



# Portland Green Infrastructure Project Advanced Design Meeting May 12, 2015



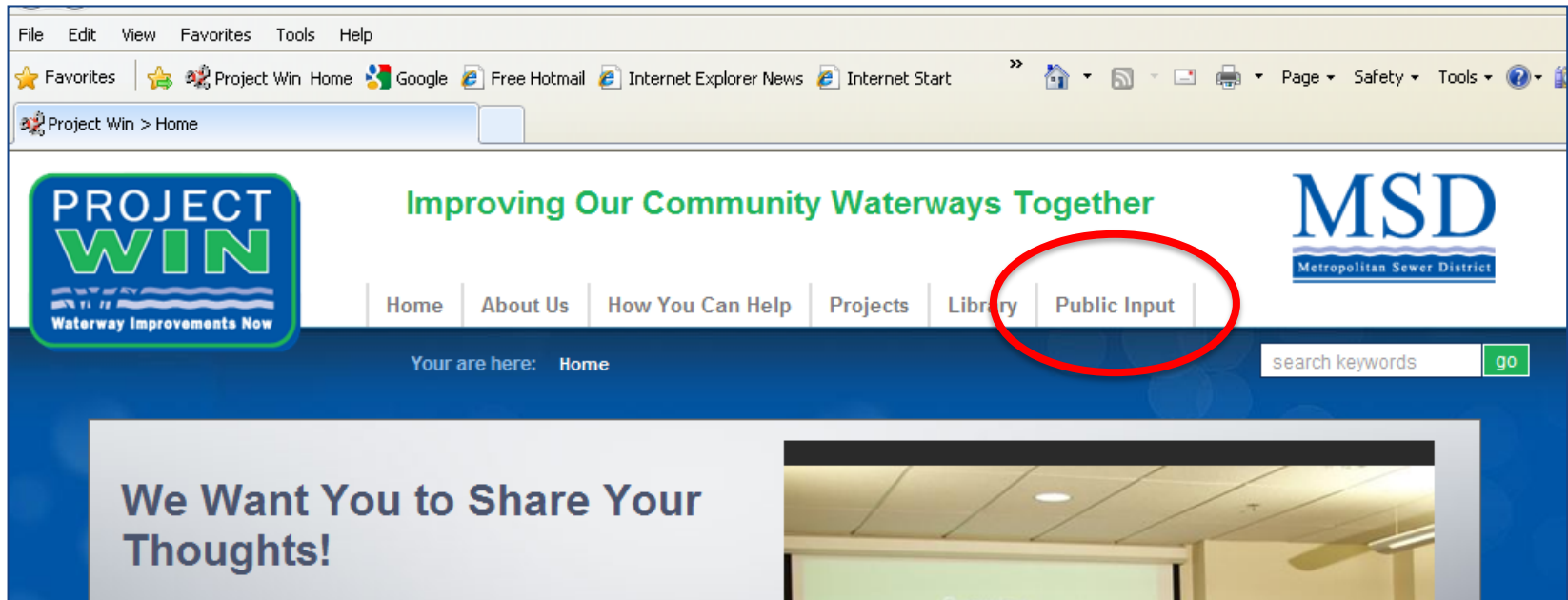


# Project Background

- A Conceptual Design Meeting was held at Western Middle School on April 14
- We Discussed:
  - Consent Decree Background
  - What “Green Infrastructure” is and how it can be used here
  - Gathered your preferences on some streetscape options
- We’re Back to Talk With You About Detailed Design
  - Gather your input before we finalize the design
- Take Any Other Questions by Using Comment Cards

# Find Out More

## msdprojectwin.org

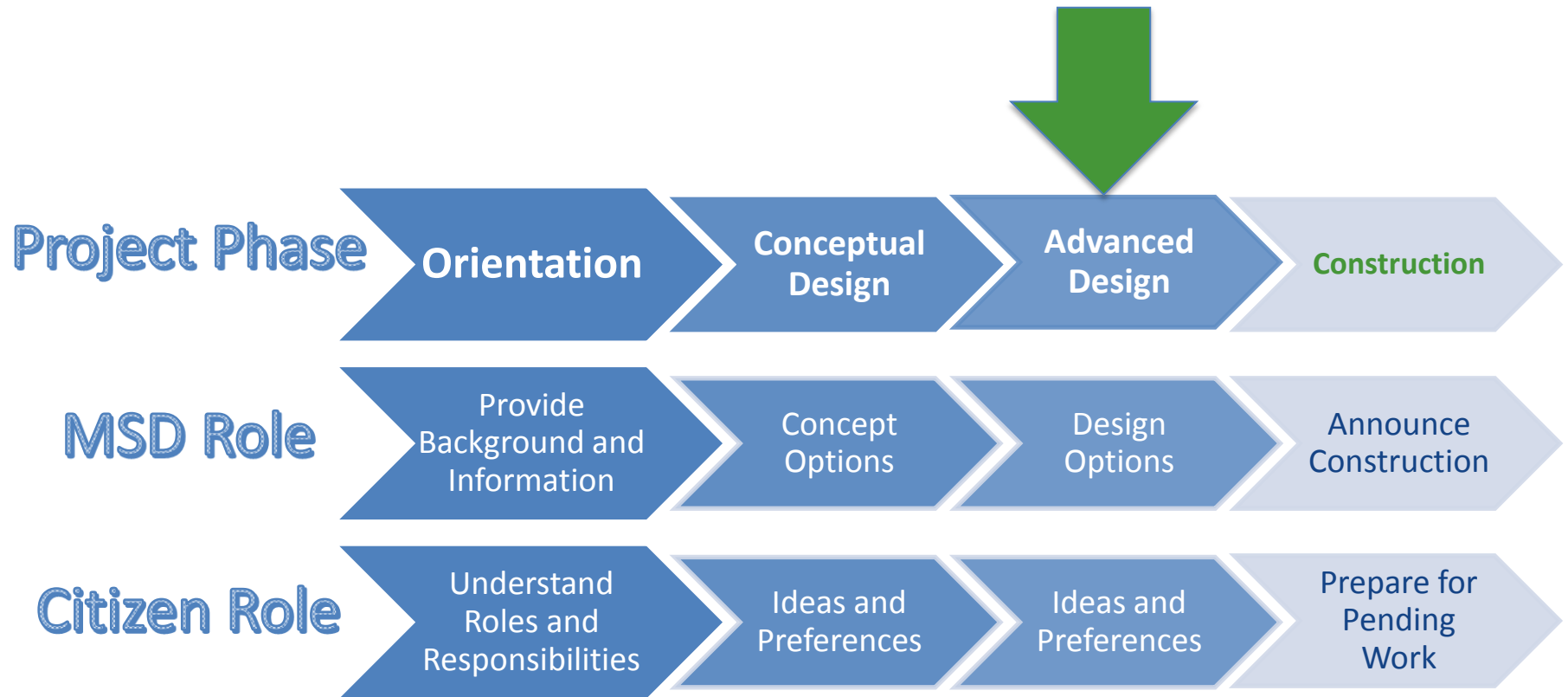


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**Please Tell Your Friends and Neighbors to Take  
the Survey Online!**



# Phase 3: Advanced Design



# Advanced Design Meeting Agenda

1. Consent Decree Background
2. Getting to Know You: Demographic and Portland Area Use Questions
3. Results from the Conceptual Design Meeting
4. Update on Portland Green Infrastructure Design Process
5. Present Design Options to You
6. Gather Your Ideas & Preferences on Design Options
7. Collect Comments from You (Cards Provided)

# CONSENT DECREE BACKGROUND





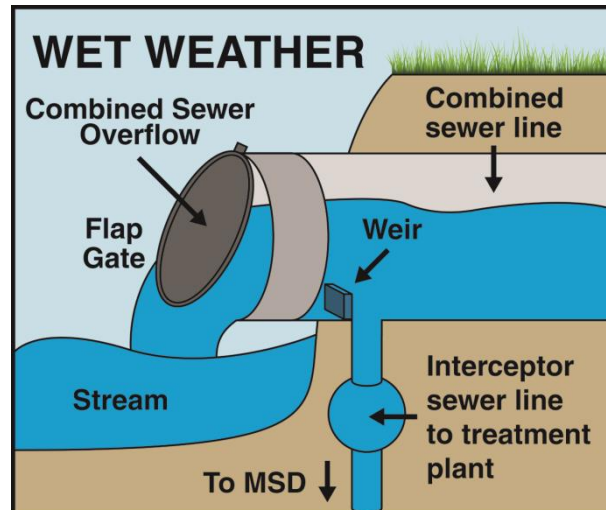




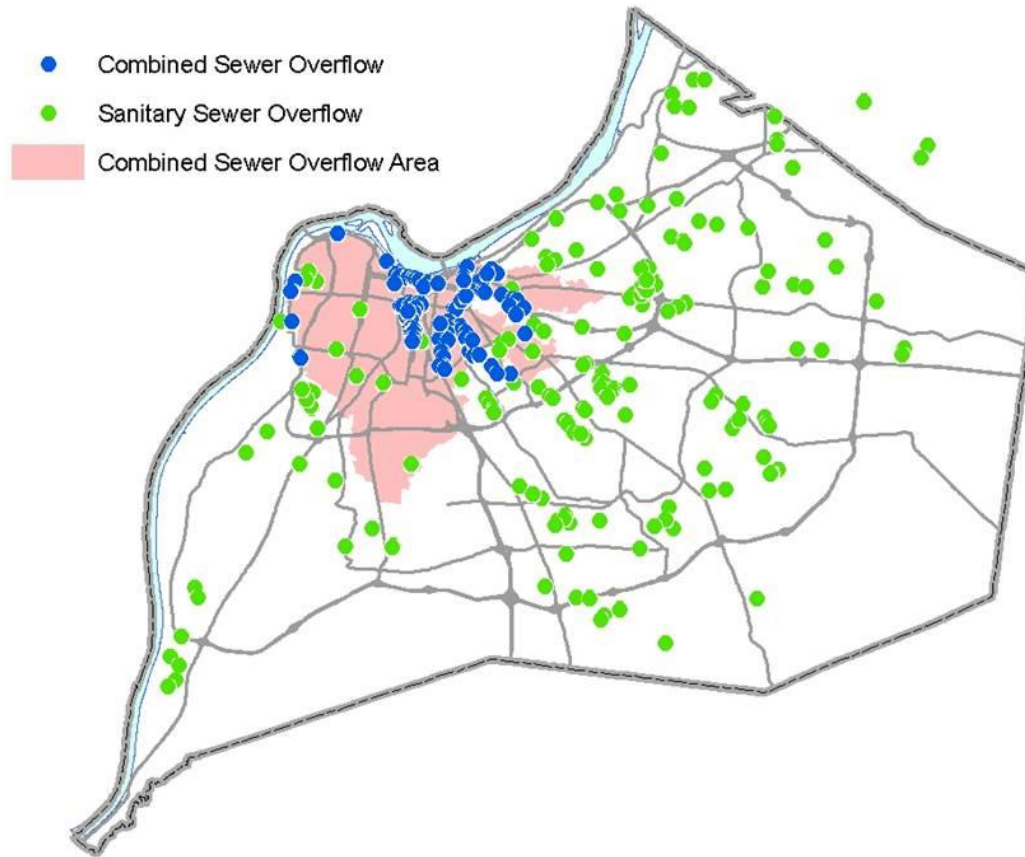


# What is a Combined Sewer Overflow?

- What is a combined sewer?
  - Both stormwater and wastewater conveyed in the same pipe.
- What is a Combined Sewer Overflow (CSO)?
  - Untreated combined sewage discharged into a water body (creek, stream, river, etc.)



# Current Overflow Sites in Louisville Metro Area





# Public Health and Safety Mandate

<b>2005</b>	<b>Federal EPA &amp; State of Kentucky mandate overflow abatement</b>
<b>2008</b>	<b>MSD submitted \$850 million plan to satisfy the mandate</b>
<b>2009</b>	<b>Federal EPA &amp; the State of Kentucky approve the plan</b>
<b>2020</b>	<b>Combined Sewer Overflow Program complete</b>
<b>2024</b>	<b>Separate Sewer Overflow Program complete</b>



# MSD Overflow Projects Across Louisville

## IOAP Storage

- I-64 and Grinstead Dr Storage Basin
- 13th St and Rowan St Storage Basin
- Lexington Rd and Payne St Storage Basin
- Bells Ln Storage Basin
- Clifton Heights Storage Basin
- Logan St and Breckinridge St Storage Basin
- Portland Wharf Storage Basin
- Southwestern Pkwy Storage Basin
- Story Ave and Main St Storage Basin
- Nightingale PS Replacement and Storage Basin

## Green Infrastructure Projects

- Story Ave and Spring St Green Infrastructure
- 18th St and Northwestern Pkwy Green Infrastructure





# Getting to Know You: Demographic and Portland Area Use Questions



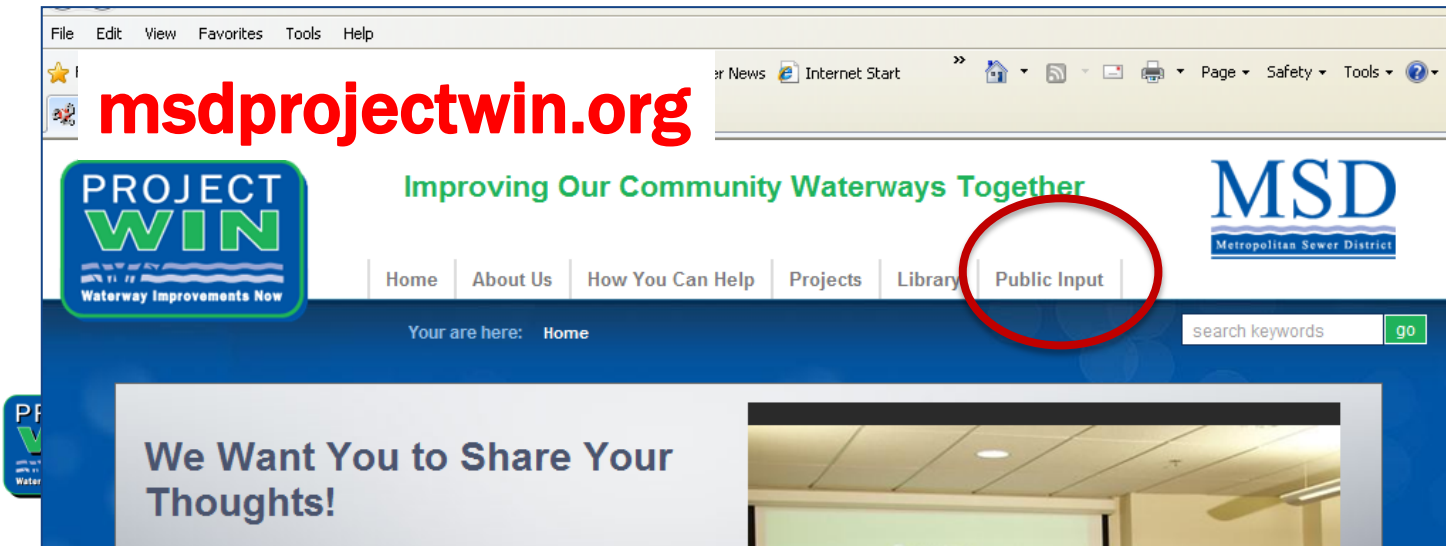
# Public Engagement Tools: “Clickers” and Online Polling

## “Clickers” for Public Meetings

- Simple To Use
- Anonymous (No One Knows Your Answers)
- Simultaneous (We All See the Results At the Same Time)
- Equal Voice for All



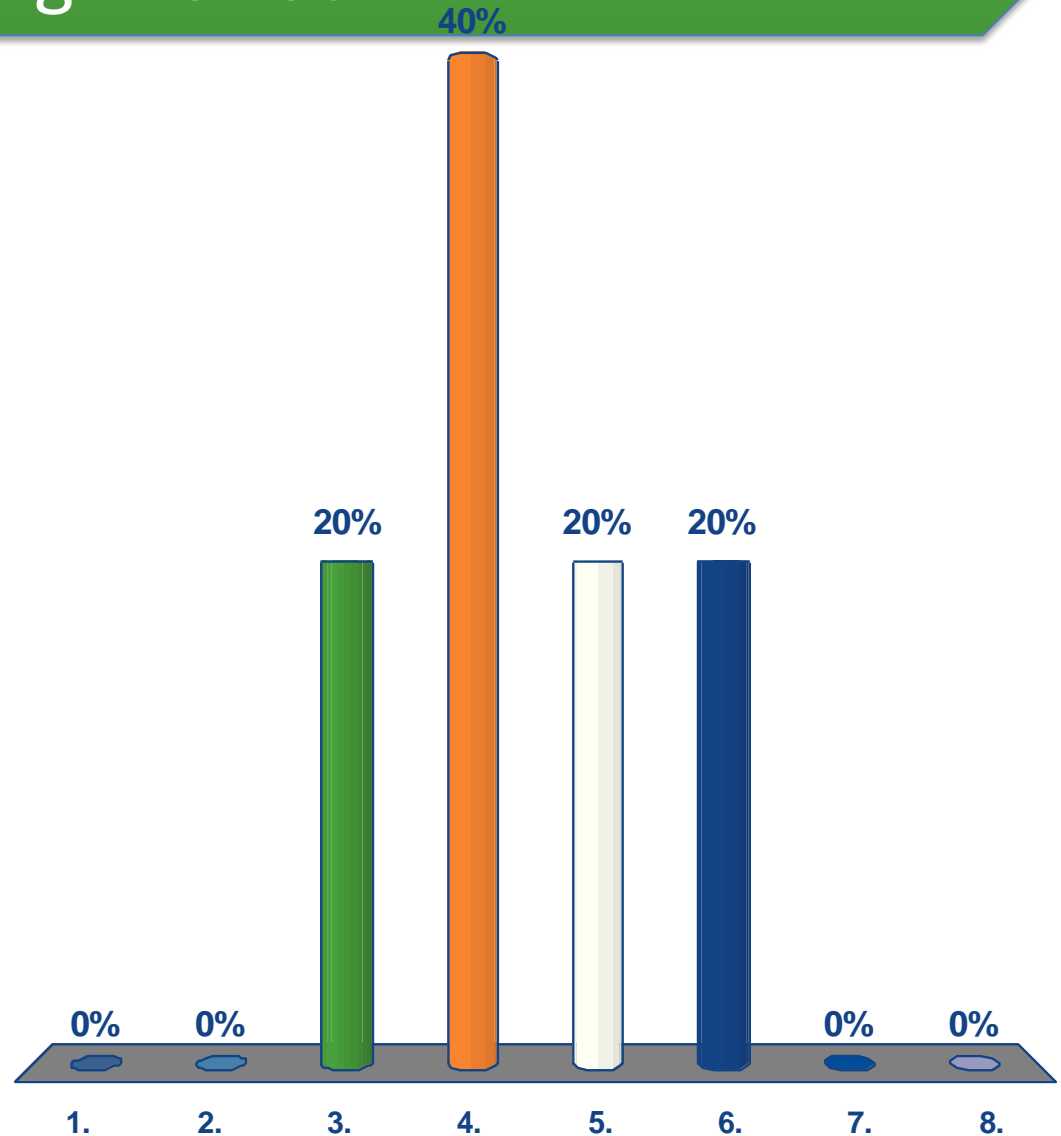
## Online Polling for Those Who Can't Attend Public Meetings





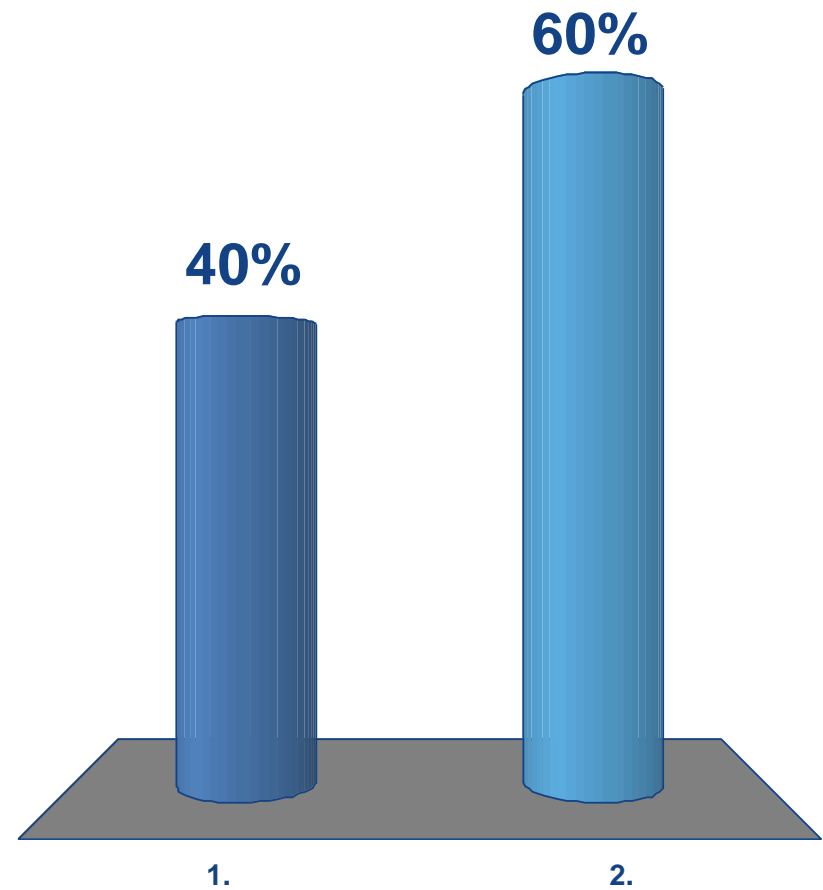
# How Young Are You?

1. 0-19
2. 20-29
3. 30-39
4. 40-49
5. 50-59
6. 60-69
7. 70-79
8. 80+



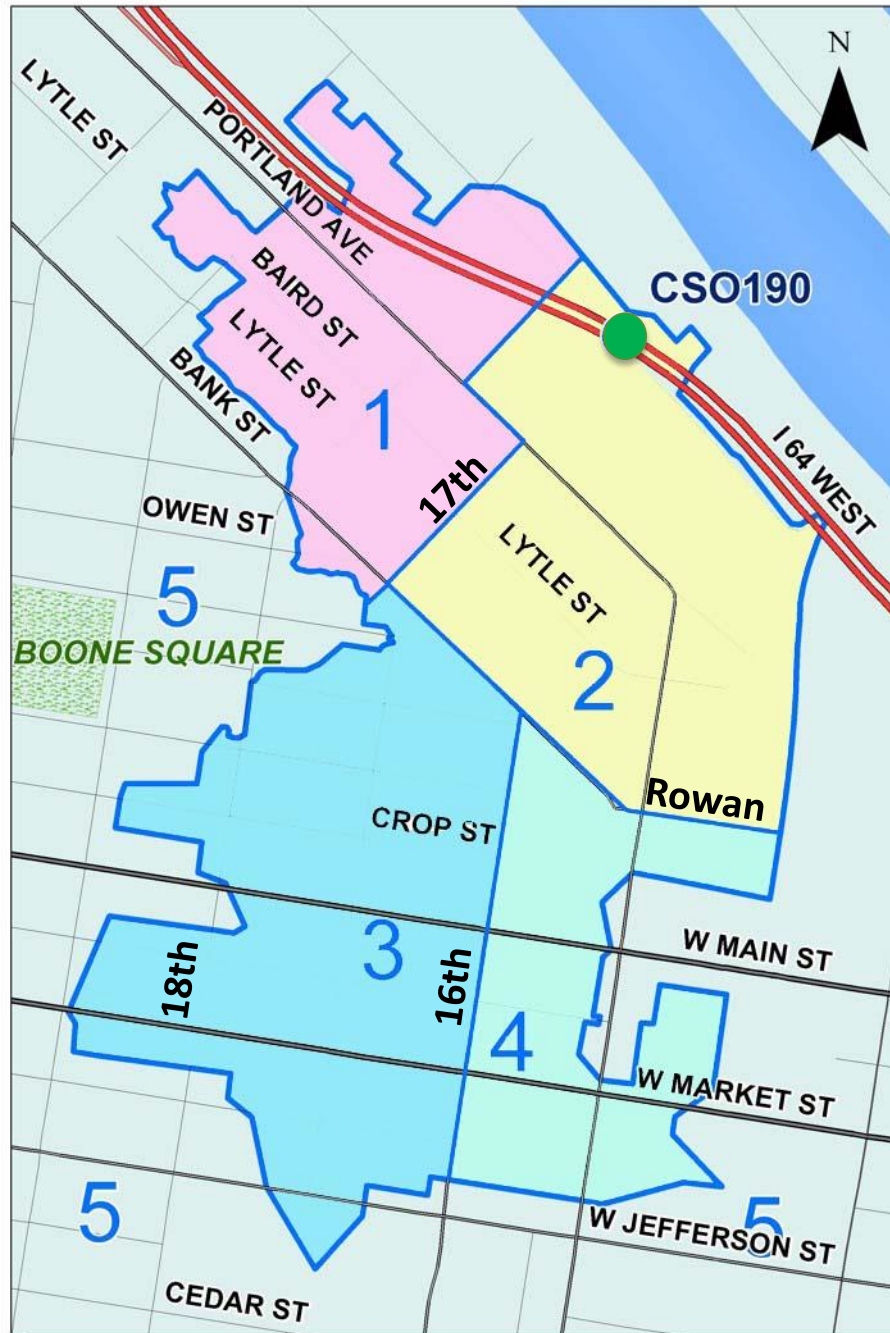
# Gender?

1. Male
2. Female



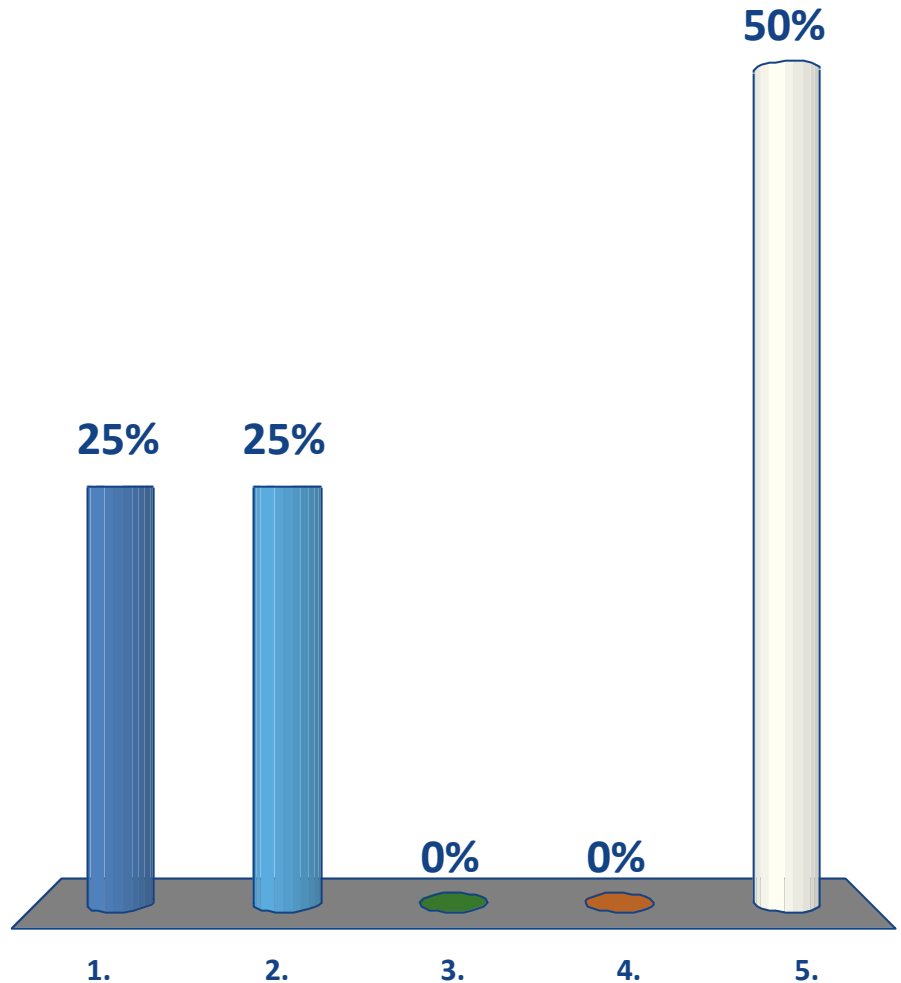


## Where Do You Live?



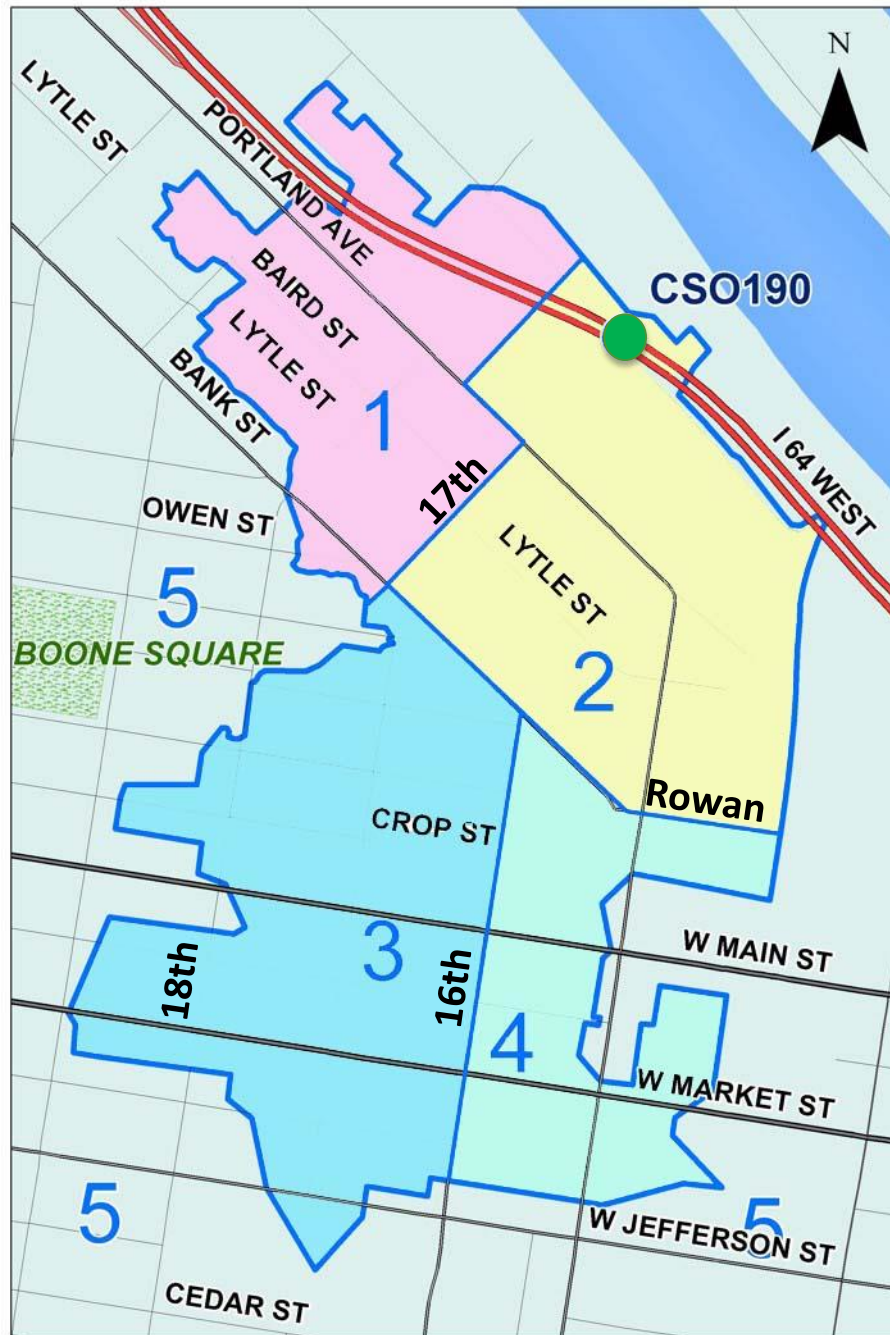
# Where Do You Live?

1. Area One
2. Area Two
3. Area Three
4. Area Four
5. Area Five (Rest of the City)



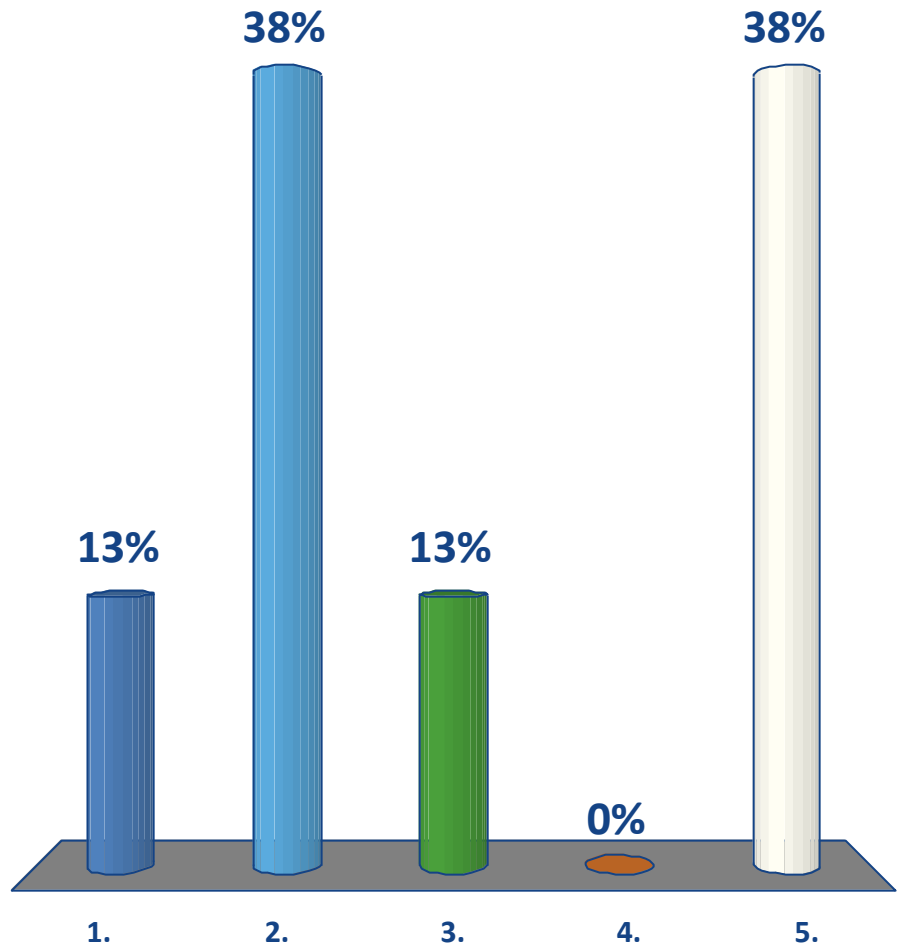


## Where Do You Spend Your Day?

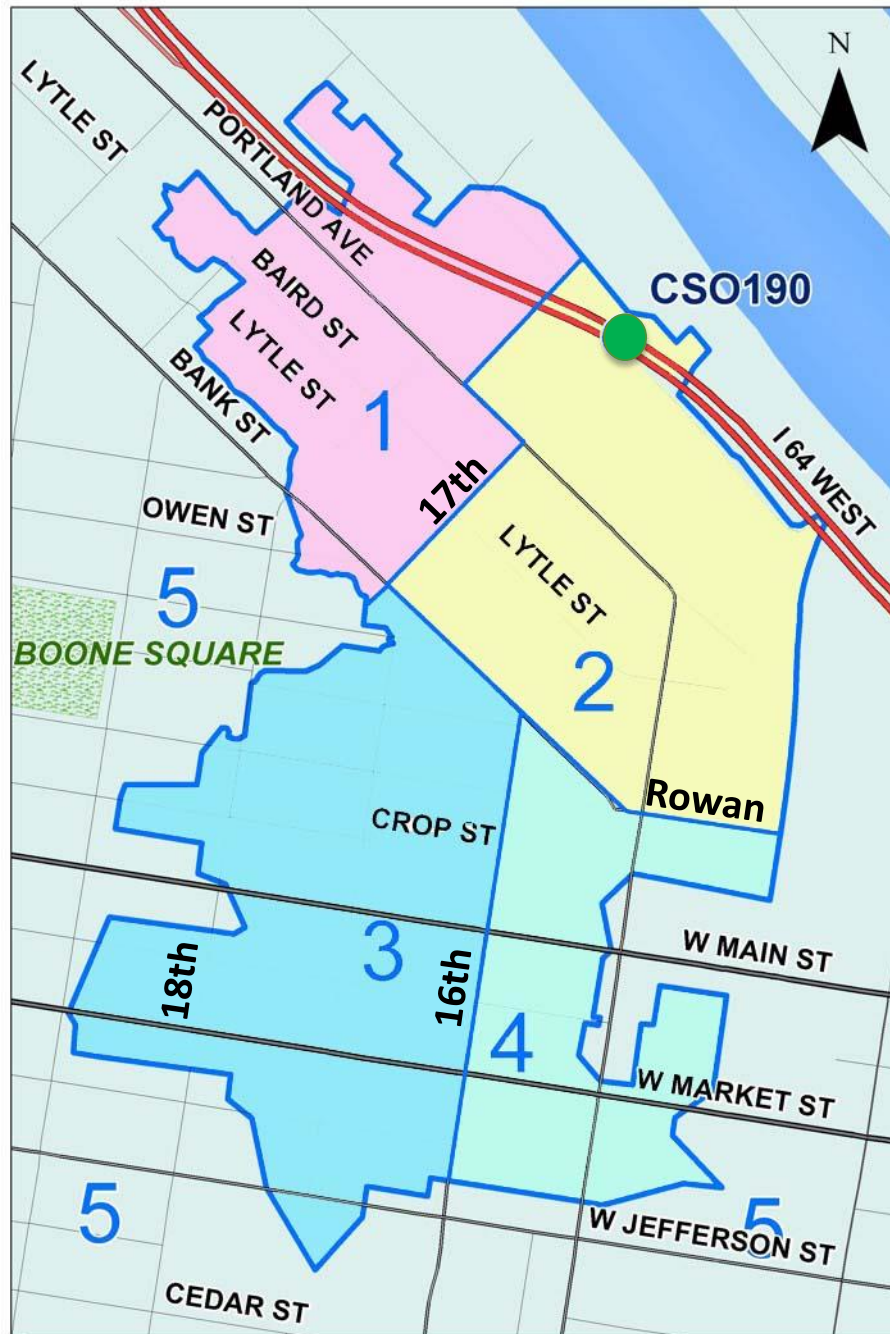


# Where Do You Spend Your Days? (up to 3)

1. Area One
2. Area Two
3. Area Three
4. Area Four
5. Area Five (Rest of the City)



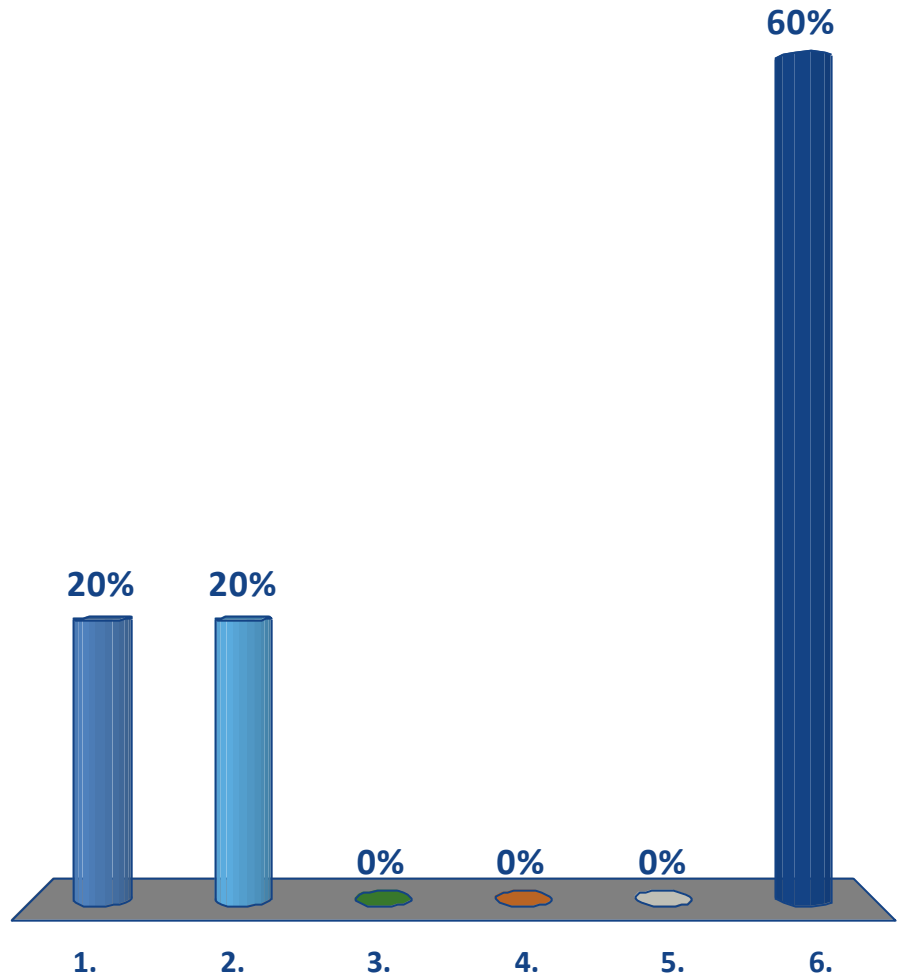
## Where Do You Operate a Business?





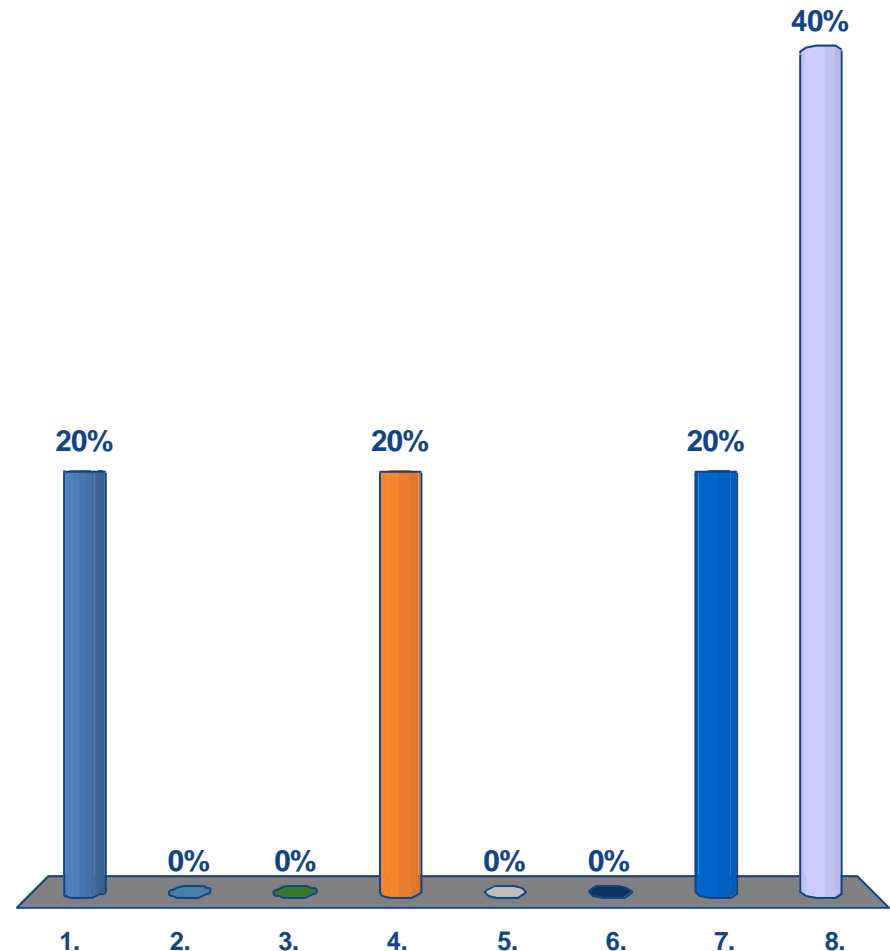
# Where Do Operate a Business?

1. Area One
2. Area Two
3. Area Three
4. Area Four
5. Area Five (Rest of the City)
6. I don't operate a business.



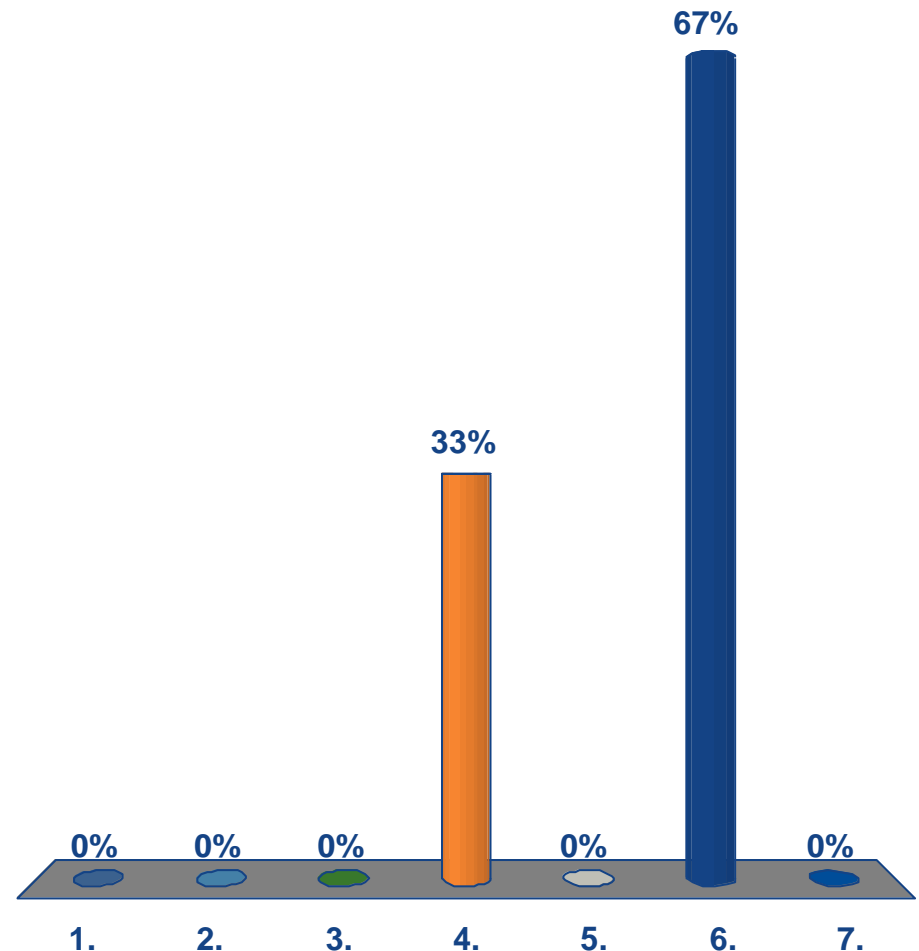
## How Did You Hear About This Meeting? (Up to 3)

1. Post Card
2. Saw It in the CJ
3. Saw it in a Metro Council District Newsletter
4. Heard About it From Someone
5. Received a Flyer
6. Project WIN website
7. MSD Email
8. Other



# What Are Your Primary Sources of Information About MSD Projects? (Up to 3)

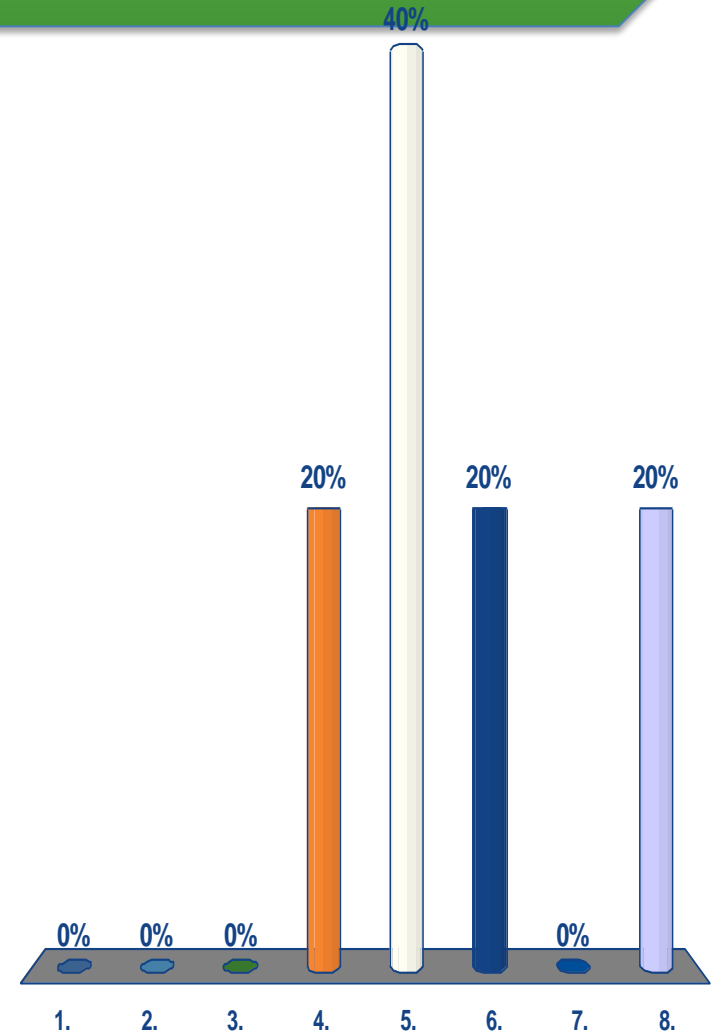
1. Public Meetings
2. Metro TV Videos
3. Project WIN website
4. Local Mainstream Print or Broadcast Media
5. Alternative Press or Online Media
6. Word of Mouth
7. I don't have any previous knowledge of MSD projects.





# How Would You Like to Learn About MSD's Projects? (Up to 3)

1. Public Meetings
2. Metro TV Videos
3. Project WIN website
4. Local Mainstream Print or Broadcast Media
5. Social Media
6. MSD Email
7. Metro Council District Newsletter
8. Bill Inserts



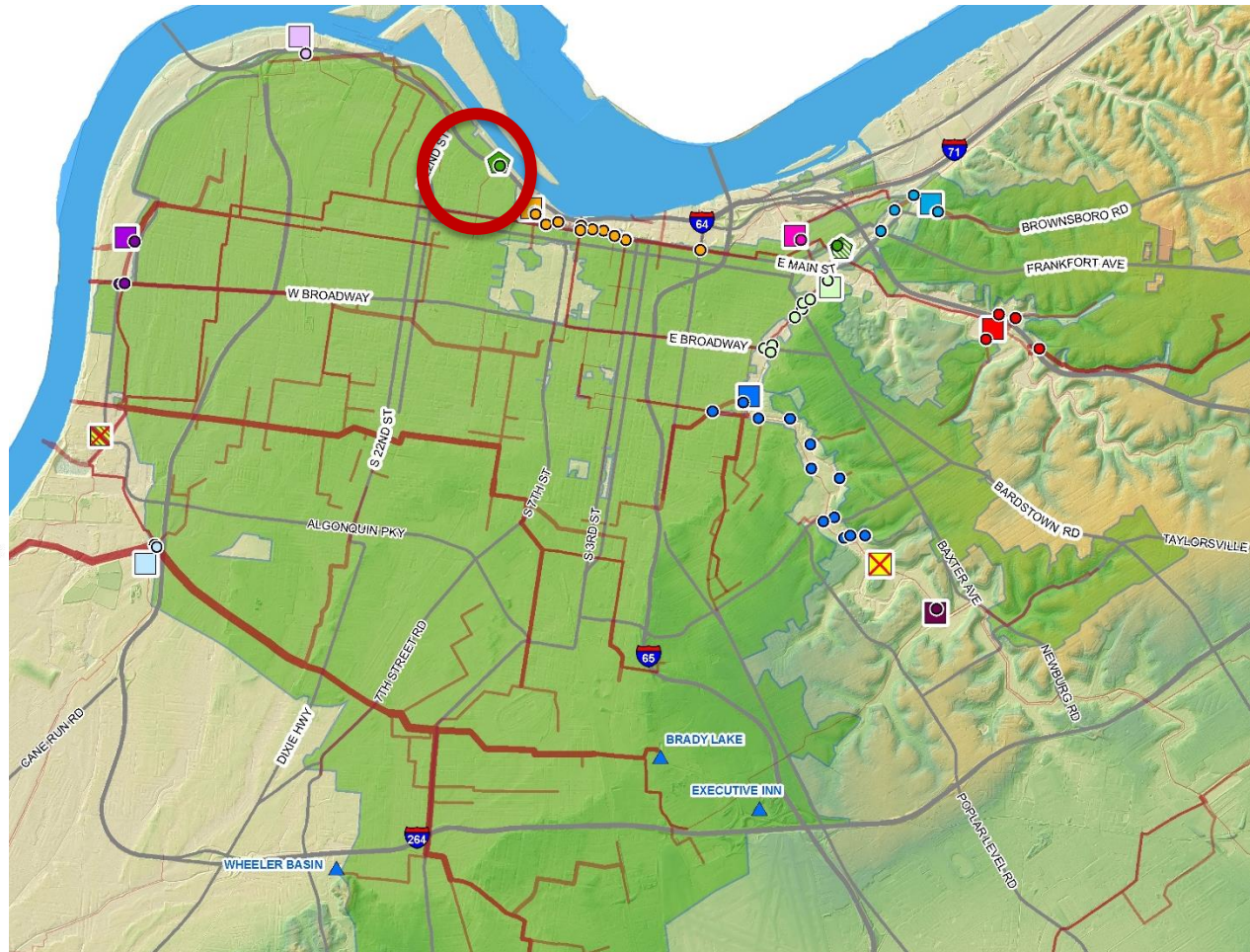
# Portland Green Infrastructure Project Update

## IOAP Storage

- I-64 and Grinstead Dr Storage Basin
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## Green Infrastructure Projects

- Story Ave and Spring St Green Infrastructure
- 18th St and Northwestern Pkwy Green Infrastructure



# Logic of Portland Green Infrastructure Project: Keep the Stormwater Out of the Combined Sewers

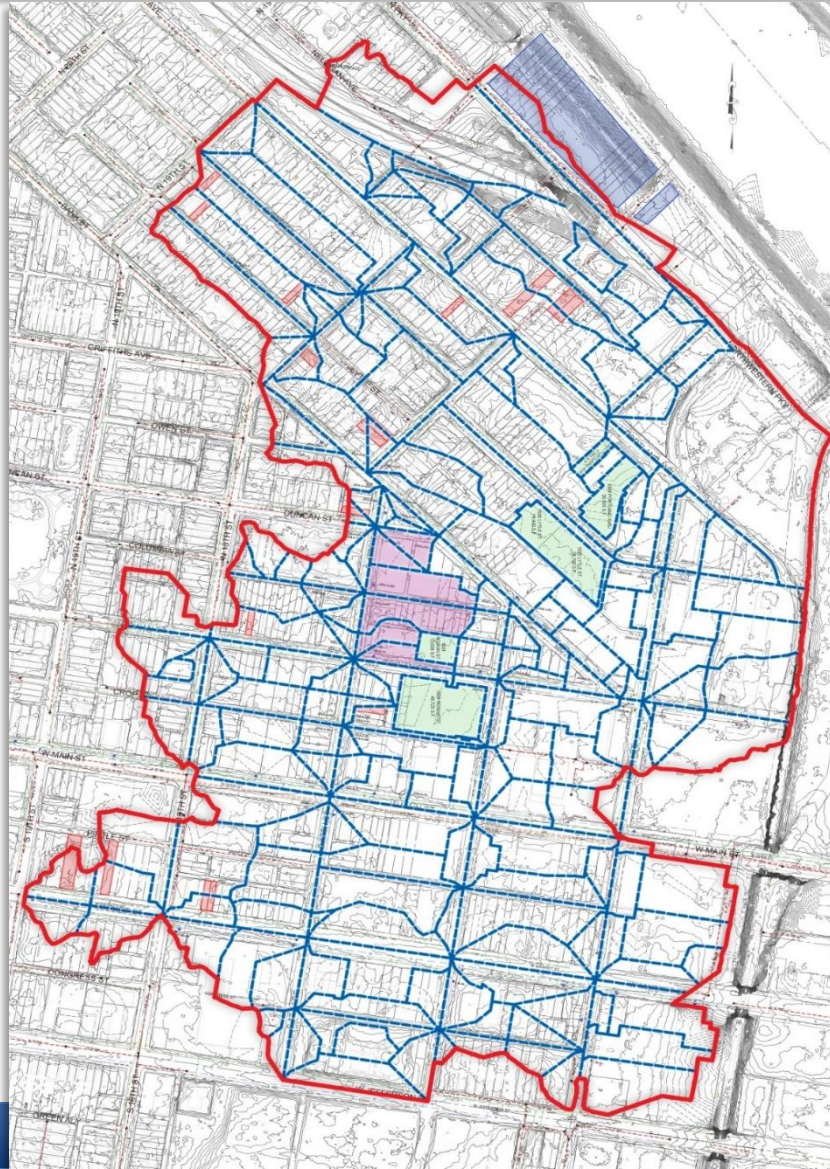


**Goal:** Capture storm water from downspouts and hard surface areas and redirect back into the ground water instead of the combined sewer system.

**Result:** If the first **one inch** of rain is redirected back to the ground, Combined Sewer Overflows, (CSO) will be dramatically reduced.



# What Needs to be Accomplished



- 142 Total Acres in the Watershed
- 2/3 (96 Acres) is Impervious (Asphalt, Roofs, Sidewalks, etc.)
- *Runoff from 2/3 of Impervious area (64 acres) must be captured.*

# Design Process and Phases

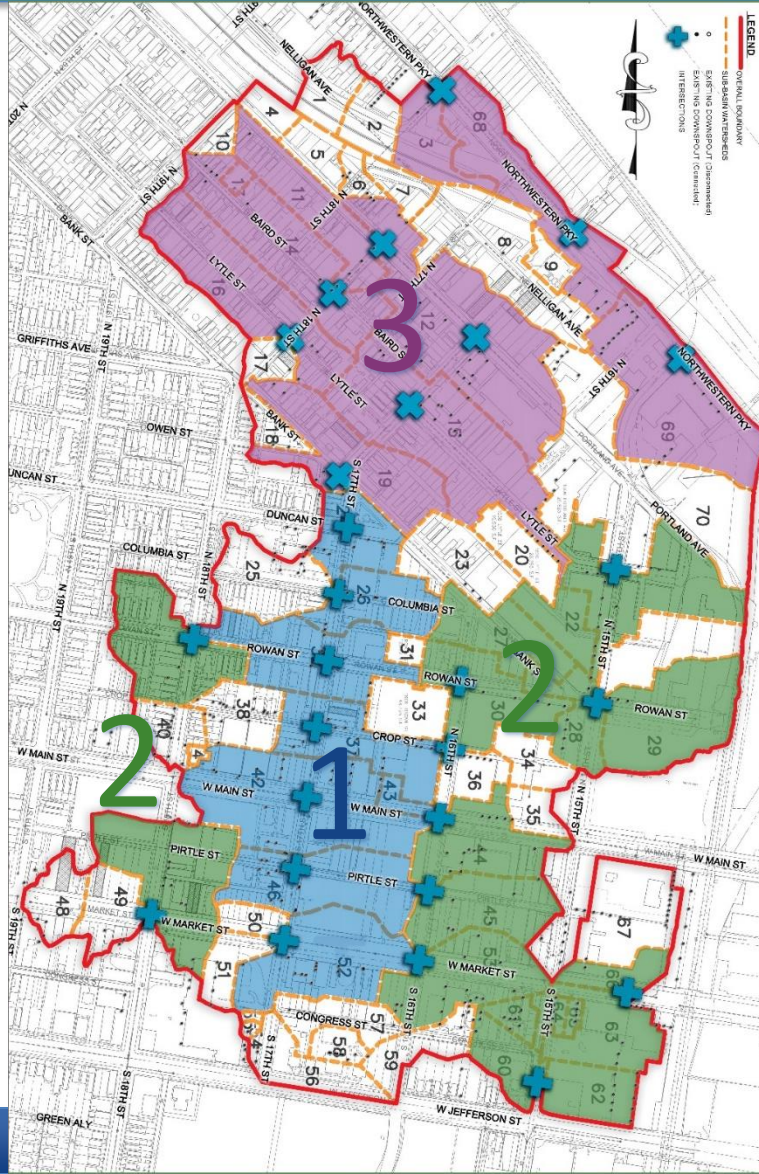
66,843 C.F.



106,230 C.F.



82,477 C.F.



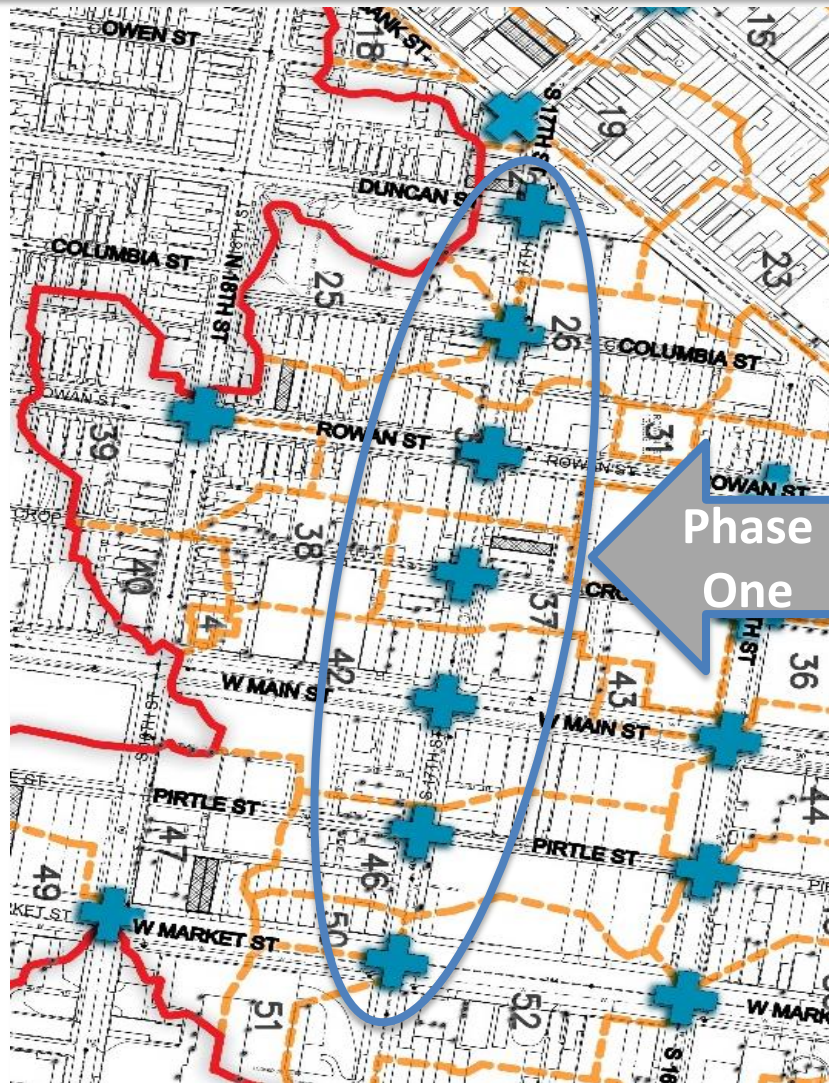
## Drivers of the Design/Decision Process:

- **Capturing Enough Area (63 acres)**
- **Having Enough Underground Stormwater Storage**
- **Using the Current Inlet Locations at Intersections**
- **Avoiding Utilities**
- **Enhancing Your Neighborhood**
- **Using Your \$\$\$ Wisely**





# Phase One



- Stormwater Drains Already at Intersections
- Currently Feed Directly Into Sewer Line Routed to Treatment Center and CSO
- Design is to Capture Stormwater at Each Intersection
- ***Phase 1: 7 Intersections***

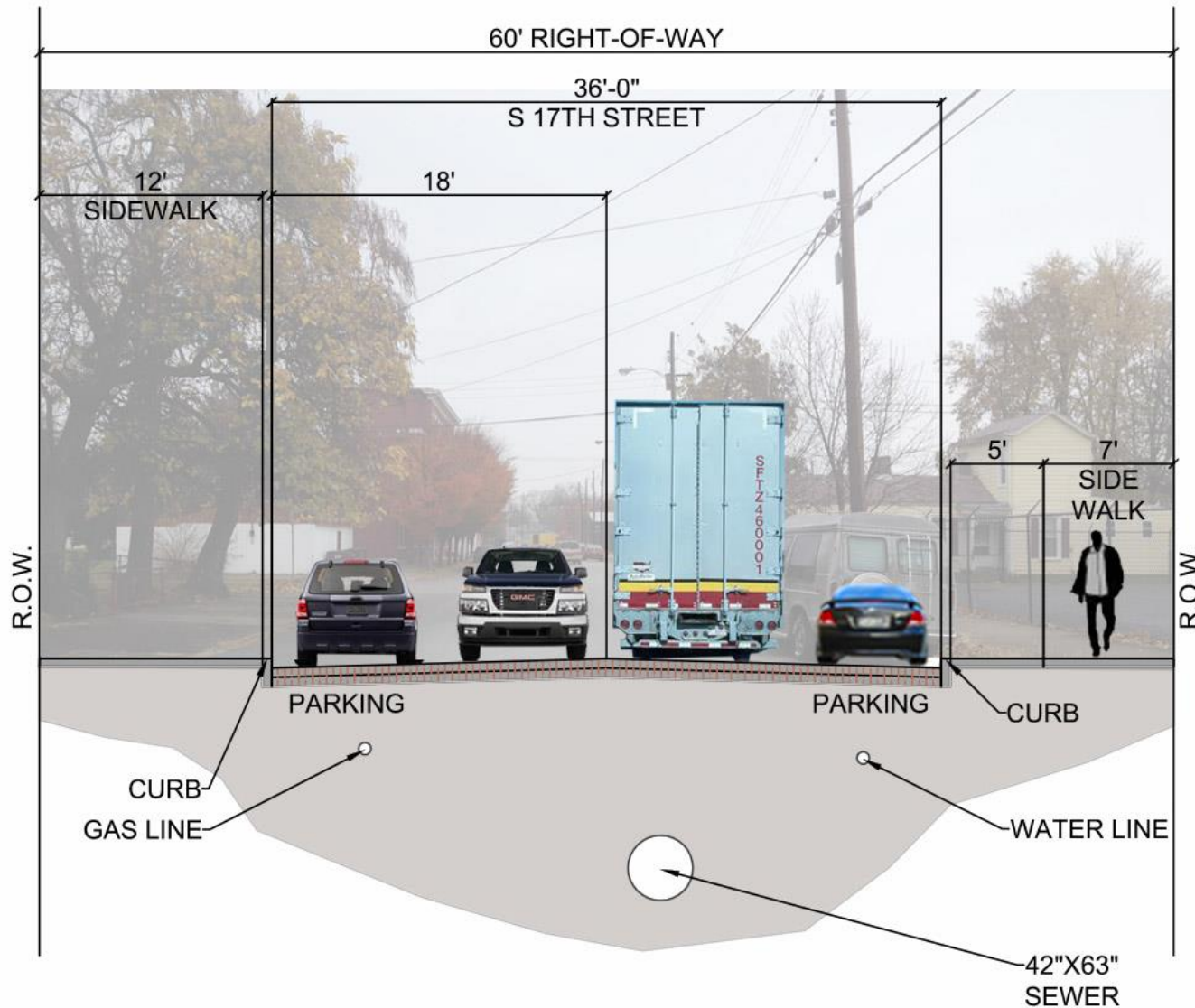




## Example: Existing Conditions at 17<sup>th</sup> and Crop Street



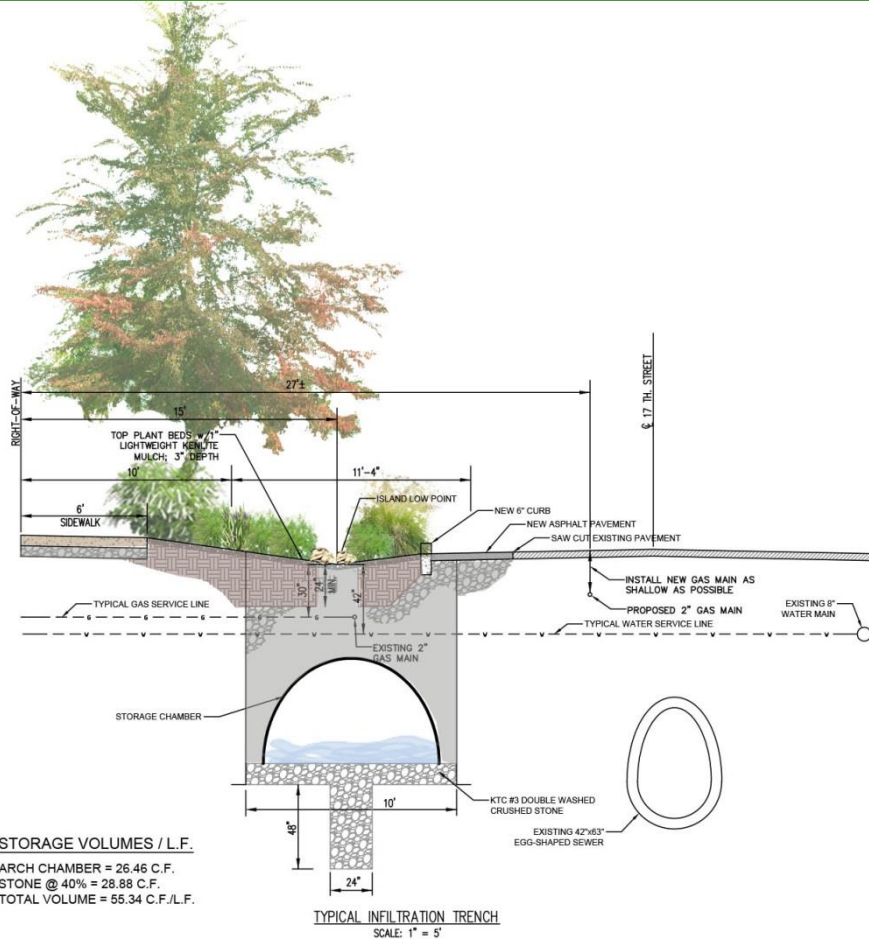
# Above and Below Ground Now



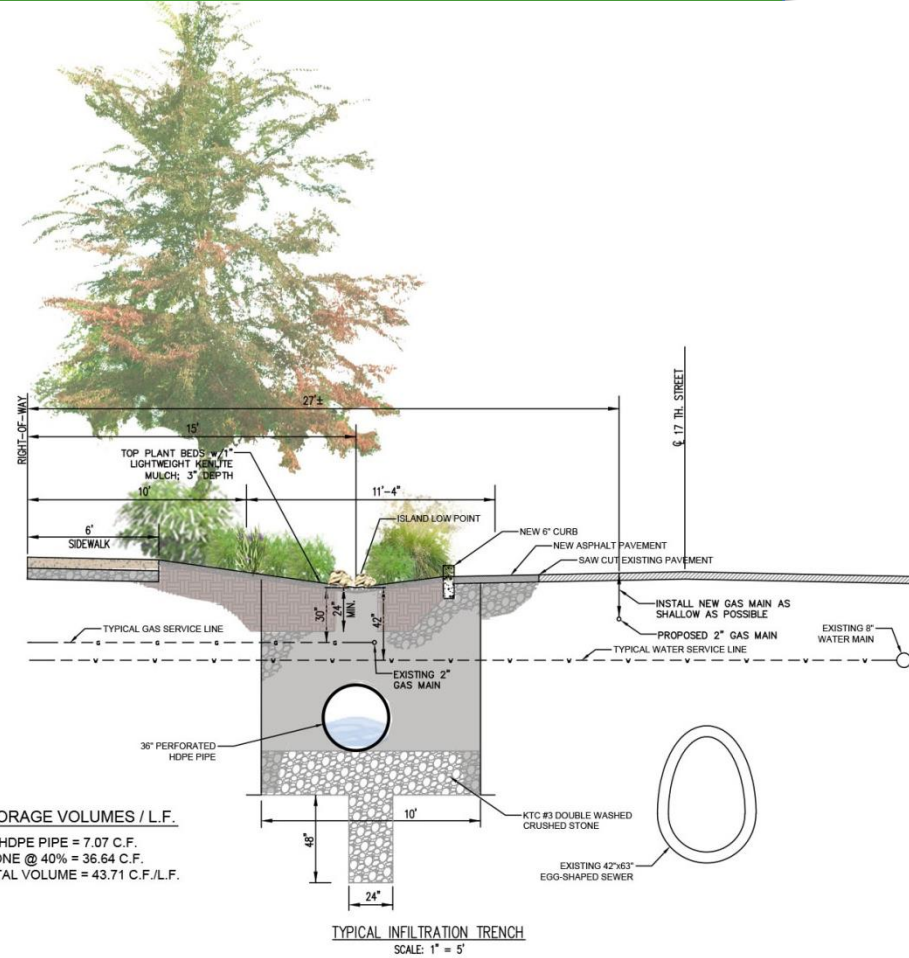
- Very Wide Street
- Up to 12 feet of Concrete Sidewalk
- Gas, water, sewer lines all under the street



# Design: Stormwater Storage Underneath Sidewalks: Streetscape Alternatives At Street Level



ARCHED CHAMBER



PERFORATED PIPE

# Community Feedback: You Gave Your Preferences for 6 Different Streetscapes.



**This design received the highest average scores for both Residential and Business Areas. It consists of grass strips with trees near the intersections.**



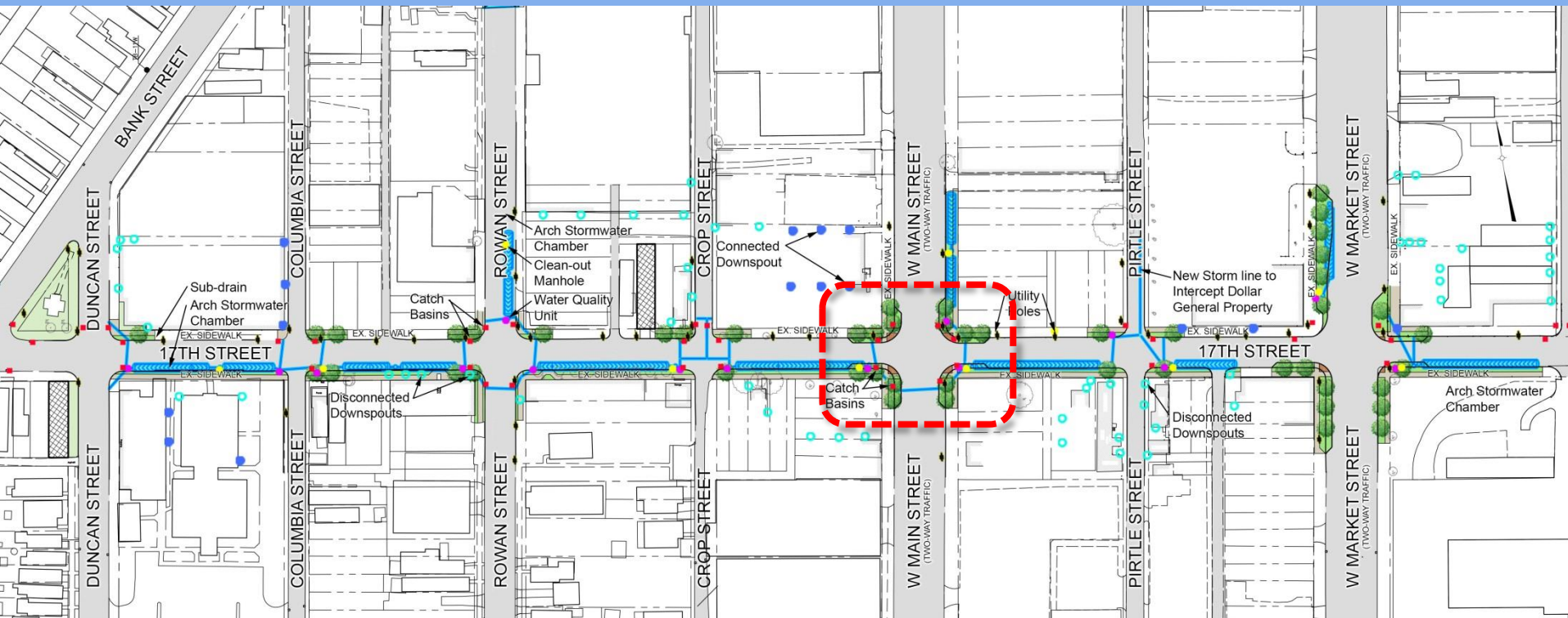
## You Also Told Us:

- The most important aspects of the potential designs were the **Potential For Beautification**, the **Benefits Of Tree Cover**, and the importance of **Sustainable Designs**.
- Your overall priorities for neighborhood improvement that could arise from this project were **Traffic Calming** and **More Tree Cover**.

# Advanced Designs Based on That Information

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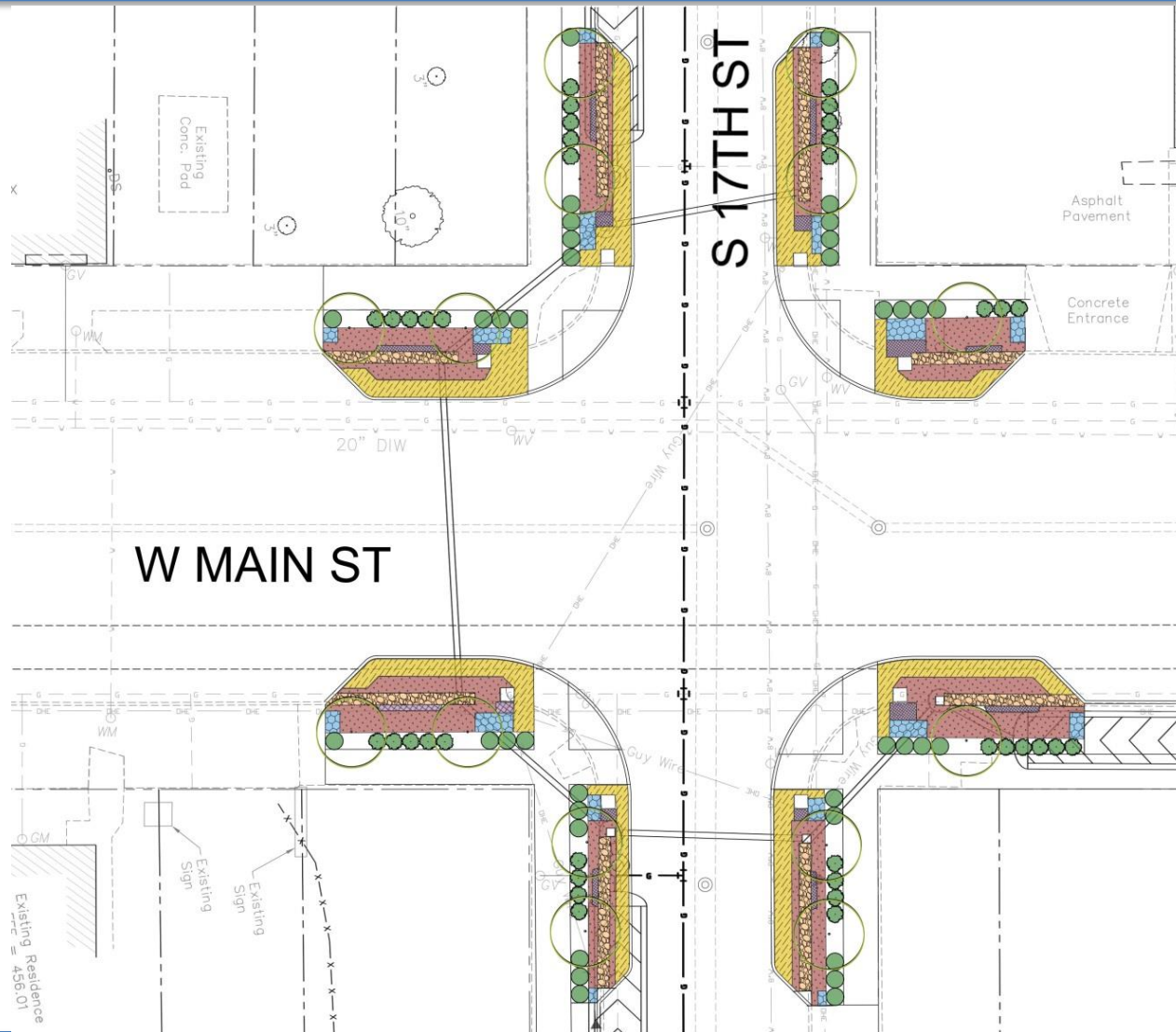
# Bumpouts at Main and Market



## LEGEND

- Existing Catch Basin
- ◆ Existing Utility Pole
- Disconnected Downspout
- Potential Downspout Disconnect
- ▨ Arch Stormwater Chamber
- Water Quality Unit
- Clean-out Manhole

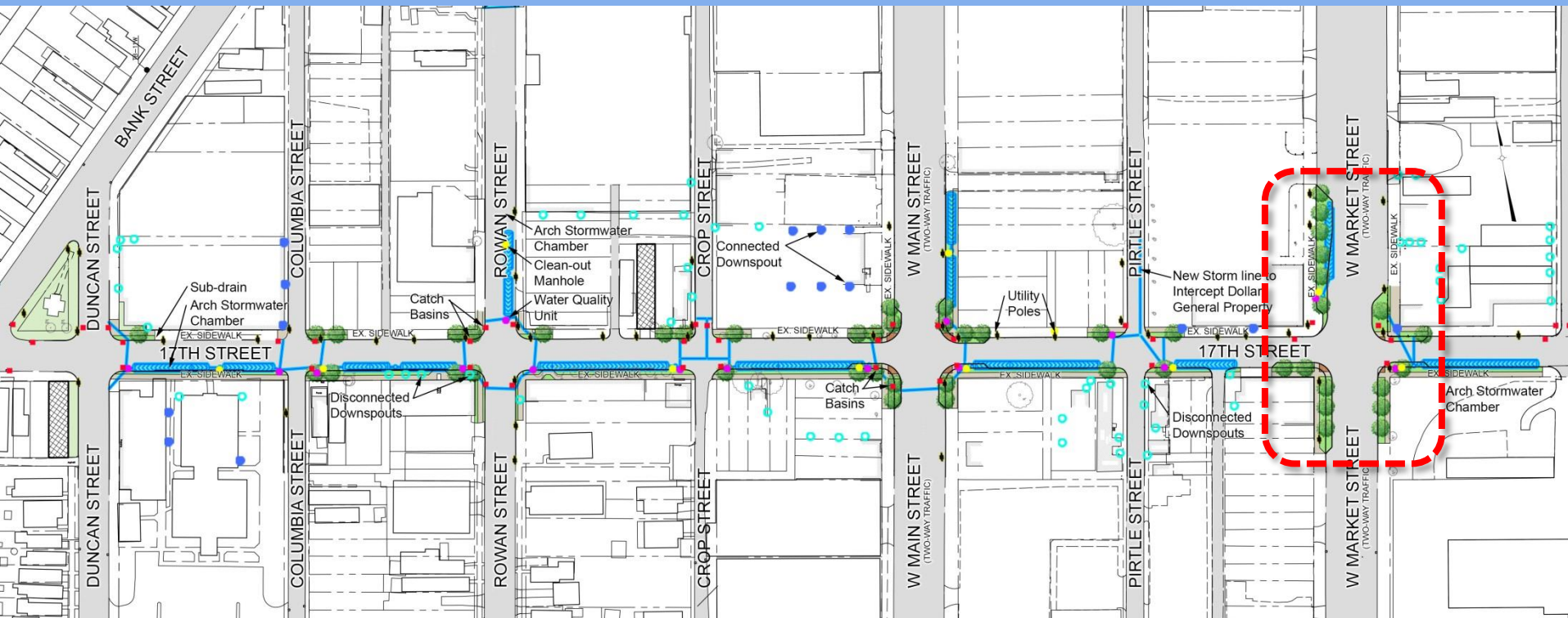
# Proposed Green Design at 17<sup>th</sup> & West Main Street



- Bumpouts Provide Traffic Calming Where Needed
- Add Grass Strip Between Sidewalk And Street Elsewhere as per Public Preference
- Bumpouts Still Have Some Options: Trees / Plantings / Grass



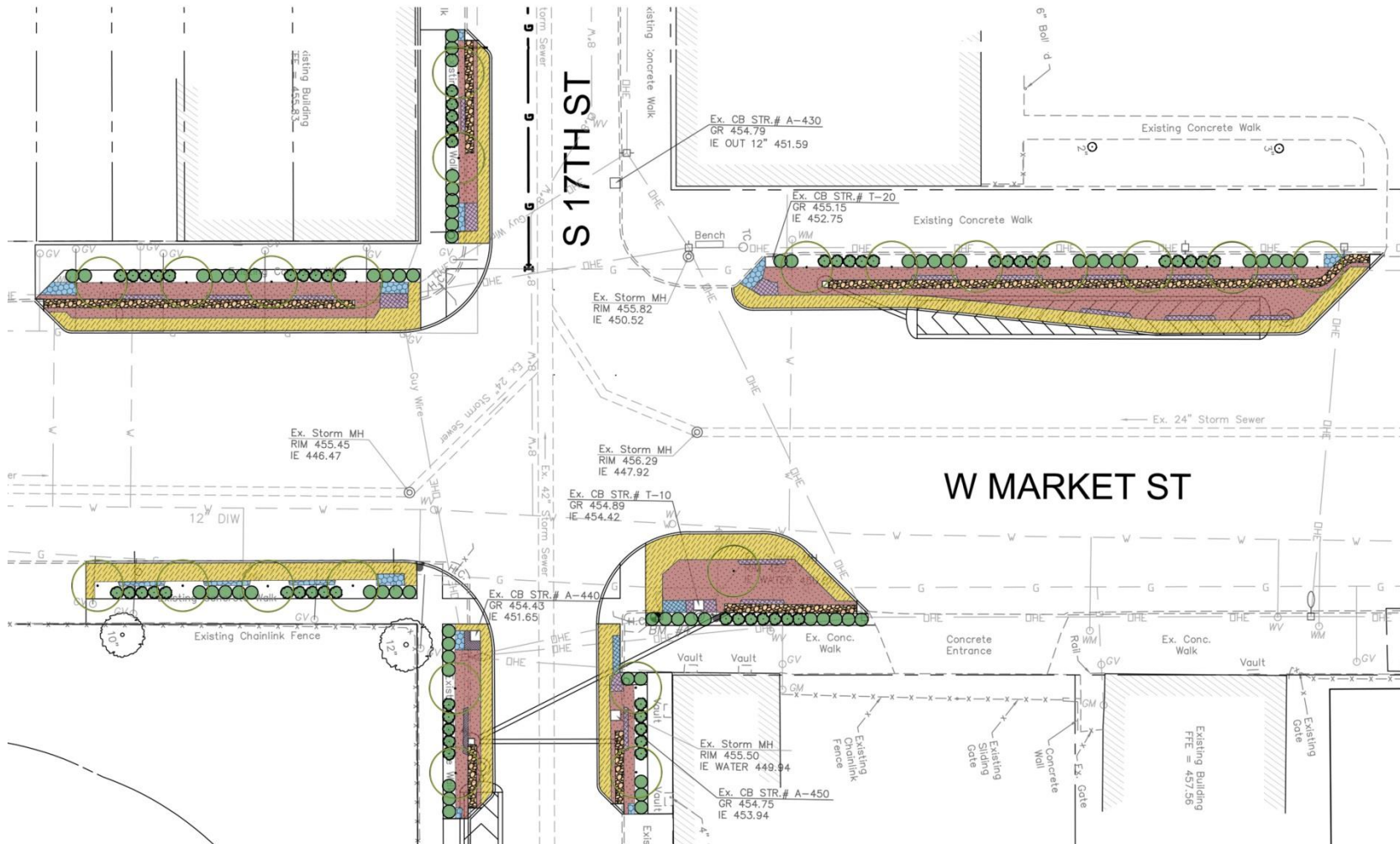
# Bumpouts Also At 17<sup>th</sup> and Market



## LEGEND

- Existing Catch Basin
- ◆ Existing Utility Pole
- Disconnected Downspout
- Potential Downspout Disconnect
- ▨ Arch Stormwater Chamber
- Water Quality Unit
- Clean-out Manhole Chamber

# Green Design at 17<sup>th</sup> & W Market



# So: We Have Some Options for the Bumpouts. Tell Us What You Think.

- The bumpouts can be just grass, have some trees also, or include plantings with the trees.
- Each option comes with different considerations.
- We'll look at each in turn and invite you to tell us what you think.

# Green Concept Design with Bumpouts

## Option 1: With Grass



- Includes Curb bump-outs
- Grass/Lawn Area Only
- Least expensive installation
- Highest Maintenance- Regular Grass Cutting





# Green Concept Design with Bumpouts

## Option 2: Grass Plus Trees



- Includes Curb bump-outs
- Grass/Lawn Area with Street Trees
- More expensive installation
- Mid-level Maintenance- Regular Grass Cutting & Tree Replacement

# Green Concept Design with Bumpouts

## Option 3: Plantings Plus Trees



- Includes Curb bump-outs
- More extensive landscaping- including shrubs, ornamental grasses & street trees
- More expensive installation
- Less Maintenance

# Green Concept Design with Bumpouts

## Option 1: Bumpouts with Grass



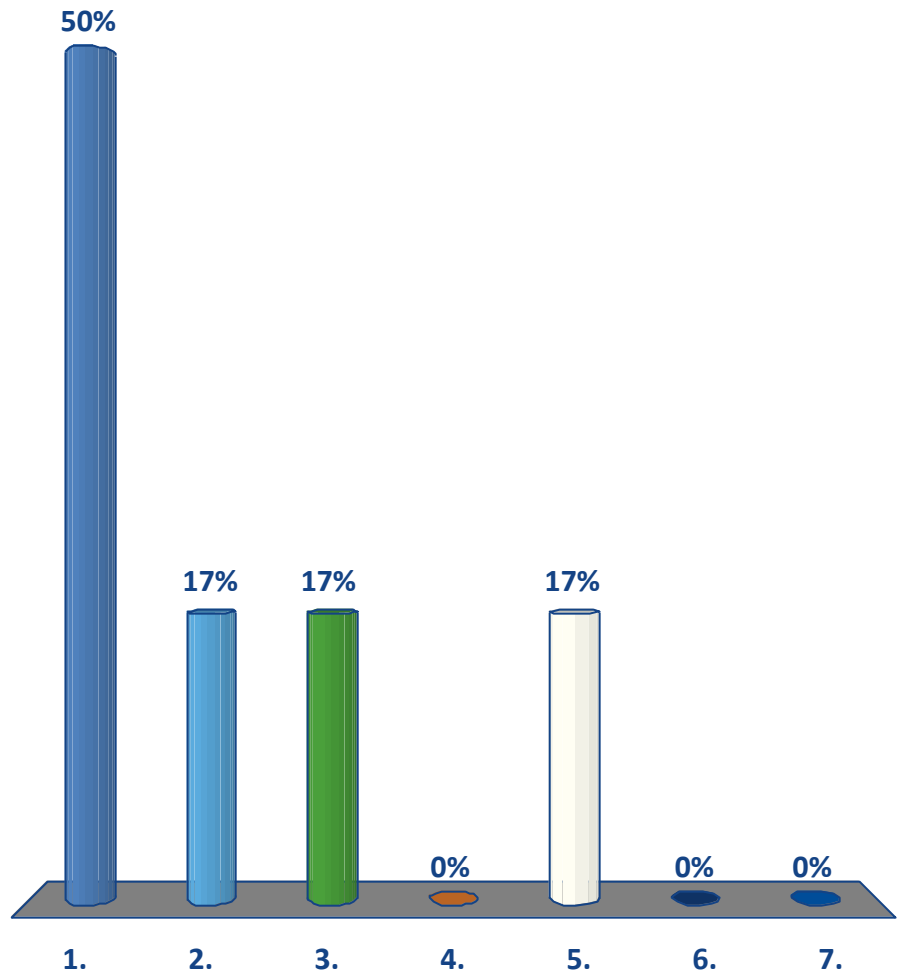
- Includes Curb bump-outs
- Grass/Lawn Area Only
- Least expensive installation
- Highest Maintenance- Regular Grass Cutting



# Suitability of Option 1 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean = 2.17

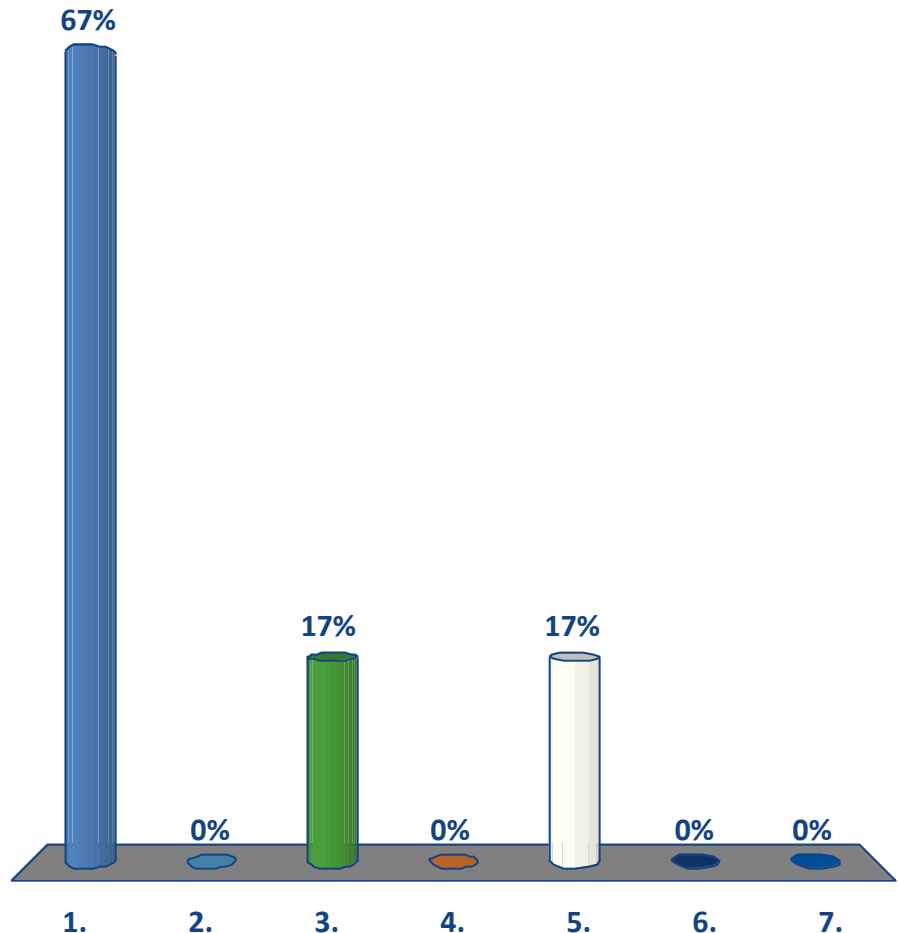




# Suitability of Option 1 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean = 2.00



# Green Concept Design with Bumpouts

## Option 2: Grass Plus Trees

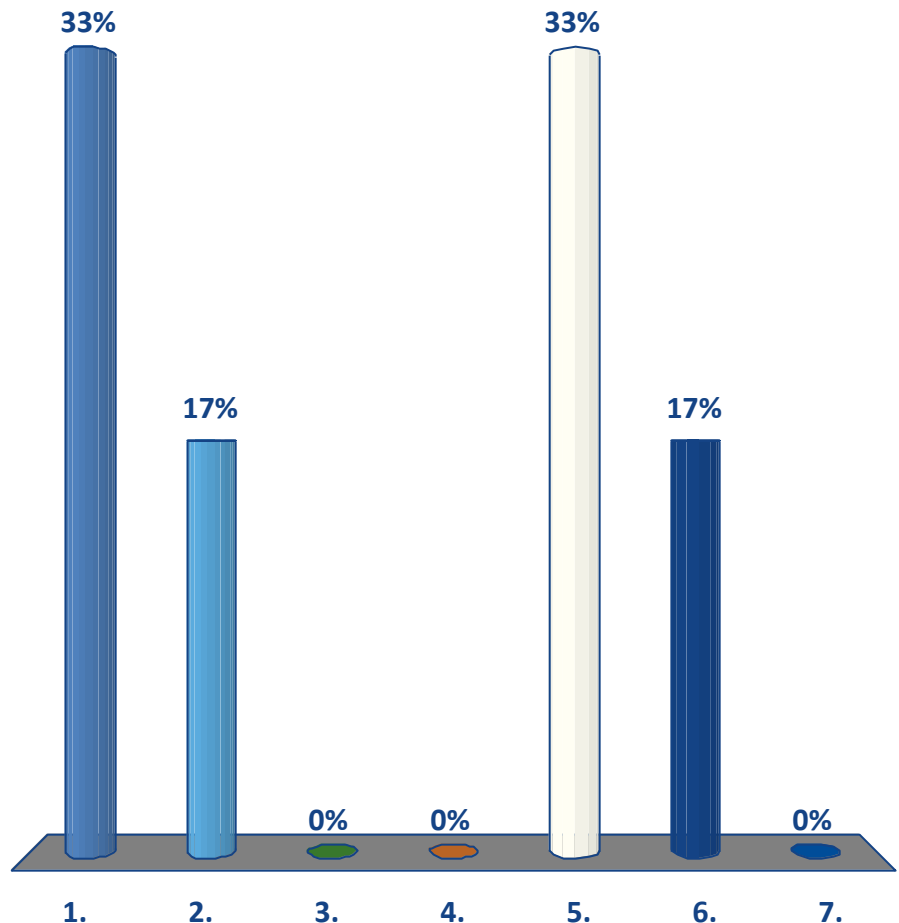


- Includes Curb bump-outs
- Grass/Lawn Area with Street Trees
- More expensive installation
- Mid-level Maintenance- Regular Grass Cutting & Tree Replacement

# Suitability of Option 2 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

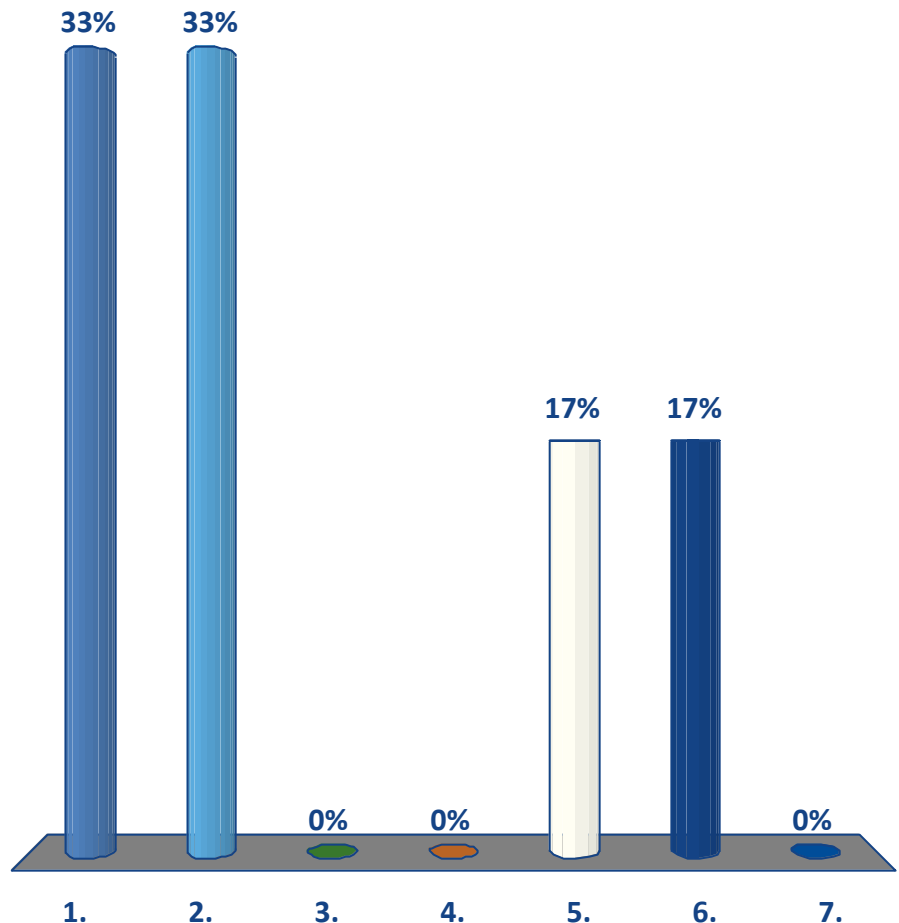
Mean = 3.33



# Suitability of Option 2 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean = 2.83





# Green Concept Design with Bumpouts

## Option 3: Plantings Plus Trees

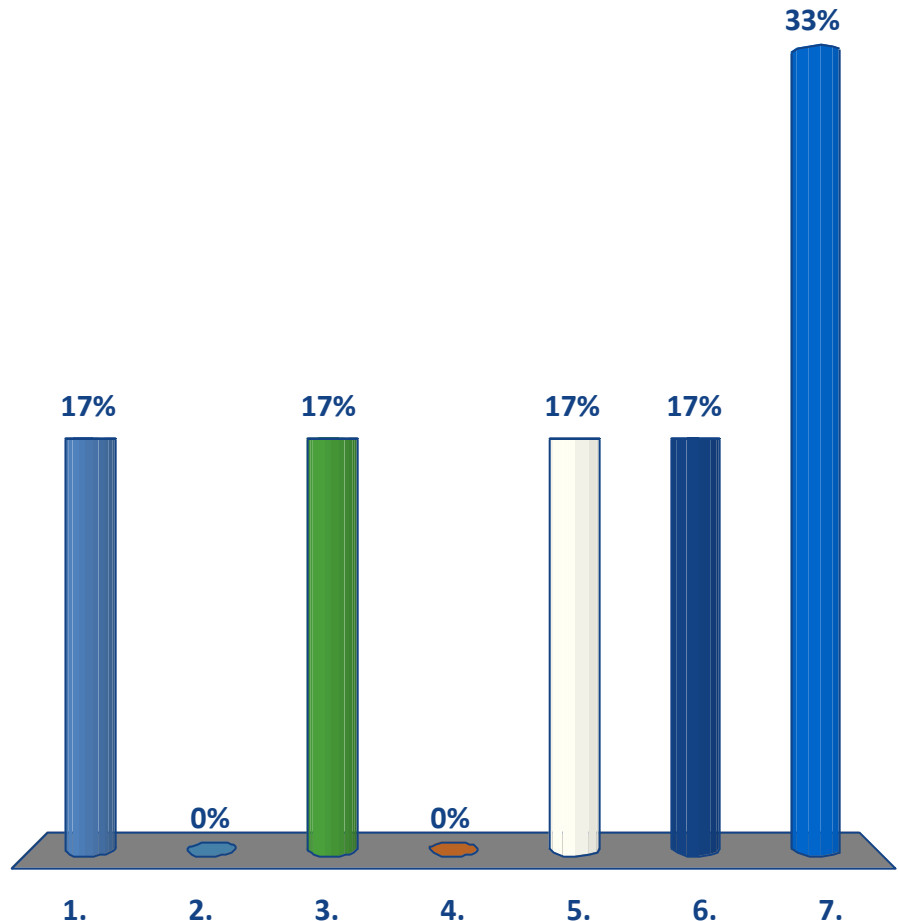


- Includes Curb bump-outs
- More extensive landscaping- including shrubs, ornamental grasses & street trees
- More expensive installation
- Quarterly Maintenance

# Suitability of Option 3 for Residential Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

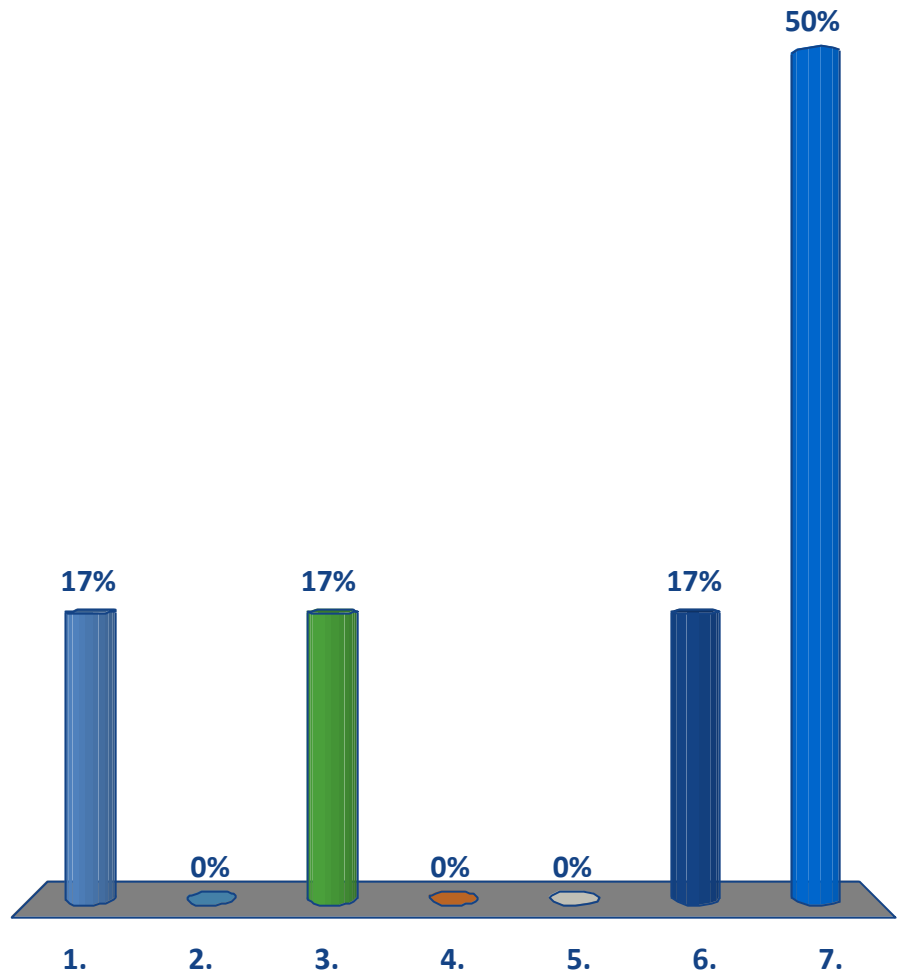
Mean = 4.83



# Suitability of Option 3 for Business Area?

1. Very Unsuitable
2. Unsuitable
3. Somewhat Unsuitable
4. Neutral
5. Somewhat Suitable
6. Suitable
7. Very Suitable

Mean = 5.17

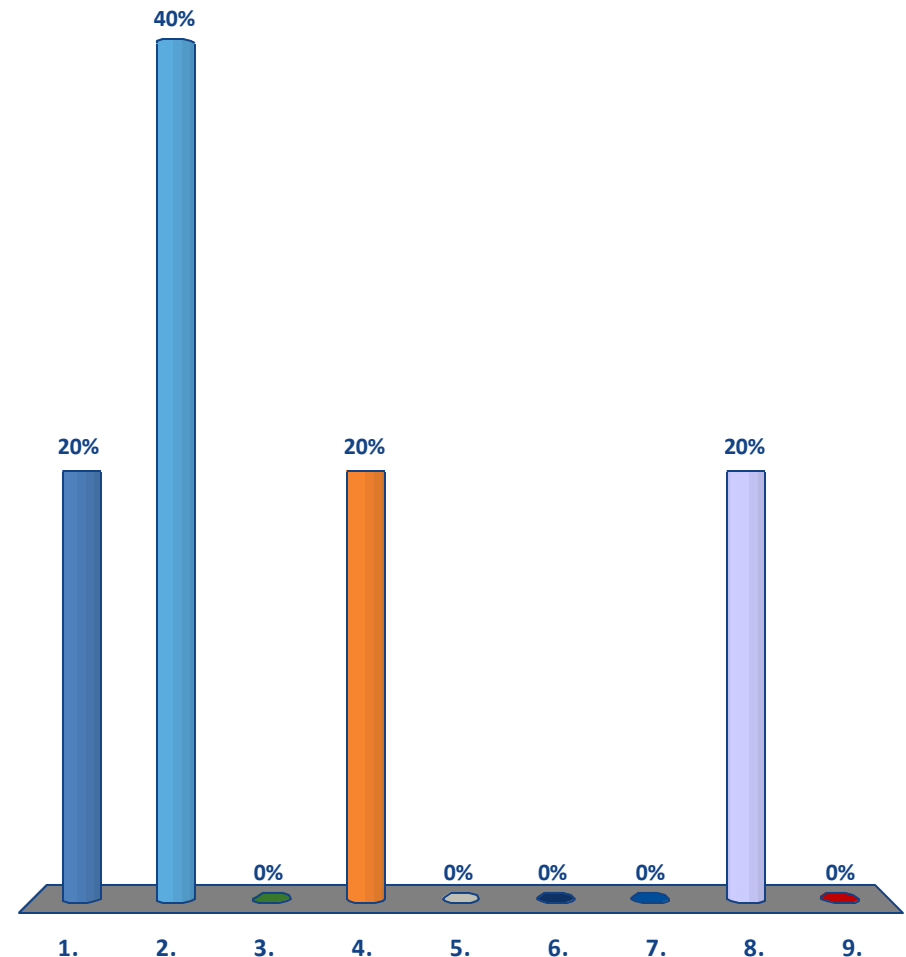




Thanks. That Helped Us.

# How satisfied are you with this process?

1. Very Unsatisfied
2. Unsatisfied
3. Somewhat Unsatisfied
4. Slightly Unsatisfied
5. No Particular Opinion
6. Slightly Satisfied
7. Somewhat Satisfied
8. Satisfied
9. Very Satisfied



Mean = 3.40

# Next Steps

- Evaluate your input
- Finalize the design
- Get design approval from EPA
- Meet with you on August, 2015
  - Show you the final design
  - Tell you what to expect during the construction process
- Start construction soon after that
- Be finished by the end of the year
- To be put on the email list for this project, send a note mentioning this project to:

[commentsIOAP@msdlouky.org](mailto:commentsIOAP@msdlouky.org)



# Current Detailed Project Schedule

## Phase 1 – 2015 Construction

Bid and Contract Award:	July 2015
<b>'Pardon Our Dust' Meeting:</b>	<b>August, 2015</b>
Begin Construction:	August 2015
Complete Construction:	December 2015

## Phase 2 – 2016 Construction

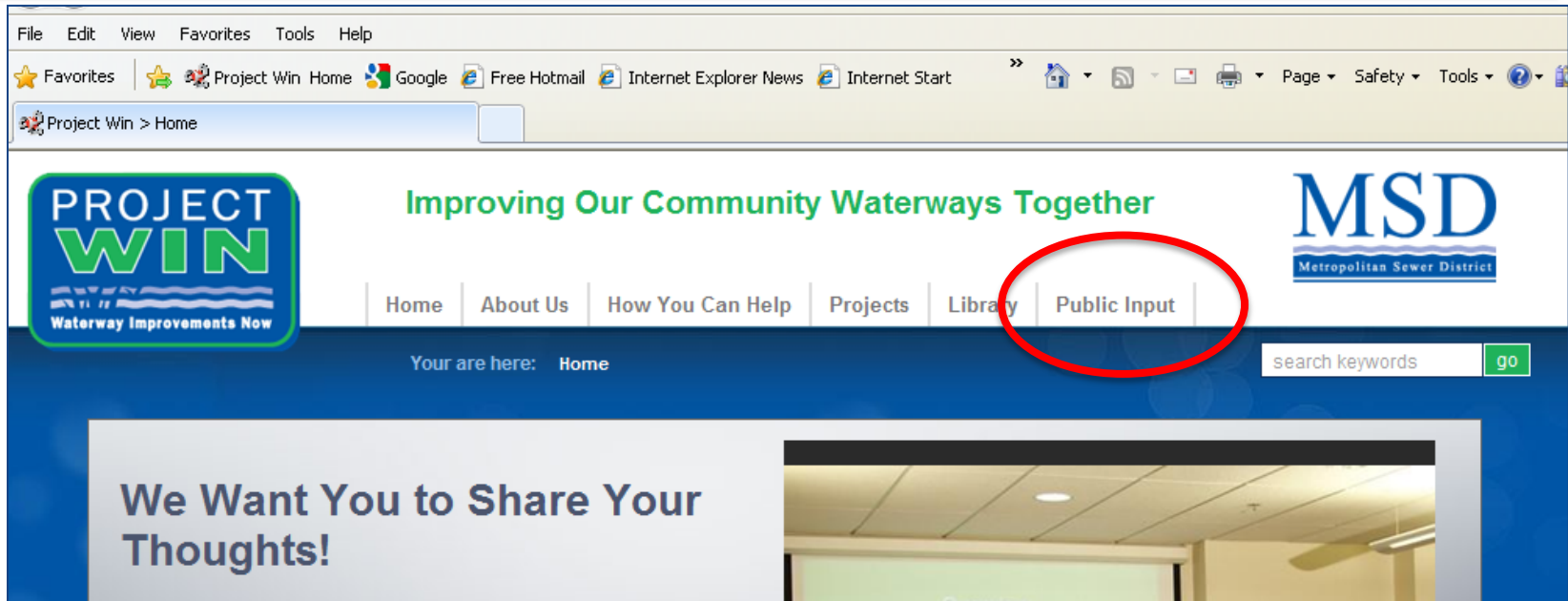
Neighborhood Feedback:	On-going
Begin Construction:	May 2016
Complete Construction:	October 2016

## Phase 3 – 2017 Construction

Neighborhood Feedback:	On-going
Begin Construction:	March 2017
Complete Construction:	August 2017

<u>EPA Certification:</u>	December 2017
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Find Out More: **msdprojectwin.org**



**Learn More at the Website Created Just for YOU!**  
**Invite Your Friends and Neighbors to Take the Survey Online!**



***For general information or emergencies  
regarding the MSD system, call:  
502-587-0603***

**Your Call Will be Answered**

- By an MSD Staff Member
- Around the Clock
- Every Day of the Year





**Any Comment Cards?**







**THANK YOU**  
**FOR YOUR TIME AND ASSISTANCE!**  
We'll see you here in August.  
Watch the MSD website for  
updates.

