

BEND SEWER INFRASTRUCTURE ADVISORY GROUP: MEETING 5

Immediate Challenges and Solutions

January 17, 2013



WELCOME AND INTRODUCTIONS

MEETING AGENDA / GOALS

- ◉ Review options for immediate solutions
- ◉ Advisory Group feedback



IMMEDIATE TERM SOLUTIONS

Presented by MSA

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CITY OF BEND COLLECTION SYSTEM MASTER PLAN



Immediate Term Alternatives

- ✓ Design & bid completed in one year.
- ✓ Involve pipes or pumps (preferably pipes).
- ✓ No environmental permits required.
- ✓ Comply with our existing DEQ WPCF permit.
- ✓ Do not require bond funding.

Solution Types

1. Increased capacity
2. Reroute flows
3. Diminish peak flows

Evaluation Criteria

⦿ Cost basis

- Design & construction cost only
- 2011 CSMP (Addendum #4) unit costs escalated to 2013 dollars
- Confirmed by recent bids
- Planning level (engineering standard: -30%, +50%)

⦿ Assess the value of alternatives

Capacity

Certainty of Service

Overflow Risk

Ease of Construction

Operations, Performance and Flexibility

Introduction to Areas 5 and 3

- ◉ Area 5 / Solution 1: Gravity Sewer Upgrades
- ◉ Area 5 / Solution 2: Reconstruct Shevlin Lift Station + Upgrade Gravity Sewer

- ◉ Area 3 / Solution 1: Westside Pump 3 + Pump 4
- ◉ Area 3 / Solution 2: Westside Pump 3 + Pump 4 and Offline Storage

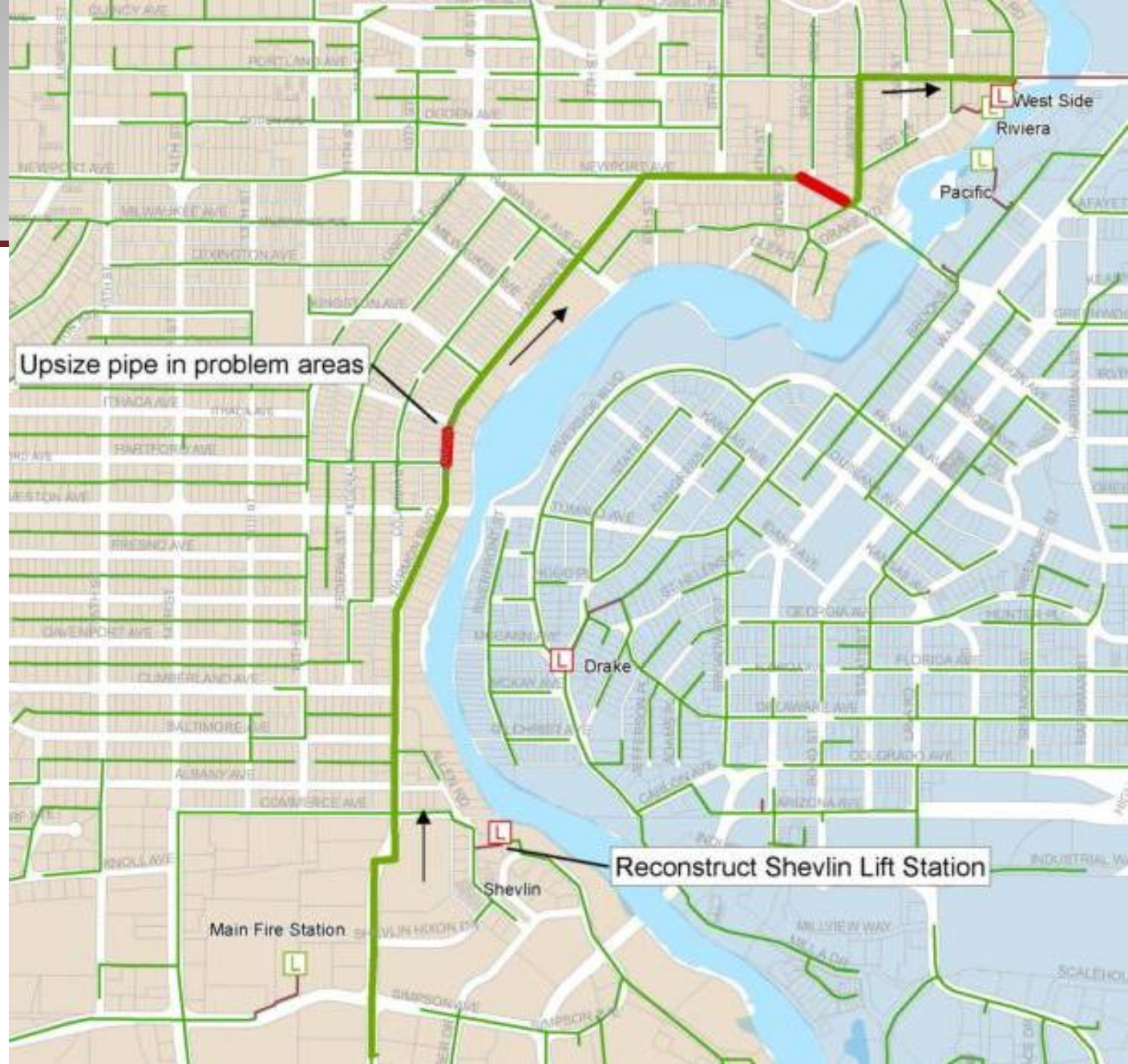
- ◉ COMBO / New Colorado Lift Station and Force Main to 2nd Street

Area 5 Options

Area 5 Solution 2

**Reconstruct
Shevlin Lift
Station +
Upgrade
Gravity Sewer**

\$897,000

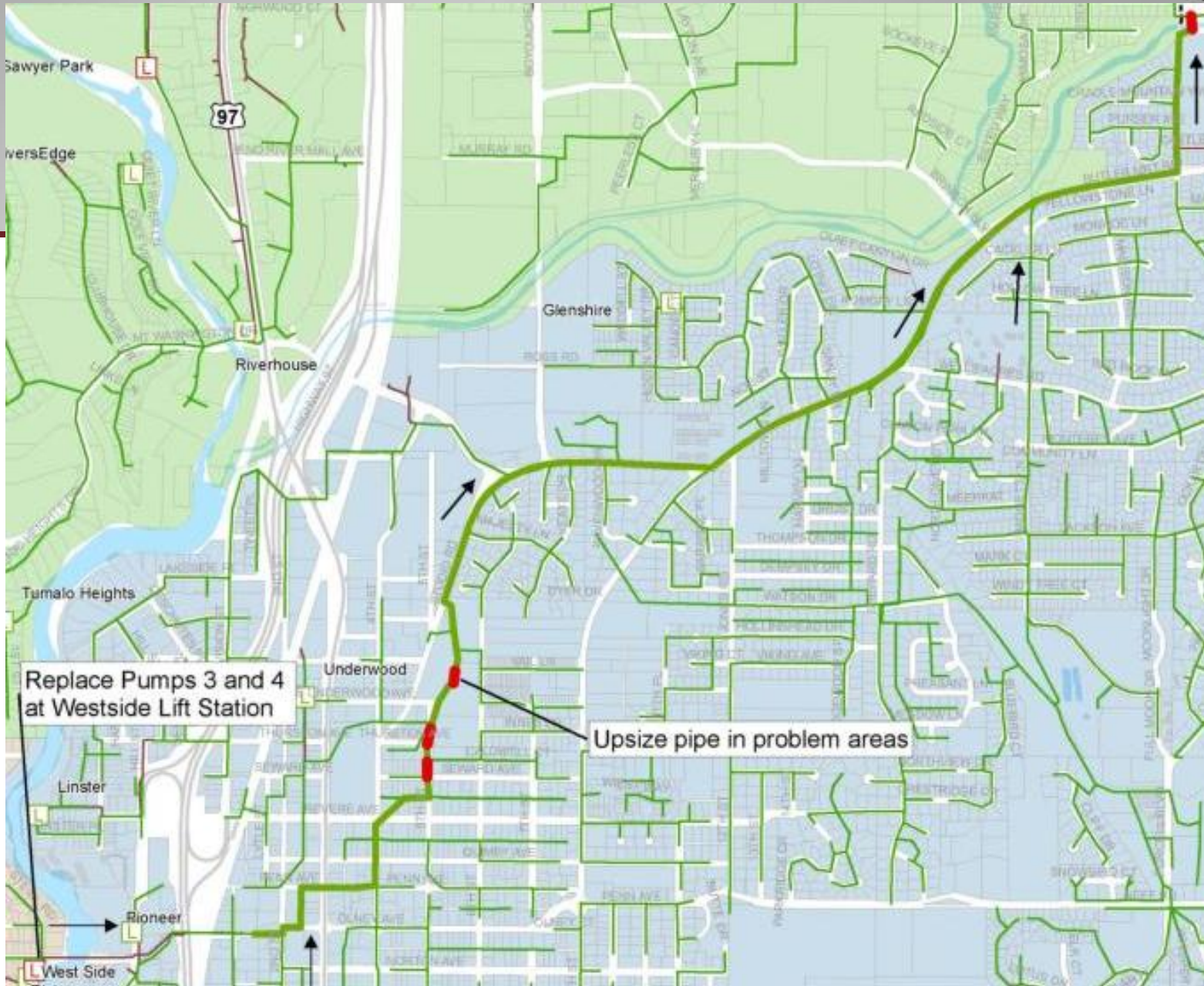


Area 3 Options

Area 3 Solution 1

Westside
Pump 3 +
Pump 4

\$701,000

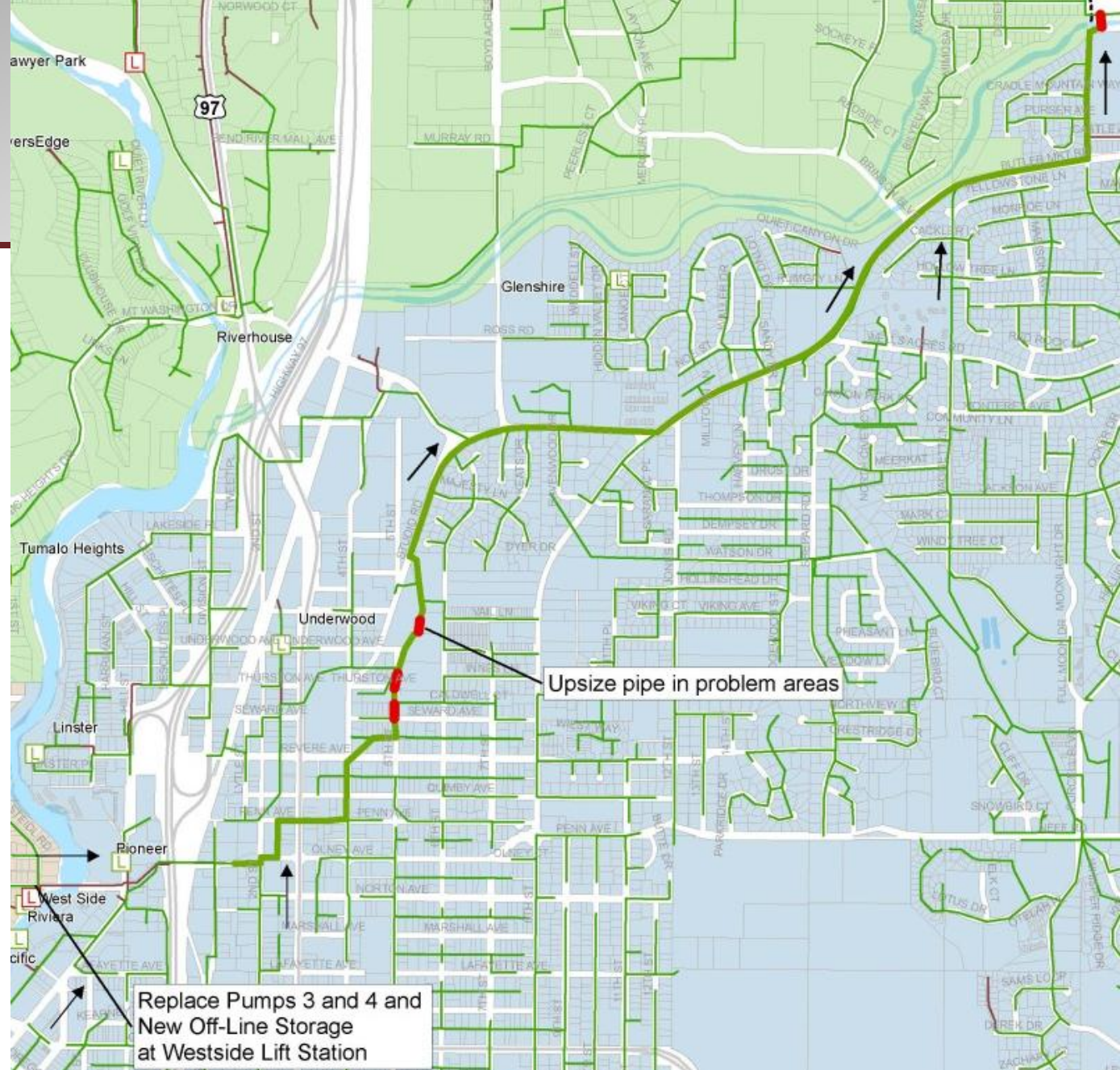


Area 3 Options

**Area 3
Solution 2**

**Westside
Pump 3 +
Pump 4
and
Offline
Storage**

\$1,509,000

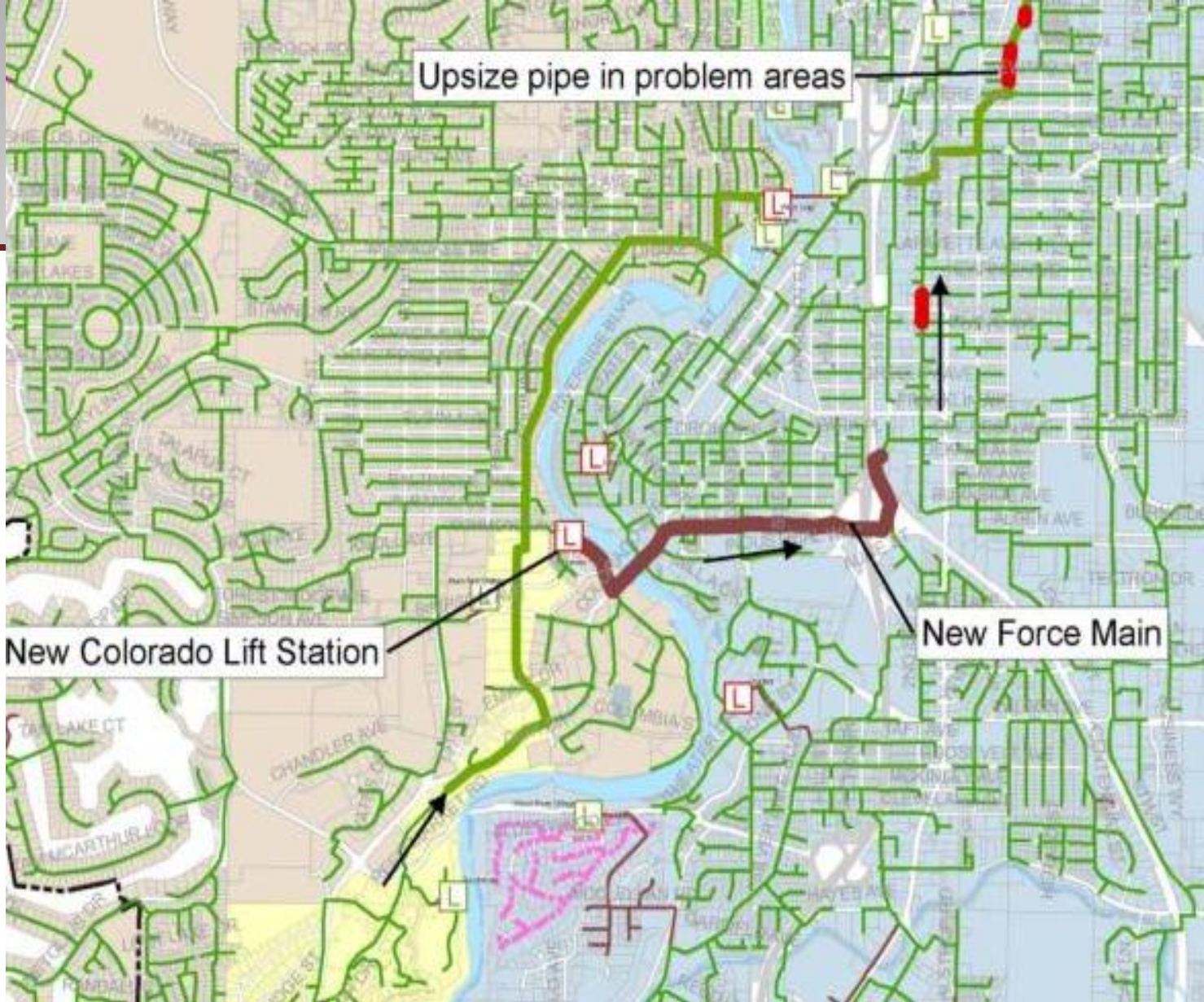


Areas 3 & 5 Option

COMBO

**New
Colorado
Lift Station
and
Force Main
to 2nd
Street**

\$3,890,000



Which solution do you like best and why?

3

Area 3
Solution 1
Westside PS
Pumps
\$701,000

OR

Area 3
Solution 2
Westside
PS Pumps &
Storage
\$1,509,000

+

5

Area 5
Solution 1
Gravity
Sewer
\$256,000

OR

Area 5
Solution 2
Reconstruct
Shevlin PS
\$897,000

or

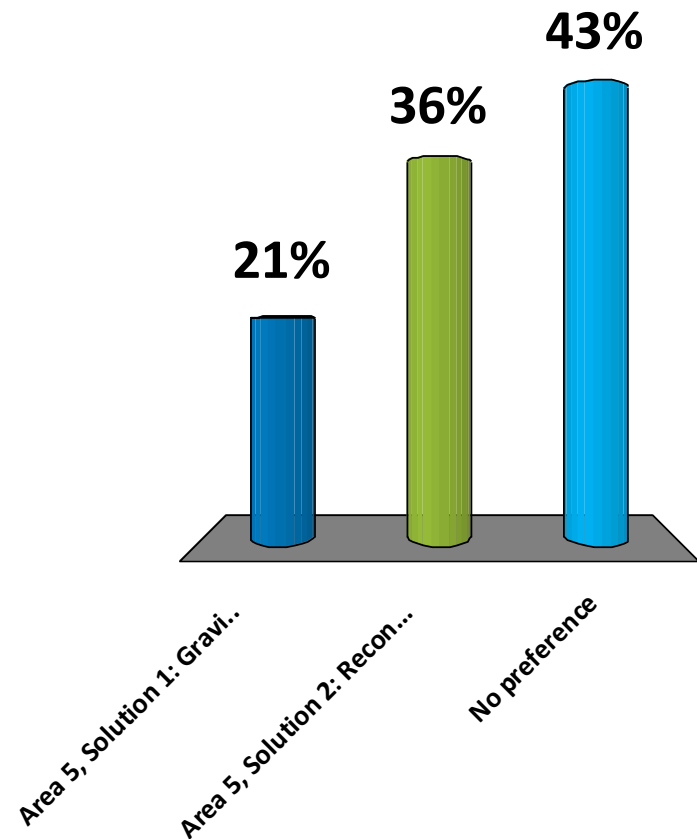
COMBO

Areas 3 & 5

New Colorado
Lift Station
\$3,890,000

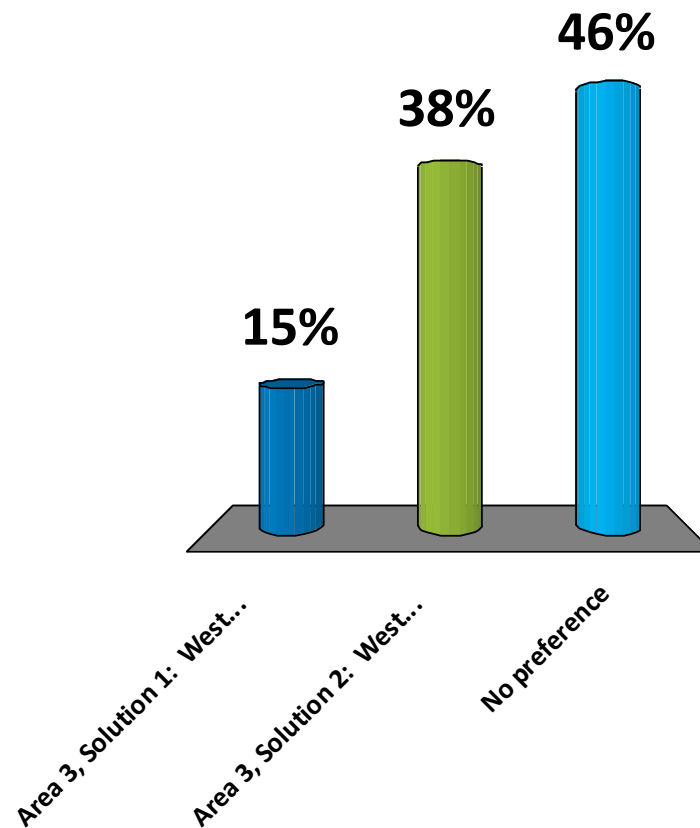
Which solution did you prefer for Area 5?

- 1. Area 5, Solution 1:**
Gravity Sewer Upgrades
- 2. Area 5, Solution 2:**
Reconstruct Shevlin LS +
Upgrade Gravity Sewer
- 3. No preference**



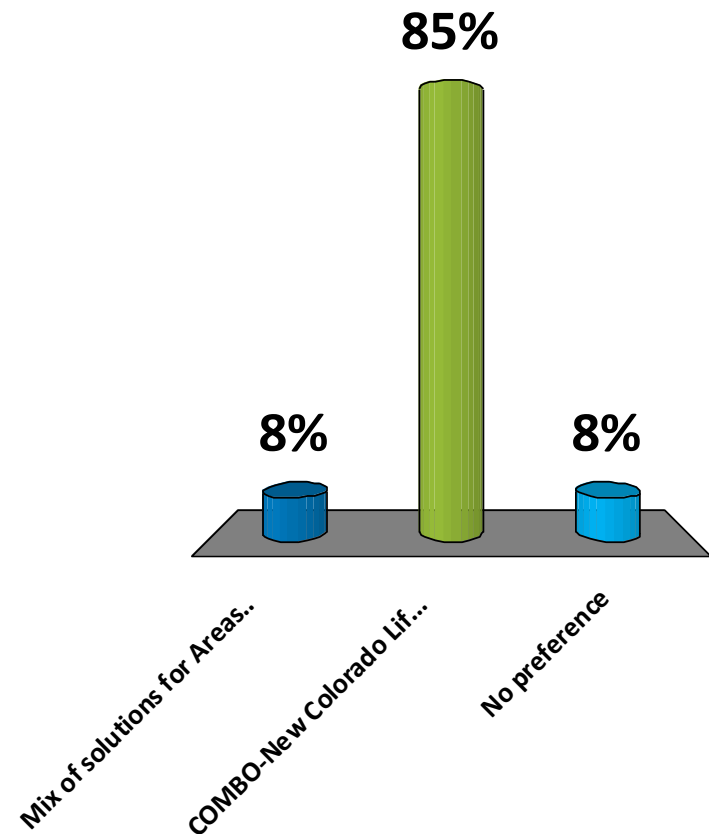
Which solution did you prefer for Area 3?

- 1. Area 3, Solution 1:**
Westside Pump 3 +
Pump 4
- 2. Area 3, Solution 2:**
Westside Pump 3 +
Pump 4 + Offline Storage
- 3. No preference**



Which solution did you prefer for Areas 5 and 3?

1. Mix of solutions for Areas 5 & 3
2. COMBO-New Colorado Lift Station, Force Main to 2nd Street
3. No preference



Introducing Area 2

- ◉ Solution 1: Gravity Sewer
- ◉ Solution 2: VFD Pumping
- ◉ Solution 6: North Force Main to Fred Meyer Rd.
- ◉ Solution 8: South Force Main to Fred Meyer Rd.

- ◉ Solution 3: South Force Main to Mervin Sampels
- ◉ Solution 4: South Force Main to Murray
- ◉ Solution 5: South Force Main to Butler Market

Area 2 Options

Area 2
Solution 1

Gravity
Sewer

\$4,994,000

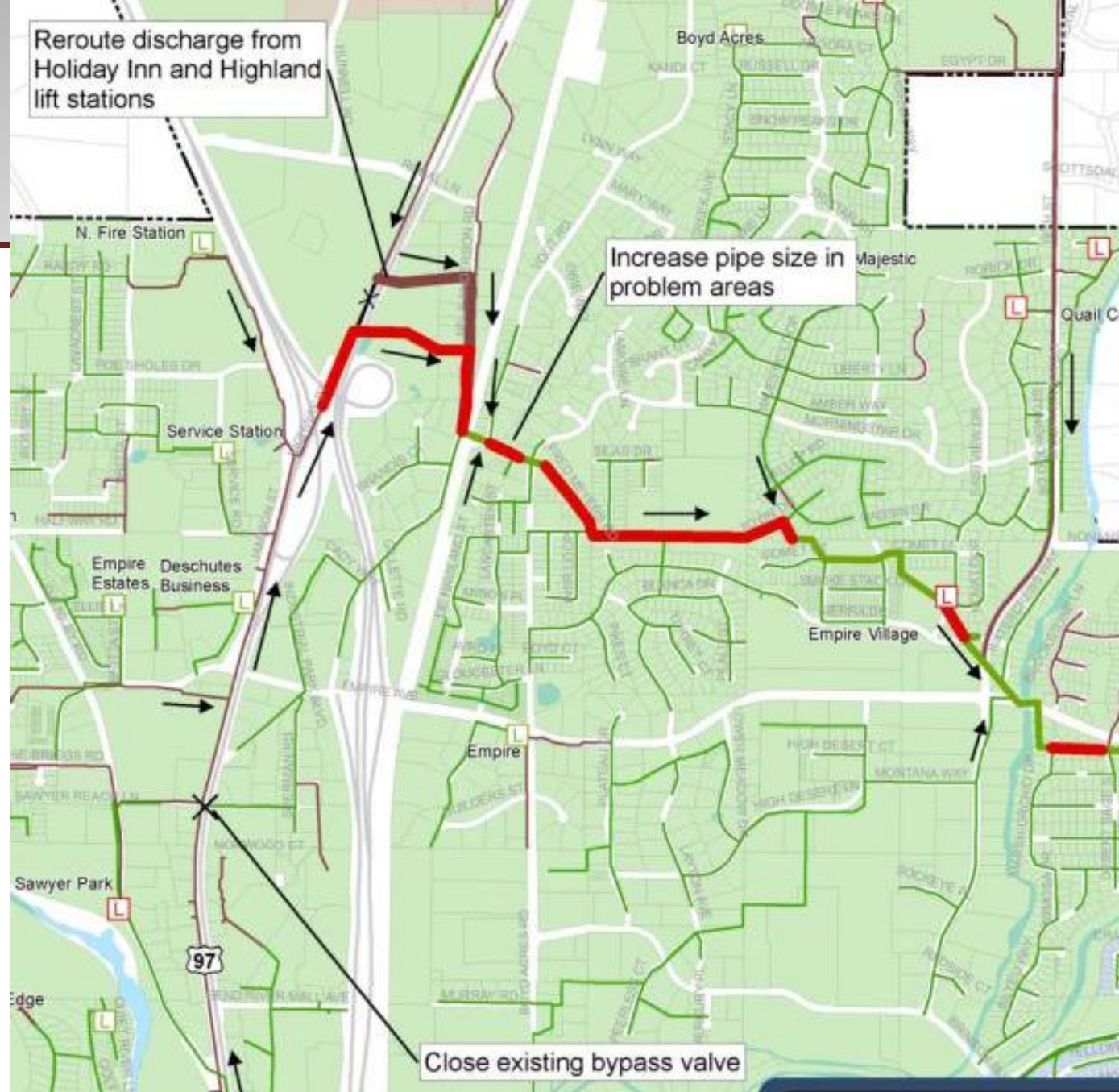


Area 2 Options

Area 2
Solution 6

North Force
Main
to Fred
Meyer Rd.

\$5,342,000

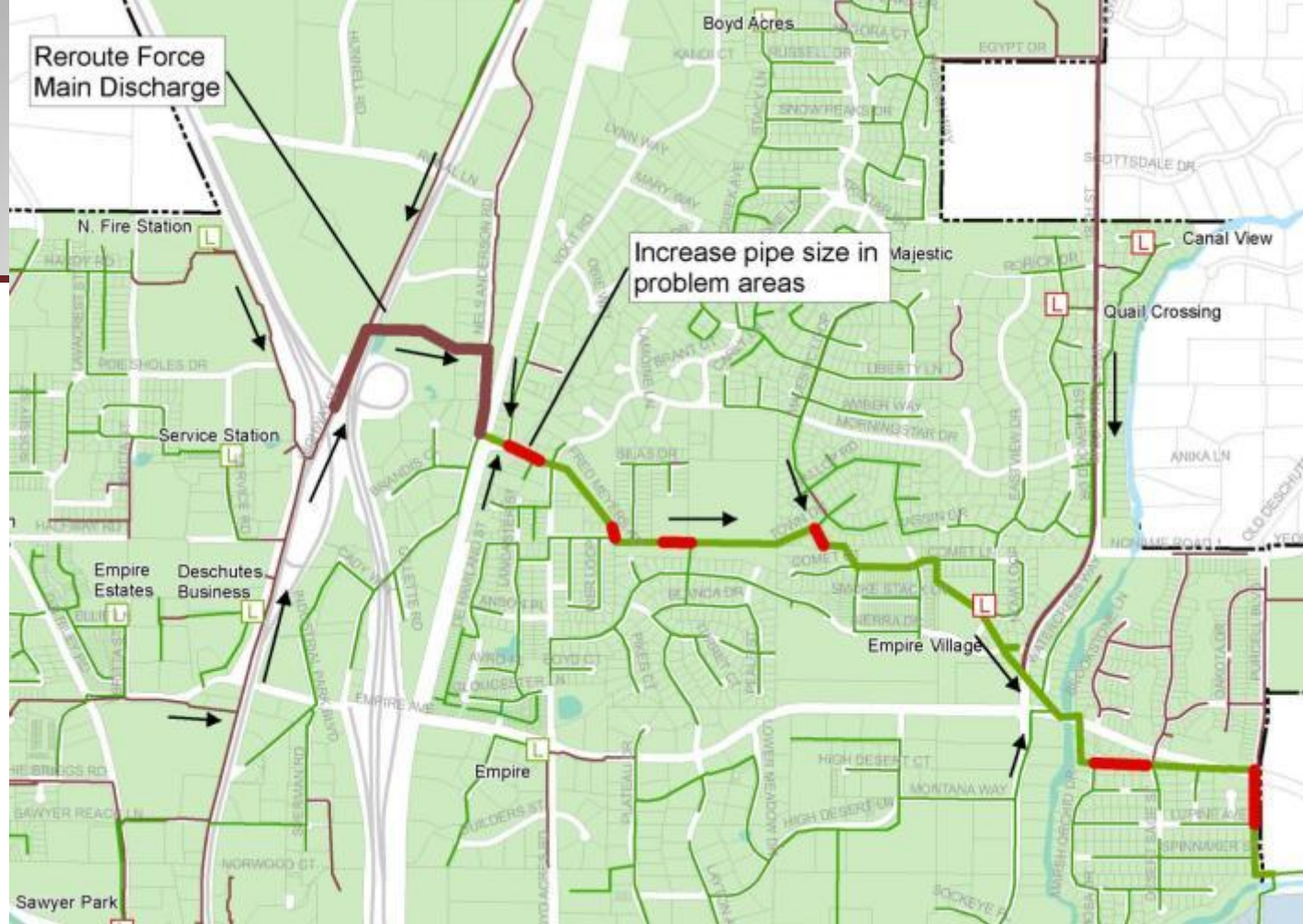


Area 2 Options

Area 2
Solution 8

South Force
Main to
Fred Meyer
Rd.

\$3,023,000

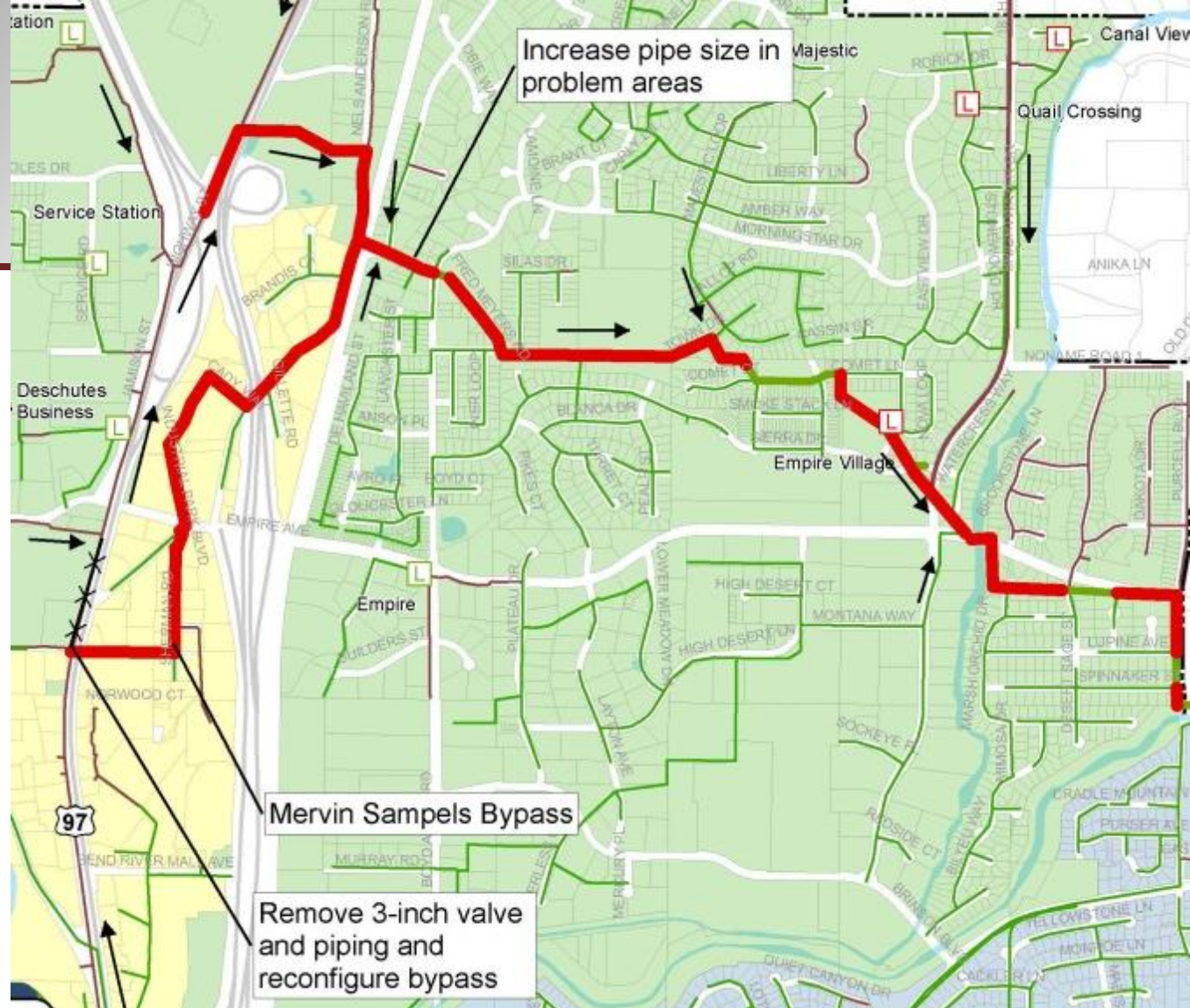


Area 2 Options

Area 2
Solution 3

South
Force Main
to Mervin
Sampels

\$9,513,000



Area 2 Options

Area 2 Solution 4

South Force Main to Murray

\$7,185,000



Area 2 Options

Area 2 Solution 5

South Force Main to Butler Market

\$5,733,000



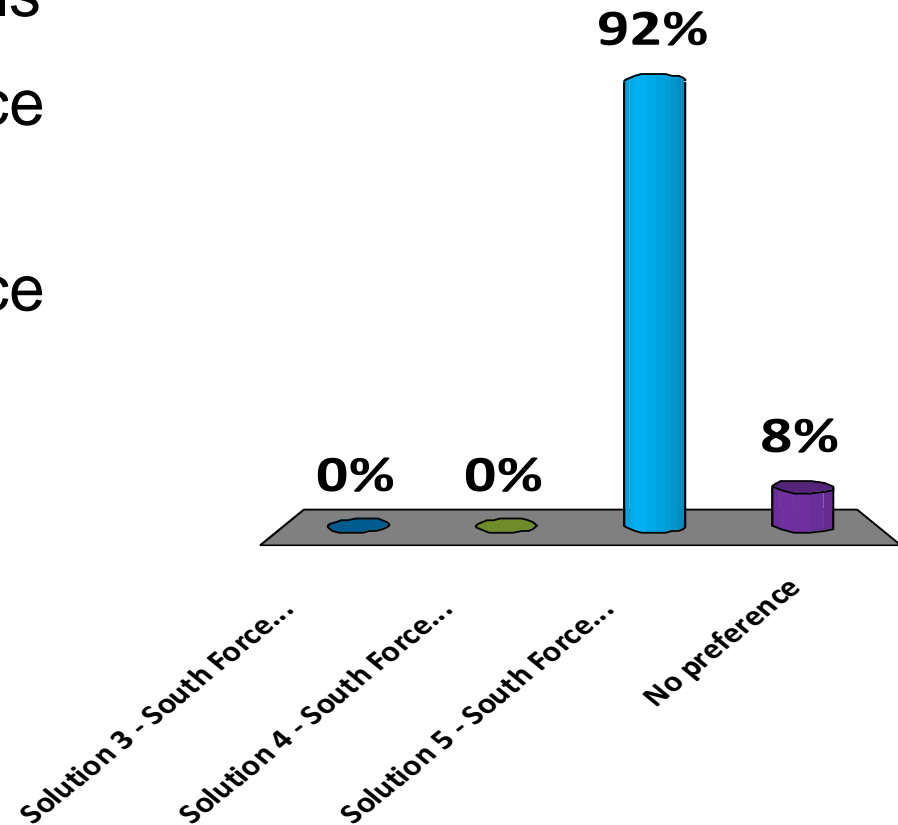
Discussion

Which solution do you prefer and why?

- Solution 3: South Force Main to Mervin Sampels
- Solution 4: South Force Main to Murray
- Solution 5: South Force Main to Butler Market

Which solution did you prefer for Area 2?

1. Solution 3 - South Force Main to Mervin Sampels
2. Solution 4 - South Force Main to Murray
3. Solution 5 - South Force Main to Butler Market
4. No preference



Recap Results: Advisory Group Feedback

- ⦿ **Area 5 – Shevlin Lift Station**
- ⦿ **Area 3 – Westside Lift Station**
- ⦿ **Area 2 – Cascade Village Shopping Center**

Immediate Solutions— Next Steps

SIAG recommendations to City Council	January 30
Design	March-December
Optimization results	December
Construction	2014

Upcoming Advisory Group Meetings

February 7	Modeling and Optimization 101
February 21	Criteria and Lifecycle
March 7	Pumps, Pipes, Storage
March 21	Pumps, Pipes, Storage (Cont.)
April 4	Treatment Alternatives
April 18	Treatment Alternatives (Cont.)