2027 ROADWAY IMPROVEMENT PROJECT

City of Grant Minnesota

111 Wildwood Road

Willernie, MN 55090

FEASIBILITY REPORT

OCTOBER 6, 2026

Prepared by:

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LHB Project No. 260155

October 6, 2026

Honorable Mayor and City Council
City of Grant
111 Wildwood Road
PO Box 577
Willernie, MN 55090

FEASIBILITY REPORT

2027 ROADWAY IMPROVEMENT PROJECT

Transmitted herewith for your review is the feasibility report outlining the current project costs for the 2027 Roadway Improvement Project. This report addresses proposed improvements associated with a potential street improvement project.

Streets included in the proposed improvements are the following:

- McKusick Road North
- Lofton Avenue North
- Dellwood Road Court North
- Indigo Trail North

We are available at your convenience to discuss this report.

Please do not hesitate to contact me at 612.766.2881 if you have any questions regarding this report.

LHB, INC.

VERONICA KUBICEK, PE

Senior Civil Engineer

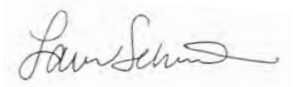
CERTIFICATION PAGE

I hereby certify that this plan, specification, or 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.



Veronica Kubicek, PE License No. 57270 Date: October 6, 2026

Prepared By:



Lauren Schmidt, PE License No. 64724 Date: October 6, 2026

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EXECUTIVE SUMMARY

This report evaluates the feasibility of proposed street improvements along the following roadway segments in the City of Grant, Minnesota:

- McKusick Road North
- Lofton Avenue North
- Dellwood Road Court North
- Indigo Trail North

The recommended improvements include mill and overlay as well as full-depth reclamation, based on geotechnical findings indicating structural pavement failure. The estimated cost is $968,015 and the project is considered feasible and recommended.

Improvements for McKusick Road North consist of milling and removing the top portion of pavement, followed by installation of a new bituminous surface. Improvements for Lofton Avenue North, Indigo Trail North, and Dellwood Road Court North consist of reclaiming and blending the existing roadway base, followed by installation of a new bituminous surface. Roadway culverts will be replaced where necessary. The total length of roadway included in the proposed project is approximately 11,103 lineal feet.

The estimated cost of improvements is $519,955 for McKusick Road North and $72,478 for Lofton Avenue North. The estimated cost of improvements is $92,996 for Dellwood Road Court North and $282,586 for Indigo Trail North. These estimates include a 10% construction contingency and 20% indirect costs to account for engineering, legal, administrative, and financing expenses.

Project funding is proposed from a combination of special assessments, contributions from the City of Grant's Street Maintenance Fund, and private development contributions. Based on the City's anticipated Capital Improvement Plan, $125,000 has been allocated for the McKusick Road North and Lofton Avenue North area. In addition, the City anticipates receiving a $150,000 contribution from the Stillwater Oaks development toward improvements associated with McKusick Road North. The remaining project costs are proposed to be recovered through special assessments in accordance with the City's Assessment Policy.

If ordered, construction is anticipated to begin in the summer of 2027. From an engineering standpoint, the project is feasible, necessary, and cost-effective, and may be implemented as proposed in this report.

INTRODUCTION

AUTHORIZATION

Pursuant to direction from the City Council, this Feasibility Report has been prepared to evaluate the proposed improvements to McKusick Road North, from Manning Avenue North (CSAH 15) to Dellwood Road North (CSAH 96) and to Lofton Avenue North, from McKusick Road North through the cul-de-sac. Upon amended direction, Indigo Trail North, from East of Ideal Avenue through the cul-de-sac and Dellwood Road Court North, from North of Dellwood Road North (CSAH 95) through cul-de-sac have been evaluated in preparation of this report.

The purpose of this report is to:

- Identify existing deficiencies
- Evaluate proposed improvements
- Provide preliminary cost estimates
- Determine project feasibility in accordance with Minnesota Statutes Chapter 429

SCOPE

This report investigates the feasibility of proposed street improvements and associated appurtenant work along:

- McKusick Road N, from Manning Avenue N (CSAH 15) to Dellwood Road N (CSAH 96)
- Lofton Avenue N, from McKusick Road N through the cul-de-sac
- Dellwood Road Court N, from Dellwood Road N (CSAH 96) through the cul-de-sac
- Indigo Trail N, from Ideal Ave N through the cul-de-sac

Project location maps are provided in Appendix A of this report.

EXISTING CONDITIONS

MCKUSICK ROAD NORTH

The project corridor is located in eastern Grant and extends approximately 1.1 miles, connecting key regional routes and serving both local and area traffic.

- Functional Classification: Local road (with area connector characteristics)
- Average Daily Traffic (ADT): Approximately 1,500 vehicles per day
- Regional Context: Connects to corridors carrying 12,000–15,000 vehicles per day

Although classified as a local roadway, the corridor functions as a former county roadway and continues to accommodate regional travel demands beyond its designation. As shown in the project location maps and exhibits, the corridor:

- Connects multiple communities (Grant, Stillwater, Dellwood)
- Provides access to regional amenities, including Brown’s Creek State Trail
- Serves residential, agricultural, and recreational land uses

Roadway Condition

The pavement along McKusick Road North is in poor to failing condition, characterized by:

- Overall Condition Index (OCI): 30–40
- Widespread distress including:
    - Longitudinal cracking
    - Alligator cracking
    - Edge failures
    - Potholing

The roadway consists of rural street sections with shallow swales or ditches adjacent to the roadway for stormwater conveyance. Key characteristics include:

- Existing pavement width: approximately 22-24 feet
- 2’ wide gravel shoulder

No public utilities are located within the existing 120’ – 170’ right-of-way. A Gopher State One Call (GSOC) investigation was initiated to identify the presence of private utilities within the project limits. Field markings observed prior to the topographic survey indicated the presence of electric, fiber, gas, and telephone facilities, generally located outside of the roadway section but within the public right-of-way.

According to City records, McKusick Road North was last paved in 1988. Field images in Appendix B clearly show advanced pavement deterioration and patch failure, indicating that continued maintenance is no longer cost-effective.

LOFTON AVENUE NORTH

The street connects to McKusick Road North and extends approximately 0.2 miles, inclusive of the cul-de-sac. Classified as a local roadway, this street not only provides access to residents, but also to a field, restaurant, and Brown’s Creek State Trail.

Roadway Condition

The pavement along Lofton Avenue North is in fair condition, characterized by:

- Transverse cracking
- Longitudinal cracking

The roadway consists of rural street sections with a combination of bituminous curb and shallow swales or ditches adjacent to the roadway for stormwater conveyance. Key characteristics include:

- Existing pavement width: approximately 22-24 feet
- Bituminous curb along both sides

No public utilities are located within the existing 66-foot right-of-way. A Gopher State One Call (GSOC) investigation was initiated to identify the presence of private utilities within the project limits. Field markings observed prior to the topographic survey indicated the presence of electric, fiber, gas, and telephone facilities, generally located outside of the roadway section but within the public right-of-way.

According to City records, Lofton Avenue North was last paved in 2002. This street is exhibiting significant distress, as illustrated with the photographic documentation provided in Appendix B.

DELLWOOD ROAD COURT NORTH

The street connects to Dellwood Rd (CSAH 96) and extends approximately 0.2 miles, inclusive of the cul-de-sac. Classified as a local roadway, this street provides access to residents.

Roadway Condition

The pavement along Dellwood Rd Ct is in fair condition, characterized by:

- Transverse cracking
- Longitudinal cracking
- Alligator cracking
- Minor Pothole repairs

The roadway consists of rural street sections with a combination of bituminous curb and shallow swales or ditches adjacent to the roadway for stormwater conveyance. Key characteristics include:

- Existing pavement width: approximately 22-24 feet
- Bituminous curb along both sides

No public utilities are located within the existing 66-foot right-of-way. A Gopher State One Call (GSOC) investigation was initiated to identify the presence of private utilities within the project limits. Field markings observed prior to the topographic survey indicated the presence of electric, fiber, gas, and telephone facilities, generally located outside of the roadway section but within the public right-of-way.

According to City records, Dellwood Road Court was last paved in 1994. This street is exhibiting significant distress, as illustrated with the photographic documentation provided in Appendix B.

INDIGO TRAIL NORTH

The street connects to the gravel road Ideal Avenue and extends approximately 0.6 miles, inclusive of the cul-de-sac. Classified as a local roadway, this street provides access to residents.

Roadway Condition

The pavement along Indigo Trail N is in fair condition, characterized by:

- Transverse cracking
- Longitudinal cracking
- Alligator cracking
- Major pothole repairs

The roadway consists of rural street sections with a combination of shallow swales or ditches adjacent to the roadway for stormwater conveyance. Key characteristics include:

- Existing pavement width: approximately 22-24 feet
- Stabilized grass along both sides of roadway

No public utilities are located within the existing 66-foot right-of-way. A Gopher State One Call (GSOC) investigation was initiated to identify the presence of private utilities within the project limits. Field markings observed prior to the topographic survey indicated the presence of electric, fiber, gas, and telephone facilities, generally located outside of the roadway section but within the public right-of-way.

According to City records, Indigo Trail North was last paved in 1986. This street is exhibiting significant distress, as illustrated with the photographic documentation provided in Appendix B.

FORENSIC INVESTIGATION

A pavement forensic investigation was completed within the project area (see Appendix E). Findings indicate that pavement thicknesses vary across the site and were found to range greatly, with the thickest pavement section being on McKusick Rd N.

A summary of the roadway cores can be found in Table 1 below.

Table 1. Pavement Thickness Summary

Street	Core	Bituminous Thickness (in)	Apparent Aggregate Base Thickness (in)	Core Condition
McKusick Road	C-1	18 1/2	NA*	Core broken into several pieces starting at depth of about 11 inches. Low severity stripping in top half of core, medium to severe stripping in bottom half of core.
	C-2	10	4	Core separated/broken at a depth of about 6 inches. Low to medium severity stripping throughout core.
	C-4	7 1/2	0	Low severity stripping throughout core.
Lofton Avenue	C-3	5	2	Core separated/broken at a depth of about 1 inch. Medium to severe stripping at break and in bottom of core.
	C-13	4	2 1/2	Low severity stripping throughout core.
Indigo Trail	C-5	3 1/2	6 1/2	Core separated/broken at a depth of about 1 1/2 inches. Severe stripping in bottom of core.
	C-6	3	7 3/4	Core separated/broken. Medium to severe stripping throughout core.
	C-7	3	5	Core separated/broken. Medium to severe stripping throughout core.
	C-8	4 1/2	9 1/2	Core separated/broken at a depth of about 1 inch. Medium to severe stripping at break and in bottom of core.
	C-9	2 1/2	11 1/2	Moderate stripping at bottom of core.
	C-10	2	8 1/2	Moderate stripping at top and bottom of core.
Dellwood Road Court	C-11	2 1/2	7 1/4	Core separated/broken, medium to severe stripping throughout core.
	C-12	3	9	Low to moderate stripping throughout out.

*Refusal was encountered at the bottom of the bituminous section.

Excerpt from Appendix E Pavement Evaluation Report page 2.

PROPOSED IMPROVEMENTS

MCKUSICK ROAD NORTH

Surface

McKusick Road North will be improved using a mill and overlay process. This method involves removing approximately 3 inches of the existing bituminous surface and replacing it with a new bituminous wear course to restore the roadway surface and improve ride quality.

Based on the existing pavement thickness, there is sufficient bituminous material to support this rehabilitation method. A new 3-inch bituminous wear course will be placed over the milled surface, resulting in a renewed pavement section that improves drivability and extends the service life of the roadway.

However, due to the underlying pavement condition, reflective cracking may occur over the following year or two, and routine maintenance such as crack sealing is anticipated to preserve performance.

The existing 2’ gravel shoulder will be restored with the project.

Roadway Alignment

The roadway will generally maintain its existing horizontal and vertical alignment. The proposed paved roadway width will match existing of approximately 22 to 24 feet.

Right-Of-Way

The proposed improvements along McKusick Road North will occur within the existing dedicated right-of-way. Acquisition of additional easements is not anticipated at this time.

LOFTON AVENUE NORTH

DELLWOOD ROAD COURT NORTH

INDIGO TRAIL NORTH

Surface

These streets (Lofton Ave, Dellwood Rd Ct N, Indigo Trl N) will be improved using a full-depth reclamation (FDR) process. This method involves pulverizing the existing bituminous pavement together with a predetermined depth of the underlying aggregate base and blending the materials to form a uniform, stabilized base for the new pavement section.

Based on existing conditions, reclamation is recommended to a depth of approximately 6 inches, which is expected to produce about 6 inches of reclaimed base material. A new 3-inch bituminous wear course will then be placed over the reclaimed base, resulting in a total pavement section of approximately 9 inches.

Minor portions of bituminous driveways (generally less than 5 feet in length) will be removed and replaced as necessary to provide a smooth transition to the proposed roadway pavement.

- Concrete driveways will have the panel adjacent to the street removed and replaced, as needed.
- Street culverts will be replaced with new high-density polyethylene (HDPE) pipe where site conditions warrant.
- Disturbed boulevard areas will be regraded and restored with seed and hydro-mulch.

Along Indigo Trail N, there was specific residential concern that the FDR may impact the tree root systems. The type of project scoped (FDR) generally causes substantially less soil disturbance than full reconstruction, and should not impact any trees based on the following:

- Existing gravel shoulder and mowed clear zone that provide tree and street section separation.
- Limited excavation depth (6”) along the street length.
- There are no tree roots protruding through the existing blacktop surface.
- No tree roots were found as part of the Geotechnical investigation.

No significant adverse impacts to wetlands, surface waters, wildlife habitat, or other natural resources are anticipated because the project would remain within the existing roadway corridor.

For Lofton Avenue N and Dellwood Road Court N: Bituminous curb will be removed and replaced for the entire length of the street.

Roadway Alignment

The roadway will generally maintain its existing horizontal and vertical alignment. The proposed paved roadway width will match existing of approximately 22 to 24 feet.

The existing cul-de-sacs will be maintained at the roadway’s terminus.

Right-Of-Way

The proposed improvements along these streets (Lofton Ave, Dellwood Rd Ct N, Indigo Trl N) will occur within the existing dedicated right-of-way. Acquisition of additional easements is not anticipated at this time.

DRAINAGE

No significant changes to drainage are anticipated along McKusick Road North as part of the proposed mill and overlay improvements. This rehabilitation method maintains the existing roadway profile and cross slopes, resulting in no meaningful improvement to current drainage conditions.

Surface drainage will continue to function as it does currently, conveying runoff to existing ditches and swales without modification.

Drainage patterns along Lofton Avenue North, Dellwood Road Court North, and Indigo Trail North will generally remain consistent with existing conditions. However, the roadway crown will be adjusted to provide positive cross slopes from the centerline, improving surface drainage toward adjacent bituminous curbs (if present) and swales.

Existing ditches and swales are expected to remain largely unchanged, with only minor grading adjustments as needed to maintain proper drainage.

PERMITS/APPROVALS

The following permits will be required as part of this Project:

- Washington County Highway 15 & 96 — Highway Right-of-Way Permit

FINANCING

OPINION OF PROBABLE COST

A detailed Opinion of Probable Cost for each roadway segment is provided in Appendix C of this report.

These estimates are based on projected 2027 construction costs and include:

- A 10% contingency allowance
- Indirect costs calculated at 20% of construction costs, which account for engineering, legal, financing, and administrative expenses

The table below provides a summary of project costs for each roadway segment:

Table 2. Project Cost Summary

PROJECT COSTS	McKusick Rd North	Lofton Avenue North	Dellwood Road Court North	Indigo Trail North
Construction Costs	$393,906	$54,908	$70,452	$214,080
10% Contingency	$39,391	$5,491	$7,045	$21,408
Total Construction Costs	$433,296	$60,399	$77,497	$235,488
Indirect Costs (20%)	$86,659	$12,080	$15,499	$47,098
Total Project Costs	**$519,955**	**$72,478**	**$92,996**	**$282,586**
			COMBINED TOTAL PROJECT COSTS:	**$ 968,015**

FUNDING

Project funding is proposed to be derived from a combination of special assessments, contributions from the City of Grant Street Maintenance Fund, and private development contributions.

Based on the City's anticipated Capital Improvement Plan (CIP), the following funds have been allocated:

- McKusick Road North & Lofton Avenue North: $125,000
- Dellwood Road Court North: $9,300
- Indigo Trail North: $28,259

In addition, the City anticipates receiving a $150,000 contribution from the Stillwater Oaks development toward improvements associated with McKusick Road North.

The remaining project costs are proposed to be recovered through special assessments, in accordance with the City's Assessment Policy. Dellwood Road Court North and Indigo Trail North would be included as Alternates in the bid package.

PRELIMINARY ASSESSMENT ROLL

The City of Grant has requested assessments be prepared in accordance with Minnesota Statutes Chapter 429 and the City of Grant's Special Assessment Policy.

The preliminary assessment roll reflects a balance between:

- Special benefit through direct property access
- Neighborhood or corridor-wide benefit
- Broader public benefit associated with roadway safety, operations, and structural rehabilitation

Assessments would be allocated as follows:

- Each buildable lot with either:
    - An address (or potential address) on the roadway to be improved
    - Direct driveway access to the roadway to be improved

  Would be assessed as one (1) full unit.

Buildable lots that abut the roadway but have their primary address or driveway access from another roadway would be assessed as one-quarter (¼) unit.

Multiple lots under the same ownership are further analyzed to account for use of the property and status of structures on the property to determine if each lot is assessed up to one (1) full unit.

This methodology is consistent with the City's adopted policy, recognizing that parcels receiving direct access benefit receive a greater level of benefit than parcels with only frontage adjacency.

The City's Assessment Policy also provides flexibility for alternate methodologies when appropriate. Specifically:

> "*When in the judgement of the City Council the Assessment Method does not fairly apportion the proposed assessments, the City Council may adopt an alternate method of assessment, including but not limited to front foot, buildable lot, a combination of front foot and buildable lot, or any other methodology which reasonably apportions the assessments.*"

The City Council has determined that an alternate method of assessment will need to be adopted, which includes properties that are included in a broader regional benefit approach for the McKusick Road North and Lofton Avenue North area.

Under this approach:

- Assessments include properties directly benefiting from roadway access.
- Additional consideration is given to nearby properties relying on the corridor for local circulation and access.

This methodology attempts to balance:

- Direct access special benefit to adjacent parcels
- Broader neighborhood benefit
- The overall circulation function of the roadway system

Table 3. Assessment Cost Summary

Description	McKusick Road & Lofton Avenue Assessment Cost	Dellwood Road Court North Assessment Cost	Indigo Trail North Assessment Cost
City Contribution	$125,000	$9,300	$28,259
Stillwater Oaks	$150,000		
Total Project Costs	$592,433	$92,997	$282,586
# of Buildable Units	23.25	3.00	13.25
Assessment Rate / Buildable Unit	$13,653	$27,899	$20,762

SPECIAL BENEFIT AND ASSESSMENT METHODOLOGY ANALYSIS

Minnesota law authorizes a city to levy a special assessment against property that receives a special benefit from a public improvement. A special assessment is valid only when three conditions are met: (1) the land must receive a special benefit from the improvement constructed, (2) the assessment must be uniform upon the same class of property, and (3) the assessment may not exceed the special benefit conferred.

A special benefit is the increase in the market value of the land that results from the improvement. Under Minnesota caselaw, it is measured as the difference between what a willing buyer would pay a willing seller for the property before the improvement and what a willing buyer would pay after the improvement is completed. The Minnesota Court of Appeals has established that road improvements confer a special benefit when they do more than generally enhance the surrounding area — for example, where reconstructing or widening a roadway improves access to and from the property or to connecting arterial routes. *EHW Props. v. City of Eagan*, 503 N.W.2d 135 (Minn. Ct. App. 1993).

The special benefit for each benefited parcel is determined by comparing the parcel's market value before the improvement to its market value after the improvement, based on the property's highest and best use. The governing standard does not require an exact or precise calculation. Minnesota courts hold that any method resulting in a fair approximation of the increase in market value for each benefited parcel may be used, and a method that on its face appears to be a fair approximation is presumed valid, with the burden resting on any objector to show otherwise.

Specifically for this Project, the City evaluated each Assessed Area as further discussed below.

McKusick Road North and Lofton Avenue North

The proposed units to be assessed on this street will be improved using a full-depth reclamation. The average market value of a home in this neighborhood is approximately $583,855 based on the current county tax assessor records. For 2027, the projected Estimated Market Value (EMV) averages $613,484 based on a conservative 3% growth factor.

The total cost of the project is $592,433.

The proposed street improvements are anticipated to provide special benefit to adjacent residential properties by improving access through enhancing pavement quality and ride comfort, improving drainage performance, increasing property marketability, and supporting the long-term preservation of property values. Based on the assessment as a percentage of the 2026 EMV, the average increase in market value of homes in this neighborhood is approximately 2.5%, equaling a new average market value of $598,498.

The proposed special assessment against each 1 unit for benefiting parcels is $13,653.

Because the proposed assessment of $13,653 reflects a fair approximation of the increase in market value that the improvement will confer on each benefited parcel, and does not exceed that increase, it is consistent with the measure of special benefit required by Minnesota law. *DeSutter v. Twp. of Helena*, 489 N.W.2d 236 (Minn. Ct. App. 1992).

Dellwood Road Court North

The proposed units to be assessed on this street will be improved using a full-depth reclamation. The average market value of a home in this neighborhood is approximately $1,621,200 based on the current county tax assessor records. For 2027, the projected Estimated Market Value (EMV) averages $1,669,836 based on a conservative 3% growth factor.

The total cost of the project is $92,997.

The proposed street reconstruction is expected to confer special benefits on abutting residential properties through improving access by improved pavement serviceability and rideability, enhanced stormwater drainage, increased desirability in the real estate market, and sustained property value over time. Based on the assessment as a percentage of the 2026 EMV, the average increase in market value of homes in this neighborhood is approximately 1.8%, equaling a new average market value of $1,650,179.

The proposed special assessment against each 1 unit for benefiting parcels is $27,899.

Because the proposed assessment of $27,899 reflects a fair approximation of the increase in market value that the improvement will confer on each benefited parcel, and does not exceed that increase and is well below the average projected annual growth factor, it is consistent with the measure of special benefit required by Minnesota law. *DeSutter v. Twp. of Helena*, 489 N.W.2d 236 (Minn. Ct. App. 1992).

Indigo Trail North

The proposed units to be assessed on this street will be improved using a full-depth reclamation. The average market value of a home in this neighborhood is approximately $898,208 based on the current county tax assessor records. For 2027, the projected Estimated Market Value (EMV) averages $925,155 based on a conservative 3% growth factor.

The total cost of the project is $282,586.

Abutting residential properties are expected to receive special benefit from the proposed improvements through improved access by improving roadway condition, more effective drainage, enhanced accessibility and market appeal, and protection of long-term property value. Based on the assessment as a percentage of the 2026 EMV, the average increase in market value of homes in this neighborhood is approximately 2.4%, equaling a new average market value of $919,500.

The proposed special assessment against each 1 unit for benefiting parcels is $20,762.

Because the proposed assessment of $20,762 reflects a fair approximation of the increase in market value that the improvement will confer on each benefited parcel, and does not exceed that increase and is well below the average projected annual growth factor, it is consistent with the measure of special benefit required by Minnesota law. *DeSutter v. Twp. of Helena*, 489 N.W.2d 236 (Minn. Ct. App. 1992).

Summary

A formal appraisal is not a legal prerequisite to determining a special benefit. Minnesota courts have expressly sustained a determination of increased market value where the public body did not offer a formal appraisal, relying instead on an informed opinion of the before-and-after value supported by market data. This flexibility reflects a long-settled principle: because approximation is the limit of endeavor in ascertaining property values, value may be established by direct or circumstantial evidence, and the rules governing proof of value are liberally construed.

PROJECT SCHEDULE

The potential schedule for the 2027 Roadway Improvement Project, following the City Assessment Policy is outlined below:

Council Orders Feasibility Report ..... March 3, 2026 & July 7, 2027

Neighborhood Meeting ..... Early September 9 & 10, 2026

Council Accepts Feasibility Report ..... October 6, 2026

Public Hearing/Order Project and Authorize Plans and Specs ..... November 10, 2026

Council Approves Plans / Orders Ad for Bid ..... February 2, 2027

Bid Opening ..... Late Feb / Early March, 2027

Declare Costs to be Assessed/ Set Public Hearing ..... April 6, 2027

Public Assessment Hearing / Adopt Assessment ..... May 4, 2027

Council Accept Bids/ Award Contract ..... May 4, 2027

Begin Construction ..... June, 2027

Substantial Construction Complete ..... August 31, 2027

Final Completion ..... September 15, 2027

FEASIBILITY AND RECOMMENDATIONS

Based on the analysis contained within this report, the proposed improvements to McKusick Road North, Lofton Avenue North, Dellwood Road Court North, and Indigo Trail North are considered both feasible and necessary from an engineering, operational, and financial standpoint.

Existing pavement conditions, supported by pavement coring and geotechnical evaluation, indicate that portions of the roadway system have experienced structural failure and are no longer suitable for continued routine maintenance alone. The recommended improvement methods—mill and overlay for McKusick Road North and full-depth reclamation (FDR) for Lofton Avenue North, Dellwood Road Court North, and Indigo Trail North—represent appropriate and cost-effective solutions based on existing pavement sections and roadway conditions.

The proposed improvements are expected to improve roadway safety, enhance drivability, restore structural performance, and increase long-term maintenance efficiency. These benefits will be achieved while maintaining the existing roadway character and drainage patterns.

Funding for the project is proposed through a combination of City roadway maintenance funds, development contributions, and special assessments, as determined by the City Council.

From an engineering perspective, implementation of the project as outlined in this report is recommended.

Final authorization of the project is contingent upon financial review and approval by the City of Grant.

APPENDICES

Appendix A Maps

Appendix B Project Photos

Appendix C Opinion of Probable Cost

Appendix D Assessments

Appendix E Pavement Coring Report

APPENDIX A: MAPS

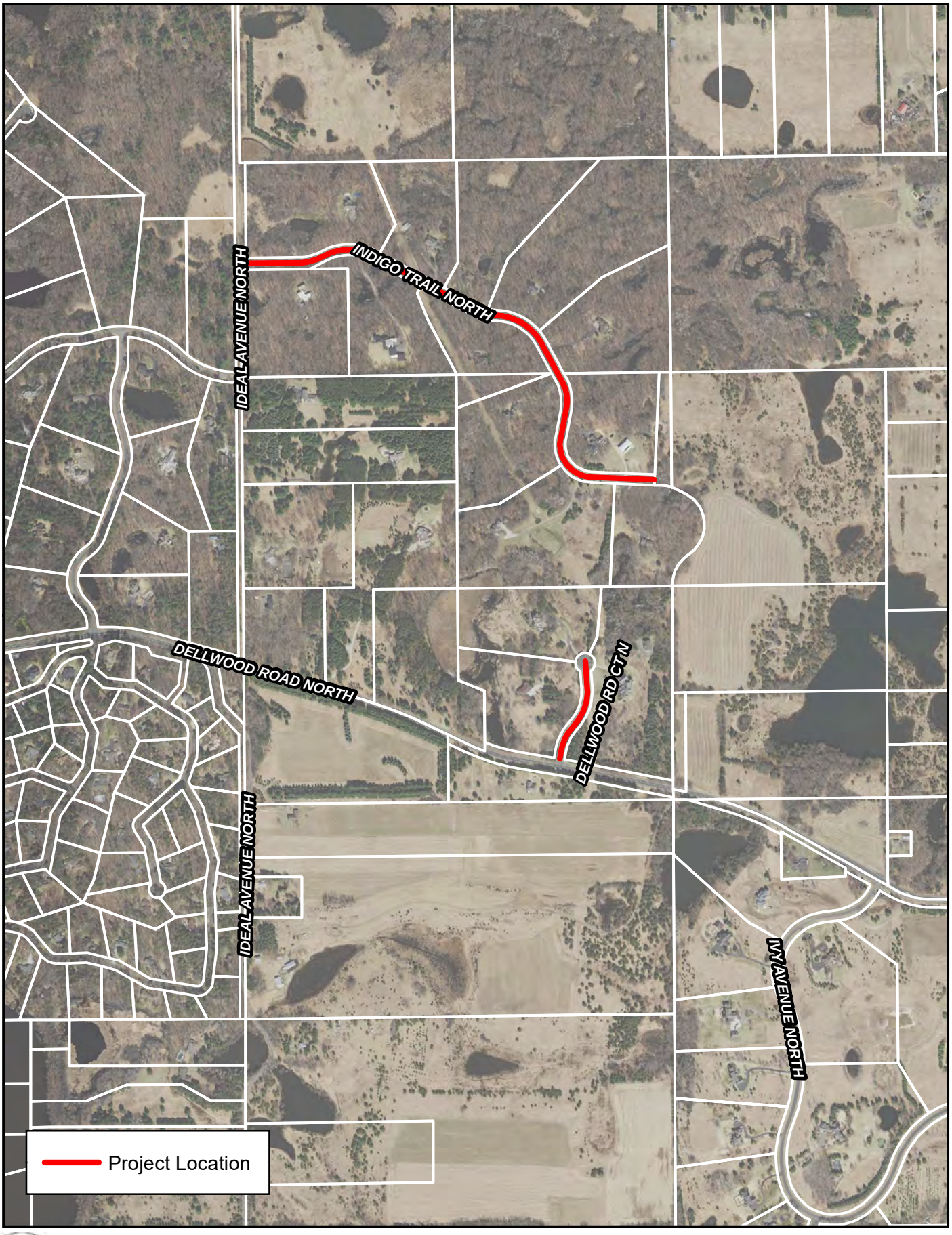


PROJECT LOCATION MAP
2027 Roadway Improvement Project
Grant, MN

0 400 800 Feet
1 inch = 800 feet

N

Document Path: M:\25Proj\250489\500 Drawings\Base\GIS\McKusick Rd N - Proj Location.mxd



PROJECT LOCATION MAP
2027 Roadway Improvement Project
Grant, MN

0 400 800 Feet
1 inch = 800 feet

N

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APPENDIX B: PROJECT PHOTOS

MCKUSICK RD N & LOFTON AVE N – PHOTOS













MCKUSICK RD N & LOFTON AVE N – PHOTOS

















MCKUSICK RD N & LOFTON AVE N – PHOTOS

















MCKUSICK RD N & LOFTON AVE N – PHOTOS







DELLWOOD RD CT N – PHOTOS





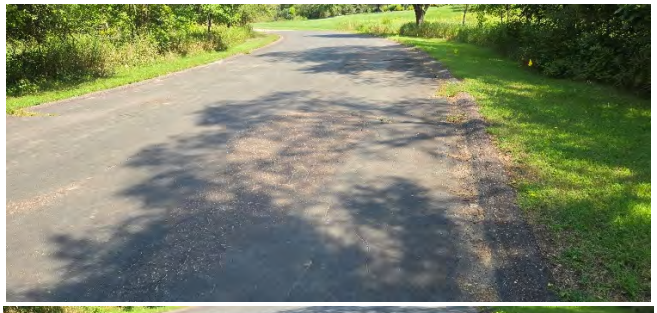
















DELLWOOD RD CT N – PHOTOS













DELLWOOD RD CT N – PHOTOS







INDIGO TRL N – PHOTOS












INDIGO TRL N – PHOTOS












INDIGO TRL N – PHOTOS












INDIGO TRL N – PHOTOS












INDIGO TRL N – PHOTOS

















INDIGO TRL N – PHOTOS









APPENDIX C: OPINION OF PROBABLE COST

Opinion of Probable Cost

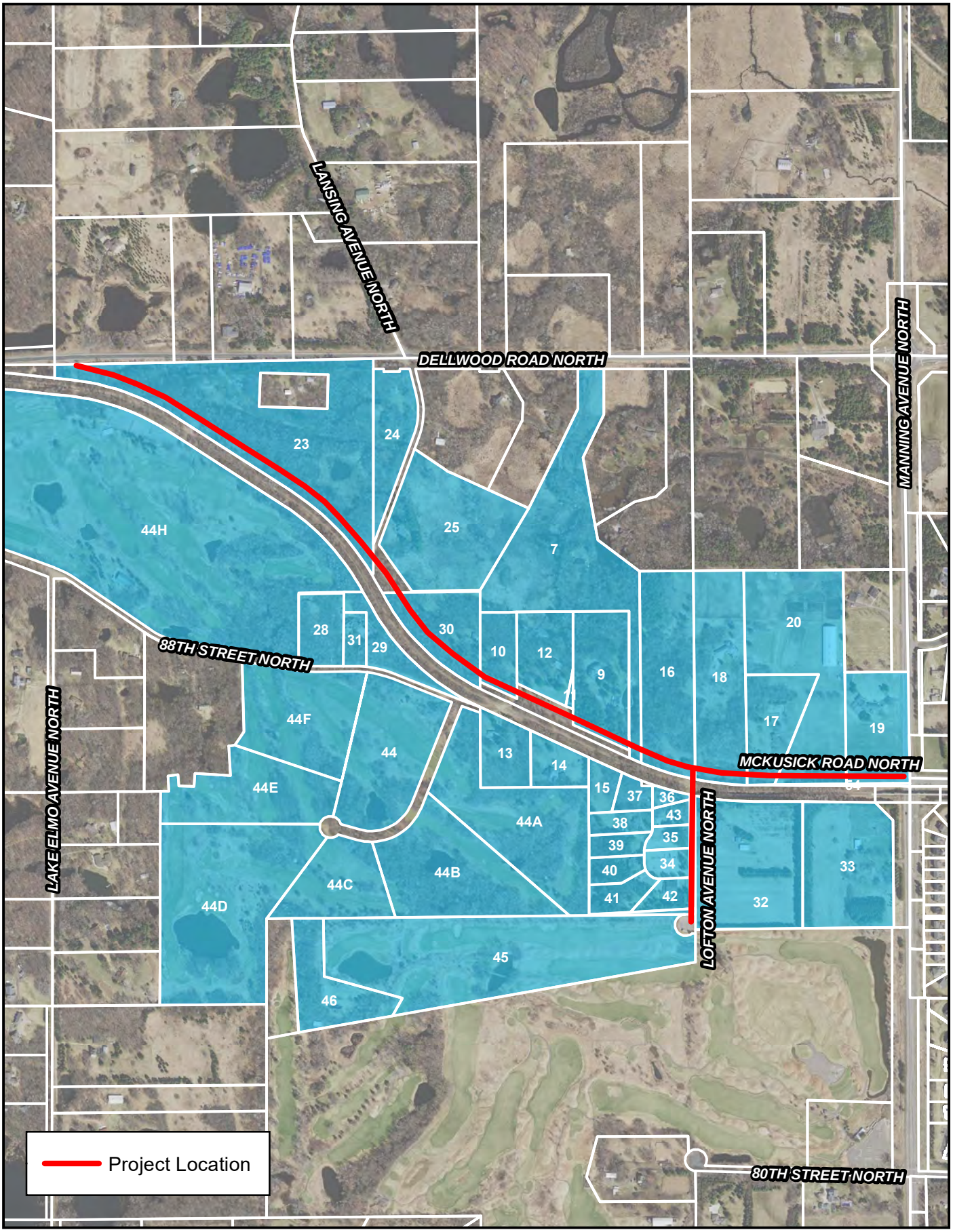
LHB Project	2027 Roadway Improvement Project	Designed By:	LS
Project Location	McKusick Road (Manning Avenue to Highway 96), Lofton Avenue, Dellwood Road Court & Indigo Trail	Checked By:	VK
City Project	2027 Roadway Improvement Feasiblity Report		
LHB Project No.	260155	Date:	8/24/2026 22:36

Item No.	MN/DOT Specification No.	Description	Unit	Estimated Total Quantity	Estimated Unit Cost	Estimated Total Cost
Schedule A: Pavement Rehabilitation: McKusick Road (Manning Hwy 15 to Dellwood Rd Hwy 96)						
1	2021.501	MOBILIZATION	LUMP SUM	1	$ 18,800.00	$ 18,800.00
2	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	200	$ 2.50	$ 500.00
3	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	20	$ 150.00	$ 3,000.00
4	2232.504	MILL BITUMINOUS SURFACE (3.0")	SQ YD	16128	$ 4.00	$ 64,512.00
5	2221.507	SHOULDER BASE AGGREGATE (CV) CLASS 2	CU YD	830	$ 50.00	$ 41,500.00
6	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	1613	$ 2.00	$ 3,226.00
7	2360.509	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	2871	$ 80.00	$ 229,680.00
8	2563.601	TRAFFIC CONTROL	LUMP SUM	1	$ 7,000.00	$ 7,000.00
9	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1	$ 3,000.00	$ 3,000.00
10	2582.503	4" DBL SOLID LINE PAINT (WR)	LIN FT	6050	$ 1.25	$ 7,562.50
11	2582.503	4"SOLID LINE PAINT (WR)	LIN FT	12100	$ 1.25	$ 15,125.00
					Construction Total	$ 393,905.50
					Construction Contigency (10%)	$ 39,390.55
					Subtotal Construction Costs	$ 433,296.05
					Indirect Costs (20%)	$ 86,659.21
					Total Project Costs Schedule A	$ 519,955.26
Schedule B: Pavement Rehabilitation: Lofton Avenue						
1	2021.501	MOBILIZATION	LUMP SUM	1	$ 2,700.00	$ 2,700.00
2	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	50	$ 2.50	$ 125.00
3	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	5	$ 150.00	$ 750.00
4	2232.504	FULL DEPTH RECLAIM	SQ YD	2280	$ 4.00	$ 9,120.00
5	2221.507	SHOULDER BASE AGGREGATE (CV) CLASS 2	CU YD	20	$ 50.00	$ 1,000.00
6	2360.509	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	410	$ 80.00	$ 32,800.00
7	2535.503	BITUMINOUS CURB	LIN FT	1283	$ 5.00	$ 6,412.50
8	2563.601	TRAFFIC CONTROL	LUMP SUM	1	$ 1,000.00	$ 1,000.00
9	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1	$ 1,000.00	$ 1,000.00
					Construction Total	$ 54,907.50
					Construction Contigency (10%)	$ 5,490.75
					Subtotal Construction Costs	$ 60,398.25
					Indirect Costs (20%)	$ 12,079.65
					Total Project Costs Schedule B	$ 72,477.90
Schedule C: Pavement Rehabilitation: Dellwood Road Court North						
1	2021.501	MOBILIZATION	LUMP SUM	1	$ 3,400.00	$ 3,400.00
2	2104.502	REMOVE CASTING	EA	2	$ 300.00	$ 600.00
3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	75	$ 2.50	$ 187.50
4	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	5	$ 150.00	$ 750.00
5	2232.504	FULL DEPTH RECLAIM	SQ YD	2460	$ 4.00	$ 9,840.00
6	2360.509	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	380	$ 80.00	$ 30,374.40
7	2506.502	CASTING ASSEMBLY	EA	2	$ 1,500.00	$ 3,000.00
8	2531.503	CONCRETE CURB & GUTTER DESIGN S524	LIN FT	100	$ 50.00	$ 5,000.00
9	2535.503	BITUMINOUS CURB	LIN FT	1840	$ 5.00	$ 9,200.00
10	2563.601	TRAFFIC CONTROL	LUMP SUM	1	$ 1,000.00	$ 1,000.00
11	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1	$ 1,000.00	$ 1,000.00
12	2574.507	COMMON TOPSOIL BORROW	CU YD	100	$ 55.00	$ 5,500.00
13	2575.505	SEEDING	ACRE	0.2	$ 3,000.00	$ 600.00
					Construction Total	$ 70,451.90
					Construction Contigency (10%)	$ 7,045.19
					Subtotal Construction Costs	$ 77,497.09
					Indirect Costs (20%)	$ 15,499.42
					Total Project Costs Schedule C	$ 92,996.51
Schedule D: Pavement Rehabilitation: Indigo Trail North						
1	2021.501	MOBILIZATION	LUMP SUM	1	$ 10,200.00	$ 10,200.00
2	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	30	$ 10.00	$ 300.00
3	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	300	$ 2.50	$ 750.00
4	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	20	$ 30.00	$ 600.00
5	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HOUR	15	$ 150.00	$ 2,250.00
6	2232.504	FULL DEPTH RECLAIM	SQ YD	9070	$ 4.00	$ 36,280.00
7	2360.509	TYPE SP 12.5 WEARING COURSE MIX (2,B)	TON	1620	$ 80.00	$ 129,600.00
8	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	20	$ 110.00	$ 2,200.00
9	2563.601	TRAFFIC CONTROL	LUMP SUM	1	$ 4,000.00	$ 4,000.00
10	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1	$ 3,000.00	$ 3,000.00
11	2574.507	COMMON TOPSOIL BORROW	CU YD	420	$ 55.00	$ 23,100.00
12	2575.505	SEEDING	ACRE	0.6	$ 3,000.00	$ 1,800.00
					Construction Total	$ 214,080.00
					Construction Contigency (10%)	$ 21,408.00
					Subtotal Construction Costs	$ 235,488.00
					Indirect Costs (20%)	$ 47,097.60
					Total Project Costs Schedule D	$ 282,585.60
					Grand Total Project Costs (Schedule A + B + C + D)	**$ 968,015.27**

Project Funding

Item No.	Funding Source	Amount
AB1	Stillwater Oaks Development (Schedule A Total Project Costs)	$ 150,000.00
AB2	City of Grant	$ 125,000.00
AB3	Special Assessment McKusick & Lofton	$ 317,433.16
C1	City of Grant	$ 9,299.65
C2	Special Assessment Dellwood Rd Ct	$ 83,696.86
D1	City of Grant	$ 28,258.56
D2	Special Assessment Indigo Trl N	$ 254,327.04
	Total Project Funding	$ 968,015.27

APPENDIX D: ASSESSMENTS



ASSESSMENT MAP
2027 Roadway Improvement Project
Grant, MN

0 400 800 Feet
1 inch = 800 feet

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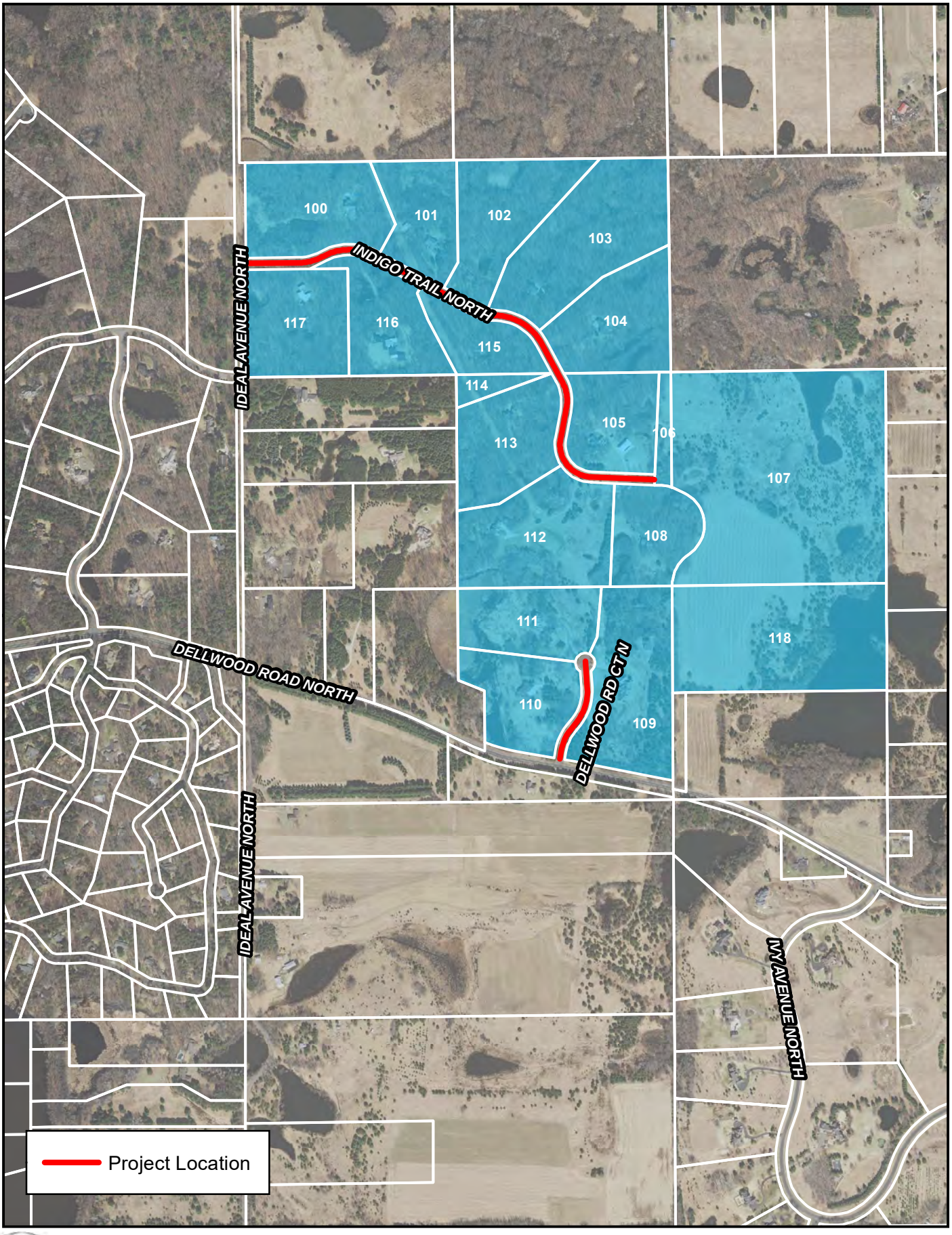
CITY OF GRANT
2027 STREET IMPROVEMENT PROJECT - MCKUSICK RD N & LOFTON AVE N
PRELIMINARY ASSESSMENT ROLL

No. of Parcels	MAP ID	PARCEL ID	OWNER NAME	OWNER ADDRESS	OWNER ADDRESS CITY	TAX NAME	TAX ADDRESS	TAX ADDRESS CITY	BUILDABLE UNIT ASSESSMENT	BUILDABLE UNIT	PROPOSED TOTAL ASSESSMENT
1	7	2403021120003	BLINKHORN TONY	11669 DELLWOOD RD N	STILLWATER MN 55082	BLINKHORN TONY	11669 DELLWOOD RD N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
2	9	2403021130001	MANDA VENKATESH R & DENISE R	11644 MCKUSICK RD N	STILLWATER MN 55082	MANDA VENKATESH R & DENISE R	11644 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
3	10	2403021130002	WEISS JOHN J & CAROL A	11520 MCKUSICK RD N	STILLWATER MN 55082	WEISS JOHN J & CAROL A	11520 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
4	11	2403021130003	MANDA VENKATESH R & DENISE R	11644 MCKUSICK RD N	STILLWATER MN 55082	MANDA VENKATESH R & DENISE R	11644 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	0	$0.00
5	12	2403021130004	LUND THOMAS & LINDA	11540 MCKUSICK RD N	STILLWATER MN 55082	LUND THOMAS & LINDA	11540 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
6	13	2403021130005	WOJTOWICZ JOHN N & JANET G	11521 88TH ST N	STILLWATER MN 55082	WOJTOWICZ JOHN N & JANET G	11521 88TH ST N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
7	14	2403021130006	MCMANIMON RYAN & KELLY	11591 MCKUSICK RD N	STILLWATER MN 55082	MCMANIMON RYAN & KELLY	11591 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
8	15	2403021130007	RICE JOHN L	8496 LOFTON AVE N	STILLWATER MN 55082	RICE JOHN L	8496 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	0	$0.00
9	16	2403021130008	GOOD PROGRAM SJK LLLP	9450 MENDEL RD N	STILLWATER MN 55082	GOOD PROGRAM SJK LLLP	11730 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
10	17	2403021140001	TURSSO KEITH J & ANGELA J	11840 MCKUSICK RD N	STILLWATER MN 55082	TURSSO KEITH J & ANGELA J	11840 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
11	18	2403021140004	SMITH SCOTT K	11770 MCKUSICK RD N	STILLWATER MN 55082	SMITH SCOTT K	11770 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
12	19	2403021140005	STEWART ROBERT L & MARY A	8614 MANNING AVE N	STILLWATER MN 55082	STEWART ROBERT L & MARY A	8614 MANNING AVE N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
13	20	2403021140006	SMITH SCOTT K	11770 MCKUSICK RD N	STILLWATER MN 55082	SMITH SCOTT K	11770 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
14	23	2403021210002	MCCARRON WILLIAM J & ANN M THOMPSON	11201 DELLWOOD RD N	STILLWATER MN 55082	MCCARRON WILLIAM J & ANN M THOMPSON	11201 DELLWOOD RD N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
15	24	2403021210005	BEER THOMAS A	8930 LANSING AVE N	STILLWATER MN 55082	BEER THOMAS A	8930 LANSING AVE N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
16	25	2403021210006	HARVEY JT REV TRS	8845 LANSING AVE N	STILLWATER MN 55082	HARVEY JT REV TRS	8845 LANSING AVE N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
17	28	2403021240002	JANTZEN ISABELLA & JORDAN	11360 88TH ST N	STILLWATER MN 55082	JANTZEN ISABELLA & JORDAN	11360 88TH ST N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
18	29	2403021240003	ARKELL JANICE G TRS	11392 88TH ST N	STILLWATER MN 55082	ARKELL JANICE G TRS	11392 88TH ST N	STILLWATER MN 55082	$13,653.04	0	$0.00
19	30	2403021240004	VACK GREGORY J & ZOE A	11492 MCKUSICK RD N	STILLWATER MN 55082	VACK GREGORY J & ZOE A	11492 MCKUSICK RD N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
20	31	2403021240005	ARKELL JANICE G TRS	11392 88TH ST N	STILLWATER MN 55082	ARKELL JANICE G TRS	11392 88TH ST N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
21	32	2403021410001	SCHWARTZ THOMAS R & SANDRA K F	1047 ROMA AVE	ROSEVILLE MN 55113	SCHWARTZ THOMAS R & SANDRA K F	8485 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
22	33	2403021410006	HURLEY TIMOTHY & STEPHANIE	8400 MANNING AVE N	STILLWATER MN 55082	HURLEY TIMOTHY & STEPHANIE	8400 MANNING AVE N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
23	34	2403021420001	SCHONE'S INC	8390 LOFTON AVE N	STILLWATER MN 55082	SCHONE'S INC	8390 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
24	35	2403021420002	KIMBERLY MARGARET QUADE TRUST	8470 LOFTON AVE	STILLWATER MN 55082	KIMBERLY MARGARET QUADE TRUST	8470 LOFTON AVE	STILLWATER MN 55082	$13,653.04	1	$13,653.04
25	36	2403021420004	RICE JOHN L	8496 LOFTON AVE N	STILLWATER MN 55082	RICE JOHN L	8496 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
26	37	2403021420006	RICE JOHN L	8496 LOFTON AVE N	STILLWATER MN 55082	RICE JOHN L	8496 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	0.25	$3,413.26
27	38	2403021420007	CAROL A RYDEL TRS	8460 LOFTON AVE N	STILLWATER MN 55082	CAROL A RYDEL TRS	8460 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
28	39	2403021420008	RYDEL CAROL A	8460 LOFTON AVE N	STILLWATER MN 55082	RYDEL CAROL A	8460 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	0	$0.00
29	40	2403021420009	ZIMNEY ROBERT JAMES	8450 LOFTON AVE N	STILLWATER MN 55082	ZIMNEY ROBERT JAMES	8450 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
30	41	2403021420010	SCHONE'S INC	8390 LOFTON AVE N	STILLWATER MN 55082	SCHONE'S INC	8390 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
31	42	2403021420011	SCHONE'S INC	8390 LOFTON AVE N	STILLWATER MN 55082	SCHONE'S INC	8390 LOFTON AVE N	STILLWATER MN 55082	$13,653.04	1	$13,653.04
32	43	2403021420013	QUADE DANIEL L TRS & KIMBERLY M QUADE TRS	8470 LOFTON AVE	STILLWATER MN 55082	QUADE DANIEL L TRS & KIMBERLY M QUADE TR	8470 LOFTON AVE	STILLWATER MN 55082	$13,653.04	1	$13,653.04
33	44A	2403021420014	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
34	44B	2403021310005	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
35	44C	2403021310004	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
36	44D	2403021320008	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
37	44E	2403021320007	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
38	44F	2403021240007	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
39	44	2403021240006	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
40	44H	2403021220007	FAIRWAY ESTATES OF GRANT LLC	PO BOX 302	EXCELSIOR MN 55331	FAIRWAY ESTATES OF GRANT LLC			$13,653.04	0	$0.00
41	45	2403021420012	RAMS TRAIL LLC	PO BOX 470	STILLWATER MN 55082	RAMS TRAIL LLC			$13,653.04	1	$13,653.04
42	46	2403021310003	BRIAN D MCCOMAS REV TRS	2663 MIDVALE PLACE	MAPLEWOOD MN 55119	BRIAN D MCCOMAS REV TRS	8350 LOFTON AVE	STILLWATER MN 55082	$13,653.04	1	$13,653.04
									Totals	23.25	$317,433.16



ASSESSMENT MAP
2027 Roadway Improvement Project
Grant, MN

0 400 800 Feet
1 inch = 800 feet

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CITY OF GRANT
2027 STREET IMPROVEMENT PROJECT - DELLWOOD ROAD CT N
PRELIMINARY ASSESSMENT ROLL

No. of Parcels	MAP ID	PARCEL ID	OWNER NAME	OWNER ADDRESS	OWNER ADDRESS CITY	TAX NAME	TAX ADDRESS	TAX ADDRESS CITY	BUILDABLE UNIT ASSESSMENT	BUILDABLE UNIT	PROPOSED TOTAL ASSESSMENT
1	109	1603021240005	SEVENICH ROBERT J & CLAREMARIE	8400 DELLWOOD ROAD CT N	MAHTOMEDI MN 55115	SEVENICH ROBERT J & CLAREMARIE	8400 DELLWOOD ROAD CT N	MAHTOMEDI MN 55115	$27,898.95	1	$27,898.95
2	110	1603021240007	PERERA UDAYANTHI	8320 DELWOOD ROAD CT N	WHITE BEAR LAKE MN 55110	PERERA UDAYANTHI	8320 DELWOOD ROAD CT N	WHITE BEAR LAKE MN 55110	$27,898.95	1	$27,898.95
3	111	1603021240006	DAMON FRANK D & BONITA J	8380 DELLWOOD RD CT N	MAHTOMEDI MN 55115	DAMON FRANK D & BONITA J	8380 DELLWOOD RD CT N	ST PAUL MN 55115	$27,898.95	1	$27,898.95
									Totals	3	$83,696.86

CITY OF GRANT
2027 STREET IMPROVEMENT PROJECT - INDIGO TRAIL N
PRELIMINARY ASSESSMENT ROLL

No. of Parcels	MAP ID	PARCEL ID	OWNER NAME	OWNER ADDRESS	OWNER ADDRESS CITY	TAX NAME	TAX ADDRESS	TAX ADDRESS CITY	BUILDABLE UNIT ASSESSMENT	BUILDABLE UNIT	PROPOSED TOTAL ASSESSMENT
1	100	0903021330002	LINDAHL MICHAEL D & AMY M	10095 INDIGO TRL N	SAINT PAUL MN 55115	LINDAHL MICHAEL D & AMY M	10095 INDIGO TRL N	SAINT PAUL MN 55115	$20,761.39	1	$20,761.39
2	101	0903021330003	JOHNSON DAVID H	10065 INDIGO TRL N	MAHTOMEDI MN 55115	JOHNSON DAVID H	10065 INDIGO TRL N	SAINT PAUL MN 55115	$20,761.39	1	$20,761.39
3	102	0903021340001	ROGERS DANIEL J & TERESA C	10045 INDIGO TRL N	WHITE BEAR LAKE MN 55110	ROGERS DANIEL J & TERESA C	10045 INDIGO TRL N	WHITE BEAR LAKE MN 55110	$20,761.39	1	$20,761.39
4	103	0903021340002	LEVENTHAL THOMAS M & KATIE J LORENTZ	10025 INDIGO TRL N	WHITE BEAR LAKE MN 55110	LEVENTHAL THOMAS M & KATIE J LORENTZ	10025 INDIGO TRL N	WHITE BEAR LAKE MN 55110	$20,761.39	1	$20,761.39
5	104	0903021340003	SEIDL THOMAS M & MARIA G	10005 INDIGO TRL N	MAHTOMEDI MN 55115	SEIDL THOMAS M & MARIA G	10005 INDIGO TRL N	MAHTOMEDI MN 55115	$20,761.39	1	$20,761.39
6	105	1603021210006	JOLIE RENEE KNEEN REV LIV TRS	9901 INDIGO TRL N	MAHTOMEDI MN 55115	JOLIE RENEE KNEEN REV LIV TRS	9901 INDIGO TRL N	SAINT PAUL MN 55115	$20,761.39	1	$20,761.39
7	106	1603021210001	RONALD D STORER LIVING TRS	18111 STRATFORD CIR	VILLA PARK CA 92861	RONALD D STORER LIVING TRS			$20,761.39	0	$0.00
8	107	1603021120001	RONALD D STORER LIVING TRS	18111 STRATFORD CIR	VILLA PARK CA 92861	RONALD D STORER LIVING TRS			$20,761.39	1	$20,761.39
9	108	1603021210005	CONNOLLY GEORGE & ERIN K JORDAHL	9860 INDIGO TRL	ST PAUL MN 55115	CONNOLLY GEORGE & ERIN K JORDAHL	9860 INDIGO TRL	ST PAUL MN 55115	$20,761.39	1	$20,761.39
10	112	1603021210004	STEPHENS CHRISTOPHER S & ASHLEE J	9888 INDIGO TRL N	WHITE BEAR LAKE MN 55110	STEPHENS CHRISTOPHER S & ASHLEE J	9888 INDIGO TRL N	WHITE BEAR LAKE MN 55110	$20,761.39	1	$20,761.39
11	113	1603021210003	DEHN ANTHONY & KETTAVANH	9950 INDIGO TRL N	MAHOTMEDI MN 55115	DEHN ANTHONY & KETTAVANH	9950 INDIGO TRL N	ST PAUL MN 55115	$20,761.39	1	$20,761.39
12	114	1603021210002	SCHOLL THOMAS E & KAREN T	10018 INDIGO TRL N	WHITE BEAR LAKE MN 55110	SCHOLL THOMAS E & KAREN T			$20,761.39	0	$0.00
13	115	0903021340004	SCHOLL THOMAS E & KAREN T TRS	10018 INDIGO TRL N	MAHTOMEDI MN 55115	SCHOLL THOMAS E & KAREN T TRS	10018 INDIGO TRL N	MAHTOMEDI MN 55115	$20,761.39	1	$20,761.39
14	116	0903021330004	NIELSEN STEVE	10060 INDIGO TRL N	WHITE BEAR LAKE MN 55110	NIELSEN STEVE	10060 INDIGO TRL N	WHITE BEAR LAKE MN 55110	$20,761.39	1	$20,761.39
15	117	0903021330001	WRIGHT LIV TRS	10055 IDEAL AVE N	WHITE BEAR LAKE MN 55110	WRIGHT LIV TRS	10055 IDEAL AVE N	WHITE BEAR LAKE MN 55110	$20,761.39	0.25	$5,190.35
19	118	1603021130003	RONALD D STORER LIVING TRS	18111 STRATFORD CIR	VILLA PARK CA 92861	RONALD D STORER LIVING TRS			$20,761.39	0	$0.00
									Totals	12.25	$254,327.04

APPENDIX E: PAVEMENT CORING REPORT

BRAUN INTERTEC

the science you build on

Revised Pavement Evaluation Report

City of Grant 2026 Roadway Improvement Project
Mckusick Road North, Lofton Avenue North, Indigo Trail and Dellwood Road Court

Prepared for

LHB, Inc.

Professional Certification:
I hereby certify that this plan, specification, or 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.

Amy J. Grothaus, PE
Senior Manager, Senior Engineer
License Number: 51327
July 30, 2026



Braun Intertec Corporation

Project 10007646_001

July 30, 2026 Project 10007646_001

Veronica Kubicek
LHB, Inc.
21 West Superior Street, Suite 500
Duluth, MN 55802

Re: Revised Pavement Evaluation Report
City of Grant 2026 Roadway Improvement Project
Mckusick Road North, Lofton Avenue North, Indigo Trail and Dellwood Road Court
Grant, Minnesota

Dear Ms. Kubicek:

We are pleased to present this revised pavement evaluation report for the City of Grant's 2026 Roadway Improvement Project.

Thank you for making Braun Intertec Corporation (Braun Intertec) your consultant for this project. If you have questions about this report, or if there are other services that we can provide in support of our work to date, please contact Amy Grothaus at 651.261.7122 (agrothaus@braunintertec.com).

Sincerely,
Braun Intertec Corporation

Amy J. Grothaus, PE
Senior Manager, Senior Engineer

Heidi C. Olson, PE
Project Engineer

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1.0 Introduction

1.1 Project Description

This revised pavement evaluation report addresses the pavement coring and hand auger borings performed for the City of Grant's 2026 Roadway Improvement Project. We understand the project includes a 3-inch mill-and-overlay on McKusick Road North and full-depth reclamation (FDR) on Lofton Avenue North; Indigo Trail and Dellwood Road Court are planned for either mill-and-overlay or FDR. To provide recommendations related to the planned for repair, it was requested that we perform pavement coring and hand auger borings.

We have described our understanding of the proposed construction and site to the extent others reported it to us. Depending on the extent of available information, we may have made assumptions based on our experience with similar projects. If we have not correctly recorded or interpreted the project details, the project team should notify us. New or changed information could require additional evaluation, analyses, and/or recommendations.

1.2 Purpose

The purpose of the pavement evaluation is to determine the thicknesses of the in-place pavement materials and to note underlying material conditions for use in providing recommendations related to mill-and-overlay and FDR.

1.3 Scope of Services

We performed our scope of services for the project in accordance with our Proposal 10007646_001, dated February 16, 2026. The following list describes the tasks completed in accordance with our authorized scope of services.

- Performing a total of four pavement cores and hand auger borings, denoted as C-1 through C-4.
- Preparing this report containing the results of our field work for use in providing recommendations related to the planned repairs.

It was later requested that we perform a total of nine additional pavement cores and hand auger borings, denoted as C-5 through C-13. These were requested on Indigo Trail (C-5 through C-10), Dellwood Road Court (C-11 and C-12) and an additional location on Lofton Avenue (C-13).

2.0 Results

2.1 Pavement Coring and Hand Auger Borings

We completed a total of 13 pavement cores and hand auger borings, denoted as C-1 through C-13. The cores were extracted to measure the bituminous thickness and to review underlying conditions. Below the bituminous layer, we penetrated the aggregate base with a hand auger probe extended to the top of the apparent subgrade soil and measured the thickness of aggregate base.

Table 2-1. provides thickness information for the roadways. The coring location sketch along with the core photos are attached to this report.

Table 2-1. Pavement Thickness Summary

Street	Core	Bituminous Thickness (in)	Apparent Aggregate Base Thickness (in)	Core Condition
McKusick Road	C-1	18 1/2	NA*	Core broken into several pieces starting at depth of about 11 inches. Low severity stripping in top half of core, medium to severe stripping in bottom half of core.
	C-2	10	4	Core separated/broken at a depth of about 6 inches. Low to medium severity stripping throughout core.
	C-4	7 1/2	0	Low severity stripping throughout core.
Lofton Avenue	C-3	5	2	Core separated/broken at a depth of about 1 inch. Medium to severe stripping at break and in bottom of core.
	C-13	4	2 1/2	Low severity stripping throughout core.
Indigo Trail	C-5	3 1/2	6 1/2	Core separated/broken at a depth of about 1 1/2 inches. Severe stripping in bottom of core.
	C-6	3	7 3/4	Core separated/broken. Medium to severe stripping throughout core.
	C-7	3	5	Core separated/broken. Medium to severe stripping throughout core.
	C-8	4 1/2	9 1/2	Core separated/broken at a depth of about 1 inch. Medium to severe stripping at break and in bottom of core.
	C-9	2 1/2	11 1/2	Moderate stripping at bottom of core.
	C-10	2	8 1/2	Moderate stripping at top and bottom of core.
Dellwood Road Court	C-11	2 1/2	7 1/4	Core separated/broken, medium to severe stripping throughout core.
	C-12	3	9	Low to moderate stripping throughout out.

*Refusal was encountered at the bottom of the bituminous section.

3.0 Recommendations

3.1 Mill-and-Overlay

As previously noted, a 3-inch mill-and-overlay is planned for McKusick Road. We do not recommend mill-and-overlay on Indigo Trail and Dellwood Road Court due to thicknesses and underlying conditions.

Based on the inplace bituminous thickness of McKusick Road, there is sufficient bituminous for the mill-and-overlay to be performed. However, based on the underlying core conditions, it should be noted that the life provided by the mill-and-overlay may be less than expected. If performed, we anticipate reflective cracking will occur within a year or two. Undersealing, in accordance with MnDOT Specification 2356, of the milled surface will help delay reflective cracking. For the overlay, we recommend a bituminous mix consisting of SPWEA240B.

3.2 Full-Depth Reclamation (FDR)

As previously noted, we understand it is planned that FDR will be performed on Lofton Avenue. We also recommend FDR on Indigo Trail and Dellwood Road Court due to thickness and underlying conditions. Based on the inplace material thicknesses for these streets, we recommend reclamation be performed to a depth of about 6 inches.

In general, the FDR process involves pulverizing and blending the existing bituminous pavement along with a portion of underlying aggregate base. The reclaimed material can either be left in place or windrowed and stockpiled so that grading, excavation work, utility repairs and/or stabilization of the subgrade soils can be performed. The left-in-place or replaced reclaim is then compacted and overlaid with bituminous pavement.

From a design perspective, we provide the following considerations when performing FDR:

- We also recommend reclamation not extend into materials that are unsuitable for reclamation such as underlying silts and clays. Extra care should be given to ensure clayey subgrade soils are not included in the reclaim.
- During reclamation, variation of existing pavement depth should be anticipated. Adjustments to the reclamation depth will be required where the pavement section depth changes.
- Following reclamation, to provide additional strength, we understand reclaim material will be left in place and not removed. The bituminous overlay will then be placed on top of the reclaim material.
- We recommend implementing thorough quality control practices, including frequent sieve analyses, to achieve a desirable gradation of the reclaimed material.

3.2.1 Removals, Pulverization and Compaction

We recommend following MnDOT Specification 2215 for the reclaiming process. We recommend reclamation be performed to a depth of about 6 inches.

Following reclamation/pulverization, the reclaim material should then be compacted in accordance with MnDOT Specification 2215.

3.2.2 Test Rolling

Following compaction, we recommend exposed materials be test rolled to check for the presence of localized weak areas. The test roll should be performed with a fully loaded, tandem axle dump truck at walking speed.

The test roll should be observed by a geotechnical engineer or qualified observer. Any weak areas should be corrected with a subcut and backfilled with excess reclaimed material or other suitable material such as MnDOT Class 5 aggregate base.

3.2.3 Pavement Design

Our scope of services for this project did not include laboratory tests on subgrade soils to determine an R-value for pavement design. Based on our review and experience working in the project area, and the underlying soil types noted by our technicians, we recommend pavement design use an R-value of 30. Assuming 20-year Bituminous Equivalent Single Axle Loads (BESALs) of about 100,000 and an R-value of 30, Table 3-1 provides the City's standard pavement section, which assumes reclamation is performed to a depth of 6 inches.

Based on our discussion, we understand it is standard practice to not remove reclaim material. As such, grades will be raised by about 3 to 3.5 inches to accommodate the bituminous overlay and "fluff" created by reclamation.

Table 3-1. Pavement Design Section

Material	Thickness (in)	Designation	Specification
Bituminous Wear	3 (1 lift)*	SPWEA240C**	2360
Full-Depth Reclamation	6	FDR	2215

*If desired, two lifts could both be placed in thicknesses of 1.5 inches each. If feasible, we recommend increasing the bituminous thickness to 3.5 inches and placing it in two lifts of 2 inches and 1.5 inches.
**Given the low traffic volumes, consideration could be given to a mix designation of SPWEA230C.

We recommend placing the bituminous wear to meet the requirements of MnDOT Specification 2360, which includes gyratory tests to evaluate strength and air voids and density tests to evaluate compaction.

We recommend tack coat meeting MnDOT Specification 2357 be placed between the lifts and along vertical faces where paving will match adjacent pavement.

3.2.4 Performance and Maintenance

We based the above pavement design on a 20-year performance life for bituminous pavements. This is the amount of time before we anticipate the pavement will require rehabilitation. This performance life assumes routine maintenance, such as seal coating and crack sealing. The actual pavement life will vary depending on variations in weather, traffic conditions, and maintenance.

Many conditions affect the overall performance of the pavements. Some of these conditions include the environment, loading conditions and the level of ongoing maintenance. With regard to bituminous pavements in particular, it is common to have thermal cracking develop within the first few years of placement, and continue throughout the life of the pavement.

We recommend developing a regular maintenance plan for filling cracks in pavements to lessen the potential impacts for cold weather distress due to frost heave or warm weather distress due to wetting and softening of the subgrade.

4.0 Procedures

4.1 Pavement Coring and Hand Auger Borings

Pavement coring and hand auger borings were performed on April 17 and July 22, 2026. The cores were conducted within drive lanes using a 4-inch core barrel and a screw auger was used to evaluate the aggregate base layer. The bituminous pavement was repaired with a cold-mix bituminous patch immediately after coring. The cores were measured to obtain approximate bituminous thickness and their material conditions were noted based on visual observation. Images of the cores are attached.

5.0 Qualifications

5.1 Use of Report

This report is for the exclusive use of the addressed parties. Without written approval, we assume no responsibility to other parties regarding this report. Our evaluation, analyses and recommendations may not be appropriate for other parties or projects.

5.2 Standard of Care

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

Appendix

Exploration Location Sketch
Core Photo Log

BRAUN INTERTEC



DENOTES APPROXIMATE LOCATION OF PAVEMENT CORE

100' 0 200'

SCALE: 1" = 200'

BRAUN INTERTEC
The science you build on

11001 Hampshire Avenue S
Minneapolis, MN 55438
952.995.2000
braunintertec.com

Drawing Information

Project No:	10007646_001
Drawing No:	10007646_001
Drawn By:	JAG
Date Drawn:	7/22/26
Checked By:	AJG
Last Modified:	7/28/26

Project Information

City of Grant 2026 Roadway Improvement Project

McKusick Road and Lofton Avenue

Grant, Minnesota

Pavement Core Location Sketch

Sheet: 1 of 2

Fig:

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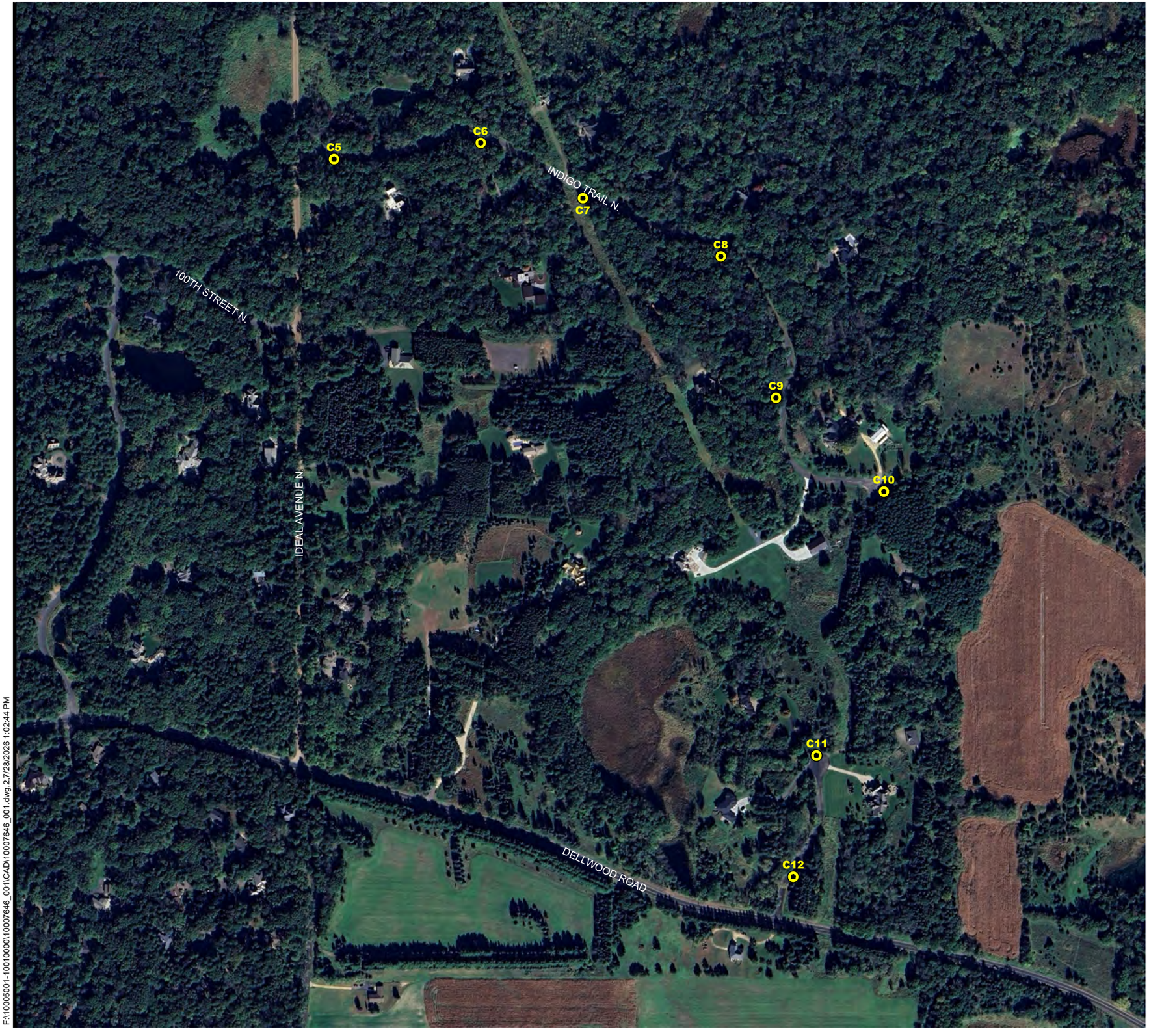

DENOTES APPROXIMATE LOCATION OF PAVEMENT CORE

200' 0 400'

SCALE: 1"= 400'

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BRAUN INTERTEC
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Minneapolis, MN 55438
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Drawing Information

Project No: 10007646_001

Drawing No: 10007646_001

Drawn By:	JAG
Date Drawn:	7/22/26
Checked By:	AJG
Last Modified:	7/28/26

Project Information

City of Grant 2026 Roadway Improvement Project

Ideal Avenue and Dellwood Road

Grant, Minnesota

Pavement Core Location Sketch

Sheet: 2 of 2

Fig:



Photograph 1	April 17, 2026
Subject:	C-1 Mckusick Road North



Photograph 2	April 17, 2026
Subject:	C-2 Mckusick Road North



Photograph 3	April 17, 2026
Subject:	C-3 Lofton Avenue North



Photograph 4	April 17, 2026
Subject:	C-4 Mckusick Road North



Photograph 5	July 22, 2026
Subject:	C-5 Indigo Trail



Photograph 6	July 22, 2026
Subject:	C-6 Indigo Trail



Photograph 7	July 22, 2026
Subject:	C-7 Indigo Trail



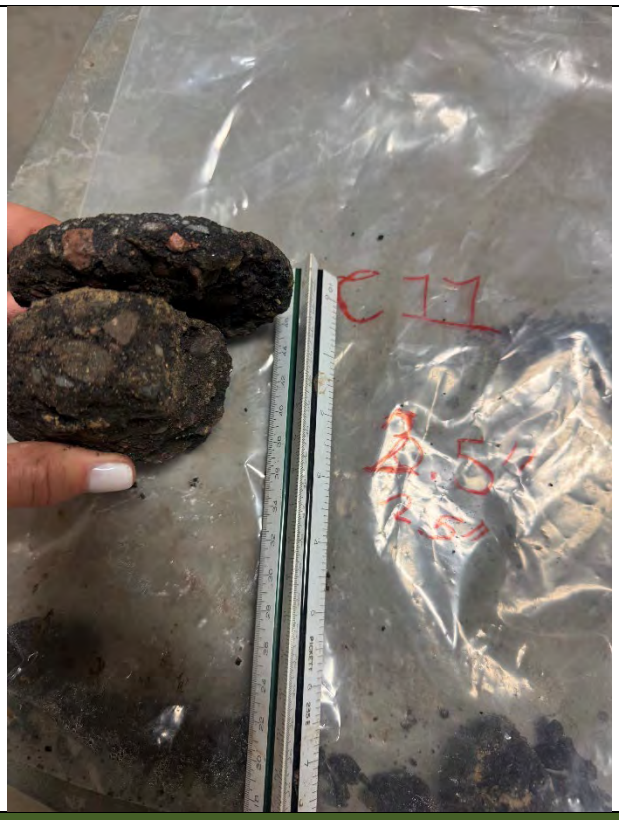
Photograph 8	July 22, 2026
Subject:	C-8 Indigo Trail



Photograph 9	July 22, 2026
Subject:	C-9 Indigo Trail



Photograph 10	July 22, 2026
Subject:	C-10 Indigo Trail



Photograph 11	July 22, 2026
Subject:	C-11 Dellwood Road Court



Photograph 12	July 22, 2026
Subject:	C-12 Dellwood Road Court



Photograph 13	July 22, 2026
Subject:	C-13 Lofton Avenue North