

Section 5: Sewer Systems

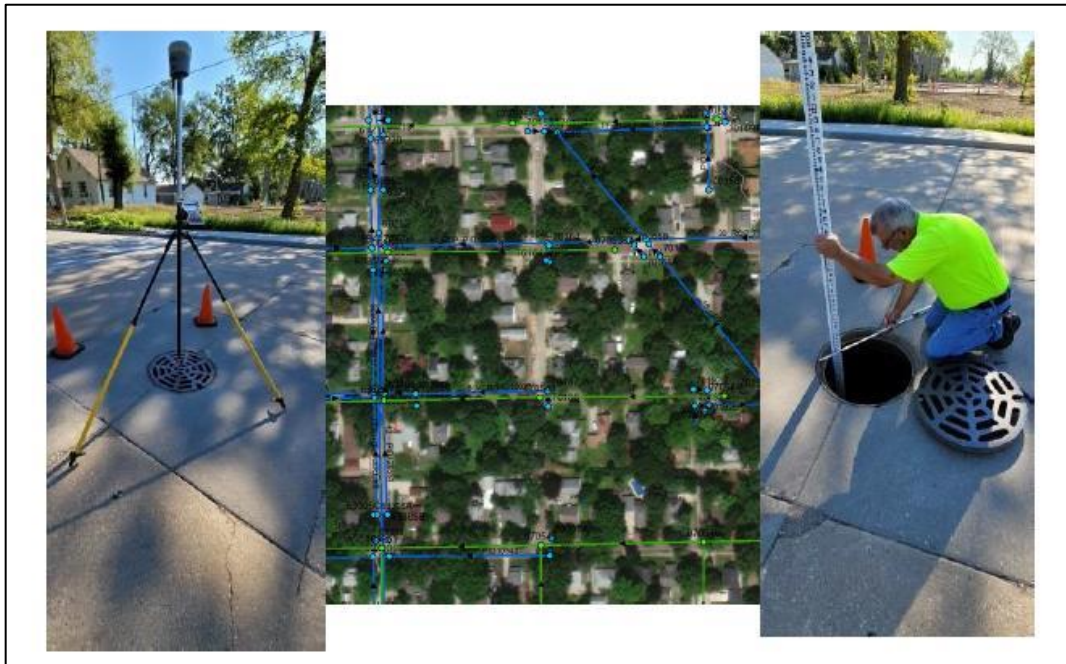
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Operations

Planning and GIS Data Acquisition

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40412 - STORMWATER MANAGEMENT PLANNING	201 SWUF	828,050	50,000	-	-	-	-
40514 - SANITARY PLANNING AND GIS	204 SAN	248,739	20,000	-	-	-	-
TOTAL		1,076,789	70,000	0	0	0	0



Description

Acquisition of detailed survey measurements, inventory data, and condition assessment of storm and sanitary manholes and inlets, and integration of data into the City's Geographical Information System (GIS).

Location

2,343 sanitary manholes, 4,195 storm manholes, and 4,077 storm inlets in the City's sewer system.

Purpose and Need

Existing GIS data for manholes and inlets is incomplete (only 3% of storm and 20% of sanitary structures are complete to date), generally lacking accurate elevation measurements and condition assessments. A complete set of measurements, inventory data, and condition assessment will allow for more robust analysis and planning for the City's sewer system.

Timeline

Begin FY23 and Finish FY25.

Changes from Previous CIP

Increased budget for more comprehensive scope.

Maintenance Programs

Miscellaneous Sewer Repairs

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40400 - STORMWATER SEWER MISC. REPAIRS	201 SWUF	311,949	375,000	390,000	405,600	421,824	438,697
40500 - SANITARY SEWER MISC. REPAIRS	204 SAN	463,718	210,000	214,200	218,484	222,854	227,311
40XXX – TIF 4 SEWER IMPRVMTS	343 TIF 4	-	150,000	150,000	-	-	-
TOTAL		775,667	735,000	754,200	624,084	644,678	666,008



Description

Unplanned repairs of storm and sanitary infrastructure.

Purpose and Need

Response to structural failures of pipes or structures, operational failures such as obstructions or severe root intrusion, localized flooding, and other urgent or emergency needs.

Timeline

Annual budget. TIF 4 (Cunningham Ave.) FY25 to Dec. 2025.

Location

Various locations in the sewer system owned by City of Urbana.

Changes from Previous CIP

Increased budget for storm sewer repairs as a result of increased stormwater utility rates. Added budget for TIF 4 (Cunningham Ave.).

Sewer Cleaning and Televising

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40402 - STORM SEWER CLEANING & TELEVISIONING	201 SWUF	342,000	1,070,000	900,000	630,000	1,130,000	1,190,000
40510 - SANITARY SEWER TELEVISIONING	204 SAN	231,000	220,000	-	-	300,000	180,000
40XXX - TIF 4 SEWER CLEAN & TV	343 TIF 4	-	300,000	-	-	-	-
TOTAL		573,000	1,590,000	900,000	630,000	1,430,000	1,370,000



Description

For storm sewer mains and sanitary sewer collectors, clean sediment, roots, and debris from pipes; and inspect condition of pipes with closed circuit television (CCTV) equipment.

Location

142.9 miles of storm sewer mains and 102.4 miles of sanitary sewer mains City-wide, organized into 11 maintenance zones.

Purpose and Need

Cleaning for regular maintenance of sewer lines, and condition inspection of pipes for asset management, capital improvement planning, and identification of unplanned repairs. Systematic cleaning and televising to supplement the cleaning and televising by City staff.

Timeline

Storm (contract): Zones 3+6+(TIF 4) in FY25, 1+9 in FY26, 5+20 in FY27, 2+7 in FY28, and 8+10 in FY29.
Sanitary (contract): Zones 6+(TIF 4) in FY25, skip FY26, skip FY27, 7 in FY28, and 10 in FY29.
Sanitary (City staff): Zones 3 in FY25, 9 in FY26, 1 in FY27, 5 in FY28, and 2 in FY29.

Changes from Previous CIP

Increased budgets for storm sewer to attain recent inspections for all zones by end of FY29.

Reduced budgets for sanitary sewer but combined contractor and City staff efforts to attain recent inspections for all zones by end of FY29.

Boneyard Creek Maintenance

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40405 - BONEYARD CREEK MAINTENANCE	201 SWUF	66,816	40,828	41,645	42,478	43,327	44,194
49201 – BONEYARD CRK MAINT REIMBURSEMENT	CHAMP IGA	-	40,829	41,645	42,478	43,328	44,194
40XXX – BONEYARD CREEK PARK MAINT	344 CENT TIF	-	25,000	25,000	25,000	25,000	25,000
TOTAL		66,816	106,657	108,290	109,956	111,655	113,388



Description

Maintenance of the Boneyard Creek channel, including diversion and retention structures. “Park maintenance” includes landscaping and removal of sediment deposits from paths.

Location

For channel maintenance, the limits of Boneyard Creek maintained by the City of Urbana, from Gregory St. to the Saline Branch. “Park maintenance” is generally located within Boneyard Creek Crossing, from Griggs St. to Broadway Ave.

Purpose and Need

By various intergovernmental agreements, City of Urbana is responsible for Boneyard Creek channel maintenance to improve or maintain proper conveyance of flow. City of Champaign will reimburse Urbana for eligible expenses according to terms of the agreements. Boneyard Creek Crossing is a public space with recreational and aesthetic features that require regular maintenance.

Timeline

Annual maintenance programs.

Changes from Previous CIP

Increased budget for Boneyard Creek Maintenance to maximize the contribution from City of Champaign. Added the “park maintenance” budget as distinct from channel maintenance.

Capital Projects (FY25 Construction)

Sewer Lining

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40418 - STORM SEWER LINING	201 SWUF	891,916	330,000	343,200	356,928	371,205	386,053
40511 - SANITARY SEWER LINING	204 SAN	514,068	205,000	209,100	213,282	217,548	221,899
TOTAL		1,405,984	535,000	552,300	570,210	588,753	607,952



Description

Cured in place pipe (CIPP) lining of existing storm sewer mains and sanitary sewer collectors.

Location

142.9 miles of storm sewer mains and 102.4 miles of sanitary sewer mains City-wide.

Purpose and Need

Rehabilitation of pipe segments that are candidates for lining and which were identified through cleaning and televising inspections. Most pipes will be lined once in their service life. In order to line all sewers over a 50-year period, the annual budget for lining would have to be \$1.4 million for storm and \$970,000 for sanitary.

Timeline

Annual rehabilitation program.

Changes from Previous CIP

Reduced budget for sanitary sewer lining to allow budget for cleaning and televising.

Boneyard Creek Crossing Improvements

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40414 - BONEYARD CREEK CROSSING IMPROVEMENT	201 SWUF	245,171	100,000	-	-	400,000	-
49201 – BONEYARD CRK MAINT REIMBURSEMENT	CHAMP IGA	113,034	-	-	-	-	-
40169 - BONEYARD CREEK LIGHTING	344 CENT TIF	9,000	150,000	-	-	-	-
TOTAL		367,205	250,000	25,000	25,000	425,000	25,000



Description

Bank stabilization, electrical repairs and enhancements, sediment control and water quality improvements, and retaining wall repairs.

Location

Boneyard Creek Crossing is located where Race Street crosses Boneyard Creek. Bank stabilization on north bank upstream (west) of Broadway Ave. Electrical work near Race St. Sediment control upstream (west) of Race St. Retaining wall repairs east of Race St.

Purpose and Need

Bank erosion requires repair to prevent property damage – UCSD participation is due to sewer crossing. Electrical work, primarily lighting improvements, and sediment control to improve utilization of Boneyard Creek Crossing for events and activities. Poor surface drainage is damaging a section of retaining wall. Applied for IL EPA 319 grant for design of sediment control and water quality improvements.

Timeline

Bank Stabilization Completed FY24; Electrical Plans FY24 and Construction FY25; Stream Improvements Studies & Plans FY25, Construction FY28.

Changes from Previous CIP

Delayed stream improvements by one FY since grant application was unsuccessful. Delayed electrical construction by one FY.

Vine Street Pump Station

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40416 - VINE STREET PUMP STATION	201 SWUF	75,000	-	-	-	-	-



Description

Replace one or both pumps, and upgrade control and communications systems.

Location

Vine St. crossing under Norfolk Southern Railway bridge, between Main and University.

Purpose and Need

Pump station for Vine Street storm runoff. The pump station is in need of rehabilitation, and it has no functioning communication system to alert City staff of pump failure or other problems.

Timeline

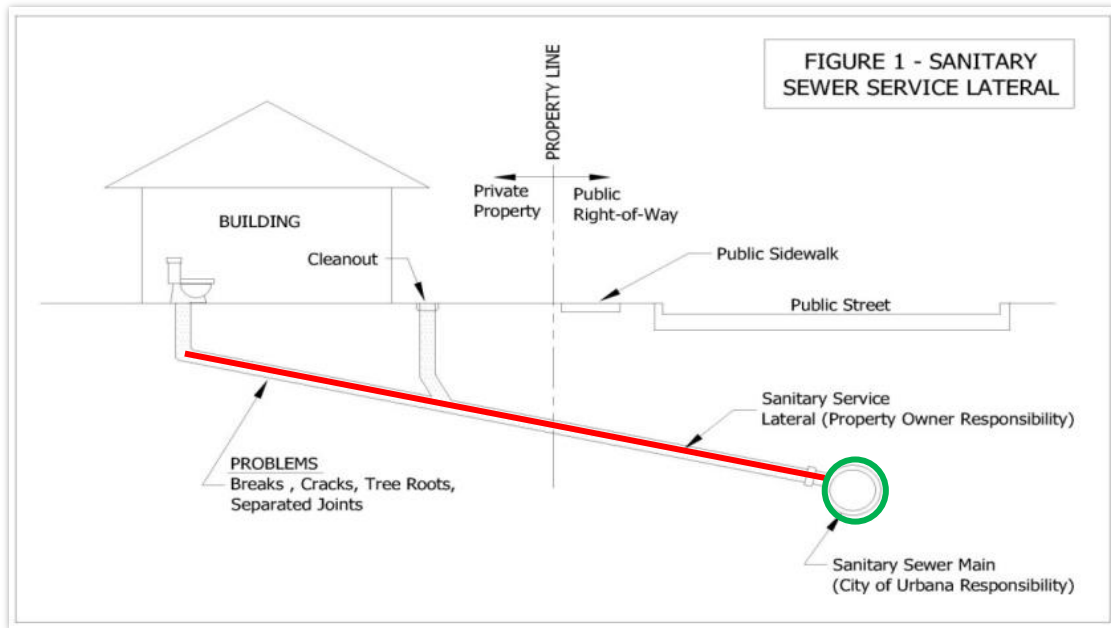
Construction FY24.

Changes from Previous CIP

None.

Sanitary Sewer Lateral Lining

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
ARPA LATERAL LINING	ARP-24	926,686	369,314	-	-	-	-



Description

Cured in place pipe (CIPP) lining of existing, private sanitary sewer laterals.

Location

Dr. Ellis Subdivision, generally bounded by Bradley Ave. to the north, Goodwin Ave. to the east, Ellis Dr. to the south, and City Boundary to the west.

Purpose and Need

Rehabilitation of private sanitary sewer laterals with lining can be a reliable, cost effective, and proactive alternative to excavating and replacing a pipe after it has failed. Reduces risk of costly repairs borne by property owner, and improves efficiency of sanitary sewer network by reducing infiltration. Pilot program funded by American Rescue Plan (ARPA).

Timeline

Studies & Plans FY24, Construction FY24.

Changes from Previous CIP

Construction started one fiscal year earlier.

Main Street Brick Arch Storm Sewer

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40417 - MAIN ST BRICK ARCH STORM SEWER RECONSTRUCTION	201 SWUF	386,260	-	-	-	-	-



Description

Replace existing, large diameter brick arch storm sewer with a new sewer in a different location.

Location

Sewer line from Main St. to Boneyard Creek, west of McCullough St. The sewer line is located under or adjacent to private buildings.

Purpose and Need

Public sewer lines located under or adjacent to private buildings presents a risk for high maintenance costs or property damage that the City seeks to mitigate by relocating the existing sewers.

Timeline

Study FY23, Plans & Construction FY24.

Changes from Previous CIP

Increased construction budget due to increased size of pavement patch on Main Street.

Carle Hospital Sanitary Sewer

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40513 - CARLE SANITARY SEWER	200 CR&I	165,000	500,000	-	-	-	-
40513 - CARLE SANITARY SEWER	204 SAN	11,882	-	-	-	-	-
TOTAL		176,882	500,000	0	0	0	0



Description

Provide alternative route for public sanitary flow which currently passes under buildings in the Carle Foundation Hospital campus.

Location

Study area generally bounded by Lincoln Ave. to the west, Church St. to the north, McCullough St. to the east, and University Ave. to the south.

Purpose and Need

Public sewer lines located under or adjacent to private buildings present a risk for high maintenance costs or property damage that the City seeks to mitigate by relocating the existing sewers.

Timeline

Study FY23-FY24, Plans & Construction FY25.

Changes from Previous CIP

Project timeline extended to allow for multiple seasons of flow monitoring observations to verify existing conditions for sewer network.

Capital Projects (FY25 Studies and Plans)

Storm Sewer Abandonment Study

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40419 - STORM SEWER ABANDONMENT STUDY	201 SWUF	106,940	-	-	-	-	-



Description

Feasibility study for existing storm sewers located in backyard utility easements.

Location

Neighborhood with existing storm sewers in backyard utility easements, generally bounded by Florida Ave. to the south, Race St. to the east, Carle Park to the north, and Orchard St. to the west.

Purpose and Need

Existing backyard sewers may have originally been combined sewers (for storm and sanitary flow). Feasibility study to determine what purpose these sewers serve today and what improvements would be required to abandon the existing sewers. Private improvements at ground level on the backyard utility easements make access very difficult for maintenance or repair to these sewers.

Timeline

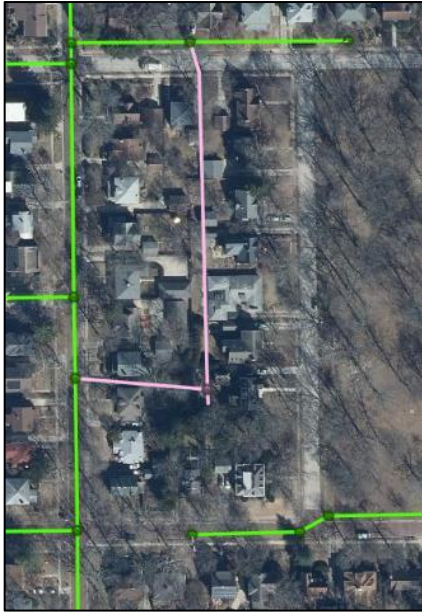
Study FY23-FY24.

Changes from Previous CIP

None.

Public Sanitary Sewer Service Gaps

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40515 - PUBLIC SANITARY SEWER GAPS STUDY	204 SAN	175,000	-	-	-	-	-



Description

Studies and improvements to fill in service gaps in the public sanitary sewer system. Solutions may include construction of new public sanitary sewer or conversion of an existing private sewer to City ownership and public use.

Location

Locations within the City of Urbana where a public sanitary sewer is not within a reasonable distance from the property.

Purpose and Need

Some properties in the City of Urbana are connected to the sanitary sewer system by privately-owned sewer laterals that serve multiple properties, while some properties have private sewage disposal (a septic system). Sewer laterals shared by multiple properties are not allowed for new construction or reconstruction. When private sewer laterals serve multiple properties, there is typically no written easement or agreement to establish the rights and responsibilities of the property owners, and this can result in private disputes when the shared sewer lateral is clogged or damaged. Private sewage disposal is not allowed when a public sanitary sewer is within a reasonable distance from the property, as defined by City Code.

Timeline

Study in FY24 to identify public sanitary sewer gaps throughout the City and propose feasible solutions.

Changes from Previous CIP

None.

Coler Avenue Brick Arch Storm Sewer

PROJECT	FUND	FY24 Projected	FY25 Allocated	FY26 Allocated	FY27 Allocated	FY28 Allocated	FY29 Allocated
40420 - COLER AVE BRICK ARCH STORM SEWER STUDY	201 SWUF	100,000	-	-	-	-	-



Description

Feasibility study for existing, large diameter brick arch storm sewer.

Location

Sewer line from Carle Park to Boneyard Creek, generally along Coler Ave. Sewer line is located under or adjacent to private buildings.

Purpose and Need

Public sewer lines located under or adjacent to private buildings presents a risk for high maintenance costs or property damage that the City seeks to mitigate by relocating the existing sewers.

Timeline

Coler Ave. Study FY24.

Changes from Previous CIP

Increased budget.