



SEQUENCE: 20112970682

NO. PAGES: 5

ORDIN 10/24/2011

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**ORDINANCE 2011- 77**

AN ORDINANCE OF THE BOARD OF SUPERVISORS OF PIMA COUNTY ARIZONA RELATING TO HIGHWAY USER REVENUE FUND REVENUE BOND PROJECTS AMENDING ORDINANCE NUMBER 1997-80 BOND IMPLEMENTATION PLAN, NOVEMBER 4, 1997 SPECIAL ELECTION (AS AMENDED SEPTEMBER 22, 1998 BY ORDINANCE NO. 1998-59, AUGUST 20, 2001 BY ORDINANCE NO. 2001-112, DECEMBER 14, 2004 BY ORDINANCE NO. 2004-118, OCTOBER 11, 2005 BY ORDINANCE NO. 2005-90, APRIL 4, 2006 BY ORDINANCE NO. 2006-20, OCTOBER 17, 2006 BY ORDINANCE NO. 2006-83, NOVEMBER 6, 2007 BY ORDINANCE NO. 2007-93, APRIL 21, 2009 BY ORDINANCE NO. 2009-39 OCTOBER 6, 2009 BY ORDINANCE NO. 2009-91, APRIL 13, 2010 BY ORDINANCE NO. 2010-22, OCTOBER 19, 2010 BY ORDINANCE NO. 2010-62, AND APRIL 5, 2011 BY ORDINANCE NO. 2011-20) FOR THE PURPOSE OF REALLOCATING BOND FUNDS, AMENDING THE SCOPE OF CERTAIN PROJECTS, AMENDING IMPLEMENTATION PERIODS FOR CERTAIN BOND PROJECTS AND AUTHORIZING THE USE OF ADDITIONAL OTHER FUNDS TO FINANCE CERTAIN BOND PROJECTS.

**WHEREAS**, the Board of Supervisors adopted Chapter 3.06 of the Pima County Code titled "Bonding Disclosure, Accountability and Implementation"; and,

**WHEREAS**, in compliance with Chapter 3.06, the Board of Supervisors adopted Ordinance Number 1997-80, the "Transportation Bond Improvement Plan, November 4, 1997 Special Election"; and,

**WHEREAS**, the Board of Supervisors, on September 22, 1998 enacted Ordinance Number 1998-59 and on August 20, 2001 enacted Ordinance Number 2001-112 and on December 14, 2004 enacted Ordinance Number 2004-118 and on October 11, 2005 enacted Ordinance Number 2005-90 and on April 4, 2006 enacted Ordinance Number 2006-20 and on October 17, 2006 enacted Ordinance Number 2006-83 and on November 6, 2007 enacted Ordinance Number 2007-93 and on April 21, 2009 enacted Ordinance Number 2009-39 and on October 6, 2009 enacted Ordinance Number 2009-91 and on April 13, 2010 enacted Ordinance Number 2010-22 and on October 19, 2010 enacted Ordinance Number 2010-62 and on April 5, 2011 enacted Ordinance number 2011-20 amending Ordinance Number 1997-80 in compliance with provisions of Chapter 3.06; and,

**WHEREAS**, the Board of Supervisors desires to amend Ordinance Number 1997-80 (as previously amended) in compliance with provisions of Chapter 3.06:

**NOW THEREFORE, IT IS HEREBY ORDAINED** by the Board of Supervisors of Pima County, Arizona:

Ordinance Number 1997-80 (as previously amended), is hereby amended as follows:

**44) DOT-44 - Orange Grove Road, Thornydale Road to Oracle Road**

Location: Unincorporated County, Marana

Bond Funding: \$20,000,000

Scope: The project consists of constructing a four and six-lane roadway from Thornydale Road to Oracle Road. The Advance Planning Report for Orange Grove Road approved by the Board of Supervisors in 1992 called for six lanes from La Cholla Boulevard to Oracle Road and four lanes from Thornydale Road to La Cholla. The cross section requirements will be reviewed during the project initiation stages to determine if the full six lanes from Thornydale to La Cholla should be built with the initial project. ~~The project will include a raised landscape median, multi-use lanes, outside curbs and storm drains, provision for pedestrians and screening and noise mitigation for adjacent residential areas where required. Reinforced box culverts or short span bridges will be constructed where the Pegler Wash, Casas Adobes Wash and the Roller Coaster Wash cross Orange Grove Road, along with other transverse drainage as needed.~~

Note: The Orange Grove Road and La Cholla Boulevard intersection will be constructed with La Cholla Boulevard, River Road to Magee Road project (see DOT-45). The intersection of Orange Grove Road and La Canada Drive will likely be completed as part of the non-bond federal aid project, La Canada Drive, River Road to Ina Road. The remainder of the roadway will be completed in two phases. Phase 1 will consist of construction from Corona Drive to Oracle Road. Phase 2 will be complete the project from Thornydale Road to La Cholla Boulevard.

Phase 2 improvements include widening the 3-lane section to a 5-lane section on Orange Grove Road from Camino de la Tierra to La Cholla Boulevard, providing two eastbound travel lanes, two westbound travel lanes, a center left-turn lane and paved shoulders on each side. Turn lanes and acceleration and deceleration lanes will be designed for Mona Lisa to meet RTA requirements. Other features, such as a pedestrian patch on one side of the road, landscaping, and sound-barrier walls, if warranted, will be designed now and built when funding is available.

Benefit: The project will reduce congestion and enhance safety along Orange Grove Road and at the intersecting street intersections. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$295.48 million. The benefit/cost ratio is 12.7:1.

Other Funding: \$385,000 (Regional Transportation Authority) additional funding sources will be utilized when available. \$3,180,000 (Urban Area HURF)

Implementation Period: 3/4/5/6/7/8

Future Annual Operating & Maintenance Costs: \$126,000

**54) DOT-54 - Mt. Lemmon Shuttle**

Location: Unincorporated Pima County

Bond Funding: \$1,779,561 \$1,500,000

Scope: To support future public transportation facilities at Summerhaven, including a proposed tram system and local shuttle service, and to accommodate the anticipated traffic at the new Village Center. Sabino Canyon Parking Improvements are needed. Improvements include roadway re-alignment, drainage facilities, environmental mitigation, improved pedestrian access, and parking.

Benefit: Improved public access and safety at Summerhaven.

Other Funding: \$510,484 \$790,046 (340,853 County HURF)  
(169,631 Wastewater Management)

Implementation Period: 1/2/3/4/5

Future Annual Operating & Maintenance Costs: To be determined

**58) DOT-58 - Kino Parkway Overpass at 22nd Street 22nd Street: I-10 to Tucson Boulevard Improvements**

Location: Tucson

Bond Funding: \$10,000,000

Scope:

The proposed project will construct an overpass for Kino Boulevard over 22<sup>nd</sup> Street, and associated access ramps from Kino to at-grade signalized connections to 22<sup>nd</sup> Street. The proposed improvements are consistent with the environment impact statement previously completed for the Kino Boulevard corridor study. The project will include multi-use lanes, curbs, sidewalks, street lighting, storm drains, landscaping, public art, and other urban street features. Funded activities include project planning, environmental studies, design, construction and public art.

The proposed improvements will also include the 22nd Street corridor improvements from Interstate 10 (I-10) to Tucson Boulevard, which will add one new travel lane in each direction, bridges over the railroad tracks, and intersection improvements along 22nd Street to promote mobility, capacity, and safety. It will create new roadway and streetscape designs, guide future land use decisions, enhance environmental and economic sustainability, and improve mobility for vehicles, transit, bicycles, and pedestrians. Special consideration will also be given to ADA accessibility. The proposed improvements are consistent with the environment impact statement previously completed for the Kino Boulevard corridor study.

The proposed improvements are consistent with the environment impact statement previously completed for the Kino Boulevard corridor study.

The project will include multi-use lanes, curbs, sidewalks, street lighting, storm drains, landscaping, public art, and other urban street features. Funded activities include project planning, environmental studies, design, construction and public art.

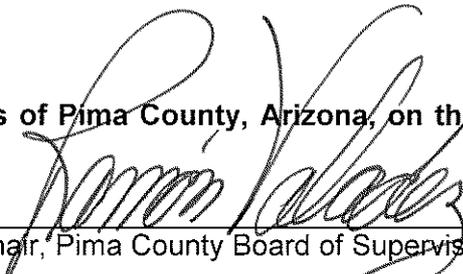
Benefits: The project will reduce traffic congestion at the intersection and enhance safety along both roadways by providing improved access control and reducing conflicting traffic movements.

Other Funding: If necessary, City of Tucson to secure funding other than county bonds to complete the project.

Implementation Period: 4/5/6/7/8

Future Annual Operating & Maintenance Costs: City of Tucson

AS AMENDED by the Board of Supervisors of Pima County, Arizona, on this 18 day of October, 2011.

  
\_\_\_\_\_  
Chair, Pima County Board of Supervisors

OCT 18 2011

Attest:

Reviewed by:

  
\_\_\_\_\_  
Clerk, Pima County Board of Supervisors

  
\_\_\_\_\_  
Pima County Administrator

Approved as to Form:

  
\_\_\_\_\_  
Civil Deputy County Attorney  
**REGINA NASSEN**

# Transportation Bond Improvement Plan

## ORDINANCE NO. 1997 - 80

(As Amended September 22, 1998 by Ordinance No. 1998-59 and August 20, 2001 by Ordinance No. 2001-112 and December 14, 2004 by Ordinance No. 2004-118 and October 11, 2005 by Ordinance No. 2005-90 and April 4, 2006 by Ordinance No. 2006-20 and October 17, 2006 by Ordinance No. 2006-83 and November 6, 2007 by Ordinance No. 2007-93 and April 21, 2009 by Ordinance No. 2009-39 and October 6, 2009 by Ordinance No. 2009-91 and April 13, 2010 by Ordinance No. 2010-22 and October 19, 2010 by Ordinance No. 2010-62, and April 5, 2011 by Ordinance No. 2011-20, and October 18, 2011 by Ordinance No. 2011-77)

## **ORDINANCE 2011- 77**

**AN ORDINANCE OF THE BOARD OF SUPERVISORS OF PIMA COUNTY ARIZONA RELATING TO HIGHWAY USER REVENUE FUND REVENUE BOND PROJECTS AMENDING ORDINANCE NUMBER 1997-80 BOND IMPLEMENTATION PLAN, NOVEMBER 4, 1997 SPECIAL ELECTION (AS AMENDED SEPTEMBER 22, 1998 BY ORDINANCE NO. 1998-59, AUGUST 20, 2001 BY ORDINANCE NO. 2001-112, DECEMBER 14, 2004 BY ORDINANCE NO. 2004-118, OCTOBER 11, 2005 BY ORDINANCE NO. 2005-90, APRIL 4, 2006 BY ORDINANCE NO. 2006-20, OCTOBER 17, 2006 BY ORDINANCE NO. 2006-83, NOVEMBER 6, 2007 BY ORDINANCE NO. 2007-93, APRIL 21, 2009 BY ORDINANCE NO. 2009-39 OCTOBER 6, 2009 BY ORDINANCE NO. 2009-91, APRIL 13, 2010 BY ORDINANCE NO. 2010-22, OCTOBER 19, 2010 BY ORDINANCE NO. 2010-62, APRIL 5, 2011 BY ORDINANCE NO. 2011-20, AND OCTOBER 18, 2011 BY ORDINANCE NO. 2011-77) FOR THE PURPOSE OF REALLOCATING BOND FUNDS, AMENDING THE SCOPE OF CERTAIN PROJECTS, AMENDING IMPLEMENTATION PERIODS FOR CERTAIN BOND PROJECTS AND AUTHORIZING THE USE OF ADDITIONAL OTHER FUNDS TO FINANCE CERTAIN BOND PROJECTS.**

**WHEREAS**, the Board of Supervisors adopted Chapter 3.06 of the Pima County Code titled "Bonding Disclosure, Accountability and Implementation"; and,

**WHEREAS**, in compliance with Chapter 3.06, the Board of Supervisors adopted Ordinance Number 1997-80, the "Transportation Bond Improvement Plan, November 4, 1997 Special Election"; and,

**WHEREAS**, the Board of Supervisors, on September 22, 1998 enacted Ordinance Number 1998-59 and on August 20, 2001 enacted Ordinance Number 2001-112 and on December 14, 2004 enacted Ordinance Number 2004-118 and on October 11, 2005 enacted Ordinance Number 2005-90 and on April 4, 2006 enacted Ordinance Number 2006-20 and on October 17, 2006 enacted Ordinance Number 2006-83 and on November 6, 2007 enacted Ordinance Number 2007-93 and on April 21, 2009 enacted Ordinance Number 2009-39 and on October 6, 2009 enacted Ordinance Number 2009-91 and on April 13, 2010 enacted Ordinance Number 2010-22 and on October 19, 2010 enacted Ordinance Number 2010-62 and on April 5, 2011 enacted Ordinance number 2011-20 and on October 18, 2011 enacted Ordinance number 2011-77 amending Ordinance Number 1997-80 in compliance with provisions of Chapter 3.06; and,

**WHEREAS**, the Board of Supervisors desires to amend Ordinance Number 1997-80 (as previously amended) in compliance with provisions of Chapter 3.06:

**NOW THEREFORE, IT IS HEREBY ORDAINED by the Board of Supervisors of Pima County, Arizona:**

Ordinance Number 1997-80 (as previously amended), is hereby amended as follows:

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**Be it ordained by the Board of Supervisors of Pima County, Arizona, as follows:**

**I. Purpose**

The purpose of this ordinance is to comply with Chapter 3.06 of the Pima County Code regarding bonding disclosure, accountability and implementation. On August 5, 1997, the Board of Supervisors adopted Resolution No. 1997-152 ordering and calling a special election on November 4, 1997, asking voter authorization to issue \$350 million in transportation revenue bonds secured by the County's annual Highway User Revenue Fund (HURF) revenues. This Transportation Bond Improvement Plan sets forth the particulars regarding each project proposed to be constructed, setting forth the amount of bond funds to be allocated to each project, along with an estimated time frame for implementing the particular project.

This Transportation Bond Improvement Plan shall become effective only if a majority of voters casting ballots in the November 4, 1997 special election authorize the issuance of bonds. In the event the electorate votes to not authorize issuance of the proposed transportation revenue bonds, Ordinance No. 1997-80 shall no longer be in force.

**II. Schedule of Bond Sales, Debt Retirement Schedule, and Tax Impact of Issuing \$350 Million in New HURF Transportation Revenue Bonds**

**A. Schedule of Bond Sales**

The total value of HURF revenue bonds being submitted to the voters for approval is \$350 million. If approved by the voters, sales of revenue bonds will be scheduled, beginning in early 1998. All projects should be completed within sixteen years from the date of voter authorization. Shown below is an original schedule of sales.

**Table 1**  
**Proposed Schedule of Transportation Revenue Bond Sales**

<u>Date of Sale</u>	<u>Amount of Sale</u>	<u>Cumulative Total</u>
January 1998	\$ 40,000,000	\$ 40,000,000
January 2000	60,000,000	100,000,000
January 2002	60,000,000	160,000,000
January 2004	60,000,000	220,000,000
January 2006	60,000,000	280,000,000
January 2008	70,000,000	350,000,000

The first sale of HURF Revenue Bonds occurred in June 1998, for \$40,000,000, which was less than the \$60,000,000 originally projected in the Bond Improvement Plan (this ordinance was amended on September 22, 1998 to reflect this change). Expenditure of these bonds has not taken place at the rate originally anticipated and projections are that they will not be completely expended until sometime in calendar year 2001. This rate of expenditure caused the County to fall out of compliance with federal arbitrage rules and the County will pay back interest earning to the Internal Revenue Service. This experience strongly recommends that the County provides itself with flexibility to sell bonds more frequently or in years other than stated in Table 1 above and to sell bonds in smaller, more targeted amounts than projected in Table 1. If

exercised, the intent of this flexibility would be to provide for more focused cash flow management and the avoidance of arbitrage entanglements. It is anticipated at this time that the overall time period of this bond package will be increased by four years.

In order to ensure continued public accountability in the scheduling of bond sales, Pima County will publish an annual report at the end of each fiscal year that updates the status of bonds sold, the anticipated schedule of future bond sales; identifies the strategic and tactical grounds for the proposed schedule; explains in detail any changes that occurred from the previous projected schedule; and updates, when necessary, the debt retirement schedule information presented in section "B" below.

**B. Debt Retirement Schedule**

The firm of Rauscher Pierce Refsnes, Inc. prepared the following analysis of debt retirement schedule for a \$350 million revenue bond program. In preparing its analysis, the firm relied upon the following assumptions: 1) five sales in aggregates of \$60,000,000 occurring every two years, with the last sale being for \$50,000,000; 2) ten year maturity on all bonds sold; 3) an interest rate of 6.5 percent; 4) an aggressive retirement of principal in the early years to keep interest payments to a minimum; and 5) bond debt period will be limited to ten years to minimize the amount of interest paid for debt service. Limiting the term of bond debt to 10 years rather than the more customary 15 years will reduce total interest payments by 37 percent.

**Table 2**

**Bond Payment Requirements**

<b><u>Fiscal Year</u></b>	<b><u>Total Debt Service</u></b>
1998/99	\$ 13,250,000
1999/00	18,421,000
2000/01	19,222,000
2001/02	19,935,500
2002/03	20,717,500
2003/04	21,544,400
2004/05	22,409,400
2005/06	23,335,400
2006/07	24,269,400
2007/08	25,275,800
2008/09	26,325,700
2009/10	27,430,100
2010/11	28,594,600
2011/12	29,813,700
2012/13	31,091,600
2013/14	32,436,600
2014/15	33,850,800
2015/16	35,330,400
2016/17	35,331,000
2017/18	9,010,000
<b>Total</b>	<b><u>\$497,594,900</u></b>

C. Tax Impacts of a \$350 Million HURF Revenue Bond Program

Approving County Highway User Revenue Funds in the amount of \$350 million at the November 4, 1997 special bond election will not result in any increase to any transportation tax that comprises the Highway User Revenue Fund. Bonds will be financed by an increased distribution to Pima County from the fund, discussed below.

Arizona Revised Statutes § 11-371 *et.seq.* enables counties to incur debt and issue bonds for transportation purposes which are secured by revenues distributed to counties from the Highway User Revenue Fund (HURF). State gasoline taxes and other transportation related taxes are collected and deposited into the HURF. The revenues in HURF are then distributed to individual counties, to the State Highway Fund, and to individual cities and towns in accordance with formulas in state statutes. Historically, county HURF revenues were distributed on the basis of the origin of fuel sales; in other words, Pima County's share from the county HURF category was determined by the percentage of statewide gasoline sales which occurred in Pima County. For years, Pima County argued the origin of fuel sales formula was inequitable because it did not provide an accurate measurement of transportation needs in Pima County. In 1996, the Governor and Legislature enacted changes in the structure of HURF. In particular, the new legislation changes how county HURF revenues are allocated by phasing in proportional unincorporated population as a distribution factor.

**Table 3**

**New County HURF Distribution Formulas**

<b><u>Fiscal Year</u></b>	<b><u>Distribution Formula</u></b>
1995/96	100% origin of fuel sales
1996/97	85% origin of fuel sales and 15% unincorporated population
1997/98	80% origin of fuel sales and 20% unincorporated population
1998/99	76% origin of fuel sales and 24% unincorporated population
1999/2000 and beyond	72% origin of fuel sales and 28% unincorporated population

This new "HURF equity" legislation results in a significant increase in HURF revenues received by Pima County as compared to what would be received under the old formula. Additional funding to Pima County has been achieved by redistributing existing transportation tax revenues, not by increasing existing taxes or creating new taxes. HURF equity means Pima County will experience a better return of transportation taxes already paid. In 1996, Arizona legislative staff prepared the following projection of the impact to Pima County of HURF equity.

**Table 4**

**Projected Pima County HURF Revenues Through Fiscal Year 2015/16**

<b><u>Fiscal Year</u></b>	<b><u>New Distributions</u></b>	<b><u>Total Distributions</u></b>
1996/97	\$ 3,335,188	\$ 28,697,675
1997/98	6,097,624	32,169,722
1998/99	9,030,298	35,964,558
1999/00	14,210,964	42,433,664
2000/01	14,973,307	44,221,010
2001/02	15,721,972	45,989,850
2002/03	16,508,071	47,829,444
2003/04	17,333,475	49,742,622
2004/05	18,200,148	51,732,327
2005/06	19,110,156	53,801,620
2006/07	20,065,663	55,953,685
2007/08	21,068,947	58,191,832
2008/09	22,122,394	60,519,506
2009/10	23,228,514	62,940,286
2010/11	24,389,939	65,457,897
2011/12	25,609,436	68,076,213
2012/13	26,889,908	70,799,262
2013/14	28,234,404	73,631,232
2014/15	29,646,124	76,576,482
2015/16	<u>31,128,430</u>	<u>79,639,541</u>
<b>Total</b>	<b>\$386,904,962</b>	<b>\$1,104,368,428</b>

The middle column, “new distributions,” charts the additional revenues that will be received by Pima County as a result of HURF equity. By fiscal year 2015/16, Pima County is projected to receive an additional \$387 million in revenues above what would have been received under the old formula. In fiscal year 1999/2000 and thereafter, HURF equity is projected to increase annual HURF revenues by approximately one-third.

Pima County proposes to allocate the “HURF equity” revenues to secure the proposed \$350 million transportation bond package. Therefore, issuance of \$350 million in transportation revenue bonds in accordance with the schedule proposed in Section II (A) will not require or otherwise result in increased taxes. Debt service will be managed through revenues on transportation related taxes which are already being paid and collected.

D. Impacts of Incorporations and Annexations on Pima County HURF Revenue Bonding Capacity

Presently approximately 30 percent of the statewide unincorporated population resides in Pima County and constitutes approximately 38 percent of the total Pima County population. Under the new “HURF equity” statutes, 28 percent of county HURF revenues will be distributed based upon proportional shares of unincorporated population. The projections discussed in the section above assumed no change in Pima County’s proportional share of unincorporated

population. Local incorporations and annexations, however, will have an effect of reducing Pima County's HURF revenue stream and therefore its revenue bonding capacity.<sup>1</sup> In fiscal year 1999/2000, the first full year of "HURF equity," the impact of incorporation and/or annexation will be to reduce the County distribution by approximately \$43 per capita. If 125,000 Pima County residents were to vote for incorporation at the November 4, 1997 election, projected revenues for fiscal year 1999/2000 would decline by \$5,625,000, and by at least that amount in each succeeding year, which is the equivalent of approximately \$50,000,000 in bonding capacity.

The November 4, 1997 transportation bond question only asks for voter authorization to issue revenue bonds for up to a maximum of \$350 million. Decisions regarding the actual sale of revenue bonds will be made every two years. These decisions will be based upon a number of factors, the most important of which will be more precise estimates of the County's HURF revenue stream and resultant bonding capacity.<sup>2</sup> If HURF revenues fall precipitously, if interest rates increase substantially above an estimated 6.5 percent, if ten year maturities are not achievable, or the bond markets resist the front loading of principal repayment, the Board of Supervisors may restructure the proposed schedule of bond sales and, as a result, may amend the transportation bond implementation plan enacted in Ordinance No. 1997-80, pursuant to Pima County Code Chapter 3.06.

E. Intergovernmental Agreements Required to Offset County HURF Losses Due to New Incorporations

Projects within newly incorporated jurisdictions beyond Implementation Period 1 will not be implemented without a specific financing plan for funding the particular project given a decrease in County bonding capacity due to revenue losses because of new incorporation. Revenues from the newly incorporated jurisdiction or other revenues may be used to supplement lost County revenues.

**III. General Schedule of Bond Project Development**

Actual implementation and development of the projects will depend on a number of variables. These variables include not only the amount of HURF bond debt that can be issued, but also specific project implementation details such as acquisition of rights-of-way or land for any specific project, permits from any state, federal or local jurisdiction, as well as required or necessary matching funds. Finally, federal bond arbitrage rules will also have an impact on project implementation. These rules require that once tax-free municipal bonds have been issued, all of the proceeds from the sale must be expended within two years and, if unexpended, financial penalties are assessed against the issuer. Therefore, it is imperative that any project scheduled to be constructed by a specific sale be initiated and constructed within

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<sup>1</sup> Cities and towns also receive HURF revenues based upon distribution formulas which take proportional incorporated population and origin of fuel sales into account. Newly incorporated cities or towns, therefore, will receive new HURF revenues and annexations would increase the HURF revenue flow to existing cities and towns. This ordinance, however, is concerned only with HURF revenues and the bonding capacity of Pima County.

<sup>2</sup> Arizona Revised Statutes §11-378 restricts county transportation revenue bonding capacity to an aggregate amount whose annual principal and interest payments do not exceed fifty percent of the total HURF receipts from the year prior to issuance of the bonds. Pima County's proposed program is premised upon allocation of less than one-half of its annual HURF revenues, providing an extra layer of financial security.

the arbitrage limit for that particular sale. If a project is delayed because of design, right-of-way acquisition, federal, state or local permitting, or local matching fund requirements, a project that is scheduled for later implementation must be moved forward, rather than risk violating federal bond arbitrage rules.

Because of federal arbitrage rules and the ten years that may be necessary to issue HURF bonds, the implementation period will cover approximately sixteen years. For planning purposes, implementation time frames will be divided into two-year time blocks. Therefore, each project will be assigned an implementation period from between 1 and 8. For example, for a project assigned an implementation period of 1, the project should be started and completed during fiscal years 1998/99 and 1999/2000.

Therefore, each project or program listed in this Bond Improvement Plan will be assigned an implementation period ranging from one to eight as indicated in the table below over the sixteen year expected life of the HURF bond authorization.

**Table 5**

**Planned Bond Project/Program Implementation Period**

<b><u>Fiscal Year</u></b>	<b><u>Implementation Period</u></b>
1998/99	1
1999/00	1
2000/01	2
2001/02	2
2002/03	3
2003/04	3
2004/05	4
2005/06	4
2006/07	5
2007/08	5
2008/09	6
2009/10	6
2010/11	7
2011/12	7
2012/13	8
2013/14	8

All of the HURF bonds scheduled for sale will be fully available for project implementation at the beginning of Implementation Period 8. As noted previously, the implementation periods assigned to each project will be adhered to, however, specific annual expenditures for each project will be detailed in an annual capital improvement program that will be adopted by the Board of Supervisors with the annual budget.

A cash flow analysis has been performed using the implementation period assigned for each project in Section IV of the Ordinance. This analysis assumes all funds assigned for the project are fully expended in the implementation period. For projects that cover one or more implementation periods, funding is divided equally between each period listed. The cash flow analysis indicates that the total funding required versus available for each period is less than ten percent at variance.

#### **IV. Specific Project Description, Scope of Work, and Location by Major Category and Project**

In this section each bond project or program approved by the Board of Supervisors is listed and described as required by Section 3.06.020, Bond Improvement Plan of the Pima County Code. The projects are listed by number, with a map reference that will be attached to this ordinance. The project description is also identified. Of the \$350 million bond issue, \$331 million has been identified to specific projects throughout the community and \$19 million remains unallocated and will be dedicated for traffic safety improvements in accordance with criteria that will be identified and discussed as Project 57 at the end of this section. These projects provide a range of community benefits from reduced congestion, decreased travel time, reduced air pollution, as well as enhanced community development.

Because existing conditions and traffic volumes are known today, and future conditions can be predicted with a relatively high degree of accuracy based on past experience, it is possible to perform benefit/cost analyses on most of the projects. This benefit/cost analysis is a measure of overall economic benefits associated with implementation of a particular project, and has been used historically to measure the cost effectiveness of public investment. Benefits are based on reductions in traffic congestion, reductions in traffic accidents, and for some new highway link projects, reductions in travel distance. The following assumptions are pertinent to the benefit/cost calculations contained in this section: A) benefits are discounted at 7 percent per year and assume a 20-year project life, B) congestion benefits were calculated only during peak demand hours, and C) traffic growth rates were averaged at 3 percent per year. The resulting estimate of benefits is deemed to be conservative using standard highway improvement and engineering procedures. For those projects where benefit/cost analysis is appropriate, the estimated total project benefits over the 20-year design period is estimated to be \$2.1 billion. Obviously the cost of the improvements, some of which do not contribute benefits to the analysis, will be \$350 million in principal, and \$148 million in interest. Therefore, the overall cost of the \$350 million program, including interest, is \$498 million as compared to a conservative 20-year estimate of benefits of \$2.1 billion.

A number of the projects based on current transportation system development do not readily lend themselves to benefit/cost analyses. These projects fall under the category of spot improvements for safety or drainage purposes, short roadway segment improvements for purposes of route and lane continuity, and projects where community redevelopment is a prime focus.

Below is a list of 58 projects to be completed with \$350 million in County HURF Revenue Bonds.

**1) DOT-1 - River Road, First Avenue to Campbell Avenue**

Location: Tucson, Unincorporated County

Bond Funding: \$15,500,000

Scope: This project consists of widening and realignment of existing River Road between First Avenue and Campbell Avenue. The proposed project will be a four-lane divided roadway with landscape median, multi-use lanes, outside curbs, storm drains, pedestrian facilities and additional landscaping. The right-of-way will support future expansion to six lanes, if warranted. This cross section will match the segment of River Road from Oracle Road to First Avenue improved previously. The intersection of First Avenue and River Road will have only minor revisions to accommodate the cross section. The project will extend to just east of Campbell Avenue. Traffic signals at Via Entrada and Campbell Avenue will be reconstructed with this project. New culverts will be installed and existing culverts under River Road will be extended to carry drainage from the Foothills towards the Rillito River.

Benefit: The project will reduce congestion and enhance safety along River Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$83.93 million. The benefit/cost ratio is 5.4:1.

Other Funding: \$6,464,000 (6,172,000 County HURF)  
( 292,000 Other)

Implementation Period: 1/2/3

Future Annual Operating &  
Maintenance Costs: \$18,000

**2) DOT-2 - Sunrise Drive, Swan Road to Craycroft Road**

Location: Unincorporated County

Bond Funding: \$5,000,000

Scope: The project will widen Sunrise Drive along its existing alignment from west of Swan Road to west of Craycroft Road. Proposed improvements will include two travel lanes in each direction, multi-use lanes, outside curbs and storm drains, landscaping and provision of pedestrian facilities and noise barriers where warranted. The median treatment will be either a raised landscape median or a median two-way left-turn lane, pending further evaluation of local area access and circulation requirements.

Benefit: The project will reduce congestion and enhance safety along Sunrise Drive. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$71.73 million. The benefit/cost ratio is 14.3:1.

Other Funding: \$10,305,000 (10,164,000 County HURF)  
( 141,000 Other)

Implementation Period: 1/2/3

Future Annual Operating &  
Maintenance Costs: \$15,000

**3) DOT-3 - River Road, La Cholla Boulevard to La Canada Drive**

Location: Unincorporated County

Bond Funding: \$3,500,000

Scope: The existing two-lane road will be replaced with a four-lane divided roadway similar to the recently completed improvements on River Road between La Cañada and 15th Avenue. Improvements will consist of a raised landscape median, two travel lanes in each direction, multi-use lanes, outside curbs, storm drains and landscaping. The right-of-way and alignment will support future expansion to six lanes, if warranted. Project will include pedestrian facilities. The existing box culverts will be lengthened to accommodate the widened cross section and at least one additional drainage structure will be built east of La Cholla Boulevard to accommodate the Citrus Wash drainage.

Benefit: The project will reduce congestion and enhance safety along River Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$26.28 million. The benefit/cost ratio is 2.7: 1.

Other Funding: \$1,395,000 (1,373,000 Urban Area HURF)  
( 22,000 County HURF)

Implementation Period: 1

Future Annual Operating &  
Maintenance Costs: \$24,000

**4) DOT-4 - River Road, Campbell Avenue to Alvernon Way**

Location: Unincorporated County, Tucson

Bond Funding: \$15,613,000

Scope: The proposed project will consist of widening and realignment of River Road from east of Campbell Avenue to the extension of Alvernon Way, east of Dodge Boulevard (see DOT -5). The road cross section will consist of two through lanes in each direction with a raised landscape median, multi-use lanes, outside curbs, storm drains and landscaping. The project will include improvements for transverse drainage for the Camino Real and Finger Rock Washes, as well as other smaller drainages that currently cross River Road. Improvements to Camino Real Wash will include increasing the channel capacity of the east braid of the wash north of River road, construction of a box culvert under River Road, and construction of a new outfall channel to the Rillito River. Improvements for Finger Rock Wash are presently undefined but will, at a minimum, provide for drainage to flow under River Road. The proposed project includes acquisition of an open space and mitigation area between the improved River Road and the Rillito River, through the River Bend area. The mitigation area will be incorporated with the Rillito River Linear Park.

Benefit: The project will reduce congestion and enhance safety along River Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$192.00 million. The benefit/cost ratio is 11.6:1.

Other Funding: \$8,148,000 (4,230,000 G.O. Bonds)  
(2,318,000 Impact Fees)  
(1,600,000 Other)

Implementation Period: 1/2/3/4/5

Future Annual Operating &  
Maintenance Costs: \$37,500

**5) DOT-5 - Alvernon Way, Ft. Lowell Road to River Road**

Location: Unincorporated County, Tucson

Bond Funding: \$3,887,000

Scope: The proposed project is extension of Alvernon Way from its existing intersection of Ft. Lowell Road north and west across the Rillito River to connect to River Road in the vicinity of Dodge Boulevard. The proposed roadway will be a four-lane cross section with a median from River Road to south of the Rillito River. North of Ft. Lowell the cross section will change to a median two-way left-turn lane similar to Alvernon Way south of Ft. Lowell Road. The new road will include multi-use lanes, outside curbs, storm drains, landscaping and pedestrian facilities. The project includes a new bridge across the Rillito River. Right-of-way for the proposed project was acquired with proceeds from the 1986

Transportation Bond issue.

Benefit: The new Alvernon connection to River Road will provide a wider bridge structure across the Rillito River to replace the functionally obsolete and structurally deficient Dodge Boulevard bridge. Existing traffic volumes on Dodge Boulevard will be significantly reduced. Further evaluation will be made of the existing Dodge Boulevard to determine if the existing bridge will remain in use as a vehicular bridge, with additional weight limits, or will be restricted to pedestrian and bicycle access only to connect the south side of the Rillito River with the Linear Park on the north side. The project will reduce congestion and enhance safety along Dodge Boulevard. The estimated economic value of the improvements to traffic flow and reductions in accidents is \$8.69 million. The benefit/cost ratio is 1.4:1.

Other Funding: \$4,836,000 (Urban Area HURF)

Implementation Period: 1/2/3/4/5

Future Annual Operating &  
Maintenance Costs: \$18,000

**6) DOT-6 - Magee Road, La Canada Drive to Oracle Road**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Unincorporated County

Bond Funding: \$3,750,000

Scope: The project consists of widening Magee Road between La Canada Drive and Oracle Road to a four-lane cross section with a raised landscaped median, multi-use lanes, outside curbs, storm drains, landscaping and pedestrian facilities. A box culvert will be constructed to carry Pegler Wash under Magee Road and provision will be made for other transverse drainage.

Benefit: The project will reduce congestion and enhance safety along Magee Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$26.06 million. The benefit/cost ratio is 4.3:1.

Other Funding: \$2,250,000 (Impact Fee Funds); Regional Transportation Authority

Implementation Period: 3/4/7/8

Future Annual Operating &  
Maintenance Costs: \$18,000

**7) DOT-7 - Orange Grove Road at Geronimo Wash**

Location: Unincorporated County

Bond Funding: \$104,668

Scope: The proposed project consists of reconstruction of the drainage crossing carrying Geronimo Wash under Orange Grove Road in the vicinity of Calle de Estevan and raising Orange Grove Road on fill over the new structure to improve sight distance for local residential streets and for vehicles approaching the Orange Grove Road - First Avenue intersection. The reinforced concrete box culvert will be sized to accommodate a 100-year peak discharge in Geronimo Wash. Modifications to this area have shown improved safety conditions and the project now has a very low priority when compared to other improvements needed in unincorporated Pima County. The project will be discontinued due to its very low priority rating and an inadequate cost/benefit ratio.

Benefit: This segment of Orange Grove Road has had a history of serious traffic accidents. Restrictions on turning movements at local streets have helped to reduce accident rates in recent years, pending a permanent solution.

Other Funding: \$11,522 (County HURF)

Implementation Period: 5/6/7/8

Future Annual Operating & Maintenance Costs: No Increase

**8) DOT-8 - Skyline Drive, Chula Vista to Orange Grove Road**

Location: Unincorporated County

Bond Funding: \$388,000

Scope: The proposed project is the reconstruction of Skyline Drive to a more contemporary four-lane divided roadway cross section with landscape median, multi-use lanes, outside curbs and storm drains, edge landscaping, pedestrian facilities and roadway noise mitigation where warranted. The improvements will enhance the safety, level of service and visual quality of Skyline Drive.

Benefit: Primary benefits for this project will be in urban design, neighborhood mitigation, improved drainage and alternate mode facilities. Safety benefits from the improvements to the alignment and sight distance are also expected. The capacity of the roadway will be relatively unaffected by this improvement.

Other Funding: None proposed

Implementation Period: 1/2/3/4

Future Annual Operating &  
Maintenance Costs: No Increase

**9) DOT-9 - Skyline Drive, Chula Vista to Campbell Avenue**

Location: Unincorporated County

Bond Funding: \$8,816,000

Scope: The proposed project is the reconstruction of Skyline Drive to a more contemporary four-lane divided roadway cross section from Chula Vista to Orange Grove Road with landscape median, multi-use lanes, outside curbs and storm drains, edge landscaping, pedestrian facilities and roadway noise mitigation where warranted. Six lanes will be constructed from Orange Grove Road to Campbell Avenue to accommodate additional traffic from commercial development in the area. The improvements will enhance the safety, level of service and visual quality of Skyline Drive. The intersection at Orange Grove Road will be modified to provide multi-use and turning lanes. Significant intersection improvements at the intersection of Skyline and Campbell will be constructed.

Benefit: Primary benefits for this project will be in urban design, neighborhood mitigation, improved drainage and alternate mode facilities. Safety benefits from the improvements to the alignment and sight distance are also expected.

Other Funding: \$13,593,000 (11,962,000 County HURF)  
( 1,631,000 Other)

Implementation Period: 1/2/3/4

Future Annual Operating &  
Maintenance Costs: No Increase

**10) DOT-10 - La Canada Drive, Ina Road to Lambert Lane**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Oro Valley, Unincorporated Pima County

Bond Funding: \$12,000,000

Scope: The proposed project consists of reconstruction and widening of La Canada Drive between Ina Road and Lambert Lane. Proposed cross section will include a raised landscape median, two travel lanes in each direction, multi-use lanes for transit and bicycle use, outside curbs and storm drains. Right-of-way will be improved with outside landscaping and noise mitigation where warranted.

Construction of the Calle Concordia to Lambert Lane segment was completed in part with bond funds by Oro Valley in 2005. The Ina Road to Calle Concordia segment will be constructed utilizing bond funds. Regional Transportation Authority, Impact Fees and Urban Area HURF funding sources. Additional bond funds have been added because of the decline of available impact fees.

Benefit: The project will reduce congestion and enhance safety along La Canada Drive Avenue.

Other Funding: \$32,053,835 ( 248,146 County HURF)  
( 3,829,435 Impact Fees)  
(18,474,002 Regional Transportation Authority)  
( 2,426,000 Urban HURF 12.6%)  
( 6,900,000 Oro Valley)  
( 176,252 Other)

Implementation Period: 1/2/3/4/5/6/7

Future Annual Operating & Maintenance Costs: Calle Concordia to Lambert – Town of Oro Valley  
Ina to Calle Concordia – Pima County \$35,000

**11) DOT-11 - Drexel Road, Tucson Boulevard to Alvernon Way**

Location: Unincorporated County, Tucson

Bond Funding: \$6,500,000

Scope: The proposed project consists of reconstruction and widening of Drexel Road. Proposed improvements will include two traffic lanes in each direction, multi-use lanes, outside curbs, storm drains, landscaping and neighborhood noise mitigation. The roadway median will be either a raised landscape median or a two-way left-turn lane to be determined by further study of local access and circulation needs. Significant improvements will be made in the drainage along the roadway and in the roadway profile where it intersects the north-south street system.

Benefit: This section of Drexel Road has five major intersections within one and one half miles. The north-south roadways are the primary arterial routes

into Tucson International Airport. The regional Mobility Management Plan has identified these as priority corridors to maintain high levels of service. Providing additional capacity on Drexel Road will allow for traffic signals to provide extended green times on the airport access routes without unduly delaying traffic on Drexel Road. The project will reduce congestion and enhance safety along Drexel Road.

Other Funding: None Proposed

Implementation Period: 4/5/6/7/8

Future Annual Operating &  
Maintenance Costs: \$22,500

**12) DOT-12 - Country Club Road, 36th Street to Milbuer**

Location: Unincorporated County, Tucson

Bond Funding: \$11,840,000

Scope: The proposed improvements consist of reconstruction and widening of Country Club road to a five-lane roadway from Ajo Way to Milbuer and a three-lane roadway from Ajo Way to 36<sup>th</sup> Street with multi-use lanes, outside curbs, storm drains, landscaping, and a two-way median left-turn lane. Country Club Road provides access to Kino Hospital, Sam Lena Park, Kino Sports Park and the Tucson Electric Park currently under construction. The intersection of Country Club Road and Irvington Road was improved in 1996 as part of a joint City of Tucson - Pima County project to widen and reconstruct Irvington Road, Benson Highway to I-10.

Benefit: The project will reduce congestion and enhance safety along Country Club  
Road and provide significant access improvements to the Kino public center.  
service

Other Funding: \$618,523 (Tucson Water)

Implementation Period: 3/4/5

Future Annual Operating &  
Maintenance Costs: \$30,000

**13) DOT-13 - Ajo Way, Country Club Road to Alvernon Way**

Location: Unincorporated County

Bond Funding: \$3,342,000

Scope: Proposed improvements include reconstruction and widening of existing Ajo Way to a six-lane divided roadway from Country Club Road to Alvernon Way. The roadway cross section will be similar to the recently completed improvements on Ajo Way west of Country Club. The project will provide additional roadway capacity, multi-use lanes for alternate modes, storm drains, roadside landscaping and pedestrian facilities which are currently not included with the existing roadway. Medians will be landscaped.

Benefit: The proposed project will improve drainage and access control along Ajo Way as well as increase capacity and improve safety. The project will reduce congestion and enhance safety along Ajo Way and increase access to the Kino public service center. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$7.33 million. The benefit/cost ratio is 1.2:1.

Other Funding: \$3,537,000 (Other)

Implementation Period: 1/2/3

Future Annual Operating &  
Maintenance Costs: \$15,000

**14) DOT-14 - Wetmore Road and Ruthrauff Roads, La Cholla Boulevard to Fairview Avenue**

Location: Unincorporated County

Bond Funding: \$7,800,000

Scope: This project includes construction of four through traffic lanes, multi-use lanes, outside curbs, storm drains, landscaping and noise mitigation where warranted. The median will be a two-way left-turn lane. The proposed cross section is similar to Ruthrauff Road, west of La Cholla Boulevard. This project will also include area drainage improvements and construction of one or more conveyance channels from Wetmore Road, north to the Rillito River.

Benefit: The proposed improvement will provide congestion relief, accident reduction and drainage benefits over a wide area. The project will reduce congestion and enhance safety along Wetmore Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$107.70 million. The benefit/cost ratio is 5.7:1.

Other Funding: \$16,072,000 ( 3,000,000 Urban Area HURF)  
( 147,000 County HURF)  
(10,084,000 Fed STP)  
( 2,226,000 Impact Fee Funds)

Implementation Period: ( 615,000 Other)  
1/2/3/4

Future Annual Operating &  
Maintenance Costs: \$34,500

**15) DOT-15 - River Road, Thornydale Road to Shannon Road**

Location: Marana, Tucson

Bond Funding: \$4,000,000

Scope: This is part of the extension of River Road from La Cholla Boulevard, west to Thornydale Road. Project is planned to be a four-lane divided roadway with landscape medians, multi-use lanes, outside curbs, storm drains and landscaping and neighborhood noise mitigation. The right-of-way will support future expansion to six lanes, when warranted. The project will include box culverts or bridge structures to carry the Pegler Wash under River Road and into the Rillito River.

Benefit: This project provides regional transportation benefits by completing connections in the regional street system, which provide alternate routes to Orange Grove Road and Ina Road for east west travel north of the Rillito River. The project will reduce congestion and enhance safety along Orange Grove and Ina Roads. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$25.70 million. The benefit/cost ratio is 3.1:1.

Other Funding: \$4,400,000 (4,375,000 Fed STP)  
( 25,000 County HURF)

Implementation Period: 1/2

Future Annual Operating &  
Maintenance Costs: \$30,000 City of Tucson

**16) DOT-16 - River Road, Shannon Road to La Cholla Boulevard**

Location: Unincorporated County

Bond Funding: \$863,000

Scope: This project is an extension of River Road from its current terminus at La Cholla Boulevard to approximately Shannon Road, where it will link up with the River Road, Thornydale to Shannon Road extension. The proposed project is a four-lane divided roadway with landscape median, multi-use lane, outside curbs, storm drains, landscaping and

neighborhood noise mitigation. The right-of-way will support widening to six lanes in the future, when warranted. The project will include box culverts to carry the Nanini Wash drainage under River Road into the Rillito River.

**Benefit:** This project provides regional transportation benefits when connected to the project to the west, completing connections in the regional road system, which provide alternate routes to Orange Grove Road and Ina Road for east-west travel north of the Rillito River. The project will reduce congestion and enhance safety along Orange Grove and Ina Roads. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$35.98 million. The benefit/cost ratio is 5.7:1.

**Other Funding:** \$4,087,000 (3,667,000 Fed STP)  
( 420,000 County HURF)

**Implementation Period:** 1/2

**Future Annual Operating & Maintenance Costs:** \$42,000

**17) DOT-17 - Valencia Road, Mark Road to Camino de la Tierra**

**Location:** Unincorporated County

**Bond Funding:** \$5,800,000

**Scope:** This project will widen Valencia Road to increase capacity and enhance safety. The roadway will have four travel lanes, multi-use lanes and raised landscape median, storm drains, edge landscaping and provision for pedestrians.

**Benefit:** This project will reduce traffic congestion and enhance safety along Valencia Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$32.65 million. The project benefit/cost ratio is 4.8:1.

**Other Funding:** \$15,298,000 (\$11,866,000 Impact Fees, \$302,000 Tucson Water, \$3,130,000 Urban HURF)

**Implementation Period:** 4/5/6

**Future Annual Operating & Maintenance Costs:** \$30,000

**18) DOT-18 - Cortaro Farms Road, Union Pacific Railroad Crossing to Thornydale Road**

**Location:** Unincorporated County, Marana

Bond Funding: \$10,644,000

Scope: The proposed project consists of widening Cortaro Farms Road, adjusting the horizontal alignment at the railroad approach and correcting the grade over the railroad and the adjacent Cortaro-Marana Irrigation District canal. The project will have four traffic lanes, multi-use lanes, outside curbs, storm drains and landscaping. The median treatment will be either a raised landscape median or a median two-way left-turn lane, depending on further evaluation of local area access and circulation needs.

Benefit: This project will reduce traffic congestion and enhance safety along Cortaro Farms Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$8.05 million. The benefit/cost ratio is 0.8:1.

Other Funding: \$19,391,000 (\$14,962,000 Urban HURF, \$4,384,000 Impact Fees, \$45,000 Development Services)

Implementation Period: 1/2/3/4 6/7

Future Annual Operating & Maintenance Costs: \$36,000

**19) DOT-19 - Hartmann Lane North of Cortaro Farms Road**

Location: Marana

Bond Funding: \$127,000

Scope: The proposed project will reconstruct Hartman Lane at the Hardy Wash to provide an all-weather crossing. The existing ford crossing will be replaced with a box culvert. A portion of Hartman Lane on either approach to the box culvert will be reconstructed to provide adequate vertical transitions. The roadway will remain two lanes. At the request of the Town of Marana, the project was terminated after completion of the design work.

Benefit: The proposed project will improve circulation for the northwest area.

Other Funding: \$371 (\$186 County HURF, \$185 General Funds)

Implementation Period: 1/2/3

Future Annual Operating & Maintenance Costs: Town of Marana

**20) DOT-20 - La Cholla Boulevard, Ruthrauff Road to River Road**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Tucson

Bond Funding: \$2,075,000

Scope: Proposed project is part of an improvement for the entire La Cholla corridor to provide an additional transportation facility of regional significance to serve the northwest area. The proposed project includes widening of La Cholla Boulevard from Ruthrauff Road north to River Road, including a new Rillito River Bridge. The proposed project will have six through traffic lanes with raised landscape median, multi-use lanes, outside curbs, storm drains and landscaping. Neighborhood noise mitigation will be incorporated in the vicinity of residential areas.

Benefit: This project will provide additional regional access into the heavily developed northwest area.

Other Funding: \$17,490,000 (14,760,000 Regional Transportation Authority)  
( 1,561,000 12.6% HURF)  
( 1,169,000 Impact Fees)

Implementation Period: 2/3/4/5/6/7

Future Annual Operating &  
Maintenance Costs: \$69,000

**21) DOT-21 - Thornydale Road, Orange Grove Road to Ina Road**

Location: Unincorporated County, Marana

Bond Funding: \$1,000,000

Scope: This project is the reconstruction and widening of this roadway to a six-lane divided road with raised median, multi-use lanes, outside curbs, landscaping and pedestrian facilities. This project will connect with the recently completed six-lane bridge over the Cañada del Oro Wash and will provide for widening of the existing box culvert carrying the Carmack Wash under Thornydale Road. Project includes noise and screening walls adjacent to the residential areas east of the road. At the request of the Town of Marana, construction was terminated south of the bridge and design drawings for the remainder were forwarded to the Town.

Benefit: The project will reduce traffic congestion and enhance safety along Thornydale Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$280.20 million. The benefit/cost ratio is 10/0:1.

Other Funding: \$2,053,000 (2,051,000 Urban Area HURF)  
( 2,000 County HURF)

Implementation Period: 2

Future Annual Operating &  
Maintenance Costs: Town of Marana

**22) DOT-22 - Thornydale Road, Ina Road to Cortaro Farms Road**

Location: Unincorporated County, Marana

Bond Funding: \$1,000,000

Scope: The proposed project is the reconstruction and widening of Thornydale Road to a four-lane divided roadway with landscape median, multi-use lanes, outside curbs and storm drains. The roadway grading, storm drains, screen walls and pedestrian facilities will be located to allow for the expansion of this roadway to six-lanes when warranted in the future. This project includes the construction of a major trunk sewer. The project will include culvert structures to carry drainage under Thornydale Road.

Benefit: The project will reduce congestion and enhance safety along Thornydale Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$94.05 million. The benefit/cost ratio is 8.5:1.

Other Funding: \$15,773,000 (8,507,000 Urban Area HURF)  
(2,769,000 County HURF)  
(3,927,000 Impact Fees)  
( 570,000 Other)

Implementation Period: 1/2/3

Future Annual Operating &  
Maintenance Costs: \$22,500

**23) DOT-23 - Thornydale Road, Cortaro Farms Road to Linda Vista Boulevard**

Location: Unincorporated County

Bond Funding: \$1,000,000

Scope: This project will widen existing Thornydale Road to a four-lane divided cross section with raised landscape median, outside curbs, multi-use lanes, storm drains, landscaping and noise mitigation and screening adjacent to residential areas where warranted. The project will improve access and safety in the vicinity of Arthur Pack Regional Park and Mountain View High School. The project will include a drainage structure to carry Hardy Wash and other transverse drainages under Thornydale Road.

Benefit: The project will reduce traffic congestion and enhance safety along Thornydale Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$51.44 million. The benefit/cost ratio is 6.9:1.

Other Funding: \$6,547,000 ( 800,000 Urban Area HURF)  
(5,700,000 County HURF)  
( 47,000 Other)

Implementation Period: 5/6/7/8

Future Annual Operating &  
Maintenance Costs: \$22,500

**24) DOT-24 - Mainsail Boulevard and Twin Lakes Drive, Twenty-Seven Wash Vicinity**

Location: Unincorporated County (Catalina)

Bond Funding: \$2,700,000

Scope: The proposed improvements include construction of Mainsail Boulevard as a two-lane road across Twenty-seven Wash between Oracle Highway and Twin Lakes Drive/Forecastle Avenue. The extension of Twin Lakes north of Mainsail to Tortolita Street will also be considered as part of this project. The improvements will consist of a two-lane roadway and box culvert structure to carry the wash under the road. Proposed improvements will provide improved all-weather access to Catalina and will provide alternatives to residential streets for access from existing neighborhoods out to Oracle Highway.

Benefit: The project benefits include revision of connections in the collector street system in Catalina per the Lago del Oro Plan and provision of all-weather access for major portions of the community. The new connections will allow traffic to divert from local neighborhood streets to the collector roadway system. The project will also improve response for emergency vehicles.

Other Funding: None Proposed

Implementation Period: 8

Future Annual Operating &  
Maintenance Costs: \$21,000

**25) DOT-25 - Interstate 19 Southbound Frontage Road at Continental Road**

Location: Unincorporated County (Green Valley) (ADOT right-of-way)

Bond Funding: \$1,000,000

Scope: The project will realign the southbound Frontage Road to connect with the recently improved intersection of Continental Road at Continental Plaza. The project will separate the southbound on and off ramps at I-19 from the Frontage Road intersection to improve safety and allow for future signalization of the ramp intersections. The project will consist of construction of a new two-lane road south of Continental Road on new alignment to connect with the existing Frontage Road. Provision for the connection was included in the design and construction of the traffic signal at Continental Plaza.

Benefit: This project will reduce congestion and improve safety by providing the signalized access between the Frontage Road and Continental Road. The increased separation will provide for better operation of the interchange intersections with Continental Road and will reduce the number of traffic signals that would have to be installed along Continental Road in the future as traffic volumes in this area of Green Valley increase.

Other Funding: \$2,146,811 (\$1,217,445 Impact Fees, \$329,366 County HURF, \$600,000 State of Arizona)

Implementation Period: 1/2/3/4/5

Future Annual Operating &  
Maintenance Costs: \$4,500

**26) DOT-26 - Abrego Drive at Interstate 19 Northbound Frontage Road**

Location: Sahuarita

Bond Funding: \$200,000

Scope: This project is connected with a developer-delegated project to extend Abrego Drive south from Nogales Highway (B-19) to Duval Road. This project is to provide additional funding for the revision of the existing Frontage Road intersection with Abrego Drive to allow for a greater

operational flexibility of the I-19 Duval Mine Road interchange.

Benefit: This project will reduce the number of intersections along Nogales Highway between the I-19 ramps and Abrego Drive and will allow for Frontage Road access to Abrego Drive until such time as Abrego Drive is completely constructed.

Other Funding: None Proposed

Implementation Period: 1/2/3/4/5

Future Annual Operating & Maintenance Costs: No Increase

**27) DOT-27 - River Road at Ventana Wash**

Location: Unincorporated County

Bond Funding: \$744,195

Scope: Design for the replacement of the existing bridge carrying River Road over Ventana Wash. The existing bridge is structurally deficient and functionally obsolete and meets federal requirements for replacement. The new bridge will provide for two traffic lanes, shoulders and a pedestrian facility. The bridge will be located to allow for widening of River Road in the future when warranted. Note: This project was retired. The costs of replacing the bridge far outweighed the benefits.

Benefit: The existing inadequate bridge will be replaced by a new structure with greater load carrying capacity, width clearance and safety. Provision for bicycles and pedestrians will be included with the new bridge structure.

Other Funding: \$16,159 County HURF

Implementation Period: 1/2/3/4/5/7/8

Future Annual Operating & Maintenance Costs: No Increase

**28) DOT-28 - Speedway Boulevard, Camino Seco to Houghton Road**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Tucson

Bond Funding: \$581,700

Scope: This project will reconstruct and widen Speedway Boulevard to a four-lane divided roadway with raised landscape median, multi-use lanes, outside curbs, storm drains and landscaping. To implement the memorandum of understanding dated May 7, 2004 with the City of Tucson, this project is delayed subject to available funding other than county bonds.

Benefit: This project will reduce traffic congestion and enhance safety along Speedway Boulevard. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$32.85 million. The benefit/cost ratio is 4.1:1.

Other Funding: \$17,500 County HURF (spent on advanced planning and design)  
Regional Transportation Authority

Implementation Period: This project is planned for RTA Implementation Period 1 (2007-2011).

Future Annual Operating &  
Maintenance Costs: City of Tucson

**29) DOT-29 - Houghton Road, Golf Links Road to Interstate 10**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Tucson

Bond Funding: \$20,000,000

Scope: This project is the widening of Houghton Road to a four-lane cross section with multi-use lanes, curbs, storm drains and outside landscaping; the segment between Old Vail Road and Golf Links Road is to have a six-lane cross section. The limits of this project are changed per memorandum of understanding with the City of Tucson dated May 7, 2004.

Benefit: The project will reduce congestion and enhance safety along Houghton Road.

Other Funding: City of Tucson; Regional Transportation Authority

Implementation Period: This project is planned for RTA Implementation Period 1 (2007-2011).

Future Annual Operating &  
Maintenance Costs: City of Tucson

**30) DOT-30 - Catalina Highway, Tanque Verde Road to Houghton Road**

Location: Unincorporated County, Tucson

Bond Funding: \$6,200,000

Scope: The project is the construction of Catalina Highway to a three-lane roadway with multi-use lanes and improved roadside drainage. The median will be a two-way left-turn lane. Residential neighborhood noise mitigation will be incorporated, if warranted.

Benefit: The project will reduce congestion and enhance safety along Catalina Highway. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$9.35 million. The benefit/cost ratio is 1.2:1.

Other Funding: \$2,355,000 (1,941,000 Impact Fees)  
( 414,000 County HURF)

Implementation Period: 1/2/3/4

Future Annual Operating &  
Maintenance Costs: \$25,500

**31) DOT-31 - Tanque Verde Road, Catalina Highway to Houghton Road**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Unincorporated County, Tucson

Bond Funding: \$2,432,000

Scope: The project is the widening of Tanque Verde Road to four lanes with multi-use lanes, improved roadside drainage, landscaping and neighborhood screening and noise mitigation where required. The median treatment will be either a raised landscape median or a median two-way left-turn lane pending further evaluation of local area access and circulation needs. Project will include a drainage structure to carry Castle Rock Wash under Tanque Verde Road.

Benefit: This project will reduce congestion and enhance safety along Tanque Verde Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$7.21 million. The benefit/cost ratio is 1.0:1.

Other Funding: \$13,568,000 (12,833,000 Regional Transportation Authority)  
( 693,000 12.6% HURF)

( 42,000 County HURF)

Implementation Period: This project is planned for RTA Implementation Period 1 (2007-2011).

Future Annual Operating & Maintenance Costs: \$25,500

**32) DOT-32 - Kolb Road, Sabino Canyon Road to Sunrise Drive**

Location: Unincorporated County

Bond Funding: \$10,000,000

Scope: The proposed project is a reconstruction and widening of Kolb Road to a three-lane roadway with multi-use lanes, curbs, storm drains, outside landscaping and neighborhood screening and noise mitigation in accordance with the results of a traffic study. The median treatment will be a two-way left-turn lane.

Benefit: The project will reduce congestion and enhance safety along Kolb Road.

Other Funding: \$500,000 (Urban Area HURF)

Implementation Period: 4/5/6/7/8

Future Annual Operating & Maintenance Costs: \$31,500

**33) DOT-33 - Kolb Road at Sabino Canyon Road**

Location: Unincorporated County

Bond Funding: \$3,400,000

Scope: Proposed project is the widening and realignment of the Sabino Canyon Road/Kolb Road intersection. The project includes widening Sabino Canyon Road from north of Old Sabino Canyon road, the current end of the four-lane roadway, through the Kolb Road intersection. The culvert carrying Ventana Wash under Kolb Road north of Sabino Canyon Road will be reconstructed and lengthened as part of this project. In addition, improvements will be made to the Ventana Wash channel to reduce breakout and retain the 100-year flow. The intersection will be signalized with the improvement.

Benefit: The project will reduce congestion and enhance safety along Kolb Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$20.49 million. The benefit/cost ratio is 6.0:1.

Other Funding: \$3,003,000 (2,654,000 County HURF)  
( 349,000 Other)

Implementation Period: 1/2

Future Annual Operating &  
Maintenance Costs: \$6,000

**34) DOT-34 - Camino del Sol, Continental Road to Ocotillo Wash**

Location: Unincorporated County (Green Valley)

Bond Funding: \$196,194

Scope: This project is the construction of a new Camino del Sol/West Parkway, west of the Canoa Land Grant, from existing Camino del Sol in the vicinity of Ocotillo Wash, north to Continental Road. In addition, improvements to Continental Road from the new Camino del Sol intersection east to existing Camino del Sol will be constructed. The project will be constructed initially as a two-lane roadway with capability for future expansion when warranted. The project corridor will be substantially wider than that typically required for the roadway to allow for increased buffering from residential areas east of the roadway and to provide for pedestrian and bicycle facilities off the road. The project will allow for future development of a parkway from Ocotillo Wash north to Duval Mine Road. At the request of the Green Valley Community Coordinating Council, this project is terminated and funds reallocated to DOT-37.

Benefit: Proposed project will obviate the need to widen existing Camino del Sol south of Continental Road. This section of Camino del Sol has a constrained right-of-way and is developed with residential structures having direct access to the roadway. The project will reduce congestion and enhance safety along Camino del Sol.

Other Funding: \$2,400,000 (Impact Fee Funds)

Implementation Period: 1/2/3/4

Future Annual Operating &  
Maintenance Costs: \$25,500

**35) DOT-35 - Abrego Drive at Drainageway No. 1/Box Culvert**

Location: Town of Sahuarita

Bond Funding: \$150,000

Scope: This project will provide additional funding for the construction of a box culvert to carry Abrego Drive over Drainageway No. 1 north of existing Duval Road. The box culvert will allow the connection of Abrego Drive all the way north to Nogales Highway (B-19). The connections of Abrego Drive north and south of the Drainage way will allow for the existing northbound I-19 Frontage Road north of Duval Road to be relocated or abandoned as this new connection will provide access to all existing development south of Duval Road that currently has access via the Frontage Road. This project will also provide additional funding for the Duval Mine Road interchange and approaches with I-19 and the La Canada drainage project.

Benefit: Proposed project will enhance area circulation by allowing Abrego Drive to extend north to Nogales Highway, reduce the number of intersections along Nogales Highway between I-19 and Abrego Drive, to allow for access to the highway at intersections appropriately spaced for traffic signals and to improve the geometry of the intersections and approaches to Nogales Highway from the south.

Other Funding: None Proposed

Implementation Period: 1/2/3/4/5

Future Annual Operating & Maintenance Costs: Town of Sahuarita

**36) DOT-36 - Camino del Sol/West Parkway, Continental Road to Duval Mine Road**

Location: Unincorporated County (Green Valley)

Bond Funding: \$0

Scope: Proposed project is the acquisition of right-of-way only for the future construction of a Camino del Sol extension/West Parkway on existing state lands west of developed Green Valley. The right-of-way acquisition will be sufficiently wide to accommodate the planned future road, separate pedestrian and bicycle facilities, linear park features and separation from existing and planned neighborhoods. Exact width will be determined through future study. At the request of the Green Valley Community Coordinating Council, this project is terminated and funds reallocated to DOT-37.

Benefit: The benefit of the right-of-way acquisition at this time is to assure that there is a complete right-of-way for future construction of the road, to assist area developers to appropriately plan and site their projects to account for this future roadway and to provide an opportunity for construction of the road and parkway elements with future funding.

Other Funding: None Proposed

Implementation Period: 3/4

Future Annual Operating &  
Maintenance Costs: None

**37) DOT-37 – Interstate 19 Northbound Frontage Road, Canoa to Continental**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Unincorporated County (Green Valley)

Bond Funding: \$3,653,806

Scope: The proposed project is the construction of 1.2 miles of frontage road that were not built with the original I-19 construction. This segment of Frontage Road crosses two major drainages; the Demitri and Esperanza Washes. These wash crossings will require bridge structures. The project will be a two-lane road with improved shoulders.

Benefit: The project will complete the linkages in the frontage road system from Continental Road south to Arivaca Junction and Arivaca Road. The Frontage Road will provide additional access and circulation opportunities for the southerly portion of the Green Valley community and will provide greater operational flexibility for I-19. The Frontage Road connection will also allow for a better balance of traffic demand between the southbound and northbound frontage roads south of Continental Road.

Other Funding: \$20,529,000 (6,882,000 12.6% HURF)  
(3,427,000 Impact Fees)  
(3,920,000 Regional Transportation Authority)  
(6,300,000 2.6% HURF-State Highways)

Implementation Period: 2/3/4/5/6/7

Future Annual Operating &  
Maintenance Costs: \$18,000

**38) DOT-38 - Pistol Hill Road, Colossal Cave Road to Old Spanish Trail**

Location: Unincorporated County

Bond Funding: \$1,000,000

Scope: Project is the construction of Pistol Hill Road as a two-lane road with

improved shoulders. The right-of-way for the proposed road was recently acquired from the state land department. The new roadway will provide for additional connections in the east end of the Rincon Valley, will allow traffic to detour around the Colossal Cave Park area and will provide an alternate to the most seriously geometrically constrained sections of Colossal Cave Road and Old Spanish Trail. These roadway segments have respective accident rates 3.5 and 2.8 times greater than the system average.

Benefit: The project will improve roadway safety by providing an alternative to sections of roadway with severe horizontal alignment and dips. The new road will also be located outside of the Colossal Cave Park and will reduce through traffic within the park area.

Other Funding: \$713,000 County HURF

Implementation Period: 1

Future Annual Operating & Maintenance Costs: \$22,500

**39) DOT-39 - Valencia Road, Interstate 19 to South 12th Avenue**

Location: Tucson

Bond Funding: \$662,000

Scope: The project will improve the intersection of South 12<sup>th</sup> Avenue and Valencia Road to connect to a City of Tucson project to the north and proposed improvements by Arizona Department of Transportation to the west.

Benefit: The project will reduce traffic congestion and enhance roadway safety for vehicles, pedestrians and bicyclists. Transit operations will also be improved in this presently constrained corridor. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$10.94 million. The benefit/cost ratio is 12.2:1.

Other Funding: \$600,000 (City of Tucson)

Implementation Period: 1/2

Future Annual Operating & Maintenance Costs: City of Tucson

**40) DOT-40 - Grant Road, Oracle Road to Park Avenue**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Tucson

Bond Funding: \$348,300

Scope: The proposed project is the reconstruction and widening of Grant Road to six lanes. The project will have landscaped median, storm drains, pedestrian facilities, multi-use lanes, arterial street lighting and other urban street amenities. To implement the memorandum of understanding dated May 7, 2004 with the City of Tucson, this project is delayed subject to available funding other than county bonds.

Benefit: The project will reduce congestion and enhance safety along Grant Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$95.03 million. The benefit/cost ratio is 9.5:1.

Other Funding: Regional Transportation Authority

Implementation Period: Delayed subject to available funding other than county bonds.

Future Annual Operating & Maintenance Costs: City of Tucson

**41) DOT-41 – Neighborhood Transportation Improvements**

Location: Supervisor District 2

Bond Funding: \$10,000,000

Scope: The project will construct improvements to neighborhood streets, including but not limited to sidewalks, street lighting, neighborhood traffic mitigation measures, street paving, and ADA pedestrian improvements.

Benefit: The project will enhance the usability and safety of neighborhood streets, improve the quality of life in neighborhoods, and add to the stability of and reinvestment in neighborhoods.

Other Funding: Matching funds from other jurisdictions as available

Implementation Period: 2/3/4/5/6/7/8

Future Annual Operating & Maintenance Costs: Minimal

**42) DOT-42 - South Tucson, 6th Avenue and Various Locations**

Location: South Tucson

Bond Funding: \$5,111,918

Scope: The proposed project is primarily to reconstruct existing roadways, improve area drainage and improve connections to the 6th Avenue corridor to enhance circulation and access in the South 6th Avenue community. The project will include improvements to the street frontage to enhance alternate modes use as well as improve the urban design features of this main roadway through South Tucson.

Benefit: The project will improve circulation and access within South Tucson particularly during wet weather, as well as enhance the appearance of the community and the routing for bicycles and buses. The project will also reduce maintenance costs on many of the streets in the community by reducing on-street drainage and replacing deteriorated pavements.

Other Funding: \$79,053 County HURF

Implementation Period: 1/2/3/4/5

Future Annual Operating & Maintenance Costs: No Increase

**43) DOT-43 – 12th Avenue, 38th Street to Los Reales Road**

Location: Tucson

Bond Funding: \$9,548,000

Scope: Phase I, Los Reales to Lerdo, will improve the function of South 12th Avenue for alternate modes and provide for improved area and roadway drainage and provide streetscape improvements for the adjacent community. Phase 2, South 12th Gateway at 10th Avenue, will improve the geometry of the intersecting streets for efficiency, safety and drainage.

Benefit: The project will improve local area circulation and access through improved drainage and will reduce maintenance costs with enhanced roadway pavements. The improvements will increase the value of adjacent properties by enhancing the streetscape elements in this corridor.

Other Funding: \$1,211,781 (964,412 Tucson Water)  
( 80,930 County HURF)  
(166,439 Misc)

Implementation Period: 1/2/3/4/5

Future Annual Operating & Maintenance Costs: City of Tucson

**44) DOT-44- Orange Grove Road, Thornydale Road to Oracle Road**

Location: Unincorporated County, Marana

Bond Funding: \$20,000,000

Scope: The project consists of constructing a four and six-lane roadway from Thornydale Road to Oracle Road. The Advance Planning Report for Orange Grove Road approved by the Board of Supervisors in 1992 called for six lanes from La Cholla Boulevard to Oracle Road and four lanes from Thornydale Road to La Cholla. The cross section requirements will be reviewed during the project initiation stages to determine if the full six lanes from Thornydale to La Cholla should be built with the initial project.

Note: The Orange Grove Road and La Cholla Boulevard intersection will be constructed with La Cholla Boulevard, River Road to Magee Road project (see DOT-45). The intersection of Orange Grove Road and La Canada Drive will likely be completed as part of the non-bond federal aid project, La Canada Drive, River Road to Ina Road. The remainder of the roadway will be completed in two phases. Phase 1 will consist of construction from Corona Drive to Oracle Road. Phase 2 will be complete the project from Thornydale Road to La Cholla Boulevard.

Phase 2 improvements include widening the 3-lane section to a 5-lane section on Orange Grove Road from Camino de la Tierra to La Cholla Boulevard, providing two eastbound travel lanes, two westbound travel lanes, a center left-turn lane and paved shoulders on each side. Turn lanes and acceleration and deceleration lanes will be designed for Mona Usa to meet RTA requirements. Other features, such as a pedestrian patch on one side of the road, landscaping, and sound-barrier walls, if warranted, will be designed now and built when funding is available.

Benefit: The project will reduce congestion and enhance safety along Orange Grove Road and at the intersecting street intersections. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$295.48 million. The benefit/cost ratio is 12.7:1.

Other Funding: \$385,000 (Regional Transportation Authority) additional funding sources will be utilized when available.

Implementation Period: 3/4/5/6/7/8

Future Annual Operating & Maintenance Costs: \$126,000

**45) DOT-45 - La Cholla Boulevard, River Road to Magee Road**

Location: Unincorporated County

Bond Funding: \$18,000,000

Scope: The project consists of construction of a six-lane La Cholla Boulevard

from River Road to Magee Road. Project will include a raised landscape median, multi-use lanes, outside curbs, storm drains and pedestrian facilities and neighborhood screening and noise mitigation where required. This project also includes reinforced concrete box culverts or short span bridges at the Nanini Wash and Pegler Wash crossings. Additional provisions will be made for transverse drainage as required.

**Benefit:** The project will reduce congestion and enhance safety along existing La Cholla Boulevard. This project when linked with the project to the south (I-10 to River Road) will provide enhanced facility of regional significance for access into the northwest area. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$202.7 million. The benefit/cost ratio is 13.5:1.

**Other Funding:** \$7,132,000 (3,685,000 Urban Area HURF)  
 ( 943,000 Developer Funded)  
 (2,139,000 Improvement District)  
 ( 100,000 County HURF)  
 ( 265,000 Other)

**Implementation Period:** 1/2/3/4/5/6

**Future Annual Operating & Maintenance Costs:** \$90,000

**46) DOT-46 - Craycroft Road, River Road to Sunrise Drive**

**Location:** Unincorporated County

**Bond Funding:** \$12,000,000

**Scope:** The project will reconstruct and widen existing Craycroft Road to a four-lane divided roadway with raised landscape median, multi-use lanes, outside curbs, storm drains, landscaping and neighborhood screening and noise mitigation as required. The project will include new culverts for the Craycroft Wash and other transverse drainage as necessary.

**Benefit:** The project will reduce congestion and enhance safety along Craycroft Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$82.37 million. The benefit/cost ratio is 6.6:1.

**Other Funding:** \$18,805,000 (3,383,000 Impact Fee Funds)  
 (9,330,000 County HURF)  
 (2,000,000 Urban Area HURF)  
 (4,092,000 Other)

**Implementation Period:** 1/2/3/4/5

**Future Annual Operating & Maintenance Costs:** \$36,000

**47) DOT-47 - Sunrise Drive, Craycroft Road to Kolb Road**

Location: Unincorporated County

Bond Funding: \$19,822,000

Scope: The project will reconstruct Sunrise Drive to two through travel lanes with multi-use lanes, drainage improvements, landscaping and neighborhood screening and noise mitigation as required. Additional lanes will be constructed at specific intersections and the construction will match the intersection improvements at Craycroft Road constructed with DOT-46. The intersection with Kolb Road will be completed as a part of this construction. The median treatment will be a raised landscape median at identified intersections with a two-way left-turn lane installed between the raised medians. The proposed project is intended to retain the existing outer limits of the cut and fill slopes along Sunrise Drive, therefore will incorporate structural retaining walls as necessary. Needed revisions or improvements to transverse drainage will be included with the project.

Benefit: The project will reduce congestion and enhance safety along Sunrise Drive. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$41.84 million. The benefit/cost ratio is 3.2:1.

Other Funding: \$0

Implementation Period: 6/7  
Future Annual Operating & Maintenance Costs: \$31,500

**48) DOT-48 - Duval Mine Road, La Canada Drive to Abrego Drive**

Location: Sahuarita

Bond Funding: \$0

Scope: The project will widen and improve Duval Mine Road in the vicinity of the I-19 interchange. Project includes widening existing roadway and the overpass structure at I-19, modifying the ramp geometry and improving the intersection connections at La Cañada Drive and Abrego Drive. The project will include provisions for improved drainage, landscaping, pedestrian and bicycle movements across the freeway and related elements. The median treatment is yet to be determined pending evaluation of local area access and circulation needs and a structural evaluation of the existing overpass.

Note: The project was completed by the Arizona Department of Transportation so that bond funds were not required for the project.

Benefit: The project will reduce congestion and enhance safety along Duval Mine Road in the vicinity of this interchange.

Other Funding: \$0

Implementation Period: 2/3/4/5

Future Annual Operating &  
Maintenance Costs: ADOT and Town of Sahuarita

**49) DOT-49 - Valencia Road, Mission Road to Interstate 19**

Location: Unincorporated County, Tucson

Bond Funding: \$6,760,000

Scope: The project will widen Valencia Road from four to six lanes between Mission Road and the freeway interchange. The interchange will be widened under a separate project by Arizona Department of Transportation. The existing Santa Cruz River Bridge was built to accommodate a six-lane roadway and will be retained with this project. Project will include multi-use lanes, curbs, storm drains, landscaping and provisions for pedestrians.

Benefit: The project will reduce congestion and enhance safety along Valencia Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$49.22 million. The benefit/cost ratio is 12.3:1.

Other Funding: \$5,033,000 Urban Area HURF

Implementation Period: 1/2/4/5

Future Annual Operating &  
Maintenance Costs: \$27,000

**50) DOT-50 - Kinney Road, Ajo Way to Bopp Road**

Location: Unincorporated County

Bond Funding: \$3,800,000

Scope: The project will widen Kinney Road to four lanes with improved shoulders, roadside drainage and landscaping. The median treatment will be either a raised landscape median or a two-way median left-turn lane pending further evaluation of local area access and circulation requirements.

Benefit: The project will reduce congestion and enhance safety along Kinney Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$4.81 million. The benefit/cost ratio is 1.2:1.

Other Funding: \$9,863,000 (\$8,043,000 Impact Fees, \$1,819,000 ADOT)

Implementation Period: 5/6/7/8

Future Annual Operating &  
Maintenance Costs: \$9,000

**51) DOT-51 - La Canada/Las Quintas Highway Drainage Improvements**

Location: Sahuarita

Bond Funding: \$1,500,000

Scope: Proposed project consists of transverse and parallel drainage improvements along La Cañada Drive and Las Quintas to provide improved roadway drainage, to alleviate ponding and drainage diversions within existing neighborhoods and to increase roadway safety.

Benefit: The project will maintain traversable roadways during wet weather and alleviate roadway-induced drainage problems in the adjacent neighborhoods.

Other Funding: \$26,913 County HURF

Implementation Period: 1/2/3

Future Annual Operating &  
Maintenance Costs: No Increase

**52) DOT-52 - Palo Verde Road, Gas Road to 44<sup>th</sup> Street**

Location: Unincorporated County

Bond Funding: \$1,300,000

Scope: The project will overlay the existing Palo Verde Road including multi-use lanes and bus stop pull outs. It will provide an improved ride for the motorist.

Benefit: The project will largely benefit smooth traffic flow for vehicles entering and exiting Palo Verde Boulevard with provisions for alternate modes including bicycles and public transit.

Other Funding: \$159,297 County HURF

Implementation Period: 4

Future Annual Operating &  
Maintenance Costs: None

**53) DOT-53 - Old Tucson-Nogales Highway-Summit Neighborhood**

Location: Unincorporated County

Bond Funding: \$1,100,000

Scope: This project proposes left-turn lanes in two directions of traffic, which will require an extension/reconstruction of the drainage structure to the east of Nogales Hwy. Additionally, roadway transition(s) are proposed on Old Nogales east of the intersection to reshape the intersection with ninety degree approaches.

The local area is subject to significant drainage problems associated with the roads. The project will construct or improve roadside drainage ditches parallel to Summit Street, McKain Road and Old Tucson/Nogales Highway within the existing right-of-way to increase conveyance towards the existing culverts under the railroad. Small detention facilities will also be constructed east of the Summit-Old Tucson/Nogales neighborhood and McKain Road/Terry Lane intersection to control the magnitude of roadside drainage and to eliminate ponding within these intersections.

Benefit: Project benefits will accrue to local neighborhoods with a safer access, particularly during wet weather conditions. The roadway construction will reduce the expense of operation and maintenance as the intersections collect substantial sediments and debris during wet weather conditions. The improved intersection alignment will allow for safer access onto Nogales Highway (B-19).

Other Funding: \$1,300,000 (400,000 RTA)  
(900,000 Impact Fees)

Implementation Period: 1/2/3/4/5/6/7/8

Future Annual Operating & Maintenance Costs: No Increase

**54) DOT-54 - Mt. Lemmon Shuttle**

Location: Unincorporated Pima County

Bond Funding: \$1,779,561

Scope: To support future public transportation facilities at Summerhaven, including a proposed tram system and local shuttle service, and to accommodate the anticipated traffic at the new Village Center. Sabino Canyon Parking Improvements are needed. Improvements include roadway re-alignment, drainage facilities, environmental mitigation, improved pedestrian access, and parking.

Benefit: Improved public access and safety at Summerhaven.

Other Funding: \$510,484 (340,853 County HURF)  
(169,631 Wastewater Management)

Implementation Period: 1/2/3/4/5

Future Annual Operating &  
Maintenance Costs: To be determined

**55) DOT-55 - Golf Links Road, Bonanza Avenue to Houghton Road**

Location: Tucson

Bond Funding: \$1,801,000

Scope: The proposed project consists of widening 0.5 miles of Golf Links Road to four lanes with a raised landscape median, multi-use lanes, curbs, storm drains, outside landscaping and other urban street features. This project will link with another project to be built entirely by the City of Tucson. The improvements will increase capacity and safety of the roadway and will define and better control access to abutting properties.

Benefits: The project will reduce congestion and enhance safety along Golf Links Road. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$2.23 million. The benefit/cost ratio is 0.9:1.

Other Funding: \$901,000 (800,000 City of Tucson)  
( 56,000 County HURF)  
( 45,000 Other)

Implementation Period: 1/2

Future Annual Operating &  
Maintenance Costs: City of Tucson

**56) DOT-56 - Broadway Boulevard, Euclid Avenue to Campbell**

NOTE: This project is now part of a Regional Transportation Authority (RTA) project. Amendments to scope, implementation periods, and funding may be necessary in the future.

Location: Tucson

Bond Funding: \$25,000,000

Scope: The proposed project will widen Broadway Boulevard to six or eight lanes from Euclid Avenue to Campbell, approximately one mile. Proposed improvements are consistent with earlier Broadway corridor studies and the recently completed portion of Broadway Boulevard, between Euclid Avenue and Toole Avenue, east and west of the Union Pacific Railroad

overpasses. The project will include improved intersections and traffic signals, a landscaped median, multi-use lanes, sidewalks, street lighting, storm drains, public art and other urban arterial features. The project will include evaluation of, and potential provisions for, the use of Broadway by advanced mass transit systems in the future. The proposed project will replace the current five-lane section with a contemporary urban arterial. Funded activities include project planning, environmental studies, design, right-of-way acquisition, construction and public art.

**Benefit:** The project will reduce congestion and enhance safety along Broadway Boulevard, as well as provide significant opportunities to revise the urban streetscape and development pattern along Tucson's Main Street. The estimated economic value of the improvements to traffic flow and reductions in accidents are \$172.85 million. The benefit/cost ratio is 4.9:1.

**Other Funding:** Regional Transportation Authority

**Implementation Period:** 4/5/6/7/8

**Future Annual Operating & Maintenance Costs:** City of Tucson

**57) DOT-57 - Safety Improvements**

**Location:** Various

**Bond Funding:** \$20,083,414

**Scope:** The HURF Revenue Bond includes \$20 million for presently undesignated safety improvements that would be implemented over the course of the bond program. Projects to be funded under this category are traffic safety improvements. The Department of Transportation publishes annual reports on the traffic accident and safety condition of the unincorporated roadway system. Improvements to be funded with bonds could include traffic signal installations, corrections of offset intersection, installation of left turn lanes, minor improvements to horizontal and vertical alignments to improve sight distance and maintain vehicle control, and similar types of specifically targeted safety projects. Specific projects will be selected by the Department for incorporation into the annual Capital Improvement Program based on the Department's assessment or ranking of conditions, or when unforeseen safety conditions require a project necessary for public safety.

**Benefits:** Previous Pima County General Obligation Bonds have included specific amounts targeted to safety improvements. These previous allocations have demonstrated substantial safety benefits. Fifty locations were improved with traffic safety bond funds authorized in the 1979 and 1980 bond elections. The overall accident reduction from both highway segment and intersection improvements was 26.3 percent (source "Evaluation of the Traffic Accident Experience of Completed Traffic Safety Projects Financed with 1979 and 1980 Bond Issue Funds" Traffic



**AS AMENDED by the Board of Supervisors of Pima County, Arizona, on this 5th day of April, 2011.**

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Chair, Pima County Board of Supervisors

Attest:

Reviewed by:

\_\_\_\_\_  
Clerk, Pima County Board of Supervisors

\_\_\_\_\_  
Pima County Administrator

Approved as to Form:

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Civil Deputy County Attorney