



**NOTICE OF AN OPEN WORK SESSION  
OF THE CITY COUNCIL OF THE CITY OF  
NORTH KANSAS CITY, MISSOURI**

**April 7, 2020  
6:00 PM**

**Due to the recommendations of the Centers for Disease Control and the State of Emergency declared by the City of North Kansas City and the Stay at Home Order issued by Mayor Don Stielow and the Clay County Health Department, and the ban on gatherings of more than ten people, this meeting will be held virtually, with the Mayor, City Council members and City staff joining the meeting on an online platform. The public may view the meeting live on Channel 2, the City's Cable Channel or YouTube channel, which can be found on the City's website at [www.nkc.org/live](http://www.nkc.org/live).**

The tentative agenda of this meeting includes:

- 1. Call Meeting to Order**
- 2. North Kansas City Infrastructure Report Card 2020** 
- 3. Pump Station Issues** 
- 4. Adjournment**

This open work session of the City Council of the City of North Kansas City, Missouri, has been duly called pursuant to the provisions of Section 2.04.030 of the Code of the City of North Kansas City, Missouri, by the undersigned Mayor of the City of North Kansas City, Missouri.

***DONE*** this 2<sup>nd</sup> day of April 2020 at 5:00 p.m.



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Don Stielow, *Mayor*

Representatives of the news media may obtain copies of this notice by contacting:

Crystal Doss, City Clerk, City Hall  
2010 Howell Street  
North Kansas City, Missouri 64116  
Telephone No. (816) 412-7815

# INFRASTRUCTURE REPORT CARD



# 2020

PRESENTED 3/17/20

# 2019 REVIEW

This is a recap of the conditions of the City's infrastructure following the 2019 calendar year. Among the items included in this brief are the events that happened, actions taken, repairs made or are in progress, and comments on how each infrastructure item could receive higher grades in the future. There is one infrastructure grade change from the 2019 Report: Storm Sewers and Pump Stations lowered from a B to a B – grade.

## **STREETS AND ALLEYS**

**2019 GRADE C+ / 2020 GRADE C+**

There were over thirty emergency snow/ice events in 2019 that required City crews to pre-treat streets with salt and remove snow and ice. Like most of the cities within our region, record amounts of potholes and other asphalt street failures appeared as the ice and snow on the streets thawed. City crews repaired over 25 potholes.

## **NORTH KANSAS CITY SPECIAL ROAD DISTRICT (ROAD DISTRICT) OVERLAY PROJECTS**

The Road District asphalt contractor milled and overlaid nine alleys, or portions of alleys, that degraded after the winter months. In addition, the Road District milled and overlaid four streets within the PID. The total cost of street repairs by the Road District was \$338,300.

## **OZARK ALLEY AND HIGHWAY 210 DRAINAGE IMPROVEMENT PROJECT**

The Road District contracted for construction of drainage improvements along the north side of Highway 210 / Armour Road, just east of Ozark Street, to address ponding issues that were occurring in this area. The improvements included installing storm sewer improvements along MoDOT's right of way, and along the City's alley on the north side of the Spanish 8 Apartments. The total cost of these improvements was approximately \$280,000.

Although there were many potholes and areas of asphalt degradation following the winter, the Road District's overlay project improved the conditions of the streets, and sections of streets, in many areas that were in poor condition prior to the winter of 2019. There are several streets throughout the City, however, that are failing and need to be overlaid in 2020, and many more can be expected in the years to follow.

**HOW CAN THIS GRADE BE IMPROVED?** The street conditions grade will not exceed a C + grade for years to come unless a substantial increase in mill and overlay projects occur. The Road District receives approximately \$230,000 annually from Clay County, and currently their Fund Balance is approximately \$1.1 million. This is inadequate funding for the number of mill and overlay projects that need to be accomplished currently, and in the years to come, for the overall street conditions rating to improve. The City may want to consider allocating funding to the Road District from the Gaming Fund for the next few years to be used specifically for increasing the number of overlays each year. Some sort of action will be necessary if the City wants to minimize the number of streets in poor condition and improve the overall grade of its street conditions.

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## **CURBS, SIDEWALKS AND DRAINAGE STRUCTURES    2019 GRADE B / 2020 GRADE B**

Over the past decade, the amount budgeted for these services has ranged between \$250,000 to \$500,000. The annual investment in repairs and replacements to the City's curbs, sidewalks and drainage structures, such as catch basins, has paid off. All three of these infrastructure items are in better condition in 2019 than they have been in many years.

**HOW CAN THIS GRADE BE IMPROVED?** The progress that has been made in replacing old catch basins, sidewalks and curbs will continue with support of annual funding in the range that has been budgeted over the past decade.

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## **CITY-OWNED TREES**

**2019 GRADE B / 2020 GRADE B**

In 2019, 73 trees were removed, and 81 trees were planted, most of which were planted to replace a tree that was removed.

Thirty-six (36) of the trees removed were ash trees in poor condition due to the infestation of the Emerald Ash Borer (EAB). Over the past five years there has been significant progress in removing trees in poor condition due to infestation of the EAB and replacing them with healthy trees. The number of ash tree removals has greatly decreased since the EAB program began in 2015. Chemical treatments applied to ash trees that were in good condition in 2015, and applied again in 2018, appear to be working effectively on many ash trees that are still in good condition.

**HOW CAN THIS GRADE BE IMPROVED?** In 2020, the City is anticipated to select a contractor and begin the Downtown Streetscape Project. Approximately thirty trees within the downtown area were determined to be in poor condition and will be removed and replaced. In addition, many trees that are in poor condition along Swift, south of East 18<sup>th</sup> Avenue, will also be removed and replaced. This project, and the continued reduction of the number of ash trees infested with EAB, may improve the grade next year.

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## **WATER TREATMENT PLANT**

**2019 GRADE C / 2020 GRADE C**

The condition of the Water Treatment Plant has not changed since 2018, but changes are coming soon. Construction plans provided by Burns and McDonnell Engineering for the rehabilitation to the Water Treatment Plant and Water Supply were completed in November 2019. Construction is expected to begin in Spring 2020 and take two years to complete.

**HOW CAN THIS GRADE BE IMPROVED?** Once the Water Treatment Plant renovation project is completed, the grade for the condition of the Water Treatment Plant may be an A.

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## **WATER DISTRIBUTION SYSTEM**

**2019 GRADE C / 2020 GRADE C**

### **WATER DISTRIBUTION SYSTEM**

Most of the City's water mains were installed over seventy years ago, and water line breaks occur several times a year. Unfortunately, most breaks are located under streets, which takes more time and resources to repair, and restoring the pavement is costly. In 2019, water crews repaired four breaks that were not located under streets. There were three water breaks that staff relied on the City's repair contractor to assist repairing, all of which were under a street and required a larger excavator than the one the Water Division has.

### **WATER VALVE REPLACEMENT PROGRAM**

In 2019, Water crews replaced seven large, high-priority water valves:

- Replaced and upgraded a twelve-inch to a sixteen-inch valve on the northeast side of the Water Treatment Plant property.
- Replaced two twelve-inch valves and two six-inch valves at 16<sup>th</sup> and Atlantic.
- Replaced three valves at Armour Road and Ozark.

Valve replacements planned for 2020 include other large, high-priority valves along Armour Road. Once these major valves are replaced the Water Division staff will begin exercising the valves and replacing those that are broken, as funding allows. The water valve replacement program will continue replacing high-priority valves each year and continue exercising and replacing valves in the order of the map locations.

**HOW CAN THIS GRADE BE IMPROVED?** After the renovations to the Water Plant are completed, it is anticipated that a water line replacement program will begin to replace old water pipes, as detailed in the Water Master Plan prepared by Burns and McDonnell in 2008.

The valve replacement program is also a multi-year initiative. As valve replacements progress, better grades for Water Distribution would be expected.

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## **SANITARY SEWER SYSTEM**

**2019 GRADE B+ / 2020 GRADE B+**

In June, three different sanitary sewer lines broke in the vicinity of East 25<sup>th</sup> and Ozark. All three breaks were where the private sewer service connects with the City' sewer main. Staff believes the breaks were attributed to the high-level groundwater in that area.

There are three sanitary sewer pump stations, and in 2019 all three experienced mechanical problems, including: pump repairs, replacement of a sewer grinder, electrical panel replacement and replacement of a submersible pump. Overall, the sanitary sewer system continues to be in very good condition.

**HOW CAN THIS GRADE BE IMPROVED?** Sanitary sewer pump stations pump sewage approximately 24 times a day throughout the year, unlike stormwater pump stations that

generally pump only a few months a year. Instead of being reactive and repairing pump problems on an emergency basis, the City could be proactive and pull one pump out each year for evaluations by the city's pump repair company. Unless the pump is removed and dismantled, there is no way to determine if items, such as the impeller and the motor windings, are in poor condition. This maintenance concept would reduce the chances of pump failures, but it would also be costly.

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## **STORM SEWERS AND PUMP STATIONS**

**2019 GRADE B / 2020 GRADE B-**

### **STORM SEWER PIPE BREAKS IN PASEO INDUSTRIAL DISTRICT (PID)**

Beginning in mid-March and ending in mid-August, the Missouri River stage level remained high throughout Missouri. In North Kansas City, the stage level reached 35.7 feet in July, which is three feet higher than the flood stage. The high river table raised groundwater levels within the PID to three feet below the surface, which caused movement and breakage of large storm sewer pipes below the streets. The broken pipes created voids under the asphalt surfaces, which resulted in sinkholes in many areas. Detours and street closures in various areas were necessary in July and August as the City's contractor repaired the sinkholes and restored the streets.

The emergency storm sewer and street repairs were completed in September at a total cost of \$743,470. The 2020 Sewer Fund Budget includes \$50,000 for conducting a video investigation to determine if there are additional storm sewer breaks within the PID.

### **PUMP STATIONS**

During the five-month period when the river level was up, all six stormwater pump stations were activated continuously to keep river water from entering the pump stations and to pump stormwater to the river each time it rained. Once the river levels receded, extensive pump-related problems were observed, and many repairs were needed due to wear and tear from being activated for such a long period of time. As of the time of this writing, there are four pumps and numerous other pump station components that are being repaired.

**HOW CAN THIS GRADE BE IMPROVED?** Consideration to taking more of a proactive approach to pump station maintenance has been recommended by the Levee District engineer. His suggestion is to remove at least one pump every year and have the City's pump repair company dismantle and examine parts such as impellers and motor windings and replace worn parts accordingly. This initiative would certainly improve the grade of the conditions of storm sewers and pump stations. It would, however, also come with a significant cost.

Staff has concerns, based on forecasts, that the Missouri River may again reach high levels and stay at high levels for a lengthy period in 2020, which could result in similar problems that occurred in 2019.

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# 2020 INFRASTRUCTURE REPORT

## PURPOSE AND INTENT

The City of North Kansas City encompasses 4.63 square miles and has a residential population estimated at 4,529, based on the 2018 U.S. Census population estimate. It is estimated that there are over 25,000 who live and work in the City during the daytime hours of the week.

The City is landlocked. Growth and development opportunities are limited primarily to redevelopment projects, such as the Northgate Village, 18<sup>th</sup> & Swift and Armour Road Redevelopment Area projects. Since the City is landlocked and nearly completely built out, the Public Works Department's focuses on maintaining, improving, and replacing various aspects of the City's existing infrastructure.

The purpose of this report is to grade the condition and performance of the City's infrastructure. The report will serve as a tool for planning and financing needed improvements. This report does not include the status of the Parks system, the fiber optic network, or public buildings and facilities.

The City owns and maintains an extensive infrastructure system, which includes:

- ✓ Transportation - Streets, drainage structures, and street trees
- ✓ Water Treatment and Distribution
- ✓ Storm Sewers and Flood Prevention including drainage inlets, pipes, and storm water pump stations
- ✓ Sanitary Sewer – Manholes and pipes, pump stations, and sewage treatment.

## INFRASTRUCTURE GRADE CARD

CATEGORY	2019	2020
<b>STREETS AND ALLEYS</b>	<b>C+</b>	<b>C+</b>
<b>CURBS, SIDEWALKS AND DRAINAGE STRUCTURES</b>	<b>B</b>	<b>B</b>
<b>CITY-OWNED TREES</b>	<b>B</b>	<b>B</b>
<b>WATER TREATMENT PLANT</b>	<b>C</b>	<b>C</b>
<b>WATER DISTRIBUTION SYSTEM</b>	<b>C</b>	<b>C</b>
<b>SANITARY SEWER SYSTEM</b>	<b>B+</b>	<b>B+</b>
<b>STORM SEWER AND PUMP STATIONS</b>	<b>B</b>	<b>B-</b>

# TRANSPORTATION

## BACKGROUND

The North Kansas City Development Company, now known as Northtown Devco, platted and constructed a majority of the streets and utilities south of Armour Road to attract commercial and industrial development after the construction of the ASB Bridge across the Missouri River. North Kansas City was incorporated in 1912, and the streets and right-of-ways were acquired by the City through dedications from the company over a period of several decades. Today the City owns and maintains approximately 62 miles of streets.

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## REVENUE SOURCES

### NORTH KANSAS CITY SPECIAL ROAD DISTRICT

The North Kansas City Special Road District was established in 1927 and is funded through a property tax levy of 8 cents for every \$100 assessed (\$.08). RSMo §67.548 requires Clay County to disburse a minimum of fourteen (14) cents for every \$100 assessed valuation. Clay County makes up the remaining six (6) cents from other County revenue sources. For the past six years, the Road District has received approximately \$230,000 annually. The Road District's current fund balance is approximately \$1.5 million.

Over the years, the three-person Road District commission has worked closely with City staff to coordinate and prioritize annual street improvement projects. The Road District's most common street improvement projects have traditionally been milling and overlaying

asphalt streets. In 2014, however, the Road District received \$730,056 after a dispute between Clay County and the State of Missouri was settled. The settlement, along with a healthy fund balance, allowed the Road District to fund the construction of Clay Edwards Drive, the reconstruction of the Vernon Street Bridge, the street extension of West 10<sup>th</sup> Avenue, the realignment of the intersection at East 32<sup>nd</sup> Avenue and Swift, and in 2018 street renovations to 16<sup>th</sup> Avenue from Linn Street to Burlington Street.

## TRANSPORTATION FUND

The City relies on the Road District to fund asphalt overlays and other pavement improvements. Other transportation-related expenses are mainly funded by the City's Transportation Fund.

The Transportation Fund is funded primarily through a half-cent sales tax for transportation. Other revenues into this fund come from disbursements of the State gasoline tax, motor vehicle sales tax, vehicle fees, and annual statutorily required disbursements from Clay County.



The Transportation Fund pays for the activities of the Transportation Division of the Public Works Department. Among the functions of the Transportation Division are the maintenance and improvements of streets, sidewalks, curbs and gutters, street signs, street trees, and traffic signs and signals. The Transportation Fund also funds the cost of street lighting as well as fixed-route and on-demand ("flex") bus service through the City that is provided by the Kansas City Area Transit Authority (KCATA).

In 2011, the Transportation Division and Buildings and Grounds Division combined to create the Municipal Services Division. Transportation employees and Buildings and Grounds employees are cross trained to perform the duties of both divisions. Seventy-five percent of the salary of the Superintendent of Municipal Services is charged to the Transportation Fund, with the other 25% (Buildings and Grounds) paid for through the General Fund. Excluding the superintendent, there are currently seven employees who are funded in the Transportation Budget, and four Building and Grounds employees funded in the General Fund.

Transportation crews perform a multitude of street maintenance tasks, including but not limited to:

- |                    |                    |
|--------------------|--------------------|
| Snow removal       | Leaf Removal       |
| Street Repairs     | Street Sweeping    |
| Landscaping        | Tree Trimming      |
| Street Painting    | Traffic Signs      |
| Catch Basin Repair | Emergency Response |

## STREETS AND ALLEYS

In the past, street conditions have been assessed very informally, according to informal noting of streets that needed to be considered as priority for the Road District's overlay program that year. In 2017, staff developed a more systematic method of rating the condition of each street and alley. Every street segment in the City was surveyed and graded. This survey is performed annually. This allows for a more proactive assessment of what areas will need work in future years by either the Road District or the City. **The Street Condition Report is attached as Exhibit A.**

## CURBS, SIDEWALKS, AND DRAINAGE STRUCTURES

The City maintains approximately 85 miles of curb and 30 miles of sidewalks. The City contracts for ongoing replacement of curbs, sidewalks, and drainage structures. In FY 2020, \$280,000 is budgeted for this purpose. Over the last 16 years, an average of the following has been performed each year: reconstruction of 18 catch basins or grate inlets; replacement of 2,500 linear feet of sidewalk; replacement of 355 linear feet of curbs; and installation of 14 handicap ramps. Staff has created maps which rate the current conditions of sidewalks, handicap ramps, and catch basins. Like the street condition report, these will allow for a systematic approach toward selection of priorities and determining annual funding requests. (The maps are too large to publish in this report.)





## **CITY-OWNED TREES**

In 2019 the City was awarded its 22<sup>nd</sup> consecutive Tree City USA designation by the National Arbor Society. North Kansas City's commitment to planting, maintaining, and replacing trees on street right-of-ways began over 50 years ago, and continues today.

In the early 1980's, Dutch Elm Disease killed nearly all of the elm trees within the City. In 2014, the Emerald Ash Borer (EAB) reached the Kansas City area. North Kansas City has numerous ash street trees.

The City established a plan, referred to as the Emerald Ash Borer Management Plan, to slow or stop the onset of the EAB to minimize the loss of ash trees that are in good condition by chemically treating them. The ash trees in fair or poor condition with EAB infestation are being removed to slow down the infestation in three-year cycles to reduce the negative aesthetic impact that removing all the trees at one time would have on neighborhoods. All ash trees that are being removed are being replaced with new trees of a different species.

Annual expenditures for tree maintenance have increased significantly over the past several years, mainly due to the onset of the Emerald Ash Borer and removal of trees at the end of their life cycle. Many of the trees that have died of old age over the past four years are honey locust trees located in the downtown area, the south half of Swift Street, and along Burlington. In 2019, 73 trees were removed, and 48 are on the list for removal in 2020. Over the past five years there has been significant progress in removing trees in poor condition and replacing them. In 2019, 81 trees were planted, most of which were planted to replace a tree that was removed.

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## **WATER TREATMENT & DISTRIBUTION SYSTEM**

### **WATER TREATMENT**

North Kansas City's water system dates back to 1912, when the construction of a treatment plant, water reservoir, and installation of water lines to serve customers were completed. Most of the original treatment plant structure and the original 1.8 million-gallon reservoir are still being utilized. The water collection/treatment/distribution process consists of pumping raw water from alluvial wells, aeration, lime softening, re-carbonation, filtration, and disinfection, followed by distribution of the finished water to the customers. For several decades significant groundwater pollution consisting of several volatile organic chemicals (VOC's) has entered the City's intake wells and has been successfully removed through the aeration process.



The quality of North Kansas City's drinking water remains high, but the emerging contaminants have required the City to take action to sustain production of clean drinking water. In 1998, the northernmost well (Well #1) began receiving such high levels of ammonia that the treatment process was ineffective in removing it. Under advice from consultants, the well was abandoned. In 2010 the first well south of the abandoned well, Well #4, began receiving higher than normal amounts of ammonia, indicating that the VOC plume that hit Well #1 was continuing to move south. Water treatment operators stopped using Well #4. Interestingly, the ammonia levels in Well #4 normalized in 2016 and it was reactivated.



In 2015 the City contracted with Burns and McDonnell to study what was occurring and what needed to be done to improve the water treatment system. In June 2016 Burns

and McDonnell presented their study entitled "Water Supply and Treatment Evaluations and Improvements," which called for certain improvements to protect the City's water source, improve water treatment, maintain high water quality, and extend the life of the facility. Costs for these improvements were estimated at \$14 million to \$17 million.

In 2017 the City Council decided to use revenues in the Gaming Fund to pay for the necessary improvements rather than increasing water rates. In January 2018, the City Council approved a contract with Burns and McDonnell for preparation of construction plans for the Water Plant improvements. Construction plans were completed in November 2019, and construction is anticipated to begin in March 2020. Construction of improvements is estimated to take about two years.

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## WATER DISTRIBUTION SYSTEM

The City owns and maintains approximately 41 miles of water pipe ranging from 2 to 18 inches in diameter, as described below:

- 2 to 4-inch diameter – 1,300 feet
- 6-inch diameter – 12.4 miles
- 8-inch diameter – 14.6 miles
- 10-inch diameter – 10.1 miles
- 12-inch diameter – 2.2 miles
- 14-inch diameter – 0.9 miles
- 16-inch diameter – 1,150 feet
- 18-inch diameter – 60 feet (discharge from WTP)

## WATER MASTER PLAN

In 2008, Burns and McDonnell Engineers completed a Water Master Plan that provided the City with detailed information about the existing water system conditions and recommendations for short and long-term improvements. The main concern addressed in the study was whether a new water storage tower was needed to increase storage and fire flows for Harrah's Casino and the Paseo Industrial District. The study concluded that the extension of a 16" water line from the north side of Missouri Route 210 and connecting to the existing water main near the WPC Facility would provide a "looped system" providing sufficient pressure and head loss in this area. In 2010, the City accomplished this water line extension, which is referred to as the "Harrah's Loop."

Completion of the Harrah's Loop was the most important project that came out of the 2008 Master Plan. Approximately \$3 million (2008 dollars) in long-term water distribution improvements were also recommended, primarily for the replacement of old water lines. These improvements are still advisable and should be planned for by the City in the future, as funds allow. Recommended water line replacements are attached as **Exhibit B**.

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## VALVE EXERCISING PROGRAM

A majority of the water valves throughout the City were installed in the mid-1950's. Over the past seven years, Water Division personnel have experienced several broken or frozen isolation valves during responses to water breaks and other emergencies that required that valves be shut off. Furthermore, during some of these emergency responses, valves that were on

the location map either could not be located or took several hours to locate.



In 2017 the first phase of a new valve-exercising program began. The first phase includes verifying locations, extending buried valve extensions to grade level, and updating the water facility location map. In FY 2019 the valve location work was completed. The second phase is in process and is focused on exercising valves and replacing them if they are found to be inoperable. Once this multi-year program is completed, exercising valves and keeping the location map updated will be an ongoing project.

## **INTERCONNECTIONS WITH KANSAS CITY, MISSOURI**

The water distribution system has two emergency connections that can deliver water from Kansas City, Missouri's (KCMO) water system to North Kansas City's. The main purpose of these emergency connections is to provide a continuous water supply to customers in the event there is a water outage in the NKC system. There is a 10-inch emergency connection located adjacent to the City's water reservoir off of NE 32<sup>nd</sup> Terrace. There is also an 8-inch connection at 32<sup>nd</sup> Avenue & Vernon Street. The connection on Vernon Street was abandoned sometime in the 1990's but was reconstructed and reconnected in 2016 after a major water main break that caused a water outage to North Kansas City Hospital.

In addition to NKC's connections to the KCMO system, there is a 10-inch emergency interconnection on Atlantic Street just south of West 9<sup>th</sup> Avenue which serves as an interconnection to provide NKC water to KCMO in the event of an emergency there.

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## **SANITARY SEWER SYSTEM**

Prior to 1996 the City operated a sewer treatment plant which was located in the Paseo Industrial District (PID). In 1996 the City entered into an agreement with Kansas City, Missouri (KCMO) for the treatment of the City's sewage. The City's sewer aeration tanks, sludge conveyer, and other treatment components of the sewage treatment plant were demolished, and the facility was

transformed into a pump station. A force main was constructed along the north side of Birmingham Road to convey the City's sewage approximately three miles to Kansas City's Buckeye Pump Station.

With the exception of the River Forest subdivision and other areas located near the Hospital, the topography in North Kansas City is virtually flat. This presents many challenges for sanitary and storm sewer systems that flow by gravity. The gradient of NKC sanitary sewer lines averages approximately .02 percent, which means that over a distance of 100 feet the pipe will slope down only 1 5/8 inches from the horizontal.

Due to the low percent of grade, the sewage must be pumped in certain areas. There are three sanitary City sewer pump stations: the 19<sup>th</sup> Avenue pump station, located within the Armour Road Redevelopment Area; the Burlington pump station; and the Bedford pump station, which pumps sewage to KCMO.

Another challenge of maintaining sewer pipes with minimum grade is that WPC crews must flush and clean pipes frequently to avoid clogging.

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## **CONDITION OF THE SANITARY SEWER SYSTEM**

In 1988 the City began a program to line the inside of its old clay sewer pipes with cure-in-place-pipe (CIPP), which is a plastic product similar to PVC. The CIPP was installed utilizing trenchless technology. By 2001, all 38 miles of sewer lines were lined. In 2003 the City contracted to have all of its 445 manholes lined. These sewer system rehab programs resulted in a significant reduction of the volume of storm water inflow and infiltration.



As a result, fees paid to KCMO for sewage treatment each year are approximately much lower than they would be if not for the inflow and infiltration reduction program.

In 2010, the City began a program to further reduce the inflow and infiltration of storm water into the sanitary sewer system by replacing broken service laterals at the point where they connect to the sewer mains. From 2010 – 2016 the City’s contractor excavated and repaired over 160 sewer connections that were identified as broken. In September 2016 the City contracted for lateral repairs using CIPP trenchless technology. Since then over 165 lateral connections to the main were repaired. This project ended in 2018 due to budget constraints and the inability to quantify infiltration reductions.

Data over the last two years leads staff to believe that inflow and infiltration continues to be an issue for the City. Given that all of the City’s sewer mains were lined at the end of the last century, the source of the current issue is a bit of a mystery and bears further investigation.

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## **STORM SEWER SYSTEM**

The 41-mile storm sewer conveyance system was constructed with minimum gradient, as the sanitary sewers were, due to the flat terrain in most of the City. As a result, storm water drains somewhat more slowly than in typical storm sewer systems, and occasionally the volume of storm water exceeds the capacity of the pipes during heavy rains. There are several areas within the City, including the Paseo Industrial District, that experience minor flash flooding in the streets during

heavy rain events, but which drain well after the rain stops.

### **LEVEES AND NORTH KANSAS CITY LEVEE DISTRICT**

The storm water runoff generated from areas as far north of the City as Vivion Road produces significant flows of a short duration. For this reason, the Hillside Levee and associated drainage ditch was constructed to divert runoff from the hillside area to Rockcreek.



When the Missouri River reaches the stage where the water is higher than the storm sewer outflow pipes, storm water is pumped into the river. There are six storm water pump stations, three of which were constructed by the City in the early 1970’s to supplement the other three pump stations

that were constructed by the US Army Corps of Engineers (Corps) in the 1950's. Ownership of the Corps pump stations was later conveyed to the Levee District. The Levee District is responsible for major repairs to those constructed by the Corps, and the City is responsible for maintenance and typical repairs of all six pump stations.

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The following is a list of the ownership of each pump station:

Levee District

- Rockcreek Pump Station
- Howell Street Pump Station
- Burlington Pump Station

City

- 26<sup>th</sup> Avenue Pump Station
- Linn-Jasper Pump Station
- Atlantic-Erie Pump Station

The Corps of Engineers inspects the pump stations annually and provides a report of the conditions of each. In addition, the Levee District's Engineers inspect all six pump stations (both the City's and the Levee District's) quarterly. City WPC staff checks on the pump stations nearly every day and start pumps up at least once a week to assure they are working properly.



**CONDITION OF THE STORM SEWER SYSTEM**

During the 1990's, the sanitary sewer system was re-lined with cure-in-place pipe (CIPP), and all of the corrugated metal storm sewer pipes were lined as well. It is estimated that 90 percent of the storm sewer piping is reinforced concrete, which is durable and has a lifespan over 75 years. Repairs of broken storm sewer pipe are rare. Catch basins are not as durable, and the City replaces an average of 15 each year. The flat terrain in the lower part of the City creates a higher risk of flash flooding than most cities, making it necessary for Public Works crews to clear debris from catch basins on a regular basis.

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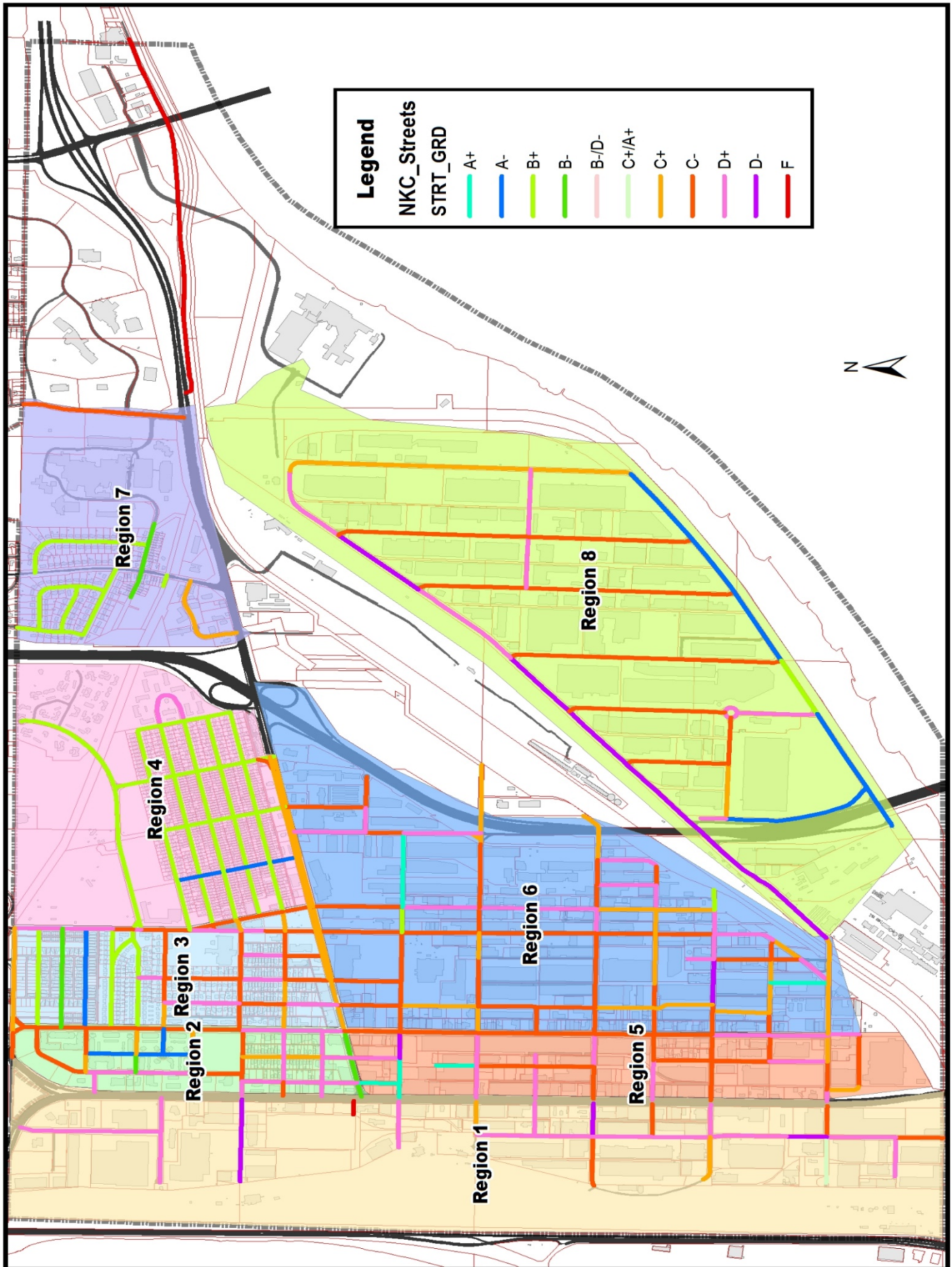
# EXHIBIT A

## STREET CONDITION GRADE CARD

**OVERALL STREET AVERAGE = C +**

<b>A+</b>	NEW CONDITION.
<b>A-</b>	NEAR NEW CONDITION. NO MAINTENANCE NEEDED.
<b>B+</b>	GOOD CONDITION. VERY FEW CRACKS OR ISSUES. NO MAINTENANCE NEEDED.
<b>B-</b>	GOOD CONDITION. CRACKS MAY BE PRESENT. MINOR CRACK SEALING SHOULD BE CONSIDERED.
<b>C+</b>	GOOD TO FAIR CONDITION. SOME CRACK SEALING IS NEEDED.
<b>C-</b>	FAIR CONDITION. EXTENSIVE CRACK SEALING IS NEEDED. MILLING AND OVERLAYING SHOULD BE CONSIDERED.
<b>D+</b>	FAIR TO POOR CONDITION. SHOULD BE MILLED AND OVERLAID SOON. FULL DEPTH REPLACEMENT IS NEEDED IN SOME AREAS.
<b>D-</b>	POOR CONDITION. MILLING AND OVERLAYING IS CURRENTLY NEEDED. FULL DEPTH REPLACEMENT IS NEEDED IN MANY AREAS ON THIS STREET.
<b>F</b>	FAILURE. STREET IS IN COMPLETE DISREPAIR. STREET WILL REQUIRE TOTAL REMOVAL AND REPLACEMENT.







# **EXHIBIT B**

## **LIST OF PROPOSED FUTURE WATER LINE IMPROVEMENTS FROM 2008 WATER MASTER PLAN**

**(IN ORDER OF PRIORITY)**

TABLE 7.1

NORTH KANSAS CITY, MISSOURI  
WATER MASTER PLAN  
CAPITAL IMPROVEMENT PROGRAM

Year	Priority	Item	General Location (st or near address)	Development Area <sup>1</sup>	Quantity	Unit	Unit Cost <sup>1</sup>	Opinion of Probable Cost	Developer Portion <sup>2</sup>	City Portion	Model Designation
Completed		Build-out System Hydraulic Improvements									
	A	WTP Meter Vault	WTP Yard	na	na	LS	\$144,000	\$144,000	\$0	\$144,000	na
	A	Pump 3 & 4 Replacement (and motor)	WTP	na	na	LS	\$94,000	\$94,000	\$0	\$94,000	na
	A	Pump 1 Impeller Replacement (and motor)	WTP	na	na	LS	\$55,000	\$55,000	\$0	\$55,000	na
	A	16-inch parallel pipe	WTP Improvements - yard piping	na	78	LF	\$128	\$14,000	\$0	\$14,000	48
	A	16-inch parallel pipe	WTP Improvements - yard piping	na	79	LF	\$128	\$14,000	\$0	\$14,000	51
	A	16-inch parallel pipe	WTP Improvements - yard piping	na	25	LF	\$128	\$5,000	\$0	\$5,000	53
	A	16-inch parallel pipe	WTP Improvements - yard piping	na	82	LF	\$128	\$15,000	\$0	\$15,000	55
	A	16-inch parallel pipe	on Armour from Burlington to Buchanan	na	117	LF	\$128	\$21,000	\$0	\$21,000	57
	A	16-inch parallel pipe	on Armour from Burlington to Buchanan	na	194	LF	\$128	\$36,000	\$0	\$36,000	59
	A	16-inch parallel pipe	on Armour from Buchanan to Clay	na	364	LF	\$128	\$67,000	\$0	\$67,000	61
	A	16-inch parallel pipe	on Armour from Clay to Swift	na	388	LF	\$128	\$68,000	\$0	\$68,000	63
	A	12-inch parallel pipe (Southern PID Loop, Leg 1)	From WTP to 16th and North Atlantic	na	1,723	LF	\$66	\$238,000	\$0	\$238,000	47
	A	12-inch parallel pipe (Southern PID Loop, Leg 3)	on 10th from Burlington to Clay	na	500	LF	\$96	\$89,000	\$0	\$89,000	33
	A	12-inch parallel pipe (Southern PID Loop, Leg 3)	on 10th from Clay to Erie	na	626	LF	\$96	\$86,000	\$0	\$86,000	35
	A	12-inch parallel pipe (Southern PID Loop, Leg 3)	on 10th from North Atlantic to Burlington	na	480	LF	\$96	\$66,000	\$0	\$66,000	39
	A	12-inch parallel pipe (Southern PID Loop, Leg 3)	on 10th from Erie to Gentry	na	1,079	LF	\$128	\$198,000	\$0	\$198,000	65
	A	16-inch Horizontal Boring, Leg 3	Railroad	na	na	LS	\$175,000	\$175,000	\$0	\$175,000	67
Completed	A	Northern PID Loop & 16-inch Horizontal Boring	Armour end Railroad	na	na	LS	\$890,000	\$890,000	\$0	\$890,000	29
Subtotal Priority A - Existing System Improvements											
									\$2,058,000	\$0	\$2,058,000
Development Driven Improvements											
	B	6-inch connection	West end of 20th	Old Mill Area	464	LF	\$48	\$32,000	\$32,000	\$0	P-1002
	B	6-inch connection	West end of 23rd	Old Mill Area	494	LF	\$48	\$34,000	\$34,000	\$0	P-1003
	B	8-inch connection	area southeast of I-29	Comm./Res.	225	LF	\$64	\$21,000	\$21,000	\$0	31
	B	8-inch connection	area southeast of I-29	Comm./Res.	789	LF	\$64	\$72,000	\$72,000	\$0	P-1004
	B	8-inch connection	area southeast of I-29	Comm./Res.	1,422	LF	\$64	\$131,000	\$131,000	\$0	P-1005
	B	8-inch connection	NKC Hospital expansion	Hospital	272	LF	\$64	\$25,000	\$25,000	\$0	P-1001
Subtotal Priority B - Development Driven Improvements									\$315,000	\$315,000	\$0
Fire Flow Improvements											
	C	8-inch connection	on Swift from Armour to 18th (leg 1)	Swift St. Fire Flow Improvements	639	LF	\$64	\$59,000	\$0	\$59,000	129
	C	8-inch connection	intersection of 18th and Swift (leg 2) - north side	Swift St. Fire Flow Improvements	24	LF	\$64	\$2,000	\$0	\$2,000	103
	C	8-inch connection	intersection of 18th and Swift (leg 1) - south side	Swift St. Fire Flow Improvements	55	LF	\$64	\$5,000	\$0	\$5,000	127
	C	6-inch connection	on Swift from 18th to 16th (leg 2)	Swift St. Fire Flow Improvements	59	LF	\$48	\$4,000	\$0	\$4,000	89
	C	6-inch connection	on Swift from 18th to 16th	Swift St. Fire Flow Improvements	745	LF	\$48	\$51,000	\$0	\$51,000	97
	C	6-inch connection	on Swift from 16th to 15th	Swift St. Fire Flow Improvements	752	LF	\$48	\$52,000	\$0	\$52,000	83
	C	6-inch connection	on 18th from Swift to Clay	Swift St. Fire Flow Improvements	364	LF	\$48	\$25,000	\$0	\$25,000	101
	C	6-inch connection	on Erie from Armour to 21st	Erie St. Fire Flow Improvements	569	LF	\$48	\$39,000	\$0	\$39,000	131
	C	6-inch connection	on Erie from 21st to 23rd	Erie St. Fire Flow Improvements	517	LF	\$48	\$36,000	\$0	\$36,000	133

Year	Priority	Item	General Location (at or near address)	Development Areas <sup>1</sup> Improvements	Quantity	Unit	Unit Cost <sup>3</sup>	Opinion of Probable Cost	Developer Portion <sup>2</sup>	City Portion	Model Designation
	C	8-inch connection	on Erie from 23rd to 26th	27th St. FF. Imp.	868	LF	\$48	\$60,000	\$0	\$60,000	135
	C	8-inch connection	on 27th from Buchanan to Swift		512	LF	\$64	\$47,000	\$0	\$47,000	137
	C	8-inch connection	on 28th from Swift to Howell Terr. (leg 1)		540	LF	\$48	\$37,000	\$0	\$37,000	139
	C	6-inch connection	on 28th from Swift to Howell Terr. (leg 2)	28th St. Fire Flow Improvements	457	LF	\$48	\$32,000	\$0	\$32,000	141
	C	8-inch connection	on 28th from Howell Terr. To Howell St. (leg 1)		31	LF	\$48	\$2,000	\$0	\$2,000	143
	C	8-inch connection	on 28th from Howell Terr. To Howell St. (leg 2)		305	LF	\$48	\$21,000	\$0	\$21,000	145
	C	12-inch connection	on Howell St. at Armour Intersection (leg 1)		8	LF	\$96	\$1,000	\$0	\$1,000	147
	C	12-inch connection	on Howell St. from Armour to 21st (leg 2)		327	LF	\$96	\$45,000	\$0	\$45,000	149
	C	12-inch connection	on Howell St. from 21st to 22nd	Howell Street Fire Flow	250	LF	\$96	\$35,000	\$0	\$35,000	151
	C	10-inch connection	on Howell St. from 22nd to 23rd (leg 1)		266	LF	\$80	\$31,000	\$0	\$31,000	153
	C	10-inch connection	on Howell St. from 22nd to 23rd (leg 2)	Improvements	51	LF	\$80	\$6,000	\$0	\$6,000	155
	C	10-inch connection	on Howell St. from 23rd to 24th		273	LF	\$80	\$31,000	\$0	\$31,000	157
	C	6-inch connection	on Howell St. from 24th to 25th		266	LF	\$80	\$31,000	\$0	\$31,000	159
	C	6-inch connection	on 24th from Howell St. to Knox		768	LF	\$48	\$53,000	\$0	\$53,000	193
	C	6-inch connection	on 24th from Knox to Macon	24th St. Fire Flow Improvements	751	LF	\$48	\$52,000	\$0	\$52,000	161
	C	6-inch connection	on 24th from Macon to Ozark		651	LF	\$48	\$45,000	\$0	\$45,000	163
	C	6-inch connection	on 25th from Macon to Ozark	25th St. Fire Flow Improvements	767	LF	\$48	\$52,000	\$0	\$52,000	191
	C	6-inch connection	on Ozark from 24th to 25th		748	LF	\$48	\$52,000	\$0	\$52,000	167
	C	12-inch connection	on Ozark from 25th existing 14" connection (leg 1)		271	LF	\$96	\$37,000	\$0	\$37,000	165
	C	12-inch connection	on Ozark from existing 14" to Clark Ferg. (leg 2)	Ozark St. Fire Flow Improvements	165	LF	\$96	\$23,000	\$0	\$23,000	169
	C	12-inch connection	Intersection of Clark Ferguson and Ozark		370	LF	\$96	\$51,000	\$0	\$51,000	171
	C	10-inch connection			24	LF	\$80	\$3,000	\$0	\$3,000	173
<b>Subtotal Priority C - Fire Flow Improvements</b>								<b>\$1,021,000</b>	<b>\$0</b>	<b>\$1,021,000</b>	
<b>Build-out Total</b>								<b>\$3,390,000</b>	<b>\$320,000</b>	<b>\$3,000,000</b>	

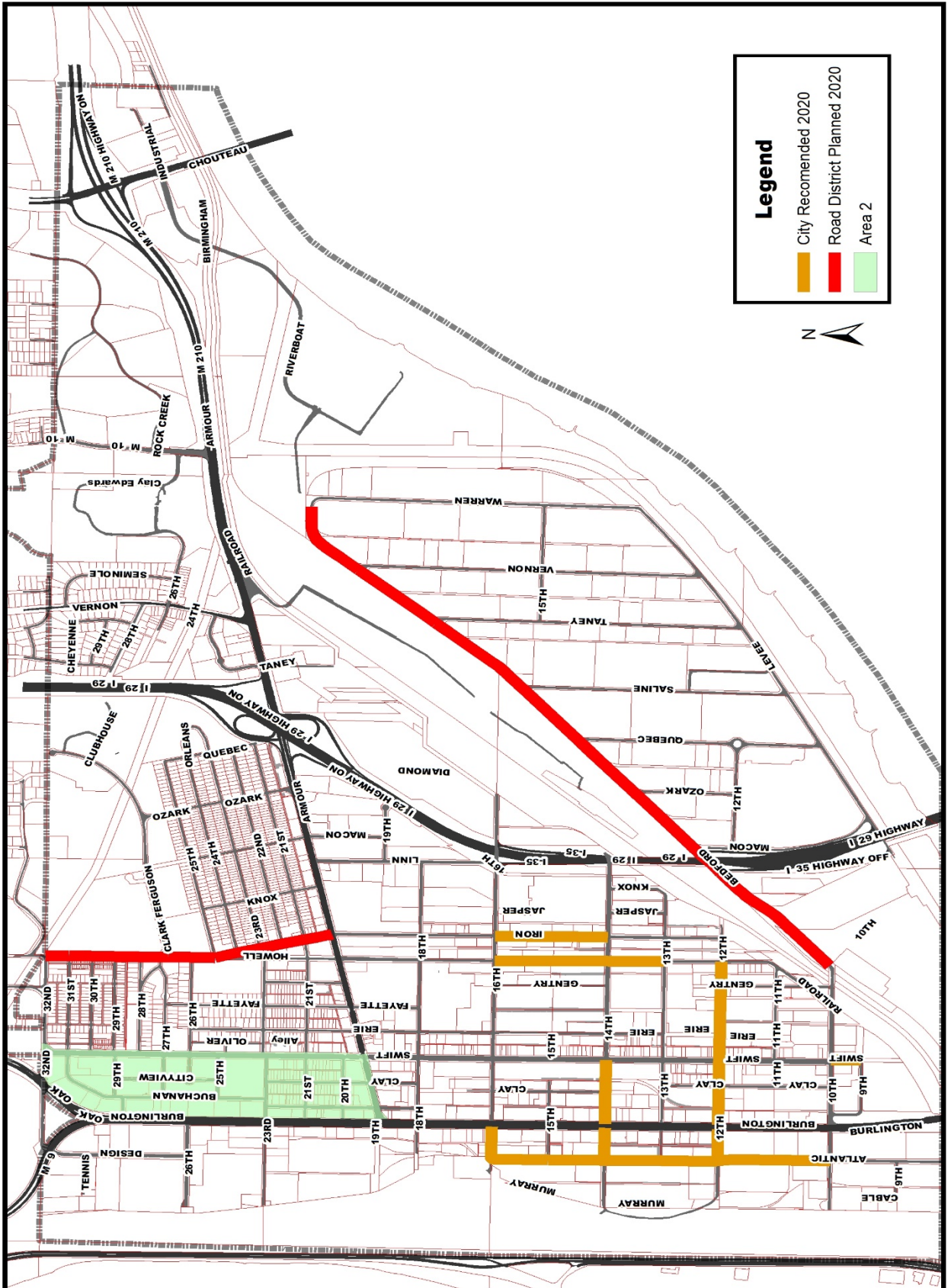
Notes:

1. New transmission lines in the existing distribution system included pavement removal and replacement.
2. Developer portion costs are based on an 8-inch equivalent cost in year 2007 and include pavement removal and replacement.
3. Unit costs for pipe is based on DIP.



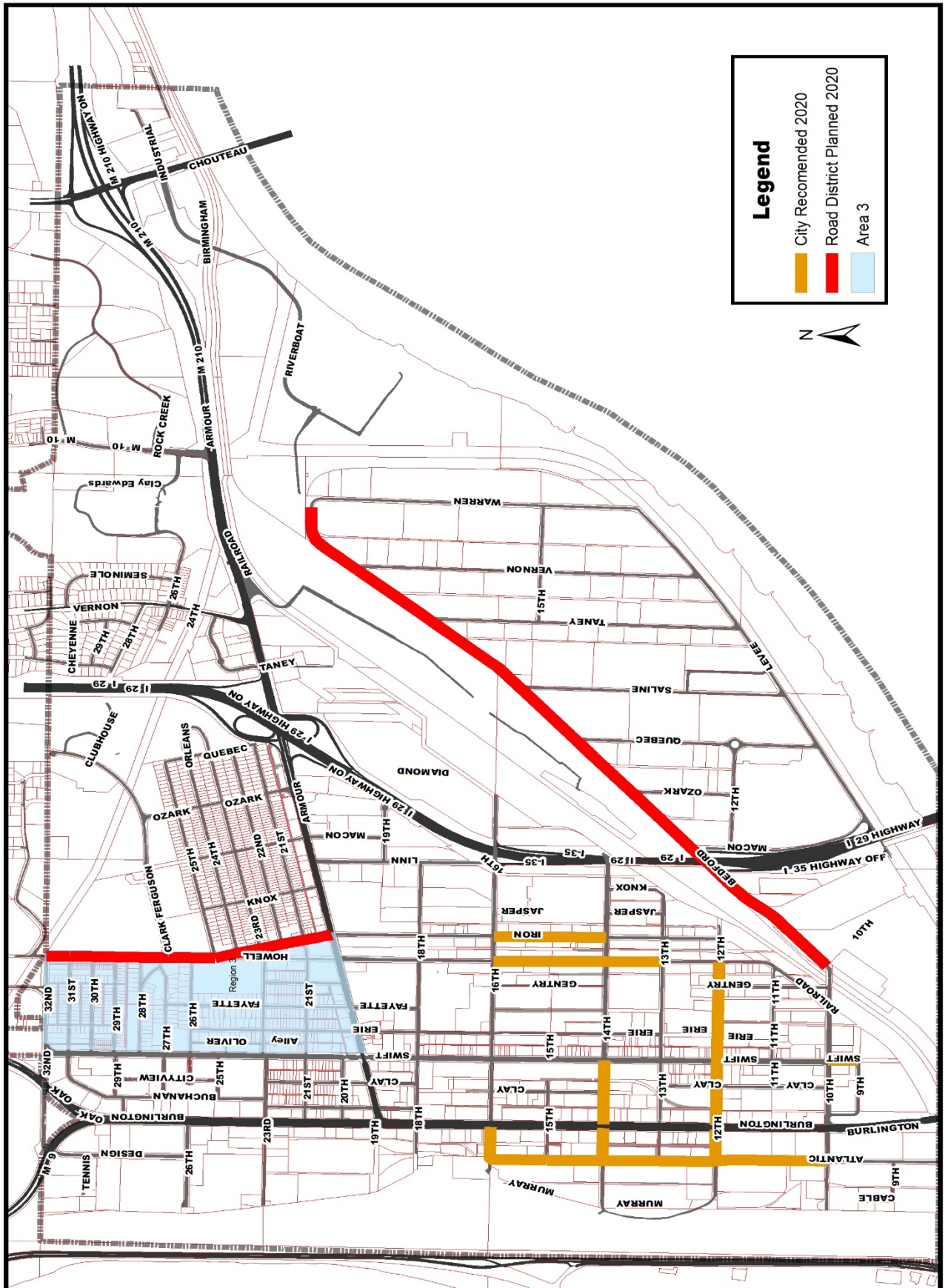


# AREA 2 LOCATION MAP





# AREA 3 LOCATION MAP

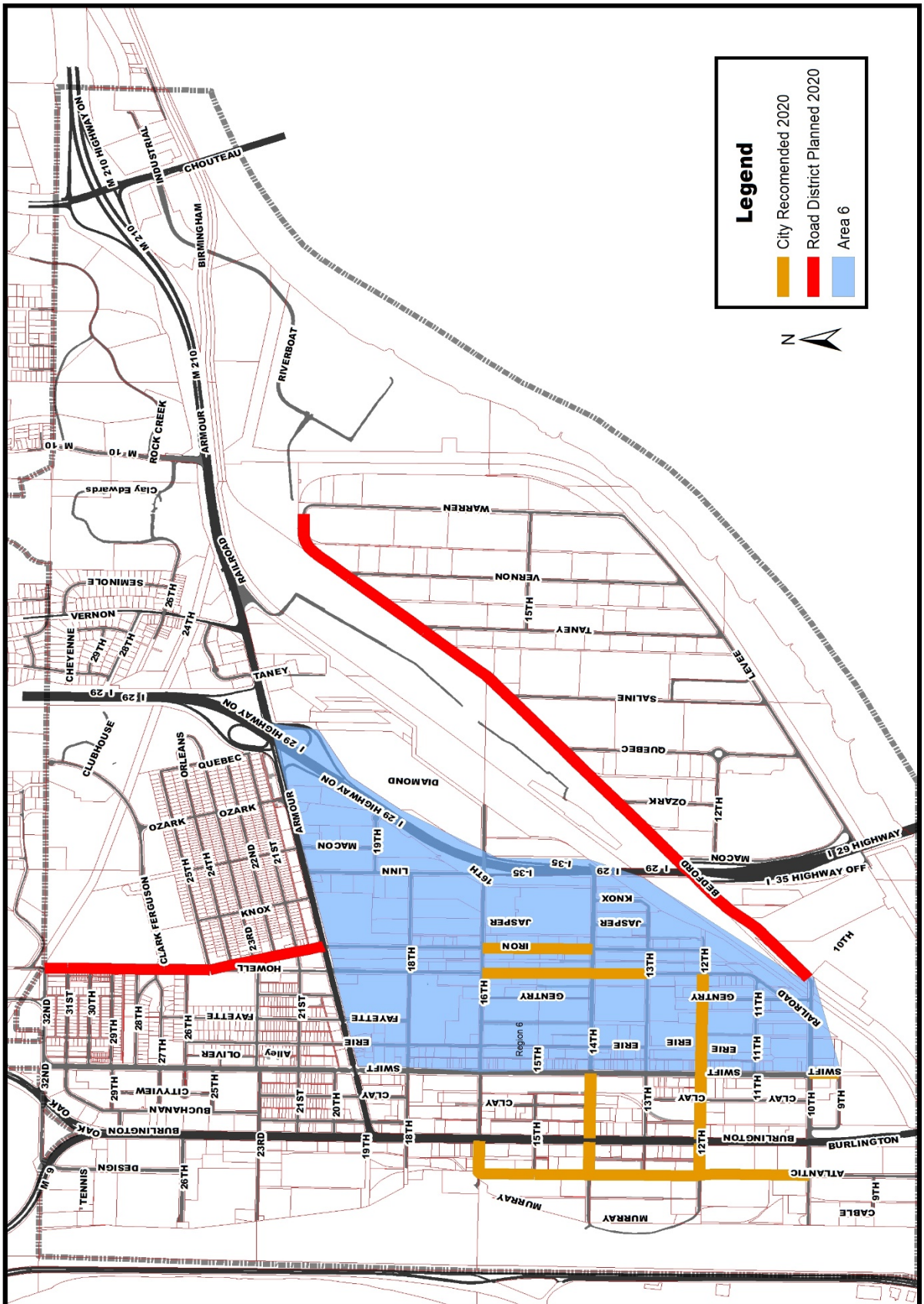






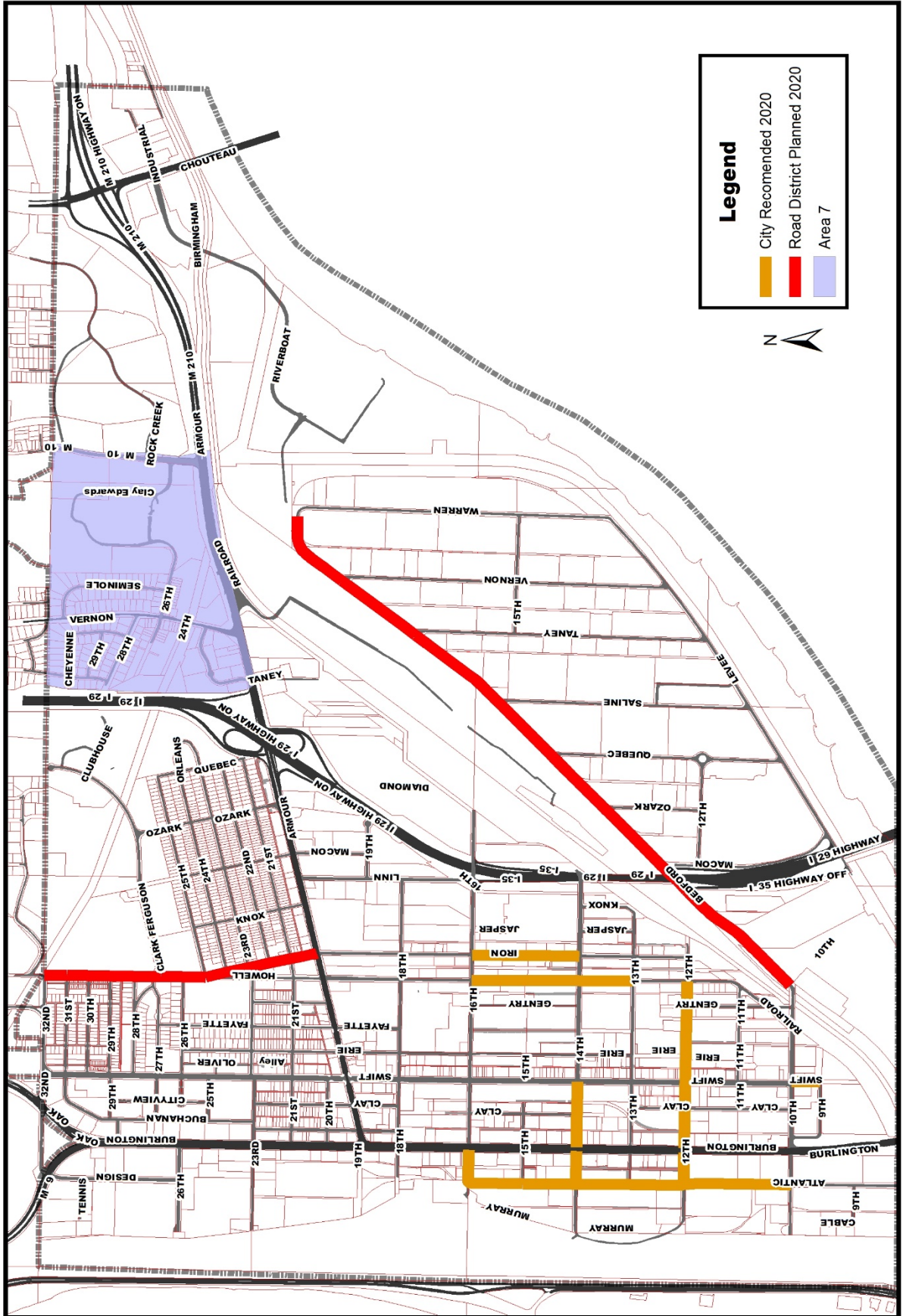


# AREA 6 LOCATION MAP

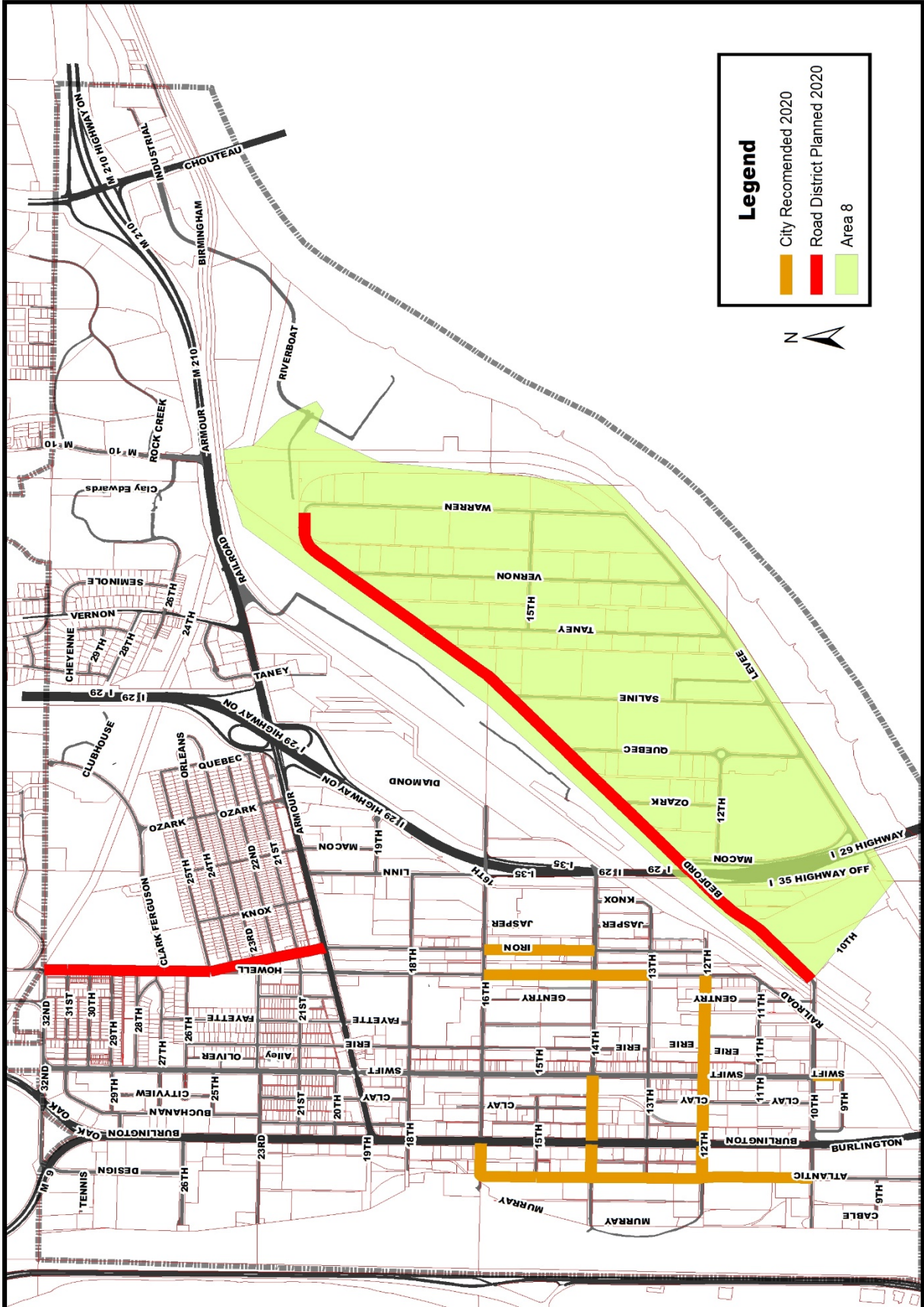




# AREA 7 LOCATION MAP



# AREA 8 LOCATION MAP



**Legend**

- City Recommended 2020
- Road District Planned 2020
- Area 8



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## MEMORANDUM



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**TO:** Honorable Mayor Stielow & City Council Members

**FROM:** Pat Hawver, Director of Public Works

**DATE:** March 17, 2020

**RE:** Proposal to Allocate Funding to Road District for Asphalt Overlays

In 2019, there were over thirty emergency snow/ice events in 2019 that required City crews to pre-treat streets with salt and remove snow and ice. Like most of the cities within our region, record amounts of potholes and other asphalt street failures appeared as the ice and snow on the streets thawed. City crews repaired over 25 potholes. The Road District asphalt contractor milled and overlaid nine alleys, or portions of alleys, that degraded after the winter months. In addition, the Road District milled and overlaid four streets within the PID. The total cost of street repairs by the Road District was \$338,300.

The Road District also contracted for construction of drainage improvements along the north side of Highway 210 / Armour Road, just east of Ozark Street, to address ponding issues that were occurring in this area. The improvements included installing storm sewer improvements along MoDOT's right of way, and along the City's alley on the north side of the Spanish 8 Apartments. The total cost of these improvements is approximately \$280,000.

Although there were many potholes and areas of asphalt degradation following the winter, the Road District's overlay project improved the conditions of the streets, and sections of streets, in many areas that were in poor condition prior to the winter of 2019. There are several streets throughout the City, however, that are failing and need to be overlaid in 2020, and many more can be expected in the years to follow.

The street conditions grade will not exceed a C+ grade, and most likely the grade will lower in the years to come unless a substantial increase in mill and overlay projects occur. The Road District receives approximately \$230,000 annually from Clay County, and currently their Fund Balance is approximately \$1.5 million. They plan to spend approximately \$700,000 this year on overlays, which is inadequate funding for the number of mill and overlay projects that need to be accomplished currently, and in the years to come, for the overall street conditions rating to improve. Staff recommends the Council consider allocating funding to the Road District from the Gaming Fund this year,

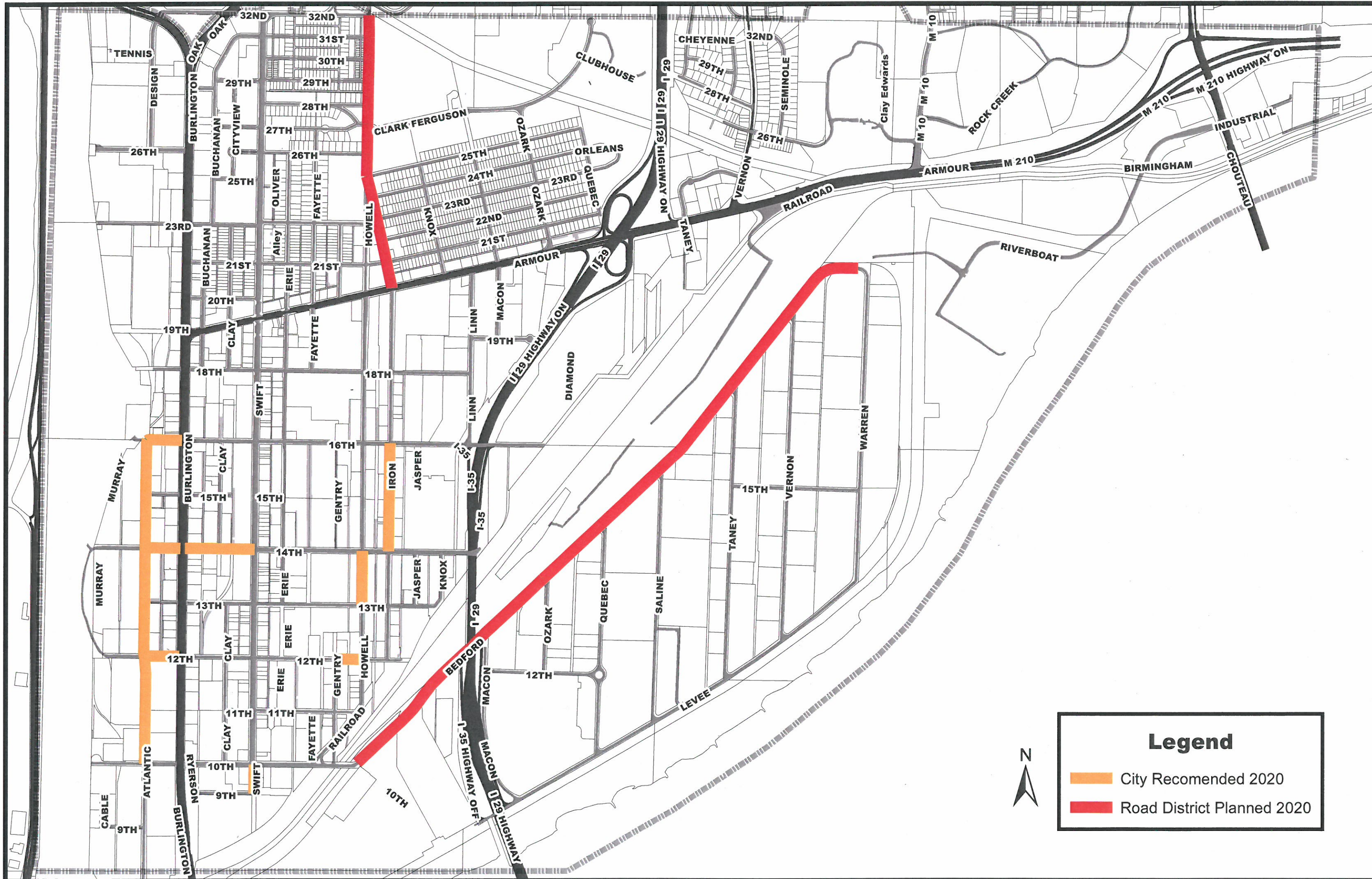


and perhaps the next few years to be used specifically for increasing the number of overlays each year.

City staff has identified several streets that are rated D- that are not planned to be included in the Road District's overlay program this year due to financial constraints. The attached map shows the streets the Road District plans to overlay this year, and the additional streets staff recommends be considered for funding to be included with the project at the City's expense. The total miles of streets recommended for additional overlays is 2.8, and the approximate estimated cost is \$500,000. Something like this will be necessary if the City wants to hold the line on and improve the overall street conditions.

**NOTE:** The recommendation in the preceding recommendation was crafted prior to the rapidly changing landscape due to the COVID-19 pandemic. That event will likely affect gaming revenues for at least some portion of time. This should be factored into the decision as to allocating additional funds to street maintenance this fiscal year. If not this year, it should be considered in future years.





**Legend**

- City Recommended 2020
- Road District Planned 2020





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# MEMORANDUM



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**TO:** Honorable Mayor Stielow & City Council Members

**FROM:** Pat Hawver, Director of Public Works

**DATE:** April 7, 2020

**RE:** Pump Station Issues

The purpose of this memo is to outline significant costs that the City has incurred and will incur related to pump stations it operates.

The City operates nine pump stations – six storm water pump stations and three sewage pump stations.

- Storm water pump stations owned by the North Kansas City Levee District and maintained on a day-to-day basis by the City:
  - Rock Creek Storm Water Pump Station
  - Howell Street Storm Water Pump Station
  - Burlington Storm Water Pump Station
- Storm water pump stations owned and operated by the City:
  - 26th Avenue Storm Water Pump Station
  - Linn-Jasper Storm Water Pump Station
  - Atlantic-Erie Storm Water Pump Station
- Sanitary sewer pump stations owned and operated by the City:
  - 19th Avenue Sewage Pump Station
  - Burlington Sewage Pump Station
  - Bedford Sewage Pump Station

## **Storm Water Pump Station Issues**

Due to high river stages from mid-May through August 2019, all six storm water pump stations were activated continuously to keep river water from entering the pump stations and to pump storm water to the river each time it rained. Between October 2019 and February 2020 many substantial pump and motor related problems at the following three pump stations were discovered during routine inspections.

- 26<sup>th</sup> Avenue Storm Water Pump Station
- Linn-Jasper Storm Water Pump Station
- Rock Creek Storm Water Pump Station

Staff has determined the problems to be caused by the wear and tear from being activated for such a long period of time.

Each of the storm water pump stations has three pumps. In each of the pump stations mentioned immediately above, only one of the three pumps and/or motors are out of service for repairs. They need to be repaired timely, because two pumps may not be pump stormwater sufficiently in the event that the Missouri River stages rise to over 20 feet. Forecasts for the Missouri River this season are worrisome.

The 2020 Water Pollution Control (WPC) budget included \$40,000 for emergency pump station repairs. The balance of the account is currently \$2,773. At this moment, a few of the repairs have been completed and invoices paid are within the budget. A significant number of the repairs, however, are still in progress. This line item will soon be well over budget.

Below is a summary of the pumps, motors, and other mechanical failures encountered, and the repairs that have been completed or are in progress at three storm sewer pump stations and two sanitary sewer pump stations:

- Linn-Jasper Storm Pump Station

The Linn-Jasper Pump Station is owned and maintained by the City. In February, staff observed vibrations in the motor the Linn-Jasper pump station and contacted Independent Electric to pull the motor and determine what the problem was. It has been determined that the rotor shaft is loose, the bearings are worn, and the housing assembly needs repairs. The necessary repairs also include machine work that needs to be done on the shaft. The total estimated cost of repairing this pump station is as follows:

○ Repair #2 Motor Imbalance	\$29,660
○ Remove and Install Motor #2	\$ 8,000
○ Disconnect and Reconnect Motor Wiring	\$ 2,000
	\$39,660

- 26<sup>th</sup> Avenue Storm Pump Station

This station is owned and maintained by the City. Staff turned on the pumps during a routine inspection and one of the pumps began to vibrate excessively. A technician from Mid-America Pump observed the pump and determined that the vibrations were caused from worn bearings in the impeller, which caused the impeller to hit the casing. There were also signs of other serious mechanical issues and staff the company recommended that the pump and motor be removed and transported to their shop to be dismantled and examine what the problems were.

In preparation to remove the pump by lifting it out with a crane through the hatch on the roof, staff realized that the hatch was too small to lift the pump through it. Apparently, the pump station building was constructed around the pumps after the pumps were installed. Staff received quotes to install a larger hatch, which would require sawing the concrete roof to the size needed and installing a larger hatch. JR Roofing provided a proposal in the amount of \$20,813 for the hatch replacement. The custom-made hatch was delivered on March 19, and installation was completed on March 25.

Once the roof opening was enlarged, Mid-America Pump rented a large crane and pulled the pump and motor out and hauled it to their shop. After dismantling the pump and motor, it was determined that the damages to the pump were extensive, and it needed to be totally rebuilt. The pump is approximately 45 years old, and the manufacturer closed their business many years ago. To repair a multitude of parts, it is necessary to fabricate them at their shop, and utilize two other repair shops that also have the means to fabricate parts. The estimated cost for removing, repairing, and reinstalling the pump is approximately \$125,000.

The pump motor was dismantled from the pump and sent to Rotec Electrical Services for diagnosis and repair. It was found to have extensive electrical problems. A proposal in the amount of \$38,970 for the motor repairs was submitted. It is estimated that the repaired pump and motor will be installed in early to mid-May.

- Rock Creek Storm Water Pump Station

The Rock Creek, Howell Street and Burlington stormwater pump stations are owned by the North Kansas City Levee District and are maintained on a day-to-day basis by the City. The Levee District is responsible for certain major repairs that might be necessary to these pump stations.

Pump #2 and the motor at the Rock Creek Pump Station failed on October 10, 2019. There is no roof hatch at the pump station to lift the pump out with a crane, so it took over a week to remove it from the base plate and dismantle it so it could be to hauled to Mid-America Pump's repair shop for repairs. After technicians examined the damages to the pump, it was determined that it needed to be overhauled, and the badly damaged motor needed to be replaced. The Levee District had a mechanical

engineer examine the motor at Mid-America Pump’s shop, and he agreed the motor had to be replaced.

The Levee District assumed responsibility for the costs of purchasing the motor, installation of a sole plate which includes concrete work, and the purchase of three soft starts at the total cost of approximately \$101,146.

The City assumed the responsibility for the costs for removing and hauling the pump to the repair shop, repairing and reinstalling the pump and motor, rerouting pump conduits and the electrical connections, and replacing the pump oilers, which altogether is estimated to cost approximately \$78,279. The new motor and the renovated pump are expected to be installed in late April.

The agreement between the City and the Levee District regarding cost sharing of repairs to the three stations the Levee District owns dates back to 1955, and it is not entirely clear to staff that some of the costs currently ascribed to the City should not be shouldered by the Levee District. Staff recommends that the City accept these costs for now and continue the plans for the work, but staff may want to revisit the current cost share for the Rock Creek pump station repairs with the Levee District.

### **Sanitary Sewage Pump Station Issues**

In addition to the problems noted above with storm water pump stations, we have had issues with two of our sanitary sewage pump stations.

- 19<sup>th</sup> Avenue Sewage Pump Station

The grinder experienced a mechanically failure, apparently when an unknown object destroyed the mesh teeth configuration that prevents large debris from passing through the pump station. The grinder had to be replaced because the damages were too extensive to repair. The bearings in the pump were worn out and the impeller was hitting the casing. Since the pump had to be removed to be repaired, staff also had the motor inspected and it was determined it needed new winding and other electrical repairs. Once the pump bearings were replaced and the pump was reinstalled, staff found that the check valve had also failed, which prevented wastewater from being pumped. The check valve was replaced. These combined repairs restored pumping capabilities. The total cost of these emergency repairs was \$29,913.

○ Inspect and Repair Pump and Motor	\$ 4,678
○ Install new Check Valve	\$ 2,300
○ Remove and Replace Grinder	<u>\$22,935</u>
	\$29,913

- Burlington Sewage Pump Station

There are three submersible pumps at the Burlington Pump Station. Staff observed a leak indicator showing there were problems with the motor windings on Pump #2. When the motor was pulled it was determined that a small seal had broken and sewage was getting in the motor. The proposal to replace the motor was close to the cost of repairing it, so it was decided that replacement in the amount of \$16,848 was the better option. The motor has been ordered and it is anticipated to be shipped and installed in early April.

- Repair Submersible Pump #2 \$16,848

The following summarizes the actual or anticipated costs of all the pump station issues noted above:

○ Linn-Jasper Storm Water Pump Station	\$ 39,660
○ 26 <sup>th</sup> Avenue Storm Water Pump Station	\$188,783
○ Rock Creek Storm Water Pump Station	\$ 78,279
○ 19 <sup>th</sup> Avenue Sewage Pump Station	\$ 29,913
○ Burlington Sewage Pump Station	\$ 16,848
<b>TOTAL:</b>	<b>\$353,483</b>

At the next Council meeting, staff will seek a transfer from the Gaming Fund to the WPC Fund in the amount of \$313,483 (total amount above less the \$40,000 budgeted for pump repairs in the FY 2020 WPC Fund).

**Minutes of the North Kansas City, Missouri City Work Session Meeting of  
April 7, 2020**

The City Council met in an open work session via an on-line platform on Tuesday, April 7, 2020, at 6:00 p.m.

The following were present:

Mayor: Don Stielow

Councilmembers: Bryant DeLong  
Rita Pearce  
Jesse Smith  
Valerie Pearman  
Zachary Clevenger  
Rick Stewart  
Fred Steffen  
Tom Farr

Mayor Stielow called the meeting to order at 6:00 p.m. City Administrator Eric Berlin noted that the Mayor and all 8 councilmembers were present.

City Administrator Berlin stated that the first item on tonight's Work Session is to discuss the North Kansas City Infrastructure Report Card for 2020. He then asked Public Works Director Pat Hawver to present the item to Council. Mr. Hawver reviewed the grades given to each section of the City's infrastructure. Discussion ensued.

North Kansas City  
Infrastructure Report  
Card 2020

City Administrator Berlin asked that Public Works Director Hawver present this item to Council. Mr. Hawver stated that due to high river stages from mid-May through August 2019, all six storm water pump stations were activated continuously. The problems with the storm water pump stations were due to wear and tear from being activated for such a long period of time. Along with the storm water pump stations having issues, two of the sanitary sewage pumps stations have experienced problems. One station needed the grinder replaced, and another pump station needed a submersible pump repaired. The anticipated cost for all of these repairs is over \$300,000. At the next Council meeting, staff will submit a budget amendment to the Council for approval.


Pump Station Issues

Mayor Stielow declared the work session adjourned at 6:30 p.m.

Adjourn

Council Adjourned





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Mayor

Attest:



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City Clerk

Approved this 21<sup>st</sup> day of April 2020.