

**RESOURCE RECOVERY PROCESS AREA SPRINKLER
SYSTEM REPLACEMENT**

PROJECT STATUS: New

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

The fire sprinkler system at the Resource Recovery Plant does not currently meet City code because it lacks backflow prevention. The system also has had component failures due to its age and cannot be accessed outside the building. The City's insurance carrier recommended installation of additional sprinkler heads in the facility, which would necessitate installation of a larger service line to maintain flow.

Engineering for a fire system upgrade was originally planned for 2011/12 in the 2011-2016 CIP. This current project encompasses that engineering work and the broader scope outlined above.

COMMENTS

2013/14 Phase I: Engineering and construction of a new building to house backflow prevention and new system valves with access for emergency services personnel without having to enter the main building
2014/15 Phase II: Design, engineering and installation of replacement for existing 38-year-old process area sprinkler system

LOCATION

Arnold O. Chantland Resource Recovery Plant, 110 Center Avenue – Map 5, location N-11

FISCAL YEAR PRIORITY		3	2			
	TOTAL	2013/14	2014/15	2015/16	2016/17	2017/18
COST:						
Engineering	64,700	24,700	40,000			
Construction	440,670	180,670	260,000			
	TOTAL	505,370	300,000			
FINANCING:						
G.O. Bonds	505,370	205,370	300,000			
(abated by Resource Recovery revenues)						
	TOTAL	505,370	300,000			

PROGRAM - ACTIVITY:
Utilities – Resource Recovery

DEPARTMENT:
Public Works

ACCOUNT NO.
374-8911-489

RESOURCE RECOVERY SYSTEM IMPROVEMENTS**PROJECT STATUS:** Cost Change

Scope Change

City of Ames, Iowa
Capital Improvements Plan**DESCRIPTION/JUSTIFICATION**

This program is to purchase new and replacement components and equipment at the Resource Recovery Plant. Also included is funding for materials for two annual preventive maintenance projects (replacement of the #2 rotary disc screen rollers (RDS) and chains and rebuilding 20% of the C-1 conveyor). Resource Recovery personnel perform the work to complete the preventive maintenance projects.

COMMENTS

Proposed projects:

- 2013/14 Preventive maintenance materials for replacement of #2 RDS rollers and chains (\$40,250); complete rebuild of #2 mill motor (\$94,000); rebuild 20% of C-1 conveyor (\$19,550); tipping floor ventilation louvers (\$22,000); mill grates (\$25,000); power factor correction (\$60,000); HVAC improvement/construction (\$85,000); and purchase/install PDS cyclone (\$150,000)
- 2014/15 Preventive maintenance materials for replacement of the #2 RDS rollers and chains (\$46,000); replace #2 mill sideliners (\$41,000); replace glass crusher rotor (\$16,000); rebuild 20% of the C-1 conveyor (\$19,550); replace tipping floor concrete at C-1 area (\$180,000); and HVAC for electric room (\$22,000)
- 2015/16 Preventive maintenance materials for the replacement of the #2 RDS rollers and chains (\$40,250); replace ADS vessel (\$150,000); and rebuild 20% of the C-1 conveyor (\$19,550)
- 2016/17 Preventive maintenance materials for the replacement of the #2 RDS rollers and chains (\$40,250); rebuild 20% of C-1 conveyor (\$19,550); dust collection vessel (\$160,000); and install two dust collection vessels (\$100,000)
- 2017/18 Preventive maintenance materials for the replacement of the #2 RDS rollers and chains (\$40,250); rebuild 20% of C-1 conveyor (\$19,550); fire system air compressor (\$15,000); new shredder (2014) replacement parts (\$50,000)

The cost changes in 2013/14 and 2014/15 are due to two additional projects that have been identified in the annual evaluation of the 5-year maintenance needs of the plant: purchase/install PDS cyclone in 2013/14 (\$150,000) and HVAC for electric room (\$22,000) in 2014/15.

LOCATION

Arnold O. Chantland Resource Recovery Plant, 110 Center Avenue - Map 5, location N-11

FISCAL YEAR PRIORITY		1	1	1	1	1
	TOTAL	2013/14	2014/15	2015/16	2016/17	2017/18
COST:						
System Improvements	1,474,750	495,800	324,550	209,800	319,800	124,800
TOTAL	1,474,750	495,800	324,550	209,800	319,800	124,800
FINANCING:						
G.O. Bonds	150,000	150,000				
(abated by Resource Recovery revenues)						
Resource Recovery Fund	1,324,750	345,800	324,550	209,800	319,800	124,800
TOTAL	1,474,750	495,800	324,550	209,800	319,800	124,800

PROGRAM – ACTIVITY:
Utilities - Resource Recovery

DEPARTMENT:
Public Works

ACCOUNT NO.
374-8903-489
590-8903-489

**RESOURCE RECOVERY PRIMARY SHREDDER
REPLACEMENT**

PROJECT STATUS: Advanced
Revenue Change

Cost Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

This project is for the replacement of the 37-year-old, 1000 horsepower, high-speed primary shredder with an 850 horsepower hydraulic drive unit. The replacement unit will accept and process material that has previously been diverted directly to the landfill (feedstock such as furniture, mattresses, carpet, and "stringy" material). This new machine will have a higher through put capacity than the current machine and will also provide a safer operating environment by reducing explosion hazards. The estimated payback period for this equipment, based on reduced rejects, additional metal revenue, additional refuse-derived fuel (RDF) sales, and reduced operation and maintenance expenses, is 6.5 years.

This project will be completed in two phases: Phase One, which was originally scheduled for 2013/14, will be completed in 2012/13 and will consist of design and engineering work including removal and/or demolition specifications of existing equipment; layout, prints and bid documents for the installation of the new shredder; and associated belts and equipment (\$130,000).

Phase Two has been advanced to take earlier advantage of the energy savings with the new shredder. This phase will include the purchase and installation of the new shredder, associated conveyors, and electrical equipment. This equipment is intended to be flexible enough to receive alternative feedstocks or be incorporated in a potential gasification system if such a system is pursued.

COMMENTS

2013/14 Phase 2: #1 mill, feed and discharge conveyors purchase/install

LOCATION

Arnold O. Chantland Resource Recovery Plant, 110 Center Avenue - Map 5, location N-11

FISCAL YEAR PRIORITY		2				
	TOTAL	2013/14	2014/15	2015/16	2016/17	2017/18
COST:						
Construction/Installation	1,000,000	1,000,000				
	TOTAL	1,000,000				
FINANCING:						
G.O. Bonds	1,000,000	1,000,000				
(abated by Resource Recovery revenue)						
	TOTAL	1,000,000				
PROGRAM – ACTIVITY:		DEPARTMENT:		ACCOUNT NO.		
Utilities - Resource Recovery		Public Works		374-8914-489		

BUILDING EXPANSION & MODERNIZATION**PROJECT STATUS:** Delayed

Scope Change

City of Ames, Iowa
Capital Improvements Plan**DESCRIPTION/JUSTIFICATION**

In 2013/14, CyRide will complete work begun in 2012/13 to expand its facilities. This expansion consists of building additional bus storage (eleven more bus bays), flood protection (wall and gates), and increased ceiling height to accommodate the height of the hybrid buses and structural repairs. Currently, nine buses are parked outside each night, flood protection is only available on the east and a portion of the north side of the facility, hybrid buses cannot travel in parts of the original building, and portions of the facility are corroding as a result of the wet environment in the wash bay area. Each of these facility deficiencies will be addressed with this two-year construction process. In 2012/13, \$3,198,500 will be expended and \$2,525,976 will be expended in 2013/14. This project is funded with 80% federal/state grants and 20% local funding accumulated over several previous budgets.

An actuated fuel shut-off system will also be installed in 2013/14 to disengage the vehicle fueling system if a fire is detected anywhere in the building (\$36,000).

In years 2014/15, 2015/16 and 2017/18, \$170,000 per year in facility needs will be addressed. These funds could be used as local match to future federal/state grants or paid with 100% local dollars if grants are not available at that time for facility needs such as roof replacement or the next phase of CyRide's Facility Master Plan expansion. The use of these funds will be determined in future capital budgets.

COMMENTS

Originally, the facility construction project was to occur over the 2011/12 and 2012/13 budget years, but was delayed one year due to additional federal requirements as well as additional time that was needed to complete the design drawings and to coordinate these drawings with nearby ISU facilities.

The actuated fuel shut-off system is a new project recommended through a facility safety audit conducted by the City of Ames' previous property insurance carrier.

LOCATION

1700 University Boulevard – Map 5, location J-10

FISCAL YEAR PRIORITY		1	1	1	1	1
	TOTAL	2013/14	2014/15	2015/16	2016/17	2017/18
COST:						
Architect/Engineering	140,000	100,000	10,000	10,000	10,000	10,000
Repairs/Modifications	3,101,976	2,461,976	160,000	160,000	160,000	160,000
TOTAL	3,241,976	2,561,976	170,000	170,000	170,000	170,000
FINANCING:						
Transit Fund	1,221,195	541,195	170,000	170,000	170,000	170,000
Federal Transit Administration	2,020,781	2,020,781				
TOTAL	3,241,976	2,561,976	170,000	170,000	170,000	170,000
PROGRAM - ACTIVITY:		DEPARTMENT:	ACCOUNT NO.			
Transportation – Transit		CyRide	552-1175-439			

DESCRIPTION/JUSTIFICATION
It is anticipated that the Ames Community School District will gift an approximate 1.3 acre parcel of green open space to the City in 2013. This space will then be developed into a neighborhood park. Standard amenities in neighborhood parks include: basketball pad with goals, a small shelter, a play structure and swings, and utilities. The estimated costs for these improvements will total \$80,000.

COMMENTS
FY14/15: Develop the Roosevelt Neighborhood Park (\$80,000)

LOCATION
9th Street and Roosevelt Avenue – Map 5, location L-10

FISCAL YEAR PRIORITY		10				
	TOTAL	2013/14	2014/15	2015/16	2016/17	2017/18
COST:						
Park Development	80,000		80,000			
TOTAL	80,000		80,000			
FINANCING:						
Local Option Sales Tax (Park Development Reserve)	80,000		80,000			
TOTAL	80,000		80,000			
PROGRAM - ACTIVITY:	DEPARTMENT:		ACCOUNT NO.			
Community Enrichment	Parks and Recreation		030-4903-459			

PLAYGROUND/PARK EQUIPMENT IMPROVEMENTS**PROJECT STATUS:** Cost Change

Site Change

City of Ames, Iowa
Capital Improvements Plan**DESCRIPTION/JUSTIFICATION**

During the past 25 years, the City has replaced old play equipment throughout the park system. The life expectancy of play equipment is 20 – 25 years. Therefore, it is necessary to begin replacement of playground equipment that was installed at the beginning of this cycle.

Outdoor exercise equipment, similar to the equipment located in the Community Center weight room, will be placed at Moore Memorial Park. Approximately six to eight pieces of equipment will be grouped together on a concrete pad adjacent to the walkway. This equipment will provide fitness benefits to residents in a natural setting.

It is anticipated that in 2013 the City will enter into an agreement with Ames Community Preschool (ACPC) so their green open space (adjacent to their building) can serve as a neighborhood park. The public will be allowed to use the site when ACPC is not in session.

COMMENTS

- 2013/14: Brookside Park (\$30,000) replacement of tot piece adjacent to Maple Shelter – Map 5, location K-10, Moore Memorial Park outdoor exercise equipment (\$20,000 - Wellmark 3 Point Play funding); ACPC play equipment (\$30,000) – Map 5, location N-10
 2014/15: Duff Avenue Park (\$20,000) replacement – Map 5, location M-9; Teagarden Park (\$20,000) new installation – Map 9, location N-17
 2015/16: Christopher Gartner Park (\$25,000) replacement – Map 4, location E-12; Hutchison Park (\$20,000) replacement – Map 4, location D-9
 2016/17: Daley Park (\$35,000) replacement – Map 4, location C-11
 2017/18: Inis Grove Park (\$40,000) replacement adjacent to Shagbark Shelter – Map 2, location M-7

FISCAL YEAR PRIORITY		3	3	3	2	3
	TOTAL	2013/14	2014/15	2015/16	2016/17	2017/18
COST:						
Construction	240,000	80,000	40,000	45,000	35,000	40,000
TOTAL	240,000	80,000	40,000	45,000	35,000	40,000
FINANCING:						
Local Option Sales Tax	220,000	60,000	40,000	45,000	35,000	40,000
Wellmark 3 Point Play Funding (April 2014)	20,000	20,000				
TOTAL	240,000	80,000	40,000	45,000	35,000	40,000

PROGRAM - ACTIVITY:
Community Enrichment**DEPARTMENT:**
Parks and Recreation**ACCOUNT NO.**
030-4967-459
113-4964-459