



Feasibility Report

2021 Alleyway Improvement Project Project FH-21-03

Iowa/Idaho Alleyway (Pascal St. to Arona St.)

Prepared by: Jesse Freihammer
City Engineer
City of Falcon Heights

I hereby certify that this feasibility report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

_____, P.E.
License No. 47272

INTRODUCTION

This feasibility report outlines the proposed 2021 Alleyway Improvement Project.

This report consists of a detailed investigation of the alleyway proposed for improvements, shown in the map below.



The proposed project involves storm water utility work, small adjustments to the road elevation of the eastern portion of the alleyway, and milling and overlaying the pavement on the entire length of the alleyway. This project is proposed to address the drainage issue on the eastern end of the alleyway and also to improve the pavement condition over the entire length of pavement.

Utility improvements for the project include the lowering the existing catch basin in the alleyway as well as installing a new catch basin where the alleyway intersects Pascal Street. This will assist with draining the storm water from the alleyway during rain events.

The total project cost for Falcon Heights is estimated to be \$43,000, which includes engineering, contingencies and overhead costs. Additionally, a storm water improvement at the alleyway's intersection with Pascal Street is estimated at \$27,000. Funding for the project will be provided through assessments from the benefitting properties and stormwater utility funds.

It is expected that if these improvements are approved, the work will be completed during the 2021 construction season. This project was initiated by Council after receiving a petition from the adjacent properties requesting improvements to the alleyway. The petition cited issues in the past with drainage on the eastern portion of the alleyway.

EXISTING CONDITIONS

The Iowa/Idaho alleyway is approximately 17' wide. The pavement has significant delamination that has created shallow potholes in the alleyway. This alleyway is the primary access to the garage for the adjacent single-family homes on Iowa Avenue and Idaho Avenue. The right-of-way of the alleyway is 20' wide. Several garages, retaining walls and landscaping are within 1'-3' of the edge of the alleyway.

The alleyway has a reverse crown, which channels storm water to the center of the alleyway rather than shedding to the sides like on a street. There are existing catch basins in the alleyway. Residents submitted photos to City staff showing storm water pooling at the east end of the alleyway and at the intersection of the alleyway and Pascal Street.

This block of Pascal Street has a storm water infiltration trench at Idaho Avenue. The catch basins at the intersection connect to the infiltration trench under Pascal Street, which allows the storm water from the street to percolate into the soil beneath the roadway.

PROPOSED CONSTRUCTION

The main scope of the project is to address the drainage issues in the eastern portion of the alleyway. The design proposed to mitigate this issue would include minor adjustment to the alleyway profile and lowering the elevation of the existing catch basin. This would allow the existing catch basin to collect more of the alleyway drainage. However, some of the drainage would be directed to Pascal Street. A mill and overlay, to remove and replace the top layer of pavement is proposed over the length of the alleyway to tie-in the adjusted roadway profile and address the deteriorated pavement areas.

The area where the alleyway intersects Pascal Street is fairly flat and reported holds water during the spring. This can create icing issues for residents using the alley entrance and on Pascal Street. An option to address this issue would be to install a new catch basin at the intersection of the alleyway and Pascal Street. Perforated pipe would be proposed to connect the new catch basin to the existing infiltration storm trench at Pascal Street and Idaho Avenue. Additional analysis in final design will evaluate the infiltration capacity. As this option includes work that is significantly different from the scope of the rest of the alleyway project and the 2021 pavement management project currently underway in the City, staff recommends construction as a separate project in 2022.

ESTIMATED COSTS AND PROPOSED FUNDING

Proposed project costs for the 2021 Alleyway Improvement Project are summarized below. The cost estimate is based on recent construction projects of similar character and assumes construction in 2022.

	Estimated Cost*	Street Infrastructure Funds	Assessments	Storm Sewer Fund
Alleyway Improvements**	\$43,000	\$4,300	\$38,700	
<i>Optional Pascal St. Storm Water Improvements***</i>	<i>\$27,000</i>			<i>\$27,000</i>
Total	\$70,000	\$4,300	\$38,700	\$27,000

*Includes 13.5% Engineering

**Includes 10% Contingency

***Includes 30% Contingency

The proposed project is eligible for assessments according to the City of Falcon Heights Assessment Policy. Per City Policy, a portion of the street improvements will be assessed to the benefitting properties. Along with assessments, alleyway costs will be financed through the Street Infrastructure Fund.

Utility improvements on Pascal Street would be funded from the storm water utility fund, and are not assessable.

Assessments will be levied to the benefitting properties as outlined in Minnesota State Statute Chapter 429 and the City's Assessment Policy, which is summarized below. The assessed amount is levied on a front footage basis.

Assuming this project is completed by fall 2022, the final assessment amount would be determined following an assessment hearing in the fall of 2022 and a thorough review of the proposed assessments by the Council.

The following City of Falcon Heights assessment policies are being followed:

- Alleyway Assessment Rates:
 - Adjacent Properties – 90% of the cost
 - City – 10% of the cost

Below list the breakdown of costs for the estimated frontage, per foot rates:

- $\$38,700 / 1208' = \$32.03/\text{foot}$

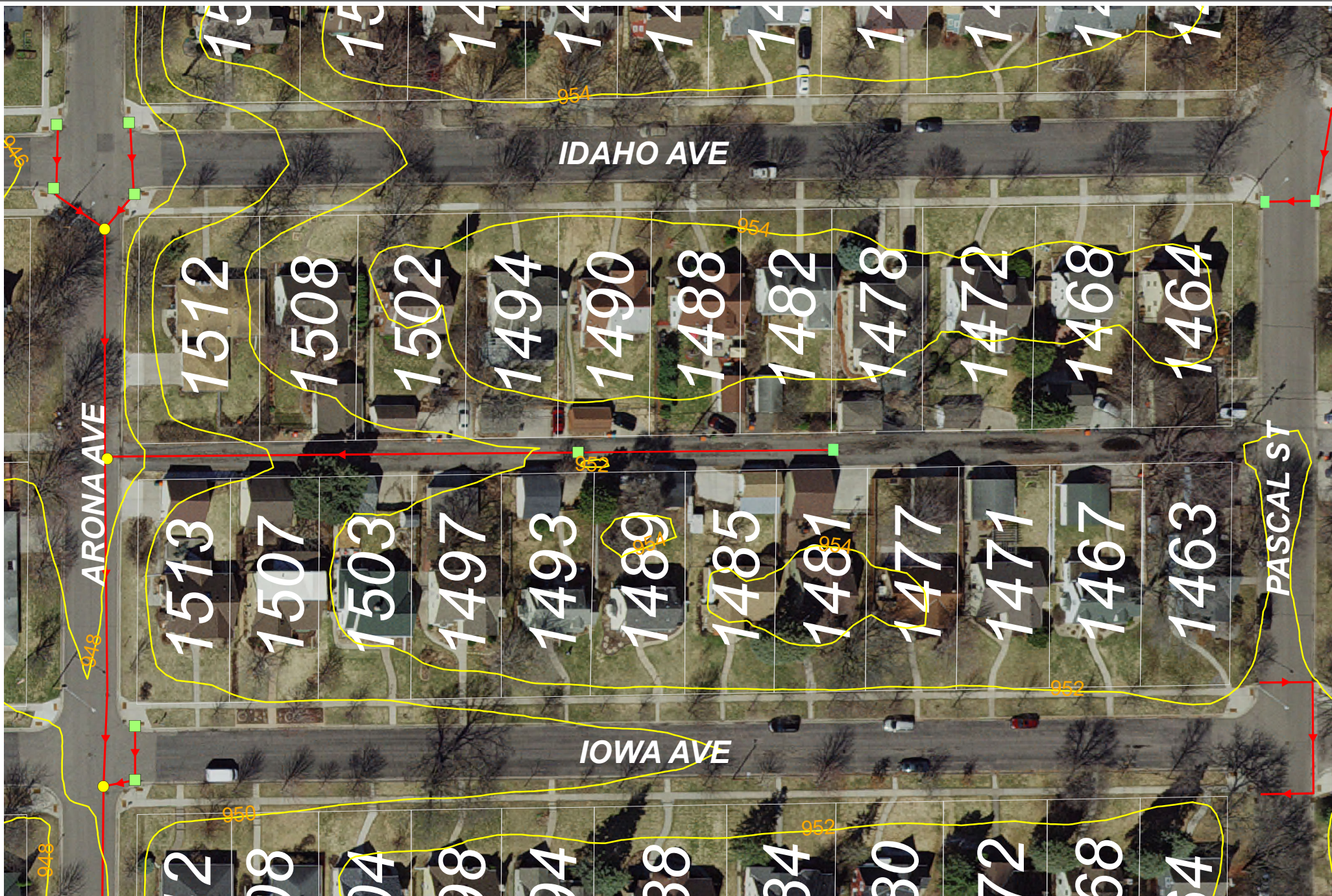
PROPOSED PROJECT SCHEDULE

Feasibility Report, Order Plans & Specs	May 26, 2021
Public Hearing	June 9, 2021
Approve Plans & Specs	Fall 2021
Bidding	Winter 2021/22
Construction	Summer 2022
Final Assessment Hearing	October 2022

PRELIMINARY ASSEMENT ROLL

Parcel ID	Parcel Address	Frontage (FT)	Footage Used (FT)	Assessment Rate (\$/FT)	Proposed Assessment Total (\$)
222923220084	1463 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220083	1467 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220082	1471 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220081	1477 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220080	1481 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220079	1485 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220078	1489 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220077	1493 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220076	1497 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220075	1503 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220074	1507 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220073	1513 IOWA AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220072	1512 IDAHO AVE W	65	65	\$ 32.03	\$ 2,081.95
222923220071	1508 IDAHO AVE W	55	55	\$ 32.03	\$ 1,761.65
222923220070	1502 IDAHO AVE W	60	60	\$ 32.03	\$ 1,921.80
222923220069	1494 IDAHO AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220068	1490 IDAHO AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220067	1488 IDAHO AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220066	1482 IDAHO AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220065	1478 IDAHO AVE W	50	50	\$ 32.03	\$ 1,601.50
222923220064	1472 IDAHO AVE W	60	60	\$ 32.03	\$ 1,921.80
222923220063	1468 IDAHO AVE W	55	55	\$ 32.03	\$ 1,761.65
222923220062	1464 IDAHO AVE W	55	55	\$ 32.03	\$ 1,761.65

Appendix



Prepared by
City of Roseville Engineering Department
May 20, 2021

Idaho and Iowa Alleyway- Existing Conditions

- Catch Basin
- ▲ Flared End
- Storm Manhole
- Storm Pipe
- ~ 2' Contours



Data Sources and Contacts:
 * Ramsey County GIS Base Map (6/04/21)
 City of Roseville Engineering Department
 For further information regarding the contents of this map contact:
 City of Roseville, Engineering Department,
 2660 Civic Center Drive, Roseville MN

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Proposed 15"
Perforated
Pipe

Proposed
Sump
Catch Basin

IDAHO AVE

ARONA AVE

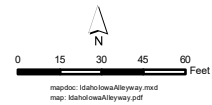
IOWA AVE

PASCAL ST



City of Roseville Engineering Department
May 7, 2021

Idaho and Iowa Alleyway Pascal Street Storm Option

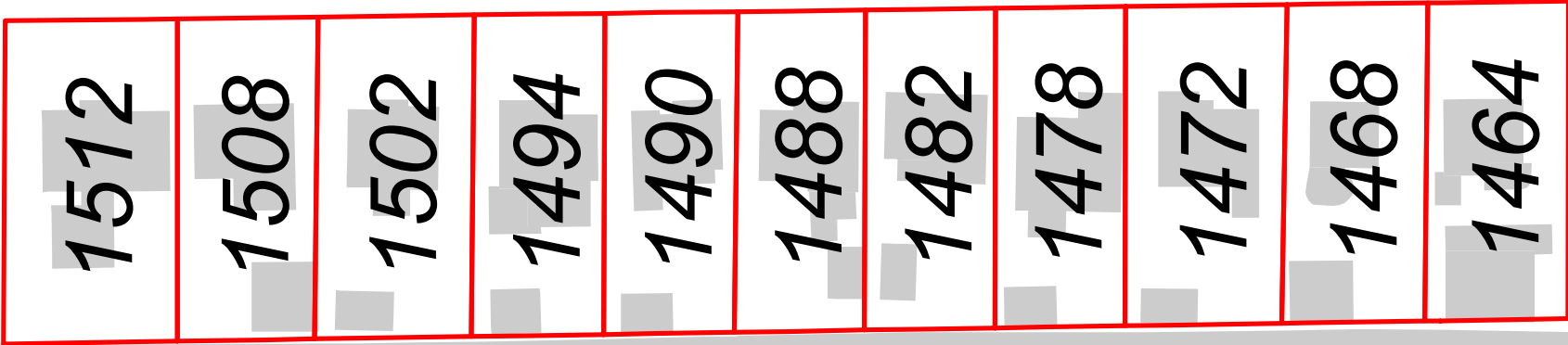


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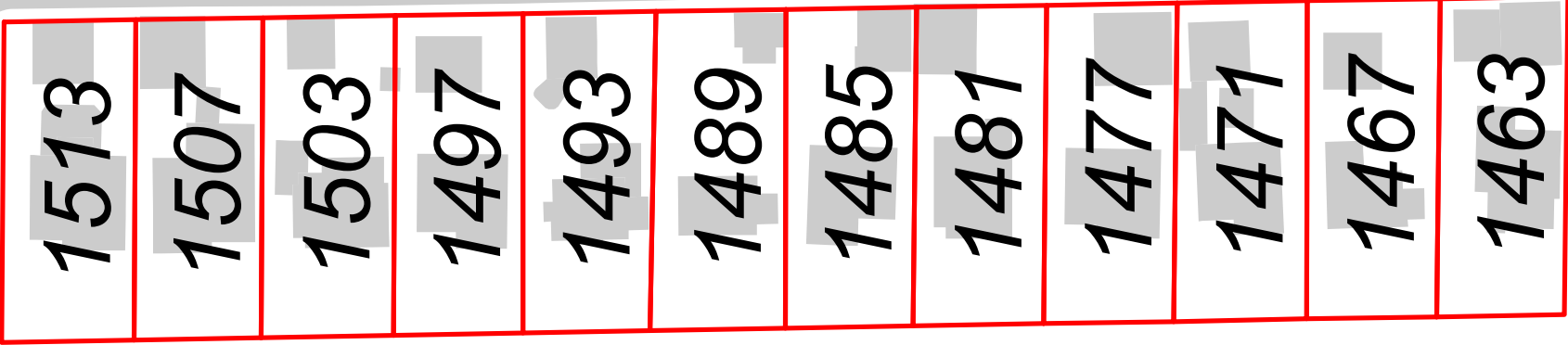
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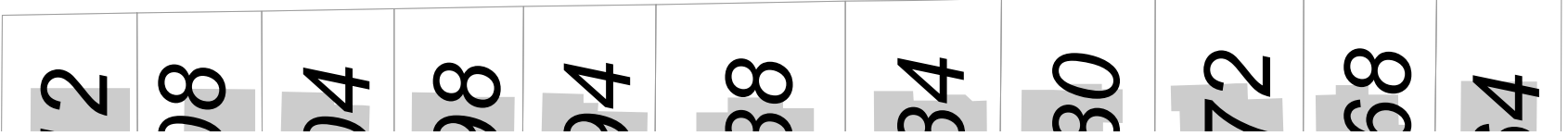
IDAHO AVE



ARONA AVE



IOWA AVE




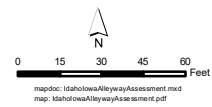
PASCAL ST



Prepared by:
City of Roseville Engineering Department
May 20, 2021

Idaho and Iowa Alleyway Assessed Parcels

 Proposed Assessments



Data Sources and Contacts:
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