

**AGENDA
CITY OF LARAMIE, WYOMING
CITY COUNCIL WORK SESSION
CITY HALL
JANUARY 24, 2017 at 6:00 pm**

City Council Meetings are open to the public. Requests for accommodations from persons with disabilities must be made to the City Manager's Office 24 hours in advance of a meeting.

1. WORKSESSION

2. Public Comments

3. WORK SESSION: Public Works Projects

**3.A. North Side Tank Project
[Smith, PW]**

Documents:

[Coversheet North Side Tank.pdf](#)
[NS Tank Overall Plan.pdf](#)
[NS Tank Presentation.pdf](#)

**3.B. South Laramie Drainage Master Plan
[Smith, PW]**

Documents:

[Cover Sheet Storm Drainage Master Plan.pdf](#)
[South Laramie Drainage Presentation 2017-01-24-FINAL.pdf](#)

4. City Council Updates/Council Comments

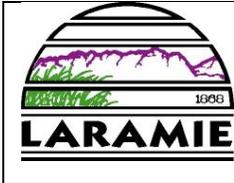
5. Agenda Review

5.A. Upcoming Council Meetings

Documents:

[Upcoming Meetings 01-24-2017.pdf](#)

6. Public Comments



Agenda Item: Discussion Item

Title: North Side Tank Project

Recommended Council MOTION:

None, for discussion only.

Administrative or Policy Goal:

Administrative Goal – Maintain City-wide infrastructure improvement program as adopted in the 2015 Water Master Plan and Long Range Financial Plans for water, sewer, and storm drainage improvements

Background:

The North Side Tank Project was identified as a missing critical element of the City’s water system several years ago. The 2015 Water Master Plan (WMP) confirmed this assumption, ultimately identifying the project as the number one priority within the City’s water capital plan.

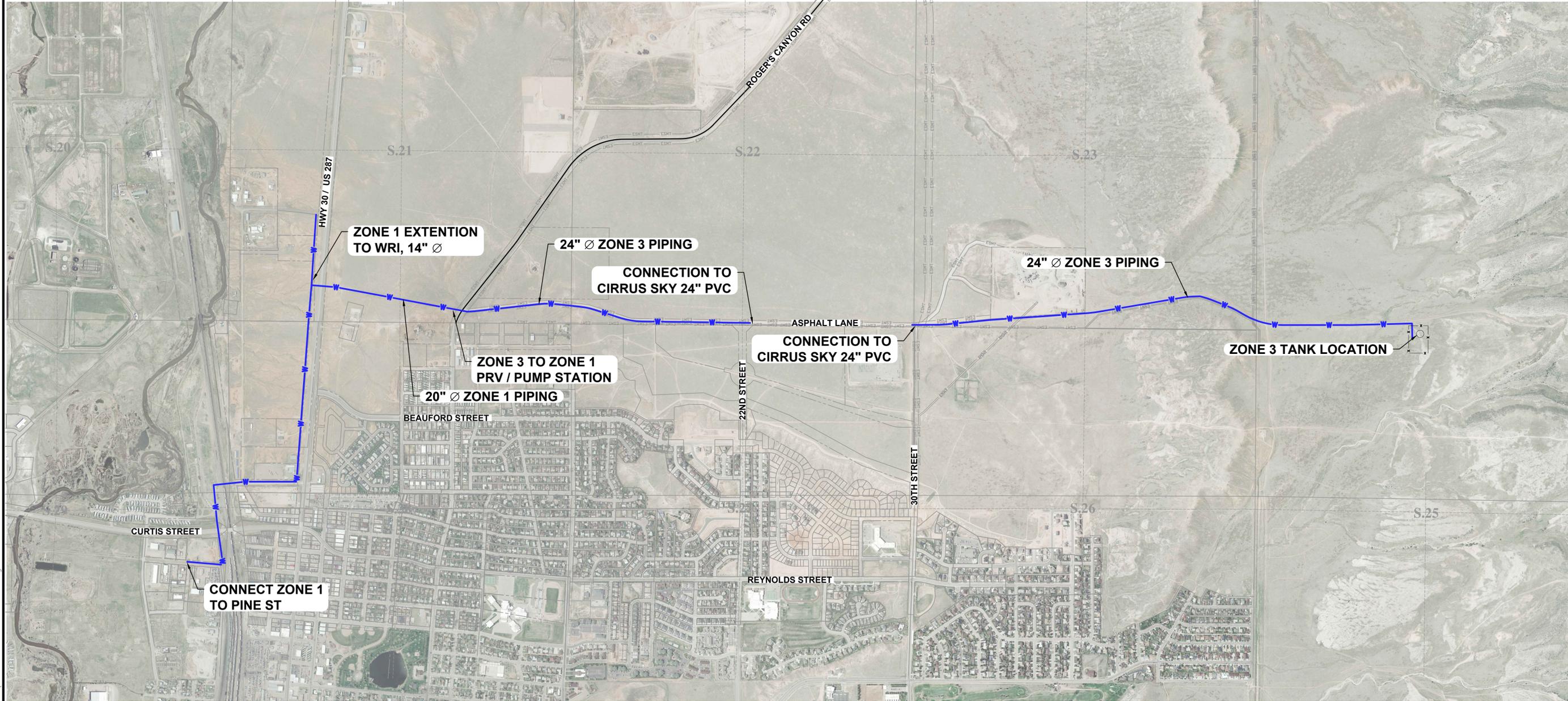
The North Side Tank Project includes a 1MG water storage tank in the City’s pressure zone 3 to the northeast of the community along with approximately 22,000 lineal feet of water transmission mains of various sizes (12” to 24” diameter) along the northern extent of the community. The system will ultimately provide a new water supply around the north side of town; designed to meet future demands and address existing deficiencies. A vicinity map showing the project location is attached.

Funding for this project is split between a Wyoming Water Development Commission (WWDC) grant and a Drinking Water State Revolving Fund loan. An application for funding the project was submitted to the WWDC in the fall of 2016. The WWDC approved full funding for the project, which provides a 67% grant (\$804,000 for design and \$8,040,000 for construction). The remaining 33% of funding must come from a loan or other source provided by the City. In the case of this project, we are pursuing a DWSRF to fund the remaining amount (\$4,356,000).

The project design has reached the 50% milestone. This includes the alignment of the various pipelines and the location of the water tank. The water tank will be a buried concrete tank located on an easement to the east of the Cirrus Sky development. The tank will ultimately supply water to Cirrus Sky and other future developments in the vicinity. The tank and pipelines will also serve the northern extent of the existing community, providing additional flow and pressure.

It is our intent to have all easements in place by June of 2017 and the design complete by July 2017. The project will be bid for construction this summer and construction should start after July 1, 2017. The project will take close to two years to complete.

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REV	DATE	DESCRIPTION	BY

DOWL
 WWW.DOWL.COM
 1575 N. 4th Street, #105
 Laramie, Wyoming 82072
 307-742-3816

CITY OF LARAMIE NORTH TANK
 NORTH TANK
OVERALL PLAN
 ALBANY COUNTY
 WYOMING

PROJECT 5128.26717.01
 DATE JANUARY 2017

© DOWL 2016
 SHEET
2
 OF 35

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The text is centered on the slide.

CITY OF LARAMIE NORTH SIDE TANK PROJECT

PRESENTED TO THE

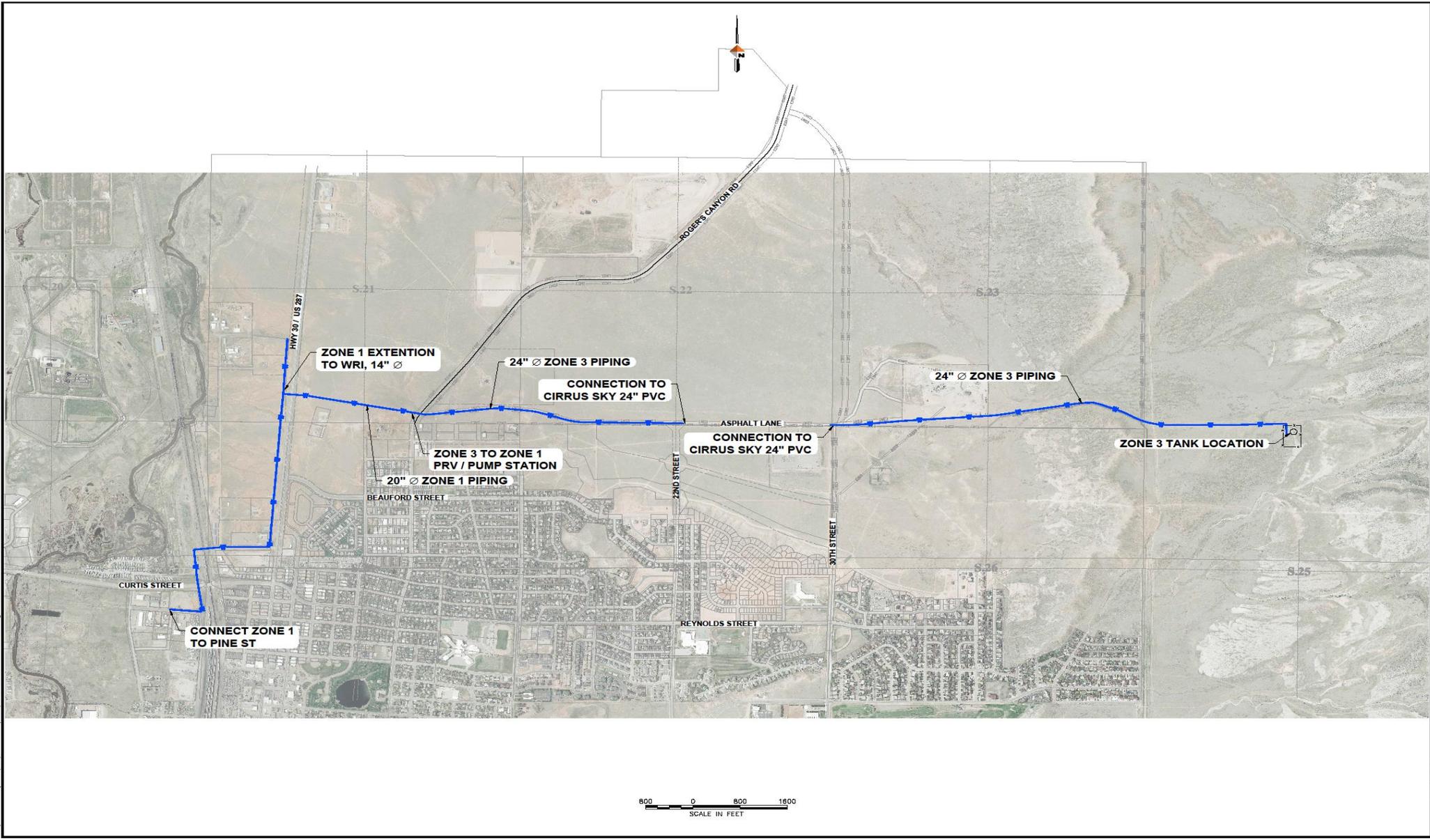
CITY COUNCIL

JANUARY 24, 2017

NORTH SIDE TANK PROJECT

- NEED FOR ZONE 3 STORAGE IDENTIFIED YEARS AGO
- INITIALLY STUDIED IN 2012/2013
- 2014 WWDC AUTHORIZES \$1.2M IN FUNDING FOR DESIGN (2/3 GRANT – 1/3 LOAN)
- 2015 WATER MASTER PLAN IDENTIFIES THE TANK AS THE #1 PRIORITY
- DESIGN INITIATED IN JULY 2016
- NOVEMBER 2016, WWDC AUTHORIZES \$1.2M IN CONSTRUCTION FUNDING (2/3 GRANT – 1/3 LOAN)

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REV. DATE		REVISIONS DESCRIPTION	BY

DOWL
www.dowl.com

1075 N. 4th Street, #105
Laramie, WY 82002
307-742-2815

CITY OF LARAMIE NORTH TANK
NORTH TANK

OVERALL PLAN
ALBANY COUNTY
WYOMING

PROJECT 5128.26/17.01
DATE JANUARY 2017
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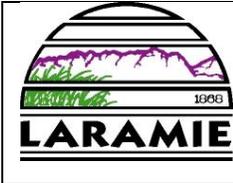
NORTH SIDE TANK PROJECT

- 1 MG BURIED CONCRETE WATER STORAGE TANK NORTHEAST OF TOWN
- 22,000 L.F. OF WATER TRANSMISSION MAINS (24" TO 12")
- PROJECT INCLUDES A PUMP STATION AND 2 PRESSURE REDUCING STATIONS
- IMPROVES FLOW AND PRESSURE FOR FUTURE GROWTH AND EXISTING AREAS OF TOWN
- CONSTRUCTION IS ANTICIPATED TO BEGIN AFTER JULY 1ST
- CONSTRUCTION COULD TAKE AS LONG AS TWO YEARS TO COMPLETE



NORTH SIDE TANK PROJECT

- **QUESTIONS?**
- **COMMENTS?**



Agenda Item: Presentation

Title: South Laramie Drainage Master Plan

Recommended Council MOTION:

None, for discussion only.

Administrative or Policy Goal:

Administrative Goal – Develop a City-Wide Master Drainage Plan.

Background:

The purpose of the South Laramie Drainage Master Plan is to provide a prioritized list of drainage improvements necessary to manage stormwater runoff for the following portions of the City of Laramie: south Laramie, the West Side neighborhood, and the Turner Tract. Much of the affected area has not been studied previously. The South Laramie Drainage Master Plan is part of an overall goal to develop a Master Plan for the entire City of Laramie. Amec Foster Wheeler developed a rainfall-runoff model to quantify surface runoff, identify drainage issues, develop alternative solutions, and prepare a recommended drainage plan for improvements in the study area.

Also, part of this study was to update the Turner Tract Drainage Master Plan. This updated Turner Tract Drainage Master Plan is to provide a prioritized list of drainage improvements necessary to manage stormwater runoff for the Turner Tract. Amec Foster Wheeler developed a rainfall-runoff model to quantify surface runoff, identify drainage issues, develop alternative solutions, and prepare a recommended drainage plan for the improvements in the study area.

In addition, Amec Foster Wheeler is also updating the FEMA flood plain maps for Spring Creek Channel. This work will correct the existing maps that are known to have significant errors.

Both drainage studies are at 90% completion. Final comments will be submitted to Amec Foster Wheeler in the immediate future and the studies will then be finalized. The FEMA flood plan needs some additional survey work before it can be submitted to FEMA for review.

Now that the South Laramie Drainage Master Plan is concluding staff will put out an RFQ to have a consultant create a City-Wide Master Drainage Plan. This Plan will combine the West Laramie Drainage Master Plan, North Laramie Drainage Master Plan and the South Laramie Drainage Master Plan into one document. A Prioritized Capital Improvement Project List will be developed from the previous master plans, and a city-wide map and model will be created. A storm water design manual will be developed based on the studies. The study will also provide recommendations for stormwater revenues and expenditures.

South Laramie Drainage Master Plan

24 Jan 2017



Agenda

1. Introductions
2. Purpose of Master Plan
3. Study Area
4. Method of Analysis
5. Alternative Solutions
6. Recommendations and Costs
7. Looking to the Future: City-Wide Master Drainage Plan



Purpose of S. Laramie Drainage Master Plan

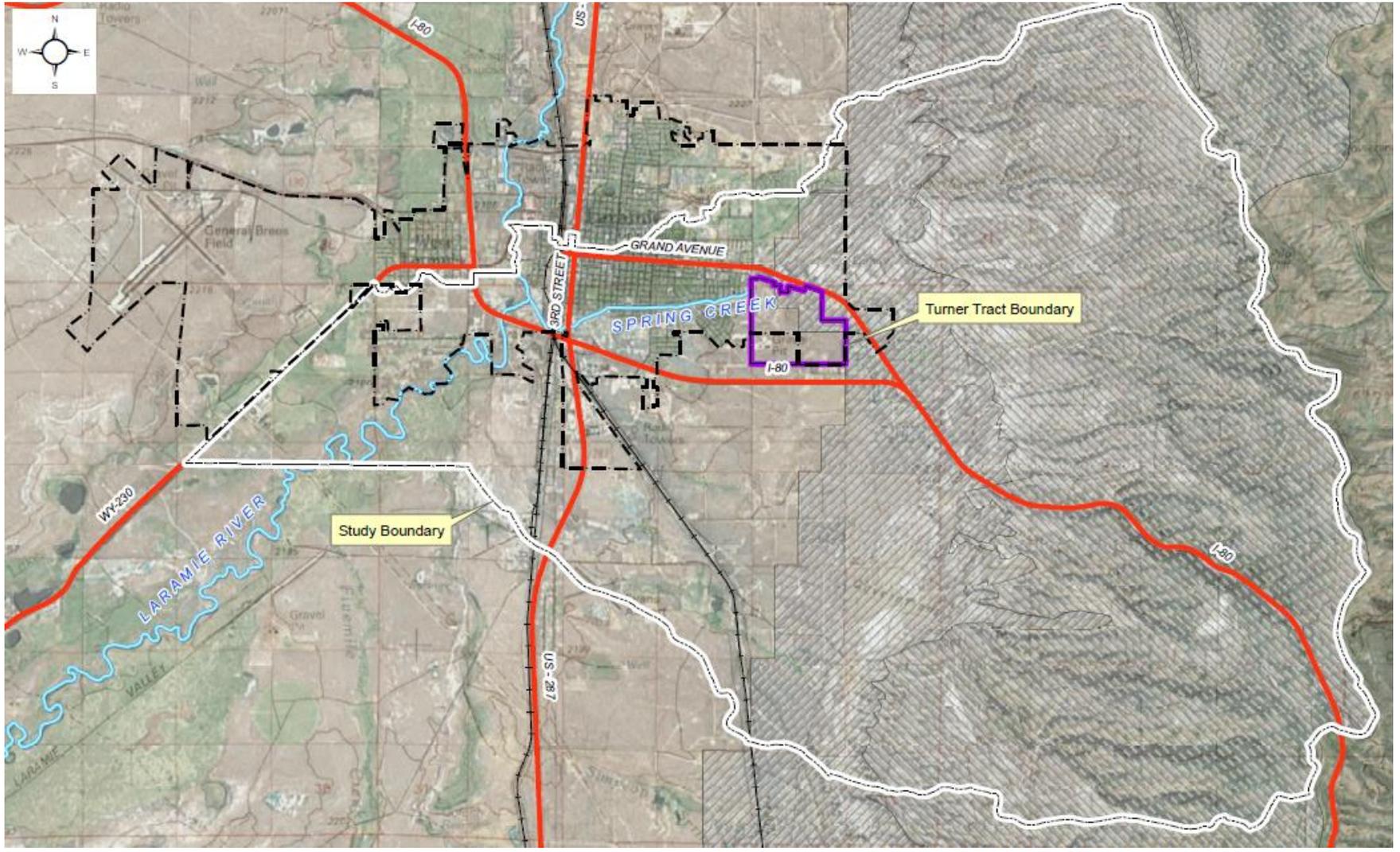
- Develop drainage model to study areas not previously evaluated:
 - South Laramie
 - West Side Neighborhood
 - Turner Tract
- Identify flooding hazards
- Provide prioritized list of drainage improvements to minimize flooding hazards and safely convey 100-year storm* runoff.



*100-year storm is the storm that has a 1% chance of happening in a given year



Study Area





Methodology

1) Data Collection

- Review Previous Reports
 - FEMA Flood Insurance Study
 - South Gateway Drainage Study
 - Turner Tract Preliminary Plat
- Field Reconnaissance
 - Survey conducted on manholes and inlets
 - Field inspections of manholes, inlets, channels, detention ponds, culverts

2) Define Drainage Basins

- Major Drainage Basins
- Divide into Sub-basins

3) Define Sub-basin characteristics

- Area, width, length, slope, impervious area, soil types, etc.
- Existing and future development conditions

4) Define Drainage Infrastructure characteristics

- Diameter, material, pond volume, etc.
- Incorporated recent projects (LHS, Regency Drive, UW Plaza)

5) Create Rainfall-Runoff Model -- PCSWMM

Methodology - continued

6) Identify Flood Hazards

- Existing Development
- Future Development

7) Develop Alternative Solutions

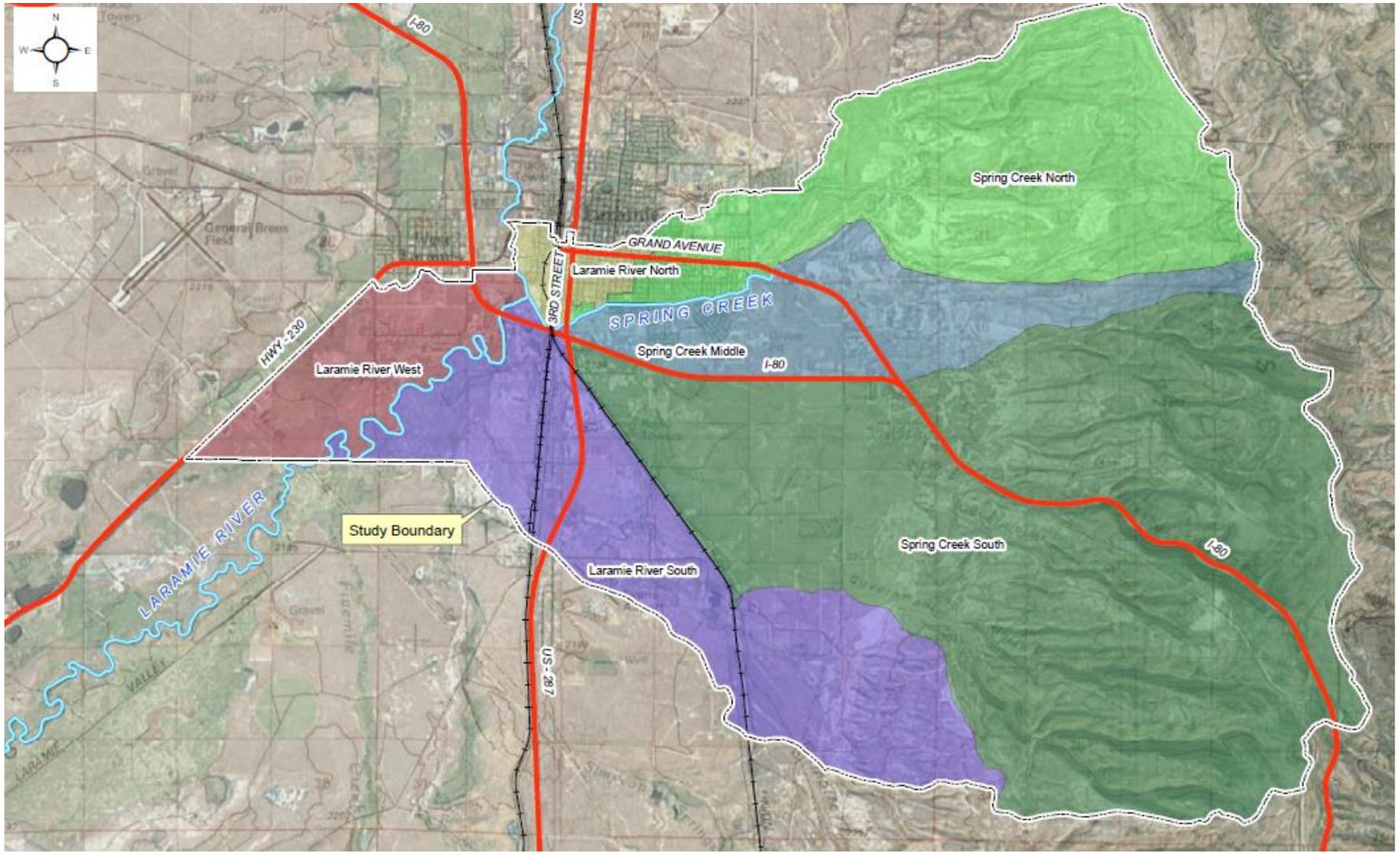
- Considered and evaluated dozens of potential solutions
- Prepared Conceptual Costs for the most feasible solutions

8) Recommend Capital Improvement Plan

- List of improvements needed to mitigate flood hazards

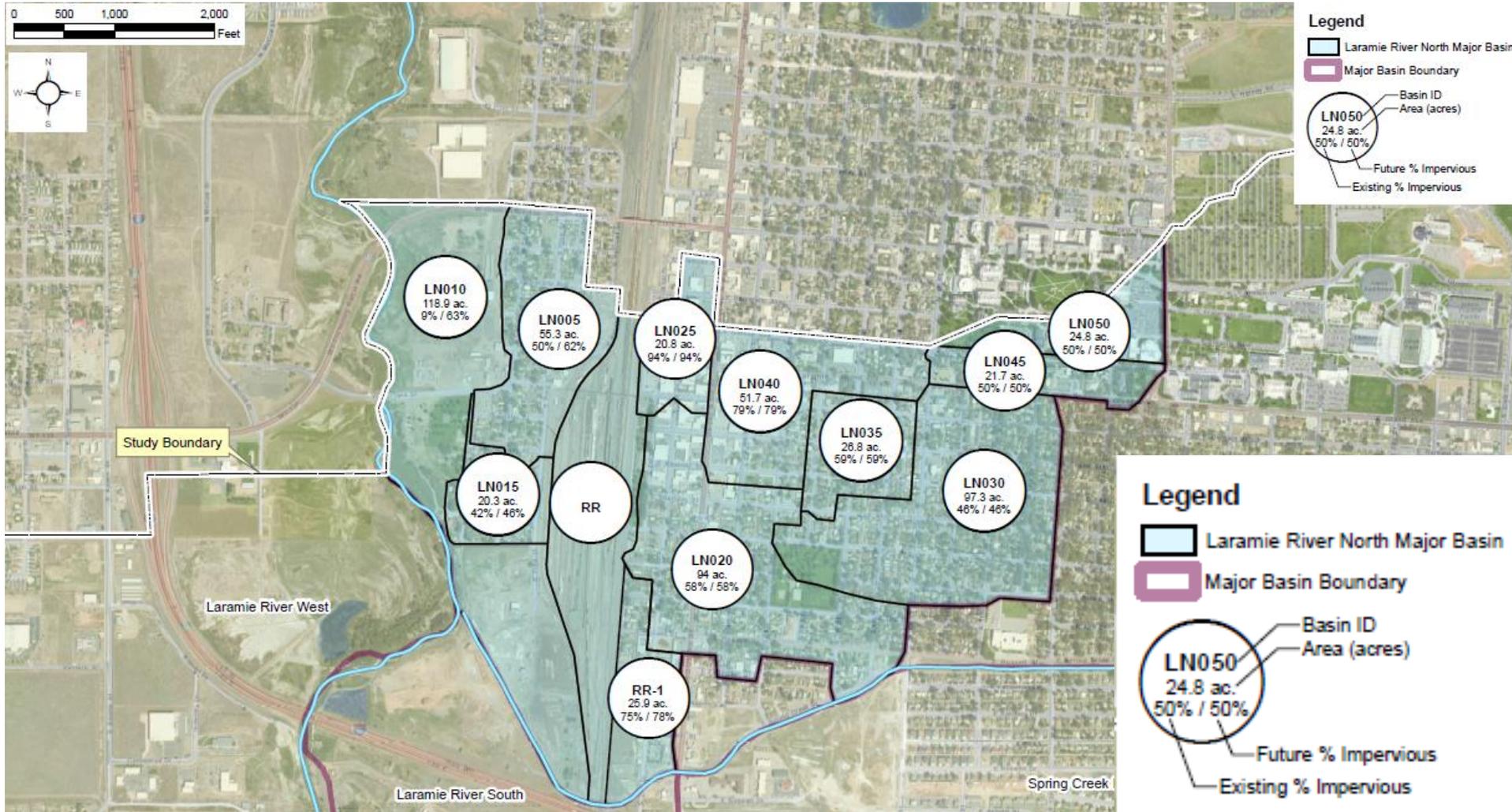


Major Basins

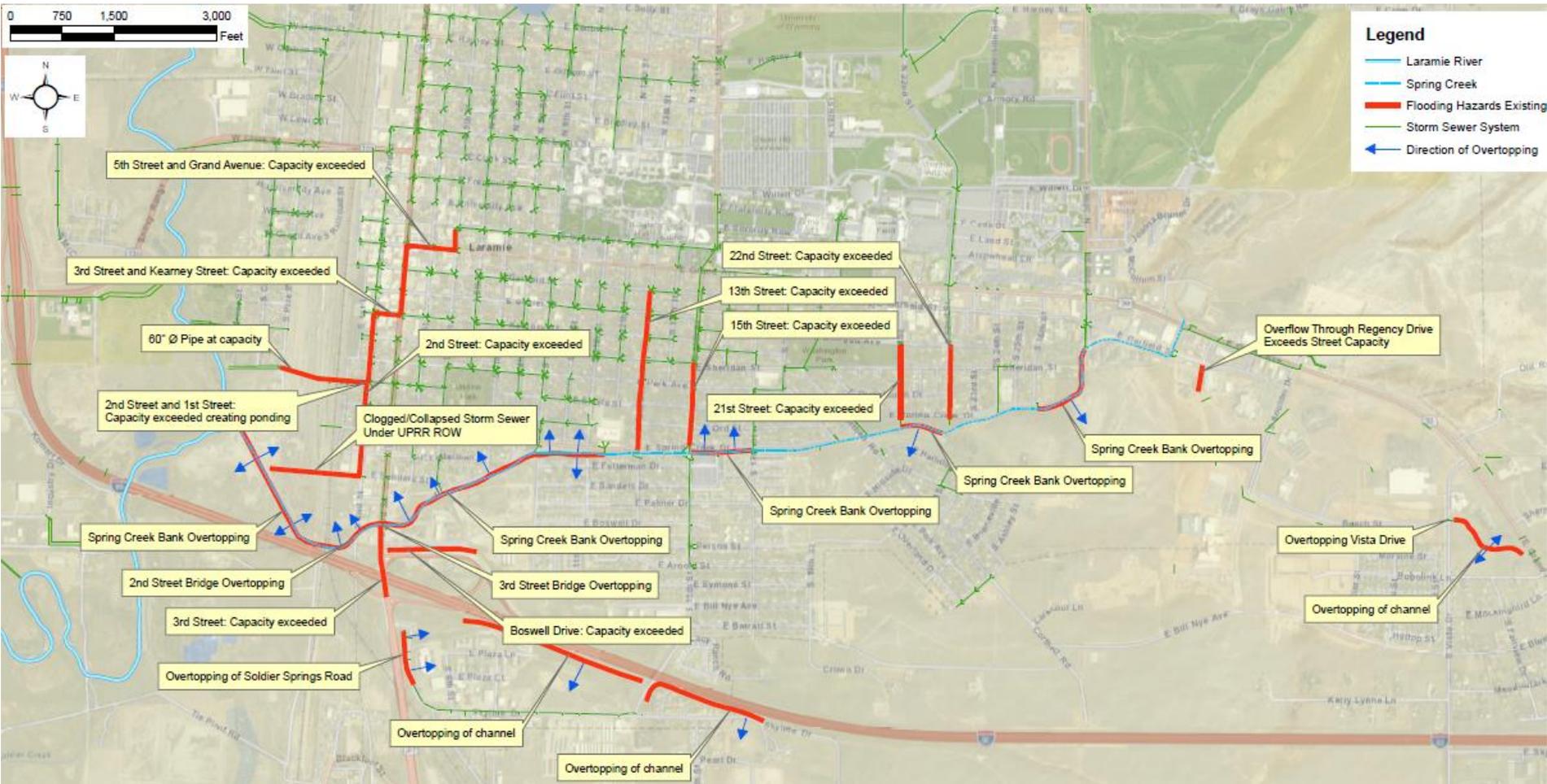




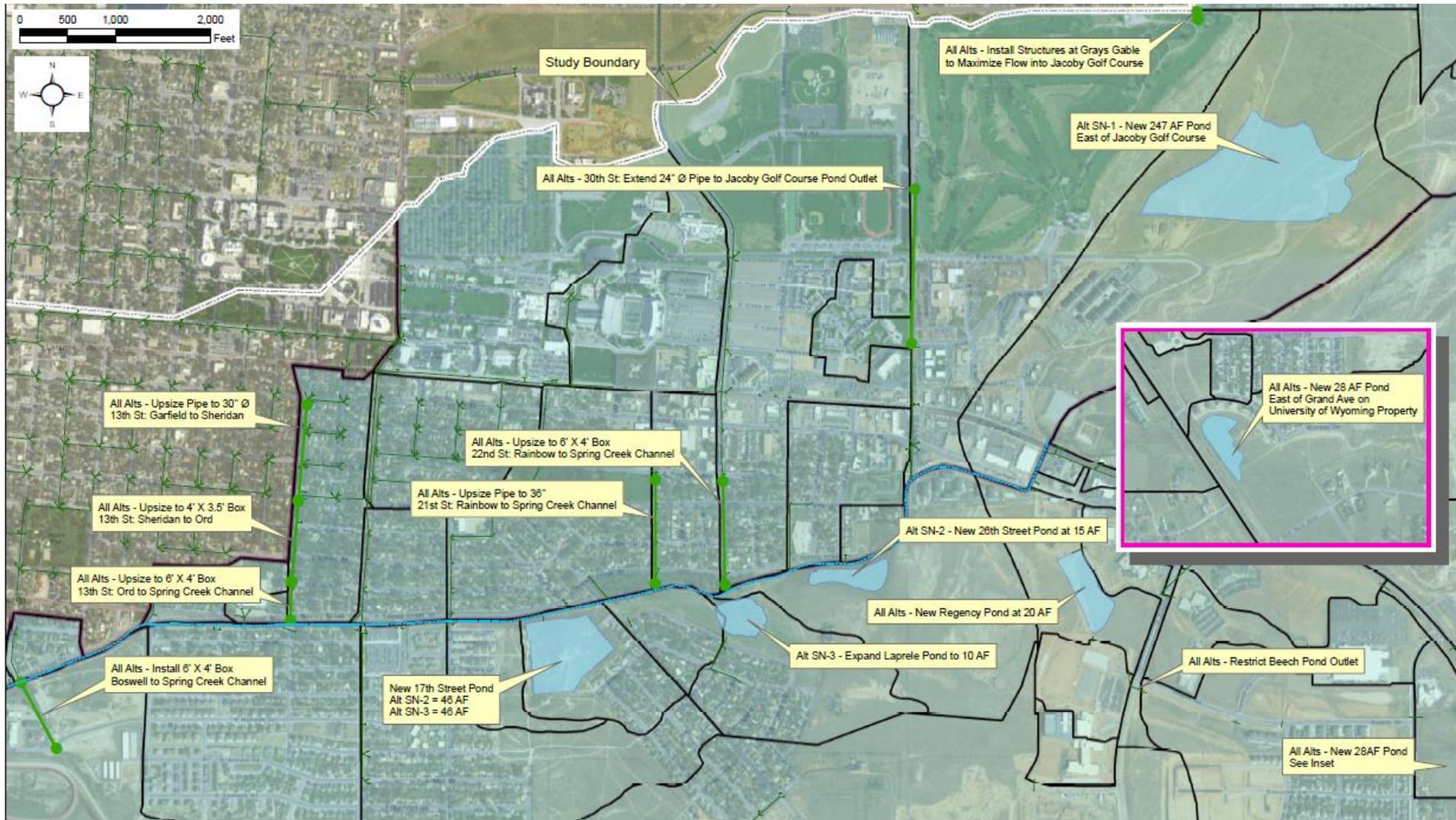
Sub-basins



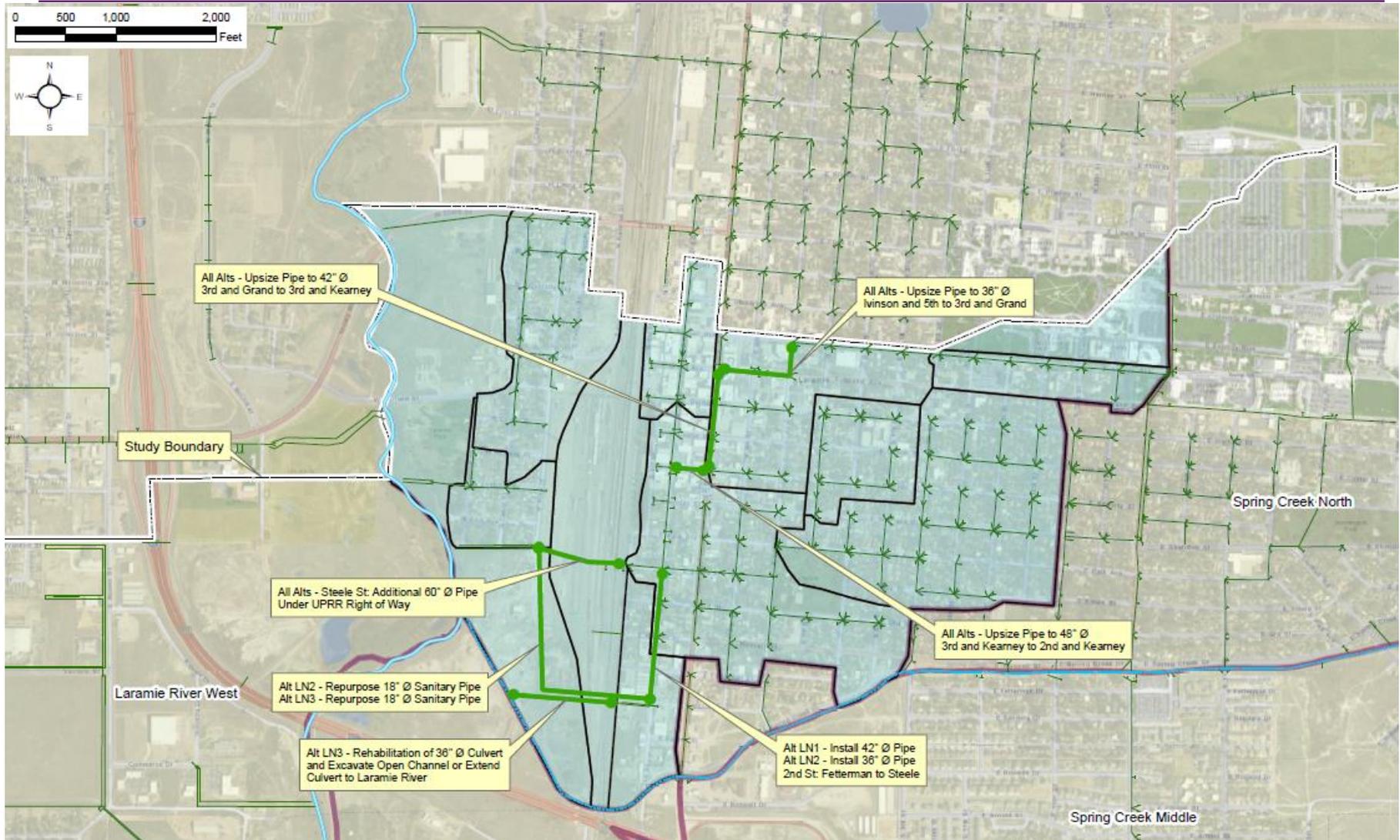
Flood Hazards – Existing & Future Development



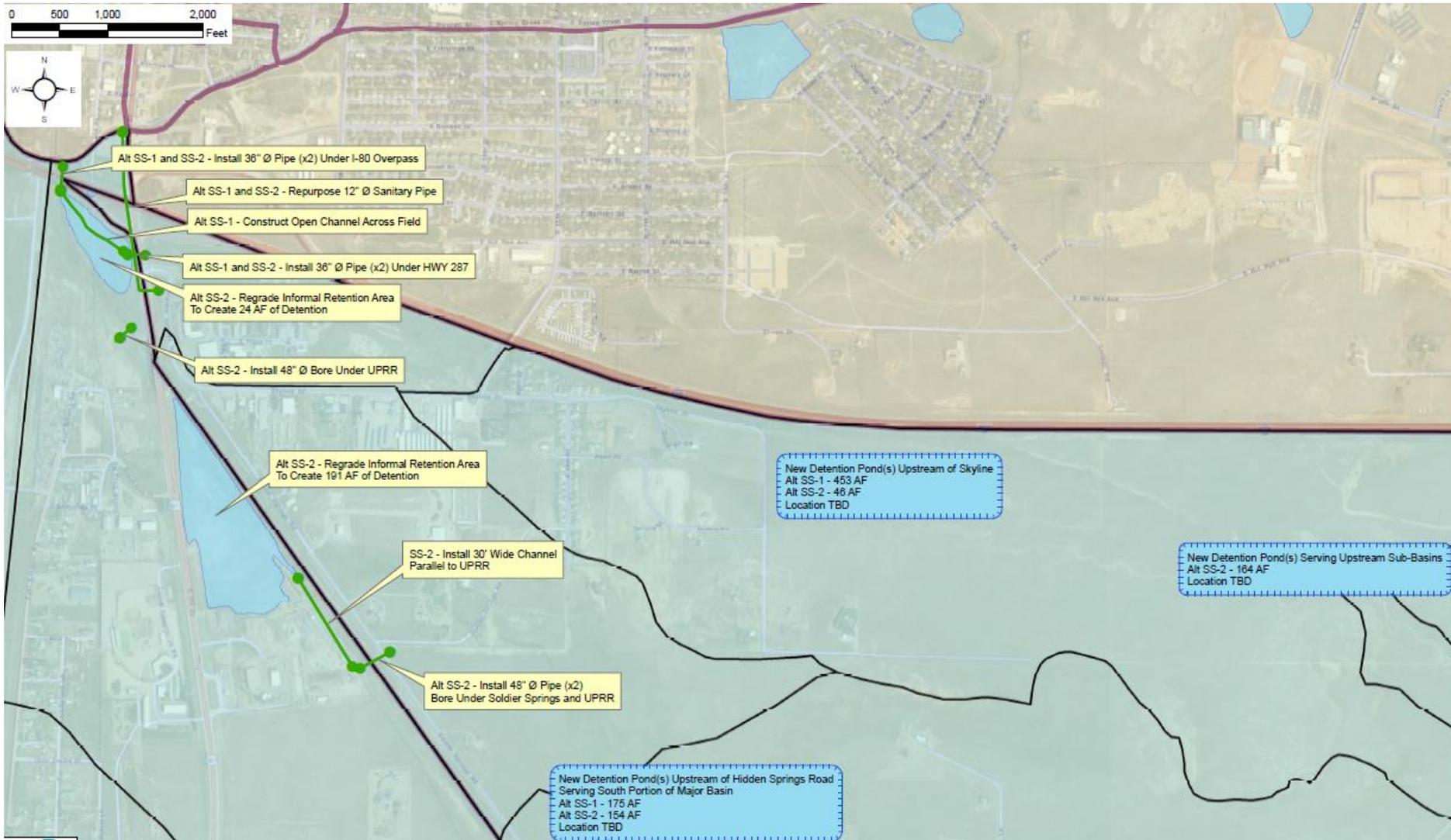
Recommended Improvements – Spring Creek North and Spring Creek Middle Major Basins



Recommended Improvements – Laramie River North Major Basin



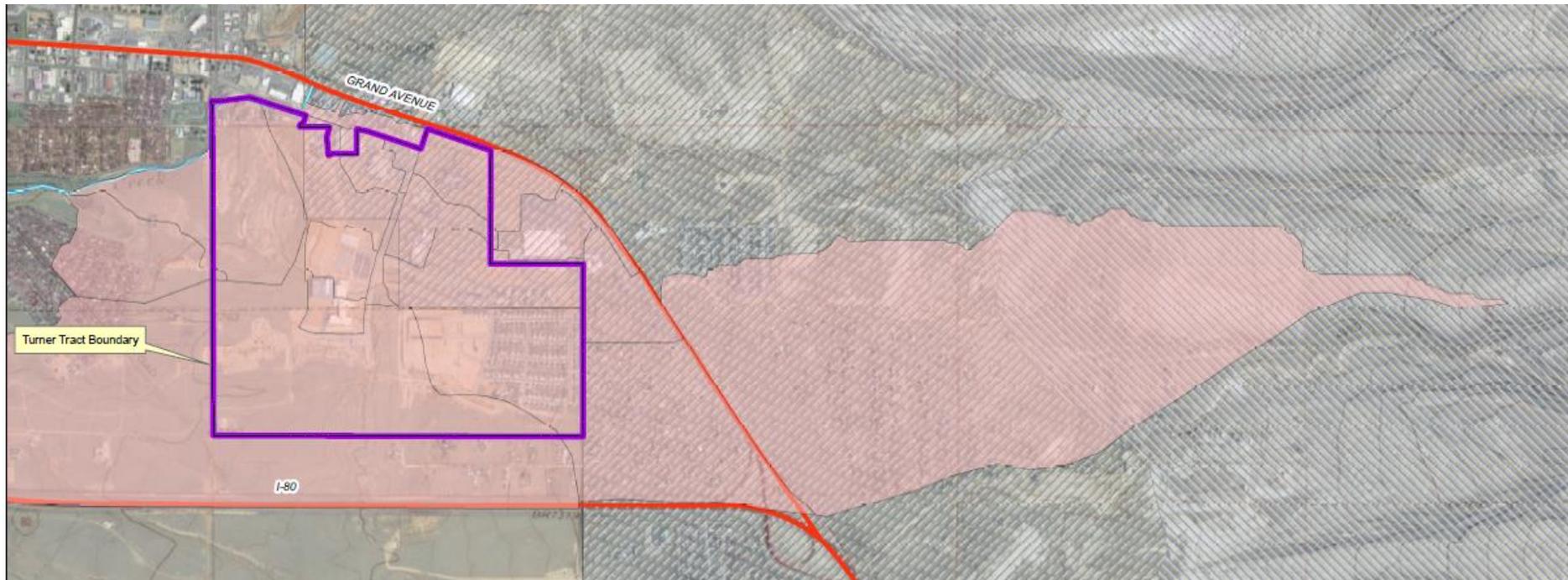
Recommended Improvements – Spring Creek South Major Basin





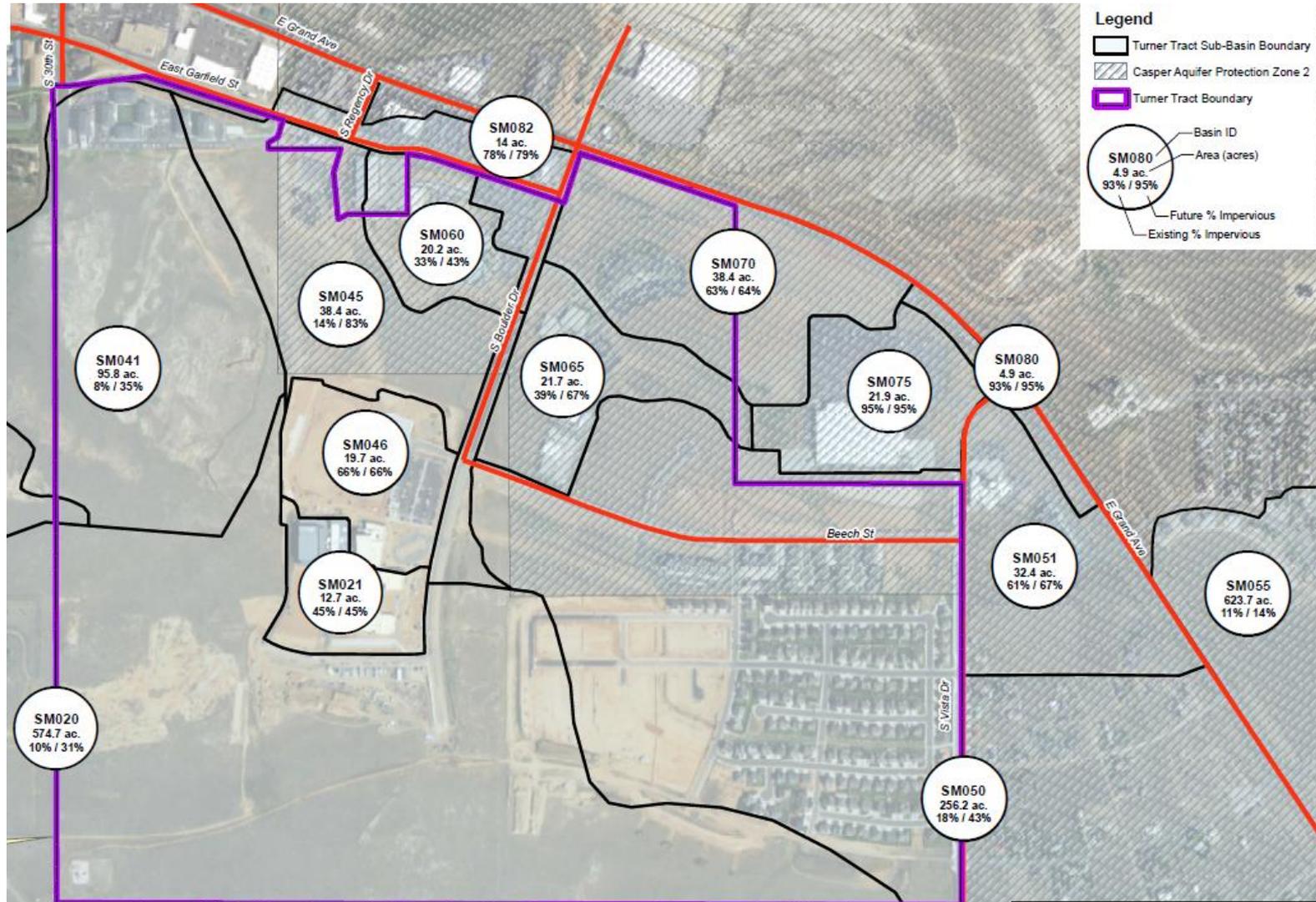
Turner Tract

- Conducted detailed analysis of Turner Tract – separate report
 - Development patterns much different than 2002 Turner Tract Report
 - Recent flooding observed: The Pointe – emergency access road



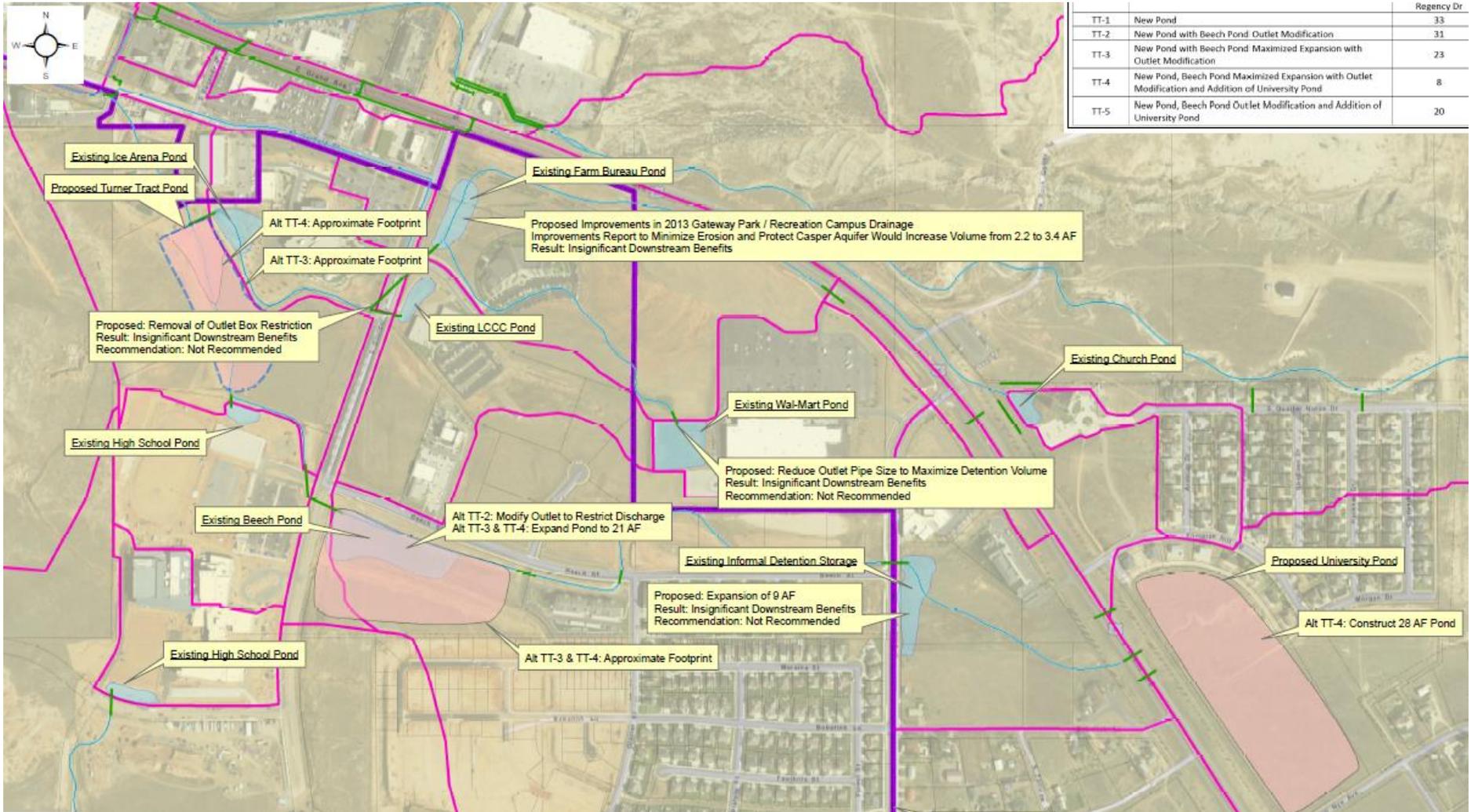


Turner Tract – Detailed Analysis





Turner Tract – Proposed Improvements



Conceptual Capital Costs – Recommended Alternatives

- Spring Creek North and Middle Major Basins -- \$24.5M
 - Includes Turner Tract Improvements -- \$8.4M
- Laramie River North Major Basin -- \$3.9M
- Spring Creek South Major Basin -- \$24.1M
- Total = \$52.5M

Current Status

- 90% Master Plan submitted to City
– awaiting comments

Looking To The Future

Existing Studies Recommended Costs

• West Laramie Drainage Master Plan	\$6,803,000
• North Laramie Drainage Master Plan	\$21,100,000
• South Laramie Drainage Master Plan	\$52,500,000
• Total Cost Of All Three	\$80,403,000

Master Drainage Plan

Goals Of The Study

- **Combine all three studies into one**
- **Prioritized Capital Improvement Project List from all three studies**
- **Create a city-wide map of the storm sewer system**
- **Create a city-wide drainage model**
- **Create a stormwater design manual**
- **Provide recommendations for stormwater revenues and expenditures**

Questions?

UPCOMING COUNCIL MEETINGS January 24, 2017

All meetings at City Hall, 406 Iverson Street, unless noted.

January 24, 2017

- 6:00 p.m. - Work Session:** Public Comments
- 6:00 p.m. - Work Session:** Public Works Project Updates
- 6:00 p.m. - Work Session:** City Council Updates/Council Comments
- 6:00 p.m. - Work Session:** Agenda Review
- 6:00 p.m. - Work Session:** Public Comments

January 31, 2017

- 6:00 p.m. - Ward Meetings:** **Ward 1** - Fire Station 3
- Ward 2** - Council Chambers, City Hall
- Ward 3** - Fire Station 2

February 7, 2017

- 6:00 p.m. - Pre-Council**
- 6:30 p.m. - Regular Meeting**

February 11, 2017

- 8:30 a.m. - Council Retreat:** Recreation Center

February 14, 2017

- 6:00 p.m. - Work Session:** Public Comments
- 6:00 p.m. - Work Session:** 3rd Street Mobility
- 6:00 p.m. - Work Session:** City Council Updates/Council Comments
- 6:00 p.m. - Work Session:** Agenda Review
- 6:00 p.m. - Work Session:** Public Comments

February 21, 2017

- 6:00 p.m. - Pre-Council**
- 6:30 p.m. - Regular Meeting**

February 28, 2017

- 6:00 p.m. - Work Session:** Public Comments
- 6:00 p.m. - Work Session:** Community Partner Presentations- Joint Meeting w/ County Commissioners
- 6:00 p.m. - Work Session:** City Council Updates/Council Comments
- 6:00 p.m. - Work Session:** Agenda Review
- 6:00 p.m. - Work Session:** Public Comments

March 7, 2017

- 6:00 p.m. - Pre-Council**
- 6:30 p.m. - Regular Meeting**

March 11-15, 2017

NLC (Washington, DC)

March 14, 2017

- 6:00 p.m. - Work Session:** Public Comments
- 6:00 p.m. - Work Session:** City Council Updates/Council Comments
- 6:00 p.m. - Work Session:** Agenda Review
- 6:00 p.m. - Work Session:** Public Comments

UPCOMING COUNCIL MEETINGS January 24, 2017

All meetings at City Hall, 406 Iverson Street, unless noted.

March 21, 2017

- 6:00 p.m. - Pre-Council**
- 6:30 p.m. - Regular Meeting**

March 28, 2017

- 6:00 p.m. - Work Session:** Public Comments
- 6:00 p.m. - Public Hearing:** Liquor License Renewals
- 6:00 p.m. - Work Session:** City Council Updates/Council Comments
- 6:00 p.m. - Work Session:** Agenda Review
- 6:00 p.m. - Work Session:** Public Comments

April 4, 2017

- 6:00 p.m. - Pre-Council**
- 6:30 p.m. - Regular Meeting**

April 11, 2017

- 6:00 p.m. - Work Session:** Public Comments
- 6:00 p.m. - Work Session:** City Council Updates/Council Comments
- 6:00 p.m. - Work Session:** Agenda Review
- 6:00 p.m. - Work Session:** Public Comments

April 18, 2017

- 6:00 p.m. - Pre-Council**
- 6:30 p.m. - Regular Meeting**

April 25, 2017

- 6:00 p.m. - Work Session:** Public Comments
- 6:00 p.m. - Work Session:** City Council Updates/Council Comments
- 6:00 p.m. - Work Session:** Agenda Review
- 6:00 p.m. - Work Session:** Public Comments