



AGENDA OF THE IMPROVEMENT AND SERVICES COMMITTEE

**WEDNESDAY, JANUARY 9, 2019, 4:00 PM
CITY HALL, ROOM 207**

PLEASE NOTE TIME CHANGE

- A. Roll Call.**
- B. Approval of the Agenda.**
- C. Approval of Minutes.**
- D. Regular Business.**
 - 1. Consideration with possible action on request by Dorwin Tevebaugh to rescind the special collection charge of \$70.00 at 1370 Harvey Street.
 - 2. Discussion with possible action on report by Department of Public Works documenting areas of localized ponding, measures already undertaken to address ponding, and future implementation steps needed to alleviate ponding. This item addresses issues previously brought forward under the following communications:
 - A. Consideration with possible action on request by Ald. Johnson to identify top areas of concern within the City that experience frequent and/or severe flooding and report Department of Public Works plan to rectify such concerns with short and long-term solutions (referred to staff at September 27, 2018 Improvement and Services Committee meeting).
 - B. Consideration with possible action on request by Ald. Nicholson to create a plan to help relieve water issues at Main and East Mason Streets and East Mason and Schwartz Streets (referred to staff at October 9, 2018 Improvement and Services Committee meeting).
 - 3. Consideration with possible action on the review and approval of the 2019 Department of Public Works service rates.

4. Consideration with possible action of the 2018-2019 Early Mini-Storm Sewer Program.
5. Consideration with possible action on request by Department of Public Works to modify Section 6.35 GBMC relating to Underground Sprinkler Systems.
6. Consideration with possible action on request by Department of Public Works to modify Section 9.20 GBMC relating to Tree and Brush Trimmer License Required.
7. Consideration with possible action on request by Department of Public Works to modify Section 9.21 GBMC relating to Right-of-Way Excavation and Occupancy.
8. Consideration with possible action on request by Department of Public Works to modify Section 9.24 GBMC relating to Construction and Repair of Streets and Sidewalks.
9. Consideration with possible action on request by Department of Public Works to modify Section 9.25 GBMC relating to License for Sidewalk Builders.
10. Consideration with possible action on the report of the Purchasing Manager:
 - A. Request approval to award the purchase of traffic signal equipment to TAPCO for \$40,330.
 11. Consideration with possible action on the review and award of the contract RAY NITSCHKE MEMORIAL BRIDGE HYDRAULIC REPAIRS (held over from Improvement and Services Committee meeting on November 26, 2018) .
 12. Consideration with possible action on request by KS Energy Services to renew the annual Hold Harmless Agreement for access to the City of Green Bay sewer system to conduct inspection of the sewer mains and laterals.

E. Informational.

1. The next Improvement and Services Committee meeting is scheduled for January 23, 2019.
2. Director's Report on recent activities of the Public Works Department.

F. Public Hearings.

G. Adjournment.

- 1) THIS MEETING IS RECORDED: THE VIDEO OF THIS MEETING AND MINUTES ARE AVAILABLE ONLINE AT www.greenbaywi.gov
- 2) ACCESSIBILITY: Any person wishing to attend who requires special accommodation because of a disability, should contact the City Safety Manager at 920-448-3125 at least 48 hours before the scheduled meeting time so that arrangements can be made.
- 3) QUORUM: Please take notice that a majority or quorum of the Common Council will attend this Improvement and Services Committee meeting and will constitute a meeting of the Common Council for purposes of discussion and information gathering relative to this agenda.
- 4) REPRESENTATION: The party requesting the communication, or their representative, should be present at this meeting.



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.I.

Consideration with possible action on request by Dorwin Tevebaugh to rescind the special collection charge of \$70.00 at 1370 Harvey Street.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

None



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.2.

Discussion with possible action on report by Department of Public Works documenting areas of localized ponding, measures already undertaken to address ponding, and future implementation steps needed to alleviate ponding. This item addresses issues previously brought forward under the following communications:

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BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. High Water Memo - Transmit 12-24-2018 MRH



DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

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INTER-OFFICE
MEMO

TO: City Alderpersons
Mayor James Schmitt
FROM: Matthew Heckenlaible, PE – Utility Manager *MRH*
SUBJECT: City Wide High Water Summary
DATE: December 24, 2018
C: Steven Grenier, PE – Director of Public Works
James Brunette, PE – Assistant Director of Public Works

Comments:

In the fall-winter of 2015, the City's Common Council requested that the Department of Public Works-Engineering prepare a report documenting known areas subject to flooding across the City and what is being done to correct the shortcomings that are causing this flooding. The report and a "City Wide High Water Summary" was presented to the Improvement and Service Committee at the January 14, 2016 meeting. The report and summary were then forwarded onto the Common Council for further discussion and direction.

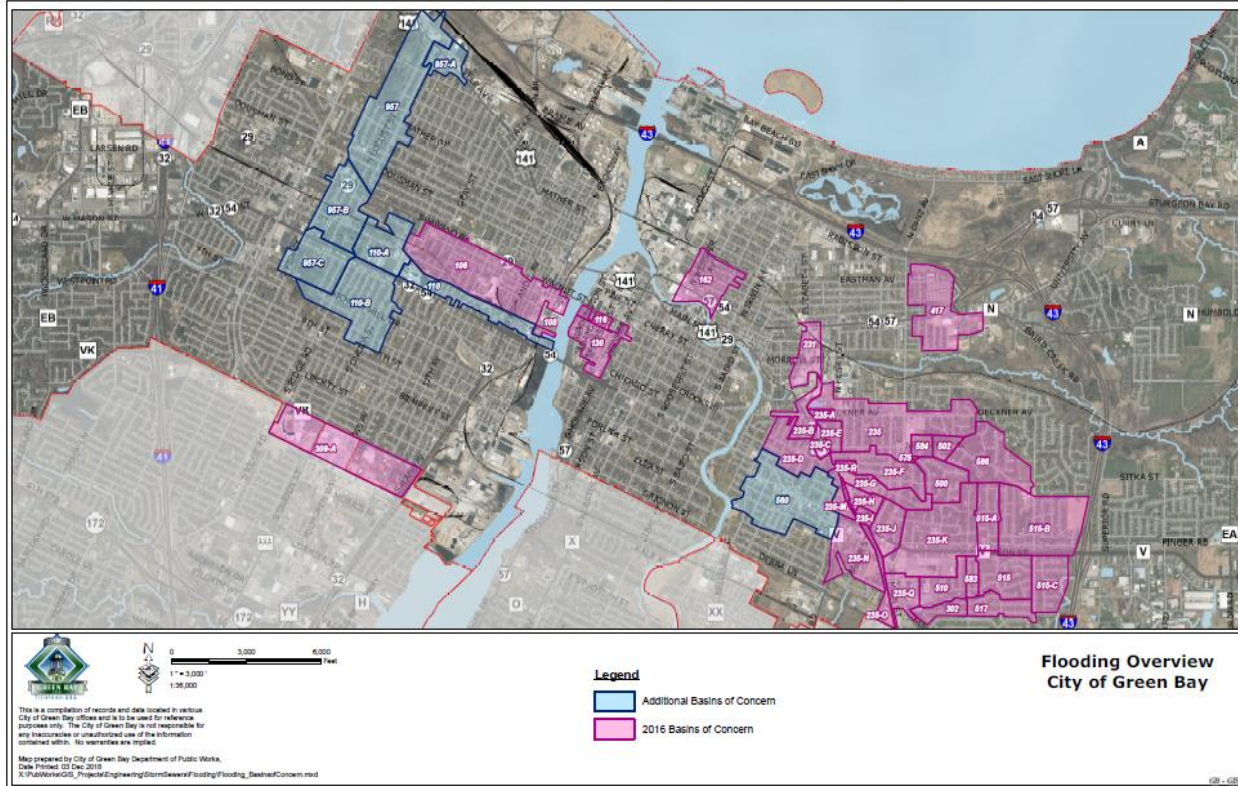
The "City Wide High Water Summary" touched on the magnitude of City wide high water concerns and also touched on a potential financial impact to address those concerns. The City is broken down into 315 smaller drainage areas or basins. Each drainage basin is assigned a unique identifying number. In the 2016 report, it was noted that there were 113 drainage basins out of the 315 basins that drainage complaints had been received by Public Works. Public Works had selected nine (9) drainage basins, which had seen repeated drainage complaints that may have also resulted in private property damage, for additional analysis and formal engineered design as necessary. The general areas of the initial nine drainage basins identified within the 2016 report are represented within the map below. Those nine basins include: 106, 108, 116, 130, 309, 162, 231, 417 and a initially only a portion of 235. The map also represents other areas of flooding concern that will over time require additional investigation and analysis into the causes associated with localized flooding.



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It is important to note that storm water runoff exceeding the capacity of the storm sewer is not always flooding. Excess runoff that is retained within the public right-of-way and does not result in property damage is conserved short-term nuisance pond, and some allowance for these conditions must be tolerated. Our efforts will be confined to areas where excess runoff has the potential to extend beyond the right-of-way, resulting in property damage.

The topic of flooding has again been raised due to recent significant rain events, specifically those of August 28, 2018 and September 17, 2018. The City's storm sewer system is typically designed to manage what is known as a 10-year, 24-hour rain event which would result in a total of 3.8 inches of rain over that time period or just shy of 0.2-inches per hour (3/16-inch per hour+/-). That storm sewer design is also based upon the system flowing via 'gravity' and not a pressurized system. As a storm sewer system is considered, the area to be drained is identified from the point of discharge to the upper most points to be drained. The smaller sized storm sewers are located on the upper most portions of the basin and as more area is collected the sewers downstream will get larger and larger. The storm sewer design also assumes a certain amount of hard surface or impervious areas such as roof tops, roads, sidewalks, patios, driveways, etc.. Impervious areas do not allow for storm water runoff to infiltrate or be absorbed into the soils. Depending upon the type of soils will also impact the ability for the soils to infiltrate storm water runoff. Clay soils do not allow a lot of infiltration while sandier soils will absorb more water. The more water that is absorbed into the ground is less water that physically



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runs off the properties and into the paved areas which eventually will get into the storm sewers and drain off to the 'surface waters'.

With today's storm water management requirements, the amount of runoff coming off a new developed site or subdivision must be equal to or less than that of the pre-developed or a grassy prairie condition. Prior to 2001, the City did not have any storm water management requirements when it pertained to storm water runoff. Therefore, the majority of the City as it was developed was under the pretext of getting storm water off the properties as quickly as possibly which ultimately taxed existing storm sewers.

Several of the sewers within the nine identified problematic drainage basins were designed and constructed more than 50-years ago. The designers and planners of those times made calculated assumptions of what and how these drainage basins were going to develop – residential, commercial, industrial, intuitional, or green space (park) and how big the drainage basin would ultimately be. In several cases those development criteria have been altered to increase the actual drainage basin or impervious surface area which increases the quantity of the storm water being directed down the storm sewer pipes. In other cases, the storm sewer pipe may not have been constructed as designed which could then restrict the amount of water that that pipe is capable of running through it.

Some of the City's storm sewers have submerged outfalls, meaning that the discharge end of the storm sewer pipe is below the discharging water body (Fox River, East River, Bay of Green Bay, Baird Creek, etc.). If the end of the pipe is under water, that means there is water within the storm sewer pipe for some distance upstream of the discharge outfall. If there is already water within the storm sewer pipe accepting more water becomes more of a challenge. In order for water to flow out of an already submerged or surcharged storm sewer pipe, water needs to build up to create pressure to push this water through the storm sewer piping. Depending on how much water is needed to create the required pressure may result in the water ponding above the ground which causes localized flooding.

A different explanation of the significance of headwater and tail water levels is provided from an internet site called engineeringcivil.com and can be seen below.



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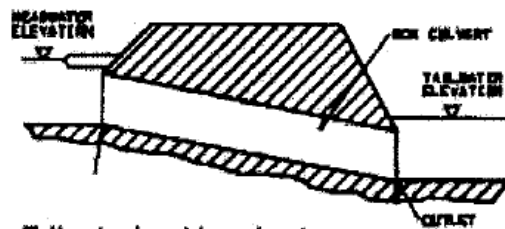
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What is the significance of tailwater level in culverts?

 engineeringcivil.com/what-is-the-significance-of-tailwater-level-in-culverts.html

The headwater level and tailwater level of culverts are important parameters in hydraulic design. The headwater level cannot be set too large, otherwise flooding upstream may occur leading to the loss of life and properties. On the other hand, the tailwater level of culverts has to comply with the following requirements:

- (i) For low tailwater levels at the outlet of culverts, the small depths of flow may cause significant erosion of downstream channels.
- (ii) For high tailwater levels, it may cause the culvert upstream to be flowing full or even under submerged condition. As such, the headwater level is increased in order to flow through the culvert and this in turn increases the flooding risk associated with high headwater level.



Tailwater level in culvert.

<http://www.engineeringcivil.com>

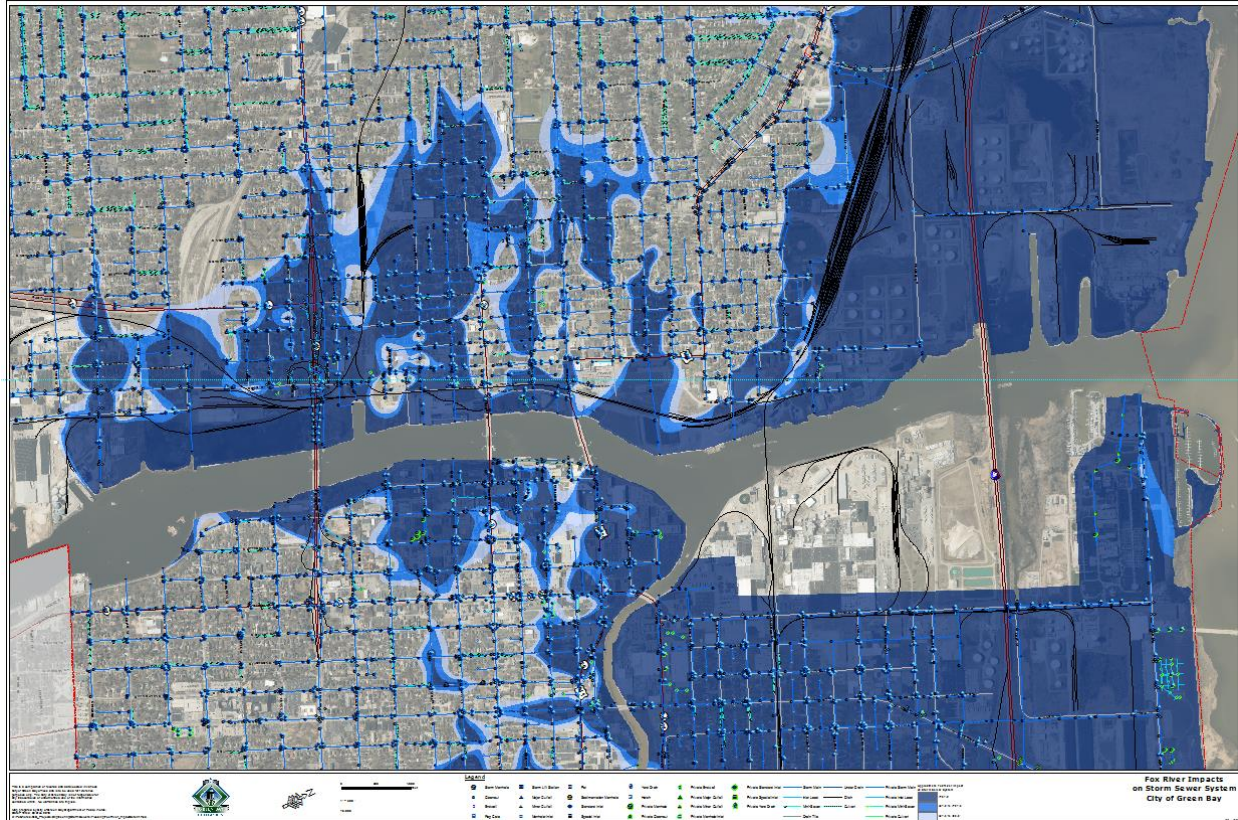
The map below depicts storm sewers within the City's downtown area that are directly impacted by a Fox River elevation of between 97.0 and 98.0. The map shows that some of the areas where high water complaints in the core of the City are occurring, could have a direct correlation with elevated Fox River heights that impact the available capacity of the existing storm sewers.



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As noted above, the City's storm sewer system is typically designed to manage a 10-year, 24-hour storm. The City's storm water ordinance requires development since 2001 to look at other storm events that can be seen below.

City Storm Water Ordinance Design Values

2-Year	24-Hour Storm	2.5 total inches
10-year	24-Hour Storm	3.8 total inches
25-year	24-Hour Storm	4.4 total inches
100-year	24-Hour Storm	5.3 total inches

The City has a manual rain gauge on top of City Hall. That rain gauge will provide us information as to the total rainfall when the gauge is checked but it will not provide us with data as to how much rain in a certain amount of time (intensity) occurred. The City utilizes other resources such as local media, National Weather Service or underground weather reporting sources. The two (2) rain events that impacted the City on August 28 and September 17 are summarized below.

August 28, 2018

(WUnderground)

McAulliffe Park Area Total Rainfall 4.41 inches from 2:30 to 8:00pm (+/-) 5.5 Hours



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From 2:29 to 3:19	0.71 inches in 50 minutes	(Less than 1-year storm)
From 3:19 to 4:19	2.45 inches in 1-hour	(100-year storm)
From 4:19 to 5:19	0.73 inches in 1-hour	(Less than 1-year storm)
From 2:29 to 5:19	3.89 inches in a little under 3 hours	(Between a 200 & 500 year storm)

September 17, 2018

(WUnderground)

McAulliffe Park Area Total Rainfall 5.29 inches from 7:09 to 9:09pm (+/-) 2.0 Hours

From 7:09 to 7:24	1.41 inches in 15 minutes	(80-year +/- storm)
From 7:24 to 7:44	1.57 inches in 30 minutes	(25-year storm)
From 7:44 to 8:14	1.26 inches in 30 minutes	(10-year storm)
From 7:09 to 8:09	4.23 inches in 60 minutes	(Over 1,000 year storm)
From 7:09 to 9:09	5.29 inches in 2 hours	(Over 1,000 year storm)

(Storm durations – based upon NOAA Atlas 14)

The bottom line with these two storm events is that the runoff intensity was far greater than the storm sewer systems were able to handle and as such caused the localized flooding in various locations throughout the City.

What has the City done to address these drainage concerns or are we ignoring them?

The City investigates drainage complaints and takes these complaints seriously. If there are solutions that can be implemented quickly, easily and economically, then steps are taken to do so. In most of the significant and reoccurring flooding areas quick, easy, economical solutions are not readily available.

Of the nine previously identified drainage basins, the following is what the City has done to date and what additional actions may be forthcoming.

Basin 309(A) – primarily Lombardi Avenue south to McCarthy Way (Ashwaubenon) and from Ashland Avenue west to Ridge Road. The primary flooding was identified to be within Oneida Street south of Lombardi Avenue and the Lombardi Avenue – Oneida Street intersection. During the initial reconstruction of Lambeau Field in the early 2000's it was identified that there was significant runoff coming off of 1265 Lombardi Avenue and that it would overwhelm the large storm sewer within Lombardi Avenue from Oneida Street east towards Ashland Avenue. What was proposed was that the Packer Organization take a look at trying to control some of the storm water coming off the property to aid in relieving the downstream storm sewers. The Packer Organization constructed an oversized storm sewer along a portion of the southerly and northerly property lines and then connect those two storm sewers with a third oversized storm



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sewer pipe just west of Oneida Street. That oversized storm sewer worked well for smaller storm events but flooding still occurred with the 10 plus year storm events.

When the Packer Organization proposed to modify the easterly portion of the stadium including modifications to the Atrium, Hall of Fame, Pro-shop the City insisted that they take more significant steps to control storm water runoff coming from the property. The Packer Organization has since constructed a large underground storm water storage tank within the northeasterly parking lot. Since the construction of this underground detention system in 2016, the City is not aware of any significant flooding issues that have been reported within Oneida Street adjacent to Lambeau Field or within the intersection of Lombardi Avenue and Oneida Street. The Packer Organization constructed this facility at an estimated cost of \$3,200,000.

Basin 417 – 2400 Block of former University Avenue. The storm sewer in this area was constructed by the former Town of Preble. The Town did not design all their storm sewers to the 10-year design storm. In a lot of cases their storm sewers can barely convey the 2-year storm event. The storm sewer within Clement Street and former Clement Street were undersized and required to be up-sized. With the redevelopment that occurred in this area in 2016 with the Festival Foods, Kwik Trip and associated Out Lot, the storm sewers were up-sized crossing and within University Avenue (Sturgeon Bay Road STH 54-57) and through the Festival Foods parking lot to the south side of the property where it connects with the existing storm sewer. Included with the redevelopment also included some underground detention and four (4) bio-filtration storm water facilities to aid in detaining (slowing) some of the storm water down prior to entering the actual storm sewer system. The Developer spent approximately \$400,000 on Public storm sewer up-grades which does not include all the private storm sewers and storm water best management devices that were also constructed.

Basin 231 – Elizabeth Street from Main Street to University Avenue and University Avenue from Elizabeth Street to Acme Street realized flooding at several of the intersections and in the low point on University Avenue. The storm sewer in this area was constructed by the former Town of Preble. The Town did not design all their storm sewers to the 10-year design storm. In a lot of cases their storm sewers can barely convey the 2-year storm event. The City had prepared construction plans prior to 2016 to begin the up-sizing of the storm sewer within Elizabeth Street from just north of Main Street north to the railroad crossing just south of University Avenue. During a fall rain event in 2015, Public Work's Engineering Staff observed the flooding on University Avenue and down Elizabeth Street. A concern was raised when staff attempted to locate the storm sewer outfall at Baird Creek. Upon further review, it was determined that this outfall was below the Creek water level and as such was causing a surcharged effect within the storm sewer system. The undersized storm sewer piping and the surcharged condition was what was causing the flooding condition. Public Works contracted with engineering consultant AECOM to perform a hydrologic and hydraulic analysis of our proposed storm sewer construction plans. After the analysis was completed, the storm sewer needed to be up-sized more than what was originally considered primarily due to the surcharging condition that Baird Creek was imposing onto the storm sewer system. With the increase in



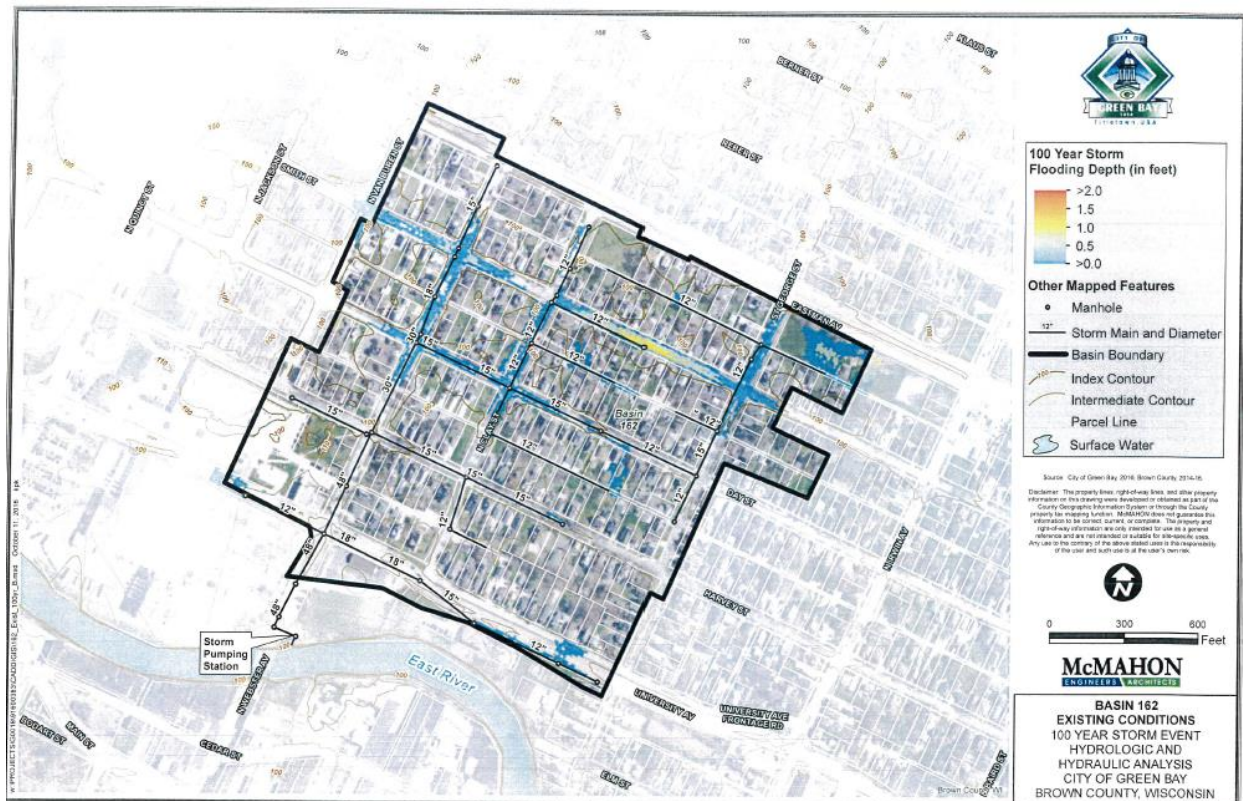
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storm sewer pipe sizes came additional conflicts with existing utilities which required re-design and coordination with these utilities. The up-sized storm sewer was constructed during the summer of 2018 for bid cost of \$1,128,118 for approximately 2,400 feet of storm sewer. The final costs are still being determined.

Basin 162 – An area bounded generally bounded by the East River to Eastman Avenue, from just west of North Webster Avenue to St George Street. The primary flooding concern has always been within the 1100 block of Smith Street. This basin was identified within the 2015-16 Storm Water Report as a significant reoccurring area. Public Works contracted with McMahon in 2016 to perform a hydrologic and hydraulic analysis of the existing storm sewer system and to provide recommendations to aid in minimizing the impacts to the storm sewer system and street surface flooding in particular in the 1100 block of Smith Street which is the lowest point within this drainage basin. The McMahon Basin map below represents conditions observed during a 100-year storm event.



The storm sewer flow is regulated by the Webster storm lift / pump station which was constructed in 1972 and has seen very little in the way of significant work or maintenance performed on the station. With the storm water flow being regulated by the storm lift / pump station, it allows for sediment to accumulate within the storm sewer which reduces the allowable volume of flow within the pipe. McMahon recommended up-sizing the storm sewer piping



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within North Webster Avenue and within other areas within this drainage basin including within the 1100 block of Smith Street. Public Works reconstructed portions of Smith Street (Webster Avenue to St. George) in the late summer, fall of 2018 in anticipation of the North Webster Avenue reconstruction project. Public Works began a portion of the North Webster Avenue storm sewer up-grades from the East River to north of University Avenue in the fall of 2018. The remainder of the storm sewer improvements will occur under a Wisconsin Department of Transportation (WiDOT) contract in 2019. Within that WiDOT contract, North Webster Avenue will become a boulevard section. The boulevard section will be depressed below the street which will allow the street storm water to drain into this area for both additional storm water detention and water quality benefits. In 2018, Public Works will have spent \$1,050,750 towards reducing high water impacts within this drainage basin with more capital being spent under the WiDOT contract in 2019.

Basin 108 – this is a relatively small drainage basin that is centralized around the 500 block of South Broadway. This area again had been identified as a recurring flooding area within the 2015-16 Storm Water Report. Public Works contracted with McMahon in 2016 to perform a hydrologic and hydraulic analysis of the existing storm sewer system and to provide recommendations to aid in minimizing the impacts to the storm sewer system and street surface flooding, particularly within the 500 block of South Broadway. The McMahon Basin map below represents conditions observed during a 100-year storm event. The storm sewer system in this area is again regulated by a storm lift / pump station. This particular storm lift / pump station was constructed in 1972. The primary recommendation by McMahon was to upsize both the storm sewer in the basin and the storm lift / pump station. Public Works had consulted with McMahon in 2017 to design the new storm lift / pump station. There were several challenges associated with this storm lift / pump station including not knowing the condition of the discharge piping leading out to the former slough / boat slip which goes under the main rails for the Canadian National Rail Road. As the existing storm sewer discharge piping and lift station are located within the filled in slough area the underlying soils are not desirable and the costs associated with up-grading this lift / pump station continued to escalate for a relatively small drainage basin. The estimated probable construction cost for lift station and storm sewer up-grades as put together by McMahon was approximately \$870,000. Public Works started looking at other options when the storm lift / pump station costs were coming in over \$1,500,000. Public Works is opting to consider combining Basin 108 with drainage Basin 110 by constructing about 250 feet of new storm sewer to connect the two drainage basins. This design is in progress.



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Basin 110 – is made up of three (3) sub-basins totaling approximately 343 acres of area. The primary impacts within the basin are near Clinton Street from South Broadway to South Ashland Avenue, Oneida Street from Western Avenue south to Hickory Hill Drive. The storm sewer within Clinton Street at South Broadway is routed through a problematic storm lift / pump station. This storm lift / pump station was constructed within the early 1980's to ensure that the intersection of South Maple Avenue and Clinton Street remained dry during dry weather and high river water conditions. This storm lift / pump station was never intended to control the rain runoff from this extremely urbanized area. Public Works is planning on constructing a new storm lift / pump station within the proposed Ship Yard development. This lift station will be able to convey approximately 100 cubic feet per second worth of flow which is actually less than half of what the basin is producing. The rationale is that presently the storm sewer pipe is submerged below the river water elevation within the slough. That means there is river water within the Clinton Street storm sewer system all the way up to 12th Avenue. By adding this larger storm lift / pump station, the existing storm sewer system would be able to be pumped down prior to rain events. This would provide as much volume as possible that could be stored and conveyed by the storm sewer system. Public Works is proceeding with the storm lift / pump station design and obtaining authorization to pre-purchase the pumps and controls (November / December 2018) with actual construction anticipated to commence in spring of 2019. It is anticipated that the storm sewer interconnection between Basins 108 and 110 and the new storm



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lift / pump station will be around \$3,000,000. Final construction estimates are not available at this time.

Basin 106 – is approximately 250 acre drainage basin covering the north side of Shawano Avenue southerly to south of Western Avenue Arndt Street extended from the Fox River west towards Oneida Street. The McMahon map shown above again is representing the existing conditions during a 100-year storm event. This area had been identified as a recurring flooding area within the 2015-16 Storm Water Report with impacts occurring within Shawano Avenue around Hazel Street, the westerly portion of Cora Street, both the westerly and easterly portions of Seymour Park (split by Ashland Avenue) and South Maple Avenue just east of Seymour Park. The areas identified above also happen to be within or in close proximity of where a former slough had been. The slough had been filled sometime between 1882 and 1938 but the land topography in the area was not significantly modified. As such storm water runoff continues to flow to low areas which in a lot of cases are the areas identified above. The location of the slough was depicted in a 1882 Plat Map that is located within Public Works and a marked up snap shot is shown below.



Public Works contracted with McMahon in 2016 to perform a hydrologic and hydraulic analysis of the existing storm sewer system and to provide recommendations to aid in minimizing the



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impacts to the storm sewer system and street surface flooding, particularly within the areas identified above. The McMahon report primarily showed flooding would occur in the above identified areas as soon as a 10-year rain event and increased in magnitude with larger rain events. McMahon provided three (3) potential options to consider to minimize the flooding impacts throughout this drainage basin. The cheapest cost alternative proposed to encumber most of Seymour Park and construct a 26 ac-ft wet detention pond in its place as well as up-sizing over 10,000 lineal feet of storm sewer. An estimated cost for the option in 2016 was approximately of \$4,000,000.

McMahon's second option was still to encumber a portion of Seymour Park, again to construct a wet detention pond approximately half the size as the cheapest alternative (11-ac-ft), to add or up-size over 18,000 lineal feet of significantly larger storm sewer and to up-grade the storm lift station located within the intersection of Howard Street and Pearl Street. The estimated cost in 2016 for Alternative 2 was \$6,825,000.

McMahon's third option was not to construct a pond, but to construct approximately 18,000 lineal feet of large diameter storm sewer along with up-sizing existing storm sewer, and to up-grade the storm lift station located within the intersection of Howard Street and Pearl Street. The estimated cost in 2016 for Alternative 3 was \$6,845,000.

Public Works has had discussion with Parks staff about the possibility of encumbering Seymour Park to construct a storm water wet pond. Parks staff was not overly receptive to the idea of losing the park for a wet storm water detention pond to relieve flooding. Public Works offered up another potential alternative that would still encumber lands within Seymour Park but would preserve open green spaces, by looking into the alternative of underground detention along with up-sizing the storm lift / pump station at Howard Street and Pearl Street. Underground detention utilizes larger diameter pipes or chambers which are buried in rows. These pipes will allow water to flow into them and a smaller diameter pipe will allow the water to release at a slower rate preventing water from taxing the downstream storm sewer system. This alternative is more costly in that storm sewer piping will be needed for the underground detention system. Parks staff is open to having further discussions regarding where such a system could be located within Seymour Park. Brown and Caldwell, another storm water consultant that the City works with has provided an estimate for some underground detention with Seymour Park could range from \$1,300,000 to \$8,000,000 depending as to the actual quantity of storage proposed.

Public Works is moving forward with up-grading the storm lift / pump station at Howard Street and Pearl Street and installing some oversized storm sewer / box culverts within Howard Street from Pearl Street west to South Broadway. A preliminary estimated cost for this portion of the project is presumed to \$2,500,000.

Basins 116/130 – are two drainage basins on the east side of the Fox River extending east towards Monroe Avenue and are generally bounded by East Walnut Street down to just north of East Mason Street. There have been reports of flooding along South Jefferson Street between



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Doty Street south to St. John Street, Adams Street between East Walnut south to Stuart Street, Madison Street from Doty Street south to Crooks Street with significant ponding occurring near the YWCA, and north of Doty Street extended between the Fox River and South Washington Street. In past investigations regarding potential explanations of this localized ponding several items have been discovered. The storm sewer pipe outfalls, one at Stuart Street and the other at Doty Street, discharge to the Fox River at an elevation below the river surface. As previously explained, if the pipe is full of water, discharging additional water out of the pipe becomes more problematic. The 'drainage basins' had expanded beyond the original designed basin limits which provides additional storm runoff to these storm sewer pipes. With the improvements along the Fox River shoreline, one of the amenities was to place extra-large rip-rap rock along the shoreline to prevent the shoreline from eroding away. Some of the placed rip-rap rock is impeding the flow leaving the existing storm sewer pipes. With the City's investment into SmartCovers, we were able to see that the Fox River elevation has a significant impact on the street flooding that occurs in the vicinity of the YWCA. If the level of the river is up, that means that there is more water already within the storm sewer pipe which impacts the ability for the street to drain, causing street flooding. If the river levels are down, the impacts towards street flooding are somewhat reduced.

Knowing that the drainage basins had expanded beyond their original boundary, Public Works required that a portion of this additional area would be captured by the new storm sewer that was constructed within the Monroe Avenue reconstruction project in 2013-2014. By re-routing this storm water north towards the East River has had an impact by reducing the drainage area west of Monroe Avenue, there still have been reports of localized flooding on South Madison Street near the YWCA especially during heavy intense rain events.

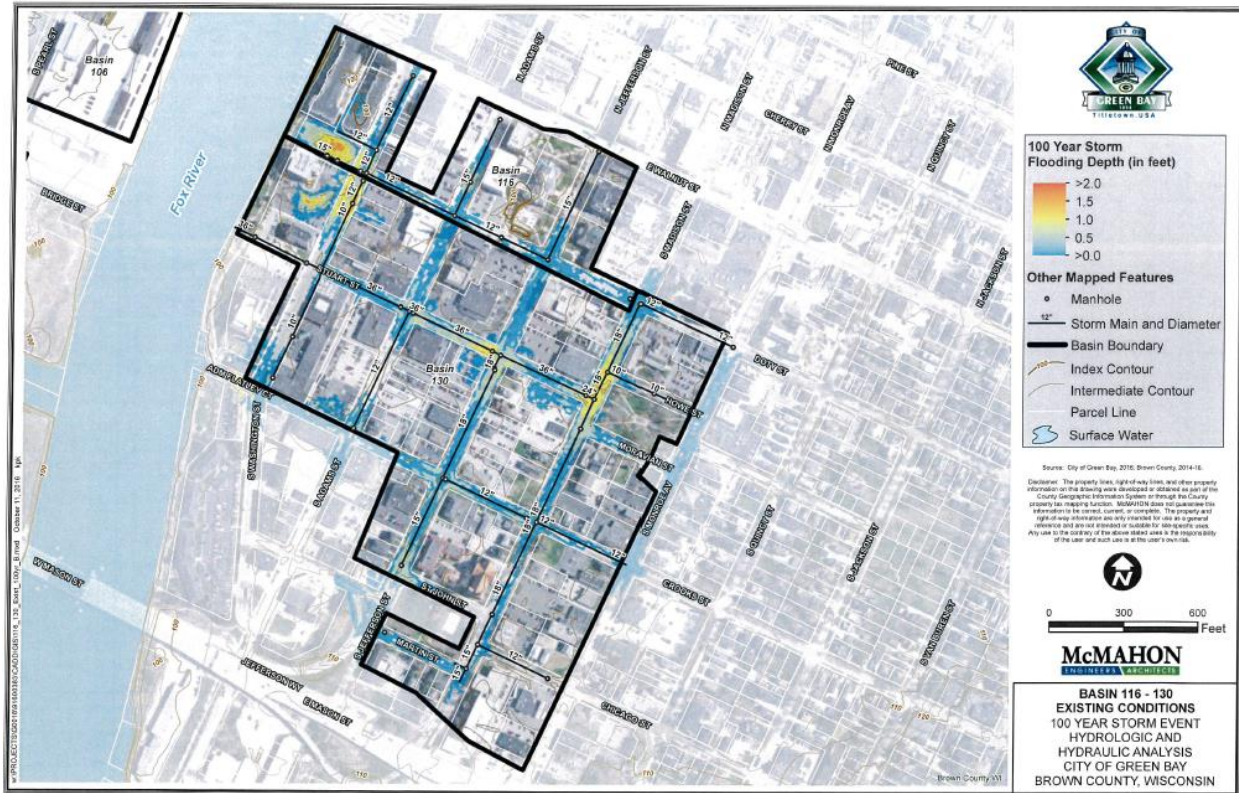
Public Works contracted with McMahon in 2016 to perform a hydrologic and hydraulic analysis of the existing storm sewer system and to provide recommendations to aid in minimizing the impacts to the storm sewer system and street surface flooding, particularly within the areas identified above. The McMahon Basin map below represents conditions observed during a 100-year storm event.



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The McMahon report primarily showed flooding would occur in the above identified areas as soon as a 10-year rain event and increased in magnitude with larger rain events in the generalized areas identified above. McMahon only considered one option to aid in reducing the localized street flooding but would not eliminate the flooding from the larger events. The option was to up-size approximately 7,800 lineal feet of storm sewer. This is over half of the storm sewers within these two drainage basins. The estimated cost in 2016 for this option was \$2,162,000.

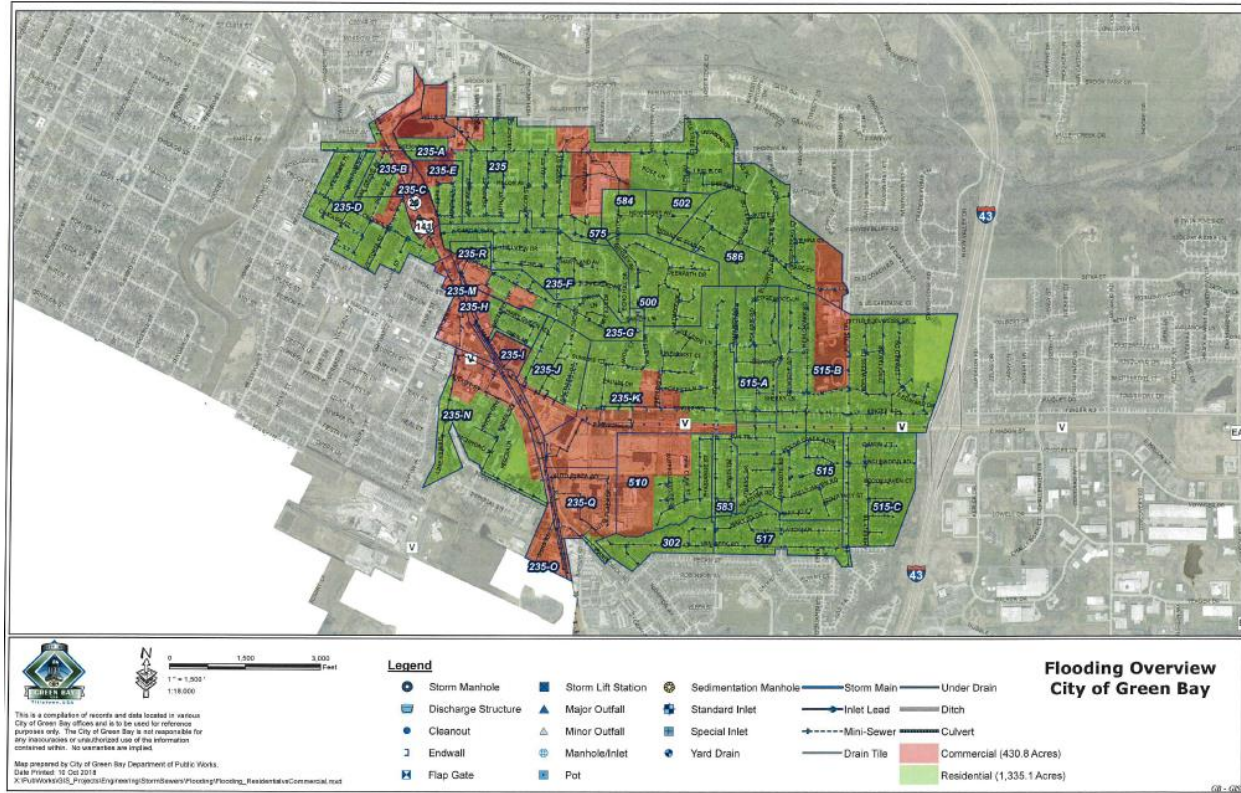
Basin 235 – is actually comprised up of 30 direct and indirect discharge sub-drainage basins all discharging to Baird Creek between Main Street and North Henry Street. The combined drainage basin totals approximately 1,766 acres. Basin 235 and associated sub-drainage basins take storm water runoff from Van Beek Road to north of Deckner Avenue from west of Main Street east towards I-43. There is approximately 431 acres of commercial/institutional properties that have substantial amounts of impervious (hard surface) areas as compared to the balance then being primarily residential development. A portion of the total combined drainage basin is also former Town of Preble infrastructure.



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The engineering design calculations performed in 1970 for the large storm sewer that ultimately enclosed what was then referred to as Ellis Creek estimated 1,962 acres of strictly residential property development. A drainage basin map or sketch was not found as part of the calculations to determine where an additional 200 acres of drainage basin would have been located. The end result was that approximately 470 cubic feet per second (CFS) of flow would be generated from the drainage basin for the 10-year design storm. Utilizing information related to the actual constructed storm sewer between Baird Creek and Schoen Street, the storm sewer is capable of managing 480 CFS of free flow discharge. Therefore, the storm sewer design and constructed storm sewer agree with each other and as such there shouldn't be any issues.

Then what is causing the flooding primarily within the Main Street corridor from Newberry Avenue south to East Mason Street, the open channel portion of Ellis Creek near Van Beek Road, Schoen Street near Hillside Lane and within the former Ellis Creek waterway?

This situation is not so dissimilar to Basin 106 in that the natural drainage path, in this case Ellis Creek, had been filled in but the surrounding areas were not modified to change the overland flow characteristics. In this case, Ellis Creek was filled in to accommodate a storm sewer and sanitary sewer for proposed growth and development of the City. The overland flow from the outer areas still ultimately drain back towards where Ellis Creek once was and as such creates some localized flooding.



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In 2009, Public Works contracted with AECOM to perform a hydrologic and hydraulic analysis for the 'Ellis Creek Drainage Basin'. The analysis replicated localized high water conditions during various storm events. However, the analysis did not reveal what the underlying causes were behind the flooding. The analysis also investigated the possibility of implementing some storm water management facilities to aid in managing the flows within the drainage basin to help alleviate the localized flooding. Four locations were considered for the possible inclusion of storm water facilities, Mill Street (west of North Henry Street), south of Deckner Avenue (referred to as the Melon Avenue site), Hillside Lane (westerly portion of Gagnon Park) and the Auto Plaza site (existing Ellis Creek open channel). The recommendations of the analysis were to further pursue the construction of the Mill Street storm water facility; that the widening and slope reconfiguration of the Auto Plaza facility would be desirable but would be significantly regulated under WDNR and ACOE permitting requirements; both the Hillside and Melon sites were not recommended for further pursuit due to the limited storage volume available at each site; and relieving flooding conditions in the area of the Razz Ma Tazz and Auto Zone buildings may best be addressed by re-grading the local area (parking lots and recreational area – horseshoe pits) to direct local runoff around the recreational area to the open land north of the buildings. If all four storm water facilities were to be implemented, water surface elevations would decrease in the corridors just downstream or in the immediate location of the storm water facilities and would not have a significant impact on relieving all of the flooding within the drainage basin. In 2012, Public Works constructed the Mill Street storm water facility for a total cost (const., land, eng.) of \$1,961,300.

In 1999, Public Works applied for a WDNR grant to modify the Auto Plaza conservancy to widen the overflow areas and to allow for ponding in the greenway conservancy area. The City ultimately received the grant late in 2000. Between the time Public Works applied for and retained a consultant for the actual design of these modifications, the WDNR modified the rules associated with working within or altering 'waterways'. Public Works had to surrender the grant money allocated for this project as it was no longer able to be permitted. Public Works has had other conversations with WDNR staff over the past 10-years regarding the modification of the Auto Plaza / Ellis Creek greenway conservancy. WDNR consistently comes back stating that this is a navigable waterway, has established habitat for birds, bugs, and various species of animals. They have verbally stated that getting this project permitted by both WDNR and ACOE would be an extreme challenge. Public Works along with a storm water consultant Brown and Caldwell, has asked WDNR again for consideration and guidance on how to permit the ability to do work within this area as recently as the middle of 2018.

As previously mentioned, the original designs assumed that this area would be strictly residential. Of the existing 1,766 acres comprising the drainage basin, 431 acres is commercial/institutional properties which more than doubles the rate at which runoff comes off these sites. Utilizing the same design calculation that was performed in the original design, but taking into account the commercial/institutional development, the end flow value increase to 550 CFS from 470 CFS. With the increase of flow the existing storm sewer is now slightly undersized.



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Another factor that needs to be considered is the amount of time it takes a drop of water from the furthest end of the drainage basin to the outfall at Baird Creek. The 1970 design assumed that it would take about 94 minutes to flow from one end to the other. Looking at the existing storm sewer characteristics within the drainage basin, the actual time a drop of water to travel that distance can be calculated. The 94 minutes is actually closer to 60 minutes. The result of that means storm water is getting from point A to Point B quicker, or more water trying to be within a given storm sewer pipe than that pipe is capable of conveying resulting in flooding. Therefore, by reducing the "Time of Concentration" the increased 550 CFS from above increases significantly more to almost 770 CFS with an end of pipe capacity of 460 CFS at Baird Creek which again was assumed to have a zero tail water condition.

When a majority of "Basin 235" was developed, storm water management requirements did not exist as indicated previously within this report. In this particular case, development surpassed what the existing infrastructure can presently manage. Public Works has been looking for cost effective, implementable solutions to aid in the reduction and ideally the elimination of the high water conditions observed within this drainage basin for normal rain events and even during some of the more intense rain events that the City has recently endured through. The reality is that easy, cost effective solutions do not exist.

One solution that Public Works has not investigated yet, but could be considered, is the significant up-sizing of the main storm sewer run from Baird Creek south to the existing open channel of Ellis Creek south of Auto Plaza, which is close to 11,000 lineal feet. Over half of that distance there are parallel large diameter sewers already installed to manage the storm water runoff which means at a minimum, over 18,000 lineal feet of storm sewer would need to be up-sized. Construction of this storm sewer would be difficult due to limited access, limited cover over the pipe, conflicts with other existing utilities and limited width within the corridor that presently exists that these sewers are within. It could be conceivable that the cost to install this up-sized storm sewer pipe could be as high as \$1,000 per foot or over \$18,000,000 and that would not include restoration of pavements within parking lots, driveways and streets.

The most economical storm water facility is traditionally the wet detention pond / facility. Wet detention ponds usually have large foot prints which require significant land resources. Within "Basin 235" there are no significant open green spaces of land, besides parks, where large storm water facilities could be constructed to detain the runoff in order to significantly reduce the impacts being observed at various downstream locations. As such, Public Works is investigating whether or not underground detention facilities will have any significant impacts on downstream sewers. Underground detention facilities are typically a lot of large diameter storm sewer pipes buried in the ground or an extremely large vault or vaults constructed beneath a parking lot of space that could be utilized for some other purpose. One area that Public Works is considering is within the East Town Mall area which has substantial parking lots that generate a lot of storm water runoff in a short period of time. Other areas that may be considered as additional sites could be the new U-Haul/Rogan Shoes parking lots or some of the parking lots



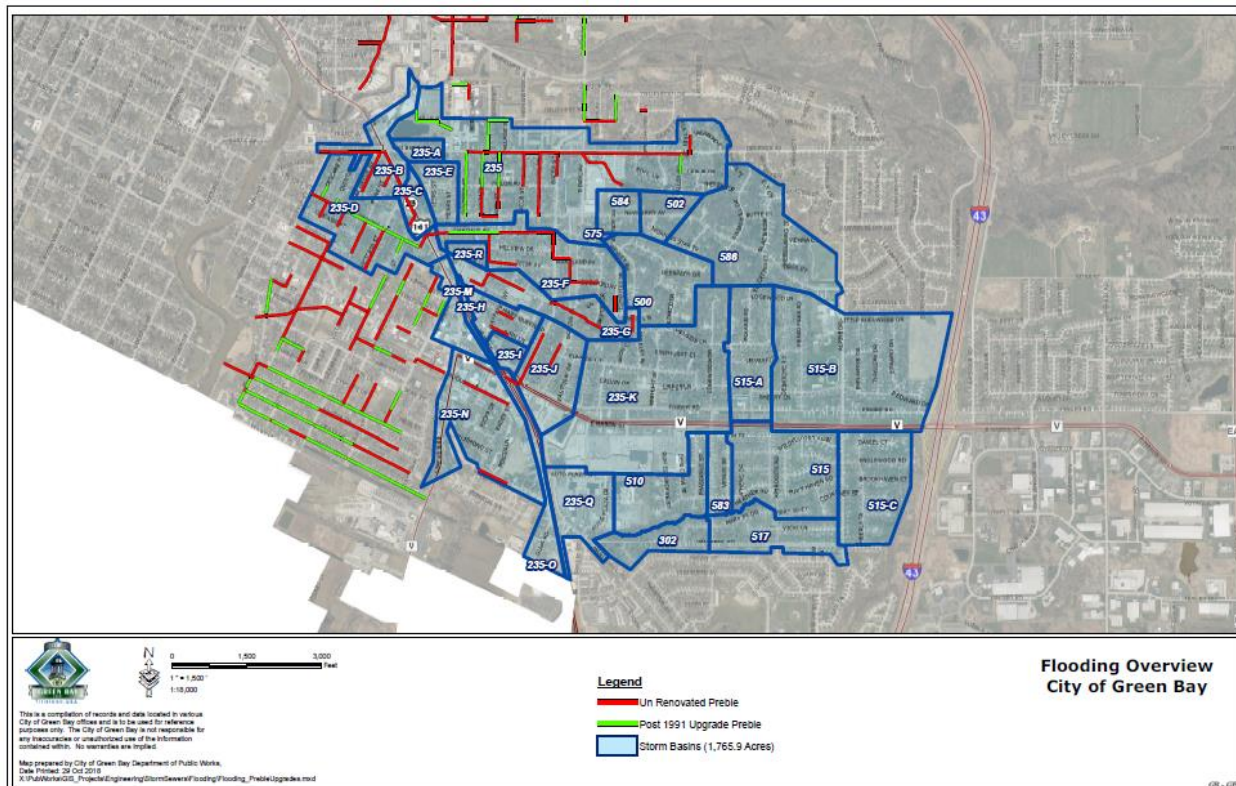
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bounded by Auto Plaza Way, Auto Plaza Drive and the Main Street Frontage Road. Public Works has not had any discussion or correspondence with any of the owners associated with these properties and has yet to do any type of engineering analysis to see if this would have any substantial impacts on the downstream storm sewer flows. These underground facilities would then limit further development or re-development within these properties. Unless the property owners are planning on doing any significant modifications within these parking lots, all the construction, restoration and future maintenances costs would be strictly on the City. Since these underground structures contain a lot of large diameter storm sewers, the construction costs are significantly higher than a traditional wet detention facility. A storm water consultant that the City utilizes, Brown and Caldwell, has estimated that such an underground facility within the East Town Mall parking lot area could exceed the \$10,000,000 price tag.

It should also be noted that there is a significant amount of “Preble” storm sewer up-grades that still need to be addressed from the 1991 report as can be observed in the map below. The red lines represent storm sewer mains in need of upsizing dating back to the 1991 Preble Study.



Additional Basins of Concern

As previously noted, the Department of Public Works has received complaints of ponding or flooding in 113 out of the 315 basins. Per Alder requests, Public Works was also to investigate the high water concerns along East Mason Street west of Main Street towards Abrams (Basin



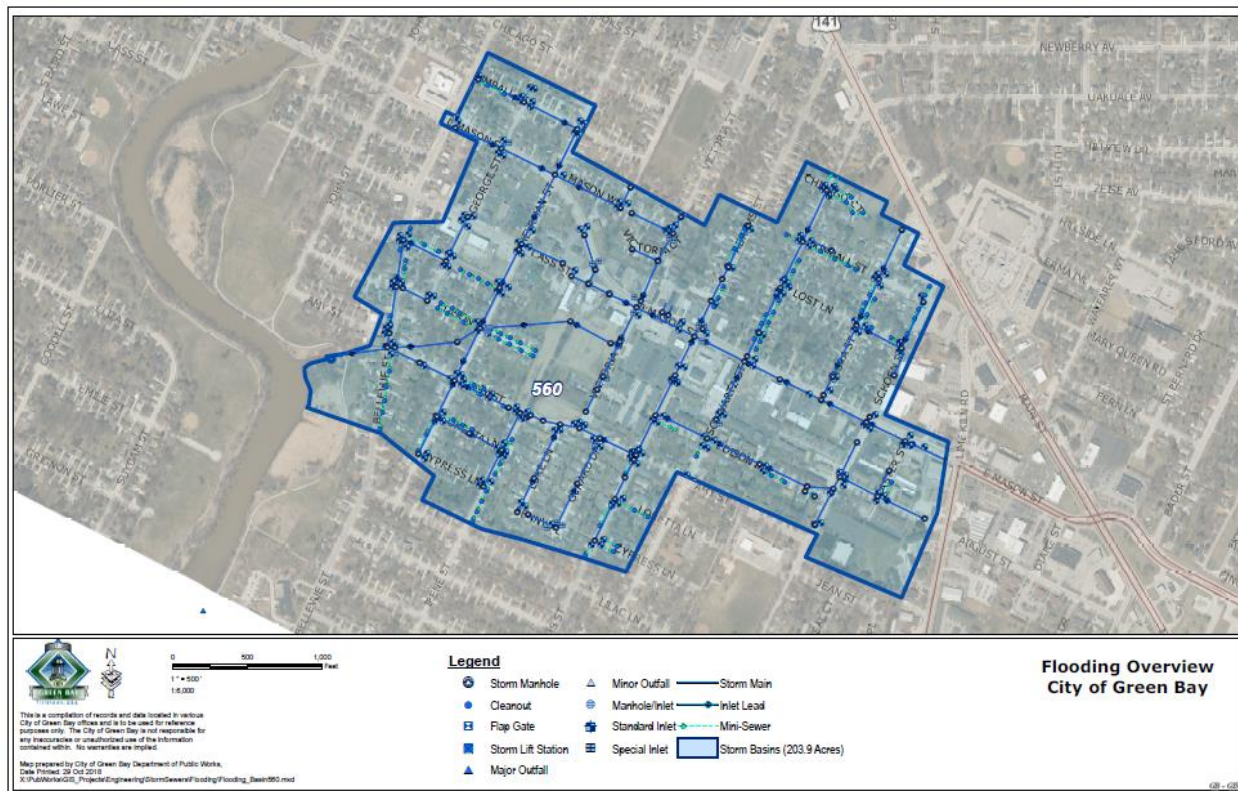
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560) and on South Locust Street near the Mason Manor driveway access between West Mason Street and Western Avenue (Basin 957).

Basin 560 – There have been repeated reports of high water issues along the East Mason corridor throughout the years, but not as significant as the recent reports of high water that occurred in August and September of 2018. The exact areas that have been impacted within this basin have not been clearly identified but recent photographs show high water near the Kwik Trip at East Mason Street and Abrams Street. Basin 560 is approximately 200 acres in size and can be seen in the map below.



This area is within the former Town of Preble and as such was included within the 1991 Preble Study. The Preble Study identified that a significant amount of storm sewer required to be up-sized to deal with flows based upon residential development for a 10-year rain event. Utilizing both residential and commercial flows and areas, the recommendation would now be to reconstruct and up-size the main line storm sewer from the outfall at the East River near Amy Street all the way up to East Mason Street at Laura Lane. Utilizing the Preble Study as a quick basis for a cost estimate and bringing it to 'present day dollars', an estimate of \$1,450,600 would be obtained. Comparing this value to recent contracts, it would seem that this estimate could be extremely low. Additional investigation as to the constructability of up-sizing the main line storm sewer and avoidance with other existing utilities would need to be completed. It would be Public Works desire to see if the storm sewer up-sizing could also be completed in conjunction



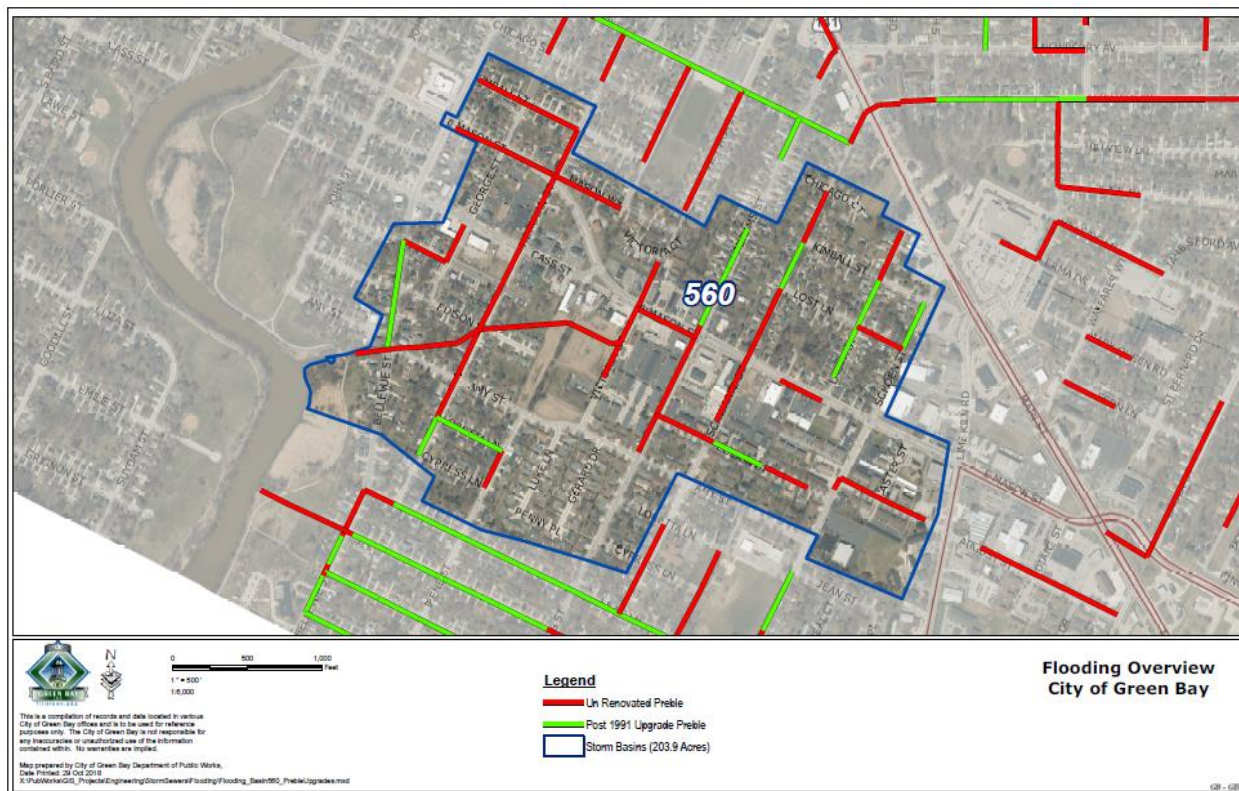
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with a water quality component or wet pond in the open green space south of East Mason Street between Victoria Street and Heyrman Street. A potential cost for a constructing a wet pond in this area could start at around \$850,000 plus land acquisition, engineering design and other unspecified costs.

It should also be noted that there is a significant amount of “Preble” storm sewer up-grades that still need to be addressed from the 1991 report as can be observed in the map below. The uncolored areas are sewers that did not require modifications at the time that the Preble Study had been completed.



Basin 957 – The entire 957 drainage basin is approximately 500 acres and was designed and constructed in the late 1950’s and can be seen below. There have been repeated documented reports of high water issues along South Locust Street between West Mason Street and Western Avenue within the past 20 years. The high water usually impacts South Locust Street near the driveway entrance of Mason Manor which extend up into private property. The high water then impacts the backyards of the properties north of the Mason Manor driveway extending north to Western Avenue and then west to 1421-1435 Western Avenue. Past investigation into this flooding complaint did not reveal any localized deficiencies with the public storm sewers in this area. The complainants stated that the flooding began when the expansion of the Mason Manor driveway and parking lots occurred in the 1990’s. With the storm sewer sizing being acceptable for the drainage areas immediately adjacent to and further up-stream of this area is unclear as to

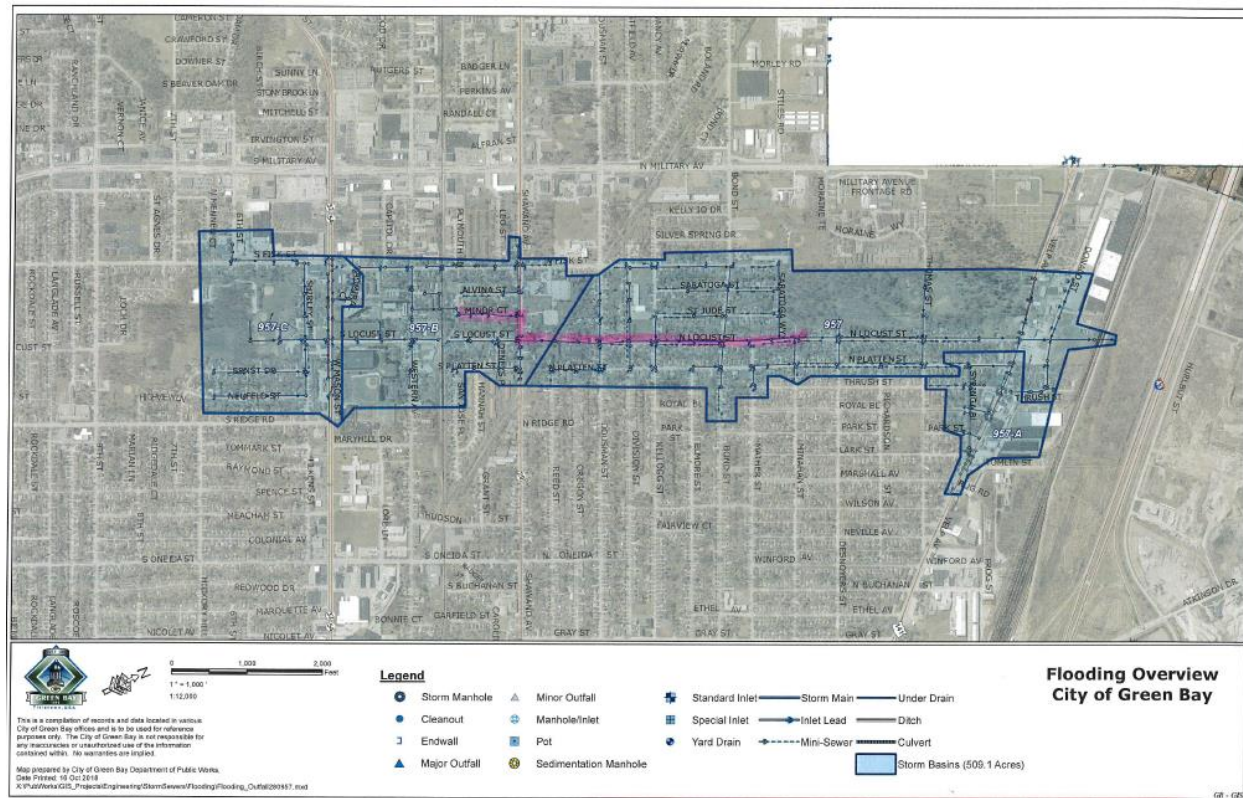


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why flooding was occurring. In the fall of 2010, Public Works looked at the type and spacing of storm inlets in this area and thought by constructing additional storm inlets in this area may allow larger volumes of storm water to get into the main line storm sewer system. After having these four (4) additional storm inlets constructed, Public Works had not received any complaints and as such, concluded that the issue had been resolved until the recent large, intense rain events of August of 2018.



Public Works has further investigated the entire main line storm sewer beginning at Colburn Park north to the outfall north of Donald Street and have come to the following conclusions.

- Assuming that the entire drainage basin is flowing to and through the storm sewer system is from residential development, as was the original design assumption.
- The storm sewer from Colburn Park at the southerly end of South Locust Street to the storm sewer easement from Western Avenue to Alvina Court is capable of handling the residential volume of flow that in theory would be produced by a 10-year storm event.
- However, the storm sewer from Alvina Court north to Desnoyers Street, approximately 5,500 lineal feet, are not capable of managing the 10-year design flows which then restricts and causes back-ups up-stream of this area. The storm sewer was constructed at a flatter slope than what was designed for.
- The storm sewer north of Desnoyers Street to the outfall north of the rail road tracks again are sized such to handle flows generated by a 10-year residential rain event.



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- With the addition of some commercial/institutional development south of Western Avenue an additional 17.4 CFS, or approximately twenty percent (20%), is added which further impacts the already taxed storm sewer system north of Western Avenue.
- By adding commercial/institutional development to the entire drainage basin increases the flows by approximately 40 CFS which now requires the northerly portion of the storm sewer system to be undersized.
- This assumes that the downstream drainage ditches from the outfall to the Bay of Green Bay are free and clear of obstructions.
- This also assumes that the outfall can freely discharge without a tail water condition. Presently, the Fox River at the Main Street bridge in the month of September 2018 had river elevations ranging from 97.0 to 98.5. The outfall at the north end of Donald Street is constructed around elevation 93.3 which means that there is over 3.7 feet of water already within the end of the 72-inch pipe reducing the overall pipe capacity by one-half.

There is not a lot of open public green space to take advantage of where the potential to construct a storm water detention pond exists, especially within the Alvina Court to Desnoyers Street corridor. That limits the opportunities to delay the flow from getting into the storm sewer system.

Because the storm sewer between Alvina Court to Desnoyers Street is where the most significant pipe deficiencies are located, an option that Public Works could consider would be to replace and up-size approximately 5,500 lineal feet of storm sewer. Assuming that new storm sewer could be designed and routed through all the existing infrastructure (sanitary sewer, water main, gas mains, electrical and telecommunication facilities) Public Works estimates that just the pipe material would be over \$2,151,000. That cost does not include the actual installation of the new storm sewer, the stone in which the pipe is placed or covered up with, the restoration of the pavement, possible cost to relocate other infrastructure and consultant design fees. This along could bring the estimated project costs over the \$5,000,000 mark.

An additional \$570,000 in pipe material costs would be necessary to make improvements between Donald Street and the outfall where further restrictions are noted due to the additional commercial/institutional flows to be considered. This increases the budgetary cost for the project alternative to up closer to the \$6,000,000 range.

Other options that Public Works has considered is putting a storm water facility within Colburn Park which would limit usable open green space. Colburn Park is also at the up-stream end of the drainage basin. Although it contributes flow into the storm sewer system, it does not have that significant contribution that if detained would resolve all the remaining issues downstream. Therefore, restricting some storm water runoff flow from the park would have some benefit and should be considered as an alternative.

Public Works is also considering other locations where storm water detention facilities could be constructed. One potential location for consideration would be the Notre Dame auxiliary field



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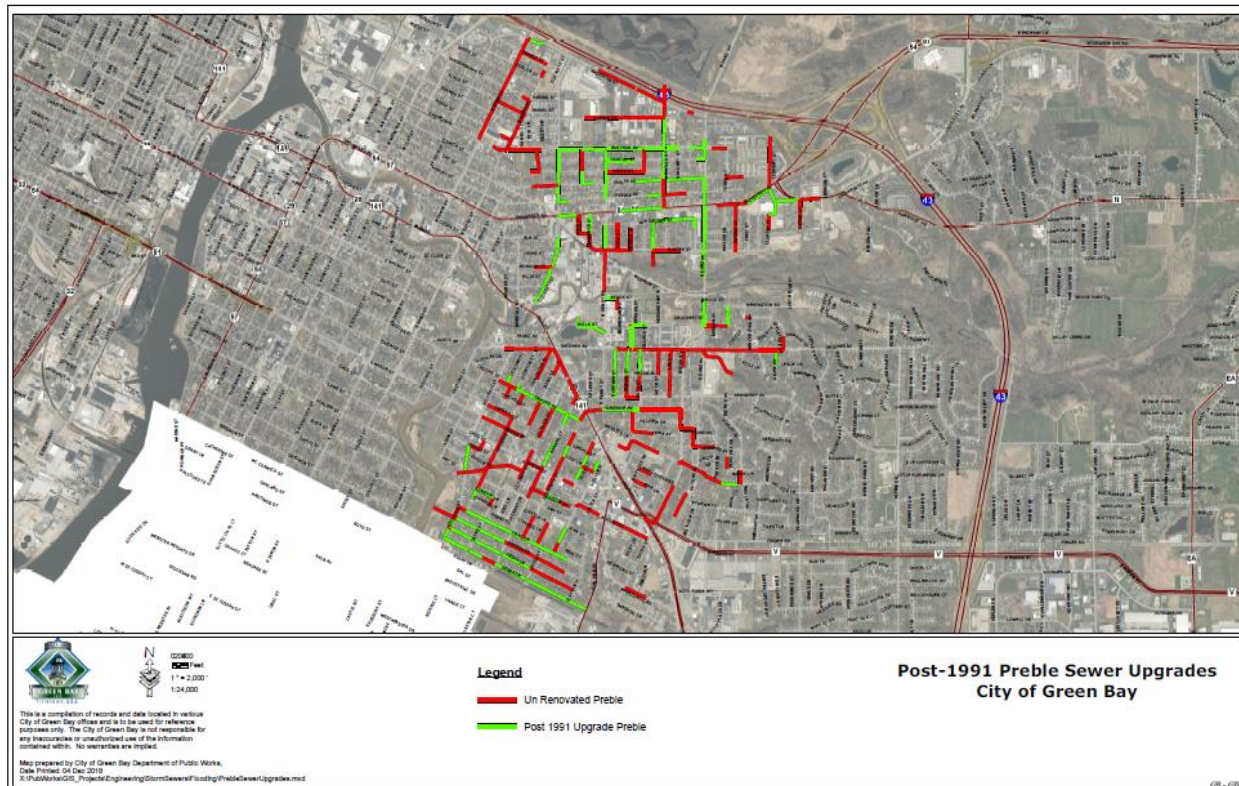
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on the west side of South Locust Street between West Mason Street and the Mason Manor driveway. Public Works has yet to reach out to Notre Dame to determine whether or not this is an option or not. Public Works has the understanding that Notre Dame utilizes this auxiliary field often and as such would most likely not consider having it be utilized as a wet detention facility. An alternative to that may be constructing an underground detention facility which significantly increases costs. Another possible location for underground detention would be under the parking lot located at 1421-1435 Western Avenue although that facility would be significantly smaller in size and may not have as much impact to the flooding that occurs in that area.

Preble Study Out-Standing improvements

The initial resolution regarding the Preble Study was to set up various contracts within the former Town of Preble area and systematically resolve outstanding storm sewer deficiencies. This process was implemented on several projects which resulted in a significant negative impact on the City's Budget and outstanding debt load. The approach of implementing the Preble Study recommendations was then reconsidered and it was determined that as streets were being resurfaced or reconstructed that the storm sewer deficiencies would be corrected. The map below is an approximation as to what areas were initially suggested for improvements and what areas still are outstanding.





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A quick glance over the map would indicate that approximately half of the 24.7 miles of sewers identified as being deficient have been addressed. The cost estimate in 1991 to address these under capacity storm sewers was approximately \$19,150,000. That leaves around 12.4 miles of storm sewers that need to be up-sized to address capacity issues for a 1991 estimated cost of \$9,575,000. By utilizing the Engineering News Record Construction Cost Index (2.3129 multiplier) a present day value of at least \$22,146,272 would be required to address the remaining Preble storm sewer issues.

Cost Implications

Basin	General Area	General Description	Costs
309-A	Lambeau Field – storage tank		\$3,200,000*
417	University Ave – Festival Foods Improvements		\$500,000+/-*
231	Elizabeth – Main to University (RR Tracks)	Bid Cost (final costs not received)	\$1,128,118*
162	N Webster / Smith / St George	2018 Bid Costs (final costs not yet received)	\$1,050,750*
		2019 WDOT Storm / inverted Blvd (Estimate)	\$2,000,000
108	500 Block S Broadway	Independent project too expensive; Project rolled into Basin 110	
110	Shipyard / Clinton Stm LS	Lift Station Estimated Cost	\$3,000,000
106	Howard / Pearl Stm LS Up-grades	Lift Station Estimated Cost	\$2,500,000
	Seymour Park – Underground Detention Systems	Per 2018 Brown & Caldwell (Range)	\$1,300,000-\$8,000,000
	Storm Sewer Up-grades	Per McMahon 2016 Study	\$6,800,000
116/130	Stuart / Doty / YWCA	Per McMahon 2016 Study	\$2,162,000
		2012 Monroe Ave storm up-grades	\$500,000+/-
235	Ellis Creek / Main Street	Storm Sewer main line improvements (Baird Creek to Auto Plaza)	\$18,000,000 PLUS
		East Town Mall Underground Detention per Brown & Caldwell 2018 Study	\$10,000,000 +/-



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560	East Mason (Lime Kiln to Amy outfall at East River)	Per 1991 Preble Study (2018 dollars)	\$1,450,600 +
		Pond – Victoria / Heyrman per Brown & Caldwell 2018 Study	\$850,000 pond \$650,000 land \$1,500,000 Total+/-
957	S Locust (Mason Manor)	Storm Up-grades	\$6,000,000
		Notre Dame Underground Detention System (Using Seymour Park as basis)	\$1,300,000 to \$5,000,000
Remaining Preble Study Improvements			\$22,150,000+
	*Money spent in past 3-years on storm water quantity improvements with identified projects – other projects not identified have also been completed.		\$5,878,868
	Guesstimate of dollars required to address some of the remaining storm sewer up-grades to reduce localized storm water high water impacts		\$66,912,600
	Remaining Preble Study Improvements		\$22,150,000
	Immediate Storm Water QUANTITY Financial Impact		\$94,941,468

Until formal engineering designs are completed above the conceptual considerations completed within this document, the costs stated above should be an initial placeholder and revised as more detailed information is determined.

Summary

Certain drainage basins continue to be adversely affected by localized ponding and flooding, especially during high-intensity rain events. As identified above, there are a multitude of reasons.

- Development in itself is a cause as the land which once was able to infiltrate, absorb storm water runoff is now covered with impervious surfaces such as roof tops, pavement and compacted lawns.
- Type of Development – low density residential verse high density residential, commercial, industrial or institutional. This again has an impact as to the amount of green lawn space that is able to absorb storm water runoff verse rapidly running off the hard surfaces.
- Development has exceeded the originally designed storm water drainage basin boundaries which now requires more storm water runoff to try and discharge through the originally designed and constructed storm sewers.
- Hard surfaces have less friction to hold storm water runoff back. Therefore, storm water runoff gets from point A to point B in a much shorter period of time which have impacts



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on downstream storm sewers and receiving waters. This increased water velocity also has erosion impacts on surround land and water ways.

- Climate change and the impacts it is having regarding more short duration high intensity rain events. If a traditional 10-year rain event produces the 3.8-inches of rain consistently over the 24-hour time period the storm sewer systems can and are able to manage this event. If a short intense rain event produces the same 3.8-inches of rain over one hour and no additional rain is observed over the next 23-hours, it would still be classified as a 10-year, 24-hour rain event but the storm sewer system would not be able to manage that rain event without observing temporary high water ponding.
- Receiving water elevations have fluctuated throughout the years. When the receiving waters such as the Bay of Green Bay, Fox River and East River, have elevated water levels there is a direct impact on the smaller tributary streams and creeks which then has an impact on the storm sewer outfalls. If the outfalls are below or partially submerged under the receiving waters, the storm sewer pipes then already have water within them and limit the amount of additional water that can be introduced into the storm sewer system.
- Topography – even though some waterways or low lands have been filled in in the past, the overall topography, lay of the land, of the surrounding area still drains to these previously identified low areas. These low areas are where the majority of the recent high water complaints are occur.
- Lack of storm water management requirements. Past storm water management was to get storm water off a property as quickly as possible – not my problem. That philosophy is partially responsible for a lot of the issues we are observing today. The City implemented storm water requirements for land disturbing / developing activities in 2001 which requires storm water to be detained on a property and letting it discharge to the storm sewers at a reduced rate.
- Engineering design assumptions from 50 years ago have changed with some of the factors identified above.
- Storm sewers were not constructed as per designed and with some of the factors identified above are now impacting the performance of these storm sewers.

There are several other basins within the City that people could say, what about this one or this one or this one. There is a City wide need for infrastructure improvements in both the storm sewer system and the sanitary sewer system, as well as pavement and water mains. The above financial impact only addresses a portion of the storm sewer need. The City Wide High Water Summary report that was prepared and presented to City Council in January 2016, illustrated that the storm water quantity impacts could exceed \$150,000,000. The above numbers validate that conclusion.

In addition to the storm water quantity impacts being discussed above, WDNR and EPA have required the City, and surrounding areas, to make improvements towards reducing the amount of sediment and phosphorus being discharged from the storm sewer system into waters of the State and US. The original reduction goal for the City in 2006 was to remove 20% total suspended



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solids (TSS) with a secondary goal of 40% TSS reduction. The State of Wisconsin had the 40% criteria removed from law but had it replaced with meeting current, approved Total Daily Maximum Loading (TMDL) requirements for each drainage basin discharging into the lower bay of Green Bay and Fox River. The new TMDL TSS removal requirements range between 52.0% and 72.2% and must also reduce phosphorus (P) by 40.5% City wide. The City hired Brown and Caldwell in the spring of 2018 to complete a study evaluating where the City presently is relative to achieving these goals and what would it take to achieve these reduction requirements. The report has recently been completed. Per the Brown and Caldwell study, the City has achieved around a 28% TSS reduction on a City-wide basis. The City along with Brown and Caldwell put together some possible projects that could be utilized in storm water quality reductions. There were 18 potential projects identified. Brown and Caldwell, utilizing past project experience, compiled some conceptual project cost estimates. The bottom line is that these 18 potential storm water quality projects have an estimated cost of \$99,415,600. Those 18 potential storm water quality projects only make up about half of the TSS and P reduction deficit that the City presently has in meeting its TMDL requirements.

Along with the storm sewer, storm water problems identified above, the City's sanitary sewer system is a significantly aging infrastructure as well with sewers dating back to the 1920's. In 2011, the City adopted a robust sanitary sewer cleaning and televising program that will take seven (7) years to complete. This program has cleaned, televised and rated the City's 466 miles of mainline sanitary sewer. What has been observed to date is deteriorating and failing pipe, sources of inflow and infiltration, root intrusion, failing pipe joints and sagging pipe where the pipe bedding has washed away. From 2011 to 2017, there have been 9,364 pipe segments investigated with over half, 5,531, of those pipe segments having been rated with some sort of structural or maintenance deficiency. This program aids the Public Works in determining the need for reconstructing, rehabilitation or where additional maintenance is required on our mainline sanitary sewers. Public Works has been expending in excess of \$3,000,000 per year into the sanitary sewer system for reconstruction, rehabilitation and preventative maintenance and there does not appear to be any significant reduction in the backlog of sanitary sewer deficiencies that could be addressed.

This report illustrates that the causes behind the high water complaints vary, are numerous and that there are no simple, quick, inexpensive solutions to resolve these issues. The report also illustrates that resolutions to address some of the storm water quantity as well as quality hurdles have a very significant financial obligation associated with them.



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.3.

Consideration with possible action on the review and approval of the 2019 Department of Public Works service rates.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. MEMO miscellaneous service rates 2019 Final

CITY OF GREEN BAY MEMO

DATE: January 2, 2019
TO: Improvement and Service
Committee

FROM: Steve Grenier
Director of Public Works
CC:

RE: 2019 DPW Service Rates



Following are the 2019 proposed service rates for Public Works.

	2018	2019
BULK COLLECTIONS		
Bulk/Collections $\leq$ 3 CY	\$70.00	\$80.00
Bulk/Collections $\geq$ 3 $\leq$ 10 CY	\$140.00	\$160.00
Bulk/Collections $\geq$ 10 CY	\$210.00	\$240.00
 APPLIANCES		
Refrigerators and freezers	\$35.00	\$35.00
All other appliances	\$25.00	\$25.00
 CARTS – RECYCLING AND TRASH		
64 Gallon	\$60.00	\$60.00
96 Gallon	\$60.00	\$95.00
 IMPROPER CART STORAGE	\$33.00	\$38.00
 WEED CUTTING		
Administrative Charge per Parcel	\$48.00	\$52.00
Plus labor per hour	\$36.00	\$72.00
Plus equipment per hour	\$29.00	\$84.00
Minimum charge ½ hour	\$64.25	\$130.00
**Plus Sales Tax		

	2018	2019
EARLY SETOUT CHARGE		
Minimum	\$50.00	\$54.00
Hourly	\$118.90	\$121.00
ASHPHALT PAVEMENT REPAIR		
Concrete based streets	\$46.00	\$62.00
Gravel based streets	\$92.00	\$108.00
SIDEWALK SNOW AND ICE CONTROL		
Charge per lineal foot - Snow	\$.15	\$.36
Administrative Charge per Parcel	\$55.00	\$55.00



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.4.

Consideration with possible action of the 2018-2019 Early Mini-Storm Sewer Program.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. 2019 Mini Sewers Contract I



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.5.

Consideration with possible action on request by Department of Public Works to modify Section 6.35 GBMC relating to Underground Sprinkler Systems.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. Sec. 6.35.____Underground_sprinkler_systems. (Tracking)

Sec. 6.35. - Underground sprinkler systems.

(1) *Generally.*

- (a) The installing, replacing, repairing, or relocating of any lawn sprinkler system shall be made in conformance with the provisions of this section.
- (b) Definition. "Person" means an individual, partnership, association or corporation.

(2) *License required.*

- (a) No person shall install, replace, repair, or relocate an underground sprinkler system within the city unless that person has obtained an underground sprinkler system license.
- (b) A residential homeowner may install, replace, repair, or relocate an underground lawn sprinkler system at his or her own home without such a license provided:
 - 1. In the opinion of the plumbing inspector, the homeowner is reasonably knowledgeable of such work.
 - 2. The person discusses the construction procedure and plans with the inspector.
 - 3. The person occupies the dwelling at the time the work is being done.
 - 4. The person receives an underground sprinkler system permit and complies with all the provisions of that section.
- (c) Any license issued under this section shall terminate on ~~January 1~~ December 31 of each year.

(3) *Qualifications and requirements.* All applicants for an underground lawn sprinkler license must:

- (a) Apply to the city clerk, who shall forward said application to the improvement and service committee for its recommendation of approval or denial to the common council. Every applicant shall furnish satisfactory evidence to the improvement and service committee that the applicant has the capability to install an underground sprinkler system.
- (b) The application shall include the following:
 - 1. Applicant's name.
 - 2. Business address and phone number.
 - 3. Qualifications of applicant.
 - 4. The number of years involved in the service of installing, replacing, repairing or assembling underground sprinkler systems.
 - 5. Any other qualification pertaining particularly to the applicant and the work to be performed.

(c) Each applicant shall ~~deposit with the application a fee of \$25.00~~ include the required application fee at the time of submittal.

(d) *Revocation/suspension.* Any license issued under this section may be revoked or suspended for cause by the improvement and service committee with approval by the common council at any time upon a hearing and sufficient written, sworn charges, filed with the improvement and service committee. Causes for revocation or suspension shall include, but not limited to, the following:

1. Failure to comply with the provisions of this section and any rules issued by the committee hereunder.
2. Failure to comply with any other applicable provision of this Code, state law, or city ordinance, rule, or regulation.
3. Abandonment of any contract or undertaking without good cause or fraudulent departure from plans or specifications.
4. Failure to obtain or cause to be obtained permits when the same are required by this section.

The holder of such license shall be given reasonable notice of the hearing and of the charges. Any person having had his license revoked under the provisions of this section shall not be granted a new license for a period of one year thereafter. Any suspension shall be for such term or conditions judged appropriate by the improvement and service committee, but in no case shall any suspension exceed a term of ~~six~~ twelve months.

(e) *Scope of license.* The holder of a valid ~~lawn sprinkler~~ Underground Sprinkler System license may install, replace, repair, or relocate only that part of the lawn sprinkler system from the discharge side of approved vacuum breaker or backflow preventer. Only the holder of a valid master plumber license, or a journeyman plumber license, working under such a master plumber, shall install the vacuum breaker or backflow preventer.

(4) *Permits and inspections.*

- (a) *Permit required.* No work of installing, replacing, repairing, or relocating any lawn sprinkler system shall be commenced by any person without first obtaining a plan approval and a permit from the building inspection division.
- (b) *Right-of-way.* No underground sprinkler shall be installed in the public right-of-way unless all provisions of section 9.33, Green Bay Municipal Code, regarding private transmission facilities are met.
- (c) *Fee.* The fee for the permit required by this section shall be as established by resolution of the common council.

- (d) *Connection.* Underground lawn sprinkler systems shall not be connected to the water distribution system unless such lawn sprinkler system is separated from the water distribution system by an approved vacuum breaker or backflow preventer.
- (e) *Valves and controls.* All work shall be done in accordance with applicable plumbing standards.
- (f) *Notice for inspection.* The permittee shall notify the plumbing inspection office when installation is completed. The permittee must allow inspection of said system by the inspector prior to covering of the system.
- (g) *Approval, disapproval.* Upon the inspection of any lawn sprinkler system installation or work for which a permit was issued under this section, the inspector shall indicate in writing that such installation or work has been inspected and approved or disapproved.

(Ord. No. 20-93; Ord. No. 21-09)



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.6.

Consideration with possible action on request by Department of Public Works to modify Section 9.20 GBMC relating to Tree and Brush Trimmer License Required.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. Sec. 9.20.____Tree_and_brush_trimmer_license_required. (Tracking)

Sec. 9.20. - Tree and brush trimmer license required.

(1) *Definitions.*

- (a) *Person* means an individual, partnership, association, or corporation.
- (b) *For hire* means that monetary compensation is expected to be received upon completion of the work.

(2) *License required.*

- (a) No person shall cut, trim, or prune any tree or brush for hire within the city unless that person has obtained a tree and brush trimmer license.
- (b) Application shall be made to the city clerk, who shall forward said application to the improvement and service committee for its recommendation of approval or denial to the common council. Every applicant shall furnish satisfactory evidence to the improvement and service committee that the applicant has the capability to cut or trim trees and brush and to remove the trimmings resulting from the work.
- (c) The application shall include the applicant's name, business address, and number of years involved in the service of cutting or trimming trees or brush.
- (d) Any license issued under this section shall terminate on ~~February 1~~ December 31 of each year.
- (e) Fee bond required.
 - 1. Each applicant shall ~~deposit with the application a fee of \$25.00~~ include the required application fee at the time of submittal.
 - 2. Before any license is issued, the applicant shall file with the city clerk a bond to the city in the sum of \$1,000.00 conditioned that the licensee shall observe and obey all rules and regulations relating to the disposing of the tree or brush trimmed.
- (f) Exceptions. The license requirement shall not apply to public service employees, including, but not limited to, employees of the city, electric, gas, water, or telephone companies while engaged in their occupation as a public service employee.

(3) *Permit required.* All licensed trimmers shall, before beginning a new job for hire, obtain a trimming permit from the department of public works.

(4) *Licensee responsibility.*

- (a) Each person licensed as a tree and brush trimmer shall be responsible to properly dispose of all trimmings and scraps which shall result from the licensed activity.
- (b) If the licensee fails to properly dispose of said trimmings, the city will dispose of them and charge the licensee the actual cost of said disposal.

- (c) Any costs incurred by the city to dispose of said trimmings shall be taken from the bond posted with the city clerk. No subsequent permits will be issued by the department of public works until the licensee has replenished the bond posted to the original sum of \$1,000.00.

(5) *Revocation of license.*

- (a) If any person licensed under this section violates any provision of this section, the common council may, upon giving the licensee five days notice and an opportunity to be heard before the improvement and service committee, revoke the license.
- (b) Any person who has had a tree and brush trimming license revoked under this section shall not be eligible to again receive a tree and brush trimmer license within ~~three~~twelve months of the date of the revocation.

(6) *Penalty.*

- (a) Any person found to be trimming or cutting trees or brush for hire without a license, as herein prescribed, shall be subject to a forfeiture of not less than \$100.00 nor more than \$1,000.00.
- (b) Any person violating any other provision of this section shall be subject to a forfeiture of not less than \$25.00 nor more than \$500.00.

(7) *Enforcement.* The director of public works shall enforce this section.

(8) *Severability.* If any section, clause, provision, or portion of this section is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this section shall not be affected thereby.



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.7.

Consideration with possible action on request by Department of Public Works to modify Section 9.21 GBMC relating to Right-of-Way Excavation and Occupancy.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. Sec. 9.21 ___ Right_of_way_excavation_and_occupancy.

Sec. 9.21 - Right-of-way excavation and occupancy.

(1) *Definitions.*

- (a) *Director.* The director of public works or his/her designee.
- (b) *Excavate.* To dig into or in any way remove or physically disturb or penetrate any part of a right-of-way.
- (c) *Facility.* Any equipment owned, operated, leased or subleased in connection with the operation of a service or utility service and shall include, but is not limited to, poles, wires, pipes, cables, underground conduits, ducts, manholes, vaults, fiber optic cables, lines, and other structures and appurtenances.
- (d) *Local representative.* A local person or persons, or designee of such person or persons, authorized by an occupant to accept service and to make decisions for that occupant regarding all matters within the scope of this chapter.
- (e) *Occupant.* Any person having facilities above, on, in or below the boundaries of the public right-of-way. For the purposes of this section, "occupant" shall exclude a private transmission facility regulated under section 9.33, Green Bay Municipal Code.
- (f) *Person.* A corporation, company, association, firm, partnership, limited liability company, limited liability partnership, and individuals and their lessors, transferees, and receivers.
- (g) *Public utility.* The meaning provided in § 196.01(5), Wis. Stats.
- (h) *Right-of-way.* The surface and the space above and below an improved or unimproved public roadway, highway, street, bicycle lane, and public sidewalk in which the city has an interest, including other dedicated rights-of-way for travel purposes.

(2) *Excavation permit.*

- (a) *Permit required.* No cut, excavation, or service connection shall be made in any right-of-way unless a permit therefore is obtained from the director. The provisions of this section shall not apply to the construction or replacement of public sidewalks.
- (b) *Obstruction.* If any traveled portion of a street, alley, or sidewalk is obstructed in any manner while doing the work allowed by the above permit, a separate permit must be obtained from the Director in accordance with section 9.27, Green Bay Municipal Code.
- (c) *Permit application.* Application for a permit shall be made to the director. Permit applications shall contain and will be considered complete only upon compliance with the following requirements:
 - 1. *Form and drawings.* Submission of the completed permit application form as established by the director, including all required attachments, drawings showing the location and area of the proposed facilities, and the size of the

cut, excavation or service connection. The proposed excavation must accommodate all existing underground facilities within the proposed route.

2. *Insurance.* The permittee shall file a certificate of insurance with the city risk manager giving evidence of liability insurance in the amounts required by resolution of the common council for bodily injury and property damage aggregate. Such insurance shall not be cancelled or reduced without the insurer giving ten days' prior written notice to the risk manager. Cancellation or reduction of insurance shall automatically suspend the permit, and no further work shall be done under such permit until a new certificate of insurance complying herewith is filed with the risk manager.
3. *Bond.* A bond in the form of cash or a performance bond shall be deposited or filed with the city clerk prior to the issuance of the permit. The director shall determine the dollar amount based upon the estimated cost to restore the area involved to a condition the same or similar to that prior to the cut and/or excavation.
4. *Payment.* Payment of the permit fees and costs as set forth below.
5. *Public utilities.* Subsections 2 and 3 shall not apply to a public utility.
6. *Approval.* Permits shall be acted upon within 30 days or be deemed granted.

(d) *Permit fee.*

1. *Fee schedule.* The permit fee shall be established by resolution of the common council in an amount sufficient to recover the costs incurred by the city. This fee shall recover the administrative and inspection costs of the permit application. Payment of said fee shall be collected prior to the issuance of the permit. The fee shall be waived for permits for utility work in new subdivisions and within the limits of public works projects, when work is undertaken in conjunction with the installation of pavement.
2. *Substantial projects.* For those applications which provide for a substantial undertaking of excavation within the public right-of-way attended by disruption of the general public and traffic, the director may assess the actual costs of the city employees' time engaged in review and inspection of the anticipated work, multiplied by a factor determined by the respective department to represent the city's cost for statutory expenses, benefits, insurance, sick leave, holidays, vacation and similar benefits, overhead and supervision, said factor not to exceed 2.0, plus the cost of mileage attributed to the work, plus all consultant fees associated with the work at the invoiced amount, plus ten percent for administration.
3. *City exemption.* The city and its contractors shall not pay fees for excavations due to general government functions.
4. *Non-refundable.* Permit fees paid are not refundable.
5. *Exceeding application specifications.* A permittee exceeding the scope of the project reported under subsection (2)(c)1 shall reimburse the city for all

additional costs incurred in addition to the normal fee for the entire project as established pursuant to subsection (2)(d)1 above.

(e) *Location of facilities.*

1. *Underground.* The permittee shall endeavor to install facilities underground or within buildings or other structures in conformity with applicable codes, unless in conflict with state or federal law, existing above-ground facilities are used or otherwise approved by the director. The director may direct that the installation be made underground if the public health, safety or welfare so requires.
2. *Limitation of space.* The director may prohibit or limit the placement of new or additional facilities within the right-of-way if there is insufficient space to accommodate all of the requests of persons to occupy the right-of-way. In making such decisions, the director shall strive to the extent possible to accommodate all existing and potential users of the right-of-way, but may prohibit or limit the placement of new or additional facilities when required to protect the public health, safety or welfare. In reaching this conclusion, the director may consider a utility's obligation to serve.
3. *Attachment to bridges.* Whenever a permittee requests permission to attach pipes, conduits, cables or wires to any city bridge structure, the applicant shall pay all costs associated with the granting of such permission, including, but not limited to, administrative expenses in the analysis and inspection of such installation. The owner of such pipes, conduits, cables or wires shall be entitled to no compensation for removal or relocation of the same in case of repair, removal, or replacement of said bridge structure by the city.

(f) *Style of cut.* All excavations in permanently improved streets shall be made by final saw cuts around the perimeter of the excavation. Any jagged edges or irregularities left by the person making the excavation will be re-sawed and a patch made accordingly at the expense of the permittee.

(g) *Repair of paved areas.*

1. *Temporary.* Excavated material shall be hauled away by the contractor. All excavations made in paved areas in the public right-of-way shall ~~be backfilled with 3/4 inch crushed stone and compacted in 12-inch layers with mechanical compaction equipment. The crushed stone shall be so placed to within three inches of the finished grade, and the excavated area shall then be filled with three inches of cold mix bituminous surface which shall be paved to conform to the existing paved surface~~ meet the construction methods and site restoration in accordance with applicable parts of the City of Green Bay Standard Specifications and Construction Standards for Public Works Construction, current edition. The permittee shall be responsible for all costs associated with maintaining the temporary repair.
2. *Permanent.* Unless otherwise approved by the director, disturbed pavement shall be replaced by an authorized contractor retained by the city

pursuant to the street excavation repair policy, and the permittee shall be responsible for the cost of these repairs. If the replacement pavement settles or cracks within five years of the date of the permit and if failure of the replacement is due to improper backfill or compaction, the pavement and backfill in the excavation area shall be removed and replaced at the expense of the permittee.

- (h) *Repair of unpaved areas.* All excavations in areas of rights-of-way which are not paved shall be backfilled with natural material compacted in 12-inch layers with mechanical compaction equipment. The surface shall be restored to its original condition, subject to the approval of the director. The permittee shall guarantee this work for one year from the date of repair.

(3) *Occupancy.*

- (a) *Obligation.* An occupant shall provide the director with the following:

1. The occupant's name, Digger's Hotline registration certificate number, address, and telephone and facsimile numbers.
2. The name, address, and telephone and facsimile numbers of a local representative, including current information regarding how to contact the local representative in an emergency.
3. The occupant shall keep all of the information listed above current at all times by providing the Director information as to changes within 15 business days following the date on which the occupant has knowledge of any change.

- (b) *Relocation of facilities.* An occupant must, promptly and at its own expense, permanently remove and relocate its facilities in the right-of-way whenever the city, acting in its governmental capacity and having determined that the public health, safety or welfare so requires, requests such removal and relocation. Notwithstanding the foregoing, an occupant shall not be required to remove or relocate its facilities from any right-of-way which has been vacated in favor of a non-governmental entity unless and until the reasonable costs thereof are first paid to the occupant therefore.

- (c) *Interference with other facilities during municipal construction.* When the city performs work in the right-of-way and finds it necessary to maintain, support, shore, or move an occupant's facilities, the city shall notify the local representative. The occupant shall meet with the city's representative within 24 hours and coordinate the protection, maintenance, supporting, and/or shoring of the occupant's facilities. The occupant shall accomplish the needed work within 72 hours, unless the city agrees to a longer period. In the event that the occupant does not proceed to maintain, support, shore or move its facilities within such time, the city may arrange to do the work and bill the occupant, said bill to be paid within 30 days.

- (d) *Abandoned and unused facilities.*

1. *Discontinued operations.* An occupant who has determined to discontinue its operations must either:
 - a. Provide information satisfactory to the director that the occupant's obligations under this section for its facilities have been lawfully assumed by another occupant; or
 - b. Submit to the director a proposal and instruments for transferring ownership of its facilities to the city. If an occupant proceeds under this clause, the city may, at its option:
 - i. Accept the dedication for all or a portion of the facilities; or
 - ii. Require the occupant, at its own expense, to remove the facilities; or
 - iii. Require the occupant to post a bond or provide payment sufficient to reimburse the city for reasonably anticipated costs to be incurred in removing the facilities.
 2. *Abandoned facilities.* Facilities which for two years remain unused shall be deemed abandoned. Any occupant having abandoned equipment in any right-of-way shall remove it from that right-of-way within two years, unless the Director waives this requirement. Abandoned facilities are deemed to be a nuisance. In addition to any remedies or rights it has at law or in equity, the City may, at its option, abate the nuisance, take possession of the facilities, or require the removal of the facilities by the occupant or the occupant's successor in interest.
 3. *Public utilities.* This subsection shall not apply to a public utility that is required to follow the provisions of § 196.81, Wis. Stats.
- (e) *Reserved.*
- (f) *Emergency situations.* Each occupant or their agent shall immediately notify the city, by verbal notice on an emergency phone number provided by the city, of any event regarding its facilities that it considers to be an emergency. The occupant may proceed to take whatever actions are necessary to respond to the emergency. Within two business days after the occurrence of the emergency, the occupant shall apply for the necessary permits, pay the fees associated therewith, and otherwise fully comply with the requirements of this section.
- (4) *Appeal of decisions.* Any applicant, permittee or occupant aggrieved by a decision of the director under this section may file a request for review before the improvement and services committee. A request for review shall be filed within ten days of receipt of notice of the decision. The improvement and services committee shall commence a hearing within 30 days of the request. The determination of the improvement and services committee shall be subject to approval by the common council. Ch. 68, Wis. Stats., shall not apply to the administrative process outlined above.

- (5) *Severability.* If any subsection, sentence, clause, phrase or portion of this section is held invalid or unconstitutional by any court or administrative agency of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions thereof.
- (6) *Penalty.* Any person who violates this section or fails to comply with the provisions of this section shall be subject to a forfeiture of up to \$1,000.00. Each day such violation or failure to comply continues shall be considered a separate offense.
- (7) *Application.* The provisions of this section shall also apply to recorded easements held by the city whenever and wherever the term "right-of-way" is used herein.

(Ord. No. 4-01; Ord. No. 23-15)



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.8.

Consideration with possible action on request by Department of Public Works to modify Section 9.24 GBMC relating to Construction and Repair of Streets and Sidewalks.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. Sec. 9.24.____Construction_and_repair_of_streets_and_sidewalks.

Sec. 9.24. - Construction and repair of streets and sidewalks.

- (1) *Statutes adopted.* Sections 62.16 and 66.0907, Wis. Stats., relating to the construction and repair of streets and sidewalks, so far as they are applicable to the city and are not inconsistent with this chapter, are adopted by reference.
- (2) *Permit required.* No sidewalk shall be constructed or repaired unless a permit therefor is first obtained from the director of public works.
- (3) *Materials.* Contractors building sidewalks and property owners constructing their own sidewalks shall obtain from the office of the director of public works plans and specifications indicating the mixture to use and the method of construction to be employed. Strict adherence to the plans and specifications is required.
- (4) *Stakes not to be removed.* After grade and line is furnished by the director of public works to a contractor or property owner, such contractor or property owner shall preserve such grade stakes until the ~~cement-concrete~~ sidewalk has been constructed. Failure to preserve such line and grade stakes, necessitating the return of the engineering department to reset stakes, shall subject the contractor or property owner to the expense involved in resetting such grade stakes.
- (5) *Minor repairs to sidewalks.* When the cost of repairs of any sidewalk in front of any lot or parcel of land shall not exceed \$100.00, the improvement and service committee or the director of public works, if so required by the council, may immediately repair such sidewalk without notice or letting the work by contract and charge the cost thereof to the owner of such lot or parcel of land in the manner provided in § 66.0907(3)(f), Wis. Stats.
- (6) *Damage to sidewalks.* No person shall propel, drive, drag, or cause to be dropped or placed on any sidewalk in the city any object which will harm the sidewalk to the extent that it would render it hazardous or defective for pedestrian travel.



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.9.

Consideration with possible action on request by Department of Public Works to modify Section 9.25 GBMC relating to License for Sidewalk Builders.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. Sec. 9.25.____License_for_sidewalk_builders.

Sec. 9.25. - License for sidewalk builders.

- (1) *Required.* No person shall build or construct any ~~cement-concrete~~ sidewalk and driveway apron upon any street in the city unless he has obtained a sidewalk builder's license.
- (2) *Application to council.* Any person intending to construct ~~cement-concrete~~ sidewalks and driveway apron upon streets in the city shall first apply to the Council for a license as a sidewalk builder. Upon the applicant's furnishing satisfactory evidence that the applicant is capable of building proper ~~cement walks-concrete sidewalk and driveway apron~~ according to the requirements of the council, the council shall issue the applicant a sidewalk builder's license, which license shall terminate on ~~April 1-~~ December 31 of each year.
- (3) *Fee; bond.* Each applicant shall ~~deposit with an application a fee of \$25.00~~ include the required application fee at the time of submittal. Before such license is issued, the applicant shall file with the city clerk a bond to the city in the amount of ~~\$2,000.00~~ \$5,000.00, conditioned that the licensee will observe and obey all the requirements of the city relating to sidewalks and to the rules and regulations relating thereto which may be prescribed by the council, and indemnifying the city or any person in front of whose property the licensee shall construct a sidewalk to observe all the requirements of the council and the lines and grades furnished by the director of public works. A certificate of insurance shall be filed in accordance with section 9.21, Green Bay Municipal Code.
- (4) *Revocation of license.* If any person holding a license as a sidewalk builder violates any ordinance of the city relating to the construction of ~~cement-concrete~~ sidewalk, the council may, upon giving the offender two days notice and an opportunity to be heard before the city improvement and service committee, revoke the license. After the license has been removed, such person shall not again receive a license as a sidewalk builder within ~~three~~ twelve months next of the date of the revocation.

(Ord. No. 29-16)



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.10.

Consideration with possible action on the report of the Purchasing Manager:

- A. Request approval to award the purchase of traffic signal equipment to TAPCO for \$40,330.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. I-9-19 IS Traffic Signal Equip.



CITY OF GREEN BAY - PURCHASING DIVISION

TO: I&S Committee
FR: Rick Jensen, Purchasing Manager
DT: January 9, 2019
RE: Purchasing Report
Cc: Steve Grenier, James Brunette, Diana Ellenbecker

Report of the Purchasing Manager:

1. Request approval to award the purchase of traffic signal equipment to TAPCO for \$40,330.

The following items were openly and competitively offered:

Improvement and Services - Report of the Purchasing Manager					
Description	Spec #	Funding Source	Awarded Vendor	# Responses	\$ Amount
Traffic Signal Related Items		101504-55141 DPW Traffic	TAPCO	4	\$40,330

CITY OF GREEN BAY QUOTATION SUMMARY

RFQ #3114 - Traffic Signal Related Items

PO #1800213

PO #1800214

PO #1800215

DEPT: DPW/Elec		REQ #269	VENDOR #1		VENDOR #2		VENDOR #3		VENDOR #4	
Planholders: 18 Vendors		CC#550-285	GENERAL TRAFFIC EQUIPMENT CORP		TAPCO		TRAFFIC CONTROL CORP		TRAFFIC PARTS	
ISSUED: 11/8/18		DUE: 11/28/18	Newburgh, NY		Brown Deer		Oak Park Heights, MN		Spring, TX	
QTY	UNIT	DESCRIPTION	UNIT	PRICE	UNIT	PRICE	UNIT	PRICE	UNIT	PRICE
16	EA	SIGNAL, TRAFFIC, 3-SECTION, VERTICAL ORIENTATION, BLACK HOUSINGS, BLACK DOORS, BLACK TUNNEL VISORS, WITHOUT LENSES, EAGLE SA103A1211BBB, NO SUBSTITUTES		\$ -	\$ 207.63	\$ 3,322.08		\$ -		\$ -
36	EA	SIGNAL, TRAFFIC, CLEAR LENS LED, RED BALL, 12-INCH, DIALIGHT 433-1270-003XL OR EQUAL	\$ 28.00	\$ 1,008.00	\$ 36.67	\$ 1,320.12		\$ -	\$ 43.00	\$ 1,548.00
12	EA	SIGNAL, TRAFFIC, CLEAR LENS LED (NO TINTED LENS), GREEN BALL, 12-INCH, DIALIGHT 433-2270-001XL OR EQUAL	\$ 30.00	\$ 360.00	\$ 39.77	\$ 477.24		\$ -	\$ 43.00	\$ 516.00
12	EA	SIGNAL, TRAFFIC, CLEAR LENS LED (NO TINTED LENS), YELLOW BALL, 12-INCH, DIALIGHT 433-3270-901XL OR EQUAL	\$ 30.00	\$ 360.00	\$ 40.89	\$ 490.68		\$ -	\$ 46.15	\$ 553.80
8	EA	BRACKET, TRAFFIC SIGNAL MOUNTING, 3-SECTION, S.S. BANDING, PELCO AB-0116-5-36-SS OR EQUAL	\$ 108.00	\$ 864.00	\$ 146.26	\$ 1,170.08		\$ -	\$ 145.00	\$ 1,160.00
4	EA	BRACKET, TRAFFIC SIGNAL MOUNTING, 42 INCH S.S. BANDING, ASTRO MINI BRAC, PELCO AB-121-42-SS OR EQUAL		\$ -	\$ 30.93	\$ 123.72		\$ -	\$ 32.00	\$ 128.00
100	EA	BRACKET, TRAFFIC SIGNAL MOUNTING, POLYCARBONATE, BLACK, EAGLE PDM 442 OR EQUAL	\$ 46.00	\$ 4,600.00	\$ 20.87	\$ 2,087.00		\$ -	\$ 16.50	\$ 1,650.00
20	EA	POLE, TRAFFIC SIGNAL, 4.5 INCH O.D. x 13 FEET LONG, THREADED ONE END, ALUMINUM, PAINTED SEMI-GLOSS BLACK	\$ 498.00	\$ 9,960.00	\$ 244.93	\$ 4,898.60		\$ -	\$ 350.00	\$ 7,000.00
20	EA	PEDESTRIAN PUSHBUTTON, ROUND, UNIVERSAL DIRECTIONAL ARROW ON BUTTON FACE, YELLOW HOUSING, WITH YELLOW MOUNTING BASE FOR ROUND POLES, TWO-TONE AUDIBLE CONFIRMATION, POLARA BULL DOG BDSP-011-Y AND APBC-Y OR EQUAL		\$ -	\$ 99.52	\$ 1,990.40		\$ -		\$ -
27	EA	POLE BASE, TRAFFIC SIGNAL, SQUARE, BOLT DOWN, ALUMINUM, UNPAINTED, THREADED TO ACCEPT 4.5 INCH O.D. SIGNAL POLE, ALUMINUM DOOR, SLOTTED HEX HEAD DOOR BOLT, WITH GROUNDING TERMINAL	\$ 136.00	\$ 3,672.00	\$ 115.73	\$ 3,124.71		\$ -	\$ 120.00	\$ 3,240.00
54	EA	POLE BASE, TRAFFIC SIGNAL, SQUARE, BOLT-DOWN, ALUMINUM, PAINTED BLACK, THREADED TO ACCEPT 4.5 INCH O.D. SIGNAL POLE, ALUMINUM DOOR, SLOTTED HEX HEAD DOOR BOLT, WITH GROUNDING TERMINAL	\$ 166.00	\$ 8,964.00	\$ 134.67	\$ 7,272.18		\$ -	\$ 142.00	\$ 7,668.00
10	EA	POLE, TRAFFIC SIGNAL, 4.5 INCH O.D. x 10 FEET LONG, THREADED ONE END, ALUMINUM, PAINTED SEMI-GLOSS BLACK	\$ 486.00	\$ 4,860.00	\$ 206.32	\$ 2,063.20		\$ -	\$ 217.50	\$ 2,175.00
30	EA	POLE CAP, TRAFFIC SIGNAL, ALUMINUM, PAINTED SEMI-GLOSS BLACK, 3 OR MORE BRASS OR STAINLESS STEEL SET SCREWS, TO FIT 4.5 INCH O.D. POLE	\$ 30.00	\$ 900.00	\$ 13.88	\$ 416.40		\$ -	\$ 15.50	\$ 465.00
10	EA	CLAMP, TRAFFIC SIGNAL MOUNTING, ALUMINUM ALLOY, 36-IN S.S. BANDING, NATURAL FINISH, PELCO AB-3004-36-SS-PNC OR EQUAL	\$ 84.00	\$ 840.00	\$ 75.42	\$ 754.20		\$ -	\$ 77.75	\$ 777.50
3	EA	CARD RACK, TRAFFIC SIGNAL, EMERGENCY VEHICLE PRE-EMPTION SYSTEM, GTT OPTICOM MODEL 760, NO SUBSTITUTES		\$ -	\$ 210.00	\$ 630.00	\$ 295.00	\$ 885.00		\$ -
8	EA	DETECTOR, TRAFFIC SIGNAL, EMERGENCY VEHICLE PRE-EMPTION SYSTEM, 1-CHANNEL, 1-DIRECTION, GTT OPTICOM MODEL 711, NO SUBSTITUTES		\$ -	\$ 638.00	\$ 5,104.00	\$ 446.00	\$ 3,568.00		\$ -
2	EA	TRAFFIC SIGNAL PRE-EMPTION SYSTEM GPS RECEIVER, GTT OPTICOM MODEL 3100 GPS RECEIVER, NO SUBSTITUTES		\$ -	\$ 3,858.00	\$ 7,716.00	\$ 2,695.00	\$ 5,390.00		\$ -
1	EA	CABINET, TRAFFIC CONTROLLER, ACTUATED, TS-2-8-PHASE, AS PER ATTACHED CITY OF GREEN BAY ACTUATED TS-2 CONTROL CABINET WITH ETHERNET SPECIFICATIONS		\$ -	\$ 12,945.00	\$ 12,945.00		\$ -		\$ -
1	EA	CONTROLLER, TRAFFIC SIGNAL, TS-2 2003 COMPLIANT, ACTUATED, 8-PHASE, AS PER ATTACHED CITY OF GREEN BAY ACTUATED CONTROLLER SPECIFICATIONS		\$ -	\$ 2,790.00	\$ 2,790.00		\$ -		\$ -
		TOTAL LOW ITEMS MEETING SPECIFICATIONS:		\$ 2,592.00		\$ 40,330.49		\$ 8,958.00		\$ 1,650.00
LEAD TIME:			30 Days		6-14 Weeks		2-4 Weeks		30-60 Days	
PAYMENT TERMS NET 30. EARLY PAYMENT DISCOUNT:			Net 30		Net 30		Net 30		Net 30	
COMPANY ACCEPTS P-CARD PAYMENTS:			Yes		Yes		No		No	

Recommendation: Award to the lowest responsive, responsible vendors, TAPCO (\$40,330.49), Traffic Control Corporation (\$8,958), General Traffic Equipment Corporation (\$2,592) and Traffic Parts (\$1,650). The awards to Traffic Control Corp., General Traffic, and Traffic Parts were each under \$25,000 and those



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.I I.

Consideration with possible action on the review and award of the contract RAY NITSCHKE MEMORIAL BRIDGE HYDRAULIC REPAIRS (held over from Improvement and Services Committee meeting on November 26, 2018) .

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

- I. Bid Summary - Public (RAY NITSCHKE MEMORIAL BRIDGE HYDRAULIC SYSTEM REPAIRS)

CITY OF GREEN BAY, WISCONSIN

SUMMARY OF BIDS FOR CONTRACT

**RAY NITSCHKE MEMORIAL BRIDGE HYDRAULIC SYSTEM
REPAIRS**

Tuesday, December 4, 2018

Contractor	Bid	Bid Bond
No Bids Received		
Any questions, call 920-448-3100		



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # D.12.

Consideration with possible action on request by KS Energy Services to renew the annual Hold Harmless Agreement for access to the City of Green Bay sewer system to conduct inspection of the sewer mains and laterals.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

None



Report to the
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MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # E.I.

The next Improvement and Services Committee meeting is scheduled for January 23, 2019.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

None



Report to the
Improvement and Service Committee
of the City of Green Bay

MEETING DATE

January 9, 2019

PREPARED BY

AGENDA ITEM # E.2.

Director's Report on recent activities of the Public Works Department.

BACKGROUND

RECOMMENDATION

FISCAL IMPACT

ATTACHMENTS

None