



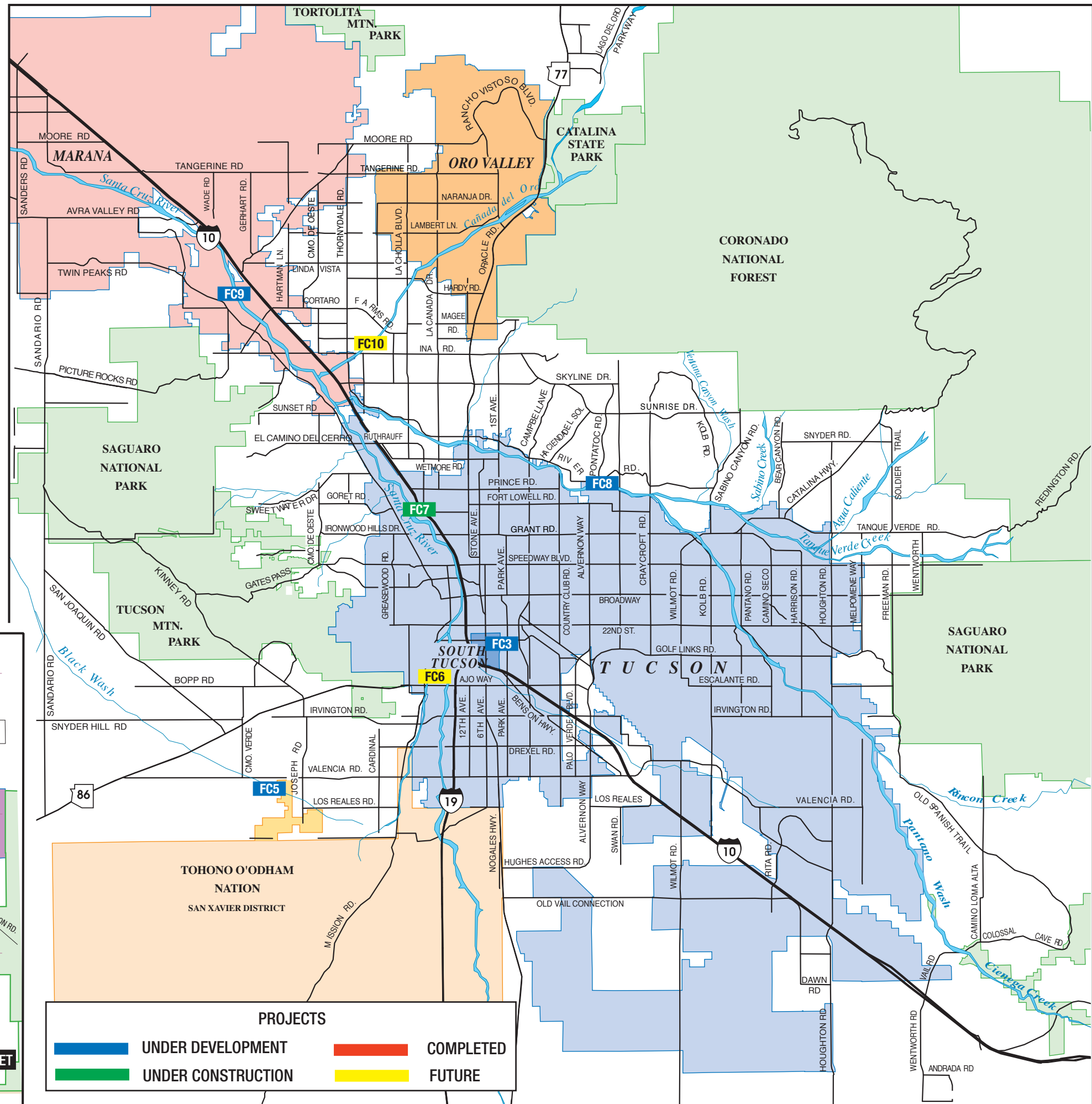
***Bond Authorization  
Question 5***

***River Parks and  
Flood Control Improvements***

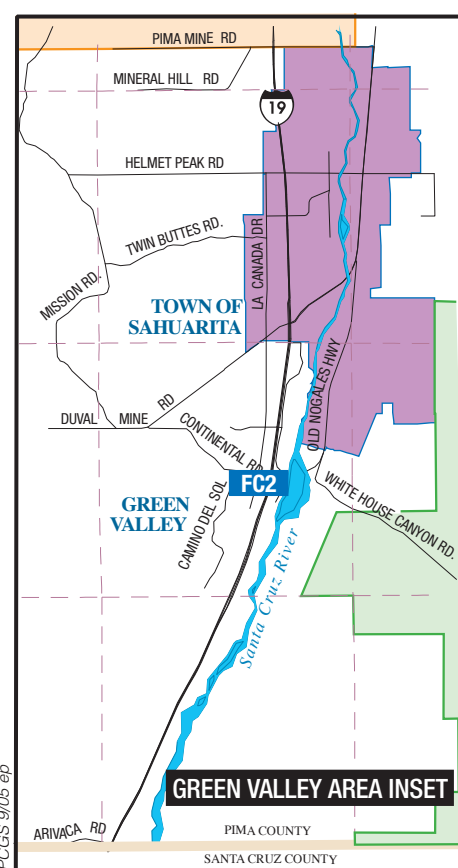
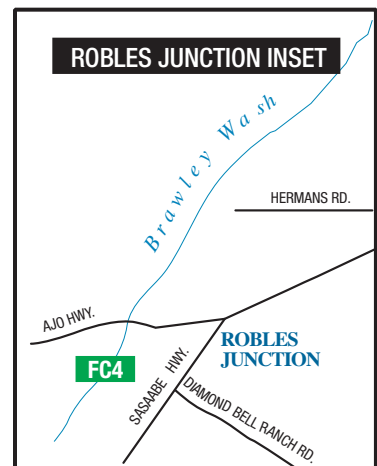
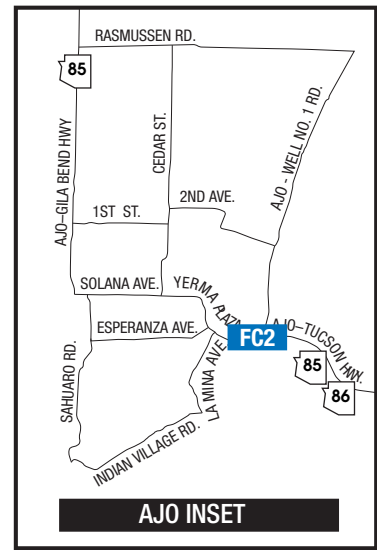
***Bond Project Status Maps  
Project Information Sheets***

## Question 5: River Parks and Flood Control Improvements End of Year Status Report FY 2004/05

- Flood Control**
- FC1. 5.01 Floodprone and Riparian Land Acquisition
  - FC2. 5.02 Urban Drainage Infrastructure Program
  - FC3. 5.03 City of South Tucson Projects
  - FC4. 5.04 Tohono O'odham Nation Drainage Improvements
  - FC5. 5.05 Pascua Yaqui Tribe Black Wash Flood Control
- River Parks**
- FC6. 5.06 Santa Cruz River, Ajo to 29th Street
  - FC7. 5.07 Santa Cruz River, Grant to El Camino del Cerro
  - FC8. 5.08 Rillito River Linear Park Completion
  - FC9. 5.09 Santa Cruz River in vicinity of Continental Ranch
  - FC10. 5.10 Cañada del Oro River Park, Thornydale to Magee



| PROJECTS  |                    |  |           |
|---|--------------------|--|-----------|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: blue; border: 1px solid black;"></span>  | UNDER DEVELOPMENT  | <span style="display: inline-block; width: 15px; height: 10px; background-color: red; border: 1px solid black;"></span>    | COMPLETED |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: green; border: 1px solid black;"></span> | UNDER CONSTRUCTION | <span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black;"></span> | FUTURE    |





# *Project Information Sheets*

## *Question 5*

### **River Parks and Flood Control Improvements**

| <b>Bond Number</b> | <b>Project</b>  |
|--------------------|---|
| FC5.01             | Floodprone and Riparian Land Acquisition (2004 Authorization)                   |
| FC5.02             | Urban Drainage Infrastructure Program   |
| FC5.03             | City of South Tucson Urban Drainage   |
| FC5.04             | Tohono O'Odham Nation Drainage Improvements                                     |
| FC5.05             | Pascua Yaqui Tribe Black Wash Urban Drainage Flood Control Improvements         |
| FC5.06             | Santa Cruz River Flood Control, Erosion Control and Linear Park, Ajo to 29th St |
| FC5.07             | Santa Cruz River, Grant Road to Camino del Cerro                                |
| FC5.08             | Rillito River Linear Park, Alvernon to Craycroft                                |
| FC5.09             | Santa Cruz River Linear Park in vicinity of Continental Ranch                   |
| FC5.10             | Canada del Oro River Park, Thornydale to Magee                                  |

**Floodprone and Riparian Land Acquisition (2004 Authorization)**

**Bond No: FC5.01**

**Status:**  
Ongoing Program

**Expected Completion:**  
FY 2010/2011

**Actual Cost**

**FY 2003/2004 thru FY 2004/2005 Qtr 4**

|                          |                       |
|--------------------------|-----------------------|
| Right-of-Way             | \$2,910               |
| <b>Total Actual Cost</b> | <b><u>\$2,910</u></b> |

**Current Project Financing Plan**

|                       |                           |
|-----------------------|---------------------------|
| Bond Proceeds         | \$5,000,000               |
| <b>Total Estimate</b> | <b><u>\$5,000,000</u></b> |

**Total Estimated Project Cost**      **\$5,000,000**

**Project Purpose:**

Purchase floodprone properties to protect public safety and preserve natural floodplain characteristics. Purchase property in fee title or secure drainage and conservation easements where appropriate. Develop land management plans to preserve floodplain and riparian areas of acquired properties. This program provides adaptive floodplain management in urban areas to preserve natural floodplains, protect riparian areas, and provide stormwater quality benefits. For upstream watershed protection in rural areas, the program preserves natural over bank flood storage and natural floodplain characteristics to minimize potential downstream flooding and protect riparian areas.

**Project Notes:**

- <> Ordinance Amount: \$5,000,000; Current Cost: \$5,000,000
- <> Ordinance Bond Funding: \$5,000,000; Current Allocation: \$5,000,000
- <> Ordinance Implementation Period: 2004/05 to 2015/16; Estimated Completion Date: 2010/2011

**Urban Drainage Infrastructure Program**

**Bond No: FC5.02**

**Status:**  
Ongoing Program

**Expected Completion:**  
FY 2010/2011

**Actual Cost**

**FY 2003/2004 thru FY 2004/2005 Qtr 4**

|                          |                                |
|--------------------------|--------------------------------|
| Construction             | \$289,634                      |
| Right-of-Way             | \$1,128                        |
| Design                   | \$25,417                       |
| Administration           | \$4,155                        |
| Planning                 | \$9,889                        |
| <b>Total Actual Cost</b> | <b><u><u>\$330,223</u></u></b> |

**Current Project Financing Plan**

|                       |                                  |
|-----------------------|----------------------------------|
| Bond Proceeds         | \$8,281,000                      |
| <b>Total Estimate</b> | <b><u><u>\$8,281,000</u></u></b> |

**Total Estimated Project Cost**      **\$8,281,000**

**Project Purpose:**

Evaluate, design, and construct drainage improvements that protect public safety through a combination of nonstructural and structural improvements that provide flood and erosion control. Develop solutions to urban areas that have experienced repetitive flooding in residential and commercial areas. Projects will be prioritized by flood damage reduction potential after evaluation, based on a fixed set of criteria, and a recommendation from the Flood Control District Advisory Committee and approval by the Board of Supervisors (Directors of the Flood Control District).

**Project Notes:**

- <> Ordinance Amount: \$8,281,000; Current Cost: \$8,281,000
- <> Ordinance Bond Funding: \$8,281,000; Current Allocation: \$8,281,000
- <> Ordinance Implementation Period: 2004/05 to 2015/16; Estimated Completion Date: 2010/2011

**Urban Drainage Infrastructure Program**

**Bond No: FC5.02**

**Status:**  
Ongoing Program

**Expected Completion:**  
FY 2010/2011

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| <u>Under Development Projects</u>                |  | <b>Expenditures<br/>To Date</b>     |
|--|--|-------------------------------------|
| Ajo - Curley School Detention Basin.....         |  | \$15,056                            |
| Ajo - Second Avenue Bridge.....                  |  | \$23,159                            |
| Urban Drainage Infrastructure Program.....       |  | \$251                               |
| <br><u>Under Construction Projects</u>           |  | <br><b>Expenditures<br/>To Date</b> |
| Urban Drainage Infrastructure Program (JOC)..... |  | \$5,554                             |
| <br><u>Completed Projects</u>                    |  | <br><b>Expenditures<br/>To Date</b> |
| Green Valley Abrego Drive Culvert.....           |  | \$286,204                           |

**City of South Tucson Urban Drainage**

**Bond No: FC5.03**

**Status:**  
Ongoing Program

**Expected Completion:**  
FY 2007/2008

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**Current Project Financing Plan**

|                       |                                  |
|-----------------------|----------------------------------|
| Bond Proceeds         | \$1,719,000                      |
| <b>Total Estimate</b> | <b><u><u>\$1,719,000</u></u></b> |

**Total Estimated Project Cost**      **\$1,719,000**

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**Project Purpose:**

- (1) Capture stormwater runoff from Rodeo Wash where it enters public right-of-way at South 4th Avenue and East 40th Street and convey the stormwater downstream in a storm drain system to South 10th Avenue and West 38th Street.
- (2) Increase stormwater drainage capacity on South 4th Avenue at the alleyway between East 26th Street and East 27th Street to convey the flow to an existing storm drain under South 5th Avenue.
- (3) Increase drainage capacity at South 7th Avenue and West 28th 2 Street and link with the existing stormwater drainage facility at West 26th Street.
- (4) Provide a storm drain from West 35th 2 Street into an existing storm drain under 10th Avenue.
- (5) Provide an underground storm drain connection between the culvert under the Union Pacific railroad tracks at East 32nd Street to connect to the downstream storm drain at South 3rd Avenue and East 32nd Street.
- (6) Install a box culvert at the intersection of South 7th Avenue and West 34th 2 Street. Eliminate repetitive flooding in streets by providing positive drainage. All projects pertain to improving drainage capacity and mitigating flooding and ponding problems associated with stormwater runoff in the City of South Tucson.

**Project Notes:**

- <> Ordinance Amount: \$1,719,000; Current Cost: \$1,719,000
- <> Ordinance Bond Funding: \$1,719,000; Current Allocation: \$1,719,000
- <> Ordinance Implementation Period: 2004/05 to 2011/12; Estimated Completion Date: 2007/2008

**Tohono O'Odham Nation Drainage Improvements**

**Bond No: FC5.04**

**Status:**  
Ongoing Program

**Expected Completion:**  
FY 2005/2006

**Actual Cost**

**FY 2003/2004 thru FY 2004/2005 Qtr 4**

|                          |                         |
|--------------------------|-------------------------|
| Construction             | \$374,555               |
| <b>Total Actual Cost</b> | <b><u>\$374,555</u></b> |

**Current Project Financing Plan**

|                       |                           |
|-----------------------|---------------------------|
| Bond Proceeds         | \$1,500,000               |
| <b>Total Estimate</b> | <b><u>\$1,500,000</u></b> |

**Total Estimated Project Cost**      **\$1,500,000**

**Project Purpose:**

Construction of a storm drain to collect runoff from the outflow of the Indian Oasis Elementary School and convey the flow underneath the Sells Youth Recreation Center and drain into catch basins adjacent to the Sells Wash. The Tohono O'odham Nation is funding and constructing the Sells Youth Center and Park, and the Oasis Elementary School, which is part of the Arizona Public School District, has received State School Deficiency Funding to correct flooding in classrooms. However, neither the Youth Center funding nor the School funding is sufficient to address the proposed storm drain.

**Project Notes:**

- <> Ordinance Amount: \$1,500,000; Current Cost: \$1,500,000
- <> Ordinance Bond Funding: \$1,500,000; Current Allocation: \$1,500,000
- <> Ordinance Implementation Period: 2004/05 to 2009/10; Estimated Completion Date: 2005/2006

**Under Construction Projects**

**Expenditures  
To Date**

|   |           |
|---|-----------|
| Tohono O'Odham Nation Urban Drainage..... | \$374,555 |
|---|-----------|

**Pascua Yaqui Tribe Black Wash Urban Drainage Flood Control Improvements**

**Bond No: FC5.05**

**Status:**  
Under Development

**Expected Completion:**  
FY 2006/2007

**Current Project Financing Plan**

|                       |                                  |
|-----------------------|----------------------------------|
| Bond Proceeds         | \$1,000,000                      |
| <b>Total Estimate</b> | <b><u><u>\$1,000,000</u></u></b> |

**Total Estimated Project Cost**      **\$1,000,000**

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**Project Purpose:**

Address deficiencies related to stormwater flooding within developed areas of the Reservation and in particular Black Wash. Upgrade existing culverts, channels, and other drainage facilities experiencing erosion damage.

**Project Notes:**

- <> Ordinance Amount: \$1,000,000; Current Cost: \$1,000,000
  - <> Ordinance Bond Funding: \$1,000,000; Current Allocation: \$1,000,000
  - <> Ordinance Implementation Period: 2004/05 to 2011/12; Estimated Completion Date: 2006/2007
  - <> Design Start: December 2004    Design Finish: December 2005
  - <> Construction Start: December 2005    Construction Finish: June 2007
-

**Santa Cruz River Flood Control, Erosion Control and Linear Park, Ajo to 29th St**

**Bond No: FC5.06**

**Status:**  
Under Development

**Expected Completion:**  
FY 2009/2010

| <b>Actual Cost</b>                          |                     | <b>Current Project Financing Plan</b> |                     |
|---|---------------------|---------------------------------------|---------------------|
| <b>FY 2003/2004 thru FY 2004/2005 Qtr 4</b> |                     |                                       |                     |
|   |                     | Bond Proceeds                         | \$14,000,000        |
| Design                                      | \$65                | <b>Total Estimate</b>                 | <b>\$14,000,000</b> |
| Planning                                    | \$1,863             |                                       |                     |
| <b>Total Actual Cost</b>                    | <b>\$1,928</b>      |                                       |                     |
| <br>  |                     |                                       |                     |
| <b>Total Estimated Project Cost</b>         | <b>\$14,000,000</b> |                                       |                     |

**Project Purpose:**

This project is considered the first phase of the Paseo de las Iglesias Project for flood control, river park and riparian habitat improvements. The Paseo de las Iglesias project is a joint Pima County and United States Army Corps of Engineers planning and feasibility study for flood control and riparian habitat restoration improvements from Congress south to the Los Reales Road alignment. This project, from 29th Street (Silverlake) to Ajo Way, is the first phase of construction for flood control improvements and linear river park system improvements along the Santa Cruz River to link to existing improvements from Grant Road to 29th Street (Silverlake), and from Ajo Way south to Irvington Road to create a continuous 7-mile long river park system. This project will also join the Santa Cruz River park system to the Tucson Diversion Channel (Julian Wash) linear river trail system. This project will provide flood and erosion control using reinforced soil cement low flow bank protection and one grade control structure along the Santa Cruz River supplementing the river linear park improvements and trails. Ecosystem restoration and riparian habitat enhancement are planned along the Santa Cruz River and the Old West Branch of the Santa Cruz River.

**Project Notes:**

- <> Ordinance Amount: \$14,000,000; Current Cost: \$14,000,000
- <> Ordinance Bond Funding: \$14,000,000; Current Allocation: \$14,000,000
- <> Ordinance Implementation Period: 2004/05 to 2013/14; Estimated Completion Date: 2009/2010
- <> Design Start: October 2006      Design Finish: October 2007
- <> Construction Start: April 2008      Construction Finish: April 2010

**Santa Cruz River, Grant Road to Camino del Cerro**

**Bond No: FC5.07**

**Status:**  
Under Construction

**Expected Completion:**  
FY 2006/2007

**Actual Cost**

**FY 2003/2004 thru FY 2005/2006 Qtr 4**

|                          |                        |
|--------------------------|------------------------|
| Construction             | \$5,027                |
| Right-of-Way             | \$5,912                |
| Design                   | \$57,292               |
| Administration           | \$160                  |
| Utility Relocation       | \$63                   |
| Planning                 | \$14,936               |
| <b>Total Actual Cost</b> | <b><u>\$83,390</u></b> |

**Current Project Financing Plan**

|                       |                           |
|-----------------------|---------------------------|
| Bond Proceeds         | \$2,700,000               |
| <b>Total Estimate</b> | <b><u>\$2,700,000</u></b> |

**Total Estimated Project Cost**      **\$2,700,000**

**Project Purpose:**

In 2003, the Pima County Flood Control District, Pima County Wastewater Management, and the Natural Resource Conservation Service (NRCS) completed soil cement bank protection along the Santa Cruz River from Grant Road to the Ft. Lowell Road alignment. This project connected the bank protection south of Grant Road, and north of Ft. Lowell Road. Pima County desires a linear park to connect into the upstream stream system, and to set the stage for future linear park development at the Silverbell Golf Course and Christopher Columbus Park along the west bank of the Santa Cruz River. This linear park and river pathways will follow and further establish the San Juan Bautista National Historic Trail on the west side of the Santa Cruz River. The proposed project includes a parking node at Grant Road, a connection to the City of Tucson's Juhan Park, and a pedestrian bridge across the Santa Cruz River to connect the linear park to the Sweetwater Wetlands Park and future linear park improvements along the east bank of the Santa Cruz River.

**Project Notes:**

- <> Ordinance Amount: \$2,700,000; Current Cost: \$2,700,000
- <> Ordinance Bond Funding: \$2,700,000; Current Allocation: \$2,700,000
- <> Ordinance Implementation Period: 2006/07 to 2015/16; Estimated Completion Date: 2006/2007
- <> Design Start: March 2004      Design Finish: November 2006
- <> Construction Start: June 2005      Construction Finish: December 2006

**Rillito River Linear Park, Alvernon to Craycroft**

**Bond No: FC5.08**

**Status:**  
Under Development

**Expected Completion:**  
FY 2006/2007

**Actual Cost**

**FY 2003/2004 thru FY 2004/2005 Qtr 4**

|                          |                         |
|--------------------------|-------------------------|
| Construction             | \$2,474                 |
| Right-of-Way             | \$9,295                 |
| Design                   | \$121,024               |
| Administration           | \$1,402                 |
| Utility Relocation       | \$4,205                 |
| Planning                 | \$9,434                 |
| <b>Total Actual Cost</b> | <b><u>\$147,833</u></b> |

**Current Project Financing Plan**

|                                |                           |
|--------------------------------|---------------------------|
| Bond Proceeds                  | \$3,000,000               |
| Flood Control Tax Levy Revenue | \$250,000                 |
| <b>Total Estimate</b>          | <b><u>\$3,250,000</u></b> |

**Total Estimated Project Cost**      **\$3,250,000**

**Project Purpose:**

In 1996, the Army Corps of Engineers (ACOE) and Pima County Flood Control District completed soil cement bank protection along the Rillito River from Alvernon Way to Craycroft Road. In 2000, the ACOE and Flood Control District completed the paved pathway on the north bank, a decomposed granite pathway on the south bank, pedestrian bridges over the major washes, installation of an irrigation supply system, and provided landscape improvements. The ACOE and Flood Control District are currently working on developing an environmental restoration project called the Swan Wetlands Project. This project would include parking nodes at the end of Columbus Boulevard on the south bank. Parking on the north bank at Craycroft Road is being undertaken through the Rio Antiquo Project. This project will enhance and effectively complete the linear park. In addition, access to the linear park system would be provided at Mehl Park.

**Project Notes:**

- <> Ordinance Amount: \$3,000,000; Current Cost: \$3,250,000
- <> Ordinance Bond Funding: \$3,000,000; Current Allocation: \$3,000,000
- <> Ordinance Implementation Period: 2004/05 to 2013/14; Estimated Completion Date: 2006/2007
- <> Design Start: November 2005      Design Finish: February 2006
- <> Construction Start: March 2006      Construction Finish: September 2006

**Santa Cruz River Linear Park in vicinity of Continental Ranch**

**Bond No: FC5.09**

**Status:**  
Under Development

**Expected Completion:**  
FY 2006/2007



| <b>Actual Cost</b>                          |                | <b>Current Project Financing Plan</b> |                    |
|---|----------------|---------------------------------------|--------------------|
| <b>FY 2003/2004 thru FY 2004/2005 Qtr 4</b> |                | Bond Proceeds                         | \$4,000,000        |
| Construction                                | \$109          | <b>Total Estimate</b>                 | <b>\$4,000,000</b> |
| Design                                      | \$767          |                                       |                    |
| Planning                                    | \$3,269        |                                       |                    |
| <b>Total Actual Cost</b>                    | <b>\$4,145</b> |                                       |                    |
| <b>Total Estimated Project Cost</b>         |                |                                       | <b>\$4,000,000</b> |



**Project Purpose:**

The Town of Marana is developing plans for bank protection on the west bank of this segment of the Santa Cruz River between Ina Road and Cortaro Road as part of the development of a regional park that was authorized in Pima County's 1997 General Obligation Bond election. The County is providing bond funding and flood control funds for the park and bank protection, respectively. The Town of Marana is securing all right-of-ways for this project.

**Project Notes:**

- <> Ordinance Amount: \$4,000,000; Current Cost: \$4,000,000
- <> Ordinance Bond Funding: \$4,000,000; Current Allocation: \$4,000,000
- <> Ordinance Implementation Period: 2004/05 to 2013/14; Estimated Completion Date: 2006/2007
- <> Design Start: Not Scheduled      Design Finish:
- <> Construction Start: July 2006      Construction Finish: June 2007



**Canada del Oro River Park, Thornydale to Magee**

**Bond No: FC5.10**

**Status:**  
Under Development

**Expected Completion:**  
FY 2007/2008

**Actual Cost**

**FY 2003/2004 thru FY 2004/2005 Qtr 4**

|                          |                       |
|--------------------------|-----------------------|
| Construction             | \$2,142               |
| Design                   | \$1,829               |
| Planning                 | \$2,933               |
| <b>Total Actual Cost</b> | <b><u>\$6,904</u></b> |

**Current Project Financing Plan**

|                       |                           |
|-----------------------|---------------------------|
| Bond Proceeds         | \$5,000,000               |
| <b>Total Estimate</b> | <b><u>\$5,000,000</u></b> |

**Total Estimated Project Cost \$5,000,000**

**Project Purpose:**

This section of the Cañada del Oro Wash is bank protected from the Union Pacific Railroad on the south bank and from just west of Thornydale on the north bank to the Omni Tucson National Golf Resort. The proposed project would provide a river linear park between Thornydale Road and Magee Road plus a paved bike path connection to the Rillito River Park via Thornydale Road. It would include a paved pathway on both sides, landscaping, irrigation, and 6 pedestrian bridges. There will also be underpass ramps at Thornydale and Ina Road, a parking node at Magee Road with ramadas and a restroom, a parking easement at Thornydale, as well as a reclaimed water irrigation system.

**Project Notes:**

- <> Ordinance Amount: \$5,000,000; Current Cost: \$5,000,000
- <> Ordinance Bond Funding: \$5,000,000; Current Allocation: \$5,000,000
- <> Ordinance Implementation Period: 2008/09 to 2015/16; Estimated Completion Date: 2007/2008
- <> Design Start: July 2006    Design Finish: July 2007
- <> Construction Start: August 2007    Construction Finish: June 2008