

**PRELIMINARY ENGINEERING REPORT
STREET IMPROVEMENT DISTRICT 2017-7
A SECTION OF 75TH STREET SOUTH, MAPLE LANE AND MAPLE CIRCLE
HORACE, NORTH DAKOTA
May, 2017
W17-00-064**

INTRODUCTION

Horace is located in east central North Dakota along the Sheyenne River between Cass County Highway 14 and 52nd Avenue South on Cass County Highway 17. The area economy is based upon agriculture, light manufacturing and commercial business. The 2010 population was 2,430 residents. This report reviews five street improvement districts within the City. A project location map is included at the end of this report.

EXISTING CONDITIONS

- Street Improvement District 2017-7 – Drainage/Chip Seal Improvements
 - This area consists of a portion of 75th Street South, Maple Circle and Maple Lane.
 - The area currently has 33 homes. The existing streets are an urban section with concrete curb and gutter and a bituminous surface.
 - The pavement width is 32' back of curb to back of curb.
 - These streets surface drain to a central location and eventually to a pond.
 - There are asphalt swales in the streets that are in poor condition.
 - The drainage swales through the home owner's properties and drainage easements are silting in and drainage is being compromised. This causes water to pool up on the streets, causing pavement deterioration. There are multiple locations along Maple Lane that do not drain during rain events.

PROPOSED IMPROVEMENTS

The purpose of the project is to remove the existing asphalt valley gutters and replacement them with concrete valley gutters, cleanout the drainage ways and then apply a bituminous seal coat to the roadway and improve project drainage at various locations in the City of Horace. The proposed project would utilize normal construction techniques. An Opinion of Probable Project Cost and Proposed Improvement maps for each area are attached at the end of this report.

- Street Improvement District 2017-7 – Drainage/Chip Seal Improvements

- Curb and gutter would be mud jacked in areas of poor drainage along this area.
- Storm water outflow areas would be regraded to further improve drainage.
- Asphalt valley gutters would be replaced with 6” reinforced concrete valley gutters.
- This area would then have the joint between the concrete curb and gutter and the pavement routed and sealed.
- Deteriorated pavement areas would be removed and patched.
- The pavement would receive a bituminous chip seal coat.

ATTACHMENTS

- Opinion of Probable Project Cost
- Project Location Map
- Proposed Improvements Maps
- Benefitting Area Maps

APPROVALS

All improvements will be designed in accordance with current engineering standards.

The Horace City Council will need to approve the Preliminary Engineering Report for Street Improvement District 2017-7.

After approval of the Preliminary Engineering Report the Horace City Council would then direct the City Engineer to prepare Plans and Specifications for the Project.

After the Plans and Specifications are prepared by the City Engineer the Horace City Council will approve the Plans and Specifications for the Project and then the Horace City Council will need to pass a resolution to advertise the project for bidding.

After bids are received for the project and publically opened the Horace City Council would award the project to the lowest responsible, responsive bidder.

PERMITS

No permits will be required for this project.

METHOD OF CONSTRUCTION

The project would be bid competitively with a public bid opening.

PROJECT FINANCING

The Engineer's Opinion of Probable Total Project Cost is \$194,000.00 for the proposed project.

The project cost would be special assessed to the benefitting areas. A Benefitting Area map is attached at the end of this report for each district.

There are a total of 33 residential homes in the benefitting area for all of the projects combined.

- **Maple Lane, Maple Circle and 75th Street Subdivision**

This subdivision currently consists of Maple Lane, Maple Circle and 75th Street. This area currently has 33 homes.

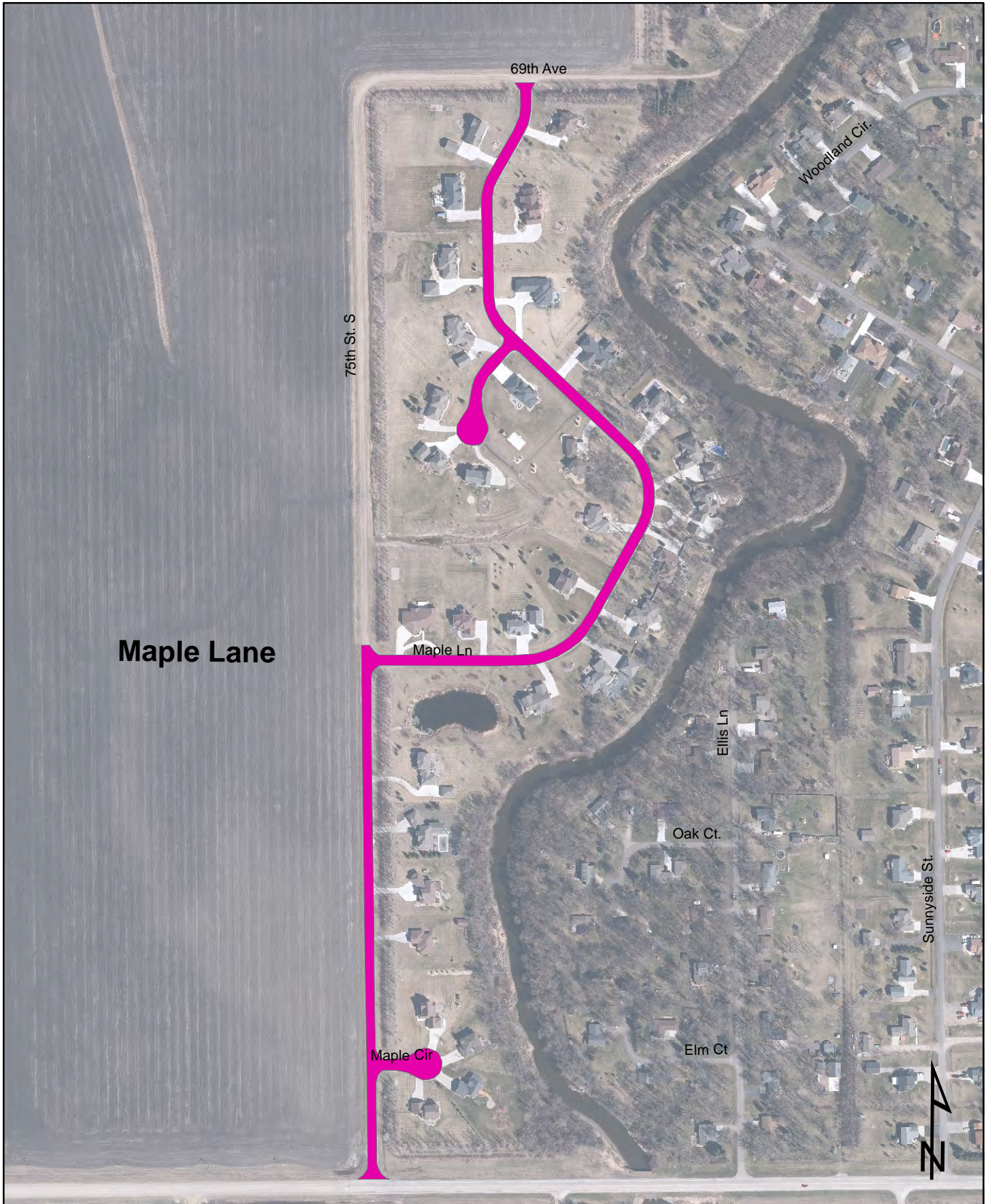
- The Estimated Cost for the project in Maple Lane, Maple Circle and 75th Street Subdivision is \$194,000.000. If the total cost for the project is assessed equally to all 33 homes in the benefitting area the cost for each home would be approximately \$5,878.79. This approximate cost per home is based upon the estimated cost of the project of \$194,000.00.

If you have any questions concerning this report, please do not hesitate to contact me.

Prepared by
Damon DeVillers, P.E.
Interstate Engineering, Inc.
P.O. Box 667
Wahpeton, ND 58074
(701) 642-5521

APPENDIX A
PROJECT LOCATION MAP

Street Improvement District 2017-7 Drainage and Chip Seal Improvements Maple Lane/Maple Cir./75th St. S



APPENDIX B
OPINION OF PROBABLE PROJECT COST

Engineer's Opinion of Probable Project Cost
 Street Improvement Maple Lane
 Horace, North Dakota
 April 25, 2017
 Area B
 Drainage, Chip Seal and Patching

Item No.	Item	Unit	No. of Units	Probable Unit Cost	Probable Total Cost
1	Bituminous Seal Coat CRS-2P	GAL	7,450	\$ 2.00	\$ 14,900.00
2	Seal Aggregate (Class 41)	TON	270	\$ 55.00	\$ 14,850.00
3	Route and Seal	LF	3,000	\$ 2.00	\$ 6,000.00
4	Drainage Improvements	LS	1	\$ 75,000.00	\$ 75,000.00
5	Patching	TON	50	\$ 150.00	\$ 7,500.00
6	Mud Jacking Concrete Curb	LF	100	\$ 25.00	\$ 2,500.00
7	Testing Laboratories Services	LS	1	\$ 5,000.00	\$ 5,000.00
8	Traffic Control	LS	1	\$ 1,500.00	\$ 1,500.00
9	Mobilization	LS	1	\$ 20,000.00	\$ 20,000.00

Opinion of Probable Bid Cost \$ 147,250.00
 Contingencies (10%) \$ 14,750.00

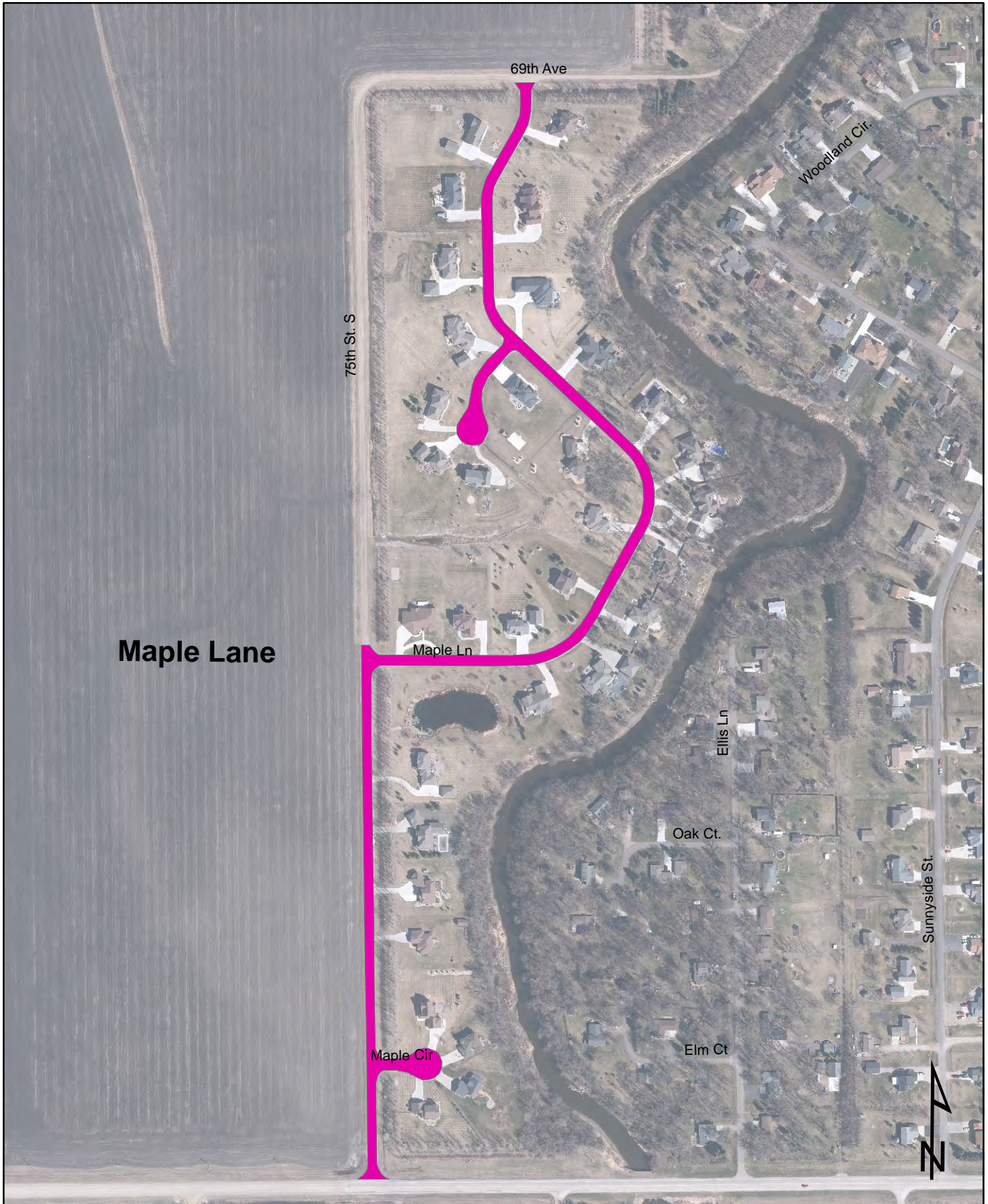
 Opinion of Probable Construction Cost \$ 162,000.00

Engineering, Legal, Administrative and Bonding (20%) \$ 32,000.00

 Opinion of Probable Project Cost \$ 194,000.00

APPENDIX C
PROPOSED IMPROVEMENTS MAPS

Street Improvement District 2017-7 Drainage and Chip Seal Improvements Maple Lane/Maple Cir./75th St. S



APPENDIX D
BENEFITTING AREA MAPS

Street Improvement District 2017-7
Benefitting Area Map
Drainage and Chip Seal Improvements
Maple Lane/Maple Cir./75th St. S

