MEMORANDUM

Date: September 25, 2017

To: The Honorable Chair and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

Re: **2017 Status Report on the 1997 Transportation Highway User Revenue Fund Bond Program**

Attached is a 2017 Status Report of the 1997 Transportation Highway User Revenue Fund (HURF) Bond Program. As the Program nears completion, nearly all of the projects slated for improvement in 1997 have been completed.

The last remaining widening project is Thornydale Road from Cortaro Farms Road to Linda Vista Boulevard. However, very limited bond funds are available for the widening; therefore, I will be recommending a pavement rehabilitation project on Thornydale Road. In addition, the remaining approximately $16 million in bond funds could also be allocated to arterial and collector roadway rehabilitation in the unincorporated area of Pima County. These two actions will close out the 1997 HURF Bond Program.

The Program has been very successful in achieving its primary purpose, which was to increase the mobility of County residents living in the unincorporated area. The Program has survived significant revenue losses because of the Great Recession and significantly increased vehicle fuel efficiency, as well as State HURF diversions to balance the State budget.

The total expenditures by Supervisorial District are estimated on Page 7 of the attached report. District 1 has received more than half of the benefits of the program, with the remaining four Districts sharing the remainder.

Critics of the County's street maintenance program often point to the use of HURF revenues to repay bonded indebtedness from the 1997 Program as a reason that local streets are in disrepair. The history of this issue debunks that claim. In 1997, not a single concern was expressed regarding street and highway maintenance. More recently, during the 2006 Regional Transportation Authority (RTA) half-cent sales tax election, still no concerns were voiced about street and highway maintenance. Street and highway maintenance concerns are a contemporary issue that can only be resolved with significantly additional funding for transportation.

The report clearly demonstrates the significant benefit the Program has had in improving the mobility of County residents. The program was designed to reduce traffic congestion and increase mobility – and it has accomplished both of these goals – particularly on the roadways in the Catalina Foothills and Northwest Tucson. Traffic congestion has been reduced by 43 percent, and the average roadway capacity has been more than doubled. The Program is a significant success and is near completion based on the continued funding of three City of Tucson projects, Thornydale Road, safety improvements and the possible use of any remaining bonding capacity for arterial pavement rehabilitation and repair in the unincorporated area of the County.

CHH/anc

Attachment

c: Transportation Advisory Committee
Sales Tax Advisory Committee
Nicole Fyffe, Executive Assistant to the County Administrator
Carmine DeBonis, Jr., Deputy County Administrator for Public Works
Ana Olivares, Director, Transportation Department

2017 Status Report

1997 Transportation HURF Bond Program

Introduction

Pima County residents living here in the 1990s will remember that prior to the 1997 HURF Bond program, traffic congestion and aging roadways were becoming a problem for the region. Development had outpaced roadway expansion, and this was causing unacceptable levels of traffic delay for commuters and businesses, especially in the growing northwest region of Tucson. Pima County had been able to fund a few major roadway widening projects, such as Skyline Drive in the 1980s and portions of River Road in the early 1990s, but many more roads needed widening and repair. We were simply unable to keep up with rapid growth from the preceding decades. Inequitable state revenue sharing formulas had penalized Pima County for decades severely restricting our ability to invest in our transportation infrastructure. This created a backlog of much needed roadway repair and capacity improvements. Most of our roadways were older two-lane arterials and many were experiencing traffic volumes that greatly exceeded their capacity.

In Arizona, transportation systems are primarily funded through state-shared revenues known as Highway User Revenue Funds (HURF). HURF are a combination of transportation-related taxes, the largest single component being gasoline tax. In 1996, the state legislature finally changed the HURF distribution formula which increased the amount Pima County received for roads in the unincorporated area. These additional funds provided a much needed opportunity to address county roadway repair and congestion with a major new reconstruction program that previously was not possible. A pay-as-you-go approach to using these additional funds was considered, but a bond-funded program was chosen because it could accomplish more roadway construction more quickly. The need for roadway expansion, especially in the rapidly growing northwest region of greater Tucson, made bonding an attractive approach to catch up with past roadway capacity deficiencies.

Bond-funded capital programs require a public vote. Even though the new HURF equity legislation specifically increased funds for county roads in the unincorporated area, the law required the bond election to be county-wide, including all cities and towns. Therefore, projects were included in the City of Tucson and other cities and towns. In November 1997, the voters approved a $350 million HURF revenue bond authorization to complete fifty-seven capital projects across the region. To date, the program has resulted in the expansion of more than 50 miles of roadways totaling 250 lane miles, and more than ninety safety improvement projects. When complete, the county-managed projects alone will have leveraged over $300 million in federal, state and other local transportation funds.

1997 HURF Bond Program

The 1997 HURF Bond program included 56 site-specific roadway projects and one category of county-wide safety projects[1]. Twenty-four projects reconstructed two- and four-lane arterial

[1] The original program was later modified, after the required public hearings, to include one more project, DOT-41, Neighborhood Improvements.

roadways into four- and six-lane arterials. Twenty more projects reconstructed older roadways to current standards, improving safety, drainage and adding bicycle and pedestrian facilities. The original Bond Implementation Plan (BIP) specified the scope and approximate timeframe for implementing each project over 15 years. As the bond program was implemented, the BIP was amended a number of times to reflect decreased HURF revenues (discussed in the following section) and other factors not anticipated at the time of adoption in 1997.

Factors Affecting Project Costs, Funding, and Schedule

Several factors caused the 1997 HURF Bond Program to be extended beyond the original dates of the implementation plan. Each of these reasons is discussed below.

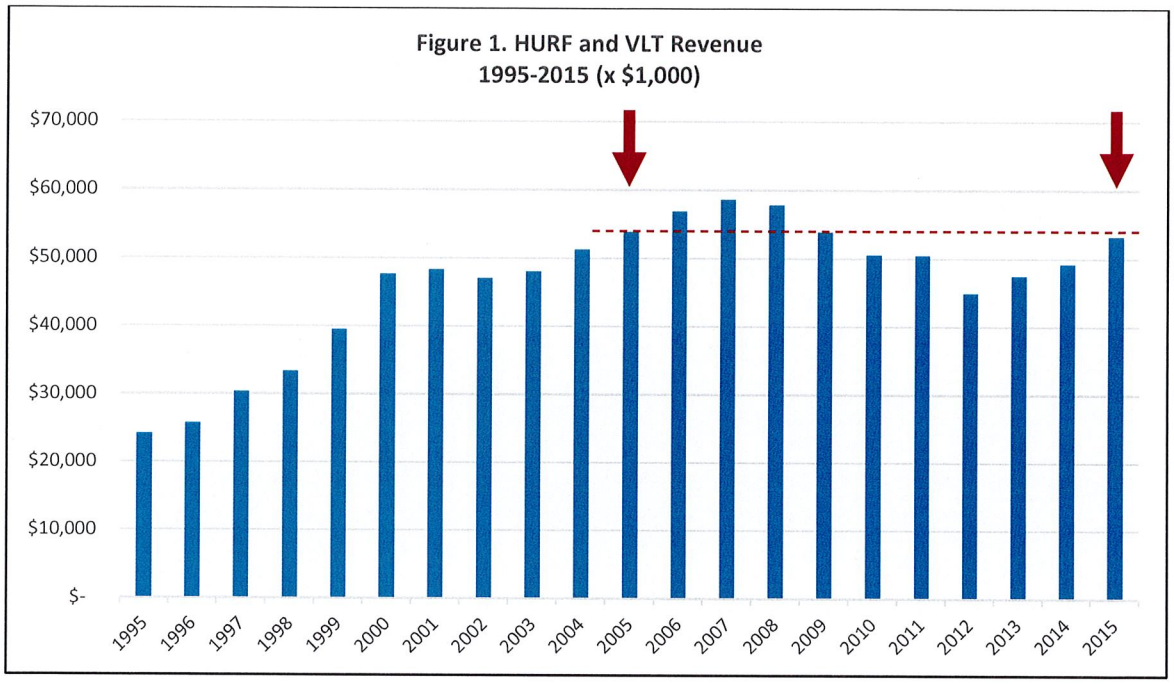
Inflation and Commodity Costs

Prior overviews of the HURF bond program in 2003 and in 2006 acknowledged that cost estimates in the original bond ordinance were based on conceptual level plans and had a general accuracy of plus or minus 30%. In addition, no inflation factor was included in expenditure projections. The 2003 HURF Bond Report calculated the cumulative inflationary impact to the program for the first six years at 21%. This amounts to an inflation increase of approximate $101 million in total bond program costs. The inflation rate increased in the early 2000s because of the shortages in some key construction commodities. The September 2005 American Road and Transportation Builders Association (ARTBA) producer price index for Highway and Street Construction showed a 15.9% year to year increase. In the first eight years of the 1997 bonds, the costs to complete projects increased to $264.9 million or nearly 43% higher than the original 1997 cost estimate. These cost increases required some project schedules to be extended.

Great Recession of 2008 and Increased Fuel Efficient Vehicles

Later into the program, the decline in the national economy because of the Great Recession beginning in 2008 stalled economic activity, such as the use of transportation systems and the purchase of fuel (which generates gas tax), the primary source of revenue for the HURF. The very rapid rise in the price of fuel from 2002-2012 also tempered the purchase and use of gasoline. Vehicle fleet efficiency increased significantly over the same time period by as much or more than 20 percent. This meant that less fuel was purchased for the same amount of driving. These factors, combined with a national trend down in driving since 2006, contributed to a reduction in HURF revenues. Figure 1 below shows HURF and Vehicle License Tax (VLT) revenues since 1995[2]. As shown, the trend line is positive through FY2007/08, declines from 2007-2012, and then increases again. Despite the increase, 2015 levels remained lower than they were 10 years previously.

[2] Huckleberry, C.H. Memorandum to the Pima County Board of Supervisors, *Road Repairs in Unincorporated Pima County*, Page 2. April 21, 2016.



County HURF Sweeps

Another significant factor in the decline of County HURF revenues during the bond program has been the legislative "sweeps" of funding where the State of Arizona, to balance their budget, diverted funds from HURF to pay for expenses that normally would have been paid through the State's General Fund. These legislative sweeps have been devastating to local governments' ability to adequately maintain their streets and highways, and have delayed the completion of several Pima County HURF Bond projects. Since 2002, these legislative sweeps have resulted in an aggregate loss of $ 1.2 billion statewide[3]. For Pima County, the state has swept $32.9 million since 2005[4]. Only recently has the legislature begun to restore some of the local share of these HURF sweeps.

Finally, three of the remaining bond projects located in the City of Tucson (Broadway Boulevard, 22nd Street, and Houghton Road) have been delayed due to extended public review and other factors outside of Pima County's control.

In summary, our ability to adequately and timely implement the original 1997 HURF bond program, while maintaining our aging streets and highways, has been adversely impacted by economic conditions at the national, state and local levels. Rapidly rising commodity and fuel

[3] Huckleberry, C.H. Memorandum to the Pima County Board of Supervisors, *Road Repairs in Unincorporated Pima County*, Page 6. April 21, 2016.

[4] Arizona Association of County Engineers, 2017 Roadway Needs Study, Draft Summary Report 1, Page 52. August 2017.

prices responding to market conditions, increased vehicle fleet efficiency resulting in fewer gallons of gasoline purchased for taxation, and legislative sweeps at the state level to balance the state budget have all combined to significantly impact the implementation of the 1997 County bond program for transportation and adversely impacted our highway maintenance program. Fortunately, additional funding from the 2006 Regional Transportation Authority has enabled Pima County to complete several 1997 HURF Bond projects.

Roadway Capacity and Roadway Maintenance

Transportation departments in growing communities such as Pima County are particularly challenged with maintaining their existing and aging transportation infrastructure while expanding the system to accommodate growth and foster economic development. Some critics have said the 1997 HURF Bond Program focused too heavily on roadway capacity expansion rather than on road repair and maintenance. The fact is that the HURF Bond program reduced traffic congestion and replaced old pavement, as well as improving safety, drainage, facilities for bicycles and pedestrians, and community-prioritized needs. Roadway repair and maintenance has always been a core need, but in 1996 and 1997, traffic congestion was becoming critical. The common theme heard most often from residents was traffic congestion and the lack of mobility. At that time, roadway repair and maintenance was simply not as pressing a concern as traffic congestion. The immediate need was congestion relief and the majority of projects were intended for that purpose solely.

The HURF Bond Program also addressed deferred maintenance by rebuilding over 250 lane miles of arterial and collector roads that were aging and had fallen into disrepair. Had HURF revenues remained stable as predicted in 1997, Pima County would have been better able to increase spending on roadway maintenance. But with declining revenues, the fiscal and legal obligation was to repay the HURF bonds and complete the bond program as promised to the voters. This increasingly meant using funds for bond repayment that could have otherwise gone towards road repair and maintenance. Fortunately, HURF revenues have now recovered slightly which has enabled the County to spend $6 million for arterial and collector roadway repair of this fiscal year. As debt service payments on the HURF bonds begin to decline, more will be available for road repair.

1997 HURF Bond Project Completion

As of September 8, 2017, fifty-six of the amended fifty-eight HURF Bond projects (97%) have been completed, or are under design or construction, including seven projects that were retired and/or replaced after the necessary public hearing process due to lack of demand. More than ninety smaller safety-projects (DOT-57) have also been completed. The county has issued $276.6 million of the $350 million bond authorization, or 79%. Table 1 on the following page shows all completed or retired projects, total cost, length, and supervisor district. This list includes portions of Houghton Road (DOT-29) and Safety Improvements (DOT-57) that have been completed.

Table 1: Completed and Retired 1997 HURF Bond Projects

#	Bond #	Project Name	Total Cost	Miles	Dist.	Status
1	DOT-01	River Road, First Avenue to Campbell Avenue	$ 21,968,507	1.2	1 & 3	COMPLETE
2	DOT-02	Sunrise Drive, Swan Road to Craycroft Road	$ 15,305,331	1.0	1	COMPLETE
3	DOT-03	River Road, La Cholla Boulevard to La Cañada Drive	$ 4,629,488	1.6	1	COMPLETE
4	DOT-04	River Road, Campbell Avenue to Alvernon Way	$ 24,726,172	2.5	1	COMPLETE
5	DOT-05	Alvernon Way, Ft Lowell Road to River Road	$ 9,625,492	1.2	1 & 3	COMPLETE
6	DOT-06	Magee Road, La Cañada Drive to Oracle Road	15,425,643	1.0	1	COMPLETE
7	DOT-07	Orange Grove Road at Geronimo Wash	$ 116,188	NA	1	RETIRED
8	DOT-08	Skyline Drive, Chula Vista to Orange Grove Road	$ 388,000	0.5	1	COMPLETE
9	DOT-09	Skyline Drive, Chula Vista to Campbell Avenue	$ 22,403,211	0.7	1	COMPLETE
10	DOT-10	La Cañada Drive, Ina Road to Lambert Lane	$ 34,136,001	4.0	1	COMPLETE
11	DOT-11	Drexel Road, Tucson Boulevard to Alvernon Way	$ 2,223,269	1.5	2	COMPLETE
12	DOT-12	Country Club Road, 36th Street to Milbur Ave	$ 12,458,523	2.0	2	COMPLETE
13	DOT-13	Ajo Way, Country Club to Alvernon Way	$ 6,759,006	1.0	2	COMPLETE
14	DOT-14	Wetmore/Ruthrauff Rd, La Cholla Blvd to Fairview Ave	$ 24,999,495	2.3	3	COMPLETE
15	DOT-15	River Road, Thornydale Road to Shannon Road	$ 9,253,622	1.0	3	COMPLETE
16	DOT-16	River Road, Shannon Road to La Cholla Boulevard	$ 4,948,245	1.4	3	COMPLETE
17	DOT-17	Valencia Road, Mark Road to Camino de la Tierra	$ 19,422,081	2.0	5	COMPLETE
18	DOT-19	Hartman Lane North of Cortaro Farms Road	$ 127,371	NA	1	RETIRED
19	DOT-20	La Cholla Boulevard, Ruthrauff Road to River Road	$ 18,236,062	0.9	1 & 3	COMPLETE
20	DOT-21	Thornydale Road, Orange Grove Road to Ina Road	$ 3,053,296	1.0	1	COMPLETE
21	DOT-22	Thornydale Road, Ina Road to Cortaro Farms Road	$ 16,772,738	1.5	1	COMPLETE
22	DOT-25	Interstate 19 SB Frontage Rd at Continental Rd	$ 3,195,060	0.3	4	COMPLETE
23	DOT-26	Abrego Drive at Interstate 19 NB Frontage Rd	$ 200,000	NA	4	COMPLETE
24	DOT-27	River Road at Ventana Wash	$ 760,357	NA	1	RETIRED
25	DOT-28	Speedway Boulevard, Camino Seco to Houghton Road	$ 599,471	NA	4	RETIRED
26	DOT-29	Houghton Road, Irvington Rd to Valencia Rd	7,920,585	3.0	4	COMPLETE
27	DOT-30	Catalina Highway, Tanque Verde Rd to Houghton Rd	$ 9,075,128	2.1	4	COMPLETE
28	DOT-31	Tanque Verde Rd, Catalina Highway to Houghton Rd	$ 14,059,218	1.7	4	COMPLETE
29	DOT-33	Kolb Road at Sabino Canyon Road	$ 6,403,244	NA	1	COMPLETE
30	DOT-34	Camino del Sol, Continental Road to Ocotillo Wash	$ 201,725	NA	4	RETIRED
31	DOT-35	Abrego Drive at Drainage way No. 1/Box Culvert	$ 150,000	NA	4	COMPLETE
32	DOT-36	Camino del Sol/West Pkwy: Continental to Duval Mine	$ -	NA	4	RETIRED
33	DOT-37	Int. 19 NB Frontage Rd, Canoa Rd to Continental	$ 23,616,051	1.5	4	COMPLETE
34	DOT-38	Pistol Hill Rd, Colossal Cave Rd to Old Spanish Trail	$ 1,712,473	1.5	4	COMPLETE
35	DOT-39	Valencia Road, Interstate 19 to South 12th Avenue	$ 1,262,222	0.4	5	COMPLETE
36	DOT-40	Grant Road, Oracle Road to Park Avenue	$ 348,299	NA	3 & 5	RETIRED
37	DOT-41	Neighborhood Transportation Improvements	$ 10,763,558	NA	2	COMPLETE
38	DOT-42	South Tucson, 6th Avenue and Various Locations	$ 5,190,971	NA	2	COMPLETE
39	DOT-43	12th Avenue, 38 Street to Los Reales Road	$ 10,676,564	4.0	2 & 5	COMPLETE
40	DOT-44	Orange Grove Road, Thornydale Road to Oracle Road	$ 10,814,576	1.5	1	COMPLETE
41	DOT-45	La Cholla Boulevard, River Road to Magee Road	$ 26,241,777	3.0	1	COMPLETE
42	DOT-46	Craycroft Road, River Road to Sunrise Drive	$ 31,804,693	2.4	1	COMPLETE
43	DOT-47	Sunrise Drive, Craycroft Road to Kolb Road	$ 19,130,057	2.1	1	COMPLETE
44	DOT-48	Duval Mine Road: La Canada to Abrego (ADOT)	$ -	NA	4	COMPLETE
45	DOT-49	Valencia Road, Mission Road to Interstate 19	$ 12,213,634	1.8	3 & 5	COMPLETE
46	DOT-51	La Canada/Las Quintas Highway Drainage	$ 1,526,913	NA	3 & 5	COMPLETE
47	DOT-52	Palo Verde Road, Gas Road to 44th street	$ 1,459,297	1.8	2	COMPLETE
48	DOT-53	Old Tucson-Nogales Highway - Summit Neighborhood	$ 2,022,252	NA	2	COMPLETE
49	DOT-54	Mt. Lemmon Shuttle	$ 2,290,043	NA	4	COMPLETE
50	DOT-55	Golf Links Road, Bonanza Ave to Houghton Rd	$ 2,701,387	0.5	4	COMPLETE
51	DOT-57	Safety Improvements	25,588,176	NA	ALL	COMPLETE
		Total	**$ 498,905,472**	**55.9**		

Expenditures by District

The 1997 HURF Bond Program has spent $129,740,668 in Supervisor District 1, or 52% of the total $250,163,627 spent in all districts. This is more than all other districts combined[5]. This is partly due to the fact that District 1 has more arterial roadway miles than other districts, but also due to growth and development in the northwest which created the need for roadway reconstruction and expansion. The total amount and percentage of total is shown below:

District	HURF Bond Expenditures	Percent of Total
1	$ 129,740,688	52%
2	$ 40,254,991	16%
3	$ 31,303,773	13%
4	$ 29,508,901	12%
5	$ 19,355,274	8%
Total	$ 250,163,627	100%

Congestion Benefits

The 1997 HURF Bond Program rebuilt outdated and undersized roadways that were costing time, money and congestion-related air pollution. Twenty-four of the original fifty-six projects widened existing two- and four-lane arterial roadways to four- and six-lanes[6]. Twenty more projects reconstructed roadways and improved safety, drainage, facilities for bicycles and pedestrians, and other community-prioritized needs[7]. Seven projects were retired and seven projects are currently in design or construction. Traffic counts taken before and after the program show that traffic congestion was reduced by 43% on the twenty-four selected roadways, despite traffic volumes increasing by 32%. For this report, traffic congestion is considered the ratio of traffic volume to roadway capacity. When the traffic volume exceeds the capacity, the roadway is said to be congested and has a volume-to-capacity (v/c) ratio greater than 1.0.

The selected capacity-widening projects were typically two-lanes wide and were very congested with an average v/c ratio of 1.18. Seventeen of these roadways had v/c ratios that ranged from 1.02 to 1.95 v/c (see Figure 4). To illustrate this congestion, River Road from First Avenue to Campbell Avenue (DOT-1) had 29,025 vehicles per day (vpd) using a two-lane roadway that was only designed to handle 14,900 vehicles[8]. Figure 4 on the following page lists these roadways, 1997 traffic volumes, number of through lanes, traffic capacities, and volume-to-capacity ratios. The average traffic volume for these roadways was 20,773 vpd for roadways designed to handle less than 18,000 vpd. Note the number of highlighted roadways with v/c near or over 1.0.

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[5] Expenditures on projects that spanned two or more districts were divided equally between those districts for this analysis even though the geographic boundaries may be somewhat different.

[6] River Road between La Canada Drive and Thornydale Road provided significant new capacity, but was not included in this analysis because there are no "before" traffic counts to compare against.

[7] Some of these projects added center-turn lanes, medians, intersection turn lanes, and paved shoulders which do provide capacity benefits are not measured in this analysis.

[8] Roadway capacity numbers are derived from Florida Dept. of Transportation, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas, Table 1, 12/18/12.

By 2017, the selected capacity roadways were rebuilt to four- and six-lanes wide. As a result, traffic congestion eased, travel times improved, and mobility was enhanced. As shown in Figure 5, the average volume-to-capacity ratio dropped 43% from 1.18 to 0.67 from 1997 to 2017. All but three projects now have v/c ratios below 1.0. Had the 1997 HURF Bond Program not occurred, the selected capacity roadways would have become severely congested with an average v/c ratio of 1.54. Three segments of River Road have experienced such traffic growth over the last twenty years that v/c ratios are above 1.0 today despite being widened to four lanes. This suggests the need for potentially widening portions of River Road to six lanes in the future. The 1997 HURF Bond Program enabled Pima County to more than double the average roadway capacity from 17,917 vpd in 1997 to 40,197 vpd in 2017.

Figure 4: 1997 Traffic Volumes and Capacities

	Bond Number	Project Name	1997 Volume	thru lanes	1997 Capacity[9]	1997 Vol/Cap
1	DOT-01	River Road: First Avenue to Campbell Avenue	29,025	3	14,900	1.95
2	DOT-02	Sunrise Drive: Swan Road to Craycroft Road	28,671	2	14,900	1.92
3	DOT-03	River Road: La Cholla Blvd. to La Canada Dre	16,460	2	14,900	1.10
4	DOT-04	River Road: Campbell Ave to Alvernon Way	26,514	3	14,900	1.78
5	DOT-05	Alvernon Way: Ft. Lowell Rd to River Rd	16,012	2	14,900	1.07
6	DOT-06	Magee Road: La Cañada Drive to Oracle Road	16,535	2	14,900	1.11
7	DOT-09	Skyline Drive: Chula Vista to Campbell Ave	42,634	4	33,000	1.29
8	DOT-10	La Canada Dr: Ina Rd to Lambert Lane	15,918	2	14,900	1.07
9	DOT-12	Country Club Road: 36th Street to Milbur Ave	7,800	2	14,900	0.52
10	DOT-13	Ajo Way: Country Club to Alvernon Way	28,057	4	33,000	0.85
11	DOT-14	Wetmore/Ruthrauff Rd: La Cholla-Fairview Rd	20,885	2	14,900	1.40
12	DOT-17	Valencia Rd: Mark Rd to Camino de la Tierra	17,406	2	14,900	1.17
13	DOT-18	Cortaro Farms Rd: UPRR to Camino de Oeste	13,924	2	14,900	0.93
14	DOT-20	La Cholla Blvd: River Rd to Ruthrauff Rd	18,104	2	14,900	1.22
15	DOT-21	Thornydale Road: Orange Grove to Ina	23,664	3	14,900	1.59
16	DOT-22	Thornydale: Ina to Cortaro Farms	23,531	3	14,900	1.58
17	DOT-29	Houghton Rd: Irvington to Valencia (Tucson)	10,500	2	14,900	0.70
18	DOT-31	Tanque Verde Rd: Cat. Hwy to Houghton Rd	9,742	2	14,900	0.65
19	DOT-39	Valencia Road: I-19 to S. 12th Ave (Tucson)	33,700	4	33,000	1.02
20	DOT-44	Orange Grove Rd: Thornydale Rd to Corona Rd	16,819	2	14,900	1.13
21	DOT-45	La Cholla Blvd: River Road to Magee Road	24,142	2	14,900	1.62
22	DOT-46	Craycroft: River Road to Sunrise Drive	17,956	2	14,900	1.21
23	DOT-49	Valencia Road: Mission Rd. to Interstate 19	32,460	4	33,000	0.98
24	DOT-55	Golf Links Rd: Bonanza Ave to Houghton Rd	8,100	2	14,900	0.54
		AVERAGE	**20,773**	**2.5**	**17,917**	**1.18**

[9] Roadway capacity numbers are derived from Florida Dept. of Transportation, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas, Table 1, 12/18/12.

Figure 5: 2017 Traffic Volumes and Capacities

	Bond Number	Project Name	2017 Volume	thru lanes	2017 Capacity[10]	2017 Vol/Cap	% change	2017 V/C if not built
1	DOT-01	River Road: First Avenue to Campbell Avenue	43,714	4	33,000	1.32	51%	2.93
2	DOT-02	Sunrise Drive: Swan Road to Craycroft Road	31,318	4	33,000	0.95	9%	2.10
3	DOT-03	River Road: La Cholla Blvd. to La Canada Dre	35,703	4	33,000	1.08	117%	2.40
4	DOT-04	River Road: Campbell Ave to Alvernon Way	38,214	4	33,000	1.16	44%	2.56
5	DOT-05	Alvernon Way: Ft. Lowell Rd to River Rd (Dodge)	17,022	4	33,000	0.52	6%	1.14
6	DOT-06	Magee Road: La Cañada Drive to Oracle Road	13,858	4	33,000	0.42	-16%	0.93
7	DOT-09	Skyline Drive: Chula Vista to Campbell Ave	44,690	6	53,910	0.83	5%	1.35
8	DOT-10	La Canada Dr: Ina Rd to Lambert Lane	28,780	4	33,000	0.87	81%	1.93
9	DOT-12	Country Club Road: 36th Street to Milbur Ave	6,843	4	33,000	0.21	-12%	0.46
10	DOT-13	Ajo Way: Country Club to Alvernon Way	26,939	6	53,910	0.50	-4%	0.82
11	DOT-14	Wetmore/Ruthrauff Rd: La Cholla-Fairview Rd	24,147	4	33,000	0.73	16%	1.62
12	DOT-17	Valencia Rd: Mark Rd to Camino de la Tierra	26,227	5	35,720	0.73	51%	1.76
13	DOT-18	Cortaro Farms Rd: UPRR to Camino de Oeste	14,645	4	33,000	0.44	5%	0.98
14	DOT-20	La Cholla Blvd: River Rd to Ruthrauff Rd	19,578	6	53,910	0.36	8%	1.31
15	DOT-21	Thornydale Road: Orange Grove to Ina	32,407	6	53,910	0.60	37%	2.17
16	DOT-22	Thornydale: Ina to Cortaro Farms	27,569	4	33,000	0.84	17%	1.85
17	DOT-29	Houghton Rd: Irvington to Valencia (Tucson)	15,823	6	53,910	0.29	51%	1.06
18	DOT-31	Tanque Verde Rd: Cat. Hwy to Houghton Rd	13,366	4	33,000	0.41	37%	0.90
19	DOT-39	Valencia Road: I-19 to S. 12th Ave (Tucson)	41,763	6	53,910	0.77	24%	1.27
20	DOT-44	Orange Grove Rd: Thornydale Rd to Corona Rd	23,406	5	35,720	0.66	39%	1.57
21	DOT-45	La Cholla Blvd: River Road to Magee Road	29,612	6	53,910	0.55	23%	1.99
22	DOT-46	Craycroft: River Road to Sunrise Drive	22,647	4	33,000	0.69	26%	1.52
23	DOT-49	Valencia Road: Mission Rd. to Interstate 19	38,275	6	53,910	0.71	18%	1.16
24	DOT-55	Golf Links Rd: Bonanza Ave to Houghton Rd	18,296	4	33,000	0.55	126%	1.23
		AVERAGE	**26,452**	**4.8**	**40,197**	**0.67**	**32%**	**1.54**

[10] Roadway capacity numbers are derived from Florida Dept. of Transportation, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas, Table 1, 12/18/12.

Currently Active HURF Bond Projects

Three HURF Bond projects are currently under construction. They include:

1. Cortaro Farms Road, from Camino de Oeste to Thornydale Road (DOT-18)
2. Houghton Road Bridge over the Union Pacific Railroad (DOT-29)
3. Safety Improvements (DOT-57) - Intelligent Transportation System Signal Coordination and Cabinet Upgrades and Square Tube Breakaway Sign Post Replacement

Six more HURF Bond Projects are currently under development and estimated to begin construction between 2017 and 2020. They include:

1. Houghton Road, from Valencia Road to Mary Ann Cleveland Way (DOT-29)
2. Kolb Road, from Sabino Canyon Road to Sunrise Drive (DOT-32)
3. Kinney Road, from Alexandrite Avenue to Bopp Road (DOT-50)
4. Broadway Boulevard, from Euclid Avenue to Country Club (DOT-56)
5. 22nd Street, from I-10 to Tucson Boulevard (DOT-58)
6. Safety Improvements (DOT-57) – S. Camino de la Tierra from Highway Drive to Curtis Road, Benson Highway Intersection Improvements at both Columbus Boulevard and Drexel Road, Speedway Boulevard from Painted Hills Road to Camino de Oeste, Ina Road sidewalks from Shannon Road to La Cholla Boulevard, Bopp Road from Sarasota Boulevard to Kinney Road, and Tanque Verde Road at Tanque Verde Loop Road.

The last two remaining HURF Bond Projects are Thornydale Road from Cortaro Farms Road to Sumter Drive (DOT-23) and Mainsail Boulevard and Twin Lakes Drive, Twenty-Seven Wash Vicinity (DOT-24). The Thornydale Road scope is currently being evaluated so that it addresses the most pressing needs of the corridor while staying within the available project budget. Mainsail Boulevard is being reviewed for retirement as the needs for this project have not materialized. Table 2 is summarizes all currently active and remaining projects.

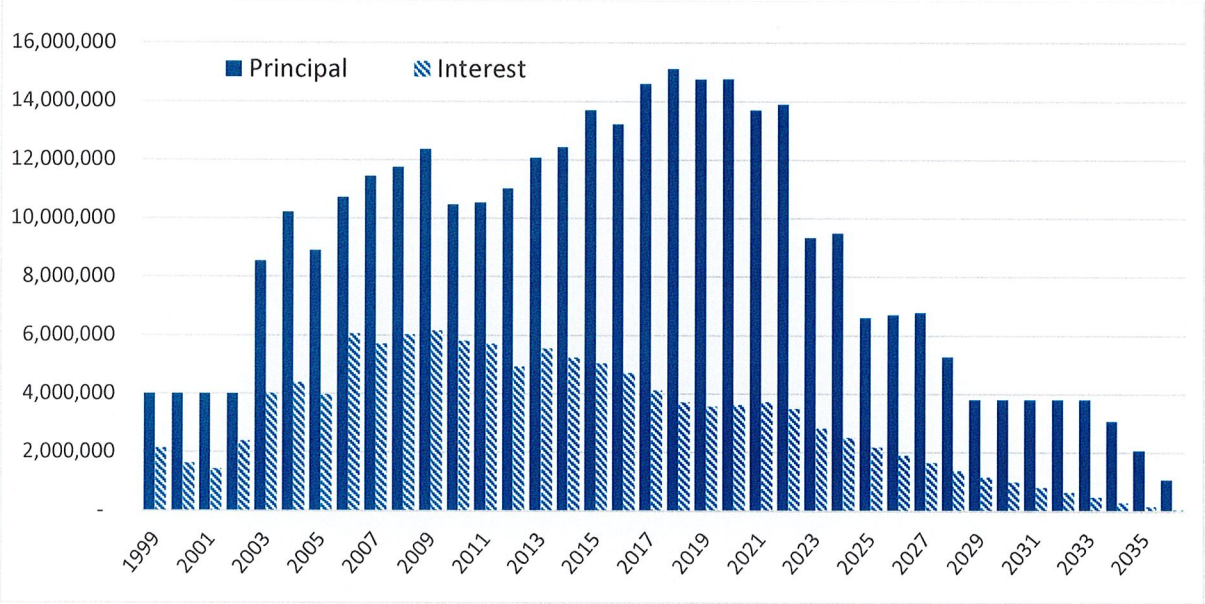
Table 2: Active and Remaining 1997 HURF Bond Projects

#	Bond #	Project Name	Projected Cost	Miles	Dist.	Status
1	DOT-18	Cortaro Farms Rd: UPRR to Cam. de Oeste	$ 30,529,595	1.0	1	Under Construction
2	DOT-23	Thornydale Road, Cort. Fms Rd to Linda Vista Blvd	$ 1,853,412	1.5	1	Future
3	DOT-24	Mainsail Boulevard and Twin Lakes Dr, 27 Wash	$ 247,386	NA	1	TBD
4	DOT-29	Houghton Road, Valencia Road to UPRR Bridge	$ 29,768,702	2.5	4	Under Construction
5	DOT-32	Kolb Road, Sabino Canyon Road to Sunrise Drive	$ 18,899,054	2.0	1	Under Development
6	DOT-50	Kinney Road, Ajo Way to Bopp Road	$ 4,341,434	1.0	3 & 5	Under Development
7	DOT-56	Broadway Boulevard, Euclid Avenue to Campbell	$ 25,000,000	0.9	2 & 5	Under Development
8	DOT-57	Safety Improvements	$ 25,054,437	NA	ALL	Under Construction
9	DOT-58	Kino Parkway Overpass at 22nd Street	$ 10,000,000	NA	2	Under Development
		Total	**$ 145,694,020**	**8.9**		

Debt Repayment of the 1997 HURF Program

Of the $350 million bonds authorized in 1997, $276.6 million have been sold. Of that amount, $188 million, or 68%, have been repaid. It is assumed that four more bond sales totaling $57 million will be needed to complete the City's three remaining projects and four County projects. This will result in a total of $333.6 million of the original $350 million authorization being sold. This also assumes that Mainsail Boulevard (DOT-44) will be retired, and it assumes that any remaining authorization from completed projects will not be sold. There will be a time in the future when the program will be completed, bonds will be repaid and the full flow of HURF funds to the County can be used to construct, operate and maintain only those roads in the unincorporated area. Figure 6 below shows the historical and future assumed repayment schedule, including the remaining $57 million bond sales.

Figure 6: 1997 HURF Debt Service Payments (past and projected)



Summary

The 1997 HURF bond program succeeded in reducing traffic congestion on major roadways in the rapidly growing areas of Pima County, with a significant focus on roadways north and northwest of Tucson. Traffic congestion was reduced by 43 percent and the average roadway capacity was more than doubled. If the County had instead focused funds solely on road repair and pavement preservation, roadways in unincorporated areas of Pima County would be in much better condition, but major roadways throughout the region would be severely congested. If HURF

revenues had kept up with inflation and the State had not diverted HURF funds for their budget, the County would have had sufficient revenues to address both congestion and pavement preservation. The 1997 HURF bond program is almost complete, with three City of Tucson and three County projects scheduled to start construction between 2017 and 2020. Within the next 10 years, debt service payments on the bonds will drop significantly and once again more funding will be available for road repair and pavement preservation.