



**U.S. Army Corps
of Engineers**
South Pacific Division
Los Angeles District

SANTA CRUZ RIVER WATERSHED MANAGEMENT STUDY

PIMA COUNTY, ARIZONA

Appendix B

Mapping Resources

August 2001

1. TOPO / AERIAL MAP PRODUCTS - Hard Copies & Digital					
AGENCY	DEPARTMENT	MAP TYPE	DATES	SCALE 1"=X	NOTE
INTERNATIONAL AGENCIES					
Instituto Nacional de Estadística Geografía e Informática		Topographic CI 50 meters	1981	250,000"	Nogales H12-2 contains most of the upper Santa Cruz Watershed
FEDERAL AGENCIES					
USGS	Earth Science Information Center	Topographic 7.5 min	Various	24,000" 100,000" 250,000"	1-800-USA-Maps
USGS	Earth Science Information Center	Satellite/ high altitude imaging	Various	Various	Color infrared photographs/imaging high altitude photos, includes border areas 1-800-USA-Maps
USGS	Earth Science Information Center	Stereo photos	Various	Various	1-800-USA-maps
USDA-FSA	Aerial photography field office	Aerial photography	1997	40,000"	Color aerials or black and white 1-800-USA-Map
National Archives	Cartographic and Architectural Branch (NNSC)	Historical aerials	Prior to 1941	Various	There is a 1936 flight for portions of Arizona
USGS EROS Data Center	Customer Services	Historical aerials	from 1940's	Various	Also coverage every 5-7 years for the entire U.S.
Library of Congress	Prints and Photographs Division	Historical aerials	1900 - 1940	Various	Also panoramas of some cities from 1906 – 1908
STATE AND REGIONAL AGENCIES					
Arizona Historical Society	Library/ Archives	Historical photographs	From late 1800's	None	Ground photos
COUNTY AND LOCAL AGENCIES					
Pima County	Mapping and Records	Aerials	1998, 1995, 1990, 1987	400'	See flight coverage keys (no key for 1987)

1. TOPO / AERIAL MAP PRODUCTS - Hard Copies & Digital					
AGENCY	DEPARTMENT	MAP TYPE	DATES	SCALE 1"=X	NOTE
	Records		1990, 1987, 1980, 1974		key for 1987)
Pima County	Mapping and Records	Topographic (2' CI)	1982, 1984	200'	Incomplete coverage, N & NW Tucson Metro area, specific study sites
Pima County	Mapping and Records	Orthophoto	1990	1000'	13-13, 13-14, 14-13, 14-14, 14-15, 15-13, 15-14, 15-15, 15-16
Pima County	Flood Control Engineering	Topographic (1' CI)	1996		Digital
Pima County	Flood Control Engineering	Topographic (1' CI)	1996		Continental Ranch Subdivision to Sanders Rd., T12S-R12E Sec 21 to T11S-R11E Sec 32, Santa Cruz River
Pima County	Flood Control Engineering	Topographic (1' CI)	1996		Grant Rd. to Ft. Lowell Rd. T13S-R13S Sec 33
Pima County	Flood Control District	15' USGS Quad			Full set of the no longer published Topographic maps
Pima County	Flood Control District	Topographic (2' CI)	1992	400' also 200'	County line to Pima Mine Rd.
Pima County	Flood Control District	Aerial-Topographic (2' CI)	1984	200'	Martinez Hill to Avra Valley Rd.
Pima County	Flood Control District	Topographic (1' CI)	1996		Avra Valley to Sanders Rd. (1988 datum)
Pima County	Flood Control District	Topographic Basin Mgmt Plans	Various	Various	Additional studies for the Rincon Creek, Tanque Verde Creek, Rillito Creek, Canada del Oro Wash
City of Tucson	Transportation Mapping and Records	Aerials	1990, 1987, 1982, 1980, 1978, 1974, 1967	400'	See flight coverage keys
City of Tucson	Transportation Mapping and Records	Topographic (2' CI)	1982-1989	200'	See flight coverage key
City of Tucson	Transportation Department	Digital-Topographic-Ortho 2' CI	1998	200' (digital available)	Flight to bounded by Orange Grove Rd., Old Vail Rd., Camino de Oeste Rd., Wentworth Rd.
LOCAL FIRMS WITH COUNTY-WIDE AERIAL COVERAGES					

1. TOPO / AERIAL MAP PRODUCTS - Hard Copies & Digital					
AGENCY	DEPARTMENT	MAP TYPE	DATES	SCALE 1"=X	NOTE
Cooper Aerial		Aerial Photography	Floods- 1977, 1983, 1993	various, & 400'	In addition to Pima County aerial coverage. Santa Cruz County -1980 portions in 1990 Pinal County -1987
Landiscor		Aerial Photography	Dating from 1963 (generally every 3 years)		Tucson metro area some of Nogales, Casa Grande areas.
McLain Harbers		Aerial Photography	1986	1508'	Pima County Metro, some in Nogales area, Pinal County. Out of business, but there are hard copies still available.

2. THEMATIC MAP PRODUCTS- Hard Copies					
AGENCY	DEPARTMENT	MAP TYPE	DATES	SCALE 1"=X=	NOTE
FEDERAL AGENCIES					
USGS	Map Distribution	Thematic Maps	Various	Various	Climate, ecology, geology, political history, population
USGS	West Distribution Branch	Hydrologic Maps	Mapped in 1970's	Various	Map of lower Colorado River Basin, hydrologic maps
USGS	National Cartographic Information Center	Historic Maps	Various	Various	Dating from 1879 nationwide
USDA Natural Resource Cons. Ser.	Soils	Base map overlay- Orthophoto Quad. (soils)	1972	2000'	Limited copies may be available
STATE AND REGIONAL AGENCIES					
Arizona Geological Survey		Reports- many available on a wide variety of topics	Various	Various	See bibliography compiled from 38 AZGS regions. (Over 300 pages) Many reports contain maps
ADOT	Photogram. and Mapping				Information not available See Web site for some information.
University of Arizona	Various and Main Library	Many thematic maps and reports with maps	Various	Various	See bibliography of published reports with maps. Most thesis maps are not cataloged separately
Pima Association of Govts.	N/A	Base map overlay- Report- <i>Identified Public Landfills...</i>	Draft- Jan. 1996		Eastern Pima County and Ajo landfill locations
Pima Association of Govts.	N/A	Base map overlay- Report- <i>Landfills and Waste Disposal Sites ...L.S.C.</i>	Feb. 1995		Figure containing locations for Lower Santa Cruz @ Tangerine to Trico-Marana
Pima Association of Govts.	N/A	Base map overlay- Report- <i>Landfill and Waste Disposal</i>	February 1995		Containing locations of landfills in Green Valley area (Continental to Pima Mts)

2. THEMATIC MAP PRODUCTS- Hard Copies					
AGENCY	DEPARTMENT	MAP TYPE	DATES	SCALE 1"=X=	NOTE
		<i>Sites ... Upper S.C.</i>			Pima Mine)
Pima Association of Govts.	N/A	Base map overlay- Report- <i>Landfills and Waste Disposal Sites... Santa Cruz River from Grant Road to Pima Mine Rd.</i>	July 1996		Site location maps of wildcat dumping and landfills
Pima Association of Govts.	N/A	Base map overlay- Report- <i>Landfills along the Santa Cruz River in Tucson and Avra Valley, AZ Final Report</i>	May 1995		Locations of landfills along the Santa Cruz River, summary report.
Pima Association of Govts.	N/A	Base map overlay- Report- <i>S.C River Alignment Recharge Study</i>	July 1986		T15S to T13S along Santa Cruz. Includes, soil, geological, well locations, water table, land ownership, and chemical concentration maps .
Pima Association of Govts.	N/A	Base map overlay- Report- <i>Incorporation of Wellhead Protection Strategies...</i>			Contains locations of contaminated wells, Industrial areas vs potable water supply, landfill vs potable water supply. LUSTS vs potable water supply
COUNTY AND LOCAL AGENCIES					
Pima County	Mapping and Records	Subdivision plats, annexations, major streets, block books etc.	Updated continuously		Eastern Pima County
Pima County	Flood Control District	Topographic (sepia) (4' CI) original flood hazard study for Santa Cruz River	1976	400'	Santa Cruz County line to Pinal county line excluding San Xavier Reservation

2. THEMATIC MAP PRODUCTS- Hard Copies					
AGENCY	DEPARTMENT	MAP TYPE	DATES	SCALE 1"=X=	NOTE
Pima County	Flood Control District	Base map overlay-gauges	updated		Rain and stream gauges for the County ALERT system
Pima County	Flood Control District	Topographic-basin management plans	Various	Various	Additional studies for the Rincon Creek, Tanque Verde, Rillito Creek, Canada del Oro
City of Tucson	Transportation Mapping and Records	Topographic-Tucson Stormwater Management Study	Using Topographic coverage listed under Topographic/aerials	200'	Delineated watersheds, routing reaches for the City of Tucson limits as of 1992
City of Tucson	Transportation Mapping and Records	Base map overlay-bridge inventory	1989	NA	
City of Tucson	Transportation Mapping and Records	Base map overlay-paving, drainage improvements	Updated continuously	200'	
City of Tucson	Stormwater Section	Base map overlay-industrial facilities, by SIC codes	1997	400'	City of Tucson
City of Tucson	Dept of Transportation	Base map overlay and report-Major Streets and Routes Plan	Various revisions 1992- 1996 (1996 latest)		City of Tucson
Tucson Water	Mapping	Base map overlay-water system 30% in ACAD	Updated continuously	800'	City of Tucson and metro area
Tucson Water	Hydrology	Base maps-well location	Updated continuously		Reproduction can be problematic for these
Tucson Water	Water Quality	Base maps, monitoring sites, zone maps	Updated at intervals		

3. THEMATIC MAP PRODUCTS -Digital				
AGENCY	DEPARTMENT	MAP TYPE	DATES	NOTE
INTERNATIONAL INFORMATION				
Universida d de Hermasillo		Digital overlay- Some GIS	Recent	In cooperation with University of AZ, Topographic, stream network, basic infrastructure using 1:250,000, 100 m ci
FEDERAL AGENCIES				
U.S.D.A. Natural Resource Cons. Ser. (Tucson)	Soils	Digital overlay- soils update	1997	Santa Rita Experimental Range- May be difficult to obtain. Limited # hard copies being distributed
ACOE				404 permit sites within Arizona
USGS	Various	Digital products	Various	See Web Sites
USGS (Tucson)	Geology	Digital overlay- geologic map of So. AZ.	1997	Geologic map, mostly depth to bedrock. Publication will be soon.
Forest Service	Coronado Station	Digital overlay on Topographic- GIS data base for Pusch Ridge Wilderness	Recent	Includes vegetation, fire history, streams, watersheds, habitat
Forest Service	Sierra Vista Ranger Station	Digital overlay on Topographic- digital GIS data base for San Rafael Watershed	Recent	Uppermost portion of Santa Cruz Watershed Habitat, fire history, recreation, habitat, streams
Fish and Wildlife Service	Buenos Aires National Wildlife Refuge	Digital overlay on Topographic- GIS data base for refuge	Recent	Habitat, vegetation, may include other base information
STATE AGENCIES				
ALRIS		Digital overlays from many state departments	Recent	A collection point for many GIS products within the State of Arizona See Web Sites
ADEQ	Office Information Technology	Digital overlays compilation of existing data	In process	This product may be available in the near future. Layers include stormwater facilities, landfills, LUSTs, monitoring and sampling site
COUNTY AND LOCAL AGENCIES				

3. THEMATIC MAP PRODUCTS -Digital				
AGENCY	DEPARTMENT	MAP TYPE	DATES	NOTE
Pima County	Technical Services	Digital overlays	Updated continuously	Many GIS layers. See attachment #16, see Web Sites
Santa Cruz County	Planning Department	Digital overlay	Recent	Regional planning for the Santa Cruz County
City of Tucson	Stormwater Section, Transportation Planning	Digital overlay- Arcview & ACAD gauge locations, regional detention facilities	1996	City of Tucson, 1996
City of Tucson	Stormwater Section	Digital overlay- ACAD <i>Balanced and Critical Basin</i> Maps	1997	City of Tucson, 1997
City of Tucson	Stormwater Section	Digital overlay- Arcview & ACAD watersheds, watercourse, riparian habitat	1992	City of Tucson, 1992
City of Tucson	Department of Planning	Arcview and ACAD maps of many demographic and socioeconomic data	Updated	Specifics not available from the Dept. of Planning.
Pima Association of Govts.	N/A	Digital overlay of two maps in ACAD		Landfill and well quality maps may be available.
Tucson Water	Mapping	Digital overlay- ACAD, of Tucson Water infrastructure	Updated continuously	Approximately 30% of the City is available.
Tucson Water	Hydrology	Digital overlay- ACAD, of well locations	Updated yearly	Monitored locations only.
Tucson Water	Hydrology	Digital overlay- ACAD, water table map	Updated yearly	
OTHER AGENCIES				
University of Arizona	Hydrology	Digital overlay	Recent	water use/riparian vegetation for the Upper Santa Cruz, Nogales area

3. THEMATIC MAP PRODUCTS -Digital				
AGENCY	DEPARTMENT	MAP TYPE	DATES	NOTE
University of Arizona	School of Renewable Natural Resources	Digital overlay-Altar Wash	Pending	Proposal to the NRCS for a watershed study of the Brawley /Altar Wash near and upstream (south) of Three Points
University of Arizona	Hydrology/School of Renewable Natural Resources	Digital overlay-Saguaro National Monument	Just initiating	For the Park Service, a study of Rincon Creek development impacts, riparian areas, vegetation assessment

4. Web Sites for Map Information		
AGENCY	SITE	PRODUCT INFORMATION
FEDERAL AGENCIES		
USGS	http://mcmcweb.er.usgs.gov/drg	Digital Raster Graphic (DRG)- Product info. & online status graphics
USGS	http://edcwww.cr.usgs.gov/glis/glis.html	DRG- Digital Orthophoto Quadrangle (DOQ), Digital Elevation Model (DEM) Global Land Information System (GLIS) Search database
USGS	http://ftpmcmc.cr.usgs.gov	DRG- Map collar clipping routines
USGS	http://mapping.usgs.gov/pub/ti/DRG/drgstnds http://mapping.usgs.gov/pub/ti/DLG/dlgstnds http://mapping.usgs.gov/pub/ti/DOQ/doqstnds http://mapping.usgs.gov/pub/ti/DEM/demstnds	DRG, Digital Line Graph (DLG), DOQ, DEM - Data Standards Download
USGS	http://www-nmd.usgs.gov/www/products/1product.html	DLG, DOQ, DEM- USGS Geospatial Data, Information, and Related Products
USGS	http://edcwww.cr.usgs.gov/glis/hyper/guide/usgs_dlg#dlg11 http://edcwww.cr.usgs.gov/glis/hyper/guide/doq#doq22 http://edcwww.cr.usgs.gov/glis/hyper/guide/usgs_dem	DLG- USGS Digital Line Graph Background + Data Summary DOQ- USGS Digital Orthophoto Quadrangle data availability DEM- USGS Digital Elevation Model data advisability
USGS	http://edcwww.cr.usgs.gov/edchome/ndcdb.html#LRG	DLG- EROS Data Center Large Scale DLG- Download Information
USGS	http://rmmcweb.cr.usgs.gov/~dcatts/software	DOQ- Converting USGS DOQs into ARC readable format and download routines
NRCS	http://www.planning.gatech.edu/gisdata/html/usdoa.htm	
ARIZONA AGENCIES		
Arizona Geological Survey	http://www.state.az.us/gs/index.htm	List of publications (many with maps)
ALRIS, Arizona State Land Department	http://www.state.az.us/gis3/alris/	Central collection center for GIS data within the state

4. Web Sites for Map Information		
AGENCY	SITE	PRODUCT INFORMATION
ADOT	http://www.dot.state.az.us/	Reports listed
AZ Historical Society	http://www.azstarnet.com/~azhist/	
ART Lab, UA	http://grotto.snr.arizona.edu/ART/	
UA Library	http://www.sabio.library.arizona.edu/	
OTHER AGENCIES		
Pima County	http://www.dot.pima.gov/gis/data/content	List of all P.C. GIS products (see attachment)
COT Transportation	http://www.ci.tucson.az.us/transport/transview	List of COT transportation maps

5. Notes on Construction Plans and As-built Mapping Provided by the Pima County Department of Transportation and Flood Control District

Reach 1 –Bank Protection/Bridges

4FFEHR—Elephant Head (Canoa) Road Bridge at the Santa Cruz River Emergency Relief Project

- Pima County DOT and FCD
- Approved 9-18-95
- As Built 5/96
- Basis of Elevation: PT 716(Sec 4) Elevation 3005.67, BM PCHD datum. N 72029.6440 E 73374.7440
- No channel or bridge elevations given

4BACS1—La Canoa Road at the Santa Cruz River

- Pima County DOT and FCD
- Approved 11/19/84
- As Built 8/11/86
- Scale varies
- Sheet 4: Bridge centerline S58°24'25"E, Proposed Channel Grade elev. 2997.5
Center P.I. Elev. 3013.13
- Sheet 6: Center of bridge Elev. 3011.13
- Sheet 7: Abutment and Pier elevations

4BBRGA—Continental Road at Santa Cruz River, Abrego Drive to Old Nogales Highway

- Pima County DOT and FCD
- Approved 5/6/85
- As Built 7/15/86
- Scale varies
- Sheet 19: Shows two continental bridges
- Sheet 20: Show soil-cement profiles and elevations
- Sheet B1: Looks to be from another plan set but no title and was with this set, center of the bridge Sta. 127+34.13 Elev. 2856.00, Fin. Grade at P.I. Elev. 2855.13. Typical tip (bottom of pier) Elev. 2775.0. Begin Bridge Sta. 124+56.66, Fin Grade Elev. 2854.58. End Bridge Sta. 130+11.60, Fin Grade Elev. 2854.58. Fin Grade for Santa Cruz River Channel Elev. 2832.80

Reach 2 – Bank Protection

ER-19-1(83)—State Highway Nogales-Tucson Pima County, Bank Protection

- Arizona State DOT Highway Division
- As built
- Mostly bank protection, not many elevs.

Reach 2 – Bridges

M-0079—Hemet Peak-Sahuarita Road Santa Cruz River Bridge

- Pima County Highway Department
- Approved 6/19/75
- As Built 9/3/76
- Scale varies from sheet to sheet
- Sheet 2: Flow line Elev. 2705.8'
- Sheet 4: Center of bridge Sta. 360+00, P.I. Elev. 2712.38, E.H.W. Elev. 2705.8

Non FA 86(53)A—Plan and Profile of Proposed State Highway Nogales-Tucson Pima County, Sahuarita Bridge

- Arizona State Highway Department
- Approved 7/52
- Scale Varies
- Sheet 1: excavate channel to el. 2741 between piers 2 and 3

C5-68-2039—Pima Mine Road Santa Cruz River Bridge

- Pima County Highway Department
- Approved 12/31/69
- As Built
- Scale varies from sheet to sheet
- Sheet 2: New Channel Elev. 2644.0, Center of Bridge P.V.I. Elev. 2667.00
- Sheet 3: Top of concrete Elev. 2666.30

IR-ER-19-1-1(97)—Plan and Profile for Proposed State Highway Nogales-Tucson Pima County

- Arizona State DOT Highway Division
- Approved 6/85
- As built

Reach 3 - Not applicable**Reach 4 – Bank Protection****4BBRGB—Santa Cruz River Stabilization at Valencia Road**

- Pima County DOT and FCD
- Approved 12/17/84
- As Built 9/14/87
- Extents: N11000 to N9000
- USCGS Datum Elevation 2464.995, ADOT Brass Disk on SW corner of Valencia Road Bridge (Marked 2465.72)
- Scale varies from sheet to sheet
- Sheet 2: Plan view, survey mark on center of survey control line on bridge reads Elev. 2464.76
- Sheet 5: Show existing flowline but not channel or any elevations

4BBSTA—Santa Cruz Bank Protection Project Ajo Way to Irvington Road

- Pima County DOT and FCD
- Approved 11/24/87
- As Built 1/19/89

- Basis of Elevation: USCGS "PA-1 Reset 1963" Elev. 2414.228 at NE Quadrant of Ajo Way Interchange on I-19
- Sheet 6: Plan of Ajo Way Road, no elevations given
- Sheet 8: Irvington Road shown, center N89°39'55.25"E No elevations given

4FSCRA—Santa Cruz River South of Ajo Way (Kostka Ave)

- Prepared for the US Department of Agriculture and Soil Conservation Service
- Pima County DOT and FCD
- Approved 1/5/84
- Sheet 3: Show existing channel centerline but does not give elevation

4BBSTB—Santa Cruz River Bank Protection Mission Lane to 29th Street

- City of Tucson, Arizona DOT, Engineering Division
- Drawn Dec 1984
- Approved by Pima DOT 1/12/87
- As Built 10/3/88
- Datum: City of Tucson, BM brass cap in concrete 2'+ below ground level at southeast corner of Alameda and Main 25'+/- west of Padre Eusebio-Francisco Kino Monument NW of city Hall Elev. 2361.68
- Scale varies from sheet to sheet
- Cross Sections not available
- Sheet 4: 22nd street centerline N72°12'03"E
Elevation at BM at Station 117+14+/-10' ~2366.42, close to center of bridge
- Sheet 5: 29th Street centerline N89°38'31"E
BMs at both ends of bridge, Left BM=El. 2368.95, Right BM=El. 2368.96
29th Street Bridge Bottom of piers Elev. 2335.76

D-323—Emergency Watershed Project Plans for the Construction of Santa Cruz West Branch Energy Dissipator Structure

- Pima County DOT and FCD
- Drawn 5/91
- Elevations are in feet above the mean seal level USGS datum
- Scale varies from sheet to sheet
- Sheet 20: Grade channel to Elev. 2398+/-

D-81-05—Rio Nuevo Redevelopment Project Construction Plans for Santa Cruz River Flood Control Channelization

- City of Tucson, AZ DOT, Engineering Division
- Approved 11/22/82
- As Built
- Scale varies
- Extents: N16750 to N6500
- Sheet 2: Speedway Blvd. Center survey mark elev. 2326.5
- Sheet 3: Show St. Mary's Road
- Sheet 5: CAP Siphon, topo lines hard to read
Congress Street center P.C.C. N83-02-42E, Left Edge Elev. 2346.9, Right Edge Elev. 2346.8
- Sheet 7: Mission Lane center survey mark elev. 2334.3

Flowline Elev. and width dimensions measured 9/17/82, updated 11/12/82

4BBSTC—Santa Cruz River Bank Protection St. Mary’s Road to Speedway Blvd.

- Pima County DOT and FCD
- Approved 5/12/88
- As Built 5/89
- Basis of Elevation: Same as WO#4BSCSG
- Scale varies
- Sheet 9: Speedway Blvd. Centerline S88°33’02”E, give elevations of soil-cement also give Existing INV. Elev. 2308.67 and Proposed INV. Elev. 2307.00
- Sheet 13: St. Mary’s Centerline N85°19’27”W

4BSCSG—Santa Cruz River Bank Protection Speedway Blvd. To Grant Road

- Pima County DOT and FCD
- Approved 9/6/90
- As Built 12/91
- Basis of Elevation: Arizona Highway Department Disk Stamped “2337” set on top center of concrete headwall at west end of Box Culvert under Frontage Road along southbound lane of Interstate 10, 0.15 miles south of St. Mary’s Road. Established by Kuler and Associates as RM16 Elev.2336.46 for FEMA
- Scale varies from sheet to sheet
- Sheet 7: Grant Road center line N89°W 2595.74’
- Sheet 8: have “End top of Soil-cement elevations”

4FSLPK—Santa Cruz River Bank Protection Silvercroft Wash to Trails End Wash

- Pima County DOT and FCD
- Complete Date 4/15/93
- Approved Date 5/22/91
- Final Plan 5/7/92
- As Built 4/20/95
- Survey control, Origin of Project Coordinates Arizona State Plan, Central Zone
CO-ORD N 465193.95 E 776063.54 Scale Factor 1.0001263
- Scale varies

E-82-05—Santa Cruz River Bank Protection Flowing Wells Wash to Silvercroft Wash

- City of Tucson, Arizona
- Approved 11/82
- Vertical Control: Datum for project is a Pima County cap survey monument located on the corner of the Southeast headwall of the El Camino del Cerro road Bridge over the Santa Cruz River Elev. 2243.18’
- Scale varies
- Two sheet in middle of set don’t seem to belong, looks like have been placed there

E-85-20—Santa Cruz River at El Camino Del Cerro

- WO #4BBSTE
- Pima County DOT and FCD
- Approved 12/17/84
- Basis of Elevation: 4BSCR panel point 2118, A ½” iron pin located at the SW corner of

- Ruthrauff Road at I-10, approximately 15' North of a chain link fence and 25' West of a 3" AHD Brass cap El. 2242.045
- No info on elevations found

C-04-0178-03—Roger Road Wastewater Treatment Plant Sewerage Improvements and additional Dike Protection

- Also Design plan #B-110
- Pima County Department of Wastewater Management
- Approved 3/3/83
- As Built
- Datum is Pima County Highway Department Brass Cap monument on corner of the SE headwall on the El Camino Del Cerro bridge over the Santa Cruz River Elev. 2243.18'
- Scale is as shown on sheets
- New Flow line Grade = +0.3333%

HYX827—Santa Cruz River at El Camino Del Cerro Bank Protection Toedown Extension

- Pima County DOT and FCD
- Approved 3/2/94
- As Built 7/23/96
- Basis of Elevation: is 4BSCR panel point 2118, ½" iron pin located at the SW corner of Ruthrauff Road at I-10, approximately 15' north of chain link fence and 25' west of a 3" Brass cap Elev. 2242.045
- Toedown Extension Elevations given

Reach 4 – Bridges

I-19-1(19)—Plan and Profiles for Proposed State Highway Nogales-Tucson Pima County, Township Line to Valencia Road

- Arizona Highway Department Bridge Division
- Approved 12/62
- Scale varies
- Santa Cruz River Bridge, Sheet 1: Many bridge elevs. No channel elev.

4BVLSC—Valencia Road Bridge over Santa Cruz River

- Pima County DOT and FCD
- Drawn 8/87
- As Built 6/89
- Scale varies
- Have duplicate sheets
- Datum: BM, "+" cut on top concrete curb at centerline median Sta. 9+22.86 Elev. 2468.13 U.S.C.G.S. Datum
- Project BM: Brass Disk on SW corner of Valencia Road Bridge Sta. 15+61.40, 27.1' Rt. Elev. 2464.99 U.S.C.G.S. Datum
- Sheet B1: Bridge Plan and Section, Flowline Elev. 2440.0', Design Scour El. 2418.00
- Sheet C1: Typical roadway sections and details
- Sheet C3 and C4: Plan and Profile, INV at channel centerline at 101' Existing channel bottom elev. 24.40, Channel invert at 87'+/- Rt. Of Construction centerline Sta. 10+40 and Sta. 14+63, then transition to 104' +/- Rt. At Sta. 14+63

- Plan set also includes Water line Plan, Profile and details

4BDSAN—Irvington Road Santa Cruz River

- Pima County DOT and FCD
- Datum: Is the USCGS sea level datum of 2451.126' at the USCGS BM #y349(1960) located at intersection of I-19 and Irvington road
- Approved 10/17/80
- Scale varies
- Sheet 5: Plan and Profile, shows valley road-elevations are hard to read
- Sheet 6: Plan and Profile, centerline inv. Elev. 2409.17'

D-68-9—Ajo Way Bridge Across the Santa Cruz River

- Pima County DOT and FCD
- Project # S-222 (14)
- Surveyed in 1956
- As Built 10-6-58
- Sheet 2: All piles shall be to Elev. 2370.00

D-74-07—Santa Cruz River Bridge Proposed Repair (Ajo Way Bridge Repairs)

- Arizona Highway Department Structures Section, Bridge Division
- Project #S 222-915
- Scale varies
- Level Bottom of Pier Elev. 2382.00
- Centerline of bridge S89°47E

S-248—Santa Cruz Bridge at 29th Street (Silverlake Road)

- Arizona Highway Department Bridge Division
- Approved 8/6/53
- Scale varies
- Sheet 1: Fin. Grade Elev. 2374.00
Elev. 2365.0 Assumed hi-water for 15000 cfs max 40-yr flood record

D-77-04—22nd Street Bridge over the Santa Cruz River

- City of Tucson, AZ DOT
- Approved 9/77
- Scale varies
- As Built
- Sheet 1: Bridge Centerline S 6°06'01"W
- Sheet 2: Bridge Plan and Elevation, Bridge Profile Grade Elev. 2366.0, Bottom of piles Elev. 2323.0 and 2322.0, more elevations noted on plans

D-68-4—Congress Street Bridge at Santa Cruz River

- City of Tucson, Arizona, Department of Public Works
- Drawn 8-19-69
- Approved 5-70
- Scale varies from sheet to sheet
- Sheet 1: Roadway Plan, BM: Brass cap in Bridge Sidewalk
38' Rt. Sta. 5+67 Elev. 2347.13

38' Lt. Sta. 7+68 Elev. 2346.94

- Sheet 2: General Plan and Elevations, Station 6+68 close to center Elev. 2347.73 Bottom of center Pier Elev. 2315.0, center line of bridge N83°02'42"E

D-81-06—St. Mary's Road Bridge Modifications Rio Nuevo Project

- City of Tucson, AZ DOT

I-65-54A—St. Mary's Road Bridge at Santa Cruz River

- Arizona Highway Department Bridge Division
- Drawn 8-49
- Scale varies
- Sheet 1: Location details; Fin. Grade existing bridge Elev. 2334.85
Top of deck level at Fin. Grade
- Sheet 2: Deck Details—Drawn 7-1-49

D-65-3—West Speedway Bridge Foundation Data

- Arizona Highway Department Bridge Division
- Drawn 2/53
- Scale varies
- Fin Gr. Existing Bridge Elev. 2326.5
- Ground line Elev. 2314.00
- Excavate Channel to Elev. 2314.00
- Also includes Deck Details

D-73-09—Speedway Blvd. Over Santa Cruz River

- City of Tucson, Arizona Department of Public Works
- Approved 12/14/73
- As Built 1/23/75
- Scale varies from sheet to sheet
- Sheet 2: General Plan and Profile, Top of deck level at Fin. Grade,
- Low Streambed Elev. 07.0+/-, Left end pier bottom Elev. 09.92, Right end pier bottom Elev. 09.92

D-77-14—Grant Road Bridge and Speedway Bridge Santa Cruz Flood Damage Repairs

- City of Tucson, AZ DOT
- Approved 12/77
- As Built 10/24/79
- Scale varies

D-64-9—Grant Road Santa Cruz River Bridge

- City of Tucson, Arizona Department of Public Works
- Approved 7/65
- Scale varies from sheet to sheet
- Sheet 1: Elevations and Details,
B.F.Elev. 2279.91, B.P.Elev. 2279.80, B.P.Elev. 2279.57, B.F.Elev. 2279.21
Invert Elevation=96.00=Elevation of Abutment
- Sheet 2: Deck Framing Plan and Details

D-84-07—El Camino Del Cerro Road Bridge over the Santa Cruz River

- Pima County Highway Department
- Approved 1/8/79
- Have a duplicate/smaller copy
- Scale varies
- Sheet 7: Bottom of pier Elev. 2205.5 typ, Top of bank protection Elev. 2336.3
Q100 Elev. 2237.8

Reach 5 – Bank Protection/Levees**4FINAR—Ina Road Landfill Bank Protection at the Santa Cruz River**

- Pima County DOT and FCD
- Approved 12/10/80
- Scale varies from sheet to sheet
- Sheet 3: Has table listing Horizontal and Vertical Control data

4FIRP2—Ina Road Bridge at Santa Cruz River Bank Protection

- Pima County DOT and FCD
- Approved 8/10/95
- Scale as shown
- Elevation Basis: USCGS, P-292-1951, Brass cap in concrete post, SE corner of Ina road and Silverbell road intersection Elev. 2169.595'
- Sheet 5A: Top left Elev. 2156.10, Top right Elev. 2155.90, also gives toe elevations

4F712B—Santa Cruz River Bank Protection between Ina Road and Interstate 10

- Pima County DOT and FCD
- Approved 9/19/85
- As Built 3/91
- Cross sections not available
- Basis of Elevation: 3" Brass Cap S.M. on East End of Ina road Bridge, being at the SW corner of section 36 Township 12 south, Range 12 east G&SRB&M Elev. 2176.01
- Scale varies from sheet to sheet
- Sheet 10: CAP was main crossing is shown

4FFCOR—Santa Cruz River Bank Protection Repairs Continental Ranch (Cortaro Rd)

- Pima County DOT and FCD
- Approved 3/3/94
- AS BID
- Have duplicate sheets
- Elevation Basis: BM #8 Elev. 2142.44 ½" rebar set in concrete 110+/- Lt. Station 37+00 Cortaro Road
- Sheet 3 & 4: Elevations are given, not sure if they are applicable

B-109—Santa Cruz River Flood Control Improvements Avra Valley Rd to Cortaro Rd

- Pima County DOT and FCD
- As Built 11/29/88
- Datum: N.G.V.D. Datum USGS BM "P 292 195" at SE corner of Ina Road and Silverbell Road Elev. 2169.60'

- Have duplicate sets
- Future Bridge shown on sheets 17-18
 - Station 137+40 Grade Break Elev. 109.42
 - Station 137+70 Grade Break Elev. 112.65
 - Station 141+25 Grade Break Elev. 114.00
 - Station 141+55 Grade Break Elev. 111.00

Concept Plans for Lower Santa Cruz River Flood Control Levee

- Pima County DOT and FCD
- Scale varies
- No date given
- Extents: Avra Valley Road to Pima County Line
- Sheet 3: Avra Valley Road approximate elev. 2052.5
- Sheet 4: Shows CAP Siphon
- Sheet 6: Postvale Road Alignment approximate elev. 2002.1
- Sheet 9: Sanders road Survey Point taken close to middle of bridge elev. 1977.5
- Sheet 10: Show Avra Valley Road Alignment and Moore Road Alignment with survey point taken close to middle elev. 1953.5
- Sheet 12: Trico-Marana Road Survey point taken close to middle elev. 1935.5
- Sheet 14: Trico Road survey point close to center elev. 1909.5
- Sheet 15: Hardin Road approximate Elev. 1897.16

4F918A(1)—Lower Santa Cruz River Flood Plain Boundaries and the Hec-2 Cross-sections

- Pima County DOT and FCD
- Horizontal Datum=NAD83
- Vertical Datum=NAVD88
- Scale varies from sheet to sheet
- Mapping Date May 1995
- Plan Date January 1996
- Extents: can't read northings, little downstream of sanders road to N 504500
- Upstream edge of Sanders road Elev. 1981.38
- Downstream edge of Sander road Elev. 1980.94
- Bridge of Cement Plant Road---Upstream edge Elev. 2070.26, Downstream edge Elev. 2068.86
- Elevation point in middle of bridge, can't read numbers but looks like 2058.8

4F918A(2)—Lower Santa Cruz River Bank Protection Continental Ranch to Sanders Road

- Pima County DOT and FCD
- November 1998
- Horizontal Datum NAD 1983
- Vertical Datum NAVD 1988
- Scale varies
- Sheet P13: shows CAP siphon crossing Santa Cruz River

Reach 5 – Bank Bridges

4BBRGE—Ina Road Bridge over the Santa Cruz River

- Pima County DOT and FCD

- Approved 3/28/85
- Project #ER-423(7)
- Sheet 2: Bridge Plan and Section, centerline bridge Sta. 168+20.58 Elev. 2175.00
plans include all elevations for all piers, W.S. Elev. 2168.41'

4BBRGF—Cortaro Road and Bridge Improvement

- Pima County DOT and FCD
- Approved 8/14/87
- As Built 11/3/88
- Basis of Elevation: Based upon USCGS Datum, BMs P-292(2169.60) and K16(2166.49)
- Scale varies from sheet to sheet
- Sheet 27: Plan and Elevation, Begin Bridge F.G. Elev. 2156.75, End Bridge F.G. Elev. 2156.71 Stream Bed Elev. 2133.20, Design Scour Elev. 2105.20

4FCORO—Flood Damage Repairs East Bank, Santa Cruz River South of Cortaro Road Bridge

- Pima County DOT and FCD
- Approved 4/23/81

4TAVRB—Avra Valley Road Bridge at Santa Cruz River

- Pima County DOT and FCD
- Approved 9/96
- Scale varies from sheet to sheet
- Sheet R4: Begin Bridge El. 2081.94, End Bridge El. 2081.94, Center Bridge El. 2084.46
PVI El. 2088.46, Proposed Channel Flowline El. 2056.7
- Sheet SCR2: River and Bridge centerlines meet at S60°41'54"E and 90.62'
- Sheet S1: Fin Grade Elev. 2056.70, Design Scour Elev. 2022.70

4FFCRB—Urbanized Area Town of Marana, Cortaro Road at Santa Cruz River

- Project # ER-MRN-0(1)P
- Arizona State DOT Intermodal Transportation Division
- Approved 3/21/96
- As Built 5/97
- The Basis of Vertical control is a chiseled "X" in headwall of box culvert 53.5' south of Cortaro road and 101' west of Silverbell road. BM elev. 2149.929 (NAVD 1988)
- Scale is as shown
- Sheet 3: Plan view, centerline of bridge =N33°30'07"E; NOTE—The centerline of the bridge is the physical centerline of the structure. No centerline monumentation exists along Cortaro Road.
- Sheet 5: Show Bridge, abandoned gas line and water easement crossing the river. No elevations given.

4BSRSC—Sanders Road Bridge over the Santa Cruz

- Pima County DOT and FCD
- Approved 11/26/84
- As Built 1/6/86
- Scale varies

- Sheet 2: mark in center of bridge=170.42', centerline of bridge S0°57'11"E
- Sheet 3: Centerline Sanders road Elev. 1979.03, includes details and low-flow channel plans

M-0017—Santa Cruz River Bridge at Sanders Road

- Pima County Highway Department
- Approved 3/75
- As Built 10/75
- Sheet 10: Location details, New channel invert Elev. 1966.0, Top of deck at each pier elev. given
- No datum info

Reach 6 – Bank Protection**4FFSCR—Santa Cruz River Bank Protection Berry Acres**

- Pima County DOT and FCD
- Approved Date 2-17-94
- As Built
- Extents: N9200 to N10700
- Scale varies from sheet to sheet
- Basis of Elevation: AHD Brass Cap at the SW corner of the Trico Marana Bridge Stamped "AHD Sta. 77+32 Elev. 1937.85"
- No elevation information given under or of the bridge
- Have duplicate sheets 1-9

Reach 6 – Bridges**C7-61-12—Santa Cruz River Bridge at Trico Road**

- Pima County Highway Department
- Approved 12/31/62
- As Built 10/63
- Scale varies
- Sheet 2: Slab Bridge Plan and Profile, Existing Channel Elev. 89.0'
- Sheet 5: Pier Details, Elev. Top of pile 84.5', Top of footing level Elev. 85.5
- Also includes deck details

4FFTSC—Trico Road Bridge at the Santa Cruz River Emergency Relief Project

- Pima County DOT and FCD
- Approved 10/26/95
- As Built 8/96
- Basis of Elevation: All elevations are NAVD88, El. 1912.214 found PCHD Brass cap on wingwall NE corner of Santa Cruz Bridge
- Scale is as shown
- Extents: Downstream Trico Road to Sta. 566+00

4FBDRW—Trico-Marana Road Bridge Repairs over the Santa Cruz River

- Pima County DOT and FCD
- Drawn 8/87
- As Built 7/88

- Scales are as shown
- No elevations listed

4FFTMB—Trico-Marana Road Bridge at the Santa Cruz River Emergency Relief Project

- Pima County DOT and FCD
- Approved 8/10/95
- As Built 7/96
- Comes with two aerial photos
- No elevations given

FAS-373—Trico-Marana Bridge at Santa Cruz River

- Pima County Highway Department
- Approved 12/31/58
- As Built 4/9/59
- Scale as shown on sheets
- Sheet 1: Exc. Channel to Elev. 1920.00, Fin and Grade Elev. 1937.00 both at beg/end of bridge