2007-2011
Tucson Regional Short Range Transit Report
November 2006

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2007-2011 Tucson Regional Short Range Transit Report

November, 2006

Prepared by the City of Tucson Department of Urban Planning and Design

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2007-2011 Tucson Regional Short Range Transit Report (SRTR)

Executive Summary

The main purpose of the *2007-2011 Tucson Regional Short Range Transit Report (SRTR)* is to provide a detailed summary of current transit services and performance measures, as well as a brief overview of planned improvements scheduled for the next five years. The SRTP is not a planning document; it will help coordinate local planning efforts throughout the Tucson Region.

The SRTR was prepared by the City of Tucson Department of Urban Planning and Design, in close coordination with the City of Tucson Department of Transportation, Sun Tran, Van Tran and TICET, Pima County, Town of Oro Valley, the University of Arizona, and the Pima Association of Governments (PAG), forming together a Transit Working Group, which will manage and update the SRTR annually, for inclusion in the required Regional Transit Authority (RTA) annual report.

A. The Importance of Public Transit in the Tucson Region

While the majority of all trips in the Tucson region are made by private automobile, public transit in the Tucson region has risen 11.2% in the last five years. Demographic forecasts for the Tucson metropolitan area indicate a substantial increase in travel demand over the next twenty-five years. Public transit use in Tucson has become a necessity for a large segment of the region's elderly, young and lower-income populations.

B. Current Transit Services

The following transit systems currently serve the Tucson region, handling about 17 million trips per year, with operating costs of over $50 million.

Transit Services and Operating Costs in the Tucson Region (FY 2004-2005)

Service Name	# Transit Vehicles	# Transit Stops	# Transit Shelters	# Employ-ees	Total Ridership	Total Miles	Capital Expenses	Operating Expenses	Total Expenses	Farebox Revenue
Sun Tran	189	2285	770	520	15,847,429	7,921,123	$1,702,808	$36,753,967	$ 38,456,775	$7,599,372
Van Tran	115	N/A	N/A	214	399,950	3,136,457	$1,948,654	$ 9,654,301	$ 11,602,955	$ 441,887
Pima Rural Transit	6	N/A	0	22	80,355	337,244	$ 71,000	$ 458,060	$ 529,060	$ 62,662
Pima Special Needs	25	N/A	N/A	80	66,140	585,172	$ -	$ 1,489,762	$ 1,489,762	$ 56,717
Oro Valley Coyote Run	8	0	0	10	15,937	190,609	$ 48,396	$ 326,829	$ 411,225	$ 35,451
UofA Cat Tran	17	48	0	28	501,432	247,000	$ 220,598	$ 986,045	$ 1,206,643	Free
TICET	6	29	6	15	131,735	112,277	$ 62,227	$ 413,974	$ 476,201	Free
Old Pueblo Trolley	2	8	0	0	25,710	7,550	$ 34,829	$ 33,971	$ 68,800	$ 16,787
Total	**368**	**2370**	**776**	**889**	**17,068,688**	**12,537,432**	**$4,088,512**	**$50,116,909**	**$54,172,621**	**$8,212,876**

Source: Pima Association of Governments

C. Planned Transit Service Improvements

There are a number of future options available to transit to serve future needs. This report looks at the planned improvements for FY2007-FY2012 for seven crucial elements that conform the transit system in the Tucson region, shown below, reflecting the implementation elements of the 2030 Regional Transportation Plan and the Regional Transportation Authority (RTA) Plan:

Elements of the Tucson Regional Transit System

Summary of Planned Improvements

Transit Element	*Planned Improvements*
Fixed Routes – Sun Tran	• Weekly evening hours will be expanded until 11:00 PM on 18 routes • Weekly evening hours will be expanded until midnight on 3 routes • Weekend hours will be expanded approximately to 9:00 PM on Saturdays and 8:00 PM on Sundays on 23 routes • 12 routes will receive an increase in bus frequencies during weekdays. Frequency will vary by times of the day. • Some routes will be extended to currently unserved areas of the region. • A new northwest area bus maintenance facility will be constructed to accommodate the expanded fleet. • Existing express routes will be upgraded to a minimum of 6 trips. • 6 new express routes will be added during weekday peak hours. • New modern express-style buses will be purchased and used on most express routes.
Existing Urban Circulators – Cat Tran and TICET	• CatTran will provide service between the Main Campus and on and off campus facilities, park and ride lots, downtown Tucson, University Medical Center and planned University Medical Research and Business Technology Centers near the Main Campus, serving a projected population of 40,000 students and a University community of 75,000 persons. • TICET route adjustments are currently being evaluated to provide service to the University of Arizona's main gate area, and to eliminate hours when ridership is low.
Future Urban Circulators – Marana, Oro Valley and Green Valley/Sahuarita	• These three new urban circulator services will provide daily connections to local activity centers as well as the regional Sun Tran system. Service routes, schedules and operations will be determined within the next few years as the RTA Plan advances.
Paratransit Services – Van Tran, Coyote Run and Pima Transit	• Existing paratransit services will be expanded by approximately 3.5 percent annually. • Existing volunteer-based services for seniors will be supported, organized by the Pima Council on Aging (PCOA), in partnership with other agencies.
Modern Streetcar	• A detailed analysis of the Locally Preferred Alternative (LPA) and the No-Build Alternative are being conducted during the Draft Environmental Impact Statement (DEIS). In 2007, the DEIS will be circulated for public review and comment, and public hearings will be held. Based on the findings of the DEIS and the public comments received, FTA and the City of Tucson will adopt a refined LPA. • Preliminary Engineering (PE) will be conducted concurrently with preparation of the FEIS that responds to public comments and commits to specific mitigation measures for adverse impacts. The FEIS will be submitted to FTA for their consideration, who will then issue a Record of Decision (ROD) that provides environmental clearance. Final design will be conducted following the issuance of a favorable ROD. A financing plan will then be finalized, construction will begin, and the project will be fully operational by 2011.
Park and Ride Centers	• 6 new park and ride centers will be located in outlying communities, connecting routes to central Tucson, and they include: Oro Valley, Marana, Green Valley, Valencia Road/Casino del Sol, Rita Ranch, and Houghton/Broadway. Specific locations and operations will be determined within the next few years as the RTA Plan advances.

D. Projected Operating and Capitals Costs

Sun Tran – Projected Five-Year Operating and Capital Costs

Project Description	*Fiscal Year 2006-2007*	*Fiscal Year 2007-2008*	*Fiscal Year 2008-2009*	*Fiscal Year 2009-2010*	*Fiscal Year 2009-2010*	*Five Year Total*
OPERATING:						
Sun Tran Operating Budget (Excludes grant funded projects)	$39,872,480					
RTA Operating Budget (Excludes Revenue offset)	$1,010,515	$3,289,630	$3,289,630	$3,878,726	$4,470,957	$17,408,173
CAPITAL:						
Number of replacement buses	23	3	11	1	10	48
Federal	$9,220,553	$4,886,459	$4,038,697	$381,634	$4,885,380	$23,412,723
Local	1,888,547	1,000,841	827,203	78,166	1,000,620	4,795,377
Total	$11,109,100	$5,887,300	$4,865,900	$459,800	$5,886,000	$28,208,100
RTA Funded Capital Items						
PERC Units	$40,000					$40,000
Replacement buses		470,000				470,000
Expansion buses			$6,897,000	$5,082,000	$1,761,000	$13,740,000
Total	$40,000	$470,000	$6,897,000	$5,082,000	$1,761,000	$14,250,000
Number of buses funded	0	7	19	16	5	47

Note: Numbers do not reflect inflation projections

Cat Tran – Projected Five-Year Capital Improvement Program

Project Description	*Fiscal Year 2006-2007*	*Fiscal Year 2007-2008*	*Fiscal Year 2008-2009*	*Fiscal Year 2009-2010*	*Fiscal Year 2009-2010*	*Five Year Total*
Cat Tran Shuttle System Replacement Buses 2,2,4,3,3	$164,000	$175,100	$370,800	$293,550	$228,150	$1,231,600
Expansion Buses (2)		175,000				175,000
Support Vehicle Replacement (1)		20,500				20,500
Vehicle Light Maintenance - Support Equipment			200,000	150,000	5,000	350,000
Bio-Diesel Fueling System Plumber Facility		85,000				85,000
Administrative/Maintenance Facility Improvements	25,000	25,000	35,000	35,000	10,000	130,000
Disabled Cart Service Replacement Carts 4,1, 2, 4,1	48,000	9,270	19,570	52,000	10,600	139,440
Disabled Cart Service Expansion Carts (1)	9,270					9,270
Bus Shelters 2,2,2,2,2	30,000	35,000	38,000	40,000	42,000	185,000
Bike Lockers 5,5,5,5,5	13,000	1,450	1,550	17,000	19,000	52,000
Park & Ride Lots		100,000	450,000	500,000	500,000	1,550,000
Program Area Total	$289,270	$626,320	$1,114,920	$1,087,550	$814,750	$3,927,810

Cat Tran – Projected Five-Year Operating Budget

Project Description	Fiscal Year 2006-2007	Fiscal Year 2007-2008	Fiscal Year 2008-2009	Fiscal Year 2009-2010	Fiscal Year 2010-2011	Five Year Total
Cat Tran Shuttle System	$1,176,200	$1,314,200	$1,347,055	$1,380,731	$1,415,249	$6,633,435
Disabled Transportation Cart Service	109,700	115,185	120,944	126,991	133,341	606,161
Bicycle Program	115,200	120,960	127,008	133,358	140,025	636,551
Transportation Administration	437,400	459,270	482,233	506,345	531,662	2,416,910
Transportation Grant Program	15,000	15,000	18,000	20,000	25,000	93,000
Program Area Total	$1,853,500	$2,024,615	$2,095,240	$2,167,425	$2,245,277	$10,386,057

TICET – Projected Five-Year Operating Budget

	Fiscal Year 2006-2007	Fiscal Year 2007-2008	Fiscal Year 2008-2009	Fiscal Year 2009-2010	Fiscal Year 2010-2011	Five Year Total
Operations, Maintenance, Fuel						
Yellow Route	$ 272,436.33	$ 272,436.33	$ 272,436.33	$ 280,609.42	$ 289,027.70	$ 1,386,946.11
Blue Route	148,063.22	148,063.22	148,063.22	152,505.12	157,080.27	753,775.05
Red Route	171,753.34	171,753.34	171,753.34	176,905.94	182,213.12	874,379.08
Administrative/ Support	59,225.29	59,225.29	59,225.29	61,002.05	62,832.11	301,510.02
Brochure Printing, Shuttle signs, shuttle painting, Misc. adv., etc.	12,500.00	48,500.00	12,500.00	48,500.00	12,500.00	134,500.00
Yearly Totals	$ 663,978.18	$ 699,978.18	$ 663,978.18	$ 719,522.52	$ 703,653.20	$ 3,451,110.26

New Urban Circulators – Estimated Annual Operating Costs

	FY 2006-2007	FY2007-2008	FY2008-2009	FY2009-2010	FY2010-2011
Marana Circulator*				$467,000	$467,000
Oro Valley Circulator*			$430,000	$445,000	$458,350
Green Valley/ Sahuarita Circulator*			$430,000	$430,000	$430,000

Note: Numbers do not reflect inflation projections. All cost estimates are for operations only since the contractor will provide vehicles and equipment.

Capital Improvement Program for Pima County Rural Transit (Vehicles)

Route	FFY 2001/02 Grant 20	FFY 2002/03 Grant 21	FFY 2003/04 Grant 22	FFY 2004/05 Grant 23	FFY 2005/06 Grant 24	FFY 2006/07 Grant 25	FFY 2007/08 Grant 26	FFY 2008/09 Grant 27	FFY 2009/10 Grant 28	FFY 2010/11 Grant 29	FFY 2011/12 Grant 30
Ajo-Tucson			$100,000				$160,000				
Ajo-DAR					$80,000						$80,000
Ajo-Gila Bend Marana				$100,000					$80,000	Vehicle supplied by RPTA	
San Xavier						$63,000					
Tucson Estates							$70,000				
Green Valley	$52,205										

Note: Numbers do not reflect inflation projections

Projected Costs for Pima County Rural Transit for FY 2006/2007

	Capital	Operating	Administration	Training	Total
Fare Revenues	$ 0	$ 67,000	$ 0	$ 0	$ 67,000
Other Operating Revenues	0	0	0	0	0
Local Share	12,600	350,489	35,744	0	398,833
Federal Share	50,400	350,489	142,972	3,500	547,361
Total	$ 63,000	$ 767,978	$ 178,716	$ 3,500	$ 1,013,194

Note: Numbers do not reflect inflation projections

Capital Improvement Program and Operational Costs for Coyote Run

	FY 2006-2007	FY2007-2008	FY2008-2009	FY2009-2010	FY2010-2011
Capital Improvements	$120,000	$60,000	$60,000	$60,000	$60,000
Operational Costs	577,213	588,673	680,858	708,402	741,153
Total	$697,213	$648,673	$740,858	$768,402	$801, 153
Fare Revenues		$65,000	$70,000	$70,000	$75,000
LTAF II		20,000	20,000	20,000	20,000
RTA		51,142	130,256	149,487	168,675
Federal Share		60,000	60,000	60,000	60,000
State Shared Revenues		183,500	183,500	183,500	183,500

Note: Numbers do not reflect inflation projections

Van Tran – Projected Five-Year Operating and Capital Costs

Project Description	Fiscal Year 2006-2007	Fiscal Year 2007-2008	Fiscal Year 2008-2009	Fiscal Year 2009-2010	Fiscal Year 2009-2010	Five Year Total
OPERATING:						
Van Tran Operating Budget (Excludes grant funded projects)	$12,536,988					
RTA Operating Budget (Excludes Revenue offset)	$190,096	$380,194	$665,339	$950,485	$1,235,630	$3,421,744
CAPITAL:						
Number of replacement vans	104	12	33	15	29	193
Federal	$1,083,980	$426,620	$412,012	$353,663	$218,373	$2,494,648
Local	1,012,860	336,158	474,045	227,069	430,287	2,480,419
Total	$5,958,000	$1,977,400	$2,788,500	$1,335,700	$2,531,100	$14,590,700
Number of expansion vans	17	6	6	5	3	37
Federal	$1,083,980	$426,620	$412,012	$353,663	$218,373	$2,494,648
Local	222,020	87,380	84,388	72,437	44,727	510,952
Total	$1,306,000	$514,000	$496,400	$426,100	$263,100	$3,005,600
RTA Funded Capital Items						
Expansion vans	$158,725	$238,087	$238,087	$238,087	$238,087	$1,111,073
Number of expansion vans	2	3	3	3	3	14

Note: Numbers do not reflect inflation projections

D. Suggested Transit Studies and Future Programs

Due to the ever changing regional conditions regarding public transit service, it is important to program regular updates to pertinent regional data and to perform studies related to the provision of efficient transit service region-wide. The Transit Working Group should annually prioritize study and data collection needs for inclusion in the PAG Overall Work Program. The Transit Working Group will developed the scope of each study and estimate costs for the OWP submittals. Among the studies to be considered during the next five years are the following:

- System-wide ADA analysis
- Bus shelter and bus stop inventory and analysis
- Transit fare analysis and system interconnectivity studies
- Park and ride location analysis
- New sub-regional circulator studies
- High-capacity transit corridor study
- Tucson-Nogales passenger rail study
- Tucson-Phoenix commuter rail study
- Marketing survey of transit needs/operation/amenities
- Transit planning study
- Cost of service study

2007-2011 Tucson Regional Short Range Transit Report (SRTR)

I. Introduction

A. The Purpose of the 2007-2011 Tucson Regional Short Range Transit Report (SRTR)

The mobility and accessibility provided by transportation options have a strong impact on the economy, ease of movement, and quality of life of the residents of any community. Transit services, in addition to providing mobility to residents without access to an automobile, can provide a wide range of economic, environmental, and traffic congestion benefits. The development of transit services can also offer a feasible alternative to driving for people with mobility choices.

This SRTR provides a summary of current transit services in the Tucson region, as well as a brief overview of improvements planned for the next five years, reflecting the implementation elements of the 2030 Regional Transportation Plan and the Regional Transportation Plan.

The main purpose of the *2007-2011 Tucson Regional Short Range Transit Report (SRTR)* is to provide a detailed summary of current transit services and performance measures, as well as a brief overview of planned improvements scheduled for the next five years to efficiently and effectively meet the public's needs. The report opens with an in-depth description of the transit system in the Tucson area. Next, the SRTR presents and reviews the current transit services provided by the different transportation agencies, and analyzes service performance in fiscal year 2004-2005 (fiscal years run from July 1 through June 30). This is followed by an analysis of financial data for each transit service. The document concludes with a summary of planned improvements that will guide the transit agencies over the next five years. The SRTP is not a long-range planning document and as such it reflects only the early elements of implementing the *2030 Regional Transportation Plan* transit visions and goals.

The SRTR was prepared by the City of Tucson Department of Urban Planning and Design, in close coordination with the City of Tucson Department of Transportation, Sun Tran, Van Tran and TICET, Pima County, Town of Oro Valley, the University of Arizona, and the Pima Association of Governments (PAG), forming together a Transit Working Group, which will manage and update the SRTR annually, for inclusion in the required Regional Transit Authority (RTA) annual report.

B. Overview of Other Public Transportation Documents

There are several federal requirements that help guide the planning, funding, and operation of local public transit systems. The *Transportation Equity Act for the 21st century* of 1998 or TEA-21, and the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users of 2005 (SAFTEA-LU), together with rules published by the Environmental Protection Agency (EPA) and the U.S. Department of Transportation, are highly interrelated federal regulations that impose policies and procedures in the urban transportation planning process. TEA-21 and SAFTEA-LU list seven planning factors that must be considered as part of the region's transportation planning process. These factors are:

- Supporting the economic vitality of the area in the global market.
- Increasing safety of the transportation systems.
- Increasing accessibility and mobility options for people and freight.
- Protecting and enhancing the environment, promoting energy conservation, and improving quality of life.
- Enhancing integration and connectivity of transportation systems.
- Promoting efficient system management and operation.
- Emphasizing the preservation of existing intermodal transportation systems.

Two key activities of the regional transportation planning process are the development of the long-range (minimum 20-year) *Regional Transportation Plan* (RTP) and the short-range (five-year) *Transportation Improvement Program* (TIP).

The *Regional Transportation Plan*, or RTP, provides a vision for a balanced, multi-modal, sustainable transportation system in the region and covers a period of time of at least 20 years into the future. The current RTP guides improvements to our region's bus, roadway, bicycle, pedestrian, aviation and rail transportation to the year 2030. The financial plan component of the RTP identifies transportation costs, existing funding sources, and proposed new sources of funding needed to fully implement the RTP. Typically, the RTP is updated every three to four years. It was last updated on June 29, 2005, and was amended on June 29, 2006.

Most Tucsonans will reach their adult years having used the automobile for their daily transportation. However, at a time in their lives when driving may no longer be an option, they may no longer be able to hop in their cars to shop, visit family and friends, or access health care. They will need alternatives. This represents an unprecedented challenge for land use planning and public transportation agencies, now and in the future.

The *Transportation Improvement Program* (TIP) is the short-range (five-year) plan, which identifies a prioritized list of projects to be funded for construction during the next five-year period. The TIP addresses regional transportation projects and programs including federal, state, local highways, transit, aviation, ride sharing, bikeways and pedestrian facilities. Programming of major transit capital investments, such as the purchase of new buses and vans, upgraded maintenance facilities, replacement equipment, and new transit stations, is primarily a function of the TIP process. The TIP is updated annually and TIP projects are drawn from the adopted RTP.

Short-range planning is conducted by individual transit agencies or municipalities. Regional services that cover many municipalities are often coordinated annually through inter-governmental agreements (IGAs). This five-year SRTR will help coordinate local planning efforts throughout the Tucson Region.

The Pima Association of Governments (PAG) coordinates the development of other regional plans and programs, including: *Congestion Management System Plan*, *Intelligent Transportation System Strategic Deployment Plan*, *Regional Aviation System Plan*, *Regional Plan for Bicycling*, *Regional Pedestrian Plan*, *Intermodal Management System Plan*, Traffic Count Program, Travel Reduction Program, and RideShare. These detailed plans are incorporated into the RTP and make recommendations for projects for future updates to the long and short-range transportation plans.

C. The Regional Transportation Authority (RTA) and the RTA Plan

The Regional Transportation Authority (RTA) represents the City of Tucson, Pima County, Towns of Marana, Oro Valley, South Tucson and Sahuarita, the Tohono O'odham Nation, the Pascua Yaqui Tribe and the Arizona Department of Transportation. The primary goal of the RTA was to build consensus among regional jurisdictions in order to develop and implement a 20-year regional transportation plan that helps connect people with work, school, shopping, and entertainment.

The RTA became effective on August 25, 2004. The legislation, signed by Governor Janet Napolitano, allows citizens in our region to help direct transportation solutions for the next 20 years.

The RTA developed a 20-year regional transportation plan (the RTA Plan) through an extensive public process involving several hundred public meetings. A 35-member Citizens Advisory Committee donated more than 2,000 hours of their time during the meetings and public outreach. The Technical/Management Committee, which was made up of transportation managers of local jurisdictions and experts from the private sector, met on an as-needed basis. On May 16, 2006, Pima County voters approved the $2.1 billion regional transportation plan presented by the RTA, along with a request for a half-cent excise tax (commonly referred to as a sales tax) to fund the plan. This report includes the transit improvements specified in the RTA Plan.

The RTA Plan includes nearly $534 million for public transit improvements over the next 20 years. This funding has allowed the local transit providers to expand services and facilities that the public has been requesting for many years. Improvements are summarized below and are described in more detail in the Planned Improvements chapter of this document.

RTA Plan-Transit Element

- Weekday evening bus service expansion
- Weekend bus service expansion
- Bus frequency and area expansion
- Special needs transit service expansion
- Neighborhood circulator bus service
- Express bus service expansion
- Downtown/University high-capacity modern streetcar system
- 6 new park-and-ride transit centers

D. The Importance of Public Transit in the Tucson Region

1. Ridership and population growth

While a majority of all trips in the Tucson region are made by private automobile – according to Census 2000 data in the year 2000 only 2.5% of workers 16 years or older in Pima County traveled to work using public transportation – public transit use in the Tucson region has risen 11.2% percent in the last five years (see *Exhibit 1*).

Transit service reduces the pressure on critical commute corridors by offering a convenient alternative to driving alone. Travel corridors where public transportation is a reliable option during peak hours are extremely popular; for instance, transit carries approximately 15 percent of all trips in the Broadway corridor.

According to the *1995-2000 Regional Transportation System Performance Assessment* – a report that reviews growth trends, travel conditions, and system improvements – between 1995 and 2000 the total daily vehicle miles of travel (VMT) within the Tucson region grew by 13.5%, while population increased by 10%. During the same five-year period, only 1.1% additional roadway capacity was added to the arterial roadway system.

The demographic and economic historical data and forecasts for the Tucson metropolitan area indicate a substantial increase in travel demand over the next twenty-five years (see *Exhibits 2 and 3*).

More efficient utilization of transportation facilities will be important to help meet this increase in travel demand. The projected increase in travel will also require improved transportation facilities and services to alleviate traffic congestion, maintain acceptable air quality, and provide for the general safety and welfare of the region.

Exhibit 1 – Five-Year Ridership in the Tucson Region

Transit Service	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	5-Year Change
Sun Tran	14,513,000	13,628,899	15,016,131	15,393,817	15,847,429	9.2%
Van Tran	310,000	313,876	324,847	358,659	399,950	29.0%
Pima Rural Transit	52,000	57,091	63,831	71,188	80,355	54.5%
Pima Transit Special Needs	69,000	63,977	60,640	63,178	66,140	-4.1%
Coyote Run- Oro Valley	11,000	13,524	12,486	13,991	15,937	44.9%
Cat Tran- UofA	319,000	392,169	376,918	444,254	501,432	57.2%
TICET	82,000	118,723	133,658	116,425	131,735	60.7%
Old Pueblo Trolley	N/A	23,649	25,687	27,572	25,710	8.7%
Total	**15,356,000**	**14,611,908**	**16,014,198**	**16,489,084**	**17,068,688**	**11.2%**

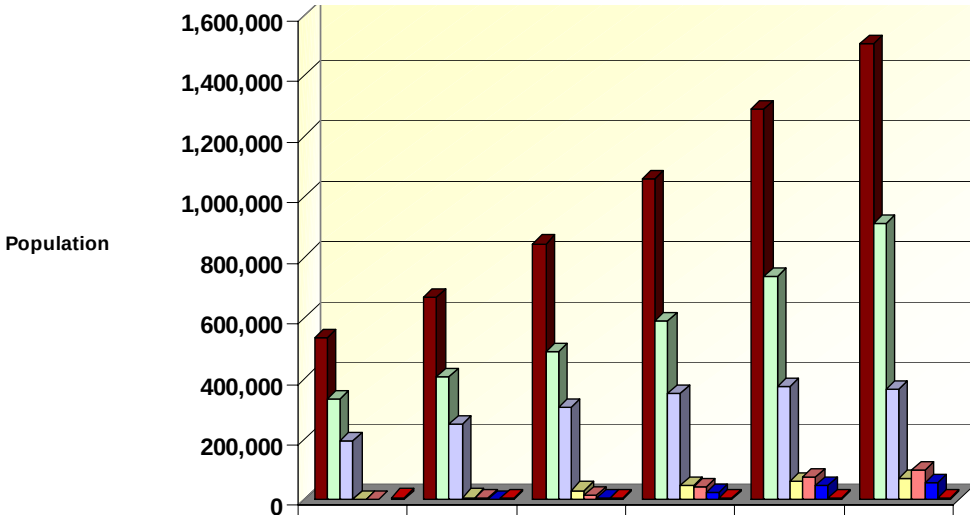
**TICET FY 2001 ridership represents a partial year*
Source: Pima Association of Governments

Exhibit 2 – Growth in the Tucson Region in the Past Five Years

	2000	2001	2002	2003	2004	2005
Population						
Pima County	**848,745**	**870,610**	**890,545**	**910,950**	**931,200**	**957,635**
Marana	14,046	15,765	17,770	20,600	23,500	26,725
Oro Valley	29,800	32,520	34,050	37,225	38,300	39,400
Sahuarita	3,580	4,615	5,455	7,425	9,700	13,990
South Tucson	5,500	5,490	5,520	5,550	5,600	5,630
Tucson	485,790	498,305	507,085	514,725	521,600	529,770
Housing						
Building Permits	9,688	9,184	9,218	9,723	11,289	13,650
Units Sold	11,077	12,142	13,751	14,618	16,114	17,591
Average Price	$ 155,907	$ 160,300	$ 162,916	$ 182,276	$ 205,506	$ 254,721
Employment						
Pima County Labor Force (annual average)	444,400	443,900	448,900	451,200	465,560	483,830
Unemployment Rate	2.8%	3.5%	4.6%	4.2%	3.7%	4.4%
Average earnings per worker	$ 31,475	$ 32,419	$ 33,677	$ 35,271	$ 36,489	$ 38,235

Source: City of Tucson Department of Urban Planning and Design

Exhibit 3 – Population Estimates and Projections in Pima County



	1980	1990	2000	2010	2020	2030
TOTAL PIMA COUNTY	531,443	666,880	843,746	1,058,496	1,289,668	1,504,084
Tucson	330,537	405,390	486,699	588,849	733,796	912,183
Unincorporated Pima County	191,189	245,918	305,059	350,913	374,255	363,002
Oro Valley	1,489	6,670	29,700	45,266	57,945	69,768
Marana	1,674	2,187	13,556	42,956	73,367	96,206
Sahuarita		1,622	3,242	24,737	44,280	56,675
South Tucson	6,554	5,093	5,490	5,775	6,025	6,250

Source: City of Tucson Department of Urban Planning and Design

2. Transit-dependent residents

Public transit use in Tucson has become a necessity for a large segment of the region's elderly, young and lower-income populations.

While transit serves many purposes, one of the most important is to provide critical access and mobility for transit-dependent and lower-income residents. In 2000, the percentage of those age 65 and older in Pima County is slightly greater than that of the State and of the country as a whole. The percentage of persons age 65 and older for the City of Tucson is slightly below the national average. Urban metropolitan areas tend to consist of younger, less wealthy populations; this phenomenon may account for the relatively low presence of older adults within the Tucson City limits (*see Exhibits 4 and Map 1*).

The relative difference in Arizona's population share of older adults is expected to increase as baby boomers approach retirement age and current migration patterns among older adults continue. This is precisely the concern that will determine needs in the Tucson region for the next decades. The most significant increase within the older population is occurring among those 85 years and older. While the population of Arizonans age 65 and older is expected to double over the next 30 years, the number of persons age 85 and older is expected to do so in just 20 years. This will result in those age 85 and older representing a greater share of the aging population (*see Exhibit 5*).

Exhibit 4 – Population by Age Group in 2000

	All Ages	65 years and older		85 years and older	
		Number	Percent	Number	Percent
United States	275,130,000	34,817,000	12.7	4,312,000	1.6
State of Arizona	4,961,953	700,461	14.1	83,381	1.7
Pima County	867,363	124,900	14.4	13,010	1.5
City of Tucson	485,790	59,752	12.3	7,773	1.6

Source: U.S. Census Bureau; Arizona Department of Economic Security, City of Tucson Department of Urban Planning and Design

Exhibit 5 – Estimated and Projected Population in Arizona by Age Group

	65 years and older		65 to 74 years old		75 to 84 years old		85 years and older	
Year	Number	% of Total	Number	% of Total	Number	% of Total	Number	% of Total
1920	9,977	3.0	7,133	2.1	2,305	0.7	539	0.2
1940	23,909	4.8	17,186	3.4	5,636	1.1	1,087	0.2
1960	90,225	6.9	63,634	4.9	22,499	1.7	4,092	0.3
1980	307,362	11.3	202,120	7.4	86,104	3.2	19,138	0.7
1990	480,587	13.1	290,044	7.9	151,013	4.1	37,846	1.0
2000	700,461	14.14	367,791	7.4	249,289	5.0	83,381	1.7
2010	908,554	14.8	465,855	7.6	309.749	5.0	132,950	2.2
2020	1,296,878	17.6	747,151	10.1	383,063	5.2	166,664	2.3
2030	1,836,177	21.3	1,017,301	11.8	612,245	7.1	206,631	2.4

Source: U.S. Census Bureau; Arizona Department of Economic Security

According to the 2000 Census, about 20% of the population in Pima County had disabilities, and about 14% lived in families with income below poverty level, from which 27% had disabilities.

In the Tucson region, most of the population with a household income of $25,000 or less live within the City of Tucson limits (*see Map 2*). The majority of persons with disabilities also live within City of Tucson limits (*see Map 3*) and are located within the shared-ride special needs transit service areas.

In regards to the young population who are not yet legally able to drive a motor vehicle, the Census reported 185,108 persons of less than 15 years of age in Pima County - about 24% of the total population in the County).

Households with no access to a motor vehicle in Pima County represent almost 4% (29,938 units) of the total number of households in the county; from which almost 70% are renter-occupied units. In the Tucson region, most of the households with no vehicle are located within City of Tucson limits and the San Xavier District of the Tohono O'odham Nation (*see Map 4*).

E. The Land Use/Transportation Factor in Tucson

Transportation and land use are closely interrelated. Real estate professionals have been known to characterize the value of a property as being a function of "location, location, and location", which, to urban planners and transportation professionals that means "accessibility, accessibility, and accessibility". The type, capacity and usage of transportation systems depend on land uses. At the same time, transportation both enables and constrains the location, shape, size, intensity and overall pattern of land uses (*see Exhibit 6*).

> Residents consistently rank transportation as a top community concern, yet we have a difficult time coming to agreement on solutions.
>
> *5 Trends Tucson?*
> *February 2004*

Land use decisions complement transportation investments by placing compatible activities adjacent to transportation infrastructure and by placing new activities at locations where transportation infrastructure and services exist or are planned. Land uses influence the amount of travel, the geographic location of travel demand, and the use of various modes of travel. Transportation investments complement land use goals by locating capacity where it stimulates development in desired locations, and by placing facilities to minimize impacts on adjacent sensitive land uses.

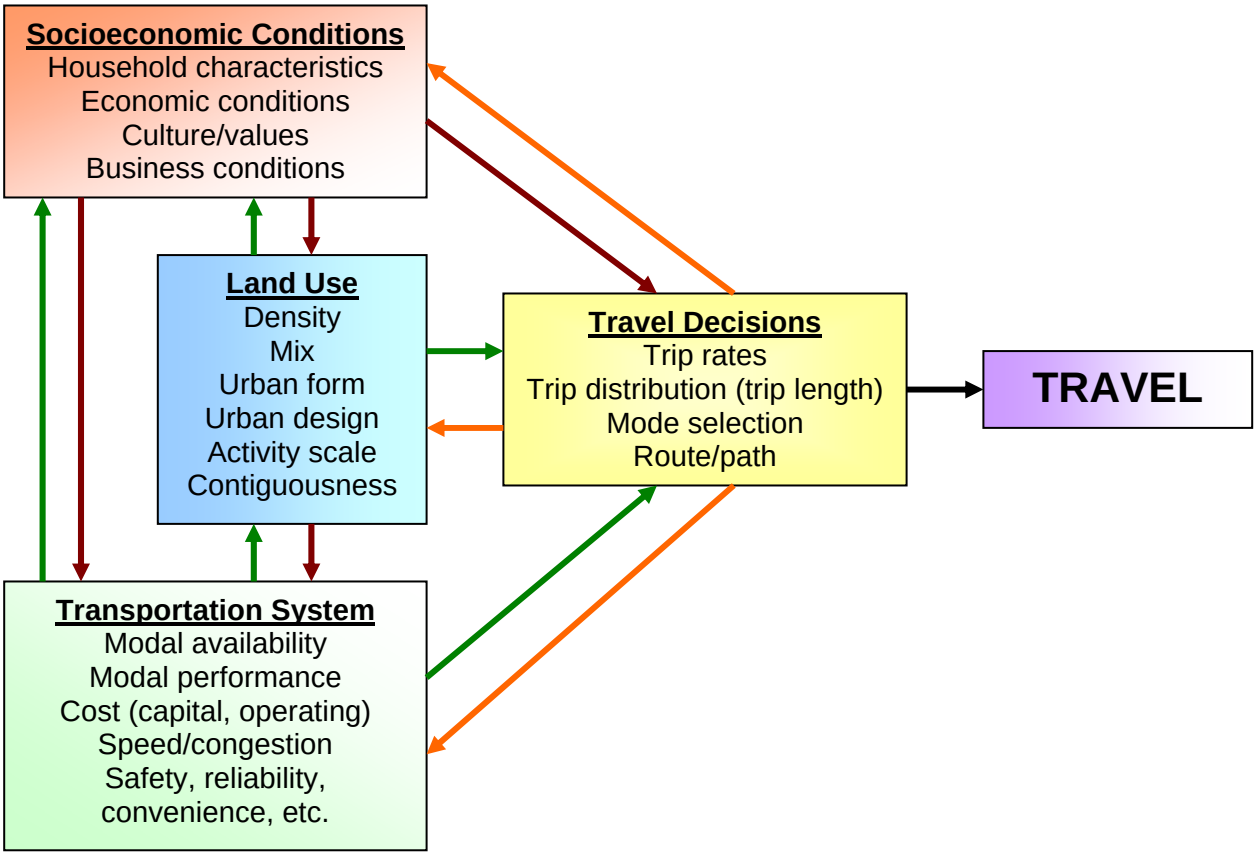
Residential subdivision street in Tucson

The built environment in the Tucson region features primarily car-oriented, one-story, low-density development (*see Map 5*). The current land use pattern, which clearly separates different types of land uses and is generally low density in nature, hinders the ability to develop an effective multi-modal transportation system. In addition to increased costs to provide roads, utilities, public transportation, public facilities and other services to support unplanned, low-density development, there are negative impacts of suburban development on public health. Throughout the Tucson region, residences, job sites, shopping and schools have been built too spread out to walk in between. Many of our neighborhoods are walled off from surrounding development limiting the ability of residents to walk, bike or take the bus to local services.

Other key trends affecting travel demand in the Tucson region include:

- Fourteen percent of the region's households reported having three or more vehicles in the year 2000.
- About four percent of the region's households have no vehicles available.
- Average household size continues to decline (from 3 per household in 1970 to 2.47 in the year 2000).
- Most commuters still drive alone.
- Longer trips (those 20 minutes or longer) are more frequent.
- Trip rates per capita have increased (from 3 per person in 1970 to 3.5 in 2000).
- Home to work trips account for only 13 percent of all trips.
- Non-home based (linked) trips are growing faster than work trips.

Exhibit 6 – Conceptual Model of Factors that Affect Travel



Source: Impact of Transportation: Transportation and Land Use, December 2004. Center for Urban Transportation Research at the University of South Florida.

II. Current Transit Service Conditions and Challenges

Eight transit systems operated by four jurisdictions and one non-profit organization currently serve the Tucson region: City of Tucson Sun Tran, Van Tran and TICET, Pima County Rural Transit Services and Special Needs Program, Oro Valley Coyote Run, the University of Arizona Cat Tran and Old Pueblo Trolley. Additionally, several social service agencies, supplemented by private for-profit operators, provide public transportation services (see *Map 6*).

Together, the transit systems handle about 17 million trips per year, with operating costs of over $50 million. *Exhibit 7* provides an overview by each major operator of services and costs for fiscal year 2004-2005.

Exhibit 7 – Transit Services and Operating Costs in the Tucson Region (FY 2004-2005)

Service Name	# Transit Vehicles	# Transit Stops	# Transit Shelters	# Employ-ees	Total Ridership	Total Miles	Capital Expenses	Operating Expenses	Total Expenses	Farebox Revenue
Sun Tran	189	2285	770	520	15,847,429	7,921,123	$1,702,808	$36,753,967	$ 38,456,775	$7,599,372
Van Tran	115	N/A	N/A	214	399,950	3,136,457	$1,948,654	$ 9,654,301	$ 11,602,955	$ 441,887
Pima Rural Transit	6	N/A	0	22	80,355	337,244	$ 71,000	$ 458,060	$ 529,060	$ 62,662
Pima Special Needs	25	N/A	N/A	80	66,140	585,172	$ -	$ 1,489,762	$ 1,489,762	$ 56,717
Oro Valley Coyote Run	8	0	0	10	15,937	190,609	$ 48,396	$ 326,829	$ 411,225	$ 35,451
UofA Cat Tran	17	48	0	28	501,432	247,000	$ 220,598	$ 986,045	$ 1,206,643	Free
TICET	6	29	6	15	131,735	112,277	$ 62,227	$ 413,974	$ 476,201	Free
Old Pueblo Trolley	2	8	0	0	25,710	7,550	$ 34,829	$ 33,971	$ 68,800	$ 16,787
Total	**368**	**2370**	**776**	**889**	**17,068,688**	**12,537,432**	**$4,088,512**	**$50,116,909**	**$54,172,621**	**$8,212,876**

Source: Pima Association of Governments

Currently, only a few corridors in the urban core of Tucson have buses operating every 15 minutes or less. Examples include 5th and 6th Streets and 6th Avenue. In outlying areas, overall service is limited. Even within Tucson, areas located in the southeast sector (e.g., Rita Ranch) have no service. South of Tucson there is limited service in Sahuarita and the Green Valley of unincorporated Pima County.

One key service characteristic not currently included in the mix of transit services is a comprehensive system of park-and-ride lots and associated express bus services. While some park-and-ride lots exist, most are both small and lack extensive direct express bus connections to major destinations. Growing areas of the region lack direct transit connections as well as opportunities to access service through park-and-ride lots.

Additionally, there are clear deficiencies in the integration and coordination of the different transit services in the Tucson region. Each transit service plans their operations independently. There is no

substantial effort to develop a unified routing system and service structure. Depending on the circumstances, PAG sometimes facilitates meetings between transit managers to discuss issues of common concern. Other instances of the lack of transit service integration are:

- There is substantial overlap between Sun Tran's route structure and Cat Tran's routes. As a rule, Cat Tran does provide more direct service to destinations of importance to the University than is offered by Sun Tran.
- Most TICET routes operate along streets also served by Sun Tran. TICET has built a market by designing routes that are geared to the needs of short-hop riders in and around the downtown. Even when the same routing is served by Sun Tran, TICET holds appeal because it does not charge a fare.
- Sun Tran schedules are not coordinated with those from Pima Rural Transit at the Laos Transit Center or on the Northwest Side. Most transfer connections appear to be random.

Public transportation works best when local operators coordinate their services and public outreach, to present a coherent, unified, and seamless image to the public. The fact that there are several transit systems operating in the Tucson region makes coordination of services both complex and necessary.

A. City of Tucson Transit – Sun Tran

Sun Tran, selected "America's Best Transit System" for 2005 by the American Public Transportation Association (APTA), is the largest public transit provider in the Tucson Region. Currently Sun Tran has 530 employees, 37 fixed routes and a fleet of 193 buses running seven days a week, with service throughout the City of Tucson, South Tucson, and parts of Marana and unincorporated Pima County. Limited weekday service is provided to Oro Valley along Oracle Road. For the fiscal year ending June 30, 2005, Sun Tran provided 15.8 million passenger trips, an increase of nearly 13 percent since 2002.

The City of Tucson administers the Sun Tran system, owns all equipment and facilities, while the day-to-day operations are conducted by a private management firm and employee group, Professional Transit Management, Ltd. (PTM).

1. Routes

Sun Tran operates four types of fixed-route service (*see Map 7*):

a. radial routes that service major trip generators (routes # 1, 2, 3, 4, 6, 7, 8, 9, 10, 16, 19, 21, 22, 23);
b. connective routes that provide service to facilitate transfers (routes # 5, 11, 15, 17, 20, 34, 37, 50);
c. feeder routes that augment radial and connective routes, as well as transit centers and stations (routes # 24, 26, 27, 29, 61); and
d. express routes that focus on major trip generator and have higher average running speeds than radial routes (routes # 81, 82, 83, 102, 103, 105, 106, 162, 180, 186).

In addition, Sun Tran offers express service to major trip generators, such as Raytheon Missile Systems, and shuttle services are provided to the public for special or seasonal events or activities, such as U of A home football games.

2. Transit Centers

Sun Tran's transit centers serve as major destination and transfer points to other parts of the city. The centers include an information booth, with Transit Center Representatives, a covered waiting area, restrooms, public telephones and other amenities. Riders can also pick up a Sun Tran Ride Guide, purchase a bus pass, and receive trip planning guidance at the transit centers as well. The hours of operation at the transit centers are weekdays, 6:00 AM to 6:15 PM, and weekends, 8:30 AM to 4:45 PM. The Ronstadt Transit Center is open 365 days a year. Holiday operating hours are 10:00 AM to 6:00 PM. Roy Laos and Tohono Tadai Transit Centers are closed only on New Year's Day, Memorial Day, 4th of July, Labor Day, Thanksgiving Day and Christmas Day.

Exhibit 8 - City of Tucson Sun Tran Transit Centers

Transit Center	*Year Opened*	*Average Weekday Boardings*	*Routes Served*	*Other Transit Services Served*
Ronstadt (Downtown – 215 E. Congress St.)	1991	8,565	1, 2, 3, 4, 6, 7, 8, 9, 10, 16, 19, 21, 22, 23, 81, 82, 83, 102, 103, 105, 106	Van Tran and TICET
Roy Laos (Southside - 205 W. Irvington Rd)	1987	3,781	2, 6, 8, 11, 16, 23, 24, 26, 27, 29, 50, 186	Van Tran and Pima County Rural Transit
Tohono Tadai (Northside – 4540 N. Stone Ave.)	1994	1,598	6, 10, 15, 16, 19, 34, 61, 162, 105	

3. Park and Ride Lots

Park and Ride lots are for passengers who do not live near a Sun Tran bus route. Passengers can park in one of twenty Park and Ride lots located throughout Tucson and catch the bus (*see Exhibit 9*). Passengers need to verify the boarding location because many buses do not enter the lot.

The City of Tucson owns the following park and ride lots: Golf Links/Kolb (with a 106-car capacity), Speedway/Harrison (52-car capacity), and Laos Transit Center park and ride lot (30-car capacity). Each facility includes shelters, benches, bicycle racks, bicycle lockers, and landscaping. Sun Tran also maintains shared-use agreements with many retail and activity centers for parking to significantly expand park and ride activity.

Exhibit 9 - City of Tucson Sun Tran Park and Ride Lots

1st Street/Forgeus - Rt. 4 (Himmel Park - 1000 N. Tucson Blvd.)	**Ina/Via Ponte - Rt. 16 S.W. corner** (On Ina, one block west of Oracle Rd.)
6th Ave./Irvington - Rts. 2, 6, 8, 11, 16, 23, 24, 26, 27, 29 & 50 (Sun Tran Laos Transit Center)	**La Cholla/San Marcos - Rt. 23** (Archer Neighborhood Center -1665 S. La Cholla Blvd.)
22nd Street/Randolph Way - Rt. 7 (Reid Park)	**Oracle/Orange Grove - Rts. 16 & 103** S.E. corner (Oracle Plaza)
Broadway/Camino Seco - Rts. 8 & 82 (Safeway Center - 8740 E. Broadway Blvd)	**Pantano/Irvington - Rts. 3 & 37** (Pima College East)
Craycroft/Glenn - Rt. 34 (Ft. Lowell Park - 2900 N. Craycroft)	**Park/Copper - Rt. 1** (Coronado Baptist Church - 2609 N. Park Ave.)
Drexel/Calle Santa Cruz - Rt. 27 (Pima College Desert Vista)	**Ruthrauff/Plane Ave. - Rt. 17** (Victory Assembly of God Church - 2561 W. Ruthrauff)
Golf Links/Kolb - Rts. 4, 17 & 83 S.E. corner (Sun Tran owned)	**Shannon/Campus Park Way - Rt. 61** (Pima College Northwest)
Greasewood/Anklam - Rt. 5 (Pima College West)	**Speedway/Harrison - Rts. 4, 8 & 180** S.W. corner (Sun Tran owned)
I-10/Ruthrauff - Rt. 17 N.W. corner of westbound Frontage Rd.	**Stone/Wetmore - Rts. 6, 10, 15, 16, 19, 34, 61, 162 & 105** (South of Tohono Tadai Transit Center)
Ina/Thornydale - Rts. 16 & 186 S.E. corner (North Pima Center)	**Tanque Verde/Catalina Hwy. - Rt. 81** N.W. corner (Bear Canyon Plaza)

4. Bike and Ride Program

Sun Tran created the Bike and Ride program to assist bus riders who want to take advantage of the benefits associated with bicycling. Bike racks are mounted on the front of all Sun Tran buses and can hold up to two bicycles at a time at no extra charge. Also, Sun Tran has a limited number of bicycle lockers for rent ($30.00 for six months) at the following locations:

- Laos Transit Center
- Ronstadt Transit Center
- Tohono Tadai Transit Center
- Golf Links/Kolb Park & Ride
- Ina/Via Ponte Park & Ride
- Mission/Ajo
- Speedway/Harrison Park & Ride
- Tanque Verde/Sabino Canyon

5. Fee System

Exhibit 10 - City of Tucson Sun Tran Fee System

Regular 1-way ride	**Full Fare:** $1.00 **Economy:** $0.40	**Aero Park Express:** $2.00
Transfers	Free *Valid for 2 hours or 2 transfer trips*	
Passes *Good for unlimited rides (except for the Stored Value Pass) on any regularly scheduled route for the day, month, quarter or year shown on the front of the pass.*	**One day:** $2.00 *Sold only on buses and valid for unlimited rides during a calendar day, except on Aero Park Routes 180 and 186.*	
	Monthly	Full Fare: $28.00 Economy: $12.00 Aero Park: $56.00
	Quarterly: $75.00 *Full fare only*	
	Annual: $275.00 *Full fare only*	
	Stored Value *This pass is similar to a debit card. It contains 10 one-way rides (except Aero Park which has 20 one-way rides). There is no expiration date on the pass. Once the pass has been used up, another pass needs to be purchased.*	Full Fare: $10.00 Economy: $4.00 Aero Park: $40.00
	Pima College – Semester: $115.00 *Sold at the start of each Semester only at Pima Community College cashier's offices on all six campuses.*	
	University of Arizona *Sold through the UofA and only available to UofA students, faculty and staff (good while supplies last). Pass prices are pro-rated monthly*	Semester: $70.00 Academic: $112.00 Annual: $156.00

Children 5 and under with an adult ride free
Economy fares/passes are available for citizens 65 years or older, individuals with disabilities, Medicare cardholders, and low-income riders. Economy fares/passes are not accepted on Aero Park Routes 180 and 186.

6. Ridership

Sun Tran experienced a surge in ridership beginning in September 2005, when gas prices quickly escalated. During this month, the system began to routinely carry more than 60,000 passengers each weekday. Comparatively, daily boardings exceeded 60,000 passenger trips on only eight occasions during the first eight months of 2005.

Despite the decline of gas prices after fuel costs peaked in 2005, Sun Tran has continued to attract riders at a rate that outpaces national trends. According to APTA's third quarter 2005 report, bus ridership was up 2.5 percent for the period. Comparatively, Sun Tran attracted 4.4 percent more riders in that quarter over third quarter 2004.

The system recently set several ridership records. In 2005, Sun Tran recorded 16,403,270 passenger trips, the most boardings logged in its 30-year history. Last year's ridership surpassed the previous annual ridership peak of 16,288,787 passenger trips in 1993.

Sun Tran's upward trend has continued into 2006, as ridership for the month of January grew 9.5 percent from January 2005. And on February 1, 2006, Sun Tran set an all-time daily record of 67,953 passenger trips, the highest recorded since the current tracking system was established in 1998.

7. Special Programs

a. **U-Pass –** For more than a decade, a partnership with the University of Arizona has facilitated sales of Sun Tran bus passes. The UA pays for up to half the cost of bus passes for students, faculty and staff, providing a cost-effective alternative to driving and parking on-campus. In fiscal year 2005, nearly 455,000 passenger trips were taken by U-Pass customers.

b. **Get On Board –** More than 60 Tucson-area employers take part in this special commuter program by encouraging transit use by their workforce. Many participants offer the convenience of on-site pass sales while others simply reimburse pass costs. Most pay part of or all of the cost of riding Sun Tran.

Employers who participate in the program recognize the many advantages of commuting by bus rather than driving alone, for themselves and their employees. Bus-riding employees can enjoy a stress-free, economical commute with more productivity built into their workday.

8. Challenges

One of Sun Tran's biggest challenges is maintaining reliable bus service as traffic congestion and passenger loads continue to get worse each year. Currently, twelve of Sun Tran's regular route services are experiencing year to date growth of over 10%. Nine of the routes experience overcrowding, defined as requiring the buses to by-pass passengers due to lack of capacity. These services operate along Broadway Blvd., Grant Rd., Alvernon Way, Oracle Rd., S. 12th Avenue, Swan Rd., Pima St. and Country Club Blvd.

Traffic congestion, passenger loads and roadway projects have impacted Sun Tran's travel time requirements. A significant number of services are operating at a substandard level of on-time performance due to system speed decreasing. These services are in need of additional buses to augment the route to improve capacity and relieve travel time restrictions. The majority of these time delays are experienced by Sun Tran riders during the evening peak at the same time Tucson motorists are challenged with similar delays.

B. City of Tucson Complementary Paratransit Services – Van Tran

Van Tran is a transit service for persons qualified under the Americans with Disabilities Act (ADA) who cannot use the fixed route Sun Tran system. This service is mandated by Federal law. Van Tran is professionally managed by Professional Transit Management, Inc. on behalf of the City of Tucson.

Van Tran is the ADA complementary paratransit service for Sun Tran. If there is no fixed route Sun Tran service in an area, then there is no complementary Van Tran service in that area. Both the passenger's trip origin and destination must be within the Van Tran service area; otherwise, it is the passenger's responsibility to get to or from the pick-up or drop-off points within the service area.

Van Tran transports "common wheelchairs". These are defined by the ADA as measuring no larger than 30" by 48" when measured from 2" to 30" off the ground, and weighing no more than 600 pounds when occupied. Van Tran is also able to transport three-wheeled scooters and any "non-traditional" mobility devices which fit the 30" by 48" dimensions as measured above, and which weigh less than 600 pounds when occupied.

Van Tran currently provides service within the Tucson Metropolitan Area, and within other portions of Pima County served by Sun Tran fixed route service. Van Tran's service area includes an area 3/4 of a mile on either side of the Sun Tran fixed bus routes, excluding express routes. Service times are Monday through Friday 4:30AM to 11:50PM, Saturdays 5:00AM to 9:45PM, and Sundays and holidays 5:30AM to 9:45PM. When Sun Tran bus service is reduced after 6:00PM, Van Tran service is also reduced.

For the fiscal year ending June 30, 2005, Van Tran provided approximately 400,000 passenger trips with a peak service fleet of 94 lift-equipped vans. Local tax dollars pay for almost 100% of Van Tran's operation. It is a limited, community resource. The fare for Van Tran is $2.00 each way and Personal Care Attendants and children under 5 ride free.

Challenges

In past years, Van Tran had facilitated a process of denying a rather small percentage of rider requests. Due to an audit by the Federal Transportation Authority (FTA), Van Tran has since moved to a "zero-denial" rate. However, this has created a challenge from a cost containment standpoint. The City of Tucson Department of Transportation is currently reviewing and making proposed changes to all processes and procedures relating to service delivery that would enable Van Tran to increase service efficiencies and still maintain the same excellent customer service (i.e. low denial rate, on-time performance).

C. City of Tucson Downtown Vans – TICET (Tucson Inner City Express Transit)

TICET is one element of the City of Tucson's Transportation Enterprise Area Management (TEAM) initiative. TEAM is charged with, *"Managing parking and transportation to enhance the business, residential and government components within the City Center".* In this capacity, TEAM manages a number of parking transportation projects including on and off street parking programs. ParkWise is the City of Tucson Department of Transportation parking and parking enforcement division. ParkWise operates TICET, is responsible for on-street parking and a number of parking garages and lots in the Downtown area, and supervises both resident and non-resident parking permit programs throughout the community.

TICET is designed to move people easily between many different downtown destinations and linking long-term parking facilities on the fringes of the downtown with major employment and cultural attractions. Service is funded through parking revenues including meters, citations, off-street parking charges, and on-street parking permit sales.

TICET operates three routes, transporting nearly 600 daily riders, in and around the downtown. All TICET services are offered at no charge to riders. All TICET routes serve the Ronstadt Transit Center (*see Map 8*). The Yellow Route serves the north and west sides of the downtown including the Federal Courthouse, City Hall, Pima County Administration Building, and the Tucson Museum of Art. The Blue Route serves the eastside of the downtown including the YMCA, Tucson Convention Center, Temple of Music and Art, the Children's Museum, Armory Park, and the Congress Street Retail Area. The Red Route serves neighborhoods west of the Downtown that are not served by Sun Tran. It links Bonita Avenue and the Community Resource Center with downtown, and destinations along Congress Street.

Most routes operate every 15 to 20 minutes, weekdays only. There is an express shuttle on the yellow route every morning between 7 and 9 AM and every afternoon between 4 and 6 PM.

Challenges

The largest challenge faced by TICET is securing adequate funding to provide service outside of pay parking areas downtown. ParkWise is self-supporting and operates only on parking revenues. While currently ParkWise does not provide TICET service to all of their revenue generating programs (Main Gate in particular), they are providing service to non-revenue generating areas such as Rio Nuevo north (Bonita Avenue/Commerce Park Loop) and Armory Park Neighborhood. Both the ParkWise Commission and TICET passengers desire that ParkWise continue to provide TICET service to these areas adjacent to pay parking, but there is not sufficient funds available to do so within the ParkWise budget. In order to continue providing service to these outlying areas, an alternative funding source must be identified and secured.

D. Pima County Rural Transit

Pima County Rural Transit service is made up of five current service areas that serve communities outside of Tucson city limits using 15-passenger handicapped-accessible vans. One of those, Ajo, has four separate services/routes.

1. Ajo/Tucson, Ajo/Why and Ajo/Gila Bend Services

The Ajo/Tucson Service operates three days a week (Mondays, Wednesdays and Fridays) between the Town of Ajo and Tucson, with stops at intermediate points such as Why, Sells and Robles Junction. Fares vary depending on the route (*see Exhibit 11).*

Exhibit 11 – Ajo-Tucson Fare Schedule

	Ajo	*Why*	*Gunsight Turnoff*	*Hickwan Turnoff*	*San Simon*	*Quijotoa*	*Sells*	*Robles Junction*	*Tucson*
Ajo		$1.00	$1.00	$1.00	$2.00	$3.00	$4.00	$6.00	$7.50
Why	$1.00		$1.00	$1.00	$2.00	$3.00	$4.00	$5.00	$7.00
Gunsight Turnoff	$1.00	$1.00		$1.00	$2.00	$2.50	$3.50	$4.50	$6.50
Hickwan Turnoff	$1.00	$1.00	$1.00		$1.00	$2.00	$3.00	$4.00	$6.00
San Simon	$2.00	$2.00	$2.00	$1.00		$1.00	$2.50	$3.50	$5.00
Quijotoa	$3.00	$3.00	$2.50	$2.00	$1.00		$2.00	$3.00	$4.50
Sells	$4.00	$4.00	$3.50	$3.00	$2.50	$2.00		$2.00	$4.00
Robles Junction	$6.00	$5.00	$4.50	$4.00	$3.50	$3.00	$2.00		$2.00
Tucson	$7.50	$7.00	$6.50	$6.00	$5.00	$4.50	$4.00	$2.00	

The Town of Ajo Dial-A-Ride operates service in the Town of Ajo, covering the community within a six-mile radius of the Ajo Plaza. This service operates Monday through Friday from 8:00AM to 5:00PM. The fare for Dial-a-Ride is 75 cents per one-way trip. Ajo/Why Service operates three trips daily, Monday through Friday, between Ajo and Why.

The Ajo/Tucson and Ajo/Why services are funded by a Section 5311 Grant and Pima County Department of Transportation Special Revenue funds.

The Ajo/Gila Bend service operates Monday through Friday and is the Pima County portion of a longer route that actually operates between Ajo and the Desert Sky Mall in the Phoenix Metropolitan area. Funding partners for the route are the Arizona Department of Transportation, Maricopa County, Pima County and the Regional Public Transportation Authority (RPTA).

2. Marana Service

The Marana route links Ina Road with Marana and surrounding neighborhoods, including Green Acres and Rillito, Monday through Friday, from 5:45 AM to 7:00 PM. Service generally operates as a fixed-route community circulator, although route deviations are provided for the elderly and persons with disabilities, on a next-day reservation basis. The service connects, but is not coordinated with, Sun Tran service at Ina/Thornydale. This route is funded by Section 5311 Grant and Pima County Department of Transportation Special Revenue funds.

For trips with origins and destinations within the Marana area, between the west end of the route and Rillito the fee is 75¢ per one-way trip. For trips with origins or destinations in the Ina/Thornydale area, the fee is $1.00 per one-way trip

3. San Xavier Service

The San Xavier Service links the San Xavier Mission and clinic with the Laos Transit Center, via Mission Road, operating approximately every one hour, Monday through Saturday from 6:30 AM to 6:57 PM, with a fare of 50 cents for a one-way ride. ADA eligible individuals are served by complementary paratransit service. This route is funded by Section 5311 Grant and Pima County Department of Transportation Special Revenue funds.

4. Tucson Estates Service

The Tucson Estates route links neighborhoods surrounding Tucson Estates with the Laos Transit Center, via Irvington Road. Service runs about every 65 minutes, weekdays only, from 6:15 AM to 7:20 PM, with a one-way fare of 50 cents. ADA eligible individuals are served by complementary paratransit service. This route is funded by Section 5311 Grant and Pima County Department of Transportation Special Revenue funds.

5. Green Valley/Sahuarita Service

This service consists of the following:

- A regional connector between Green Valley and the Laos Transit Center, operating two morning and two afternoon trips Monday through Friday, with a one-way fare of $2.00. The connector has been designed to provide transportation for workers between Tucson and La Posada in Green Valley and for workers between Sahuarita and Raytheon.
- A deviated fixed route circulator operating in Green Valley and Sahuarita on Monday, Tuesday, Thursday and Saturday.
- A mid-day regional connector operating between Green Valley and Tucson with stops in Sahuarita on Wednesdays.

This route is funded by Section 5311 funds and a three-year grant from the Arizona Department of Transportation.

6. Challenges

The need for future public transportation services in the unincorporated County is great as the population increases and ages in place. Requests for service have been received from Picture Rocks, Three Points, Vail, Catalina, Corona de Tucson and the Summit neighborhood. Additionally, requests have been received for increased hours for the services currently in operation.

E. Pima County Special Needs Transportation Program

The Pima County Special Needs Transportation Program provides demand response door-to-door transportation to persons with disabilities living in unincorporated Pima County and within the Special Needs service boundary as established by the Board of Supervisors. The service area is the urban fringe around the City of Tucson.

This service is often the only means of transportation for disabled individuals. Trips may be for any purpose. To be eligible for transportation, the Special Needs office of the City of Tucson must certify individuals as disabled. Currently there are over 1,300 individuals certified as disabled in unincorporated Pima County. Some of these individuals reside outside the Special Needs boundary. The service transports about 66,000 passengers a year. It costs about $1,489,000 a year.

Through an intergovernmental agreement (IGA) Pima County also reimburses the City of Tucson for ADA paratransit trips outside Tucson's city limits that are provided by Sun Tran and Van Tran. Most often, these trips are provided to or from locations in unincorporated Pima County that are within ¾ mile of a Sun Tran bus route. Annual estimated ridership is 674,457. Pima County funded transportation for 22,000 ADA eligible individuals within the Van Tran service area of the unincorporated County. Reimbursements totaled about $476,000 per year for FY 2004-2005.

The IGA with the City of Tucson also covers costs associated with the administration of transportation services for County residents. These services include low-income certification fare certification, voucher sales and registration of residents with disabilities. A second part of that IGA is for costs in maintaining the ADA Eligibility Office.

Challenges

The Special Needs Service Area boundary was last expanded in the mid-1990's to serve the growing unincorporated area around the Tucson region. Additional population growth in the past several years has resulted in a greater number of disabled clients asking for service from unincorporated areas currently outside the service area boundary. One challenge is expand the service area boundary and provide service to disabled residents residing in those areas.

After several years of relatively flat ridership, FY 2005-2006 showed a significant increase in ridership. Another challenge is to adequately serve demands for future ridership and control costs of providing the service in a time of ever-increasing fuel costs and higher labor costs.

F. Oro Valley Coyote Run

The Town of Oro Valley operates a transit service, called Coyote Run, for Oro Valley elderly and disabled residents who are 62 years of age and older, transportation dependent and/or residents who are eligible under the Americans with Disabilities Act. In the years of 1998, 2001 and again in 2003 Coyote Run was the recipient of the Arizona Transit Association Award for Excellence and has recently been featured in several national transit journal articles.

Since the initial operations in 1996, there has been a need to increase fleet size as well as replace vehicles due to the significant demand for the service. In fiscal year 2003/2004 Coyote Run had a total of 13,991 trips and 177,000 service miles; in fiscal 2004/2005, the service generated 15,937 trips and over 190,000 service miles. It is estimated that in this fiscal year of 2005/2006 Coyote Run will log approximately 17,000 trips and 195,000 service miles; this will be an increase of over 3,000 annual trips and 18,000 service miles in only three years.

In addition to the Town of Oro Valley's paratransit services, the Transit Division cooperates and helps fund via an Intergovernmental Agreement (IGA) with the City of Tucson a limited fixed route transit services provided by Sun Tran on Oracle Road in Oro Valley. The transit division also has an agreement with the City of Tucson and pays the City for ADA assessments to determine eligibility for residents.

1. Fares

Since it began operations in 1996, Coyote Run has maintained the same fare rate for services. The current fare rate is based upon distance from the core of the Town limits and ranges from two (2) dollars for a one-way trip up to six (6) dollars for a one-way trip.

2. Challenges

In addition to the above statistics, there has been the need to increase driving and dispatching personnel. The Town of Oro Valley's Transit service has seen a steady increase in expenses both in the operating and in the personnel side of the budget; all the while funding from the Federal Transit Administration and the State of Arizona has remained flat with no increases in funding from either anticipated in the next few years.

Coyote Run is projecting a fare increase to be implemented on July 1st of 2006 to handle Coyote Run's expenses, bringing the fare rate to a more comparative level with other similarly sized transit systems in the United States. The recommended fare increase would approximately double the current annual fare.

3. Needs

Associated with current and future operating expenses in the Town of Oro Valley's Transit Division:

a. The current cost per one-way trip is $24.39.
b. The current cost per mile is $2.05
c. The current fare box to operating expenses ratio is 8.5% (this is the lowest ratio since Coyote Run began services in 1996) this is well below the national average of 14%.
d. The current fuel cost's per gallon of fuel is $2.17 and the transit division consumes on average 1500 gallons per month or an estimated total of 18,000 gallons for fiscal 2005/2006. In actual cost's this would be just under $40,000 in fuel cost for the current fiscal year. That's compared to the total in fiscal 2004/2005 of just over $34,000 in total fuel cost.
e. In this current fiscal year it is estimated the Transit Division's total maintenance costs at $37,000.00 compared to last fiscal years total maintenance cost's of $34,000. These maintenance-related expenses are expected to rise substantially in the next few years as the transit Division's fleet continues to age.
f. In fiscal year 2004/2005 the Transit Divisions total personnel costs were $273,512.00 and in the current fiscal year it is estimated personnel expenses (payroll etc.) to be at least $322,282.00.
g. In fiscal 2004/2005 the cost per vehicle was $48,490.00 and the estimated cost per vehicle in the current fiscal year of 2005/2006 is $69,735.00.

G. University of Arizona Cat-Tran

The University of Arizona constitutes a significant part of Tucson; it is one of its single largest employers, generator of traffic, and concentration of daytime population.

The University of Arizona planning area encompasses approximately 490 acres and includes acreage presently in University ownership, city streets and alleys, acreage owned by institutions associated with the University, and property to be acquired by the University.

The University is comprised of two campuses, the Main Campus and the Arizona Health Science Center (AHSC). Most of the Main Campus is bounded by Speedway Boulevard, Campbell Avenue, Sixth Street, and Park/Euclid Avenues. The "North Campus" of the AHSC, which includes the University Medical Center (UMC), is currently bounded by Chauncey Street, Campbell Avenue, Helen Street, and Vine Avenue. The campuses are surrounded by nine predominantly residential neighborhoods, as well as a number of commercial areas.

The goal of the *2003 University of Arizona Comprehensive Master Plan* is to provide the best environment for teaching, research, and service to the State of Arizona. It involves the careful balancing and weaving of interconnected and interdependent issues. They include the relationship between teaching, research and service, utility infrastructure, transportation, circulation, and parking, building placement, sustainability, pedestrian circulation, neighborhood concerns, economic development, and housing and student life. The *Master Plan* attempts to live up to its title by being truly comprehensive in addressing these interrelated elements, thereby, providing direction for future developments to further enhance a functional and beautiful campus reflecting the spirit of the University of Arizona.

The Campus supports approximately 37,000 FTE students and a University community of about 55,000. There are upwards of 18,000 parking spaces and 9,000,000 gross square feet of buildings. The *Comprehensive Campus Plan 2003* provides capacity for anticipated growth of up to 40,000 FTE students and a University community of about 75,000. A relatively modest growth in parking spaces, including those at the University Medical Center, is recommended to increase to 21,000 supporting a new total of more that 17,000,000 gross square feet of campus buildings.

1. University of Arizona Transportation System

The transportation system administered by the Parking & Transportation Services Department at the University of Arizona is a fare-free system and consists of a fixed route shuttle service and a demand response disabled cart service for elderly, permanent or temporarily disabled individuals. It is a self-sustaining transit system funded only by parking revenue and other fees generated by the University of Arizona, Parking & Transportation Services Department. A $25.00 Semester Boarding Pass is sold on three routes (USA, Orange and Mauve) for passengers traveling to the Main Campus from remote off campus shuttle stops and University facilities. These passes allow students and employees that live in close proximity to a shuttle route to utilize the shuttle service without having to purchase parking permits for the Main Campus and also help manage the passenger loads from high density areas near the University.

2. University of Arizona Cat Tran Shuttle Service

Cat Tran is the University of Arizona campus transit circulator, owned and operated by the University of Arizona Parking & Transportation Services Department. Cat Tran provides fare-free fixed route transit service along five primary routes to faculty, students, employees and visitors. Shuttle service at the main Campus is open to the general public. Cat Tran service is ADA accessible and circulates between U of A on and off campus parking facilities, park and ride lots, Downtown Tucson, University Medical Center, and the Main Campus.

Cat Tran provides service on five (5) primary routes for daily service and one (1) route for evening service Monday through Friday. Continuous service is provided each day from 6:30 AM to 12:30 AM of the next day (*see Map 9*). The Cat Tran Fleet consists of 18 buses that utilize a combination of gas and clean bio-diesel engines. The Cat Tran service area includes 49 stops concentrated at the Main Campus, park and ride lots, remote parking facilities, and the Arizona Health Science Center. Two (2) stops in the Downtown area also provide a direct link to the University from downtown housing, government offices, and for UA staff commuting to UA facilities downtown.

A key component of the Cat Tran service is the network of six park and ride lots that provide access to routes serving the Main Campus. Use of these lots is restricted to those holding parking and boarding passes issued by the University. Pass holders utilize Cat Tran service to the Main Campus reducing traffic congestion and demand for on Campus parking space.

Six routes operate during the school year:

a. **Orange Route** operates from campus to Prince Road along Mountain Avenue. It serves three (3) park and ride lots, the 9004 lot at Price Road and Vine, the 9007 lot at Mountain and Ft. Lowell and the 9005 lot at Adelaide and Mountain. The route operates Monday through Friday from 6:30 AM to 6:30 PM and services each stop approximately every 15 minutes.
b. **Mauve Route** operates from the Arizona Health Science Center through campus to the 9008 lot on Plummer Avenue (south of Broadway). The route operates Monday through Friday 6:30 AM to 8:00 PM and services each stop every 10 minutes during peak hours and every 15 minutes during off peak hours.
c. **USA Route** operates from the Student Union on campus to the University Services Annex building at Main Avenue and St. Mary's Road. The USA Route interlines with the City of Tucson's TICET Transit System at the Downtown Franklin Street stop. The route operates Monday through Friday from 6:30 AM to 6:30 PM and services each stop every 20 minutes.
d. **Purple Route** operates within the confines of the campus and travels north and south from the Arizona Health Science Center to the 6th Street Garage on the southern boundary of campus. The route operates Monday through Friday from 6:30 AM to 6:30 PM and services each stop every 12 minutes.
e. **Teal Route** operates within the confines of the campus and travels from the Arizona Health Science Center (AHSC) to Main Gate Square and back to AHSC. The route operates Monday through Friday from 6:30 AM to 6:30 PM and services each stop every 13 minutes.
f. **Nightcat Route** operates as a circulator on the Main Campus and extends service to the Arizona Health Science Center. The route covers key evening activity centers on campus and operates Monday through Friday from 6:30 PM to 12:30 AM. The route provides service on a 30-minute frequency and may provide slight route deviations for customer convenience, safety and weather conditions.

3. U-Pass Program

The University, through the Parking and Transportation Services Department works in conjunction with Sun Tran to promote public transit, and reduce traffic congestion on critical commute corridors to the University. Parking and Transportation Services offers a subsidized bus pass purchase program entitled U-Pass, to all students and employees.

The U-Pass program enables any student or employee affiliated with the University to receive up to 50% off the Sun Tran full fare rate. In collaboration with Sun Tran, special "All Access" passes are designed and created and sold exclusively on the UA campus.

There are three pass types sold, they include:

- Fall Semester Pass discounted 40% and valid from August to December
- Academic Pass discounted 50% and valid from August to May
- Annual Pass discounted 43% and valid from August to August

Over the last five years, the U-Pass program has afforded over 12,700 University students and employees an alternative transportation choice in their daily commute to the University. The annual subsidy cost for the U-Pass program provided by the Parking and Transportation Services Department is approximately $250,000 per year.

4. Park and Ride Lots

The University of Arizona has established six (6) Park and Ride lots in close proximity to the University campus which are utilized by University students and employees through a parking permit system administered by Parking and Transportation Services. All Park & Ride lots are located on the Cat Tran route system with easy access to the Main campus with service every 10, 15 and 20 minutes. Current lot capacity stands at 691 spaces with the potential to expand by additional 200 spaces.

The University owns or leases Park and Ride lots at the following locations, they include:

- **Prince Road and Vine -** Orange Route 15 min. service / 81 spaces
- **Adelaide and Mountain Ave.** Orange Route 15 min. service / 66 spaces
- **Ft. Lowell and Mountain Ave.** Orange Route 15 min. service / 36 spaces
- **Main Ave. and Sixth Street (2 lots)** USA Route 20 min. service / 144 spaces
- **Plummer Ave. South of Broadway** Mauve Route 10 min. service / 364 spaces

All Park and Ride lots are patrolled by Parking and Transportation Services enforcement personnel and are maintained by University field crews.

5. Cat Tran Service Summary

Exhibit 12 – Five-year University of Arizona Cat Tran service summary

	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	5-Year Change
Passenger trips	318,573	392,169	376,918	444,254	501,245	57.3%
Annual Change	25.2%	23.1%	-3.9%	17.9%	12.8%	
Annual Service Hours					53,160	
Annual Budget					$ 1,102,405	
Cost Per Service Hour					$ 20.74	
Cost Per Trip					$ 2.20	

6. University of Arizona Disabled Cart Service

The Disabled Cart Service at the University of Arizona is a free service provided to all University faculty, staff, students, visitors and public participants in University programs who have a temporary or permanent disability that creates a need for special transportation services. The cart service operates in conjunction with Cat Tran on the main campus to ensure that disabled individuals have full access to all Campus buildings and facilities. The cart service fleet consists of six (6) golf carts, one (1) a four passenger, four (4) with six passenger capacity for ambulatory and limited mobility passengers and one (1) fully accessible cart for wheelchair passengers. The Disabled Cart Service has been in operation for eight (8) years, has logged approximately 50,000 service hours and provided more than 75,000 trips. The cart service provided 15,608 trips during the fiscal year ended June 30, 2005, an increase of 5.8 % over fiscal year 2003/2004 when 14,751 trips were provided. Ridership growth over the last five (5) years shows an impressive 71.8 % increase in rider ship.

The University of Arizona Disability Resource Center (DRC) estimates their client base at approximately 1,750 disabled students. The DRC and the Campus Health Center serve as the referral service for the disabled client base on campus. Parking & Transportation Services covers this disabled student base and also extends service to staff and faculty. The majority of trip requests are utilized for class attendance and to access worksites and buildings on the University campus. In some instances, client services are extended to visitors attending cultural, academic, and sporting events. The Disabled Cart Service area covers approximately 490 acres and contains a daily population of approximately 55,000 people.

The Disabled Cart Service is the primary source of transportation for the disabled to access locations and buildings within the campus area. The primary focus of agencies such as Sun Tran, Van Tran and Handi-Car is to get people to the University campus, but not to provide internal campus transportation. The makeup and layout of campus facilities, classrooms, streets and vehicle restrictions prevent local transit agencies from providing critical door to door (classroom and building) transportation required by our disabled clients.

Information on the Disabled Cart Service is available through collaborative efforts with Sun Tran and multiple departments at the University such as Human Resources, Campus Health, Disability Resource Center, Student Union, and Student Affairs. On line information of the service is available through various U of A Departments and Parking and Transportation Services websites.

Exhibit 13 – Five-year University of Arizona Disabled Cart service summary

	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	5-Year Change
Passenger trips	9,084	9,856	10,061	14,751	15,608	71.8%
Annual Change	7.9%	8.6%	2.0%	46.6%	5.8%	
Annual Service Hours					5,972	
Annual Budget					$ 97,472	
Cost Per Service Hour					$ 16.32	
Cost Per Trip					$ 6.25	

7. University of Arizona Planning Challenges and Constraints

Solving the transportation issues at the University of Arizona underscores the need to move vigorously toward a multi-modal transportation system and to meet the land use challenges presented in a 490 acre planning area, traffic congestion, travel demands of 55,000 daily residents and a future University population 75,000. A few examples include:

a. **Traffic Congestion** – Traffic congestion continues to grow in the University area as a result of the University's own growth and the growth in through traffic (i.e., with neither origin nor destination at the University). Road widening, once the ready answer to traffic congestion, becomes difficult and then impossible, due to monetary and social/environmental costs. The major implications for campus transportation planning: recognize traffic capacity is limited; withdraw the "target" of free-flowing traffic, and direct attention to other ways of meeting travel needs or eliminating or minimizing travel needs.

b. **Parking** – As the campus grows, the parking program faces the loss of its inexpensive surface space capacity as more buildings create the demand for more parking. At full build out the University will provide parking for only 25 percent of the campus population. The major implications for campus transportation planning: begin to develop parking at fringe locations served by transit shuttles. Identify infrastructure requirements needed to accommodate multi-modal transportation needs from reduced parking capacity.

c. **Infrastructure** - There is a major lack of planned improvements in the area surrounding the University of Arizona in spite of the fact that it is expected to continue and expand as a major trip generator in the central city and as a major travel market affecting public transportation.

d. **Park and Ride Capacity** - There is a lack of Park and Ride capacity for emerging travel needs at/to the University as well as opportunities to access service through park & Ride lots. A greater "Regional Emphasis" on Park and Ride planning and investment is needed for the region.

e. **Connectivity -** Growing areas of the Region lack direct transit connections as well as opportunities to access service through Park and Ride lots. Areas that lack direct transit connections include:
    - Oro Valley / University of Arizona
    - Rita Ranch / University of Arizona
    - Marana / University of Arizona
    - South Tucson / University of Arizona

H. Old Pueblo Trolley

Old Pueblo Trolley (OPT) emerged from the 1985 University of Arizona Centennial celebration when a group was founded to revive trolley service in Downtown Tucson. Currently, OPT operates as a nonprofit organization that includes a transit museum division, a heritage bus division, and historic electric streetcar division. OPT's electric streetcar division provides service from the Fourth Avenue Business District to the main gate of the University of Arizona. Service operates on Friday nights, Saturdays, and Sundays, with a fare of $1.00 for adults and 50¢ for children 6 to 12 years-old on Fridays and Saturdays, each way, and a fare of 25¢ each way on Sundays. An all-day pass is also offered for $2.50 per adult and $1.25 per child. The trolley route is shown on *Map 10*.

The City of Tucson has supported a majority of OPT's endeavor's through the donation of retired buses and parts, leasing property for the Transportation Museum, and assisting in providing some maintenance for OPT's catenary electrical lines and rail track. Additionally, the City of Tucson has collaborated with OPT on a number of grant-related issues.

Challenges:
As a not-for-profit entity, OPT (Historical Streetcar Division) is challenged to provide safe, professional, and timely services with very little financial resources. Although the City of Tucson recognizes OPT as a community icon, recognition alone cannot sustain all the multi-faceted needs that a historic entity faces.

Needs:
OPT's primary need is a steady revenue stream. Like many municipal-supported and not-for-profit entities, sometimes the need for operational capital is outstripped by the shear number of projects being competed upon and the lack of revenue that can be generated.

I. Other Transit Programs

1. Section 5310 Elderly and Disabled Transportation Program

The federally-funded Section 5310 program, otherwise known as the Elderly and Disabled Transportation Program, assists local non-profit agencies in acquiring vehicles to transport elderly and disabled clients. This program supplements the larger paratransit programs (such as Van Tran, Pima Special Needs Transit, and Coyote Run), providing agencies with up to 80 percent of the cost of a vehicle that will be used for client transportation. Non-profit agencies, Native American Nations, Districts and Tribes are eligible applicants. Types of vehicles typically available under this program range from small passenger vans without wheelchair access to large cutaway vans with raised roofs and wheelchair lifts.

Local applications are solicited annually by the Pima Association of Governments (PAG) and are reviewed by a regional Elderly and Disabled Transportation Review Task Force. The Task Force meets to review applications, hear presentations by potential recipients and ranks the submissions to the Arizona Department of Transportation (ADOT) for inclusion on a statewide priority list. In past years, the PAG region has been successful at obtaining grants, and an average of 12-14 vehicles have been made available to agencies in our region annually. In fiscal year 2005, local agencies received a total of $515,000 in 5310 Program funding for vehicles. They are listed below.

5310 Program Funding Recipients for FY 2005:

- Paralyzed Veterans of America
- Project PPEP
- UofA Parking and Tranportation
- Community Living Program of Catholic Community Services
- San Xavier District of the Tohono O'odham Nation
- Pio Decimo Center
- AIRES
- Intermountain Centers for Human Development
- Blake Foundation
- La Frontera Center

2. Regional Vanpool Incentive Program (VIP)

The Pima Association of Governments (PAG) Travel Reduction Program (TRP) offers a Regional Vanpool Incentive Program (VIP) to assist with the formation of vanpools at major employers throughout the Tucson region. Major employers include both non-profit agencies and for-profit companies with 100 or more employees at the worksite. The main purpose of the program is to help reduce single-occupant vehicle trips and to offer an affordable transportation option to the regional workforce.

PAG provides a subsidy of $400.00 per month per van for a qualified van of 7 to 15 employees for a period of twelve months. The VIP is funded in part by the Federal Transit Administration and is locally supported. In order to qualify for the VIP subsidy, each employee must use the vanpool at least 3 times per week to and from the work site. The cost per seat of the van is determined by the size of the van, miles driven, fuel costs, number of riders and any subsidy provided by a TRP employer.

As of this year, 17 vanpools have been established serving a variety of major employment worksites such as local government offices, manufacturers and retailers. Annual ridership will be measured starting next year.

III. FY2007-FY2011 Planned Transit Service Improvements

The last Tucson Metropolitan Short-Range Transit Plan (SRTP), prepared for the years 1997-2002, provided a 5-year outlook for service improvements, planning activities, and capital programs. Given the many changes that have occurred since 1997 which impact all transit agencies in the region, this report has been prepared specifically to provide current statistics, projections, and future options regarding transit service in the Tucson metro area for the next five years. It will serve as an interim basis for the planning of transit services, as well as provide detailed data for future planning efforts, including the updating of the Regional Transportation Plan (RTP), the SRTR, and others.

The 1997-2002 Short Range Transit Plan (SRTP) included a series of goals, objectives, and standards for evaluating transit service. The plan identified the following nine goals, with accompanying objectives:

1. Develop a transit system that is available and usable to an increasing number of persons living in all parts of the metropolitan Tucson area.
2. Develop a transit system that attracts additional riders by expanding public awareness of transit as a realistic alternative to individual vehicles.
3. Develop a system that includes additional transit components such as dial-a-rides, circulators, non-ADA paratransit, shuttles, commuter rail, and light rail.
4. Develop an integrated system that seamlessly links all modes of transportation into a system that maximizes the public's ability to use alternative modes of transportation.
5. Develop a system that is energy efficient and environmentally friendly.
6. Purchase vehicles and build stops, stations, and transit centers that are accessible with persons with disabilities.
7. Develop a system that provides an ADA paratransit operation that is complementary and comparable to the fixed route component and that complies with all ADA requirements.
8. Develop a system that is funded by a dedicated revenue source supplemented by grants and contributions from local, state, and federal funding sources, and by maintaining a reasonable system-wide farebox-to-cost ratio.
9. Develop a system that makes the most efficient and responsible use of public funds.

These goals remain important, and transit authorities continue to collect data to monitor performance in these areas. The updating of the SRTR in 2007 will provide an opportunity to re-visit these goals and objectives, and to consider their current relevance. The recognition of the regional context of land use and transportation patterns in the Tucson metro area is critical for the efficient coordination of efforts by the six local jurisdictions for achieving transit improvements in the next five years.

There are a number of future options available to transit to serve future needs. This report looks at the planned improvements for FY2007-FY2012 for seven crucial elements that conform the transit system in the Tucson region, shown in *Exhibit 14*.

Exhibit 14 – Elements of the Tucson Regional Transit System

A. FY2007-FY2011 Planned Improvements for Fixed Routes – Sun Tran

1. Weekday Evening Bus Service Expansion and Weekend Bus Service Expansion.

Exhibit 15 and *Maps 11, 12 and 13* show the routes where weekday evening hours will be expanded until 11:00 PM or midnight (current operation is from 7:30 PM to 9:30 PM), and weekend hours will be expanded approximately from 6:00 AM to 9:00 PM on Saturdays, and from 7:00 AM to 8:00 PM on Sundays.

Exhibit 15 – Planned Expansion of Service Hours for Sun Tran's Regular Fixed Routes

Route number/name		Projected Fiscal Year*		
		Expanded Weekday Evening Hours		Expanded Weekend Hours
		Until 11:00 PM	Until Midnight	
RADIAL ROUTES				
1	Glenn / Swan	2007		2007
2	Cherrybell / CountryClub	2007		2008
3	6th Street / Wilmot	2007		2007
4	Speedway Blvd.		2007	2007
6	S. Park Ave./ N. 1st Street	2007		2007
7	22nd Street	2007		2007
8	Broadway / 6th Avenue		2007	2007
9	Grant	2007		2007
10	Flowing Wells	2007		2007
16	12th Ave. / Oracle Road		2007	2007
19	Stone	2007		2007
21	W. Congress / Silverbell	2007		2008
22	Grande	2007		2007
23	Mission	2007		2008
CONNECTIVE ROUTES				
5	Pima / W. Speedway	No Planned Service Improvements		
11	Alvernon	2007		2007
15	Campbell	2007		2007
17	Country Club / 29th Street	2007		2007
20	W. Grant / Ironwood Hills			2008
34	Craycroft	2007		2007
37	Pantano			2008
50	Ajo Way	No Planned Service Improvements		
FEEDER ROUTES				
24	12th Avenue	No Planned Service Improvements		
26	Benson Highway	2007		2008
27	Midvale Park Rd.	2007		2008
29	Valencia	2007		2008
61	La Cholla	No Planned Service Improvements		

** Projected implementation dates may vary*

2. Bus Service Frequency and Service Area Expansion

Twelve of Sun Tran's service routes will receive an increase in bus frequencies during weekdays only to reduce overcrowding and improve overall reliability (see *Exhibit 16* and *Maps 14, 15 and 16*). Frequency will vary by times of the day. Some routes will be extended to currently unserved areas of the region. A new northwest area bus maintenance facility will be constructed to accommodate the

expanded fleet. Frequency service enhancements are not scheduled to begin until 2012 after the construction of the new Sun Tran maintenance facility and the purchase of new expansion vehicles.

Exhibit 16 – Planned Increase of Frequency and Area Expansion for Sun Tran's Fixed Routes

Route number/name		New Frequencies and Time Period		New Extension with 30 Min. Frequency and Time Period	Projected Fiscal Year*
		Section to be improved from 15 to 10 min.	Section to be improved from 30 to 15 min.		
RADIAL ROUTES					
3	6th Street / Wilmot		6th St. / 5th St. – Midday		2012
4	Speedway Blvd.	Speedway – Midday		Kolb to PCC East – All Day Speedway to Houghton – All Day	2012
6	S. Park Ave./ N. 1st St.	S.Park Ave./N.1st Ave. (north of Laos Transit Center, south of Tohono Transit Center) – Peak	Bilby / Tucson Blvd (south of Laos Transit Center). – Peak		2012
7	22nd Street		22nd Street – Peak		2012
8	Broadway / 6th Avenue				2012
9	Grant		Grant – All Day		2012
10	Flowing Wells		Flowing Wells – Peak		2013
16	12th Ave. / Oracle Road	S.12th Ave / Oracle (north of Laos Transit Center; south of Tohono Transit Center) – Peak	N.Oracle / Ina (north of Tohono Transit Center) – Peak		2012
19	Stone		Stone – All Day		2013
CONNECTIVE ROUTES					
5	Pima / W. Speedway				2012
11	Alvernon	Alvernon – All Day	Ajo and Palo Verde – All Day (to 20 min)		2012
15	Campbell	Campbell (north of UA Mall) – Peak	Campbell (south of UA Mall) – Peak (to 20 Min)	Campbell to Tucson International Airport – All Day	2013
FEEDER ROUTES					
27	Midvale Park Rd			Valencia to Casino del Sol – All Day	2013
NEW ROUTES					
62	Oracle/Oro Valley (Feeder Route)			N. Oracle to Oro Valley (north of Tohono Transit Center) – All Day	2012
	Houghton			Houghton/Rita Ranch – All Day	2012

** Projected implementation dates may vary*

3. New and Enhanced Express Bus Service

Existing express routes would be upgraded to a minimum of six trips to provide more flexibility for regional transit commuters. Six new express routes also will be added during weekday peak hours (see *Exhibit 17* and *Map 17*). New modern express-style buses will be purchased and used on most Sun Tran express routes.

Exhibit 17 – Planned New and Enhanced Express Bus Service for Sun Tran

Express Route Number/Name		Routes to be upgraded to 6 trips per weekday	New Route Area	Projected Fiscal Year*
81	Tanque Verde	✓		2010
82	Broadway		Trips increased to 12 trips per weekday	2010
83	Golf Links	✓		2010
102	Ina Road		No service enhancements planned	
103	Oldfather	✓		2010
105	Sunrise	✓		2010
106	Swan	✓		2010
162	Oro Valley			2009
180	AeroPark Speedway	✓		2010
186	AeroPark Ina		No service enhancements planned	
NEW			Oro Valley to Downtown/UA and Raytheon	2009
NEW			Marana to Downtown	2009
NEW			Green Valley to Downtown	2009
NEW			Rita Ranch area to Downtown	2009
NEW			Laos Transit Center to Ronstadt Transit Center	2011

** Projected implementation dates may vary*

B. FY2007-FY2011 Planned Improvements for Existing Urban Circulators – Cat Tran, TICET

1. University of Arizona Cat Tran

Cat Tran will provide service to a growing campus community projected to reach 40,000 Full Time Equivalent (FTE) students and a University community of about 75,000. The University will provide service between the Main Campus and on and off campus parking facilities, park and ride lots, Downtown Tucson, University Medical Center and planned University Medical Research and Business & Technology Centers near the Main Campus.

These services are intended to continue to develop and expand the University shuttle system, especially park-and-ride lots. These services are also intended to improve circulation within and surrounding the University. Cat Tran service will also be coordinated with Sun Tran service, especially park-and-ride lots, schedules and circulator routes to improve access to campus and alleviate congestion on surrounding streets and neighborhoods.

2. Tucson Inner City Express Transit (TICET)

Route adjustments are currently being evaluated to provide service to the University of Arizona's main gate area and to eliminate hours when ridership is low.

C. FY2007-FY2011 Planned Improvements for New Urban Circulators – Marana, Oro Valley, and Green Valley/Sahuarita

Three new transit circulator services (Marana, Oro Valley and Green Valley/Sahuarita) will be provided in communities with limited transit service today (see *Maps 18 and 19 of Appendix A*). These new services are intended to provide daily connections to local activity centers as well as the regional Sun Tran system. Service routes, schedules, and operations will be determined within the next few years as the RTA Plan advances.

Exhibit 18 – Planned Improvements for New Marana, Oro Valley, and Green Valley/Sahuarita Urban Circulators

Circulator Area	Vehicles	Annual Hours	Projected Fiscal Year
Marana	2	11,022	2009
Oro Valley	2	8,784	2009
Green Valley/Sahuarita	2	8,784	2009

D. FY2007-FY2011 Planned Improvements for Rural Transit – Ajo

The current service from Tucson to Ajo will increase the number of service days from three to five (Monday through Friday). A heavy duty over the road type bus will be purchased. Other public transit services in the Ajo area will be improved and expanded.

E. FY2007-FY2011 Planned Improvements for Paratransit Services

Existing paratransit services will be expanded by approximately 3.5 percent annually to meet future mobility needs of a growing elderly and disabled population. Expanded paratransit services include: Tucson's Van Tran, Oro Valley's Coyote Run, and Pima County's Pima Transit.

Funding also will help support existing volunteer-based services for seniors in need, organized by the Pima Council On Aging (PCOA), in partnership with other agencies.

F. FY2007-FY2011 Planned Improvements for Park and Ride Centers

Transit service will be supported by six new park-and-ride centers located in outlying communities, with connecting routes to central Tucson. Centers will have amenities for safety, comfort and convenience. Locations include: Oro Valley, Marana, Green Valley, Valencia Rd/Casino del Sol area, Rita Ranch area, and Houghton/Broadway area (see *Map 18*). Facility locations and operations will be determined within the next few years as the RTA Plan advances.

G. FY2007-FY2011 Planned Improvements for Old Pueblo Trolley

Old Pueblo Trolley will continue to provide the same level of service within the same service area, until 2010, when the modern streetcar would work in conjunction with OPT.

H. A Preview to the High-Capacity Modern Streetcar System

Photo simulation in the UA campus

A new fixed-guideway transit system will link densely-populated activity centers along a 4-mile corridor in central Tucson between the University of Arizona and downtown. The system is intended to serve an existing weekday population of 100,000 within the corridor, as well as encourage future transit-supportive development and economic investment for future urban residents and workers. Over 1.4 million trips are estimated annually.

1. Schedule.

In the fall of 2004, the City of Tucson Department of Transportation initiated a Major Transit Investment Study (MTIS) to identify potential transit solutions connecting major activity centers in the central core, including downtown Tucson, the Rio Nuevo Master Plan area, the 4th Avenue/University Boulevard retail corridors, the University of Arizona and the Arizona Health Sciences Center. The study analyzed mobility needs and identified and compared the costs, benefits, and impacts of a range of transit alignment and technology alternatives. A Locally Preferred Alternative (LPA) was selected by the Tucson Mayor and Council on January 18, 2006. The modern streetcar was the selected technology and the University Boulevard route was the selected alignment (see *Map 19*).

The MTIS is being advanced in accordance with the project development process outlined by the Federal Transit Administration (FTA) for major capital investments and the rules and regulations specified under NEPA. A Notice of Intent was published in the Federal Register on January 19, 2005, officially identifying the City of Tucson as a potential candidate for Small Starts funding for 50 percent of the capital costs of the modern streetcar. The local funding for the modern streetcar is included in Regional Transportation Plan as one of the transit projects.

The next step is to conduct a detailed analysis of the LPA and the No-Build Alternative during the Draft Environmental Impact Statement (DEIS) and to propose mitigation measures for adverse impacts. In 2007, the DEIS will be circulated for public review and comment, and public hearings will be held. Based on the findings of the DEIS and the public comments received, FTA and the City of Tucson will adopt a refined LPA.

Photo simulation in downtown Tucson

Preliminary Engineering (PE) will be conducted concurrently with preparation of the FEIS that responds to public comments and commits to specific mitigation measures for adverse impacts. The FEIS will be submitted to FTA for their consideration, who will then issue a Record of Decision (ROD) that provides environmental clearance. Final design will be conducted following the issuance of a favorable ROD. A financing plan will then be finalized, construction will begin, and the project will be fully operational by 2011.

2. What is a Modern Streetcar?

The modern streetcar is a new technology that has been introduced in Portland, Oregon and Tacoma, Washington. It is an electric railway, operating at street level, typically in mixed traffic. It shares a lane, on tracks, with other vehicles and operates safely in high traffic and/or high pedestrian areas to link neighborhoods with activity centers. In Tucson, the modern streetcar would work in conjunction with

Old Pueblo Trolley (restored historic vehicles) but it is a separate system with a distinct, modern technology. Modern streetcars are low-floor, air-conditioned vehicles with wide doors (designed for rapid on and off boarding) that can carry approximately 150 passengers per vehicle. Approximately 10 percent of the Tucson metropolitan area population lives and/or works within walking distance of the Modern Streetcar. The Modern Streetcar is expected to carry 4,200 passengers per day, including residents, University and Downtown-area employees, tourists and students. In addition, the Modern Streetcar will provide service to those people coming Downtown for special events, sporting events, entertainment and other activities. The Streetcar system will be fully integrated with Sun Tran and will reduce 259 bus trips per day from the Downtown area.

3. Relationship with land uses.

Photo simulation on 4th Avenue Tucson

Across the nation, more and more people are choosing to live closer to urban centers so they can reduce their commuting costs and spend less time driving between home and work. In the Tucson region, the Modern Streetcar will entice people to live more centrally, which will promote infill development and help curb urban sprawl. Thousands of housing units are being developed and planned for the areas in and around Downtown. By living closer to their work, these residents won't be commuting on I-10, Oracle Road, Broadway, I-19, or other major arterials.

The use of a Modern Streetcar can lead to a reduction in urban sprawl because transit systems help serve as a catalyst for land use change. Fixed transit systems linked with good land use policy can reduce demand for driving by creating more compact, efficient forms of development that are pedestrian-friendly. Such systems also lead to the development of exciting urban environments where services are located closer together.

IV. Projected Capital Improvement Programs, Operational Costs and Funding Sources

A. FY2007-FY2011 Capital Improvement Program, Operational Costs and Funding Sources for Fixed Routes – Sun Tran

Exhibit 19 – Sun Tran – Projected Five-Year Operating and Capital Costs

Project Description	*Fiscal Year 2006-2007*	*Fiscal Year 2007-2008*	*Fiscal Year 2008-2009*	*Fiscal Year 2009-2010*	*Fiscal Year 2009-2010*	*Five Year Total*
OPERATING:						
Sun Tran Operating Budget (Excludes grant funded projects)	$39,872,480					
RTA Operating Budget (Excludes Revenue offset)	$1,010,515	$3,289,630	$3,289,630	$3,878,726	$4,470,957	$17,408,173
CAPITAL:						
Number of replacement buses	23	3	11	1	10	48
Federal	$9,220,553	$4,886,459	$4,038,697	$381,634	$4,885,380	$23,412,723
Local	1,888,547	1,000,841	827,203	78,166	1,000,620	4,795,377
Total	$11,109,100	$5,887,300	$4,865,900	$459,800	$5,886,000	$28,208,100
RTA Funded Capital Items						
PERC Units	$40,000					$40,000
Replacement buses		470,000				470,000
Expansion buses			$6,897,000	$5,082,000	$1,761,000	$13,740,000
Total	$40,000	$470,000	$6,897,000	$5,082,000	$1,761,000	$14,250,000
Number of buses funded	0	7	19	16	5	47

Note: Numbers do not reflect inflation projections

B. FY2007-FY2011 Capital Improvement Program, Operational Costs and Funding Sources for Existing Urban Circulators – Cat Tran, TICET

1. University of Arizona Cat Tran

The University of Arizona Transit System is self-sustaining, funded only by parking revenue and other fees generated by the University Parking and Transportation Services Department.

Exhibit 20 – Cat Tran – Projected Five-Year Capital Improvement Program

Project Description	*Fiscal Year 2006-2007*	*Fiscal Year 2007-2008*	*Fiscal Year 2008-2009*	*Fiscal Year 2009-2010*	*Fiscal Year 2009-2010*	*Five Year Total*
Cat Tran Shuttle System Replacement Buses 2,2,4,3,3	$164,000	$175,100	$370,800	$293,550	$228,150	$1,231,600
Expansion Buses (2)		175,000				175,000
Support Vehicle Replacement (1)		20,500				20,500
Vehicle Light Maintenance - Support Equipment			200,000	150,000	5,000	350,000
Bio-Diesel Fueling System Plumber Facility		85,000				85,000
Administrative/Maintenance Facility Improvements	25,000	25,000	35,000	35,000	10,000	130,000
Disabled Cart Service Replacement Carts 4,1, 2, 4,1	48,000	9,270	19,570	52,000	10,600	139,440
Disabled Cart Service Expansion Carts (1)	9,270					9,270
Bus Shelters 2,2,2,2,2	30,000	35,000	38,000	40,000	42,000	185,000
Bike Lockers 5,5,5,5,5	13,000	1,450	1,550	17,000	19,000	52,000
Park & Ride Lots		100,000	450,000	500,000	500,000	1,550,000
Program Area Total	$289,270	$626,320	$1,114,920	$1,087,550	$814,750	$3,927,810

Exhibit 21 – Cat Tran – Projected Five-Year Operating Budget

Project Description	*Fiscal Year 2006-2007*	*Fiscal Year 2007-2008*	*Fiscal Year 2008-2009*	*Fiscal Year 2009-2010*	*Fiscal Year 2010-2011*	*Five Year Total*
Cat Tran Shuttle System	$1,176,200	$1,314,200	$1,347,055	$1,380,731	$1,415,249	$6,633,435
Disabled Transportation Cart Service	109,700	115,185	120,944	126,991	133,341	606,161
Bicycle Program	115,200	120,960	127,008	133,358	140,025	636,551
Transportation Administration	437,400	459,270	482,233	506,345	531,662	2,416,910
Transportation Grant Program	15,000	15,000	18,000	20,000	25,000	93,000
Program Area Total	$1,853,500	$2,024,615	$2,095,240	$2,167,425	$2,245,277	$10,386,057

2. Tucson Inner City Express Transit (TICET)

No Capital Improvement Program is in place at this point. There is the possibility of expanding the fleet to serve additional areas and/or special events. This effort will need to be coordinated with the Regional Transportation Authority (RTA).

Current operational costs are funded through parking revenues only, and outside funding sources to continue to provide service to non-pay parking areas are being researched.

Exhibit 22 – TICET – Projected Five-Year Operating Budget

	Fiscal Year 2006-2007	Fiscal Year 2007-2008	Fiscal Year 2008-2009	Fiscal Year 2009-2010	Fiscal Year 2010-2011	Five Year Total
Operations, Maintenance, Fuel						
Yellow Route	$ 272,436.33	$ 272,436.33	$ 272,436.33	$ 280,609.42	$ 289,027.70	$ 1,386,946.11
Blue Route	148,063.22	148,063.22	148,063.22	152,505.12	157,080.27	753,775.05
Red Route	171,753.34	171,753.34	171,753.34	176,905.94	182,213.12	874,379.08
Administrative/ Support	59,225.29	59,225.29	59,225.29	61,002.05	62,832.11	301,510.02
Brochure Printing, Shuttle signs, shuttle painting, Misc. adv., etc.	12,500.00	48,500.00	12,500.00	48,500.00	12,500.00	134,500.00
Yearly Totals	$ 663,978.18	$ 699,978.18	$ 663,978.18	$ 719,522.52	$ 703,653.20	$ 3,451,110.26

C. FY2007-FY2011 Capital Improvement Program, Operational Costs and Funding Sources for New Urban Circulators – Marana, Oro Valley, and Green Valley/Sahuarita

The RTA-funded transit circulators are projected to begin operating within the next three to four years. The Green Valley/Sahuarita and Oro Valley circulators will be the first ones to begin. Each of these services has a budget of $7.7 million for the life of the RTA plan. The Marana circulator has a budget of $8.4 million since the service area is larger. It is expected that each of these services will be operated by a private contractor who will provide all capital equipment and facilities. Estimated annual operating costs for the contractor are shown on *Exhibit 23*.

Exhibit 23 – Estimated Annual Operating Costs for the New Urban Circulators

	FY 2006-2007	FY2007-2008	FY2008-2009	FY2009-2010	FY2010-2011
Marana Circulator*				$467,000	$467,000
Oro Valley Circulator*			$430,000	$445,000	$458,350
Green Valley/ Sahuarita Circulator*			$430,000	$430,000	$430,000

Note: Numbers do not reflect inflation projections. All cost estimates are for operations only since the contractor will provide vehicles and equipment.

D. FY2007-FY2011 Capital Improvement Program, Operational Costs and Funding Sources for Rural Transit – Ajo

The improvements on the Ajo Route are tentatively scheduled to start sometime in fiscal year 2008. This means that RTA funding must cover 18 years of operations of the 20-year RTA plan.

Ajo Circulator: $1 million total or about $56,000 per year (RTA funds used to improve existing service)

Exhibit 24 – Capital Improvement Program for Pima County Rural Transit (Vehicles)

Route	FFY 2001/02 Grant 20	FFY 2002/03 Grant 21	FFY 2003/04 Grant 22	FFY 2004/05 Grant 23	FFY 2005/06 Grant 24	FFY 2006/07 Grant 25	FFY 2007/08 Grant 26	FFY 2008/09 Grant 27	FFY 2009/10 Grant 28	FFY 2010/11 Grant 29	FFY 2011/12 Grant 30
Ajo-Tucson			$100,000				$160,000				
Ajo-DAR					$80,000						$80,000
Ajo-Gila Bend Marana				$100,000					$80,000	Vehicle supplied by RPTA	
San Xavier						$63,000					
Tucson Estates							$70,000				
Green Valley	$52,205										

Note: Numbers do not reflect inflation projections

The budget summary shown on *Exhibit 24* is taken directly from Pima County Rural's Transit FY2006/2007, Section 5311 Grant Application, approved for funding by the Arizona Department of Transportation (ADOT). The Federal share comes from the Section 5311 Grant, the local share comes from Pima County's Department of Transportation non-HURF (Highway User Revenue Funds).

Exhibit 25 – Projected Costs for Pima County Rural Transit for FY 2006/2007

	Capital	Operating	Administration	Training	Total
Fare Revenues	$ 0	$ 67,000	$ 0	$ 0	$ 67,000
Other Operating Revenues	0	0	0	0	0
Local Share	12,600	350,489	35,744	0	398,833
Federal Share	50,400	350,489	142,972	3,500	547,361
Total	$ 63,000	$ 767,978	$ 178,716	$ 3,500	$ 1,013,194

Note: Numbers do not reflect inflation projections

E. FY2007-FY2011 Capital Improvement Program, Operational Costs and Funding Sources for Paratransit Services – Van Tran, Coyote Run

1. City of Tucson – Van Tran

Exhibit 26 – Van Tran – Projected Five-Year Operating and Capital Costs

Project Description	*Fiscal Year 2006-2007*	*Fiscal Year 2007-2008*	*Fiscal Year 2008-2009*	*Fiscal Year 2009-2010*	*Fiscal Year 2009-2010*	*Five Year Total*
OPERATING:						
Van Tran Operating Budget (Excludes grant funded projects)	$12,536,988					
RTA Operating Budget (Excludes Revenue offset)	$190,096	$380,194	$665,339	$950,485	$1,235,630	$3,421,744
CAPITAL:						
Number of replacement vans	104	12	33	15	29	193
Federal	$1,083,980	$426,620	$412,012	$353,663	$218,373	$2,494,648
Local	1,012,860	336,158	474,045	227,069	430,287	2,480,419
Total	$5,958,000	$1,977,400	$2,788,500	$1,335,700	$2,531,100	$14,590,700
Number of expansion vans	17	6	6	5	3	37
Federal	$1,083,980	$426,620	$412,012	$353,663	$218,373	$2,494,648
Local	222,020	87,380	84,388	72,437	44,727	510,952
Total	$1,306,000	$514,000	$496,400	$426,100	$263,100	$3,005,600
RTA Funded Capital Items						
Expansion vans	$158,725	$238,087	$238,087	$238,087	$238,087	$1,111,073
Number of expansion vans	2	3	3	3	3	14

Note: Numbers do not reflect inflation projections

2. Oro Valley – Coyote Run

Exhibit 27 illustrates rough estimates only and does not include any potential RTA funds neither personnel costs because they had not been determined at the time of finalizing this SRTR.

Funding for operating expenses comes from the Town of Oro Valley's general fund and from the Local Transportation Assistance Fund (LTAF). Funding for vehicles comes from the Town's' general fund and from the Federal Transit Administration via IGA's through the City of Tucson and when and if available from LTAF II funds.

Exhibit 27 – Capital Improvement Program and Operational Costs for Coyote Run

	FY 2006-2007	FY2007-2008	FY2008-2009	FY2009-2010	FY2010-2011
Capital Improvements	$120,000	$60,000	$60,000	$60,000	$60,000
Operational Costs	577,213	588,673	680,858	708,402	741,153
Total	$697,213	$648,673	$740,858	$768,402	$801, 153
Fare Revenues		$65,000	$70,000	$70,000	$75,000
LTAF II		20,000	20,000	20,000	20,000
RTA		51,142	130,256	149,487	168,675
Federal Share		60,000	60,000	60,000	60,000
State Shared Revenues		183,500	183,500	183,500	183,500

Note: Numbers do not reflect inflation projections

V. Suggested Transit Studies and Future Programs

Due to the ever changing regional conditions regarding public transit service, it is important to program regular updates to pertinent regional data and to perform studies related to the provision of efficient transit service region-wide. The Transit Working Group should annually prioritize study and data collection needs for inclusion in the PAG Overall Work Program. The Transit Working Group will developed the scope of each study and estimate costs for the OWP submittals. Among the studies to be considered during the next five years are the following:

A. System-Wide ADA Analysis

This is a comprehensive analysis of ADA accessibility throughout the region for access to transit service. The analysis will include a complete inventory of all transit routes, facilities, and stops or stations. Included will be sidewalk access to the transit stops, accessibility around shelters, curb ramps and their appropriate design, access from major stops to destinations, and any other issues related to compliance with Federal Americans with Disabilities Act provisions. The ADA Analysis should also include am assessment of public transportation passenger facilities to assure barrier free access to persons with disabilities including those in wheelchairs.

B. Bus Shelter and Bus Stop Inventory and Analysis

The study will perform a complete inventory of existing shelters for their design and placement. It will prioritize the placement of new shelters where there are none today based on criteria developed during the study. The study will also prioritize the need for bus pullouts throughout the region and make recommendations for construction of these pullouts to the RTA.

C. Transit Fare Analysis and System Interconnectivity Studies

A comprehensive review of fare structures and system-wide fare evaluation is needed due to the variety of services being provided throughout the region. The PAG region currently has a variety of fare structures that could impede smooth transfer within the system's providers. Utilization of single fare tools, smart cards, recognition of student passes, and other techniques should be studied and pursued. Transit Interconnectivity should also be analyzed as part of fare structuring and route planning. Consistency in the fare system is needed as well as a review of new fare systems such as zonal fares, free fare zones, transfer fees, variable fares for different services, etc. There is also a need to evaluate new techniques for fare collection to speed boarding and alighting of transit vehicles. The Transit Fare Analysis should include a full assessment of Smart Card Technologies as follows:

Regional Smart Card Taskforce:
The City of Tucson, Sun Tran and the RTA should prepare to transition its fare collection system to a Smart Card technology. Smart Card technology uses a credit card sized device with memory and processing capacity which will allow stored values and trip applications to better serve the region and neighboring transit systems. The smart card fare collection system also, will allow seamless travel between bus, rail, parking, paratransit and regional transit. The system will enhance customer service, operations, security, planning and revenue collection. The Smart Card would be able to allow Sun Tran and regional partners to consider a wide variety of fare structures, loyalty programs and commercial partnerships.

A study should be conducted to determine the types of technologies available to implement a smart card system. The study should determine ways that a smart card system can:

Increase customer convenience and satisfaction:
Finding ways to make it easier for more people to use mass transit will in turn increase ridership and generate more revenue. The smart card can improve passenger's speed during boarding, reduce times in the queue and allow for easier access to multiple forms of mass transit using the same payment mechanism.

Reduce costs of collecting fares:
Studies show that mass transit agencies spend on average 15 cents out of every $1 just collecting the fare. Automating this labor intensive and time consuming process can help drive down ticketing costs by at least a half of that, improve traffic-pattern monitoring, minimize cash handling and decrease errors – all while increasing customer satisfaction.

Lower lost revenues due to fraud:
As noted in the Transport for London example above, losses from passengers traveling without a ticket can greatly cut into the bottom line. With Automated Fare Collection, passengers whose smart card payments are not up-to-date are not allowed access to the transit system.

D. Park and Ride Location Analysis

A complete inventory of existing park and ride locations needs to be done including conditions at the lot, amenities, maintenance procedures, and usage of the facility. An analysis of future locations to accommodate new express service and new service at the edges of the region would be included. Recommendations of the study will be used to prioritize and program future park and ride locations to be funded by the RTA.

E. New Sub-Regional Circulator Studies

The RTA includes the funding for new circulator transit systems in Green Valley, Marana and Oro Valley areas. Studies need to be undertaken to evaluate this service and recommend routing and vehicle types to make this service successful. The study will include considerable public participation work within each service area to get the best possible destination and routing information to provide the most cost-efficient service to each area.

F. High-Capacity Transit Corridor Study

This study will look at major transit corridors within the region to identify those with the greatest potential for investment as high capacity transit corridors. This could include extensions of the modern streetcar, rapid bus corridors, commuter rail corridors, and light rail. The results of the study will make recommendations for programming future Major Transit Investment Studies in conformance with Federal Transit Administration guidelines.

G. Tucson-Nogales Passenger Rail Study

There is current interest with private rail providers to begin regular tour trains originating at the Tucson Historic Depot to Mexico. In addition, the Mexican passenger rail organization wants to begin regular service to Tucson from coastal cities in Mexico through Nogales. This study would analyze the feasibility of this service and identify the infrastructure required in the United States to accommodate the service. This service is consistent with the adopted Tucson Historic Depot Master Plan.

H. Tucson-Phoenix Commuter Rail Study

This study will determine the feasibility and costs associated with providing passenger rail service between Tucson and Phoenix. Major transit investments are being made over the next 20 years in the Phoenix region including rapid buses, light rail and comprehensive bus service. The upgrades being programmed in the RTA in Tucson can accommodate future connections from rail service to other destinations in Tucson. This study can analyze the scope and feasibility of connecting these regions by a commuter rail system that could be planned and built over the next 20 years. The study would serve as a base for analyzing future transit needs between these regions.

I. Marketing Survey of Transit Needs/Operation/Amenities

This survey should be regularly programmed throughout the 5 year period to gather information from transit users, providers, and the general public. It will evaluate the transit needs and get feedback on service provision and help the region effectively program new or alternative services to best meet the publics needs and expectations.

J. Transit Planning Study

Transit ridership in Pima County is rapidly increasing. New fixed and express bus routes are being planned and developed as well as park and ride lots. These park and ride lots will serve as transit hubs for express bus services from suburbs to Downtown.

To keep up with the demand and the needs of the existing and future Sun Tran commuters, a transit study should be conducted to identify the origins and destinations of local and express route patrons, determine locations of boarding and alighting, identify travel patterns of passenger accessibility and connectivity to bus stops and shelters, and determine locations of appropriate shelters, streetscape improvements, park and ride lots, additional bus route modifications, and other transit passenger amenities.

K. Cost of Service Study

One of the remaining challenges that continues to impact the provision of transit in the PAG Region is the lack of a dedicated funding source for the base service currently provided by the jurisdictions. The RTA funding accounts for the costs associated with new service, but the problem remains for local jurisdictions to control the costs of the service upon which the RTA service is based. The Cost of Service Study is a tool to be used to maximize the funding and costs within the system and to determine the best practices for delivery of the most cost-effective service to the transit customers.

Glossary of Terms

Accessible Vehicle
Accessible vehicle is a vehicle that does not restrict access, is usable, and provides allocated space and/or priority seating for individuals who use wheelchairs.

***ADA* – Americans with Disabilities Act of 1990**
The legislation defining the responsibilities of and requirements for transportation providers to make transportation accessible to individuals with disabilities.

Bonds
Financing mechanism used to raise funds. Bonds are secured debt offered through a legal entity (usually a state or local government) that guarantees two rights to the purchaser:

1. The right to receive a fixed interest payment (e.g. 10%), often semiannually, on the par value of the bond (e.g. $10,000) and
2. The right to be paid the par value of the bond (e.g.$10,000) at a definite future date when the bond matures (e.g. 20 years after issuance).

Capital
Projects related to the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost which equals the lesser of:

- The capitalization level established by the government unit for financial statement purposes, or
- $5,000.

Capital Expenses
Expenses related to the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost which equals the lesser of: the capitalization level established by the government unit for financial statement purposes or $5,000. Capital expenses do not include operating expenses that are eligible to use capital funds.

Capital Funding
A Capital Funding Source is a source of funds used to pay for capital expenses. There are two types:

Directly Generated Funds are any funds where revenues are generated by or donated directly to the transit agency, including passenger fare revenues, advertising revenues, donations, bond proceeds and taxes imposed by the transit agency. Almost all such funds for capital purposes are bonds and directly imposed taxes: fares and advertising revenues are normally used only for operating expenses.

Government Funds are funds provided by federal, state, and/or local governments. For some purposes, also includes directly generated taxes, tolls, fees, and other imposed funding sources.

Complementary Paratransit Services
Transportation service required by the American with Disabilities Act (ADA) for individuals with disabilities who are unable to use fixed route transportation systems. This service must be comparable to the level of service provided to individuals without disabilities who use the fixed route system and meet the requirements specified in Sections 37.123-137.133 of Transportation Services for Individuals with Disabilities (Part 37), Code of Federal Regulations, Title 49, Volume 1. The

complementary services must be origin-to-destination service (demand response (DR)) or on-call demand response (DR) service to an accessible fixed route where such service enables an individual to use the fixed route bus (MB) system for his on her trip.

Carpool
A carpool is an arrangement where two or more people share the use and cost of privately owned vehicles in traveling together to and from pre-arranged destinations. Carpools are not public transportation.

Circulator
Service that circulates within an activity center such as a central business district and the University of Arizona.

Express Service
Service that operates over longer distances – five miles or greater – with a few or no intermediate stops.

Feeder Service
Service designed to provide access to major fixed route transit stops, stations, or centers using appropriately sized vehicles operating as a deviated fixed route.

Fixed Route
Fixed-route service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations; each fixed-route trip serves the same origins and destinations, unlike paratransit. Includes route deviation service, where revenue vehicles deviate from fixed routes on a discretionary basis.

Operating Expenses
Operating Expenses are the expenses associated with the operation of the transit agency, and classified by function or activity and the goods and services purchased.

Operating Funding Source
Operating Funding Source is a source of funds used to pay for operating expenses. Under federal regulations, some capital funds may be used to fund a portion of operating expenses, and would therefore be considered operating funds.

Government Funds are funds provided by federal, state, and/or local governments. For some purposes, also includes directly generated taxes, tolls, fees, and other imposed funding sources.

Directly Generated Funds are any funds where revenues are generated by or donated directly to the transit agency, including passenger fare revenues, advertising revenues, donations, bond proceeds and taxes imposed by the transit agency.

Other Operating Funds is the sum of freight tariffs, auxiliary transportation revenues, non-transportation revenues, revenue accrued through a purchased transportation agreement, and subsidy from other sectors of operations.

Subsidy from Other Sectors of Operations is the funds obtained from other sectors of a transit agency's operations to help cover the cost of providing transit services. Subsidies from other sectors of transit operations include subsidies from utility rates where the transit agency is a utility company; subsidies from bridge and tunnel tolls owned and operated by transit agency; and subsidies from other sources provided the same entity that operates the transit agency.

Paratransit
Paratransit is non-fixed-route service which is not provided on a repetitive, fixed-schedule basis along a specific route to specific locations. Paratransit is the only non-fixed-route mode.

Park and Ride Lot
Park and ride lots are normally located near the edge of the transit service area and along major transit routes, providing access to transit services from areas of lower density and from street layout unsuitable for route service.

Public Transportation (public transit, transit, mass transit, mass transportation)
Public transportation is transportation by a conveyance that provides regular and continuing general or special transportation to the public, but not including school buses, charter or sightseeing service.

Radial Service
Service originating and ending at the central business district or at transit centers along major corridors.

Regional Transit Authority (RTA)
The Regional Transportation Authority (RTA) serves Tucson, Pima County, Marana, Oro Valley, Pascua Yaqui Tribe, Sahuarita, South Tucson and Tohono O'odham Nation. Members of each jurisdiction and a representative of the Arizona Department of Transportation serve on the RTA board, which is charged with developing a 20-year transportation plan that includes various modes of transportation to connect people with work, school, shopping, appointments and entertainment. The RTA became effective on August 25, 2004. The primary goal of the RTA is to build consensus among regional jurisdictions in order to prepare a regional transportation plan.

Regional Transit Authority (RTA) Plan
The RTA's plan is a working document showing a 20-year, multi-modal transportation blueprint for the Pima County region, addressing cross-town mobility, reduced travel congestion, improved safety and security, improved travel modes and improved bicycle and pedestrian options. The $2.1 billion plan was approved on the May 16, 2006, election ballot along with a separate request for a 1/2 cent excise tax to fund the plan.

Regional Transportation Plan (RTP)
The RTP provides a vision for a balanced, multi-modal, sustainable transportation system in the region and covers a period of time of at least 20 years into the future. The current RTP guides improvements to our region's bus, roadway, bicycle, pedestrian, aviation and rail transportation to the year 2030. The financial plan component of the RTP identifies transportation costs, existing funding sources, and proposed new sources of funding needed to fully implement the RTP. Typically, the RTP is updated every three to four years. It was last updated on June 29, 2005, and was amended on June 29, 2006.

SAFTEA-LU – Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users
SAFETEA-LU was enacted August 10, 2005, as Public Law 109-59. SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009.

TEA-21 – Transportation Equity Act for the 21st century (1998)
TEA-21 was enacted on June 9, 1998 as Public Law 105-178. TEA-21 authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 6-year period 1998-2003. The TEA 21 Restoration Act, enacted July 22, 1998, provided technical corrections to the original law.

Transit Agency
A transit agency (transit system) is an entity (public or private) responsible for administering and managing transit activities and services. Transit agencies can directly operate transit service or contract out for all or part of the total transit service provided. When responsibility is with a public entity, it is a public transit agency. When more than one mode of service is operated, it is a multimode transit agency.

Transit Center
A transit center serves as a major transfer point designed for timed-transfer connections. The center shall serve express and limited routes from all directions, and local routes radiating out in a minimum of nine directions. Transit centers are always located off street for convenient transferring and to enable vehicles to operate in all directions. In addition to the amenities provided at stops and stations, transit centers have drinking fountains, restrooms, and staffed information center.

Transit Station
A transit station serves express or limited routes and any number of additional routes. Placement is at activity centers and traffic generators but shall be located off-street for convenient transferring. The station also serves transit routes from all four directions. Transit stations provide at least one shelter, and may include cool towers, posted schedule boards, and electronic message boards.

Transit Stop
Transit stops serve one or more transit route of any category where there is a low volume of boardings and alightings. They are marked by a transit stop sign and may have a bench, a basic shelter, and a tree.

Transportation Improvement Program (TIP)
The *Transportation Improvement Program* (TIP) is the short-range (five-year) plan, which identifies a prioritized list of projects to be funded for construction during the next five-year period. The TIP addresses regional transportation projects and programs including federal, state, local highways, transit, aviation, ride sharing, bikeways and pedestrian facilities. Programming of major transit capital investments, such as the purchase of new buses and vans, upgraded maintenance facilities, replacement equipment, and new transit stations, is primarily a function of the TIP process. The TIP is updated annually and TIP projects are drawn from the adopted RTP.