



January 20, 2016

Mayor and Members of the Ames City Council:

I am attaching for your review and approval the City Manager's Recommended five-year Capital Improvements Plan (CIP) for fiscal years 2016-17 through 2020-21. This document reflects \$188,226,802 of expenditures from various City, State, and Federal revenue sources to accomplish important infrastructure improvements in our community.

Over the years, the citizens of Ames have benefitted from the City Council's commitment to maintaining the City's infrastructure when other communities throughout the country were unable or unwilling to make the type of financial investment needed to accomplish these improvements. As we look to the next five years, this commitment is even more important. Our community has experienced unprecedented growth over the past five years, fueled by Iowa State University's increase in enrollment of 6,114 students, the addition of 6,500 jobs in our metro area, and the physical expansion of our city limits by 672 acres, with its corresponding need for more streets, water lines, sewer lines, and electric lines to accommodate this growth.

Many of the projects reflected in the CIP involve our utilities, which are critical for maintaining the quality of life in Ames, though they are less visible to our citizens. With the recent adoption of our new Long Range Transportation Plan, we now have an updated blueprint to guide implementation of the various street, bridge, and bike path improvements over the next five years.

We have a daunting task before us to meet the obligation to extend City infrastructure into newly-developed areas as well as maintain the existing infrastructure where age has taken its toll on these facilities. Our annual Street Analysis system indicates that 52% of our streets are in need of repair, with an estimated total cost of \$158,000,000. Fortunately, during the past session, the State Legislature increased the Road Use Tax by \$0.10 per gallon, which will generate approximately an additional \$1,000,000 per year to the City. As a result of this action, you will notice in the CIP that this additional funding source has been applied to finance many of the much needed projects.

I have attempted in the following paragraphs to highlight the new projects that have been introduced in the Plan, the increased funding that is being recommended for a particular project, and the most significant projects that are included in the Plan.

PUBLIC SAFETY - \$7,044,222

Over the next five years, \$251,722 has been earmarked in the CIP for improvements to roofs, driveways, and restrooms at **Fire Stations #1 and #2** (pages 9, 10, and 11).

This Plan also includes a \$750,000 commitment by the City to install **Accessibility Enhancements** (page 18) throughout the community in the form of ADA ramp improvements along with upgrades at traffic signals and other publicly-owned parking facilities.

With the approval of the new Long Range Transportation Plan and its greater emphasis on integrating bicyclists and motorists on-street, the CIP reflects a significant increase in funding to \$648,500 for **Multi-Modal Roadway Improvements** (page 22) over the next five years.

Included in the Long Range Transportation Plan is a commitment to the Complete Streets concept. Therefore, the **Traffic Engineering Studies** project (page 21) identifies funding in FY 2016/17 to create a Complete Streets Master Plan that will guide the design of our streets/paths in the future.

In an effort to reduce accidents and facilitate traffic movement through one of our busiest corridors, the **US Highway 69 Improvements** project (page 17) identifies a plan to install a median along South Duff from S. 5th to the Squaw Creek bridge and a new signalized intersection at the south end of the Walmart Center. In addition, this project includes an outer-road on the east side of South Duff to provide access to the businesses impacted by the new median. The intersection at South Duff and U.S. Highway 30 will also receive attention under this Plan with the installation of a new traffic signal at the eastbound off ramp.

The **Intelligent Transportation** projects (page 19) that are being introduced in this CIP will result in the installation of traffic adaptive signal systems along Duff Avenue and Lincoln Way. These new systems will allow for real-time optimization of traffic and pedestrian flow at signalized intersections.

UTILITIES - \$105,041,950

ELECTRIC UTILITY - \$28,275,000

With the completion in FY 2015/16 of the conversion of our Power Plant from a coal-fired to a gas-fired operation, thereby reducing our carbon footprint by 40%, a number of projects remain to be accomplished to maintain our generating units. These projects will require an approximately \$11,000,000 investment to **overhaul Unit #7 and Unit #8** (pages 41 and 45), **reconstruct the precipitator** (page 44), **install a fire protection system** (page 42), **repair boiler tubes** (page 40), and **replace relays and controls** (page 38).

In addition to placing an emphasis on the Power Plant, a major focus in the CIP is directed towards improvements to our distribution system (\$3,300,000) and to our transmission system (\$5,825,000) over the next five years.

The City Council's sustainability goal is reinforced in this CIP. First, the **Demand Side Management** project (page 29) sets aside \$5,000,000 for our electric customers who initiate energy conservation or efficiency measures that reduce the system's peak load demand. This program has yielded sufficient success that the need to develop **New Electric Generation Capacity** (page 39) has been delayed in the CIP. Second, **Retrofitting LED Street Lights** (page 34) is being introduced in the CIP with the expectation that 7,500 roadway and security lights will be replaced by LED fixtures over the next five years, thus reducing our maintenance costs, lowering energy usage, and decreasing glare.

WATER UTILITY - \$35,725,300

The City's largest single CIP facility project ever is highlighted in the **New Water Treatment Plant** (page 47). This \$71,241,000, 15 million gallon per day plant is projected to satisfy the water needs of our community for the next 20 years. Because the City has committed to design this facility to LEED standards, we have received a \$6,600,000 grant for these sustainability efforts.

Along with the new capabilities to meet our treatment needs in the new plant, we have identified sites for new wells to provide much needed water capacity. The **Water Supply Expansion** project (page 48) calls for the construction of three new wells north of 13th Street and west of Stagecoach Road. Each well will have a capacity of 1.5 million gallons per day.

In an effort to improve efficiency and improve customer service, the **Advanced Metering Infrastructure** project (page 49) calls for the conversion to an automated meter reading system over the next eight years.

The distribution lines receive an emphasis in this CIP with the **Water System Improvements** program (page 66). Due to the increasing number of rusty water complaints received this past year, the investment into this initiative has been increased by \$200,000 per year for a total of \$6,500,000.

Two new initiatives have been added to this five year plan. First, the **Ada Hayden Water Quality Study** (page 51) will assure that the lake is periodically checked to determine if the development practices in the watershed required by the City have been effective in preserving the quality of the lake. Second, a **Lime Lagoon Expansion** project (page 54) will result in the reconfiguration of the largest lime cell, making the operation and clean-out of the cell easier.

SANITARY SEWER UTILITY - \$30,827,000

In 2012, we completed a comprehensive evaluation of the structural condition of the buildings and other structures at the treatment plant. Based on the results of this study, numerous projects were added to the CIP. These improvements included: **Residuals Handling** (page 56), **Digester Improvements** (page 57), **Clarifier Maintenance** (page 58), **Co-generation System Maintenance** (page 60), **Electrical Maintenance** (page 61), and **Structural Rehabilitation** (page 62).

In order to meet the projected peak weather flows, the following three strategies will be pursued: 1) operational modifications at the treatment plant, 2) removal of 25% of the infiltration through the rehabilitation of our sanitary sewer lines, and 3) an expansion to the equalization basin capacity. Therefore, the **Flow Equalization Expansion** project (page 64) will add an additional 6 million gallons to the basin, increasing the treatment plant's storage capacity to 10.4 million gallons. In addition, the **Sanitary Sewer Rehabilitation** program (page 69) earmarks \$19,120,000 over the next five years to fix deteriorated sewer lines and manholes to decrease infiltration into the system.

In preparation for the Iowa Department of Natural Resources program to require **Nutrient Reduction** (page 63) at our plant for an estimated cost of \$35,000,000, this CIP signals the initiation of a preliminary engineering report to advise how to most effectively satisfy this new state mandate.

STORM SEWER UTILITY - \$8,313,400

Following the 2010 flood, the City Council established a goal to mitigate the impact of future river flooding. A comprehensive flood mitigation study indicated that channel improvements along Squaw Creek would be the most cost-effective method of mitigating flooding. Therefore, the **Flood Mitigation – River Flooding** project (page 72) commits \$1,500,000 towards channel restoration work within 2,000 feet either side of the South Duff Bridge which is projected to reduce flooding on South Duff Avenue by approximately two feet.

During major rainfall events, the community has experienced over-land flooding in neighborhoods. To help reduce street flooding caused by non-functioning storm sewers, the \$1,250,000 **Storm Water Improvement Program** (page 73) will replace deteriorated pipes and intakes that will help convey water to peak rain events.

As the City grows, more impervious areas are installed with the corresponding developments. In order to help mitigate the impact of associated storm water runoff, the **Storm Water Erosion Control Program** (page 74), **Low Point Drainage Improvements** (page 75), **Storm Water Facility Rehabilitation Program** (page 76), and **Storm Water Quality Improvements** (page 77) are included in the CIP totaling \$4,843,400.

RESOURCE RECOVERY - \$1,901,250

Because of our innovative Resource Recovery system, we are one of the most effective communities in reducing the amount of garbage that must be placed in a landfill. Since every ton of material that is rejected from our process and sent to the landfill costs us \$61.50, we are constantly exploring ways to become even more effective in our waste processing techniques. The new **Material Handling System** (page 80) will accomplish this goal by improving 1) the air quality in the process area, 2) the Refuse Derived Fuel quality, and 3) the bag house performance resulting in maximum material processing and a reduction in the amount of waste transported to the landfill.

Various other improvements to this utility are included in the **Resource Recovery System Improvements** program (page 81) where \$1,676,250 is earmarked for various preventive maintenance projects to replace rollers, belts, chains, conveyors, pumps, and operations software.

TRANSPORTATION - \$70,583,130

In keeping with the priorities identified by our Citizen Satisfaction Survey, a great deal of emphasis is being placed on improving our transportation system in this planning document.

Perhaps the most requested street project is the **Grand Avenue Extension** (page 87) from S. 3rd/4th to S. 16th Street. Work on this \$20,623,000 project is already underway focusing on the federally mandated environmental analysis of the proposed route. Project design and land acquisition is planned for FY 2016/17 with construction of the roadway and bridge to be accomplished in FY 2017/18 and FY 2018/19. In order to advance this project in the CIP, other projects listed in the previous CIP were delayed in this document.

Approximately \$35,000,000 are planned for **Asphalt Street Pavement Improvements** (page 88), **Concrete Pavement Improvements** (page 90), **Arterial Street Pavement Improvements** (page 91), **Downtown Street Pavement Improvements** (page 92), **Seal Coat Street Pavement Improvements** (page 93), **CyRide Route Pavement Improvements** (page 95), **Collector Street Pavement Improvements** (page 96), and **Cherry Avenue Extension** (page 97). In addition, the financial commitment to **Pavement Restoration** (page 102) has been increased from \$375,000 to \$1,250,000 over the life of the CIP for various maintenance techniques to preserve our City streets.

Our off-street path system receives emphasis in the CIP with \$2,654,800 identified for the **Shared Use Path System Expansion** (page 89) and \$625,000 for **Shared Use Path Maintenance** (page 104).

In keeping with the City Council's desire to improve the appearance of City infrastructure, the **Right-of-Way Appearance Enhancements** (page 103) and the **Right-of-Way Restoration** (page 94) programs include \$1,845,000 to be used on retaining walls, entryways, medians, and right-of-way enhancements.

The latest bridge inspection report has identified the need to repair the concrete end rails and approach pavement on the Dayton Avenue bridge over the Union Pacific Railroad. This work is provided for in the **Bridge Rehabilitation** program (page 100).

In response to our unprecedented growth in ridership and a decrease in federal funding for capital, the **CyRide Vehicle Replacement** program (page 106) includes the purchase of 25 used buses, along with 13 new buses, over the next five years. With the original bus storage building now 32 years old, \$2,365,000 is being earmarked to replace the roof, HVAC system, bus hoists, bus wash, and fueling system in the **CyRide Building Expansion & Modernization** program (page 107). In response to one of the most frequently requested service, the **Bus Stop Improvements** program (page 109) will make it possible to install two to three new shelters each year.

COMMUNITY BETTERMENT - \$5,557,500

Our park system continues to be one of the top contributors to the quality of life in our community. Therefore, the CIP devotes a significant amount of funds to improve these facilities. The **Park System Improvements** program (page 116) signals removing the wading pool at Brookside Park and replacing it with a new spray pool pad out of the flood plain. In addition, irrigation systems will be installed in the two open sports fields at Inis Grove and River Valley Parks to allow these areas to better accommodate the concentrated use by our recreation programs.

In order to assure that we maintain the fun factor at the **Furman Aquatic Center** (page 120), plans for a new, yet to be determined major feature are included in FY 2017/18. This new attraction could include a speed slide, climbing wall, or swirl slide.

The old house that was moved in to serve as the clubhouse at our municipal golf course has exceeded its projected life span. Therefore, the CIP earmarks \$300,000 in the **Homewood Golf Course** (page 121) to construct a new structure to serve as not only the clubhouse, but also a multi-purpose facility for the winter months.

In an effort to further expand our recreational trail system, a new east/west link is envisioned with the construction of the **Moore Memorial Park Pedestrian Bridge** (page 125) that will connect this park to Ontario Street.

In FY 2015/16 an assessment will be made to determine if any of our park system facilities are not in compliance with the standards under the Americans With Disabilities Act. During the following five years, \$125,000 has been earmarked in the **ADA Transition Plan Improvements** (page 122) so that we can begin to make modifications where needed.

Finally, as our city continues to develop, this document plans for two new neighborhood parks, **Sunset Ridge** (page 124) and **Rose Prairie** (page 126).

The City Council will continue its commitment to strengthening our neighborhoods by setting aside \$1,125,000 for the **Neighborhood Improvement Program** (page 128), **Downtown Facade Improvement Program** (page 130), and the recently approved **Campustown Facade Improvement Program** (page 131).

I want to offer my special thanks to our Department Heads who have identified the need for the various projects contained in the CIP. This is a very difficult task given that our citizens have varying opinions as to which infrastructure projects they would prefer to have reflected in this document and, no doubt, will not be happy with all of their recommendations. This is particularly true this year with the approval of the new Long Range Transportation Plan. In addition, I want to express my gratitude to Bob Kindred, Assistant City Manager, Duane Pitcher, Finance Director, Nancy Masteller, Budget Officer, Emily Burton, Finance Department Secretary, and Derek Zarn, Printing Services Technician, for their work to help create this five year plan.

Sincerely,



Steven L. Schainker
City Manager