Public Information Meeting for the

Avondale Estates Comprehensive Stormwater Master Plan

September 2, 2020

Meet the Facilitators

Shannon Powell
Assistant City Manager

Paul Hanebuth
Assistant City Manager

Rebecca Long
Communications Manager

Lori Visone, PE
Project Manager

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Senior Technical Advisor

Brown AND Caldwell

Background

- City of Avondale Estates became responsible for the maintaining an aged stormwater infrastructure in 2004.
- Stormwater infrastructure is important
  - Transportation
  - Water Quality
  - Flooding
- Proper maintenance of stormwater infrastructure is required by regulation state and federal regulations

Need for Master Planning

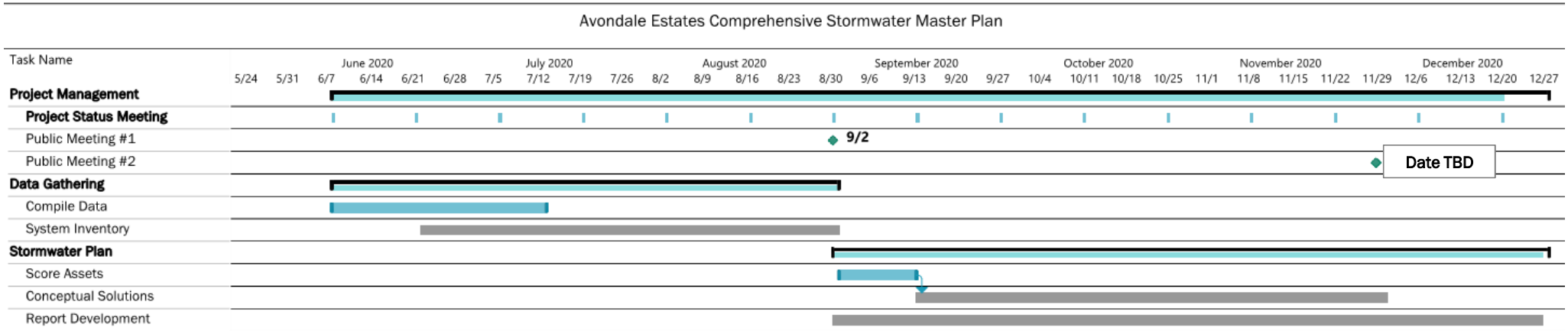
- Maintaining citywide stormwater infrastructure is complex
  - Restricted visibility (underground)
  - Various age
  - Various condition
  - Large number of assets
- Limited Funding / Competing Needs
- Equitable Allocation of Resources

Comprehensive Stormwater Master Plan

...will provide Avondale Estates with a roadmap to proactively implement its stormwater program within the available funding.

- Key Tasks
  - Public Outreach
  - Data Gathering
  - Plan Development
    - Asset Scoring
    - Conceptual Solutions
    - Implementation Plan

Project Schedule



Data Gathering

...focuses on an inventory and assessment of the stormwater sewer system

- Key Components of Data Collection:
  - Stormwater structures – drop inlets, catch basins, headwalls, junction boxes/manholes
  - Stormwater conveyances – pipes, culverts, and flumes
  - Stormwater detention basins – facilities that store water during and after storm events.

stormwater structure

stormwater detention basin

stormwater conveyance

Summary of Data Collection

- Type, material, shape and size
- Condition Assessment
  - Structural Condition
  - Siltation/Blockages
  - Water Quality Concerns
- Photos and videos


CC-1025-S
CC-1393-S_U
Avondale Estates
07/15/2020 03:19 PM
84.25915° W
33.77361° N
1,047.9ft

Score Assets

...each inventoried asset (structure, conveyance and basin) will be scored using weighted prioritization criteria.

Prioritization Criteria:

- Capacity
- Structural Integrity
- Flooding
- Safety/Potential Failure Impact
- Public Feedback

Conceptual Solutions

...based on scoring results conceptual solutions will be developed for five areas.

- Asset score will assist in determining priority locations for concept plan development
- Concept plans include:
  - High level plan to provide solutions to infrastructure issues
    - May include gray and/or green infrastructure solutions
  - Cost estimate

Gray infrastructure includes traditional piped systems which focus on efficiently conveying stormwater runoff

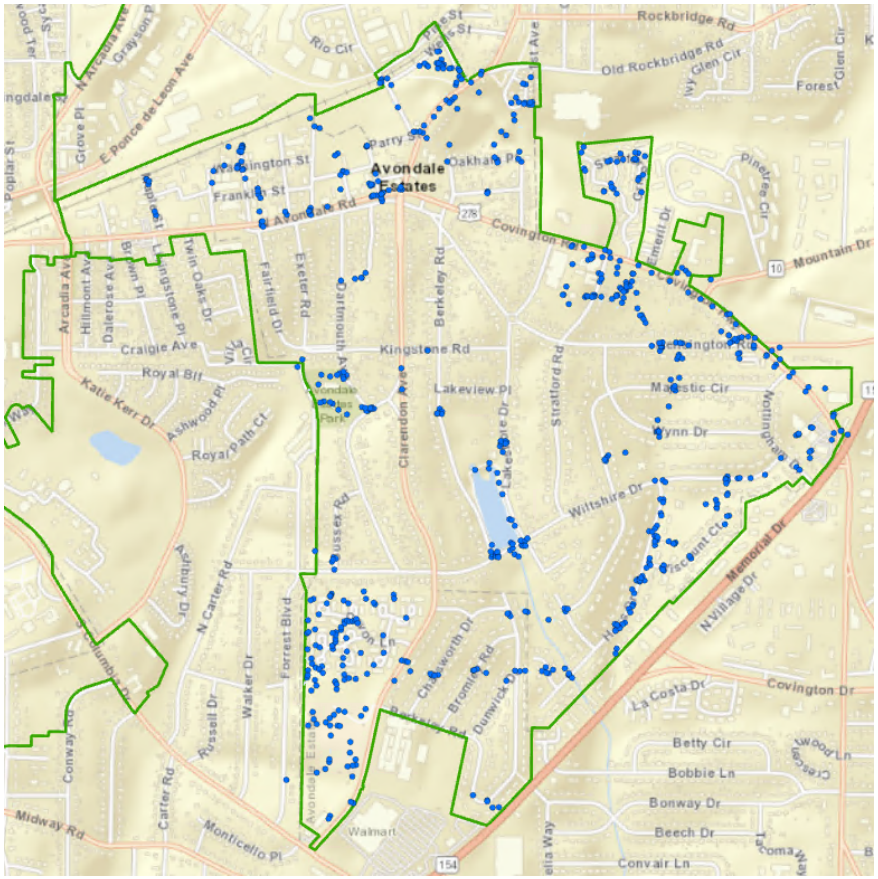
Green infrastructure includes engineered and natural measures that provide infiltration and evapotranspiration of stormwater runoff.

Master Plan Report

- Compiles methods
- Documents results
- Outlines a path for implementation

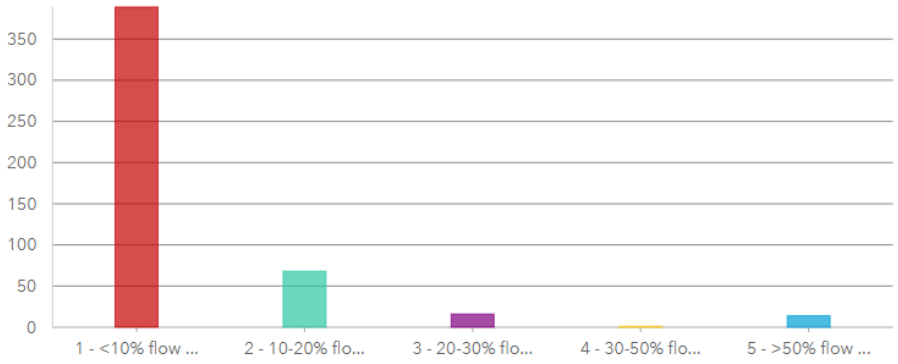
Current Results and Trends

- Field inventory complete
  - 648 structure surveys
  - 771 conveyance surveys
  - 17 detention basin surveys



Structure Condition

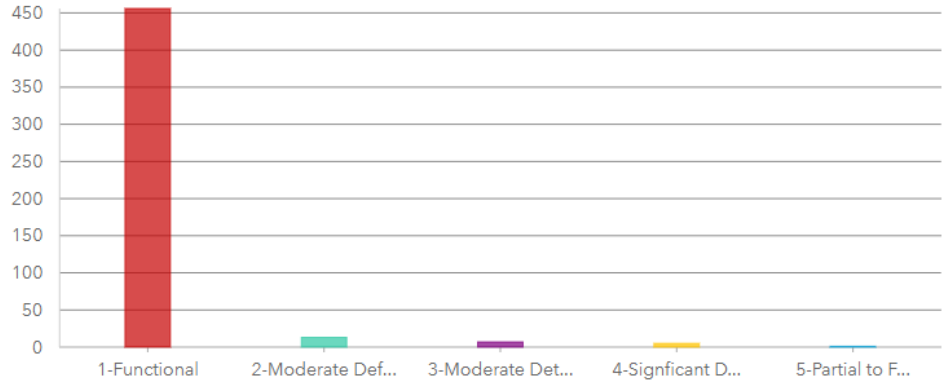
Siltation/Blockage



Hide table Empty categories Sort

Answers	Count	Percentage
1 - <10% flow area, Limited to no impact on function	389	60.12%
2 - 10-20% flow area, Minor impact on function	68	10.51%
3 - 20-30% flow area, Moderate impact on function. Maintenance recommended.	16	2.47%
4 - 30-50% flow area, Significant impact on function. Maintenance necessary.	1	0.15%
5 - >50% flow area, Severe impact on function. High priority maintenance	14	2.16%

Structural Conditions



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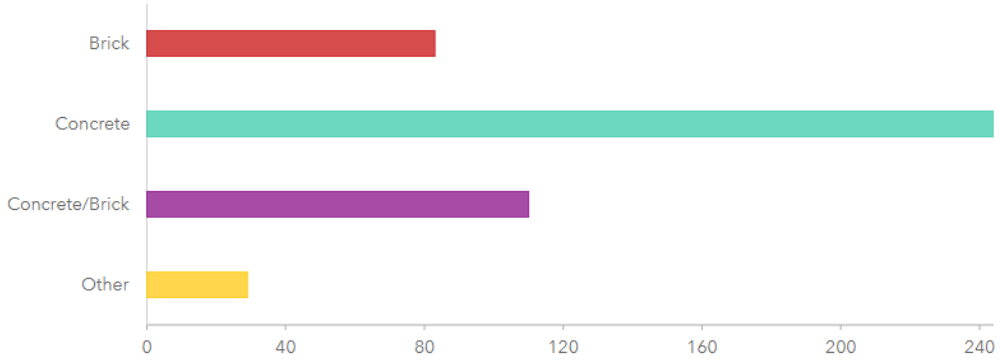
Answers	Count	Percentage
1-Functional	456	70.48%
2-Moderate Defects	13	2.01%
3-Moderate Deterioration, Maintenance recommended	7	1.08%
4-Signficant Deterioration, Maintenance necessary.	5	0.77%
5-Partial to Full Failure, High priority maintenance.	1	0.15%

Structure Characteristics

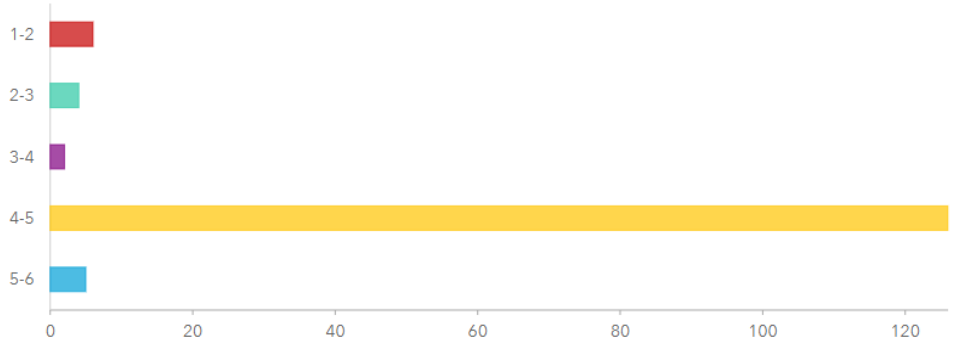
Material



Hide table | Other response | Empty categories | Sort

Answers	Count	Percentage
Brick	83	12.83%
Concrete	244	37.71%
Concrete/Brick	110	17%
Other	29	4.48%

Diameter (ft)



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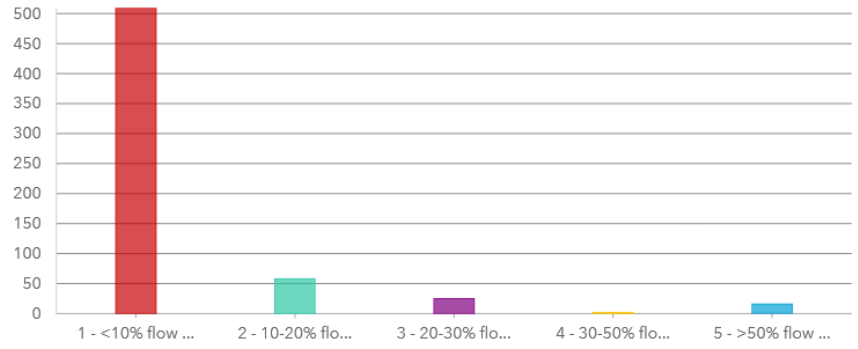
Stats	Value
Min.	1
Max.	6
Avg.	3.867133

Conveyance Condition

Siltation/Blockage



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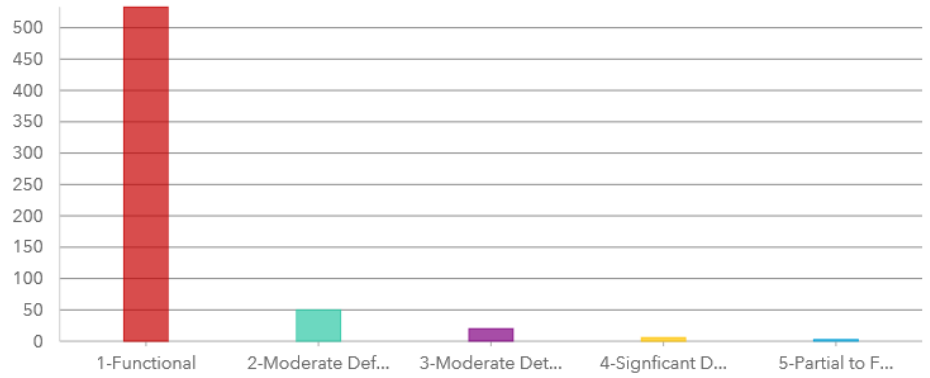
Answers	Count	Percentage
1 - <10% flow area, Limited to no impact on function	509	63%
2 - 10-20% flow area, Minor impact on function	58	7.18%
3 - 20-30% flow area, Moderate impact on function. Maintenance recommended.	25	3.09%
4 - 30-50% flow area, Significant impact on function. Maintenance necessary.	2	0.25%
5 - >50% flow area, Severe impact on function. High priority maintenance	16	1.98%

Structural Conditions



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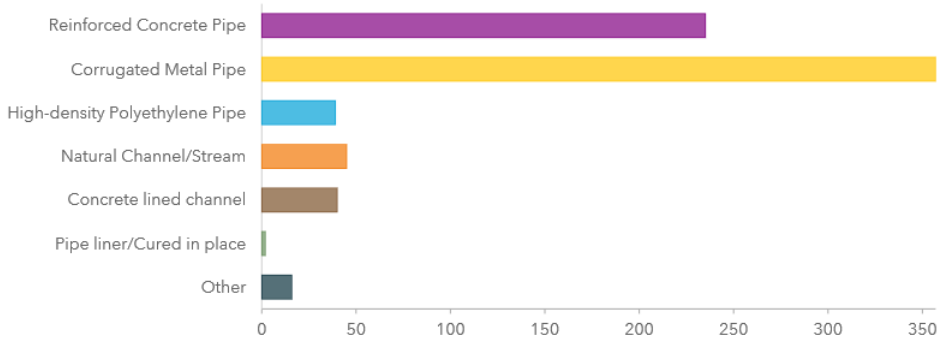
Answers	Count	Percentage
1-Functional	533	65.97%
2-Moderate Defects	50	6.19%
3-Moderate Deterioration, Maintenance recommended	20	2.48%
4-Signficant Deterioration, Maintenance necessary.	6	0.74%
5-Partial to Full Failure, High priority maintenance.	3	0.37%

Conveyance Characteristics

Material



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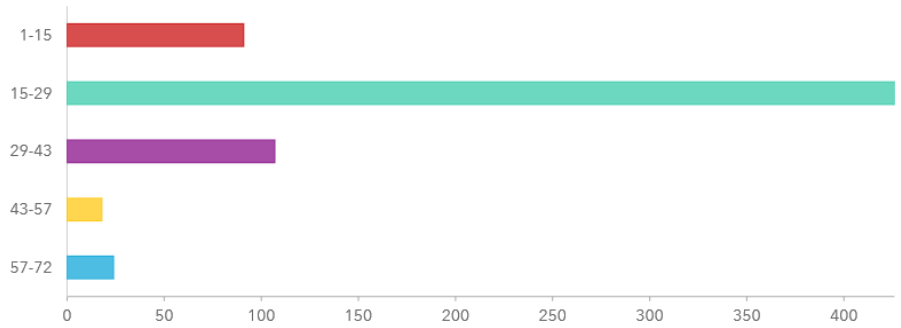
Answers	Count	Percentage
Reinforced Concrete Pipe	235	29.08%
Corrugated Metal Pipe	357	44.18%
High-density Polyethylene Pipe	39	4.83%
Natural Channel/Stream	45	5.57%
Concrete lined channel	40	4.95%
Pipe liner/Cured in place	2	0.25%
Other	16	1.98%

Diameter/Height (inches)



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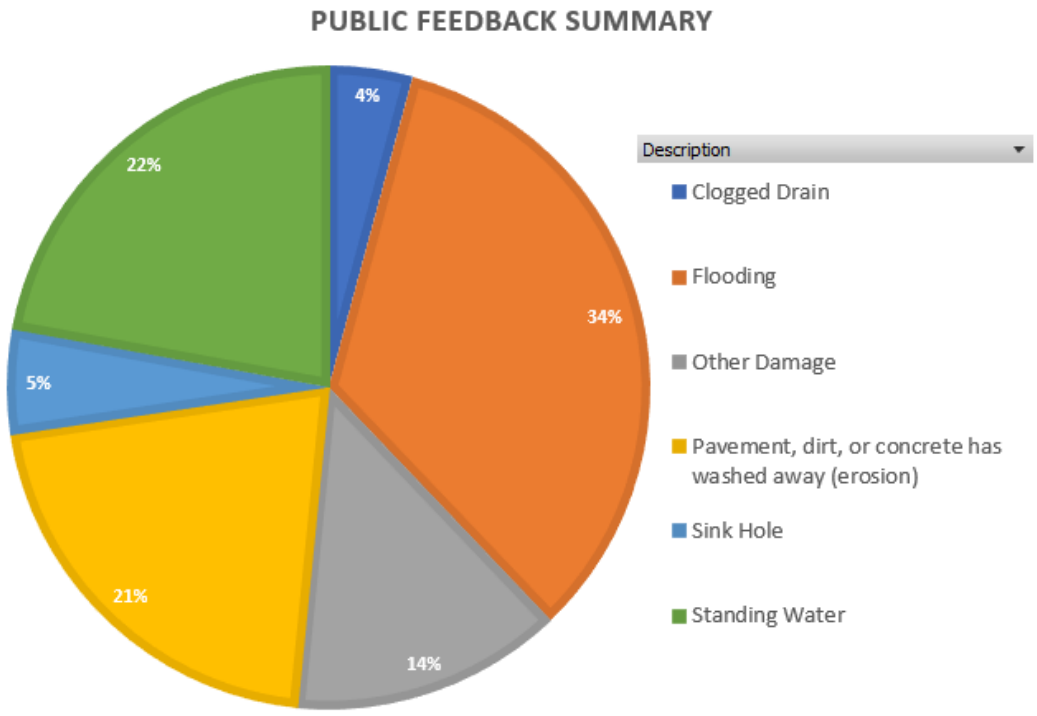
Stats	Value
Min.	1
Max.	72
Avg.	23.385886

Road Forward

- Complete asset scoring
- Select locations for concept plan development
- Second public information meeting
- Develop Stormwater Master Plan Report

Public Feedback

- Important mechanism to inform the master plan.
- Provide feedback by September 9th for inclusion in the master plan.
- Almost 60 comments received to date



Public Feedback

- Two ways to report flooding or potential drainage issues:
  1. Text STORMWATER to 404.528.2886 and follow the prompts
  2. Report online at www.AvondaleEstates.org/Stormwater
- Please include an address, description, and picture to help us better understand the problem.

Questions