

2016 STREET, DRAINAGE, AND UTILITY IMPROVEMENTS



SEPTEMBER, 2015

CITY OF LAKE ELMO, MN.
Project No. 2015.129

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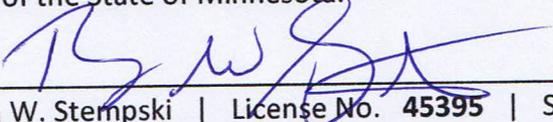
CERTIFICATION

FEASIBILITY REPORT 2016 STREET, DRAINAGE & UTILITY IMPROVEMENTS

THE CITY OF LAKE ELMO, MINNESOTA

SEPTEMBER 2015
Lake Elmo Project No: 2015.129

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.



Ryan W. Stempki | License No. 45395 | September 30, 2015
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2016 STREET, DRAINAGE & UTILITY IMPROVEMENTS

CITY OF LAKE ELMO PROJECT NO: 2015.129

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CITY OF LAKE ELMO
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EXECUTIVE SUMMARY

In accordance with the City of Lake Elmo annual Street Capital Improvement Program, this feasibility report addresses the street improvements that are programmed for construction in 2016. The project includes street improvements for the following areas consisting of approximately 9,600 lineal feet:

- Kirkwood Avenue North from 50th Street North to the north end (1,905 lineal feet).
- Kelvin Avenue North from Old State Highway 5 to the north end of the private shared driveway (1,590 lineal feet).
- Stonegate 1st Addition subdivision (6,135 lineal feet) including 9th Street North, Jasmine Avenue Place North and Jasmine Avenue North from 10th Street (CSAH 10) to Julep Avenue North.

The timing of these street improvements was determined by the city's pavement management program. Upon review of the necessary street improvements, staff also reviews the street drainage systems and existing public utilities. In addition to the street improvements, the scope of this Report includes watermain improvements, storm sewer casting replacement, and storm sewer or drainage upgrades to prevent water from standing on or along the street. The streets within the Stonegate 1st Addition and Kelvin Avenue North are proposed with new concrete curb to improve drainage, improve the construction quality, and provide edge control to protect and extend the service life of the new bituminous surface. Cost information is included in this Report for providing city water to residents along Kelvin Avenue North that have petitioned for it in the past. Further, it is recommended to extend the city's trunk watermain along a portion of Kelvin Avenue North in accordance with the 2030 Comprehensive Water System Plan. A geotechnical investigation was completed to support the Report recommendations.

The total estimated project cost for the street improvement is \$1,195,000. Of this amount \$437,800 is proposed to be assessed to the benefiting properties including a unit assessment of \$5,200 to 17 residential properties along Kelvin Avenue; a front footage assessment in the amount of \$13,400 to Common Ground Church (a non-residential property) along Kelvin Avenue; a unit assessment of \$13,800

to 7 residential properties (consisting of 10 assessable units) along Kirkwood Avenue; and a unit assessment of \$6,000 to 33 residential properties in the Stonegate 1st Addition. The city cost share for the improvements is therefore estimated to be \$757,200 to be financed through general obligation bonds. The detailed breakdown of the proposed improvements and corresponding assessment amounts for each street project is provided in the “Financing of Improvements” section of this Report.

The total estimated project cost for the watermain improvement is \$214,000. The trunk watermain is being installed as part of the overall water system build out. The properties along the trunk watermain routes will receive benefit from the improvements and it is recommended that each of the 8 benefiting properties along the trunk watermain route y be assessed a \$5,800 lateral benefit charge. The total city cost share for the trunk watermain improvements is therefore estimated to be \$58,600 to be financed through the Water Enterprise Fund, either directly or through bond repayments.

The lateral watermain extensions north of Kelvin Court and east of Kelvin Avenue would be installed to specifically deliver municipal water to the adjacent properties along the route; therefore those properties are required to pay 100% of the infrastructure extension cost. A unit assessment of \$12,000 to 5 residential properties is proposed to be assessed along Kelvin Avenue (north of Kelvin Court). A unit assessment of \$24,500 to 2 residential properties is the proposed unit assessment for 3505 and 3509 Kelvin Avenue. Feedback from these neighborhoods should be considered on whether or not to proceed with the lateral watermain improvements. The detailed breakdown of the proposed improvements and corresponding assessment amounts for each watermain project is provided in the “Financing of Improvements” section of this Report.

In addition to the recommended improvements, the estimated project costs and the proposed assessments, this Report addresses the permitting requirements and the easement and right-of-way acquisition needed to implement the improvements. The recommended Project Improvements are necessary, cost-effective, and feasible and will result in a benefit to the properties proposed to be assessed. It is recommended that the city council accept this Report, hold the public hearing, and order the improvements.

I. PROJECT INITIATION AND SCOPE

This project was initiated as part of the city's Street Capital Improvement Plan (CIP). The preparation of this feasibility report for the 2016 Street, Drainage and Utility Improvements was authorized by the city council on August 4, 2015, after reaffirming the Capital Improvement Program and the designated 2016 street segments to be considered.

This Report is a desktop study, based on street pavement rating observations, street inventory measurements, record drawings, aerial photography, aerial contours, Washington County plat records, the 2030 Comprehensive Water System Plan, and city utility maps. Field observations were made to review and evaluate the severity of the distresses in the pavement, and a geotechnical investigation was completed to determine the in place pavement section and the underlying subbase soil characteristics for each of the street segments. Topographic surveys were not completed as part of this report. It has been assumed that the general drainage characteristics of each neighborhood can be preserved or improved as the improvements are implemented, however this must be verified as part of the detailed design for the selected improvements.

A geotechnical investigation was completed as part of this report to determine the in place pavement section for each of the street segments, including the bituminous and aggregate base, and the underlying subbase soil characteristics. Along with the geotechnical investigation, field observations were also made to determine the severity of the distresses in the pavement.

II. PROJECT AREA CHARACTERISTICS

Kirkwood Avenue North is a gravel road that is 1,905 feet long with a large diameter gravel cul-de-sac at the north end. The roadway resides within a 60 foot right-of-way, however the gravel cul-de-sac resides outside of the right-of-way. GIS measurements indicate approximate road width of 22 feet. The existing gravel thickness was measured at 6 inches in a few areas, but is also as low as 2 inches thick in other areas. Below the gravel is a silty sand and sandy lean clay subgrade that is moderately high in frost heave potential and slow draining. The street surface has a good center crown which drains the road to existing ditches alongside the road edges. City mapping indicates a culvert crossing at the approximate midpoint of this street. This culvert would stay in place unless it was determined to be replaced during the detailed design phase. Some minor ditching will be required to facilitate drainage from the

proposed cul-de-sac area. The properties along Kirkwood Avenue North are served by private wells and individual sewage treatment systems. There are no future plans to extend public utilities to the area at this time.

Records from the Street Inventory indicate that Kelvin Avenue North was last paved in 1980 and is 1,095 feet long and 22 feet wide from edge of bituminous to edge of bituminous. The right-of-way is 66 feet between Stillwater Lane and Kelvin Court and is undefined between Trunk Highway 5 and Stillwater Lane. There is a 495 foot long private drive serving 8 properties just north of Kelvin Court which acts as an extension of Kelvin Avenue. The City owns an Outlot adjacent to the private drive and therefore owns half of the right-of-way for the private drive. There is no curb along these street segments with drainage being handled along roadway edges.

Records also indicate that Kelvin Avenue was last seal coated in 1993. The bituminous pavement is significantly distressed with severe alligator and edge cracking throughout the entire segment currently owned by the city. The private segment does not show significant surface distresses at this time. A soil boring taken in the private segment indicates 2.75 inches of bituminous and 3-inches of aggregate base on a clayey sand subgrade. There is no existing storm sewer. Some minor ditching and driveway culvert construction will be determined during the detailed design phase.

An existing 12-inch diameter trunk watermain is located at the intersection of Kelvin Court North and Kelvin Avenue North. Record Drawings indicate this watermain was installed in October of 2006. The properties along Kelvin Avenue North are served by individual sewage treatment systems. There are no future plans to extend municipal sanitary sewer to the area at this time.

The Stonegate 1st Addition development was constructed in 1992 with 60-foot right-of-way and 30-foot wide streets with bituminous curb. The streets provide local access to approximately 32 residential properties and a City Park. The streets include 9th Street North, 1,340 feet long with 2 center island cul-de-sacs at the east and west ends (drive lanes around the cul-de-sacs are 22 feet wide from face of curb to face of curb); Jasmine Avenue Place North, 600 feet long with a center island cul-de-sac at the south end (drive lane around the cul-de-sac is 22 feet wide from face of curb to face of curb); and Jasmine Avenue from 10th Street (CSAH 10) to Julep Avenue North, 3,025 feet long with a 45-foot radius bump out to serve the City Park.

Records indicate that the Stonegate 1st Addition streets were last crack sealed in 1999 and seal coated in 2001. The streets within this neighborhood have severe alligator cracking and potholes forming in greater areas each winter cycle. The bituminous curb has minimal height and is damaged and distressed. The existing storm sewer system consists of 12-inch to 42-inch reinforced concrete pipe with catch basins along Jasmine Avenue North and within the 9th Street North cul-de-sac to the east. One outlet exists at the low point of Jasmine Avenue North and at the 9th Street North cul-de-sac to the east. The storm sewer catch basins and piping appear to remain functional and can be salvaged. All catch basin castings are in need of replacement with new rings and infa-shields to minimize future subsurface infiltration of water. Geotechnical testing indicated that the existing road thickness and underlying soils are suitable for a street reclamation improvement. The average thickness of existing bituminous is 3 ¾ inches and the apparent underlying gravel base layer has an average thickness of over 12 inches. Most of the subgrade appears reasonably stable. There are some areas of unstable clayey soils below 2 feet that tend to be offset by the relatively thick overlying aggregate base layer. The properties in the Stonegate 1st Addition are served by private wells and individual sewage treatment systems. There are no future plans to extend public utilities to the area at this time.

III. PROPOSED STREET & DRAINAGE IMPROVEMENTS

Street reconstruction is proposed for Kirkwood Avenue North provided the property owners continue to support a project to upgrade the existing gravel road to a paved surface. The geotechnical investigation concluded that Kirkwood Avenue North did not have sufficient aggregate base materials to support a low cost shape and pave improvement. Most of the soil borings showed minimal to no aggregate base or aggregate base intermixed with a clayey/silty soil that would not be able to provide adequate structural support to a newly paved surface. Therefore the project will require the construction of a new engineered base and subbase prior to paving.

The reconstruction process includes the removal of the existing roadway base material to a depth to accommodate a new street thickness that includes a 1-foot sand subbase with draitile at low points, a new 4-inch aggregate base layer and a new 3.5-inch bituminous surface. A reconstruction improvement is necessary to remove and replace the unstable subbase soils and construct a uniform 7-ton engineered pavement section that includes a sand subbase drainage layer to protect the new roadway from future frost heave failures. High strength and stability are needed from the upper portion of the subgrade to resist yielding from wheel loads. Although load intensity dissipates with depth, the more critical portion

requiring high strength for wheel load resistance is normally considered the upper 3 feet of the subgrade, referred to as the critical subgrade zone. That is why it is necessary to test, review and correct unstable soils to a depth of 3 feet during construction. A 1-foot sand subbase helps to consistently address the presence of unstable soils while providing a controlled uniform layer of support to the road. A 1-foot wide gravel shoulder will be placed along the street for edge control. The street will utilize the existing ditches and street culverts to distribute storm water runoff away from the street. Minor ditching within the city right-of-way is required off of the cul-de-sac area to facilitate drainage.

Street reconstruction is also proposed for Kelvin Avenue North. The reconstruction includes a 1-foot sand subbase with draitile, new 4-inch aggregate base layer and a new 3.5-inch thick bituminous surface. Reconstruction is necessary of Kelvin Avenue North due to absence of a consistent aggregate base (or none present at all) and the pavement distresses observed. Concrete ribbon curb is proposed along the street to protect the street edge and to improve drainage and construction quality. Edge protection is critical to the long-term success of the new street, especially with the significant failures observed along the edge of this street today. The existing ditch section is adequate along Kelvin Avenue North to accommodate the roadway drainage. There will be some minor ditch grading and driveway culvert construction to improve minor drainage deficiencies.

Reconstruction of the private street north of Kelvin Court is recommended if these properties request the extension of watermain. With the installation of watermain and the fact that the City owns half of the private drive right-of-way, we are recommending that the street be reconstructed to City standards and converted to a public roadway. This will require the adjacent properties to provide the remaining right-of-way to the city for the street improvement. A minimum 45-foot radius cul-de-sac at the north end will also be required for snow plow and emergency vehicle turning movements.

Street reclamation is proposed for the streets within the Stonegate 1st Addition including Jasmine Avenue North, Jasmine Avenue Place North, and 9th Street North. This improvement will provide a new bituminous surface supported by a renewed recycled aggregate base. Geotechnical investigations along the Stonegate 1st Addition street segments indicated that there is adequate bituminous pavement and aggregate base material in place to employ a reclaim of approximately 8 inches in depth and to pave a new bituminous surface to the approximate existing street grades and elevations. The proposed project would keep the streets at the existing centerline to limit or minimize the construction grading and drainage impacts to adjacent properties. Maintaining the existing grading and drainage conditions, with

minimal change, is very important to controlling overall project costs. The center island cul-de-sacs will remain in place with the same driving lane widths around them. Concrete curb and gutter will be placed along these streets to direct storm water to the existing catch basin inlet structures. This concrete curb and gutter will protect the edge of the pavement and provide improved construction tolerance capability for drainage of the roadway. The curb height is proposed to be 4 inches tall to allow the recycled material to remain in place, while minimizing the match-in grades to the boulevard areas. The street reclamation project, therefore, will replace the existing street surfaces in place, approximating the existing location and conditions to the greatest extent possible.

IV. PROPOSED WATERMAIN IMPROVEMENTS

Staff is recommending that 12-inch diameter trunk watermain be installed as part of the Kelvin Avenue North Street Improvement Project. The 2030 Water System Comprehensive Plan identifies the need for a 12-inch diameter trunk watermain loop to connect the Tapestry development north of Sunfish Lake Park to the future 12-inch diameter trunk line along Old TH 5. This main is partially constructed through Sunfish Lake Park and into the Parkview Meadows subdivision. If the street along Kelvin Avenue North is reconstructed the trunk watermain extension should be coordinated as part of this project. There are 7 properties along this trunk route would receive a water service stub. Per the current assessment policy and City fee schedule each of the 7 properties would be assessed a lateral benefit charge of \$5,800 per REC unit. The Common Ground Church is estimated to be 2 REC units.

In response to a request for city water service this report also addresses the proposed improvements and associated costs to extend an 8-inch diameter lateral watermain along a private drive north of the Kelvin Avenue and Kelvin Court intersection. The lateral watermain would be extended approximately 570 feet to the cul-de-sac on the north end and would provide city water service to 5 existing properties. Should these properties desire municipal water service, adequate right-of-way would need to be provided to implement the improvement.

More recently, the city received a second petition to extend watermain from Kelvin Court to the east side of Kelvin Avenue, which would provide water service to 3503 and 3505 Kelvin Avenue North. A 6-inch diameter lateral watermain would be extended approximately 490 feet from Kelvin Court to the east along the shared driveway used by 3503 and 3505 Kelvin Court. It is recommended that the unit assessments be presented to these two properties and the improvements made should they support the

improvement for the proposed assessment amount. This improvement would provide city water service to 2 existing properties.

The special assessment presented in the Report covers the construction of the trunk and lateral watermain and service stub to the property line. When a property connects to city water, they must hire a licensed plumber to run a line from their home to the service stub at their cost. In addition, property owners would need to pay a \$1,000 Water Connection Charge, \$3,000 Water Availability Charge (WAC), \$300 Meter Installation and Permit Fees per the current City Fee Schedule.

V. IMPACTS OF PROPOSED IMPROVEMENTS

Choosing not to complete the proposed improvements on the paved streets (Kelvin Avenue and Stonegate 1st Addition) would result in the continued degradation of these city streets. The street pavements are beyond their useful service life and distresses will become more severe. Continuing to fund routine maintenance on these streets, such as patching, pothole repairs and overlays will become more expensive and less effective as the repair needs become more substantial and frequent. If the streets in the Stonegate 1st Addition are not improved, they will continue to degrade to a point beyond the ability to apply a standard reclamation process, and a more expensive solution, such as a full reconstruction, may be required.

Kirkwood Avenue is currently a gravel road that requires specific maintenance practices for the Public Works Department to address (i.e. grading, addition of aggregate base, dust control, etc.). The work is contracted out by the City. Should the Council decide not to pave this street, standard gravel road maintenance would continue. The residents along this street petitioned for it to be paved in 2011. Given the economy and budgetary status of the city at that time, the Council did not authorize a feasibility report. Instead, the Council directed staff to program this street improvement in the Street CIP to be completed no sooner than 2016. The residents would pay 100% of the paving costs, and 30% of all other cost, such as base and shouldering improvements.

Choosing not to complete the proposed lateral watermain improvements to serve new properties with municipal water should be based on feedback from the benefitting property owners. Choosing not to complete the proposed trunk watermain improvements at this time would not allow those extensions to be coordinated with the street improvements. If the trunk watermain improvements are completed

within the useful life of the newly reconstructed street, it may require the use of trenchless methods at a higher cost than open trench methods to install the watermain pipe and will require new excavations in the newly constructed pavements.

Should a construction project be pursued as recommended there are several short term impacts that will affect properties adjacent to the surrounding project area. Short-term traffic delays, construction dust and noise, minor tree loss, and erosion will occur during construction of the improvements. Efforts to minimize these impacts include resident communications, proper construction traffic signage, restriction of work hours, and implementation of dust and erosion control measures. Special efforts will be required by the contractor to maintain access to properties and access for emergency vehicles. Driveways and boulevard areas will be impacted with curb and ditch improvements. For new curb areas, disturbances will occur approximately five feet behind curb into the boulevard and driveway areas. For new ditch areas, disturbances may extend to the city's right-of-way depending on the existing grades to match in front yards. This will require the property owners to relocate all private property located within city right-of-way including any underground sprinkler systems or invisible dog fences prior to construction. Mailboxes will be removed and relocated by the contractor to facilitate the curb installation. Disruptions that occur to existing yards and driveways will be restored consistent with general construction practices, however it is not always possible to restore to pre-existing conditions. Construction impacts can be mitigated through the use of proper construction specifications and best management practices.

VI. RIGHT-OF-WAY AND EASEMENTS

All improvements are proposed within existing City right-of-way or prescriptive easements with the exception of the watermain extension along Kelvin Avenue, proposed to be installed along a private shared driveway. To proceed with the watermain extension along Kelvin Avenue and to convert the private drive to a City owned street (the segment of Kelvin Avenue north of Kelvin Court), right-of-way acquisition will be required from seven properties. This report assumes that this right-of-way will be dedicated to the City at no cost in order to allow the improvements to be installed as requested by these property owners. Staff will also need to review the assumption of prescriptive easement to accommodate the proposed cul-de-sac improvement at the north end of Kirkwood Avenue North. The existing gravel turnaround extends beyond the existing 60 foot right-of-way adjacent to this property. The proposed paved turnaround will be slightly smaller than the existing gravel turnaround providing

staff with the confidence that the improvement can be installed without additional right-of-way acquisition. In the Stonegate subdivision, each of the three cul-de-sacs appear to have the existing paved surface extended up to the existing right-of-way leaving only the drainage and utility easement beyond the right-of-way to accommodate the temporary construction limits needed to complete the project. Since the proposed improvement is a reclaim of the street surface with no adjustment in grade or alignment staff believes that the improvement can be implemented as proposed without additional right-of-way or easements. Each of these situations will require further analysis during the detailed design phase of the project.

VII. PERMITS AND APPROVALS

The following permits will be required to implement the proposed improvements:

- Valley Branch Watershed District Permit for stormwater management and erosion control.
- MPCA NPDES Construction Permit for stormwater management and erosion control.
- Minnesota Department of Health (MDH) Watermain Extension Permit.
- Washington County Right-of-Way Permit to complete work within the County R/W.

VIII. SUMMARY OF ESTIMATED PROJECT COSTS

Included in the Appendix is the detailed estimate of probable Project costs including construction, engineering, geotechnical investigations, and contingencies. An allowance for coordination to convert the private portion of Kelvin Avenue to city right-of-way has been included, no other allowance has been provided to acquire easement and right-of-way. A 3% allowance is included for legal, fiscal and administration costs per past practices and direction by the City Finance Director.

These cost estimates are based on recent construction projects of similar character and assume that the proposed improvements would begin in 2016. The actual project costs will be determined through a competitive bidding process and will vary with market conditions at the time of the bid.

| | |
|--|--------------------|
| Total estimated project cost for the 2016 Street & Drainage Improvements: | \$1,195,000 |
|--|--------------------|

- | | |
|-------------------------|-----------|
| • Kirkwood Avenue North | \$251,000 |
| • Kelvin Avenue North | \$290,000 |

- Stonegate 1st Addition \$654,000

Total estimated project cost for the 2016 Watermain Improvements: \$214,000

- Kelvin Avenue North – Trunk Watermain \$105,000
- Kelvin Avenue North – Lateral Watermain (N of Kelvin Ct) \$60,000
- Kelvin Avenue North – Lateral Watermain (E of Kelvin Ave) \$49,000

IX. FINANCING OF IMPROVEMENTS

The street and drainage improvements portion of this project will be partially financed by imposing special assessments against the benefiting properties. Special assessments are levied in accordance with Minnesota Statutes Chapter 429 and the City of Lake Elmo Special Assessment Policies and Procedures for Public Improvements, amended June 17, 2014. Benefiting properties for the street and drainage improvements are defined as properties abutting the improvement or gaining access to their property from the streets that will be improved. Each lot will receive improved access for the property owner and provide equal use by service vehicles that serve the lot. There are fifty-seven (57) assessable properties for this improvement. Common Ground Church is a non-residential lot along Kelvin Avenue North and therefore will be assessed 100% by the front footage method that is adjusted by their average percentage of trips, which calculates to an assessment of \$13,400. The preliminary assessment rolls are included in the appendix of this Report for each improvement area.

The total estimated project costs for the proposed Street and Drainage Improvements and corresponding assessment amounts are listed in the table below:

| Proposed Improvement | Total Estimated Project Costs | CITY SHARE OF PROJECT COST | ESTIMATED PER UNIT ASSESSED RATE |
|--|--------------------------------------|-----------------------------------|---|
| Kirkwood Avenue Reconstruction | \$251,000 | \$113,000 | \$13,800 |
| Kelvin Avenue Reconstruction | \$290,000 | \$188,200 | \$5,200 |
| Stonegate 1 st Addition Reclamation | \$654,000 | \$456,000 | \$6,000 |

The watermain improvement portion of this project will be funded through a combination of the City's Water Enterprise Fund and special assessments. Because the trunk watermain extensions serve the entire water supply system, and therefore all existing and future users of the city water supply, the project is considered a CORE Water Infrastructure and is funded through the Water Enterprise Fund. The city collects Water Availability Charges and Water Connection Charges from each user connecting to the system to pay for CORE water infrastructure improvements, either directly or through bond repayments.

In addition to the above funding source, it is recommended that the city impose special assessments against the properties benefiting from the watermain improvements. Special assessments are levied in accordance with Minnesota Statutes Chapter 429 and the City of Lake Elmo Special Assessment Policy. Following the assessment policy and recent assessment practices for similar projects, the city council should consider levying a lateral benefit assessment of \$5,800 to each of the existing housing units that are provided a water service stub along the trunk watermain extensions. In accordance with the 2015 City Fee Schedule, the city charges a \$5,800 lateral benefit charge to any property connecting to the city water system that has not been assessed for a watermain lateral. For the proposed new lateral watermain extensions (Kelvin Avenue Area: north of Kelvin Court and east of Kelvin Avenue), the Project is proposed to be assessed 100% to the benefitting properties. There are five (5) benefitting properties along Kelvin Avenue to extend 8-inch watermain north of Kelvin Court, and two (2) benefitting properties to extend 6-inch watermain east of Kelvin Avenue. When a property connects to city water, they must also pay a \$3,000 Water Availability Charge (WAC), a \$1,000 Water Connection Charge, a \$300 Meter Fee, and a \$65 Plumbing Permit Fee.

The total estimated project costs for the proposed Watermain Improvements and corresponding assessment amounts are listed in the table below:

| Proposed Improvement | Total Estimated Project Costs | City Share of Project Cost | Total Lateral Benefit Charge (\$5,800 / Unit) | Estimated Per Unit Assessed Rate for 8" Lateral Extension | Estimated Per Unit Assessed Rate for 6" Lateral Extension |
|-----------------------------|--------------------------------------|-----------------------------------|--|--|--|
| Kelvin Avenue Watermain | \$214,000 | \$58,600 | \$46,400 | \$12,000 | \$24,500 |

The City may use fund reserves or bonds for the Project improvements to pay the up-front project costs and to cover City cost participation. Special assessments would be levied against the benefiting properties with payment terms structured so that the City receives funds to meet debt obligations. If bonds are sold to finance the improvements, the interest rate on the assessment would be charged at the coupon rate plus 2%. If no bonds are sold, the interest rate would be set at the rate allowed by State law.

It is recommended that the street improvements be levied over a 10-year period and the watermain improvements be levied over a 15-year period. Assuming an assessment is levied in the amount of 6% interest, the property owner, if they choose to finance the assessment, would be required to pay an estimated annual payment as listed in the assessment payment schedule included in the appendix of this Report.

X. PROJECT SCHEDULE

The following schedule is proposed to accommodate construction of the improvements in 2016:

| | |
|--------------------|---|
| August 4, 2015 | Council orders preparation of Feasibility Report. |
| October 6, 2015 | Presentation of Feasibility Report. Council accepts the Report and calls for Hearing on Improvement. |
| November 3, 2015 | Public Improvement Hearing. Council passes resolution ordering Improvement and preparation of Plans and Specifications. |
| February 16, 2016 | Council approves Plans and Specifications and Orders Advertisement for Bids. |
| March 17, 2016 | Receive contractor bids. |
| April 5, 2016 | Council accepts bids and awards Contract. |
| May 2, 2016 | Conduct Pre-Construction Meeting and issue Notice to Proceed. |
| August 12, 2016 | Substantial completion. |
| September 30, 2016 | Final completion. |

XI. CONCLUSIONS AND RECOMMENDATIONS

The street pavement surfaces along Kelvin Avenue North and within the Stonegate 1st Addition are beyond their useful service life and show surface distresses suggesting improvements are needed at this time. Street reconstruction is recommended for Kelvin Avenue North with the placement of a new bituminous surface and the installation of new concrete curb and gutter. The streets within the Stonegate 1st Addition continue to increase in surface distresses, to a point where staff is concerned that the city will miss the opportunity to address these street segments using a lower cost street reclamation process. Therefore the Report recommends the in-place bituminous and aggregate base be reclaimed with the placement of new bituminous surface and the installation of new concrete curb and gutter in the year 2016 to avoid a higher cost street improvement in the future.

In 2011, Kirkwood Avenue North residents petitioned the city to pave their existing gravel street. The Council directed staff to schedule these improvements in the street capital improvement program to be completed in 2016. As part of this feasibility report, a soil boring analysis and site review concluded that a low cost shape and pave improvement of the existing gravel surface was not feasible. The conclusion from this additional analysis is that a full street reconstruction be completed in order to support a new paved surface with gravel shoulders.

Trunk watermain improvements are proposed along Kelvin Avenue North to complete a trunk watermain loop as identified in the city's 2030 Comprehensive Water System Plan. The trunk main is needed as part of the city's distribution network. Staff recommends that the trunk watermain installation be coordinated at the time the streets are being reconstructed along the identified watermain route (Kelvin Avenue North). The lateral watermain extensions to serve Kelvin Avenue (north of Kelvin Court and east of Kelvin Avenue to 3503 and 3505) were included in the Report in response to petitions for city water, and are recommended only with the support of each benefitting neighborhood. If the property owners and council choose to move forward with the watermain extension, staff recommends that the utility be constructed at the time of the street improvement and that consideration be given to converting the exiting private drive to a publically owned street.

The street, drainage, and watermain improvements, as proposed in this Report, are technically and financially feasible, are necessary, cost effective, and will result in a benefit to the properties proposed to be assessed. It is recommended that the city council accept this Report, hold the public hearing, and order the improvements.

APPENDIX



LEGEND

 2016 STREET IMPROVEMENTS



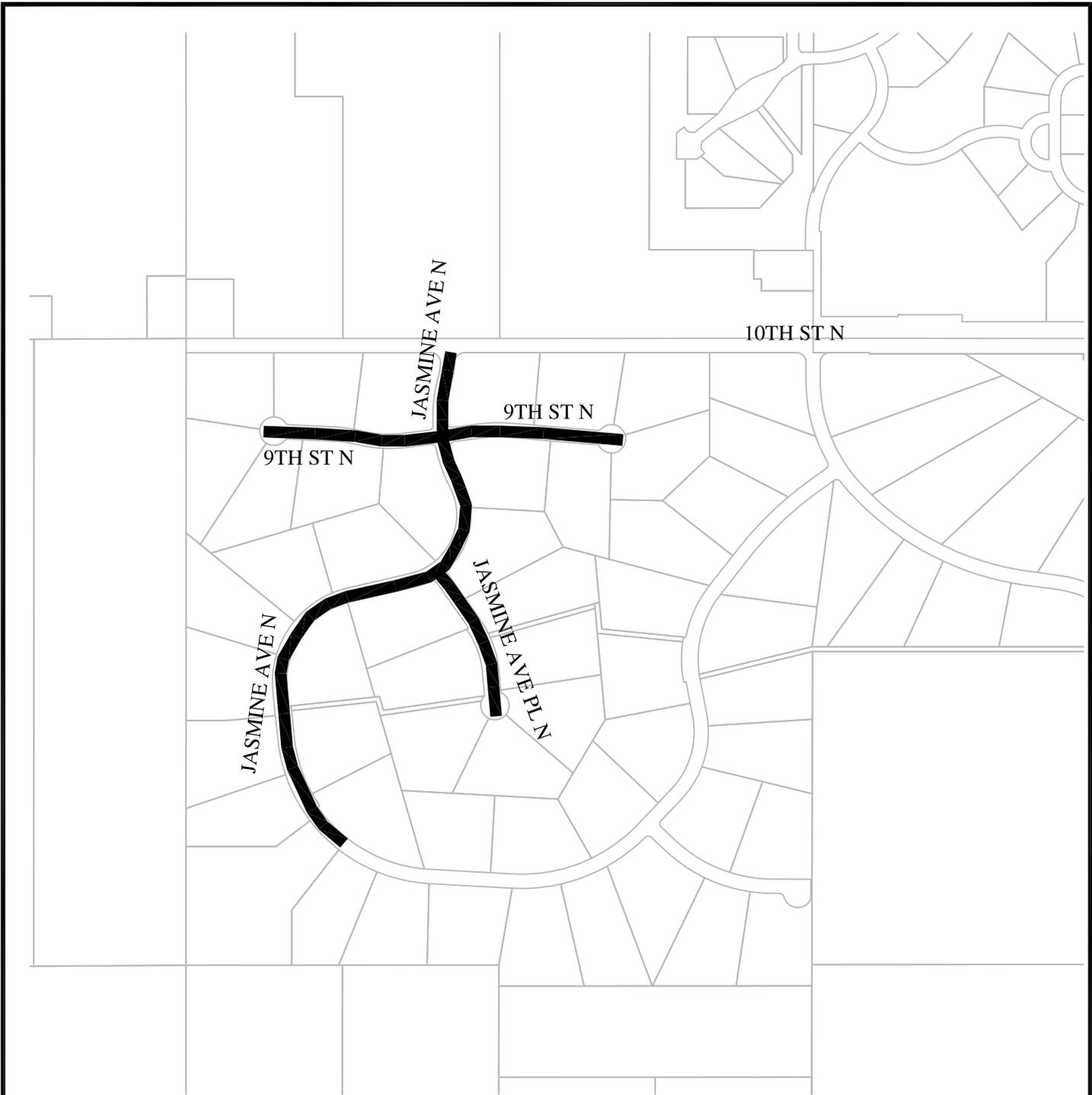
FIGURE NO. 1

LOCATION MAP

KIRKWOOD AVENUE NORTH &
KELVIN AVENUE NORTH

FOCUS
ENGINEERING

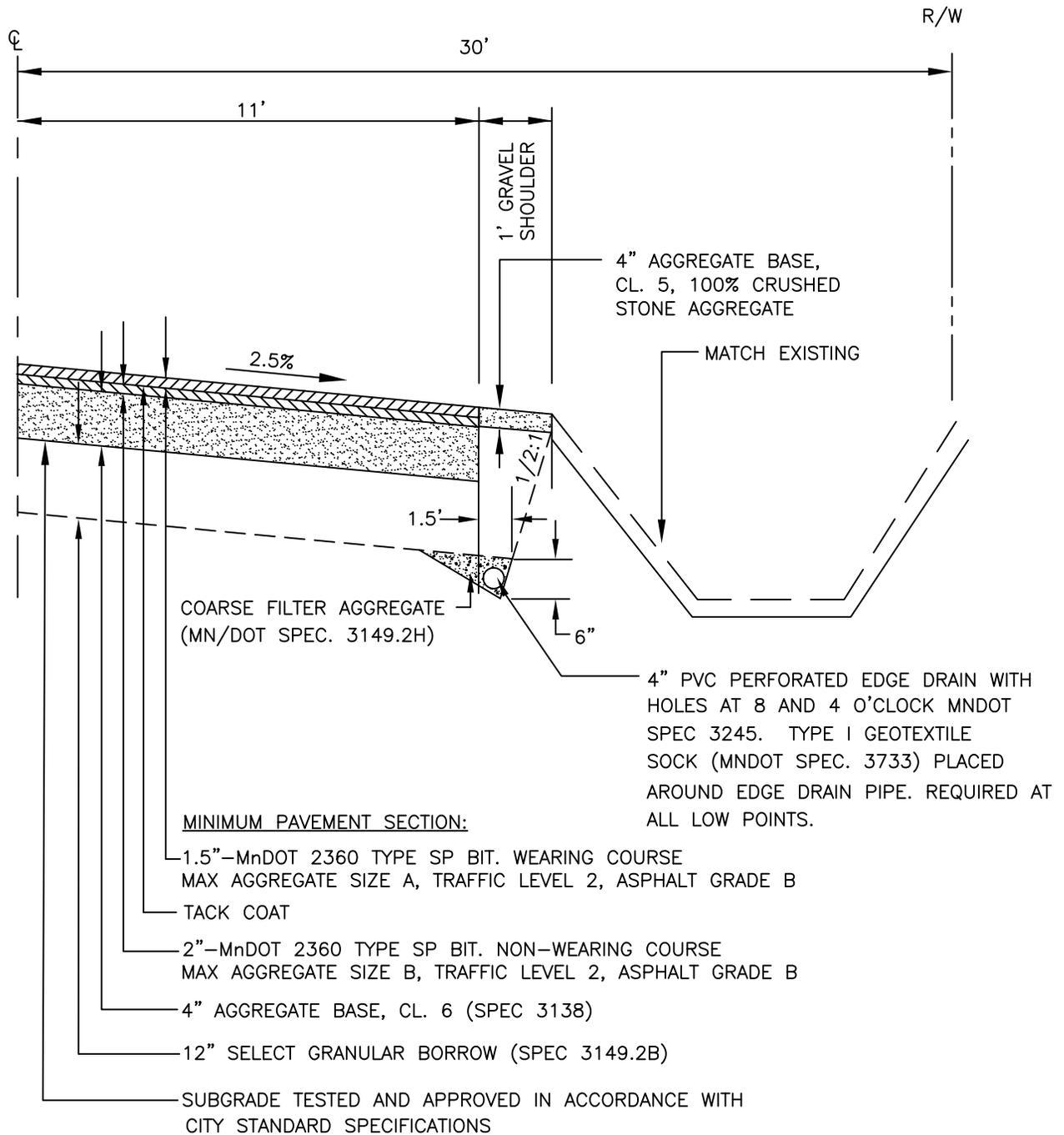
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LEGEND

 2016 STREET IMPROVEMENTS

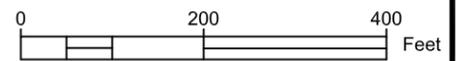


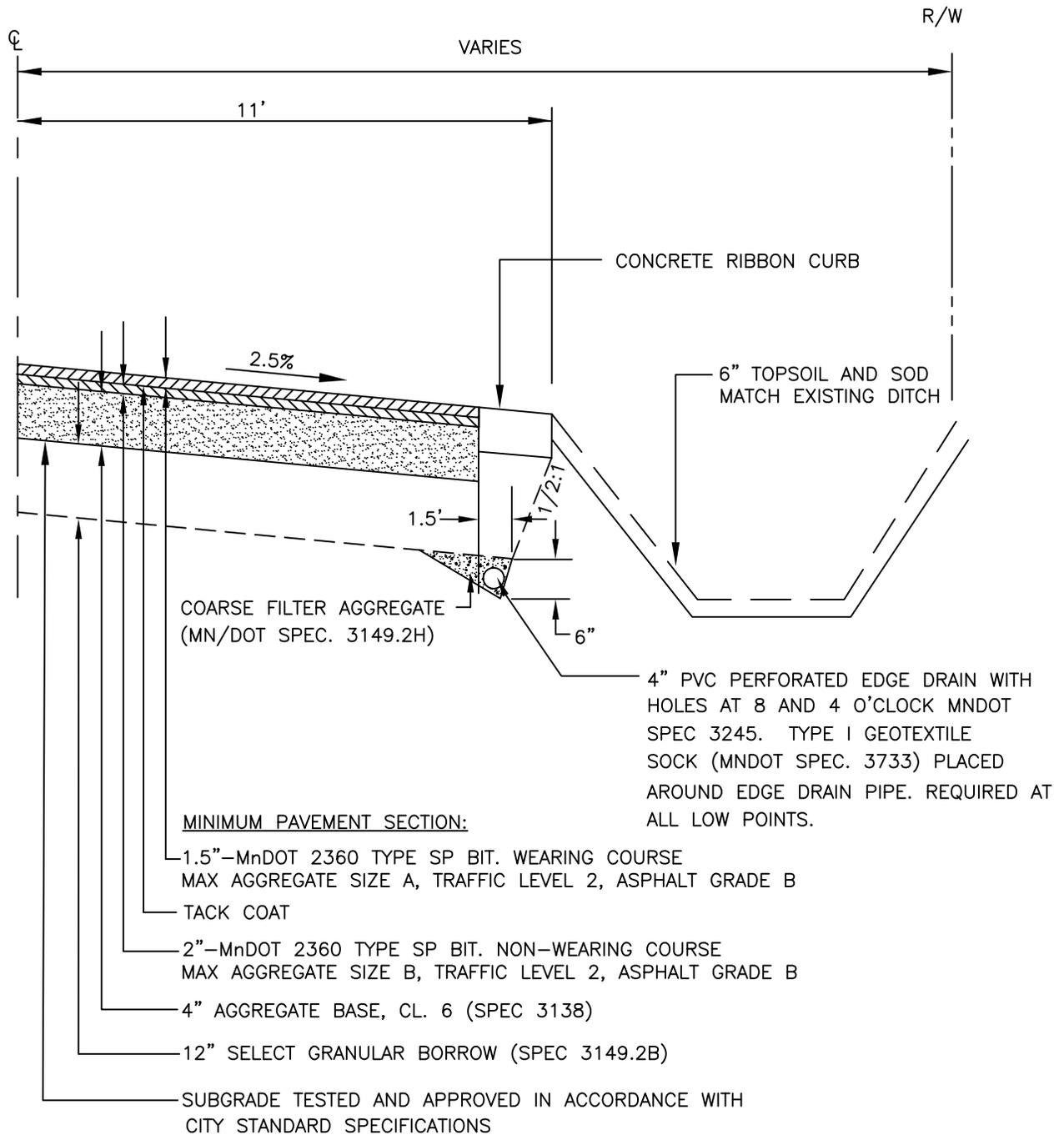


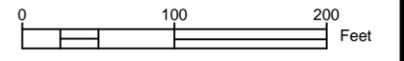


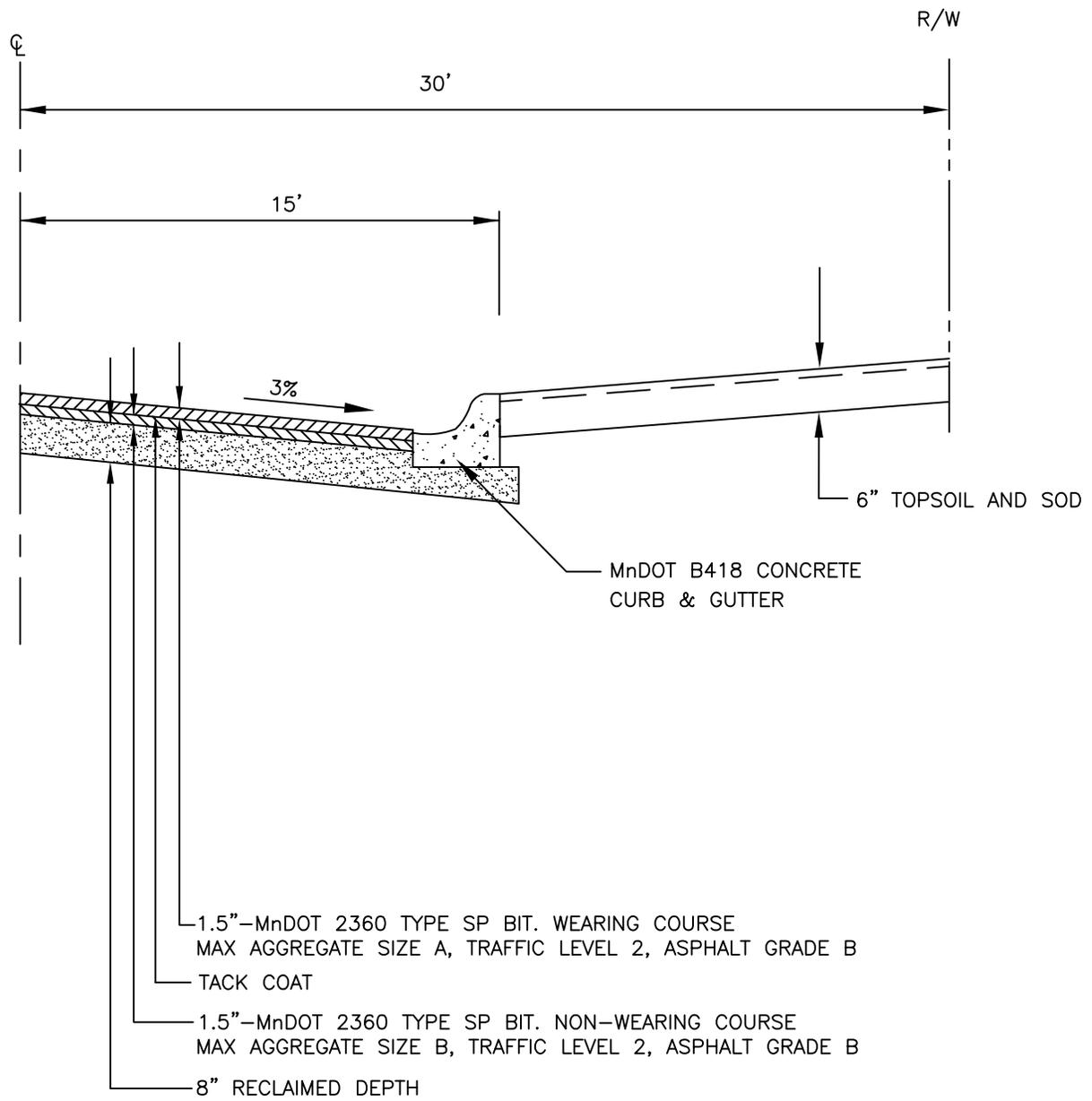
LEGEND

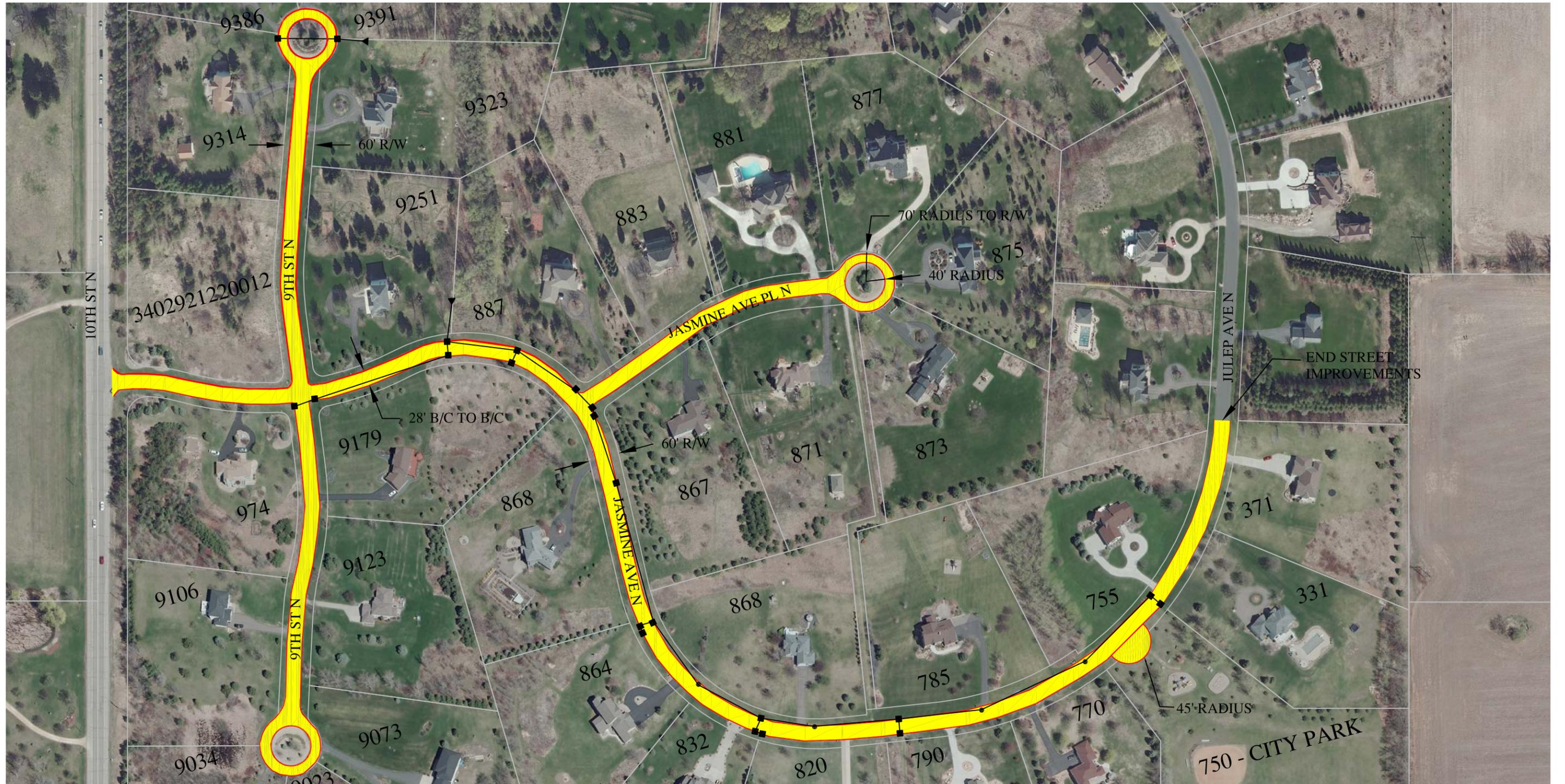
 FULL RECONSTRUCTION: NEW BITUMINOUS SURFACE
22' WIDE WITH 1' GRAVEL SHOULDER











LEGEND



RECLAIM WITH CONCRETE CURB AND GUTTER



EXISTING STORM MANHOLE



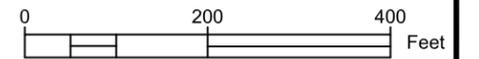
EXISTING RCP STORM PIPE



EXISTING CATCH BASIN



EXISTING FLARED END SECTION



2016 STREET IMPROVEMENTS FEASIBILITY REPORT
 CITY OF LAKE ELMO, MINNESOTA
 FOCUS PROJECT NO. 2015.129



ENGINEER'S OPINION OF PROBABLE COST
 KIRKWOOD AVENUE - FULL STREET RECONSTRUCTION TO 22 FEET IN WIDTH (W/ 1-FOOT GRAVEL SHOULERS)

DATE: SEPTEMBER 2015

| Item | Description | Quantity | Unit | Unit price | Total Cost |
|--|--|----------|------|------------|------------------|
| 1 | MOBILIZATION | 1.00 | LS | \$9,000.00 | \$9,000 |
| 2 | TRAFFIC CONTROL | 1.00 | LS | \$4,500.00 | \$4,500 |
| 3 | SILT FENCE | 1,815.00 | LF | \$2.25 | \$4,084 |
| 4 | BIOROLL DITCH CHECK | 10.00 | EA | \$200.00 | \$2,000 |
| 5 | SALVAGE MAILBOX | 7.00 | EA | \$30.00 | \$210 |
| 6 | SAWCUT PAVEMENT (ALL TYPES) | 140.00 | LF | \$3.00 | \$420 |
| 7 | COMMON EXCAVATION (CV) (P) | 3,039.34 | CY | \$9.00 | \$27,354 |
| 8 | SUBGRADE CORRECTION | 443.67 | SY | \$10.00 | \$4,437 |
| 9 | SUBGRADE PREPARATION | 19.05 | RS | \$200.00 | \$3,810 |
| 10 | SELECT GRANULAR BORROW (CV), SPEC 3149.2B | 1,870.36 | CY | \$12.00 | \$22,444 |
| 11 | CLASS 6 AGGREGATE BASE | 1,305.41 | TN | \$14.00 | \$18,276 |
| 12 | BITUMINOUS NON-WEARING COURSE | 598.63 | TN | \$62.00 | \$37,115 |
| 13 | BITUMINOUS WEARING COURSE | 448.97 | TN | \$65.00 | \$29,183 |
| 14 | BITUMINOUS MATERIAL FOR TACK COAT | 351.64 | GAL | \$3.00 | \$1,055 |
| 15 | BITUMINOUS DRIVEWAY PAVING | 155.56 | SY | \$20.00 | \$3,111 |
| 16 | AGGREGATE SHOULDERING | 105.63 | TN | \$20.00 | \$2,113 |
| 17 | 4" PVC PERF EDGE DRAIN W/BACKFILL & WRAP | 1,200.00 | LF | \$6.00 | \$7,200 |
| 18 | DITCH GRADING | 200.00 | LF | \$11.00 | \$2,200 |
| 19 | IMPORT AND PLACE TOPSOIL | 363.75 | CY | \$15.00 | \$5,456 |
| 20 | SEEDING, FERTILIZER AND WOOD FIBER BLANKET | 2,182.47 | SY | \$2.15 | \$4,692 |
| 21 | INSTALL SALVAGED MAILBOX | 7.00 | EA | \$70.00 | \$490 |
| Subtotal Estimated Construction Cost: | | | | | \$190,000 |
| Contingencies: | | | | \$19,000 | |
| Easement and Right-of-way Acquisition: | | | | \$0 | |
| Engineering Services (Report, Design and Construction Administration): | | | | \$23,000 | |
| Full-Time Construction Observation: | | | | \$10,000 | |
| Geotechnical Engineering: | | | | \$3,000 | |
| Legal, Fiscal and Administration: | | | | \$6,000 | |
| Total Estimated Project Cost: | | | | | \$251,000 |

*The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.

2016 STREET IMPROVEMENTS FEASIBILITY REPORT
CITY OF LAKE ELMO, MINNESOTA
FOCUS PROJECT NO. 2015.129



ENGINEER'S OPINION OF PROBABLE COST
KELVIN AVENUE STREETS -REPLACED TO 22 FEET IN WIDTH (W / RIBBON CURB)

DATE: SEPTEMBER 2015

| Item | Description | Quantity | Unit | Unit price | Total Cost |
|--|--|----------|------|-------------|------------------|
| 1 | MOBILIZATION | 1.00 | LS | \$10,500.00 | \$10,500 |
| 2 | TRAFFIC CONTROL | 1.00 | LS | \$5,300.00 | \$5,300 |
| 3 | SILT FENCE | 2,070.00 | LF | \$2.25 | \$4,658 |
| 4 | SALVAGE MAILBOX | 11.00 | EA | \$30.00 | \$330 |
| 5 | SAWCUT PAVEMENT (ALL TYPES) | 478.00 | LF | \$3.00 | \$1,434 |
| 6 | REMOVE & DISPOSE OF EXIST. BITUMINOUS PAVEMENT | 4,283.53 | SY | \$3.00 | \$12,851 |
| 7 | REMOVE & DISPOSE OF EXIST. BITUMINOUS PAVEMENT (DRIVEWAYS) | 178.33 | SY | \$4.00 | \$713 |
| 8 | REMOVE & DISPOSE OF EXIST. CONCRETE PAVEMENT (DRIVEWAYS) | 88.89 | SY | \$7.00 | \$622 |
| 9 | COMMON EXCAVATION (CV) (P) | 2,584.34 | CY | \$9.00 | \$23,259 |
| 10 | SUBGRADE CORRECTION | 303.93 | SY | \$10.00 | \$3,039 |
| 11 | SUBGRADE PREPARATION | 15.90 | RS | \$200.00 | \$3,180 |
| 12 | SELECT GRANULAR BORROW (CV), SPEC 3149.2B | 1,590.36 | CY | \$12.00 | \$19,084 |
| 13 | CLASS 6 AGGREGATE BASE | 1,109.97 | TN | \$14.00 | \$15,540 |
| 14 | 2360 TYPE LV3 BITUMINOUS NON-WEARING COURSE | 427.42 | TN | \$62.00 | \$26,500 |
| 15 | 2360 TYPE LV4 BITUMINOUS WEARING COURSE | 320.57 | TN | \$65.00 | \$20,837 |
| 16 | BITUMINOUS MATERIAL FOR TACK COAT | 251.07 | GAL | \$3.00 | \$753 |
| 17 | 2360 TYPE LV4 BITUMINOUS WEAR COURSE, DRIVES | 178.33 | SY | \$20.00 | \$3,567 |
| 18 | 6"CONCRETE DRIVE | 88.89 | SY | \$40.00 | \$3,556 |
| 19 | SAW & SEAL STREET (40' INTERVALS) | 715.50 | LF | \$1.95 | \$1,395 |
| 20 | CONCRETE RIBBON CURB | 3,282.74 | LF | \$10.00 | \$32,827 |
| 21 | 4" PVC PERF EDGE DRAIN W/BACKFILL & WRAP | 1,600.00 | LF | \$6.00 | \$9,600 |
| 22 | 15" RCP STORM SEWER PIPE | 60.00 | LF | \$28.00 | \$1,680 |
| 23 | 15" FLARED END SECTION | 4.00 | EA | \$850.00 | \$3,400 |
| 24 | DITCH GRADING | 250.00 | LF | \$11.00 | \$2,750 |
| 25 | IMPORT AND PLACE TOPSOIL | 305.41 | CY | \$15.00 | \$4,581 |
| 26 | SEEDING, FERTILIZER AND WOOD FIBER BLANKET | 361.11 | SY | \$2.15 | \$776 |
| 27 | SODDING | 1,471.36 | SY | \$4.25 | \$6,253 |
| 28 | INSTALL SALVAGED MAILBOX | 10.00 | EA | \$70.00 | \$700 |
| 29 | INSTALL SIGN PANEL | 13.00 | EA | \$100.00 | \$1,300 |
| Subtotal Estimated Construction Cost: | | | | | \$221,000 |
| Contingencies: | | | | \$22,000 | |
| Easement and Right-of-way Acquisition: | | | | \$3,000 | |
| Engineering Services (Report, Design and Construction Administration): | | | | \$25,000 | |
| Full-Time Construction Observation: | | | | \$10,000 | |
| Geotechnical Engineering: | | | | \$2,000 | |
| Legal, Fiscal and Administration: | | | | \$7,000 | |
| Total Estimated Project Cost: | | | | | \$290,000 |

*The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.

KELVIN AVENUE TRUNK WATERMAIN IMPROVEMENTS
 CITY OF LAKE ELMO, MINNESOTA
 PROJECT NO. 2015.129



ENGINEER'S OPINION OF PROBABLE COST
 TRUNK WATERMAIN FROM KELVIN CT TO STILLWATER LANE

DATE: SEPTEMBER 2015

| Item | Description | Quantity | Unit | Unit price | Total Cost |
|--|----------------------------------|----------|------|------------|------------------|
| 1 | MOBILIZATION | 1 | LS | \$5,500.00 | \$5,500 |
| 2 | TRAFFIC CONTROL | 1 | LS | \$2,800.00 | \$2,800 |
| 3 | CONNECT TO EXISTING WATERMAIN | 1 | EA | \$2,000.00 | \$2,000 |
| 4 | 12" DIP, CL. 52 WATERMAIN | 800 | LF | \$52.00 | \$41,600 |
| 5 | 6" DIP, CL. 52 WATERMAIN | 70 | LF | \$39.00 | \$2,730 |
| 6 | 1" TYPE "K" COPPER WATER SERVICE | 200 | LF | \$28.00 | \$5,600 |
| 7 | 1" CORPORATION STOP | 6 | EA | \$250.00 | \$1,500 |
| 8 | 1" CURB STOP WITH BOX | 6 | EA | \$300.00 | \$1,800 |
| 9 | 6" HYDRANT ASSEMBLY (8'-6" BURY) | 2 | EA | \$4,400.00 | \$8,800 |
| 10 | 6" RES. SEAT GATE VALVE & BOX | 2 | EA | \$1,300.00 | \$2,600 |
| 11 | 12" RES. SEAT GATE VALVE & BOX | 2 | EA | \$3,000.00 | \$6,000 |
| 12 | MJ DIP COMPACT FITTINGS | 560 | LB | \$6.00 | \$3,360 |
| Subtotal Estimated Construction Cost: | | | | | \$84,000 |
| Contingencies: | | | | \$8,500 | |
| Easement and Right-of-way Acquisition: | | | | \$0 | |
| Engineering Services (Report, Design and Construction Administration): | | | | \$5,800 | |
| Full-Time Construction Observation: | | | | \$3,200 | |
| Geotechnical Engineering: | | | | \$500 | |
| Legal, Fiscal and Administration: | | | | \$2,500 | |
| Total Estimated Project Cost: | | | | | \$105,000 |

*The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.

**KELVIN AVENUE LATERAL WATERMAIN IMPROVEMENTS
CITY OF LAKE ELMO, MINNESOTA
PROJECT NO. 2015.129**



**ENGINEER'S OPINION OF PROBABLE COST
LATERAL WATERMAIN ALONG KELVIN AVE (NORTH OF KELVIN CT)**

DATE: SEPTEMBER 2015

| Item | Description | Quantity | Unit | Unit price | Total Cost |
|------|------------------------------------|----------|------|------------|------------|
| 1 | MOBILIZATION | 1 | LS | \$1,500.00 | \$1,500 |
| 2 | TRAFFIC CONTROL | 1 | LS | \$750.00 | \$750 |
| 3 | CONNECT TO EXISTING WATERMAIN | 1 | EA | \$2,000.00 | \$2,000 |
| 4 | 8" DIP, CL. 52 WATERMAIN | 570 | LF | \$42.00 | \$23,940 |
| 5 | 6" DIP, CL. 52 WATERMAIN | 20 | LF | \$39.00 | \$780 |
| 6 | 1" TYPE "K" COPPER WATER SERVICE | 80 | LF | \$28.00 | \$2,240 |
| 7 | 1" CORPORATION STOP | 5 | EA | \$250.00 | \$1,250 |
| 8 | 1" CURB STOP WITH BOX | 5 | EA | \$300.00 | \$1,500 |
| 9 | 6" HYDRANT ASSEMBLY (8'-6" BURY) | 1 | EA | \$4,400.00 | \$4,400 |
| 10 | 6" RES. SEAT GATE VALVE & BOX | 1 | EA | \$1,300.00 | \$1,300 |
| 11 | 8" RES. SEAT GATE VALVE & BOX | 1 | EA | \$1,800.00 | \$1,800 |
| 12 | MJ DIP COMPACT FITTINGS | 321 | LB | \$6.00 | \$1,926 |
| 13 | RESTORATION TO EXISTING CONDITIONS | 1 | LS | \$3,000.00 | \$3,000 |

Subtotal Estimated Construction Cost: \$46,000

Contingencies: \$4,600
 Easement and Right-of-way Acquisition: \$2,500
 Engineering Services (Report, Design and Construction Administration): \$3,300
 Full-Time Construction Observation: \$2,000
 Geotechnical Engineering: \$500
 Legal, Fiscal and Administration: \$1,400

Total Estimated Project Cost: \$60,000

*The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.

**KELVIN AVENUE LATERAL WATERMAIN IMPROVEMENTS
CITY OF LAKE ELMO, MINNESOTA
PROJECT NO. 2015.129**



**ENGINEER'S OPINION OF PROBABLE COST
6-INCH LATERAL WATERMAIN TO SERVE 3505 & 3509**

DATE: SEPTEMBER 2015

| Item | Description | Quantity | Unit | Unit price | Total Cost |
|--|------------------------------------|----------|------|------------|-----------------|
| 1 | MOBILIZATION | 1 | LS | \$1,500.00 | \$1,500 |
| 2 | TRAFFIC CONTROL | 1 | LS | \$500.00 | \$500 |
| 3 | CONNECT TO EXISTING WATERMAIN | 1 | EA | \$2,000.00 | \$2,000 |
| 4 | 6" DIP, CL. 52 WATERMAIN | 490 | LF | \$39.00 | \$19,110 |
| 5 | 2" TYPE "K" COPPER WATER SERVICE | 30 | LF | \$40.00 | \$1,200 |
| 6 | 2" CORPORATION STOP | 2 | EA | \$650.00 | \$1,300 |
| 7 | 2" CURB STOP WITH BOX | 2 | EA | \$750.00 | \$1,500 |
| 8 | 6" HYDRANT ASSEMBLY (8'-6" BURY) | 1 | EA | \$4,400.00 | \$4,400 |
| 9 | 6" RES. SEAT GATE VALVE & BOX | 2 | EA | \$1,300.00 | \$2,600 |
| 10 | MJ DIP COMPACT FITTINGS | 100 | LB | \$6.00 | \$600 |
| 11 | RESTORATION TO EXISTING CONDITIONS | 1 | LS | \$3,000.00 | \$3,000 |
| Subtotal Estimated Construction Cost: | | | | | \$38,000 |
| Contingencies: | | | | \$3,800 | |
| Easement and Right-of-way Acquisition: | | | | \$0 | |
| Engineering Services (Report, Design and Construction Administration): | | | | \$3,000 | |
| Full-Time Construction Observation: | | | | \$2,000 | |
| Geotechnical Engineering: | | | | \$500 | |
| Legal, Fiscal and Administration: | | | | \$1,200 | |
| Total Estimated Project Cost: | | | | | \$49,000 |

*The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.

ENGINEER'S OPINION OF PROBABLE COST

STONEGATE 1ST ADDITION - STREET RECLAMATION TO EXISTING WIDTH (W/ NEW CONCRETE CURB & GUTTER)

DATE: SEPTEMBER 2015

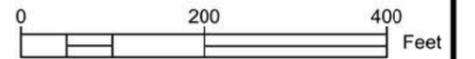
| Item | Description | Quantity | Unit | Unit price | Total Cost |
|------|--|-----------|------|-------------|------------|
| 1 | MOBILIZATION | 1.00 | LS | \$24,800.00 | \$24,800 |
| 2 | TRAFFIC CONTROL | 1.00 | LS | \$12,800.00 | \$12,800 |
| 3 | SILT FENCE | 1,500.00 | LF | \$2.25 | \$3,375 |
| 4 | INLET PROTECTION | 23.00 | EA | \$150.00 | \$3,450 |
| 5 | BIOROLL DITCH CHECK | 13.00 | EA | \$200.00 | \$2,600 |
| 6 | SALVAGE MAILBOX | 31.00 | EA | \$30.00 | \$930 |
| 7 | SAWCUT PAVEMENT (ALL TYPES) | 685.00 | LF | \$3.00 | \$2,055 |
| 8 | REMOVE & DISPOSE OF EXIST. BITUMINOUS PAVEMENT (DRIVEWAYS) | 231.11 | SY | \$4.00 | \$924 |
| 9 | REMOVE & DISPOSE OF EXIST. CONCRETE PAVEMENT (DRIVEWAYS) | 100.00 | SY | \$7.00 | \$700 |
| 10 | SUBGRADE CORRECTION | 1,150.83 | SY | \$10.00 | \$11,508 |
| 11 | RECLAIM EX. BIT. AND BASE MATERIALS, 8-INCH DEPTH | 19,843.09 | SY | \$0.90 | \$17,859 |
| 12 | SUBGRADE PREPARATION OF RECLAIMED SURFACE | 62.91 | RS | \$200.00 | \$12,582 |
| 13 | BITUMINOUS NON-WEARING COURSE | 1,576.26 | TN | \$62.00 | \$97,728 |
| 14 | BITUMINOUS WEARING COURSE | 1,576.26 | TN | \$65.00 | \$102,457 |
| 15 | BITUMINOUS MATERIAL FOR TACK COAT | 1,234.55 | GAL | \$3.00 | \$3,704 |
| 16 | BITUMINOUS DRIVEWAY PAVING | 408.89 | SY | \$20.00 | \$8,178 |
| 17 | 6" CONCRETE DRIVE | 100.00 | SY | \$40.00 | \$4,000 |
| 18 | SAW & SEAL STREET (40' INTERVALS) | 4,088.99 | LF | \$1.95 | \$7,974 |
| 19 | REMOVE AND REPLACE R-3067 CATCH BASIN CASTING | 23.00 | EA | \$800.00 | \$18,400 |
| 20 | ADJUST MANHOLE | 4.00 | EA | \$400.00 | \$1,600 |
| 21 | CONCRETE CURB & GUTTER | 12,009.73 | LF | \$11.00 | \$132,107 |
| 22 | IMPORT AND PLACE TOPSOIL | 1,144.59 | CY | \$15.00 | \$17,169 |
| 23 | SODDING | 6,867.55 | SY | \$4.25 | \$29,187 |
| 24 | INSTALL SALVAGED MAILBOX | 31.00 | EA | \$70.00 | \$2,170 |

Subtotal Estimated Construction Cost: \$519,000

| | |
|--|----------|
| Contingencies: | \$52,000 |
| Easement and Right-of-way Acquisition: | \$0 |
| Engineering Services (Report, Design and Construction Administration): | \$42,000 |
| Full-Time Construction Observation: | \$21,000 |
| Geotechnical Engineering: | \$4,000 |
| Legal, Fiscal and Administration: | \$16,000 |

Total Estimated Project Cost: \$654,000

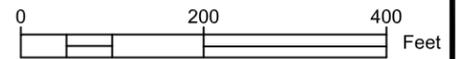
*The estimated costs are according to average prices received on similar projects in other areas. The actual costs for this project will be determined through a bidding process and can vary with market conditions at the time of the bid.





LEGEND

- 3607 ASSESSABLE PROPERTY
- 1 NUMBER OF STREET ASSESSMENTS
- * 100% FRONT FOOTAGE METHOD
- WM WATERMAIN ASSESSMENT
- WM x.2 = 2 REU'S





STREET IMPROVEMENTS
KIRKWOOD AVENUE NORTH
PRELIMINARY ASSESSMENT ROLL

| NO. | NAME | ADDRESS | | | | PID | AMOUNT |
|------------|------------------------------------|----------------|----------|-------|-----------|---------------------|---------------|
| 1 | MANZARA ANTHONY P & SARAH E | 5050 | KIRKWOOD | AVE N | LAKE ELMO | 55042 0202921430002 | \$ 13,800.00 |
| 2 | HECTOR WAYNE M & KAREN K SCHNEIDER | 5110 | KIRKWOOD | AVE N | LAKE ELMO | 55042 0202921430003 | \$ 13,800.00 |
| 3 | THOMPSON CARMEN M & ROBBI | 5170 | KIRKWOOD | AVE N | LAKE ELMO | 55042 0202921430004 | \$ 13,800.00 |
| 4 | KRISTENSON ALLAN J & JACQUEL | 5230 | KIRKWOOD | AVE N | LAKE ELMO | 55042 0202921430005 | \$ 13,800.00 |
| 5 | HESSE RICHARD D & ROSALIE M | 5235 | KIRKWOOD | AVE N | LAKE ELMO | 55042 0202921420001 | \$ 55,200.00 |
| 6 | BASARA DOUGLAS J & ELIZABETH J | 5300 | KIRKWOOD | AVE N | LAKE ELMO | 55042 0202921420002 | \$ 13,800.00 |
| 7 | LAATSCH JOHN M & MARY CANE LAATSCH | 5760 | KIRKWOOD | AVE N | LAKE ELMO | 55042 0202921420003 | \$ 13,800.00 |
| | | | | | | TOTAL | \$ 138,000.00 |

STREET IMPROVEMENTS
 KELVIN AVENUE NORTH
 PRELIMINARY ASSESSMENT ROLL

| NO. | NAME | ADDRESS | PID | AMOUNT |
|-------|--|-----------------------------------|---------------------|---------------|
| 1 | COMMON GROUND CHURCH | 10240 STILLWATER BLVD N LAKE ELMO | 55042 1402921320024 | \$ 13,400.00 |
| 2 | FRENIER ANTOINE & ANDREA MEYER | 10240 STILLWATER LN N LAKE ELMO | 55042 1402921320016 | \$ 5,200.00 |
| 3 | HEDQUIST RICHARD A & PATRICI | 3440 KELVIN AVE N LAKE ELMO | 55042 1402921320014 | \$ 5,200.00 |
| 4 | CHRISTENSEN CYN DIE | 3464 KELVIN AVE N LAKE ELMO | 55042 1402921320013 | \$ 5,200.00 |
| 5 | ROGERS WILLIAM J & JUDY D | 3490 KELVIN AVE N LAKE ELMO | 55042 1402921320012 | \$ 5,200.00 |
| 6 | DONNA R HARSTAD TRS | 3503 KELVIN AVE N LAKE ELMO | 55042 1402921240002 | \$ 5,200.00 |
| 7 | DONNA R HARSTAD TRS | 3503 KELVIN AVE N LAKE ELMO | 55042 1402921240006 | \$ 5,200.00 |
| 8 | CHAVEZ JOSE & JOAN S | 3505 KELVIN AVE N LAKE ELMO | 55042 1402921240005 | \$ 5,200.00 |
| 9 | LINDER ALVERT R & JUDITH A | 3508 KELVIN AVE N LAKE ELMO | 55042 1402921320019 | \$ 5,200.00 |
| 10 | SCHILTGREN ROBERT J TRS & MARY J HOGAN-SCHILTGREN TR | 3509 KELVIN AVE N LAKE ELMO | 55042 1402921240011 | \$ 5,200.00 |
| 11 | PAULSON DONALD V & PHYLLIS K | 3533 KELVIN AVE N LAKE ELMO | 55042 1402921240007 | \$ 5,200.00 |
| 12 | KASK EARLE L & FREYA L | 3551 KELVIN AVE N LAKE ELMO | 55042 1402921240009 | \$ 5,200.00 |
| 13 | LOOS DAVID S & WENDY | 3567 KELVIN AVE N LAKE ELMO | 55042 1402921240010 | \$ 5,200.00 |
| 14 | BUCHHOLTZ THEODORE & EDNA S | 3597 KELVIN AVE N LAKE ELMO | 55042 1402921240008 | \$ 5,200.00 |
| 15 | CURRAN PATRICK A & DIANE J | 3607 KELVIN AVE N LAKE ELMO | 55042 1402921240012 | \$ 5,200.00 |
| 16 | CURRAN PATRICK A & DIANE J | 3607 KELVIN AVE N LAKE ELMO | 55042 1402921240013 | \$ 5,200.00 |
| 17 | FRIEDERICH WILLIAM & CHRISTIN | 3691 KELVIN AVE N LAKE ELMO | 55042 1402921230003 | \$ 5,200.00 |
| 18 | BEAUBIEN JEANNE M | 3681 KELVIN AVE N LAKE ELMO | 55042 1402921240003 | \$ 5,200.00 |
| TOTAL | | | | \$ 101,800.00 |

WATERMAIN IMPROVEMENTS
 KELVIN AVENUE NORTH
 PRELIMINARY ASSESSMENT ROLL

| NO. | NAME | ADDRESS | | | | PID | AMOUNT |
|-----|--|---------|------------|--------|-----------|---------------------|---------------|
| 1 | COMMON GROUND CHURCH | 10240 | STILLWATER | BLVD N | LAKE ELMO | 55042 1402921320024 | \$ 11,600.00 |
| 2 | FRENIER ANTOINE & ANDREA MEYER | 10240 | STILLWATER | LN N | LAKE ELMO | 55042 1402921320016 | \$ 5,800.00 |
| 3 | HEDQUIST RICHARD A & PATRICI | 3440 | KELVIN | AVE N | LAKE ELMO | 55042 1402921320014 | \$ 5,800.00 |
| 4 | CHRISTENSEN CYNDIE | 3464 | KELVIN | AVE N | LAKE ELMO | 55042 1402921320013 | \$ 5,800.00 |
| 5 | ROGERS WILLIAM J & JUDY D | 3490 | KELVIN | AVE N | LAKE ELMO | 55042 1402921320012 | \$ 5,800.00 |
| 6 | LINDER ALVERT R & JUDITH A | 3508 | KELVIN | AVE N | LAKE ELMO | 55042 1402921320019 | \$ 5,800.00 |
| 7 | SCHILTGREN ROBERT J TRS & MARY J HOGAN-SCHILTGREN TR | 3509 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240011 | \$ 5,800.00 |
| 8 | PAULSON DONALD V & PHYLLIS K | 3533 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240007 | \$ 12,000.00 |
| 9 | KASK EARLE L & FREYA L | 3551 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240009 | \$ 12,000.00 |
| 10 | LOOS DAVID S & WENDY | 3567 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240010 | \$ 12,000.00 |
| 11 | BUCHHOLTZ THEODORE & EDNA S | 3597 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240008 | \$ 12,000.00 |
| 12 | CURRAN PATRICK A & DIANE J | 3607 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240012 | \$ 12,000.00 |
| 13 | DONNA R HARSTAD TRS | 3503 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240002 | \$ 24,500.00 |
| 14 | CHAVEZ JOSE & JOAN S | 3505 | KELVIN | AVE N | LAKE ELMO | 55042 1402921240005 | \$ 24,500.00 |
| | | | | | | TOTAL | \$ 155,400.00 |

STREET IMPROVEMENTS
 STONEGATE 1ST ADDITION
 PRELIMINARY ASSESSMENT ROLL

| NO. | NAME | ADDRESS | PID | AMOUNT |
|-------|--|--------------------------------|---------------------|---------------|
| 1 | MONTEITH CURTIS & DEBRA | 331 JULEP AVE N LAKE ELMO | 55042 3402921230012 | \$ 6,000.00 |
| 2 | BETZ DOUG M & AMY M | 371 JULEP AVE N LAKE ELMO | 55042 3402921230013 | \$ 6,000.00 |
| 3 | CITY OF LAKE ELMO | 750 JASMINE AVE N LAKE ELMO | 55042 3402921230002 | \$ 6,000.00 |
| 4 | HOHENWALD MARK | 755 JASMINE AVE N LAKE ELMO | 55042 3402921230010 | \$ 6,000.00 |
| 5 | YANG KAY | 770 JASMINE AVE N LAKE ELMO | 55042 3402921230005 | \$ 6,000.00 |
| 6 | PETERS PAMELA J | 785 JASMINE AVE N LAKE ELMO | 55042 3402921230009 | \$ 6,000.00 |
| 7 | WALLRICH TIMOTHY W & MARILEE A | 790 JASMINE AVE N LAKE ELMO | 55042 3402921230016 | \$ 6,000.00 |
| 8 | HENDERSON RANDALL T & GLORIA A | 820 JASMINE AVE N LAKE ELMO | 55042 3402921230015 | \$ 6,000.00 |
| 9 | INTIHAR KEVIN & WINDY | 829 JASMINE AVE N LAKE ELMO | 55042 3402921230006 | \$ 6,000.00 |
| 10 | LANCETTE MICHAEL & KATHLEEN | 832 JASMINE AVE N LAKE ELMO | 55042 3402921220010 | \$ 6,000.00 |
| 11 | BONFE ANTHONY W & MARY E | 854 JASMINE AVE N LAKE ELMO | 55042 3402921220009 | \$ 6,000.00 |
| 12 | SKARDA JAMES R & PATRICIA L | 868 JASMINE AVE N LAKE ELMO | 55042 3402921220008 | \$ 6,000.00 |
| 13 | JADER GARY C & RICHELLE M | 974 JASMINE AVE N LAKE ELMO | 55042 3402921220001 | \$ 6,000.00 |
| 14 | JOHNSON GEORGE N & MARY JAN | 867 JASMINE AVE PL N LAKE ELMO | 55042 3402921220011 | \$ 6,000.00 |
| 15 | LARSON SEAN D & LINDA M | 871 JASMINE AVE PL N LAKE ELMO | 55042 3402921230007 | \$ 6,000.00 |
| 16 | BRUNO BENJAMIN J | 873 JASMINE AVE PL N LAKE ELMO | 55042 3402921230008 | \$ 6,000.00 |
| 17 | JOHN M & KRISTINA W HEILI TRS | 875 JASMINE AVE PL N LAKE ELMO | 55042 3402921240002 | \$ 6,000.00 |
| 18 | FITZGERALD THOMAS & MARY | 877 JASMINE AVE PL N LAKE ELMO | 55042 3402921240001 | \$ 6,000.00 |
| 19 | OLSON ROBBI J & JILL M | 881 JASMINE AVE PL N LAKE ELMO | 55042 3402921210003 | \$ 6,000.00 |
| 20 | IH2 PROPERTY ILLINOIS LP | 883 JASMINE AVE PL N LAKE ELMO | 55042 3402921210010 | \$ 6,000.00 |
| 21 | LEARN JAMES W JR & JOAN E | 887 JASMINE AVE PL N LAKE ELMO | 55042 3402921210009 | \$ 6,000.00 |
| 22 | SHERRITT BRUCE C & MICHELLE M | 9023 9TH ST N LAKE ELMO | 55042 3402921220004 | \$ 6,000.00 |
| 23 | STADICK DANIEL P & JEANNE M | 9034 9TH ST N LAKE ELMO | 55042 3402921220003 | \$ 6,000.00 |
| 24 | MILNAR GREGORY B & BEVERLY B | 9073 9TH ST N LAKE ELMO | 55042 3402921220005 | \$ 6,000.00 |
| 25 | CHENGSENGPASEUTHAR MAIXI | 9106 9TH ST N LAKE ELMO | 55042 3402921220002 | \$ 6,000.00 |
| 26 | NELSON DAVID M & MARYBETH H | 9123 9TH ST N LAKE ELMO | 55042 3402921220006 | \$ 6,000.00 |
| 27 | TAYLOR KRISTINA J | 9179 9TH ST N LAKE ELMO | 55042 3402921220007 | \$ 6,000.00 |
| 28 | MONICO GINO A & PEGGI A | 9251 9TH ST N LAKE ELMO | 55042 3402921210008 | \$ 6,000.00 |
| 29 | ISRAELSON RONALD J & COLLEEN A | 9314 9TH ST N LAKE ELMO | 55042 3402921210004 | \$ 6,000.00 |
| 30 | SMORCH TERRANCE M & CAROL K | 9323 9TH ST N LAKE ELMO | 55042 3402921210007 | \$ 6,000.00 |
| 31 | HOMMERDING JACOB G & AUTUMN P | 9386 9TH ST N LAKE ELMO | 55042 3402921210005 | \$ 6,000.00 |
| 32 | MEYER DALE J & GERNES-MEYER & BERNIECE L GERNES-ME | 9391 9TH ST N LAKE ELMO | 55042 3402921210006 | \$ 6,000.00 |
| 33 | MOREY DARRELL W & CHARLOTTE | 2749 HENSLOW AVE OAKDALE | 55128 3402921220012 | \$ 6,000.00 |
| TOTAL | | | | \$ 198,000.00 |

ASSESSMENT PAYMENT SCHEDULE - KIRKWOOD AVENUE STREET & DRAINAGE

| | | |
|--------------------------|--------------|--------------------|
| Interest Rate | 6.00% | |
| Original Years | 10 | |
| Remaining Years | 10 | |
| Year Started | 2016 | |
| Beginning Balance | | \$13,800.00 |

| YEAR | BEGINNING PRINCIPAL | ANNUAL PRINCIPAL | ANNUAL INTEREST | ANNUAL TOTAL | ENDING PRINCIPAL |
|-------------|----------------------------|-------------------------|------------------------|---------------------|-------------------------|
| 2016 | \$13,800.00 | \$1,380.00 | \$1,002.67 | \$2,382.67 | \$12,420.00 |
| 2017 | \$12,420.00 | \$1,380.00 | \$745.20 | \$2,125.20 | \$11,040.00 |
| 2018 | \$11,040.00 | \$1,380.00 | \$662.40 | \$2,042.40 | \$9,660.00 |
| 2019 | \$9,660.00 | \$1,380.00 | \$579.60 | \$1,959.60 | \$8,280.00 |
| 2020 | \$8,280.00 | \$1,380.00 | \$496.80 | \$1,876.80 | \$6,900.00 |
| 2021 | \$6,900.00 | \$1,380.00 | \$414.00 | \$1,794.00 | \$5,520.00 |
| 2022 | \$5,520.00 | \$1,380.00 | \$331.20 | \$1,711.20 | \$4,140.00 |
| 2023 | \$4,140.00 | \$1,380.00 | \$248.40 | \$1,628.40 | \$2,760.00 |
| 2024 | \$2,760.00 | \$1,380.00 | \$165.60 | \$1,545.60 | \$1,380.00 |
| 2025 | \$1,380.00 | \$1,380.00 | \$82.80 | \$1,462.80 | \$0.00 |
| | | \$13,800.00 | \$4,728.67 | \$18,528.67 | |

First year interest calculated from October 15, 2016 through December 31, 2017

ASSESSMENT PAYMENT SCHEDULE - KELVIN AVENUE STREET AND DRAINAGE

| | | |
|--------------------------|--------------|-------------------|
| Interest Rate | 6.00% | |
| Original Years | 10 | |
| Remaining Years | 10 | |
| Year Started | 2016 | |
| Beginning Balance | | \$5,200.00 |

| YEAR | BEGINNING PRINCIPAL | ANNUAL PRINCIPAL | ANNUAL INTEREST | ANNUAL TOTAL | ENDING PRINCIPAL |
|-------------|----------------------------|-------------------------|------------------------|---------------------|-------------------------|
| 2016 | \$5,200.00 | \$520.00 | \$377.82 | \$897.82 | \$4,680.00 |
| 2017 | \$4,680.00 | \$520.00 | \$280.80 | \$800.80 | \$4,160.00 |
| 2018 | \$4,160.00 | \$520.00 | \$249.60 | \$769.60 | \$3,640.00 |
| 2019 | \$3,640.00 | \$520.00 | \$218.40 | \$738.40 | \$3,120.00 |
| 2020 | \$3,120.00 | \$520.00 | \$187.20 | \$707.20 | \$2,600.00 |
| 2021 | \$2,600.00 | \$520.00 | \$156.00 | \$676.00 | \$2,080.00 |
| 2022 | \$2,080.00 | \$520.00 | \$124.80 | \$644.80 | \$1,560.00 |
| 2023 | \$1,560.00 | \$520.00 | \$93.60 | \$613.60 | \$1,040.00 |
| 2024 | \$1,040.00 | \$520.00 | \$62.40 | \$582.40 | \$520.00 |
| 2025 | \$520.00 | \$520.00 | \$31.20 | \$551.20 | \$0.00 |
| | | \$5,200.00 | \$1,781.82 | \$6,981.82 | |

First year interest calculated from October 15, 2016 through December 31, 2017

ASSESSMENT PAYMENT SCHEDULE - KELVIN AVENUE (S OF KELVIN CT) TRUNK WATERMAIN

Interest Rate 6.00%
 Original Years 15
 Remaining Years 15
 Year Started 2016
 Beginning Balance \$ 5,800.00

| YEAR | BEGINNING PRINCIPAL | ANNUAL PRINCIPAL | ANNUAL INTEREST | ANNUAL TOTAL | ENDING PRINCIPAL |
|-------------|----------------------------|-------------------------|------------------------|---------------------|-------------------------|
| 2016 | \$ 5,800.00 | \$ 386.67 | \$ 421.41 | \$ 808.08 | \$ 5,413.33 |
| 2017 | \$ 5,413.33 | \$ 386.67 | \$ 324.80 | \$ 711.47 | \$ 5,026.67 |
| 2018 | \$ 5,026.67 | \$ 386.67 | \$ 301.60 | \$ 688.27 | \$ 4,640.00 |
| 2019 | \$ 4,640.00 | \$ 386.67 | \$ 278.40 | \$ 665.07 | \$ 4,253.33 |
| 2020 | \$ 4,253.33 | \$ 386.67 | \$ 255.20 | \$ 641.87 | \$ 3,866.67 |
| 2021 | \$ 3,866.67 | \$ 386.67 | \$ 232.00 | \$ 618.67 | \$ 3,480.00 |
| 2022 | \$ 3,480.00 | \$ 386.67 | \$ 208.80 | \$ 595.47 | \$ 3,093.33 |
| 2023 | \$ 3,093.33 | \$ 386.67 | \$ 185.60 | \$ 572.27 | \$ 2,706.67 |
| 2024 | \$ 2,706.67 | \$ 386.67 | \$ 162.40 | \$ 549.07 | \$ 2,320.00 |
| 2025 | \$ 2,320.00 | \$ 386.67 | \$ 139.20 | \$ 525.87 | \$ 1,933.33 |
| 2026 | \$ 1,933.33 | \$ 386.67 | \$ 116.00 | \$ 502.67 | \$ 1,546.67 |
| 2027 | \$ 1,546.67 | \$ 386.67 | \$ 92.80 | \$ 479.47 | \$ 1,160.00 |
| 2028 | \$ 1,160.00 | \$ 386.67 | \$ 69.60 | \$ 456.27 | \$ 773.33 |
| 2029 | \$ 773.33 | \$ 386.67 | \$ 46.40 | \$ 433.07 | \$ 386.67 |
| 2030 | \$ 386.67 | \$ 386.67 | \$ 23.20 | \$ 409.87 | \$ (0.00) |
| | | \$ 5,800.00 | \$ 2,857.41 | \$ 8,657.41 | |

First year interest calculated from October 15, 2016 through December 31, 2017

ASSESSMENT PAYMENT SCHEDULE - KELVIN AVENUE (N OF KELVIN CT) 8" LATERAL WATERMAIN

Interest Rate **6.00%**
 Original Years **15**
 Remaining Years **15**
 Year Started **2016**
 Beginning Balance **\$ 12,000.00**

| YEAR | BEGINNING PRINCIPAL | ANNUAL PRINCIPAL | ANNUAL INTEREST | ANNUAL TOTAL | ENDING PRINCIPAL |
|-------------|----------------------------|-------------------------|------------------------|---------------------|-------------------------|
| 2016 | \$ 12,000.00 | \$ 800.00 | \$ 871.89 | \$ 1,671.89 | \$ 11,200.00 |
| 2017 | \$ 11,200.00 | \$ 800.00 | \$ 672.00 | \$ 1,472.00 | \$ 10,400.00 |
| 2018 | \$ 10,400.00 | \$ 800.00 | \$ 624.00 | \$ 1,424.00 | \$ 9,600.00 |
| 2019 | \$ 9,600.00 | \$ 800.00 | \$ 576.00 | \$ 1,376.00 | \$ 8,800.00 |
| 2020 | \$ 8,800.00 | \$ 800.00 | \$ 528.00 | \$ 1,328.00 | \$ 8,000.00 |
| 2021 | \$ 8,000.00 | \$ 800.00 | \$ 480.00 | \$ 1,280.00 | \$ 7,200.00 |
| 2022 | \$ 7,200.00 | \$ 800.00 | \$ 432.00 | \$ 1,232.00 | \$ 6,400.00 |
| 2023 | \$ 6,400.00 | \$ 800.00 | \$ 384.00 | \$ 1,184.00 | \$ 5,600.00 |
| 2024 | \$ 5,600.00 | \$ 800.00 | \$ 336.00 | \$ 1,136.00 | \$ 4,800.00 |
| 2025 | \$ 4,800.00 | \$ 800.00 | \$ 288.00 | \$ 1,088.00 | \$ 4,000.00 |
| 2026 | \$ 4,000.00 | \$ 800.00 | \$ 240.00 | \$ 1,040.00 | \$ 3,200.00 |
| 2027 | \$ 3,200.00 | \$ 800.00 | \$ 192.00 | \$ 992.00 | \$ 2,400.00 |
| 2028 | \$ 2,400.00 | \$ 800.00 | \$ 144.00 | \$ 944.00 | \$ 1,600.00 |
| 2029 | \$ 1,600.00 | \$ 800.00 | \$ 96.00 | \$ 896.00 | \$ 800.00 |
| 2030 | \$ 800.00 | \$ 800.00 | \$ 48.00 | \$ 848.00 | \$ - |
| | | \$ 12,000.00 | \$ 5,911.89 | \$ 17,911.89 | |

First year interest calculated from October 15, 2016 through December 31, 2017

ASSESSMENT PAYMENT SCHEDULE - KELVIN AVENUE (E OF KELVIN AVE) LATERAL 6" WATERMAIN

| | |
|-------------------|--------------|
| Interest Rate | 6.00% |
| Original Years | 15 |
| Remaining Years | 15 |
| Year Started | 2016 |
| Beginning Balance | \$ 24,500.00 |

| YEAR | BEGINNING PRINCIPAL | ANNUAL PRINCIPAL | ANNUAL INTEREST | ANNUAL TOTAL | ENDING PRINCIPAL |
|------|---------------------|------------------|-----------------|--------------|------------------|
| 2016 | \$ 24,500.00 | \$ 1,633.33 | \$ 1,780.11 | \$ 3,413.44 | \$ 22,866.67 |
| 2017 | \$ 22,866.67 | \$ 1,633.33 | \$ 1,372.00 | \$ 3,005.33 | \$ 21,233.33 |
| 2018 | \$ 21,233.33 | \$ 1,633.33 | \$ 1,274.00 | \$ 2,907.33 | \$ 19,600.00 |
| 2019 | \$ 19,600.00 | \$ 1,633.33 | \$ 1,176.00 | \$ 2,809.33 | \$ 17,966.67 |
| 2020 | \$ 17,966.67 | \$ 1,633.33 | \$ 1,078.00 | \$ 2,711.33 | \$ 16,333.33 |
| 2021 | \$ 16,333.33 | \$ 1,633.33 | \$ 980.00 | \$ 2,613.33 | \$ 14,700.00 |
| 2022 | \$ 14,700.00 | \$ 1,633.33 | \$ 882.00 | \$ 2,515.33 | \$ 13,066.67 |
| 2023 | \$ 13,066.67 | \$ 1,633.33 | \$ 784.00 | \$ 2,417.33 | \$ 11,433.33 |
| 2024 | \$ 11,433.33 | \$ 1,633.33 | \$ 686.00 | \$ 2,319.33 | \$ 9,800.00 |
| 2025 | \$ 9,800.00 | \$ 1,633.33 | \$ 588.00 | \$ 2,221.33 | \$ 8,166.67 |
| 2026 | \$ 8,166.67 | \$ 1,633.33 | \$ 490.00 | \$ 2,123.33 | \$ 6,533.33 |
| 2027 | \$ 6,533.33 | \$ 1,633.33 | \$ 392.00 | \$ 2,025.33 | \$ 4,900.00 |
| 2028 | \$ 4,900.00 | \$ 1,633.33 | \$ 294.00 | \$ 1,927.33 | \$ 3,266.67 |
| 2029 | \$ 3,266.67 | \$ 1,633.33 | \$ 196.00 | \$ 1,829.33 | \$ 1,633.33 |
| 2030 | \$ 1,633.33 | \$ 1,633.33 | \$ 98.00 | \$ 1,731.33 | \$ 0.00 |
| | | \$ 24,500.00 | \$ 12,070.11 | \$ 36,570.11 | |

First year interest calculated from October 15, 2016 through December 31, 2017

ASSESSMENT PAYMENT SCHEDULE - STONEGATE 1ST ADDITION STREET & DRAINAGE

| | | |
|--------------------------|--------------|-------------------|
| Interest Rate | 6.00% | |
| Original Years | 10 | |
| Remaining Years | 10 | |
| Year Started | 2016 | |
| Beginning Balance | | \$6,000.00 |

| YEAR | BEGINNING PRINCIPAL | ANNUAL PRINCIPAL | ANNUAL INTEREST | ANNUAL TOTAL | ENDING PRINCIPAL |
|-------------|----------------------------|-------------------------|------------------------|---------------------|-------------------------|
| 2016 | \$6,000.00 | \$600.00 | \$435.95 | \$1,035.95 | \$5,400.00 |
| 2017 | \$5,400.00 | \$600.00 | \$324.00 | \$924.00 | \$4,800.00 |
| 2018 | \$4,800.00 | \$600.00 | \$288.00 | \$888.00 | \$4,200.00 |
| 2019 | \$4,200.00 | \$600.00 | \$252.00 | \$852.00 | \$3,600.00 |
| 2020 | \$3,600.00 | \$600.00 | \$216.00 | \$816.00 | \$3,000.00 |
| 2021 | \$3,000.00 | \$600.00 | \$180.00 | \$780.00 | \$2,400.00 |
| 2022 | \$2,400.00 | \$600.00 | \$144.00 | \$744.00 | \$1,800.00 |
| 2023 | \$1,800.00 | \$600.00 | \$108.00 | \$708.00 | \$1,200.00 |
| 2024 | \$1,200.00 | \$600.00 | \$72.00 | \$672.00 | \$600.00 |
| 2025 | \$600.00 | \$600.00 | \$36.00 | \$636.00 | \$0.00 |
| | | \$6,000.00 | \$2,055.95 | \$8,055.95 | |

First year interest calculated from October 15, 2016 through December 31, 2017