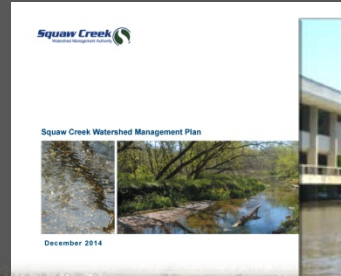


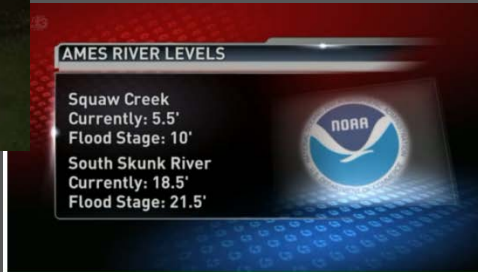
NOVEMBER 29 CITY COUNCIL WORKSHOP

- Sept 22nd Localized Flooding
- Flood Mitigation – River Flooding
- Watershed Opportunities
- Nutrient Reduction
- Grand Avenue Extension
- Skunk River Trail
- Vet Med Trail



SEPTEMBER 22ND LOCALIZED FLOODING

2



AMES, Iowa – Residents in Ames are dealing with flooding after a long night of rain. City officials say some areas of the city got upwards of five inches of rainfall Thursday night in to Friday morning.

After a dry period, another round of rain began in Ames just before 6:00 a.m.

Flooding from Squaw Creek affected parks and other low-lying areas of the city. Heavy rains caused street flooding and manhole covers in some areas were popped off by the rushing water. Dayton and 13th flooded and there was also flooding on 16th Street and 24th Street.

Officials say about a dozen homes suffered flood damage and 15 cars became stranded in flood waters.

A power outage was reported in the east part of Ames.

"We always encourage residents that if they see standing water on roadways to not drive into that standing water. Turn around and avoid that because you never can be sure what is underneath the roadway or how deep the water actually is," said Brian Phillips, Assistant City Manager, Ames.

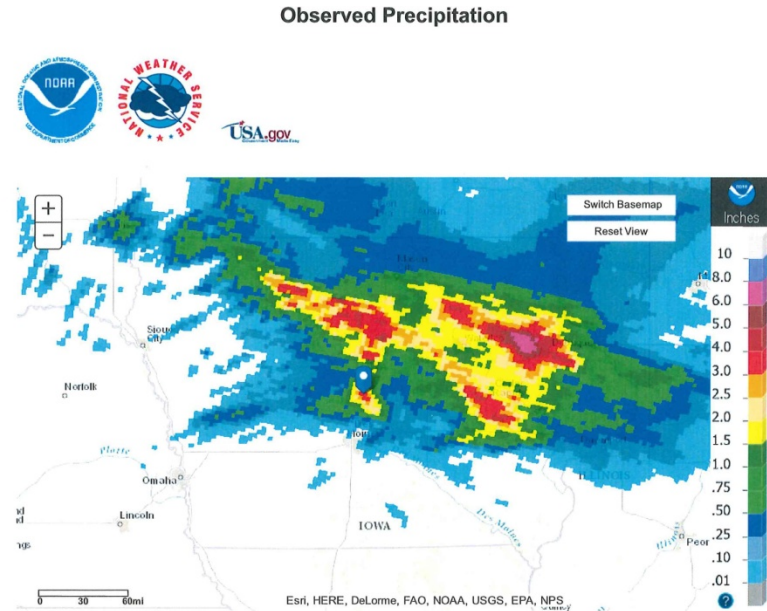
If you need to report damage or hazardous conditions, you're advised to call the Ames Police Department at (515) 239-5133. Do not call 911 or police seeking information on road conditions as they'll be busy handling emergency calls.

Tracy Warner – Public Works

What happened

3

- Areas of Ames received over 5 inches of rain in about 2 hours in the night



Displaying September 23, 2016 1-Day Observed Precipitation
Valid on: September 23, 2016 12:00 UTC
What is UTC time? Map Help

What has been done

4

- Significant data collection
 - Ames City Clerk's Office
 - Story County Emergency Management
 - Ames Building Inspections
 - Ames Public Works



What has been done

5

- October 3rd toured Ames area:
 - Ames staff and
 - Story County Emergency Management
 - Federal Emergency Management Agency (FEMA) and
 - Iowa Homeland Security and Emergency Management staff
- PW Staff meetings with Somerset residents, Ames Community School District staff, and contractors

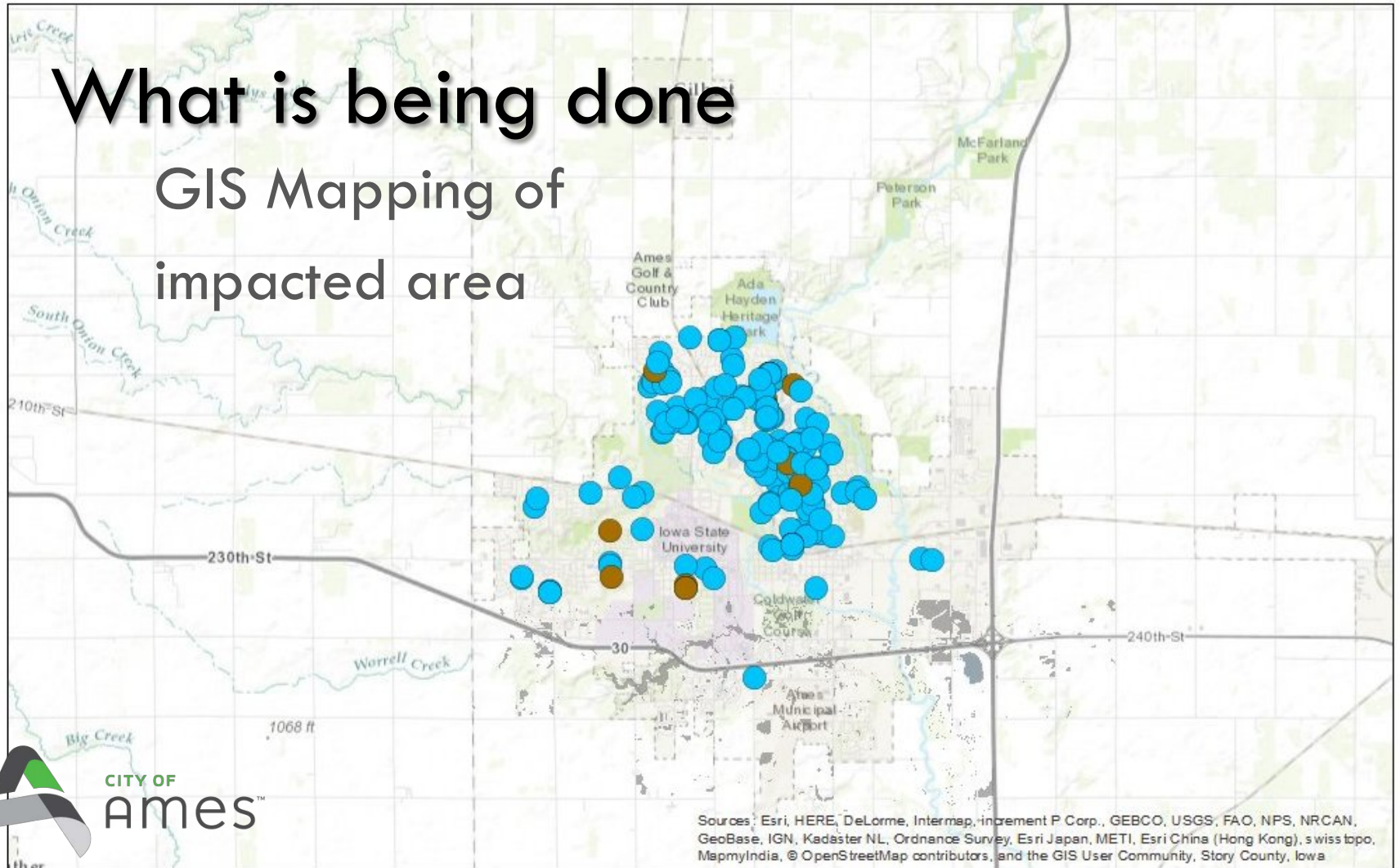
What is being done

6

- Staff meeting with several residents
 - Clarify sanitary vs. storm impact
 - Discuss what happened
 - Sump pump vs. surface water through window/door
- Staff televised several sewer locations

What is being done

GIS Mapping of impacted area



Flooding in Ames

8

- Intense rainfall resulting in localized and/or river flooding becoming more common yet are complex
- Many factors combine to create flooding
- Flooding impacts us & is impacted by us
 - Community-wide (including watershed upstream of Ames)
 - Neighborhood
 - Individual home or property

Flooding in Ames

9

- City strives to minimize flooding through:
 - Storm Water Management
 - Sanitary Sewer System
 - Subdivision Design
 - Building Code Requirements

- These all have evolved over time as standards and expectations change

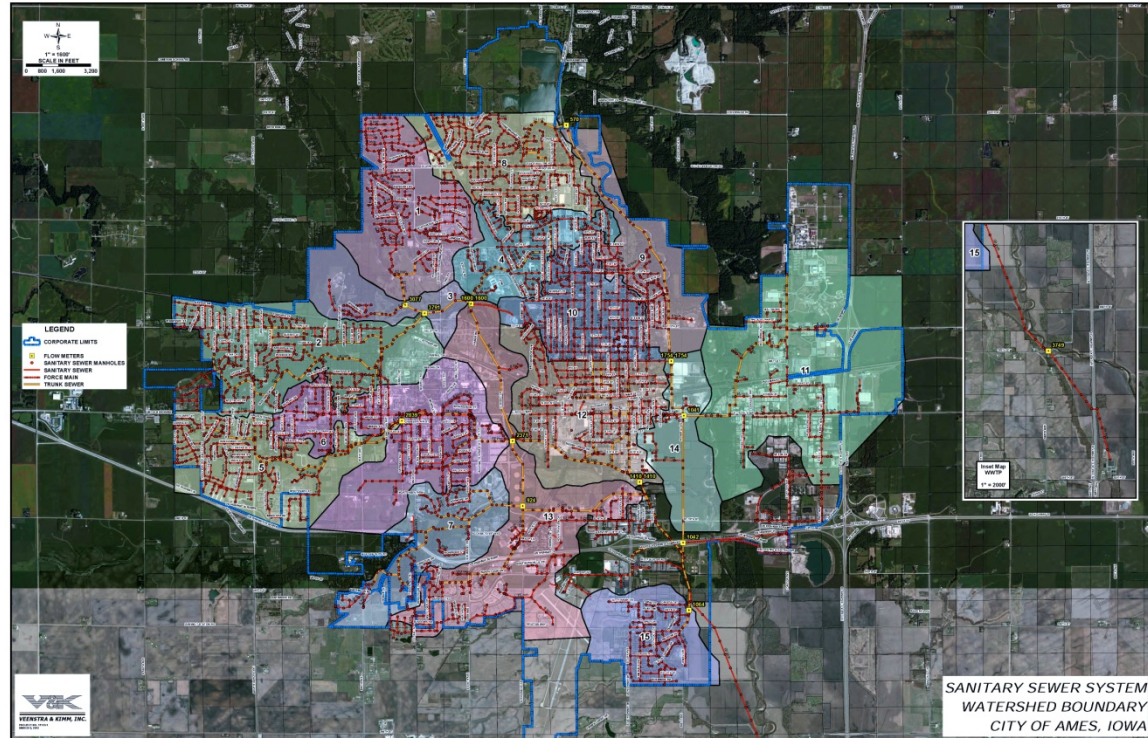
What is City doing

10

- \$25 million on improvements over 10 years to sanitary sewer system to remove Inflow/Infiltration (clean water out of sanitary sewer system)
 - Manhole Rehabilitation contracts (2 active) \$2.74 million
 - CIPP lining project in review w/ DNR est. \$2.4 million
 - Basin 5 (SW Ames), Basin 6 (Campustown), Basin 10 (north of Downtown), RR crossings

What is City doing

11



What is City doing

12

- Fats, Oil & Grease (FOG) Program
 - Helping businesses keep FOG out of sewers
 - Aids in maintaining maximum sewer pipe capacity
- Ames is partner in Squaw Creek Watershed Management Authority
 - Watershed improvements approach (more coming later tonight about this approach)

What is City doing

13

- Post-Construction Storm Water Management requirements – 2014 ordinance
- Storm Water System Improvements
 - 2016-21 CIP incl. \$8.3 million over 5 years
- Low Point Drainage Improvements
 - Annual program since 1994

What is City doing

14

- Staff drafting 2017-22 Capital Improvements Plan
 - Considered some identified areas for Low Point Drainage Improvements over next 5 years
 - Storm Water System Analysis starting 2017/18 (\$180k)
- PW Staff recommends identifying available project savings to start drainage analysis on some isolated areas in current fiscal year (2016/17)

What can individuals do

15

- Key questions for every flooded property:
 - What specifically led to your flooding?
 - Water coming through basement walls or floor
 - Sump pump failure or inadequate
 - Water flowing overland into home or business
 - Sanitary sewer backing up into home or business
- Each of these has different causes & solutions

What can individuals do

16

- Sanitary Sewer backed up into home
 - Gain knowledge what is connected to sanitary sewer service
 - Washer, Utility Sink, Floor Drain
 - Sump pump could be (built pre 1970s)
 - Backflow prevention device on sewer service
 - Hire licensed plumber and get plumbing permit

What can individuals do

17

- Sump pump connection to storm sewer pipe
 - Some sump pumps connected to sanitary sewer system
 - City formerly had a footing drain grant program
 - Cost share with property owner to transfer to storm pipe
 - Hire licensed plumber and get plumbing permit
 - Transfer sump pump discharge to storm sewer (storm water) system

What can individuals do

18

- Water through basement walls and floor
 - High groundwater
 - Hydrostatic pressure
 - Channel water away from structure
 - Seal foundation
 - Emergency power supply for sump pump

What can individuals do

19

- Sump pump quit discharging due to a full storm sewer pipe
 - A legal sump pump system must be in place and operating before a secondary pump placed at a higher elevation can be installed as a backup to a failed primary system
 - If primary, legal pump fails or is not capable of handling an increase in volume, then a secondary sump pump discharged to grade could pump what the primary system cannot
- Emergency power supply, extra sump pump on-hand

What can individuals do

20

- Evaluate drainage flow around their house
 - Grades away from house (vs. towards house) including window wells and walk-out patio doors
 - Have storm water drainage paths free from obstructions (i.e. fences, sheds, heavy landscaping) to continue flow of water and not back-up water onto neighboring properties
 - Be aware of storm water related easements in the area

Summary

21

- Intense rainfalls and flooding happens by nature
- Reducing their impacts is a shared responsibility
- City is making major investments to address flooding
- Each property has unique attributes
- Property owners should consider investments to address their own unique challenges

Questions

22

- Any questions or discussion about the September 22, 2016 localized flooding?

SQUAW CREEK FLOOD MITIGATION

23



whks

Tracy Warner – Public Works

Background

24

- 2010 Flood
- 2013 Flood Mitigation Study
- Flood Mitigation – River Flooding Stream Restoration Project



Background

FLOOD MITIGATION – RIVER FLOODING

PROJECT STATUS: Cost Change Revenue Change City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

Following the floods of 2010, the City Council established a goal of mitigating the impact of future flooding in Ames. A comprehensive Flood Mitigation Study was completed in late 2013 that considered many possible mitigation alternatives across a wide range of factors, including: degree of reduction of flood water elevation, estimated annual damage reduction, construction costs, ongoing operations and maintenance costs, environmental impacts, and likelihood of obtaining federal grant funding.

COMMENTS

On December 10, 2013, the City Council approved a series of flood mitigation measures. These included discrete elements targeted at: A.) Undertaking a 'stream restoration' of Squaw Creek; B.) Working with IDOT to improve the conveyance capacity of the US Highway 30 bridge; C.) Working through the Squaw Creek Watershed Management Authority to pursue flood mitigation alternatives in the upper reaches of the watershed; and D.) Conducting a workshop to review and discuss the range of possible floodplain regulatory approaches.

This project involves a 'restoration of the Squaw Creek channel'. While the exact scope of work is yet to be defined, a central component would include conveyance improvements within the channel approximately 2,000 feet either side of the South Duff Avenue bridge. This would reduce the water surface elevation of a 1% annual chance flood (i.e. – a "100-year" flood) by approximately 2 feet on South Duff Avenue, a major damage center. As part of this project, staff will evaluate alternatives for providing natural stabilization and restoration options. A consultant will be retained in FY 2015/16 to begin the detailed design work. Outside grant funding through FEMA, REAP, and other possible sources will be pursued. The budget for this project will be updated for the FY 2016/17 CIP once the detailed design work is further along.

A possible future conveyance improvement activity (not included in the five-year CIP) is the lengthening of the Highway 30 bridge by the Iowa Department of Transportation. That work would involve extending the span of the bridge by approximately 430' to the west, at an estimated cost of \$7,740,000 (in 2013 dollars).

The cost change is the result of updated cost estimates. Using previously issued General Obligation Bonds in the first year resulted in the revenue change.

LOCATION

South Duff Avenue and Squaw Creek

	TOTAL	2015/16	2016/17	2017/18	2018/19	2019/20
COST:						
Design/Engineering	639,000	500,000	139,000			
Easements	578,000	578,000				
Construction	4,637,000		4,637,000			
TOTAL	5,854,000	1,078,000	4,776,000			
FINANCING:						
General Obligation Bonds	1,338,000	144,000	1,194,000			
General Obligation Bonds (previously issued)	500,000	500,000				
FEMA Hazard Mitigation Grants	4,016,000	434,000	3,582,000			
TOTAL	5,854,000	1,078,000	4,776,000			

PROGRAM - ACTIVITY:

Utilities – Storm Sewer

DEPARTMENT:

Public Works

ACCOUNT NO.

371-8612-489
376-8612-488
560-8612-489



Background

FLOOD MITIGATION – RIVER FLOODING

PROJECT STATUS: Cost Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

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Consideration of upstream measures within the greater Squaw Creek watershed should continue in order to further reduce flood impacts to the community.

The cost change for this project is due to updated project estimates.

LOCATION

South Duff Avenue and Squaw Creek

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Engineering	150,000	150,000				
Construction	1,350,000	1,350,000				
TOTAL	1,500,000	1,500,000				
FINANCING:						
General Obligation Bonds	500,000	500,000				
Federal/State Grants	1,000,000	1,000,000				
TOTAL	1,500,000	1,500,000				

PROGRAM - ACTIVITY:
Utilities – Storm Water

DEPARTMENT:
Public Works

ACCOUNT NO.
377-8612-489
560-8612-489



Background

27

- Flood Mitigation Study recommendation
 - Channel modifications at South Duff Bridge
 - Improve conveyance along channel
- Public Input on CIP project description
 - Stream restoration

Background

28

- Stream Restoration
 - Natural Channel Design
 - Stabilization, Habitat, Reconnect w/ Floodplain
- Channel Modifications
 - Significant Channel Excavation
 - Enable Increased Conveyance
 - Minor Natural Habitat, Retaining Walls/Head Walls

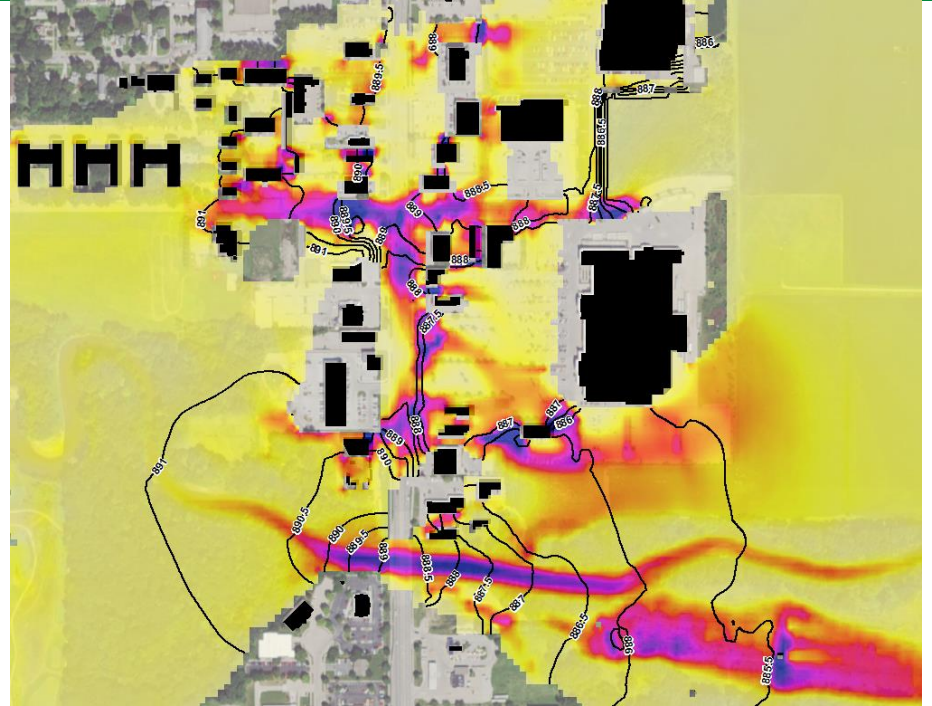
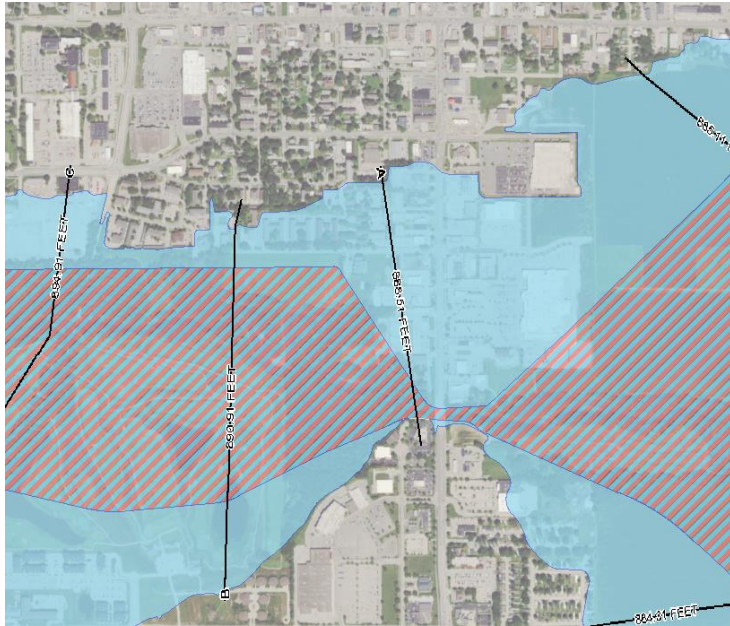
2 Dimensional Flow Model

29

- Study identified problematic issues with existing 1D flood model
 - Floodway concept is a regulatory tool only
 - Flood elevations and velocities vary across sections
- Developed 2D Hydraulic Model
 - Reshaped our understanding of the project

2 Dimensional Flow Model

30



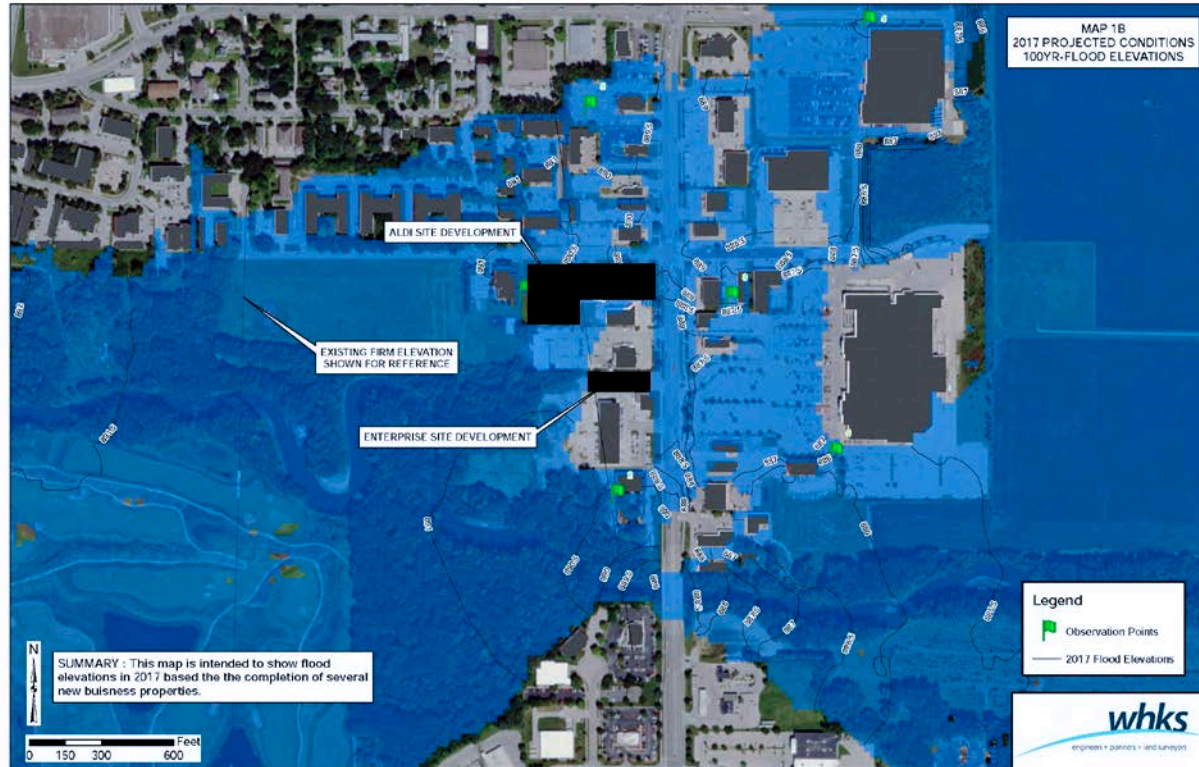
Public Outreach

31

- First time reaching out with this information
- Have not held public outreach/input meetings

2017 Projected Conditions

32



Alternative 1 – Stream Restoration

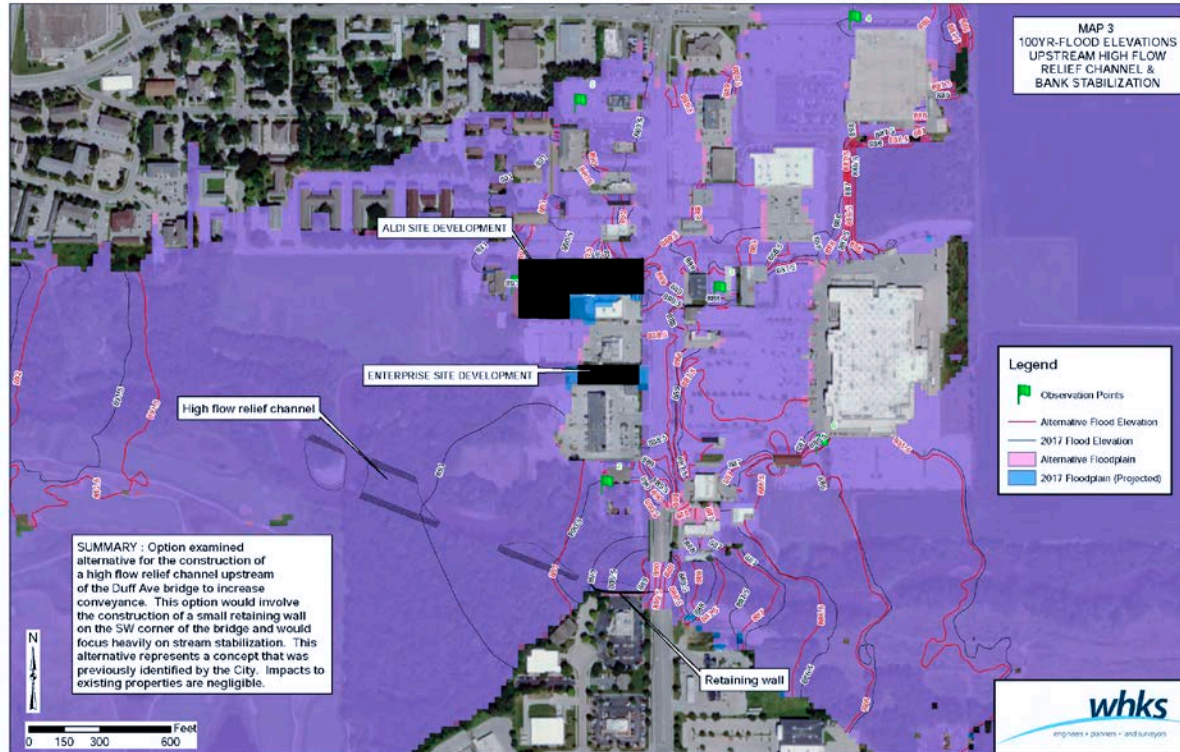
33

- Purely Stream Restoration primarily addresses erosion and sedimentation, minimal flood reduction
- Natural Design Approach
- No impacts to buildings/parking
- \$990K – \$1.3M



Alternative 1 – Stream Restoration

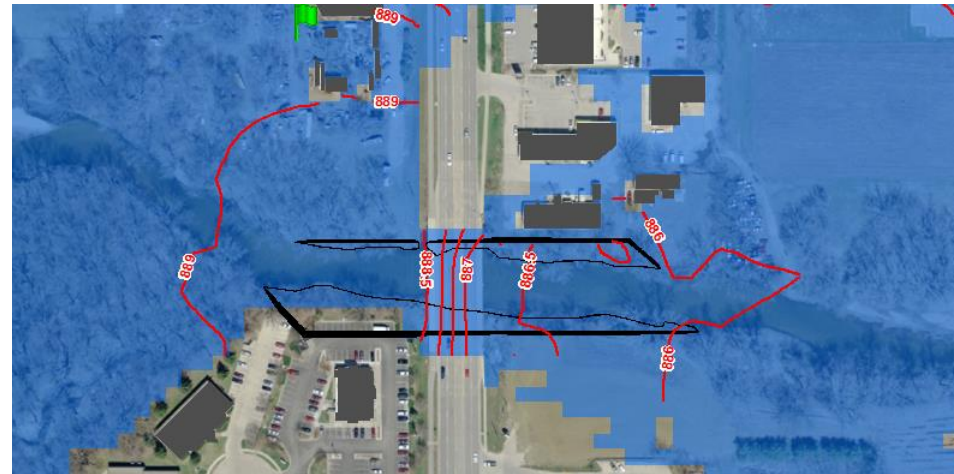
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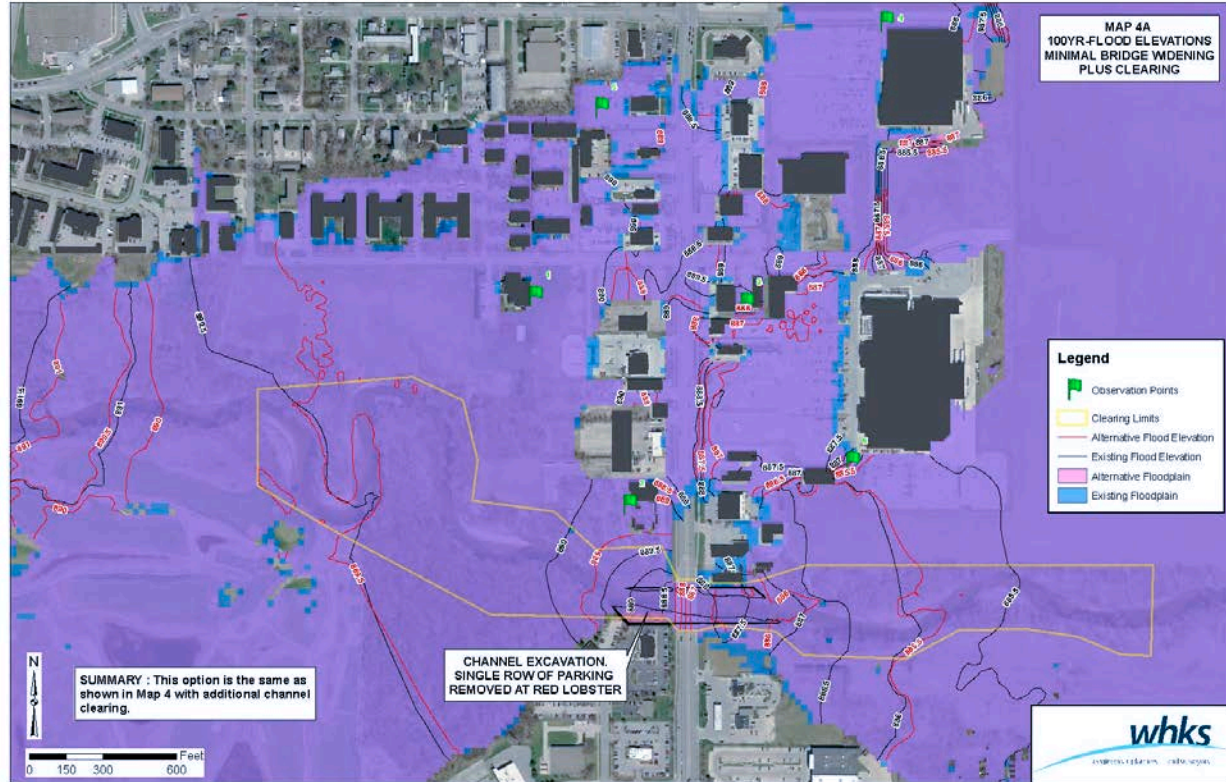
Alternative 2 – Limited Excavation

35

- Some impacts to adjacent property
- Minor flood benefits
- Flood Reduction 0.1– 0.8ft
- \$1.1 – \$1.5M



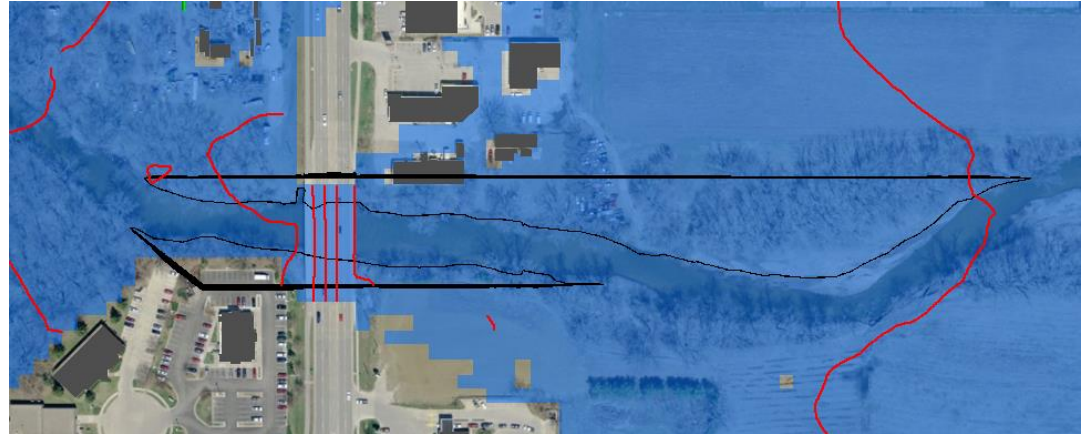
Alternative 2 – Limited Excavation



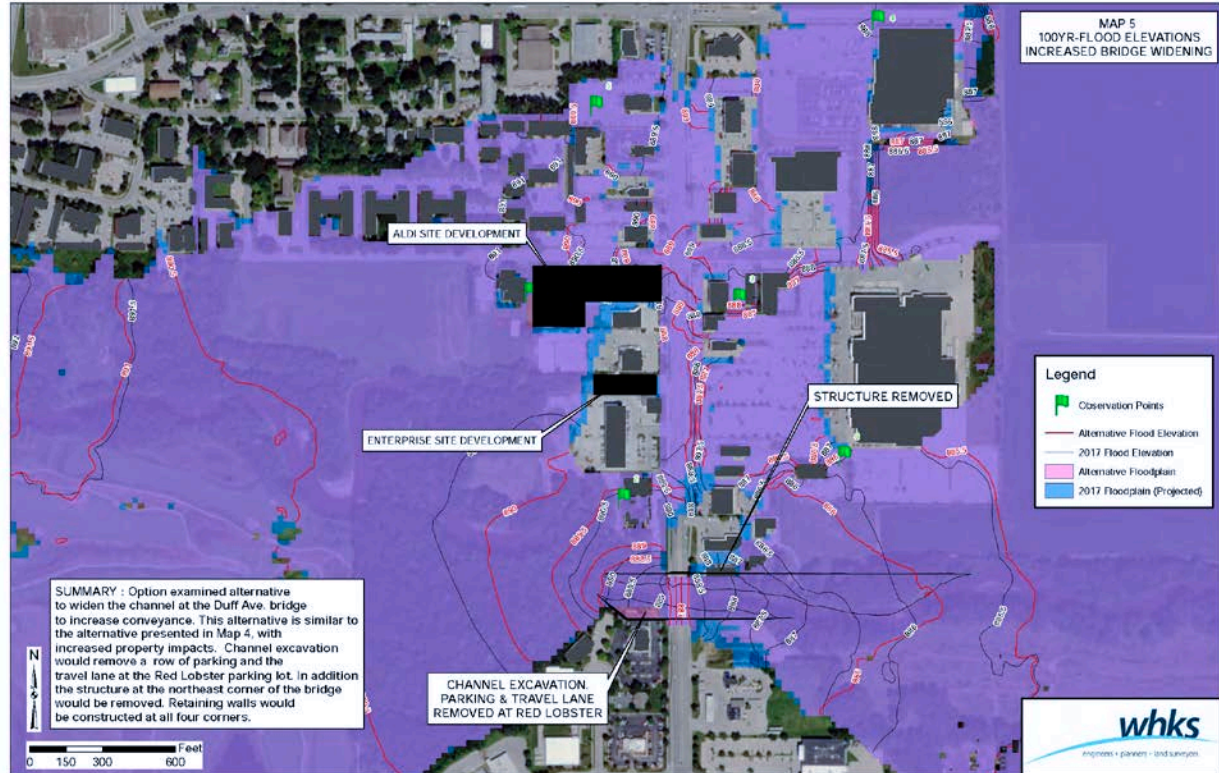
Alternative 3 – Expanded Excavation

37

- Moderate impacts to adjacent property
- Impacts to buildings/lots
- Flood Reduction 0.3 – 1.0ft
- \$1.3 – \$1.8M

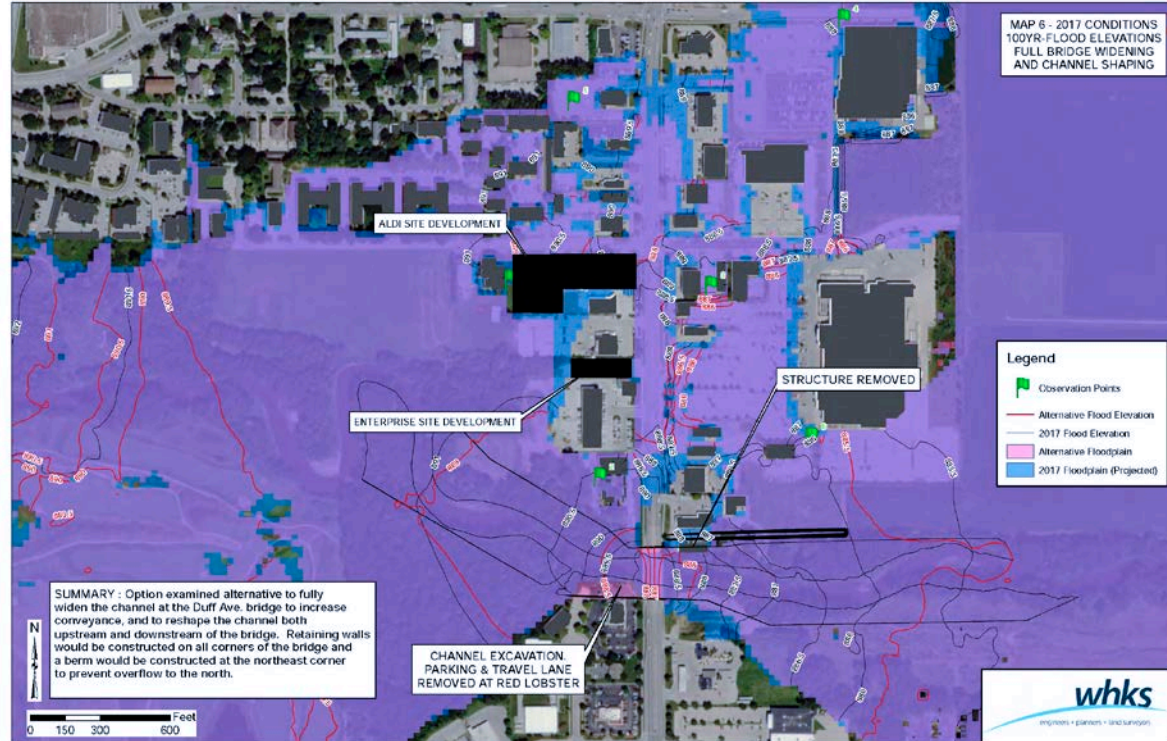


Alternative 3 – Expanded Excavation



Alternative 4 – Full Build (Channel Shaping)

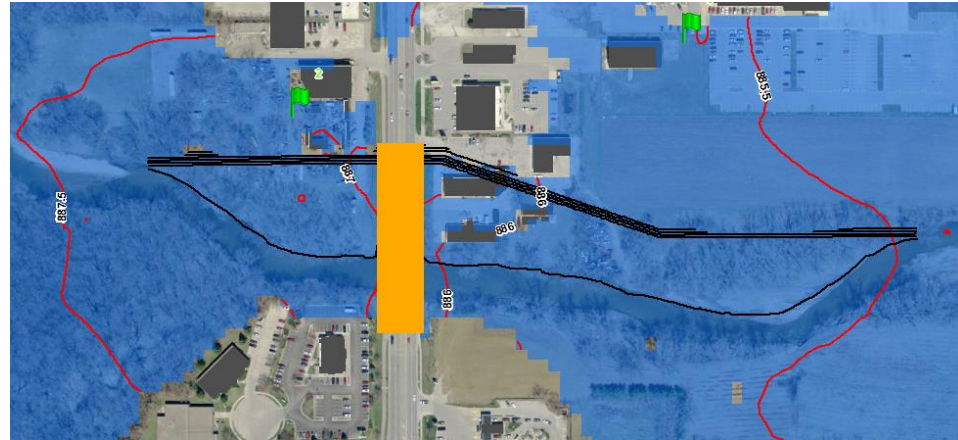
40



Alternative 5 – New Bridge

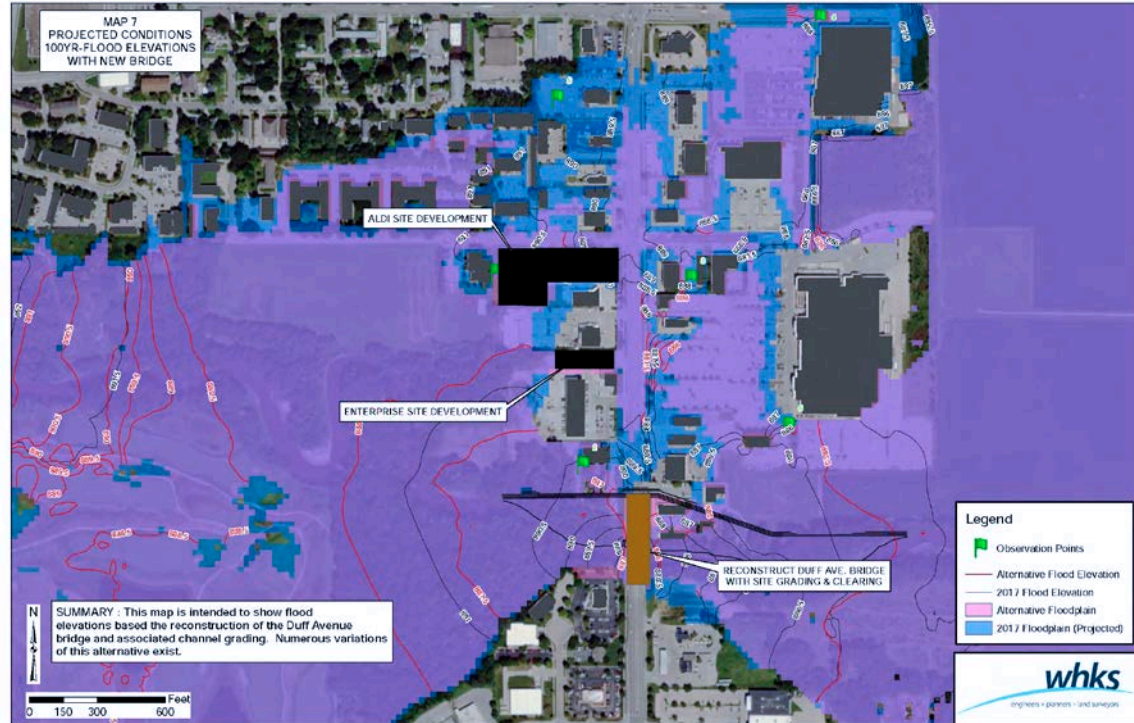
41

- Developed as a Comparison
- Major Impacts to buildings/lots
- Flood Reduction 1.0 – 3.5 ft
- \$12M ±



Alternative 5 – New Bridge

42



Analysis Insights

43

- 2017 Flood elevations considered as current conditions
- The Duff Avenue Bridge acts as a major restriction
- Analysis looked at numerous alternatives
- Squaw Creek channel clearing could mean purchase of properties and significant channel excavation
- Consistent with CIP description, team briefly looked at flood mitigation alternatives in watershed (Squaw Creek Watershed Management Plan)

Background

FLOOD MITIGATION – RIVER FLOODING

PROJECT STATUS: Cost Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

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TOTAL	1,500,000	1,500,000				
FINANCING:						
General Obligation Bonds	500,000	500,000				
Federal/State Grants	1,000,000	1,000,000				
TOTAL	1,500,000	1,500,000				

PROGRAM - ACTIVITY:
Utilities – Storm Water

DEPARTMENT:
Public Works

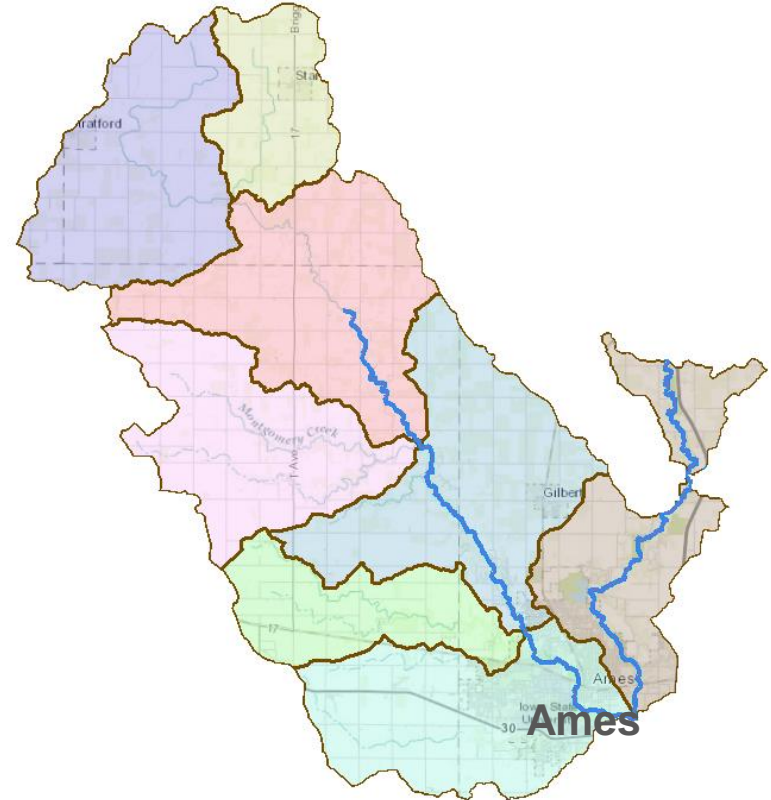
ACCOUNT NO.
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560-8612-489



Watershed Approach

45

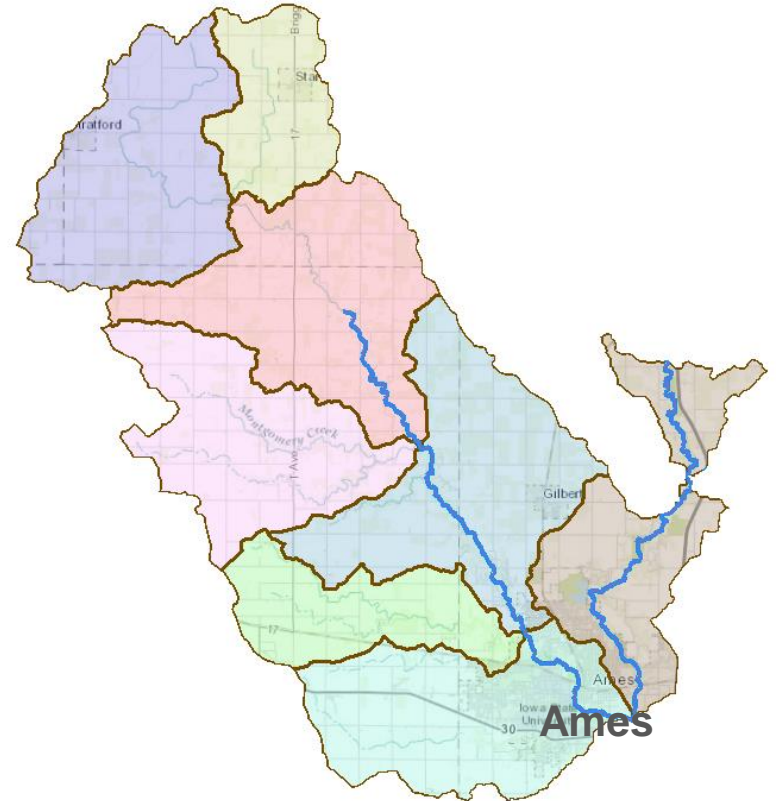
- What is a watershed approach?
 - Over time, reduce flows and nutrients coming downstream
 - Conservation practices
 - Wetlands
 - Basins
 - In-Field
 - Edge-of-Field



Watershed Approach

46

- ❑ Squaw Creek Watershed Management Authority
 - ❑ Watershed Management Plan completed in 2014
 - ❑ Plan identifies hundreds of potential sites for various practices
 - ❑ Expanding to study Keigley Branch-portion of South Skunk River
- ❑ Story County studying 11 watersheds



What would it look like?

47

- Partnerships
 - Story County, IDNR, IDALS, etc.
 - Squaw Creek Watershed Management Authority
- City funding options:
 - to specific practices
 - Investment amount or match
- Long Term Commitment



Watershed Approach Benefits

48

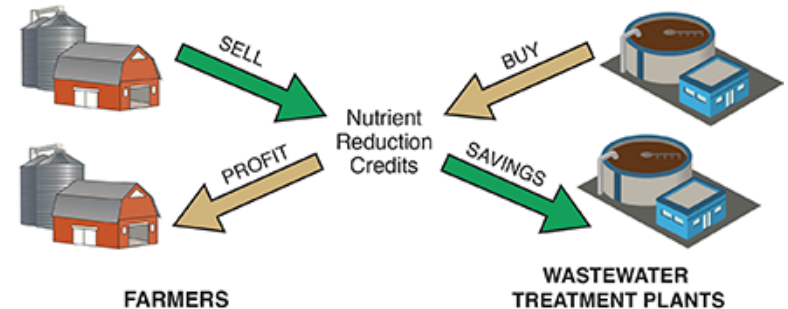
- ❑ Reduced Flood Flows
- ❑ Reduced Nutrient Loading
- ❑ Collaborative Effort
- ❑ Scalable
- ❑ Wide Reaching
- ❑ Shared Cost & Profit
- ❑ Water Quality
- ❑ Wetland Credits
- ❑ Limited Maintenance
- ❑ Public Perception
- ❑ Habitat
- ❑ Recreation

Watershed Approach Challenges

49

- No method currently exists for credit trading
 - Several functioning state programs (CT, NY)
- No existing partnerships
- Shared design standards
- Public perception
- Timeline

How a Water Quality (Nutrient) Trade Works



Nutrient reduction credit = Further nutrient reduction beyond the amount required for farmers by TMDLs

Next Steps

50

- Provide guidance with Squaw Creek at S Duff Ave
 - Considerations relative to Grand Avenue Extension
- Consider Watershed Approach
 - More information next from John Dunn (WPC)
 - Could bring back more information to City Council

Questions

51



NUTRIENT REDUCTION

52



John Dunn – WPC

GRAND AVENUE EXTENSION (GAE)

53



City Council Workshop – November 29, 2016

GAE – Phases 1 & 2 (Complete)

54

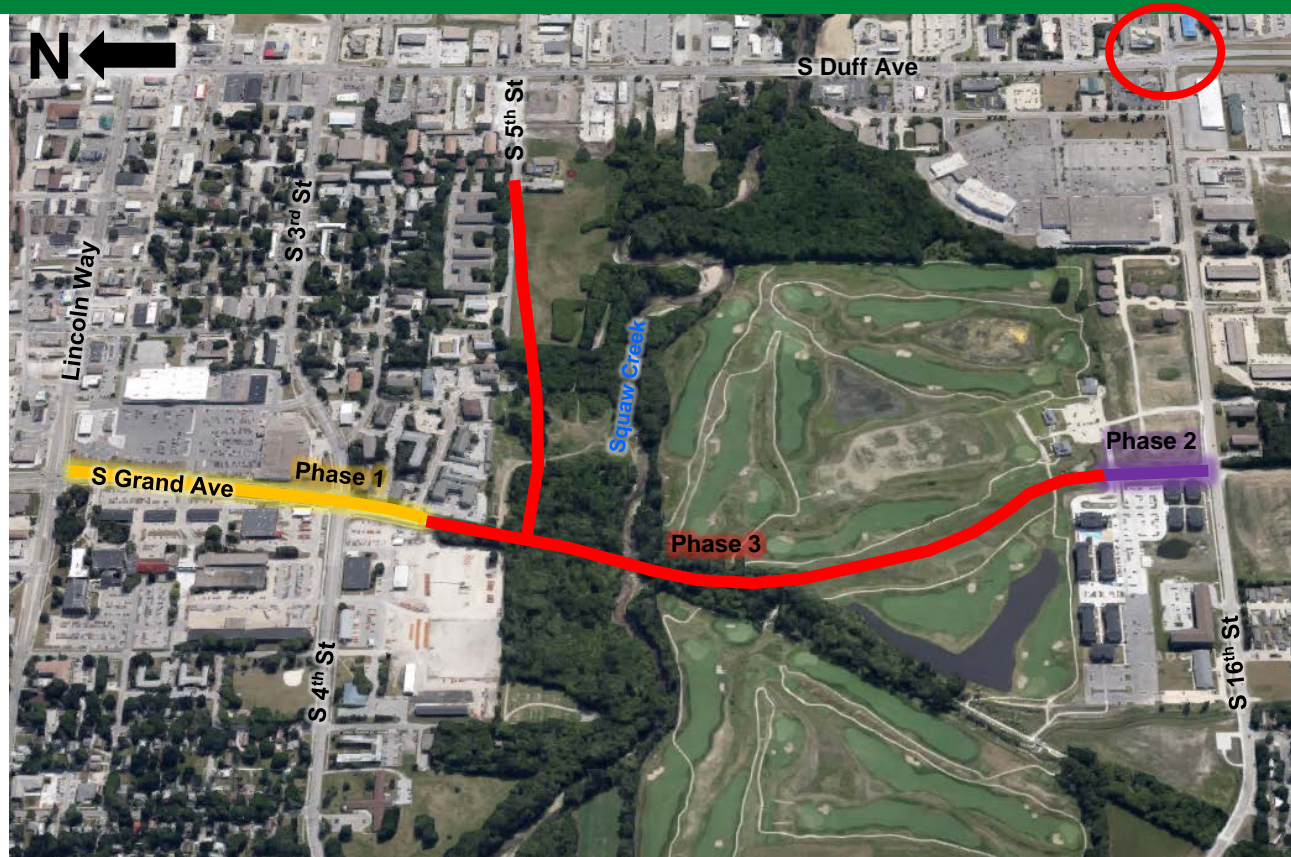
Phase 1 - Lincoln Way to Squaw Creek Dr



Phase 2 – S 16th St North 400 Ft



GAE – Phase 3

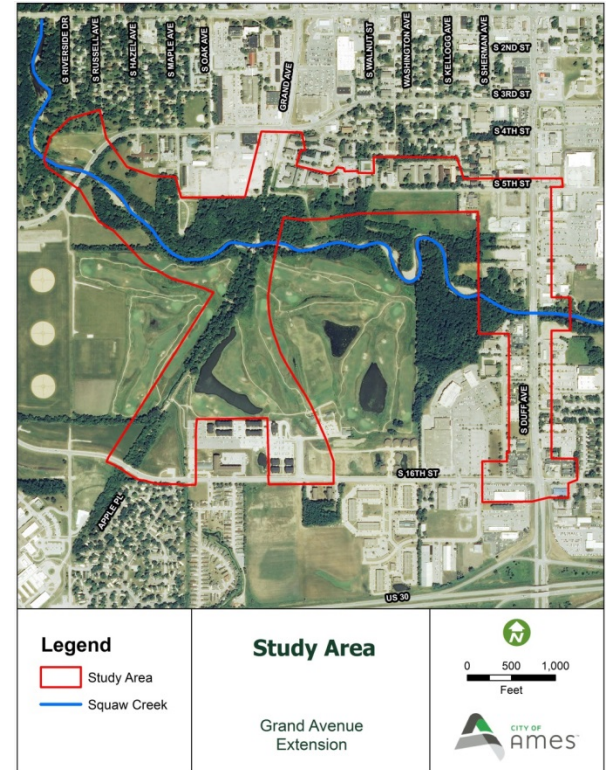


GAE – Study Area

56

Study Area Limits:

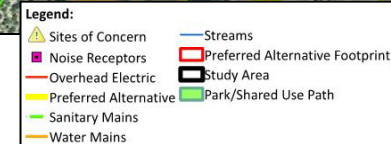
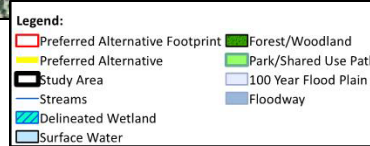
- South 4th Street to South 16th Street
- South Duff Avenue to northwest of South 4th Street along Squaw Creek



GAE – Environmental Constraints

Preferred Alternative Impacts:

Issue	No Build Alternative	Preferred Alternative
Parklands and Recreational Area Impacts (acres)	0	19.36
Section 4(f) Impacts (acres)	0	3.03
Right-of-Way Acquisition (acres)	0	30.36
Displacements (number of sites)	0	0
Archaeological Impacts (number of sites) / (acres)	0	1 / 2.8
Wetland Impacts (acres)	0	1,272
Stream Impacts (linear feet)	0	1,480
Floodway / Floodplain Impacts (acres)	0	16.2 / 32.5
Threatened and Endangered Species Habitat (acres)	0	5.4
Woodland Impacts (acres)	0	5.7
Noise Impacts (number of receptors)	0	0
Regulated Materials (number of sites) / (acres)	0	1 / 2.8
Utility Impacts (number of crossings)	0	2





- Not Including S Duff Channel Improvements
- Surface water elevations will be refined during design to achieve no-rise conditions

LEGEND

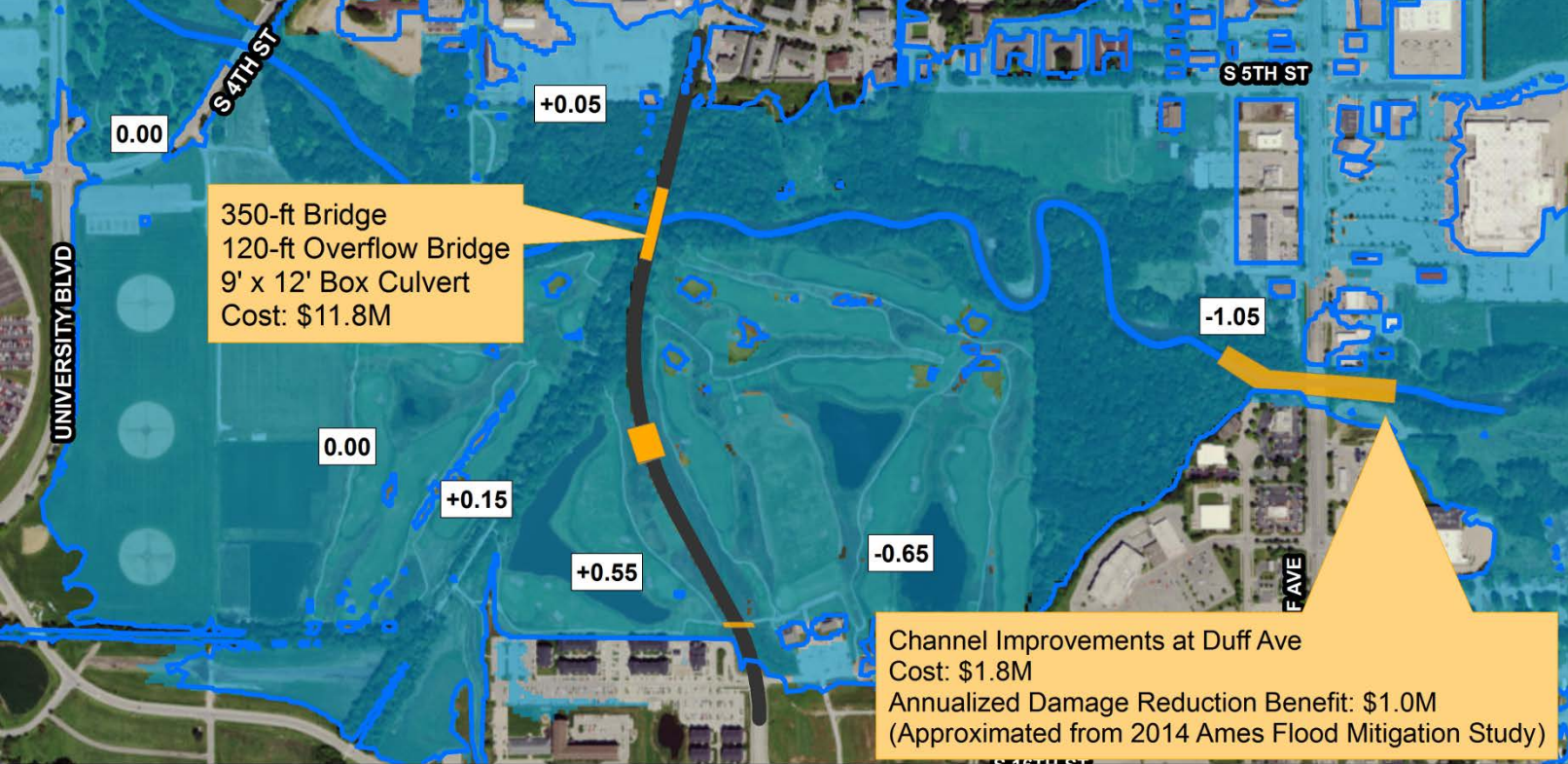
- Alternative B
- Existing 100-year Inundation Limit
- Alternative B Inundation Area
- +0.04 Change in water level from existing conditions (in feet)

Hydraulic Alternative 1 Grand Avenue Extension Hydraulic Design and Transportation Service Level: 100-year Event

Note: This hydraulic alternative is labeled as Hydraulic Alternative B in Environmental Assessment

CITY OF
AMES

0 Feet 1,000



LEGEND

- Alternative Components
- Existing 100-year Inundation Limit
- Approx. Inundation Area
- +0.04 Change in water level from existing conditions (in feet)

Hydraulic Alternative 2 Grand Avenue Extension Completed with Channel Improvements at Duff Ave

Hydraulic Design and Transportation Service Level: 100-year Event

Note: Proposed improvements are estimates and not based on hydraulic modeling results. This hydraulic alternative is similar to WHKS's Hydraulic Alternative 5.



0 Feet 1,000



- Including S Duff Channel Improvements
- **Surface water elevations will be refined during design to achieve no-rise conditions**
- Credit can be taken at S Grand Ave structures (reduced structure lengths, type and size)
- Annualized savings considers all flood events (10 yr to 1,000 yr events)



61

- Including S Duff Channel Improvements
- **Surface water elevations will be refined during design to achieve no-rise conditions**
- Credit can be taken at S Grand Ave structures (reduced structure lengths, type and size)
- Annualized savings considers all flood events (10 yr to 1,000 yr events)

LEGEND

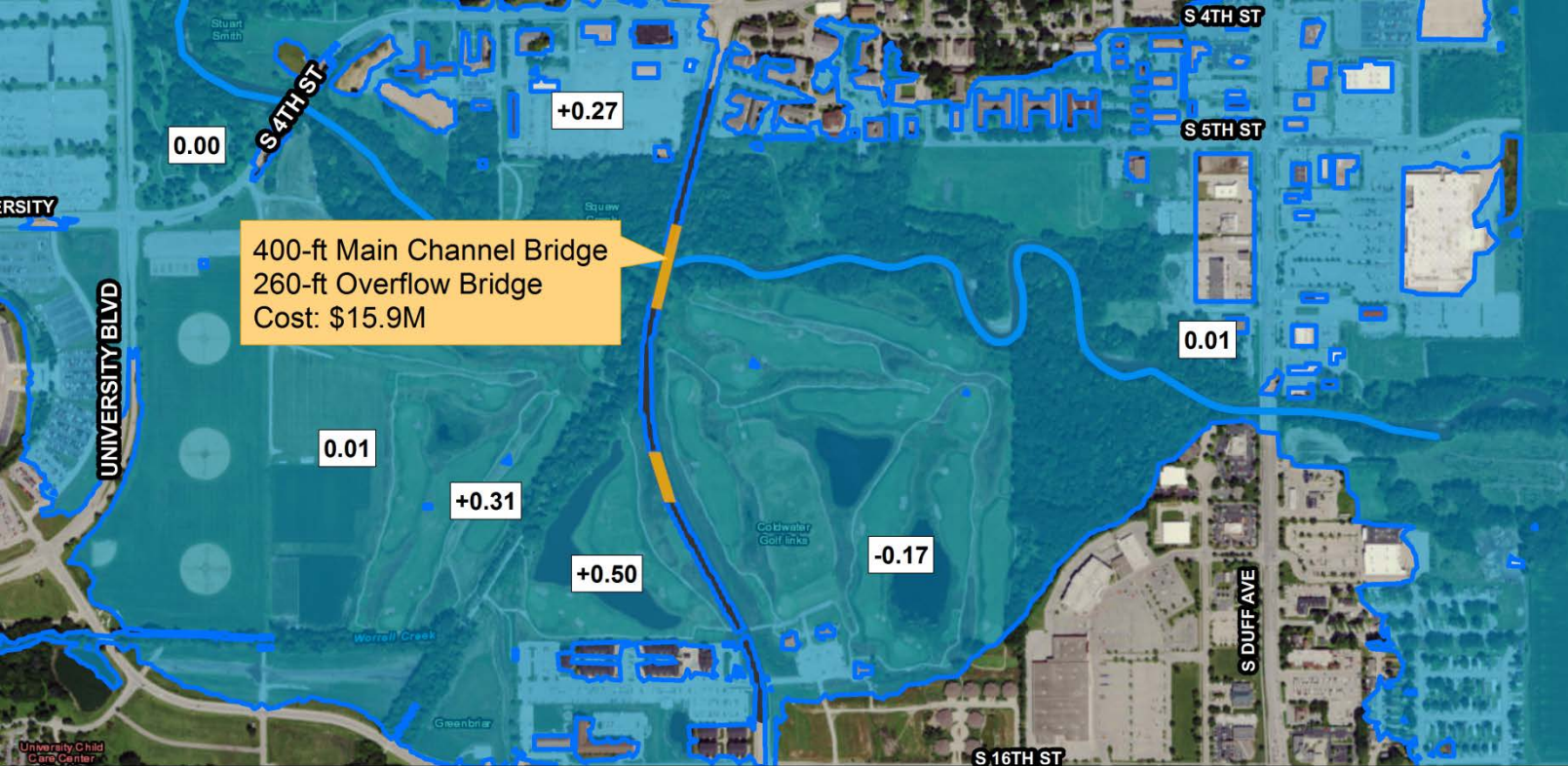
- Existing 100-year Inundation Limit
- Alternative A Components
- Alternative A Inundation Area
- +0.04 Change in water level from existing conditions (in feet)

**Hydraulic Alternative 3
Grand Avenue Extension
Completed with Channel
Improvements at Duff Ave
Hydraulic Design and Transportation
Service Level: 100-year Event**

Note: This hydraulic alternative is labeled as Hydraulic Alternative A in Environmental Assessment

CITY OF Ames

0 Feet 1,000



- Not Including S Duff Channel Improvements
- **Surface water elevations will be refined during design to achieve no-rise conditions**
- GAE remains operational during historical 2010 event

LEGEND

- Alternative_C
- 2010 Inundation Area (approx.)
- Alternative C Inundation Area (2010)
- +0.04 Change in water level from existing conditions (in feet)

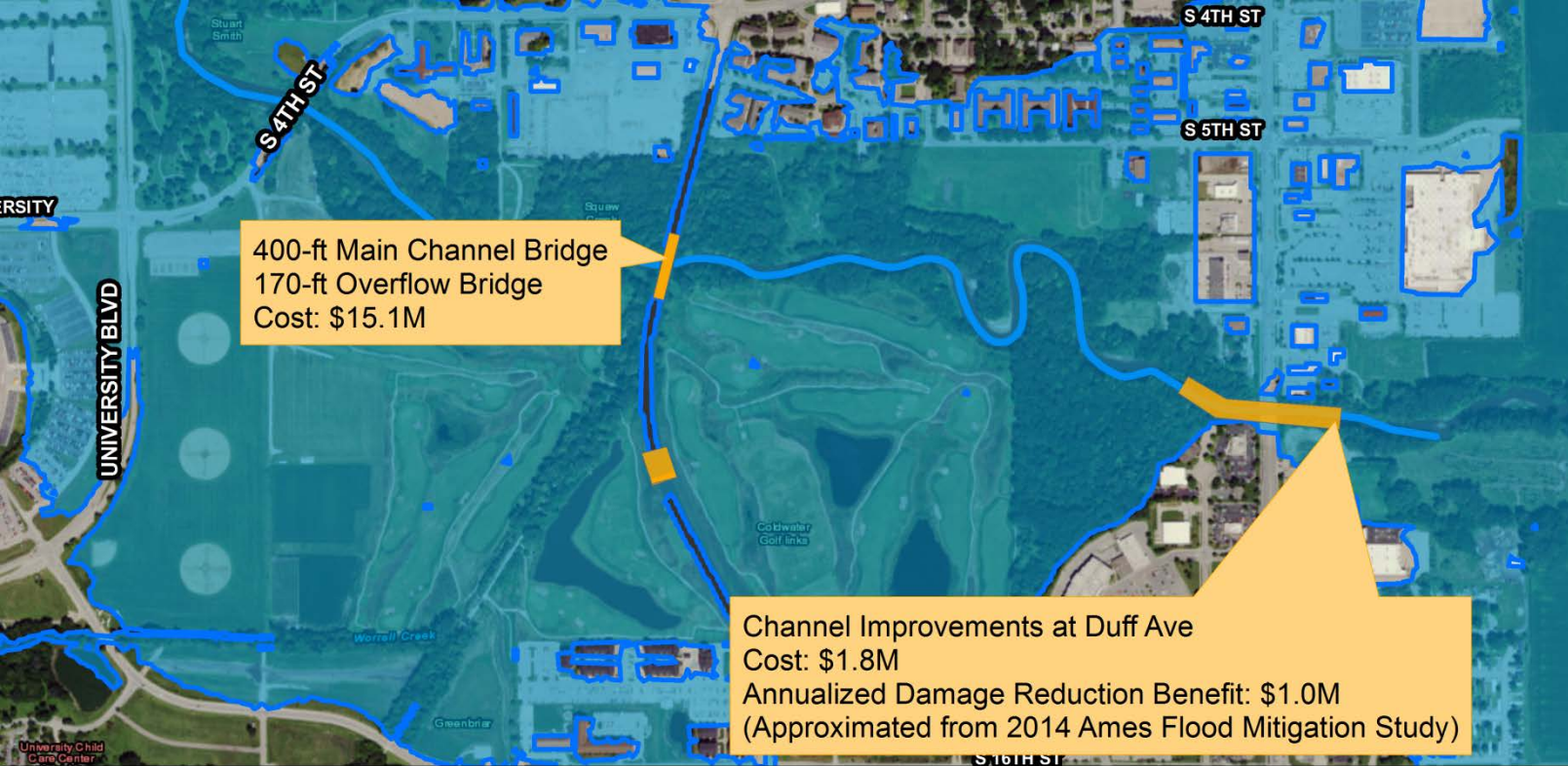
Hydraulic Alternative 4 Grand Avenue Extension Hydraulic Design and Transportation Service Level: 2010 Peak Flow Rate

Note: This hydraulic alternative is labeled as Hydraulic Alternative C in Environmental Assessment



0 Feet 1,000





400-ft Main Channel Bridge
170-ft Overflow Bridge
Cost: \$15.1M

Channel Improvements at Duff Ave
Cost: \$1.8M
Annualized Damage Reduction Benefit: \$1.0M
(Approximated from 2014 Ames Flood Mitigation Study)

- Including S Duff Channel Improvements
- **Surface water elevations will be refined during design to achieve no-rise conditions**
- Credit can be taken at S Grand Ave structures (reduced structure lengths, type and size)
- Annualized savings considers all flood events (10 yr to 1,000 yr events)

LEGEND

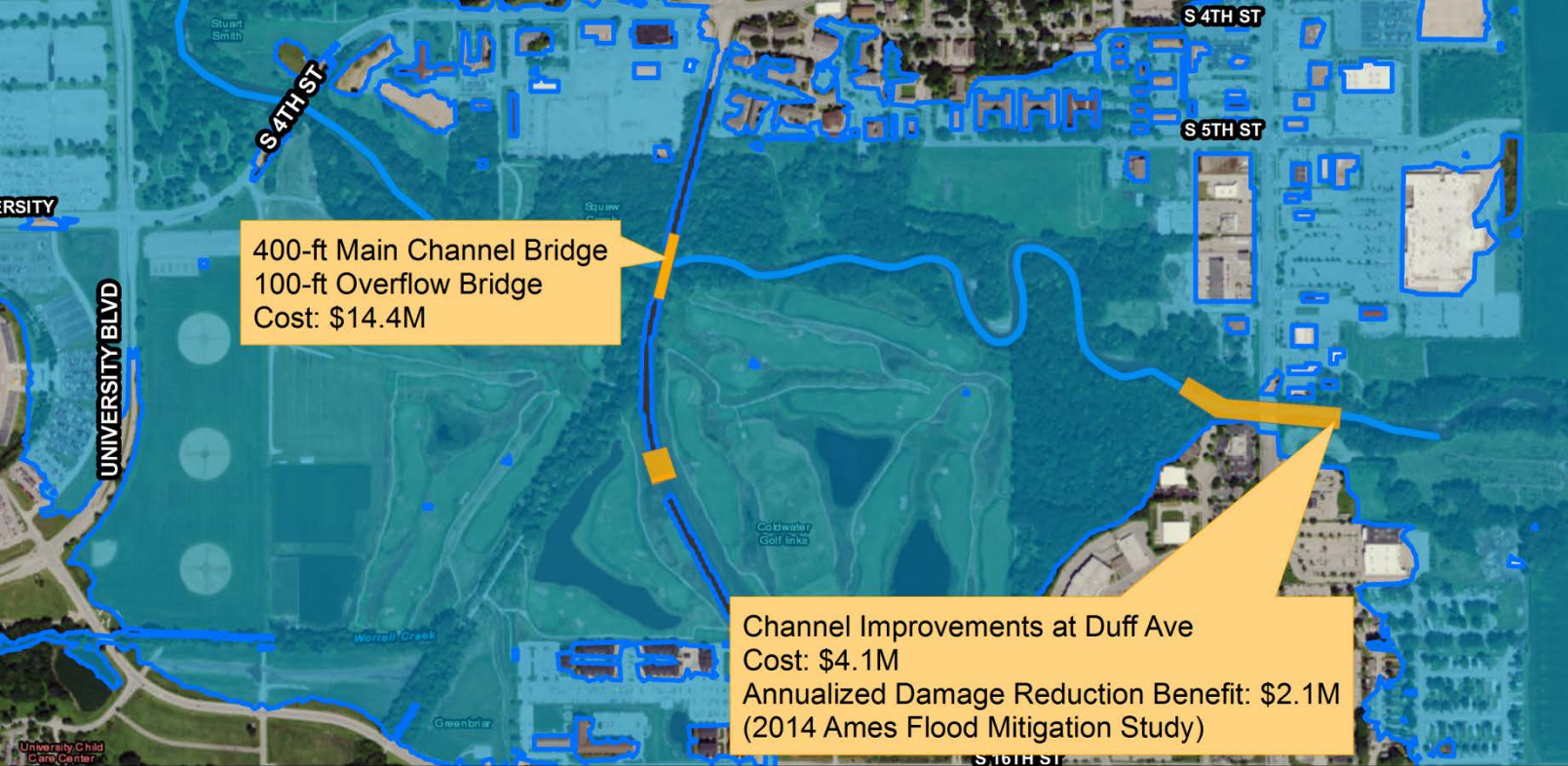
- Alternative
- 2010 Inundation Area (approx.)
- Alternative C Inundation Area (2010)

**Hydraulic Alternative 5
Grand Avenue Extension
Completed with Channel
Improvements at Duff Ave
Hydraulic Design and Transportation
Service Level: 2010 Peak Flow Rate**

Note: Proposed Improvements are estimated and not based on hydraulic modeling results.

**CITY OF
Ames**

0 Feet 1,000



400-ft Main Channel Bridge
100-ft Overflow Bridge
Cost: \$14.4M

Channel Improvements at Duff Ave
Cost: \$4.1M
Annualized Damage Reduction Benefit: \$2.1M
(2014 Ames Flood Mitigation Study)

LEGEND

- Alternative
- 2010 Inundation Area (approx.)
- Alternative C Inundation Area (2010)

Hydraulic Alternative 6
Grand Avenue Extension
Completed with Channel
Improvements at Duff Ave
Hydraulic Design and Transportation
Service Level: 2010 Peak Flow Rate

Note: Proposed Improvements are estimated and not based on hydraulic modeling results.



0 Feet 1,000



- Including S Duff Channel Improvements
- **Surface water elevations will be refined during design to achieve no-rise conditions**
- Credit can be taken at S Grand Ave structures (reduced structure lengths, type and size)
- Annualized savings considers all flood events (10 yr to 1,000 yr events)

GAE – Estimated Cost Alternatives

Cost Summary:

Hydraulic Alternative	Grand Ave Extension Cost	S. Duff Ave Channel Cost	TOTAL COST
Alternative 1 (100-year Event)	\$12.6 M	\$0.0 M	\$12.6 M
Alternative 2 (100-year Event)	\$11.8 M	\$1.8 M	\$13.6 M
Alternative 3 (100-year Event)	\$11.1 M	\$4.1 M	\$15.2 M
Alternative 4 (2010 Event)	\$15.9 M	\$0.0 M	\$15.9 M
Alternative 5 (2010 Event)	\$15.1 M	\$1.8 M	\$16.9 M
Alternative 6 (2010 Event)	\$14.4 M	\$4.1 M	\$18.5 M

GAE – CIP Budget

GRAND AVENUE EXTENSION

PROJECT STATUS: Advanced

Cost Change

City of Ames, Iowa
Capital Improvements Plan

DESCRIPTION/JUSTIFICATION

This project is for the extension of Grand Avenue from Lincoln Way to South 16th Street. Included is South 5th Street (Grand Avenue to South Duff Avenue) as well as improvement to the South Duff Avenue (US 69)/South 16th Street intersection. Extending Grand Avenue to South 16th Street will divert traffic from the US Highway 69 corridor (Grand Avenue to Lincoln Way to South Duff Avenue) to the new extension. It will help alleviate the existing congestion and allow for easier access to businesses along US Highway 69. In addition, through traffic on the Grand Avenue extension will also encounter less traffic congestion.

COMMENTS

This roadway will include turn lanes, a bridge over Squaw Creek, a golf cart underpass at Coldwater Golf Course, and a bike path along the west side of the roadway. Street lighting has also been included in the project costs.

LOCATION

2013/14	South Grand Avenue (Squaw Creek Drive to S 16 th St) and S 5 th St (S Grand Ave to S Duff Ave) (Planning and NEPA Phase I) (\$423,000)
2015/16	South Grand Avenue (Squaw Creek Drive to S 16 th St) and S 5 th St (S Grand Ave to S Duff Ave) (NEPA Phase II) (\$280,000)
2016/17	South Grand Avenue (Squaw Creek Drive to S 16 th St) and S 5 th St (S Grand Ave to S Duff Ave) (NEPA Phase II, planning, engineering, and land acquisition)
2017/18	South Grand Avenue (Squaw Creek Drive to S 16 th St) and S 5 th St (S Grand Ave to S Duff Ave) (engineering, grading, bridge, and box culverts/golf cart passage)
2018/19	South Grand Avenue (Squaw Creek Drive to S 16 th St) and S 5 th St (S Grand Ave to S Duff Ave) (engineering and paving); and S Duff Ave (S 16 th St intersection improvements)

A Transportation Funding Study in 2012/13 identified federal and state grants that may be available for funding this project.

The status changes (advanced and cost change) are due to Grand Avenue Extension being a transportation priority.

	TOTAL	2016/17	2017/18	2018/19	2019/20	2020/21
COST:						
Planning	300,000	300,000				
Engineering	2,450,000	1,000,000	725,000	725,000		
Land Acquisition	700,000	700,000				
Construction	14,000,000		7,000,000	7,000,000		
	TOTAL	17,450,000	2,000,000	7,725,000	7,725,000	
FINANCING:						
G. O. Bonds	9,000,000	1,300,000	4,000,000	3,700,000		
Federal/State Grants	4,150,000	700,000	1,725,000	1,725,000		
MPO/STP Funds	4,300,000		2,000,000	2,300,000		
	TOTAL	17,450,000	2,000,000	7,725,000	7,725,000	
PROGRAM – ACTIVITY:						
Transportation – Streets Engineering						
DEPARTMENT:						
Public Works						
ACCOUNT NO.						
320-8181-439						
377-8181-439						



GAE – Next Steps

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- Select Hydraulic Alternative for Design of S Grand Avenue Roadway and Structures
- Grant Applications Submitted TSIP, ICAAP, U-STEP
- Selection of Design Services (Dec 2016)
- Signed Environmental Assessment (Dec 2016)
- Signed Finding of No Significant Impact (Feb 2017)

SKUNK RIVER TRAIL

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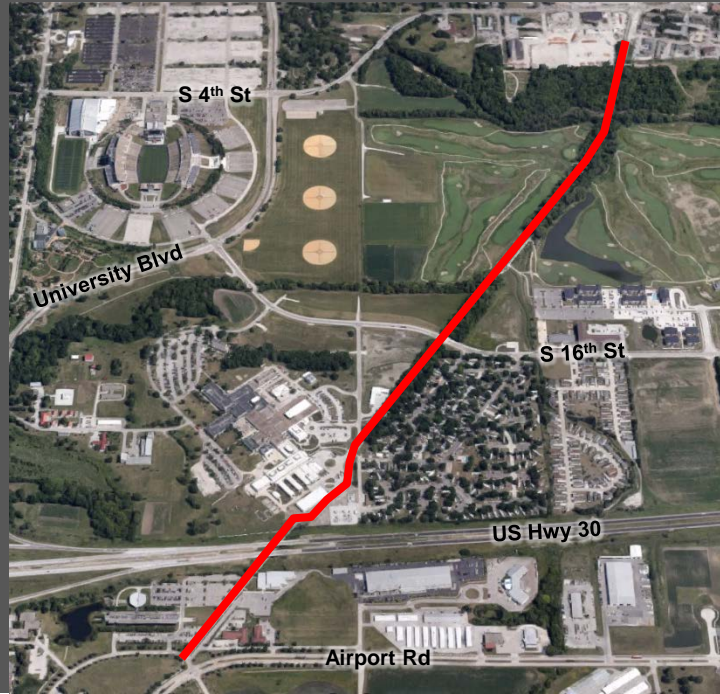


Skunk River Trail

- Existing Pedestrian Bridge removed as part of GAE potentially to be reused at Skunk River Trail crossing of Squaw Creek between SE 16th St and E Lincoln Way
- Draft 2017 CIP, Trail Paving in 2019/20

VET MED TRAIL

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Vet Med Trail

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- Planning Study
 - Data Collection of Existing Trail Users Underway
 - Public Input Meetings Winter/Spring 2016/17
- Existing Pedestrian Bridge to be Removed with GAE
- GAE Bridge to be Constructed with Multi-Use Facilities in 2018/19, Estimated 10 month Construction (bridge only)
- Draft 2017 CIP, Trail Paving in 2020/21