

**MEETING MINUTES**  
**PUBLIC SERVICES COUNCIL COMMITTEE**

Tuesday, May 28, 2019  
Public Services Large Conference Room  
560 S 16<sup>th</sup> Street

In Attendance:

Council Member – Jim Sandager  
Council Member – Kevin Trevillyan  
City Manager – Tom Hadden  
Deputy City Manager – Jamie Letzring  
Assistant City Attorney – Greta Truman

City Engineer – Brian Hemesath  
Public Services Deputy Director – Joe Cory  
Public Services Superintendent – Kevin Hensley  
Principal Engineer – Jason Schlickbernd

Guests in Attendance:

Andy McCoy, HDR – Item #1  
Stephanie Then, HDR – Item #1

Meeting was called to order at 11:33 AM by City Engineer, Brian Hemesath.

**1. Fairmeadows Creek Drainage Study – Update (JMS)**

***Issue Summary:***

City Staff have been working with HDR to analyze stormwater conditions within the Fairmeadows Creek Drainage Basin, generally 1000 acres between Valley West Drive and Grand Avenue from Ashworth Road to Railroad Avenue. The intent of the drainage study is to identify existing storm sewer with inadequate capacity, identify reaches of Fairmeadows Creek that may need rehabilitation, and investigate whether onsite stormwater detention is advantageous in future redevelopment opportunities.

HDR has completed the Fairmeadows Creek Drainage Study and will review the analysis and recommended improvements estimated at nearly \$35M.

**Direction:** Information only.

**2. Future Direction for VJ Alley Improvements (JMS)**

***Issue Summary:***

Engineering Services staff presented information to the PSCC on March 26, 2018 (minutes attached) regarding considerations for paving of alleys in Valley Junction. Background on the development of the Valley Junction Alley Improvements Program approved by City Council in 2009 was provided at the meeting, along with an update on work completed to date and

successes of the program. The decision was made at that time to not include paving of any alleys until the drainage improvements were complete thru the 500 Block of Valley Junction.

As an update, the last phase (Phase 5B) of drainage improvements is being completed this Spring/Summer. City Staff will be securing professional services contracts for FY 19-20 CIP projects soon and wish to seek input from PSCC members on how they wish to proceed with the VJ Alley Improvements Program. Attached is a map showing recommended priorities for consideration.

**Direction:** The PSCC supported the paving of alleys adjacent to commercial properties where stormwater improvements have been completed in the Valley Junction area. The Committee will revisit paving the remaining alleys at a future date.

### 3. **1026 7<sup>th</sup> Street Lighting (BJH)**

***Issue Summary:***

This issue was previously discussed at the September 24, 2018 Public Services Council Committee Meeting. In September 2018 the resident at 1026 7th Street contacted staff about installing an additional streetlight on 7th Street south of his property. The resident stated that a neighbor's property has been used as a short-term rental and he believed illicit activity was occurring there. He indicated an additional streetlight in front of the neighboring property will help deter any illegal activities. There is an existing utility pole on the south lot line of 1020 7<sup>th</sup> Street where a new streetlight could be attached at minimal cost.

7th Street is a local street and meets current lighting design standards. An additional light is not necessary for street lighting purposes and will over-light the street. The resident provided a petition signed by 9 of the 10 surrounding property owners. The unaccounted property is directly across from the proposed streetlight.

At the September 24, 2018 PSCC meeting, PSCC Members determined that adding street lighting on 7th Street was not necessary, but asked that code compliance/zoning look into the presence of a possible short term rental at 1001 7th Street and take appropriate action. The property owner has since contacted the City and is being brought back to PSCC at the request of Councilperson Sandager.

**Direction:** The PSCC supported Staff installing an additional streetlight on 7<sup>th</sup> Street.

### 4. **Weekend Work Requests**

Contractors are requesting permission from the PSCC to work weekends (mainly Saturday from 8am-5pm with possibility of Sunday similar times should weather warrant) on the following projects:

- S. 81<sup>st</sup> Street & Cascade Avenue Widening – Alliance Construction Group
- Cedar Ridge Sewer Extension – Priority Excavating

### 5. **Review of Items for Council Meeting (June 3, 2019)**

**ENGINEERING COUNCIL AGENDA ITEMS:**

**CONSENT AGENDA**

Resolution – Accept Work

- Maple Grove Lift Station – Gator Excavating & Veenstra & Kimm, Inc. (0510-058-2018)  
640.000.000.5250.490

Resolution – Order Construction

- City Entrance Enhancements – Phase 1A Shive-Hattery, Inc. (0510-051-2018)  
500.000.000.5250.490
- Fiber Conduit Interconnect Project – Green Route (0510-017-2017)

Resolution – Approval of MOU Agreement – Booneville Road Reconstruction

- South 88<sup>th</sup> Street to west of South 100<sup>th</sup> Street (0510-006-2017)

Motion – Approval of Change Order #3

- South 88<sup>th</sup> Street & Mills Civic Parkway Reconstruction – McAninch Corporation  
(0510-048-2018) 500.000.000.5250.490

Motion – Approval of Change Order #8

- City Hall Renovations – Lang Construction Group (0510-052-2017)  
500.000.000.5250.490

Motion – Award Contract

- South 33<sup>rd</sup> Street & Fuller Road Retaining Wall Improvements – Calhoun-Burns & Associates, Inc.  
(0510-037-2017) 500.000.000.5250.490

**6. Staff Updates:**

None.

**7. Other Matters:**

None.

The meeting adjourned at 12:36 pm. The next Public Services Council Committee meeting is scheduled for June 10, 2019.

A recording was made. Respectfully submitted by Juanita Greer, Secretary.

HDR







# FAIRMEADOWS CREEK STORMWATER DRAINAGE STUDY

City of West Des Moines, Iowa

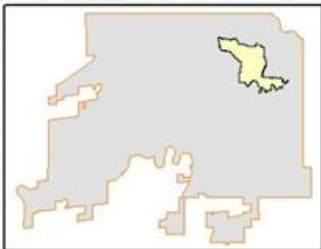
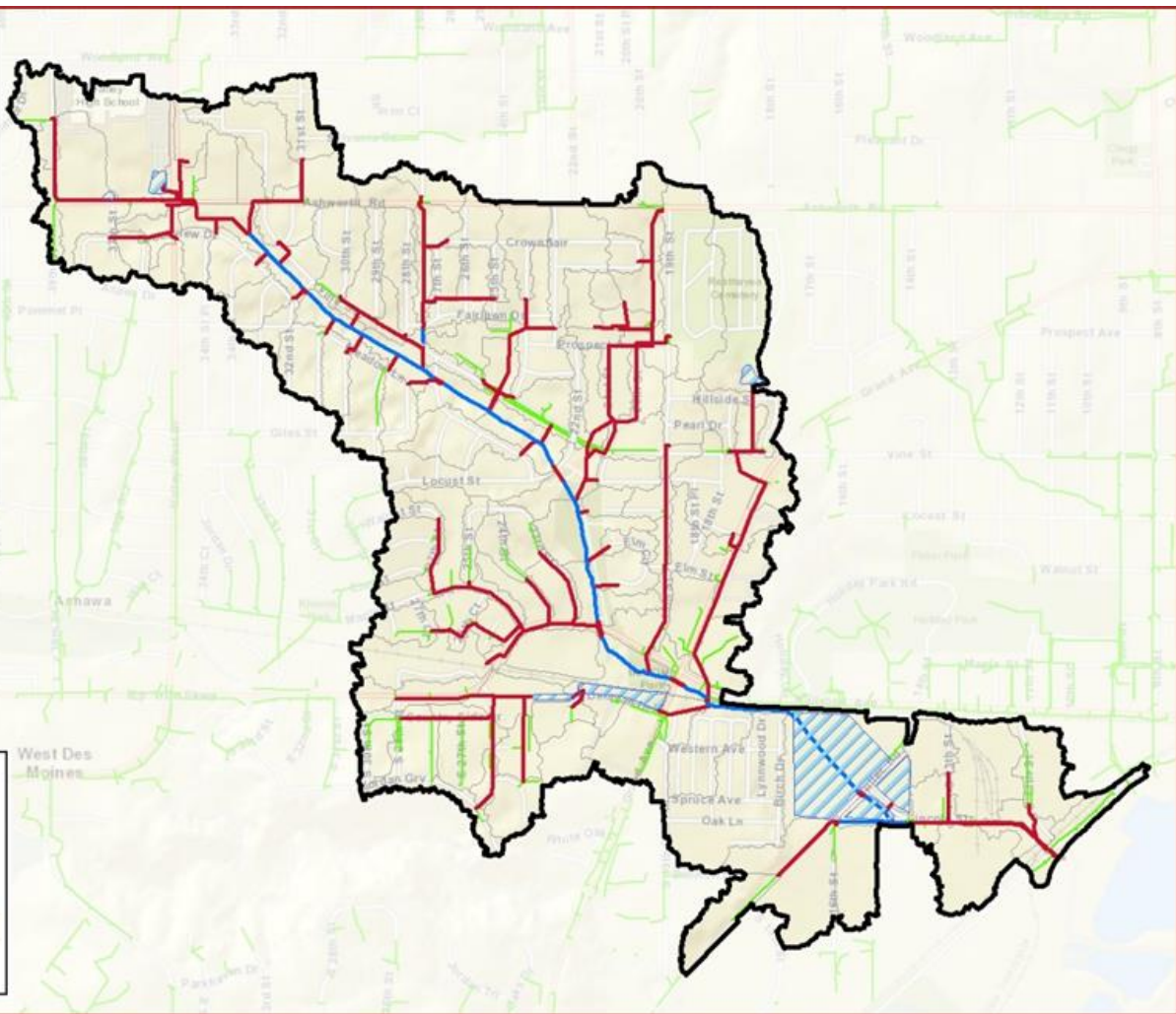


### LEGEND

-  Subcatchment
-  Modeled Storage Area
-  Modeled Open Channel
-  Modeled Storm Pipe
-  Storm Pipe

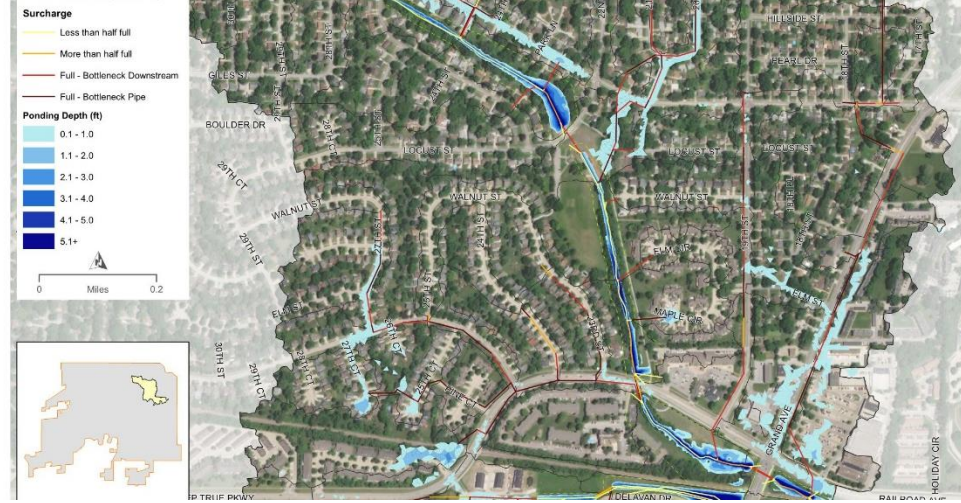


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# STORMWATER SYSTEM EVALUATION

- Capacity of the storm sewer pipe network
- Surface ponding and flowpaths
- Flow leaving the Fairmeadows Creek Watershed on Railroad Avenue
- Hazard risk classification and public safety impacts from surface ponding



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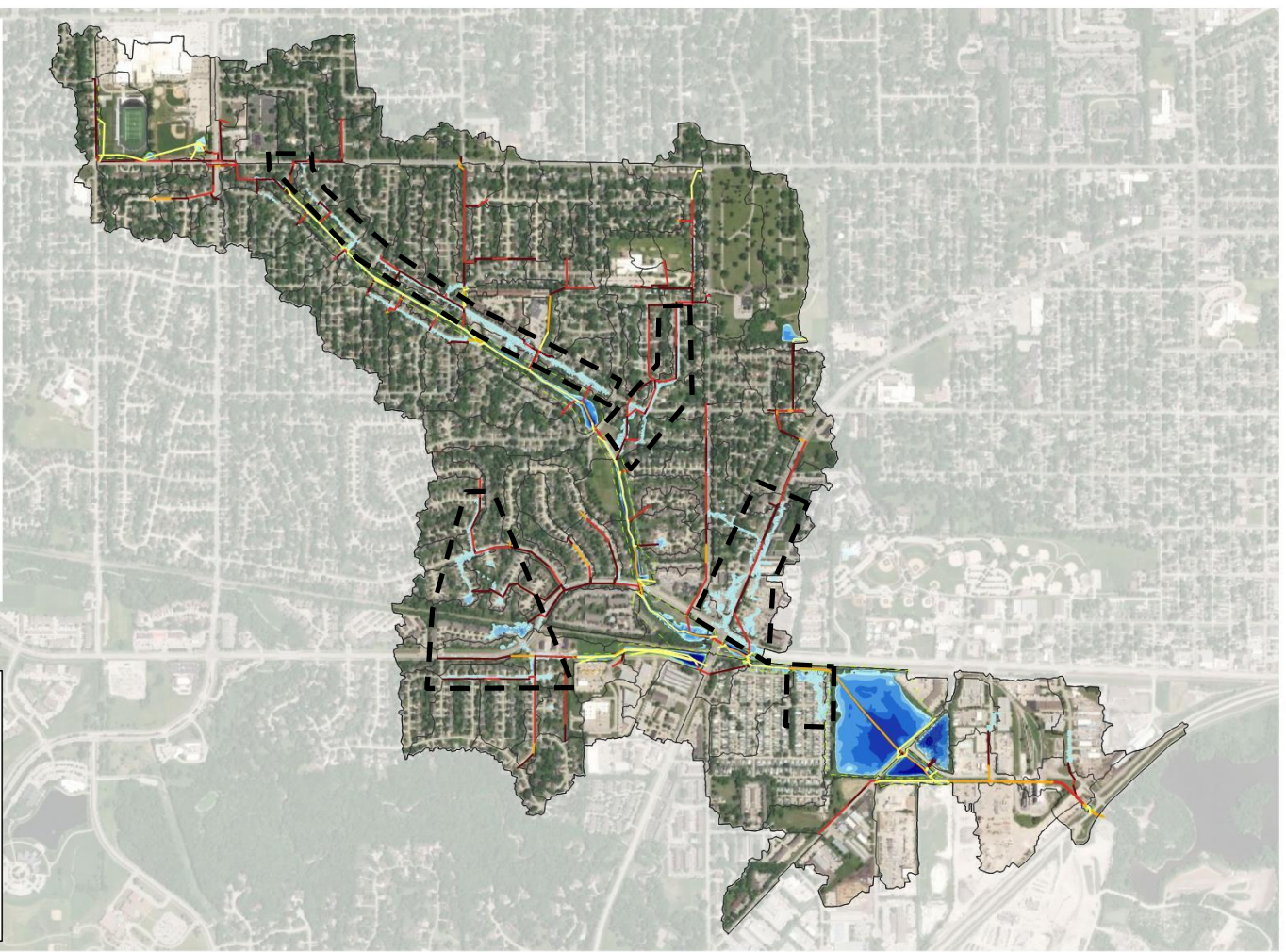
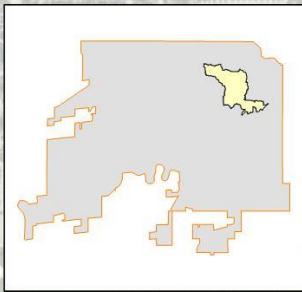
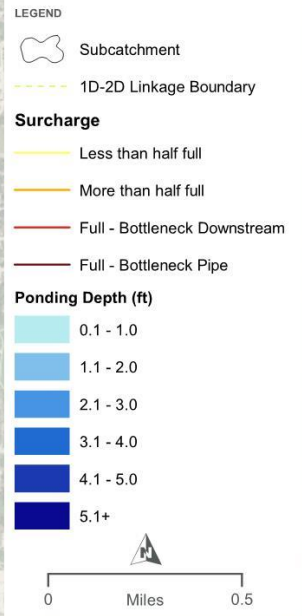


# STORMWATER SYSTEM EVALUATION

- Capacity of the storm sewer pipe network
- Surface ponding and flowpaths
- Flow leaving the Fairmeadows Creek Watershed on Railroad Avenue
- **Hazard risk classification and public safety impacts from surface ponding**

Depth * Velocity (ft <sup>2</sup> /s)	Hazard Category	Impact
0.0 – 2.2	Low	Dangerous to infants/small children and elderly
2.2 – 5.4	Moderate	Extreme danger to all children and the elderly, upper limit dangerous to some adults
5.4 – 16.1	High	Dangerous to adults, surpasses working limit for trained safety works and potential to move vehicles
16.2 +	Extreme	Dangerous to all, moves vehicles and potential to destroy small buildings





5-YR EXISTING CONDITION MODEL RESULTS  
FAIRMEADOWS CREEK WATERSHED DRAINAGE STUDY

FIGURE 1

LEGEND


 Subcatchment

 1D-2D Linkage Boundary

Flood Hazard Risk

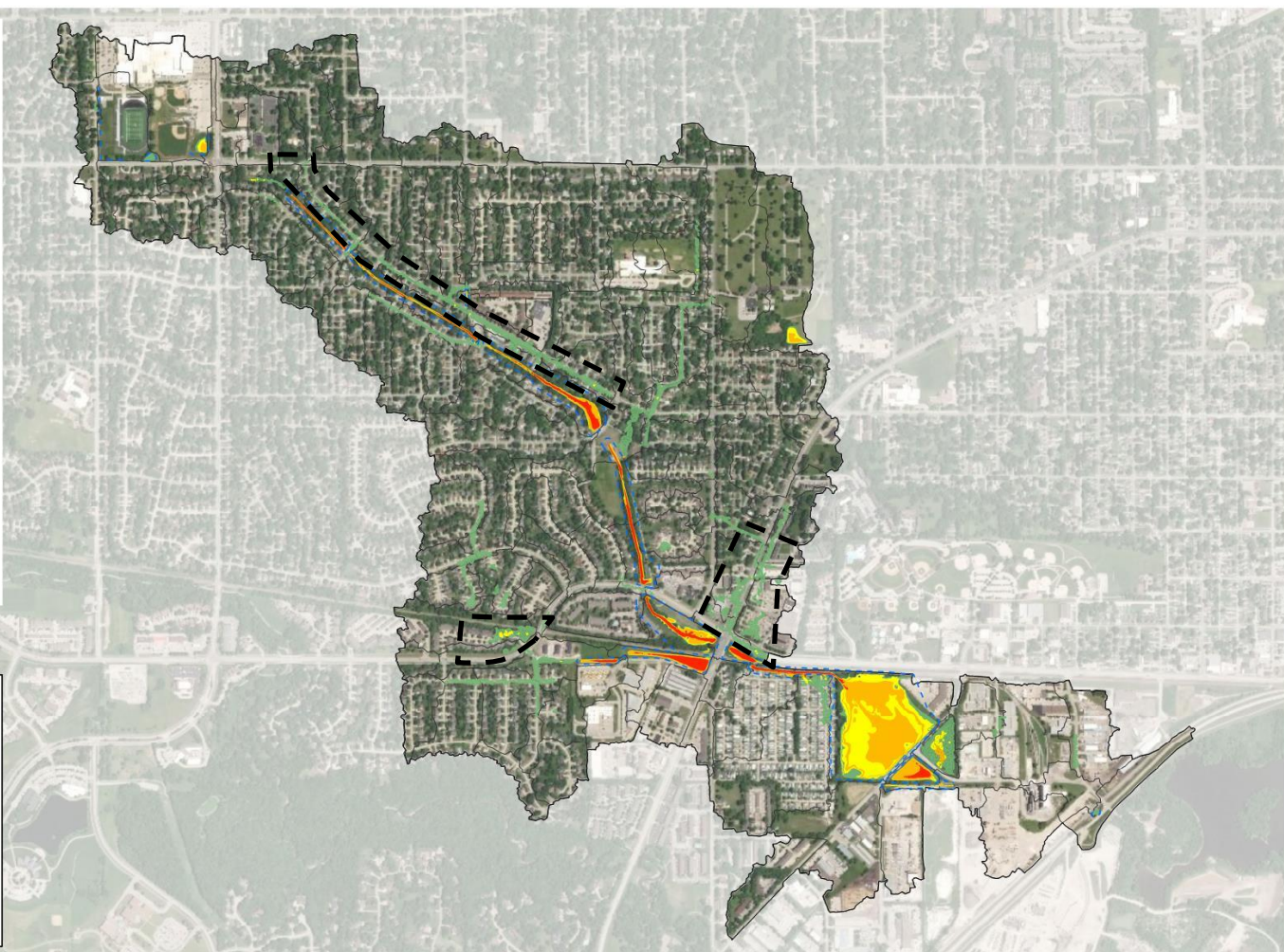
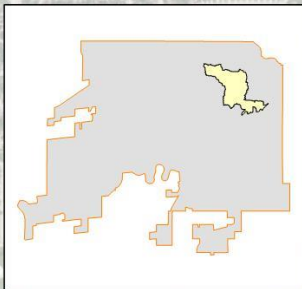
RISK

 0.0 - 2.2 ft<sup>2</sup>/s (Low Risk)

 2.3 - 5.4 ft<sup>2</sup>/s (Moderate Risk)

 5.5 - 16.1 ft<sup>2</sup>/s (High Risk)

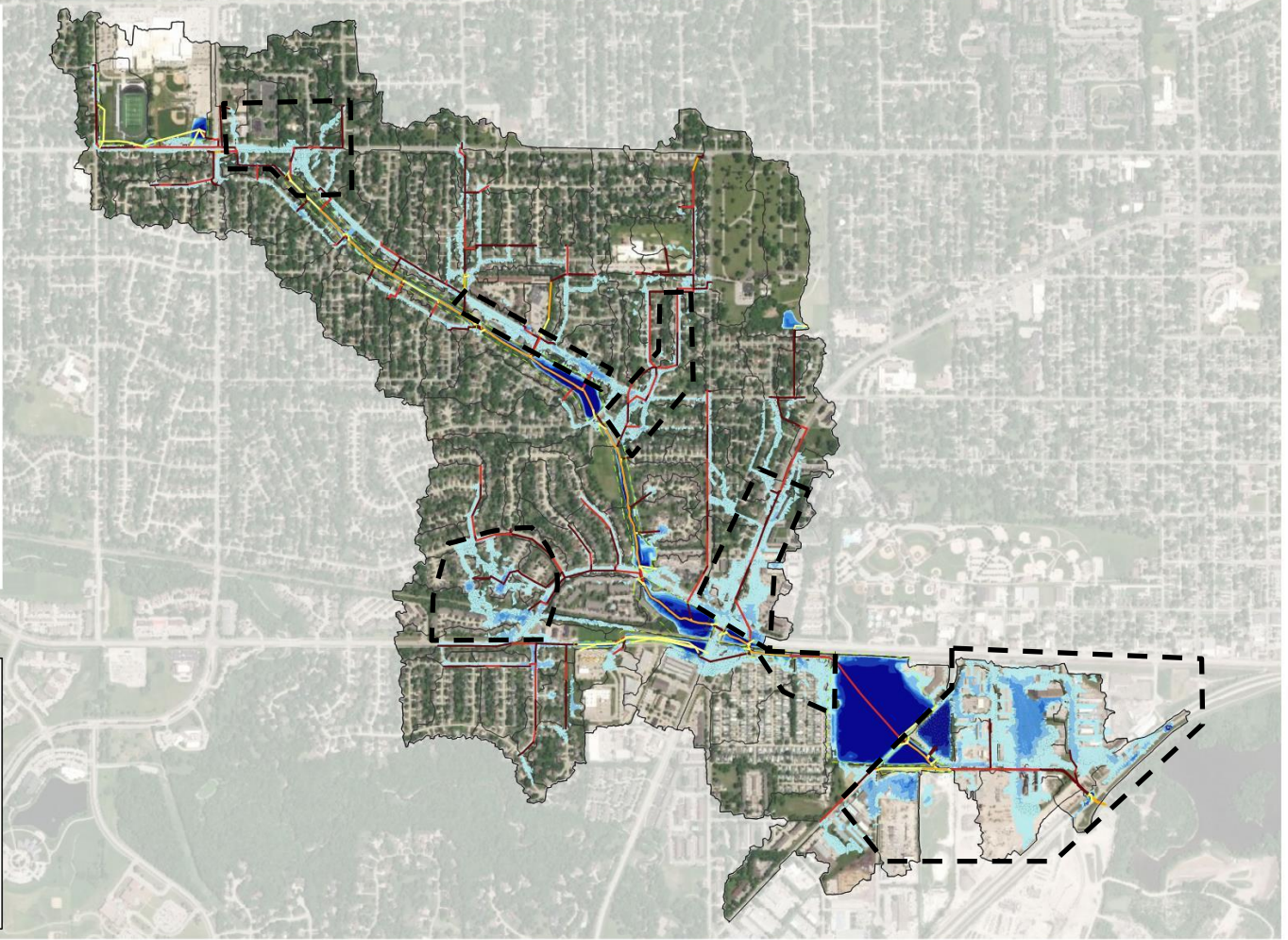
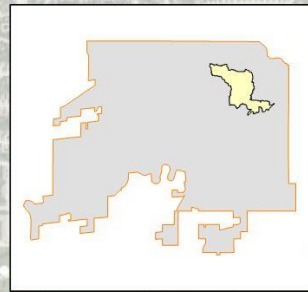
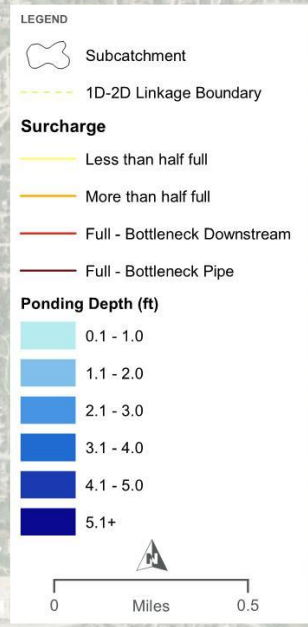
 16.2+ ft<sup>2</sup>/s (Extreme Risk)



5-YR EXISTING CONDITION FLOOD HAZARD CLASSIFICATION

FAIRMEADOWS CREEK WATERSHED DRAINAGE STUDY

FIGURE



100-YR EXISTING CONDITION MODEL RESULTS  
FAIRMEADOWS CREEK WATERSHED DRAINAGE STUDY

LEGEND


 Subcatchment

 1D-2D Linkage Boundary

Flood Hazard Risk

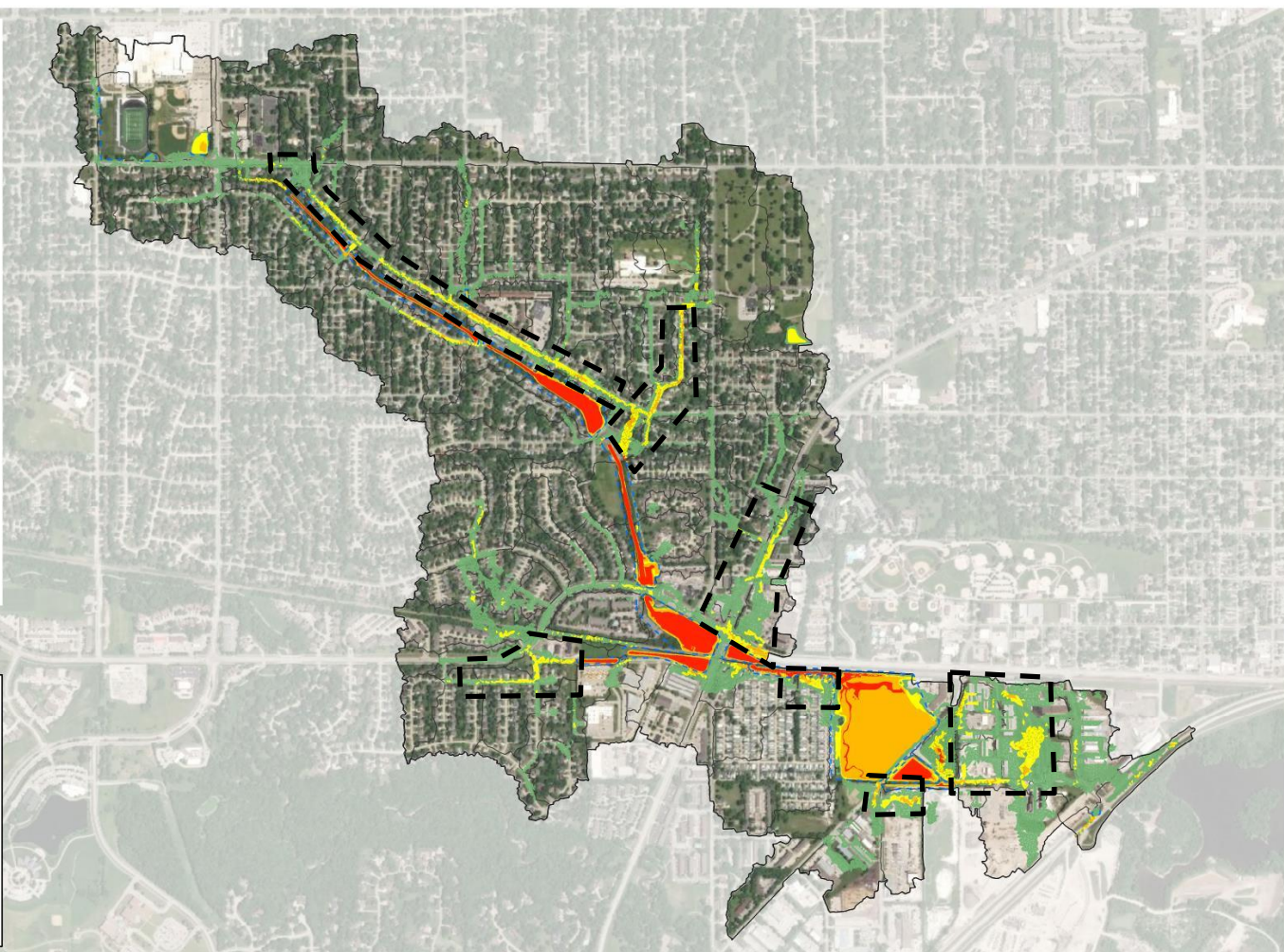
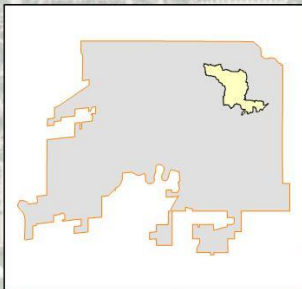
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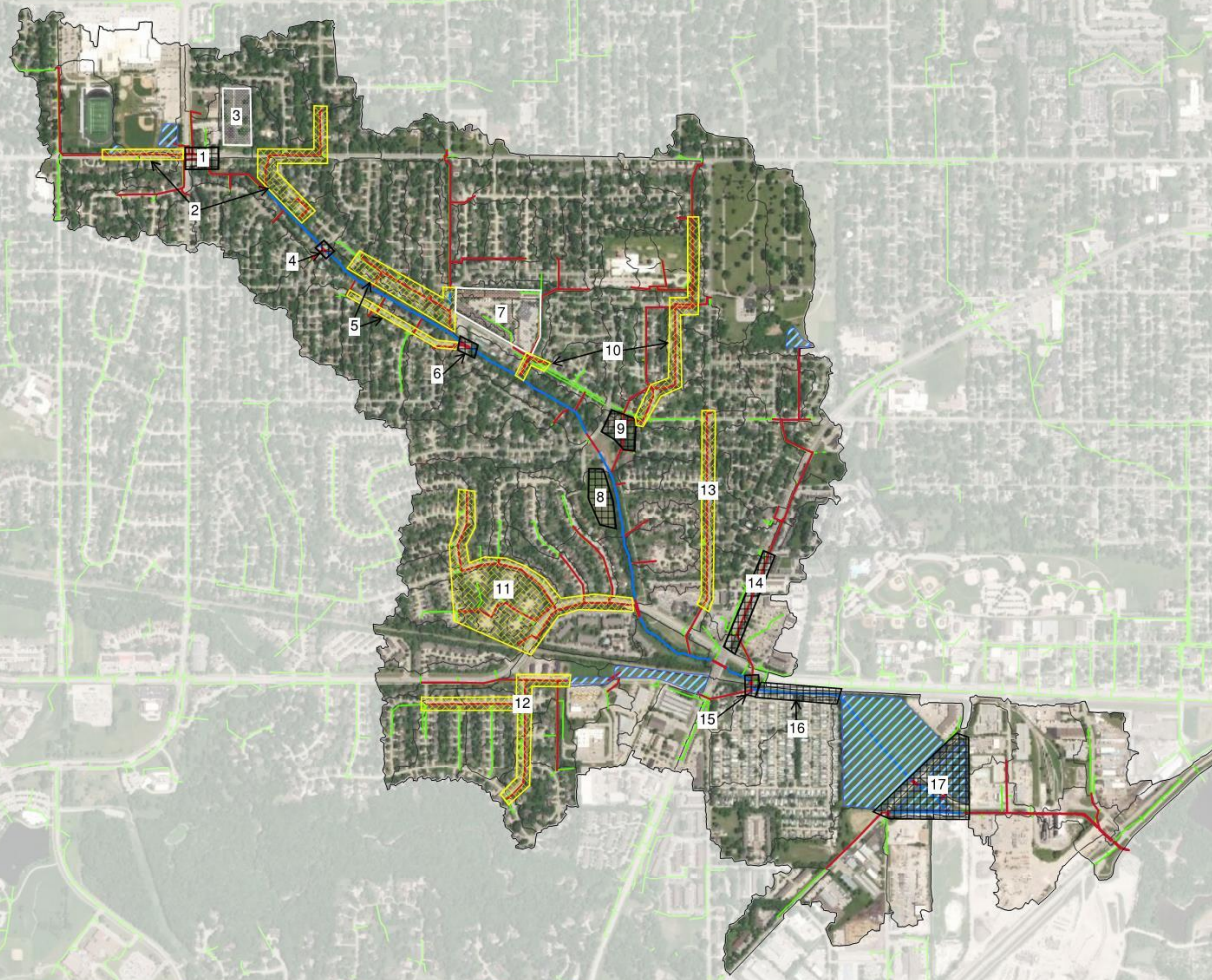
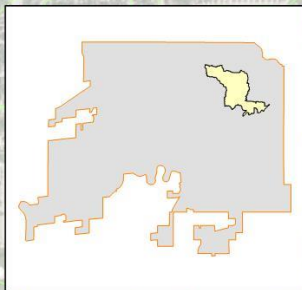
 16.2+ ft<sup>2</sup>/s (Extreme Risk)



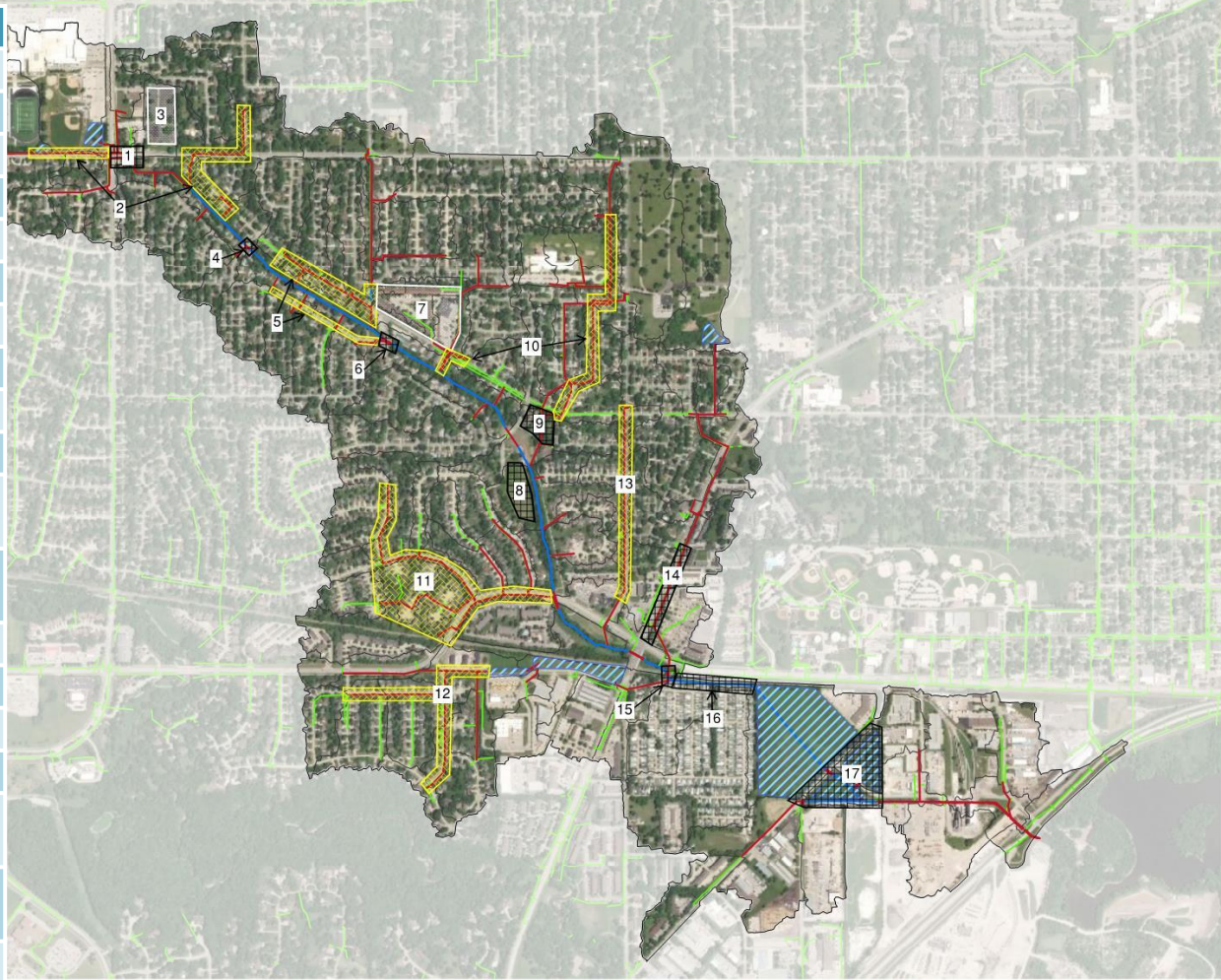
100-YR EXISTING CONDITION FLOOD HAZARD CLASSIFICATION  
FAIRMEADOWS CREEK WATERSHED DRAINAGE STUDY

LEGEND

-  Subcatchment
-  Modeled Storage Area
-  Modeled Open Channel
-  Modeled Storm Pipe
-  Storm Pipe
-  Tier 1 Projects
-  Tier 2 Projects
-  Tier 3 Projects



No.	Description and Comments
1	Ashworth Road – street grading & storm sewer
2	Replace storm sewer upstream of 32 <sup>nd</sup> Street
3	Redevelopment on Ashworth Road
4	Replace culvert under 32 <sup>nd</sup> Street
5	Replace storm sewer upstream of 27 <sup>th</sup> Street
6	Replace culvert under 27 <sup>th</sup> Street
7	Redevelopment on Vine Street
8	Fairmeadows Park Detention Basin
9	North Fairmeadows Park Detention Basin
10	Replace storm sewer north of Vine Street
11	Replace storm sewer in Meadow Point neighborhood
12	Replace storm sewer in Country Side neighborhood
13	Replace storm sewer on 19 <sup>th</sup> Street
14	New storm sewer on Grand Avenue
15	Replace culvert under Union Pacific Railroad
16	Widen channel south of Union Pacific Railroad
17A	Berm around NE Cell and additional culvert from Fuller Road to NE Cell
17B	Additional culvert from Fuller Road to open channel south of SW Cell
17C	Overflow weir in berm that separates SW Cell
17D	Berm south of Lincoln Street



PROPOSED PROJECT LOCATIONS  
 FAIRMEADOWS CREEK WATERSHED DRAINAGE STUDY  
 FIGURE

## Recommended Tier 1 Projects, Benefits, and Associated Costs

Projects	Benefits	Cost
Ashworth Road – Street Grading and Replace Storm Sewer (No. 1)	<b>5-year:</b> brings the storm sewer system into compliance. <b>100-year:</b> reduces overland flow onto Vine Street by 35 percent. This improves public safety by reducing the extent of moderate risk hazard areas.	<b>\$918,000</b>
Replace Culvert under 32nd Street (No. 4)	<b>100-year:</b> no longer overtopping 32nd Street. Improves public safety by reducing the high risk hazard areas to low/no risk hazard.	<b>\$421,000</b>
Replace Culvert under 27th Street (No. 6)	<b>100-year:</b> no longer overtopping 27th Street. Improves public safety by reducing the moderate risk hazard areas to low risk hazard.	<b>\$627,000</b>
North Fairmeadows Park Detention Basin (No. 9)	<b>100-year:</b> Reduce downstream peak flows to improve the level of service (reduce overtopping) of EP True Parkway, which reduces inter-basin flow on Railroad Avenue.	<b>\$2,808,000</b>
Fairmeadows Park Detention Basin (No. 8)	<b>100-year:</b> Offsets upstream conveyance improvements (Tier 2 projects) to improve the level of service (reduce overtopping) of 22nd Street and not increase peak flows downstream.	<b>\$889,000</b>
New Storm Sewer on Grand Avenue (No. 14)	<b>5-year:</b> brings the storm sewer system into compliance. <b>100-year:</b> Reduces flooding in Hy-Vee parking lot and reduces inter-basin flow on Railroad Avenue.	<b>\$1,526,000</b>
Replace Culverts under Union Pacific Railroad (No. 15)	<b>100-year:</b> Increase the culvert capacity to reduce flood depths and inter-basin flow on Railroad Avenue which improves Public Safety by reducing the flood hazard risk from high hazard to low/moderate hazard.	<b>\$1,139,000</b>
Widen Channel South of Union Pacific Railroad (No. 16)	<b>100-year:</b> Increases channel capacity in order to convey the increased peak flows that would occur from upstream conveyance improvement projects.	<b>\$1,966,000</b>
Fuller Road Area (No. 17)	<b>100-year:</b> Offset upstream conveyance improvements (Tier 1 and Tier 2 projects) so future conditions are not worse than existing conditions in the Fuller detention basin and downstream of Fuller Road.	<b>\$540,000</b>
<b>Total Cost</b>		<b>\$9,916,000</b>



## Recommended Tier 2 Projects, Benefits, and Associated Costs

Projects	Benefits	Cost
Replace Storm Sewer Upstream of 32 <sup>nd</sup> Street (No. 2)	<b>5-year:</b> brings the storm sewer system into compliance.	<b>\$1,749,000</b>
Replace Storm Sewer Upstream of 27 <sup>th</sup> Street (No. 5)	<b>5-year:</b> brings the storm sewer system into compliance.	<b>\$1,718,000</b>
Replace Storm Sewer North of Vine Street (No. 10)	<b>5-year:</b> brings the storm sewer system into compliance.	<b>\$8,314,000</b>
Replace Storm Sewer in Meadow Point Neighborhood (No. 11)	<b>5-year:</b> brings the storm sewer system into compliance.	<b>\$8,666,000</b>
Replace Storm Sewer in Country Side Neighborhood (No. 12)	<b>5-year:</b> brings the storm sewer system into compliance.	<b>\$4,265,000</b>
Replace Storm Sewer on 19 <sup>th</sup> Street (No. 13)	<b>5-year:</b> brings the storm sewer system into compliance.	<b>\$1,109,000</b>
<b>Total Cost</b>		<b>\$25,821,000</b>

## Recommended Tier 3 Projects, Benefits, and Associated Costs

Projects	Benefit	Cost
Redevelopment on Ashworth Road (No. 3)	Stormwater management practices would reduce the peak flows to the storm sewer system for the 5-year and 100-year events.	N/A
Redevelopment on Vine Street (No. 7)	Stormwater management practices would reduce the peak flows to the storm sewer system for the 5-year and 100-year events.	N/A

# WATERSHED LEVEL BENEFITS

- Reduced number of private properties potentially affected by flooding:

	Existing Conditions	Tier 1 Proposed Conditions	Tier 2/3 Proposed Conditions
<b>5-year Event</b>	47	23 (51% Reduction)	5 (89% Reduction)
<b>100-year Event</b>	263	192 (27% Reduction)	164 (38% Reduction)

- Reduced flood hazard risk on Vine Street and Railroad Avenue from **High Hazard Risk to Low Hazard Risk**.
- Reduced flow leaving Fairmeadows Creek Watershed on Railroad Avenue:

	Existing Conditions Flow (cfs)	Tier 1 Proposed Conditions Flow (cfs)	Tier 2/3 Proposed Conditions Flow (cfs)
<b>5-year Event</b>	20	0 (100% Reduction)	0 (100% Reduction)
<b>100-year Event</b>	570	60 (90% Reduction)	40 (93% Reduction)



# QUESTIONS?

City of West Des Moines, Iowa



**MEETING MINUTES  
PUBLIC SERVICES COUNCIL COMMITTEE  
Monday, March 26, 2018  
City Hall Training Room**

**In Attendance:**

Council Member – Kevin Trevillyan  
Council Member – Renee Hardman  
Deputy City Manager – Jamie Letzring  
Finance Director – Tim Stiles  
Assistant City Attorney – Greta Truman  
Interim City Engineer – Brian Hemesath

Comm & Econ Dev Director – Clyde Evans  
Public Services Director – Bret Hodne  
Public Services Deputy Director – Joe Cory  
Public Services Superintendent - Kevin Hensley  
Principal Engineer – Jason Schlickbernd  
Engineering Technician – Randy Cox

Meeting called to order at 11:30 AM.

**1. Valley Junction Alley Improvements – Paving Considerations**

*Issue Summary:*

The Valley Junction Alley Improvements Phase 4 project was constructed in 2017 and included storm sewer improvements in 3 alleys in the 400 block of Valley Junction. The project was amended to include paving of the southern half of the alley west of the Post Office and the northern half of the alley west of Casey's. Phase 5A of the Valley Junction Alley Improvements is now ready for bidding and includes 3-4 alleys in the 500 block of Valley Junction. City Staff wish to seek input on whether the Phase 5A project should include 3 or 4 alleys, dependent upon available funding. City Staff also wish to seek input as to whether paving of any alleys in Phase 5A should be considered at this time or whether paving of alleys (if desired) should wait until storm sewer improvements are completed in the 500 block. Background on the development of the Valley Junction Alley Improvements Program approved by City Council in 2009 was provided at the meeting, along with an update on work completed to date (approximately 15 alleys) and successes of the program, so that PSCC members can make an informed decision.

*Direction:* PSCC members agree with Staff recommendations to continue drainage improvements without paving for Phases 5A and 5B.

**2. Request to Work Saturdays – 2017 Intake Repair Program**

*Issue Summary:*

During the preconstruction meeting on March 12, 2018 for the 2017 Intake Repair Program, Hill Contracting requested approval to work Saturdays through project completion on June 30, 2018. City Staff are supportive of the request.

*Direction:* PSCC members were supportive of allowing work on Saturdays, with a delayed start time of 8:00 a.m. in residential areas, and areas adjacent to residential areas.

**3. Review of Public Services Items for Council Meeting (April 2, 2018)**

- A. Order Construction:
  - i. 2018 PCC Patching Program
  - ii. Library and Law Enforcement Center HVAC Improvements
  - iii. Valley Junction Alley Improvements, Phase 5A
  - iv. Veterans Parkway, SE Adams Street to SE 50<sup>th</sup> Street
  - v. Veterans Parkway Bridge over I-35
  
- B. Accept Work - 2017 PCC Patching and Medians Program
  
- C. Approval of Professional Services Agreement - Law Enforcement Center and Library Mechanical Updates - Commissioning
  
- D. Accept Public Improvements - Fareway Plat 1 (Sanitary Sewer)
  
- E. Approval of Transfer of Public Road Jurisdiction - Ashworth Road and 88<sup>th</sup> Street along I-80
  
- F. Establish Just Compensation and Approve Acquisition of Property:
  - i. Booneville Road Bridge over Sugar Creek
  - ii. Valley West Drive and Westown Parkway Storm Sewer Improvements
  
- G. Amendment to City Code - Title 4 (Health and Safety Regulations), Chapter 5 (Solid Waste Control) - Remove the Licensing Requirements for Haulers of Solid Waste – City Initiated
  
- H. Raccoon River Drive Culvert near South Jordan Creek Parkway
  - o Approval of Plans and Specifications
  - o Receive and File Report of Bids
  - o Award Contract
  
- I. Valley Junction Activity Center Fire Escape Stairs
  - o Approval of Plans and Specifications
  - o Receive and File Report of Bids
  - o Award Contract

**Direction:** The PSCC concurs with staff recommendations on the Council agenda items.

**4. Staff Updates**

- A. Director Hodne informed that the Metro Waste contract approval pending; and a meeting regarding Spring Clean-up is scheduled for April 16. West Des Moines is hosting a state-wide Public Works conference on April 5-6, with anticipated 450-500 attendees.
  
- B. Interim City Engineer Hemesath noted that the Engineering Department is conducting interviews today for Senior Engineering Tech – Facilities.

C. Principal Engineer Schlickbernd stated that part of Hwy. 28 will be shut down April 2 at 9 am for approximately two months; Ashworth Road Phase 1 closure also begins April 2.

Direction: Information Only.

5. **Other Matters:** There were none.

The meeting adjourned at 12:33 PM. The next Public Services Council Committee meeting is scheduled for April 9, 2018.

Copies of handouts are available at Engineering Services upon request. A recording was made. Respectfully submitted by Jennifer Canaday, Administrative Secretary.

# Valley Junction Alley Improvements Progress Update

2018

Presented by  
WDM Engineering Services



# What Prompted Update?

- Approaching 10 years since study was commissioned
- Council and staff turnover over the years
- Approaching conclusion of drainage problem areas being addressed
- Desire to start surfacing some alleys
- Double Check to make sure key recommendations are still valid and no change in direction is warranted

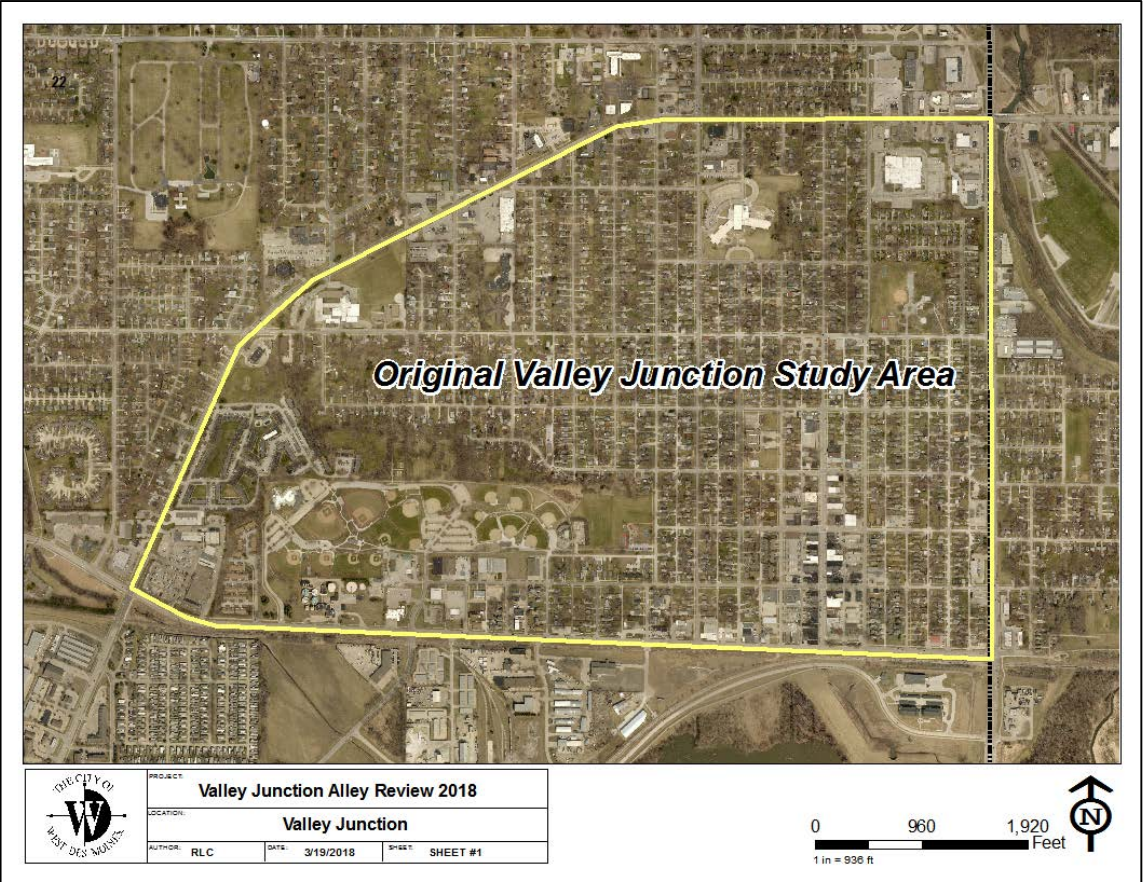


# Original Goal and Objective

- About 50 alleys in the Valley Junction area are unpaved and many have drainage issues in and/or adjacent to alleys. The existing alleys are typically gravel surfaced and require frequent maintenance. Gravel surface irregularities contribute to the drainage problems. The rear yards adjacent to the alleys are often lower than the alley itself leaving no outlet for storm water. The purpose of this study is to explore the feasibility of developing a paving program for alleys in the study area.

(Valley Junction Alley Study, West Des Moines Study No. 0210-46, Par. 1 Executive Summary, H. R. Green Company Sep. 17<sup>th</sup> 2009)

# Original Study Area



# How Did We Get Here?

- 7-28-2008-WDM City Council approval of engineering services agreement with H. R. Green to perform a study of V J Alleys.
- 8-6-2009-PWCC Study Update letter to Council and Mayor from Duane Wittstock.
- 8-10-2009-WDM City Council Committee report on V J Alleys. Mayor requested a workshop to discuss long term drainage problems and staging.
- 9-14-2009-H. R. Green presentation of Valley Junction Alley Study along with discussion. Recommendations to be discussed at full council workshop on 9-21-2009.
- 9-21-2009-Council Workshop on V J Alleys
- 10-5-2009-WDM City Council Motion Approving Conceptual Improvement Program as modified by the recommendations made at the September 21, 2009 Council Workshop.

# Key recommendations from study and Council Workshop

- Begin alley improvements at the south east corner of the study area and proceed east to west on the 100 block and then proceed to the 200 again working east to west and continue this pattern across the study area.
- Ponding water is one of the more common concerns.
- Installation of a sub drain system to lower water table to support future surfacing.
- Phased program beginning with correction of drainage issues followed by the installation of paving within a few years of the drainage completion as funds are available.
- 6" PCC Pavement for commercial/mixed use alleys and 6" HMA Pavement for residential alleys.
- Valley Junction Alley Drainage and Pavement Improvements are a priority item.
- If one resident disagrees with the improvements the segment could be removed until the area is complete at which time it could be re-evaluated.

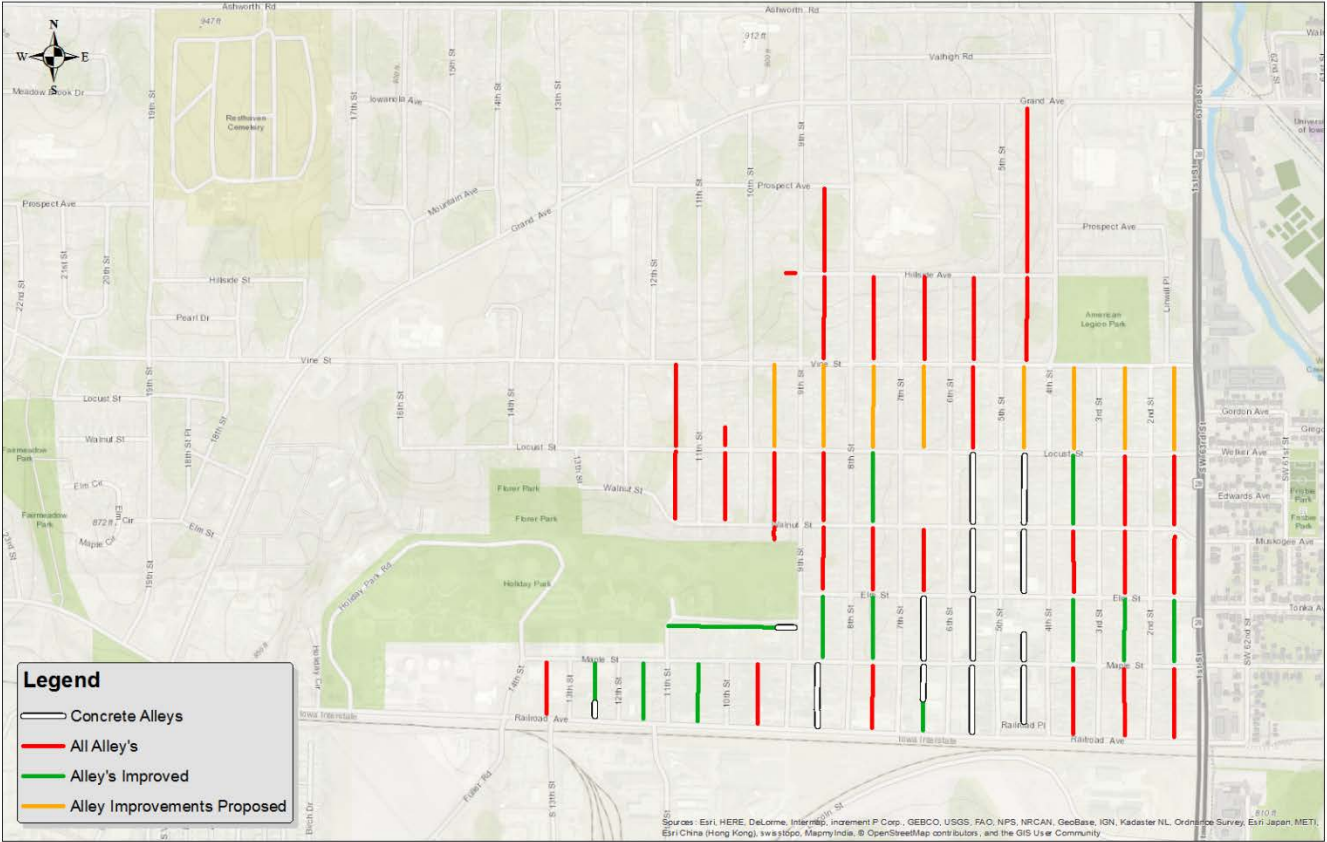
# Implementation

- Valley Junction Alleys Phase 1
  - 100 Block studied. 11 Locations. Improvements completed on 5 locations.
  - 2011 Construction.
- Valley Junction Alleys Phase 2
  - 200 Block studied. 8 Locations. Improvements completed on 7 locations.
  - 2013 Construction.
- Valley Junction Alleys Phase 3
  - 300 Block studied. 6 Locations. Project canceled due to lack of interest from residents on 8-13-14.

# Implementation

- Valley Junction Alleys Phase 4
  - 400 Block studied. 9 Locations. Improvements completed on 4 locations.
  - 2017 Construction.
- Valley Junction Alleys Phase 5a
  - 500 Block studied. 9 Locations. Improvements proposed on 3 locations
  - Proposed Letting April 25<sup>th</sup> 2018. Construction summer 2018.
- Valley Junction Alleys Phase 5b
  - 500 Block studied. 9 Locations. Improvements proposed on 5 locations
  - Letting and Construction 2019.

# Current Status



# Available Options

- Continue the progression with storm sewer improvements north and west. Then start with paving operations in the same pattern. Beginning at the south east corner of Valley Junction moving north and west
- Continue the progression with storm sewer improvements as well as paving considerations until the north west corner is reached and then start over again in the south east corner with paving operations
- Conclude storm sewer improvements in the area of problematic drainage then start paving operations in the south east corner of Valley Junction
- When alleys are to be paved PWCC direction was 6" PCC (Concrete) Pavement for commercial/mixed use alleys and 6" HMA (Asphalt) Pavement for residential alleys. Stay the course or re-evaluate



# Available Options

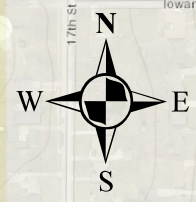
- Stage 5a- 3 Alleys. Storm Sewer Improvements with a rock surface = \$590,000.
- Stage 5a-3 Alleys. Storm Sewer Improvements with a 6" PCC (Concrete) surface = \$690,000.
- 6" PCC (Concrete) at time of initial Construction = \$100,000.
- Stage 5a-3 Alleys. 6" PCC (Concrete) after Storm Sewer Improvements = \$200,000.

# Conclusion and Recommendation

- Finish the Storm Sewer Improvements in the 500 Block.
- North of the 500 Block no Storm Sewer Improvements necessary at this time. Disturbance of the alley material may actually cause more problems than it solves without paving at the same time.
- Start concrete paving of the alleys in a south to north progression. Priority being given to commercial alleys, high use residential alleys and those alleys in which storm sewer improvements were previously completed on.

# 2019 VJ Alley Cost Analysis

RLC 1-7-2019

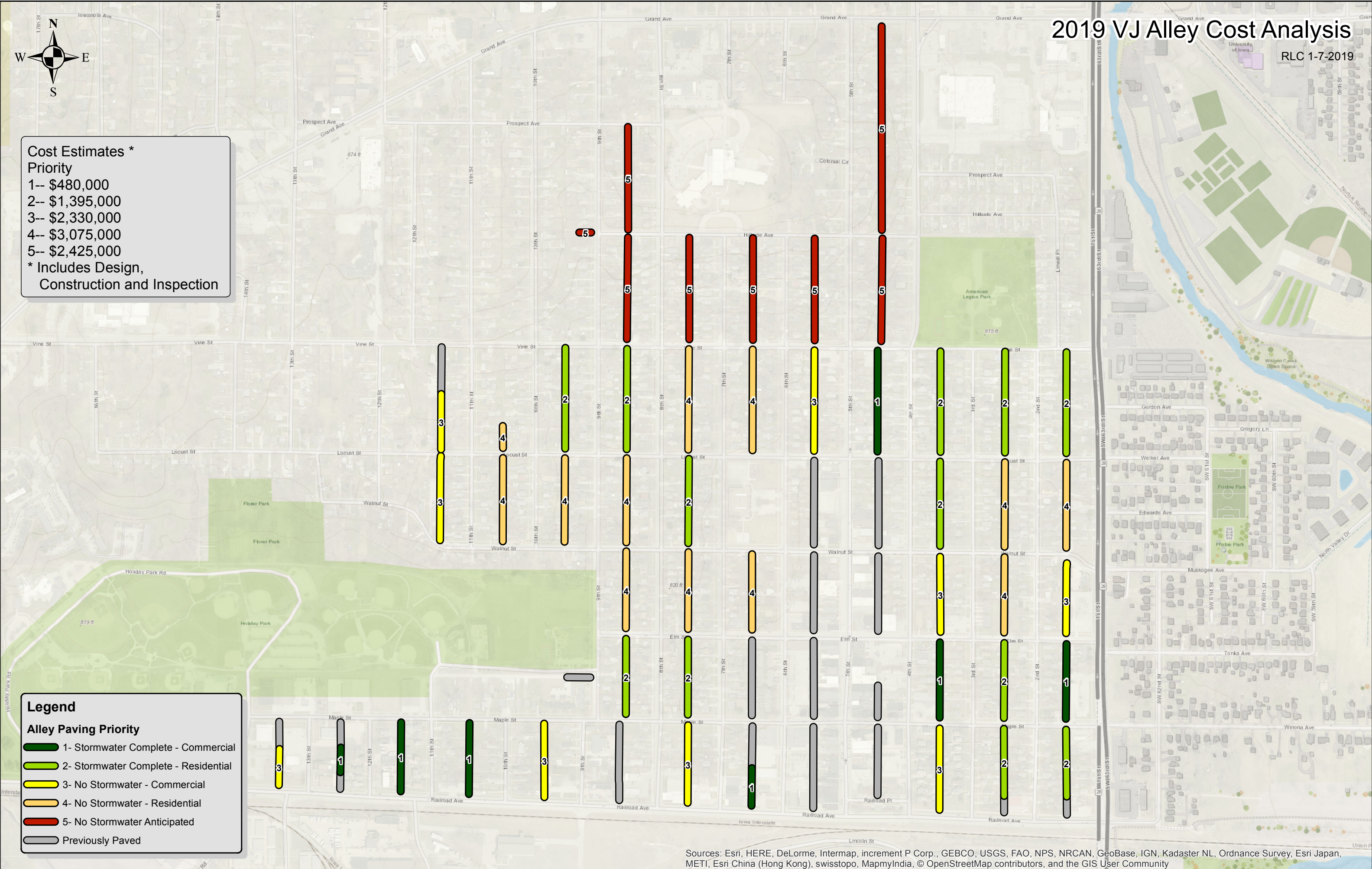


**Cost Estimates \***  
**Priority**  
 1-- \$480,000  
 2-- \$1,395,000  
 3-- \$2,330,000  
 4-- \$3,075,000  
 5-- \$2,425,000  
 \* Includes Design, Construction and Inspection

**Legend**

**Alley Paving Priority**

- 1- Stormwater Complete - Commercial
- 2- Stormwater Complete - Residential
- 3- No Stormwater - Commercial
- 4- No Stormwater - Residential
- 5- No Stormwater Anticipated
- Previously Paved



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community