

TO: Programs, Projects, and Operations Subcommittee

FROM: Lori Ann Laster, Stormwater Management Engineer

SUBJECT: FY 2017 Urban Cost Share Programs

- Stormwater Best Management Practices Program
- Flood Mitigation Planning and Mapping Program

DATE: April 4, 2016

The District solicited applications for the urban cost share programs from the various units of government in the District for the upcoming fiscal year. The following applications were received.

Stormwater Best Management Practices Program

The Stormwater Best Management Practices Program cost shares with units of government and non-profit organizations to encourage installation of practices to control stormwater runoff and improve water quality. The Policy Manual allows for Management approval of all applications.

In Fiscal Year 2016 the program guidelines were revised and applications were open for the year. One project has been approved for the Northwest High School Rain Garden. The total project cost is \$28,200 and the cost share approved is \$5,000.

For Fiscal year 2017, the City of Omaha submitted an application for Dundee Elementary School. The project will include installation of rain gardens, rain barrels, permeable pavement, and natural plantings. Educational programming will be incorporated into the design, construction, and maintenance of the project. The entire cost of this project will be \$50,000 and the City is requesting \$5,000 in assistance.

The University of Nebraska Omaha is requesting assistance to install a rain garden on the southeast corner of the Barbara Weitz Community Engagement Center to divert water from storm sewers. The project will incorporate student work from the Introduction to Sustainable Landscape Design class at UNO. The total cost for this project is \$10,000 and the University is requesting \$5,000 in assistance.

The total funding to be included in the FY 2017 budget for this program is \$10,000.

Flood Mitigation Planning and Mapping Assistance

The Flood Mitigation Planning and Mapping Assistance Program provides cost share to governmental entities to help identify flood prone areas and plan projects to reduce flood risk and damage.

New program applications were received and are outlined below.

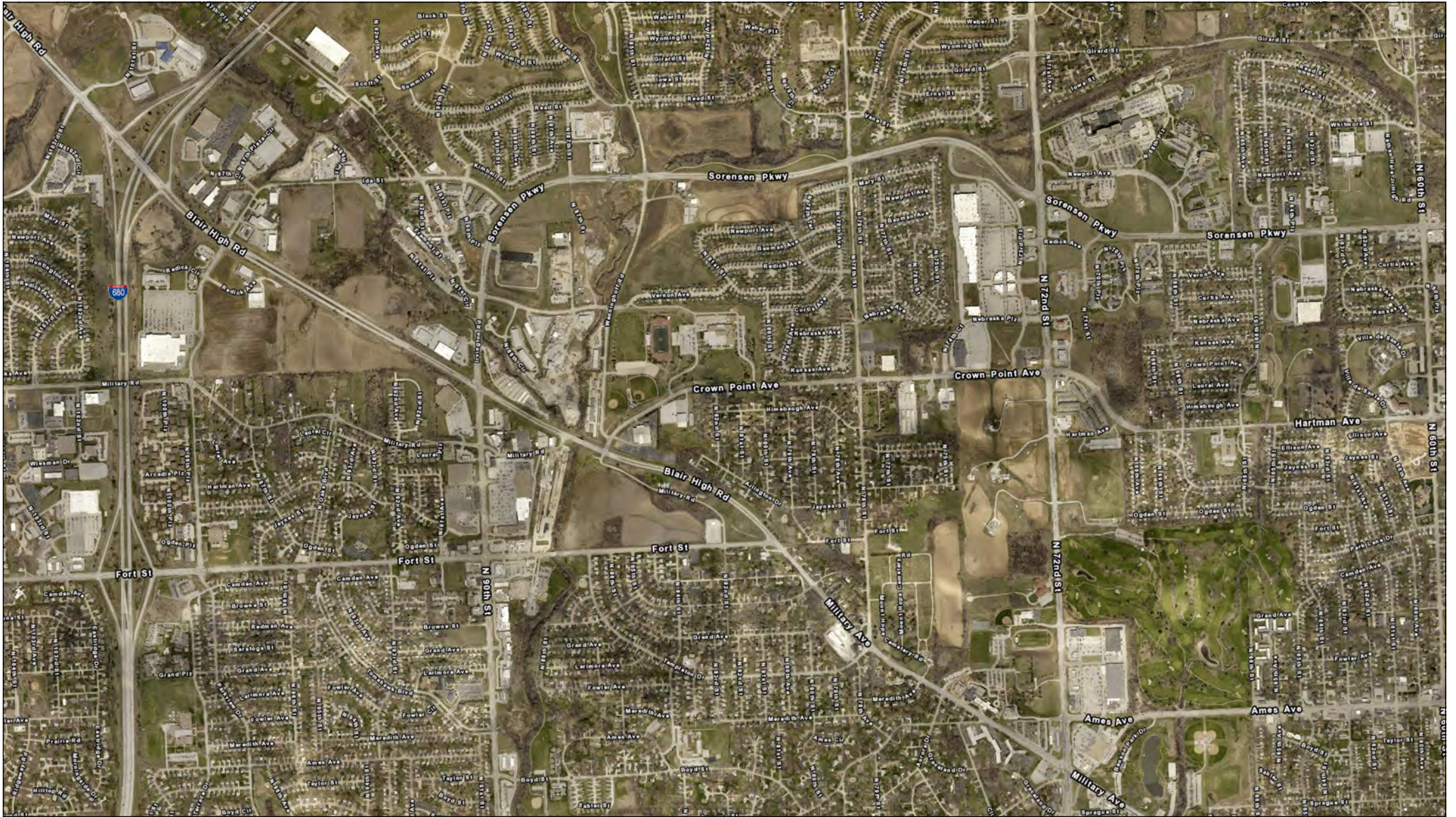
The City of Blair has requested assistance to reevaluate the floodplain of Cauble Creek in northwest Blair. The total cost of this project is \$71,050 and the City is requesting a total of \$35,525.

The City of Blair has requested assistance to reevaluate the floodplain of South Creek in southern Blair. The total cost of this project is \$84,370 and the City is requesting a total of \$42,185.

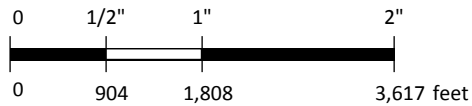
Guidelines for District Program 17.39 require that the applicant apply for and receive federal funds in order to apply for District cost share. However, the small dollar amounts and potential for excessive delays in project implementation make federal funding infeasible for these projects. Staff believes these are worthwhile projects and that the state and federal funding requirements should be waived.

- **It is recommended that the Subcommittee recommend to the Board of Directors that the District Program 17.39 requirement for state and federal funding be waived and that the Flood Mitigation Planning and Mapping Assistance Program applications from the City of Blair be approved, for a total of \$77,710, subject to funding in the FY 2017 Budget.**

Northwest High School



1 : 21,700
1 = 1,808



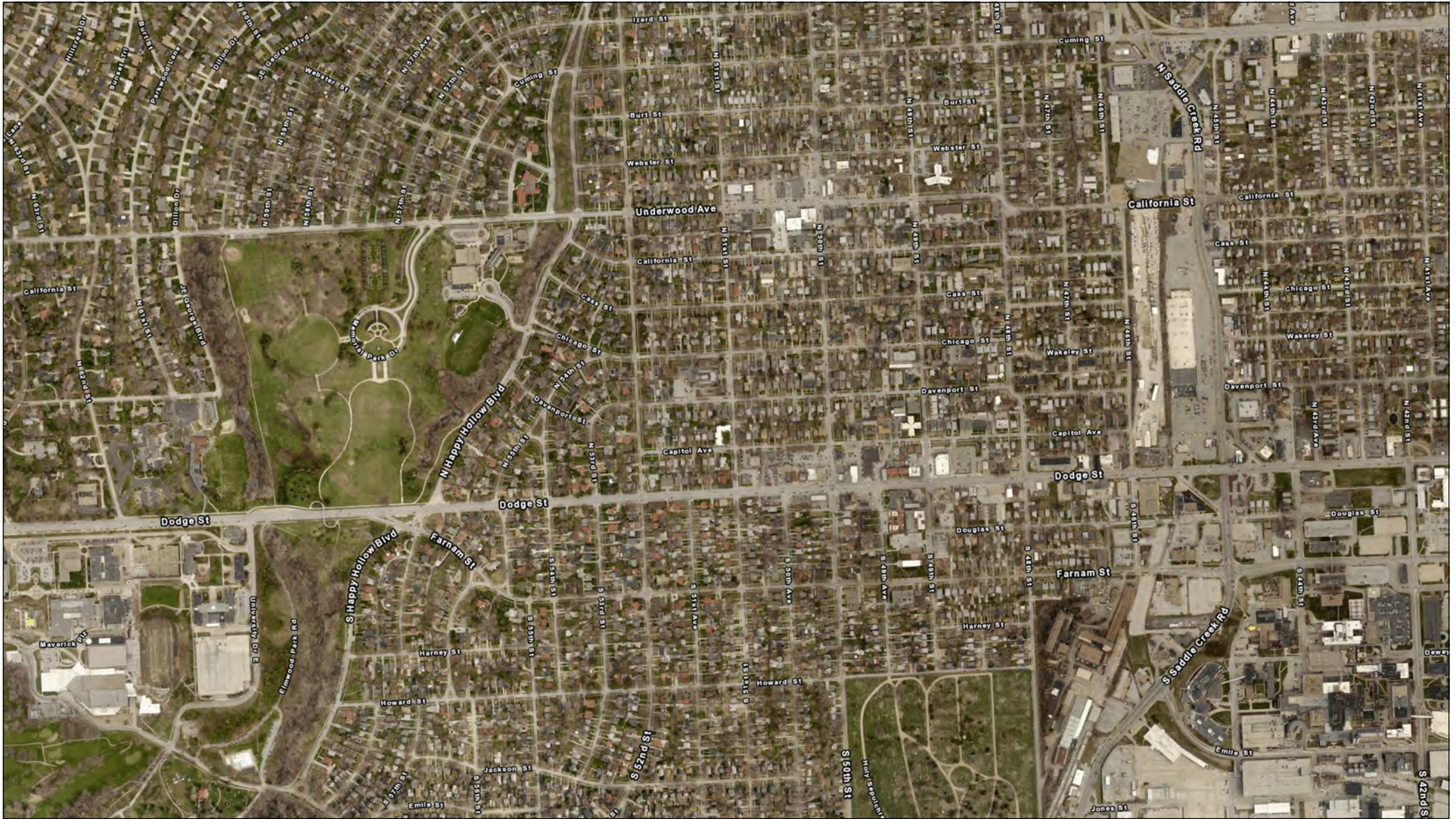
This map is a user-generated, static output. It is for reference only. Data on this map may not be accurate, current, or otherwise reliable. It is for informational purposes only, and may not be suitable for legal, engineering, or surveying purposes.

Douglas County GIS

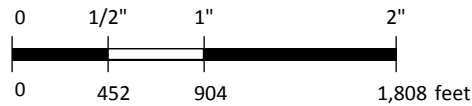


1819 Farnam St
Suite 402
Omaha NE, 68183

Dundee Elementary School



1 : 10,850
1 = 904



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Douglas County GIS



1819 Farnam St
Suite 402
Omaha NE, 68183



Stormwater BMP Program – Application Form

Project name Dundee Elementary School
 Project location (attach location map) 310 N. 51st St Omaha, NE 68132
 Sponsor organization City of Omaha
 Sponsor address 5600 S. 10th St
 City Omaha State NE ZIP 68107
 Contact person Nina Cudahy & Andy Szatko
 Title Environmental Quality Control Division Manager + ERC Tech I
 Email address Nina.Cudahy@cityofomaha.org Daytime phone 402-444-3915 x229
Andy.Szatko@cityofomaha.org x200

Description of stormwater best management practice and how it will be incorporated in this project

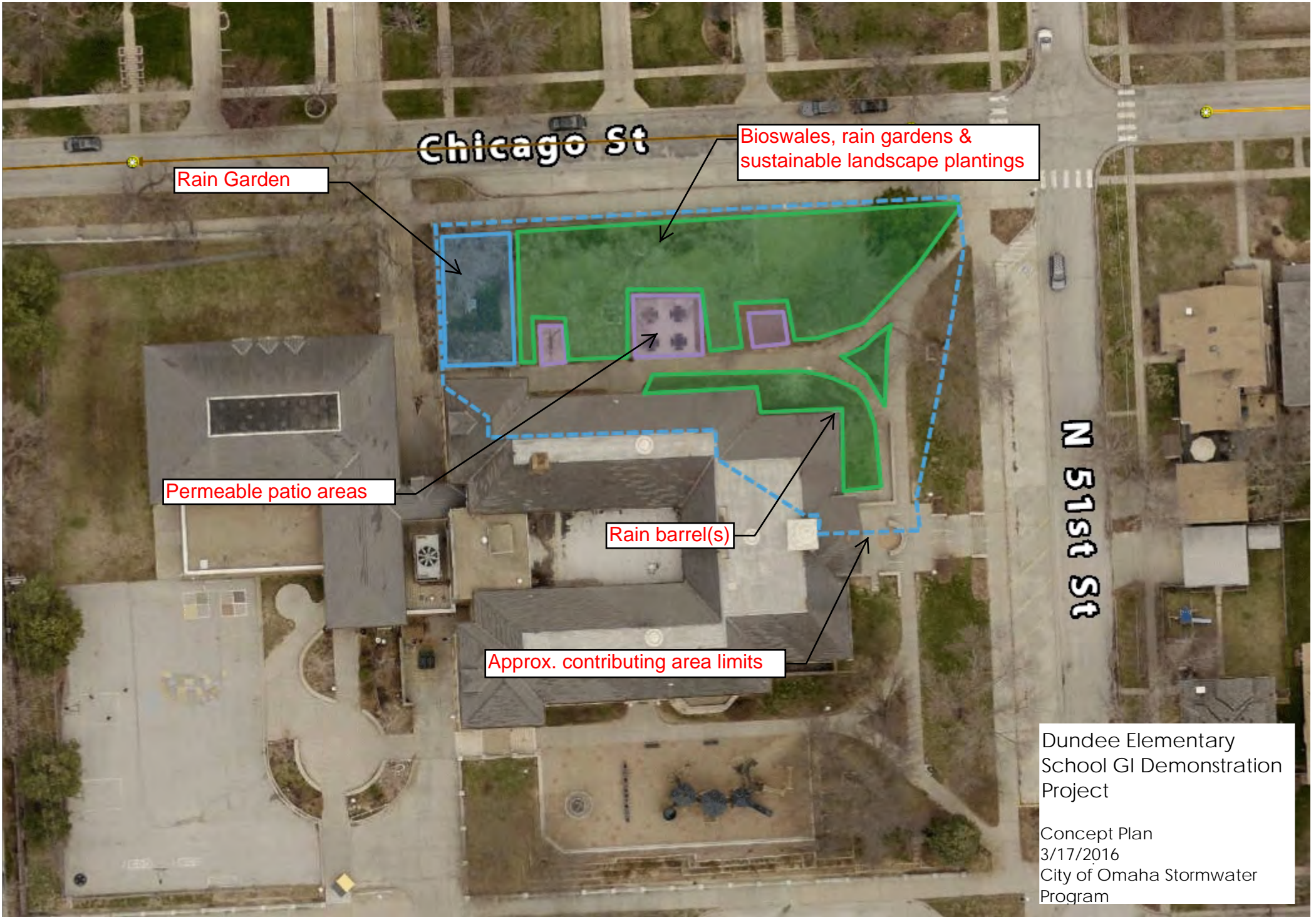
The goal of this project is to address stormwater runoff issues on the north side of the school while providing educational opportunities to students, teachers, administration, & parents & the community. Stormwater best management practices to be utilized on this project include rain gardens, rain barrels, permeable pavement, & natural plantings. Educational programming will be incorporated into the design, construction, & maintenance of the project.

Total estimated cost \$ 50,000 Cost share request \$ 5,000

Andy Szatko
Signature

3/15/16
Date

Environmental Quality Control Technician I
Title



Rain Garden

Chicago St

Bioswales, rain gardens & sustainable landscape plantings

Permeable patio areas

Rain barrel(s)

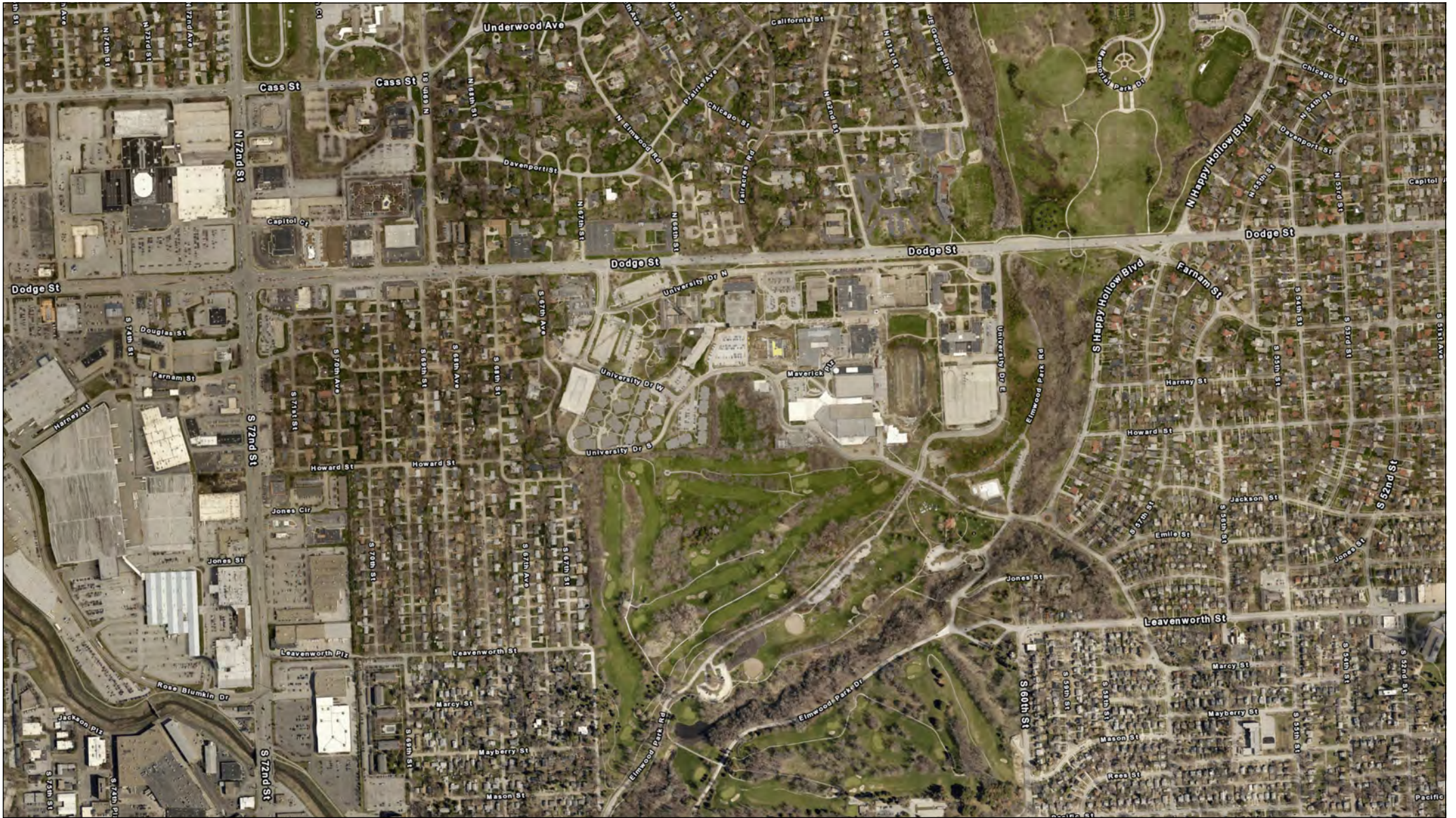
Approx. contributing area limits

N 51st St

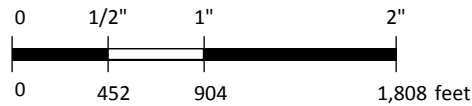
Dundee Elementary School GI Demonstration Project

Concept Plan
3/17/2016
City of Omaha Stormwater Program

UNO Community Engagement Center



1 : 10,850
1 = 904



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Douglas County GIS



1819 Farnam St
Suite 402
Omaha NE, 68183

Stormwater BMP Program – Application Form



Project name UNO Community Engagement Center Rain Garden

Project location (attach location map) southeast corner of CEC on UNO campus

Sponsor organization UNO/Community Engagement Center

Sponsor address 6400 S. University Drive Rd. N

City Omaha State NE ZIP 68182

Contact person Steve Rodie

Title Director, UNO Center for Urban Sustainability

Email address srodie@unomaha.edu Daytime phone 402-554-3752

Description of stormwater best management practice and how it will be incorporated in this project
see attachment for project overview and estimated budget

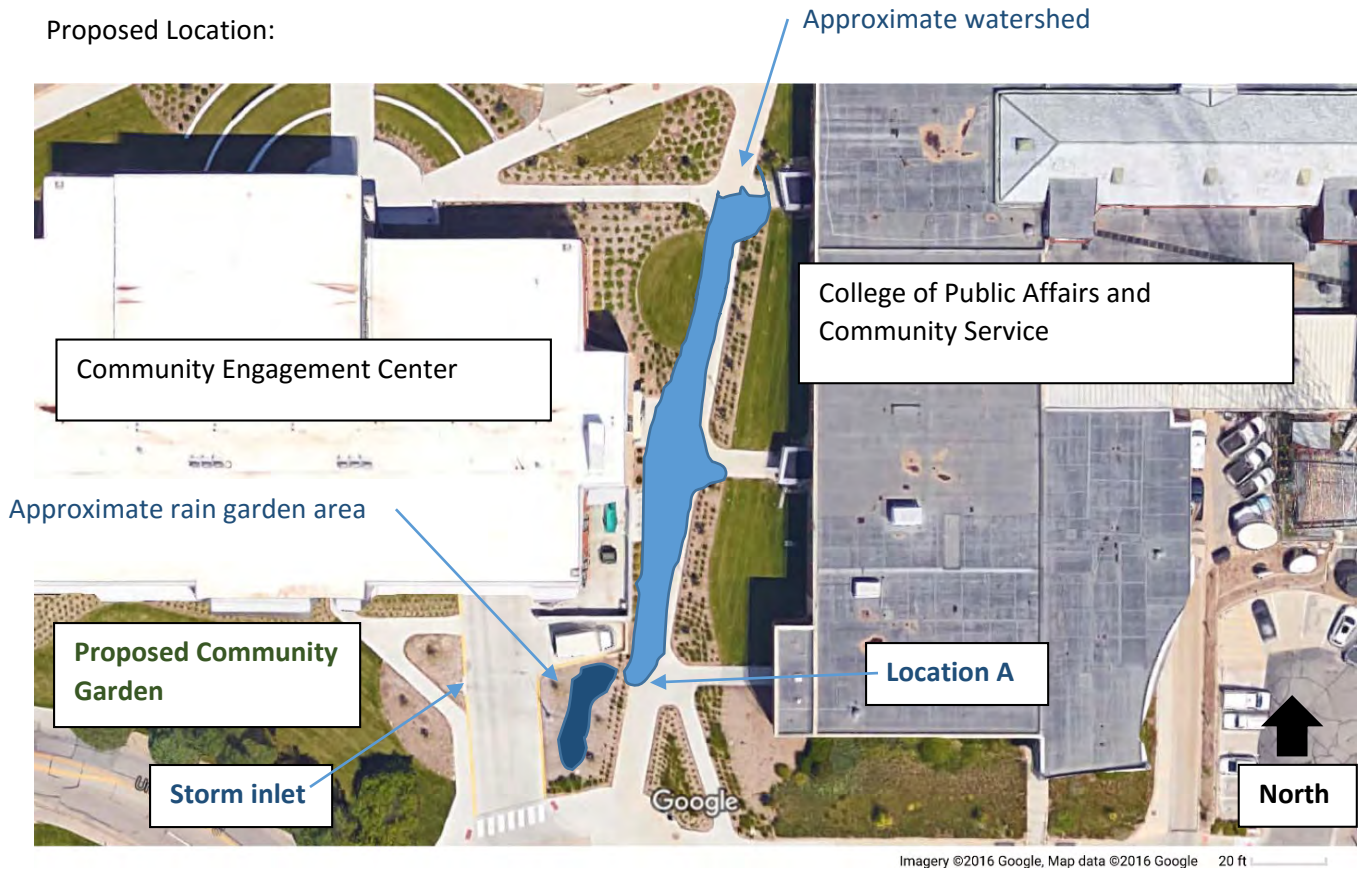
Total estimated cost \$ 10,000 Cost share request \$ 5,000.00

Steven N. Rodie 3/18/2016
Signature Date

Director, Center for Urban Sustainability
Title

Project Title: UNO Community Engagement Center (CEC) Rain Garden

Proposed Location:



Runoff During Rain Event (looking south at Location A)



Project Purpose and Learning Goals:

We propose to construct a rain garden on the southeast corner of the building in an existing mulched landscape bed currently containing three baldcypress trees (which would be highly adaptable to future wet soil conditions). Water would be collected from the adjoining sidewalk, which currently drains a significant area between the CEC and the College of Public Affairs and Community Service to the east. Existing conditions direct the water past the proposed garden area into the storm sewer; the diverted water would collect and infiltrate into the soil during 90% of rain events; 10% of storms would potentially overflow into the sewer. The overall goal of the project is to enhance students' and public knowledge/awareness of native plants and environmental systems in a highly visible, people friendly setting on campus. It would complement a proposed community garden to the west on the south side of the building. Specific objectives include: storm water runoff capture, habitat creation (especially for pollinators such as monarch butterflies); and a site for general information and awareness about Nebraska plants (through plant labeling, interpretive signage, and potential Q/R code usage).

Design Process and Implementation:

UNO Introduction to Sustainable Landscape Design students are working on a concept design during spring semester, 2016; design approvals are scheduled for summer 2016, with implementation by student volunteers and a contractor during early fall semester 2016. Steve Rodie will help coordinate initial establishment through students, CEC volunteers and the UNO Green Thumb volunteer group. Drip irrigation exists in the bed area, so an irrigation source is available for initial establishment. Soil tests and watershed measurement will dictate the appropriate size and depth of the garden; plants will be selected based upon student input/research and the desire to increase biodiversity on campus. Signage will be coordinated with signage that is in process for the UNO Welcome Center Bioretention Garden, and we will work with UNO Student Services, the UNO Sustainability Coordinator, and the CEC Director to maximize garden visibility for students, faculty, staff and visitors.

Proposed Budget:

Given the garden design is still being finalized, it is anticipated that a minimum of \$10,000 (\$5,000 request from the NRD) will be required given final design time, site grading, plants (anticipating a variety of native shrubs, herbaceous perennials, grasses, sedges and rushes that will fill the actual rain garden basin as well as the context planting to illustrate low-maintenance landscape principles along the garden slopes and adjacent berms), planting beyond volunteer efforts, mulching, irrigation retrofit, armoring of water inflow and outflow locations, interpretive signage, and plant labeling.


**Flood Mitigation Planning and Mapping Assistance Program –
Application Form**

Project name Flood Plain Study for Cauble Creek in Blair, Nebraska
 Project location (attach location map) North west portion of City
 Sponsor organization City of Blair, NE
 Sponsor address 218 S 16th St.
 City Blair State NE ZIP 68008
 Contact person Al Schoemaker
 Title Director of Public Works
 Email address ars@ci.blair.ne.us Daytime phone 402-426-4191

Description of the proposed project

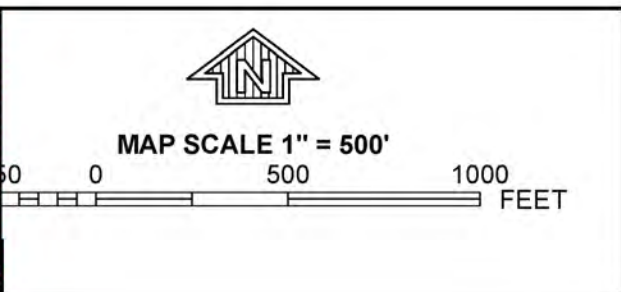
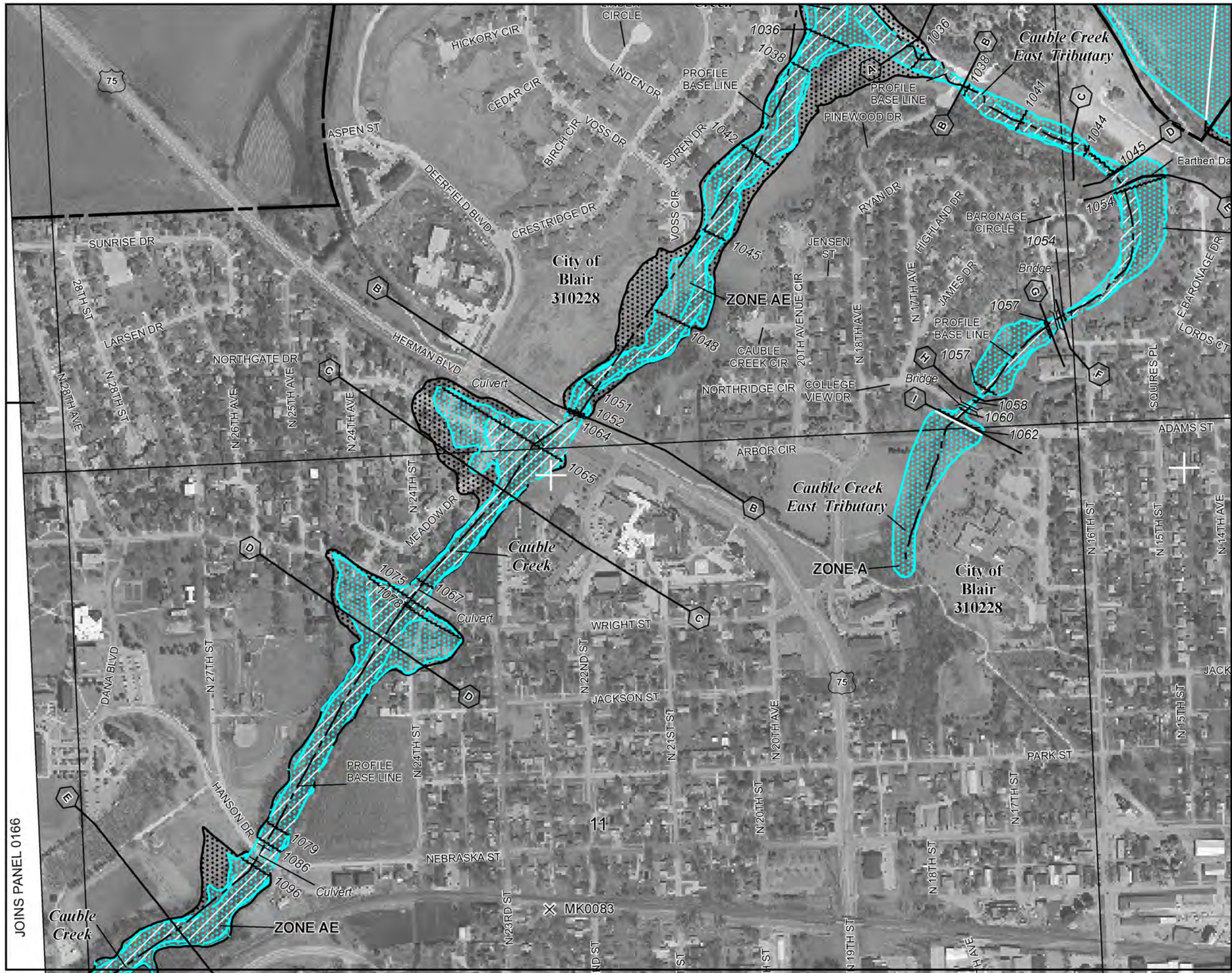
FYRA Engineering will perform an engineering analysis of the flood plain for Cauble
 Creek in Blair, NE to make a determination to possibly reduce the overall flood
 plain and remove existing structures currently shown in the 100 year flood plain
 being removed from the flood plain. Work is scheduled to begin this fall in the
 next fiscal year for Blair, NE.

Total estimated cost \$ 71,050 Cost share request \$ 35,525


 Signature

3/8/16
 Date

Director of Public Works
 Title



PANEL 0167D

FIRM
FLOOD INSURANCE RATE MAP

**WASHINGTON COUNTY,
NEBRASKA
AND INCORPORATED AREAS**

PANEL 167 OF 345
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BLAIR, CITY OF	310228	0167	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
31177C0167D
EFFECTIVE DATE
JANUARY 6, 2012

Federal Emergency Management Agency

JOINS PANEL 0166

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

**Flood Mitigation Planning and Mapping Assistance Program –
Application Form**



Project name Flood Plain Investigation for South Creek.
Project location (attach location map) South Side of Blair, NE
Sponsor organization City of Blair, NE
Sponsor address 218 S 16th St
City Blair State NE ZIP 68008
Contact person Al Schoemaker
Title Director of Public Works
Email address ars@ci.blair.ne.us Daytime phone 402-426-4191

Description of the proposed project

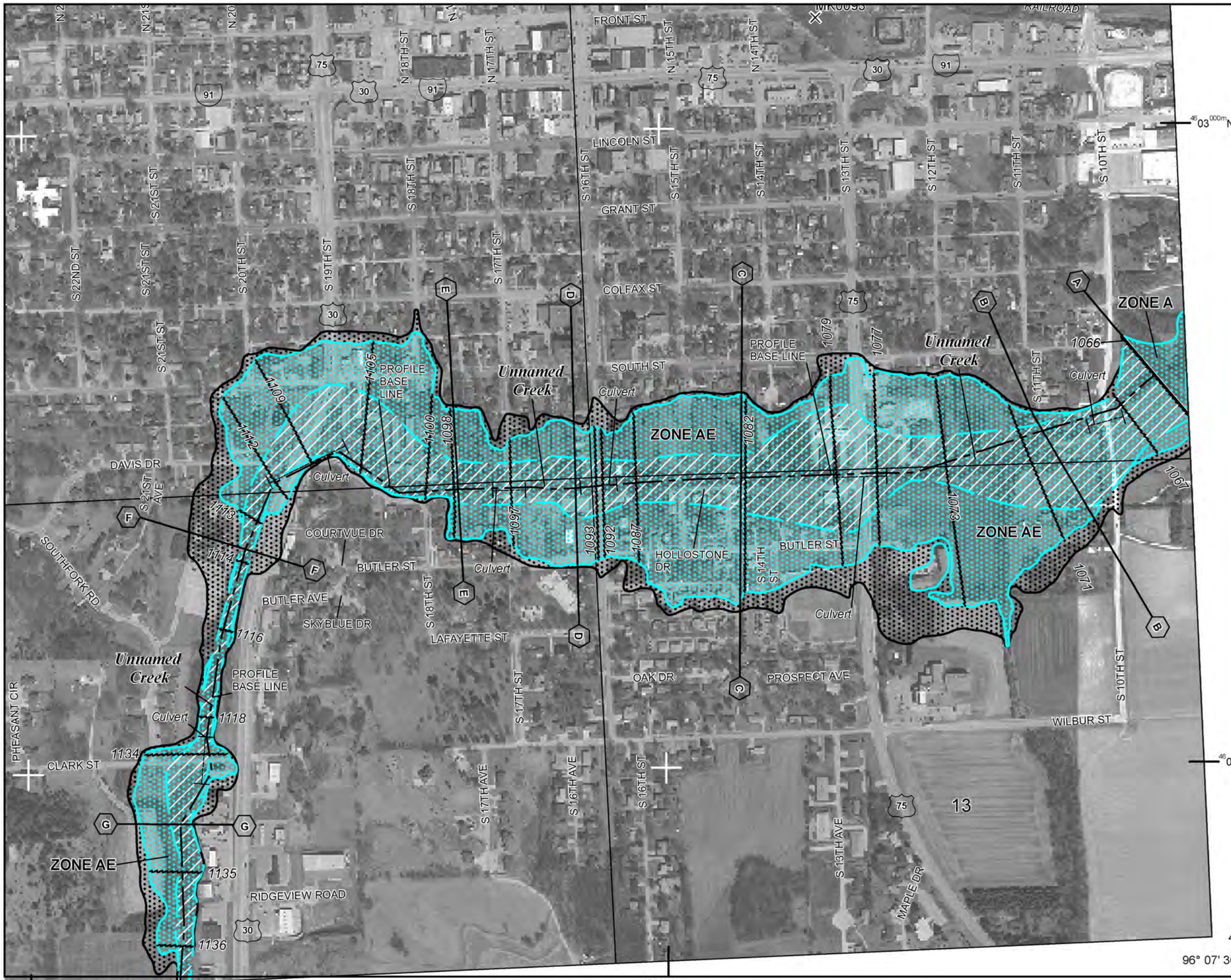
FYRA Engineering is reevaluating the FEMA prepared flood plain for South Creek in Blair, NE. The study covers South Creek flood plain from the south (beginning) of the creek to the Highway 75 Drainage structure. The purpose of the reevaluation is to provide a sound engineering study and model to reduce the current flood plain for South Creek by submitting their study results to FEMA making a flood plain map revision request. The preliminary results show a reduction of structures in the 100 year flood plain from 91 to 14. A reduction of almost 85%

Total estimated cost \$ 84,370 Cost share request \$ 42,185

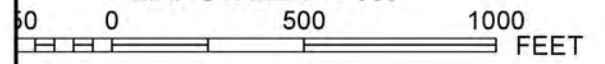

Signature

3/8/16
Date

Director fo Public Works
Title



MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0167D

FIRM
FLOOD INSURANCE RATE MAP

WASHINGTON COUNTY,
NEBRASKA
AND INCORPORATED AREAS

PANEL 167 OF 345

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

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