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 <u>City of Omaha</u> 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 <u>University of Nebraska Omaha</u> 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.

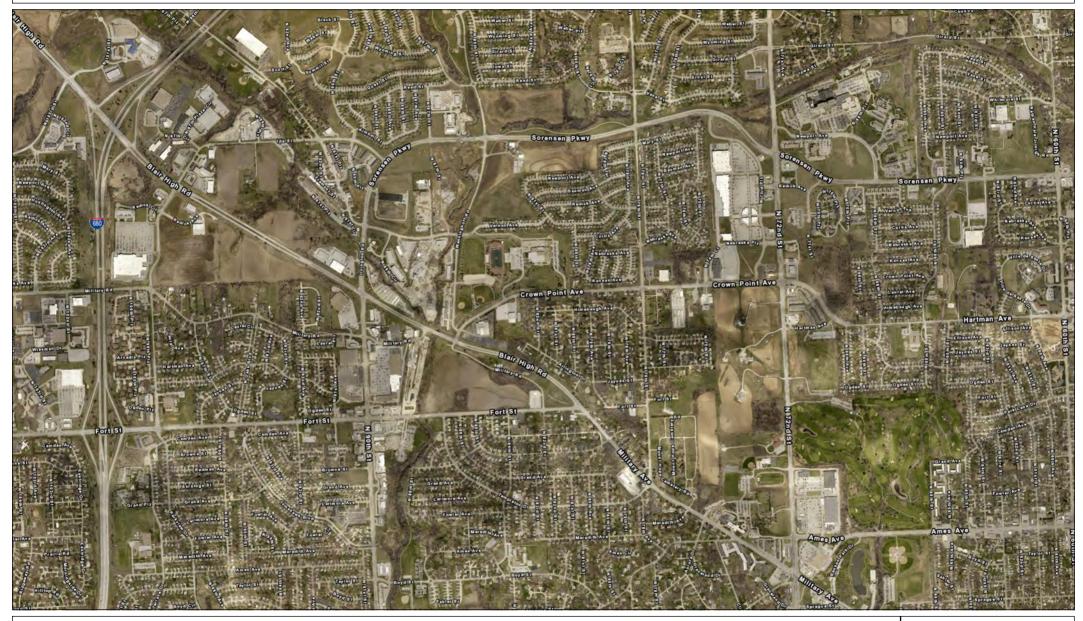
The <u>City of Blair</u> has requested assistance to reevaluate the floodplain of Cauble Creek in northwest Blair. The total cost of this project is \$71,050 and the City is requesting a total of \$35,525.

The <u>City of Blair</u> 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



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Douglas County GIS



1819 Farnam St Suite 402 Omaha NE, 68183



GARDEN UDED

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- We want to take h them alout pollostors and the types of plants through the SR Code that will be to a Northwest vehicle
- This proposed rain garden will reduce roll in allage into otorm drains, printecting against finding and never overflow
- The garden will also provide a good place for Nerthwest students to relaxioning the day and also learn about the plants we have in the garden.
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- Providen Northwest classes with (Science, Technology, Engineering, Art. and Math) STEAM learning upportunities
- Garden will be made up of butterfly points and will consist of yellow, blue and red plants to match our school colors
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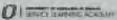
Omaha Northwest Rain Garden Project

- Omana Northward High School Omana Purke Schools 8204 Crown Rolet Ave., Omana NE
- Design Fall Semister, 2015
- Construction Spring 2016

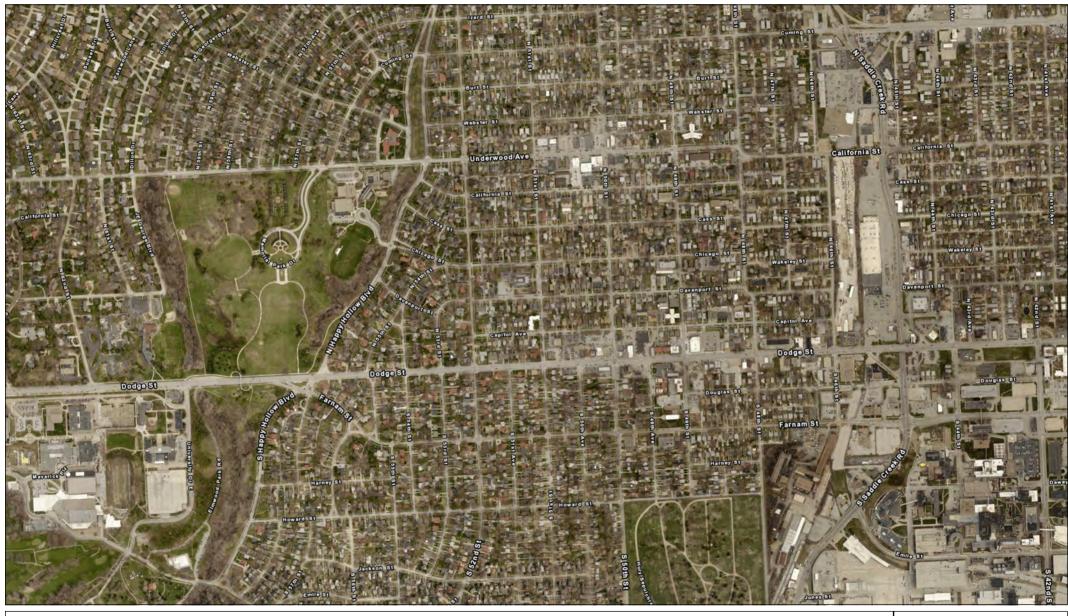
Designers:

Horticulture Class, Omaha Northwest, Mrs. Burns Landscape Appreciation & Environmental Sustainability University of Nebraska at Omaha, Professor Rode

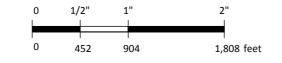




Dundee Elementary School



1 : 10,850 1 = 904



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DCGIS

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PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT 9901 S. 154th Street Ornaha, NE 68136-3521 402-444-6222 www.papionrd.org

Stormwater BMP Program – Application Form

Project name	Dundee Elementary School
Project location (attach locat	ion map) <u>310 N. 51 * 57 Obnaha, NE 68132</u>
Sponsor organization	City of Omaha
Sponsor address	5600 S. 10th St
City	Omaha State NE ZIP 68107
Contact person	Nina Cudahy + Andy Szatko
Title	Environment Quelity Control Division Manager + EQC Tech I
Email address <u>Ilina. C.</u> Andy. Sz	attice cityofomaha.org Daytime phone 402-444-3915 x 220 attice 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 scheel while providing educational opportunities to students, teachers, administration, & parents + the community. Starmwater bast management practices to be utilized on this project include rain gardens, rain barrels, permeable povement, + natural plantings. Educational programing will be incorporated into the design, construction, + maintenace of the project.

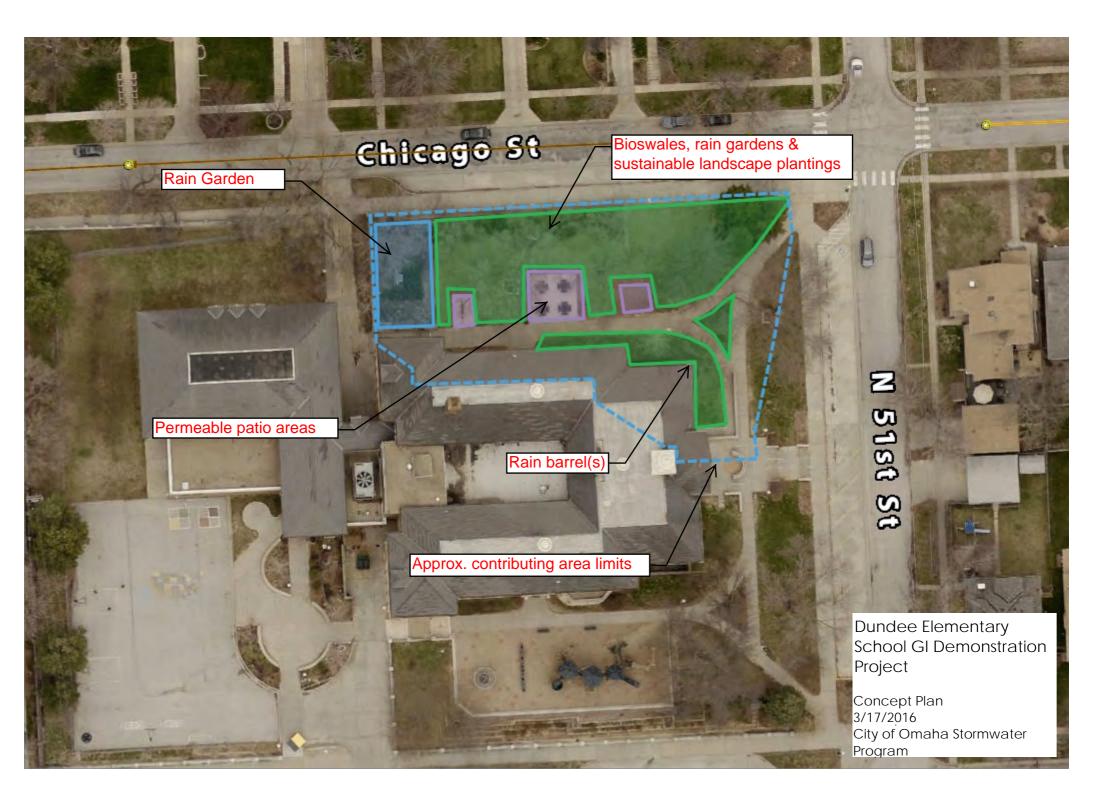
Total estimated cost

\$ 50,000

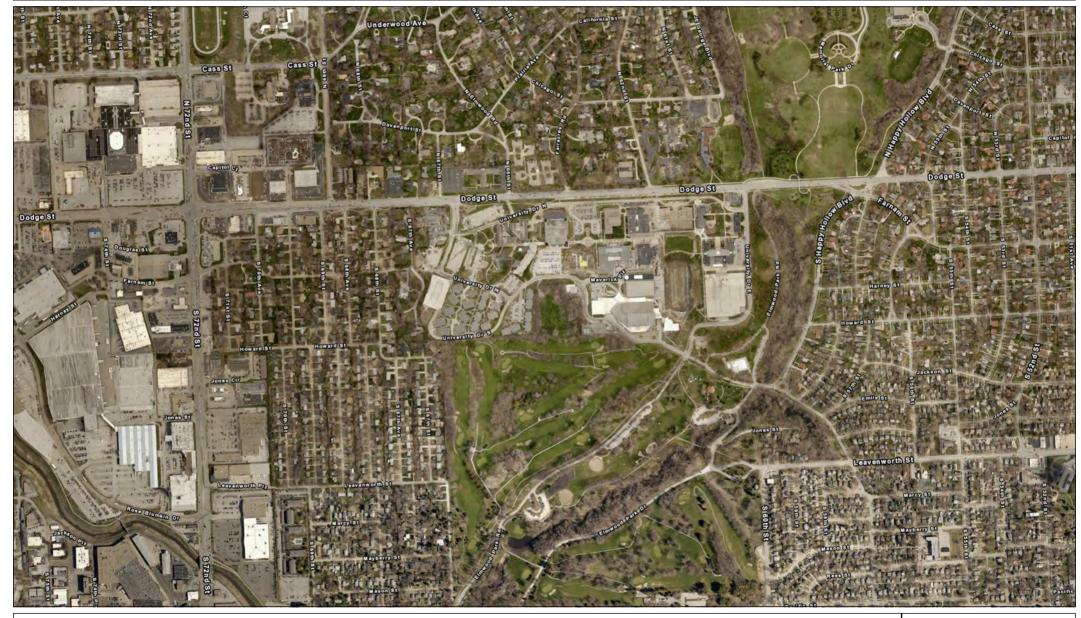
Cost share request \$ 5,000

15/16

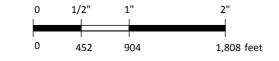
Environmental Quality Cantrol Technicion I Title



UNO Community Engagement Center



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Stormwater BMP Program – Application Form



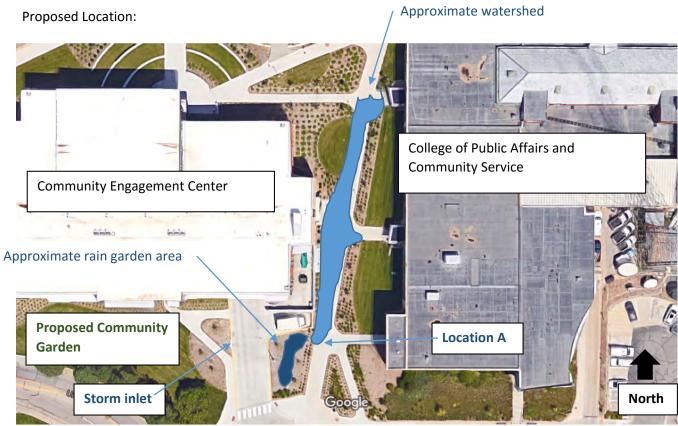
Project name		UNO Community Engagement Center Rain Garden					
Project location (atta	ach location map)	southeast corner of CEC on UNO campus					
Sponsor organizatio	n UNO/Commu	mmunity Engagement Center					
Sponsor address	ersity Drive Rd. N						
City	Omaha	State	e <u>NE</u>	ZIP	68182		
Contact person	Steve Rodie						
Title	Director, UN	Director, UNO Center for Urban Sustainability					
Email address	ail addresssrodie@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

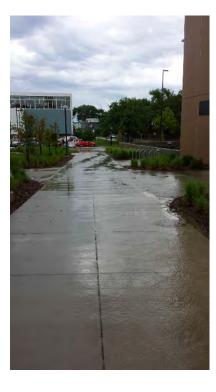
Total estimated cost	\$ <u>10,000</u>	Cost share request \$ 5,000.00	
Steven N. Rodie		3/18/2016	
Signature		Date	
Director, Center for Urb	oan Sustainability		
 Title			

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



Imagery ©2016 Google, Map data ©2016 Google 20 ft

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 Pla	Flood Plain Study for Cauble Creek in Blair; Nebraska					
Project location (attach l	ocation map)	North west	portion of	City			
Sponsor organization	City of H	City of Blair, NE					
Sponsor address	218 S 16t	218 S 16th St.					
City	Blair		State	NE	ZIP _	68008	
Contact person	Al Schoen	naker				-	
Title	Director	Director of Public Works					
Email addressars@ci.blair.ne.us		15	Daytime phone		402-426-4191		
Description of the propo FYRA Engineering v		on engineering	analysis o	of the fl	ood plai	n for Cauble	
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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

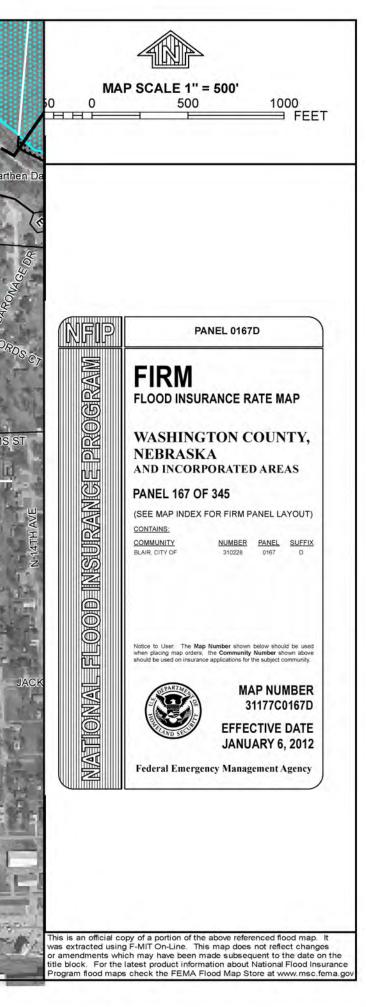
Cost share request \$ 35,525

Signature

3/8/16 Date

Director of Public Works Title







Flood Mitigation Planning and Mapping Assistance Program – Application Form

Project name	Flood Plain Invest	igation for Sout	h Cree	k.		
Project location (attach lo	ocation map)South_S	ide 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

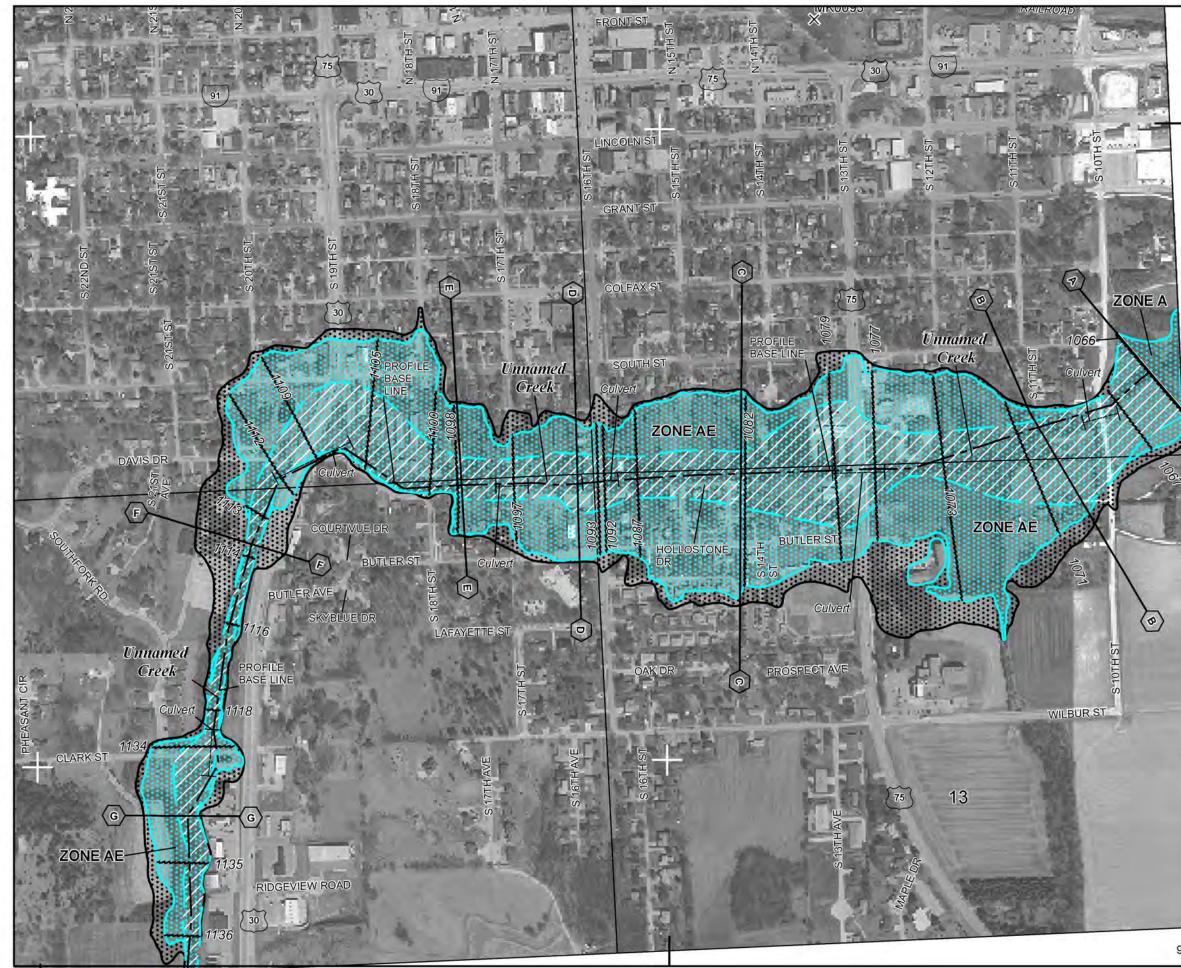
Cost share request \$ 42,185

Signature

<u>3/8/16</u>

Director fo Public Works

Title



MAP SCALE 1" = 500' 0 500 1000 50 HHF = FEET 603000mN NFIP PANEL 0167D PROGRAM **FIRM** FLOOD INSURANCE RATE MAP WASHINGTON COUNTY, NEBRASKA AND INCORPORATED AREAS INSURANCE PANEL 167 OF 345 (SEE MAP INDEX FOR FIRM PANEL LAYOUT) CONTAINS: COMMUNITY NUMBER PANEL SUFFIX BLAIR, CITY OF 310228 0167 D FL(0)0D 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. NATTIONNAL MAP NUMBER 31177C0167D **EFFECTIVE DATE JANUARY 6, 2012** Federal Emergency Management Agency 02 4 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 date of the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov