

Transportation and Feasibility Study

City of Tucson
Department of Transportation
30 November 2005

report volume 02 of 02
Sun Tran





attention

This volume of the Transportation and Feasibility Study focuses on the Sun Tran component and the analysis of alternative sites for the Sun Tran transit facility. Please refer to volume 01 for the Greyhound findings.

letter of transmittal

30 November 2005

City of Tucson
Department of Transportation
Sixth Floor, Public Works Building
Tucson, Arizona 85726-7210
Attn: Kim McKay, Project Manager

Transportation and Feasibility Study

**City of Tucson
Department of Transportation
201 North Stone
Tucson, Arizona 85726-7210**

Attention: Kim McKay, Project Manager

**Re: Transit Study Final Report and
Recommendations - vol. 02 Sun Tran**

Dear Kim McKay

Burns Wald-Hopkins Architects is pleased to submit volume 02 of this Final Report in accordance with the terms of our Contract No. 052041 dated 03 March 2005. We have enjoyed working with you and your Technical Advisory Committee and we trust that this report will assist the City of Tucson in making important decisions about Sun Tran facilities in downtown Tucson.

We began our work with the Technical Advisory Committee by establishing goals for the project, which included “plan transit facilities to serve a future downtown as envisioned by the Rio Nuevo Master Plan” and “enhance long-term vitality of downtown.”

Together with the Technical Advisory Committee we identified three alternative sites for the Sun Tran transit facility, in addition to the existing Ronstadt Transit Center site at the northeast corner of Sixth Avenue and Congress Street.

We analyzed the sites and their characteristics, and then developed concepts for each one.

Finally we evaluated the concepts for each site against a series of criteria established by the Planning Team. Our evaluation ranked a reconfigured RTC site first for Sun Tran .

Thanks you for this opportunity to be of service to the City of Tucson and its transit needs.

Sincerely,

Burns Wald-Hopkins Architects

David Wald-Hopkins AIA
Project Manager

Dave Burns AIA
Project Planner

acknowledgments

Burns Wald-Hopkins Architects is grateful to the following for their participation in this study. We thank them for their enthusiasm and expertise.

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Vince Catalano [Traffic Engineering](#)
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Jim Glock [Department of Transportation](#)
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introduction

Burns Wald-Hopkins Architects and its planning team were retained in early March 2005 to prepare a Transportation and Feasibility Study addressing Sun Tran and Greyhound Facilities in downtown Tucson.

Scope of Work

The scope of work described in the contract is as follows:

- Review existing circulation studies. The consultant will then make a recommendation for the circulation for Sun Tran and Greyhound vehicles. The scope of this work will include updating the Intermodal Center Area Circulation Study and will include a study of the impact of 2-way conversion on transit movements. This study will document infrastructure improvements to accommodate transit in this area, and projected costs to implement needed improvements
- Review the documents for the Ronstadt Transit Center Modifications Concept and make recommendations for circulation of transit vehicles. The consultant will verify routing and turning radii and will work with TDOT staff to identify potential projects and costs for required improvements
- Build on existing studies to determine needs of Sun Tran and propose solutions that will accommodate the Congress Street frontage mixed-use facility. Using footprint from the Depot Plaza Housing project and the Ronstadt Transit Center Modifications Concept Study, the consultant will identify conceptual layout for mixed-use space on the Congress Street frontage of the Transit Center site. This site will also include parking at street level (on the north side) and potential underground parking
- Investigate the opportunities for mixed use at the Greyhound facility. In particular the consultant shall look at the potential of retail space on the Toole Avenue frontage. The consultant will also be responsible for looking at ways to incorporate a multi-story facility for commercial space at the site in combination with Greyhound.

- The consultants shall work with City staff to identify potential locations for a Greyhound facility and/or the Ronstadt Transit Center. The consultant shall also compare the pros and cons of each site.
- Document each area of study and retain complete set of documents and notes

Sequence of Work

Based on the scope of work, the Planning Team pursued a planning process that provided a structured, coherent framework for decision-making as it moved from the general to the specific in five steps:

- **goals** establish vision and goals for the project
- **facts** gather information on potential sites, two-way conversion, transit system and the commercial market
- **needs** confirm facility and route requirements
- **concepts** prepare a conceptual site plan for each site
- **recommendations** evaluate the proposed concepts and make a recommendation for Greyhound and Sun Tran

The Planning Team began work in early March with a commitment to deliver its final report five months later on 26 July 2005.

Project Goals Included under tab 01, the goals were established by the Project Management Team and the Planning Team. Generally they sought to balance the needs of transit riders and downtown stakeholders. The overall goal was to contribute to the long-term vitality of downtown.

Project Facts With input from the Project Management Team and Technical Advisors, three potential sites for Sun Tran were identified in addition to the existing RTC site

introduction (continued)

located at the north east corner of Sixth Avenue and Congress Street. The sites studied were as follows:

- **Sun Tran sites**
 - 01 Ronstadt Transit Center
 - 02 Toole Avenue
 - 03 Fifth Ave. and Seventh St.
 - 04 downtown dispersed

Each of these sites were analyzed for zoning, adjacency to neighborhoods, access, convenience, etc. The findings are included under tab 02.

Project Needs We met with representatives of Sun Tran to document their space and functional requirements for new facilities – building area, number of bays, security, site size, etc. These Needs are documented under tab 03.

Project Concepts We then married the Goals, Facts and Needs to create concepts for each of the four Sun Tran sites. We attempted to meet the Project Goals at each site, locating the new facilities to maximize the potential of each. These concepts are documented under tab 04.

Project Recommendations Having developed concepts for the four Sun Tran sites, the Planning Team evaluated the pros and cons of each concept and created a matrix for quantifying the success of each site in meeting goal driven criteria.

The Planning Team found that a reconfigured RTC site that incorporated the Pennington Triangle was the preferred location for the Sun Tran transit center. The concepts for all of these sites can be found under tab 05.

assumptions

The list below calls out the assumptions that were necessarily made during the analysis of the report. They were made at the direction of the Management Team or are well founded upon commissioned studies and reports (cited in the appendix)

The completion of the Stevens Avenue Alignment between Sixth Street and Barraza - Aviation Parkway. This is necessary to permit the effective circulation of the Greyhound coaches under certain scenarios. While a general path has been determined, the configuration of the linkage with Sixth Avenue has not been selected.

The completion of the two-way conversion of all of the streets in the Downtown area. This greatly affects the circulation of Sun Tran buses.

Installation of a modern streetcar whose route would include portions of Congress Street through downtown, making bus service there redundant.

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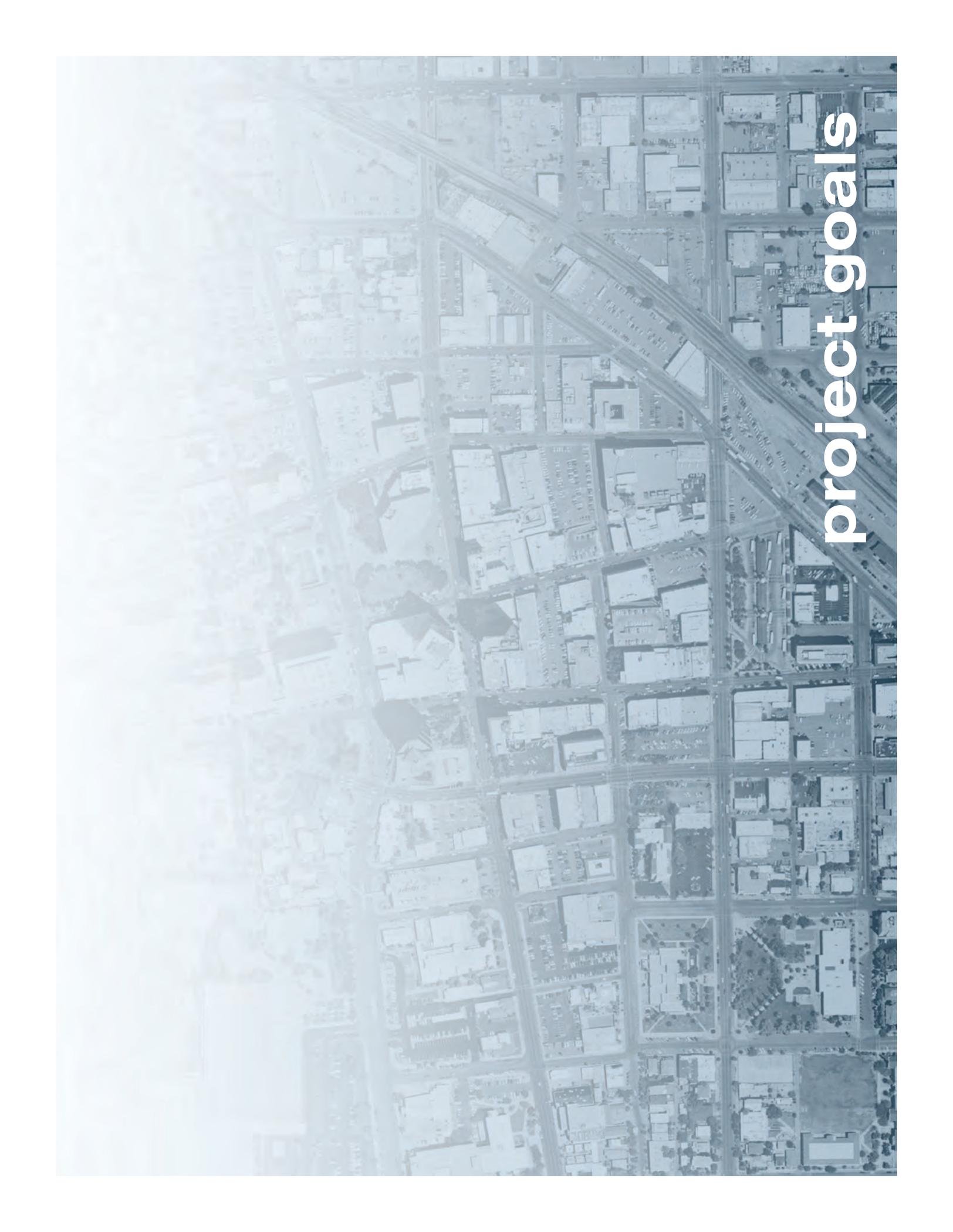
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project goals

project goals

The Project Management Team and the Planning Team established goals for the relocation of the Greyhound bus facilities in the Tucson downtown area.

Include Sun Tran and Greyhound ridership in the planning process

Accommodate future growth in planning for new facilities

Coordinate with other downtown planning activities - Downtown Links (Stevens Avenue Alignment), Warehouse District MP, Congress Street MP, etc.

Plan transit facilities to serve a future downtown as envisioned in the Rio Nuevo Master Plan

Consider long term regional transportation issues

Enhance safety and security, both real and perceived

Integrate additional activities/eyes onto RTC to reduce criminal activities

Maximize commercial opportunities associated with transit

Improve pedestrian accessibility and enhance way finding

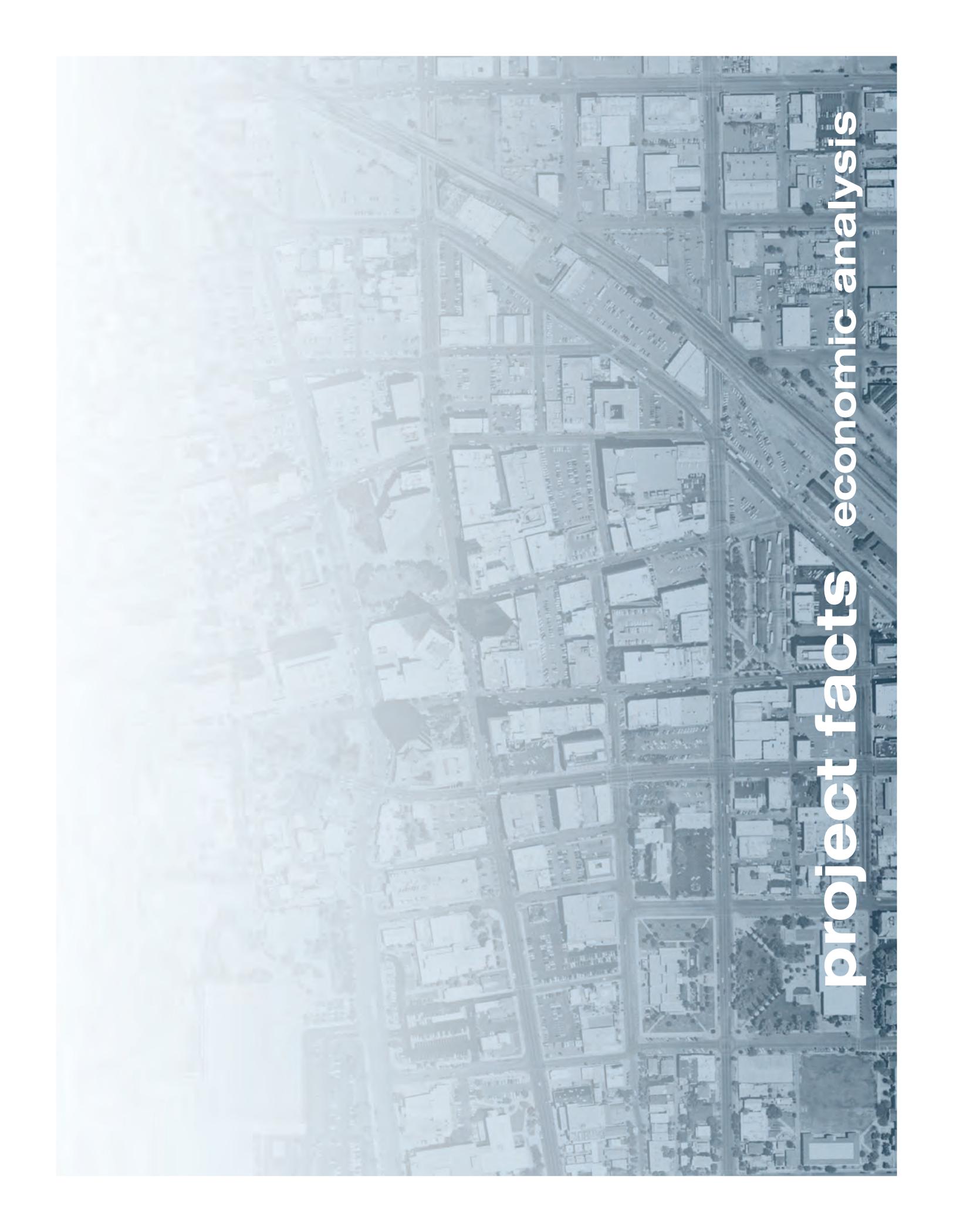
Balance needs of ridership with interests of downtown stakeholders

Meet Title VI requirements for providing equal access to downtown government offices

Enhance multi-modal transportation system

Contribute to the long-term vitality of downtown (economic, social, etc.)

Provide connectivity to Alternatives Analysis Recommendations

An aerial photograph of a city street grid, showing a dense network of roads and buildings. The image is overlaid with a blue gradient that is darkest on the right side and fades to white on the left. The text 'project facts economic analysis' is written vertically in white, bold, sans-serif font on the right side of the image.

project facts economic analysis

Regional Economic Context and Market Overview

The demographic and economic trends in the metropolitan area provide the real estate market context for development opportunities at the Ronstadt Transit Center site and at the proposed Greyhound site in Downtown Tucson. This section reviews some of the more important economic and demographic trends in the Tucson region.

Regional Economic Base

Non-farm employment growth in the Tucson MSA has generally followed national economic cycles. However, the region’s historic reliance on a few key industrial sectors such as defense, aerospace, leisure services (generated by seasonal visitors), and certain niche technology sectors, have caused the impact of economic cycles to be more severe. As seen in Table II-1, the Arizona Department of Economic Security estimates 2004 total non-farm employment in Pima County to be 351,500 workers.

**Table II-1
Tucson MSA (Pima County) Sectoral Employment Trends**

	1990	1995	2000	2004	CAGR 1990-04
Average Annual Employment (000s)					
Total Non Farm	251.6	302.6	349.9	351.5	2.4%
Natural Resources and Mining	2.2	2.2	1.8	1.2	-4.2%
Construction	14.9	20.6	22.9	23.3	3.2%
Manufacturing	25.5	27.4	32.9	28.4	0.8%
Trade, Transportation, and Utilities	45.3	51.6	55.0	54.3	1.3%
Wholesale Trade	5.9	6.7	7.5	7.3	1.5%
Retail Trade	33.7	37.2	38.7	39.3	1.1%
Transp., Warehousing, and Utilities	5.7	7.7	8.8	7.7	2.2%
Information	5.1	6.5	7.9	7.7	3.0%
Financial Activities	11.9	11.6	14.8	15.4	1.9%
Professional and Business Services	21.4	33.8	43.5	41.4	4.8%
Professional and Tech. Services	9.4	12.8	15.6	14.2	3.0%
Management of Companies	1.2	3.2	2.6	2.3	4.8%
Administrative and Waste Services	10.8	17.8	25.3	24.9	6.1%
Educational and Health Services	30.0	35.5	42.0	47.5	3.3%
Leisure and Hospitality	29.5	34.8	39.9	37.8	1.8%
Arts, Entertainment, and Recreation	5.0	5.3	5.1	5.2	0.3%
Accommodation and Food Services	24.5	29.5	34.8	32.6	2.1%
Other Services	10.0	10.2	13.0	14.7	2.8%
Government	55.9	68.4	76.3	80.0	2.6%

Notes:

- 2004 Data reflects average of monthly employment between January and May 2004.

- CAGR is Compounded annual growth rate between 1990 and 2004

Source: Arizona Department of Economic Security and Economics Research Associates

The Tucson MSA has added approximately 100,000 non-farm jobs during the 1990-2004 period with a compounded annual growth of 2.4 percent. Most of this growth can be attributed to service providing employment sectors, especially Professional and Business Services, and (private) Educational and Health Services, which experienced an annual growth of 4.8 percent and 3.3 percent respectively during the 1990-2004 period. Other strong growth sectors were Construction, Information, Other Services, and Government. While the Manufacturing sector grew between 1990 and 2000, it has dropped sharply since. The share of manufacturing jobs has fallen from 10 percent in 1990 to 8 percent in 2004.

Table II-2 presents sectoral employment forecasts by the Tucson Planning Department – Economic Business Research Project. Note that these forecasts are from the 3rd quarter of 2001 and are classified as unofficial projections. However, they present a relative comparison of sectoral employment growth and their shares of total employment over the long term.

**Table II-2
Tucson MSA (Pima County) Employment Growth Projections**

	2000	2010	2020	2030	Absolute Change	Percentage Change	CAGR 2000 -30
Thousands of Workers							
Mining						124.8%	2.7%
Construction	1.9	2.1	3.1	4.3	2.4	55.9%	1.5%
Manufacturing	21.9	23.9	29.6	34.1	12.2	59.9%	1.6%
T.C.P.U.	33.0	40.2	46.2	52.8	19.8	10.0%	0.3%
Trade	12.0	13.1	13.3	13.2	1.2	95.9%	2.3%
F.I.R.E.	72.6	85.8	112.3	142.3	69.7	70.2%	1.8%
Services	13.8	16.0	19.8	23.5	9.7	123.4%	2.7%
Government	119.2	159.9	208.8	266.2	147.1	52.3%	1.4%
Total	76.2	89.0	103.3	116.0	39.8	86.1%	2.1%
Notes:	350.5	430.0	536.3	652.4	301.8		

- The above projections are based on unofficial 3rd Quarter 2001 projections
- CAGR. = Compounded Annual Growth Rate
- T.C.P.U. = Transportation, Communication, and Public utilities
- F.I.R.E. = Finance, Insurance, and Real Estate

Source: Tucson Planning Department and Economics Research Associates

As seen in the table, the Tucson MSA is expected to add approximately 301,800 jobs during the 2000-2030 period, or approximately 10,000 jobs annually. The Services and Trade sectors are expected to experience the strongest growth, with the Services sector projected to increase from 34 percent in 2000 to approximately 40 percent in 2030. However, the realization of these projections is dependent on the economic recovery of the national and regional economies.

Population and Household Growth Trends

The City of Tucson and Pima County continue to grow at a healthy pace. Both the City of Tucson

and Pima County experienced cumulative growth rates of just over 20 percent during the past decade. From 1990 to 2000, the County ranked 27th greatest in the nation in terms of absolute population growth. Pima County is forecast to add 192,000 residents from 2000 to 2010.

**Table II-3
Population Growth Trends**

	1980	1990	2000	2010 Forecast		
				Low	Middle	High
Total Population (000's)						
City of Tucson	331	405	487	na	596	na
Pima County	542	680	848	975	1,040	1,090
Arizona	2,785	3,747	5,169	6,175	6,735	6,965
Ten Year Change						
City of Tucson	--	22.4%	20.2%	na.	22.4%	na.
Pima County	--	25.5%	24.7%	15.0%	22.6%	28.5%
Arizona	--	34.5%	38.0%	19.5%	30.3%	34.7%
10 Year CAGR						
City of Tucson	--	2.0%	1.9%	na.	2.0%	na.
Pima County	--	2.3%	2.2%	1.4%	2.1%	2.5%
Arizona	--	3.0%	3.3%	1.8%	2.7%	3.0%

CAGR = Compounded Annual Growth Rate
Source: US Census, L. William Seidman Research Institute, College of Business, Arizona State University, Economics Research Associates

As seen in Table II-3, during the 1990-2000 period, population in Pima County grew by 24.7 percent, compared to statewide population growth of 38 percent. The City of Tucson grew by 20.2 percent during this period, somewhat slower than Pima County or Arizona as a whole.

Table II-4 presents dwelling units permitted within the City of Tucson. During the past 10 years, the city has added just over 3,600 per year. When mobile homes are excluded, the average number of units added is just over 3,100 with 74 percent of those being single-family units. It is interesting to note over these same ten years, the City of Tucson added approximately 7,100 people per year or one new residential unit for every two new persons. The high ratio of new housing units to new population suggests that some of the new housing is second homes or fractional ownership units typically associated with resort communities.

**Table II-4
Tucson Building Permit Trends in Units**

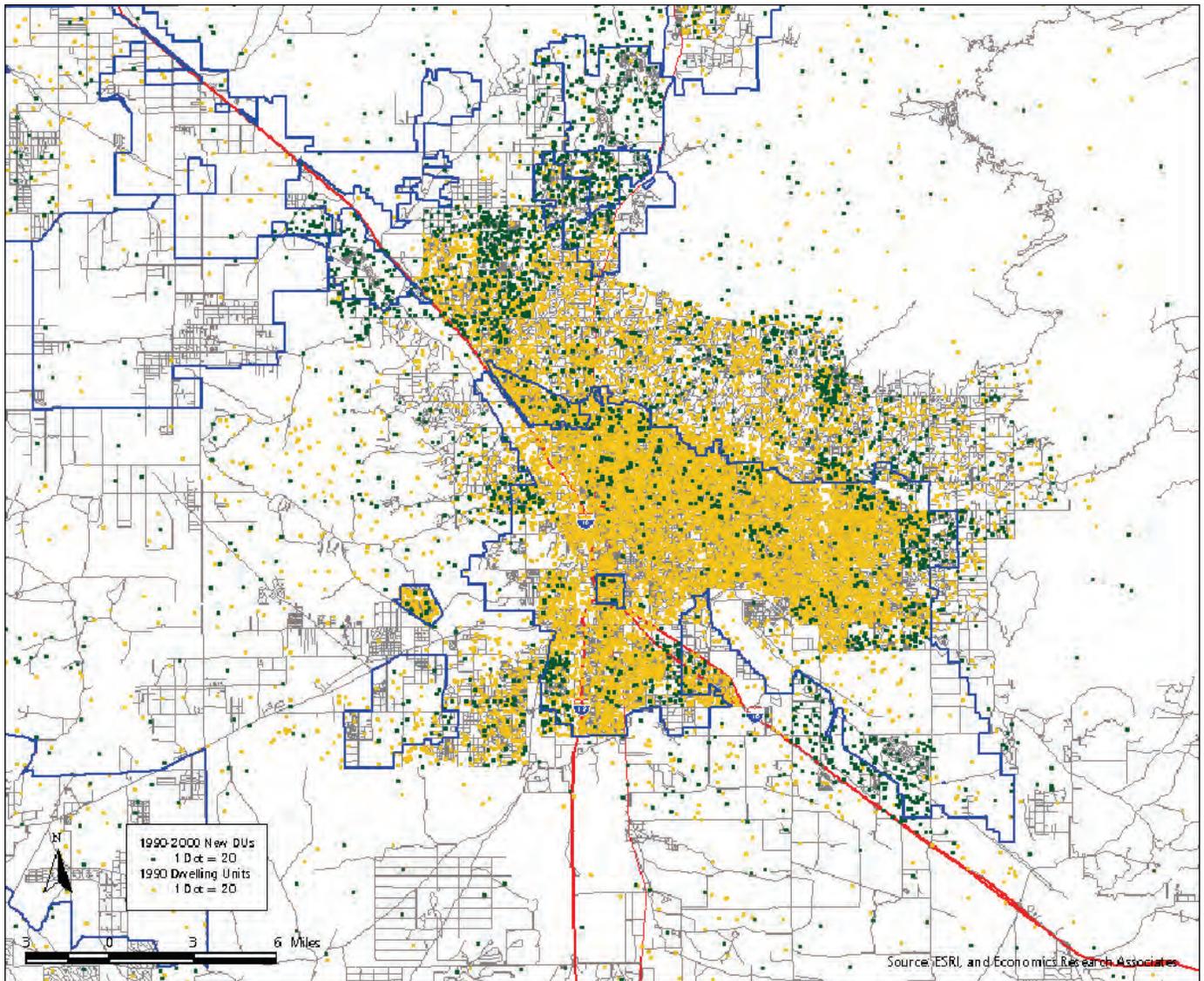
Year	Single Family	TH	Duplex	Tri-& Four-Plex	Apts	Total Excluding MH	Mobile Home	Total
1995	1,731	0	50	20	1,175	2,976	544	3,520
1996	1,957	8	68	6	358	2,397	525	2,922
1997	2,055	10	56	20	507	2,648	390	3,038
1998	2,550	31	81	76	797	3,535	644	4,179
1999	2,657	58	118	67	641	3,541	615	4,156
2000	2,876	41	104	90	612	3,723	559	4,282
2001	2,534	42	88	77	703	3,444	611	4,055
2002	2,355	52	146	29	475	3,057	547	3,604
2003	2,353	72	156	33	207	2,821	373	3,194
2004	2,137	106	160	33	714	3,150	372	3,522
Avg	2,321	42	103	45	619	3,129	518	3,647

Source: City of Tucson Department of Planning and Design

New residential construction in Tucson continued to escalate in 2004, fueled by low interest rates, economic recovery and population growth. The total number of housing units permitted within Tucson increased from 3,194 in 2003 to 3,522 in 2004, or an increase of ten percent. While single-family construction has declined steadily in recent years, the number of apartments is up substantially over last year.

Exhibit II-1 presents a dot density overlay of dwelling units in the Tucson area during 1990 and incremental units between 1990 and 2000. The exhibit shows that the distribution of new dwelling unit growth is more scattered about the downtown, which is unlike the decades of the 1970s and 1980s, when new development concentrated almost exclusively to the northwest of downtown. The more recent development pattern suggests that downtown Tucson is regaining some of its centrality relative to the regional population, and that centrality bodes well for future downtown retail and office development.

Exhibit II-1 City of Tucson Dwelling Unit Growth 1990-2000



Household Income Characteristics

Table II-5 presents comparative median and average income growth between 1990 and 2000 for the City of Tucson, Pima County, Arizona and United States. The median household income in Pima County in 1999 was \$36,758. Though this is lower than the national median of \$41,994, Pima County's median household income experienced 7.7 percent growth (in real terms) between 1990 and 2000 compared to only 4.0 percent growth nationally. The average household income in Pima County in 1989 was \$44,507 (in adjusted 1999 dollars), increasing 11 percent in 1999 to \$49,415. Note that both the City of Tucson and Pima County have relatively lower median as well as mean average household incomes compared to the state of Arizona as a whole.

Table II-5 also shows distribution of households by income category. The Tucson Metropolitan area has a relatively higher share of low-income households and a lower share of high-income households compared to the state and the nation as a whole. A larger share of leisure and hospitality service jobs, student households, and retirees, which have lower wages, are often cited as the reasons for the relatively lower income levels in the Tucson Metropolitan area.

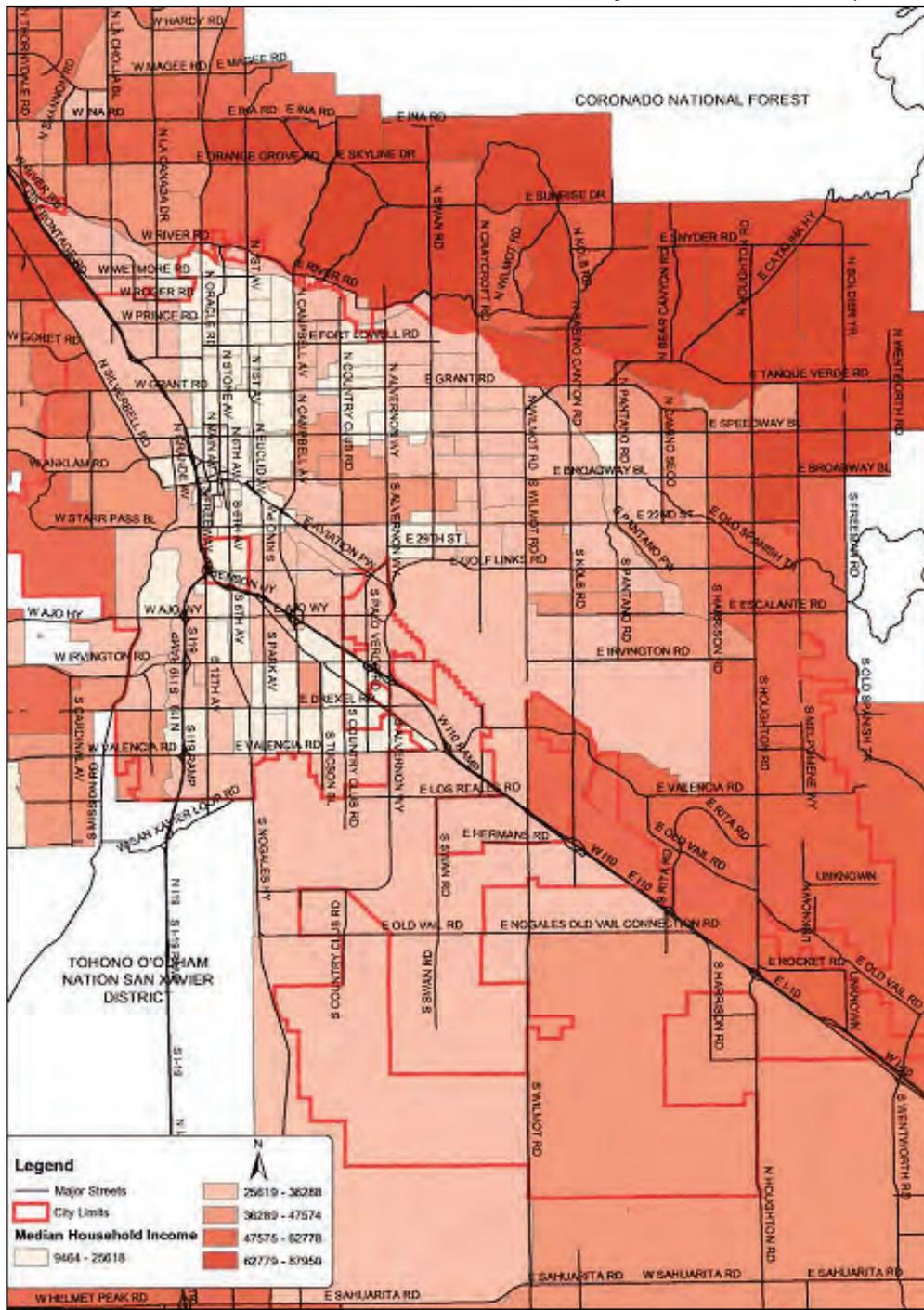
Median household income by census tract is reflected in Exhibit II-4. The darker shades represent higher median household incomes. As can be seen, income levels are generally highest in the north and eastern portions of the metro area near the Catalina Mountains. The downtown and the older areas tend to have the lowest income.

Table II-5
Household Income Growth

	Tucson Pima County	Arizona	United States	
Median Household Income (1999 dollars)				
1989	\$29,219	\$34,127	\$37,001	\$40,382
1999	\$30,981	\$36,758	\$40,558	\$41,994
Growth	\$1,762	\$2,631	\$3,557	\$1,612
% Growth	6.0%	7.7%	9.6%	4.0%
CAGR	0.6%	0.7%	0.9%	0.4%
Mean Average Household Income (1999 dollars)				
1989	\$36,859	\$44,507	\$47,596	\$51,664
1999	\$40,133	\$49,415	\$53,926	\$56,644
Growth	\$3,273	\$4,908	\$6,330	\$4,980
% Growth	8.9%	11.0%	13.3%	9.6%
CAGR	0.9%	1.1%	1.3%	0.9%
Households Distribution by Income (1999)				
<\$15,000	21.7%	17.5%	14.9%	15.8%
\$15,000 - \$29,999	26.4%	22.8%	21.0%	19.3%
\$30,000 - \$44,999	20.3%	19.5%	19.2%	17.9%
\$45,000 - \$59,999	12.8%	13.7%	14.3%	14.0%
\$60,000 - \$74,999	7.6%	9.1%	10.1%	10.4%
\$75,000 - \$99,999	6.2%	8.4%	9.7%	10.2%
>\$100,000	5.0%	9.0%	10.8%	12.3%

Source: US Census, and Economics Research Associates

Exhibit II-4
Median Household Income Distribution by Census Tract (1999)



Source: City of Tucson and Economics Research Associates

Citywide Housing Market

Based on data provided by the Tucson Association of Realtors Multiple Listing Service, as presented in Table II-6, total residential home sales in the metropolitan area increased ten percent from 2002 to 2003 and then another 16 percent from 2003 to 2004. The northwest market continues to lead the region in terms of number of units listed and sold. The average sales price for all property types increased from \$169,063 in 2002 to \$205,188 in 2004, an increase of 21 percent in two years. The average days on the market dropped from 53 to 49 days over the past two years indicating a strong owner housing market.

**Table II-6
Tucson Metropolitan Area – Housing Sales Trends**

	1997	1998	1999	2000	2001	2002	2003	2004
Total Unit Sales	8,472	10,020	11,244	11,077	12,142	13,251	14,618	17,016
Single Family	6,650	8,013	9,018	8,927	9,984	10,971	12,192	14,559
Townhouse/Condo	1,444	1,572	1,721	1,715	1,842	1,985	2,168	2,245
Mobile Home	378	435	505	435	316	295	258	212
Average Sales Price	\$132,096	\$137,323	\$147,180	\$155,907	\$160,300	\$169,063	\$178,171	\$205,188
Average Days on Market	78	71	62	55	52	53	54	49

Source: Tucson Association of Realtors, Economics Research Associates

As mentioned, the apartment market was affected by the robust increase in home sales propelled by low mortgage rates. According to RealFacts, which surveys 82 apartment projects in Tucson ranging in size from 96 to 826 units, absorption was negative for 2001 and 2002. It turned positive in 2003 and 2004, as shown in Table II-7. The average occupancy rate for these properties climbed from a low point of 89.7 percent in 2002 to 92.3 percent by 2004, suggesting a gradually improving apartment market.

Table II-8 presents average monthly rental trends for apartment units in the Tucson market. Note that these include both new and existing apartment units. The rent increases have been very moderate indicating that Tucson is still one of the more affordable communities in the country for renters. The modest rent increases and the steep sales price jumps indicate that the strength of the Tucson housing market is on the ownership side. This is typical of most markets given the historically low mortgage rates.

**Table II-7
Tucson Apartment Market Trends – Major Projects**

	Units Built	Total Units	Occupancy Rate	Occupied Units	
1999	252	19,904	na	na	na
2000	0	19,904	94.9%	18,888	na
2001	200	20,104	93.2%	18,736	-152
2002	500	20,604	89.7%	18,481	-255
2003	0	20,604	90.7%	18,687	206
2004	0	20,604	92.3%	19,017	330

Source: Realfacts, Economics Research Associates

**Table II-8
Average Rents – Tucson Apartment Market Major Projects**

	Ave. Monthly Rent	% Change	Ave. Rent/SF/ Month
2000	\$568	na	na
2001	\$584	2.8%	na
2002	\$604	3.4%	\$0.80
2003	\$611	1.2%	\$0.81
2004	\$620	1.5%	\$0.81
2005	\$626	1.0%	\$0.81

Source: Realfacts, Economics Research Associates

Table II-9 presents a summary of the midsize apartment market (20 to 100 units) by submarket. As shown, the northern Tucson markets typically generate the highest rent levels, with an average 2002 rent of \$749. Average rents in the southern submarket are the lowest in the region (\$470 in 2002). The central submarket also had fairly low rents (\$518 in 2002) but also below average vacancy rates. The highest vacancy rate was reported in the north central and east submarkets at 12.5 percent and 12.4 percent, respectively. Not surprisingly, the university submarket reported the lowest vacancy rate in 2002 (6.9 percent).

**Table II-9
Tucson Rental Market – Midsize Apartments**

Submarket	Average Rent		Change	Vacancy 2002
	2002	2001		
Northeast	\$749	\$749	0.0%	8.1%
Northwest	\$693	\$683	1.5%	10.9%
North	\$654	\$658	-0.6%	11.1%
North Central	\$473	\$475	-0.4%	12.5%
University	\$590	\$605	-2.5%	6.9%
Central	\$518	\$510	1.6%	8.7%
East	\$529	\$523	1.1%	12.4%
South	\$470	\$464	1.3%	9.8%
West	\$617	\$613	0.7%	10.5%
Average	\$556	\$552	0.7%	10.7%

1/ Midsize properties are defined as properties with 20 to 100 apartments.

2/ Average rent includes new and existing apartments

Source: The Waterfall Group, Economics Research Associates

Retail Market

During the past six years, the Tucson Metropolitan Area has absorbed over 3.5 million square feet of retail space. With the strong absorption of nearly 1.6 million square feet during the past year, the total vacancy has dropped from 11.1 percent in 2003 to 9.5 percent in 2004. As shown in Table II-10, the average annual absorption for this six-year period was 591,000 square feet.

As indicated in Table II-11, the total square feet of retail space per capita has remained relatively consistent over the past several years at about 43 to 44 square feet. In other words, it does not appear that retail space has been overbuilt with respect to population growth. The Tucson Mall area (northwest) saw increased vacancies while the area near Park Place Mall (east) experienced an increase in absorption. The increase in vacancy in the retail market from 2002 to 2003 was due to poor performance in older properties as newly constructed properties entered the market. In 2003 Wal-Mart, Kohl's and La Encantada (a new pedestrian-oriented shopping center) accounted for all of the positive absorption. La Encantada was 97 percent pre-leased upon opening and is targeted in part at the high-end tourist market with in-line tenants such as BeBe Sport, Williams Sonoma, and Apple Computer.

Table II-10
Tucson Metropolitan Area - Retail Trends

Year	Vacancy	Net Absorption
1999	10.16%	176,091
2000	10.04%	592,502
2001	10.75%	415,395
2002	10.35%	305,309
2003	11.06%	469,675
2004	9.47%	1,586,442
Average		590,900

Source: CB Richard Ellis, Economics Research Associates

Table II-11
Tucson Metropolitan Area - Retail Market Trends

Time Period by Quarter	Total Retail Space (sq ft)	Vacancy Rate	Absorption (sq ft)	Total Sq Ft per Capita
2nd, 1999	35,853,340	10.58%	354,779	43.72
4th, 1999	36,469,190	9.90%	797,291	43.94
2nd, 2000	36,750,385	9.44%	422,242	43.61
4th, 2000	37,188,632	8.74%	657,589	43.68
2nd, 2001	37,755,832	10.03%	32,083	43.62
4th, 2001	38,296,240	9.97%	507,048	43.88
2nd, 2002	38,534,269	10.34%	72,787	43.65
4th, 2002	38,846,119	10.12%	363,222	43.42
2nd, 2003	39,268,351	11.27%	(70,575)	43.18
4th, 2003	39,847,030	11.23%	551,530	43.28
2nd, 2004	40,355,569	9.80%	1,005,045	43.30
4th, 2004	40,701,283	9.14%	581,397	43.17

Source: Pima County Real Estate Research Council,
Economics Research Associates

The retail market is currently very strong in the Tucson metropolitan area. This strength is powered by local and national economic recovery and rising home equity due to value appreciation. According to the Arizona Bankers Association, total bank deposits in Tucson have jumped from \$5.0 billion in 2000 to \$7.6 billion in 2004. This 50 percent increase in bank deposits in four short years foreshadows a continued strong retail market for several more years.

Table II-12 presents retail market indicators in the Tucson area by major submarkets. The Southeast, Southwest and Central submarket all showed strength during the last quarter of 2004. The southern parts of the Tucson metropolitan area are beginning to receive more attention from both residential and retail developers. This bodes well for downtown Tucson to become more of a hub to the entire region.

Table II-12
Retail Market Indicators by Submarket- Tucson Area, 4Q 2004

	Total Space	Vacancy Rate	Net Absorption	New Construction
Northwest	5,897,778	7.0%	16,427	59,669
West	573,719	6.1%	3,918	0
Southwest	3,063,579	8.1%	66,958	0
Southeast	3,734,379	14.2%	272,681	194,675
Northeast	1,001,241	16.5%	-16,999	0
Central	3,136,635	10.5%	69,305	34,760
TOTAL	17,407,321	9.9%	412,290	289,100

Source: CB Richard Ellis, Economics Research Associates

Hotel Market

According to the Metropolitan Tucson Convention & Visitors Bureau, the Tucson metropolitan area currently has approximately 10,000 hotel units in 61 properties. Since there is a very strong correlation between hotel demand and air passenger volume, the Tucson Airport passenger volume shown below is very revealing.

Table II-13
Passenger Volume at Tucson Airport

Year	Passengers	Change
1996	3,513,443	na
1997	3,541,116	0.8%
1998	3,477,422	-1.8%
1999	3,514,110	1.1%
2000	3,592,188	2.2%
2001	3,627,798	1.0%
2002	3,507,883	-3.3%
2003	3,508,868	0.0%
2004	3,770,445	7.5%
2004 1stQ	969,795	3.8%
2005 1stQ	1,049,535	8.2%

Source: Tucson Municipal Airport

**Table II-14
Transient Rental Tax and Hotel Revenue in Tucson**

Fiscal Year	Transient Tax Collected (\$1,000)	Tax Rate	Hotel Room Revenue (\$1,000)	Percent Increase
1994-95	\$4,083	4.0%	\$102,075	na
1995-96	\$4,046	4.0%	\$101,150	-0.9%
1996-97	\$4,421	4.0%	\$110,525	9.3%
1997-98	\$4,572	4.0%	\$114,300	3.4%
1998-99	\$4,758	4.0%	\$118,950	4.1%
1999-00	\$4,927	4.0%	\$123,175	3.6%
2000-01	\$5,058	4.0%	\$126,450	2.7%
2001-02	\$4,549	4.0%	\$113,725	-10.1%
2002-03	\$4,636	4.0%	\$115,900	1.9%
2003-04	\$7,019	5.0%	\$140,380	21.1%

Source: City of Tucson Finance Department

From 1996 to 2003, the hotel market in Tucson showed virtually no demand growth. The total passenger volume was 3.51 million in 1996, and it was still 3.51 million in 2003 as shown in Table II-13. In the intervening years, this number never dropped below 3.48 million and never rose above 3.63 million. The hotel revenue information from City Transient Room Tax data provides an identical picture. As shown in Table II-14, the Tucson hotel market experienced no real demand increase from fiscal year 1994-95 to 2002-03 when inflation is considered. Because of this lack of demand growth and increasing competition, many of the local properties have struggled and have not been able to invest in order to maintain competitive position. Some of the downtown properties fall into this category.

**Table II-15
Tucson Area Hotel Statistics**

	Avg Room Rate			Occupancy Rate		
	2003	2004	Change	2003	2004	Change
Airport	\$57.66	\$59.03	2.4%	63.13%	65.29%	3.4%
Downtown	\$72.20	\$75.30	4.3%	58.77%	63.41%	7.9%
East	\$60.92	\$62.08	1.9%	70.81%	75.05%	6.0%
Resort	\$138.95	\$131.94	-5.0%	59.85%	65.11%	8.8%

Source: PKF Consulting

economic context (continued)

Since 2003, the Tucson hotel market has shown strong growth as indicated in Table II-15 above. Hotel room revenue increased by over 20 percent over the past fiscal year. From 2003 to 2004, downtown hotel occupancy rates have climbed 7.9 percent, and room rates climbed 4.3 percent. Resort occupancy rates climbed 8.8 percent during this same period, and airport passenger volumes were up 7.5 percent. The first quarter 2005 statistics indicate a continuation of this strong demand growth trend. Air passenger volume during the first quarter of 2005 is up 8.2 percent over the same period in 2004. Tucson may be in for a period of hotel and resort demand growth as its value relative to other similar destinations becomes more apparent.

Office Market

The Tucson office market has expanded notably over the past few years, mostly as a result of the development of build-for-sale projects throughout the region. This movement from leasehold to ownership space appears to be continuing with most of the new product being delivered in mid size office condominiums developed at the city's northern perimeter. The vacancy rate in Tucson rose to 13.3 percent by year-end 2003, the highest vacancy rate reported in several years. With strong regional demand increase, it has dropped back to 11.7 percent by year-end 2004. As shown in Table II-16 below, office absorption has averaged approximately 235,000 square feet per year over the past six years.

Table II-16
Tucson Metropolitan Area - Office Trends

Year	Vacancy	Net Absorption
1999 3Q	10.9%	134,693
2000 3Q	9.9%	404,783
2001 3Q	12.9%	45,991
2002 3Q	15.0%	323,909
2003 4Q	13.3%	153,000
2004 4Q	11.7%	346,848
Average		234,900

Source: CB Richard Ellis, Pima County Real Estate Research

Mid year 2003 Class A lease rates ranged from \$18.50 per square foot in the Northeast submarket to \$24.00 per square foot in the East Central, North Central, and Downtown submarkets.

Table II-17
Office Lease Rates by Submarket, Mid Year 2003

	Lease Rates	
	Class A	Class B/C
Northwest	\$19.50	\$18.99
West Central	--	\$22.10
East Central	\$24.00	\$17.45
Northeast	\$18.50	\$17.49
North Central	\$24.00	\$19.58
Downtown	\$24.00	\$21.18

(1) Based on full service lease.

(2) Market coverage: includes buildings 10,000 square feet and larger.

Source: CB Richard Ellis, Economics Research Associates

The current office inventory of buildings over 10,000 square feet in size by submarket is reflected in Table II-18. As shown, the East Central corridor (centered along Broadway east of Alvernon Way, south of Speedway and north of Golf Links) currently contains the largest inventory of office space. Absorption was strongest in the Northwest and North Central submarkets. The highest vacancy rate was reported in the East Central area (15.1 percent) followed by the West Central submarket (14.5 percent). The downtown submarket vacancy was third highest (14.1 percent).

Table II-18
Office Market Indicators by Submarket, Year End 2004

	Total Bldg	Vacancy Rate	Net	
			Absorption	
Northwest	1,428,281	7.4%	152,670	54,281
West Central	471,300	14.5%	49,631	65,200
East Central	2,142,876	15.1%	(19,995)	42,244
Northeast	774,348	9.7%	43,384	11,744
North Central	1,393,405	8.8%	75,750	49,996
Downtown	1,245,680	14.1%	45,368	32,277
TOTAL	7,455,890	11.7%	346,848	255,742

Source: CB Richard Ellis, Economics Research Associates

Downtown Potential and Site Evaluation

Downtown Tucson Housing Market

Due to steady population growth, a gradual recovery of the regional economy and continued low mortgage rates, the strength of the downtown Tucson housing market is coming from the ownership sector. The West University neighborhood is moving up market with rental units converting back to owner occupancy. Attractive units in the Armory Park neighborhood are now bringing high prices with the top unit selling for \$550,000. The John Wesley Miller 98-unit single-family development, named Amory Park del Sol and located on the western border of this federally registered residential historic district, is selling in the \$250,000 to \$450,000 range. The project is apparently more than half sold.

Table III-1

Downtown Tucson Housing Demand Forecast

	2005-2015
Projected Tucson Dwelling Unit Increase	48,500
Increase Excluding Mobile Homes	42,500
Downtown Market Share @ 5% - Low	2,100
Downtown Market Share @ 8% - High	3,400

Source: Economics Research Associates

According to the 2000 Census, Downtown Tucson had 8,500 housing units of which 1,700 were in the Downtown Core the remaining 6,800 in the Downtown Neighborhoods. Assuming sites can be created, ERA forecasts that Downtown Tucson has the market potential to absorb between 2,100 and 3,400 additional residential units over the next decade (2005 to 2015). Given the recent success of projects like Amory Park del Sol, a number of developers are proposing residential projects in the downtown. Within the Downtown, there are currently eleven housing projects in various stages of planning, design or contraction. If all these were to proceed to completion, over 700 new units would be added. The housing developers are responding to market demand, which consists of locals moving out of smaller and older units, outsiders finding Tucson to be a good value, and empty nesters or young professional households seeking a more urban living environment.

Downtown Hotel Market

Downtown Tucson has four hotels, and they include: 1) The Radisson Tucson City Center of 307 units located at 181 West Broadway, 2) The Innsuites Tucson City Center with 260 units located at 475 North Granada Avenue, 3) The 161-unit Clarion Hotel & Suites at 88 East Broadway, and 4) the Congress Historic Hotel with only 40 rooms. The four properties total 768 rooms and constitute about seven to eight percent of the Tucson market. Several of these properties are in need of significant reinvestment to become competitive business hotels.

Assuming that the upward trend detected for 2004 and 2005 continues for several years, the 2005 to 2015 demand growth will be stronger than that experienced during the past ten years. Using a current inventory of 10,000 rooms and a slightly less than 3.0 percent annual growth rate, ERA estimates that the metropolitan area will be able to support an additional 3,200 hotel rooms by 2015. This analysis includes the recently opened Starr Pass Marriott Resort, which has 585 guest units.

Table III-2
Downtown Tucson Hotel Market Demand Forecast

	2005-2015
Projected Metropolitan Area Hotel Demand Increase in Units	3,200
Downtown Market Share @ 6% - Low	190
Downtown Market Share @ 12% - High	380

Source: Economics Research Associates

ERA estimates that the downtown potential is 6 to 12 percent of the total Tucson metropolitan market growth or 190 to 380 units. Considering both the demand growth and the current competition, downtown Tucson is likely to add one or two new hotel by 2015. The expansion of an existing property is also a possibility. This new competition will spur renovation of the existing hotels and contribute to the upgrading of the overall downtown environment. Both the Ronstadt Transit Center site and the Civic Plaza site are attractive locations for future downtown hotel development. Developers, however, are likely to time the completion of these new hotels to follow the reconstruction of Congress Street and the widening of I-10 through downtown Tucson.

Downtown Retail Market

Downtown Tucson currently has in excess of 4.5 million square feet of total space. Of this total, which is estimated from information provided by the Tucson Downtown Alliance, only 7.0 percent or 319,000 is occupied retail space. The major tenant types include restaurants, cafes, nightclubs and art/craft galleries. Some of the occupied retail space, particularly the space in the vicinity of the Ronstadt Transit Center, appears to be fairly weak and have financially marginal tenants. In addition, the downtown has 151,000 square feet of vacant ground floor space, much of which could be retail or restaurant space. The challenges to more successful retail in Downtown Tucson include: 1) Intense through traffic on Congress and Broadway, 2) The lack of a strong corporate employment base, 3) Limited on-street parking, and 4) Facilities that cater to the socially needy population with limited incomes. Because of these challenges, downtown has not participated in the very strong regional retail growth of the past five or six years.

Table III-3
Inventory of Downtown Space

Type of Space	Sq Ft	Percent
Ground Floor Retail	319,067	7.0%
Vacant Ground Floor	151,477	3.3%
Ground Floor Office/Theater/Institutional	533,601	11.8%
Vacant Upper Floor	280,847	6.2%
Occupied Office Space 2nd floor & up	1,211,220	26.7%
Occupied Social & Institutional	295,657	6.5%
Government Buildings	1,442,969	31.8%
Hotels or Events Facility	302,047	6.7%
Total	4,536,885	100.0%

Source: Tucson Downtown Alliance

In the decade ahead, a number of actions will strengthen Downtown Tucson retailing. These include: 1) The addition of local residential population due to housing construction; 2) The redesign of Congress Street into two way traffic flow to reduce traffic speed and volume, add on-street parking and widen sidewalks; 3) The replacement of the aging Martin Luther King public housing project with a new Depot Plaza development; 4) The possible relocation of the Ronstadt Transit Center away from Congress Street; 5) The completion of a 790-space public garage located at Pennington Street and Sixth Avenue; and 6) Completion of the new Fourth Street underpass. Developers are poised to invest in downtown mixed-use projects, typically with residential built over retail or restaurant uses, should most of the above action proceed to implementation.

Table III-4
Downtown Tucson Retail Market Demand Forecast

	2005-2015
Projected Metropolitan Area Retail Demand Increase in SF	5,200,000
Downtown Market Share @ 1.5% - Low	75,000
Downtown Market Share @ 3.0% - High	150,000

Source: Economics Research Associates

Depending upon the effectiveness of the new Congress Street design and of the relocation and more vigorous management of the Ronstadt Transit Center, ERA projects the new 2005 to 2015 Downtown Tucson retail development potential to be in the 75,000 to 150,000 square feet range. In addition, the market should be of sufficient strength to allow existing space to upgrade.

The Tucson office market is currently on an upward trend with vacancies falling and absorption increasing. However, in the decade ahead a number of disruptive construction projects are likely to cause tenants to delay coming downtown until they are completed. These include the widening of I-10, the reconstruction of Congress and Broadway into two-way streets, and the construction of the new Fourth Avenue underpass.

Considering the recent market interest, condominium office development in the downtown neighborhoods could prove to be popular, especially in historic districts like the El Presidio or Armory Park. Relocation of County offices into the new Criminal Justice complex could create some secondary vacancies that would compete for tenants.

economic context

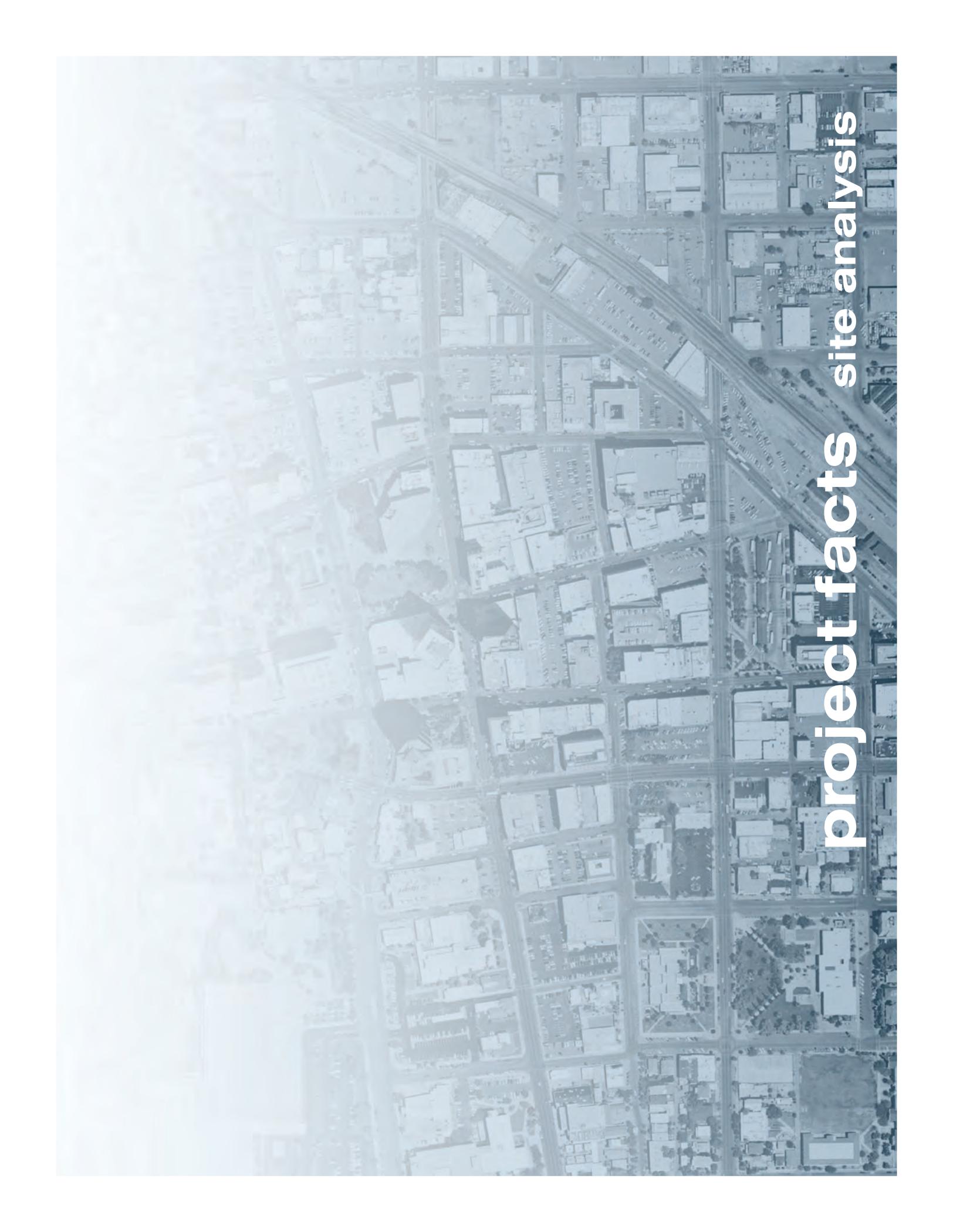
(continued)

ERA projects that the Tucson Metropolitan Area will absorb approximately 3.3 million square feet of office space between 2005 and 2015. We estimate that downtown will attract 4.0 to 7.5 percent of the total market or 130,000 to 250,000 square feet over this next ten-year period.

Table III-5
Downtown Tucson Office Market Demand Forecast

	2005-2015
Projected Metropolitan Area Office Demand Increase in SF	3,300,000
Downtown Market Share @ 4.0% - Low	130,000
Downtown Market Share @ 7.5% - High	250,000

Source: Economics Research Associates



project facts site analysis

analysis introduction

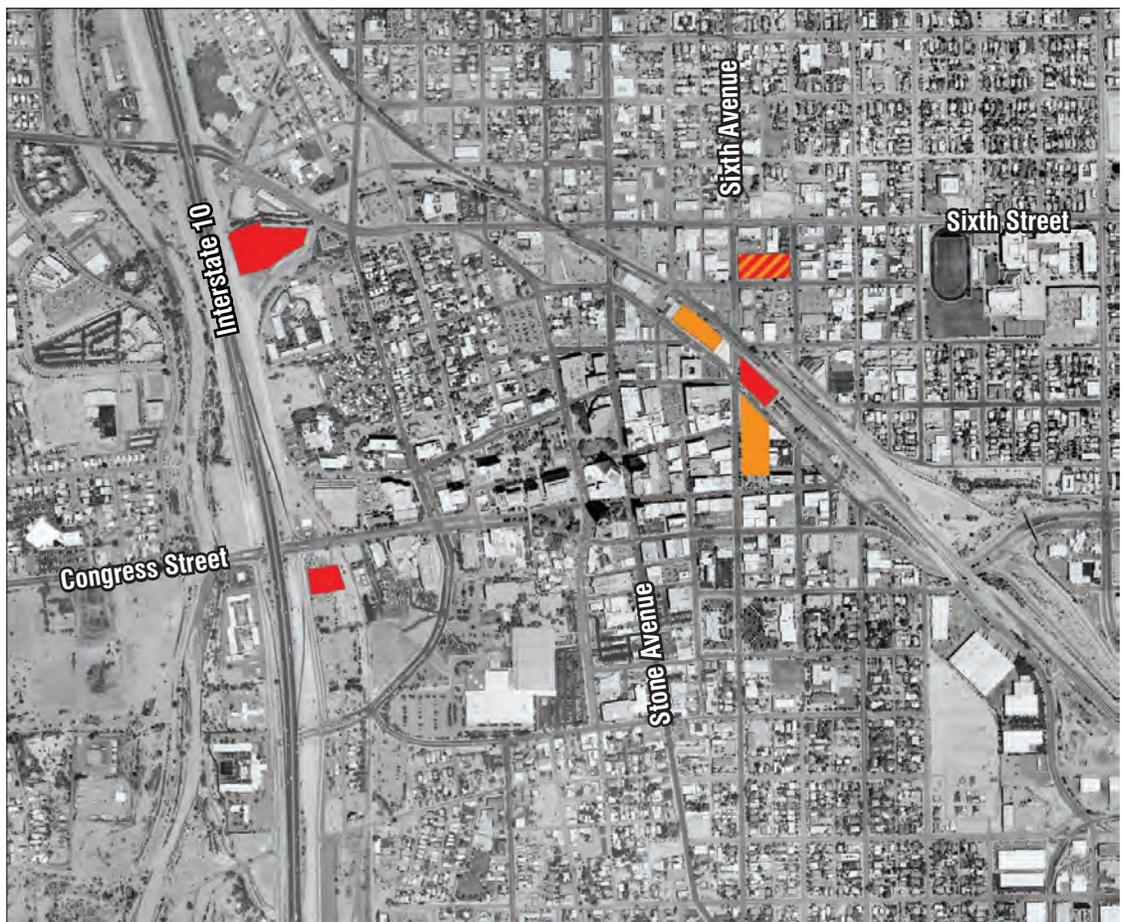
After a broad review of the downtown area of Tucson the Planning Team along with the Project Management Team and the Technical Advisory Committee focused the study on seven prospective sites: four for Greyhound, and four for Sun Tran. While there were a great many of sites that could have been chosen, it was the studied opinion of the team members that these sites possessed the greatest potential. None of the site proposals involve locating the Sun Tran and Greyhound facilities simultaneously on the same site.

NOTE: As one of the goals of the relocation of both the Sun Tran and Greyhound facilities was to further integrate the various modes of mass transit, the facilities were not considered in exclusion of each other. Sites for both of the facilities appear together in the following large scale analysis while the detailed examinations of the individual sites is relegated to the specific volumes (i.e. Sun Tran sites in this volume, Greyhound sites in volume 01).

image key

- proposed Greyhound sites
- 01 Toole Avenue
- 02 Millstone property
- 03 Fifth Ave./Seventh St.
- 04 Civic Plaza site

- proposed Sun Tran sites
- 01 Ronstadt Transit Center
- 02 Toole Avenue
- 03 Fifth Ave./Seventh St.
- 04 dispersed downtown



proposed Greyhound and Sun Tran sites

analysis combined sites

This portion examines the sites as a totality with respect to many of the larger issues at hand.

One of the goals of this project is to increase the connectivity between the various modes of mass transit in Tucson, making each more viable and the entire system more efficient for the ridership. Sun Tran routes should complement the routes taken by the modern street car as well as offering convenient transit options to Greyhound and heavy rail (Amtrak) riders.

The image below shows these related modes of transit along with all of the proposed sites. The Millstone property in particular lacks a practical connection to both the modern street car and the heavy rail lines. At this time those sites nearest to the existing facilities have the greatest connections.

image key

-  proposed sites GH and ST
-  heavy rail routes
-  heavy rail depot
-  modern street car
-  street car stops (aka stations)



related modes of transport

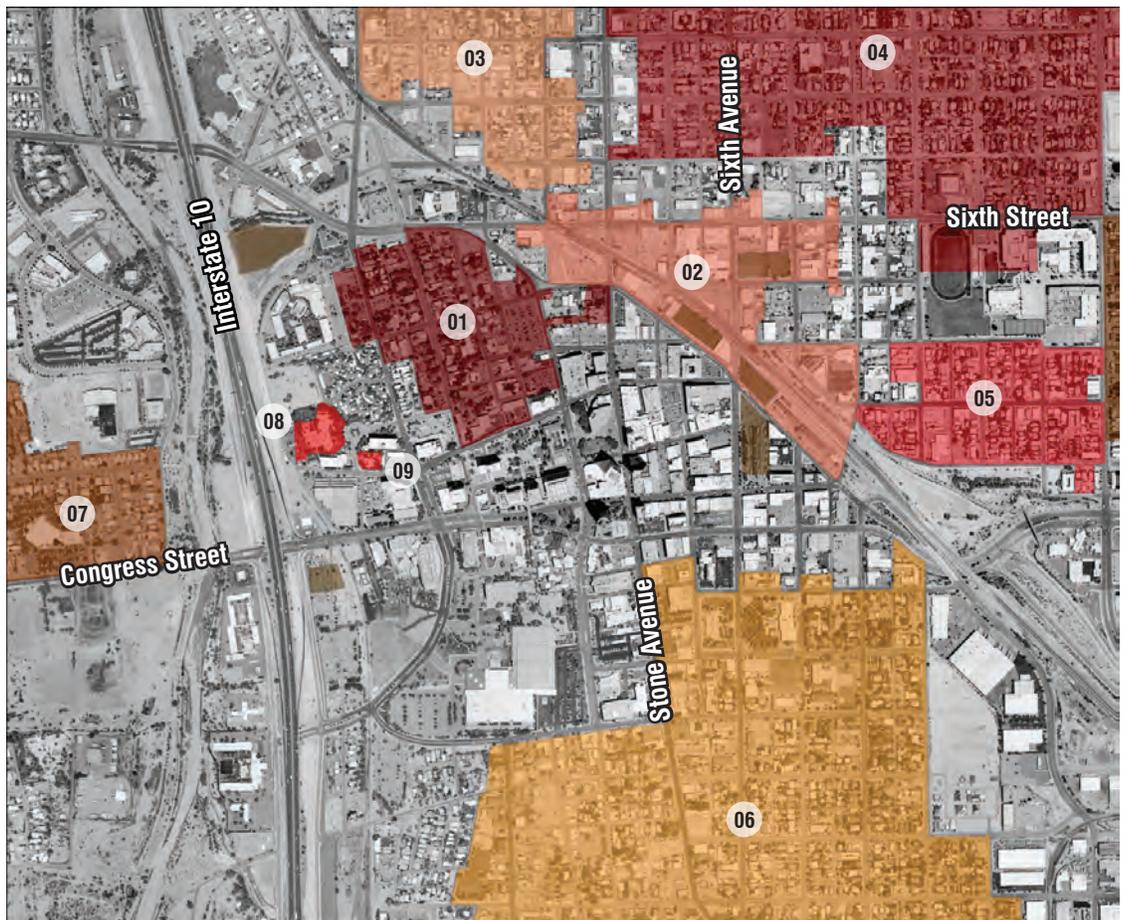
analysis combined sites

The image below shows the location of the potential Sun Tran and Greyhound sites with respect to the recognized historic districts in the area.

While their status does not preclude the locating of a facility within their bounds, there is a certain level of review that a design must pass in order to be built, ensuring appropriate sensitivity to the cultural significance of the area.

image key

- proposed sites
GH and ST
- 01 El Presidio
Historic District
- 02 Warehouse
Historic District
- 03 John Spring
Neighborhood
Historic District
- 04 West University
Historic District
- 05 Iron Horse
Expansion
Historic District
- 06 Armory Park
Historic District
- 07 Menlo Park
Multiple Re-
source Area
- 08 historic structure
- 09 historic structure



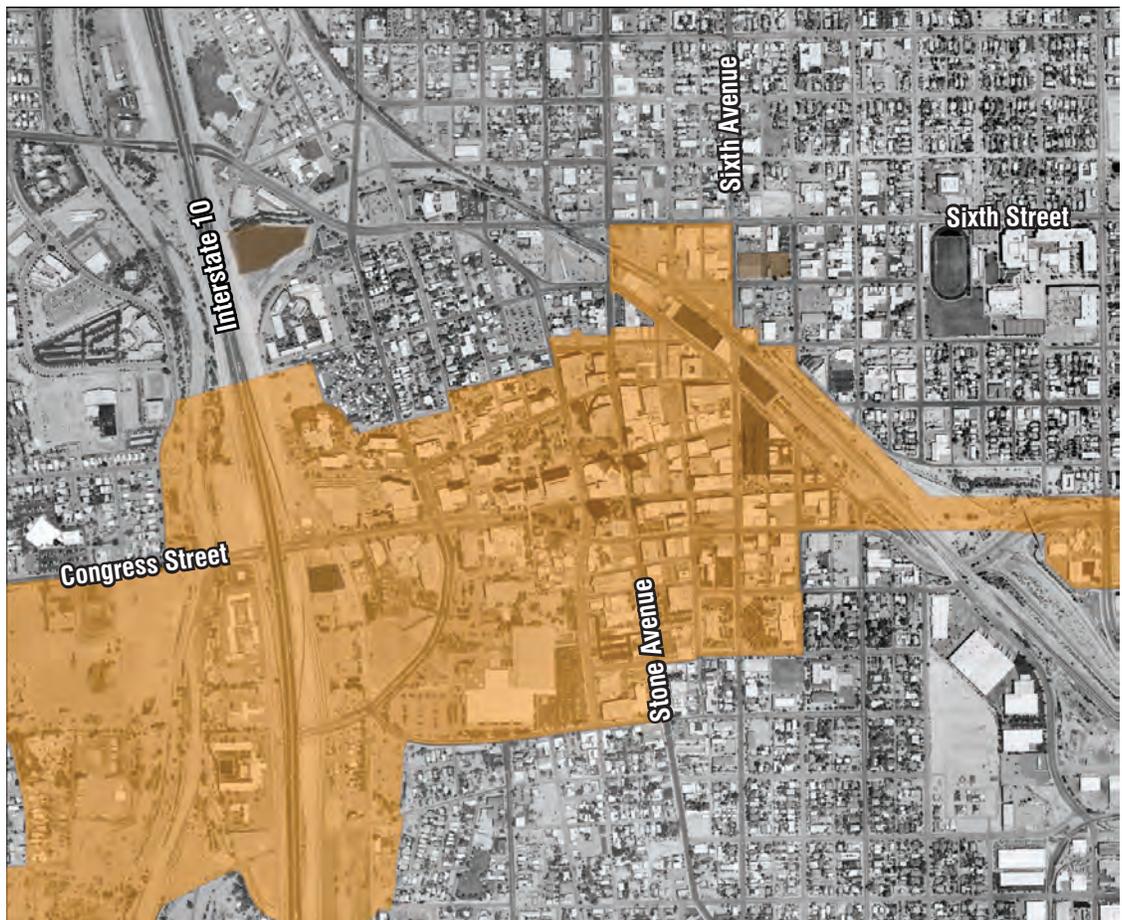
historic districts and structures

analysis combined sites

The image below shows the relationship between all of the proposed sites and the Rio Nuevo MPF District overlay. Note that one of the goals of the Transportation and Feasibility Study is to reinforce preexisting plans etc. and both the Millstone site and the Fifth Avenue and Seventh Street sites are outside the current Rio Nuevo Multi-Purpose Facilities District bounds, and therefore public investment in either site would not qualify as local match expenses toward expenditure of Rio Nuevo funds.

image key

-  proposed sites
GH and ST
-  Rio Nuevo Multi-Purpose Facilities District



Rio Nuevo Multi-Purpose Facilities District

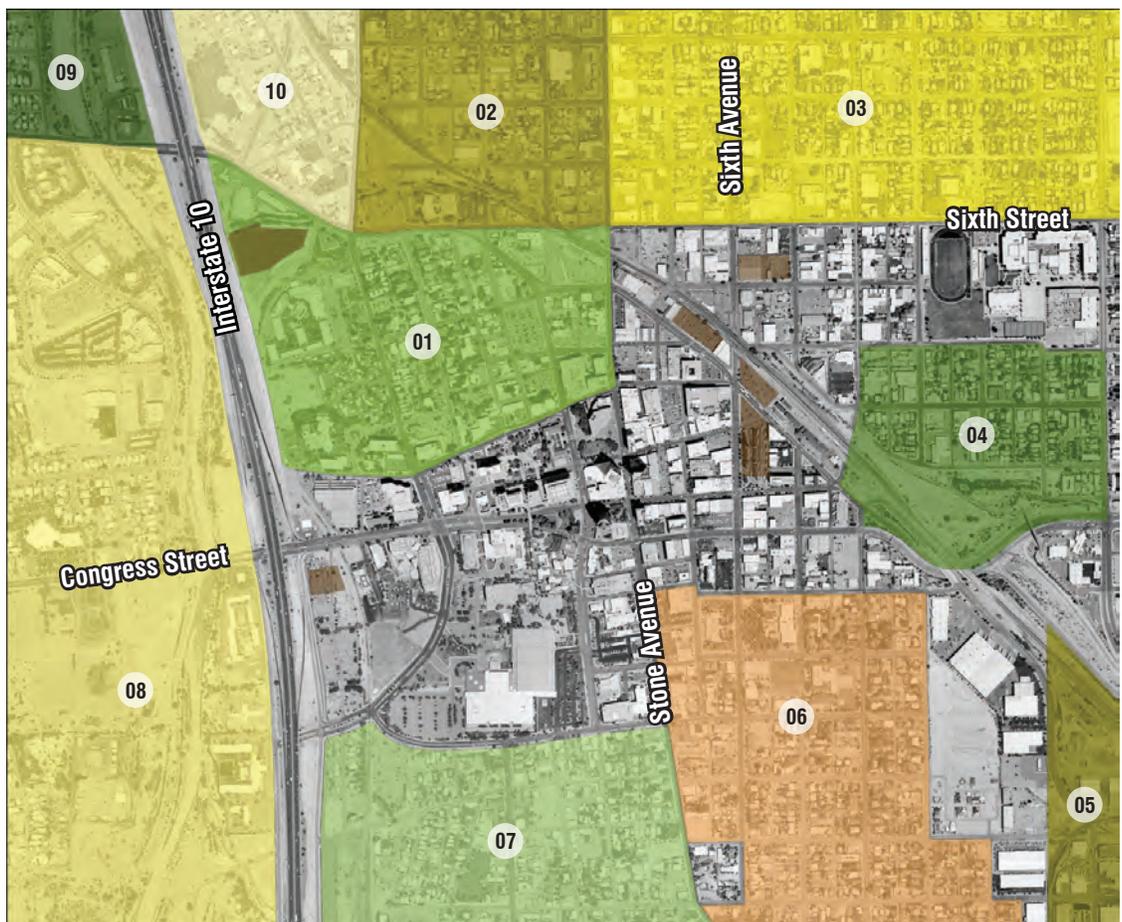
analysis combined sites

The image below shows the neighborhood associations in the vicinity of the potential sites. Note that only the Millstone property is actually within the bounds of an association (El Presidio).

Neighborhood opposition to facilities such as Greyhound is often based upon noise pollution and safety concerns. With respect to the first, it can be seen from the image below that all of the sites are located in zones already affected by transit generated noise: two sites flank Interstate 10 and the remainder are near the rail lines. Where safety is concerned, representatives of TPD have indicated (see appendix 02 - meeting minutes 10) that these facilities are not the problem that public perception would make them out to be.

image key

- proposed sites
GH and ST
- 01 El Presidio N.A.
- 02 Dunbar Spring N.A.
- 03 West University N.A.
- 04 Iron Horse N.A.
- 05 South Park N.A.
- 06 Armory Park N.A.
- 07 Barrio Viejo N.A.
- 08 Menlo Park N.A.
- 09 Barrio Hollywood N.A.
- 10 Barrio Anita N.A.



neighborhood associations

Sun Tran existing site and routes

analysis of the existing Sun Tran site and current bus routes

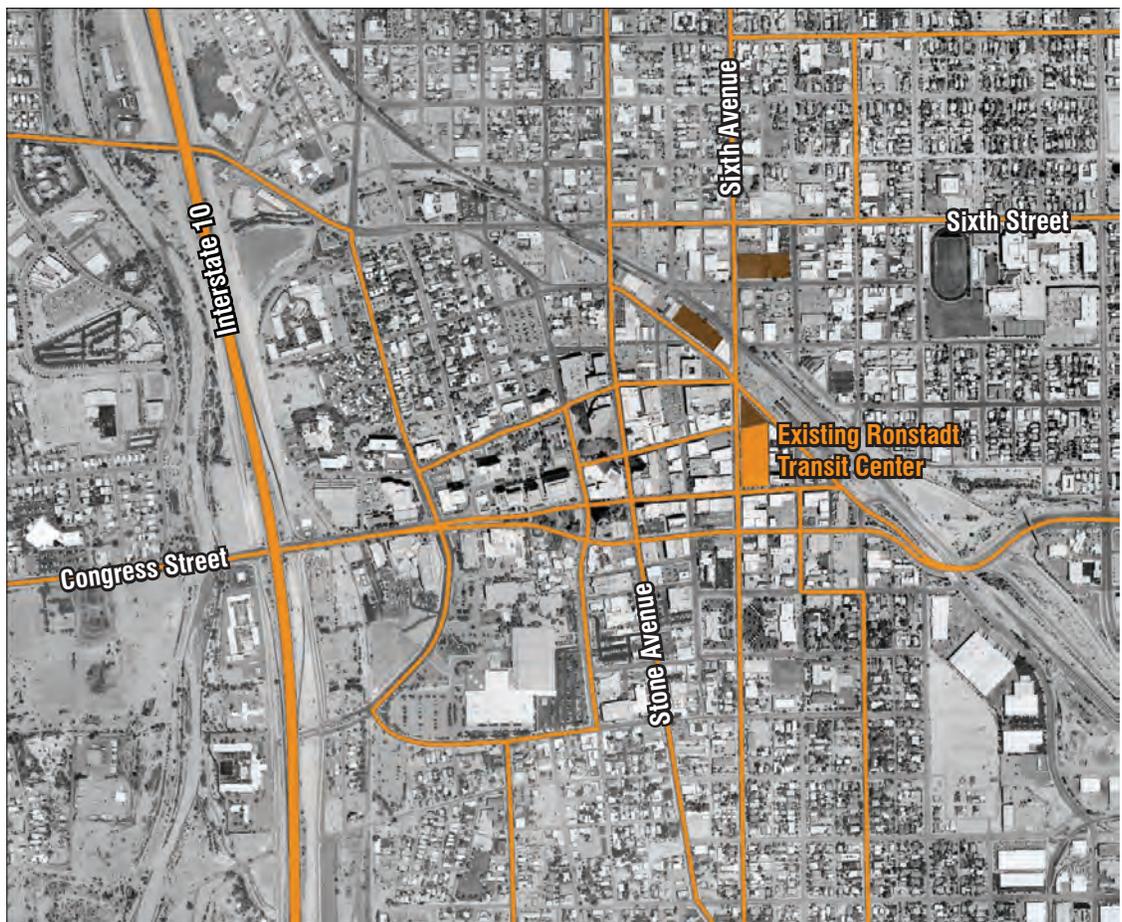
Downtown Tucson is currently served through Sun Tran’s Ronstadt Transit Center located on the north east corner of Sixth Avenue and Congress Street. The RTC is provided with eighteen bus bays and sees approximately 16,000 users daily, drastically more than Sun Tran’s other two transit centers. The current site area is approximately 114,339 square feet and accommodates 18 full-sized buses.

That portion of the facility that lies along Congress Street is considered to have great potential for commercial development. Additionally many downtown interests perceive the RTC as drawing an unsavory element into the area.

Options for this facility include leaving it unchanged, modifying the site, relocating it to a new site, or dispersing its service throughout the downtown area.

image key

-  proposed Sun Tran sites
-  existing Sun Tran site (RTC)
-  existing Sun Tran routes



existing Sun Tran Transit Center and bus routes

analysis summary

Sun Tran site 01

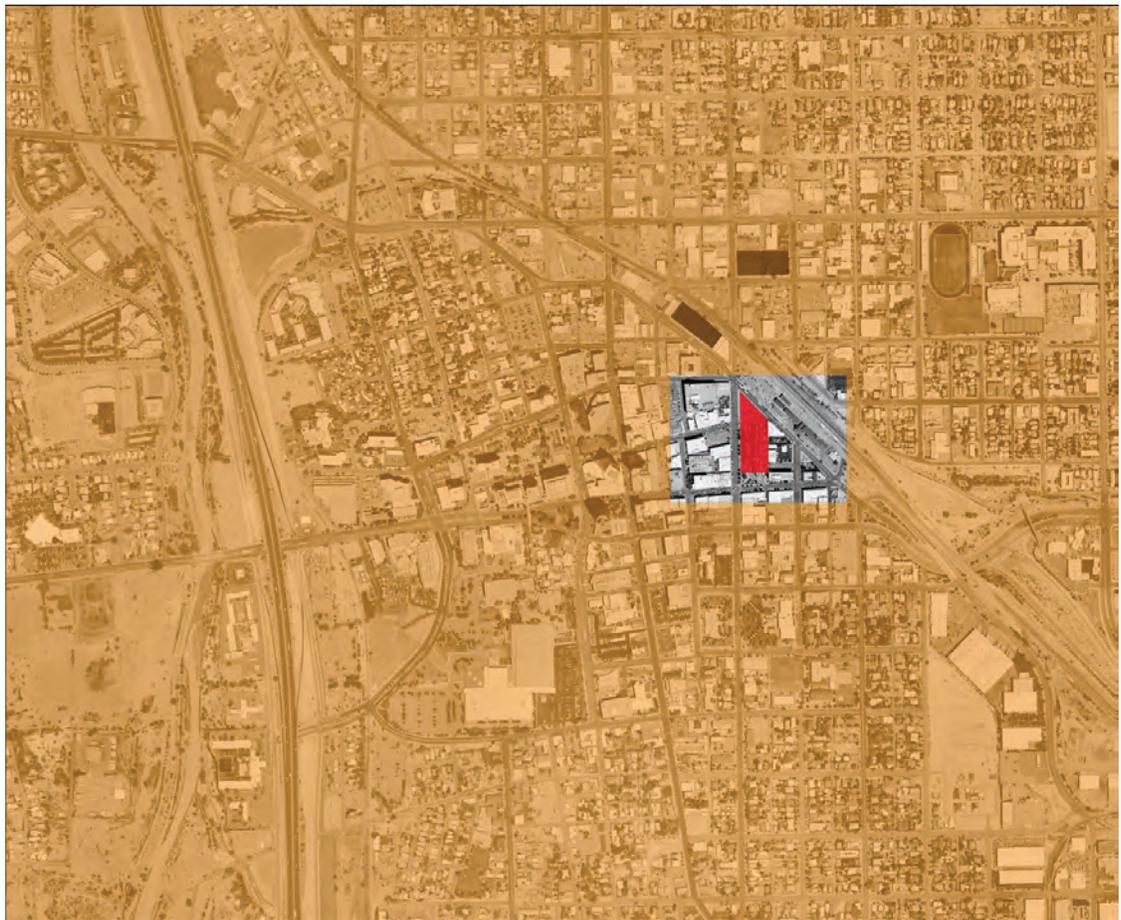
Ronstadt Transit Center

The first site to be considered for the Sun Tran transit center lies along Sixth Avenue between Congress and Pennington Streets. As examined here, the site includes the existing RTC area as well as the Pennington Triangle to its north.

The land on which the current RTC sits is owned by the City of Tucson and the Pennington Triangle parcels are also in the process of being acquired. It should be well noted that the existing RTC parcels were purchased with FTA funds and an abandonment of them with respect to mass transit could entail a substantial repayment of those funds by the city. This fact alone drastically increases the capital costs of all other sites considered for Sun Tran in this study.

image key

- proposed Sun Tran sites
- site 01 - Ronstadt Transit Center
- limits of enlargement



enlargement key - Sun Tran site 01

analysis
Sun Tran site 01

Ronstadt Transit Center

The utilization of this site for the Sun Tran Transit Center would place it adjacent to the City Council approved Greyhound Bus Depot site (see Transportation and Feasibility Study volume 01-Greyhound) as well as adjacent to the existing Historic Depot (heavy rail which offers passenger service via Amtrak). There is also a modern street car stop (referred to as a station) proposed at the southwest corner of the site. No other site under consideration can offer the same level of connectivity between mass transit modes.

Additionally, it is conveniently close to many of the government (municipal and county) buildings and familiar to existing users. Its location near the rail road line means that any noise it produces is in an area already affected by transit generated noise.



site area and related transit modes

image key

- proposed Sun Tran site
- related transit modes
- modern street car route
- modern street car stop

NOTE: All boundaries, dimensions and areas are approximate.

analysis
Sun Tran site 01

Ronstadt Transit Center

This site is outside any of the current historic districts and neighborhood associations, though it is adjacent to the Warehouse Historic District to the north.

It is however within the bounds of the Downtown Business District which is represented by the Tucson Downtown Alliance and is part of a special taxation entitled the Business Improvement District (BID).



historic districts and neighborhood associations

- image key
- proposed Sun Tran site
 - historic district boundaries

Ronstadt Transit Center

This site is completely contained within the Rio Nuevo Multi-Purpose Facilities District meaning that the public investment that this transit project would require would qualify as local match expenses toward the expenditure of Rio Nuevo funds. This site is also immediately adjacent to the Depot Plaza Master Plan Area. That plan proposes reclaiming the southern portion of Ronstadt Transit Center that runs along Congress Street south of the abandoned Tenth Street for commercial development. The transit center function is considered by some to have a negative impact on the success of that mixed-use development. A ten foot service easement along the entire east side of the site has been granted to the Depot Plaza development.

To the northwest lies the Arts District Master Plan Area. The incorporation of the Pennington Triangle into the site brings the facility into greater proximity with this plan area, but as there is no change in function there should be no change in the current dynamic between the two.



master plans and other overlays

image key

- proposed Sun Tran site
- Arts District MP boundary
- Depot Plaza MP boundary
- Rio Nuevo MPF District boundary

analysis summary

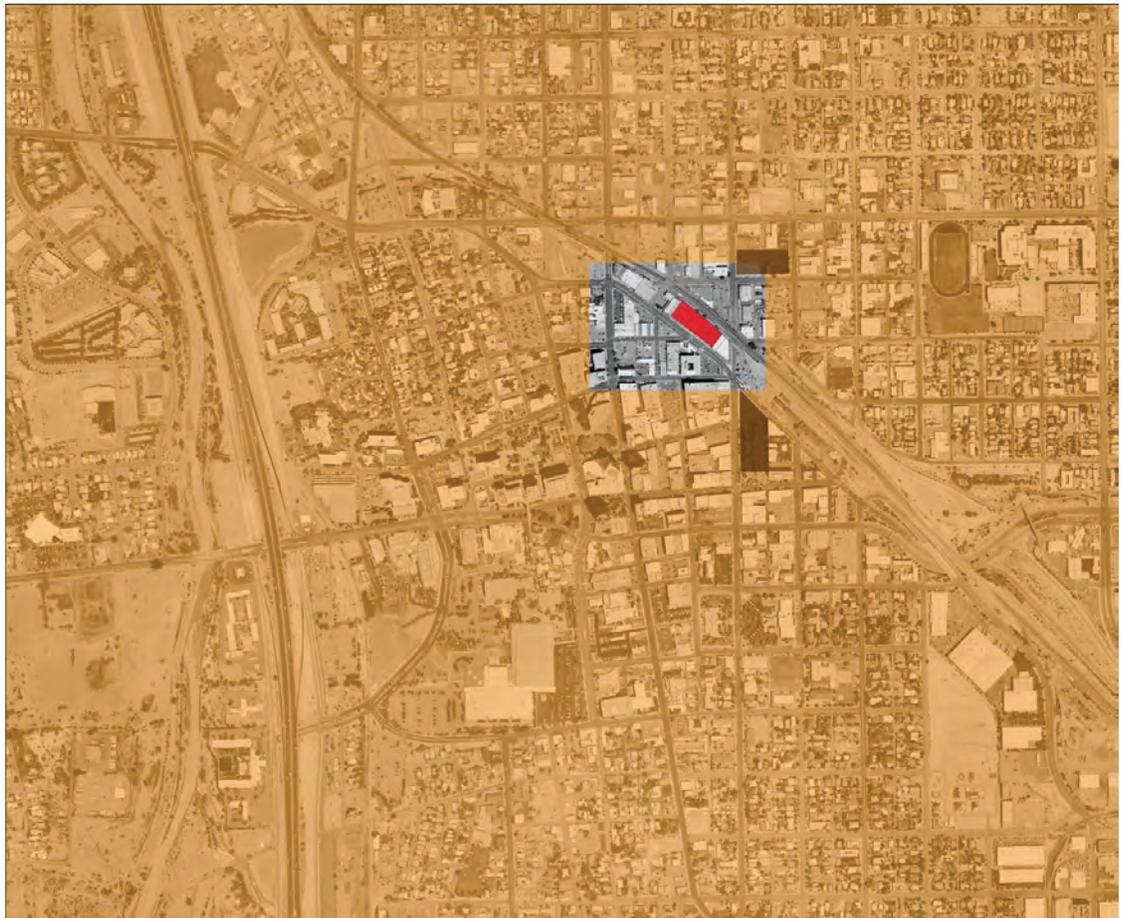
Sun Tran site 02

Toole Avenue

The second Sun Tran site under consideration lies along the north side of Toole Avenue west of Sixth Avenue. Currently the site is used for parking. The majority of the area is owned by the State of Arizona while the northern most parcel is privately held at the present.

image key

-  proposed Sun Tran sites
-  site 02 - Toole Avenue
-  limits of enlargement



enlargemnet key - Sun Tran site 02

analysis
Sun Tran site 02

Toole Avenue

This site would locate the Sun Tran transit center close to two potential Greyhound Bus Depot sites (see Transportation and Feasibility Study volume 01 - Greyhound) as well as the Historic Depot (heavy rail with passenger service via Amtrak). This site has the second greatest level of connectivity to the other modes of transit but is not conveniently close to any of the proposed modern street car stops.

It is relatively close to many of the governmental facilities particularly the municipal courts. Set against the Union Pacific rail line, the noise that is created by the operating buses would be in an area already subject to transit generated noise. The increased duration of noise may not be compatible with the neighboring uses (primarily art galleries/studios at the present).

It should be noted that some of the turning radii on streets approaching the site are insufficient for a full size public bus, particularly that from south bound sixth west on to Toole Avenue.



site area and related transit modes

image key

- proposed Sun Tran site
- related transit modes

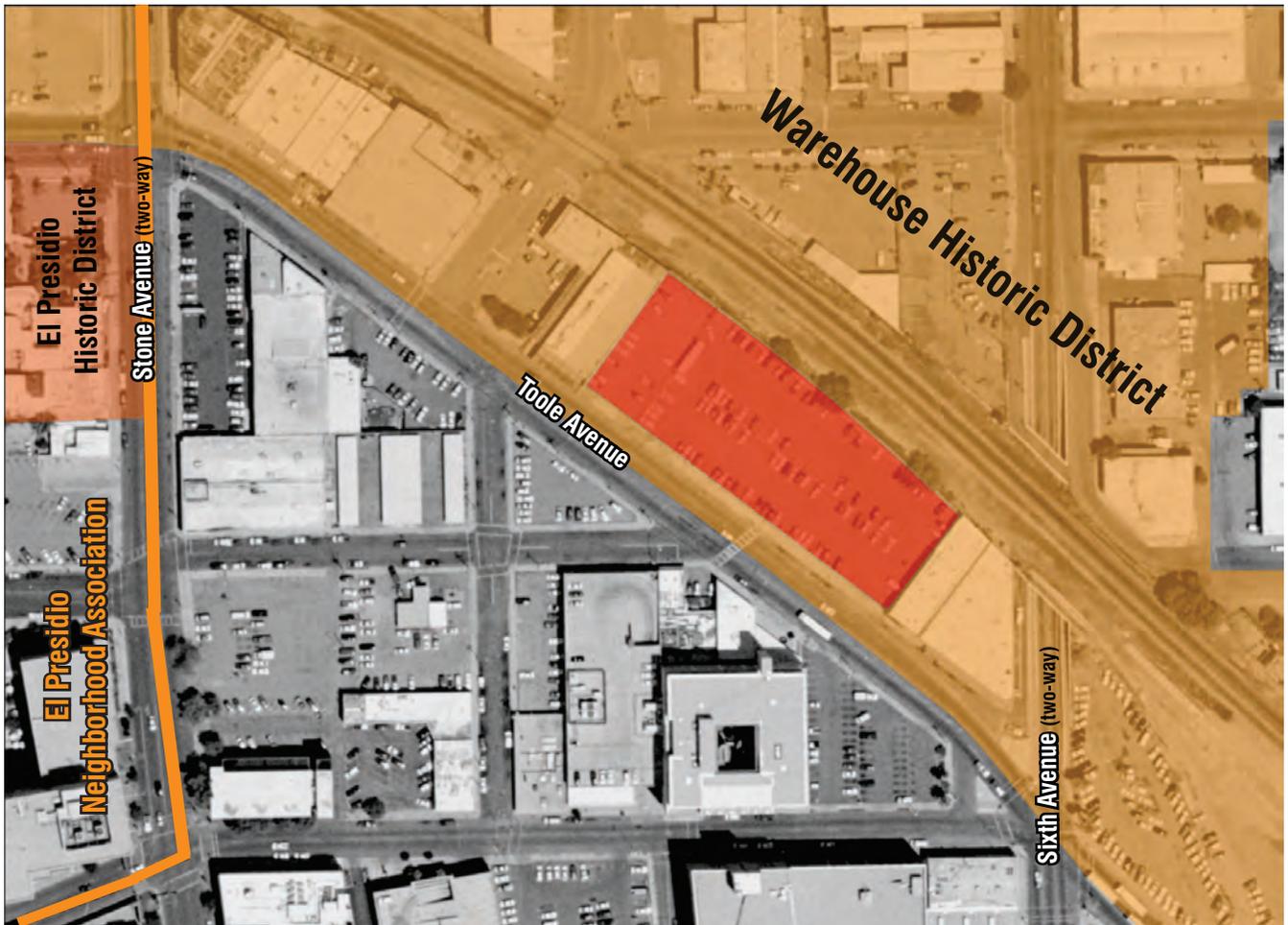
NOTE 01: All boundaries, dimensions and areas are approximate.

NOTE 02: Stevens Avenue connection to Sixth Avenue is currently undetermined.

analysis
Sun Tran site 02

Toole Avenue

This site is within the bounds of the Warehouse Historic District and while that designation does not preclude the use of this site for a transit facility, any design would be subject to a review board to ensure that the appropriate level of sensitivity to the cultural value of the area is shown.



historic districts and neighborhood associations

image key

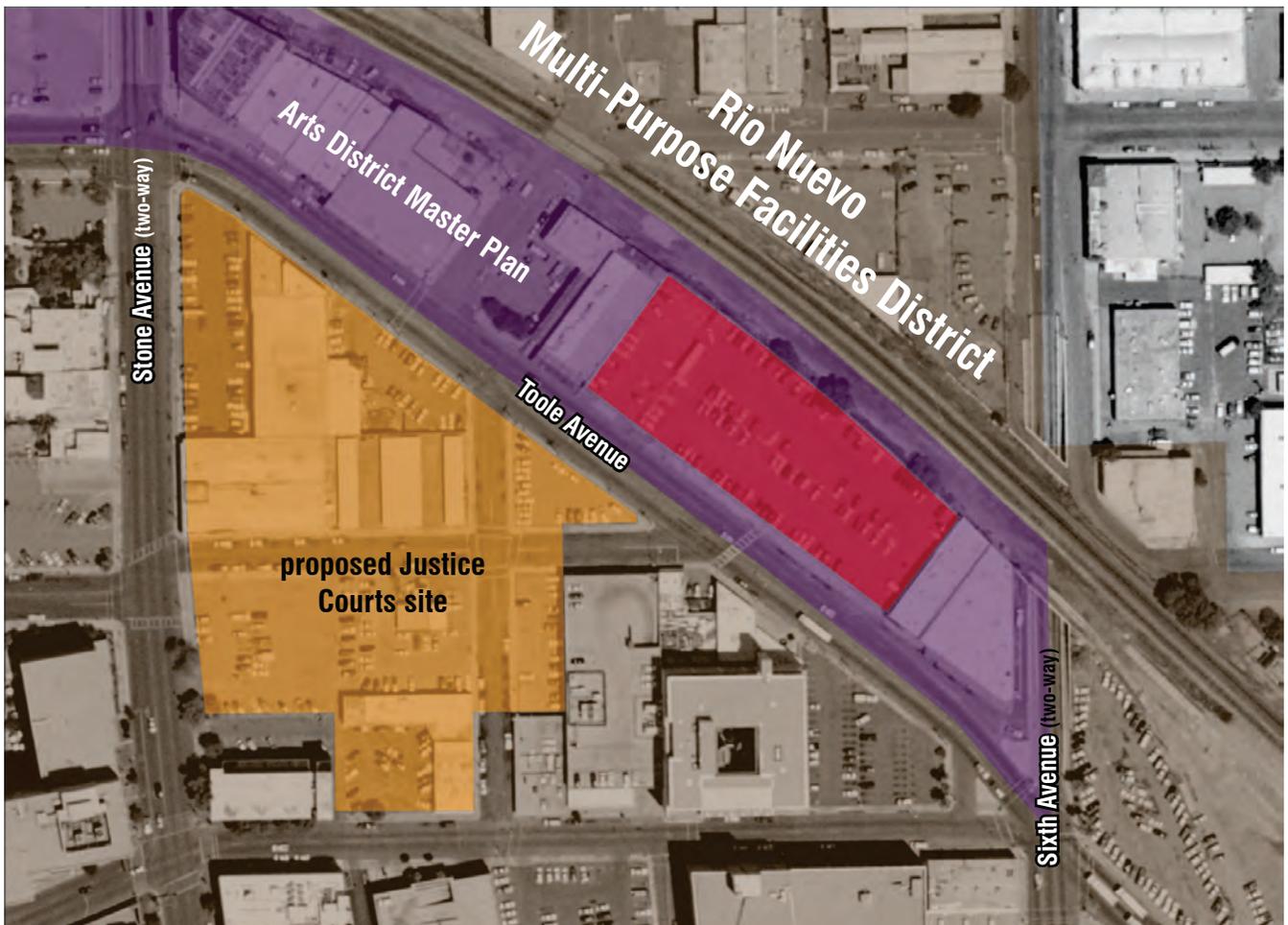
- proposed Sun Tran site
- Warehouse Historic District
- El Presidio Historic District
- El Presidio Neighborhood Association

analysis
Sun Tran site 02

Toole Avenue

This site is within the bounds of the Rio Nuevo Multi-Purpose Facilities District meaning that the public investment it would require would qualify as local match expenses toward expenditure of Rio Nuevo Funds.

As can be seen below, the Arts District Master Plan would be directly impacted by the placement of the Sun Tran transit facility on this site. Under that plan this area is slated for a street-side art walk backed by artists studio and residences, a function that likely could not be accommodated on this site were it also used as a transit facility. As one of the stated goals of this study is to re-inforce existing Master Plans etc. the appropriateness of this site for a Sun Tran transit center is called into question.



master plans and other overlays

image key

- proposed Sun Tran site
- Arts District Master Plan area
- proposed Justice Courts site
- Rio Nuevo MPF District

analysis summary

Sun Tran site 03

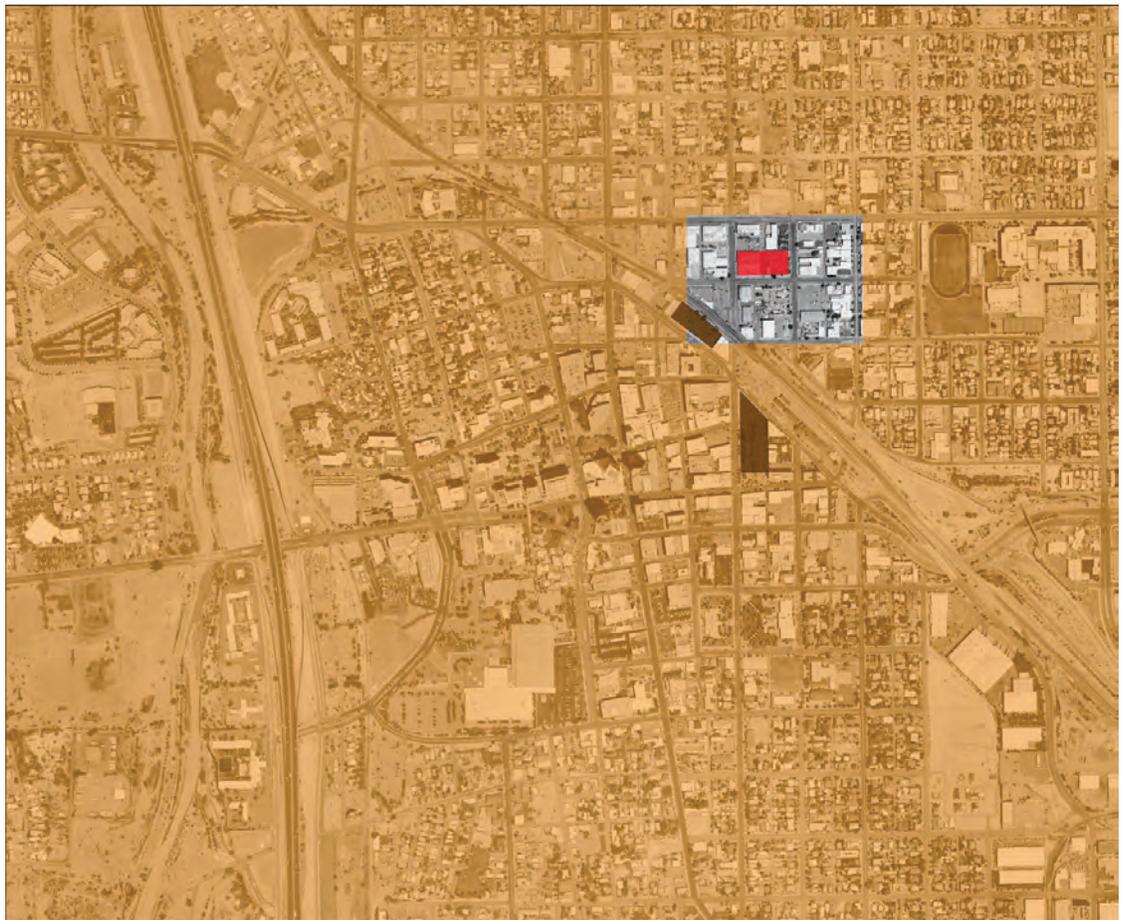
Fifth Avenue and Seventh Street

The third site under consideration for the Sun Tran transit center is located along the north side of Seventh Street between Fifth and Sixth Avenues.

The four parcels that compose this site are privately owned and are currently utilized in several capacities. On the western half there are existing building one of which is a long-standing retail establishment (Miller's Surplus). While not protected these building are of sound construction and may have historic value. On the eastern there are smaller buildings and a service yard.

image key

- proposed Sun Tran sites
- site 03 - Fifth Ave. and Seveth St.
- limits of enlargement



enlargemnet key - Sun Tran site 03

analysis
Sun Tran site 03

Fifth Avenue and Seventh Street

This site is bisected by Arizona Avenue; its use of this site as a mass transit center would certainly require the abandonment of this right-of-way which may cause some difficulty for the neighboring businesses, such as Reproductions, Inc.

This site is located one block west of Fourth Avenue along which the modern street car will be routed. It is also one block north of the City Council approved Greyhound Bus Depot site (see Transportation and Feasibility Study volume 01 - Greyhound) and two blocks from the Historic Depot where passenger service is provided via Amtrak.

The site is located well away from most of the governmental buildings and some of the amenities of downtown such as the library and museums. This may prove to be a significant obstacle for many of the current ridership for whom these are primary destinations.

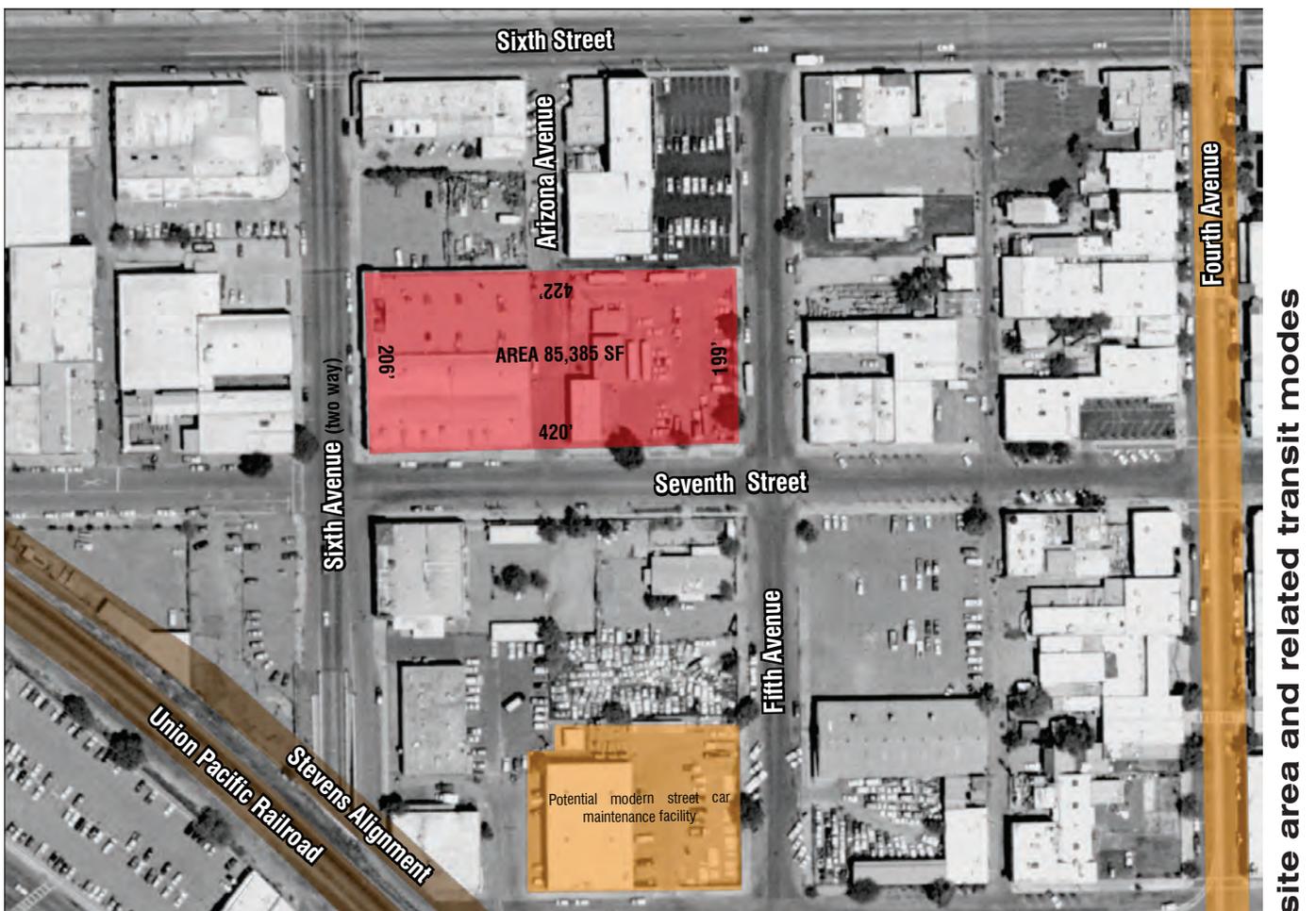


image key

- proposed Sun Tran site
- related transit modes
- modern street car route

NOTE: All boundaries, dimensions and areas are approximate.

analysis
Sun Tran site 03

Fifth Avenue and Seventh Street

This site is within the Warehouse Historic District but is not bounded by any current neighborhood associations. Though the historic district designation would not exclude a transit facility, it does require a level of design review to ensure that any facility placed on the demonstrated the appropriate sensitivity to the cultural value of the area.

The two existing structures on the western half of the site are not currently designated as historic but are listed as contributing structures to the historic district. They are in good condition but it is unlikely they could be preserved were the site utilized as a transit center.

While the site is one block west of Fourth Avenue there is stated opposition to the placement of a transit center on this site by the Fourth Avenue Merchants Association.

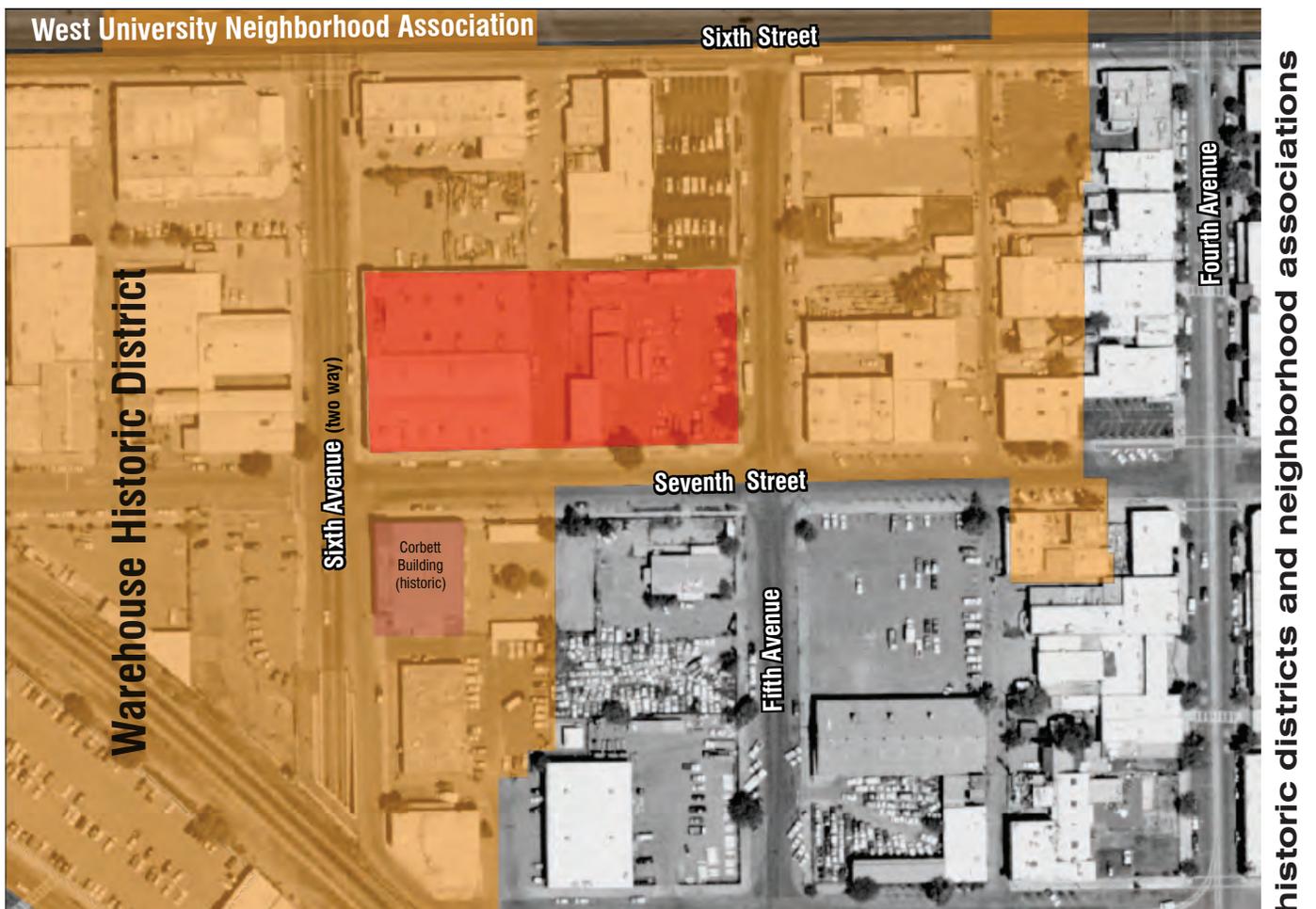


image key

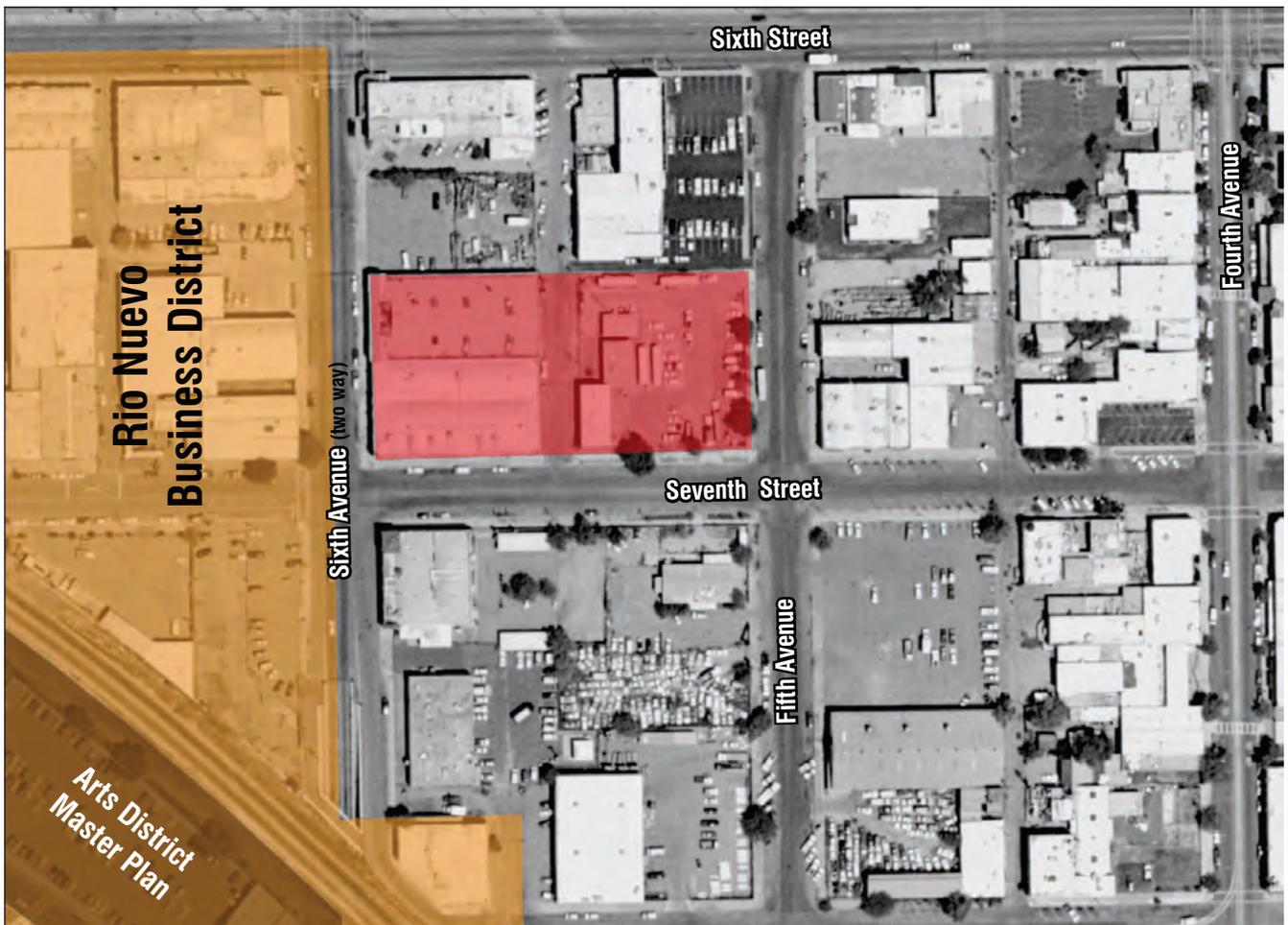
- proposed Sun Tran site
- neighborhood association boundaries
- historic district boundaries
- historic structure

analysis
Sun Tran site 03

Fifth Avenue and Seventh Street

The Rio Nuevo Multi-Purpose Facilities District stops just short of this site which means that the public investment that would be required to execute the facility would not qualify as local match expenses toward expenditure of Rio Nuevo funds.

The Arts District Master Plan is also located at some distance from this site and across the railroad tracks and should therefore feel little impact from its development as a transit facility.



master plans and other overlays

- image key
- proposed Greyhound site
 - Arts District Master Plan boundary
 - Rio Nuevo Business District boundary

analysis summary Sun Tran site 04

Downtown dispersed

The final site to be considered for the Sun Tran transit function is actually a broad zone. In this scenario the RTC transit services would be dispersed over the downtown area, most likely concentrated around the larger street intersections.

While it would minimize the amount of land devoted to mass transit, it would complicate downtown traffic circulation as buses would require pullouts or would have to stop in the street to board passengers. Though certain routes might pass closer to popular destinations it would be a less convenient and legible system for riders as there might be considerable distances between transfer stops etc. It would also spread many of the negative activities associated with the current RTC over the downtown area where they would likely be harder to monitor.

image key

- proposed Sun Tran sites
- site 04 - downtown dispersed
- limits of enlargement



enlargement key - Sun Tran site 04

analysis

Sun Tran site 04

Downtown dispersed

This scenario would allow riders access to many other transit modes but often only through distant or multiple transfers. As not all buses would stop at all stops, transfers might be difficult to time or prohibitively distant. While there would be less infrastructure to install and maintain, there would also be fewer services offered (rest rooms for bus drivers etc.). Additionally, in order to make a dispersed scenario efficient requires reduced time intervals which in turn requires more buses operating on each route.

Note that the stops show below are area just a few of the possibilities.



site area and related transit modes

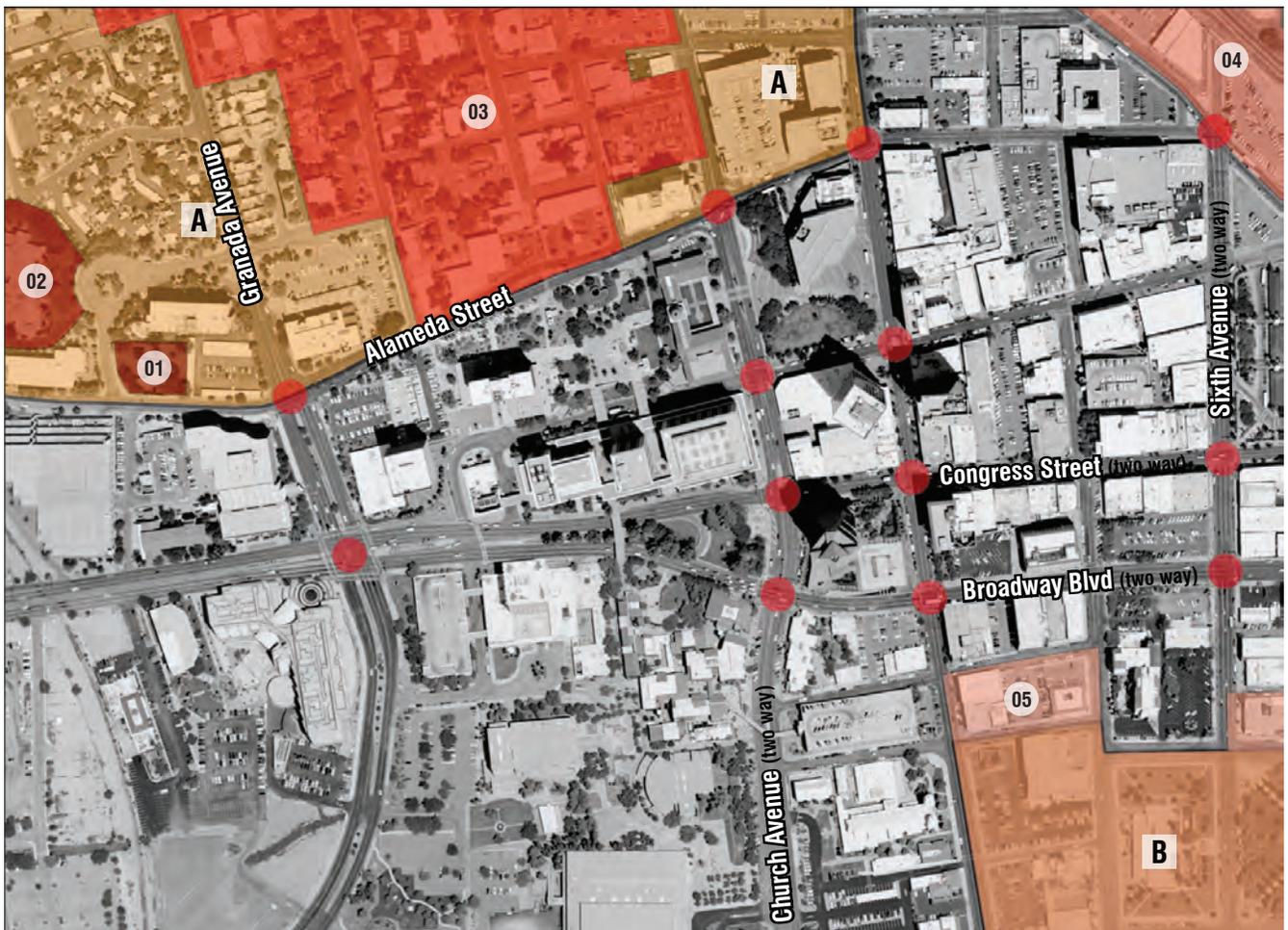
- image key**
- proposed Sun Tran stop
 - related transit modes
 - modern street car route
 - modern street car stop

analysis
Sun Tran site 04

Downtown dispersed

While several of the stops shown border on various neighborhood associations and historic districts, the inherent flexibility in the dispersed configuration means that most stops could be shifted with relative ease. In addition, as the stops entail little development they are less imposing on their environment. All of the sites shown fall within the Downtown Business District which is represented by the Tucson Downtown Alliance and is part of a special taxation zone entitled the Business Improvement District.

There are safety concerns with this arrangement as such small and far flung sites are less easily monitored.



historic districts and neighborhood associations

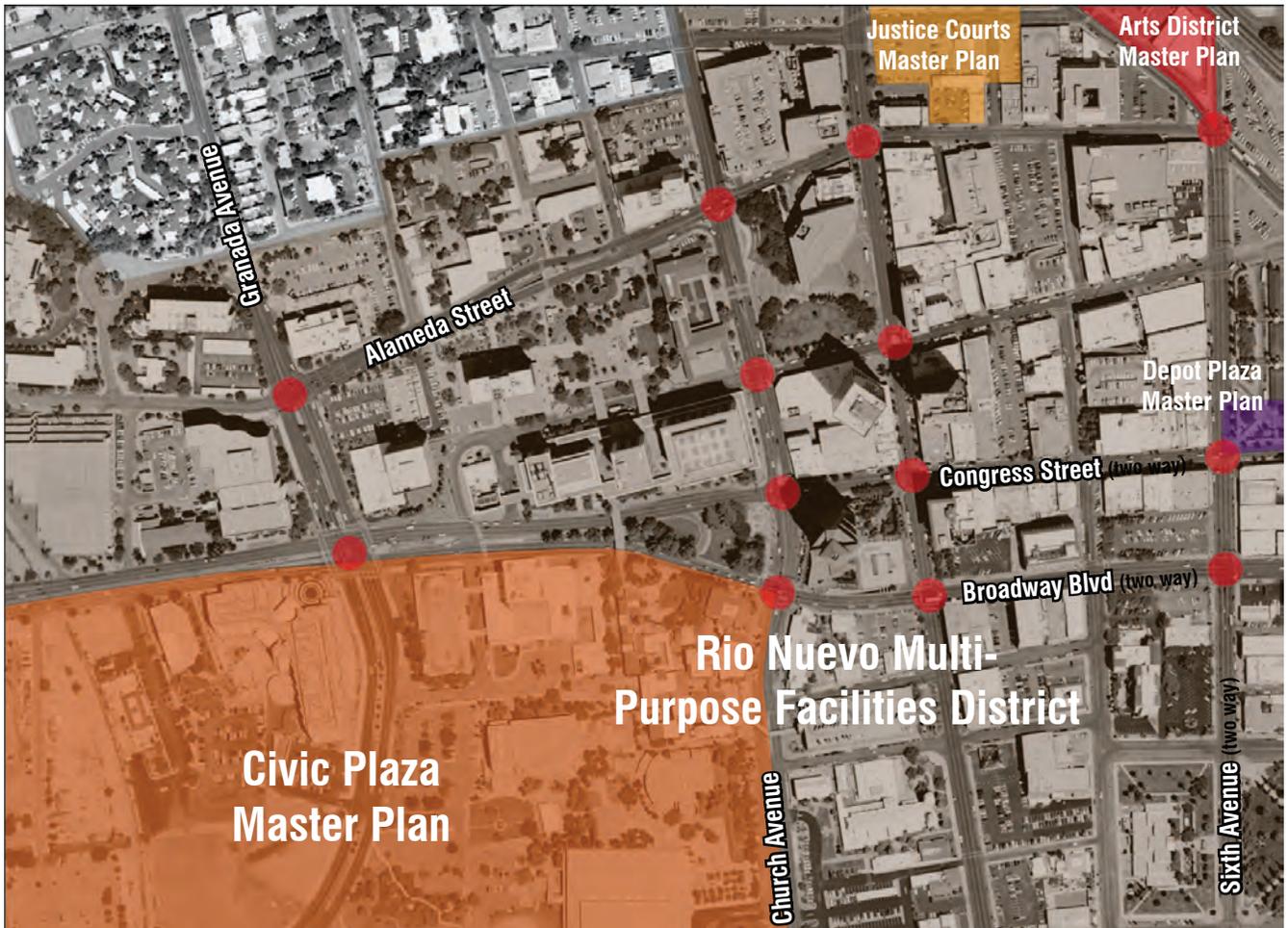
image key

- proposed Sun Tran stop
- historic structure
- historic structure
- El Presidio Historic District
- Warehouse Historic District
- Armory Park Historic District
- El Presidio Neighborhood Association
- Armory Park Neighborhood Association

analysis
Sun Tran site 04

Downtown dispersed

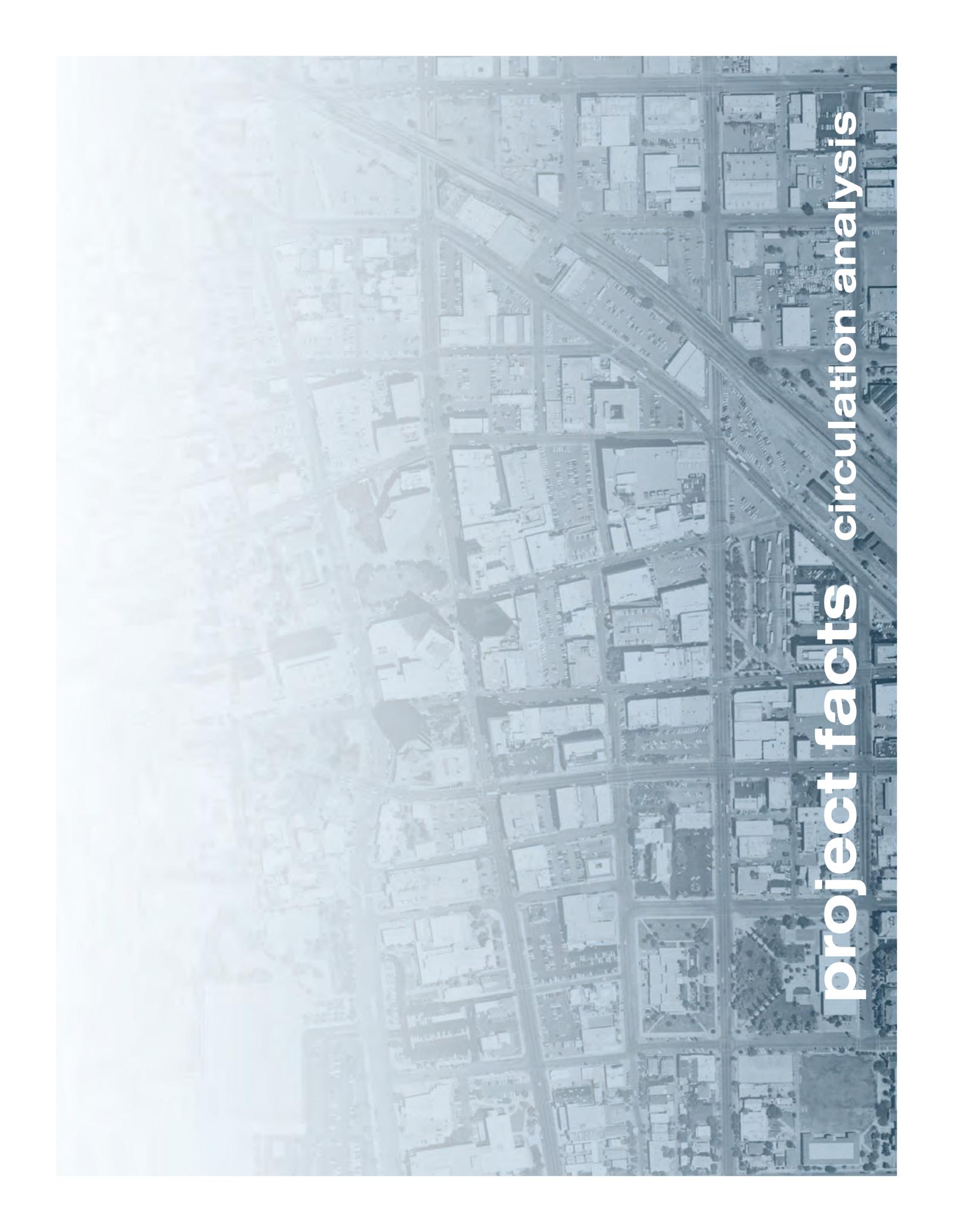
The dispersed stops as shown border on several master plan areas, but again, the flexibility of this system means that they can be shifted as necessary.



master plans and other overlays

image key

- proposed Sun Tran stop
- Arts District MP
- Rio Nuevo MPF District
- Depot Plaza MP
- Civic Plaza MP
- Justice Courts MP

An aerial photograph of a city street grid, showing a dense network of roads and buildings. A semi-transparent blue overlay covers the entire image, with the text 'project facts' and 'circulation analysis' overlaid on the right side. The text is white and bold, with 'project facts' on the top line and 'circulation analysis' on the bottom line, both rotated 90 degrees counter-clockwise.

project facts **circulation analysis**

Transit Feasibility Discussion on Two-Way Traffic

Associated with the revitalization efforts of Rio Nuevo, downtown traffic issues have received much study and analysis. From those examinations has arisen a concept for converting the existing downtown streets from one way traffic operations to two-way. Ultimately, based on the conclusions of traffic analyses conducted in **The Downtown Traffic Study for the Conversion of One-Way Street to Two-Way Operations**, dated December 2003, and **The Congress Street Master Plan Transportation Analysis**, dated July 2005, it was decided that the implementation of two-way traffic, at least along Congress Street and Broadway Boulevard, should only occur when an additional relief route was developed that could handle the anticipated traffic diverted away from downtown.

Initially, an interim route along the Stevens Avenue north of the UPRR was considered. **The Preliminary Engineering Report, Stevens Avenue Broadway Boulevard to Sixth Street**, dated December 2004 documented the review of three potential two lane alignments to serve as an interim relief route until the Barraza-Aviation Parkway could be fully developed. At the time it was envisioned that this route could be developed quickly and inexpensively to provide relief for anticipated downtown traffic congestion.

However, in December 2004 **The Warehouse Arts District Master Plan** was approved by Mayor and Council. The first recommendation of that plan was to begin the process to officially discard the current Barraza-Aviation alignment west of Sixth Avenue and study a “north-side-of-the-tracks-only” alternative connecting to Stone Avenue at Sixth Street. This recommendation along with the development of the **Regional Transportation Authority’s Improvement Plan**, the structurally deficient Twenty-Second Street structure over Barraza-Aviation Parkway/UPRR and the recent approval of the federal legislation: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), lead to a different approach to handle downtown traffic issues. From this has emerged the Downtown Links project that is currently studying a permanent alignment on the north side of the railroad tracks. Although the project is just beginning, it is anticipated that the Downtown Links alignment will serve transit destined to and from downtown and provide significant congestion relief for the Central Business District.

While the two-way concept continues to evolve to meet the needs of the numerous downtown stakeholders, the following reviews the existing conditions as they affect this study.

Congress Street

Congress Street until recently consisted of three lanes operating one-way westbound through downtown. In late June 2005, a one-way westbound two lane experimental concept was implemented along Congress Street. This cross-section consists of maintaining the two westbound lanes along the south curb line and creating additional parallel and angled parking along the north curb line. The two-way concept maintains the existing roadway cross-section with three lanes, however, with one lane in each direction and two-way center left-turn lane.

Broadway Boulevard

Broadway Boulevard, until recently, also consisted of three lanes operating one-way eastbound through downtown. In late June 2005, a one-way eastbound two lane experimental concept was implemented along Broadway Boulevard. This cross-section consists of maintaining the two eastbound lanes along the north curb line and creating additional parallel and angled parking

along the south curb line. The two-way concept for Broadway Boulevard also maintains the existing roadway section, which will accommodate Broadway Boulevard being converted to a five lane section from Fourth Avenue to Sixth Avenue and a four lane section between Scott Avenue to west of Church Avenue. The five lane section consists of two lanes eastbound, two lanes westbound, and a two-way left-turn lane. Due to physical constraints, the four-lane section consists of two lanes eastbound and westbound.

Sixth Avenue

Sixth Avenue currently consists of three lanes operating one-way northbound through downtown from Eighteenth Street to Toole Avenue. The two-way concept for Sixth Avenue again maintains the existing roadway cross-section with three lanes, with one lane in each direction and two-way center left-turn lane from Eighteenth Street to Broadway Boulevard. North of Broadway, Sixth Avenue is a five lane section with two lanes in each direction and two-way center left-turn lane to the intersection with Toole Avenue/Alameda Street. The UPRR underpass north of the Toole Avenue/Alameda Street intersection limits Sixth Avenue to a two lane section with one lane in each direction while the additional lane is transitioned on the south approach of the intersection.

Stone Avenue

Stone Avenue currently consists of three lanes operating one-way southbound through downtown from Toole Avenue to Eighteenth Street. The two-way concept for Stone Avenue again maintains the existing roadway cross-section with three lanes, with one lane in each direction Eighteenth Street to Pennington. North of Pennington Street, Stone Avenue is a five lane section with two lanes in each direction and two-way center left-turn lane to the intersection with Toole Avenue/Franklin Street Intersection. The UPRR underpass north of the Toole Avenue/Franklin Street intersection limits Stone Avenue to a four lane section with two lanes in each direction.

Alameda Street

Alameda Street currently consists of two to three lanes operating one-way westbound through downtown from Toole Avenue/Sixth Avenue to Church Avenue. The two-way concept for Alameda Street consists of maintaining the existing curb lines and developing a two-way two to three lane cross-section as space permits.

Pennington Street

Pennington Street currently consists of two lanes operating one-way eastbound through downtown from Church Avenue to Toole Avenue/Sixth Avenue. The two-way concept for Pennington Street also consists of maintaining the existing curb lines and developing a two-way two lane cross-section.

Based on these two-way concepts for the existing one-way downtown streets an implementation plan was developed for the conversion of downtown streets. This concept is shown in Exhibit 1. This concept does indicate the conversion of some routes with upcoming projects which are currently being reevaluated. Although the implementation strategy is being reevaluated the overall concept is still valid.

Impacts of Two-Way Traffic on Proposed Sites

Sun Tran

Although the proposed locations for the relocation/modification of the Ronstadt Transit Center vary, they will all be affected by the conversion of Downtown Streets to two-way traffic. The impacts will be due to the extensive number of busses utilizing the downtown street network and access/egress locations. Completion of the Downtown Links Project connecting Broadway Boulevard at Barraza-Aviation Parkway to Sixth Street could potentially change the routing of Sun Tran buses allowing southeast bound vehicles to be routed directly onto it.

site 01 – Ronstadt Transit Center

The first site being evaluated for the relocation of the Ronstadt Transit Center is actually a modification of the current site that will move the existing operations north to allow development along Congress Street. This alternative will also incorporate the property immediately north of the current Ronstadt Transit Center. The site is bounded by Sixth Avenue to the west, Toole Avenue to the north, Congress Street to the south and the Depot Gateway project to the east. This location is expected to have a phased development.

During the interim phase the Ronstadt Transit Center is configured to have access and egress via Toole Avenue. Toole Avenue is expected to receive an increase in traffic volume with the conversion of downtown streets to two way traffic. This increase in traffic combined with the focus of all access and egress to the transit center off Toole will increase congestion in the area. Additionally, there will be access issues related to the physical constraints created by the roadway geometry in the area, namely access from northbound Sixth Avenue. The right turn movement from northbound Sixth Avenue to Toole Avenue to enter the site in a southbound direction is very difficult. This maneuver requires that a Sun Tran vehicle have a large offset off of Sixth Avenue's east curb line to make the turn. This area will need to be treated appropriately to mitigate potential vehicular conflicts in this area. Additionally, Sun Tran vehicles will have difficulties accessing northbound Sixth Avenue from either westbound Congress Street or Broadway Boulevard due to geometric constraints.

As the site transitions to the ultimate configuration, it is assumed that a high capacity modern street car transit line will exist along Congress Street, thereby allowing a possible reduction in bus bay requirements in the transit center. This alternative will have all access and egress from Pennington Street. Pennington Street is also expected to receive an increase in traffic volumes with the conversion of downtown streets from one-way to two-way traffic. However, Pennington is not expected to receive the same increase in volumes as Toole Avenue. The proposed Stevens Avenue Extension which will be providing a bypass from the Broadway/Barraza-Aviation Parkway Traffic interchange over Fourth Avenue with a yet to be determined connection to Sixth Street once implemented will provide some congestion relief for this area. The access difficulties from either westbound Congress Street or Broadway Boulevard will remain.

site 02 – Toole Avenue

The second site being evaluated for the relocation of the Ronstadt Transit Center is the Sixth Avenue and Toole Avenue site. This site is bounded by the UPRR Tracks to the north, Toole

Avenue to the south, and resides between some warehouses east of Sixth Avenue. The access to and egress from this site, for Sun Tran Vehicles is expected to occur off of Toole Avenue via Sixth Avenue and Stone Avenue. This location is not directly impacted by the proposed two-way conversion however Toole Avenue is expected to experience an increase in traffic volume once the two-way traffic is implemented in the downtown. This traffic volume increase combined with concentration of all Sun Tran operations along Toole can be expected to create access and egress issues to the site. The proposed Downtown Links project, once implemented would provide some congestion relief for this area. There will also be similar access issues from westbound Congress Street and Broadway Boulevard as experienced at modified Ronstadt Transit Center Site. Additionally this site also is impacted by two other projects being planned in the area. First is the development of a joint Pima County and City of Tucson Courts complex which will have impacts along Toole Avenue near this location. Next is the Warehouse Arts District Master Plan which calls for reducing the roadway width in this area to accommodate pedestrian improvements along the north side of Toole Avenue.

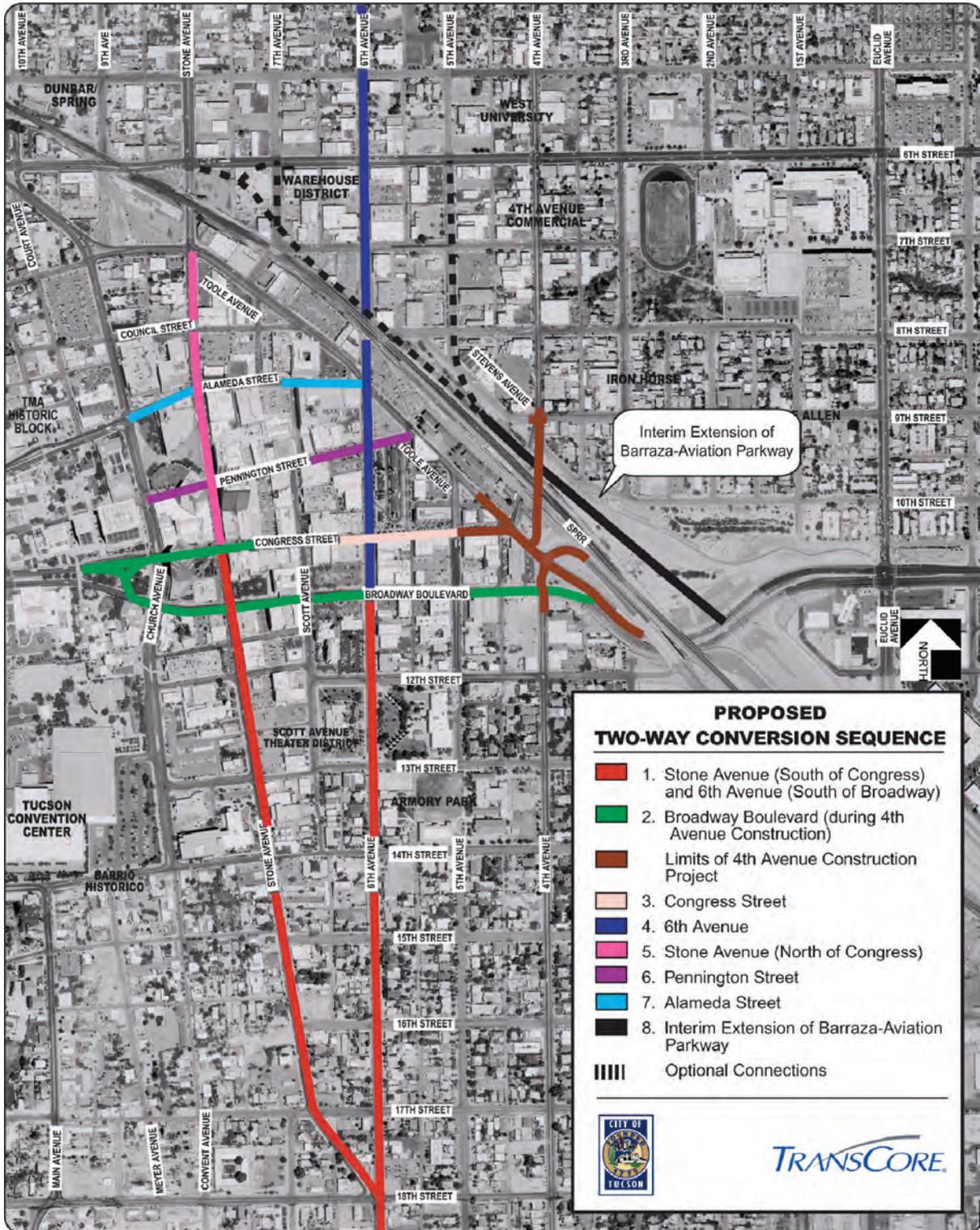
site 03 – Fifth Avenue and Seventh Street

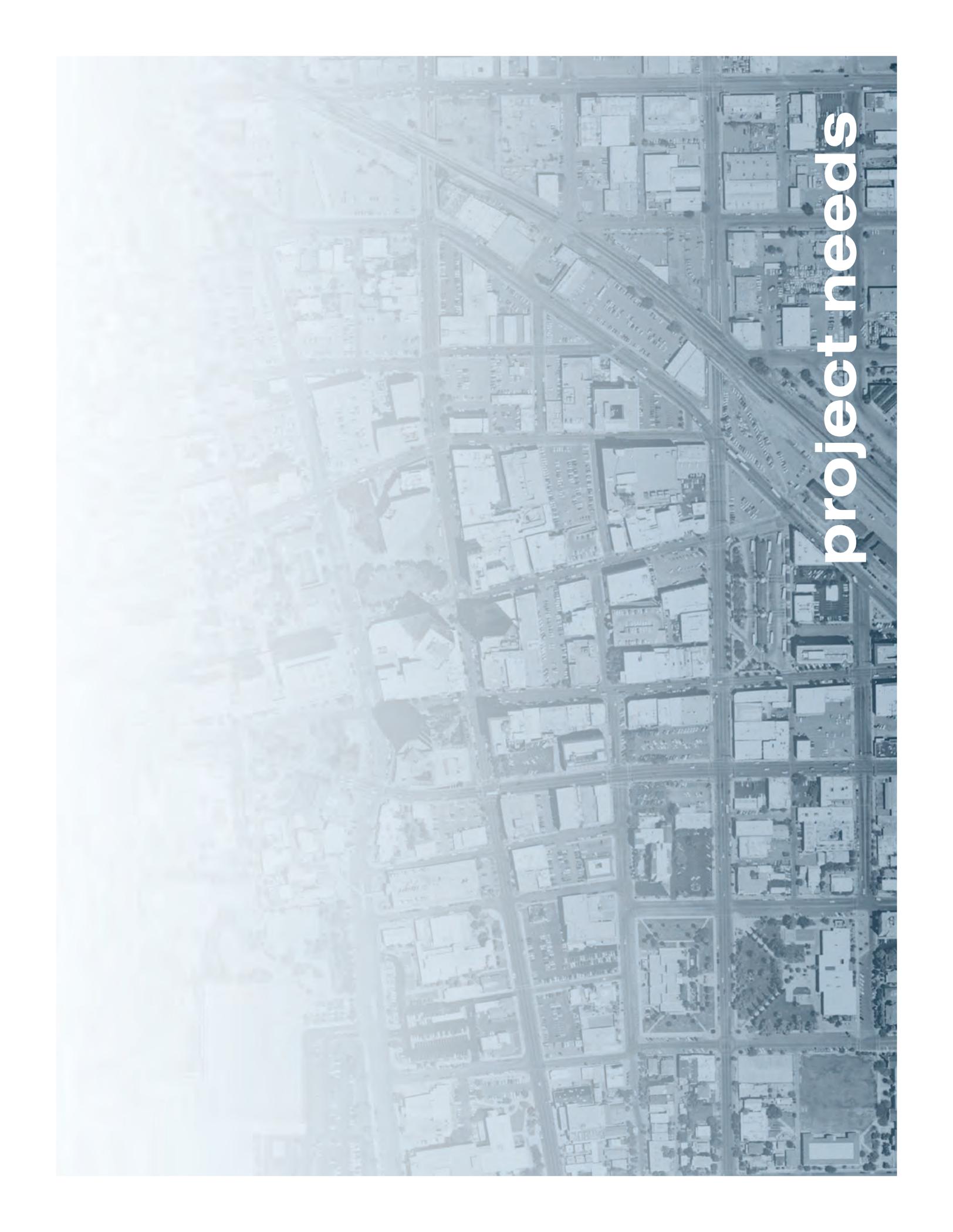
The third site being evaluated for the relocation of the Ronstadt Transit Center is the property located on the northwest corner of Fifth Avenue and Seventh Street. This site is bounded by the Sixth Avenue to the west, Fifth Avenue to the east, Seventh Street to the south and by development to the north. The access to and egress from this site for Sun Tran vehicles is planned to occur from Fifth Avenue via Sixth Street and from Sixth Avenue via Downtown and Sixth Street. The impacts related to two-way traffic will primarily be the increase in delay that is expected for all vehicles traveling the downtown roadway network. Additionally, depending on the specific lane arrangement utilized for the two-way conversion of Sixth Avenue north of the UPRR underpass Sun Tran vehicle may experience turning difficulties. Although this location has some impact from the conversion of Downtown Streets to two-way traffic there are two transportation projects related to downtown which will definitely impact this area. First is the Downtown Links project which would provide a bypass from the Broadway/Barraza-Aviation Parkway Traffic interchange over Fourth Avenue with a yet to be determined connection to Sixth Street. Additionally the Major Transit Investment Study Alternative Analysis is proposing a maintenance facility in the vicinity of this location that needs to be considered in the potential development of this location.

site 04 – Downtown dispersed

The fourth option being evaluated for the relocation of the Ronstadt Transit Center is not actually a site but an operational change in the Sun Tran system downtown. This alternative would have Sun Tran making stops primarily near street intersections with no particular concentration of activity. This particular alternative would be subject to the increase in congestion that is anticipated with the conversion of two-way streets and the growth in regional traffic volumes. Additionally Sun Tran vehicles as well as the rest of the vehicular traffic would be subjected to turn restrictions at various intersections due to physical constraints. Both of these issues would increase travel time for transit patrons and increase operational costs for Sun Tran. Additionally, as there is no specific site transit vehicle access/egress, stops will be based on the existing physical restrictions on a site by site basis.

Exhibit 1 PROPOSED TWO-WAY CONVERSION SEQUENCE



An aerial photograph of a city street grid, showing a dense network of streets and buildings. A prominent diagonal road cuts through the grid from the top-left towards the bottom-right. The image is semi-transparent, serving as a background for the text.

project needs

facility needs

To provide a reliable basis for planning, the Team worked with Greyhound and Sun Tran to confirm their space and functional requirements for new facilities in the downtown area.

Sun Tran

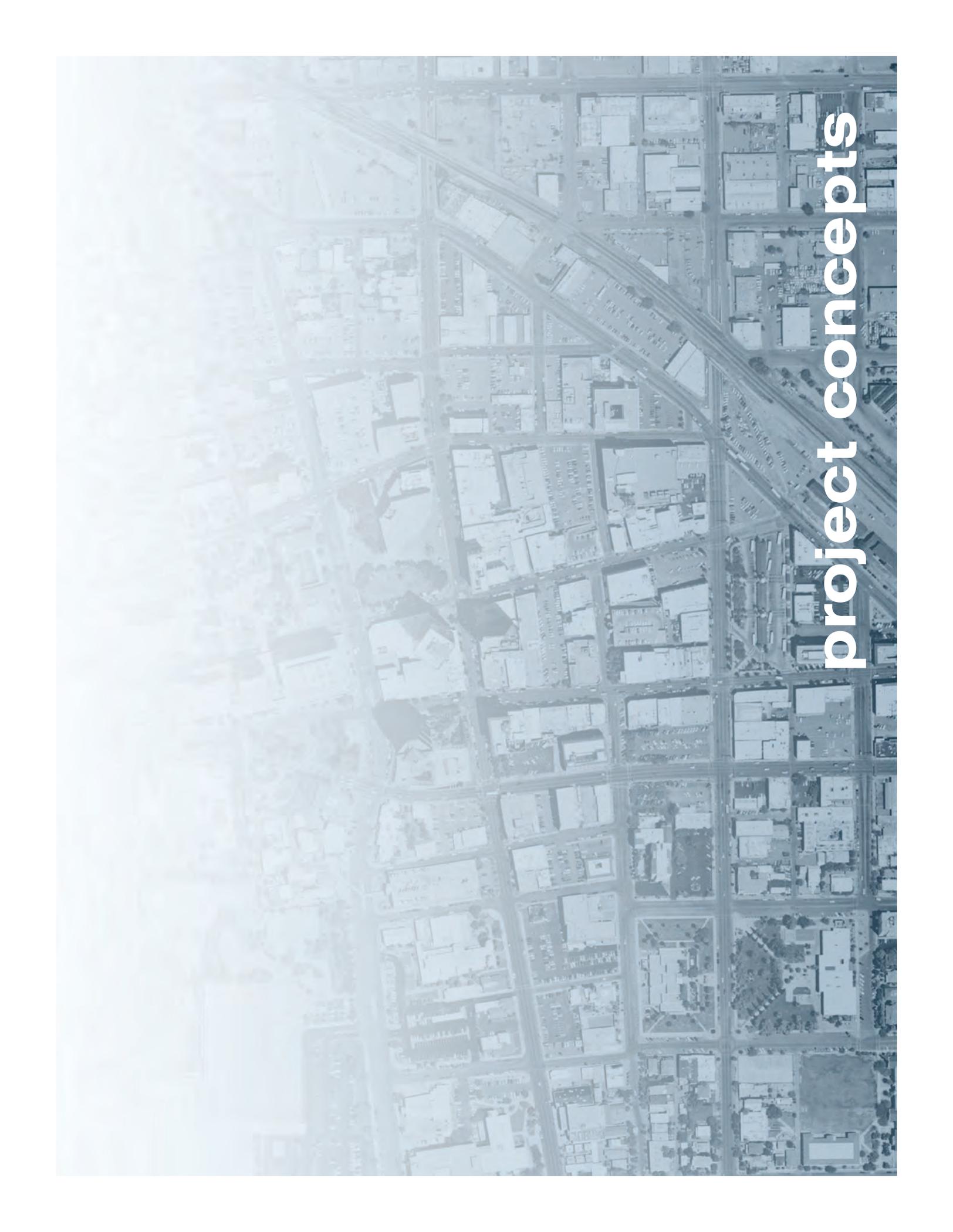
SunTran's facility requirements for a downtown hub have not been formally documented by SunTran, but the Planning Team has derived the following tabulation of functional spaces and areas from conversations with SunTran and observations at the current Ronstadt Transit Center. Some of the areas are dependent upon the geometry of the site and the turning radii of the buses and therefore hard to quantify independent of a site. It is necessary for the modern streetcar to be in place and operating in order for the reduced number of berths in the transit center master plan to be workable for Sun Tran.

interim plan

bus berths	18 @ 340sf/berth	6120sf
ST parking spaces	2 @ 180sf/space	360sf
TPD parking space	1 @ 180sf/space	180sf
handicapped parking space	1@ 260sf/space	260sf
sidewalks, driveways, concourses		TBDsf
landscaping		TBDsf
information booth		225sf
toilets, public	4 stalls	512sf
toilets, staff	2 stalls	128sf
shade structures		15000sf
facility maintenance		TBDsf

master plan

bus bays	12 @ 340sf/slip	4080sf
ST parking spaces	2 @ 180sf/space	360sf
TPD parking space	1 @ 180sf/space	180sf
handicapped parking space	1@ 260sf/space	260sf
sidewalks, driveways, concourses		TBDsf
landscaping		TBDsf
information booth		225sf
toilets, public	4 stalls	512sf
toilets, staff	2 stalls	128sf
shade structures		15000sf
facility maintenance		TBDsf



project concepts

Ronstadt Transit Center

This concept alters the existing RTC arrangement by shifting the facility north into the Pennington Triangle, recently acquired by the City of Tucson. This allows the vehicular circulation to be reconfigured, eliminating the southern entry along Sixth Avenue, and opening up the southern most portion of the block for commercial development along the Congress Street frontage. The transit site has a net area of approximately 117,837 square feet which includes a 10 foot easement to the Depot Plaza development along the eastern edge of the site.

As proposed there are berths for 19 buses as well as space for the TICET circulator operating curbside along Sixth Avenue which could also be used for Sun Tran Express Service. The facility itself offers shade to riders waiting at the bus berths as well as restrooms on the island. There is a Multi-Modal facility provided in the south eastern corner of the site where information could be obtained as well as bus passes etc. This building would also offer restroom and refreshment services to riders or downtown pedestrians as well as to Sun Tran drivers. It has a footprint of 7,170 square feet and could be made multi-storied to provide for administrative offices etc. Nearby and to the north are four parking spaces, including one for handicapped drivers, and one for a Tucson Police Department patrol car.

The brick arcade along the perimeter of the existing RTC has been preserved and extended. The large break in the arcade along Sixth Avenue would serve as a formal entry to the site, letting onto a small square with plantings and seating. An additional break in the arcade at Pennington Street would allow for pedestrian circulation across the site toward the recommended site for the Greyhound Bus Depot as well as the Historic Depot (Amtrak). This would also facilitate street-side bus service in the event that the transit center had to be temporarily closed.

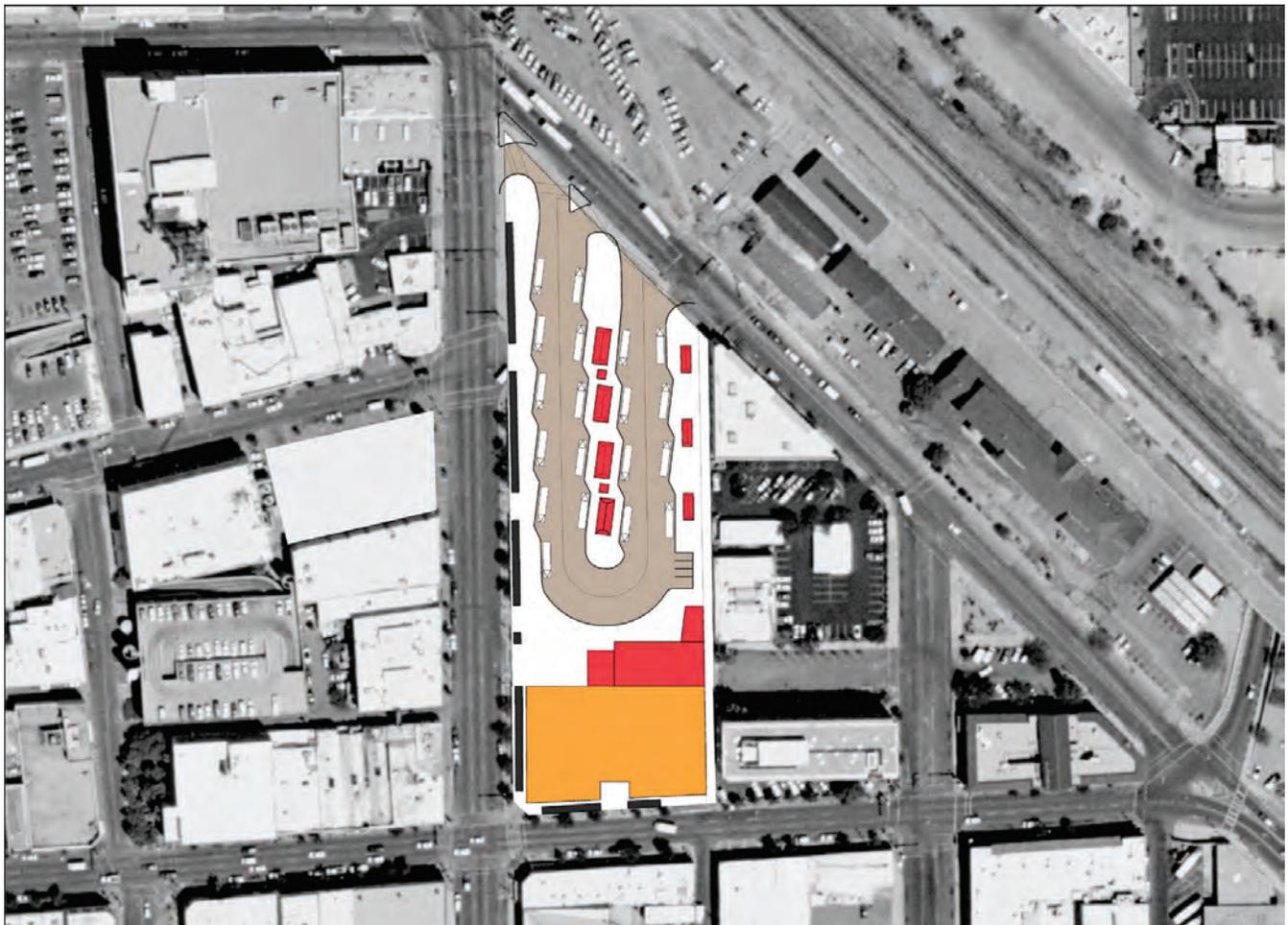
The commercial provision at the end southern end of the site has an area of approximately 24,401 square feet and occupies the entire Congress street frontage (200 feet) as well as 130 feet north along Sixth Avenue. This is considered a prime commercial location and would allow for retail on the lower floor with office or hospitality on the floors above. There is no on-site parking provided for commercial activities, but is available on-street and in the new Pennington Street parking garage just to the west of the transit center.

scheme Sun Tran site 01

After exploring the physical planning opportunities for each site, the Planning Team developed a preferred concept for each one.

Ronstadt Transit Center diagrammatic plan of scheme

It should be noted that this configuration requires the loss of the rightmost northbound lane of Sixth Avenue between Congress Street and Toole Avenue to achieve the necessary turning radius for buses accessing the site. This lane is lost regardless when Sixth Avenue passes under the railroad tracks. It is also necessary for the routing of Sun tran buses that Fifth Avenue between Toole Avenue and Broadway Boulevard be available to bus traffic.



scheme Sun Tran site 01

image key

-  Sun Tran facility
-  commercial structure
-  on-site vehicular circulation

Toole Avenue

The Planning Team explored the concept of a Transit Mall on Toole Avenue itself, believing that approach to offered some benefit in providing transit facilities in downtown Tucson. But after further consideration, it was judged that putting the buses in the right-of-way created significant hazards to riders and created substantial obstacles to normal traffic flows on Toole Avenue. So the Planning Team explored the potential of the vacant parcels on the north side of Toole.

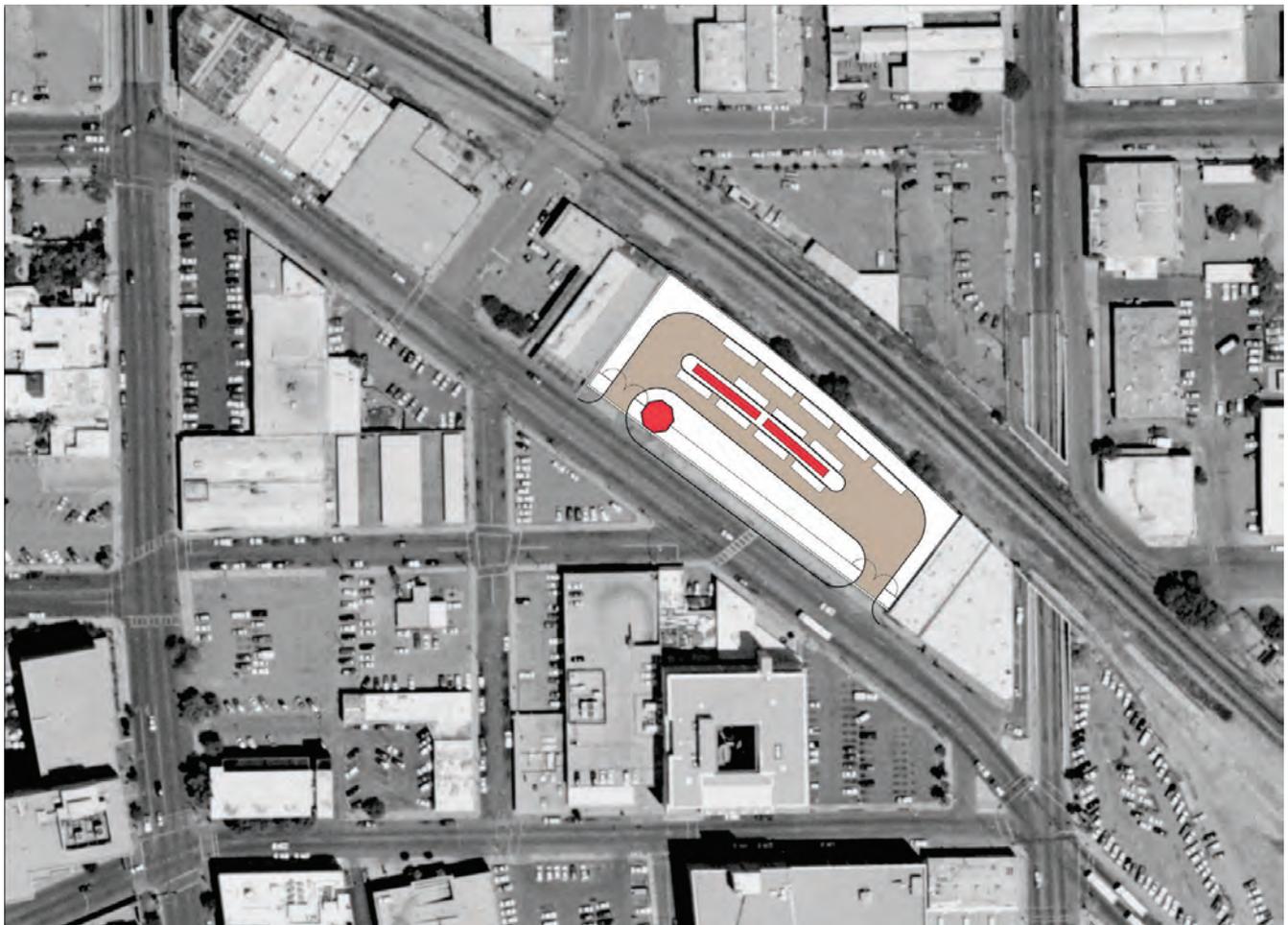
The concept shows 12 bus bays on the site with a looped driveway system. The site is secured and entry is limited to ticketed riders via the octagonal structure shown. A broad sidewalk to the south edge would permit continuation of the Art Walk in front of the Sun Tran transfer hub.

There is no commercial potential directly associated with this concept.

scheme
Sun Tran site 02

After exploring the physical planning opportunities for each site, the Planning Team developed a preferred concept for each one.

Toole Avenue
diagrammatic plan of scheme



scheme Sun Tran site 02

image key

-  Sun Tran facility
-  on-site vehicular circulation

Fifth Avenue and Seventh Street

The site will accommodate 12 bus bays including the onsite driveways and facilities for riders and buses. Buses would access the site from Sixth Avenue on the west and Fifth Avenue on the east. The site is secured and entry is limited to ticketed riders.

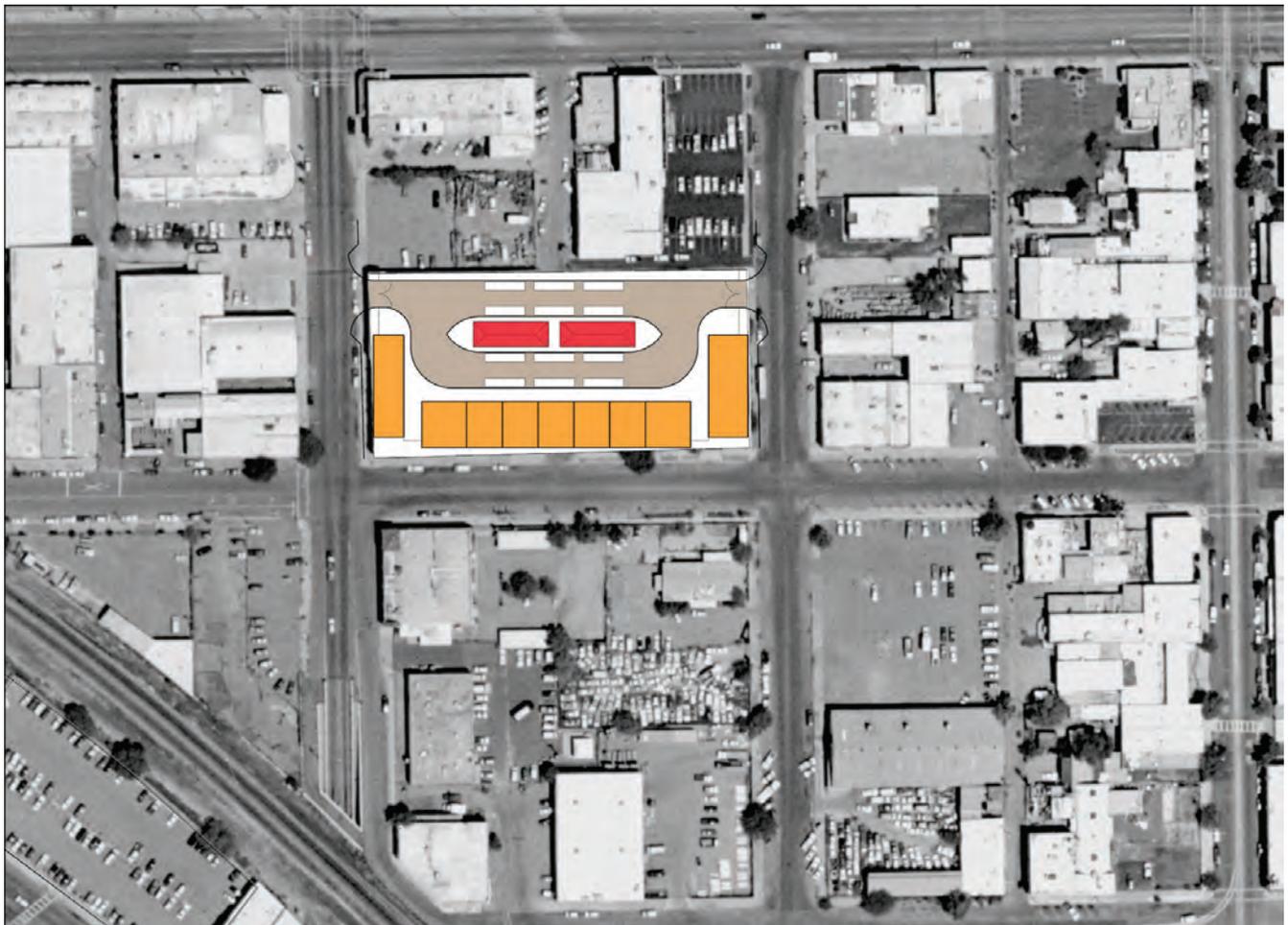
There is an opportunity for commercial development on the west, east and south faces, totaling approximately 24,514 square feet assuming one level, but no on-site parking is provided.

This concept relies on the future development of the Stevens Alignment linking Sixth Street and Barraza-Aviation Parkway to give buses easy access to the existing routes.

scheme
Sun Tran site 03

After exploring the physical planning opportunities for each site, the Planning Team developed a preferred concept for each one.

**Fifth Avenue and Seventh Street
diagrammatic plan of scheme**



scheme Sun Tran site 03

image key

-  Sun Tran facility
-  commercial structures
-  on-site vehicular circulation

An aerial photograph of a city grid, likely downtown, with a semi-transparent blue overlay. The grid consists of numerous rectangular blocks separated by streets. The buildings are mostly multi-story structures. The blue overlay is darker at the top and fades towards the bottom.

scheme Sun Tran site 04

Downtown dispersed

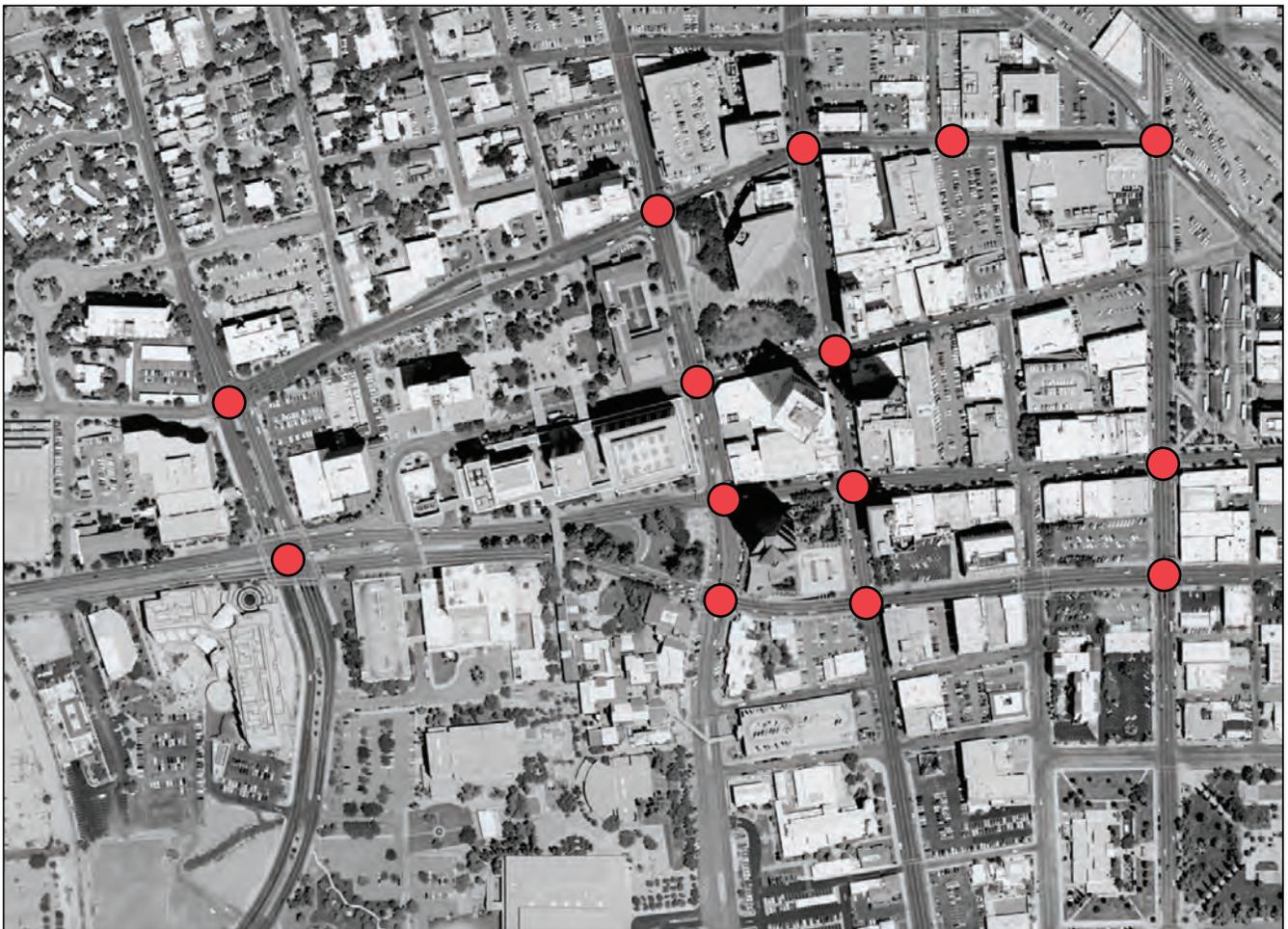
This concept would return SunTran to the system that existed before the Ronstadt Transit Center was built meaning that buses would be routed on the east and west streets, through downtown, rather than collecting at a central distribution hub. This dispersed system provides little opportunity to synchronize buses for efficient transfers, and could mean that riders would have to wait and/or walk significant distances to make a transfer, depending on the routes involved.

This concept would require bus pull-outs so not to impede the flow of following traffic, which could be difficult with downtown's narrow right-of-ways and zero building setbacks.

scheme
Sun Tran site 04

After exploring the physical planning opportunities for each site, the Planning Team developed a preferred concept for each one.

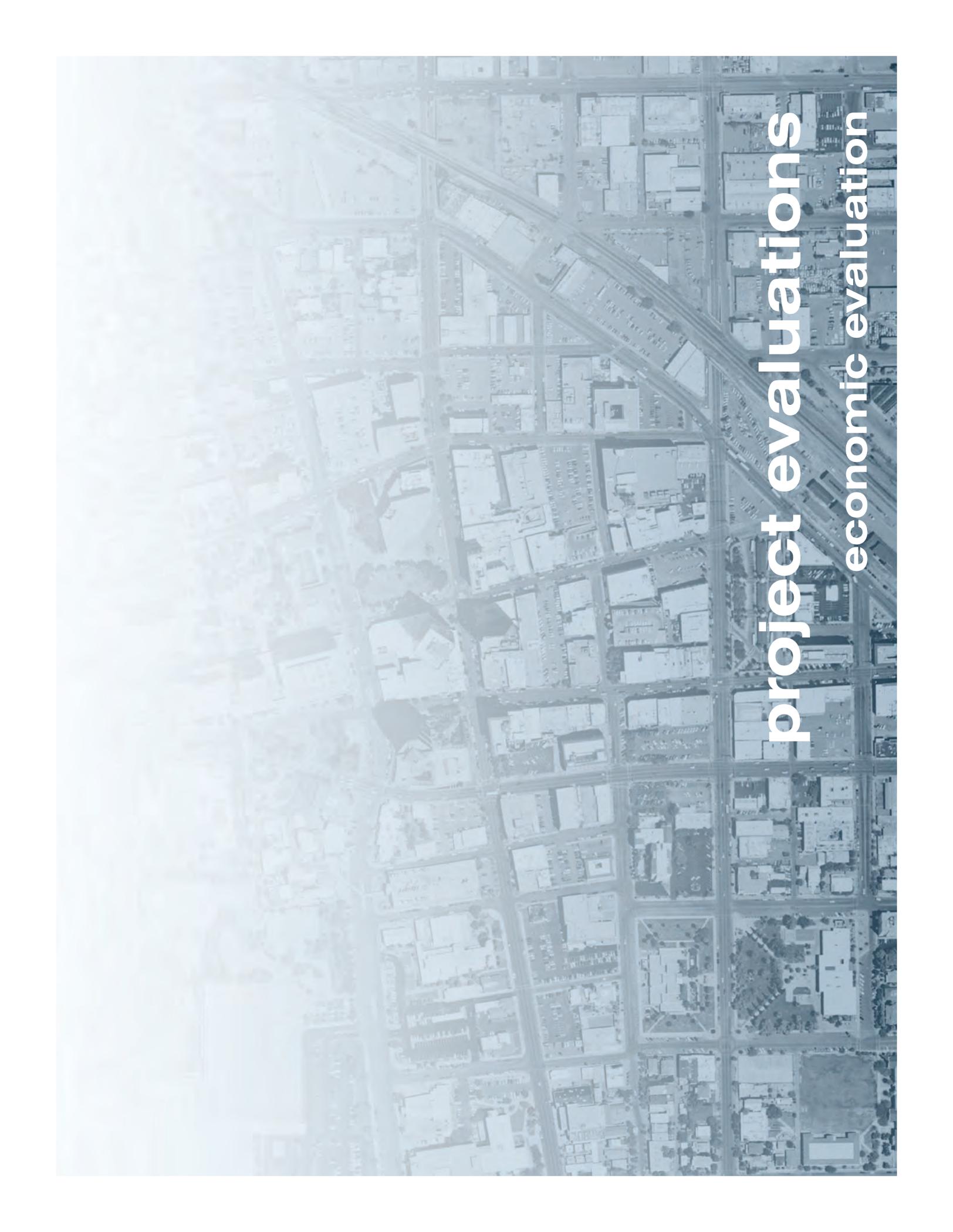
**Downtown dispersed
diagrammatic plan of scheme**



scheme Sun Tran site 04

image key

 Sun Tran facility

An aerial photograph of a city street grid, showing a dense network of streets and buildings. A prominent diagonal road cuts through the grid from the top-left towards the bottom-right. The image is overlaid with a semi-transparent blue filter. The text 'project evaluations' and 'economic evaluation' is written vertically in white on the right side of the image.

project evaluations

economic evaluation

Evaluation of SunTran Site Alternatives

SunTran contributes to the vitality of Downtown Tucson by providing access to a significant portion of the workforce. Without transit service the downtown would need to devote more land to parking facilities and roads, and the dominance of roads and parking structures would give this city center a more suburban rather than urban character.

While SunTran service benefits downtown Tucson as a whole, the property owners and business operators around the Ronstadt Transit Center are unified in their opinion that the presence of this facility has an adverse influence on their rents, property values and business viability¹. Their cited problems with bus riders include: 1) Loitering by transfer passenger discouraging patrons from entering retail establishments, 2) Fights, 3) Use of restrooms, 4) Drug dealing, and 5) Solicitation. One stakeholder indicated to ERA “the arrival of Ronstadt Transit Center coincided with and likely caused the collapse of retail resurgence along Congress Street.” The bus riders are viewed to have very little discretionary income and provide no support for local shops. Another commented “they buy one cigarette at a time.” In addition to the problems caused by bus patrons, the buses themselves, particularly when stacked, impede traffic and pedestrian access into their establishments. They also cause noise, vibration and exhaust pollution, all of which deter patronage.

The buildings along Congress Street and Sixth Avenue within one block of the Ronstadt Transit Center are well suited to the creation of a pedestrian scale retail district. In fact, within Downtown Tucson, there is no better area for the creation of such a district. These buildings are of intimate scale, often of historic character and were originally designed as retail buildings with engaging glass fronts. The City and at least one well-capitalized private developer are moving to revitalize Downtown Tucson by changing Congress Street into a vital and pedestrian oriented retail street. The planned actions include:

- The reconstruction of Congress Street to accommodate two-way traffic, slow through traffic and to provide a wider sidewalk and on-street parking.
- The construction of the new Fourth Avenue underpass because it facilitates completion of Aviation Parkway and trolley service linking the University of Arizona with downtown.
- The completion of the Pennington garage with 590 new public parking spaces (200 of the 790 spaces are committed to the Bank of America on long-term lease).
- The development of Depot Plaza, which includes the City of Tucson building 68 units of Hope VI housing to partially replace the aging Martin Luther King project and a developer building market rate housing over retail space along the Congress Street and Fifth Avenue frontages.
- The same developer has taken major positions across Congress Street in the Rialto Theater block and in the block immediately to the west for renovation and redevelopment into residential, office retail, restaurant and theater uses.



By maintaining the Ronstadt Transit Center at its current location, the success of the Congress Street revitalization strategy is questionable, even with all of the above investments. In response to this concern, ERA evaluated alternative locations for this transit center from the perspective of enhancing long-term downtown vitality. The three sites being considered for a new SunTran facility include: 1) The current Ronstadt site plus the small triangular block to the north across Pennington Street, 2) Toole Street – just northwest of Sixth Avenue and the Contemporary Art Museum possibly incorporating some street frontage along Toole, and 3) Two half blocks on the Westside of Fifth Avenue on the north and south sides of Seventh Street. The evaluation results are summarized in Table III-7 below.

**Table III-7
Strength of Market Demand for Private Development on Alternative SunTran Sites**

Land Use	Ronstadt	Toole	5th & 7th
Housing: Apartments/Lofts	8	5	9
Hotel or Motel	7	1	1
Office	6	4	1
Retail/Entertainment	10	5	4
Total Score	31	15	15

Scoring: 10 = strongest demand and 1 = weakest demand
Source: Economics Research Associates - May 2005

The two parcels at Fifth Avenue and Seventh Street have very good potential for residential development but no real potential for hotel or office uses within the near future. This location places the transit center outside of the downtown and separated from the downtown by arterial roads and railroad tracks. While this alternative serves the property development interest around the Ronstadt Center, it does diminish transit dependent labor force access into the downtown. For this reason, it is not the best alternative in serving long-term downtown vitality.

The Toole site has two advantages. It keeps the bus facility in the downtown and frees the Ronstadt site and the surrounding properties to achieve their market potential. The negative influences of the bus facility on adjacent properties can be contained by the railroad tracks to the northeast and the “Homeland Security” buffer strip frontage along the new Criminal Justice complex to the southwest. The relocation of the transit center to the Toole site would allow the Ronstadt site to be redeveloped, for housing, retail and possibly hotel uses, possibly in tandem with the Depot Plaza project.

Once the north side of Congress Street is redeveloped and Congress Street itself is reconfigured, the Rialto Block and the block to its west will no doubt be redeveloped as well. Other nearby retail spaces will be renovated into newer shop or restaurant uses. A new pedestrian oriented

retail district will be created in Downtown Tucson with its hub at the intersection of Congress Street and Sixth Avenue. The vibrancy created by this new retail and restaurant district will induce additional residential, hotel and office development in the downtown. From a long-term Downtown Tucson vitality perspective, relocation of the transit center to the Toole Street site is the best strategy.

With all the public and private investments planned in its vicinity, the Ronstadt Transit Center site has clearly become a prime development site within Downtown Tucson. As indicated in Table III-7, the site has potential for housing, retail, hotel, office and entertainment uses within the next decade. It can be the centerpiece of a revitalized downtown. However, should the relocation of the entire transit center off the Ronstadt site not be possible for technical or political reasons, a compromise alternative that achieves a portion of the area's upside potential may be possible. This compromise alternative should have the following characteristics:

- A development parcel of at least 70 feet deep from the Congress Street frontage to accommodate retail uses on the ground level with housing, office or hotel above and a service alley on the north side.
- A parking structure north of the service alley forming a buffer between the transit center and the new development along Congress Street.
- Improved management and security at the new transit center to minimize its negative social influences.

The Ronstadt Transit Center site is one of the most important properties shaping the future of Downtown Tucson for the next 10 to 20 years. Its reuse should be planned carefully with the long-term objectives of the entire Tucson community in mind.

¹ ERA interviews on March 30 and 31, 2005

Joint Development At Sun Tran Site

The City of Tucson is considering selling the Congress Street frontage of the current Ronstadt Transit Center site for private development. Development of this site is important to the future vitality of Downtown Tucson. It has frontage on Congress Street and is in the midst of smaller, older and historic buildings that make for a good pedestrian retail and restaurant district. The site has 195 feet of Congress Street frontage and 130 feet of Sixth Street frontage for a total land area of 24,400 square feet. Because a portion of this site was originally purchased with Federal Transit Administration (FTA) funds, repayment to FTA is necessary when disposed for private development. The sale to a developer allows the City to repay FTA.

ERA tested two alternative development scenarios for this site, and they are as follows:

- A hotel with four levels of guest rooms over ground floor retail, restaurant, lobby and ancillary space. The hotel would have 20 guest units per floor and 80 guest rooms in total. The ground floor would have approximately 12,000 square feet of Congress Street frontage and 7,000 square feet would be leased to non-hotel retailers. The balance is entry and hotel restaurant.
- A mixed-use project with 44 apartment units on four floors over 12,000 square feet of ground floor retail space. Approximately 40 parking spaces would be provided to tenants at the ground floor level north of the retail space and under the residential units.

The pro forma analyses of the two scenarios indicate that the hotel/retail project is the more feasible scenario. With an average room rate of \$145 in 2008, the hotel development is able to provide a private developer with an 18 percent rate of return and still carry about \$32 or \$33 per square foot in land cost. Land disposition revenue would be about \$875,000 for this parcel (Table III-8).

The apartment over retail project proved to not be feasible. Even at rents slightly above the current average for Tucson, the apartment/retail project is not able to carry any land cost and still provide the developer with a reasonable return. Being located between a busy arterial street and the transit center, the site is not a highly desirable residential site. Also, on-site parking is more important to residential tenants as compared to hotel guests; and the accommodation of that on-site parking affects the project's development economics (Table III-9).

The office market in Downtown Tucson is sufficiently soft that a developer would only build an office over retail mixed-use project if he had a firm tenant commitment. If the office market shows a bit more strength, an office over retail project would be worthy of consideration.

An aerial photograph of a city street grid, overlaid with a semi-transparent grid pattern. The image is in grayscale and serves as a background for the text.

project evaluations

pros and cons / evaluation matrix

site 01 Ronstadt Transit Center

Pros:

No land acquisition cost - city owned property.
Reduced Title VI impact.
Master Plan reduces number of bus bays required.
No buses routed on Congress Street.
Allows for the commercial development of the Congress Street frontage in agreement with the Depot Plaza Master Plan.
Very high level of connectivity with other transit modes, making possible inter-modal connections, and contributing to long term regional transportation solutions.
Relatively low operational costs.
Conveniently located close to common rider destinations.
Familiar to riders and legible to users.
Little alteration to current routing / system required - reduced cost in the changing of signage etc.
Immediately available for use / development.
Does not interfere with existing plans in area.
Is within the Rio Nuevo MPF District - public funds invested here would count as local match expenses toward expenditure of Rio Nuevo funds.
Close to public parking.
Contributes to generating a critical mass needed for economic development and the long-term vitality of downtown.

Cons:

Land has very high commercial potential.
Site cannot be secured as configured.
Perceived negative impact by neighboring property owners.

pros and cons

site 02 Toole Avenue

Pros:

- Located on the periphery of downtown.
- Location against rail road tracks has little commercial potential.
- Located adjacent to the new City/County Courthouse.
- Relatively close to several other transit modes, making possible inter-modal connections, and contributing to long term regional transportation solutions.
- Relatively convenient for transit users.
- Opens existing RTC site up for commercial development.
- No existing structures means no demolition expenses.
- Possible significant Title VI impact.
- Bus noise in area already affected by train noise.

Cons:

- Violates the Warehouse District Master Plan and compromises the potential of the Art Walk.
- Parcels are not owned by City.
- Concentrates all bus traffic on Toole Avenue - some important turns to access that street are too tight for buses.
- No commercial opportunity on this site.
- Site not allow number of buses required by Interim Plan.
- Relatively distant from modern street car route.

pros and cons

site 03 Fifth Avenue and Seventh Street

Pros:

Located on the periphery of downtown.
Location has little commercial potential.
Opens existing RTC site up for commercial development.
Bus noise in area already affected by train noise.
Located near Fourth Avenue and proposed modern street car route.

Cons:

Parcels are not owned by City.
Site not allow number of buses required by Interim Plan.
Relatively distant from several other transit modes, making difficult inter-modal connections that contribute to long term regional transportation solutions.
Relatively inconvenient for transit users as is not close to common destinations.
Demolition of existing structures that contribute to Historic District designation.
Perceived negative impact by neighboring property and business owners.
Possible significant Title VI impact.
Longer bus routes means higher operational costs.

pros and cons

site 04 Downtown dispersed

Pros:

- No concentration of facilities and riders that may contribute to antisocial behavior.
- Located in public right-of-ways - no land acquisition costs.
- Minimized impact on neighborhoods.
- Opens up existing RTC site to full commercial development.

Cons:

- Low system legibility to users.
- Not safe or convenient for riders trying to make connections.
- Return to a gridded system that was deemed failure in the past.
- Only efficient with increased headways which would require more buses on routes - increased capital costs.
- No commercial opportunity associated with scheme.

evaluations

Each of the schemes for each of the sites was evaluated by the Planning Team against a number of criteria and the goals initially established

Sun Tran Criteria

The criteria used to evaluate the potential Sun Tran sites are as follows:

capital costs

covers the expense of relocating the facility to this site, including land acquisition and new structures etc.

operations costs

the increased or decreased expense of operating the facility on the site.

availability / schedule

whether the site would be available as soon as circumstances would require

user convenience

would access to the new location become a hindrance to the current users, and hence reduce ridership

Title VI considerations

whether FTA money used to purchase the RTC site would have to be repaid thereby increasing the capital cost of the alternative sites.

system access

whether the site would integrate well into the transit modes circulation system

connectivity

does the site allow for the effective integration of the various modes of transit, creating a more efficient system as a whole

neighborhood impact

the potential disruption that the facility would pose to the surrounding neighborhoods

opportunity cost

wether locating a transit facility on the site is putting the site to its highest and best use i.e. does the site have great commercial potential etc.

safety and security

the potential for the site to be easily monitored and/or secured

compatibility with existing

whether the plan contravenes a master plan etc already approved.

It was agreed by the Planning team that each of the criteria would receive a value of from 1 to 4, with 1 being best and 4 the worst. After all criteria for a site were weighted they were summed to establish the overall suitability of the site for the different facilities. As can be seen from the evaluation matrix a reconfigured RTC site was preferred by a wide margin, receiving six first-place rankings out of the eleven criteria used.

Sun Tran Site Evaluation Matrix

Sun Tran criteria (continued)

criteria	site			
	Ronstadt Transit Center	Downtown dispersed	Toole Avenue	Fifth Ave. and Seventh St.
capital costs	1	2	3	4
operations costs	2	1	3	4
availability / schedule	2	1	3	4
user convenience	1	4	2	3
Title VI considerations	1	3	2	4
system access	1	3	2	4
connectivity	1	3	2	4
neighborhood impact	2	1	2	4
opportunity costs	4	1	2	3
safety and security	2	4	1	3
compatability with existing plans	1	2	4	3
total score	18	25	26	40
ranking	1st	2nd	3rd	4th

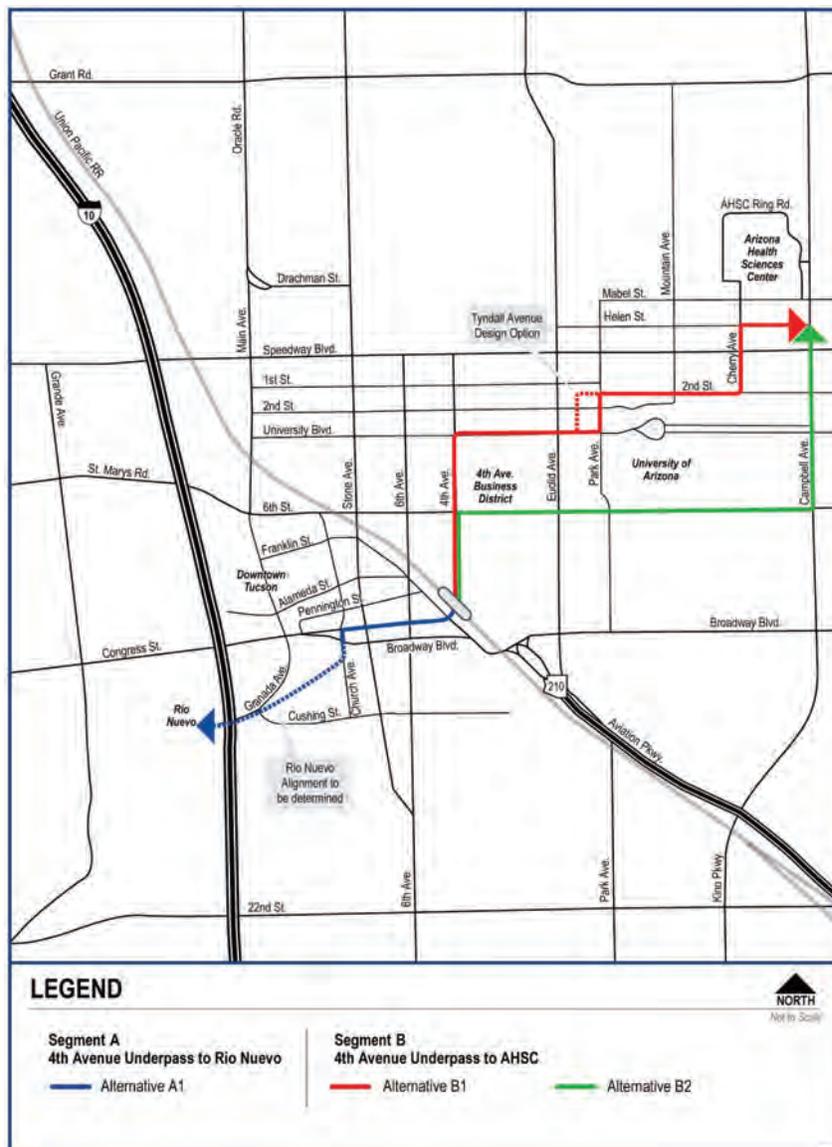
scoring values

1 best 2 good 3 poor 4 worst

Ronstadt Transit Center - Transit Modes Narrative

The site selection and reconfiguration of the Ronstadt Transit Center is closely linked to the development of a high capacity transit connection between downtown Tucson and the Rio Nuevo area to the University of Arizona and the Arizona Health Sciences Center (Figure 1). This project is referred to as the City of Tucson Major Transit Investment Study and is currently in the Alternatives Analysis phase of study. Transit modes being evaluated for this study include rapid bus circulator and modern streetcar. The relationship between the proposed major transit investment and Sun Tran bus service is a key component of the Ronstadt Transit Center site selection.

Figure 1: Potential Transit Alignments



Multi-modal connections

The proposed major transit investment will add a new type of transit service to the City of Tucson's urban core. The high capacity transit system will operate every 10 minutes, 18 to 20 hours per day and will be accessible via connecting Sun Tran bus service. Transfers between rapid bus circulator/modern streetcar and Sun Tran can be made throughout the system but will be primarily focused in the region's two largest activity centers: downtown Tucson and the University of Arizona (UA). These locations will function as "bookends" at either end of the rapid bus circulator/modern streetcar line and will be connected by frequent transit service. The Ronstadt Transit Center in downtown Tucson will be the larger of the two transit facilities and will provide connections to much of Sun Tran's service area. The UA transfer point will be smaller but will provide connections between University-bound bus service and the rapid bus circulator/modern streetcar system.

Reallocation of bus service

One of the advantages of the proposed rapid bus circulator/modern street system is that it will allow the reconfiguration and reallocation of some Sun Tran service in the study area. Some of the routes currently serving downtown Tucson would be replaced by the rapid bus circulator/modern streetcar line and instead be rerouted to serve the UA transfer point. Efficiencies experienced by the reconfiguration of routes would be reallocated to express bus service.

For example, the Route 9 currently operates between Grant Road and downtown Tucson via the UA on Campbell Avenue and 6th Street. Given the level of investment being made between the University and downtown with the rapid bus circulator/modern streetcar system, it would be possible to terminate the Route 9 at the UA instead of downtown since more of the riders are headed to the UA in the first place. Those passengers destined for downtown Tucson are primarily riding the bus in the peak hour and therefore the new Route 9 could be supplemented by a Route 9 express that serves downtown Tucson in the peak hour only. This operating scenario would create a forced transfer between rapid bus circulator/modern streetcar to reach downtown in the off-peak but this is expected to be a relatively small number of passengers. Overall, the cost savings by short turning the Route 9 would allow Sun Tran to reallocate service elsewhere in the system.

The benefits of replacing some existing Sun Tran bus service in downtown Tucson with the proposed rapid bus circulator/modern streetcar system are many. The new Ronstadt Transit Center site will be smaller in size (12 bus bays) than the existing facility because it will be buffered with mixed-use commercial and residential development. In addition, bus bay space at the new Ronstadt Transit Center will be at premium because of potential service frequency increases that would result if the proposed Regional Transportation Plan is approved by voters in 2006. Together, these issues emphasize the importance of the connection between the Ronstadt Transit Center and the rapid bus circulator/modern streetcar system.

transit modes (continued)

The local Sun Tran bus routes serving the Ronstadt Transit Center and the UA transfer point are described in the Table 1. Sun Tran Routes 1, 4, and 9 would no longer serve the Ronstadt Transit Center in downtown Tucson. The segment of Route 9 eliminated between UA and downtown Tucson would be supplemented by a Route 9 express that would operate in the peak hour only. Route 4 on Speedway is currently supplemented by express bus Routes 81, 103, and 106.

Table 1: Local Sun Tran Bus Service Connections

Ronstadt Transit Center Bus Routes	UA Transfer Point Bus Routes
2 (Cherrybell/Country Club)	1 (Glenn/Swan)*
3 (6 th Street/Wilmot)	4 (Speedway)*
6 (S. Park Ave./N. 1 st Ave.)	5 (Pima/W. Speedway)*
7 (22 nd St.)	9 (Grant)
8 (Broadway/6 th Ave.)	15 (Campbell)
10 (Flowing Wells)	20 (W. Grant/Ironwood Hills)
16 (12 th Ave./Oracle Road)	
19 (Stone)	
21 (W. Congress/Silverbell)	
22 (Grande)	
23 (Mission)	

*Routes 1, 4, and 5 would interface with the proposed rapid bus circulator/modern streetcar system at the UA campus but not at the UA transfer point.

recommended plan interim scheme

The interim scheme is proposed as a bridge between the existing Ronstadt Transit Center and the installation of the modern street car when a reduced number of bus berths becomes feasible.

In this configuration ancillary structures are located in the southeast corner of the Transit Center site providing services such as vending, information and restrooms (for drivers as well as riders). There is a designated parking space located nearby for a TPD patrol car. Security is also provided via closed circuit cameras located around the facility.

The center is shaded by a tensile structure that while filtering the intense sunlight still allows for the growth of plants below. It also hides the facility's operations and directs the noise it generates away from the residents of the Depot Plaza to the east.



The brick arcade that wraps the existing site is maintained and even extended along the Sixth Avenue frontage.

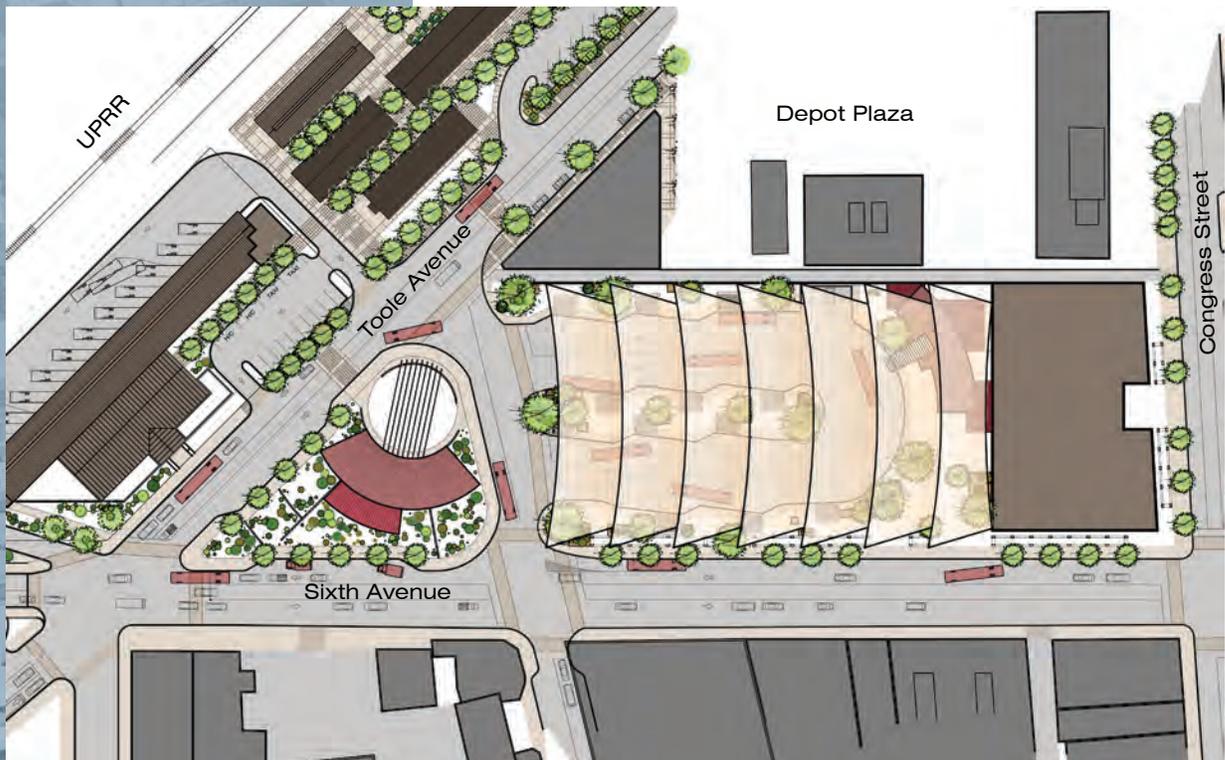
recommended plan master plan scheme

This master plan scheme assumes the operation of a modern streetcar along Congress Street alleviating the need for some current Sun Tran routes. This in turn permits the reduction of the number of bus berths provided in the transit center.

With the area gained from the loss of those berths this plan assumes the construction of a Multi-Modal Center on what was the Pennington Triangle. This facility would sit at the intersection of the major transit modes serving Tucson: Amtrak, Greyhound, and Sun Tran and would provide welcoming as well as general services (information, vending, restrooms etc.).

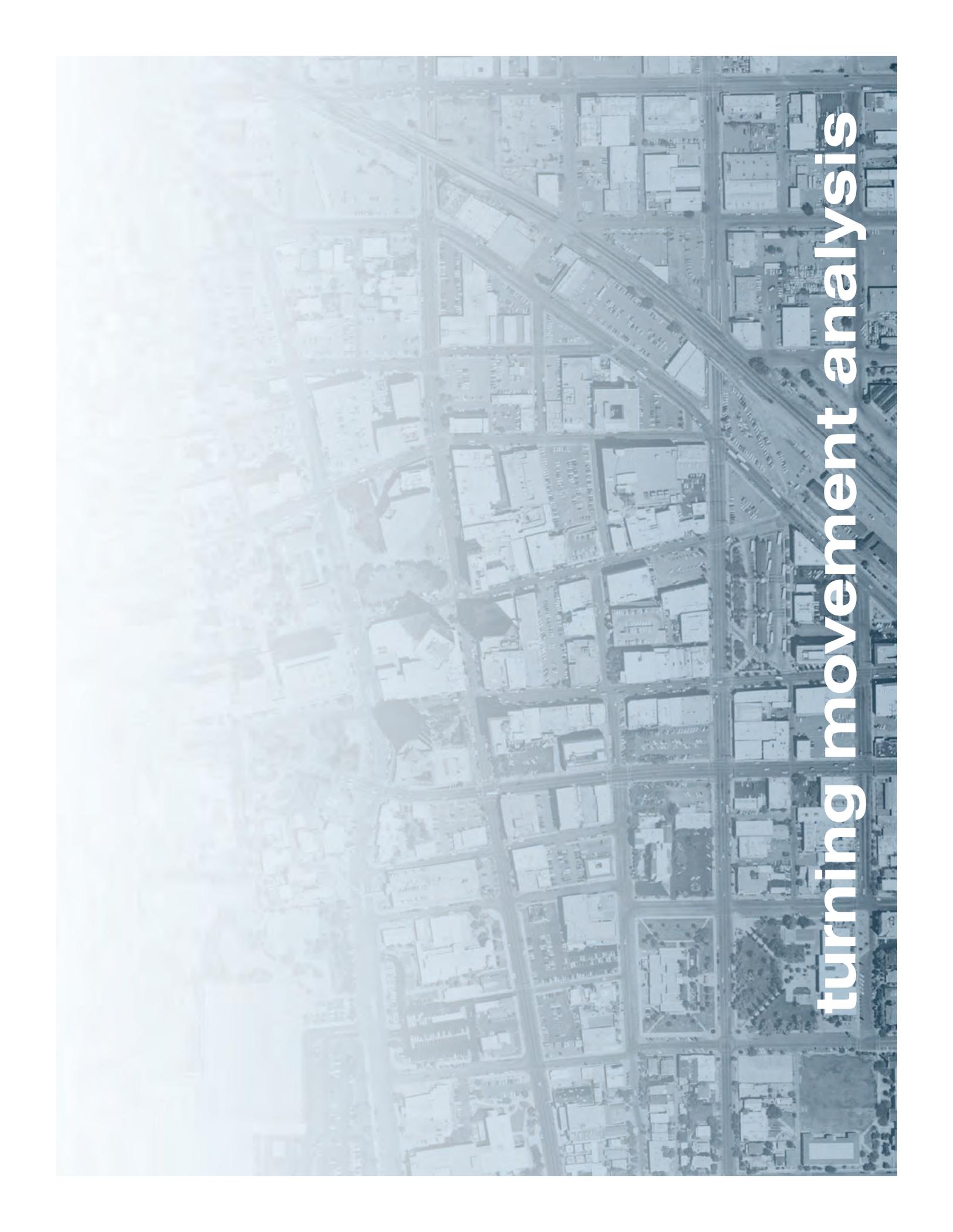
The ancillary structures remaining from the interim plan would continue to provide services to Sun Tran's ridership. The provision for the TPD patrol car is also maintained as is the closed circuit security camera system.

The center is shaded by a tensile structure that while mitigating the intense sunlight still allows for the growth



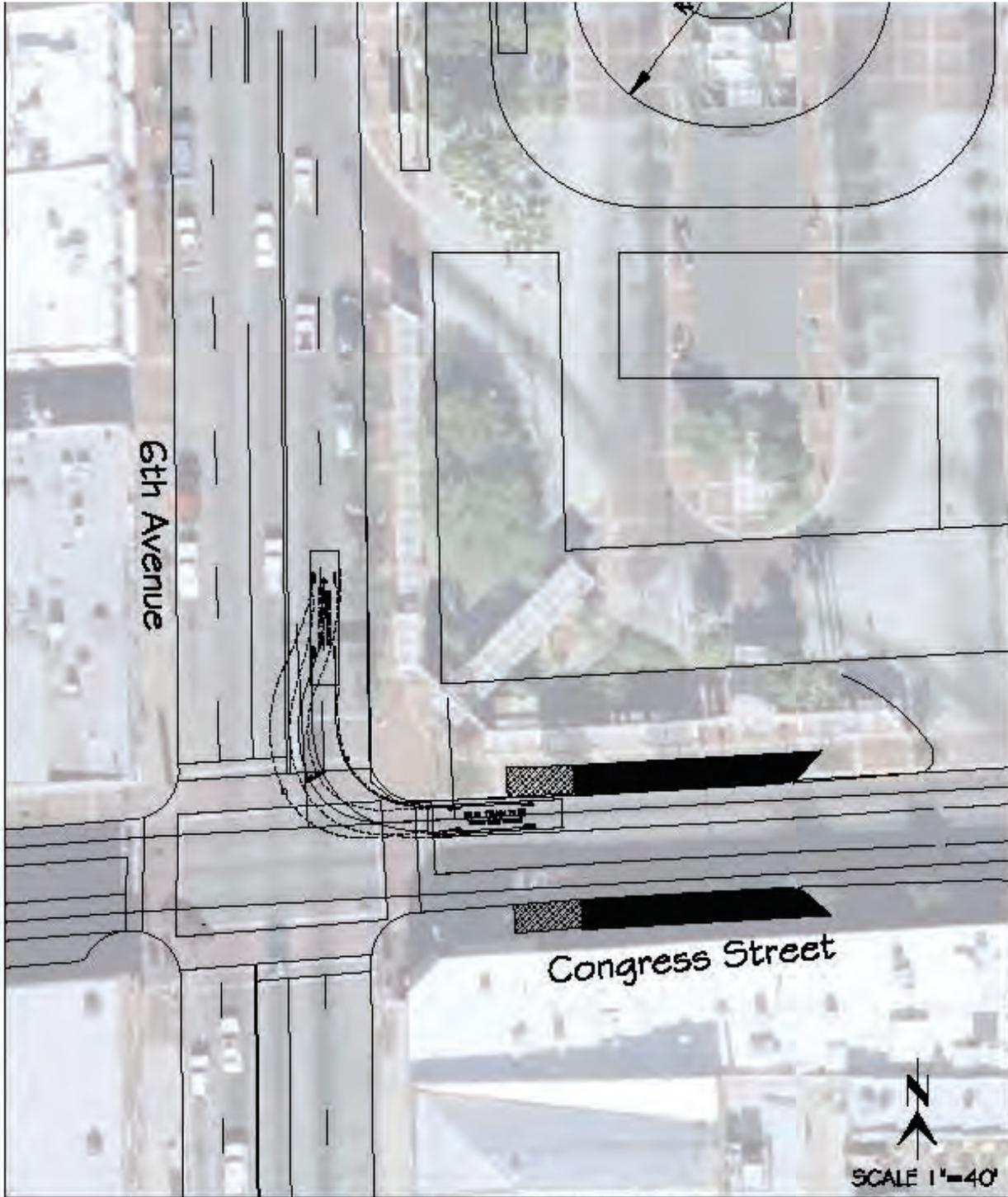
master plan scheme with tensile shade structure

of plants below. It also hides the facility's operations and directs the noise it generates away from the residents of the Depot Plaza to the east .



turning movement analysis

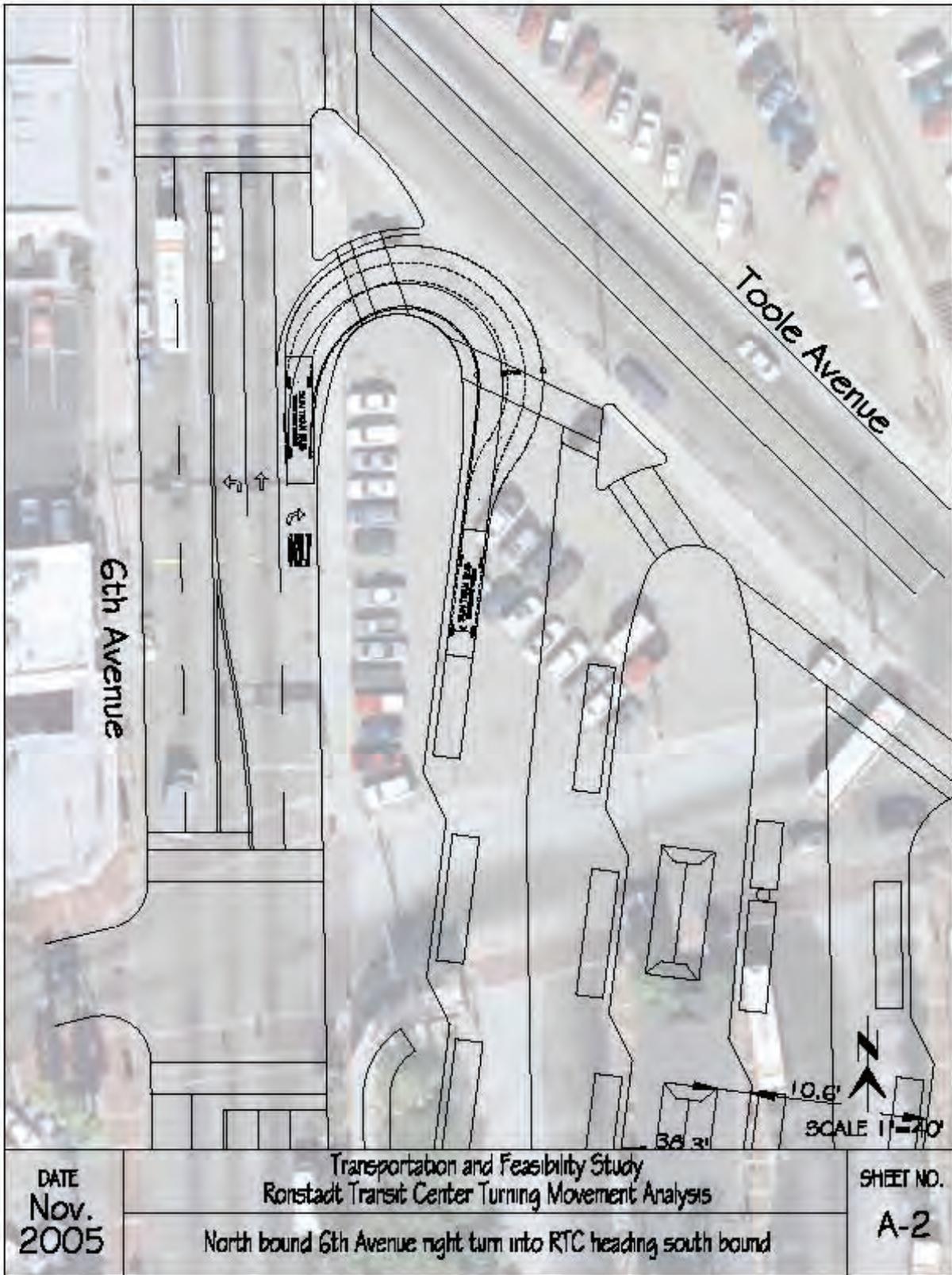
turning move. analysis



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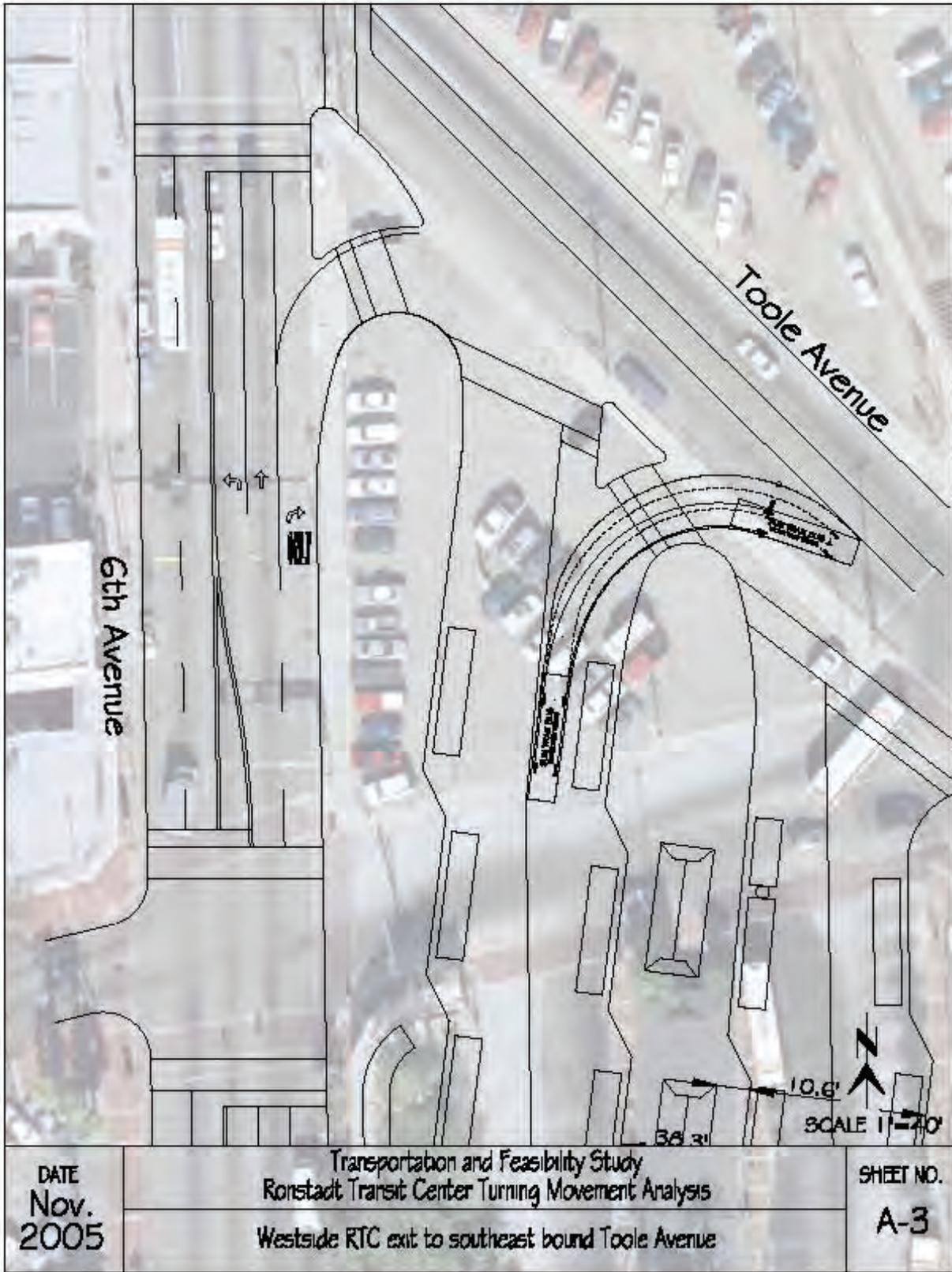
DATE Nov. 2005	Transportation and Feasibility Study Ronstadt Transit Center Turning Movement Analysis	SHEET NO.
	West bound Congress Street to north bound 6th Avenue	A-1

turning move. analysis
(continued)



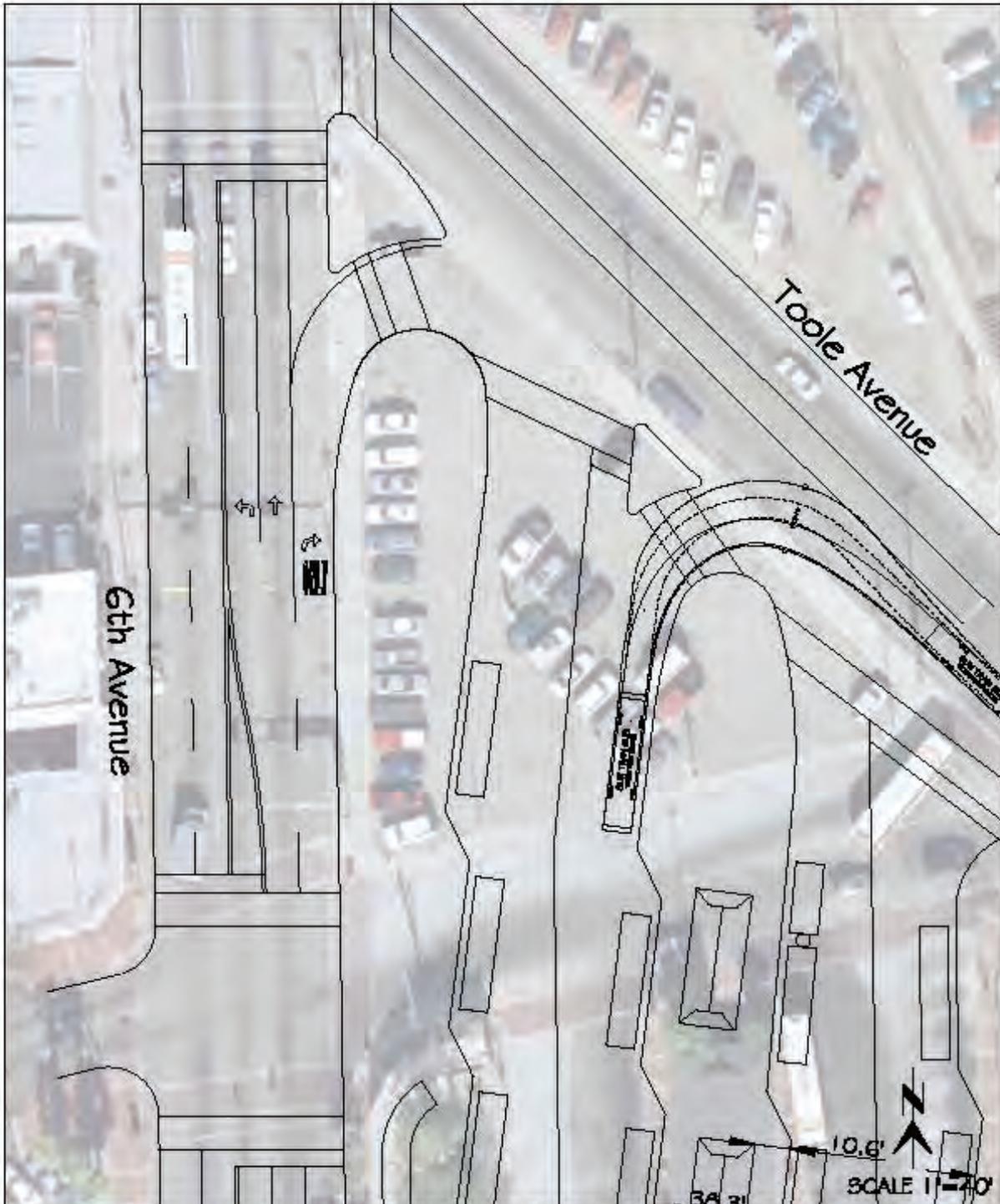
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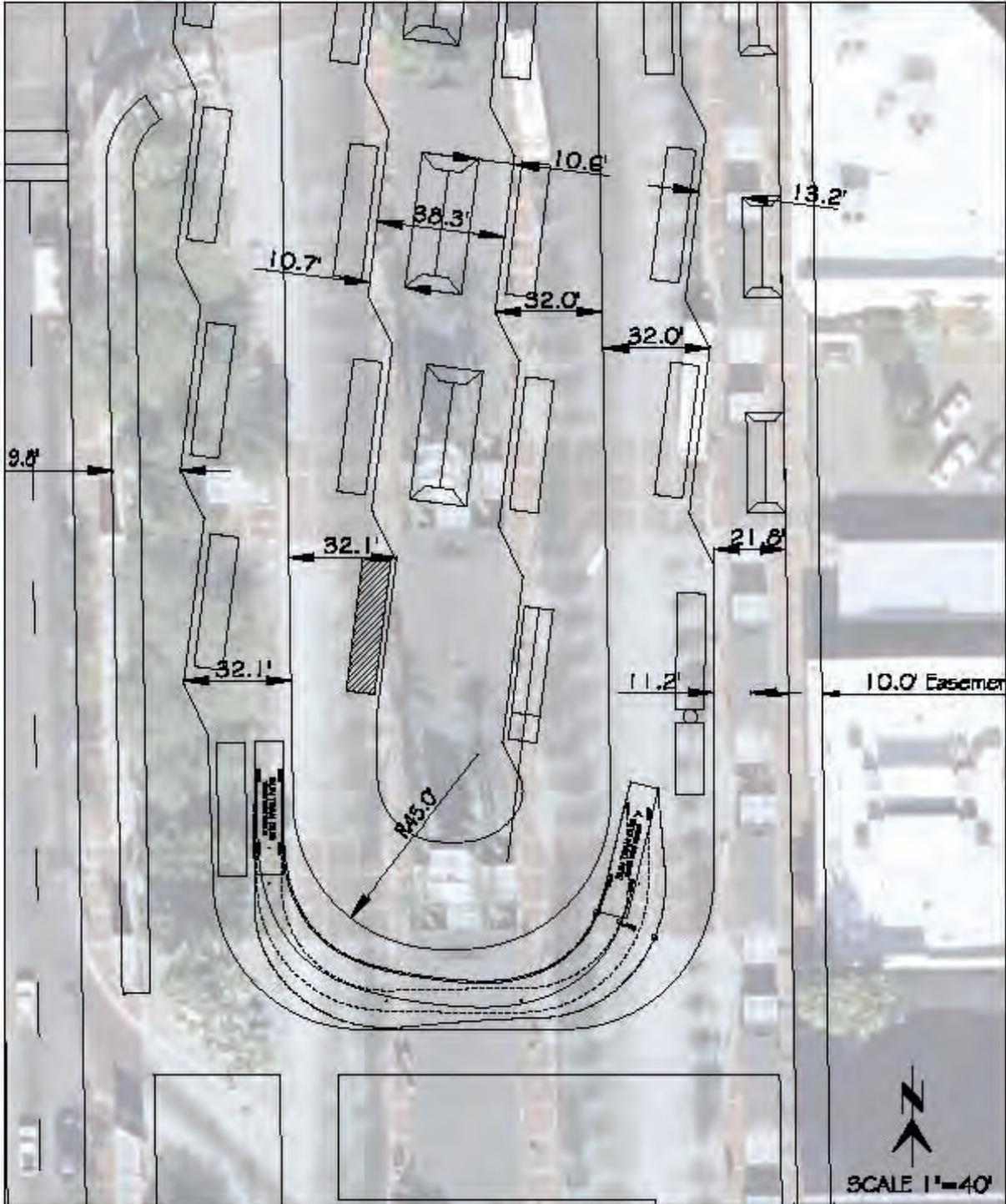
turning move. analysis
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Westside RTC ext, from last bay to southeast bound Toole Avenue		

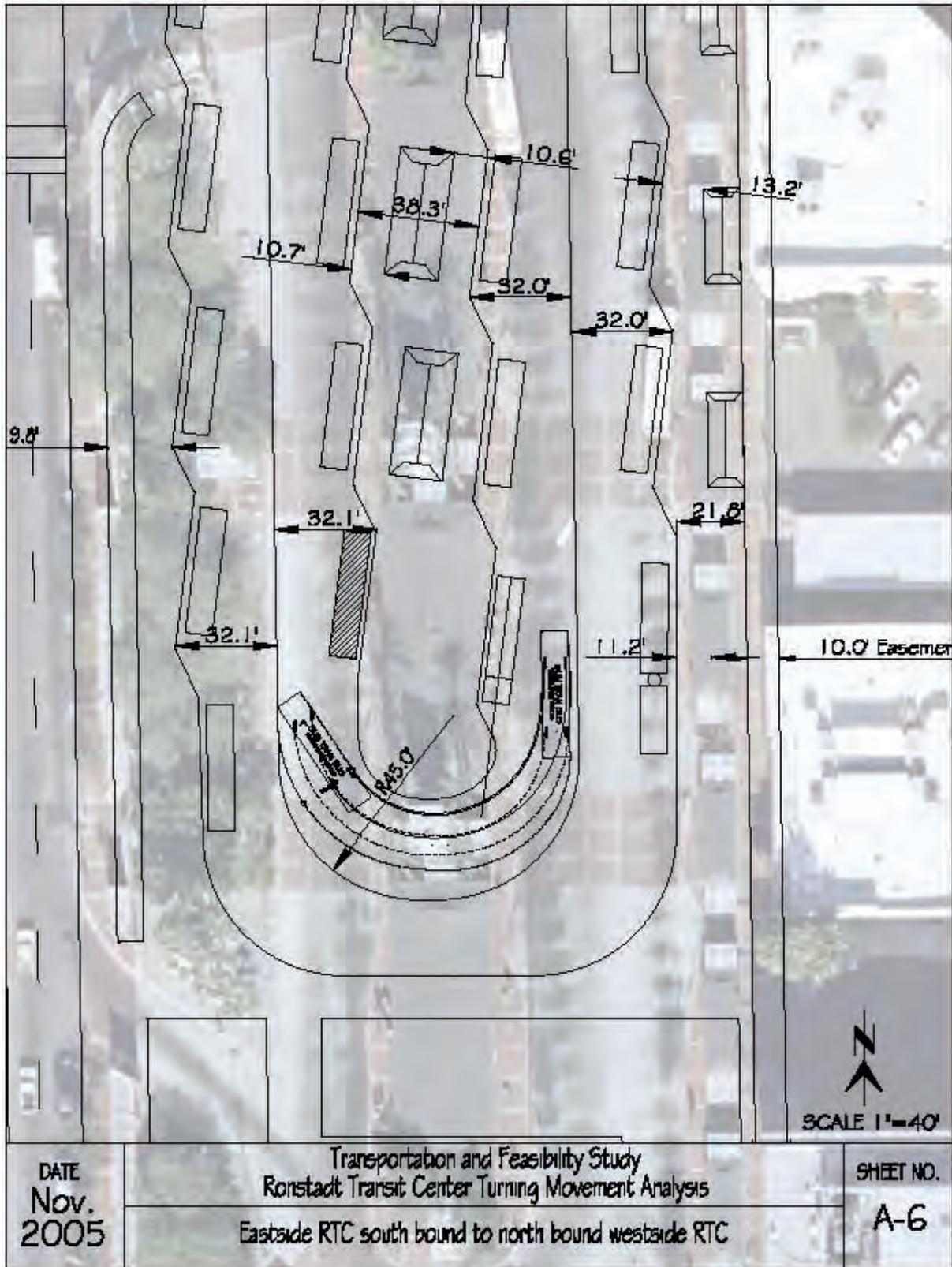
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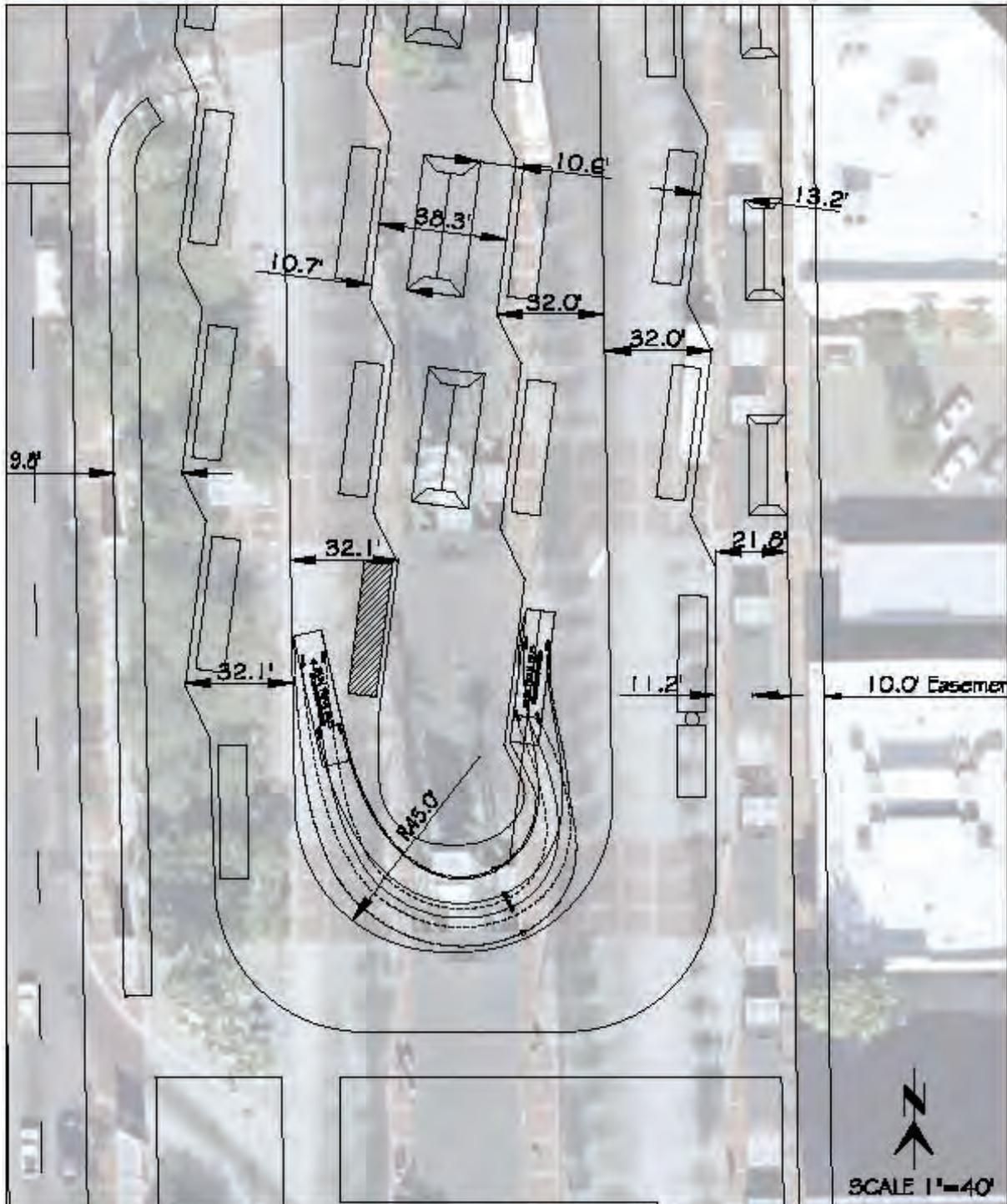
<p>DATE Nov. 2005</p>	<p>Transportation and Feasibility Study Ronstadt Transit Center Turning Movement Analysis Westside RTC south bound to north bound eastside RTC</p>	<p>SHEET NO. A-5</p>
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turning move. analysis
(continued)



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turning move. analysis
(continued)



<p>DATE Nov. 2005</p>	<p>Transportation and Feasibility Study Ronstadt Transit Center Turning Movement Analysis Eastside RTC south bound, from last bay to north bound westside RTC</p>	<p>SHEET NO. A-7</p>
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turning move. analysis (continued)

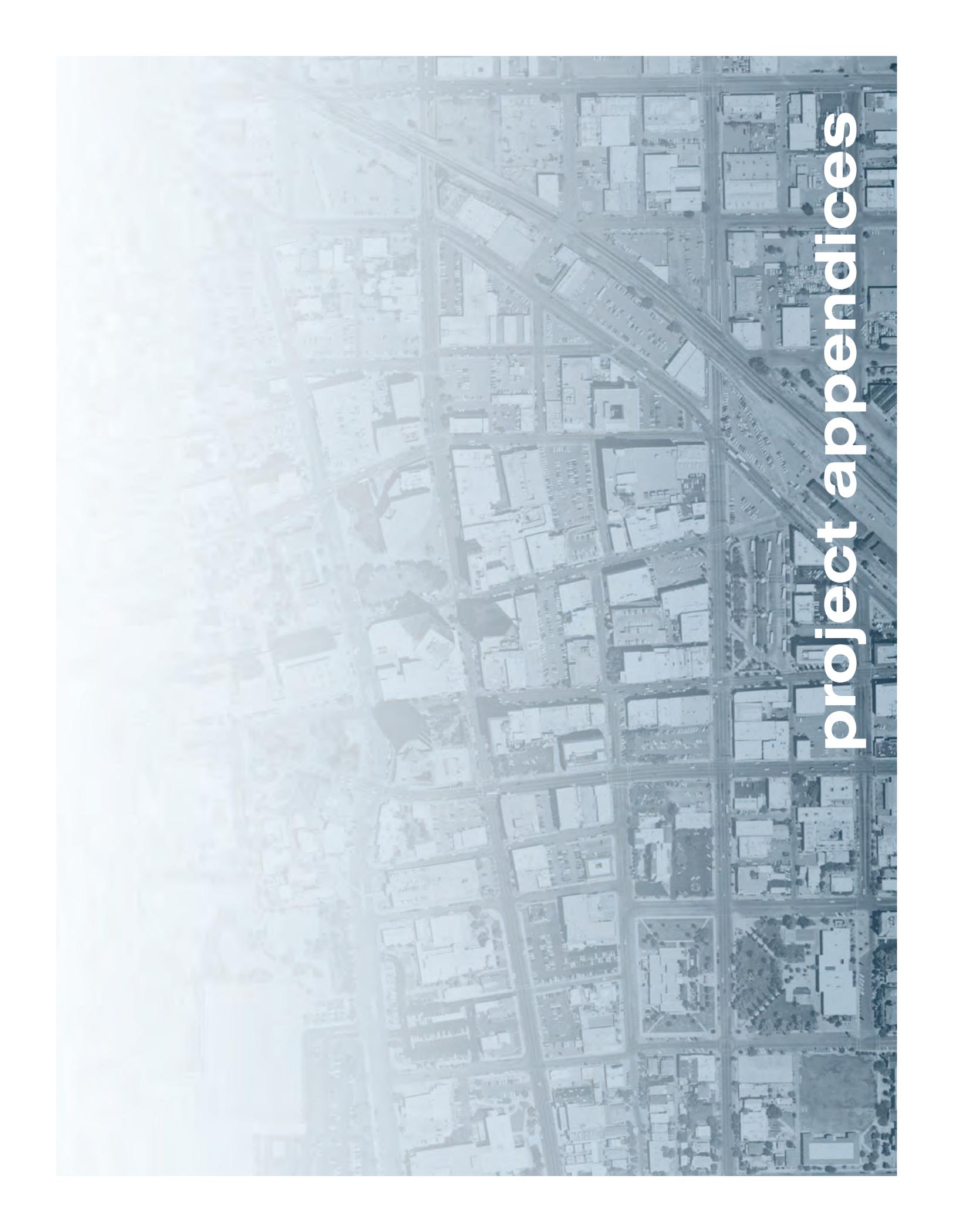


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turning move. analysis
(continued)



NOT FORMATTED TO SCALE

An aerial photograph of a city street grid, showing a dense network of streets and buildings. A prominent diagonal road, likely a highway or expressway, runs from the top-left towards the bottom-right. The text 'project appendices' is overlaid on the right side of the image, oriented vertically.

project appendices

appendix 01 references

The following is a list of the reports etc. addressing downtown planning and transportation issues that were referenced during this study:

codes

City of Tucson Land Use Code, Rio Nuevo and Downtown zones

studies and reports

Preliminary Engineering Report: Stevens Avenue, Broadway Boulevard to Sixth Street

COT Major Transit Investment Study

Final Environmental Assessment for the Proposed Downtown Tucson Intermodal Center

Sun Tran Future in the Downtown

Two-Way Conversion

Conceptual Study for Modifications to RTC

Transit Elements of the 2030 Regional Transportation Plan
Phase 01: Inventory and Analysis of Transit Services and Facilities
Phase 02: Identifying Future Transit Growth Markets
Phase 03: Recommended Transit Service and Facility Improvements

plans

Tucson Downtown Comprehensive Street Tree Plan

Tucson Downtown Pedestrian Implementation Plan

Warehouse District Master Plan

Depot Plaza Master Plan

Tucson Historic Warehouse Arts District Master Plan

Tucson Warehouse Historic District: Public Participation Plan and Preliminary Analysis for Master Plan

manuals and programs

Greyhound Terminal Design Manual

Design Principles: Intercity Bus Terminal at an Intermodal Transportation Center

appendix 02 meeting minutes

Meeting Date: February 28, 2005

Meeting Purpose: Project Kick-off

Attendees: Kim McKay, Vince Catalano/
Transportation, Lucy
Amparano/Rio Nuevo, Joan
Beckim/Kaneen, Mike Barton/
Transcore, Dave Burns, David
Wald-Hopkins/Burns & Wald-
Hopkins, Corky Poster/Poster
Frost, Aimee Ramsey, Bob
McGee/Sun Tran

Distribution: Project Directory

Meeting Notes #001

1. After introductions, Kim presented the project purpose and directed team to assume 2-way traffic circulation for Broadway and Congress. After discussion, planning team indicated that 1-way opportunities would be explored too when appropriate.
2. She will put together a Project Directory including the following members of the Project Management Team representing the City: Kim McKay, Vince Catalano, Aimee Ramsey, Bob McGee, Lucy Amparano/Rio Nuevo

After discussion it was agreed Greyhound should be invited to join the Project Management Team.
3. The Technical Advisory Committees will include the PMT plus other city representative and outside agencies.
4. Group discussed alternative sites for Greyhound and RTC. Kim will set up meeting to discuss Rio Nuevo locations for Greyhound and Transit. (Scheduled for Tuesday March 8th)
5. Project schedule: four months through June 30, 2005. Jim Glock will be responsible for the presentation to Mayor and Council.
6. Group discussed Project goals. See Exhibit1.

PROJECT GOALS

- Include Sun Tran and Greyhound ridership in the planning process.
- Accommodate future growth in planning for new facilities.
- Coordinate with other downtown planning activities- Stevens Alignment, Warehouse District, MP, Congress St. MP, etc.

appendices

- Plan transit facilities to serve a future downtown as envisioned in the Rio Nuevo Master Plan.
- Consider long term regional transportation issues.
- Enhance safety and security, both real and perceived.
- Integrate additional activities/eyes onto RTC to reduce criminal activities.
- Maximize commercial opportunities associated with transit.
- Improve pedestrian accessibility and enhance wayfinding.
- Balance needs of ridership with interests of downtown stakeholders.
- Meet title VI requirements for providing equal access to downtown government offices.
- Enhance multi-modal transportation system.
- Develop a plan to best serve Greyhound passengers, making travel safe, convenient, and efficient.
- Provide Greyhound passengers with proximity and connectivity to other modes of transportation.
- Locate Greyhound facilities in close proximity to I-10, allowing for easy on and off access for coaches.
- Contribute to the long-term vitality of downtown Tucson.
- Provide connectivity to Alternatives Analysis recommendation.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting. Please contact him if you have any comments and/or changes.

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meeting minutes (continued)

Meeting Date: March 8, 2005

Meeting Purpose: **Project Co-ordination**

Attendees: Matthew Taunton/SR Beard, Corky Poster Carmen Batholomew, /Poster Frost, Dave Burns, David Wald-Hopkins/Burns & Wald-Hopkins, Mike Barton/ Transcore, Lucy Amparano/Rio Nuevo, Joan Beckim/Kaneen, Kim McKay, Vince Catalano/Transportation, Greg Shelko/Rio Nuevo

Distribution: Project Directory

Meeting Notes #002

1. Group reviewed goal previously established as attached.
2. Group then reviewed potential locations for transit facilities. Greg Shelko discussed concerns over library plaza for Sun Tran.
3. Greyhound has 31 buses per day and need 8-10 bays. Strong link between Greyhound and Sun Tran.
4. Group referred to Alternatives Analysis website: www.tucsontransitstudy.com
5. Greyhound sites selected for study:
 - 6th and Toole
 - Millstone Property
 - Civic Plaza (3 ½ acres)
 - 5th Ave and 7th Street
6. Sun Tran sites selected for study:
 - Ronstadt Transit Center
 - Civic Plaza
 - Dispersed (curbside in downtown)
 - Hub(s) outside downtown with trolley access.
7. Aimee reported that 18 SunTran routes come into downtown. At RTC, potential for 20 bays ignoring commercial development on Congress. Ideally 24 bays required to replace Ronstadt, but would need 4-5 acres.
8. Aimee will investigate options for reducing RTC by off-loading routes. She will also investigate distributed system.
9. Next meeting with Jim Glock to confirm study sites scheduled for March 16 at 8am at Rio Nuevo.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting. Please contact him if you have any comments and/or changes.

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meeting minutes (continued)

Meeting Date: March 16, 2005

Meeting Purpose: **Project Co-ordination**

Attendees: Matthew Taunton/SR Beard, Corky Poster, Carmen Batholomew/Poster Frost; Dave Burns, David Wald-Hopkins/Burns & Wald-Hopkins; Mike Barton/ Transcore; Lucy Amparano/Rio Nuevo; Joan Beckim/Kaneen; Kim McKay, Vince Catalano, Aimee Ramsey, Bob McGee/SunTran; Greg Shelko/Rio Nuevo; Jim Glock/Transportation

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Meeting Notes #003

1. Group discussed Greyhound sites preliminarily selected at previous meeting. Jim Glock suggested a site west of the river, co-located with four buses. But after review, agreed current list is approved as follows:
 - 6th and Toole
 - Millstone property
 - Civic Plaza
 - 5th & 7th
2. Then group considered SunTran sites. Jim indicated City has internally looked at Broadway and Euclid, and group agreed to add this site as an option but after further discussion it fell off the list. Also discussion of 5th and 7th, adjacent to Stevens Alignment. One goal would be to get transfer option out of downtown.

Group discussed alternative SunTran locations downtown at length including Library Plaza and Civic Plaza. Also, potential for below-grade facility.

Finally group agreed to include the following sites in the study:

- Ronstadt Transit Center
 - 5th and 7th
 - Dispersed Downtown
 - On-Street Downtown
 -
3. Matthew also commented that fleet will improve over the years, less noise, less smell.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting. Please contact David if you have any comments and/or changes.
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meeting minutes (continued)

Meeting Date: March 16, 2005

Meeting Purpose: Discussion with Greyhound

Attendees: Deanna Simsek/Greyhound;
Kim McKay/Transportation;
Corky Poster, Carmen
Bartholomew/Poster Frost;
Mike Barton/Transcore Dave
Burns, David Wald-Hopkins/
Burns & Wald-Hopkins

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Meeting Notes #004

1. Kim reviewed the sites being considered for Greyhound.
2. Deanna will put together information on routes, schedules, headways, bays, operational issues, design criteria, etc. John Isaacson will help gather information.
3. Deanna said Greyhound goals included:
 - How to best serve passengers.
 - Make travel safe, pleasant and efficient.
 - Connectivity to local transit:
 4. Sun Tran
 5. Taxi
 6. AmTrak
4. SunTran typically tries to provide food service support. In new facilities, developing new concepts for retailing. Deanna will provide model of new facilities.
5. Passengers want to see the bus, people are anxious.
6. Security considerations- restaurant would be in secure area. But could also be an amenity to the community.
7. Tucson is a good market- should thrive.
8. Deanna has rider survey which she has previously provided to Kim.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting.
Please contact him if you have any comments and/or changes.
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meeting minutes (continued)

Meeting Date: March 25, 2005

Meeting Purpose: Establishing SunTran Requirements

Attendees: Jim Glock, Kim Mckay/
Transportation; Aimee Ramsey/
Sun-Tran; Matthew Taunton/SR
Beard; Mike Barton/Transcore;
Dave Burns, David Wald-
Hopkins/Burns & Wald-Hopkins

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Meeting Notes #05

1. Aimee said RTC still works if downtown streets are converted to two-way circulation.
2. SunTran restructured two years ago to save \$638,000. RTC had 14,000 daily users; now 18,000 daily users (ons and offs.). Laos has 2500 daily users.
3. 58 new buses will operate if RTA passes- 75% of which will go downtown. SunTran lays over couple of routes, but system could be redesigned to remove all layovers.
4. Question: What drives the size of a system? Generally the land available.
5. Discussed models derived from other cities. S.R. Beard will investigate and report at March 31 meeting.
6. Could short-turn several routes: 1, 3, 4 and 9 possibly, all with transfer penalties. Would then need only 15 bays at RTC.
7. Discussed Transportation Study prepared by PAG to develop transit recommendations for the 2030 RTP.
8. RTA will require sales tax funding capacity of RTC can be increased by increasing frequency.
9. Number of express routes will increase. Generally these are not transfer routes and would not go to RTC. Majority of express ridership does not use RTC at all.
10. Express buses could also be dispersed elsewhere downtown.
11. 5th and 7th street could work from Aimee's point of view, if provided with Stevens access. Stevens alignment still needs to be reviewed and approved by Mayor and Council.
12. Aimee will work through routing for:
 - 5th and 7th assuming Stevens Alignment
 - RTC with 15 bays and express bus-stops dispersed through downtown.
 - On-street (concentrated): Like a library Plaza idea, assuming two-way.
 - Dispersed: Like original system downtown, assuming two-way.

meeting minutes (continued)

13. Kim described sensitivity to buildings being demolished in warehouse district.
14. Discussed Stone as potential Transit Mall. Would probably have to be north-south. Perhaps Toole could be a Transit Mall. Warehouse MP shows improvements to Toole.

Potentially: Transfer routes on Toole with express stops dispersed through downtown.

It was agreed this is a concept that could apply elsewhere downtown.

15. Matthew will bring Portland study which outlines issues associated with Downtown Transit.
16. Mike will provide digital aerial photo of Downtown.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting. Please contact David if you have any comments and/or changes.

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meeting minutes (continued)

Meeting Date: March 31, 2005

Meeting Purpose: Project Co-ordination

Attendees: Kim McKay, Vince Catalano, Andy McGovern, Brooks Keenan, Ivey Schmitz/TDOT; Tom Fisher/PAG; Matthew Taunton, Marc Soronson/SRBA; George Caria, Aimee Ramsey/SunTran; Bill Lee/ERA; Joan Beckim/Kaneen; Tavo Garcia/Greyhound Lines; Corky Poster/Poster Frost; Michael Barton/Transcore; Dave Burns, David Wald-Hopkins/BWH

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Meeting Notes #06

1. After review of agenda, Joan reported the perception that there are too many public meetings, and desire to have more technical information. Plan now is to have no public meetings at this time. TDOT open house would be a good format for presenting findings. Potentially in May or June coupled with Alternatives Analysis. Perhaps also Stevens Alignment. Joan will coordinate time and location.
2. David reviewed Sun Tran and Greyhound sites for study as follows:
 - Greyhound
 - 6th & Toole
 - 5th & 7th
 - Civic Plaza
 - Millstone
 - SunTran
 - Rondstadt
 - 5th & 7th
 - Transit Mall (Toole)
 - Dispersed Downtown
3. Mike Barton reported on 2-way conversion
 - 4th Avenue underpass expected to bid in June.
 - Stevens Alignment will go out for further study and design shortly. This will alleviate some pressure on Congress and Broadway.
 - Temporary one-way system with two lanes anticipated to last five years on Congress and Broadway.
 - There will be difficulties accessing RTC with 2-way Congress
4. Mark presented the Alternatives Analysis with preferred alignments, and Matthew presented transit models from other cities including Denver and Portland.

meeting minutes (continued)

- Tom Fisher reported as follows:
 - Additional buses being proposed for downtown with RTA, resulting in pulsing every 15 minutes. Election is scheduled for May 2006- funds available for Transit would take year or two. Perhaps \$400 million over 20 years being allocated to Transit.
 - Bill Lee reported his observations as follows:
 - In other cities, transit has negative and positive attributes.
 - Positive- delivers downtown workers
 - Negative- social concerns, congestion
 - Problem area is probably 150-200 feet around transit center. Should locate center where it minimizes impact on adjacent properties.
 - RTC impacts retail on Congress in historic structures. Opportunity to redevelop RTC/ Depot Plaza is “once in a generation” opportunity.
 - Tucson absorbing 400,000 sf of retail a year- would not take long to fill Congress retail with redevelopment of block. Has more potential to positively impact downtown than Civic Plaza.
 - Other transit locations:
 - 5th/7th-will face organized opposition, and is separated from downtown use.
 - Toole- has some appeal
 - RTC- underground development expensive and negatively impacts what goes on top.
 - Putting transit underground puts problem out of sight.
 - Corky pointed out: There is no successful retail downtown. How do we know RTC is the deterrent? Portland bus mall has damaged retail. Negative.
5. Corky reported on Greyhound functional requirements:
- Building requirements 10,700 gsf
 - Site requirements 1.6 acres
 - 6th & Toole site would require 35' of railroad. R.O.W. Kim indicated site should be understood without right-of-way, which would probably result in loss of parking.
6. Aimee discussed SunTran requirements:
- She indicated anything can work if routes can be engineered.
 - With integration of Alternatives Analysis, she could see an east hub at University and a west hub downtown, serving possibly half the routes.
 - Location, management and design are all considerations for Transit reminded Corky.
 - Earliest potential streetcar under

meeting minutes (continued)

- Alternatives Analysis is 2012 or so.
- Greyhound will be relocated temporarily for two years, at which time permanent location needs to be designed and built.
- Temporary SunTran option would have to be dispersed.
- Implementing the Depot Plaza MP is at least 2-3 years away.
- Potentially route quieter, hybrid, buses on Congress and Broadway. SunTran is currently planning to take SunTran off Congress with 2-way.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting. Please contact David if you have any comments and/or changes.

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meeting minutes (continued)

Meeting Date: April 21, 2005

Meeting Purpose: Project Coordination

Attendees: Kim McKay, Vince Catalano, Jim Glock, Shellie Ginn, Matt Hausman/TDOT; Marc Soronson/SRBA; Aimee Ramsey/SunTran; Joan Beckim/Kaneen; Mike Barton/Transcore; David Wald-Hopkins/BWH; Lucy Amparano/RN;

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Meeting Notes #07

1. Mike Barton announced that he was resigning from Transcore effective May 4. David expressed desire to retain Mike's services through completion of the project.
2. Mark explained preferred route for streetcar on 2-way Congress. FTA has expressed concern over connectivity. Also discussed hub connectivity at UA hub with SunTran which could reduce routes downtown.

Region 9 has expressed desirability of streetcar adjacency to RTC. Mark said it was important to have streetcar reinforce SunTran services.

He has talked to Shellie and Kim about modifications to RTC to make it more compatible with Downtown redevelopment.

Kim said she does not want to jeopardize potential of federal funding.

3. David discussed strengths of the Toole site- edge of Downtown, blocking into rail lines, adjacent to new courthouse.
4. Jim Glock indicated FTA funds would have to be repaid- 80% of real estate value for RTC.
5. On-board survey results should be available April 28, at 3pm.
6. SunTran could live with 12 bays downtown.
7. Next meeting to present concepts May 10 at 1:30.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting.

Please contact David if you have any comments and/or changes.
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meeting minutes (continued)

Meeting Date: April 29, 2005

Meeting Purpose: **Planning Workshop**

Attendees: Kim McKay/TDOT; Matthew Taunton, Marc Soronson/SRBA; Bill Lee/ERA; Mike Barton/Transcore; Alec Kennedy, Dave Burns, David Wald-Hopkins/BWH; Corky Poster, Carmen Bartholomew/Poster Frost

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Meeting Notes #08

1. After review of agenda, group reviewed project goals adding the following goal:
 - Enhance long-term vitality of downtown.
2. The Group reviewed the sites for Greyhound as follows:
6th and Toole
 - Corky presented 6th and Toole site revised to eliminate encroachment into rail R.O.W.
 - Discussed routing of coaches to this site: Broadway east and Alameda east looks difficult. Site needs to be accessed northbound on Toole. After discussion, agreed access should be off 6th with Toole stop bar moved south. Then west on Alameda. Stevens access could simplify routing.
 - Challenging site bringing buses thru downtown.
 - Greyhound facility includes a restaurant. Corky has not evaluated office or residential above Greyhound.
 - Construction of permanent Greyhound facilities must start by early 2006 at latest.
 - Transit facilities generally do not enhance commercial development, indicated Bill Lee.
 - Group discussed potential of office adjacent to Depot, wonderful views.

Millstone Site

- Greenway project will take out 20 feet of west edge. Only access to St. Mary's. Question- how do you make a left turn? School across the street. Cannot make right turn, left on Main because of tracks. During Interstate reconstruction, coaches can use Frontage Road.
- Private site \$2.5 million; 3.5 acres.
- Would need half-signal to allow left turn out of site for coaches and private vehicles.
- Downtown owners would like location, but negative to neighborhood. Site has strong development potential other than Greyhound. How do passengers access other Transit facilities?

Civic Plaza

- Carmen reported that Civic Plaza site does not appear to be available for Greyhound. She proposed a site north of Broadway where access off and on Frontage road is enhanced. After discussion group agreed to

meeting minutes (continued)

- continue of Greyhound on Civic Center Site.
- Civic Plaza is intended to serve destination visitors and Greyhound may not be compatible use.
- Potential to layer Greyhound below the Science Center, shared with tour buses. Greyhound is 24-hour operation. Greyhound is not a huge negative to developers.
- Will need to be a major bus facility for gem show, arena, science center, convention center. Connectivity to Civic Plaza would be good, but not until 2011 at earliest. Science Center wants to be open 2009.

5th and 7th

- Maintenance facility for streetcar would probably go on south lot. Location requires Stevens Alignment to work, probably transit only access.
- The North site is approximately 76,032 sf.
- Could exist without Stevens, but would still have on-grade rail crossing to contend with.
- Stacking residential over Greyhound, but matter of economics. Can probably find a cheaper site.
- 24-hour function not compatible with Greyhound.
- North site is in historic warehouse district.
- Floodplain issues. Tucson Arroyo will ultimately be taken out of floodplain. Still a capacity issue.
- Matthew talked about co-locating bus and rail is occurring in Denver. But indicated vertical separation can allow this to work.
- Connectivity question? Buses on 6th within block of street car. Most limited mode is pedestrian. People will not use overpasses, underpass scary.
- Trolley and Ticet both have limited hours.

3. The group then reviewed sites for SunTran as follows:

Dispersed approach

Negatives:

- No scheduled transfers
- Passenger confusion and inconvenience
- Change radial routes to grid system, new signage
- Fewer routes downtown
- Buses all over the place
- No layovers possible
- No driver access to restrooms and snacks
- Safety- random crossing
- Street- capacities, blocking flows
- Reduced service resulting in reduced ridership
- Sidewalk width not sufficient
- More shelters downtown

Benefits:

- For some people, will get them to their destination quicker, more directly.
- Dispersed grid system works well with frequent buses (5 min. intervals)
- Fewer routes downtown
- Concentrated RTC problems dispersed
- Shifts location of problem
- Reduced SunTran operating cost (fewer miles)

[Note: Laos Center contributed to 25% increase in ridership]

meeting minutes (continued)

Bill: one definition of successful downtown is people on the streets. Transit serve helps. Without transit, get a more suburban model. Healthy downtown needs transit. Best location probably at the edge. Rather than pre-empting best locations in the center. Another definition is a sense of place, an area that cannot be recreated by developers. For Bill best location against railroad tracks.

Ronstadt Transit Center

- Consider locating Police Substation at Transit Center.
- Ticketed access to RTC- passenger only zones, “fare zones”
- Would have possible captive audience for development of air rights. SunTran offices
- Depot Plaza will have 200-high end units with 60 subsidized issue
- MLK is leveraging the redevelopment opportunity. RTC is biggest issue

Toole Transit Mall

- Needs Stevens Alignment to work
- Currently adopted Barraza-Aviation goes through middle of vacant Toole lot.
- One lane each way, with center turn lane on Toole works for Warehouse Dist MP
- Question: Can this be Transit Mall only, no through traffic?
- Schedule for Stevens: 2007.
- Matthew’s concept: one lane each way, not including cars.
- Or use 4-lane street section. Transfers across the street would be hazardous.
- Access issues onto Toole- problem heading south
- Express buses serve predominantly government workers, and would not stop.
- Not a pulsed system with Mall.
- Transfers would have to hunt and peck for new bus.
- Mall can accommodate more buses than Transit Center.
- Warehouses: State owned-land
- About 75% of RTC size of RTC site
- Art walk design underway currently
- Would have to rebuild intersections at 6th and Toole.
 - Need to assume everything is two-way.
 - Connectivity- Transit Mall would only be close to Trolley if extends past Depot.

5th and 7th

- Stevens must be built for this location. No pedestrian connectivity similar issues to Greyhound
- Hart to explain to FTA. Also Title VI issues, and 4th Avenue. Merchants Association.
- Would need to rebuild streets, paving sections and intersections.

meeting minutes (continued)

- Plan to ban trucks from downtown, 4th Avenue underpass will not accommodate it.
4. The group developed criteria for SunTran and Greyhound and gave them a preliminary evaluation as follows: After considerable discussion RTC site reconfigured with 12 bays was ranked number 1 for SunTran and 6th and Toole site was ranked number 1 for Greyhound.
 5. Follow-up assignments:
BW- Develop SunTran site analysis and plan for each site
PF- Develop Greyhound site analysis and plan for each site
Mike Barton- Prepare traffic and access analysis for each site

BW- Prepare Table of Contents for report
ERA- Prepare economic analysis for each site
Beard- Prepare analysis of Transit impacts

Draft a report to Kim by early June.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting.
Please contact David if you have any comments and/or changes.
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meeting minutes (continued)

Meeting Date: May 10, 2005

Meeting Purpose: Review of Site Concepts

Attendees: Kim McKay, Vince Catalano, Lucy Amparano, Jon Updike, Mike Holder, Shellie Ginn/COT; Aimee Ramsey, Katrina Heineking/SunTran; Mike Barton/Transcore/HDR; Marc Soronson, Matthew Taunton/SRBA; Carmen Bartholomew/Poster Frost; Greg Shelko/RN; Joan Beakim/Kaneen; Alec Kennedy, David Wald-Hopkins, Dave Burns/BW

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Meeting Notes #9

1. Discussed schedule. Kim will schedule a presentation of the study results to Downtown Sub-Committee and Mayor and Council.
 - Key individuals- TPD, TDA, GOV, Private,
 - Open House- early June
 - Sub-Committee- ?
 - Mayor and Council- perhaps July
2. Dave discussed the four Sun Tran sites and evaluation with the following discussion:
 - 12 bays contingent on streetcar implementation
 - Minimum site area- approximately 64,000 sf (1 ½ acres).
 - Shade- approximately 11,000 sf at existing RTC.
 - Potential to consolidate SunTran bays at north end of RTC site.
 - There would be a streetcar station at Congress and 6th. Some discussion of pedestrian linkage to Congress St. Station from the SunTran Center.
 - Also need to look at Greyhound circulation on Toole.
 - COT will be acquiring Pennington Triangle with FTA funds.
 - Alternative use of FTA funded property would require FTA repayment.
 - Details of routing need to be worked out with SunTran.
 - Question: How is security actually provided?
 - Look at old RTC scheme with 12 bays to increase developable parcel.
 - Some concern over message to FTA by contracting RTC.
 - Agreed to look at two options: Compact triangle scheme using right-of-ways. 12 bays with on-site circulation.
 - Look at uses in development parcel that puts eyes on RTC- Police Sub-Station, Bike Station.
 - Very clear link to streetcar.

meeting minutes (continued)

3. Dave briefly presented 5th/7th site and Toole sites, with little discussion.
4. Carmen presented Greyhound sites and ranking, with following discussion:
 - Greyhound also favors 6th and Toole site.
 - Revised concept pulls facilities out of right-of-way and loses only one space, but needs variance.
 - Poster Frost will explore 2nd level of office, but issue of lobby and off-site parking.
 - 5th and 7th site: Assumes Stevens Alignment is assured as part of this scheme. Scheme saves Miller Surplus building- not on historic register.
 - Need to take taxis into account
 - Millstone property: Landscape buffers would be necessary. ADOT limits access onto frontage roads and would need to be reviewed, and judgment is that access is not permitted. Also concern of crossing the Greenway.
 - Civic Plaza site. Test Greyhound plan on Civic Plaza site.
5. Next Steps:
 - Visually show SunTran and Greyhound sites.
 - Need format for Open House early June.
 - Talk to key stakeholders.
 - Meet with Police on Ronstadt safety
 - Review Table of Contents.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting.
Please contact David if you have any comments and/or changes.
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meeting minutes (continued)

Meeting Date: May 12, 2005

Meeting Purpose: Review of Site Concepts with TPD

Attendees: Kelly Lane, Tom McNally/TPD; Lucy Amparano/Rio Nuevo; George Caria, Katrina Heineking/SunTran; Kim McKay/TDOT; Corky Poster/Poster Frost; Alec Kennedy, Dave Burns, David Wald-Hopkins/BW

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Meeting Notes #10

1. After introductions Kim introduced purpose to review security issues at SunTran and Greyhound sites.
2. Dave discussed the four candidate sites for SunTran, and then Corky discussed four candidate sites for Greyhound.
3. Police Department reps described problems associated with existing sites as follows:
 - Greyhound- looks run-down, dilapidated, but do not let people congregate. Easy to distinguish between bus riders and others who should not be there. Greyhound provides its own security. Perceived issue when released prisoners are given Greyhound vouchers and dropped off downtown.
 - Calls mostly to do with criminal offenses on buses coming in- ex-crimes, assault, missing people, etc. But not a lot of people loitering downtown.
 - Team 5, Operations, Division Downtown only get 6% of Police activity; 94% elsewhere.
 - Suntran- vision to be open environment, but treated as a park, attracting people to come and sit who may not have anything to do with SunTran.
 - Solution to define it more narrowly as a Transit Center, creating barriers to easy access. Limiting access points will limit problems on the site itself.
 - Specific problems: Narcotics activity (Tucson H.S. kids purchasing), gang member loitering.
 - SunTran has two off-duty officers in uniform M-F 12:30 to 11pm. Department is tracking impact- numbers are going up, but mostly because of no-tolerance policy. Consensus that RTC is actually pretty safe, but new Businesses/Bars are not location for problems.
 - Pay phones are a source of problems.
 - Potential to place a vehicle in the location to create more visible presence, and give access to computers. A sub-station is not anticipated.
 - 6-8 security cameras RTC recording the activity.
 - Northside, Southside, Transit Centers are not nearly the problem.
4. Dave presented two options for RTC:
 - Triangle scheme: bus bays in ROW in Pennington Triangle.
 - On-site scheme.
 - Triangle concept has conflicts with buses, riders, and pedestrians on sidewalks, also bus maneuvering

meeting minutes (continued)

issues.

- On-site concept brings a lot more eyes on the product. Consider turn-stile into facility, or limit access points.
- Toole site: could accommodate probably eight bays.

5. Recaping

Greyhound- condition of facility is a concern, but security deters people hanging out. Bigger perception is prisoner drop-off. Enhanced design should help.

SunTran- Limited access, less park-like, more eyes on the facility, maintain security, visibility from street to center OK, aesthetically pleasing.

These notes were taken by David Wald-Hopkins and reflect his understanding of the meeting.

Please contact David if you have any comments and/or changes.
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appendix 03 interviewees

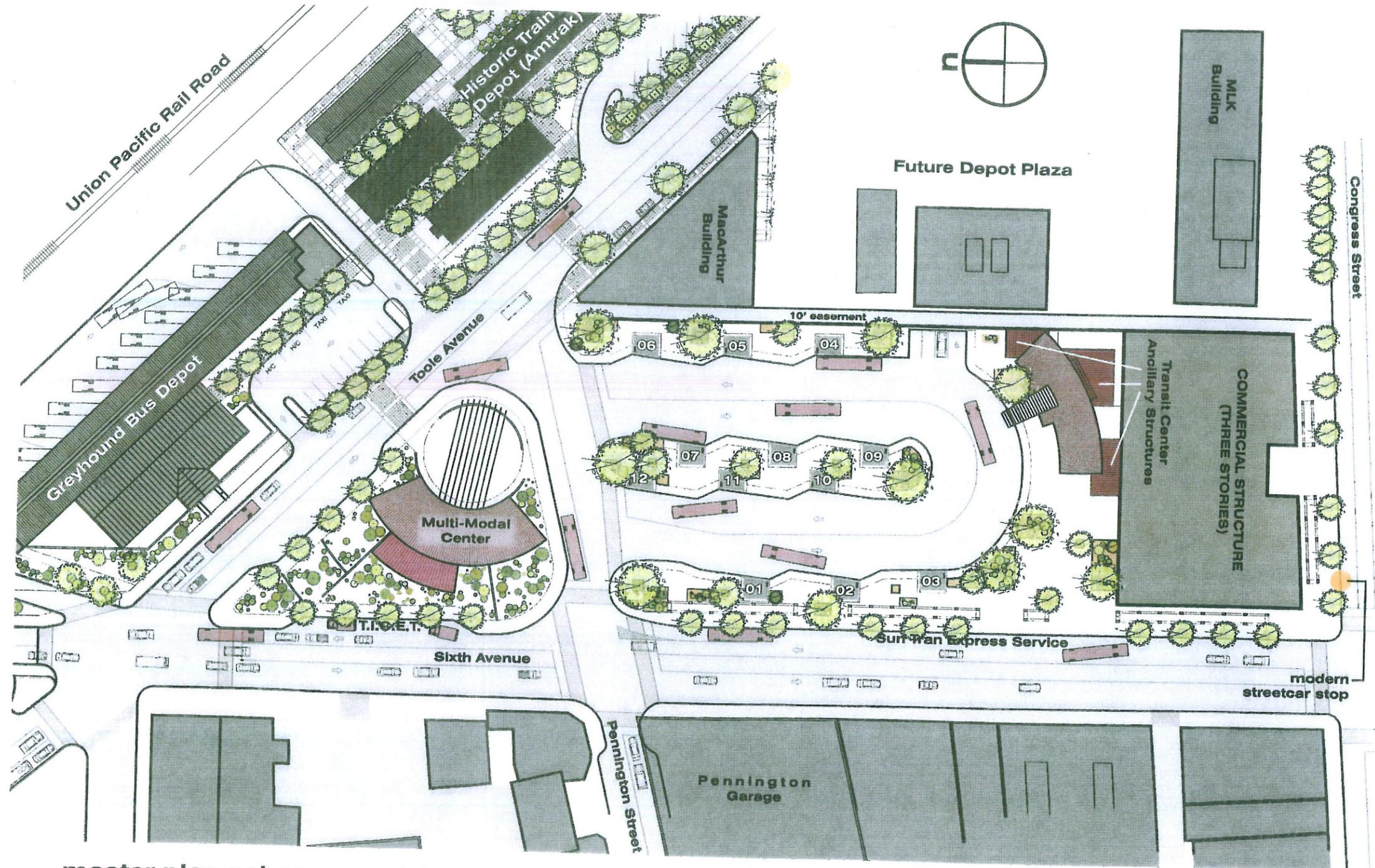
Downtown Stakeholder interviewed by Bill Lee/Economics Research Consultants on 30-31 March 2005:

- John Burr **President Armory Park Neighborhood Association**
- Gene Caywood **transit and trolley advocate**
- Swain Chapman **Chapman Lindsey Property Management**
- Shirley Cooney **downtown property owner**
- Donovan Durband **Director Tucson Downtown Alliance**
- Howard Greenseth **transit advocate**
- Fiore Iannacone **independent Merchants' Association**
- Richard Oseran **Congress Hotel owner, lawyer**
- John Sedwick **Fourth Avenue Merchants' Association**
- John Updike **City Real Estate Administrator**
- Tom Warne **Depot Plaza Developer**

recommended plan

These plans represent the sum of the second volume of this report and are founded on the input of, among others, the Planning Team, the Technical Advisory Committee, and the Project Manager, and their assessment of the goals, facts and needs at hand.

Recommended Sun Tran Transit Center Site Plan - master plan scheme



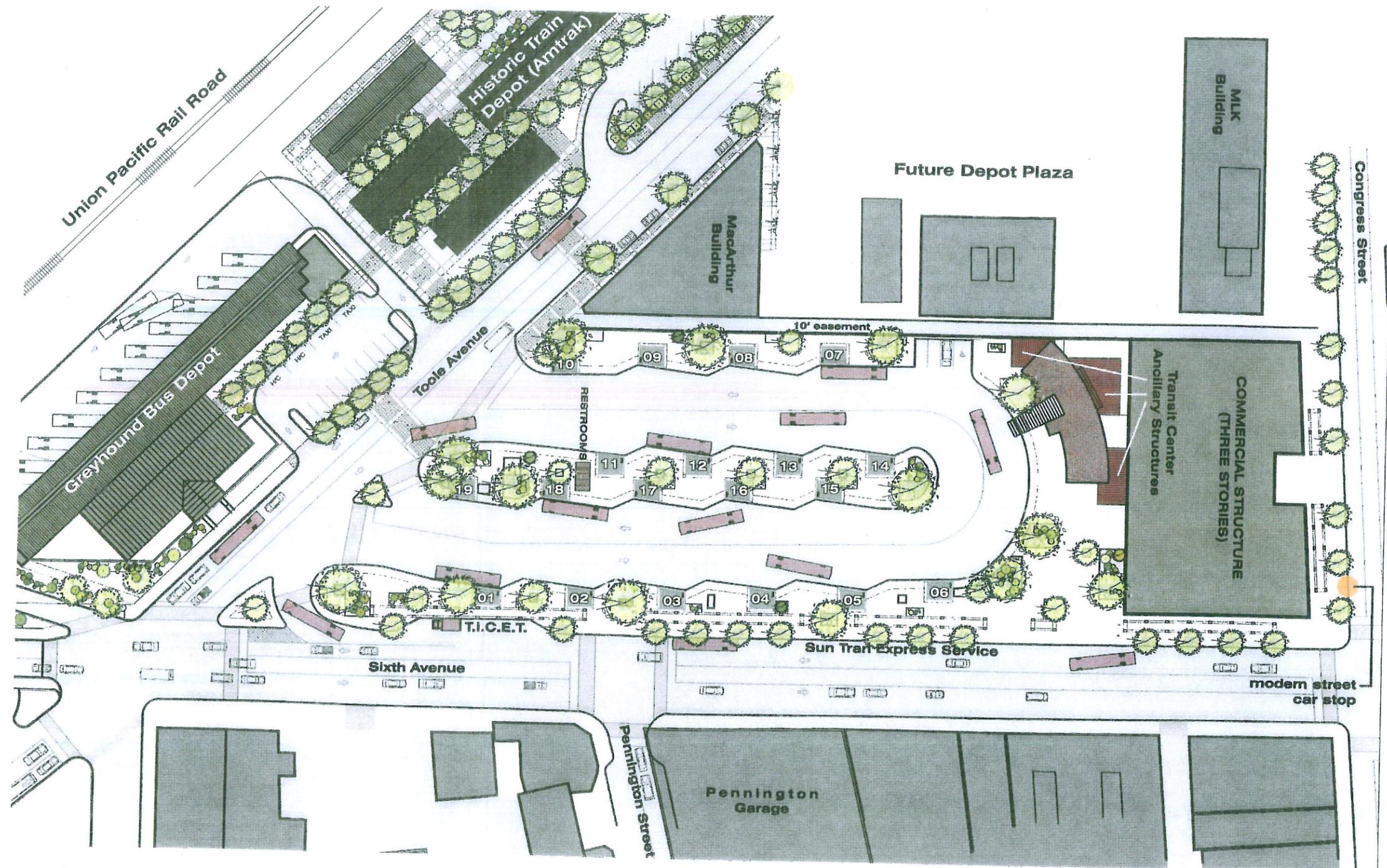
master plan scheme provision summary

number of bus berths	12	Transit Center Ancillary Facility components	Multi-Modal Facility components
on-site parking spaces (one TUPD, one disabled, two Sun Tran)	4	vending	transit administration
		restrooms	ST driver services
		rider information / ticketing	rider information / ticketing

recommended plan

These plans represent the sum of the second volume of this report and are founded on the input of, among others, the Planning Team, the Technical Advisory Committee, and the Project Manager, and their assessment of the goals, facts and needs at hand.

Recommended Sun Tran Transit Center Site Plan - interim scheme



interim scheme provision summary

number of bus berths	19
on-site parking spaces (one TUPD, one disabled, two Sun Tran)	4

- Transit Center Ancillary Facility components
- vending
 - restrooms
 - rider information / ticketing
 - ST driver services

