

Wauwatosa, WI **Board of Public Works Meeting Agenda**

Wednesday, March 12, 2025	8:30 AM	Zoom Only:
-		https://servetosa.zoom.us/j/89415047159,
		Meeting ID: 894 1504 7159
	Rogular Mooti	20

Regular Meeting

VIRTUAL MEETING INFORMATION

Members of the public may observe and participate in the meeting via Zoom only at the link above. To access the Zoom meeting via phone, call 1-312-626-6799 and enter the Meeting ID.

CALL TO ORDER

ROLL CALL

APPROVAL OF MINUTES

Approval of Minutes from the February 19, 2025 regular meeting	<u>25-0339</u>
<u>NESS</u>	
Request by Hope Sprague, Peony and Thistle for a Street Vendor License for the sale of flowers in the streets of City of Wauwatosa between April 2025 to November 2025	<u>25-0328</u>
Consideration of request from Guelig Waste Removal & Demolition LLC to complete work on Sundays for the demolition of the Incinerator Building at 11100 W. Walnut Road (Department of Public Works)	<u>25-0378</u>
Request by Sheri Schmit, Milwaukee Regional Medical Center (MRMC), for an exception to the bike parking regulations of Wauwatosa Municipal Code (WMC) 24.11.080 in the MRMC Campus located south of Watertown Plank Road, north of Wisconsin Avenue, and east of I-41	<u>24-1684</u>
Consideration of request by Multimodal Transportation Engineer for approval of an application from Lime to renew its operation of a dockless scooter program in Wauwatosa	<u>25-0332</u>
	 Approval of Minutes from the February 19, 2025 regular meeting NESS Request by Hope Sprague, Peony and Thistle for a Street Vendor License for the sale of flowers in the streets of City of Wauwatosa between April 2025 to November 2025 Consideration of request from Guelig Waste Removal & Demolition LLC to complete work on Sundays for the demolition of the Incinerator Building at 11100 W. Walnut Road (Department of Public Works) Request by Sheri Schmit, Milwaukee Regional Medical Center (MRMC), for an exception to the bike parking regulations of Wauwatosa Municipal Code (WMC) 24.11.080 in the MRMC Campus located south of Watertown Plank Road, north of Wisconsin Avenue, and east of I-41 Consideration of request by Multimodal Transportation Engineer for approval of an application from Lime to renew its operation of a dockless scooter program in Wauwatosa

5.	Consideration of request by Director of Public Works for approval of an underground distribution easement to WE Energies over a portion of City owned property located at 11501 W. Burleigh Road (Burleigh Water Tower Site)	<u>25-0333</u>
	Recommendation to Common Council	
6.	Request by TosaGreen Summit to utilize portions of the City Hall and Public Works parking lots for recycling collections on September 13 and September 20, 2025	<u>25-0343</u>
7.	Consideration of placing the 2022, 2023 and 2024 Street Improvement Projects on the tax roll for construction projects that were completed during the 2024 Construction Season	<u>25-0373</u>
	Recommendation: Common Council	
8.	Consideration of award of Contract 25-08 / Project 1024, Center Street Improvements to MJ Construction, Inc. in the amount of \$1,414,080.00	<u>25-0372</u>
	Recommendation: Common Council	
9.	Request by the Engineering Division for approval of plans and specification for Contract 25-11 / Project 1025, 2025 Alley Reconstruction. Project limits are the alley from N 109th St to 111th St.between Harvard Ln and Bluemound Rd	<u>25-0395</u>
10.	2024 MS4 Annual Stormwater Report	25-0267
	Recommendation: Common Council	
11.	Approval of Final Payment for Contract 23-60 Fire Station Bunk House Remodel	<u>25-0342</u>
	Recommendation: Common Council	
12.	Project Updates	<u>25-0408</u>

ADJOURNMENT

NOTICE TO PERSONS WITH A DISABILITY

Persons with a disability who need assistance to participate in this meeting should call the City Clerk's office at (414) 479-8917 or send an email to tclerk@wauwatosa.net, with as much advance notice as possible.



Staff Report

File #: 25-0339

Agenda Date: 3/12/2025

Agenda #: 1.

Approval of Minutes from the February 19, 2025 regular meeting

3



Staff Report

File #: 25-0328

Agenda Date: 3/12/2025

Agenda #: 1.

Request by Hope Sprague, Peony and Thistle for a Street Vendor License for the sale of flowers in the streets of City of Wauwatosa between April 2025 to November 2025

Submitted by:

The City Clerk Office Jennifer Stilling, Senior Civil Engineer Department:

City Clerk and Public Works (Engineering Services Division)

A. Issue

The applicant has applied for Street Vendor License for various locations throughout the City to sell flowers.

B. Background/Options

The applicant has provided the following information:

- Street Vendor License Application, including hours of operation (12 pm to 7 or 8 pm)
- Certificate of Liability Insurance

The applicant would like to sell flowers from a mini-van sized vehicle starting in April through November. The exact dates are to be determined, but it will likely be 2 times or less per month.

The applicant has been invited to sell flowers at the following locations:

- 8334 W North Avenue: There is no parking lot at this property, so the point of sale would be on a public street.
- 7330 Chestnut Avenue: The point of sale location is to be determined, but the applicant has indicated that it will be on the public street.
- 8932 W. North Avenue: There is a parking lot at this location, but it is unknown where the point of sale will be located.
- The Village: The applicant received an invitation from a Village business, but the applicant has not received approval from the Village Business Improvement District (BID). The point of sale location is to be determined.

Additional to be determined locations may be added to the applicant's schedule.

According to the attached e-mail, the applicant has stated that if the point is sale is at the street, the flower display will not take up any grass or sidewalk space. The flowers will not be placed in the grass, but will hang from the truck.

Pictures of the truck are included in the attachments.

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Street Vendor applications require Board of Public Works approval per City Code 6.50.050.

C. Strategic Plan (Area of Focus)

Priority Area One: Economic Development and Financial Resilience

D. Fiscal Impact

No financial impact to the City of Wauwatosa.

E. Recommendation

Engineering does not have a recommendation for this item because the applicant is currently not proposing a point of sale within a parking lot.

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Fee: \$60.00 per year 01-311-4320-000

Date 2-24-25

CITY OF WAUWATOSA STREET VENDOR LICENSE APPLICATION BOARD OF PUBLIC WORKS APPROVAL REQUIRED

License No.d by

FEB 2 4 2025

City Clerk's Office

•••••••	Al hereby apply for a Street Vendor License according to the provisions of Wauwatosa City Ordinance, Ch. 6.50
	I hereby apply for an Ice Cream Street Vendor License according to the provisions of Wauwatosa City Ordinance Ch.6.100
	Name of Applicant (print) DILE HOPE SprAque Date of Birth
	Address 7837 Mary Ellan P/ city WAUWATOS State W/ Zip 53213
	Home Phone <u>177-8066</u> Prior Address (within 2 years) <u>W375 5 4965 Eproxy Jako Rd</u>
	Trade / Business Name 4lony & Chuskle
	Business Address 7837 Mary Elfen Place Business Phone 414.477.9898
	Type of Merchandise Hours Specific Location of Sale (see notes below)
	Type of Vehicle or Structure (see notes below) 1971 V W
1/in	upuwuk- Andres Elle
7	Date(s) of Sale 1202 - Hours of Operation 12 - + Spr # of Employees - Me
	Premises where merchandise is stored 7837 Mary Ellen Pace, WAUWATOSA
	Have you been convicted of violating any law substantially related to street vending within the past 5 years? M
	If so, where? Charge
	If so, where? Charge Charge Have you previously applied for this type of license in Wauwatosa? MO When? Granted?
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	If so, where?
	If so, where?

Copy: Police Dept., Fire Dept.

Wauwatosa City Clerk's Office, 7725 W. North Avenue, Wauwatosa, WI 53213, 414-479-8917, fax 414-479-8989

Plony & Thistle owner 4220 24 B Hope Spray 24A 23 4400 City I plan to go 8 and Sell where 22 invited -\$500 places I've Been - Trife invited 7 21 2700 already 15 5 16 14 20 13 6 3390 - 8334 Morth au. 18 17 19 2A 5 1 · 7300 Chestnut St 1760 **4B** 6A 2 44 3 2B 8932 - North Dale 0 1205 **6**B Village of Warmitosa 7A 12A 3 10 4 11 88 I am working 7B on h bookings 8B 12B 11600 808 00851 0005 21603 now My Sedson as from april - November - I plan to be

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CERTIFICATE OF INSURANCE

- THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY -

DATE ISSUED (MM/DD/YY) 2/24/25

Home Office • 100	Erie Insurance Place •	Erie, Pennsylvania 16	530 +	814.870.2000
Toll free 1,800,458.	0811 • Fax 814.870.3	126 • erieinsurance.	.com	

NAME	AND ADDRESS OF AGENCY TOSA I	NSURANCE AGENCY	LLC	AGENT'S NO.	00		NCEC		
	7206 W	/ NORTH AVE		WW1043	Co.: D	ERIE INSURA	NCE P	ROPERTY & C/	SUALTY COMPANY
	WAUW	ATOSA, WI 53213			Co.: E	ERIE INSURA		XCHANGE Attorney-in-F	ect (Not Applicable)
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	(414)45	54-8672			Co.: G	Flagship C	ity ins	SURANCE CON	IPANY
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COMPLETE NAME AND ADDRESS OF CERTIFICATE HOLDER OR ADDITIONAL INSURED: Peony and Thistle Custom Design Servics 7837 Mary Ellen PI Wauwatosa WI 53213 Thank you Jennifer for the email. I'm happy to provide further details! The challenge is the planning is ongoing and my plans are evolving.

What I know for sure is the flower truck when parked at the curb will not take up any grass or sidewalk space The truck is fully contained in itself, and takes up the space of a minivan-sized vehicle and will not affect traffic in any way. Please note that the purple flowers in the front ground level, actually hang from the awning/as shown in 2nd pic and not set on the grass.

I'm not sure if I will be parked in any parking lots, if I end up planning to - I can surely notify the appropriate Wauwatosa department.

This is my first summer season with the truck and I am not sure how often I would utilize the permit. It would most likely be 2 or less times a month.

I have included pictures of my flower truck so you can easier visualize

Thank you Hope Sprague 414.477.8066

Sent from my iPhone

On Mar 4, 2025, at 10:22 AM, Jennifer Stilling <jstilling@wauwatosa.net> wrote:

Hello,

I am following up to the voice mail message that I left for you this morning. We need more information in order to process this application. Please provide the following:

- 1. Where will your products be sold? From a tent? A truck?
- 2. Where will the point of sale be located at each of the following locations? If the point of sale is within a parking lot, handicap parking and parking lot circulation cannot be blocked. A map with dimensions as to how much space will be occupied must be provided at each address:
 - 1. 8334 North Ave
 - 2. 7330 Chestnut
 - 3. 8932 North Ave
 - 4. The Village? Where specifically in the Village?
- 1. Do you have any specific dates that you will be selling at each location? Do you plan to rotate between the locations above between April November? Is there generally a day of the week that you plan on being there (for example, every second and third Wednesday of the month)?

The application states that additional locations may be added. If additional locations are added to the above list, application(s) and approval(s) would be required for those locations as well.

Thank you,

Jennifer Stilling, PE (she/her) Senior Civil Engineer City of Wauwatosa 7725 W. North Ave Wauwatosa, WI 53213 Phone: 414.479.8934 jstilling@wauwatosa.net

Wauwatosa Self Serve Portal: Online Permitting

<image001.png>







Staff Report

File #: 25-0378

Agenda Date: 3/12/2025

Agenda #: 2.

Consideration of request from Guelig Waste Removal & Demolition LLC to complete work on Sundays for the demolition of the Incinerator Building at 11100 W. Walnut Road (Department of Public Works)

Submitted by: David Simpson Department:

Public Works

A. Background/Options

The contractor that will be demolishing the abandoned incinerator building located at the Department of Public Works site is requesting that they be allowed to complete work on Sundays from 7:00am-4:00pm (see attached request).

While the majority of the work completed at this site is not proximate to residential homes we do receive complaints from some residents when we make noise overnight so I do think we may get complaints if we allow work too early in the day on Sundays. I suggest that the Board consider the application, however, allow noise to begin no earlier than 9:00am on Sundays.

B. Recommendation

Allow Guelig Waste Removal & Demolition LLC to complete work on the Demolition of the Incinerator Building at the Department of Public Works property on Sundays from 9:00am-6:00pm.

Guelig Waste Removal & Demolition LLC N4456 US Highway 45 Eden, WI, 53019 February 11, 2025

City of Wauwatosa 7725 W North Avenue Wauwatosa, WI, 53213

Dear City of Wauwatosa:

This letter is regarding the Wauwatosa DPW Incinerator building demolition. We would like permission to be able to work on Sundays from 7:00am to 4:00pm. We would be hauling trucks and pulverizing concrete.

Sincerely,

Robert J Guelig Single member/owner



Staff Report

File #: 24-1684

Agenda Date: 3/12/2025

Agenda #: 3.

Request by Sheri Schmit, Milwaukee Regional Medical Center (MRMC), for an exception to the bike parking regulations of Wauwatosa Municipal Code (WMC) 24.11.080 in the MRMC Campus located south of Watertown Plank Road, north of Wisconsin Avenue, and east of I-41

Submitted by: Art Piñon Department: Development

A. Issue

Request by Sheri Schmit, Milwaukee Regional Medical Center (MRMC), for an exception to the bicycle parking regulations of Wauwatosa Municipal Code (WMC) 24.11.080

B. Introduction

Since 2022, the City has been collaborating with the Milwaukee Regional Medical Center (MRMC) to address challenges related to bicycle parking compliance on the MRMC Campus. Currently, the campus does not contain the required number of short- and long-term bicycle spaces mandated by City Code. A primary challenge has been MRMC's difficulty in finding suitable space within existing medical buildings and entrance areas to accommodate the required number of bicycle spaces. Moreover, the prescribed number of bicycle spaces exceeds what is necessary based on observed and recorded parked bicycles and bike ridership data. As a result, MRMC is requesting an exception to the bicycle parking requirements for medical and hospital buildings within the MRMC Campus. The exception is contingent upon an agreement between the City and MRMC, ensuring that an adequate amount of bicycle parking is provided to meet the practical needs of campus patients, employees, and visitors.

C. Discussion

Per City Code, Public and Civic uses require 1 short-term bicycle space for every 10 motor vehicle spaces and 1 long-term bicycle space for every 6,000 square feet of gross floor area. Based on the MRMC collective square footage (6,435,798 square feet) and number of parking spaces (12,616 parking spaces), the required bicycle parking in the MRMC campus is as follows:

Required Bicycle Parkin	g	Existing Bicycle Parking			
Long-Term	Short-Term	Long-term Short-term			
1,073	1,262	184 (-889 deficit)	214 (-1,048 deficit)		

As shown, there is a significant deficit in the required number of short- and long-term bicycle parking. The substantial deficit is due to a majority of the campus being developed prior to adoption of the Bicycle Parking Ordinance.

As indicated before, the exception is being proposed for medical and hospital buildings only due to the medical facility's unique bike parking demands, which do not align with other uses that fall within the Commercial, Public and Civic Use category (i.e. restaurants, libraries, colleges, schools, retail uses, etc.). Other types of development within the campus that could occur (i.e. retail, residential, hotel, etc.) would be required to provide bicycle parking in compliance with City Code. Based on the attached 2024 Annual Bike Parking Report, the number of observed parked bicycles is significantly under the number of bicycle parking spaces provided in many locations, and even far less than the number of spaces required by City Code. In addition, the campus functions with a variety of uses within close proximity that support one another. For example, a physician who rode their bike to work may have an office at one part of the campus, perform a medical procedure at another part of the campus, and then lunch in the cafeteria of another part of the campus. While utilizing 3 different uses (i.e. medical office, surgery center, cafeteria), the physician would likely only utilize one (1) long term bike parking space. Based on the parking counts, as well as the multiple uses that support one another in the campus, it would be impractical to require an increase in the number of bike parking spaces without the demand to support the additional spaces.

With granting of an exception, MRMC has expressed a commitment to providing a bicycle friendly campus for visitors, employees, and patients, including construction of bicycle infrastructure. In place of compliance with the City's bicycle parking requirements for its medical and hospital uses, MRMC is proposing parking facilities reflective of actual employee, visitor, and patient bicycle parking needs. MRMC is proposing an agreement with the City requiring MRMC to submit an Annual Bicycle Parking Report documenting bike parking conditions on campus, bike parking demand/counts, needed infrastructure changes, and employee incentives for biking to work. Based on the results of annual reports and working with the City, MRMC will make annual adjustments to bike parking facilities for medical and hospital uses that satisfies the needs of visitors, employees, and patients.

Bicycle and Pedestrian Facilities Committee Input

On January 27, 2025, City staff and MRMC met with the City's Bicycle and Pedestrian Facilities Committee (BPFC) to obtain feedback on the proposed exception. The committee's comments were as follows:

- Exempt only existing development/modification (no change to footprint)
- City staff may provide additional recommendations/requirements in the annual report
- All new development requires some amount of bike parking

The agreement incorporates the above comments by exempting existing development as well as projects which do not increase a building's footprint, and requiring new medical and hospital development to provide bike

parking as deemed appropriate by the Zoning Administrator.

A separate letter was submitted by Marie Colmerauer, BPFC member indicating the need for short-term bicycle parking adjacent to the Children's Emergency Room entrance (see attached). MRMC has indicated they are working on acquiring the needed bicycle rack.

Attached to this report is the applicant's bike parking request letter, Bicycle Parking Memo, 2024 Annual Bike Parking Report (which serves as a template for future report), email from BPFC member, Marie Colmerauer, and email from the Bicycle and Pedestrian Facilities Committee Chairperson, Ryan Wallace.

D. Recommendation

Staff recommends approval subject to the following agreement conditions:

- 1. Existing development and renovation/remodel projects that do not alter the building footprint are exempt from the bicycle parking standards (WMC 24.11.080).
- 2. New medical and hospital development, as well as building additions to existing medical and hospital buildings, must provide short- and long-term bicycle parking as deemed appropriate by the Zoning Administrator, but are not subject to WMC 24.11.080.
- 3. Non-medical and hospital development within the campus must provide short- and long-term bicycle parking in compliance with WMC 24.11.080.
- 4. The Milwaukee Regional Medical Center (MRMC) shall submit Annual Bike Parking Reports for medical office and hospital uses for the next 5 years. The attached 2024 Annual Bike Parking Report shall be utilized as a template for the report and include the following information:
 - a. Number and location of all short- and long-term, covered and non-covered, bicycle parking spaces for medical office and hospital uses within the MRMC Campus.
 - b. Bicycle parking counts taken 3 times a year (Spring, Summer, and Fall). Counts shall identify the number of occupied bike parking spaces to determine areas of the campus where more bicycle parking is needed, and occupancy percentages of bike parking areas. Counts must only be taken on days where biking is feasible. Days with rain, snow, etc. shall be excluded from the counts. Weather conditions when counts are taken shall be noted.
 - c. Based on bike parking counts, recommendations for areas in need of more bicycle parking. Areas in need of more bicycle parking are those containing either of the following:
 - 1. Average of the 3 counts exceeds 80% occupancy
 - 2. Two of the 3 counts exceed 80% occupancy
 - d. Include a summary and table of needed bicycle infrastructure changes based on the

calculated bike parking demand (i.e. average of the 3 counts exceeds 80% occupancy rate, two of the 3 counts exceed 80% occupancy, etc.).

- e. The report shall include a map, with buildings labeled, showing bicycle parking locations, parking counts and occupancy percentages.
- f. Include a brief discussion on incentives for employees riding bikes, monetary allowance (if any) to purchase a bicycle, as well as outreach and efforts to obtain feedback from employees regarding campus bike parking infrastructure.
- 5. The annual Bike Parking Report shall be submitted to the City's Zoning Administrator no later than January 1st, every year, for a 5-year period. The first report shall be submitted by no later than January 1, 2026 and document findings for the calendar year 2025. Prior to January 1, 2030, the requirement for an annual bike parking report shall be re-evaluated by the City to determine if there are any needed modifications to said report.
- 6. Recommended infrastructure changes (Condition 4.c) must be completed within ninety (90) days of the date of the report. Documentation (i.e. photos, etc.) must be submitted to the City within 90 days of the report date demonstrating completeness of the changes. The ninety (90) day completion period may be extended by the Planning Manager if issues such as back order of materials, permit requirements, or other unforeseen circumstances prevent MRMC from completing the improvements.
- 7. If MRMC fails to submit an annual report or complete recommended infrastructure changes within the required 90-day timeframe, the City reserves the right to deny any discretionary application, building permit, site plan, or any other City approval until the required annual report and/or 90-day infrastructure change documentation is submitted.



November 11, 2024

Wauwatosa Board of Public Works 7715 W. North Avenue Wauwatosa, WI 53213

Dear Mr. Chairman,

The purpose of this letter is to request a waiver to the Bike Parking ordinance, adopted in September 2023, Sec 24.11.08, for all existing and future development on the Milwaukee Regional Medical Center Campus.

The Milwaukee Regional Medical Center (MRMC) continues to promote multi-modal transportation for its employees, patients, and visitors, especially the use of bicycles. Through complete streets, the Ride Guide program, inclusion of multiple existing and planned bike share (Bublr) stations and extensive transportational planning, MRMC is exceptionally bicycle friendly. However, the campus does not meet the Wauwatosa bike parking requirements, since most of the buildings were built prior to the adoption of the ordinance, and newer/future buildings have unique parking demands that may not align with the requirements for commercial, public and civic oriented uses.

Consequently, we've developed the attached proposal for the City of Wauwatosa Board of Public Works to review for consideration an exception to the Bike Parking requirements.

The attached proposal recognizes the long- and short-term bike parking deficiencies and provides realistic, best-practice and data-driven recommendations that MRMC believes will meet the intent of the City's bicycle parking ordinance. This proposal also includes a method of measurement which will result in an annual report. The template for the annual report utilizing one bike parking count in 2024 is also attached.

I look forward to attending the December 11, Board of Public Works meeting. Thank you, in advance for your consideration.

Sincerely,

Sheri Schmit PE VP of Transportation and Infrastructure

8700 W. WATERTOWN PLANK RD. • MILWAUKEE, WI 53226 • 414-778-4570 • FAX: 414-778-6085 MEMBERS

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September 19, 2024							
TO:	Sheri Schmit						
FROM:	GRAEF						
SUBJECT:	2024 Bicycle Parking at Milwaukee Regional Medical Center (MRMC)						

Background

Milwaukee Regional Medical Center (MRMC) continues to promote multi-modal transportation for its employees, patients, and visitors; especially the use of bicycles. Through complete streets, the Ride Guide program, inclusion of multiple existing and planned bike sharing (bublr) systems, and extensive transportational planning, MRMC is exceptionally bicycle friendly. Separately, the City of Wauwatosa requires a minimum number of bicycle parking spaces for commercial, public, and civic buildings. This memo addresses the current state of bicycle parking at MRMC.

Required Bicycle Parking

The City of Wauwatosa's bicycle parking requirements can be found in <u>Sec. 24.11.080</u>. Bicycle parking requirements vary depending on the use of a property (residential, industrial, commercial/institutional). There are two types of bicycle parking facilities – short-term and long-term, and any land use will require both types.

Short-Term Parking

Intended to serve customers, clients, students, and other short-term visitors.

There must be 1 bicycle parking space for every 10 motor vehicle spaces.

All short-term parking must be within 100 feet of any entrance. At least 50% of the total must be within 50 feet of a <u>visitor</u> <u>entrance</u>. Racks outside 100 feet of an entrance do not contribute to the total.

Long-Term Parking

Intended to serve employees, residents, and other long-term visitors.

There must be 1 bicycle parking space for every 6,000 square feet of gross floor area.

All long-term parking spaces must be protected from the weather and unauthorized access. If the facility is educational, this requirement can be waived on approval by the Board of Public Works or <u>Common Council.</u>

Utilizing 2024 existing building square footage and vehicular parking data provided by MRMC, the campus is required to provide 1,262 short-term bicycle parking spaces and 1,073 long-term bicycle parking spaces. Tables 1 and 2 on the following page show a summary of existing bicycle parking requirements for the MRMC campus as a whole, as well as a breakdown by individual member institutions.



Table 1. Code-required bicycle parking (campus-wide)

			Required Bicycle Parking						
	Building Square Feet	Actual Car Parking Spaces	Long-Term ⁱ	Short-Term ⁱⁱ					
MRMC Campus	6,435,798	12,616	1,073	1,262					
i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 SqFt. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080									
ii The number of motor vehicle pa space required for <i>Chapter</i> 24, 811	ii The number of required short-term bicycle parking spaces is dictated by the total number of motor vehicle parking spaces. For a commercial, public, or civic building, there is one short-term space required for every 10 motor vehicle spaces. Wauwatosa Bicycle Parking Ordinance,								

			Required Bi	cycle Parking
	Building Square Feet	Actual Car Parking Spaces	Long-Term ⁱ	Short-Term ⁱⁱ
Froedtert	2,564,349	6,503	427	650
CW	2,193,857	3,402	366	340
MCW	1,586,635	2,366	264	237
Versiti	90,957	95	15	10
MRMC Campus	6,435,798	12,616	1,073	1,262

Table 2. Code-required bicycle parking (institution breakdown)

i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 SqFt. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080

ii The number of required short-term bicycle parking spaces is dictated by the total number of motor vehicle parking spaces. For a commercial, public, or civic building, there is one short-term space required for every 10 motor vehicle spaces. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080



Existing Bicycle Parking

As can be seen in the attached Exhibit A – Campus Bicycle Parking, the MRMC campus includes a variety of both existing and planned bicycle parking facilities, both short-term and long-term. "Planned" bicycle facilities are developments that are currently under construction on campus, but not yet online for bicycle parking usage. As a whole, the MRMC campus provides a total of 184 long-term bicycle parking stalls (-889 deficit from code requirement) and 214 short-term bicycle parking stalls (-1,048 deficit from code requirement). Exhibit A – Campus Bicycle Parking provides the location and description of each bicycle parking facility. Table 3 below and Table 4 on the following page show a summary of required bicycle parking vs. existing bicycle parking provided for the MRMC campus as a whole, as well as a breakdown by individual member institutions.

Table 3. Required vs. Existing bicycle parking (campus-wide)

					Required Bicycle Parking		Existing Bio	cycle Parking
	Employees	1st Shift Employees on campus	Building Square Feet	Actual Car Parking Spaces	Long-Term ⁱ	Short-Term ⁱⁱ	Long-Term ⁱⁱⁱ	Short-Term ^{iv}
MRMC Campus	20,000	11,800	6,435,798	12,616	1,073	1,262	184 (-889 Deficit)	214 (-1,048 Deficit)
i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 SqFt. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080								
ii The number of is one short-term	required sh space requi	ort-term bicycl red for every 1	e parking spac 0 motor vehic	es is dictated by the tot le spaces. Wauwatosa l	tal number of motor ve Bicycle Parking Ordina	hicle parking spaces. Fo nce, Chapter 24, §11.08	or a commercial, public, 80	or civic building, there
iii To classify as educational, or u	long-term, c use otherwise	i bicycle space approved by	must provide the Board of P	protection from both w Public Works or Commo	eather and acces by un on Council of Wauwato:	authorized individuals. sa. Wauwatosa Bicycle	These requirements can Parking Ordinance, Cha	be waived if the facility is pter 24, §11.080
iv To classify as Bicycle Parking (short-term, c Drdinance, C	a bicycle space Chapter 24, §1	e must be withi 1.080	n 100' of an entrance.	50% of all short-term s	paces must be located v	within 50' of a visitor enti	rance. Wauwatosa
Notes:								
56 of the existing short-term parking spaces do not meet the 100' minimum requirement (Bike Rack #4, #5, #8, and #9 are all located more than 100' from the nearest public entrance.								
Each space was	examined to	see which defi	nition of a spo	ace it met. See iii and i	v for definitions of long	g-term and short-term s	paces.	
Of the 214 existi	ng short-tern	n parking, the	MRMC campu	s meets the requiremen	nt stating that 50% of al	l short-term spaces mus	st be within 50' of a visite	or entrance.

MRMC has a large portion of its total employee base that either works off-campus, or works during 2nd and 3rd shifts that make it less likely to commute via bicycle. The "1st Shift Employees on campus" column is an accurate reflection of actual employees who work on-campus during daylight hours.



Table 4. Required vs. Existing bicycle parking (institution breakdown)

					R equired Bicycle Parking		Existing Bic	ycle Parking
	E mployees	1st S hift Employees on campus	Building Square Feet	Actual Car Parking S paces	Long-Term ⁱ	S hort-T erm ⁱⁱ	Long-Term ⁱⁱⁱ	S hort-Term ^{iv}
Froedtert	8,738	5,155	2,564,349	6,503	427	650	107 (-320 Deficit)	38 (-612 Deficit)
CW	3,948	2,368	2,193,857	3,402	366	340	30 (-336 Deficit)	18 (-322 Deficit)
MCW	7,164	4,127	1,586,635	2,366	264	237	32 (-232 Deficit)	148 (-89 Deficit)
Vers iti	150	150	90,957	95	15	10	15 (meets req.)	10 (meets req.)
MR MC Campus	20.000	11.800	6 435 798	12.616	1 073	1 262	184 (-889 Deficit)	214 (-1 048 Deficit)

i The number of required long-term bicycle parking spaces is dictated by the total square footage of floor area of a building. For a commercial, public, or civic building, there is one long-term space required for every 6,000 S qFt. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080

ii The number of required short-term bicycle parking spaces is dictated by the total number of motor vehicle parking spaces. For a commercial, public, or civic building, there is one short-term space required for every 10 motor vehicle spaces. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080

iii To classify as long-term, a bicycle space must provide protection from both weather and acces by unauthorized individuals. These requirements can be waived if the facility is educational, or use otherwise approved by the Board of Public Works or Common Council of Wauwatosa. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080

iv To classify as short-term, a bicycle space must be within 100' of an entrance. 50% of all short-term spaces must be located within 50' of a visitor entrance. Wauwatosa Bicycle Parking Ordinance, Chapter 24, §11.080

Notes:

56 of the existing short-term parking spaces do not meet the 100' minimum requirement (Bike Rack #4, #5, #8, and #9 are all located more than 100' from the nearest public entrance.

The 148 short-term spaces listed for MCW could be classified as either long-term or short-term as the ordinance allows the design requirements for long term spaces to be waived at educational facilities.

Of the existing bike parking provided, only Versiti and MCW meet the requirement stating 50% of all short-term spaces must be within 50' of a visitor entrance.

Each space was examined to see which definition of a space it met. See notes iii and iv for definitions of long-term and short-term spaces.

Each institution has a large portion of its total employee base that either works off-campus, or works during 2nd and 3rd shifts that make it less likely to commute via bicycle. The "1st S hift Employees on campus" column is an accurate reflection of actual employees who work on-campus during daylight hours.

Recommendations

Providing an adequate amount of bicycle parking to accommodate both commuters (long-term) and visitors (short-term) to the campus is a priority to MRMC. This can be evidenced through the millions of dollars of investment to infrastructure, staff, policies, and resources that have been allocated to bike and pedestrian facilities in and around the MRMC campus. The following section includes realistic, best-practice, and data-driven recommendations that MRMC believes will meet the intent of the City's bicycle parking ordinance.

Ongoing Monitoring of Bicycle Facility Usage

MRMC is a dynamic campus that is constantly in motion (land development changes, employee growth, etc.). Instead of a static code standard that mandates quantities of bicycle parking stalls according to building square footage and vehicular parking stalls, the MRMC campus should continually monitor use of both short-term and long-term racks by both visitors and employees to determine if more bike parking facilities are needed. To that end, GRAEF recommends MRMC

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conduct three separate bicycle parking counts annually: one in April/May, one in June/July, and one in August/September. Bicycle parking occupancy shall be documented for all bicycle parking facilities, both short-term and long-term.

Long-Term Parking Milestones

MRMC should ensure safe and secure bicycle facilities are provided for employees who currently commute by bicycle, and those who will likely start to commute when new facilities are added in the future. A MRMC survey from 2023 found that about 3% of MRMC employee respondents commute by bicycle. According to existing Wauwatosa zoning code, the required amount of long-term bicycle parking spaces is determined by the square footage of the institution's building. Due to the high density of building square footage on campus as well as the daytime vs. nighttime shifts of actual employees on campus, this results in an excessive bicycle parking requirement that does not reflect that actual need.

MRMC should be aware of the phenomenon noted by The Association of Pedestrian and Bicycle Professionals (APBP) in their bicycle parking guidelines: that perceived demand for bicycle parking may be lower than the demand that develops when quality parking appears. As MRMC adds bicycle lanes, improves bicycle connections into surrounding neighborhoods, embraces programming and education, and increases the visibility of bicycle commuting on campus, the number of employees who chose to commute by bicycle will likely increase. This is supported by a MRMC survey conducted in 2016 where 14.8% of respondents said they would consider riding their bicycle to work in the future.

As stated in the previous ongoing monitoring section, MRMC should continually monitor the occupancy of long-term bicycle parking supply to employees, moving towards accommodating enough long-term parking for the employees which currently commute via bicycle, as well as providing a suitable buffer of excess spaces to permit growth of bicycle usage. There are currently an average of approximately 11,800 staff/students on campus during the daytime hours. As the bicycle parking usage is monitored, MRMC should install enough long-term bicycle parking spaces at each bicycle parking facility to maintain a buffer of 20% of empty spaces so that the facilities can accommodate the growth of bicycle parking usage. As the usage of facilities increase, spaces should be added to respond to that growth. If a facility exceeds the 80% occupancy on a regular basis, the member institution should look to add additional spaces in order to maintain a 20% buffer of available parking spaces.

A larger buffer should be considered for facilities with very few spaces to bolster that facility's adaptability. For example, Versiti has 15 long-term bicycle parking spaces planned as part of their Blood Research Institute Expansion project. As part of annual bicycle counts, if it is found that less than 3 open bike parking spaces (20%) are available on a regular basis, Versiti should look to add additional long-term parking spaces in order to accommodate at least 3 open bike parking spaces (20%).

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Additionally, as new construction projects are undertaken by individual institutions, long-term bicycle parking facilities should be included as part of the design.

Short-Term Parking Milestones

There is less information and precedent on which to base the recommended amount of short-term bicycle parking for visitors on the MRMC campus. While some visitors to the campus undoubtedly travel by bicycle, the nature of the facilities means that most patients and visitors typically travel from further away for treatment and care. APBP recommends that short-term bicycle parking be based on the square footage of the healthcare facility itself. The City of Wauwatosa's Municipal Code instead bases the required amount of short-term bicycle parking on the number of vehicle parking spaces on site. The code requires 1,262 short-term bicycle parking spaces across the campus.

This amount is excessive when looking at patient and visitor data held by each institution. In place of this number, the recommendation would be that each institution public entrance include a minimum of four short-term bicycle parking spaces. MRMC should plan to monitor the use of these racks by both visitors and employees to determine if more racks are needed, gradually increasing the amount of parking to meet actual need, while providing a 20% excess buffer similar to the long-term recommendations. Additionally, as new building construction is undertaken, short-term spaces should be planned for each public entrance as part of the design.

Bicycle Parking Design

The City of Wauwatosa's Municipal Code clearly defines what is considered a long-term and a short-term bicycle parking space. When addressing the needs of employees and visitors, MRMC should ensure that every bicycle parking space on campus is meeting either the definition of a short-term or a long-term bicycle parking space. Most importantly;

- <u>All</u> short-term parking spaces must be within 100 feet of an entrance, and <u>half</u> of them must be within 50 feet of a visitor entrance.
 - See Exhibit A Campus Bicycle Parking for locations of entrances, visitor entrances, and distances surrounding them.
- All long-term parking spaces must be protected from weather and unauthorized access.

Wauwatosa's Municipal Code also has strict design requirements for all bicycle parking spaces. Both short-term and long-term spaces must follow a few design standards, while short-term spaces are subject to more requirements.



Requirement	Long-Term	Short-Term
Consist of racks or lockers that are anchored so that they cannot be easily removed.	x	x
Be of solid construction, resistant to rust, corrosion, hammers and saws.	×	x
Allow both the bicycle wheel and frame to be locked with the bicycle in an upright position using a standard U-lock.	×	x
Be designed to not cause damage to the bicycle.	x	x
Facilitate easy locking without interference from or to adjacent bicycles.	x	x
Be in highly visible, active, well-illuminated areas that do not interfere with pedestrian movements.		x



Children's Hospital Medical College of Wisconsin Versiti Blood Center

Outside SW corner of MCW HUB

NE corner of main MCW entrance

SE corner of main MCW entrance

South of MCW main MCW entrance

NW corner of Connell and 87th Street, south of MCW HUB

In front of main Versiti entrance, south of Watertown Plank Road

Short Term

10

11

12

13

14

15

Covered / Not Covered	# of Racks	Capacity	Bike Rack #	Organization	Location	Short / Long Term	Covered / Not Covered	# of Racks	Capacity
		eet	Planned B	Bicycle Parking	Str				ark
Covered in parking structure	2	18	16	Medical College of Wisconsin	Just South of Milwaukee State Crime Lab	Short Term	Not covered	1	2
Covered in parking structure	1	9	 17	Medical College of Wisconsin	NE corner of Parking Area 1 Replacement Building	Long Term	Covered in parking structure	8	16
Covered in parking structure	6	60	5 18	Medical College of Wisconsin	SW corner of Parking Area 1 Replacement Building	Long Term	Covered in parking structure	8	16
Not covered	2	18	1 9	Versiti Blood Center	Inside staff entrance	Long Term	Covered	15	15
Not covered	2	20	20	Froedtert Hospital	Southwest side of structure by entrance	Long Term	Covered in parking structure	13	20
Covered bike lockers	12	12	Z Recomme	ended Bicycle Parking	ā				9
Covered in parking structure	2	18	21	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	<u> </u>
Not secured	1	9	22	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	6 4
Not covered	1	9	23	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	2 4
Not covered	19	38	24	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	4
Covered - under overhang	1	9	25	Froedtert Hospital	Within 50' of Froedtert Hospital Entrance	Short Term	Not covered	2	4
overed - under overhang	1	9	26	Children's Hospital	Within 50' of Childrens' Hospital Entrance	Short Term	Not covered	2	4
lot covered	4	36	27	Children's Hospital	Within 50' of Childrens' Hospital Entrance	Short Term	Not covered	2	4
lot covered	6	54	28	Children's Hospital	Within 50' of Childrens' Hospital Entrance	Short Term	Not covered	2	4
ot covered	1	10	29	Children's Hospital	Within 50' of Childrens' Hospital Entrance	Short Term	Not covered	2	4

2024 - Annual Bike Parking Report







Introduction

To best align with the City of Wauwatosa's municipal code for bike parking, MRMC is completing an annual report to document existing bike parking conditions on campus. The report will note any changes to bike infrastructure, including bike parking and on street facilities. The report will also detail current employee incentives to commute by bicycle. Finally, the results of any bike counts will be included to ensure the existing bike parking is meeting the needs of both employees and visitors.

Bike Infrastructure Changes

The Milwaukee Regional Medical Center encourages all mode types by implementing complete streets design across campus and providing sufficient and accessible bike parking. During 2024, the MRMC campus has undergone extensive construction to both its streets and building infrastructure. Some of the construction has impacted bike infrastructure and bike parking. The changes that occurred in 2024 are outlined below:

- Updated bike parking in Children's employee only structure from bike lockers that were in poor condition to two covered bike racks
- 5 new short term racks will be installed at FH to better align with the city's code
- 4 new short term racks will be installed at CW to better align with the city's code
- Two new Complete Streets are under construction (Doyne extension and 95th Street)
- 92nd Street is being reconstructed and will also be a Complete Street when finished.

Bike Commuting - Employee Incentives

The Milwaukee Regional Medical Center prioritizes sustainable commutes and reducing single occupancy vehicle trips to and from campus. One-way MRMC supports these efforts is through a transportation demand management (TDM) program for employees. The TDM program, known as The Ride Guide, provides information, resources, and incentives to employees making a sustainable commute, including commuting by bike.

The Ride Guide offers numerous incentives for current and interested bike commuters including:

- Discounted bike tune ups and bike maintenance classes from the Tosa Bike Garage
- Three bike challenges from Love to Ride with local prizes
- Free monthly Spin class from the WAC to improve fitness for bike commuting
- Bike trip planning through the City of Milwaukee's Low Stress Bike Route Finder
- Local bike trail information
- Bike commuting education including a webinar on commuting by bike featuring current MRMC bike commuters

- Emergency Ride Home Program granting two Lyft rides home per quarter for employees currently making a sustainable commute (including biking)
- Bicycle safety tips and classes from Bublr Bikes
- Discounted Bublr Bike passes (30-day pass for \$5 \$25 off!)
- Bike Buddy program offering employees an opportunity to ride with a seasoned bike commuter and fellow employee
- Bike to Work Day including four group rides and commuter stations with swag and refreshments

MRMC further supports commuting by bike by providing complete streets infrastructure within the campus boundaries. N 87th Street is the first of many complete streets with raised, separated bike lanes on the campus. N 92nd Street, W Doyne Ave and N 95th Street are currently under design or construction and will also have bicycle accommodations.

While not every employee owns their own bicycle, the MRMC has partnered with the City and Bublr bikes to bring numerous Bublr bike stations to the campus. As of 2024, three bublr bike stations can be seen on or adjacent to MRMC's campus. Two additional stations are planned for N 92nd Street in the fall of 2024.

Finally, MRMC is continually updating and installing new bike parking racks across campus to further embrace commuting by bike. As of 2024, there are 15 bike parking locations across the MRMC campus. Most of which have numerous bike racks and many of which are covered and secure.

Bike Parking Counts

To monitor the use of both short term and long-term bicycle parking across the MRMC campus a bike parking county was conducted. Numerous factors were considered when selecting the date of the count including weather, time of day, and day of week. MRMC is aware that the campus sees the highest number of trips per day on Tuesdays, Wednesdays and Thursdays each week. Time of day is another important factor to consider, most employees and visitors are at MRMC during first shift therefore bicycle counts are proposed to take place mid-day to capture the highest number of bikes campus. Finally, bike parking will only take place on days with favorable weather conditions that align with ideal biking conditions. The bike parking count parameters are listed below:

- Bike parking counts will take place on a Tuesday, Wednesday or Thursday only
- Bike parking counts will take place between 9am 2pm
- Bike parking counts will only be completed when there is less than 10% chance of precipitation
- Bike parking counts will only be completed when temperatures are between 50 90 degrees

One bike parking count was completed in 2024. The count was done on Wednesday, August 28, 2024. The weather on August 28^{th} was favorable for biking, with temperatures in the 70s and low to no chance of precipitation. The count was completed in the early afternoon between 1pm - 2pm.

In 2025 and beyond, three bike parking counts will be taken in May, July and September.

The 2024 annual bike parking count results can be seen in the table below.

Bike Parking Count 8/28/24										
MRMC Direct #	Member Org	Location description	Covered/Not Covered	Short/Long Term	# of Racks	Total Capacity	# of Bikes Present	% of Total Bike Capacity Utilized		
#1	FH	NE corner, Level 1 of P1/Blue Parking Garage	Covered	Long term	2	18	2	11%		
#2	FH	NE corner, Level 1 of P2/Gold Parking Garage	Covered	Long term	1	9	0	0%		
#3	FH	NW corner, Level 1 of P3/Orange Parking Garage	Covered	Long term	6	60	5	8%		
#4	FH	Located east of 92nd St south of main FH entrance	Not covered	Short term	2	9	1	11%		
#5	CW	Located NE corner, Level 1 of CW West/Corporate Parking Structure	Covered	Long term	2	8	3	38%		
#6	CW	West end of parking structure, Level C	Covered	Long term	2	18	0	0%		
#7	CW	Outside CW E5 entrance, behind main entrance	Not covered	Short term	1	9	3	33%		

#8	CW	Outside West entrance of Children's research institute	Not covered	Short term	1	9	3	33%
#9	MCW	Outside SW corner of MCW HUB	Not covered	Short term	19	38	1	3%
#10	MCW	NE corner of main MCW entrance	Covered	Short term	1	9	6	67%
#11	MCW	SE corner of main MCW entrance	Covered	Short term	1	9	5	56%
#12	MCW	South of MCW main MCW entrance	Not Covered	Short term	4	36	7	19%
#13	MCW	NW corner of Connell and 87th Street, south of MCW HUB	Not Covered	Short term	6	54	7	13%
#14	Versiti	In front of main Versiti entrance, south of Watertown Plank Road	Not Covered	Short term	1	16	1	6%
#15	WI Diagnostic Lab	SW corner of W Connell Ave and N 87th Street, near loading dock	Not Covered	Short term	2	20	0	0%



From: Marie Colmerauer <<u>marie.colmerauer@gmail.com</u>>

Sent: Tuesday, January 14, 2025 9:50 AM

To: Steven Braatz <<u>sbraatz@wauwatosa.net</u>>; <u>sEescobedo@wauwatosa.net</u>; Melissa Dolan <<u>mdolan@wauwatosa.net</u>>; Mark Hammond <<u>mhammond@wauwatosa.net</u>>; Alan Kesner <<u>akesner@wauwatosa.net</u>>; John Ruggini <<u>jruggini@wauwatosa.net</u>>

Subject: [External] Please oppose the request from the Milwaukee Regional Medical Center (MRMC) for a waiver from the Bike Parking ordinance

Hello Mr. Braatz, Ms. Escobedo, Ms. Dolan, Mr. Hammond, Mr. Kesner, and Mr. Ruggini,

I am writing to ask you to oppose the request from the Milwaukee Regional Medical Center (MRMC) for a waiver from the Bike Parking ordinance "for all existing and future development". This item was HELD at the December meeting and will be revisited again at your meeting in January.

In comparison to the amount of parking available at the MRMC complex, I think it's a minor ask for them to also adhere to bike parking requirements. But, on a personal note, my family lives at 638 Pleasant View. A few years ago, my daughter had a scooter accident and had to be rushed to Children's ER. We were parked into our driveway, so I biked her over there. There were no bike parking racks near the entrance of the ER. I had to illegally lock up my bike to a parking sign. It made an already stressful situation even more stressful. I hope this personal story reflects the need for the MRMC to adhere to the city ordinance.

Please oppose their request.

Thanks for your consideration! Marie Colmerauer
Arthur Pinon

From:	Ryan Wallace <ryanericwallace@gmail.com></ryanericwallace@gmail.com>			
Sent:	Wednesday, February 5, 2025 7:03 PM			
То:	Elizabeth Saunderson			
Cc:	Arthur Pinon; Tamara Szudy			
Subject:	[External] Re: BPFC Feedback on MRMC Bike Parking			

Liz -

This is what I wrote down for feedback:

- Exempt only existing development/modification (no change to footprint)
- City staff may provide additional recommendations/requirements in the annual report
- All new development requires some amount of bike parking

Let me know if you have any questions or need any clarifications.

Thanks Ryan

On Tue, Feb 4, 2025 at 2:47 PM Elizabeth Saunderson < esaunderson@wauwatosa.net > wrote:

Hi Ryan,

Can you remind me when I should expect to see the committee's feedback on MRMC bike parking that was discussed at the January meeting? I didn't write down a timeframe in my notes.

Thank you,

Liz

Elizabeth Saunderson, PE

Civil Engineer – Multimodal Transportation

City of Wauwatosa

7725 W. North Avenue

Wauwatosa, WI 53213

City Hall: (414) 479-8900 (ext. 5510)

Direct: (414) 479-8996

Email: <u>esaunderson@wauwatosa.net</u>



Staff Report

File #: 25-0332

Agenda Date: 3/12/2025

Agenda #: 4.

Consideration of request by Multimodal Transportation Engineer for approval of an application from Lime to renew its operation of a dockless scooter program in Wauwatosa

Submitted by:

Elizabeth Saunderson, Civil Engineer - Multimodal Transportation Department: Department of Public Works, Engineering Division

A. Issue

Chapters 11.50 and 11.51 of the Wauwatosa Municipal Code regulate Electric Scooters and Dockless Mobility Systems. The Board of Public Works previously approved Terms and Conditions for companies interested in participating in the City's Dockless Scooter Program and approved Lime to operate the City's dockless scooter program in 2024. Lime has requested an extension to the approval to operate the program in 2025 with further modifications to the Terms and Conditions.

B. Background/Options

Chapter 11.50 and 11.51 of the City's Municipal Code govern the use of dockless mobility devices within Wauwatosa. Section 11.51.020(A) of the City's municipal code states that "No person may operate a dockless mobility system in the city without permission to participate in a dockless mobility system program administered by the board of public works. Participation in the program may only occur upon application and approval of the board of public works." The Board of Public Works previously approved Terms and Conditions for companies interested in participating in the Dockless Scooter Program, which is attached with edits requested by Lime. The requested changes have been approved by the City Attorney.

Lime, a dockless scooter company, has submitted a 2025 application and terms and conditions document to be considered by the Board of Public Works, both of which are attached for the Board's review. New in 2025, Lime plans to deploy Captur real-time parking correction and education for riders of its scooters. I have reviewed Lime's application and am recommending approval of their application at this time. I also discussed a proposed program fee identical to that which was charged to Lime last year which includes an annual program fee of \$1,500 plus a \$0.10/ride fee.

The dockless scooter program helps solve the last mile problem with public transportation and helps increase public transportation rider-ship which will ultimately reduce the pressure on Wauwatosa roadways. In 2024, the Lime program had a total of 23,822 rides for a total distance traveled of 41,029 miles.

C. Strategic Plan (Area of Focus)

Priority Area Three: Infrastructure: Ensure the City's infrastructure supports public health through multi-modal transportation and recreation opportunities; Support rideshare opportunities in the City, such as Bublr bicycles and electric scooter rideshare programs.

D. Fiscal Impact

The City will receive \$1,500 as an annual fee in addition to \$0.10 per ride taken in 2025 to help offset City related program administration and monitoring expenses.

E. Recommendation

Approval of Lime's Dockless Scooter Program Application allowing Lime to operate a Dockless Scooter Program in Wauwatosa with an initial annual program fee of \$1,500 plus \$0.10/ride for 2025.



City of Wauwatosa

Dockless Scooter Program Application

Business Name: Lime	
Proposed approximate date service will commence:	April 1 2025 (Weather dependent)
Approximate number of scooters to be deployed in Wauwatosa:	250
Customer service phone number to report operational concerns:	1-800-546-3345
Business website for customers to report operational concerns:	Support@li.me (www.li.me)

1. Describe your plan to ensure the orderly appearance and operation of the system. Include proposed strategies to encourage proper parking among users, and plans for addressing improperly parked or fallen scooters.

To ensure tidiness around the city Lime will use our in-house labor on daily patrol routes. These routes will be in high-density and sensitive areas (city hall, village, etc). This will ensure vehicles are upright, parked correctly and not blocking bus stops or sidewalk ramps. These patrol routes also allow us to quickly respond to any issues or complaints that arise throughout the day.

Lime uses a mix of in-house and out-of-house labor to ensure smooth operation. The out-of-house labor includes our Logistics Providers (LPs). Logistics Providers are independently established businesses that carry the necessary level of insurance required to handle our swappable batteries. In conjunction with our inhouse team, LPs ensure that all vehicles on the road are fully charged and safe to ride. In addition to swapping batteries, LPs complete move and retrieval tasks, to ensure that vehicles are in preferred locations or brought back for repair if necessary. Lime has an expansive network of over 150 juicers and LPs in the Milwaukee area dedicated to providing excellent service.

All scooters are equipped with gyroscopic sensors that detect if the vehicle is upright or tipped over. Using our internal system we have visibility into the status of all scooters. Using this software we can identify overturned scooters and correct the issue.

Each Lime vehicle is also tracked by idle time. Internal limits can be set that will autogenerate a move task if a scooter hasn't been ridden in a set period of time. A team member will then collect the vehicle and move it to a more appropriate location.

Lime has a variety of tactics to encourage parking compliance. Through in-app messaging and push notifications, we educate users on local regulations and parking etiquette. As part of our commitment to proper parking, Lime holds safety events where riders and the public are educated on parking etiquette and other tips for using a scooter.

New in 2025, Lime is deploying Captur real-time parking correction and education: Our end-trip photo review now provides real-time education upon trip completion, depending on the specific parking error (e.g., tipped over, blocking the right-of-way, etc.). This integration enables the Lime app to instantly block a rider's parking attempt if the end-trip photo reveals that they are attempting to mispark. If a user is repeatedly non-compliant, they can be suspended, fined, or banned from Lime's platform.

2. Describe your plan of operation during the winter months and during snow events. The City of Wauwatosa performs robust snow removal operations on all City streets and alleys. City residents are required to clear snow and ice from public sidewalks and crosswalks abutting their property. Include proposed strategies to ensure that scooters do not impede City of Wauwatosa or resident snow removal and ice control operations.

Lime understands the seasonality of winters in Wisconsin and is able to scale our operation up and down with the weather. We plan to cease operation by the time snow accumulates. Using our large network of labor we aim to remove all scooters from the street 24-48 hours before measurable snowfall occurs.

3. Describe how you will take in and handle complaints, questions and inquiries from the public as well as City staff.

There are multiple ways that the public can contact Lime. Every scooter is branded with the company's customer service phone number and email address. Additionally, there is a Milwaukee specific sticker on every scooter that can be scanned to report an issue. After a user reports an issue, an alert is sent to the entire Milwaukee team who then resolves the problem. In 2024 in Wauwatosa the average response time was 48 minutes.

City officials will be provided with the contact info of Lime's in-market manager.

4. Describe how you will promote, market, and provide education on your service.

Lime will continue growing scooter usage by strengthening our existing partnerships with local companies like Bublr Bikes and Independence First. We will also identify and reach out to prospective partners in Wauwatosa in hopes of coordinating with them on events and marketing opportunities. We aim to work closely with the city and other community stakeholders to identify areas of opportunity. An example of this would be a community event where the city would like Lime to deploy scooters or any location where the city would like additional scooters. This has been successful in the past, as seen through Lime's collaboration with Summerfest in 2023 and 2024, in which we deployed hundreds of scooters daily near the festival grounds. To educate the public on scooter use Lime aims to hold at least one safety event per month. These events allow the community to try our vehicles, and ask any questions they might have. It also allows Lime personnel to educate attendees on proper scooter etiquette as it relates to riding and parking our vehicles.

The undersigned declares that the information provided is true,	and that they agree to	all rules and regulations set
forth in the City of Wauwatosa Municipal Code and the Dockles	s Scooter Program Tern	ns and Conditions document:
alvin Elmore		2/6/2025
	<u> </u>	2/0/2023
	Signature	Date
Printed Name Calvin Elmore		
Title Operations Manager US Control North		
The Operations Manager, US Central North		
Email Address Calvin.Elmore@li.me		
Completed applications should be emailed to dsimpson@wauwa	tosa.net.	
· · · · ·		

 Office Use Only:
 Application Approved by BPW:_____

 Application Received:
 Application Approved by BPW:_____



City of Wauwatosa Department of Public Works

Dockless Scooter Program

Terms and Conditions

Approved by the Board of Public Works March 1, 2021

Modified & Approved for Lime March 12, 2025

Table of Contents

1.	Introdu	lction	.3	
	Purpos	e	.3	
2.	Terms		.3	
	2.1.	Agreement	.3	
	2.2.	Priority	.3	
	2.3.	Program Subject to Change	.3	
	2.4.	Application	.3	
3.	Defini	tions	.3	
4.	Progra	am Duration	. 5	
	4.1.	Initial Term	.5	
	4.2.	Extension	.5	
	4.3.	Termination	.5	
	4.4.	Modification and Suspension	.5	
5.	Progra	am Participation	. 5	
	5.1.	Voluntary Participation	.5	
	5.2.	Local Operations	.5	
	5.3.	Outstanding Fines and Forfeitures	.5	
	5.4.	Number of Participants	.5	
6.	Insura	nce Requirements	6	
	6.1.	General Requirements	.6	
	6.2.	Minimum Insurance Requirements	.6	
7.	Indem	nification	6	
8.	Limita	tion of Liability	.7	
9.	Public	Records	.7	
10	. Privac	у	.7	
11	. Opera	ting Regulations	. 8	
	11.1.	Minimum Equipment Requirements	.8	
	11.2	Allowable Fleet Size	.8	
	11.3	User Fees	.9	
	11.4	Dockless Scooter Parking	.9	
	11.5	. Submerged Scooters1	10	
	11.6	. Equipment Maintenance	10	
	11.7	Reporting and Data Sharing1	10	
	11.8	Community Outreach1	10	
12	12. Program Fees			
	12.1.	Program Fees1	1	
13	. Ackno	wledgement of Receipt	1	

1. Introduction

Purpose

The City of Wauwatosa has initiated a Dockless Scooter Program (Program) to allow the use of dockless scooters in Wauwatosa.

Dockless scooters, as defined herein, means a system of self-service scooters made available for shared use to individuals on a short-term basis, which may be rented via a smart-phone app, vendor website, vendor customer service number, or a pre-paid PIN and which do not require structures at permanent, fixed locations where rides must begin and end.

Dockless scooters may provide many benefits to residents and visitors of Wauwatosa. They have the potential to help the City improve outcomes related to equity, congestion mitigation, health, and access to opportunity. The City also realizes the potential for disruption to pedestrian ways and other public rights of way if the Program is not managed well. Dockless scooters have the potential to reduce reliance on motor vehicles and ride sharing services for short trips, decreasing congestion and air quality impacts. Dockless scooters may provide links to public transit, assisting with connectivity and solving the first-mile/last-mile problem.

2. Terms

2.1. Agreement

These Terms and Conditions are made in conjunction with each Participant's Application. Together, these documents record our agreement in relation to use of the Public Right of Way in Wauwatosa.

2.2. Priority

If there is any inconsistency between these Terms and Conditions and/or any other agreements, the Terms and Conditions shall prevail.

2.3. Program Subject to Change

A. The terms and conditions of the Dockless Scooter Program (Program) are subject to change, without limitation, by the Director of Public Works. These changes may include, but are not limited to: changes in the minimum or maximum number of dockless scooters allowed in the City, changes to the number of participants allowed in the Program, or changes to the parking requirements.

B. Participants will be notified by electronic mail of any changes to the Program. Participants unwilling or unable to comply with proposed changes may voluntarily suspend or terminate participation in the Program. The Director of Public Works must submit written notice (written notice shall include electronic mail correspondence) to all Participants 30 days prior to any change coming into effect.

C. Participants terminating participation in this Program must cease offering their equipment for rent and remove their equipment from the City of Wauwatosa's streets within seven (7) days.

2.4. Application

A. Completed applications shall be submitted via email to David Simpson, Director of Public Works, <u>dsimpson@wauwatosa.net</u>.

3. Definitions

"Applicant" means any person who submits an application to the Department of Public Works for

the Program.

"Application" means a formal request filed with the Department of Public Works for participation in the Program.

"Business" means engaging in activities over time for the purpose of sustained financial gain.

"Customer" means a person who has downloaded the operator's app to their smart phone or other device.

"Deploy" means to make available to users in a public place.

"Dockless" means a system of self-service mobility devices made available for shared use to individuals on a short-term basis, which may be rented through a smart-phone app, vendor website, vendor customer service number, or a pre-paid PIN and which do not require structures at permanent, fixed locations where rides must begin and end.

"Equipment" means dockless scooters.

"Fleet" means equipment owned or leased by the operator which is intended for use as part of a dockless scooter system in the city.

"Holidays" means New Year's Eve, New Year's Day, Martin Luther King Jr. Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving and the day after, and Christmas and the day before.

"Mobility device" means a vehicle, whether motorized or not, including a bicycle, a scooter, a skateboard, or any other micro-mobility vehicle which is exempt from state registration under ch. 341, Wis. Stats.

"Objection" means any information that could form the basis of denial, non-renewal, suspension or revocation of participation in the Program. An objection may result from information provided by any resident or from written reports filed by the Chief of Police.

"Operator" means any person engaged in the activities of owning or operating a dockless scooter system.

"Participant" means any individual or partner, and any officer, director or agent of any corporate applicant which has been approved by the Department of Public Works for entry into the Program.

"**Person**" means any individual, firm, corporation, limited liability company, partnership or association acting in a fiduciary capacity.

"Scooter" means a device weighing less than 100 pounds that has handlebars and an electric motor, is powered solely by the electric motor and human power, and has a maximum speed of not more than 20 miles per hour on a paved level surface when powered solely by the electric motor.

"Service area" means the entire city.

"Service zone" means a geographic area of the city, the boundaries of which are described herein.

"Unsafe" means any dockless equipment that could cause harm or injury to a user or anyone else within the public right-of-way despite being operated in a reasonable manner.

"User" means an individual who pays a fee to unlock dockless equipment for the purpose of transportation or recreation.

"Unused dockless equipment" means any dockless scooter parked in one location for more than 7 consecutive days without being used.

4. Program Duration

4.1. Initial Term

A. Participation in the Program shall commence upon review and approval of a participant's application by the Board of Public Works.

B. Initial term shall be approved by the Board of Public Works and shall be no greater than two years.

4.2. Extension

A. The City of Wauwatosa reserves the right to extend the participant's term at the discretion of the Board of Public Works.

B. If a participant chooses not to extend their participation in the Program, the participant shall notify the City of termination at least two (2) weeks prior to the expiration of the then-current term.

C. Upon notice of an extension of the Program, participation will automatically renew upon notice served to the applicant.

4.3. Termination

A. The Program may be terminated at any point, by a vote of the Wauwatosa Board of Public Works. Upon termination of the Program, participants shall be provided written notice of said termination by the Director of Public Works via certified and electronic mail.

B. Participants shall cease to offer equipment for rent in the City of Wauwatosa immediately upon receiving notice of termination. Participants shall have 72 hours from the time of receipt of the termination notice to physically remove equipment from the City streets.

C. If participants fail to retrieve equipment within 72 hours of receipt, the City will remove said equipment.

4.4. Modification and Suspension

A. Participation in this Program may be modified or suspended, at any point, and for any reason, without limitation, by the Director of Public Works. Should participation be modified or suspended, participants shall be notified in writing via certified and electronic mail by the Director of Public Works of the nature and the reasons for the change.

5. Program Participation

5.1. Voluntary Participation

A. Participation in this Program is mandatory.

5.2. Local Operations

A. Participants shall have a locally based operations manager who is able to respond to Wauwatosa.

5.3. Outstanding Fines and Forfeitures

A. The City of Wauwatosa will not process any application for participation in the Program made on behalf of an individual or corporation that owes outstanding fines or forfeitures to the City of Wauwatosa.

5.4. Number of Participants

A. The Director of Public Works reserves the right to cap the number of participants and/or scooters at any time. Notice of any such cap or change will be provided to all Participants at least fourteen (14) days prior to coming into effect.

6. Insurance Requirements

6.1. General Requirements

A. A certificate of insurance acceptable to the City evidencing the insurance requirements is to be provided. The certificate shall state that the issued insurance policies meet the requirements as outlined below. All certificates are to be provided before a participant places any dockless equipment in the City of Wauwatosa. If such certificate is not received, the City of Wauwatosa has the authority to remove the participant from the Program. If such certificate expires prior to the end date of this Program, a current certificate shall be provided and must demonstrate that no lapse in coverage has occurred.

B. Insurance companies must be acceptable to the City and should have a current A.M. Best rating of A-VIII or better.

C. All policies shall be written on an occurrence form.

D. Applicants must provide the City either a copy of their Commercial General Liability and Auto Liability insurance policies, including all endorsements, or policy language and endorsements showing the Commercial General Liability and Auto Liability insurance policies meet the requirements of the Terms and Conditions. A COI provided by the applicant, if reviewed and approved by the City Attorney may also be acceptable.

E. Applicants must provide the City with a copy of their user agreements.

6.2. Minimum Insurance Requirements

A. Workers' Compensation and Employer's Liability

1. Workers' Compensation – Statutory Limits

B. Commercial General Liability*

Commercial General Liability	\$1,000,000 each occurrence
General Aggregate	\$3,000,000 aggregate

- **1.** Coverage must be equivalent to ISO form CG0001 or better.
- 2. The City of Wauwatosa shall be added as an additional insured via blanket endorsement.

3. Coverage shall apply to the risks associated with or arising out of the services provided under this Program.

C. Auto Liability

Combined Single Limit \$1,000,000 each accident

1. If the Applicant owns or has any long term leased vehicles, coverage must be for Any Auto (Symbol 1) or Any Owned Auto (Symbol 2). If there are no owned or long term leased vehicles, then coverage must be for Hired and Non-Owned Auto Liability (Symbols 8 and 9).

2. Coverage shall apply to the risks associated with or arising out of the services provided under this Program/Application.

7. Indemnification

Notwithstanding any references to the contrary in the application documents, Applicant assumes full

liability for all of its acts in the performance of the Program. Applicant will save and indemnify and keep harmless the City against all liabilities, judgments, costs and expenses which may be claimed by a third party against the City which may result from the negligence or willful misconduct of the Applicant, or the Applicant's agents, employees, or workmen, except to the extent arising out of or resulting from the City's negligence or willful misconduct. If judgment is recovered, whether in suits of law or in equity, against the City by reason of the negligence or willful misconduct of the Applicant or Applicant's agents, employees, workmen, the Applicant assumes full liability for such judgments not only as to the amount of damages, but also for the cost, attorneys fees, or other reasonable expenses resulting there from. The City shall notify the Applicant promptly following receipt or notice of any indemnifiable claim-no later than thirty days of notice of the claim. Applicant shall be entitled to have control over the defense and settlement of tendered lawsuits, including the selection of counsel; provided that Applicant may not settle any lawsuit on behalf of the City without the City's written consent that either (1) requires the City to admit liability, or (2) exceeds the limits of Applicant's insurance policies. City shall cooperate in all reasonable respects with the Applicant and its attorneys in the defense or settlement of such lawsuit; provided, that City shall be entitled to reasonably participate in the defense of such lawsuit and to employ its own counsel at its own expense to assist in the handling of such lawsuit. Applicant shall have no obligation to indemnify, defend or hold harmless the City from and against any claims resulting from or arising out of the conditions within the Right of Way, including, but not limited to, the design, construction, or maintenance failure of the roadway, roadway infrastructure, roadway projects, or other rights of way, including, but not limited to, sidewalks, medians, curbs, and bridges, controlled, maintained, or owned by the Indemnitee.

8. Limitation of Liability

Except as expressly provided herein, neither party shall be liable for any indirect, incidental or consequential damages (including without limitation, damages resulting from loss of use, loss of profits, interruption or loss of business, lost goodwill, lost revenue and lost opportunity) arising out of any of the terms or conditions of this agreement, or with respect to its performance hereunder. Notwithstanding anything contained herein to the contrary, and to the maximum extent permitted by applicable law, the maximum aggregate liability of Applicant arising out of or in connection with the agreement, the Code of the City of Wauwatosa, or any rules, regulations, or guidelines (whether in contract, breach of warranty, tort (including negligence), product liability, strict liability, breach of statutory duty, indemnity or otherwise) shall not exceed three hundred fifty thousand U.S. dollars (\$350,000) in the aggregate.

9. Public Records

Applicant understands that the City is bound by the Wisconsin Public Records Law, and as such, all of the terms of this Program are subject to and conditioned on the provisions of Wis. Stat. sec. 19.21 *et. sec.* Applicant acknowledges that it is obligated to assist the City in retaining and producing records that are subject to the Wisconsin Public Records Law and that the Applicant must defend and hold the City harmless from liability due to its fault under that law. Except as otherwise authorized, those records shall be maintained for a period of seven years. This provision shall survive termination of this application, Applicant's right to participate in the Program, and the Program itself.

10. Privacy

Participants shall provide a copy of their user agreements and privacy policies with their application. Participants must provide notice to the City regarding any changes to their terms of service, user

agreements, or privacy policies throughout the duration of the Program. Relevant portions of participants' user agreement or terms of service must be consistent with the provisions of this Application, the Wauwatosa Code of Ordinances, Wisconsin State Law, and applicable federal law. Changes to a participant's user agreement or terms of service inconsistent with the provisions of this Application, the Wauwatosa Code of Ordinances, Wisconsin State Law, and applicable federal law. Changes to a participant's user agreement or terms of service inconsistent with the provisions of this Application, the Wauwatosa Code of Ordinances, Wisconsin State Law, or applicable federal law may be grounds for termination from participation in this Program.

11. Operating Regulations

11.1. Minimum Equipment Requirements

A. Safety

- **1.**Each dockless scooter shall meet the requirements described in Sections 347.489 (1), 347.489 (2), and 347.489 (3) of the Wisconsin State Statutes.
- 2. The maximum motor-assist speed for dockless scooters shall be 15 MPH.
- **3.**All operators shall have visible language on each dockless scooter and on the operator's website and smartphone application which notifies the user that:
 - Helmet use is encouraged while riding a dockless scooter
 - Sidewalk riding is prohibited
 - Users are required to follow all rules of the road
 - Scooters must be parked responsibly
- **B.** Technology

1. The operator shall equip each dockless scooter with an on-board GPS device capable of providing real-time location data to the operator and the Director of Public Works.

C. Dockless Scooter Identification

1. Each dockless scooter must be assigned a unique identifying number which shall be provided to the Director of Public Works prior to placing the dockless scooter into service.

2. Each dockless scooter must be clearly and visibly labeled with the operator's name, a toll-free phone number for 24-hour customer support, and the dockless scooter's unique identification number.

11.2. Allowable Fleet Size

A. The Director of Public Works shall establish the maximum number of dockless scooters per operator that may be deployed.

1. All requests for changes in fleet size or distribution should be sent by electronic mail to the Department of Public Works.

B. Winter Fleet.

1. Operators must ensure that deployed scooters do not impede City of Wauwatosa or resident snow removal and ice control operations.

2. The operator may be required to decrease the amount of equipment deployed during winter months.

C. Operators may remove equipment without prior authorization in the case of severe weather.

D. The Director of Public Works reserves the right to cap the number of dockless scooters at any time.

11.3. User Fees

User fees must be clearly and understandably communicated to the user prior to dockless scooter use.

11.4. Dockless Scooter Parking

A. General

1. The operator shall provide instructions for properly parking dockless scooters to customers and users in easily understandable formats through multiple media types.

2. The operator shall keep the sidewalk free from obstructions to pedestrians by requiring users to park dockless scooters such that a walk space not less than 5 feet wide shall at all times be kept open for pedestrians.

3. All dockless scooters shall be parked in an upright position with 2 wheels making a point of contact with the ground.

4. Operators must use geo-fencing to prohibit parking in the following areas:

a. Bridges

b. Other areas as reasonably directed by the Director of Public Works

5. Dockless scooters shall be parked in accordance with the following guidelines.

a. Where possible, without impeding the flow of pedestrian traffic, a dockless scooter may be parked on a sidewalk or in a bicycle rack or other similar area designated for bicycle parking.
b. Dockless scooters shall not be parked between the sidewalk and the curb where such area is less than 3 feet wide.

c. Dockless scooters shall not be parked on the sidewalk at the intersection of two or more streets between the points of curvature, measured along the curb.

d. On blocks without sidewalks, dockless scooters may be parked in the roadway if the right-of-way and the pedestrian way are not obstructed.

e. Except at existing, permitted bicycle facilities, dockless scooters shall not be parked in the terrace or furniture zone where adjacent to or within the following locations:

- 1. Parklets
- 2. Loading zones
- **3.** Accessible parking spaces
- 4. Curb ramps
- 5. Entryways
- 6. Driveways
- 7. Street furniture requiring pedestrian access
- 8. Transit stops, including bus stops, shelters, and passenger waiting areas
- B. Improper Parking
 - **1.** Access to parking meters shall not be obstructed.

2. Upon notification by the Director of Public Works or the Chief of Police, or a designee, of any dockless scooter that is improperly parked, the operator shall relocate the dockless scooter in accordance with the following requirements:

a. Within 2 hours of notice between 7 a.m. and 7 p.m.

b. By 9 a.m. for notices received between 7 p.m. and 7 a.m.

3. The City may relocate improperly parked dockless scooters as discussed in section 11.50.040 of the City's municipal code.

C. Unused Dockless scooters

1. Unused dockless scooters shall be relocated by the operator. The City may relocate unused dockless scooters that are not remedied in accordance with section 11.50.040 of the City's municipal code.

11.5. Submerged Scooters

Participants acknowledge that submerged scooters may discharge a hazardous substance so the operator must remove scooters from waterways within 24 hours of receiving notice. If the operator fails to comply with the removal requirements, the City may cause removal and require reimbursement for actual expenses incurred.

11.6. Equipment Maintenance

A. Any dockless scooter deemed unsafe or inoperable shall be placed out of service immediately upon notice to the participant and removed from the public right-of-way by the operator within 2 hours of notice. Notice to the participant includes notification from the general public, or electronic mail notification from the City of Wauwatosa.

B. The city may impound dockless scooters that are deemed unsafe or inoperable and not remedied in accordance with this provision per section 11.50.040 of the City's municipal code.

11.7. Reporting and Data Sharing

A. Participants shall be required to provide periodic reports as requested by the Director of Public Works.

B. Aggregate customer demographic data that does not identify individual customers, individual payment methods, or their individual trip history, gathered by the system application shall be provided to the Director of Public Works on at least a quarterly basis using anonymized keys.

C. The following information shall be reported quarterly throughout the duration of the Program, or as directed by the Director of Public Works:

1. List of reported parking complaints including: description, location of incident, description of company response, response time

- 2. Incidents of dockless scooter theft and vandalism
- **3.** Vehicle maintenance complaints
- **4.** Number of users participating in discount programs disaggregated by program type (low income, students, etc.), if applicable
- 5. Accident/crash information
- **6.** Aggregate payment method information
- 7. Trip origination and destination information

11.8. Community Outreach

A. Participants shall implement any community outreach plans at their own cost.

B. The operator shall provide a website, a call center, and a mobile application customer interface that is available 24 hours a day, 7 days a week.

12. Program Fees

12.1. Program Fees

A. Participants shall pay a fee as determined by the Board of Public Works.

B. Fees will be used to address costs incurred by the City related to administration and monitoring of the program, including monitoring and use of the public way.

C. Payments shall be received by the date/s set by the Board of Public Works. Payments

City of Wauwatosa Attn: Dept. of Public Works 11100 W. Walnut Road Wauwatosa, WI 53226

shall be mailed to:

D. If payment to the City is not received, or payment arrangement is not made within ten (10) business days after notification via electronic mail, participation in the program shall be automatically terminated by the Director of Public Works. Upon termination, operator must remove all equipment within 7 days.

13. Acknowledgement of Receipt

The undersigned declares that the information provided in this application is true, that they have read and agree to the Terms and Conditions as described herein, and that they agree to all rules and regulations set forth in the Wauwatosa Code of Ordinances.

Company:
Name (Printed):
Fitle:
Signature:
Date:





23,822

Trips

11,846

Unique Riders

41,029

Miles Traveled

Sustainability and Ridership Metrics





Staff Report

File #: 25-0333

Agenda Date: 3/12/2025

Agenda #: 5.

Consideration of request by Director of Public Works for approval of an underground distribution easement to WE Energies over a portion of City owned property located at 11501 W. Burleigh Road (Burleigh Water Tower Site)

Submitted by:

David Simpson, P.E. Department: Public Works

A. Issue

In order to construct the planned water system pumping station on the Burleigh Road water tower site, existing overhead WE Energies power lines must be relocated underground and an easement is needed to complete that work.

B. Background/Options

As part of the construction of the planned Burleigh Pumping Station, WE Energies overhead power lines must be relocated below ground. In order to do this WE Energies needs the attached easement to be granted so they can complete the work. This easement is within building setback lines so granting the easement will not impact any future building needs, should they arise. Given that this project is necessary to allow construction of the planned pumping station I am recommending approval of the easement.

C. Strategic Plan (Area of Focus)

Priority 3: Infrastructure

D. Fiscal Impact

There is no cost for creation of the easement and the cost related to burial of the power lines was accounted for in the project budget.

E. Recommendation

Approval of the attached Underground Distribution Easement, subject to technical corrections, from the City of Wauwatosa to the Wisconsin Electric Power Company (We Energies) for the burial of overhead power lines in a City owned parcel at 11501 W. Burleigh Road (Burleigh Water Tower Site)

Recommendation to Common Council

Document Number

WR Number: **4983314** IO Number: **76253**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, **THE CITY OF WAUWATOSA**, a municipal **corporation**, hereinafter referred to as "Grantor", owner of land, hereby grants and warrants to **WISCONSIN ELECTRIC POWER COMPANY**, a **Wisconsin corporation doing business as We Energies**, hereinafter referred to as "Grantee", a permanent easement upon, within, beneath, over and across a part of Grantor's land hereinafter referred to as "easement area".

The easement area is described as a strip of land eight (8) feet in width, being a part of the Grantor's land located in the Northwest 1/4 of the **Northeast 1/4 of Section 18, Town 7 North, Range 21 East**, City of Wauwatosa, Milwaukee County, Wisconsin.

The location of the easement area with respect to Grantor's land is as shown on the attached drawing, marked Exhibit "A", and made a part of this document.

1. **Purpose:** The purpose of this easement is to construct, install, operate, maintain, repair, replace and extend underground utility facilities, conduit and cables, electric pad-mounted transformers, manhole, electric pad-

RETURN TO: We Energies PROPERTY RIGHTS & INFORMATION GROUP 231 W. MICHIGAN STREET, ROOM P277 PO BOX 2046 MILWAUKEE, WI 53201-2046

> 299-9960-001 (Parcel Identification Number)

mounted switch-fuse units, electric pad-mounted vacuum fault interrupter, concrete slabs, power pedestals, riser equipment, terminals and markers, together with all necessary and appurtenant equipment under and above ground as deemed necessary by Grantee, all to transmit electric energy, signals, television and telecommunication services, including the customary growth and replacement thereof. Trees, bushes, branches and roots may be trimmed or removed so as not to interfere with Grantee's use of the easement area.

- 2. Access: Grantee or its agents shall have the right to enter and use Grantor's land with full right of ingress and egress over and across the easement area and adjacent lands of Grantor for the purpose of exercising its rights in the easement area.
- 3. Buildings or Other Structures: Grantor agrees that no structures will be erected in the easement area or in such close proximity to Grantee's facilities as to create a violation of all applicable State of Wisconsin electric codes or any amendments thereto.
- 4. Elevation: Grantor agrees that the elevation of the ground surface existing as of the date of the initial installation of Grantee's facilities within the easement area will not be altered by more than 4 inches without the written consent of Grantee.
- 5. **Restoration:** Grantee agrees to restore or cause to have restored Grantor's land, as nearly as is reasonably possible, to the condition existing prior to such entry by Grantee or its agents. This restoration, however, does not apply to any trees, bushes, branches or roots which may interfere with Grantee's use of the easement area.
- 6. Exercise of Rights: It is agreed that the complete exercise of the rights herein conveyed may be gradual and not fully exercised until some time in the future, and that none of the rights herein granted shall be lost by non-use.
- 7. Binding on Future Parties: This grant of easement shall be binding upon and inure to the benefit of the heirs, successors and assigns of all parties hereto.
- 8. Easement Review: Grantor acknowledges receipt of materials which describe Grantor's rights and options in the easement negotiation process and furthermore acknowledges that Grantor has had at least 5 days to review this easement document *or* voluntarily waives the five day review period.

Grantor: THE CITY OF WAUWATOSA

By: _____ Dennis McBride, Mayor

By: ______ Steve Braatz, City Clerk

Personally came before me in _____ County, State of Wisconsin, on _____, 2025, the above named Dennis McBride, the Mayor and Steve Braatz, the City Clerk of the City of Wauwatosa, a municipal corporation, for the municipal corporation, by its authority, and pursuant to Resolution File No. adopted by its Common Council on _____, 2025...

Notary Public Signature, State of Wisconsin

Notary Public Name (Typed or Printed)

(NOTARY STAMP/SEAL)

My commission expires _____

This instrument was drafted by Jorian Giorno on behalf of Wisconsin Electric Power Company, PO Box 2046, Milwaukee, Wisconsin 53201-2046.



R:\Data\we\Survey\@WorkManagement\NOSURV\DRAWING & FIELD DATA\GENERAL JOBS\MILWAUKEE COUNTY\T7N-R21E\SECTION 18\4983314



Staff Report

File #: 25-0343

Agenda Date: 3/12/2025

Agenda #: 6.

Request by TosaGreen Summit to utilize portions of the City Hall and Public Works parking lots for recycling collections on September 13 and September 20, 2025

Submitted by:

Jeff Roznowski, Chairperson, TosaGreen Summit

On behalf of the Tosa Green Summit and Wauwatosa CrimeStoppers, I would like to request the use of a portion of the City Hall and Public Works Parking Lots on the following dates, for the purpose of recycling collections as part of the 15th annual Tosa Green Summit:

• Public Works Parking Lot, Saturday September 13, 2025, from 8 am to 2 pm for MMSD's Household Hazardous Waste collection.

• City Hall Parking Lot, Saturday September 20, 2025, from 9 am to 1 Noon for Wauwatosa Crimestoppers annual Shred It event and collections for medicine, textiles, bikes, scrap metal,

toothbrushes and toothpaste tubes and Tosa Cares. Note this is a shorter time period, 3 hours, compared to 5 hours in the past, due to unexpected costs with our shredding vendor.

Two maps depicting the requested areas and traffic flow are attached.

Also on September 20, we plan to have exhibits in the lower civic center, which I am in the process of reserving with the Public Works Department.

As you may recall, last year we moved the MMSD collection to the DPW location to improve the traffic flow and eliminate the traffic backups that occurred at City Hall and along North Avenue. This worked well for all Stakeholders, including MMSD, Veolia, DPW, and our Tosa Green Summit volunteers. Volumes were consistent with prior years and maximum wait times were 10 minutes. Regular Drop Off Center collection will continue to occur on September 13 from 7:30 am to 4 pm. We will have volunteers directing traffic to and from 113th Street.

For the other recycling collections at City Hall on September 20, traffic has always run smoothly, including in 2024, with minimal backups (maximum of 5 minutes), but we will continue to have volunteers guiding traffic.

Tosa Green Summit Recycling: City Hall Lot - Shred It, Meds, Textiles, Bikes, Tooth Care, Scrap Metal, Tosa Cares: 9-20-25



Tosa Green Summit Recycling: DPW Lot - MMSD Household Hazardous Waste 9-13-25





Staff Report

File #: 25-0373

Agenda Date: 3/12/2025

Agenda #: 7.

Consideration of placing the 2022, 2023 and 2024 Street Improvement Projects on the tax roll for construction projects that were completed during the 2024 Construction Season

Submitted by:

Jeni Schroeder, PE

Department

Department of Public Works - Engineering Services

A. Issue

Consideration of Billing special assessments for construction projects completed during the 2024 Construction Season.

B. Background/Options

The Common Council passed resolutions dated March 1, 2022, March 7, 2023 and March 19, 2024 approving special assessments for work in connection with repaying, and work appurtenant thereto, in the following streets:

Street & Location Washington Highlands Decorative Street Lighting	Ald. Dist 1	Exist & <u>(Prop.) Width</u> n/a	Pavement <u>Const. Type</u> n/a	Assessed <u>Sidewalk Work</u> No
North Ave. from N. 104 th St. to Mayfair Rd.		7 36-28- (25-24-31)	36 A-Asp	bh Yes
North Ave. from Met-to-wee Ln. to N. 104 th St.	6 & 7	36-28-36 (25-17-31)	A-Asph	Yes
Alley between W. Burleigh St. and Chambers St. from N. 122 nd St. to N. 124 th St. (East-West Leg)	7	20 (20)	A-Conc	No
Alley between W. Burleigh St. and Chambers St. from N. 122 nd St. to N. 124 th St. (North-South Leg)	7	20 (20)	A-Green	No
Alley between W. Meinecke Ave. and North Ave. from Lefeber Ave. to N. 73 rd St.	5	20 (20)	A-Green	No

File #: 25-0373	Agenda Date: 3/12/2025			Agenda #: 7.	
N. 115 th St. from Park Hill Ave. to Blue Mound Rd.	3	30 (30)	D-Asph	No	
Colonial Dr. from Auer Ave. to Concordia Ave.		8 30 (3	0) D-Asph	Yes	
Sarasota Pl. from N 95 th St to N. 100 th St.	8	30 (30)	D-Asph	Yes	

The attached resolution directs City staff to issue bills for the special assessments associated with these completed projects.

C. Strategic Plan (Area of Focus)

Priority Area Three: Infrastructure

D. Fiscal Impact

The Capital Budget included special assessments for these projects.

E. Recommendation

Approve the resolution placing 2022, 2023 & 2024 Street Improvement Projects on the tax roll for construction projects that were completed during the 2024 Construction Season.

Recommendation: Common Council

WHEREAS, the Common Council of the City of Wauwatosa did, by resolution passed and dated March 1, 2022, March 7, 2023 and March 19, 2024, approve and adopt reports of the Board of Public Works in connection with repaying, and work appurtenant thereto, in the following streets:

		Exist &	Pavement Construction	<u>Assessed</u> Sidewalk
<u>Street & Location</u> Washington Highlands Decorative Street Lighting	<u>Ald. Dist.</u> 1	<u>Width</u> n/a	<u>Type</u> n/a	<u>Work</u> No
North Ave. from N. 104 th St. to Mayfair Rd.	7	36-28-36 (25-24-31)	A-Asph	Yes
North Ave. from Met-to-wee Ln. to N. 104 th St.	6&7	36-28-36 (25-17-31)	A-Asph	Yes
Alley between W. Burleigh St. and Chambers St. from N. 122 nd St. to N. 124 th St. (East- West Leg)	7	20 (20)	A-Conc	No
Alley between W. Burleigh St. and Chambers St. from N. 122 nd St. to N. 124 th St. (North-South Leg)	7	20 (20)	A-Green	No
Alley between W. Meinecke Ave. and North Ave. from Lefeber Ave. to N. 73 rd St.	5	20 (20)	A-Green	No
N. 115 th St. from Park Hill Ave. to Blue Mound Rd.	3	30 (30)	D-Asph	No
Colonial Dr. from Auer Ave. to Concordia Ave.	8	30 (30)	D-Asph	Yes
Sarasota Pl. from N 95 th St to N. 100 th St.	8	30 (30)	D-Asph	Yes

WHEREAS, the construction of the improvement above-described having now been completed in the aforementioned streets, it is the desire of the Board of Public Works to place the special assessments on the tax roll.

WHEREAS, it is the desire of the Board of Public Works to adjust the assessments for approaches and service walks, contained in said report, in relation to the costs of construction involved.

WHEREAS, the City Engineer has prepared amended special assessments taking into account the aforementioned differences.

NOW, THEREFORE, BE IT RESOLVED, By the Common Council of the City of Wauwatosa, Wisconsin, as follows:

Section 1. That the special assessments for paving set forth in the aforesaid reports of the Board of Public Works, approved by resolution passed and dated as listed are hereby directed to be entered upon the tax roll as hereinafter set forth and as reiterated in the special assessments attached hereto.

Section 2. That the attached amended special assessments for approaches and service walks, against the respective lots, tracts, and parcels of land abutting on the aforementioned streets be and the same are hereby approved and adopted and are directed to be entered upon the tax roll as hereinafter set forth.

Section 3. That the owners of the respective parcels of land fronting or abutting the street improvements on which public hearings have been held and preliminary assessments have been confirmed, shall have payment of the special assessments scheduled as follows:

(a) Each special assessment and special charge, pursuant to Section 66.0627 of the Wisconsin Statutes, levied in an amount of \$200 or less against any parcel of land in the City of Wauwatosa shall be entered in the tax rolls in one installment.

(b) Each special assessment for improvements levied in an amount exceeding \$200 against any parcel of land in the City of Wauwatosa shall be entered in the tax rolls in five equal annual installments of principal together with interest at the rate of twelve percent (12%) per year or the percentage rounded out to the next highest whole percentage number above the interest rate paid by the City for the sale of corporate purpose bonds, which include the project which is the subject of the special assessment, whichever figure is less, on the unpaid balance of said assessment. Individual assessments shall run concurrently except as provided under Section 3.08.040 of the City Code.

(c) Each special assessment levied against any parcel of land in the City of Wauwatosa for the installation of sanitary sewer main or water main or construction of permanent street pavement shall not be entered in the tax roll until all installments of special assessments for sanitary sewer or water main or construction of permanent street pavement levied previously against the same parcel of land have been entered into the tax rolls and have been paid. Such subsequent special assessment shall be deferred and only interest at the rate of twelve percent (12%) per year, or the percentage rounded out to the next highest whole percentage number above the interest rate paid by the City for the issuance of General Obligation Debt, which include the project which is the subject of the special assessment, whichever figure is less, on such subsequent special assessment shall be carried into the tax rolls in addition to the scheduled installments of such prior assessments. After the last installment of such prior special assessment shall, beginning with the next subsequent tax roll, be entered in the tax rolls pursuant to Section 3.08.030 of the City Code.

(d) Whenever special assessments are levied against the frontage and side of a corner parcel of land in the City of Wauwatosa for the installation of sanitary sewers or water mains or construction of permanent pavements arising out of the same public works project, such special assessments levied against a corner parcel of land shall be deemed to be two separate special assessments, and the special assessment levied against the frontage of the corner parcel of land shall first be scheduled on the tax rolls for payment as provided in Section 3.08.030 of the City Code and the special assessment levied against the side of the corner parcel of land shall be scheduled on the tax rolls pursuant to (c) above, following such scheduling of the special assessment levied against the frontage of the corner parcel of the corner parcel of land.

(e) Notwithstanding the provisions of (c) and (d) above, any owners of parcels of land assessed may at their option elect to pay both the scheduled installments of prior assessments as well as scheduled installments of subsequent special assessments on the same tax rolls as entered on those tax rolls pursuant

to Section 3.08.030 of the City Code.

(f) If, after special assessments have been placed on the tax rolls in installments or otherwise, the taxpayer fails to pay the same within the time allowed for payment of general taxes, the same shall become delinquent and shall be treated in the same manner and subject to the same laws as delinquent general property taxes.

Section 4. That the City Clerk publish the installment assessment notice, as by Section 66.0715 of the Wisconsin Statutes provided, including therein that the owners of the property benefited by said improvement may elect within thirty (30) days from the date of said notice to pay the said assessment on their property on or before the next succeeding November 1.



Staff Report

File #: 25-0372

Agenda Date: 3/12/2025

Agenda #: 8.

Consideration of award of Contract 25-08 / Project 1024, Center Street Improvements to MJ Construction, Inc. in the amount of \$1,414,080.00

Submitted by:

Jeni Schroeder, PE

Department

Department of Public Works - Engineering Services

A. Issue

Consideration of award of Contract 25-08 / Project 1024, Center Street Improvements to MJ Construction, Inc. in the amount of \$1,414,080.00.

B. Background/Options

The project consists of sanitary sewer lateral, water main, storm sewer leads and inlets, roadway and pedestrian facilities and communications improvements within the project limits.

Project limits are on Center Street from N. 113th Street to N. 118th Street. The project will complete the road work that was associated with the underground utility installations in the summer of 2024. The western driveway entrance to the schools will be realigned to match into the intersection with N. 116th Street. The work is planned for the 2025 construction season.

We have examined the three (3) bids submitted for Contract 25-08 / Project 1024, Center Street Improvements on Wednesday, March 5, 2025. The bids received are as follows:

MJ Construction	\$1,414,080.00
Mid City Corporation	\$1,473,160.92
LaLonde Contractors, Inc.	\$1,586,931.88

C. Strategic Plan (Area of Focus)

Priority 2: Public Safety, Goal 2 - Proactively address pedestrian, bicycle and vehicular safety.

Priority 3: Infrastructure, Goal 1 - Optimize infrastructure to handle 100-year storm events.

Priority 3: Infrastructure, Goal 2 - Ensure the City's infrastructure supports public health through multi-modal

transportation and recreation opportunities.

D. Fiscal Impact

The project was included in the approved 2024-2028 Capital Budget. An estimated \$125,000 of the project cost will be reimbursed by the Wauwatosa School District.

E. Recommendation

Staff recommends the award be made to MJ Construction, Inc. and for their bid price of \$1,414,080.00, this being the lowest and best bid.

Recommendation: Common Council
Resolution awarding the bid for Contract 25-08 / Project 1024, Center Street Improvements to MJ Construction, Inc. in the amount of \$1,414,080.00.

RESOLUTION 1

WHEREAS, the Board of Public Works of the City of Wauwatosa reports that pursuant to the official notice, published as required by law, for proposals for Center Street Improvements under Contract 25-08, Project 1024, bids and proposals were received until 11:01 o'clock in the morning, Wednesday, March 5, 2025, and therefore publicly opened; and

WHEREAS, that said bids and proposals are returned herewith, and the bids received are as follows:

MJ Construction	\$1,414,080.00
Mid City Corporation	\$1,473,160.92
LaLonde Contractors, Inc.	\$1,586,931.88

WHEREAS, the lowest bid received is from MJ Construction in the amount of \$1,414,080.00; and

WHEREAS the Board of Public Works recommends that the proper City Officials be authorized to enter into a contract for doing said work of improvement;

NOW, THEREFORE, BE IT RESOLVED, by the Common Council of the City of Wauwatosa, that the proper City Officials be and they are hereby authorized and directed to enter into a contract with MJ Construction for the work of Center Street Improvements at and for their bid price of \$1,414,080.00, this being the lowest and best bid.

BE IT FURTHER RESOLVED that the surety deposits, if any, be returned to the unsuccessful bidders.



Staff Report

File #: 25-0395

Agenda Date: 3/12/2025

Agenda #: 9.

Request by the Engineering Division for approval of plans and specification for Contract 25-11 / Project 1025, 2025 Alley Reconstruction. Project limits are the alley from N 109th St to 111th St.between Harvard Ln and Bluemound Rd

Submitted by:

Maggie Anderson **Department:**

Public Works, Engineering Division

A. Issue

Engineering is requesting approval of plans and specification for Contract 25-11 / Project 1025, 2025 Alley Reconstruction. Project limits are the alley from N 109th St to 111th St. between Harvard Ln and Bluemound Rd

B. Background/Options

Engineering has prepared the attached plans and specifications for the concrete alley project.

C. Strategic Plan (Area of Focus)

Well Maintained Infrastructure: Repair and replace the City's infrastructure at a pace that will ensure out infrastructure is in good repair within financial retrains of budgeting for generations.

D. Fiscal Impact

This project has been included in the approved 2025-2029 Capital Budget.

E. Recommendation

Staff recommends approval of the plans and specifications and authorization be granted to the City Clerk to advertise for bids on Contract 25-11 / Project 1025, 2025 Alley Reconstruction.



Α

SHEET No.

1

2

3

4

7

8

5 D1

6 D2-D4

D5-D7

D8-D11

9 D12-D13



PROJECT COORDINATION:

NICK DEMING, PE CONSTRUCTION MANAGER (414) 479-3541 NDEMING@WAUWATOSA.NET

DIVISION C

MAGGIE ANDERSON, PE SENIOR CIVIL ENGINEER (414) 479-3444 MANDERSON@WAUWATOSA.NET

DIVISION D

JENI SCHROEDER, PE SENIOR CIVIL ENGINEER (414) 479-3554 JSCHROEDER@WAUWATOSA.NET

PPROVED BY THE BOARD OF PUBLIC WORKS OF THE CITY OF WAUWATOSA, WISCONSIN BY RESOLUTION DOPTED:

DATE

CITY CLERK

SUBMITTED FOR APPROVAL: MARCH 12TH, 2025

> CITY ENGINEER REG. PROF. ENGR.

CITY OF WAUWATOSA ENGINEERING SERVICES DIVISION

2025 ALLEY RECONSTRUCTION

HARVARD-BLUEMOUND 109TH ST-111TH ST

SCALE: AS NOTED

SHEETS:

75

PAVING NOTES:

- 1. ELEVATIONS SHOWN FOR CURB AND GUTTER ARE FLANGE LINE ELEVATIONS UNLESS OTHERWISE NOTED
- 2. NO TREES OR SHRUBS SHALL BE DISTURBED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER
- 3. CONTRACTOR SHALL PRESERVE AND PROTECT ALL RETAINING WALLS AND OTHER APPURTENANCES ADJACENT TO THE PROJECT.
- 4. SAWCUT 2' BEYOND EDGE OF CONCRETE AT DRIVEWAYS. REMOVAL AND REPLACEMENT OF 2' DRIVEWAY SECTION IS INCIDENTAL TO 7" CONCRETE BID ITEM. ALL SAWCUTTING IS INCIDENTAL.
- 5. UNDERGROUND UTILITIES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY USING DIGGERS HOTLINE FIELD LOCATES AND RECORD DRAWINGS. HOWEVER, THE CITY DOES NOT GUARANTEE THEIR EXACT SIZING, LOCATION, OR DEPTH OR THAT OF OTHERS NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE EXISTENCE OF THESE UTILITIES AND THOSE NOT SHOWN. COSTS FOR LOCATING AND DELAY SHALL BE INCIDENTAL TO THE CONTRACT.
- 6. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 3" SAND BEDDING AND COVER AROUND STREET LIGHT, TRAFFIC SIGNAL OR INTERCONNECT CABLE, DUCT OR CONDUIT WHEREVER IT IS EXPOSED.
- 7. INSTALL EROSION CONTROL INLET BASKETS IN ALL THE INLETS AND CATCH BASINS DIRECTLY DOWN-SURFACE OF ALL OPEN CUT WORK PRIOR TO STARTING WORK, OR WHERE DIRECTED BY THE ENGINEER. INLET PROTECTION MUST BE REMOVED WHEN WORK IS COMPLETED.
- 8. TRAFFIC CONTROL AND EROSION CONTROL SHALL BE ERECTED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
- 9. CONTRACTOR SHALL SUPPORT ALL EXISTING UTILITIES, STRUCTURES, POWER POLES, STREET LIGHTS AND SIGNS AS NEEDED TO FACILITATE CONSTRUCTION. INCIDENTAL TO CONSTRUCTION.
- 10. ALL DECORATIVE PAVERS SHALL BE REPLACED IN KIND OR REMOVED, STOCKPILED AND REPLACED BY THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS.
- 11. NO STAGING OR STOCKPILING IS ALLOWED ON BLUEMOUND RD. ALL WORK MUST REMAIN WITHIN THE PROJECT LIMITS OF THE ALLEY.
- 12. ALL ALLEY EDGES SHALL HAVE FELT TO SEPARATE THEM FROM ADJACENT PAVEMENTS, STRUCTURES, PLANTERS, WALLS, POWER POLES, AND FENCES. 30" x 30" FELTED ISOLATION BOX OUT IS REQUIRED AT ALL LIGHT POLES AND CONCRETE POLE BASES PLACED WITHIN CONCRETE. FELT SHALL BE INCIDENTAL TO THE PAVEMENT BID ITEM.
- 13. ALL CURB RAMP OPENING TAPERS ADJACENT TO GRASS ARE 3' UNLESS OTHERWISE SHOWN ON THE CURB RAMP DETAILS. ALL CURB RAMP TAPERS ADJACENT TO PAVED SURFACES SHALL BE 10:1 MAX.
- 14. CONTRACTOR SHALL PRESERVE AND PROTECT ALL RETAINING WALLS AND OTHER APPURTENANCES ADJACENT TO THE PROJECT.
- 15. A SAWCUT IS REQUIRED AT THE EDGE OF ALL CURB AND GUTTER; SIDEWALK; AND PAVEMENT REPLACEMENT LOCATIONS. SAWING IS INCIDENTAL TO THE CONTRACT.

STORM SEWER NOTES:

- 1. ALL IRON FROM EXISTING STRUCTURES WHICH ARE CALLED OUT FOR REMOVAL OR REPLACEMENT SHALL BE SALVAGED TO THE CITY OF WAUWATOSA DEPARTMENT OF PUBLIC WORKS.
- 2. ALL NEW MANHOLE FRAMES AND GRATES SHALL BE PROVIDED BY THE CITY OF WAUWATOS THE DEPARTMENT OF PUBLIC WORKS. CONTRACTOR SHALL CALL AT LEAST ONE WORKING I ADVANCE TO CITY DPW TO ARRANGE PICKUP OF FRAMES AND GRATES.
- 3. CONTRACTOR SHALL EXPOSE EXISTING STORM SEWER AT ALL LOCATIONS PRIOR TO START CONSTRUCTION TO VERIFY EXACT LOCATION AND INVERT OF EXISTING SEWER. ANY DISCREPANCIES SHALL BE REPORTED TO ENGINEER TO ALLOW DESIGN MODIFICATIONS AS REQUIRED. EXISTING SANITARY SEWER AND WATER MAIN CROSSINGS HAVE BEEN SHOWN I PROFILE ALONG THE STORM SEWER BASED ON BEST AVAILABLE RECORDS. ELECTRIC, TELEPHONE, GAS, STREET LIGHTING, WATER AND SANITARY SERVICES ARE SHOWN IN PLAN PROFILE VIEW BASED ON BEST AVAILABLE RECORDS. CONTRACTOR SHALL LOCATE SERVIC THE FIELD AND CROSSING OF THESE SERVICES ARE INCIDENTAL TO UNIT BID PRICE FOR ST SEWER.
- 4. ALL STORM SEWER ELEVATIONS ON PLANS ARE INVERT ELEVATIONS.
- 5. CONSTRUCT ALL SEWER IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWE AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION- INCLUDING ADDENDUMS.
- 6. ALL RIM ELEVATIONS ARE APPROXIMATE, AND SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
- 7. BYPASS PUMPING SHALL BE INCIDENTAL TO STORM SEWER CONSTRUCTION.
- CONTRACTOR SHALL ABANDON ALL STORM SEWER IN LINE WITH PROPOSED SEWER BY REMOVING ALL EXISTING PIPE AND MANHOLES. ABANDONMENT IS INCIDENTAL TO PROPOSE SEWER INSTALLATION.
- 9. CONTRACTOR SHALL RECONNECT ALL EXISTING LIVE STORM SEWER LINES OR LATERALS T PROPOSED STORM SEWER SYSTEM.
- 10. ALL UTILITY INSTALLATIONS SHALL HAVE MECHANICALLY CRUSHED CONCRETE BACKFILL CONSOLIDATED BY MECHANICAL COMPACTION, UNLESS INDICATED OTHERWISE ON THE PL.

DESCRIPTION	DATE	MAUWATOSA WAUWATOSA ENGINEERING SERVICES	GENERAL NOTES 2025 ALLEY RECONSTRUCTION	CONTRACT: 25-11 FILE NO: 15-1092 DRAWN BY: MJA CHECKED BY: MJA SCALE: AS SHOWN
DESCRIPTION	DATE			CONTRACT: 25-11
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EXISTING TYPICAL SECTION STA 00+00 TO 1+80



CITY OF DESCRIPTION		SERVICES
• CEO		
ICAL SECTIONS	W. BLUE MOUNI	TO: N. 109TH ST
EXISTING TYP	W. HARVARD LN &	FROM: N. 111TH ST
25-11 15-1092 VR_F	MJA AS SHOWN)2
CONTRACT: FILE NO: DRAWN RV:	CHECKED BY: SCALE:	DC

NOTE: TRANSITION FROM 10' TO 5' FLOW LINE IS BETWEEN STA 1+80 AND 2+50



		_	_	_		_	_
DESCRIPTION							
DATE							
					SERVICES		
	ICAL SECTIONS			V. BLUE MUUNU RU	TO:	N. 109TH ST	
	PROPOSED TYP			W. HAKVAKU LN & V	FROM:	N. 111TH ST	
25-11	15-1092	VB-F L	MJA	AS SHOWN		5	
CONTRACT:	FILE NO:	DRAWN BY:	CHECKED BY:	SCALE:			



HARVARD ALLEY STA 6+00 TO 7+00

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	CONTRACT:	FILE NO:	DRAWN BY:	CHECKED BY:	SCALE:			הר	







NOTES:

1. FLARE WIDTH SHALL BE EITHER 4' OR EQUAL TO 1/2 THE EXTENT OF THE TERRACE (ROUNDED TO THE NEAREST FOOT), WHICHEVER IS LESS.

2. WHERE POSSIBLE, DRIVE APPROACHES SHALL BE CONSTRUCTED SO THAT 8" OF WATER DEPTH IN THE GUTTER FLOWLINE CANNOT LEAVE THE CITY PUBLIC RIGHT-OF-WAY. EXCEPTIONS MUST BE APPROVED IN WRITING BY THE ENGINEERING SERVICES.

3. SIDEWALK SECTION IS OPTIONAL WHERE NO PUBLIC SIDEWALK EXISTS. IF THE OPTIONAL SIDEWALK SECTION IS OMITTED THEN A STRAIGHT GRADE MAY BE BUILT FROM BACK OF CURB TO 15' BACK OF CURB FACE OR TO THE RIGHT-OF-WAY (PROPERTY) LINE, WHICHEVER IS LESS; SLOPE SHALL BE 12:1 OR LESS.

CITY OF WAUWATOSA DRIVE APPROACH DETAIL

DESCRIPTION ISSUED FOR BIDDING	
DATE 2/11/2021	
CITY OF NAUWATOSA ENGINEERING SERVICES DIVISION	
CONSTRUCTION DETAILS	
25-11 25-11 VB-F NOT TO SCALE DO6	
CONTRACT: FILE NO: DRAWN BY: CHECKED BY: SCALE:	









PLOT BY : VALERIA BREIMON-FLORES



3/7/2025 9:50 AM PLOT BY :





CONTRACT DOCUMENTS

2025 ALLEY RECONSTRUCTION

IN THE CITY OF WAUWATOSA, WISCONSIN

CONTRACT 25-11

PROJECT 1025 QuestCDN No. 9427286



March 12, 2025

Construction & Inspection Coordination:

Nicholas Deming, PE Construction Manager (414) 507-7153 ndeming@wauwatosa.net Alley Plans Prepared By:

Maggie Anderson, PE Senior Civil Engineer 414-479-3444 <u>manderson@wauwatosa.net</u>

CONTRACT DOCUMENTS

FOR

2025 ALLEY RECONSTRUCTION

IN THE CITY OF WAUWATOSA, WISCONSIN

CONTRACT 25-11

PROJECT 1025 QuestCDN No. 9427286

The plans and specifications for this project were prepared by the Engineering Services Division.

Date March 12, 2025

Boris Veleusic City Engineer

The plans, specifications, form of contracts and other documents contained in and constituting the contract documents for this project were approved by the Board of Public Works of the City of Wauwatosa, at a meeting held March 12, 2025

Steven A. Braatz Jr., City Clerk Wauwatosa, Wisconsin

TABLE OF CONTENTS

- 100 Official Notice to Contractors
- 200 Instruction to Bidders
- 300 Proposal
- 400 Federal Funding and Minimum Wage Scales Requirements
- 500 Standard General Conditions of the Construction Contract
- 501 Supplementary Conditions
- 600 Special Provisions
- 601 Measurement and Payment
- 605 General Provisions for Construction
- 610 General Provisions for Sewer Construction
- 620 Removals, Earthwork, and Grading
- 621 Concrete Construction
- 670 General Provisions for Street Lighting and Electrical Systems
- 700 Contract
- 800 <u>Bonds</u>

Appendix or Appendices

SECTION 100 - OFFICIAL NOTICE

OFFICIAL NOTICE TO CONTRACTORS ADVERTISEMENT FOR BIDS

The City of Wauwatosa will receive proposals for alley reconstruction until 11:01 A.M. Local Time, April 09, 2025 at which time all bids will be publicly opened and read virtually via use of the Zoom platform. Access at zoom.us, Meeting ID 858 4894 1097.

CONTRACT 25-11 2025 ALLEY RECONSTRUCTION

Under this proposal, the Contractor shall furnish all labor, materials, supplies, equipment, tools and other services necessary for installation of concrete alley replacement, storm sewer installation, sanitary manhole rehabilitation, topsoil and sod restoration, and work incidental thereto in portions of:

From: N. 109th Street To: N. 111th Street

all in accordance with contract documents.

Interested parties may view and obtain digital copies of the contract documents, including plans and specifications, from Quest Construction Data Network. Access the QuestCDN website at www.questcdn.com. Input QuestCDN eBidDoc No. 9427286 on the website's Project Search page. No password is required. Contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in downloading and working with the digital documents.

There is a nonrefundable charge of \$25.00 for the plans and contract documents. Plans are also available for viewing only at the Engineering office at City Hall, 7725 W. North Avenue, Wauwatosa, Wisconsin. Plans will be available on March 19, 2025.

The City will accept only online electronic bids through QuestCDN. To access the electronic bid form, download the project documents and click the online bidding button at the top of the advertisement.

All proposals must be submitted in electronic format together with a bid bond equal to five (5) percent of the bid payable to the City of Wauwatosa, Wisconsin, as a guarantee that if his bid is accepted, the successful bidder will execute and file the proper contract and bonds within ten (10) days after notification of award of the contract.

Failure on the part of the successful bidder to execute his contract and *performance* and *labor & material payment* bonds within ten (10) days from the date of notice of the award of contract will be considered as just cause for the annulment of the award and the forfeiture of the proposal guarantee to the City not as a penalty but in payment to the City as liquidated damages as a result of such failure.

No bid shall be withdrawn after the opening of bids for a period of sixty (60) days after the scheduled time of closing of bids.

The letting of the work described herein is subject to the provisions of Section 66.09, Wisconsin Statutes, requiring the bidder to furnish proof of responsibility. Bidder prequalification is required on forms furnished by the City of Wauwatosa and submitted to the City Engineer. Prequalification forms that are submitted after 5 days preceding the contract letting date may be cause for the rejecting of bids.

TIME OF SUBSTANTIAL COMPLETION

The substantial completion date for Contract <u>25-11 2025 ALLEY RECONSTRUCTION</u> shall be October 24, 2025. See Section 600 for additional completion requirements.

There will be no other extension of time and no extenuating circumstances, except perhaps an industry strike, or the inability of the City to receive plan and specification approval.

If the contractor does not complete the work on or before the date set forth above for <u>CONTRACT 25-11 2025 ALLEY RECONSTRUCTION</u> or within the extra time allowed under a City Engineer granted time extension, the City will assess liquidated damages. The City will deduct nine hudred forty five dollars (\$945.00) every calendar day that the work remains uncompleted from payments due the contractor.

The Contractor will also be charged for each and every day inspection is required after the time of completion has expired. This charge will be based on the actual costs of inspection, construction supervision, clerical and administrative costs, traffic control and overhead charges.

A required "Affidavit of Compliance" is included in Section 300 and must be submitted with the bid.

The right to reject or accept any or all bids and the right to waive any informality in bidding is reserved to the City of Wauwatosa, Wisconsin.

Dated at Wauwatosa, Wisconsin March 12, 2025

Steven A. Braatz Jr., City Clerk

City of Wauwatosa, Wisconsin

SECTION 200 – INSTRUCTIONS TO BIDDERS

200.01 - DESCRIPTION OF WORK

The work on this contract consists of the following:

CONTRACT 25-11 2025 ALLEY RECONSTRUCTION

Under this proposal, the Contractor shall furnish all labor, materials, supplies, equipment, tools and other services necessary for installation of concrete alley replacement, storm sewer installation, sanitary manhole rehabilitation, topsoil and sod restoration, and work incidental thereto. The contractor will perform this work at various locations in areas within the City of Wauwatosa, all in accordance with contract documents.

200.02 - <u>RETURN OF PROPOSAL GUARANTY</u>

The bid deposit(s) of all depositors will be returned after the bids have been accepted by the Common Council and the vouchers for the return of the deposit(s) approved by the Common Council.

200.03 - TIME OF SUBSTANTIAL COMPLETION

The substantial completion date for Contract <u>25-11 2025 ALLEY RECONSTRUCTION</u> shall be October 24, 2025, See Section 600 for additional completion requirements.

If the contractor does not complete the work on or before the date set forth above for <u>CONTRACT 25-11 2025 ALLEY RECONSTRUCTION</u> or within the extra time allowed under a City Engineer granted time extension, the City will assess liquidated damages. The City will deduct nine hudred forty five dollars (\$945.00) for every calendar day that the work remains uncompleted from payments due the contractor.

200.04 - BOND REQUIREMENTS

In addition to the standard full penalty for nonperformance of Contract, the Contractor's attention is directed to Section 504.16 that requires a second performance bond guaranteeing labor and material payments.

200.05 - EXAMINATION OF SITE AND CONTRACT DOCUMENTS

The bidder is required to examine carefully the site of the work, the proposal, plans specifications, general conditions, official notice to contractors, contract and bond, all as herein contained and known as the contract documents for the work contemplated; it will be assumed that the bidder has investigated and is satisfied as to the requirements of the contract documents. It is mutually agreed that the submission of a proposal shall be considered as conclusive evidence that the bidder has made such examination and is satisfied as to all the conditions and contingencies.

No pleas of ignorance of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work under this Contract, as a result of failure to make the necessary examinations and investigations

will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill, in every detail, all of the requirements of the contract documents, or will be accepted as a basis for any claims whatsoever for extra compensation or for an extension of time.

200.06 - INTERPRETATION OF CONTRACT DOCUMENTS AND ADDENDA Should any question arise concerning the true meaning of any part of the contract documents, the bidder may submit to the City Engineer a written request for an interpretation thereof. The interpretation of the question so requested will be made as an addendum and either mailed or delivered to all bidders who receive contract documents.

<u>Addenda:</u> Bidders shall acknowledge receipt and incorporation of all addenda at the appropriate location provided in the proposal. Any addenda issued during the time of bidding shall be included with the bid, and in closing a contract they will become a part thereof.

200.07 - PREPARATION OF PROPOSALS

The bidder can ONLY submit his proposal through the QuestCDN electronic bidding format. A nominal fee will be charged to the Bidder for an electronic submission of a proposal through QuestCDN.

Wisconsin Statute 77.54(9m) allows a sales and use tax exemption for certain building materials sold to construction contractors for incorporation into public works projects. To claim the exemption, contractors must prepare Wisconsin Form S-211, Sales and Use Tax Exemption Certificate and provide the form to their supplier in compliance with WI 77.54(9m) when purchasing supplies covered by this statute. All other materials, supplies, and equipment purchased by a contractor, sub contractor, or builder for the construction of the work specified under this contract is subject to all applicable sales tax. Proposals are to include all applicable sales tax.

200.08 - REQUIREMENTS FOR SIGNING BIDS

- a) Bids, which are not signed by individuals making them, shall have attached thereto a power of attorney evidencing authority to sign the bid in the name of the person for whom it is signed.
- b) Bids, which are signed for a partnership, shall be signed by all of the partners or by an attorney-in-fact. If signed by an attorney-in-fact there shall be attached to the bid a power-of-attorney evidencing authority to sign the bid, executed by the partners.
- c) Bids, which are signed for a corporation, shall have the corporate name thereof and the signature of the President or other authorized officers of the Corporation, manually written below the corporate name following the word "By _____."

200.09 - INTERPRETATION OF ESTIMATES

The estimated quantities of the work, which are the results of calculations as accurate as possible in advance, shall be used as a basis for determining the lowest bidder. After the contract is awarded, the quantity of work listed under any item, or all items, may be increased or decreased a reasonable amount at the discretion of the City Engineer without in any way invalidating the bid price. The quantities on which payment will be made to the contractor will be determined by the City Engineer who shall measure the work actually performed by the contractor as specified in the contract.

Bidders must determine for themselves the quantities of work that will be required, by such means as they may prefer, and shall assume all risks as to variations in the quantities of the different classes of work actually performed under the contract. Bidders shall not at any time after the submission of their proposal dispute or complain of the aforesaid schedule of quantities or assert that there was any misunderstanding in regard to the amount or character of the work to be done, and shall not make any claim for damages or loss of profits because of a difference between the quantities of work assumed for comparison of bids and the quantities of work actually performed.

200.10 - WHEN AWARD EFFECTUAL

The contract shall be deemed as having been awarded when formal notice of award shall have been duly served upon the intended awardee (i.e., the bidder to whom the City contemplates awarding the contract) by some officer or agent of the City duly authorized to give such notice.

200.11 - REQUIRED NUMBER OF EXECUTED CONTRACTS

The successful bidder will be required, after the award of the contract, to furnish four (4) counterparts of the contract and bond, no later than 10 days after notification of the award of the contract.

200.12 - WITHDRAWAL OF BIDS

Any bidder may withdraw his bid at any time prior to the scheduled time for the receipt of bids.

200.13 - DELIVERY OF PROPOSALS

The bidder can ONLY submit his proposal through the QuestCDN electronic bidding format. A nominal fee will be charged to the Bidder for an electronic submission of a proposal through QuestCDN.

Please note that returning the entire Project Manual is not required; the relevant contract forms, proposals, etc. shall be considered sufficiently complete when submitted through the QuestCDN on-line bidding process.

200.14 - REJECTION OF PROPOSALS

Proposals may be rejected, if they show any alterations of form, additions not called for, conditional or alternate bids unless called for, incomplete bids, or irregularities of any kind. Proposals in which the unit prices are obviously unbalanced may be rejected.

200.15 - PROPOSAL GUARANTY

No proposal will be considered unless the bid is accompanied by either of the following proposal guarantees:

a) <u>Bid Bond</u> The bidder may accompany his proposal with a bid bond equal to at least five percent (5%) but not more than ten percent (10%) of his bid, made payable to the City of Wauwatosa, Wisconsin, as a guarantee that if his bid is accepted he will execute and file the proper contract and bond within ten (10) days after notification of the award of the contract.

b) <u>Certified Check</u> The bidder may accompany his proposal with a certified check for at least five percent (5%) of the total amount of his bid, made payable to the City of Wauwatosa, Wisconsin, as a guaranty that if his bid is accepted he will execute and file the proper contract and bond within ten (10) days after notification of the award of the contract.

Failure on the part of the successful bidder to execute his contract and performance bond within ten (10) days from the date of notice of the award of contract will be considered as just cause for the annulment of the award and the forfeiture of the proposal guarantee to the City not as a penalty but in payment to the City as liquidated damages as a result of such failure.

200.16 - CONSIDERATION OF PROPOSALS

The City reserves the right to reject any or all proposals, to waive technicalities, and to advertise for new proposals, or to proceed to do the work otherwise.

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, together with samples, which may be subjected to tests provided for in these specifications to determine their quality and fitness for the work.

200.17 – <u>PAYMENT</u>

Payment shall be per Section 500 as supplemented by Section 501.

The City will not accept or respond to payment application requests from subcontractors.

No interest will be paid by the Owner for any delay in making any payment unless the Contractor makes written demand of the Owner for payment of interest for any such delay. In no event, however, will any interest be payable for the 10 day period following the 15th of the calendar month. Interest will be payable at the rate of 5% annually and Wisconsin Statutes Section 66.01335 does not apply.

200.18 - RESPONSIBILITY OF THE CONTRACTOR

The Contractor, under this contract, shall protect the City against any damage to the equipment and material being used or installed. Any damage occurring because of

failure on the part of the equipment, employees, or supervisors, shall be repaired or replaced by the contractor without cost to the City.

200.19 - PREQUALIFICATIONS OF BIDDERS

All bidders are to furnish proof of responsibility by completing the prequalification form furnished by the City of Wauwatosa. This form is to be obtained from the City Engineer's office and is to be returned to the City Engineer's office in the City Hall of Wauwatosa, Wisconsin, not less than five (5) days prior to the time set for opening of bids as stated in the Official Notice.

200.20 - SUBSTANCE ABUSE PREVENTION PROGRAM

By signing this Bid, the Bidder certifies to the City of Wauwatosa that it has, or will have prior to Contract award, a substance abuse prevention program which complies with State of Wisconsin Act 181 (Chapter 103.503 of the State Statutes) and the substance abuse prevention program requirements in section 501 of these documents. The program must cover all union and non-union employees who work on the Owner's construction sites. Failure to implement such a program prior to award shall result in the Bidder being held to be non-responsible. Following award of the Contract if the Contractor breaches the District Policy by failing to have or to effectively implement the policy, the Owner shall consider this a breach of the Contract by the Contractor and may terminate the Contract. This requirement shall be applicable to all subcontractors with subcontracts in excess of one percent (1%) of the bid.

200.21 - ELECTRONIC SIGNATURES

By signing this Bid, the Bidder agrees to execute this contract using Digital ("electronic") signatures (e-signature) rather than physical signatures. The parties agree that to the extent they sign electronically, their electronic signature is the legally binding equivalent to their handwritten signature. Failure to execute this contract with an electronic signature shall result in the Bidder being disqualified.

The bidder further agrees to execute any other documents associated with this contract requiring signature with their electronically rather than physically, if so required by the City.

SECTION 300 - PROPOSAL

CONTRACT 25-11 2025 ALLEY RECONSTRUCTION

Bids to be received until 11:01 A.M. Local Time, April 9, 2025.

TO: CITY OF WAUWATOSA WAUWATOSA, WISCONSIN

The undersigned, having familiarized oneself with the local conditions affecting the work and with the contract documents including advertisement for bids, instruction to bidders, general conditions, the form of proposal, the form of contract, form of bond, plan, specifications on file in the office of the City Clerk of the City of Wauwatosa, Wisconsin, hereby proposes to perform everything required to be performed and to provide and furnish all labor, materials, supplies, equipment, tools and other services necessary for installation of concrete alley replacement, storm sewer installation, sanitary manhole rehabilitation, topsoil and sod restoration, and work incidental thereto all in accordance with the plans and specifications as prepared by the City of Wauwatosa Engineering Services Division, Wauwatosa, Wisconsin, including all addenda issued hereto for the prices as listed below.

Addenda: The bidder hereby acknowledges that they have received Addenda Nos.

___, ___, (Bidder shall insert No. of each addendum received) and agrees that all addenda are hereby made part of the Contract Documents, and Bidder further agrees that their bid(s) includes all impact resulting from said addenda.

Contract 25-11

DIVISION A - SANITARY SEWER

NO.	ITEM CODE	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
A1	A5-04	REPLACE FRAME AND COVER, EX SAN MH'S, CITY SUPPLIED	3	EA		

TOTAL FOR DIVISION A - SANITARY SEWER (ITEMS A1)

DIVISION C - STORM SEWER

NO.	ITEM CODE	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
C1	C1-49	15" CLASS IV REINFORCED CONCRETE STORM SEWER	13	LF		
C2	C3-62	48" DIA. CATCH BASIN W/ 2' SUMP	1	EA		
C3	C4-02	CONNECT TO EX STORM STRUCTURE (NEW CONNECTION)	1	EA		
C4	C5-13	REPLACE FRAME AND COVER, EX STORM MH'S, CITY SUPPLIED	1	EA		
C5		REMOVE EXISTING STORM SEWER STRUCTURE	1	EA		

TOTAL FOR DIVISION C - STORM SEWER (ITEMS C1-C5)

DIVISION D - PAVING

NO.	ITEM CODE	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
D1	D1-02	COMMON EXCAVATION	1	LS		
D2	D1-07	EXCAVATION BELOW SUBGRADE	158	CY		
D3	D1-15	REMOVING CONCRETE PAVEMENT	1,576	SY		
D4	D2-11	CONCRETE CURB & GUTTER REMOVE AND REPLACE	45	LF		
D5	D1-04	BASE AGGREGATE DENSE 1 1/4"	143	TON		
D6	D3-07	7" CONCRETE SIDEWALK AND DRIVEWAY	1,984	SF		
D7	D4-01	7" CONCRETE PAVEMENT	1,355	SY		
D9	D5-02	TOPSOIL AND SOD	1,804	SF		
D10	D5-03	TOPSOIL, SEED, AND MULCH	260	SF		
D11	D5-76	INLET PROTECTION	7	EA		
D12	D6-01	TRAFFIC CONTROL	1	LPSM		
D13	D7-03	ADJUSTING STORM MANHOLE	1	EA		
D14	D7-04	ADJUSTING SANITARY MANHOLE	3	EA		
D15		REMOVAL AND DISPOSAL OF EXISTING GUARD RAIL	70	LF		

TOTAL FOR DIVISION D - ROADWAY (ITEMS D1-D15)

DIVISION E - STREET LIGHTING AND COMMUNICATIONS

NO.	ITEM CODE	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
E1	E1-01	LOCATE, TEST AND PROTECT EXISTING AND NEW CIRCUITS	1	LS		
E2	E1-42	2" DIAMETER SCHEDULE 80 PVC CONDUIT	36	LF		

TOTAL FOR DIVISION E - ELECTRICAL (ITEMS E1-E2)

TOTAL FOR ALL DIVISIONS A THROUGH F - (ITEMS A1 - E2)

PRIME CONTRACTOR

With submission of this proposal, the prime contractor hereby certifies that they are performing a minimum of 1/3 of the value of work within this proposal. The total value of work being performed by the prime contractor is ______ dollars and _____ cents.

SUBCONTRACTOR LIST

The following Subcontractors will be utilized for portions of the Project Work (only list those > \$25,000). Changes shall not be made subsequent to the Bid unless the change(s) is approved by the City. The contractor is required to complete and submit this list with the bid.

Subcontractor	Classification of Work	Estimated Dollar Amount

AFFIDAVIT OF COMPLIANCE WITH THE STATE OF WISCONSIN ACT 181 (CHAPTER 103.503 OF THE STATE STATUTES) CONTROLLED SUBSTANCE PREVENTION PROGRAM

State of		Pr	oject Name	
		County	Contract No.	. 25-11
I,		-		, being duly sworn, state that:
1.	I am the		_of	, a
	Corporation, pa	rtnership, o	r individual of	(City, Village, (State)
	and make this at	ffidavit pursi	uant to the req	uirements of State of Wisconsin Act 181.
2.	l have entered total cost (incluc exceed \$48,00	into the City ling labor, e 00 if a single	v of Wauwatos quipment and e-trade project	and the materials) of completing the contract will a or \$200,000 if a multiple trade project.
3.	3. The corporation, partnership or individual I represent has in place a Controlled Substance Prevention Program that is consistent with and meets the requirements of the State of Wisconsin Act 181.			
4.	l have confirm have in place a and me	ed that the Controlled eets the req	subcontractor Substance Pro uirements of t	s I plan to employ on this contract also evention Program that is consistent with the State of Wisconsin Act 181.
	Title	Officer N	<u>lame</u>	Address
Р	resident			
Vice	e President			
S	ecretary			
Т	reasurer			
Sub	scribed and swor	n to before	me this	
Day	of		, 20	
	(Nota	ry Signature	e)	
				(Contractor Signature)
Nota	ary Public, State	of		
My (Commission expi	res:		

Page 300 - 4

2. Accompany	ing this proposal is a	
in the sum of		(Bond-Certified Check) Dollars
\$	as required by the Adver	tisement for Bids.
3. This bid is b	ased on the following subcont	ractors:
Name	Address	Class of Work
4. I hereby cer	tify that all statements herein a	re made on behalf of
	(Name of Corporation, partner	ship or person submitting bid)
a corporation organize	ed and existing under the laws	of the State of
	; a partnership consisting	of an individual trading as
	of the City of	
State of		
that I have examined checked the same in statements and subm correct.	and carefully prepared this pro detail before submitting this it this proposal in (its) (their) t	pposal from the plans and specifications and have proposal; that I have full authority to make such pehalf, and that the said statements are true and
	Signature	
		(Title if any)
		(nue, n'any)
Sworn and subscribed	before me this	
day of	, 20	
	(Notary of	or other officer authorized to administer oaths).
My Commission expir	es	

(Bidders should not add any conditions or qualifying statements to this proposal, as otherwise the proposal may be declared irregular as being not responsive to the advertisement. <u>Do not remove</u> <u>Proposal Form from Contract Documents</u>

SCHEDULE OF FIXED EXTRAS (Apply only if there is no Bid Item for the same work or the work is specified as being included with another item)

CONSTRUCTION:

1.	Water Service alteration or relay 1 ¼" and smaller in diameter	\$175.00/Lin. Ft.
2.	Water Service alteration or relay 1 $\frac{1}{2}$ " to 2" in diameter	\$200.00/Lin. Ft.
3.	Remove & Replace Curb Stop	\$1,500.00 Each
4.	Water Service alteration larger than 2"	To be negotiated
5.	Adjust Manhole Frames	\$ 500.00 Each
6.	Adjust Catch Basin/Inlet Frames	\$ 500.00 Each
7.	Adjust Water Boxes	\$250.00 Each
8.	Internal Manhole Seal Removal and/or Installation	\$ 325.00 Each
9.	4" Underdrain Pipe (Complete)	\$ 15.00/Lin. Ft.
10.	Sawing concrete pavement	\$200.00 plus \$ 3.00/L.F. for each foot over 50 feet
11.	Sawing asphalt pavement	\$200.00 plus \$ 2.00/L.F. for each foot over 50 feet
12.	Sawing asphalt over concrete pavement.	\$200.00 plus \$ 3.50/L.F. for each foot over 50 feet
13.	Relay house sewers and drains (includes reconnect)	\$250.00/Lin. Ft.
14.	Reconnect house sewers and drains	\$450.00 Each
15.	Steel sheeting and bracing left in place	To be negotiated
16.	Close wood sheeting and bracing left in place	To be negotiated
17.	Spot wood sheeting and bracing left in place	To be negotiated
18.	Concrete Cradle	\$ 175.00/Cu. Yd.
19.	Concrete Cap	\$ 150.00/Cu. Yd.
20.	Borrow Excavation	\$ 20.00/Cu. Yd.

Page 300 - 6

21.	Rock excavation by hand	\$ 330.00/Cu. Yd.
22.	Rock excavation by mechanical means	\$ 250.00/Cu. Yd.
23.	Buried concrete removal (including concrete encasement)	\$ 150.00/Cu. Yd.
24.	Concrete pole base removal & disposal	\$ 100.00 Each
25.	Base aggregate dense, 1-1/4 inch, tons in place including disposal of excess excavated materials.	\$ 18.00/Ton
26.	Excavated material used for backfill in lieu of gravel backfill – credit.	\$ 10.00/Cu. Yd.
27.	Aggregate slurry used for backfill in lieu of granular or crushed concrete backfill or vice versa	\$110.00/C.Y. under 5.0 C.Y. \$75.00/C.Y. over 5.0 C.Y.
28.	No. 2 stone for ditch bottom stabilization including disposal of excess excavated material	\$ 24.20/Ton
29.	Crushed limestone No. 1 or smaller, tons in place	\$15.00/Ton
30.	Utility structure masonry repairs	\$ 85.00/Vrt. In. or
		\$1020/Vrt. Ft.
REST	ORATION: (Prices Include Removal and Disposal)	\$1020/Vrt. Ft.
REST 1.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement.	\$1020/Vrt. Ft. \$ 70.00/Sq. Yd.
REST 1. 2.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement. 8" concrete base course.	\$1020/Vrt. Ft. \$ 70.00/Sq. Yd. \$ 55.00/Sq. Yd.
REST 1. 2. 3.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement. 8" concrete base course. 5" concrete sidewalk	\$1020/Vrt. Ft. \$ 70.00/Sq. Yd. \$ 55.00/Sq. Yd. \$8.00/Sq. Ft.
REST 1. 2. 3. 4.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement. 8" concrete base course. 5" concrete sidewalk 7" concrete drive	\$1020/Vrt. Ft. \$ 70.00/Sq. Yd. \$ 55.00/Sq. Yd. \$8.00/Sq. Ft. \$ 9.00/Sq. Ft.
REST 1. 2. 3. 4. 5.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement. 8" concrete base course. 5" concrete sidewalk 7" concrete drive Detectible Warning Fields	\$1020/Vrt. Ft. \$ 70.00/Sq. Yd. \$ 55.00/Sq. Yd. \$8.00/Sq. Ft. \$ 9.00/Sq. Ft. \$40.00/Sq. Ft.
REST 1. 2. 3. 4. 5. 6.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement. 8" concrete base course. 5" concrete sidewalk 7" concrete drive Detectible Warning Fields High strength early setting concrete/"9 bag"	\$1020/Vrt. Ft. \$ 70.00/Sq. Yd. \$ 55.00/Sq. Yd. \$ 8.00/Sq. Ft. \$ 9.00/Sq. Ft. \$40.00/Sq. Ft. 125% of bid price for the relevant pavement type
REST 1. 2. 3. 4. 5. 6. 7.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement. 8" concrete base course. 5" concrete sidewalk 7" concrete drive Detectible Warning Fields High strength early setting concrete/"9 bag" Vertical face concrete curb and gutter	\$1020/Vrt. Ft. \$70.00/Sq. Yd. \$55.00/Sq. Yd. \$8.00/Sq. Ft. \$9.00/Sq. Ft. \$40.00/Sq. Ft. 125% of bid price for the relevant pavement type \$ 42.00/Lin. Ft.
REST 1. 2. 3. 4. 5. 6. 7. 8.	ORATION: (Prices Include Removal and Disposal) 8" concrete pavement. 8" concrete base course. 5" concrete sidewalk 7" concrete drive Detectible Warning Fields High strength early setting concrete/"9 bag" Vertical face concrete curb and gutter Mountable concrete curb and gutter	 \$1020/Vrt. Ft. \$70.00/Sq. Yd. \$55.00/Sq. Yd. \$55.00/Sq. Yd. \$8.00/Sq. Ft. \$9.00/Sq. Ft. \$40.00/Sq. Ft. \$40.00/Sq. Ft. \$42.00/Lin. Ft. \$43.00/Lin. Ft.

9.	Concrete Steps	\$ 75.00/Lin. Ft.
10.	Pavement Milling (Asphalt)	\$ 4.00/Sq. Ft.
11.	Pavement Milling (Concrete)	\$ 6.00/Sq. Ft.
12.	Tack Coat	\$ 5.00/Gal.
13.	Asphalt pavement Less than 30 tons in place Greater than 30 tons in place	\$ 90.00/Ton \$ 80.00/Ton
14.	Temporary bituminous cold patch or temporary HMA	\$ 120.00/Ton
15.	Topsoil & Sodding	\$ 1.50/Sq. Ft.
16.	Topsoil, Seeding & Mulching	\$ 0.90/Sq. Ft.
17.	Topsoil, spread	\$ 30.00/Cu. Yd.
18.	Concrete pavement dowel bars.	\$ 9.50 Each
19.	Concrete pavement tie bars.	\$ 7.00 Each

EROSION CONTROLS - ALL ITEMS TO INCLUDE MAINTENANCE: (incidental in this contract)

1.	Silt fence erection and maintenance.	\$ 4.00/Lin. Ft.
2.	Hay Bales.	\$ 7.00 Each
3.	Ditch protection	\$ 6.50/Lin. Ft.
4.	Catch basin and inlet screens.	\$ 50.00 Each
5.	Catch basin and inlet baskets.	\$ 150.00 Each
6.	Tracking Pad Stone	\$ 25.00/Ton

SCHEDULE OF FIXED EXTRAS (CONTINUED)

REPAIR OF WATER MAIN BREAKS DURING CONSTRUCTION

Contractor shall repair all main breaks on existing mains that occur during normal working hours. The Water Works will normally operate the valves for the shutoff. In emergency situations, the contractor may operate the valves with proper notification and authorization.

Where repairs are made on mains that will be abandoned, the Contractor shall furnish all repair material. The Contractor shall have a minimum of 2 repair clamps, 2 dual purpose sleeves, and 1 length of ductile iron, cast iron or PVC pipe of the existing pipe size on the job before the job starts and at all times thereafter. This repair material need not conform to the standard specifications.

When repairs are required on mains that will remain in service, the contractor shall also furnish all repair materials. The contractor shall have a minimum of 2 repair clamps, 2 dual purpose sleeves, and 1 length of ductile iron, pipe Special Class 54 and of the same size as the existing pipe on the job before the job starts and at all times thereafter. This repair material shall conform to the standard and Wauwatosa's specifications. Where, in unusual circumstances, the City furnishes materials, the cost of such material will be deducted from the amount due the contractor.

All breaks occurring as a result of the negligence of the contractor, whether from actual construction or faulty operation of hydrants and valves, shall be repaired at their own expense. Where the break occurs while exercising normal care, the Contractor will be compensated for the repair of each break as follows:

a. Where the break can be repaired without replacing pipe and no excavation is required, the Contractor will be paid \$1,300.00.

b. Where the break can be repaired without replacing pipe, and the Contractor must excavate, the Contractor will be paid \$1,900.00.

c. Where a piece of pipe must be removed and replaced, including any excavation required to complete the repair, the Contractor will be paid \$2,500.00.

The Contractor, at their own expense, shall repair water services or branches damaged, as a result of the construction.

SECTION 400 – FEDERAL FUNDING REQUIREMENTS AND MINIMUM WAGE SCALE

Additional requirements due to Federal Funding are not applicable to this contract.

Minimum wage scale intentionally omitted pursuant to 2015 Wisconsin Act 55, effective January 1, 2017.
SECTION 500 - STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page			
Article 1—Definitions and Terminology1				
1.01	Defined Terms1			
1.02	Terminology6			
Article 2	- Preliminary Matters			
2.01	Delivery of Performance and Payment Bonds; Evidence of Insurance7			
2.02	Copies of Documents			
2.03	Before Starting Construction7			
2.04	Preconstruction Conference; Designation of Authorized Representatives			
2.05	Acceptance of Schedules8			
2.06	Electronic Transmittals8			
Article 3	-Contract Documents: Intent, Requirements, Reuse9			
3.01	Intent9			
3.02	Reference Standards9			
3.03	Reporting and Resolving Discrepancies10			
3.04	Requirements of the Contract Documents			
3.05	Reuse of Documents			
Article 4	—Commencement and Progress of the Work11			
4.01	Commencement of Contract Times; Notice to Proceed11			
4.02	Starting the Work11			
4.03	Reference Points			
4.04	Progress Schedule			
4.05	Delays in Contractor's Progress12			
Article 5	-Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions			
5.01	Availability of Lands			
5.02	Use of Site and Other Areas14			
5.03	Subsurface and Physical Conditions15			
5.04	Differing Subsurface or Physical Conditions16			

5.05	Underground Facilities	17
5.06	Hazardous Environmental Conditions at Site	19
Article 6-	-Bonds and Insurance	21
6.01	Performance, Payment, and Other Bonds	21
6.02	Insurance—General Provisions	22
6.03	Contractor's Insurance	24
6.04	Builder's Risk and Other Property Insurance	25
6.05	Property Losses; Subrogation	25
6.06	Receipt and Application of Property Insurance Proceeds	27
Article 7-	-Contractor's Responsibilities	27
7.01	Contractor's Means and Methods of Construction	27
7.02	Supervision and Superintendence	27
7.03	Labor; Working Hours	27
7.04	Services, Materials, and Equipment	
7.05	"Or Equals"	28
7.06	Substitutes	29
7.07	Concerning Subcontractors and Suppliers	
7.08	Patent Fees and Royalties	
7.09	Permits	
7.10	Taxes	
7.11	Laws and Regulations	
7.12	Record Documents	
7.13	Safety and Protection	
7.14	Hazard Communication Programs	35
7.15	Emergencies	35
7.16	Submittals	35
7.17	Contractor's General Warranty and Guarantee	
7.18	Indemnification	
7.19	Delegation of Professional Design Services	
Article 8-	—Other Work at the Site	40
8.01	Other Work	40
8.02	Coordination	41
8.03	Legal Relationships	41

Article 9	-Owner's Responsibilities	42
9.01	Communications to Contractor	42
9.02	Replacement of Engineer	42
9.03	Furnish Data	42
9.04	Pay When Due	42
9.05	Lands and Easements; Reports, Tests, and Drawings	43
9.06	Insurance	43
9.07	Change Orders	43
9.08	Inspections, Tests, and Approvals	43
9.09	Limitations on Owner's Responsibilities	43
9.10	Undisclosed Hazardous Environmental Condition	43
9.11	Evidence of Financial Arrangements	43
9.12	Safety Programs	43
Article 10	0—Engineer's Status During Construction	44
10.01	Owner's Representative	44
10.02	Visits to Site	44
10.03	Resident Project Representative	44
10.04	Engineer's Authority	44
10.05	Determinations for Unit Price Work	45
10.06	Decisions on Requirements of Contract Documents and Acceptability of Work	45
10.07	Limitations on Engineer's Authority and Responsibilities	45
10.08	Compliance with Safety Program	45
Article 1	1—Changes to the Contract	46
11.01	Amending and Supplementing the Contract	46
11.02	Change Orders	46
11.03	Work Change Directives	46
11.04	Field Orders	47
11.05	Owner-Authorized Changes in the Work	47
11.06	Unauthorized Changes in the Work	47
11.07	Change of Contract Price	47
11.08	Change of Contract Times	49
11.09	Change Proposals	49
11.10	Notification to Surety	50

Article 12-	-Claims	50		
12.01	Claims	50		
Article 13-	Article 13—Cost of the Work; Allowances; Unit Price Work			
13.01	Cost of the Work	51		
13.02	Allowances	55		
13.03	Unit Price Work	55		
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work		56		
14.01	Access to Work	56		
14.02	Tests, Inspections, and Approvals	56		
14.03	Defective Work	57		
14.04	Acceptance of Defective Work	58		
14.05	Uncovering Work	58		
14.06	Owner May Stop the Work	58		
14.07	Owner May Correct Defective Work	59		
Article 15-	-Payments to Contractor; Set-Offs; Completion; Correction Period	59		
15.01	Progress Payments	59		
15.02	Contractor's Warranty of Title	62		
15.03	Substantial Completion	62		
15.04	Partial Use or Occupancy	63		
15.05	Final Inspection	64		
15.06	Final Payment	64		
15.07	Waiver of Claims	65		
15.08	Correction Period	66		
Article 16-	-Suspension of Work and Termination	67		
16.01	Owner May Suspend Work	67		
16.02	Owner May Terminate for Cause	67		
16.03	Owner May Terminate for Convenience	68		
16.04	Contractor May Stop Work or Terminate	68		
Article 17—Final Resolution of Disputes69				
17.01	Methods and Procedures	69		
Article 18—Miscellaneous				
18.01	Giving Notice	69		
18.02	Computation of Times	69		

EJCDC® C-700, Standard General Conditions of the Construction Contract.

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18.03	Cumulative Remedies	70
18.04	Limitation of Damages	70
18.05	No Waiver	70
18.06	Survival of Obligations	70
18.07	Controlling Law	70
18.08	Assignment of Contract	70
18.09	Successors and Assigns	70
18.10	Headings	70

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
 - 1. Addenda—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 - 2. Agreement—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 - 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 - 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 - 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 - 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 - 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 - 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 - 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 - 10. Claim
 - *a.* A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
- c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
- *d*. A demand for money or services by a third party is not a Claim.
- 11. Constituent of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
- 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
- 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
- 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
- 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
- 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
- 17. *Cost of the Work*—See Paragraph 13.01 for definition.
- 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
- 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
- 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
- 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

- 22. Engineer—The individual or entity named as such in the Agreement.
- 23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
- 24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
- 25. Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
- 26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
- 27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
- 28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
- 29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
- 30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
- 31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
- 32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

- 33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
- 34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
- 35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
- 36. Schedule of Values—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
- 37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
- 38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
- 39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
- 40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
- 41. Submittal—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
- 42. Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

- 43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
- 44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
- 45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
- 46. Technical Data
 - a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
- 47. Underground Facilities—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
- 48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
- 49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
- 50. Work Change Directive—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. Intent of Certain Terms or Adjectives: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. Furnish, Install, Perform, Provide
 - 1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. Contract Price or Contract Times: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

- 2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance
 - A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
 - B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
 - C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 Before Starting Construction

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 Acceptance of Schedules

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 Electronic Transmittals

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 Intent

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 Reference Standards

- A. Standards Specifications, Codes, Laws and Regulations
 - Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. Reporting Discrepancies
 - 1. Contractor's Verification of Figures and Field Measurements: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
 - 2. Contractor's Review of Contract Documents: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
 - 3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.
- B. Resolving Discrepancies
 - 1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Requirements of the Contract Documents

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation— RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.
- 4.02 *Starting the Work*
 - A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.
- 4.03 Reference Points
 - A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 Delays in Contractor's Progress

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
 - 1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 - 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 - 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
 - 1. The circumstances that form the basis for the requested adjustment;
 - 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 - 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 - 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 - 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

- 5.01 *Availability of Lands*
 - A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 Use of Site and Other Areas

- A. Limitation on Use of Site and Other Areas
 - 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
- C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 Subsurface and Physical Conditions

- A. *Reports and Drawings*: The Supplementary Conditions identify:
 - 1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
 - 2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
 - 3. Technical Data contained in such reports and drawings.
- B. Underground Facilities: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
- D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 - 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 - 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 Differing Subsurface or Physical Conditions

- A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
 - 1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 - 2. is of such a nature as to require a change in the Drawings or Specifications;
 - 3. differs materially from that shown or indicated in the Contract Documents; or
 - 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. Owner's Statement to Contractor Regarding Site Condition: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. Possible Price and Times Adjustments
 - 1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
- b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
- c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
- 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
- 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. Underground Facilities; Hazardous Environmental Conditions: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 Underground Facilities

- A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
 - 1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - complying with applicable state and local utility damage prevention Laws and Regulations;

- 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
- 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
- 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. Notice by Contractor: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. Engineer's Review: Engineer will:
 - 1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 - 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 - 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 - 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. Owner's Statement to Contractor Regarding Underground Facility: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. Possible Price and Times Adjustments
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
- b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
- c. Contractor gave the notice required in Paragraph 5.05.B.
- 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
- 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
- 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 Hazardous Environmental Conditions at Site

- A. Reports and Drawings: The Supplementary Conditions identify:
 - 1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
 - 2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 - 3. Technical Data contained in such reports and drawings.
- B. Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

of construction to be employed by Contractor, and safety precautions and programs incident thereto;

- 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.
- 6.02 Insurance—General Provisions
 - A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
 - B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
 - C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
 - D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

- A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

- 4. not seek contribution from insurance maintained by the additional insured; and
- 5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 Builder's Risk and Other Property Insurance

- A. Builder's Risk: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. Property Insurance for Facilities of Owner Where Work Will Occur: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. Property Insurance for Substantially Complete Facilities: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. Partial Occupancy or Use by Owner: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. Insurance of Other Property; Additional Insurance: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

- 1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
- 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
 - 1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 Receipt and Application of Property Insurance Proceeds

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

- 7.01 Contractor's Means and Methods of Construction
 - A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
 - B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 Supervision and Superintendence

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.
- 7.03 Labor; Working Hours
 - A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.
- 7.04 Services, Materials, and Equipment
 - A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
 - B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
 - C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.
- 7.05 "Or Equals"
 - A. Contractor's Request; Governing Criteria: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
- 3) has a proven record of performance and availability of responsive service; and
- 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. Engineer's Evaluation and Determination: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
 - Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

- 3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. Engineer's Evaluation and Determination: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. Reimbursement of Engineer's Cost: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for evaluating of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 Concerning Subcontractors and Suppliers

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.
- 7.08 Patent Fees and Royalties
 - A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
 - B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
 - C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 Permits

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 Taxes

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 Laws and Regulations

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 Emergencies

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 Submittals

- A. Shop Drawing and Sample Requirements
 - 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
 - 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

- 3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
 - 1. Shop Drawings
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 - 2. Samples
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 - 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. Engineer's Review of Shop Drawings and Samples
 - Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 - 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 - 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 - 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

- 5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
- 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
- 7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
- 8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.
- D. Resubmittal Procedures for Shop Drawings and Samples
 - 1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
 - 2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
 - 3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.
- E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs
 - 1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

- 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

- 8.01 Other Work
 - A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
 - B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
 - C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
 - D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 Legal Relationships

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

- 9.01 Communications to Contractor
 - A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.
- 9.02 Replacement of Engineer
 - A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.
- 9.03 Furnish Data
 - A. Owner shall promptly furnish the data required of Owner under the Contract Documents.
- 9.04 Pay When Due
 - A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

- 9.05 Lands and Easements; Reports, Tests, and Drawings
 - A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
 - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
 - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 Insurance
 - A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 Change Orders
 - A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 Inspections, Tests, and Approvals
 - A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 Limitations on Owner's Responsibilities
 - A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 Undisclosed Hazardous Environmental Condition
 - A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 Evidence of Financial Arrangements
 - A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).
- 9.12 Safety Programs
 - A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
 - B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

- 10.01 Owner's Representative
 - A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.
- 10.02 Visits to Site
 - A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
 - B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 Resident Project Representative

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 Engineer's Authority

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 Determinations for Unit Price Work

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.
- 10.06 Decisions on Requirements of Contract Documents and Acceptability of Work
 - A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 Limitations on Engineer's Authority and Responsibilities

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 Compliance with Safety Program

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 Amending and Supplementing the Contract

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.
- 11.02 Change Orders
 - A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
 - B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 Work Change Directives

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 Field Orders

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.
- 11.05 Owner-Authorized Changes in the Work
 - A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
 - B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
 - C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 Unauthorized Changes in the Work

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.
- 11.07 Change of Contract Price
 - A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
 - B. An adjustment in the Contract Price will be determined as follows:

- 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
- 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
- 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
 - 1. A mutually acceptable fixed fee; or
 - 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 Change of Contract Times

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 Change Proposals

- A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.
- B. Change Proposal Procedures
 - 1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
 - 2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. Engineer's Initial Review: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. Engineer's Full Review and Action on the Change Proposal: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

- 5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 Notification to Surety

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 Claims

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 - 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. Submittal of Claim: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. Mediation
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. Denial of Claim: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

- 13.01 Cost of the Work
 - A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

- 2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
 - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 - 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 - 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 - 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.
- c. Construction Equipment Rental
 - 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:
 - 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
 - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 6. Expenses incurred in preparing and advancing Claims.
 - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. Contractor's Fee
 - 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
 - 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. Documentation and Audit: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. Cash Allowances: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

- E. Adjustments in Unit Price
 - 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
 - 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
 - 3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

- 14.01 Access to Work
 - A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. Costs and Damages: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

- 14.04 Acceptance of Defective Work
 - A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 Uncovering Work

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

- 15.01 *Progress Payments*
 - A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
 - B. Applications for Payments
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

- 3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
- 4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. Review of Applications
 - Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 - 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
 - 3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

- 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
- 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
- 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.
- D. Payment Becomes Due
 - 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.
- E. Reductions in Payment by Owner
 - 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
- c. Contractor has failed to provide and maintain required bonds or insurance;
- d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
- e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
- f. The Work is defective, requiring correction or replacement;
- g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
- h. The Contract Price has been reduced by Change Orders;
- i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
- j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
- k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
- I. Other items entitle Owner to a set-off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
- 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 Partial Use or Occupancy

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

- 1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
- 2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
- 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
- 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.
- 15.05 Final Inspection
 - A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 Final Payment

A. Application for Payment

- 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
- 2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
- e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. Engineer's Review of Final Application and Recommendation of Payment: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.
- 15.07 Waiver of Claims
 - A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

- 16.01 Owner May Suspend Work
 - A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 Owner May Terminate for Convenience

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

- A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 Giving Notice

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 Computation of Times

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 Limitation of Damages

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 No Waiver

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.
- 18.06 Survival of Obligations
 - A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.
- 18.07 Controlling Law
 - A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 Assignment of Contract

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 Successors and Assigns

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 Headings

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 501 - SUPPLEMENTARY CONDITIONS

Section Includes:

- SC-2.02.A Copies of Documents
- SC-2.05.A.2 Schedule of Submittals
- SC-2.06 Preconstruction Conference
- SC-2.07.A Initial Acceptance of Schedules
- SC-2.07.A.2 Schedule of Submittals
- SC-3.01 Intent
- SC-4.01. A Commencement of Contract Times; Notice to Proceed
- SC-4.03.B Reference Points
- SC-4.04.C Progress Schedule
- SC-4.05. Abnormal Weather Conditions
- SC-4.05. Delays in Contractor's Progress
- SC-5.01.C. Storage of Materials, Equipment, and Vehicles
- SC-5.02.D. Loading of Structures
- SC-5.03. Subsurface and Physical Conditions
- SC-5.04.A. SC Differing Subsurface and Physical Conditions
- SC-5.05.B. Underground Facilities
- SC-5.06(A)(3). Hazardous Environmental Conditions
- SC-6.01.B. D. and I. Performance, Payment, and Other Bonds
- SC-6.03. Contractor's Insurance
- SC-6.04.E. Property Insurance
- SC-7.02- Supervision and Superintendence
- SC-7.03.A. Labor; Working Hours
- SC-7.03.C. Work Hour Restrictions
- SC-7.03.D- Holiday Work Hours
- SC-7.04.D and .E Services, Materials, and Equipment

- SC-7.05.A. Contractor's Request; Governing Criteria
- SC-7.07.A. Concerning Subcontractors and Suppliers
- SC-7.16.B.2. Samples
- SC-7.07. Concerning Subcontractors, Suppliers, and Others
- SC-7.09.A. Utility Charges.
- SC-7.11. Laws and Regulations
- SC-7.15. Emergencies.
- SC-7.16.G. Shop Drawings and Samples
- SC-10.03. Resident Project Representative
- SC-11.05(A) Amending and Supplementing the Contract
- SC-13.02.B. Cash Allowances.
- SC-14.02.B.1 Inspections, Tests, and Approvals
- SC-14.03. Defective Work.
- SC-15.01.B.1. Applications for Payments
- SC-15.01.D. Payment Becomes Due.
- SC-15.01.F. Payment for Extra, Additional, or Omitted Work
- SC-15.03. Substantial Completion
- SC-15.06.A.3 Alternatives to Waivers of Liens.
- SC 15.06.D. Completion of Work.
- SC-15.07.A. Waiver of Claims
- SC-15.08. Correction Period
- SC-15.06.A.2. Application for Payment
- SC-17.20. Substance Abuse Prevention Program
- SC-18.01.A.2. Giving Notice
- SC-18.11. Covenant Against Contingent Fees.
- SC-18.12. Officials Not to Benefit.
- SC-18.13. Other Contracts

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract. All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions will have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-2.02.A COPIES OF DOCUMENTS. Delete Paragraph 2.02.A in its entirety and insert the following in its place:

A. Owner shall furnish to Contractor two fully executed copies of the Contract; One copy is for the Contractor's bonding agency and one copy is for the Contractor's file. Additional printed copies will be furnished upon request at the cost of reproduction. One copy in electronic portable document format (PDF) will also be provided upon request.

SC-2.03.A.2 Schedule of Submittals. Delete Paragraph 2.03.A.2 in its entirety.

SC-2.04. *Preconstruction Conference; Designation of Authorized Representatives*. Add the following new paragraph after Paragraph 2.04.B:

C. At this conference Owner may designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individual shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of Engineer.

SC-2.05.A. Initial Acceptance of Schedules. Delete the first sentence in Paragraph 2.05.A

- SC-2.05.A.2. Schedule of Submittals. Delete Paragraph 2.05.A.2 in its entirety.
- SC-3.01. Intent. Add the following new paragraph after the first paragraph in 3.01.C:
 - In case of discrepancy between documents, the governing order is as follows:
 - 1.Addenda
 - 2.Special Provisions (Section 600)
 - 3.Plans
 - 4. Wauwatosa Standard Specifications
 - **5.All Other Specifications**
 - 6.Appendices and other documents intended to be incorporated into the contract

If there is a discrepancy on a drawing, the drawing dimension, unless obviously incorrect, govern over scaled dimensions. If there is a discrepancy in the plans, the typical sections or details govern over any standard detail drawing.

SC-3.01. Intent. Add a new paragraph immediately after Paragraph 3.01.H as follows:

 Some Specification and Drawing text is written in imperative and streamlined form. This imperative language is directed to Contractor, unless specifically noted otherwise. Include the words "shall be" by inference where a colon (:) is used within sentences or phrases.

SC-4.01. A Commencement of Contract Times; Notice to Proceed. Delete Paragraph 4.01.A in its entirety and insert the following in its place:

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than 30 days after the time period for acceptance of Bids by Owner stated in the Bid Form or the thirtieth day after the Effective Date of the Agreement, whichever is earlier.

SC-4.03.B – **Reference Points.** Add the following new paragraph immediately after Paragraph 4.03.A:

B. The Owner will furnish and set the survey stakes for the general location, alignment, grade, and other necessary points with proper notes thereon. The Contractor shall notify the City Engineer not less than seventy-two (72) hours or not less than three (3) working days, whichever is greater, in advance of when and where grade and points are desired.

The Contractor shall be responsible for the preservation of all stakes and marks, and if in the opinion of the City Engineer any of the survey stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, the cost to the City of replacing them shall be charged against the Contractor and shall be deducted from the payment for the work.

SC-4.04.C – Progress Schedule. Add the following new paragraph immediately after Paragraph 4.04.B:

C. In addition to submission of the progress schedule, the Contractor shall schedule weekly meetings with the Engineer. The agenda will include, but is not limited to, site safety, review of work progress to date, 3-week schedule, field observations, identified field issues and resolutions, delays, corrective measures to regain the progress schedule, and resident and business impacts.

The Contractor shall provide a 3-week schedule to the Engineer that shows the current week work schedule and proposed work schedule for the following two weeks at these meetings. The Contractor's project manager and project superintendent shall attend this meeting. A Subcontractor with work shown on the 3-week schedule shall have a representative knowledgeable of the project attend the meeting.

SC-4.05. Abnormal Weather Conditions. Add the following language to Paragraph 4.05.C.2:

(1) The Engineer will award a time extension for severe weather on calendar day and completion date contracts. Submit a request for adverse weather days if the number of adverse weather days exceeds the anticipated number of adverse weather days tabulated below.

TOTAL ANTICIPATED ADVERSE WEATHER DAYS FOR EACH CALENDAR MONTH

Jan: 31^[1] Feb: 28^[1] Mar: 31^[1] April: 5 May: 4 June: 4 July: 3 Aug: 3

Sep: 4 Oct: 5 Nov 1 thru 15: 2 Nov 16 thru 30: $15^{[1]}$ Dec: $31^{[1]}$

[1] Includes an anticipated winter suspension from November 16 through March 31. Multi-year contracts will address the winter suspension dates within the special provisions.

- (2) Submit the request to the Engineer at the end of the month. Indicate the number of adverse weather days that occurred during that month. Provide progress schedule documentation to show that the controlling item of work was delayed. Show that the delay was beyond the control of the contractor. The Engineer will assess the contractor's submittal and indicate how many adverse weather days are confirmed.
- (3) For each calendar month, the Engineer will grant an adverse weather day for each confirmed adverse weather day that exceeds the number of anticipated adverse weather days. When the contractor requests adverse weather days, the Engineer will give the contractor a monthly written statement showing the number of days credited for adverse weather. At the end of the project, the Engineer will extend time on calendar day and completion date contracts for the cumulative number of severe weather days credited each month. On days where less than 4 hours of controlling items of work were or could have been performed, a full adverse weather day will be granted. On days where 4 or more hours but less than 8 hours of controlling items of work were or could have been performed a half adverse weather day will be granted. Days in which 8 hours or more of a controlling item of work were or could have been performed a half adverse weather day.
- (4) Winter Suspension for Completion Date Contracts
 - a) The Contractor may request a winter suspension for a completion date contract. If the Engineer determines that conditions do not allow for the completion of the remaining work, the Engineer may approve the Contractor's request and determine a start date of the winter suspension. The end date of the winter suspension is March 31 or a date mutually agreed upon by both parties. If weather conditions permit work to resume within the winter suspension period, the Engineer may direct the Contractor to resume all or specific work activities.

- b) During winter suspension, store all materials in a manner that does not obstruct vehicular and pedestrian traffic, plowing operations, and does not hinder visibility of drivers. The Contractor shall be responsible to protect all stored materials from damage and/or theft. Install traffic control and other safety devices necessary to protect the traveling public and pedestrians. Provide suitable drainage and install temporary erosion control where necessary. If the winter suspension begins when liquidated damages are being assessed, or when the work has not progressed as scheduled and would not have been completed prior to the completion date, the cost of necessary pre-suspension work is incidental. If the winter suspension begins prior to the contract completion date, and the work has progressed as scheduled and would have been completed prior to the completion date, the cost of pre-suspension work will be paid as specified under SC-15.01.F.
- c) For a winter suspension that begins prior to the contract completion date and the work has progressed as scheduled and would have been completed prior to the completion date, the Engineer will extend contract time to correspond to the end of the winter suspension and liquidated damages will not be assessed during the winter suspension.
- d) For a winter suspension that begins when liquidated damages are being assessed or when the work has not progressed as scheduled and would not have been completed prior to the completion date, the engineer will not extend contract time. Time will be suspended until the end of the winter suspension and no work will be permitted unless authorized by the Engineer in writing. Liquidated damages will not be assessed during the winter suspension when no work is occurring. Liquidated damages will resume at the end of the winter suspension and will resume during any calendar days the Engineer authorizes or directs the Contractor to perform contract work during the winter suspension period.
- (5) Winter Suspension for Non-Completion Date Contracts
 - a) The Contractor shall complete all work on Non-Completion Date Contracts prior to the Winter Suspension date of November 15th. If work is not complete prior to the Winter Suspension dates, the Contractor shall ready the project for Winter Suspension per SC-4.05(4)b. and all costs shall be incidental to the contract. If weather conditions permit work to resume within the winter suspension period, the Engineer may direct the Contractor to resume all or specific work activities.

SC-4.05. Delays in Contractor's Progress. Add the following paragraph immediately following Paragraph 4.05.H:

I. The Engineer shall have authority to suspend the work wholly or in part for such period or periods as they may deem necessary, due to unsuitable weather or such conditions as are considered unfavorable for the suitable prosecution of the work

or for such time as it is necessary due to the failure on the part of the Contractor to carry out orders given or perform any and all provisions of the contract.

SC-5.01.C. Storage of Materials, Equipment, and Vehicles. Add the following new language at the end of Paragraph 5.01.C.:

C. Materials shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, shall be inspected prior to their use in the work and shall meet the requirements of the specifications at the time it is proposed to use them. Stored materials shall be located so as to facilitate prompt inspection. That portion of the public streets or public lands not required for public use or travel may upon approval of the Engineer be used for storage purposes and for placing of the Contractor's plant and equipment, however, adequate storage space is not guaranteed and, additional space, if required, shall be provided by the Contractor at their own expense.

The Contractor's vehicles, equipment and materials shall not be left on the street except when work operations are actually in progress, unless otherwise authorized by the Engineer.

SC-5.02.D. Loading of Structures. Add the following new language at the end of paragraph 5.02.D:

D. If the Contractor intends to store materials, equipment, or vehicles on a structure, at the Engineer's request, the Contractor shall provide a structural analysis stamped by a licensed Structural Engineer including calculations showing that the loading does not exceed the structural loading and will not endanger the structure or adjacent structures or land to stresses or pressures that will endanger them prior to storing materials, equipment, or vehicles on the structure.

SC-5.03. Subsurface and Physical Conditions. Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. The following reports of explorations and tests of subsurface conditions at or contiguous to the Site are known to Owner: None.
- F. The following drawings and photographs of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) are known to Owner: None.
- G. The reports and drawings identified above are not part of the Contract Documents, but the "technical data" contained therein upon which Contractor may rely, as expressly identified and established above, are incorporated in the Contract Documents by reference. Contractor is not entitled to rely upon any other information and data known to or identified by Owner or Engineer.
- H. Copies of reports and drawings identified in SC-5.03.F and SC-5.03.G that are not included with the Bidding Documents may be examined at City of Wauwatosa's City Hall during regular business hours.

SC-5.04.A. SC Differing Subsurface and Physical Conditions. Delete Paragraph 5.04.A in its entirety and insert the following in its place:

- A. Notice: If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:
- 1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
- 2. is of such a nature as to require a change in the Contract Documents; or
- 3. differs materially from that shown or indicated in the Contract Documents; or
- 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then the Contractor shall immediately call the attention of the Engineer to such conditions, and, if Contractor finds that the materials differ from those shown on the drawings, or indicated in these specifications, Contractor shall at once make such changes in the drawings and/or specifications, as Contractor may find necessary.

SC-5.05.B. Underground Facilities. Delete Paragraph 5.05.B in its entirety and insert the following in its place:

- B. Notice by Contractor:
 - 1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown and indicated with reasonable accuracy in the Contract Documents Contractor shall, within two working days after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
 - 2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 12.01.

SC-5.06(A)(3). Hazardous Environmental Conditions. Add the following subparagraphs immediately after Paragraph 5.06(A)(3):

4. The following reports regarding Hazardous Environmental Conditions at the Site are known to Owner: None.

SC-6.01.B. *Performance, Payment, and Other Bonds*. Add the following new paragraphs immediately after Paragraph 6.01.B:

- Labor and Material Bond. The Contractor shall furnish a surety bond in an amount at least equal to 100% of the full contract price, such bond to be executed by a surety company acceptable to the Owner. The labor and material bond shall serve as security for the payment of all persons performing labor and all persons furnishing materials in connection with this contract.
- 2. Premium Payment. The premiums on the performance bond and labor and material bond shall be paid by the Contractor.
- 3. If Section 71.80(16) Wisconsin Statutes is applicable, Contractor hereby agrees to comply with the requirements of such Section. This Section is applicable to Contractors who are nonresidents of Wisconsin when total contract price exceeds \$50,000.00.

SC-6.01.D. Performance, Payment, and Other Bonds. Replace in its entirety the language in Paragraph 6.01.D with the following:

All bonding companies and sureties issuing bonds and/or contract security to Contractor shall be licensed to perform business in the State of Wisconsin.

SC-6.01. *Performance, Payment, and Other Bonds*. Add the following language immediately following Paragraph 6.01.H.:

I. Should any surety upon the bond for performance of this contract become unacceptable to the Owner, the Contractor must promptly furnish such additional security as may be provided from time to time to protect the interests of the Owner and of persons supplying labor or materials in the prosecution of the work contemplated by this contract.

SC-6.03. Contractor's Insurance. Add the following language immediately after paragraph 6.03.C:

D. The Contractor and the Contractor's insurance company shall be held responsible for and shall save the Owner harmless from all liability for damages occasioned by the digging up, use or occupancy of the street, alley, highway, public grounds and private grounds, or which may result therefrom, or which may result in any way from the negligence or carelessness of the Contractor, their agents, employees or workmen; or by reason of the elements, unforeseen or unusual difficulties, obstructions, or obstacles encountered in the prosecution of the work; and they shall indemnify the Owner for and save it harmless from all claims and liabilities, actions and causes of action, and liens for materials furnished or labor performed in the construction or execution of the work, and from all

costs, charges and expenses incurred in defending such suits or actions, and from and against all claims and liabilities for injury or damage to persons or property emanating from defective or careless work methods, or from and against all claims or liabilities for royalties, license fees, actions, suits, charges and expenses or damage from infringement for reason of the use of any invention or improvement in tools, equipment or plant or any process, device or combination of devices used in the construction of the work.

The Contractor shall not commence work under a contract until they have obtained all insurance required under this paragraph and has filed certificates thereof with the Owner, nor shall the Contractor allow a subcontractor to commence work until all similar insurance required has been so obtained and filed. Contractor shall be required to maintain insurance throughout the duration of the contract until final acceptance of the project.

E . WORKMEN'S COMPENSATION INSURANCE Statutory coverage as required by Chapter 102 of the Statutes of the State of Wisconsin, as revised, and all acts amendatory thereof and supplementary thereto, and for all employees of the Contractor. All subcontractors and suppliers shall furnish to the Contractor and the Owner evidence of similar insurance for all of their respective employees unless such employees are covered by the protection afforded by the Contractor.

F. COMPREHENSIVE GENERAL LIABILITY AND PROPERTY DAMAGE INSURANCE

(1) COMPREHENSIVE GENERAL LIABILITY

The Contractor shall maintain during the life of this Contract, Comprehensive General Liability written in comprehensive form to protect the Contractor, the Owner and Engineer against all claims arising from injuries to members of the public or damage to property of others arising out of any act or omission of the Contractor or their agents, employees, or subcontractors. The policy shall be endorsed to include Notice of Cancellation Endorsement Form IL-7002 10-90 or equivalent endorsement language which is approved by the City Attorney. This endorsement shall be specifically reflected on the Certificate of Insurance form required by Section 6.02, and a copy of said endorsement shall be provided to the Owner when available. In addition, this policy shall specifically insure the contractual liability assumed by the Contract.

The scope of this coverage shall also include the Personal Injury Hazards, including "a", "b", and "c". "a" includes false arrest, malicious prosecution, and un-willful detention or imprisonment. "b" includes libel, slander, and defamation of character. "c" includes wrongful eviction, invasion of privacy and wrongful entry. Employee exclusion shall be removed. In addition, coverage will include broad form property damage, host liquor liability, advertising injury, additional persons insured, extended bodily injury, and incidental medical malpractice.

Comprehensive general liability coverage shall contain no exclusions for explosion, collapse, or underground work (X, C, or U).

The contractor shall also provide completed operation and product liability coverage for the life of the Contract and maintain such coverage for a period of 1 year after final acceptance of the work by the Owner.

The liability limits shall not be less than \$1,000,000 combined single limit per occurrence for personal injury, bodily injury and property damage if coverage written on 1973 I.S.O. form or \$1,000,000. combined single limit per occurrence with \$2,000,000. aggregate for personal injury, bodily injury or property damage if coverage is written on 1986 I.S.O. coverage form.

(2) UMBRELLA/EXCESS LIABILITY

The Contractor shall maintain during the life of this Contract, Umbrella/Excess Liability coverage totaling \$5,000,000. If primary comprehensive General Liability is written on a 1986 I.S.O. coverage form, Umbrella/Excess liability shall include a drop down provision to protect, on a primary basis, the contractor, the Owner and Engineer, in the case of exhaustion of the aggregate primary limits.

G. COMPREHENSIVE AUTOMOBILE LIABILITY AND PROPERTY DAMAGE Operations of owner, hired and non-owned motor vehicles.

Bodily Injury	\$	500,000 per person
	\$1	,000,000 per occurrence
Property Damage	\$	500,000 per occurrence

The Contractor shall file with the Owner a certification of insurance containing a ten (10) day notice of cancellation.

NOTE: The required limits of liabilities may be obtained with primary liability policies or in combination with an umbrella excess third party liability policy.

H. ADDITIONAL INSUREDS All insurance coverages required pursuant to this contract shall name the following persons as additional insured parties:

The Owner and its boards, commissions, committees, authorities, employees, agencies and officers, voluntary associations, other units operating under the jurisdiction and within the appointment of its budget.

SC-6.04.E. *Property Insurance.* Immediately following paragraph 6.04.E, add the following paragraphs:

- F. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:
- 1. include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents, and other consultants and

subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;

- 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, false work, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.
- 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
- cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
- 5. allow for partial utilization of the Work by Owner;
- 6. include testing and startup;
- 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued; and
- 8. include coverage for hazardous materials to comply with the requirements of Paragraph 5.06.C of the General Conditions.

SC-7.02- Supervision and Superintendence. Add the following new paragraphs immediately after Paragraph 7.02.B.:

C. The work shall be under the charge and care of the Contractor until final acceptance by the City. The Contractor shall assume all responsibility for injury or damage to the work by action of the elements or for any cause whatsoever, whether arising from the execution or partial or complete failure in execution of the work. The Contractor shall rebuild, restore and make good, at their own expense, all injuries or damages to any portion of the work occasioned by any causes before its completion and acceptance.

SC-7.03.A. Labor; Working Hours. Add the following new paragraph immediately after Paragraph 7.03.A:

1. When a person employed by Contractor, or anyone for which Contractor is responsible, is abusive or disrespectful to the general public or to the Owner's representative, such employee shall, upon written request by Owner, be removed from the Work.

SC-7.03.C. Work Hour Restrictions. Delete Paragraph 7.03.C. in its entirety and insert the following in its place:

Work operations in residential areas, including daily startup activities under this contract, shall be limited to the period from 7 A.M. to 7 P.M. Monday thru Friday, during the life of the contract except those work operations identified in the special provisions, if any. If, in the opinion of the Engineer, or their authorized representative, unusual circumstances dictate work outside of these hours is warranted due to an emergency condition, or special circumstance, such authorization by the Engineer or their representative to extend the working hours beyond those stated herein, shall be given in writing and, if authorized, shall be on a single incidence basis for a specific day. For all other work that is not deemed an unusual circumstance, the Contractor shall follow the procedures outlined in the specifications to obtain written permission to perform work.

SC-7.03- *Holiday Work Hours.* Add the following new paragraph immediately after Paragraph 7.03.C:

D. The Contractor shall not perform work on holidays observed by the Owner without written permission from the Engineer.

SC-7.04 Services, Materials, and Equipment. Add the following new paragraphs immediately after Paragraph 7.04.C.:

- D. Clean Up. The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by their employees or work and Contractor shall remove all their rubbish from and about the site and all their tools, equipment, scaffolding and surplus materials and shall leave the work clean and ready for use. In case of dispute, the Owner may remove the rubbish and surplus materials and charge the cost to the Contractor and the Contractor agrees to reimburse such cost to the Owner.
- E. Final Cleaning Up. Within fourteen (14) calendar days after the completion of the work and before acceptance and payment will be made, the Contractor shall clean and remove from the site of the work and adjacent property all surplus and discarded materials, rubbish and temporary structures, restore in an acceptable manner all property, both public and private, which has been damaged in the prosecution of the work and shall leave the site of the work in a neat and presentable condition.

SC-7.05.A. Contractor's Request; Governing Criteria. Delete SC 7.05.A. and replace with the following:

- A. Contractor's Request; Governing Criteria: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 4. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and

sufficiently similar so that no change in related Work will be required, Engineer may deem it an "or equal" item, subject to the following. For the purposes of this paragraph, a proposed item of equipment or material may be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner. Engineer may object on behalf of on behalf of Owner for any reason in Engineer's discretion.

- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

SC-7.07.A. Concerning Subcontractors and Suppliers. Add the following new paragraph immediately following Paragraph 7.07.A.:

1. The Contractor must perform with their own organization, work amounting to at least one-third of the original contract amount unless a differing portion is specified in the contract Special Provisions.

SC-7.16.B.2. Samples. Delete Paragraph 7.16.B.2 in its entirety and replace with the following new paragraphs:

- A. The Contractor shall provide such facilities as the Engineer may require for collecting and forwarding samples, and shall not make use of or incorporate in the work any material represented by these samples until the tests have been made and the material found to be acceptable in accordance with the requirements of the specifications. The Contractor shall furnish without charge all samples required.
- B. When required by the Engineer, representative preliminary samples of the character and quality prescribed shall be submitted by the Contractor or producer for examination and shall be tested in accordance with the methods referred to herein. The acceptance of preliminary sample, however, shall not be construed as acceptance of the material from the same source delivered later. Only the materials actually delivered for the work will be considered and their acceptance or rejection will be based solely on the results of the

tests prescribed in these specifications. All samples shall be submitted before shipment of the material to the site of the work and in ample time to permit making tests or examinations before incorporating the material into the work.

- C. All tests shall be made in accordance with the methods described in these specifications. If any specifications are inadvertently omitted, those of the A.S.T.M. or other recognized societies for such materials will be used. References to A.S.T.M. or other recognized societies, specifications shall be understood to mean the latest revision of the standard specifications. Laboratory tests shall be made by a recognized laboratory acceptable to the Engineer. Reports of tests provided by the Contractor shall be submitted promptly to the Engineer.
- D. The Contractor shall give timely notice to the Engineer of the place and time of the test to be made, to permit the Engineer to witness the test if they should so desire. All tests shall be made at the sole expense of the Contractor.

SC-7.07. Concerning Subcontractors, Suppliers, and Others. Add new paragraphs immediately after Paragraph 7.07.M:

N. Contractor shall, to the extent practicable, maintain a list of all Subcontractors, Suppliers, and service providers performing, furnishing or procuring labor, services, materials, plans or specifications for the performance of the Work.

SC-7.09.A. Utility Charges. Amend the fourth sentence of Paragraph 7.09.A to read as follows:

Contractor shall pay all charges of utility owners for connections for providing permanent service to the Work.

SC-7.11. Laws and Regulations. Add the following paragraph after Paragraph 7.11.C:

- D. Contractor shall assist and cooperate fully with Owner in meeting any obligations under the Wisconsin Public Records law. In the event that Contractor withholds records, for any reason, and said withholding is found to be in violation of the law or a Court Order, Contractor shall indemnify and hold harmless Owner for any and all costs related to the withholding of those records, including, but not limited to, monetary damages of any kind, actual attorney's fees, and litigation costs of any kind.
- E. Owner and Contractor recognize that applying applicable Wisconsin public records laws to particular records requests can be difficult in light of copyright and other confidentiality protections. To ensure that applicable laws are followed, both with regard to private rights, and with regard to public records laws, Owner and Contractor agree as follows. When Owner receives public records requests for matters that Owner believes might be proprietary or confidential information. Owner will notify Contractor of the request. Within three (3) days of such notification (subject to extension of time upon mutual written agreement). Contractor shall either provide Owner with the record that is requested for release to the requester or Contractor shall advise Owner that Contractor objects to the release of the requested information and the basis for the objection. If for any reason Owner concludes that Owner is obligated to provide such records to Owner immediately upon Owner's request. Contractor shall not charge for work performed under this

paragraph except for the "actual. necessary and direct" charge of responding to the records request as that is defined and interpreted in Wisconsin law.

In addition to and not to the exclusion or prejudice of any provisions of this agreement or documents incorporated herein by reference, Contractor shall indemnify and save harmless and agrees to accept tender of defense and to defend and pay any and all legal, accounting, consulting, engineering and other expenses relating to the defense of any claim asserted or imposed upon the Owner, its officers, agents, employees and independent contractors growing out of Owner's denial of a records request. based upon objections made by Contractor; or (ii) Contractor's failure to provide records to Owner upon Owner's request; or (iii) Owner's charges made to a records requester based upon reimbursement of costs Contractor charged to Owner in responding to a records request; or (iv) Owner's lack of timely response to a records request. following Contractor's failure to timely respond to Owner as required herein; or (v) Owner's provision of records to a requester that were provided to Owner by Contractor in response to a records request. Contractor's claims of proprietary rights, or any other copyright or confidentiality claims, shall be waived such that Owner may provide all requested documents, programs, data, and other records to the requestor, upon failure by Contractor to defend, indemnify or hold harmless the Owner as required herein, and/or upon judgment of a court having jurisdiction in the matter requiring release of such records.

F. In carrying out any of the provisions of this contract or in exercising any power or authority granted to the Contractor hereby, there shall be no personal liability upon the Engineer or their authorized assistants, it being understood that in such matters they act as agents and representatives of the Owner.

SC-7.15. Emergencies. Add a new paragraph immediately after Paragraph 7.15.A as follows:

B. In the event it becomes necessary for the Owner to perform emergency maintenance and protection which are the responsibility of Contractor under the Contract Documents, the costs incurred will be charged against Contractor, a Change Order will be issued, and Owner shall be entitled to an appropriate decrease in the Contract Price.

SC-7.16.G. Shop Drawings and Samples. Add the following paragraphs immediately after Paragraph 7.16.F:

G. If Contractor requests a change of a previously approved item, Contractor shall reimburse Owner for Engineer's charges for its review time unless the need for such change is beyond the control of Contractor.

SC-10.03. Resident Project Representative. Add the following new paragraph immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will have same authority and responsibilities as Engineer.

SC-11.05(A) Amending and Supplementing the Contract. Add the following new paragraphs immediately after Paragraph 11.05(A):

1. <u>INCREASED OR DECREASED QUANTITIES OF WORK</u>. If the Engineer deems it proper or necessary in the execution of the work to make changes which will increase or

decrease the quantity of labor or material or the expense of the work, such changes shall not annul nor violate the contract or agreement hereby entered into nor release the surety thereon, and the Contractor shall furnish the necessary labor and material to complete the contract as changed.

Items for which quantities change are categorized as major or minor items. A major item shall be considered to be any item whose total cost, determined by multiplying the original quantity and the contract unit price, is equal to or greater than five percent of the total amount of the original contract. A minor item is one of which total cost, determined, as above, is less than five percent of the total amount of the original contract.

When the actual quantity of any major item required to complete the work is increased or decreased, payment for the quantity of work actually performed for such item will be made in accordance with the table below:

Item	Actual Quantity as % of Contract Quantity	Basis of Payment
Major (<u>></u> 5% of Total Contract)	75% - 125%	Contract Unit Prices
Major (<u>></u> 5% of Total Contract)	<75%	Adjusted Unit Prices (not to exceed cost for 75% of contract quantity times the contract unit price)
Major (<u>></u> 5% of Total Contract)	>125%	Adjusted Unit Prices for units >125% of contract quantity. (Contract Unit Prices for all units up to 125% of contract quantity).
Minor (<5% of Total Contract)	All	Contract Unit Prices

Increased or Decreased Quantities of Work

The adjustment or revision of unit prices shall be negotiated on the basis of actual cost for the entire item plus a reasonable allowance for profit and applicable overhead.

If such changes cause an increase or decrease in the time required for its performance, an equitable adjustment shall be made and a Change Order effectuating the change shall be executed. .

No changes shall be made without first obtaining the approval in writing of the Engineer or their duly authorized representative. Any claim for adjustment under this section must be asserted within ten (10) days from the date the change is ordered, unless the Engineer shall for proper cause extend such time. Nothing provided in this section shall excuse the Contractor from proceeding with the prosecution of the work so changed.

2. EXTRA WORK. The Contractor may be ordered by the Engineer to perform additional work and furnish materials which do not appear in the proposal or contract as a specific item accompanied by a unit price, or lump sum price, and which are not included under

the price bid for other items in the contract. All such work and materials shall be designated as extra work. The Contractor shall perform extra work whenever it is deemed necessary or desirable by the Engineer to fully complete the project as contemplated and it shall be done in accordance with the intent of these specifications.

Extra work shall be done under the supervision of the Engineer and their decision shall be final and binding. The plan of the work to be followed, the equipment to be used and the amount and character of labor to be employed shall meet with the approval of the Engineer. Authorization for extra work shall be given by the Engineer in writing in the form of a Change Order. The Contractor shall perform the extra work by force account when so ordered by the Engineer. Work performed on a cost-plus-limited basis shall have itemized statements submitted in accordance with 109.4.5.1(3) of the State Specs. Claims for extra work which have not been authorized by the Engineer will be rejected.

SC-13.02.B. Cash Allowances. Delete Paragraph 13.02.B.1.in its entirety and insert the following in its place:

1. The cash allowances include the cost to Contractor (less any applicable trade discounts) of materials, equipment, and services required by the allowances to be delivered at the Site, or for the Project, and all applicable taxes; and

SC-14.02.B.1 *Inspections, Tests, and Approvals*. Add the following new paragraphs immediately following Paragraph 14.02.B.:

H. Inspectors, employed by the Owner, shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. The inspector is not authorized to revoke, alter, or waive any requirements of the specifications. Inspector is authorized to call the attention of the Contractor to any failure of the work or material to conform to the specifications and the contract and shall have authority to reject materials or suspend the work until any questions at issue can be referred to and decided by the Engineer.

The inspector shall in no case act as foreman or perform other duties for the Contractor nor interfere with the management of the work by the latter. Any advice which the inspector may give the Contractor shall in no way be construed as binding the Engineer in any way or releasing the Contractor from fulfilling any of the terms of the contract.

If the Contractor refuses to suspend operations on verbal order, the Engineer or inspector shall issue a written order giving the reason for shutting down the work. After placing the order in the hands of the Project Manager, Project Superintendent, or Foreman on-site, the inspector shall immediately leave the job. Work done after the inspector leaves the job will not be accepted or paid for.

SC-14.03. Defective Work. Add the following new paragraph immediately following Paragraph 14.03.G.:

H. Failure or neglect on the part of the Engineer to condemn or reject bad or inferior work or materials shall not be construed to imply an acceptance of such work or materials, if it becomes evident at any time prior to the final acceptance of the work by the Owner. Neither shall it be construed as barring the Owner, at any subsequent time, from the recovery of damages or of such a sum of money as may be needed to build anew all portions of the work in which fraud was practiced or improper materials hidden, wherever found.

SC-15.01.B.1. Applications for Payments. Delete paragraph 15.01.B.1. in its entirety and insert the following in its place:

1. At least forty days before the date established for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Contractor shall submit three documents: an invoice from the material or equipment supplier which states item's cost; an itemspecific invoice, bill of sale, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein; all of which will be satisfactory to Owner.

Requests for payment for materials and equipment not incorporated in the Work shall not be made.

SC-15.01.D. Payment Becomes Due. Delete paragraph 15.01.D. in its entirety and insert the following in its place:

D. Within fifteen days after presentation of the Application for Payment to Owner, with the Engineer's recommendation, the amount recommend will (subject to the provisions of paragraph 14.02.D and calendar placement on the next available Board of Public Works Agenda) become due, and when due will be paid by Owner to Contractor.

SC-15.01.F. Payment for Extra, Additional, or Omitted Work. Add the following new paragraphs immediately following Paragraph 15.01.E.:

F. The Owner upon proper action by its governing body, may authorize changes in, additions to, or deductions from the work to be performed or the material to be furnished pursuant to the provisions of the contract or any other contract documents.

Adjustments, if any, in the amounts to be paid to the Contractor by reason of any such change, addition or deduction shall be determined by one or more of the following methods:

- (a) By unit prices contained in the Contractor's original bid and incorporated in the construction contract.
- (b) By a supplemental schedule of prices contained in the Contractor's original bid and incorporated in the construction contract.
- (c) By an acceptable lump sum proposal from the Contractor not to exceed fifteen (15%) percent of the original contract price for all extra, additional or omitted work to comply with Section 62.15(1c) of the Wisconsin Statutes. For lump sum proposals

submitted by a subcontractor, the Owner will allow the contractor a markup on work the subcontractor performs as follows:

- Use a markup of 10% for the first \$10,000 of work.
- Use a markup of 2% for work in excess of \$10,000.
- (d) On a cost-plus-limited basis not to exceed fifteen percent (15%) of the original contract price to comply with Section 62.15 (1c) of the Wisconsin Statutes. A cost-plus-limited basis is defined as the cost of labor, materials and insurance, plus fifteen percent (15%) of the said cost to cover superintendence, general expense, overhead, and profit. Equipment necessary to complete work on a cost-plus-limited basis will be paid as an hourly rate and shall include no mark-up above the hourly rate.
 - 1. Labor The Owner will pay the contractor's labor costs at the contractor's personnel actual wage rates or wage rates previously agreed upon with the Owner, in writing, for personnel directly involved in producing and supervising the cost-plus-limited basis work. The Owner will only pay for hours that personnel are actually engaged in cost-plus-limited basis work. The Owner will also reimburse the contractor based on actual costs paid to, or on behalf of, workers for subsistence and travel benefits, health and welfare benefits, pension fund benefits and other contractor-paid benefits. The Owner will pay no part of wages or benefits for personnel connected with the contractor's forces above the classification of foreman and having only general supervisory responsibility for the cost-plus-limited basis work.
 - 2. Materials The Owner will pay the Contractor based on actual invoiced costs, including applicable taxes and actual freight charges, for Engineer-approved materials the contractor uses in force account work. If the contractor uses materials from the contractor's stock, the Owner and the contractor will agree on the price. Do not incorporate materials into the work without agreement. The Owner reserves the right to furnish materials as it deems appropriate. Make no claims for the costs, overhead, or profit on materials that the Owner provides.
 - 3. Insurance The Owner will pay the contractor based on actual invoiced costs for property damage, liability and workers compensation insurance premiums, unemployment insurance contributions and social security taxes on work performed on a cost-plus-limited basis. The contractor shall furnish satisfactory evidence of the rates actually paid.
 - 4. Equipment The Owner will pay for the use of contractor-owned equipment the Engineer approves for work on a cost-plus-limited basis only during the hours that it is operated to the nearest half hour. Contractor-owned equipment expense rates will be paid as given in EquipmentWatch Cost Recovery (formerly Rental Rate Blue Book). Base all rates on revisions effective January 1 for all equipment used in that calendar year and provide the Engineer with a copy of the rate sheet for each piece of equipment used.

http://equipmentwatch.com/estimator/

For equipment not listed in EquipmentWatch, provide an expense rate and furnish cost data to support that rate.

Rental equipment will be paid at the rental cost as invoiced by the rental company.

The Owner will not pay rental for tools or equipment with a replacement value of \$500 or less.

The Engineer may reject equipment not in good working condition or not properly sized for efficient performance of the work.

If a subcontractor performs work on a cost-plus-limited basis, the Owner will allow the contractor a markup on work the subcontractor performs as follows:

- Use a markup of 10% for the first \$10,000 of work.
- Use a markup of 2% for work in excess of \$10,000.

No claim for an addition to the contract sum shall be valid unless authorized in writing by the Engineer pursuant to section SC-11.05(A). Final proposed costs, including all back-up documentation, for authorized changes performed on a cost-plus-limited basis shall be submitted to the Engineer within 45 days of completing the authorized work.

SC-15.03. Substantial Completion. Add the following paragraph immediately following Paragraph 15.03.F.:

G. The Contractor, upon receipt of the punch list, shall submit all missing documentation and perform all work enumerated on the punch list within 14 calendar days from the date the Engineer issues the punch list.

If missing documentation and incomplete or unacceptable work remain after the 14 calendar days, the Engineer may restart contract time unless the Engineer and the Contractor mutually agree to extend this 14 calendar day requirement.

SC-15.06.A.3 Alternatives to Waivers of Liens. Delete Paragraph 15.06.A.3. in its entirety.

SC 15.06.D. Completion of Work. Delete Paragraph 15.06.D. in its entirety and insert the following in its place:

D. Completion of Work: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment, the Common Council, if applicable, has approved of the work and final payment, and the Board of Public Works has ratified final payment, and issuance of notice of the acceptability of the Work has been made.

SC-15.07.A. *Waiver of Claims*. Delete Paragraph 15.07.A. in its entirety and insert the following in its place:

A. The Owner shall not be precluded or estopped by any measurements, estimate or certificate made either before or after the completion and acceptance of the work and payment therefore, from showing the true amount and character of the work performed and materials furnished by the Contractor, or from showing that any measurement, estimate or certificate is untrue or incorrectly made, or that the work or materials do not conform in fact to the contract. The Owner shall not be precluded or estopped, notwithstanding any such measurement, estimate, certificate and payment in accordance therewith, from recovering from the Contractor and their sureties such damage as it may sustain by reasons of the Contractor's failure to comply with the terms of the contract. Neither the acceptance by the Board of Public Works and/or Common Council, nor any representative of the Board of Public Works and/or Common Council, not any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the Owner shall operate as a waiver of any portion of the contract or of any power herein reserved, or any right to damages herein provided. A waiver of breach of the contract shall not be held to be a waiver of any other or subsequent breach.

SC-15.08. Correction Period. Delete paragraphs 15.08.A. and 15.08.D in their entirety and insert the following in their place:

- A. If within one year after the date of final payment (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in paragraph 7.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work, or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Engineer's recommendation of final payment, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

SC-15.08. A *Correction Period.* Add the following new paragraph immediately after paragraph 15.08.A.4:

5. If Contractor cannot correct defective work within thirty days due to prevailing manufacturing or repair time, Contractor shall promptly provide temporary Work, satisfactory to Owner, until Work can be permanently corrected.

SC-15.06.A.2. Application for Payment. Add the following paragraph immediately after Paragraph 15.06.A.2.e :

f. List of all Subcontractors, Suppliers, and service providers required by SC-7.07.N.

SC-17.20. Substance Abuse Prevention Program. Add the following paragraphs immediately following Paragraph 17.19:

The contractor shall develop, implement and maintain a Substance Abuse Prevention Program as established by Section 103.503 of the Wisconsin State Statutes, and all acts amendatory thereof and supplementary thereto. This statute establishes certain prohibitions against the use and distribution of drugs and alcohol by employees of contractors and subcontractors that have been awarded contracts for or are performing work on public works projects subject to Wisconsin's prevailing wage requirements.

The program must cover all union and non-union employees who work on the Owner's construction sites. Failure to implement such a program prior to award shall result in the Bidder being held to be non-responsible. Following award of the Contract if the Contractor breaches the District Policy by failing to have or to effectively implement the policy, the Owner shall consider this a breach of the Contract by the Contractor and may terminate the Contract. This requirement shall be applicable to all subcontractors with subcontracts in excess of one percent (1%) of the bid.

The act specifically provides that effective May 1, 2007, contractors, subcontractors and their respective employees must comply with the following requirements:

- 1. Employees on covered public works projects are prohibited from (a) using, possessing, attempting to possess, distributing, delivering or being under the influence of drugs while performing work on covered public works projects, and (b) using or being under the influence of alcohol while performing work on covered public works projects.
- 2. Before a contractor or subcontractor begins a covered public works project, the contractor or subcontractor must have a written program for the prevention of substance abuse, including:
 - (a) A prohibition against the use of drugs or alcohol while working on covered public works projects.
 - (b) A requirement that contractor's or subcontractor's employees submit to random, reasonable suspicion and post-accident drug and alcohol tests.
 - (c) A requirement that contractor's and subcontractor's employees submit to drug and alcohol tests before beginning work on covered public works projects, unless those employees have been participating in a random testing program during the preceding 90 days.
 - (d) A procedure for notifying employees that fail a test or refuse to submit to testing that they may not perform work on covered public works projects until they submit to and pass drug and alcohol tests.
- 3. Each contractor and subcontractor is required to pay for the development, implementation and enforcement of its own substance abuse program. These costs cannot be passed on to covered public works projects.

- 4. Contractors and subcontractors cannot allow employees that fail a test or refuse to submit to substance abuse tests to work on covered public works projects.
- 5. All substance abuse testing must be conducted in accordance with guidelines for laboratory testing procedures and chain of custody procedures established by the Substance Abuse and Mental Health Services Administration of the Federal Department of Health and Human Services.

SC-18.01.A.2. *Giving Notice.* Delete Paragraph 18.01.A.2 in its entirety and insert the following in its place:

2. Delivered at or sent to the last business address known to the giver of the notice by United States Postal Service First-Class or Priority Mail, postage prepaid, or by United Parcel Service of America, Inc. UPS shipping service.

SC-18.11. Covenant Against Contingent Fees. Add the following new paragraph immediately after Paragraph 18.10:

- 18.11 Covenant Against Contingent Fees.
- A. The Contractor warrants that they have not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage or contingent fees. Breach of this warranty shall give the Owner the right to terminate the contract, or in its discretion to deduct from the contract price or consideration the amount of such commission, percentage, brokerage or contingent fees. This warranty shall not apply to commission payable to Contractors upon contracts or sales secured or made through bona fide established commercial or selling agencies maintained by the Contractor for purposes of securing business.

SC-18.12. *Officials Not to Benefit*. Add the following new paragraph immediately after Paragraph 18.11

18.12. Officials Not to Benefit

A. No member of the Public Body shall be admitted to any share or part of this contract or to any benefit that may arise there from but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

SC-18.13. Other Contracts. Add the following new paragraph immediately after Paragraph 18.12

18.13 Other Contracts.

A. The owner may award other contracts for additional work and the Contractor shall fully cooperate with such Contractors and carefully fit work within the contract including additional work added to the contract to that provided under other contracts as may be directed by the Owner. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other Contractor.

END OF SUPPLEMENTARY CONDITIONS

SECTION 600 SPECIAL PROVISIONS

CONTRACT 25-11

These Special Provisions cover items, correction, deletions or additions to the General Contract Conditions, the Standard Specs, the State Specs, and the City Provisions, and take precedence over those other parts of those specifications which are in conflict herewith.

200.03 - <u>TIME OF SUBSTANTIAL COMPLETION</u> The substantial completion date for Contract 25-11 2025 ALLEY RECONSTRUCTION shall be October 24, 2025.

If the contractor does not complete the work on or before the date set forth above for CONTRACT 25-11 2025 ALLEY RECONSTRUCTION or within the extra time allowed under a City Engineer granted time extension, the City will assess liquidated damages. The City will deduct nine hudred forty five dollars (\$945.00) for every calendar day that the work remains uncompleted from payments due to the contractor. An entire calendar day will be assessed for any period of time within a calendar day that the work is not substantially complete beyond 12:01am.

600.0 – Notice to Contractor

The Contractor shall be advised that the City of Wauwatosa's Standard Specifications have been updated and reorganized for contracts being bid after December 11th, 2023. Changes include a new Section 500 - General Standard Conditions to the Construction Contract, a new Section 501 – Supplementary Conditions, and a significant reorganization of the specifications for storm sewer, sanitary sewer, water main, removals, excavation, grading, concrete construction, and asphalt paving. During the reorganization, various technical updates have also been made to the technical specifications. The Contractor shall take extra care to review the specifications within this contract and ensure they have a thorough understanding of the specifications included herein. Adherence to the specifications provided shall be fully the responsibility of the Contractor.

600.1 – Alley Requirement

No staging, stockpiling, or storage is allowed on Bluemound Road. Beginning with the commencement of excavations and/or removals in the alley, the Contractor shall have no more than 30 calendar days (excluding holidays listed below) to substantially complete that alley, unless given the express written permission of the Engineer. If the alley is not substantially complete 30 days after the start of excavations and/or removals within it, the City of Wauwatosa will assess liquidated damages. The City will deduct Nine Hundred Forty Five Dollars (\$945.00) per calendar day per alley that the work remains uncompleted from payments due the Contractor. These damages will be in addition to the damages which will be

Page 600 - 1

assessed for failure to substantially complete the entire contract by October 24, 2025. An entire calendar day will be assessed for any period of time within a calendar day that the work is not substantially complete beyond 12:01am

600.2 – Plans and Specifications

A. A general description of the work along with the locations is contained in the Instructions to Bidders - Section 200. The plans for the construction of this project consist of 14 sheets with the file numbers 15-1092.

600.3 Utility Coordination

It is anticipated that the City will be performing utility and roadway work on N. 109th St from Wisconsin Avenue to Potter Road. The Contractor is responsible to coordinate their work with the other City contractors to ensure no delays are encountered.

600.4 – Starting the Work. Add the following new paragraph immediately after Paragraph 4.02.A of the Standard General Conditions:

- A. The Contractor shall not start work prior to **Tuesday**, **September 02**, **2025**.
- B. Upon starting the work, the Contractor shall work continuously and make substantial progress each day until the project is complete. Work days are defined as Monday through Friday (excluding adverse weather days and holidays). A sum of \$900 for each suitable day on which no substantial work or progress is completed may be deducted from any monies due to the Contractor. Substantial progress will be determined with the City in discussions with the Contractor.

600.5 Holiday Work Hours. Add the following new paragraph immediately after Paragraph SC-7.03.D of the Supplemental Conditions:

- 1. Do not perform work on the project during the following holiday periods:
 - Monday, September 01, 2025

600.6 – Reference Points. Strike paragraph SC-4.03.B in its entirety from Section 501. The contractor shall be responsible for staking on this project.

SECTION 601

MEASUREMENT AND PAYMENT

The bid price for each bid item shall include the furnishing of all materials, tools, labor, etc. It shall include excavation, disposition of surplus material, pipe laying, backfilling, surface replacement, sheeting, shoring, tunneling, augering, dewatering, furnishing and installing of fittings, connecting to existing manholes, restoration of public of private property disturbed or damaged by the Contractor's operation and cleanup, all as specified.

The item numbers referred to below correspond to the numerical portion of the number in the proposal. Contractor shall refer to the items below, the plans and the specifications for details of the work included.

DIVISION A – SANITARY SEWER

Item A5-04 – Replace Frame and Cover, Ex. San. MH's, City Supplied

<u>Description</u> This provision describes replacing existing sanitary frames and covers, as supplied by the City, at locations as shown on the Contract Drawings and directed by the Engineer.

Materials As specified in Section 610.

<u>Construction</u> Replacing existing sanitary manhole frames and covers shall include all labor, materials, equipment, and tools necessary for the removal and installation of a new sanitary manhole frame and cover, as furnished by the City of Wauwatosa, including but not limited to salvaging of the existing frame and cover to the City of Wauwatosa Department of Public Works.

<u>Measurement</u> The City will measure Replace Frame and Cover, Ex. San. MH's, City Supplied by each frame and cover acceptably replaced and Salvaged to the City, as confirmed by the Engineer.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODEDESCRIPTIONUNITA5-04Replace Frame and Cover, Ex. San. MH's, City SuppliedEA

Frames and covers installed as part of a complete manhole rebuild shall NOT be paid under this item.

DIVISION C – STORM SEWER

Item C1-48 to C1-63 – Class IV Reinforced Concrete Storm Sewer

<u>Description</u> This provision describes the installation of Class IV reinforced concrete pipe (RCP) storm sewer as shown on the Contract Drawings and

directed by the Engineer.

Materials Reinforced concrete pipe (RCP) as specified in Section 610.

<u>Construction</u> Storm sewer shall include all labor, material and equipment necessary for tree removal and trimming as required, pavement saw cutting and removal or lawn removal, excavation, removal and disposal of excess soil material, removal of incidental sewer and water main piping that is inactive, removal of incidental manhole structures and duct bank that are inactive, pipe installation including pipe bedding and pipe cover material in the pipe zone, mechanically compacted spoil or crushed concrete backfill and compaction, and permanent surface restoration where noted on drawings.

In addition to this, the contractor shall expose various utility crossing at locations of possible conflict, as shown on the plans, prior to commencing pipe laying so that either the utilities can be altered or the line and grade of the proposed relay can be adjusted. Electric and communication poles, pedestals, traffic signals, conduit and cable shall be protected and supported as necessary to install piping. This work will be incidental to the cost of the contract.

<u>Measurement</u> The City will measure Class IV Reinforced Concrete Storm Sewer horizontally from center-to-center of manholes or to the limits of the existing pipe remaining, whichever is applicable.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	UNIT
C1-48	12" Class IV Reinforced Concrete Storm Sewer	LF
C1-49	15" Class IV Reinforced Concrete Storm Sewer	LF
C1-50	18" Class IV Reinforced Concrete Storm Sewer	LF
C1-51	21" Class IV Reinforced Concrete Storm Sewer	LF
C1-52	24" Class IV Reinforced Concrete Storm Sewer	LF
C1-53	27" Class IV Reinforced Concrete Storm Sewer	LF
C1-54	30" Class IV Reinforced Concrete Storm Sewer	LF
C1-55	36" Class IV Reinforced Concrete Storm Sewer	LF
C1-56	42" Class IV Reinforced Concrete Storm Sewer	LF
C1-57	48" Class IV Reinforced Concrete Storm Sewer	LF
C1-58	54" Class IV Reinforced Concrete Storm Sewer	LF
C1-59	60" Class IV Reinforced Concrete Storm Sewer	LF
C1-60	66" Class IV Reinforced Concrete Storm Sewer	LF
C1-61	72" Class IV Reinforced Concrete Storm Sewer	LF
C1-62	78" Class IV Reinforced Concrete Storm Sewer	LF
C1-63	84" Class IV Reinforced Concrete Storm Sewer	LF

Class IV Reinforced Concrete Storm Sewer shall be paid for at the unit price bid per lineal foot measured horizontally for the various classes, types, backfill and sizes of pipe installed. Payment for pipe will be based on the actual number of feet installed, as measured by the City of Wauwatosa.

<u>Item C3-57 to C3-59, C3-61 to C3-63, C3-65 to C3-67, C3-69 to C3-71, C3-73 to C3-75 – Dia. Catch Basin w/ Sump</u>

<u>Description</u> This provision describes the installation of precast catch basins with sumps at the locations as shown on the Contract Drawings and directed by the Engineer.

<u>Materials</u> As specified in Section 610. Frame and grate as shown on plans. Frames, back boxes and grates shall be provided by the City.

<u>Construction</u> The unit bid price for this item shall include all labor, materials, equipment, and tools necessary for overhead tree removal and trimming as required, pavement sawcutting and removal or lawn removal, excavation, removal and disposal of excess soil material, removal of incidental sewer and water main piping that is inactive, removal of incidental structures and ductbank that are inactive, all necessary bypass pumping, structure installation including base, riser and cone, concrete bench, watertight connections with all incoming and outgoing sewers, stubs, steps, frames and covers, mechanically compacted spoil or crushed concrete backfill (as applicable) and compaction, and surface replacement where noted on drawings.

<u>Measurement</u> The City will measure Catch Basins with Sumps as each installed, including installation of frames and grates, as determined by the Engineer.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
C3-57	36" Dia. Catch Basin w/ 1' Sump	EA
C3-58	36" Dia. Catch Basin w/ 2' Sump	EA
C3-59	36" Dia. Catch Basin w/ 3' Sump	EA
C3-61	48" Dia. Catch Basin w/ 1' Sump	EA
C3-62	48" Dia. Catch Basin w/ 2' Sump	EA
C3-63	48" Dia. Catch Basin w/ 3' Sump	EA
C3-65	60" Dia. Catch Basin w/ 1' Sump	EA
C3-66	60" Dia. Catch Basin w/ 2' Sump	EA
C3-67	60" Dia. Catch Basin w/ 3' Sump	EA
C3-69	72" Dia. Catch Basin w/ 1' Sump	EA
C3-70	72" Dia. Catch Basin w/ 2' Sump	EA
C3-71	72" Dia. Catch Basin w/ 3' Sump	EA
C3-73	84" Dia. Catch Basin w/ 1' Sump	EA
C3-74	84" Dia. Catch Basin w/ 2' Sump	EA
C3-75	84" Dia. Catch Basin w/ 3' Sump	EA

Storm structures shall be paid for at the unit price bid per each for the various types, backfill, and sizes of structure installed. Payment for structures will be based on the actual number of each, as measured by the Engineer.

Item C4-02 – Connect to Existing Storm Structure (New Connection)

<u>Description</u> This provision describes connecting the existing storm sewer to new storm sewer or manhole at the locations as shown on the Contract Drawings and directed by the Engineer.

Materials As specified on plans.

<u>Construction</u> Connections to existing storm structures shall include all labor, material and equipment necessary for overhead tree removal and trimming as required, pavement sawcutting and removal or lawn removal, excavation, removal and disposal of excess soil material, removal of incidental sewer and water main piping that is inactive, removal of incidental manhole structures and duct bank that are inactive, all necessary bypass pumping, temporary plugs, core-drill of existing structures when necessary, installation of sleeves between new storm sewer and existing storm sewer or structure, mechanically compacted spoil or crushed concrete backfill and compaction, and surface replacement where noted on drawings.

<u>Measurement</u> The City will measure Connections to existing storm structures as each new connection installed.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
C4-02	Connect to Existing Storm Structure (New Connection)	EA

Connections to existing storm structures shall be paid for at the unit price bid per each for the various types and sizes of connections installed. Payment for connections to existing storm structures will be based on the actual number installed, as measured by the City of Wauwatosa.

Item C5-13 – Replace Frame and Cover, Ex. Storm MH's, City Supplied

<u>Description</u> This provision describes replacing existing storm inlet frames and covers, as supplied by the City, at locations as shown on the Contract Drawings and directed by the Engineer.

Materials As specified in Section 610.

<u>Construction</u> Replacing existing storm manhole frames and covers shall include all labor, materials, equipment, and tools necessary for the removal and installation of a new storm manhole frame and cover, as furnished by the City of Wauwatosa, including but not limited to salvaging of the existing frame and cover to the City of Wauwatosa Department of Public Works.

<u>Measurement</u> The City will measure Replace Frame and Cover, Ex. Storm MH's, City Supplied by each frame and cover acceptably replaced and salvaged to the City, as confirmed by the Engineer.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
C5-13	Replace Frame and Cover, Ex. Storm MH's, City Supplied	EA

Frames and covers installed as part of a complete manhole rebuild shall NOT be paid under this item.

Item C5 – Remove Existing Storm Sewer Structure

<u>Description</u> This provision describes the removal of existing storm structures at the locations as shown on the Contract Drawings and directed by the Engineer.

Materials As specified in Section 610.

<u>Construction</u> Storm structure removal shall include all labor, materials and equipment necessary to remove and dispose of existing storm structures in accordance with the City Specs.

<u>Measurement</u> The City will measure removal of existing storm structures as each storm structure removed.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
C5	Remove Existing Storm Sewer Structure	EA

Remove Existing Storm Sewer Structure shall be paid for at the unit price bid per each storm structure removed for the various classes, types, backfill, and sizes of storm structures removed. Payment for removal shall be based on the actual number removed, as measured by the Engineer.

DIVISION D – PAVING

Item D1-02 – Common Excavation

<u>Description</u> This provision describes performing all site grading including removal of existing asphaltic pavement and existing base course to subgrade elevation.

Materials (Vacant)

<u>Construction</u> Construction shall be in accordance with Section 620 for excavation and includes all excavation required to reach subgrade elevation. Removal of unstable and unsuitable materials below subgrade elevation as the engineer directs will be paid for as Excavation below Subgrade. <u>Measurement</u> The City will measure Common Excavation as a single lump sum unit of work, acceptably completed.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION
D1-02	Common Excavation

<u>UNIT</u> LS

Common Excavation, as measured above, is full compensation for all site grading (including any necessary filling), protection of utilities and structures, preparation to subgrade, removal and disposal of asphaltic pavements, existing base course materials, and maintaining drainage over subgrade. Removal of Asphaltic Surface Temporary shall be included in the price bid for Common Excavation.

Item D1-04 – Base Aggregate Dense 1 1/4-Inch

<u>Description</u> This provision describes furnishing and placing Base Aggregate Dense 1 ¹/₄-Inch in accordance with Section 620.

<u>Materials</u> Furnish Materials in accordance with Section 620 for Base Aggregate Dense 1 ¹/₄-Inch.

<u>Construction</u> Construct Base Aggregate Dense 1 ¹/₄-Inch in accordance with Section 620.

<u>Measurement</u> The City will measure Base Aggregate Dense 1 ¼-Inch by the ton acceptably completed. The contractor shall provide copies of the Base Aggregate Dense weight receipts to the Engineer at the end of each day. Tonnage shall be calculated by summing all material receipts from each truckload, with unused material from any truck being deducted from the total.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
D1-04	Base Aggregate Dense 1 ¼-Inch	TON

Base Aggregate Dense 1 ¼-Inch, as measured above, is full compensation for providing material; hauling; and placing to the limits the plans show or as the engineer directs.

Item D1-07 – Excavation below Subgrade

<u>Description</u> This provision describes removal of unsuitable or unstable material below the subgrade as identified by proof rolling at a depth and area determined by the engineer.
Materials (Vacant)

<u>Construction</u> Construction shall be in accordance with Section 620 for excavation and includes all excavation required to remove areas of unstable and unsuitable material below subgrade as identified and directed by the engineer.

<u>Measurement</u> The City will measure Excavation below Subgrade by the cubic yard acceptably completed.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
D1-07	Excavation below Subgrade	CY

Excavation below Subgrade, as measured above, is full compensation for removal, hauling, and disposal of unsuitable or unstable material below subgrade elevation.

Item D1-15 – Removing Concrete Pavement

<u>Description</u> This provision describes removing and disposing of concrete pavement as shown on the Contract Drawings and directed by the Engineer.

Materials (Vacant)

<u>Construction</u> Remove and dispose of concrete pavement including all surfaces or other pavements superimposed on it.

<u>Measurement</u> The City will measure Removing Concrete Pavement by the square yard acceptably completed. The City will measure the removal of concrete curb and gutter in conjunction with the removal of concrete pavement by the square yard acceptably completed under the removing concrete pavement item.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
D1-15	Removing Concrete Pavement	SY

Removing Concrete Pavement, as measured above, is full compensation for sawcutting, removing, and disposing concrete pavement to the limits the plans show or as the engineer directs.

Item D2-11 - Concrete Curb & Gutter, Remove and Replace

<u>Description</u> This provision describes removing and disposing of concrete curb and gutter and furnishing all materials, equipment, tools, labor and incidentals necessary for the construction of concrete curb and gutter at locations as shown on the Contract Drawings and directed by the Engineer.

<u>Materials</u> The grade and class of all concrete used shall conform to Grade A of said State Specs so that a minimum compressive strength of 3700 pounds per square inch is developed in 28 days of curing. Other grades may be used with the approval of the Engineer. The use of a water reducing admixture is subject to Section 501 of the State Specs. Delete all references to Part 7 of the State Specs.

<u>Construction</u> Remove and dispose of concrete curb and gutter including all surfaces or other pavements superimposed on it.

Curb & gutter construction shall conform to Section 601 of the State Specs. The surface of curb and gutter construction shall be finished by troweling and brushing.

Construct Concrete Curb and Gutter in accordance with the construction details shown in the plans.

Honeycombing occurring along the back of the curb and the flange face shall be pointed with mortar (1 part Portland cement to three parts Fine Aggregate) after removal of the forms. All excess concrete behind the curb shall be removed before backfilling.

Tie new work to existing concrete pavement or curb and gutter using tie bars driven or epoxied into the existing concrete. Two (2) tie bars in the gutter pan are required where proposed curb and gutter is adjacent to existing curb and gutter. Tie bars which connect proposed curb and gutter to pavement or proposed pavement to existing pavement shall be spaced at 30 inches on center, or as directed by the Engineer.

<u>Measurement</u> The City will measure Concrete Curb and Gutter removed and replaced by the linear foot measured along the flow line acceptably completed. No deduction will be made for inlet grates within the new curb and gutter.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	UNIT
D2-11	Concrete Curb and Gutter, Remove and Replace	LF

Concrete Curb and Gutter Remove and Replace, as measured above, is full compensation for removing, and disposing concrete curb and gutter to the limits the plans show or as the engineer directs and the construction required at driveways, alleys, and curb ramps; for providing materials, including concrete, expansion joints; for placing, finishing, protecting, and curing; and restoring the worksite. All tie bars required for construction of this item shall be incidental.

Item D3-01, D3-05 – Concrete Sidewalk and Driveway, Remove and Replace

<u>Description</u> The unit bid price for this item shall include all labor, materials, equipment, and tools necessary to remove and construct concrete walks as shown on the Contract Drawings and directed by the Engineer.

Materials Furnish material in accordance with Section 620 and Section 621.

<u>Construction</u> Construction shall be in accordance with Section 620 and 621. The slope across the walk shall be 1.5% unless otherwise directed or shown on the plans. The surface of sidewalk construction shall be finished by troweling and brushing, and sidewalks shall be 5 feet wide unless otherwise noted or directed by the Engineer. Concrete sidewalk and concrete drive approaches must be constructed on Base Aggregate Dense 1 ¼-Inch as shown in the plans. Base Aggregate Dense 1 ¼-inch for sidewalk and drive approaches will be paid for separately under the applicable bid item.

<u>Measurement</u> The City will measure Concrete Sidewalk and Driveway bid items by the square foot acceptably completed, as measured and determined by the Engineer.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	UNIT
D3-01	5" Concrete Sidewalk and Driveway, Remove and	SF
	Replace	
D3-05	7" Concrete Sidewalk and Driveway, Remove and	SF
	Replace	

Concrete Sidewalk and Driveway, Remove and Replace, as measured above, is full compensation for removing, placing, finishing, protecting, and curing concrete.

Item D4-01- Concrete Pavement

<u>Description</u> The unit bid price for this item shall include all labor, materials, equipment, and tools necessary for installation of concrete pavement.

Materials All concrete shall be in accordance with Section 620 and 621.

Construction Construction shall be in accordance with Section 620 and 621.

<u>Measurement</u> The City will measure Concrete Pavement by the square yard acceptably completed, as measured and determined by the Engineer.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE DESCRIPTION

<u>UNIT</u>

D4-01	7" Concrete Pavement	SY
D4-04	8" Concrete Pavement	SY
D4-07	9" Concrete Pavement	SY
D4-10	10" Concrete Pavement	SY

Concrete Pavement, as measured above, is full compensation for removing, placing, finishing, protecting, and curing concrete.

Item D5-02 – Topsoil and Sod

<u>Description</u> This provision describes furnishing and placing topsoil and sod at the locations the plan shows and the engineer directs.

Materials Furnish topsoil; bluegrass nursery sod; and Type A granular fertilizer.

<u>Construction</u> Cover the grade with 3 inches of topsoil. Before laying sod, a good butt joint shall be provided in all cases. No scraps of any size will be permitted for use. All sod must be fertilized with a Type A granular fertilizer; cost to be included in bid prices. To make a tight match with the undisturbed sod, a sod cutter may be used to line up and square up the trench. Sod must be placed to a butt joint and not wedged off with topsoil or laid on top of existing lawn. Sod shall be properly rolled or tamped in place and kept moist.

Topsoil must be properly placed within 48 hours after form removal. Sod must be properly placed within three (3) weeks after form removal, unless temperatures are consistently over 82°F during that time.

All sod must be watered thoroughly each day for ten (10) consecutive calendar days (excluding Sundays) by the Contractor.

The Contractor must notify the City when watering on site. In extreme heat, the Contractor must continue watering daily until the sod is accepted as being established by the Engineer. If the Contractor chooses to use City of Wauwatosa water, water may be obtained at the City's Public Works facility at 11100 W. Walnut Road, at the Contractor's expense.

On the last day of the 10- day watering period, the Contractor shall provide written notice to each private property where watering has been completed stating that further watering is the responsibility of the property owner.

<u>Measurement</u> The City will measure Topsoil and Sod by the square foot acceptably completed.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION
D5-02	Topsoil and Sod

<u>UNIT</u> SF Top Soil and Sod, as measured above, is full compensation for furnishing and placing earth fill, topsoil, blue grass nursery sod, and Type-A fertilizer; and watering for 10 days.

Item D5-03 – Topsoil, Seed, and Mulch

<u>Description</u> This provision describes furnishing and placing topsoil, seed, fertilizer, and mulch at the locations the plan shows and the engineer directs.

<u>Materials</u> Furnish topsoil, seed, fertilizer, and mulch meeting the requirements of Section 605 of these specs.

Construction Construct in accordance with Section 605 of these specs.

<u>Measurement</u> The City will measure Topsoil, Seed, and Mulch by the square yard acceptably completed, as measured and determined by the Engineer.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION
D5-03	Topsoil, Seed, and Mulch

Top Soil, Seed, and Mulch, as measured above, is full compensation for furnishing and placing earth fill, topsoil, seed, Type-A fertilizer, and mulch; and watering in accordance with Section 605.

Item D7-03 – Adjusting Storm Manhole

<u>Description</u> This provision describes adjusting existing storm manholes to match new and replacement pavement and sidewalk.

<u>Materials</u>

Construction

<u>Measurement</u> The City will measure Adjusting Storm Manhole by each structure acceptably adjusted.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION
D7-03	Adjusting Storm Manhole

<u>UNIT</u> EA

<u>UNIT</u>

Adjusting Storm Manhole, as measured above, is full compensation for all labor, tools, and materials required for the removal of existing frame and cover, adjustment rings, cleaning and surface preparation of the structure, and the furnishing and installing, including mortar, of adjustment rings for chimney

rehabilitation of structure frames to the proper grade and slope as shown on the Contract Drawings or as directed by the Engineer.

Item D7-04 – Adjusting Sanitary Manhole

<u>Description</u> This provision describes adjusting existing sanitary manholes to match new and replacement pavement and sidewalk.

<u>Materials</u>

Construction

<u>Measurement</u> The City will measure Adjusting Sanitary Manhole by each structure acceptably adjusted.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
D7-04	Adjusting Sanitary Manhole	EA

Adjusting Sanitary Manhole, as measured above, is full compensation for all labor, tools, and materials required for the removal of existing frame and cover, adjustment rings, cleaning and surface preparation of the structure, and the furnishing and installing, including mortar, of adjustment rings for chimney rehabilitation of structure frames to the proper grade and slope as shown on the Contract Drawings or as directed by the Engineer.

Item D5-76 – Inlet Protection

<u>Description</u> The unit bid price for this item shall include all labor, materials, equipment, and tools necessary for the installation and maintenance of Inlet Protection at the locations directed by the Engineer.

Materials Furnish material in accordance with Section 628 of the State Specs.

<u>Construction</u> Construction shall be in accordance with Section 628 of the State Specs. Inlet Protection shall include all labor, material and equipment necessary for furnishing, hauling, and placement of inlet protection materials, cleanup, maintaining and removing all devices.

<u>Measurement</u> The City will measure Inlet Protection by each inlet acceptably protected, as measured and determined by the Engineer.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODEDESCRIPTIOND5-76Inlet Protection

<u>UNIT</u> EA Inlet Protection, as measured above, is full compensation for furnishing, hauling, and placement of inlet protection materials; cleanup, and all incidental work related to inlet protection required by local, state, and federal ordinances, statutes, permits, and regulations; not specifically included for payment under any other unit prices.

Item D6-01 – Traffic Control

<u>Description</u> Installation and maintenance of traffic control components for diversion of traffic around the work site.

<u>Materials and Construction</u> Traffic control shall include all traffic control plan preparation, labor, material and equipment necessary for furnishing, maintaining and removing all approved traffic control devices. It shall include placing signs, barricades, and all other items required by the traffic control plan, any necessary covering and uncovering of signs, and removal of all items when traffic control is no longer necessary.

Measurement Traffic control will be measured lump sum for labor and materials.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNI</u>	Т
D6-01	Traffic Control	LS	

Traffic control shall be paid for at 50 percent for maintaining traffic control, and 50 percent for the removal of equipment as determined by the City of Wauwatosa.

DIVISION E – STREET LIGHTING & COMMUNICATIONS

Item E1-01 – Locate, Test and Protect Existing and New Circuits

<u>Description</u> This work shall start at the notice to proceed and consists of repairing damage to existing circuits, locating existing underground wiring as affected due to work associated with project, testing new equipment, and testing new 600V underground circuit(s).

Materials (Vacant)

<u>Construction</u> If there are overhead and underground utility facilities located within the project limits, refer to the plans and specifications for any anticipated utility adjustments.

The Contractor shall coordinate his construction activities with a call to Diggers Hotline or a direct call to the utilities which have facilities in the area as required per statutes (see General Provisions for a detailed list of utility contact information). Contractor shall be responsible for locating existing underground street lighting and traffic signal cables within the project limits.

Bidders are advised to contact each utility company prior to preparing their bids. Any damage to public or private utilities shall become the responsibility of the Contractor. Satisfactory repair or replacement shall be completed at the Contractor's expense.

Where there is enclosed or unenclosed lighting cable within the project limits, care must be exercised by the Contractor to avoid damage to the cable during work. Where the Contractor or any of his Subcontractors damage any part of the lighting system which results in inoperative street lights or traffic signals, or an outage has occurred anywhere within the project limits, the damage shall assessed within 24 hours. The damage shall be repaired within 72 hours by a qualified electrician at the Contractor's expense, and in accordance with City specifications.

Should a reasonable time limit be exceeded, as determined by the Engineer, the City reserves the right to hire a third party, independent of the Contractor, to perform the repair(s). The cost of hiring a third party and having them repair the damage will be paid for by the Contractor. Contractor agrees they will be informed of the final cost, which will be deducted from monies owed in a subsequent payment.

In lieu of hiring a third party, the City may also choose to fine the Contractor as they see fit for the circumstances, to be charged each day the lights are not properly functioning outside of Engineer's determined time limit.

Repairs shall be investigated and completed promptly in accordance with City of Wauwatosa specifications (20 inch depth, splices, mason sand envelope, etc.). The City may require temporary repairs at the Contractor's expense, including the installation of overhead facilities, to accelerate the return of functional electrical systems. Backfilling of the curb at repair locations must not be done until all needed repairs have been made and inspected by the City Electrical Supervisor.

When applicable, cable work at existing conduit locations damaged during construction is to be corrected by utilizing newly placed conduit which has been laid as part of the contract work. Frost loops of at least 12 inches shall be provided where cables enter conduit systems. **All buried cable must be enveloped with mason sand.**

The Contractor shall perform acceptance tests for circuits installed under this project and shall record that information on INSULATION AND EQUIPMENT TESTING SCHEDULE after construction is completed. The contractor shall create and provide all documentation to the City at completion of tests (with all system issues corrected).

Testing shall occur in the presence of the Public Works Department personnel. The Contractor and the City shall agree on a time for testing of the completed installation which is generally toward the end of the contract period.

A general system "Test Burn" shall be performed with any failed luminaires being replaced, along with any other non-functioning component. Only one test burn for the purpose of identifying initial failures will be required.

For insulation testing (on new underground conductors): Fuses shall be removed from all fuse holders to not damage LED luminaire drivers during testing. Each conductor (entire length) shall have its insulation tested to ground from the control cabinet. The conductors shall have a reading of infinity, at 1000Vdc impressed voltage to be accepted. If any readings do not meet the infinity requirement, the contractor shall sequentially test each portion (between termination points) of the lighting circuit till the issue(s) can be identified. The issues shall be mitigated by corrections (i.e. tighten lugs) or replacements (i.e. replace defective splices, conductors) - additional splices will NOT be allowed.

If equipment associated with the project does not operate properly or fails the tests as outlined, it is the Contractor's responsibility to determine issues and to correct and/or repair defect at his own expense.

<u>Measurement</u> The City will measure Locate, Test, and Protect Existing and New Circuits as a single complete unit of work.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	<u>UNIT</u>
E1-01	Locate, Test and Protect Existing and New Circuits	LS

Locate, Test, and Protect Existing and New Circuits, as measured above, is full compensation for testing, locating and protection of existing and new circuits, repairs, replacement materials; for removals and replacement of all installed materials; and for all labor, equipment, tools and incidentals necessary to complete the work.

INSULATION AND EQUIPMENT TESTING FOR PROJECT:				COMPANY:	
EQUIPMENT OR CIRCUIT NAME:	TEST BY:	TEST RESULT PASS OR FAIL	DATE TESTED:	OWNER OR ENGINEER PRESENT:	COMMENTS:

Item E1-42- 2" PVC Conduit

<u>Description</u> All work under these items shall be completed in accordance with Section 652 of the State Specs except as hereinafter amended. Conductors shall be installed after conduit is installed.

<u>Materials</u> The conduit and fittings shall comply with Section 652 of the State Specs. Engineer approved backfill shall be used.

<u>Construction</u> The conduit shall be installed in accordance with Section 652 of the State Specs.

Conduit shall be installed between 24" to 30" below grade at roadway crossings, from back of curb to back of curb (use pavement grade for depth). Conduit shall only be installed in other areas and/or depths if shown on the plans.

Conduit for this item shall be bored or open cut trench. Backfill any voids left from the work with mechanically compacted crushed concrete and restore any disturbed or damaged areas. All restoration is incidental to this item.

An arrow shall be impressed or cut into top of curb by the electrical contractor at any location with a 2-inch conduit crossing in the roadway. Arrows shall be parallel to the crossing.

<u>Measurement</u> The City will measure PVC Conduit, completed in accordance with the contract, by the linear foot of completed work.

<u>Payment</u> The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM CODE	DESCRIPTION	UNIT
E1-27	1" Diameter Schedule 40 PVC Conduit	LF
E1-28	1" Diameter Schedule 80 PVC Conduit	LF
E1-32	1 ¼" Diameter Schedule 40 PVC Conduit	LF
E1-33	1 ¼" Diameter Schedule 80 PVC Conduit	LF
E1-36	1 ¹ / ₂ " Diameter Schedule 40 PVC Conduit	LF
E1-37	1 ½" Diameter Schedule 80 PVC Conduit	LF
E1-41	2" Diameter Schedule 40 PVC Conduit	LF
E1-42	2" Diameter Schedule 80 PVC Conduit	LF
E1-46	2 ¹ ⁄ ₂ " Diameter Schedule 40 PVC Conduit	LF
E1-47	2 ¹ ⁄ ₂ " Diameter Schedule 80 PVC Conduit	LF
E1-51	3" Diameter Schedule 40 PVC Conduit	LF
E1-52	3" Diameter Schedule 80 PVC Conduit	LF
E1-56	4" Diameter Schedule 40 PVC Conduit	LF
E1-57	4" Diameter Schedule 80 PVC Conduit	LF
E1-61	6" Diameter Schedule 40 PVC Conduit	LF
E1-62	6" Diameter Schedule 80 PVC Conduit	LF

PVC Conduit measured as above, is full compensation for furnishing and installing all materials, including but not limited to fittings and couplings, for excavating trenches, excavating bore pits, boring, placing conduit, and backfilling, for restoring disturbed or damaged areas, including but not limited to pavement restoration, seeding and sodding, transporting and disposing of surplus material, and for all labor, tools, equipment, materials, and incidentals necessary to complete this item of work.

SECTION 605 CONTENTS

605 - GENERAL PROVISIONS FOR CONSTRUCTION

605.1 -	General Conditions					
	605.1.01 - Plans and Specifications					
	605.1.02 - Permits and Fees					
	A. Use of City Water	605-4				
	605.1.03 - Cooperation by Contractor	605-5				
	A. Traffic	605-5				
	1. Payment	605-6				
	2. Materials	605-6				
	3. Trench Restoration	605-6				
	4. Pedestrians	605-6				
	B. Noise and Dust Control	605-7				
	C. Notice to Utilities	605-7				
	D. Graffiti	605-9				
	E. Snow Removal	605-9				
	605.1.04 - Scope of Work	605-9				
	A. Site Investigation and Representation	605-9				
	B. Field Relocation	605-10				
	605.1.05 - Protection of Work	605-10				
	A. Access for Emergency, Public Transportation,					
	and Postal Vehicles	605-10				
	605.1.06 - Legal Relations	605-11				
	A. General	605-11				
	1. Safetv	605-11				
	2. Construction Safety Program	605-11				
	3. Safety Equipment	605-11				
	4. Complaints	605-11				
	5. Notice of Work	605-12				
	6. Traffic Safety and Access to Property	605-12				
	B. Fire Prevention and Protection	605-13				
	605 1 07 - Prosecution and Progress	605-13				
	A. Preconstruction Conference Requirements	605-14				
	B. Preconstruction Survey	605-15				
	C. Overall Construction Schedule	605-15				
	605 1 08 - Mailboxes	605-17				
	605.1.09 - Payment	605-17				
	,					

605.2 - Construction General				
605.2.01 – Driveway Access	605-18			
605.2.02 – Backfill				
A. Maintenance of Trench Surface	605-18			
605.2.03 - Pavement and Site Restoration	605-18			
A. Pavement Restoration	605-18			
1. Protection of Structures	605-18			
B. Lawn Replacement and Landscaping	605-18			
1. General	605-19			
2. Soil Preparation	605-19			
3 Sod	605-19			
4 Seed	605-19			
C. Signage	605-20			
605.2.04 - Protection of the Environment	605-21			
A General	605-21			
B Protection of Sewers	605-22			
C. Protection of Air Quality	605-22			
D. Erosion Control for Sewer & Water Installations	000 22			
in Paved Areas	605-22			
1. General	605-22			
2. Control of Surface Runoff	605-23			
a. Storm Water Inlet and Catch Basin	605-23			
b. Gutter Detention	605-24			
3. Control of Trench Sediment.	605-25			
a. Dewatering	605-25			
b. Downstream Sewer Protection	605-26			
4. Payment	605-26			
F Protection of Trees and Shrubs	605-26			
1 Roots	605-27			
	000 21			
Table for Basic Formula Value of Trees				
Based on Caliper Size	605-29			
F. Protection of Street Lights and				
Traffic Signals	605-30			
1. Time Limits for Repairs	605-30			
2. Temporary Lighting	605-30			
G. General Clearances to Utilities	605-31			

SECTION 605 – GENERAL PROVISIONS FOR CONSTRUCTION

SECTION 605.1 - GENERAL CONDITIONS

605.1.01 - PLANS AND SPECIFICATIONS

All work performed and all materials supplied under this contract shall be in strict compliance with the Contract Documents including plans and specifications and to all other specifications, codes, and ordinances referred to or established by law. The following Specifications are made a part of these Standard Specifications:

- A. The "Standard Specifications for Sewer & Water Construction in Wisconsin" Sixth Edition, December 22, 2003, and any addenda where applicable to sewer and water construction, hereinafter called "Standard Specs."
- B. The current edition with supplements of the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, hereinafter called "State Specs," excluding Bid Items and Part 7 – Quality Management Program. The "current edition" shall include all projects approved for bidding by the Wauwatosa Board of Public Works on or after November 1st of the preceeding year of the edition year. ie - The 2023 Edition would be effective for projects approved from November 1st, 2022 to Oct. 31st, 2023.

In general, all sewer, water, paving, or other construction work in the City of Wauwatosa shall be in accordance with the "Standard Specs", these "City Specs" as they modify and amend the "Standard Specs", "State Specs", and any Contract Special provisions and the terms of the Contract. The Contractor shall also refer to special notes on each sheet of the plans and shall arrange and conduct the work so as to conform to the requirements thereon. These notes shall be an integral and binding part of the specifications.

Copies of the aforementioned Standard Specs are on file at the Engineering Department of the City of Wauwatosa for use and reference on the premises by prospective bidders. An electronic copy of the State Specs can be downloaded from WisDOTs website at the following web address:

https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/rdwy/ssarchive.aspx

605.1.02 - PERMITS AND FEES

The Contractor shall obtain all necessary permits except as noted below. The cost of any permits or fees shall be included in the Contractor's base bid and contract price except where otherwise noted. The amounts for permits and fees are subject to change.

The occupancy permit fee will be waived for this Contract.

There will be **no** permit fee for water services or sewer laterals installed or altered. A properly licensed plumber or utility contractor shall do this work, and the Wauwatosa Plumbing Department has authorized the City's Public Works Inspectors to make detailed inspections of any and all portions of work or materials relating to any sewer lateral or water service work. The City's Plumbing Inspector may make verification inspections from time to time.

The Contractor will not be billed by the City for inspection time charged to this project by the Engineering Division except as specified in the Standard Specs on Page 1-49, Subsection 1.10.5: Contractor to be charged for inspection after time allowed for completion has expired.

If L.P. Gas is used in a construction shanty, a permit must be obtained from the Fire Department at the Contractor's expense.

A. USE OF CITY WATER

Water is only available from select hydrants as identified by the City of Wauwatosa Water Department.

The Contractor shall secure permission from the Water Department, obtain all necessary permits, pay any fees **at their own expense**, and notify the Engineer and Fire Department before obtaining water from fire hydrants. The Contractor shall make their own arrangements and pay all costs for water, connecting to hydrants, and transporting the water to the construction work. The water department will bill the Contractor based on the actual metered amount of water used. The contractor shall not use a hydrant without a hydrant meter in place. Use of a hydrant without a meter will result in the contractor being charged a \$50 fee per use in addition to being charged for the water to fill the water tank to full capacity with the costs to be deducted from monies due the Contractor.

Upon payment of the fees, the City will furnish one hydrant meter setting with vacuum breaker, backwater valve, and control valve. The Contractor shall be responsible for the meter setting and valves at each location water is drawn. By using the meter setting, cross connections to and contamination of the City's water supply is minimized.

Hoses from hydrants shall not extend across roadways which are open to traffic, unless they are properly protected from any wheel loads. Water main breaks caused by pressure surges introduced into the system from wheel loads or improper use of hydrants shall be repaired at the expense of the Contractor.

The Contractor shall use only special hydrant-operating wrenches to open hydrants. Hydrant valves must be opened "full" since "cracking" the valve causes damage to the hydrant. If any hydrants are damaged, the Contractor will be held responsible and shall notify the appropriate agency and the Engineer so that all damage can be repaired as quickly as possible. Upon completion of the work, the Contractor shall remove all temporary piping and facilities. Fire hydrants shall be completely accessible to the Fire Department at all times. No material or other obstructions shall be placed closer to a fire hydrant than permitted by ordinances, rules, or regulations, or within 10 feet of a fire hydrant in the absence of such ordinances, rules, or regulations.

605.1.03 - COOPERATION BY CONTRACTOR

A. TRAFFIC

Prior to the preconstruction meeting, the Contractor may be requested by the City to submit to the Engineer, for approval, a written schedule of operations and proposed construction sequencing and staging.

The Contractor shall start work by making the proper notifications as specified, and by placing the necessary detour signs, barricades, warning lights, and warning and information signs to provide for the safety and convenience of the public. Strict adherence to the Manual on Uniform Traffic Control Devices (MUTCD) and Wisconsin MUTCD Supplement is required. Control of arterial traffic shall be in conformance with Section 643 of the current State Specs.

The street shall be kept open to all traffic, and the Contractor shall keep the portions of the street being used by public traffic in such condition that traffic will be reasonably and adequately accommodated, unless otherwise noted. The Contractor shall provide and maintain in safe and adequate condition temporary approaches, crossings, and intersections with roads and necessary driveways. **The Contractor shall bear all of the expense** of maintaining traffic over the section of street undergoing improvement and the construction and maintenance of such approaches, crossings, intersections, and other features as may be necessary without direct compensation except as to those features of such work which are a part of planned, completed construction work.

During the life of the project the Contractor, at all locations, shall provide means satisfactory to the Engineer for crossings for the traffic on intersecting streets in a manner which will not interrupt the flow of such traffic or be harmful to the improvement, unless otherwise noted.

During a suspension of work under the terms of the contract or authorized by the Engineer due to unfavorable weather or other conditions which are not the fault of the Contractor, and which make such suspension advisable, the Contractor shall make passable and shall open to traffic such portions of the street under improvement and such temporary roadways or portions thereof as may be agreed upon between the Contractor and Engineer for temporary accommodation of necessary traffic during the period of suspension. During the period of suspension, the surface maintenance of the traveled way of the temporary route or line of travel agreed upon shall be **at the expense of the Contractor**. When work is resumed, the Contractor shall replace or renew any work or material lost or damaged because of such temporary use of the roadway under improvement. The Contractor shall remove, when required, work or material used in the temporary maintenance

thereof, and shall complete the improvements in every respect as though its prosecution had been continuous and without interference, except as may otherwise have been agreed upon by the Contractor and Engineer at the time arrangements were made for the temporary accommodation of necessary traffic during the anticipated period of suspension.

1. PAYMENT

If there is a separate bid item for Traffic Control, the lump sum price shall be payment in full for all work specified. If the contract does not include a separate bid item for Traffic Control, then the work required shall be considered as incidental to the contract.

2. MATERIALS

The Contractor shall furnish, install, and maintain during construction all standard construction signing, barricade(s), barricade lights, and delineation necessary to protect the public traveling in and around the project. Signs shall have reflective backgrounds. Barricades and drums left in place to delineate the traveled way through and around obstructions shall have steady burning lighting affixed to each barricade or drum during darkness. All other barricades shall have flashing warning lights.

3. TRENCH RESTORATION

The Contractor shall replace the pavement in the trench areas, with the specified material, as soon as possible so traffic can utilize the entire width of the roadway, unless otherwise noted. The Contractor shall place a sufficient number of barricades to provide for adequate tapers into and around the sanitary sewer, storm sewer, or water main construction sites.

4. PEDESTRIANS

The Contractor shall make a special effort to accommodate ADA pedestrian traffic in and through the project, particularly by the required replacement of public sidewalk prior to other work, **at their own expense**. Sidewalks not usable shall be barricaded and clearly signed to indicate that the walk is closed per Part 6 of the MUTCD and Wisconsin MUTCD Supplement, and temporary pathways and/or detours shall also be clearly marked and/or signed in this manner. Where removal of sidewalk keystones (and adjacent stones) are specified at intersections, the new curb radius must be in place prior to such removal. However, if the Contractor elects to remove the walks earlier, the Contractor must provide temporary crushed aggregate to grade in their place. Temporary bridges for pedestrians shall be provided as required by the plans or special provisions or as ordered by the Engineer over new pavement, sidewalks, trenches, street intersections, and any other locations as determined by the Engineer. **This work shall be incidental to the contract**.

B. NOISE AND DUST CONTROL

The Contractor shall so conduct all their operations that they will cause the least annoyance to the residents in the vicinity of the work, and shall comply with all applicable local ordinances, **at the Contractor's own expense**. The compressors, hoists, and other apparatus shall be equipped with such mechanical devices as may be necessary to minimize noise and dust. Compressors shall be equipped with silencers on intake lines.

All gasoline or oil operated equipment shall be equipped with silencers or mufflers on intake and exhaust lines. Storage bins and hoppers shall be lined with material that will deaden the sounds. The operation of dumping rock and of carrying rock away in trucks shall be so conducted as to cause a minimum of noise and dust.

Vehicles carrying rock, concrete, or other material shall be routed over such streets as will cause the least annoyance to the public and shall not be operated on public streets between the hours of 9 p.m. and 7 a.m., or on Saturdays, Sundays, or legal holidays unless approved by the Engineer.

All unpaved streets, roads, detours, or haul roads used in the construction area shall be given an approved dust-preventive treatment or periodically watered to prevent dust. Applicable environmental regulations for dust prevention shall be strictly enforced. Any application of dust palliative shall be incidental to the contract unless otherwise stated as a separate base bid item.

C. NOTICE TO UTILITIES

The Contractor shall give notice in writing to all utilities (such as the gas, electric, telephone, transport company, and all other utilities) that may be affected by the Contractor's operations at least 3 working days before starting work.

The Contractor shall contact all private utilities, through Diggers Hotline, for necessary location or relocation of facilities including, but not limited to, poles, wires, and underground services.

Where performing trenchless work operations, the Contractor should expose ("daylight") all known utility crossings to verify the location of underground utilities prior to conducting work operations. The Contractor shall expose **ALL** City facilities, to include public/private sewer & water laterals within the right-of-way. City facilities shall be exposed to 1' below the facility to allow for visual inspect the bore head crossing to ensure no damage has been cone. The Engineer may allow the Contractor to perform pre & post televising on sewer mains and laterals in lieu of daylighting these facilities.

The Contractor shall also contact the Wauwatosa Fire and Police Departments when closing a street to all but municipal access. The Contractor shall also be responsible for notifying residents as necessary in regard to the work or the work of subcontractors. Adjustments to MMSD facilities require 72 hour notice to MMSD.

The Contractor shall not hinder or interfere with any person in the protection of such work, or with the operation of buses, at any time, except with the written permission of the Engineer. The Contractor must obtain all necessary information in regard to existing utilities and shall protect such utilities from injury and shall avoid unnecessary exposure so that they will not cause injury to the public. The cost of making repairs in case of any damage whatsoever shall be borne by the Contractor. The Contractor shall also give 3 working days of notice to the following City of Wauwatosa departments and other affected organizations:

- Traffic & Electrical Supervisor Randy Michelz 414-471-8429
- Engineering Division 7725 W. North Avenue Construction Inspection & Survey Engineer Nick Deming 414-479-3541
- 3. Fire Department
 1643 Underwood Ave.
 911 (Emergencies)
 414-471-8490 (Non-emergencies)
- 4. Police Department
 1700 N. 116th St.
 911 (Emergencies)
 414-471-8430 (Non-emergencies)
- Water Department Water Department Supervisor Adam Florin 414-471-8480 ex: 5915
- 6. Street and Sewer Department 414-471-8422
- Forestry Section Urban Forestry & Grounds Superintendent Alex Krutch c. 414-975-0635
- Milwaukee Metropolitan Sewerage Commission District Construction Services
 260 W. Seeboth Street
 414-225-2241

- 9. Digger's Hotline 800-242-8511 (811)
- Milwaukee County Transit Company David Locher
 1942 N. 17th Street
 Milwaukee, WI 53205
 414-343-1727

D. GRAFFITI

The Contractor shall not allow graffiti to remain on any vehicle, equipment, barricade, materials or structures owned, rented, installed, or constructed by the Contractor. The Contractor shall remove graffiti within 48 hours of discovery **at their own expense.** Failure to remove graffiti within 48 hours may result in the City removing the graffiti at the Contractor's expense. These costs shall be deducted from monies owed to the Contractor.

E. SNOW REMOVAL

Provide for snow removal in those areas closed to traffic and outside of the traveled way as required to facilitate safe construction operations and provide access to residents. Proper drainage and erosion control shall be maintained in order to minimize runoff across lanes open to travel. The City of Wauwatosa or other Authority Having Jurisdiction (AHJ) shall be responsible for maintaining travel lanes fully open to traffic and sidewalks that remain open to traffic or as otherwise defined by city ordinances. The Contractor shall be responsible to clear snow from closed travel lanes (including travel lanes closed to through traffic) and sidewalks to the satisfaction of the City Engineer prior to opening closed lanes and sidewalks to traffic. The contractor shall maintain any and all traffic control for closed lanes and sidewalks that may be impacted by the snow removal operations of the City of Wauwatosa or other AHJ. This work shall be considered incidental to the contract.

605.1.04 - SCOPE OF WORK

A. SITE INVESTIGATION AND REPRESENTATION

The Contractor acknowledges that they have satisfied themselves as to the nature and location of the work, the general and local conditions – particularly those bearing upon the availability of transportation, disposal, handling, and storage of materials, and those bearing upon vehicular access to commercial, industrial, and residential properties – the availability of labor, water, electric power, and roads, uncertainties of weather, river stages, or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during the prosecution of the work, and all other matters which can in any way affect the work or the cost thereof under this Contract. The Contractor further acknowledges that they have satisfied themselves as to the character, quality, and quantity of surface and subsurface materials and groundwater to be encountered from inspecting the site, as well as from information presented herein as a part of these Contract Documents. Any failure by the Contractor to acquaint themselves with all the available information will not relieve the Contractor from responsibility for properly estimating the difficulty or cost of successfully performing the work. Neither the Owner nor the Engineer assumes responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner or the Engineer.

B. FIELD RELOCATION

During the progress of the work, minor relocation of the work may be necessary. Such relocation shall be made only with the agreement of the Engineer. If existing structures are encountered that will prevent construction as shown, notify the Engineer before continuing with the work in order that the Engineer may make such field revisions as necessary to avoid conflict with the existing structures, or to have the affected utility altered by others. The Contractor shall proceed to work on other portions of the project during the delay. No additional compensation will be given for such delays. If the Contractor proceeds with the work despite this interference, they shall be responsible for any damage that may occur.

605.1.05 - PROTECTION OF WORK

A. ACCESS FOR EMERGENCY, PUBLIC TRANSPORTATION AND POSTAL VEHICLES

Notify the fire department, police department, and applicable public and school transportation companies at least 3 working days before closing any street or portion thereof. No closing shall be made without appropriate concurrence of aforementioned departments. Notify said departments when the streets are again passable for emergency vehicles. Maintain vehicle access to consecutive arterial crossings or dead end streets in excess of 300 linear feet, unless special written permission has been obtained from the Fire and Police departments.

The Contractor shall provide a 24 hour emergency telephone number or numbers with the Fire and Police departments so that contact may be made easily at all times in case of barricade or flare trouble or other emergencies.

The Contractor shall develop a written plan for the storage of vehicles and materials at the construction site. This plan shall be submitted to the Engineer for approval prior to starting construction. If the Contractor wishes to use any property outside the City right-of-way, they must provide written approval from the property owner to the City.

Maintain postal service facilities in accordance with the requirements of the US Postal Service.

605-10

605.1.06 - LEGAL RELATIONS

A. GENERAL

1. SAFETY

The Contractor shall be solely and completely responsible, at their expense, for conditions at the job site, including safety of all persons (including employees) and property during execution of the work. This requirement shall apply continuously and not be limited to normal working hours. Project safety provisions shall conform to US Department of Labor (OSHA) requirements, the Wisconsin Occupational Safety and Health Act, and all other applicable laws including those which may be specified in other parts of these Contract Documents, and shall in any event comply with the common law standards of due care. Where any of these are in conflict, the more stringent shall apply. The Contractor's failure to thoroughly familiarize themselves with these safety provisions shall not relieve the Contractor of responsibility.

2. CONSTRUCTION SAFETY PROGRAM

The Contractor shall develop, and maintain for the duration of the Contract, a safety program that will effectively incorporate and implement, as a minimum, all required safety provisions. The Contractor's Superintendent shall be qualified and experienced in construction safety and shall be at the work site and be authorized to supervise and enforce compliance with the safety program. A written outline of the Contractor's safety program may be required prior to commencing any operations, for record purposes only.

3. SAFETY EQUIPMENT

The Contractor shall maintain at the job site safety equipment applicable to the work as prescribed by the governing safety authorities, including all articles necessary for giving first aid to the injured, and shall establish the procedure for the immediate removal to a hospital or a doctor's care of persons who may be injured on the job site. The Contractor shall do all work necessary to protect the general public from hazards including, but not limited to, surface irregularities or un-ramped grade changes in pedestrian sidewalks or walkways, and trenches or excavations in roadways.

Barricades, lanterns, and proper signs shall be furnished by the Contractor and placed as necessary to insure safety to the public and the work at their own expense.

4. COMPLAINTS

All complaints received by the Contractor shall be reported to the Engineer no later than the working day following receipt thereof. Such reports shall include the name, address, date, time received, date and time of action complained about,

and a brief description of the alleged damages or other circumstances upon which the complaint is predicated.

Each complaint shall be assigned a separate number and all complaints shall be numbered consecutively in order of receipt. In the event more than one complaint is received from the same complainant, each later complaint shall show all previous complaint numbers registered by the same complainant. In addition, a summary report shall be made to the Engineer each month which shall indicate the date, time, and name of the person investigating the complaint, and the amount of damages claimed (or estimate thereof), including the amount of settlement, if any.

When settlement of a claim is made, the claimant shall furnish the Engineer with a copy of the release of claim. The Owner shall be notified immediately, throughout the statutory period of liability, of any formal claims or demands made by attorneys on behalf of claimants, of the serving of any notice, summons, subpoena, or other legal documents incidental to litigation, and for any out-of-court settlement or court verdicts resulting from litigation.

5. NOTICE OF WORK

The Contractor shall provide written notice to the Engineer at least 5 days prior to the start of actual construction. If requested by the City, the Contractor shall provide written notice of work to affected property owners and residents adjacent to the construction at least 3 days prior to the start of actual construction to such properties.

The Contractor shall develop a written plan for the storage of vehicles and materials at the construction site. This plan shall be submitted to the Engineer for approval prior to starting construction. If the Contractor wishes to use any property outside the City right-of-way, they must provide written approval from the property owner to the City.

6. TRAFFIC SAFETY AND ACCESS TO PROPERTY

Comply with all laws regarding closing or restricting the use of public streets or highways. No public or private road shall be closed except by express written permission of the Engiener. Conduct the work so as to assure the least possible obstruction to traffic and normal commercial pursuits. Protect all obstructions within traveled roadways by installing signs, barricades, and lights where necessary for the safety of the public.

Signs, barricades, lights, and other traffic control devices shall conform to the requirements of the State of Wisconsin Manual of Uniform Traffic Control Devices (MUTCD).

The convenience of the general public and residents adjacent to the project and the protection of persons and property are of prime importance and shall be

provided for in an adequate and satisfactory manner. During construction operations, construct and maintain such facilities as may be required to provide access by all property owners to their property. Pedestrian access to properties adjacent to the work shall be provided for at all times. **This work shall be incidental to the contract unless otherwise stated as a bid item.**

Where traffic will pass over backfilled areas before they are permanently paved, and where, in the opinion of the Engineer, the final pavement replacement has not followed in a timely fashion, the top of the area shall be maintained with temporary bituminous surfacing that will allow normal vehicular traffic to pass over. **This shall be done at no additional cost to the City**. This does not apply to sections where no surface replacement is called for under this contract. If the Engineer orders this type of restoration for such sections that do not call for surface replacement, the Contractor shall be paid at the amount specified under the temporary asphalt item included in the contract. If a temporary asphalt item is not included within the contract, the Engineer will pay the amount in the Schedule of Fixed Extras.

Temporary access driveways must be provided where required. The Contractor shall maintain access to driveways by use of steel plates, compacted gravel, and/or temporary asphalt when practicable. This work shall be incidental to the contract unless otherwise stated as a bid item.

Cleanup operations shall follow immediately behind backfilling and the work site shall be kept in an orderly condition at all times. The Contractor shall immediately clean up accidental spills of any type of material that may be a hazard to safe movement of vehicular traffic. Where the type and amount of spilled material creates a hazard, the Contractor shall immediately post flag persons, initiate cleanup, and advise the Engineer of the spill.

Flag persons shall follow MUTCD requirements and have the proper safety equipment and apparel, per MUTCD and OSHA recommendations.

B. FIRE PREVENTION AND PROTECTION

The Contractor shall execute all work in a fire-safe manner. The Contractor shall supply and maintain on the site adequate firefighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable fire prevention laws. Where these laws do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed.

605.1.07 - PROSECUTION AND PROGRESS

The work shall be performed at such time and in or on such parts of the project and with such forces, materials, and equipment to prevent any delay to the completion of the project within the time limits stated in the Contract, and in conformance with the Overall Construction Schedule specified herein.

The contractor may petition the Board of Public Works for approval of night work (7 p.m. to 7 a.m.) or Sunday work. The Board generally meets the 1st and 3rd Monday of every month. A request for approval of night or Sunday work must be made on a Board of Public Works Application and received by the appropriate City staff by deadlines indicated on the application form. No fees will be assessed to the Contractor for a request to the Board of Public Works to perform night work or Sunday work. The Contractor shall comply with all applicable requirements of the Owner. Please send an electronic copy of the completed application to BoPW to <u>ndeming@wauwatosa.net</u> and <u>jhenderson@wauwatosa.net</u> by the deadlines listed on the form in addition to any recipients required on the application form.

The Contractor may, with written permission of the Engineer and acquisition of all necessary permits, **and at the contractor's expense**, work outside regular hours of 7 a.m. to 7 p.m., Monday through Friday (City holidays are not considered part of this regular working week). A written request shall be made to the Engineer and allow 7 calendar days for satisfactory arrangements to be made to inspect the work in progress which occurs between 7 p.m. and 7 a.m. or Sundays, and allow 3 regular working days for satisfactory arrangements to be made to inspect the work in progress which occurs on 7 a.m. to 7 p.m. on Saturdays.

The Contractor shall not be allowed to perform work on City holidays without written permission from the Engineer.

If the Contractor schedules work outside regular hours and days which requires an inspector, and does not arrive on site within one hour of the scheduled time on the scheduled day, excluding inclement weather conditions, the Contractor shall be charged a fee of \$300 to the City, to be deducted from monies owed to the Contractor. The scheduled day shall count as a working day towards the completion of the project deadline regardless of whether the Contractor works. If the Contractor needs to cancel the work scheduled outside regular hours and days, they must contact the City Engineering Department or the inspector who is scheduled to be on site at least 24 hours in advance of the scheduled time and date.

A. PRECONSTRUCTION CONFERENCE REQUIREMENTS

A preconstruction conference shall be held after the time of the Contract award and before the notice to proceed to discuss the responsibility of each party in the project and to clarify any questions. Required attendance shall include representatives of all contractors, including the superintendents designated for the project, resident engineer in charge of inspection and their principal staff, and representatives of the municipality or governing authority. A representative of the resident inspection staff shall preside over the conference.

The Contractor shall submit to the Engineer for approval a schedule of operations and proposed construction sequencing and staging, as described in section C below. The Engineer may waive this requirement for the convenience of the City. This schedule will be used to check and control the progress of the work. A suggested format for the preconstruction conference would include but not be limited to the following subjects:

- 1. Presentation of a proposed *Overall Construction Schedule* by the General Construction Contractor.
- 2. Presentation of *Traffic Control Plan* by the Contractor.
- 3. Review of Erosion Control Plan.
- 4. Check off required bonds and insurance certifications prior to notice to proceed.
- 5. Shop drawing submittal and approval procedure.
- 6. Chain of command, direction of correspondence, and coordinating responsibility between contractors.
- 7. Request for a weekly job meeting for all involved.
- 8. Laboratory testing of materials requirements.
- 9. Inventory of material stored on site provisions.
- 10. Progress estimate and payment procedure.

B. PRECONSTRUCTION SURVEY

After the Contract is awarded and before starting the work, the Contractor shall make a thorough examination, and should photograph, in color, if the Contractor feels it is warranted, all existing buildings, structures, and other improvements which are within 100 feet of the work and/or which might be damaged by the Contractor's operations. The examination may be made jointly by the Contractor, the Engineer, and the property owner. The scope of the examination and photographs taken shall include cracks in structures, settlement, leakage, and similar conditions.

The above records and photographs are intended for use as evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of property owners, the Contractor, and the Owner. The records will provide a means of determining whether, and to what extent, damage may have occurred as a result of the Contractor's operation. The City intends to videotape the condition of the roadways and the areas surrounding the project sites when possible.

C. OVERALL CONSTRUCTION SCHEDULE

The Contractor shall prepare and submit to the Engineer within 10 working days after the awarding of the Contract their Overall Construction Schedule. The Overall Schedule shall be comprised of preparatory and construction operations covering all work to be done in connection with the Contract.

Failure to submit the Overall Schedule or subsequent updates of the Schedule shall be considered cause for withholding any partial payments due or that may become due under the Contract.

Therefore, it is imperative that the Contractor adheres to the completion dates listed in the Official Notice and Instructions to Bidders. If after the award of any paving contracts it is determined that a change in sequence would be mutually beneficial to all parties involved, the Engineer shall issue a Contract Modification. However, this modification will not alter the final completion date unless otherwise agreed upon and noted in the Contract Modification.

The Overall Schedule shall meet the following minimum requirements:

- Include activities that describe essential features of the work and activities that might potentially delay contract completion. Identify activities that are controlling items of work. Procurement of long lead time items shall be included as tasks within the schedule but can exceed the 15 working day duration limit noted below. Build in the specified amount of severe weather days as specified in the contract.
- 2. Identify the contemplated start and completion dates for each activity. Provide a duration, ranging from one to 15 working days, for each activity. Break longer activities into 2 or more activities distinguished by the addition of a location or some other description.
- 3. For contracts with 15 activies or less or 8 weeks or less in duration, specify the sequencing of all activities. For contracts with more than 15 activities or longer than 8 weeks in duration, provide a logic diagram that shows the sequence of activities and the scheduling interrelationships among activities. Alternatively, the contractor may identify the activity interrelationships in a tabular listing. Ensure all activity interrelationships are finish to start relationships with no leads or lags. Use only contractual constraints in the schedule logic. The engineer may accept requested exceptions.
- 4. Provide on or with the schedule the following information:
 - a. Work days per week
 - b. Number of shifts per day
 - c. Number of hours per shift
- 5. Show completing the work within interim completion dates and the specified contract time or completion date.
- Provide the engineer with a pdf copy of the information required in items 3 and 4.

Handwritten schedules are NOT acceptable. It is recommended that the contractor include third-party activities related to the contract within the schedule if third-party work is anticipated to occur within coordination of the project.

As the work progresses, the Engineer may request an update to the original progress schedule for reasons including but not limited to the following:

- 1. The project completion or interim completion targets are delayed 14 calendar days or more for portions of work governed by calendar days or 10 working days or more for portions of work governed by working days.
- 2. The progress of the work differs significantly from the original progress schedule.

3. A contract change order requires the addition, deletion, or revision of activities that causees a change in the contractor's work sequence or the method and manner of performing the work.

The Overall Schedule shall be incidental to the contract.

605.1.08 - MAILBOXES

(Where Applicable) Maintaining mailboxes along the construction route is the responsibility of the Contractor, including subcontractors, and shall be incidental to the work. The Contractor shall notify the property owner(s), if necessary, prior to the start of work that their mailbox may require removal and replacement. A notification letter will be provided by the Engineer for distribution by the Contractor if requested. Mailboxes which require removal as part of any work shall be carefully removed by the Contractor and delivered to the property owner. Resetting the mail box shall be the responsibility of the Contractor. The Contractor shall also, at their own expense, maintain a temporary mailbox to allow the property owner to continue receiving mail until such time as the permanent resetting is completed. The Contractor shall coordinate the location(s) of any temporary mailboxes with the United States Postal Service and the Engineer. Temporary mailboxes shall be keyed mailboxes unless otherwise approved by the Engineer.

Should a mailbox be damaged as the result of any construction activity, the Contractor shall take the responsibility of repairing, replacing, and/or re-installing it at their own expense, within a reasonable amount of time as determined by the Engineer. The Contractor shall also, at their own expense, maintain a temporary mailbox to allow the property owner to continue receiving mail until such time as the permanent repairs are completed, if needed. Failure of the Contractor to complete this work in a timely fashion, as determined by the Engineer, may result in the City hiring a third party or using a City crew to perform it, at the Contractor's expense, to be deducted from monies owed to the Contractor.

Any and all work relating to mailboxes shall be incidental to the contract unless otherwise listed as a separate base bid item or directed by the Engineer.

605.1.09 - PAYMENT

The work specified in this Section 605 shall be considered **incidental to the contract** and the cost shall be included as part of the appropriate unit price stated in the Proposal unless otherwise stated.

Lump sum amounts are not subject to negotiation for cases where actual amounts of work and/or materials are larger than the engineering estimates.

Existing sign removal and re-installation as indicated on the plans and as directed by the Engineer shall be **incidental** to the contract base price unless otherwise noted.

SECTION 605.2 - CONSTRUCTION GENERAL

605.2.01 - Driveways

Driveway access shall be maintained at all times whenever possible, unless directed by the Engineer or stated on the plans. This may require driveways to be constructed one-half at a time, with steel plates, and/or the coordination with the business or industry, or a temporary driveway access point. This maintenance of approach access shall be considered incidental to the work. Maintenance of driveway access to residential properties may be waived with the written permission of the Engineer.,

The Contractor shall be limited to a maximum of 30 calendar days from the time an approach, its adjacent sidewalks, and/or adjacent curb and gutter is removed, to the time that said pavements have sufficient cure time for bearing vehicle traffic from the street to the property or alley. Failure of the Contractor to meet this deadline will cause the City to charge liquidated damages of \$25 per day per approach until access is provided.

For contracts that do NOT include replacing all of the curb and gutter and/or all of the existing pavement (ie. selective replacement of these two items), the above time frame is reduced in the following manner, unless otherwise directed by the Engineer or shown in the plans:

- Residential driveways shall be replaced within 5 days after removal of the driveway approach or sidewalk.
- Driveway access to commerical and industrial properties shall be maintained at all times.

605.2.02 - BACKFILL

A. MAINTENANCE OF TRENCH SURFACE

The Contractor will be required to maintain the trench area, during the interval between the sewer or water main installation and the pavement restoration, by keeping it to grade and spreading calcium chloride, if necessary, for dust control. This trench maintenance shall be **incidental** to the contract, unless otherwise noted.

Settlement of replaced pavement over trenches within the warranty period shall be considered the result of improper or inadequate compaction of the subgrade or backfilling materials. The Contractor shall promptly repair all pavement deficiencies noted during the warranty period at no cost to the City.

605.2.03 - PAVEMENT RESTORATION AND SITE RESTORATION

A. PAVEMENT RESTORATION

1. PROTECTION OF STRUCTURES

Provide whatever protective coverings as necessary to protect the exposed portions of bridges, culverts, curbs, gutters, manhole and valve box covers, posts, guard fences, road signs, and any other structures from splashing oil, asphalt, or concrete from the paving operations. Remove any oil, asphalt, concrete, dirt, or any other undesirable matter that may come upon these structures by reason of the paving operations.

Where water valve boxes, manholes, catch basins, or other underground utility appurtenances are within the area to be resurfaced, the structure shall be level with the top of the final restoration grade as directed by the Engineer. If it is evident that these facilities are not in accordance with the proposed finished surface, notify the Engineer a minimum of 14 calendar days in advance so the proper authority can be contacted in order to have the facility altered before proceeding with the resurfacing. Consider any delays experienced from such obstructions as **incidental** to the paving operation.

B. LAWN REPLACEMENT AND LANDSCAPING

Topsoiling, mulching, fertilizing, and seeding shall conform, respectively, to Sections 625, 627, 629, 630 and 631 of the State Specs and as they are amended herein.

All landscaping work must be watered until sustained growth is assured. All watering shall be considered **incidental** to the contract.

Backfill required at curb repairs must be topped with a minimum of 6 inches of screened topsoil to top of curb.

If restoration in accordance with these specifications is not completed (aside from watering) within 2 weeks of the completion of adjacent paving and underground operations (restoration may be delayed with written permission from the Engineer), the City reserves the right to hire a third party, independent of the Contractor, to complete the work, or utilize City workers, to be paid with funds deducted from monies owed to the Contractor. Should the City exercise this right, the Contractor will not be paid for any of the quantities that were completed by the third party or City workers.

1. GENERAL

The Contractor shall give the Engineer at least 3 working days of notice of the time and place of planting and keep them advised of the schedule of planting operations.

2. SOIL PREPARATION

Remove any non-topsoil material to a depth of 6 inches and backfill with topsoil/compost blend as specified in Section 625.2 of the State Specs. Apply a Type A granular fertilizer per the supplier/manufacturer's specified rate and mix

into the upper 4 to 6 inches of soil thoroughly. Rake or drag area until surface is thoroughly settled with a smooth, firm surface, free of humps or hollows. Ensure proper placement to eliminate the risk of future settling or sinking.

The Contractor shall dispose of all extraneous and excess materials at their expense and in accordance with any Federal, State, or Local laws.

3. SOD

All sod shall be placed on topsoil as specified within 24 hours after it has been cut. It must be staked or pegged on all slopes steeper than one foot vertical to three feet horizontal and where shown on the plans, which shall be incidental. The sod for Type "A" Lawn Replacement shall be a blend of bluegrass and fescues nursery sod, and shall be practically free from weeds or undesirable grasses. Sod must be placed to a butt joint and not wedged-off with topsoil. After being placed, it must be rolled or tamped. **All sod work must be watered for a minimum of 10 consecutive calendar days by the Contractor or until sustained growth is assured. The contractor shall provide 3 days notice to residents prior to turning over watering requirements to the resident.**

4. SEED

All areas designated to be seeded shall be placed on topsoil fertilized with a Type A granular fertilizer fertilizer per the supplier/manufacturer's specified rate and covered with Urban Type B erosion mat, unless otherwise specified. The seed mix for Type "C" Lawn Replacement shall be as noted below unless otherwise noted in the plans, free from weeds or undesirable grasses. After being placed, rake seed/soil as necessary to provide seed to soil contact and covered with mulch or erosion fabric where designated. All seed, mulch, and erosion fabric work must be watered until sustained growth is assured, a minimum of 14 calendar days.

- a. General Lawn Areas: Wisconsin Department of Transportation Seed Mixture No. 40. Seeding rate shall be 4-5 pounds per 1000 square feet. Provide the empty seed bags brought to site to the inspector immediately after installation.
- b. River Banks, Ravine Slopes, and Drainage Swales: Shady woodland seed mix shall be used for wet mesic to dry mesic soils. Species such as Solomon's Plume, Columbine, Jacob's Ladder, Jackin-the-Pulpit, Wild Geranium, and Early Meadow Rue are representative of a natural woodland. Seeding rate shall be in accordance with suppliers instructions.

C. SIGNAGE

New signs called out to be provided under the contract shall conform to Section 637 of the State Specs. New signs shall be installed on new posts and shall have hardware provided by the Contractor and included with the costs of the signs and/or sign post item(s).

605-20

New posts shall be 2" (2 3/8" O.D.) x 10' Schedule 40 Aluminimum extruded post with a mill finish and plain end. The Post Anchor shall be Tapco V-Loc Steel Breakaway post or Engineer approved equal.

Hardware to attach existing signs to new poles shall be salvaged from the existing signs and posts, unless otherwise noted. New hardware required to resintall existing signs shall be approved by the Engineer prior to ordering.

Signs, posts and materials within the project limits may be removed and salvaged and shall be stored at the DPW Yard until reinstallation. Obtain permission from the Engineer to removal signs, posts, etc. if no item to remove, salvage and reinstall signs exists on the contract. Sign posts that are not V-Loc Steel Breakaway posts shall be disposed of by the Contractor at their expense. If no item to remove, salvage and resintall signs, posts & hardware, the work shall be considered incidental to the contract and performed at the Contractor's expense. The Contractor shall provide a minimum of 3 days notice to DPW Electrical Superintendent before delivering the signs to the yard.

Prior to delivering the signs to the DPW Yard, the contractor shall provide a detailed list to the DPW Electrical Superintendent containing the following in formation:

- 1. Description and number of each sign(s) being delivered to the DPW Yard that will be reinstalled
- 2. Number of brackets being salvaged to the yard
- 3. Number of poles being salvaged to the yard that will be reinstalled.
- 4. The list shall have the contract number, the project description, the name of the contractor storing the materials and a contact person listed at the top of the page.

Upon delivery to the DPW Yard, the contractor shall assist the City/consultant inspector on the project to verify that all signs, hardware, posts and other materials contained on the list have been delivered. The Contactor shall store the signs in a manner that will not cause the signs to be damaged while being left in storage. All loose hardware shall be stored together in a labaled box or storage container noting what hardware is stored in each box or storage container. The box or storage container shall also be labeled with the contract number and the project description.

The Contractor shall be responsible for replacing any signs, posts or hardware that are damaged as a result of construction operations or due to improper storage by the contractor. The Contractor shall also be responsible to replace any missing signs, posts or hardware that were not properly delivered and stored to the DPW Yard.

The Contractor shall notify the insepctor of any damaged signs, posts or hardware prior to removal for documentation purposes. Failure to notify the on-site inspector prior to removal may result in the Contractor being responsible for replacement of the damaged signs, posts or hardware.

The Contractor shall immediately notify the Engineer of any signs, posts, or hardware that the Contractor deems unsuitable to be salvaged and reinstalled to allow the Engineer to resolve any concerns prior to reinstallation. The Engineer may require the contractor to furnish new material(s) under the contract using a bid item in the proposal or, if no such item exists for a particular item deemed unsuitable for reinstallation, by negotiating a price for replacement. The City also may elect to provide new material(s) to the contractor for reinstallation at no additional cost to the City.

The Contactor shall provide the DPW Electrical Superintendent with a minimum of 7 calendar day's notice prior to picking up the stored signs, posts and hardware. The City may replace salvaged signs, posts and hardware at their discretion while the signs are in storage at the DPW Yard. Before removing items from the DPW Yard, the contractor shall verify ALL items are present that were documented as delievered to the DPW Yard for storage. Notify the Engineer immediately and DO NOT remove any items from the DPW Yard if any item is missing. The Contractor will be responsible to replace any items discovered missing after removal of all items from storage at the DPW Yard.

605.2.04 PROTECTION OF THE ENVIRONMENT

A. GENERAL

The Contractor, in executing the work, shall maintain all work areas on and off the site as needed to keep them free from environmental pollution that would be in violation of any Federal, State, or Local regulations. All costs related to confromance with Protection of The Environment within these City Specs shall be considered incidental to the contract, unless otherwise noted by the Engineer.

B. PROTECTION OF SEWERS

Take adequate measures to prevent the impairment of the operation of the existing sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering a sewer or sewer structure. All sewer and groundwater flow interfering with construction and requiring diversion shall be diverted to sewers leading to a wastewater treatment plant. Non-sanitary sewage may only be diverted to non-wastewater treated areas if proper erosion and pollution control measures are followed in accordance with Wisconsin DNR regulations.

Prior to commencing excavation and construction, the Contractor shall submit for the City's review detailed plans (including routing and connections) showing how the Contractor intends to handle and dispose of sanitary sewer wastes. By reviewing the plan, the City neither accepts any responsibility for the adequacy thereof nor for any damages to public or private property resulting therefrom, such responsibilities remaining with the Contractor.

C. PROTECTION OF AIR QUALITY

Air pollution shall be minimized by wetting down bare soils during windy periods, by requiring the use of properly operating combustion emission control devices on

construction vehicles and equipment used by contractors, and by encouraging the shutdown of motorized equipment not actually in use.

Burning of waste, debris, and rubbish will not be permitted on the construction site.

If temporary heating devices are necessary for protection of the work, such devices shall be of a type that will not cause pollution of the air.

D. EROSION CONTROL FOR SEWER & WATER INSTALLATIONS IN PAVED AREAS

1. GENERAL

The latest edition of the DNR technical standards shall be adhered to for erosion control installation and maintenance, and shall overrule any potential specifications conflicts herein. Chapter 2.8.0 of the Standard Specs contains the general criteria for erosion control. In addition, since the control of soil erosion is a dynamic process, the Contract requires flexibility by the Contractor to accommodate changing conditions as the project progresses.

Excavated materials and imported backfill materials stored at the project site shall be kept to a minimum and shall be used or removed from the site as soon as practicable, which shall be incidental. Such materials shall be stored in such a manner that will not result in runoff of stockpiled materials. Backfilled trenches and other areas shall be left to the level of the adjacent area or slightly below until restored to reduce the potential for erosion. All excess excavated materials and all excess imported backfill materials shall be promptly removed from the site and disposed of at the Contractor's expense.

The Contractor shall monitor each location where water may run off the site and shall provide measures to guard against sediments leaving the site. The Contractor shall have adequate erosion fabric fence or bales of hay and means of anchoring the same in place for erosion control as determined necessary by the Engineer. The type and amount of materials required will be determined by the type and amount of open excavation. The Contractor shall schedule the work so that the amount of open excavation and the stockpiling of construction materials on the job site is minimized for erosion control. Diversion berms or sediment filtration berms shall be constructed and maintained as determined necessary by the Engineer. Replacement of preexisting erosion control measures which are disturbed in the course of the work shall be completed promptly following completion of the work on the project causing such disturbance.

Tracking of foreign materials (e.g. mud, stone) on street surfaces shall be controlled during the working day as necessary, but no later than the end of the working day, by one or more of the following methods as required:

a. Hand shoveling material off street pavement.

- b. Machine removal (such as with end loader or grader), provided that the results are equal to that of hand shoveling.
- c. Sweeping material off street pavement. If using a mechanical sweeper that does not contain a built in water system to mitigate dust, the contractor shall sufficiently wet the surface or the area needing to be swept prior to sweep to reduce the spread of dust.

Specific erosion control measures are shown on the plans and shall be as described in these specifications. Sample details of erosion control devices follow these specifications. All control measures protruding above the normal paved and/or ground surface shall be marked by barricades and flashers. Maintenance of erosion control measures shall be considered **incidental**, including if an erosion control device needs to be replaced.

2. CONTROL OF SURFACE RUNOFF

- a. <u>STORM WATER INLET AND CATCH BASIN</u>, hereinafter called inlet protection: Inlet protection shall be installed **prior** to disturbing any pavement or earth areas, and shall remain in place and maintained until the surface is restored with temporary or permanent pavement. Inlet protection shall be installed at all inlets that will receive runoff from the construction site, including adjacent streets and where materials are stockpiled. Depending on the slope of the street, this will include inlets in the block(s) downstream from the work site due to anticipated bypassing. The contractor shall install Type D inlet baskets at all locations permissable. The contractor shall indicate on their erosion control implementation plan those inlets which Type D inlet protection is unable to be place and their proposed substitution.
 - <u>PLACEMENT</u>: The inlet insert basket or sheet shall fit into the inlet without gaps around the insert as illustrated in the detail drawings. If the inlet being protected has a curb box, the curb box shall be protected as shown in the appropriate detail drawings until inlet protection is no longer needed.
 - <u>FABRIC SPECIFICATIONS:</u> The filter fabric shall be a geotextile fabric Type FF of polyester, polypropylene, stabilized nylon, polyethylene, or polyvinylidene chloride meeting the following specifications:
 - Grab strength: 120 lb. minimum in the machine direction and 100 lb. in the cross machine direction (ASTM D4632).
 - The fabric shall have an opening no greater than a number 30 US Standard Sieve.
 - Water Flow Rate of approximately 120 gal/min/ft² at 50 MM constant head as determined by multiplying permittivity in sec as determined by ASTM D-4491 by a conversion factor of 74.

- Ultra violet radiation stability of 70% for strength retained at 500 hrs of exposure (ASTM D4355).
- <u>MAINTENANCE:</u> Inlet protection shall be inspected by the Contractor within 24 hours after each working day rainfall or daily during periods of prolonged rainfall on working days. Repair or replacement shall be made immediately as incidental to the work.

Sediment deposits shall be removed after each storm event, or more often if the fabric becomes clogged.

b. GUTTER DETENTION

- 1. In areas where the street grade is greater than 4%, additional control is necessary to reduce flow velocity and to prevent sediment from bypassing the inlet screen/inlet grate screen.
- 2. Gravel filled nylon bags each containing a minimum of one-half cubic foot of material shall be placed in the gutter section with the long dimension of the bag perpendicular to the curb line, abutting the curb face at approximately 75 foot intervals.
- 3. Sediment deposits shall be removed after each storm event, or when reaching a maximum depth of 3 inches.
- 4. If the street is open for traffic, a barricade with flashers shall be placed by each bag.
- 5. The protection shall be installed prior to disturbing any pavement or earth areas, and shall remain in place and be maintained until the surface is restored with temporary or permanent pavement.

3. CONTROL OF TRENCH SEDIMENT

- a. **DEWATERING**
 - 1. If it becomes necessary to pump water from any trench or excavation, it shall be the Contractor's responsibility to remove particles greater than 100 microns. To demonstrate that settling or filtering is not required, all particles must pass through a US Standard No. 140 sieve.
 - 2. METHODS OF REMOVAL
 - a. Pumped water requiring particle removal may be settled in portable tanks. The tank capacity must be large enough to allow for sufficient settling time to remove particles greater than 100 microns. The Contractor may add a flocculation substance to enhance the settlement process.
- b. A second method of treating pump water may be as shown in the detail drawings, if applicable. This basin should be placed on the paved surface near a protected inlet. If a temporary settling basin is to be left unattended, it shall be covered with a half inch plywood or similar safety cover. Due to space and traffic constraints, this method must have prior approval from the Engineer.
- c. The fabric shall be geo-textile fabric, polyester, polypropylene stabilized nylon, polyethylene, or polyvinylidene chloride meeting the following specifications:
 - Grab strength: 400 lb. minimum in any principal direction (ASTM D1682)
 - Mullen Burst Strength: Minimum 600 psi (ASTM D774)
 - The fabric shall have an opening no greater than a number 140 US Standard Sieve, and a minimum permeability of 25 gpm/sq.ft. (Multiply the Permittivity in Sec. from ASTM. D4491-85 Constant Head Test using the conversion factor of 74.)
- d. Other methods demonstrated to produce the desired results may be submitted for the approval of the Engineer.
- a. <u>DOWNSTREAM SEWER PROTECTION</u>: At the end of each work day, the Contractor shall cover the entire annular space at both ends of the flume with a sheet of filter fabric. The fabric shall be of sufficient width so as to be tightly banded around the sewer pipes and the flume pipe. The fabric shall be geotextile fabric of polyester, polypropylene, stabilized nylon, polyethylene, or polyvinylidene chloride meeting the following specifications:
 - Grab strength: 400 lb. minimum in any principal direction (ASTM D1682)
 - Mullen Burst Strength: Minimum 600 psi (ASTM D774)
 - The fabric shall have an opening no greater than a number 140 US Standard Sieve, and a minimum permeability of 25 gpm/sq.ft. (Multiply the Permittivity in Sec. from ASTM D4491-85 Constant Head Test using the conversion factor of 74.)

4. PAYMENT

Erosion Control as herein before prescribed, required, and performed will not be separately measured for payment, but will be considered **incidental** to other

items in the contract unless there is a separate bid item specifically for erosion control. Maintenance of any eroision control item shall be considered **incidental**.

D. PROTECTION OF TREES AND SHRUBS

No trees, shrubs, or any other vegetation shall be removed without the written permission of the Engineer.

Unless specifically shown on the plans, or otherwise directed by the Engineer, it is the intent of the work operations under this contract to make every effort to preserve and protect trees and shrubs from damage or removal within the limits of, and adjacent to, the work included in the contract. The Contractor shall take all necessary precautions to protect trees, shrubs, and roots at the work site. Any costs associated with this work and work described within this section shall be considered incidental unless otherwise noted or directed by the Engineer.

There are, at various locations on the project, existing trees and shrubs which will require special care and protection during the removal and subsequent construction of new pavements, curbs, drive approaches, and walks. Prior to beginning construction operations for the removal and/or replacement of these contract work items, the Contractor shall conform to the following procedure:

The Contractor shall, prior to construction, conduct a detailed walk-through field inspection of all potential conflicts of the contract work with trees and shrubs within and adjacent to the project limits. The Contractor shall not excavate or cut the roots of trees or shrubs unless so indicated by the Engineer's written order or explicitly noted on the plans.

1. ROOTS

Root foundations must remain adequate to withstand heavy windstorms. To protect the immediate portion of the tree roots, a Root Protection Zone shall be maintained. This zone is 5 feet on each side of the edge of the tree trunk parallel with the street and from the backside of the curb to the backside of the walk. No construction equipment or materials, sand, soil, gravel, block, or pipe shall be placed, parked, or stored within this area. All cutting for the removal of sod and soil in order to establish a finished grade within this zone must be done manually. No excavation shall occur within this zone unless otherwise directed on the plans or by the Engineer.

Tree roots interfering with the work shall be completely severed with a clean, sharp tool e.g. axe, or chainsaw, and removed with an approved machine or other approved methods. All old walk shall be removed prior to root cutting.

a. <u>SIDEWALKS</u>: The root system on the walk side of the tree shall not be cut by means of mechanical root cutting machines. If root removal is essential to concrete walk replacement, interfering roots shall be manually cut with hand implements. Roots below the proposed walk shall be removed only to a depth of 9 inches below the proposed elevation of the new walk surface. The cut must be within 2 inches of the edge of the proposed sidewalk to avoid cutting

too close to the trunk of the tree. All roots within 2 inches of the bottom of the proposed sidewalk must be removed.

All debris from the root sawing and/or tree removal operations shall be removed from the sidewalk area and root sawing trenches filled with approved topsoil before the end of the work day. All exposed and severed tree roots shall be immediately covered with mulch and watered to prevent drying until such time that the concrete work is complete, the forms removed, and the area between the tree and concrete work backfilled with approved topsoil.

Stumps and roots shall be ground by an Engineer approved mechanical grinding machine to a depth of 18 inches below the proposed ground elevation. Other methods of grubbing may be used only with the approval of the Engineer. All grubbing holes shall be cleaned of chips and grindings and filled with approved compacted backfill, with at least the top 3 inches being topsoil. All debris from root sawing and/or tree removal operations shall be hauled from site and disposed of in a reasonable amount of time, as detemined by the Engineer, and in accordance with any Federal, State, or Local regulations.

Dead, diseased, infected, or infested trees may not be hauled away until a permit has been obtained from the City Forester. No fee will be charged for the permit. Clearing and grubbing shall conform to Section 201 of the current State Specs.

If, in the Engineer's opinion, if it is necessary to alter the methods of construction in the plans to preserve trees and shrubs, the Contractor shall make such changes as directed. Such adjustments may include, but are not limited to, curb, sidewalk, and drive approach dimension changes, including horizontal and/or vertical alignment.

If the Engineer determines that damage to trees has occurred due to negligence of the Contractor, or failure to comply with above procedures and as directed by the Engineer, the Contractor shall be held liable for the basic formula value of such trees, based on caliper size, with such amounts to be deducted from the monies due under the contract (see following Table on the next page).

BASIC FORMULA VALUE OF TREES BASED ON CALIPER SIZE

<u>TRUNK</u>	CROSS-SECTION AREA	BASIC VALUE
(Diameter)	(Square Inches)	(U.S. Dollars)
2		85.00
4		230.00
6		415.00
8		625.00
10		780.00
12	113	3,051.00
13	133	3,591.00
14	154	4,158.00
15	177	4,779.00
16	201	5,427.00
17	227	6,129.00
18	254	6,858.00
19	284	7,668.00
20	314	8,478.00
21	346	9,342.00
22	380	10,260.00
23	415	11,205.00
24	452	12,204.00
25	491	13,257.00
26	531	14,337.00
27	573	15,471.00
28	616	16,632.00
29	661	17,847.00
30	707	19,089.00
31	755	20,385.00
32	804	21,708.00
33	855	23,085.00
34	908	24,516.00
35	962	25,974.00
36	1,018	27,486.00
37	1,075	29,025.00
38	1,134	30,618.00
39	1,195	32,265.00
40	1,257	33,939.00

Diameter: measurements taken 4.5 ft. (1.4m) above ground level.

Basic values established at \$27.00 per square inch cross-section of trunk. Basic price based on industry survey and U.S. Department of Labor Consumer Price Index.

F. PROTECTION OF STREET LIGHTS AND TRAFFIC SIGNALS

All electrical work shall, where pertinent, conform to the Wisconsin Electrical Code and good electrical construction practices.

Where there is enclosed or unenclosed lighting cable within the project limits, care must be exercised by the Contractor to avoid damage to the cable during work. Where the Contractor or any Subcontractors damage any part of the lighting system which results in identifiable fault in the wiring, inoperative street lights or traffic signals, or an outage has occurred anywhere within the project limits, the damage shall be repaired by a qualified electrician **at the Contractor's expense** in accordance with City specifications. All lighting systems shall be kept 100% operational.

1. TIME LIMITS FOR REPAIRS

The Contractor shall have **24 hours** from the report of a problem in the existing or permanent lighting system to inspect and identify the cause, and **2 hours** for a temporary system (if applicable). Repairs shall be made no later than **3 days** after the problem is identified. Should these limits be exceeded, the Engineer reserves the right to hire a third party, independent of the Contractor, or use City workers to perform the repair(s). The cost of hiring a third party or using City workers and having them repair the damage will be paid for by the Contractor. Contractor agrees they will be informed of the final cost, which will be deducted from monies owed in a subsequent payment. In lieu of hiring a third party or using their own staff, the Engineer may also choose to fine the Contractor \$100, to be charged each day the lights are not properly functioning outside of aforementioned time limits, and to be deducted from monies owed to the Contractor.

2. TEMPORARY LIGHTING

If no plans for temporary lighting are included in the Contract Documents, the Contractor may choose, at their own expense, to maintain street lighting via overhead connections to existing poles, the installation of temporary poles and luminaires with their own wiring, or splicing (in existing wires only) around new and/or old pole bases as needed.

Any repairs and/or replacements made by the Contractor shall be incidental to the contract unless otherwise stated as a separate base bid item. Repairs shall be investigated and completed promptly in accordance with City of Wauwatosa specifications, or as instructed by the Engineer if no lighting specifications are included in the Contract Documents. The City may require temporary repairs at the Contractor's expense, including the installation of overhead facilities, to accelerate the return of functional electrical systems. Backfilling of the repair locations must not be done until all needed repairs have been made and inspected by the City Electrical Supervisor. Splices in poles shall be made with reusable set-screw type connectors. Penn Union SX-2 or approved equal, copper service entrance connector, or approved equal. Complete splice with layer of nonstick varnished cambric insulating tape, followed by multiples laps of Scotch 130C rubber insulating tape, followed by multiple laps of Scotch Super 88 vinyl insulating tape. Split bolt compression connectors are not acceptable for this contract.

When applicable, cable work at existing conduit locations damaged during construction is to be corrected by utilizing newly placed conduit which has been laid as part of the contract work. Frost loops of at least 12 inches shall be provided where cables enter conduit systems. **Any direct-buried cable must be enveloped with mason sand.**

G. GENERAL CLEARANCES TO UTILITIES

The following minimum separations for city facilities should be followed when encountering other utilities within the right-of-way, unless more strict requirements are required by other governing bodies:

Water facilities Sewer pipes and laterals Lift Stations, Manholes, & Inlets Street light poles Street light cable Fiber cable and hand holes All other facilities not listed

3 feet (horizontal & vertical) 2 feet (horizontal & vertical) 5 feet (horizontal) 3 feet 2 feet 2 feet 2 feet 2 feet

SECTION 610 – SEWER AND WATER CONSTRUCTION

SECTION 610 - CONSTRUCTION OF SANITARY AND STORM SEWERS AND LATERALS

New sewer and water construction must be completed prior to the general pavement removal operation. Preparation of the Right-of-Way, saw-cutting and removals shall be in accordance with Section 620 of these specifications.

Inlet shapes are to be altered in accordance with the iron to be used. Masonry shims on sewer structures must fully cover the masonry below. The pitch across the frame should be set to match the concrete curb and gutter cross-section.

Trench work shall not begin so far in advance of rough grading work that the gravel backfill will require more than a 6 week maintenance interval. The Contractor will be required to maintain the trench area during the interval as incidental to the work, by keeping it to grade and spreading calcium chloride, if necessary, for dust control. Aggregate slurry backfill must be used if excavation is to be paved over in less than 10 calendar days or as indicated on the plans. All sewer structure work shall be done in accordance with the Standard Specs and the City Specs.

Excavation and backfilling relating to utility installation is incidental to the utility bid item.

610.1.01 - EXCAVATION

A. GENERAL

Excavation required for this work for the most part is unclassified. Complete all excavation regardless of the type of materials encountered. The Contractor shall make their own estimate of the kind and extent of the various materials which will be encountered in the excavation, including the presence or absence of water. The surface type as shown on the plans is presented only as a guide for the Contractor and does not guarantee the type or depth of material beneath the surface course. No additional compensation will be made for differing surface materials. No additional compensation will be made for any rails, ties, or other unknown structures and objects that may be encountered. The Contractor may make written requests to the Engineer for exceptions to this rule, however the Engineer is under no obligation to approve exceptions.

The Contractor shall expose both ends of spot relays before commencing any pipe laying so that line and grade may be adjusted.

If a concrete cradle, cap, or envelope exists on any sewer to be removed and it is not noted on the plans, payment for the removal will be at 80% of the rate for rock excavation shown in the Schedule of Fixed Extras. The fixed extra price will include all additional costs including, but not limited to, any additional labor, material, time, equipment, excavation, backfill, shoring, bracing, pavement removal and replacement, fees, and trucking. Excavation by hand means the use of pneumatic hand tools. Mechanical excavation requires the use of special attachments on excavators.

These prices will be used for removals up to 40 linear feet. If the concrete cradle, cap or envelope extends for greater lengths, a price for the remainder of the removal shall be mutually agreed upon with the Engineer before the Contractor continues. When computing the volume removed, no subtraction will be made for the cross-sectional area of the existing pipe. If the concrete cradle, cap, or envelope are shown on the plans, the price of removal should be included in the price for the sewer relay.

The spot relay shall be in a straight line grade from the downstream end of the existing pipe to the upstream end. Additional piping removed and replaced in order to provide positive drainage to the downstream end will be paid at the contract price for a longer spot relay or at the relay contract per linear foot price when the relay exceeds 25.5 linear feet. The pipes coming into and going out of the spot relay shall be checked with a hand level to make sure that they do not back pitch. Additional pipe should be removed to eliminate back-pitch and will be incidental the spot relay/repair.

The location, size, and elevation of all underground structures shown on the plans have been located to a reasonable degree of accuracy, but the City does not guarantee their exact location and data or the location and data of others not shown. Concrete support columns shall be placed on all sewers where shown on the plans and at all other locations not shown where a utility in a rigid conduit is discovered to pass beneath the new sewer by less than 12 inches. Concrete support columns shall be formed. Bank pouring of concrete support columns will not be permitted. The costs of these supports will be considered incidental to the contract.

Bridging, where needed or where directed to be placed, shall be provided and installed by the Contractor at no additional cost to the City.

If any damage occurs to an underground facility, or the damage is found to exist, such that the protective coating of an electrical line is penetrated or gases or liquids are escaping from a broken line which endangers life, health, or property, the Contractor shall immediately call "911" to report the damage location. This call shall be made prior to contacting the utility involved.

1. SALVAGED MATERIALS

See Section 620 of the specifications for materials to be salvaged.

610.1.02 - LAYING OF PIPE

A. BEDDING, COVER, FOUNDATION AND BACKFILL MATERIAL

All sewer pipe shall be laid in a Standard Section, Class "C" bedding of crushed limestone conforming to File No. 3 and Table 32 or Table 38, as applicable to size and type of pipe material, of the Standard Specs, with modifications as specified in Section 3.2.6(i) for PVC pipe of the Standard Specs, unless otherwise noted on the plans. Cover material for pipe shall be the same as that specified for bedding. Risers which do not require a concrete envelope shall be bedded (i.e. surrounded by bedding material) all the way to the top of the riser, and special care shall be taken to "tuck" the bedding tightly around the entire lateral assembly for all laterals to prevent future settling.

Backfill used on this contract for sanitary and storm sewer work shall be either mechanically compacted (unless directed to use flooding by the Engineer) crushed recycled concrete 1-1/4 inch dense meeting the gradation requirements for granular material as specified in Table 37 in Section 8.43.4 of the Standard Specs, or aggregate slurry backfill as specified in Section 8.43.8 of the Standard Specs. The backfill shall be consolidated by mechanical compaction of the trench backfill as specified in Section 2.6.14(b) of the Standard Specs unless otherwise specified by the Engineer.

Lumps of clay, loam, spoils (unless otherwise stated), garbage, organic material, or any other material the Engineer deems unsuitable are not allowed in the backfill, and the Engineer reserves the right to order the Contractor to remove such items from the trench before paving commences, at the Contractor's expense, should the pieces be deemed unreasonably large and/or numerous. Material resulting from incidents such as, but not limited to, trench wall collapses is NOT excluded from this rule. For instances where the Contractor does not remove unacceptable backfill when directed, they shall be charged a percentage of the price for the pipe over the lineal footage in which the fill is present, to be deducted from monies owed to the Contractor.

B. PIPE AND FITTINGS

Except for lateral reconnections, sizes and strength classifications of sanitary sewer pipe to be used in all locations are indicated on the plans.

All wyes and tees shall be moulded as a single piece only. No wyes or tees with glued and/or fused pieces will be accepted unless the Contractor is given the written permission of the Engineer.

PVC pipe shall conform to ASTM D-3034 SDR35, Type PSM, rubber gasket joints, or ASTM F-789 Type PS-46 for sizes 4 inches through 15 inches and F-679 (T-I)

12454 Type PSM rubber gasket joints for sizes 18 inches through 27 inches. Where PVC pressure pipe is called for on the plans, it shall conform to AWWA C900, Pressure Class 150 (PC150) DR18. Joints shall use elastomeric gaskets.

All concrete pipe to be used for storm sewer on this project shall be reinforced concrete pipe, ASTM C-76 or ASTM C-507, or of the class shown on the plans. Reinforced concrete horizontal elliptical pipe 18 inch or larger in diameter shall conform to ASTM C 507 and of the class as shown on the plans. All reinforced concrete pipe catch basin or inlet leads, regardless of size, shall be ASTM C-76 Class V. Pipe furnished under this classification as manufactured by American Concrete Pipe Co., Inc., Milwaukee and Green Bay, WI, Madison Concrete Pipe, Inc., Madison, WI, County Concrete Corp., Marathon, WI, or equal, shall meet the requirements set forth in ASTM C-76 with "B" or "C" wall for circular pipe and any additional requirements set forth herein and in Chapter 8.6.0 of the Standard Specs. Joints shall use rubber gaskets in all concrete pipes (including circular and elliptical) and concrete box culverts, unless otherwise approved by the Engineer.

Temporary repairs for storm sewers which are to be replaced before the completion of the project may be made with PVC class SDR35 pipe, and the joints may be made by any reasonable means to prevent leaking and backups before the future replacement, at the discretion of the Engineer. Permanent storm spot repairs which were not originally called for on the plans or in a change order may be made with PVC C900 pipe with antihydraulic mortar joints if the Contractor does not wish to use RCP, with the permission of the Engineer and at no additional cost to the City.

Joints for concrete storm sewer reducers and bends shall be submitted to the Engiener and approved prior to construction as part of the shop drawing review.

The Contractor shall bear all costs of testing and shall submit copies of these test reports to the Engineer prior to any pipe installation.

C. JOINTS BETWEEN DISSIMILAR PIPE MATERIALS

When field cutting and/or machining the pipe is necessary, use only tools and methods recommended by the pipe manufacturer and approved by the Engineer. Breaking and chipping the pipe with a wrench, pliers, or a hammer will not be allowed.

Connect dissimilar pipe materials by means of a non-shear flexible compression coupling as specified below for sanitary sewer and for storm sewer, or a concrete closure collar for storm sewers as directed by the Engineer. Install couplings in strict accordance with the manufacturer's recommendations.

Joints on sanitary sewers between dissimilar pipe shall be either a non-shear coupling as manufactured by DFW/HPI or shall be made with flexible mechanical

compression joint coupling conforming to ASTM C-594 Type B with stainless steel bands and shear ring conforming to ASTM A-167 as manufactured by Joints, Inc. (Calder) of Gardena, CA, Fernco Joint Sealer Co. of Ferndale, MI., or as manufactured by Gripper Gasket, LLC of Corona, CA., or equal, and in addition using a transitional bushing conforming to ASTM C-594 Type B when pipe with different outside diameters are to be connected.

If a connection is being made to an existing lined pipe, the connection shall be made with one of the above adaptors directly to the liner of the pipe. A connection to the host pipe will not be permitted.

Joints on storm sewers between dissimilar pipe may be made with either a non-shear flexible mechanical compression joint coupling with No. 305 stainless steel bands or, where this is not possible, a concrete closure collar as shown on the special detail with prior approval of the Engineer.

Use concrete closure collars only on nonflexible pipe storm sewers and when approved by the Engineer, and then only to make connections between dissimilar pipe when standard rubber gasketed joints, mortar, or flexible couplings are impractical.

Before the closure collars are poured, wash the pipe to remove all loose material and soil from the surface on which the concrete will be placed. Wet nonmetallic pipe thoroughly prior to pouring the collars. Wrap and securely fasten a light gauge of sheet metal or building felt around the pipe to insure that no concrete shall enter the line. Place reinforcement as needed. Make the entire collar in one pour using 3000 psi concrete and extend a minimum of 12 inches on each side of the joint. The minimum thickness around the outside diameter of the pipe shall be 6 inches. No collar shall be poured in water. After the collars are poured and have taken their initial set, cure by covering with well-moistened earth. Refer to a special detail drawing(s), if provided.

Payment for connecting dissimilar pipe materials with flexible couplings, non-shear couplings or, when approved by the Engineer, concrete closure collars shall be included in, and incidental to, the prices for pipe stated in the bid unless otherwise noted as a separate item.

D. ABANDONED SEWERS, DRAINS AND SEWER STRUCTURES

Where the plans call for a sewer to be abandoned, the Contractor has the option to either remove or abandon the sewer by bulkheading the ends and filling the pipe with concrete grout as specified in Sections 8.35.4 or 8.35.5 of the Standard Specs, or as directed or approved by the Engineer. Direction of the use of Elastizell PS120 which is not called for on the plans or included in a bid item description shall be paid as an extra cost to the Contractor per cubic yard of material installed.

Bulkheads shall be as specified in Chapter 3.2.25 of the Standard Specs. Where the plans call for removal, the Contractor shall remove the entire pipe including any concrete support and backfill with the material as specified. The cost of this work shall be incidental unless otherwise specified as a separate bid item.

Manholes shall be removed or abandoned where specified or shown on the plans. As with sewers, the Contractor has the option to remove structures which are identified for abandonment but must remove those identified to be removed. The removal shall include the base of the structure. Manhole caps shall be used in the abandonment of sanitary or storm sewer structures and shall be made to the satisfaction of the Engineer. Where a cap is used, the manhole shall be filled with slurry or other suitable materials at least 4 feet below the proposed finished grade. This work shall be incidental to the contract unless noted as a separate bid item.

E. INSULATION AROUND WATER MAINS & APPURTENANCES

The Contractor shall provide and install extruded polystyrene rigid insulation with a minimum of 25 PSI compressive strength, two layers of 2 inch thick by 6 feet long by the width of the trench, between storm sewer and structure installations and all water mains and services at all locations shown on the plans, and at any other location where a water main or service is exposed. Insulation shall also be placed above storm sewers where they cross under water mains and services with less than 12 inches of separation, or as directed by the Engineer. Include costs with the price of the storm sewer relay, repair, extension, or structure, or water main relay, repair, or extension. If the vertical separation is greater than 12 inches and the service or main has a minimum of 6 feet of cover, the insulation need not be installed at locations which are not shown on the plans. Insulation shall be incidental to the work unless noted as a separate bid item.

F. CONNECTION TO EXISTING STRUCTURES

Where the sewer relay, repair, or extension begins or ends with a connection to an existing structure, the Contractor shall remove existing pipe and masonry from the structure as needed to make the new connection. The Contractor shall install an Engineer approved flexible water tight pipe-to-MH seal ("boot") for all sanitary sewer and other flexible pipe connections. For rigid pipe storm sewer connections, the Contractor may mortar the pipe into place. The structure's paved invert shall also be modified and rebuilt as needed. All costs shall be included with the price of the sewer unless noted as a separate bid item.

G. CONCRETE BEAMS & CRADLES

Concrete beams/cradles shall be constructed or placed where shown in the plans or as directed by the Engineer. Concrete beams shall conform to File No. 2 of the

Standard Specs. Concrete cradles shall conform to 3.2.6 (c) of the Standard Specifications except as modified herein.

Concrete cradles shall be monolithically poured and must be constructed using wood forms or other Engineer approved forming material. Concrete cradles shall be poured and permitted to cure for a minimum of 24 hours prior to setting the pipe on the cradle. The pipe shall not be placed on blocks or hardwood prior to the the cradle being formed & cured and these materials shall not be incorporated in any way into the cradle.

Concrete cradles Concrete used for concrete cradles shall conform to Section 620 of these specifications.

H. RESTRAINTS FOR ENDWALL SECTIONS AND BOX CULVERTS

Where a storm sewer terminates into an endwall section, the last three sections of pipe into the endwall section, including the joint to the endwall section, shall be mechanically restrained. Submit the type and number of proposed endwall restraints for each joint to the Engineer for review and approval.

Box culverts shall have the last three joint sections restrained at an outfall, similar to an endwall section. Box culverts shall also be mechanically restrained for the last three sections at the end of a run when typing into existing box culvert or a structure. The joint on either side of a new structure shall also be mechanically restrained.

610.1.03 - BUILDING LATERAL SEWERS AND STORM WATER DRAINS

A. GENERAL

The size, type of material, location, and direction of existing building laterals and the approximate distances from the nearest existing downstream manhole are shown on the plans and on the TV inspection logs, available for inspection at the City Engineering Division upon request. The Contractor shall be responsible for locating and verifying the size and type of material of each existing building lateral in the field. This shall include dye testing or electronic locating methods where necessary. This shall be incidental to the work and no additional compensation will be made for the location process or delays caused by this verification.

Make all lateral reconnections in accordance with the details shown in the plans. Materials to be used for this work shall be as specified in Chapter 3.4.0 of the Standard Specs, amended as follows: The material to be used shall be of equal size of the existing lateral and of the same material as the relayed mainline sewer unless otherwise specified on the plans.

Adaptors, couplings, and connectors shall be watertight and as shown on the plans, or shall be approved by the Engineer. Joints shall be rubber gasket as approved by

the State and local plumbing code. Cement mortar or glued joints are <u>not</u> acceptable.

Excavation and backfill shall conform to the applicable requirements of Chapter 3.4.0 of the Standard Specs and as herein modified. The maximum trench width shall be the outside diameter of the pipe plus 24 inches. Bedding shall be the same as required for the mainline. Backfill in the pipe zone shall be the same as required for mainline repair.

Install lateral reconnections in accordance with the applicable requirements of Chapter 3.4.0 of the Standard Specs. Use factory fabricated wyes or tees without glued or fused pieces. Provide bends, suitable lengths of straight pipe, and joints for dissimilar pipe as required. The minimum slope of the lateral reconnection shall be 1/4 inch per foot. Sanitary lateral reconnections which are to be extended shall be laid at normal depth for a new lateral with the adjustment to the existing grade of the lateral being made beginning at 5 feet from the back of curb or where directed by the Engineer.

B. LATERAL AND SUMP PUMP COLLECTOR SYSTEM TRACER WIRE WITH ACCESS BOX

This section shall only be applicable where shown on the plans or directed by the Engineer, and shall be incidental to the cost of lateral installation.

1. DESCRIPTION

When stated on the plans or directed by the Engiener, building sewer laterals and sump pump collector systems shall be installed with a tracer wire in accordance with the State of Wisconsin Administrative Code Chapter SPS 382.30(11)(h). This code requires that all new, non-metallic building sewers (including sanitary, storm, sump pump collector systems and private sanitary sewers) and water services installed must be accompanied by a means of locating the underground pipe.

a. A pipe locator conductor (tracer wire) shall be installed on all non-metallic (PVC, PE, clay, concrete and other non-metallic) sewer laterals and sump pump collector systems within the limits of the project as noted on the plan or directed by the Engineer. The conductor shall be placed along the top of the sewer lateral pipe from the sewer main or structure up to the property line or the end of the installation beyond the roadway as directed by the Engineer. On sump pump collector systems, the conductor shall run from the storm structure to the clean-out and from clean-out to clean-out or as directed by the Engineer.

Wrapping of the tracer wire on the pipe is prohibited. The conductor shall be held in place with ties or hitches spaced no more than 10 feet apart. The ties or hitches shall be spaced no more than 10 feet apart. The conductor shall be a minimum of 12-gauge standard solid copper wire with a green PVC or 30 to 45 MIL of Polyethylene coating to prevent corrosion. The wire shall be rated for buried and wet conditions. The conductor itself will be one continuous loop with the two wire ends connected to the tracer wire access box.

- b. The tracer wire shall be brought to the surface at the property line, end of the lateral installed, at each sump pump collector system clean-out, or at a location directed by the Engineer within a covered access device. The covered access device (tracer wire access box) may be a terminal box, valve box, a small diameter PVC conduit or a cleanout. Within the covered access device, the Contractor shall provide an extra 18 inches of wire. The lid of the covered access device shall have "SEWER" permanently engraved on it by the manufacturer. The lids shall be cast iron accompanied with connection holes where the Contractor shall connect the tracer wire with stainless steel terminal bolts. The lid shall be bolted with a standard pentagonal head key.
- c. Please be aware that below grade splices are prohibited.
- d. Each tracer wire shall be field tested after installation is complete.
- e. The Valvco Tracer Wire Access Box (http://www.cptest.com) and the Bingham & Taylor Cathodic Test Box (http://www.binghamandtaylor.com/cathodic.htm) are considered acceptable devices for this specification.

To minimize damage to the tree's root zone during the installation of the sanitary sewer lateral installation, no excavation shall be made within the following limits:

Tree Diameter (In.)	No Excavation Limits
(@ 4.5' Above Ground)	Distance (ft.) from Trunk
0 - 2 3 - 4	1
5 - 9	5
10 - 14	10
15 - 19 Over 19	10 12 15

The Contractor may encroach on the above limits if the sanitary sewer lateral to which the lateral piping will be connected or the house side of the existing City sidewalk is within the specified no excavation zone. The Contractor shall keep these

excavations as small as possible and shall contact the Engineer at least 3 days prior to starting the installation so they may notify the City Forester.

610.1.04 - MANHOLES

The Contractor shall be responsible for cleaning all sewer and water structures in the project area of all debris at their own expense.

A. INVERTS

Benches on all manholes shall be constructed at a minimum up to the crown of each pipe and sloped as specified for a sanitary or storm manhole as needed. Refer to File No.s 11 and 12 of the Standard Specs.

B. CASTINGS

New frames and covers are required on all new manholes, and new frames, grates, and back boxes are required for new inlet structures unless otherwise noted on the plans, and shall be supplied by the Contractor unless otherwise directed in the contract or by the Engineer. All castings shall be considered incidental to the appicable structure item unless otherwise stated as separate bid items.

Sanitary sewer manhole covers shall be self-sealing with an o-ring gasket and of a non-modernized design. The cover shall weigh approximately 143 pounds. They shall be Neenah R-1661-B or equal. They shall have two concealed pick holes. The City of Wauwatosa will furnish these self-sealing covers with the new frame and grate unless specified otherwise in the plans. The Contractor shall pick them up at the Municipal Public Works Building at 11100 W. Walnut Road and install them. The contractor shall call 414-471-8422 a minimum of 1 day prior to picking up the materials. The Contractor shall provide all labor & equipment necessary to load the materials and deliver them from the DPW Yard to the jobsite.

Storm sewer manhole covers shall be as shown in the plan details or equal and of a non-modernized design. The cover shall weigh approximately 152 pounds. Single and double storm sewer inlets shall be as shown in the plan details or equal and of a non-modernized design.

Frames for sanitary and storm sewer MHs shall be compatible with the covers and also be of a non-modernized design. Frames shall weigh approximately 369 pounds.

All manhole frames, iron rings, covers, storm water inlet or catch basin frames, grates, and back boxes which are removed from existing structures and are not reused shall remain the property of the City. The Contractor shall deliver these to the Municipal Public Works Building at 11100 West Walnut Road, Wauwatosa. WI.

C. FRAME/CHIMNEY JOINTS AND SEALS

Unless the manholes are to be adjusted and set to grade under a separate contract, the frame/chimney joints shall be as specified in the Standard Specs. Sanitary sewer manholes shall be constructed with a Type I, flexible watertight frame/chimney joint as detailed in Section 3.5.4(f)1.(a) of the Standard Specs. Seals shall be incidental to any manhole work unless otherwise stated as a separate bid item.

The Engineer approved manhole frame/chimney seal, where required, shall consist of a flexible rubber sleeve, overlapping extension or extensions as needed, and stainless steel bands, and shall extend from the frame to the cone of the new manhole to insure the chimney is fully covered. They shall be furnished and installed by the Contractor and shall be an internal rubber sleeve as manufactured by Cretex Specialty Products, N16 W23390 Stoneridge Drive, Suite A, Waukesha, Wisconsin, 53188, NPC, Inc., 250 Elm Street, PO Box 301, Milford, NH 03055 or Engineer approved equal. The Contractor shall use the proper tools for installation of the seals.

If it appears a flexible rubber seal will not fit or function properly in a manhole, and the Contractor has permission from the Engineer, a mastic seal or equal may be spread on the chimney in lieu of installing the rubber one. The Engineer must be present at the time of installation to verify all chimney joints were thoroughly covered.

1. SURFACE PREPARATION

Surface preparation shall be as follows or as recommended by the manufacturer if their requirements are more stringent:

- a. Remove manhole cover and allow any accumulated fumes to dissipate, open additional manholes or use blower to ventilate, if necessary.
- b. Power wire brush the lower 3 inches of the manhole frame to remove any loose rust or scale and repair any imperfections by either grinding smooth or filling with mortar. A reasonably smooth, clean sealing surface is required.
- c. Realign the casting if it is offset more than approximately 2 inches from the chimney.
- d. Make a visible line or series of alignment marks around the frame 2-3/4 inches up from the bottom edge of the frame for normal positioning. The sleeve can be installed higher in the frame if necessary, in which case the marks should be raised accordingly.

- e. Provide a 4 inch wide sealing surface on the manhole cone deck (i.e. not on the adjusting rings). Remove all loose and protruding mortar and brick as needed to provide a sealing surface.
- f. All sealing surfaces must be circular, reasonably smooth, clean and free of any loose material or excessive voids. If such a surface does not exist for the bottom of the sleeve to seal against, the Contractor shall prepare one. The Contractor shall use one-component, quick-set, high-strength, non-shrink, polymer modified patching mortar which has been formulated for vertical or overhead use to prepare the uniform vertical sealing surface.
- g. If the bottom of the sleeve is to seal against the top of an eccentric (straight side) cone and an inadequately high vertical surface does not exist, the contractor shall contact the manufacturer to obtain details for building the required vertical surface.
- h. If any caulk is used to fill minor irregularities in the bottom sealing surface, the caulk shall be a butyl rubber caulk conforming to AASHTO M-198, type B. When used, the Contractor shall apply a single bead of the caulk to the center portion of the lower sealing surface of the sleeve. The Contractor shall not use any other type of caulking material. Caulk is considered incidental to the seal installation and the Contractor will not be paid extra for it.

2. CRETEX INTERNAL MANHOLE FRAME CHIMNEY SEAL INSTALLATION

The Contractor shall also refer to the manufacturer's literature for additional installation variations and options.

- a. Install the rubber sleeve with the printing at the top and line the top edge up with the previously applied marks. Any flaws in the manhole frame, such as minor cracks, pits or protrusions, shall be repaired by either filling with mortar or grinding smooth.
- b. Lightly lubricate the outside of one stainless steel band with gasket lube and install it in the lower band recess so that the slotted end laps over the end with the studs and the studs extend through the adjustment slot. Put on the self-locking nuts and tighten sufficiently to draw the lapped ends of the band close enough to allow the attachment of the expansion tool. Position the expansion tool and expand the band as required to provide a watertight seal and tighten the two lock nuts.
- c. Conduct a water leakage test on the lower band under the supervision of the Engineer. The Engineer shall determine how much water should be used for a proper test and shall decide if the seal passes or fails. If it fails, the Contractor may choose to re-install the lower band and repeat the test, or apply a bead of butyl rubber caulk, conforming to AASHTO M-198, Type B, to

the lower sealing surface of the sleeve to fill any minor irregularities in the masonry surface to the satisfaction of the Engineer present.

- d. Lubricate the second band and install it in the upper recess, attach the tool and expand as before, keeping the bands parallel and a minimum of approximately 3 inches apart. The bands can be put closer together if excessive sleeve expansion is specifically required.
- e. Check the top and bottom edges of the installed sleeve to insure that it has been properly compressed and sealed against the two surfaces.
- f. The Engineer will not pay the Contractor for any internal manhole seals unless the Engineer has witnessed a passing water leakage test or witnessed satisfactory application of butyl rubber caulk or mastic.

D. FRAME ADJUSTMENTS & MASONRY

The masonry mortar and concrete bricks shall comply with the requirements of Section 519 of the State Specs and shall be incidental to the work.

Adjustments on manhole frames must be done after the asphalt base/binder has been laid and before the surface course is laid, and shall match 1/4 inch ("string bounce") below the surface grade. Backfilling around the frames after adjustment shall be done with compacted fill as specified for the pavement base, and compacted asphalt base/binder material. Adjustments shall be incidental to the work unless otherwise specified as a separate bid item, and any adjustment bid item shall include all the labor, equipment, and materials needed.

The minimum dimensions for the pavement box-outs to perform adjustments shall be large enough to fully accommodate compaction by mechanical means. The use non-mechanical means will not be permitted for compacting the lower layers around manholes without the express written approval of the Engiener.

While performing the masonry work involved in making adjustments, the Contractor shall provide the means to intercept dropped materials before they reach the bottom of the structure, and shall clean the structure of any such materials at the bottom before final payment will be made. This shall be incidental to the work.

New sewer structures shall be built within approximately 4 inches of grade needed for the frame, requiring final frame setting during adjustments. Sewer structures to be in concrete pavement, at the time the surrounding concrete pavement is poured, shall have frames that are "wedged" high enough during concrete paving that the aggregates in the agitated concrete mix can move freely under the frame, and thus allow the frame to sit on solid concrete.

When additional masonry replacement is required to an extent which includes a normal step location, a new step must be incorporated as part of the work under that item. Replacement of masonry in poor condition is required even if it extends farther than listed on the plans. Sanitary manhole masonry work must be performed before the installation of internal seals or Pro Rings.

E. PRECAST MANHOLE JOINTS

All joints between sanitary manhole sections including base, riser(s), and cone shall be sealed with a high-strength external perimeter sealing band, consisting of a heavy polypropylene backing, rubberized mastic seal, woven polypropylene reinforcing, and heavy-duty steel straps, under the supervision of the Engineer. The external seal shall allow the manhole structure to pass the ASTM C-1244 vacuum test as described in Chapter 3.7.6 of the Standard Specs (see section 610.1.07 C of the City Specs for internal chimney seals). External perimeter sealing band shall be Mar Mac MacWrap or approved equal. Vacuum test shall be performed after all seals are in place, under the supervision of the Engineer, who will decide if it passes.

For sanitary manholes which have an outside drop, an Engineer approved mastic seal shall be used in lieu of Mar Mac MacWrap for all joints which are non-circular around the full perimeter of the manhole at the applicable joint(s). This mastic seal shall also be installed on other non-circular joints at the direction of the Engineer.

All external joint sealing shall be incidental to the cost of the manhole, regardless of sealing method, unless otherwise noted as a separate bid item.

F. BYPASS PUMPING

Contractor shall submit bypass pumping plans for review by the Engineer at least 3 business days prior to the work. A bypass pumping plan is required for ALL bypass pumping that occurs. The Contractor shall notify the Engineer 24 hours prior to commencement of the bypass pumping operation. The Contractor's plan for bypass pumping shall be approved by the Engineer before the Contractor will be allowed to start bypass pumping. This shall be incidental to the utility work.

Bypass Pumping plans shall include but is not limited to all of the information below:

- Locations of the MH where pumping will occur and the discharge MH
- Pump(s) size and flow capacity
- Duration of bypass pumping
- For proposed 24 hr pump operations, provide the following additional information:
 - Back-up system information in event of pump failure

o 24 hour emergency contact

G. MANHOLE CONNECTIONS

Where a new manhole is to connect to an existing sewer that will not be relayed at a later point in the project, up to the first 6 linear feet of pipe used in this connection shall be included in the price of the new manhole and considered incidental to the work.

If the existing pipe is found to be in poor condition, the Contractor shall inspect it to find how much farther they must dig to expose a section in at least acceptable condition. If the length is reasonably short and/or at the Engineer's direction, the Contractor shall be paid for each linear foot of pipe used beyond the initial 6 feet of connection. If the next acceptable pipe is unreasonably far away, the Contractor shall seek instructions from the Engineer for how to proceed.

610.1.05 - CATCH BASINS, STORM WATER INLETS & INLET MANHOLES, AND STORM WATER DRAINS

Storm water inlets and inlet MHs shall be constructed in conformance with File No. 11, 12, and 28 of the Standard Specs modified so as to accommodate the required frame (refer to the standard details and special provisions on the plan), and shall include a 6 inch stub for future lateral connection and a 4 or 6 inch stub for future underdrain connection at locations and directions as shown on the plans or as directed by the Engineer. The cost of these stubs shall be included in the unit price bid per inlet. These stubs shall be made of PVC SDR35 pipe.

The frame, grate, and curb box shall be furnished by the Contractor. The specific casting to be used on the job will be noted on the plans and listed in the special provisions of each individual contract. Castings shall be incidental to the structure unless otherwise noted as a separate bid item.

Storm water inlet manholes shall have a poured bench meeting the requirements of a standard manhole. Where the plans call for the construction of a storm water inlet rather than a manhole or inlet manhole on a storm sewer, the inlet shall also have a paved invert as specified for a standard MH.

Where the depth of the manhole is too shallow to accommodate the standard cone top section, a flat top slab shall be substituted for the cone and shown in the shop drawings. The steps and cover shall be to the side identified on the plans as the straight side. No additional compensation will be given for this change. Payment will be at the per vertical foot bid and contract price.

Underdrains, to be installed where indicated on the plans, shall be 6 inch perforated PVC wrapped in geotextile fabric (a "sock"), and be in accordance with section 612 of

the State Specs. Bedding of 3/8 inch limestone chips shall be used around the entire pipe and be in accordance with Table 32 of section 8.43.2 of the Standard Specs unless otherwise specified.

610.1.06 - ACCEPTANCE AND QUALITY CONTROL OF SANITARY AND STORM SEWERS

A. FINAL SEWER CLEANING

Prior to final acceptance of the sewer system by the Engineer, flush and clean all parts of the system. Remove all accumulated construction debris, rocks, gravel, sand, silt, and other foreign material from the sewer system at or near the closest downstream manhole. If necessary, use water jet, mechanical rodding or bucketing equipment. If any foreign matter is still present in the system upon final televised inspection by the Contractor, re-flush and clean the sections and portions of the lines as required.

The Contractor shall also submit a written report of the sanitary sewer cleaning. This report shall identify the sewer segments cleaned and the type and volume of debris removed from the sanitary sewers.

Perform a mandrel test and provide the results to the Engineer as part of the acceptance process.

B. ACCEPTANCE OF SANITARY AND STORM SEWER RELAYS BY CLOSED CIRCUIT TV VIDEO INSPECTION

Prior to final acceptance of any sanitary sewer or storm sewer spot relay, the Contractor shall inspect by means of remote closed circuit television equipment the entire segment of sanitary sewer, manhole-to-manhole, on which the repair was made, not just the short length repaired out of the manhole. It is the City's intent to have all manhole-to-manhole sewer spans disturbed, replaced, or repaired as part of the contract, to be internally inspected. Sewers shall be cleaned prior to inspection and all manhole connections shall be shown. A USB external hard drive of the inspections shall be furnished to the Engineer for review and acceptance. Televising shall be incidental to the sewer work.

The following conditions shall apply to the sewer acceptance TV inspection:

- 1. CCTV operators shall be NASSCO trained and certified in the use of Pipeline Assessment and Certification processes and nomenclature.
- 2. Video shall be furnished on an external USB hard drive that will not be returned to the Contractor.

- 3. The TV camera shall travel through the sewer at a maximum rate of 30 feet per minute.
- 4. The camera shall stop at the beginning and end joint of each relay for a 10 second period.
- 5. The camera shall travel in the downstream in all cases.
- 6. The lens of the camera shall be cleaned at each MH or when directed by the Engineer.
- 7. The videos shall have an on-screen display showing, at a minimum, the following:
 - a. Upstream and downstream MH numbers
 - b. Footage from upstream MH
 - c. Date of inspection
- Sewers shall not be televised within 48 hours of a rainfall event greater than 1/ 4 inch.
- 9. Jetting of pipe relay segments shall be completed no less than 30 minutes prior to televising and under normal functioning conditions.

This inspection shall be made as soon as practicable after the backfill has been consolidated. If the Contractor chooses to wait until after paving or restoring the trench surface to televise the sewer, theywill be solely responsible for any costs incurred from any potential repairs required to make the work acceptable, including, but not limited to, additional restoration and/or paving.

Reasons for rejection of the relay will include but not be limited to:

- Dropped joint
- Broken joint
- Open or offset joint
- Sag in repair
- Deflected pipe
- Leaks

The Engineer shall determine if any of these conditions exist and if they are excessive enough to be considered defective and warrant replacement. If directed by the Engineer, the Contractor shall promptly, at their expense, correct all defects.

C. MANHOLE VACUUM TESTING

Contractor shall vacuum test sanitary manholes in accordance with the applicable requirements of Chapter 3.7.6 of the Standard Specs under the supervision of the Engineer. It is highly recommended that the Contractor test sanitary sewer manholes immediately after installation and prior to backfilling. If the Contractor chooses to wait until after paving or restoring the trench surface to vacuum test the manholes, they will be solely responsible for any costs incurred from any potential repairs required to make the work acceptable, including, but not limited to, additional restoration and/or paving.

Plug lift holes with non-shrink grout. If a manhole fails the initial test, make necessary repairs with non-shrink grout or other acceptable and approved materials. The Contractor shall continue re-testing until the Engineer determines a satisfactory test is obtained. All testing shall be incidental to the contract.

D. SEWER TRENCH AND MANHOLE EXCAVATION DYE WATER FLOOD TEST

The City of Wauwatosa, at its discretion, may perform dye water flood testing on all sewer trenches and manhole excavations prior to final surface restoration or final payment to identify infiltration into the system. Dye water flood testing of sewer pipe and manholes shall be in accordance with the applicable requirements of Chapter 3.7.2 Water Infiltration Test of the Standard Specs. Infiltration rates as identified in the Standard Specs shall determine pass or failure of the pipe and manholes. If a pipe or manhole fails the initial test, the Contractor shall make necessary repairs at their own expense with approved materials. The Engineer may continue re-testing until a satisfactory test is obtained.

E. TRENCHLESS UTILITY INSTALLATION NEAR CITY SEWER FACILITIES

The City of Wauwatosa, at its discretion, may require contractors installing utilities using a trenchless method (such as directional boring) within the vicinity of existing storm sewer and existing sanitary sewers, including storm sewer and sanitary sewer laterals, to televise these facilities before and after completing work to ensure that the facilities were not damaged during installation of a trenchless utility. This includes, but is not limited to installation of gas mains and services, electrical lines and services, sewers and laterals, telephone lines, fiber optics, and water mains and services.

Televising requirements shall follow Paragraph B. of this section.

SECTION 620 - REMOVALS, EARTHWORK AND GRADING

620.1 – REMOVALS

1. PREPARATION OF RIGHT-OF-WAY

Should any tree, shrub, or plant that has been disturbed or otherwise damaged by the Contractor die within one year from the time that it was disturbed or damaged, they shall replace such tree, shrub, or plant in kind and size or satisfactorily compensate the property owner. Proof of satisfactory compensation to a property owner shall be a written release from the property owner to the Contractor, a copy of which shall be provided to the Engineer.

The Contractor shall not store materials and equipment over tree roots in grounds belonging to the Milwaukee County Parks system in the area between the curb and sidewalks or bike paths, or any other County property without County permission. The Contractor shall develop a written plan for the storage of vehicles and materials at the construction site. This plan shall be submitted to the Engineer for their approval prior to starting construction. If the Contractor wishes to use any property outside the City right-of-way, they must provide written approval from the property owner to the City.

a. TRACKING PADS

Tracking Pads, where shown in the plan, shall be constructed according to Section 628.2.14 & 628.3.16 of the State Specs. Tracking Pads should be reviewed on a minimum of a weekly basis and replaced or reworked as needed to minimize material tracked onto adjacent roads. If directed by the Engineer, the Contractor shall replace or rework the Tracking Pad within 24 hours of the request being made. Tracking Pads shall be considered incidental to the contract unless a pay item is provided for in the contract.

2. CLEARING AND GRUBBING

If clearing and grubbing is required by the contract, clearing and grubbing shall be per Section 201 of the State Specs.

The Contractor shall dispose of all stumps, roots, brush, waste logs and limbs, timber tops, and debris resulting from clearing and grubbing by chipping or removing the material from the right-of way. Burning of debris or burying debris within the right of way is not permitted.

The contractor shall not remove City trees unless directed in writing by the Engineer or explicitly shown to be removed by the Conctrator in the plan.

a. Tree Trimming

If tree trimming of private trees overhanging the right-of-way or an easement is required under the contract, the contractor shall hired a certified arborist to perform the tree trimming. Symmetrically trim lower limbs or branches of trees left in place and overhanging the right-of-way or easement to at least 18 feet above the finished grade but no more than 24 feet above finished grade unless otherwise authorized in writing by the Engineer. Trim tree branches using generally accepted horticultural practices.

The Contractor shall not trim any City owned tree. If the Contractor believes a City owned tree or trees requires trimming, the Contractor shall notify the Engineer prior to the Pre-Construction Conference to see if City Forces can trim the tree(s). The Engineer will consult with the City Forester to determine if the tree(s) can be trimmed. The City will not accept any additional costs from the Contractor regardless of whether or not the tree(s) can be trimmed.

3. SAWCUTTING

All sawing is considered incidental to the contract unless otherwise noted.

Sawcutting consists of sawing existing concrete or asphaltic pavements, curb and gutter, driveways, or sidewalks, and the washing of the sawing debris at locations where cuts have been made in areas still open to traffic, or as directed by the Engineer. The saw cuts shall be straight, vertical, and to the full depth of the pavement. All debris and residue created from sawcutting shall be immediately removed and cleaned up by the Contractor to the satisfaction of the Engineer. Debris and residue shall not be washed down into the storm sewer. Utility trenches shall be sawed prior to pavement removal unless otherwise approved by the Engineer.

For sawing that is not straight or for sawing where the debris and residue is not properly cleaned, 5% of the pavement cost may be credited to the project if the Contractor does not re-saw or cleanup as directed. Any re-cuts or extra cleaning shall be at the Contractor's expense.

For trenches, the width of pavement cut shall be sufficiently sized to allow for a minimum of an 8 inch undisturbed ledge on each side, where gravel backfill is used. The contractor may elect to re-saw prior to pavement replacement at the contractor's own expense. The Engineer may direct the Contractor to re-saw areas where damage has occurred to the existing pavement. Curbs and sidewalks shall be completely removed to existing expansion or scored joints sawed full depth, falling within 4 feet of the normal restoration limits, as directed by the Engineer.

4. REMOVAL OF PAVEMENT AND ANCILLARY CONCRETE

Saw all pavements (bituminous and concrete), curb & gutter, driveway aprons, and sidewalk prior to removal as incidental to the work unless otherwise noted as a base bid item. All concrete or asphalt over concrete base shall be sawed to the full depth of the concrete except where noted on the plans, and in accordance with Section 203.3.2.2 of the State Specs.

The Contractor shall use appropriate concrete breaking machinery to minimize disruption to nearby residents and businesses. The Engineer reserves the right to order the Contractor to change the method of pavement breaking during the progress of the work if damages seem likely to occur. In any event, the Contractor shall be solely responsible for all damages

The edges of existing pavements to remain in place shall be cut as straight lines with vertical faces. The defective pavement shall be removed from an area without damaging the remaining pavement. Damage to pavements due to the Contractor's negligence, as determined by the Engineer, shall be replaced as directed by the Engineer at the expense of the Contractor.

Service walks, fences, and other structures within the grading limits belonging to abutting property owners shall be removed and delivered to the abutting property when ordered by the Engineer. Any other material not required by the City shall become the property of the Contractor, who shall remove and dispose of such material at their own expense.

5. MILLING ASPHALT & CONCRETE

The Contractor shall use a self-propelled milling machine with depth, grade, and slope controls. Mill to depth identified in the plans +/- 0.25 inches or as directed by the Engineer. Shroud the drum to prevent discharging loosened material into adjacent work areas or live traffic lanes. Provide an engineer-approved dust control system. Millings shall be disposed of by the contractor unless otherwise noted.

If no milling depth is given on the plans for milled butt joints, butt joints shall be milled to a minimum of 2 inches in dpeth where matching into existing pavement unless otherwise approved by the Engineer.

All milled butt joints, in driveways where there is no existing joint, are to be sawed, prior to milling.

6. PAVEMENT CORE HOLES

If pavement cores are necessary to locate underground utilities, the pavement cores maybe salvaged and temporarily reinstated prior to a permanent pavement repair being completed. Reinstatement of a core shall not be considered a permanent repair unless so authorized in writing by the Engineer and shall only apply in certain special conditions at the discretion of the Engineer. Core hole plugs shall be reinstated with Utilibond or UtiliGrout 2-part epoxy mix, or approved equal.

Pavement repairs shall be a minimum of a 4' x 4' repair area in all pavements. For concrete pavements, the minimum area may be larger depending on the location of surrounding joints.

For cores in the curb flange, a minimum of a 5' section shall be replaced. If the core is within 3' of a joint or crack in the curb and gutter, replace the section to the joint or 3" beyond the crack. Replace the entire section if less than 5' of the piece of curb and gutter impacted will remain in place.

For cores in sidewalk and driveway approaches, the Contractor shall replace the entire sidewalk square or driveway approach panel. If the core hole is completed in a curb ramp (including the curb and gutter), curb ramp landing, and/or sidewalk square adjacent to the landing, the complete curb ramp will be required to be replaced.

7. SALVAGED MATERIALS

Existing iron on structures to be abandoned or rebuilt and hydrants to be removed shall be removed by the Contractor using reasonable care. These salvaged items will become property of the City and shall be delivered to the City's Public Works Building at 11100 W. Walnut Rd. by the Contractor, even if they are damaged or broken. The Contractor shall be fined \$20 per frame, lid/cover, and back-box which is unaccounted for at the end of the project, to be deducted from monies owed to the Contractor. Internal manhole chimney seals shall be removed and disposed of by the Contractor as incidental to the work.

620.2 – EXCAVATION AND GRADING

1. GENERAL

Excavation and Grading work shall be performed in accordance with Section 205, 207, 208, 211, and 305 of the State Specs, except as modified herein, to the depths and thicknesses indicated on the plans. The removal of asphalt pavement shall be incidental to common excavation. In cases where asphalt pavement overlays concrete pavement, the removal of the asphalt shall be incidental to the concrete pavement removal item. References to Section 700 of the State Spec can be omitted unless otherwise noted in the plans or special provisions.

Excavation and disposal of excess material to the specified depth of the new pavement is required and will be paid for under the unit bid item for removals, but the removal of temporary pavement shall be considered incidental to the price of placing said pavement.

The approaches to the street being graded shall be sloped as indicated on the plan or as directed in the field by the Engineer to reasonably accommodate any equipment or vehicles entering the site. The side slopes shall be graded at a 6-to-1 slope. If due to the existing grades a 6-1 slope cannot be achieved, the maximum permitted slope shall be 4-1 unless otherwise directed by the Engineer. The Contractor shall notify the Engineer where a maximum 6-1 slope cannot be achieved and obtain the variance in writing from the Engineer prior to grading.

All sidewalks shall be graded for four (4) inches of base aggregate dense unless otherwise noted.

2. EXCAVATION

Surplus excavation must be wasted by the Contractor, at their expense, in locations permitted to such disposal outside the right-of-way (unless otherwise indicated). The estimated quantity for grading is based on information provided by the cross-sections of the roadway and does not include the excavation or backfill for utility excavations. If a Common Excavation item is not included in the contract, backfilling and beveling along replaced pavement, sidewalk, driveway approaches, curb & gutter and other hard surface restoration is considered incidental to the contract.

Earth in excavation shall be removed to the proper cross section as shown or noted on the plans. The Contractor shall dispose of all excess earth not required in the Contract, and shall also dispose of earth not suitable in the judgment of the Engineer to be used in the work.

Large rocks, 6" in diameter or larger, and other obstructions shall be removed to a depth of not less than 2 foot below subgrade within the road bed or 3' below the finished grade if outside the road bed. The cost of this work is to be included in the bid price for excavation.

3. EARTH FILL

Earth taken from excavation shall be placed in embankment to the proper cross section as shown on the plans. Such filling shall be placed in layers not to exceed 8 inches in depth and shall be uniformly spread and compacted in such a manner and with such equipment as is deemed acceptable by the Engineer. All sod and other vegetable matter shall be stripped from the ground surface before any filling operations begin. Material used in the preparation of the subgrade shall consist of suitable sand, clay, earth, or gravel, and be free from animal, vegetable, or any other organic matter.

The Contractor shall grade the area around the sidewalk to the proper cross section or depth noted for topsoil before paving. This work shall be done by hand methods or by use of equipment which, in the opinion of the Engineer, will not cause damage to the curb, walk, or trees. Backfill material placed between the curb and the lot line shall be free from roots, rocks, and construction debris, and shall be subject to the approval of the Engineer.

4. SUBGRADE

Before depositing stone, the Contractor shall shape the subgrade by scarifying, blading, leveling, and rolling as required to prove the required grade and cross-section Areas which are inaccessible to the roller shall be thoroughly compacted with a plate compactor. Use of plate compactors for utility frame adjustments is not permitted. The Contractor shall not do unnecessary hauling upon the finished subgrade. Any ruts or holes that develop during trucking operations in the subgrade or dense graded base shall be re-graded and compacted at the expense of the Contractor.

The Contractor shall conduct their operations so as to not expose the subgrade to precipitation that may cause the subgrade to become unstable. If the Contractor fails to protect the subgrade with the means and methods used, the Contractor shall bear all costs to stabilize or undercut the unstable material.

Subgrade under open graded base areas shall not be compacted or subjected to excessive construction equipment traffic prior to geotextile placement. Where erosion of subgrade has caused accumulation of fine materials or surface ponding, remove material with light equipment and scarify underlying soils to a minimum depth of 6 inches with a York rake or equivalent and light tractor. Fill and lightly regrade any areas damaged by erosion, ponding, or traffic compaction before placing stone. Bed bottoms are level grade.

5. PROOF ROLL

The Contractor shall attempt to locate any soft or spongy areas in the subgrade using a method approved by the Engineer. Any soft or spongy areas in the subgrade must be removed and replaced with suitable material as directed by the Engineer prior to placement of the base aggregate and prior to any forecasted precipitation once the existing subgrade has been exposed. The Engineer may also require a proof roll of the dense graded base before paving operations begin.

6. EXCAVATION BELOW SUBGRADE (EBS)

Undercutting of unstable subgrade or base must be authorized by the Engineer. The volume of material removed will be determined either by direct measurement or markings on the subgrade/base measured by the Engineer. The Contractor shall make undercuts approximately 1 foot deep unless instructed otherwise by the Engineer. The aggregate used to fill the undercuts shall be as shown in the plans or

as directed by the Engineer. Undercuts required due to subgrade exposure to precipitation shall be completed at the cost of the Contractor.

7. UNDERDRAINS

Underdrain installation shall conform to Section 612 of the State Specs unless otherwise noted.

In applications with open graded base for porous surfaces, such as asphalt or permeable pavers, the underdrain piping shall be perforated or slotted rigid PVC pipe manufactured in accordance with ASTM D-3034. Perforations shall be 3/8" on 12" centers.

8. GEOSYNTHETICS

Furnish and install geotextiles for subgrade separation and stabilization, drainage filtration, subgrade reinforcement, and under culverts and riprap as shown in the plans or directed by the Engineer. Geosynthetics shall conform to the requirements of Section 645 of the State Specs. The City may request samples for testing from the job site.

For applications with open graded base for porous surfaces, such as asphalt or permeable pavers, the Contractor shall provide non-biodegradable, nonwoven fabric made from 100 percent polypropylene staple filaments as manufactured by the following or an approved equal:

- a) Carthage Mills Series: FX-80HS.
- b) TenCate Geosynthetics North America Mirafi Series: 160N.
- c) Propex Inc. Series: Geotex 801
- d) US Fabrics, Inc. Series: 205NW

9. DENSE GRADED BASE

Dense graded base shall be 1-1/4 inch per section 305.2.1 of the State Specs, constructed to the thickness as shown on the plans or as directed in the field by the Engineer, and constructed in accordance with State Spec 305, except as noted herein, to the compacted thickness shown on the plans or stated in the proposal. All organic material shall be removed from the site of the work and shall not be used as part of the base or subgrade material, and this shall be considered incidental to the work.

a. MATERIALS

The 1-1/4 inch crushed aggregate shall conform to the following gradation requirements:

<u>Table 1</u>

SIEVE SIZE	PERCENT PASSING BY WEIGHT
31.5mm (1 ¼ in.)	95 to 100
25mm (1 in.)	-
19mm (3/4 in.)	70 to 93
9.5mm (3/8 in.)	42 to 80
4.75mm (No. 4)	25 to 63
2.00mm (No. 10)	16 to 48
0.425mm (No. 40)	8 to 28
0.075mm (No. 200)	2 to 12

If the Contractor requests to use 1-1/4 inch recycled concrete in lieu of crushed aggregate and the request is approved by the Engineer, the 1-1/4 inch recycled concrete shall meet the gradations listed in Table 1 above.

The stone shall be shaped and thoroughly compacted to the specified thickness to at least 95% of maximum density.

b. PLACEMENT

Crushed dense graded base (gradation 1-1/4 inch) shall be placed and compacted to lifts no thicker than 6 inches until the overall thickness indicated by the plans is reached. Compaction shall be to 95% of maximum density per section 305.3.2 of the State Specs. Soft or yielding spots must be reworked or removed, replaced, and rolled until the dense graded base is uniformly compacted over its entire length and width with no tendency to ravel.

Where the contract specifies or allows 1 ¹/₄-inch base, do not place reclaimed asphalt or blended materials below virgin aggregate materials unless the Engineer allows in writing.

c. PAYMENT

No payment will be made for dense graded base quantities exceeding 125% of the final estimated quantities as computed by the City unless additional earth excavation has been approved by the Engineer. Dense graded base may be incidental to some items in the contract and will not be paid under the Dense Graded Base bid item, if present in the contract.

10. OPEN GRADED BASE

Open Graded Base shall be constructed to the thickness as shown on the plans or as directed in the field by the Engineer, and constructed in accordance with State Spec 310, except as noted herein.

a. Materials

Crushed stone shall contain a minimum of 90% fractured faces and have a LA Abrasion of less than 40 per ASTM C 131. Do not use rounded river gravel for vehicular applications. All stone materials shall be washed with less than 2% passing the No. 200 sieve.

Gradation Requirements:

Table 1 ASTM No. 57 Base

SIEVE SIZE	PERCENT PASSING BY WEIGHT
37.5 mm (1 1/2 in.)	100
25 mm (1 in.)	95 to 100
12.5 mm (1/2 in.)	25 to 60
4.75 mm (No. 4)	0 to 10
2.36 mm (No.8)	0 to 5

<u>Table 2</u>

ASTM No. 8 Base

SIEVE SIZE	PERCENT PASSING BY WEIGHT
12.5 mm (1/2 in.)	100
9.5 mm (3/8 in.)	85-100
4.75 mm (No. 4)	10-30
2.36 mm (No.8)	0-10
1.16 mm (No. 16)	0-5

Table 3 ASTM No. 2 Subbase

SIEVE SIZE	PERCENT PASSING BY WEIGHT
75 mm (3 in.)	100
63 mm (2 1/2 in.)	90 to 100
50 mm (2 in.)	35 to 70
37.5 mm (1 1/2 in.)	0 to 15
19 mm (3/4 in.)	0 to 5

Gradation Requirements for open graded aggregates not specifically listed in Tables 1 through 3 above shall conform to Section 310 of the State Specs, if not defined elsewhere in the plans or these specifications.

621- CONCRETE CONSTRUCTION

621.1 GENERAL PROVISIONS FOR CONCRETE CONSTRUCTION

Concrete construction shall conform to Sections 415, 416, 501, 601, and 602 of the State Specs, except as modified herein. All concrete provided shall be Grade A or Grade C concrete with class C fly ash being the only acceptable Supplemental Cementious Material (SCM). Grade E shall only be used in locations shown in the plans or directed in writing by the Engineer. Quality Control (QC) field testing referenced in Section 700 of the State Specs for concrete is not required unless otherwise noted within Section 600 or Section 601 of these specifications. Voluntary QC field testing may be done at the Contractor's own discretion and own expense. The City will perform QV testing as noted in these specifications.

The Engineer reserves the right to reject any concrete at the Contractor's expense that does not reasonably meet the mix specifications, or is not reasonably workable enough to be properly placed in areas including, but not limited to, corners and angles.

If required by the City, the Contractor shall provide "high-early strength" concrete at the rate listed in the Schedule of Fixed Extras for the specified pavement type unless it is a specific bid item.

The Contractor will be required to remove all broken concrete, excess dirt, debris, and any other materials resulting from the work and dispose of it with their own resources at the Contractors own expense.

The Contractor particularly warrants and agrees, when signing this contract, that they will replace, within a year after **final acceptance** of the work under the contract, any pavement, curb, walk, stairs, or driveway that develops pop-outs, scaling, spalling of the surface, structural defects, or any other nonconforming defects as determined by the Engineer.

1. CONCRETE MARKING STAMPS

The Contractor shall mark the ends of each portion of concrete work with a stamp that shall show "City of Wauwatosa", the year in which the work was placed, and the name of the contracting company that performed the work. All concrete work shall be marked including but not limited to, pavement, curb and gutter, sidewalk, and driveway aprons. Failure by the Contractor to properly mark the concrete or if the stamp is missing or contains incorrect information, the Contractor will be required to remove and replace the concrete from joint to joint or as otherwise determined by the Engineer.

2. TUNNELING

Tunneling under curbs and sidewalks is optional and at the expense of the Contractor, unless otherwise stated. However, should any subsequent cracking, subsidence, or any other indication of failure occur within the warranty period, the damaged section shall promptly be replaced by the Contractor at no additional cost to the Owner. Tunneling under pavement is not permitted.

621.2 MATERIALS

1. CONCRETE

The grade and class of all concrete used shall conform to Grade A or Grade C of the State Specs (excluding all SCMs other than class C fly ash) so a minimum compressive strength of 3600 pounds per square inch is developed in 28 days of curing. Where the plans call for Special High Early Strength (SHES) Concrete Pavement, the contractor shall conform to the requirements of 416.2.5 of the State Specs. Other grades may be used only with the written approval of the Engineer. The use of a water reducing admixture is subject to Section 501 of the State Specs. The Contractor shall provide a list of concrete mix product codes, admixture product information sheets, and their relative WisDOT concrete grades from the concrete supplier.

a. COLORING AND STAMPING CONCRETE

Coloring and Stamping Concrete, where shown in the plans, shall conform to the requirements Section 405 of the State Specs.

2. TYPE B AGGREGATE SLURRY BACKFILL ALONG CURB FLANGE

When indicated in the plans to slurry backfill along the curb flange, the slurry backfill should conform to Section 6.43.9 of the Standard Specs, *with the addition of one bag of fly ash* per cubic yard. The mix shall be deposited in the trench directly from a concrete transit mix truck.

3. REINFORCING STEEL

Provide reinforcing steel as specified that conforms with Section 505 of the State Specs.

4. EXPANSION JOINTS

Joint material shall conform to 415.2.3 of the State Specs.

5. CURING COMPOUNDS

Liquid Membrane-Forming Curing Compounds shall conform to the requirements of Section 415.2.4 of the State Specs. Curing compounds shall be used on all concrete pavements and ancillary concrete such as, but not limited to curbs and gutter, walks, and drive approaches.

6. JOINT SEALING

All joints shall be sealed with a hot applied joint sealant conforming to the Specification for Joint and Crack Sealants, Hot-Applied, for Concrete and Asphalt Pavements, ASTM Designation D6690, type II. A Certification of Compliance shall be furnished to the Engineer prior to application.

621.3 FORMS

Forms shall be used when concrete is not being poured against existing pavement. The construction of sidewalks without forms is prohibited. The side pitch of sidewalks shall be 1/4 inch per foot and shall slope toward the street unless otherwise noted or shown in the plans.

The forms shall be clean, straight, of sufficient strength to resist springing out of shape, and an approved type of metal or wood extending the full depth of the concrete, and shall be equipped with fastening devices to prevent movement in any direction. All foreign material shall be removed from forms that have been previously used. Flexible forms of an approved type shall be used for all inside radii under 200 feet. Flexible face/outside forms shall be used on radii of less than 300 feet. When flange forms without a bar recess are used, the Contractor shall provide a metal parting strip for the reinforcing steel so that the steel will be fully exposed when the forms are removed, or drill in the rebar at their own expense when the concrete is hardened.

All rubble, broken concrete, and other debris shall be removed from the area between the curb and lot line before the curb forms are set.

The forms shall be set upon the prepared subgrade to proper line and grade and firmly staked in position. Areas which are inaccessible to a mechanical vibratory roller shall be compacted by using an approved mechanical compactor. Non-mechanical compaction methods will NOT be permitted. Before steel reinforcing or concrete is placed, the contact surfaces of the forms shall be cleaned and oiled.

The Contractor must continually have, in advance of the concrete pour, at least 200 linear feet of form setting, fine grading, and compacting completed for inspection.

For pavement and sidewalk, forms and form pins shall not be removed for at least 4 hours after the concrete is finished, unless approved by the Engineer. The removal
of forms and form pins shall be at a time and in a manner which will not cause damage to the newly poured concrete.

Where finishing machinery is to ride on the forms, the Contractor shall use an approved type of "Road" form. The foundation under the forms shall be firm and cut true to grade so that the form, when set upon, will be firmly in contact for its whole length and at the desired grade. The material under the forms shall be mechanically tamped so no settlement or springing of forms under the finishing equipment occurs.

The Contractor shall, at their own expense, repair lighting systems which are damaged by their form pins. Refer to Section 605 of the City Specs for repair requirements.

1. ADJUSTING UTILITY FRAMES AND WATER VALVES

a. ADJUSTING UTILITY FRAMES

Concrete around utility frames, water valves, or any other fixtures shall not be placed until such frames and fixtures have been accurately adjusted, properly secured, and set to the required alignment and grade by the Contractor.

For concrete paving, the practice of boxing out covers and then placing adjacent concrete promotes random cracking and will NOT be permitted. Whenever possible, the frames may be adjusted and set to grade on a full bed of mortar in advance of the paving operation or curb and gutter placement (except of asphalt pavement and asphalt resurfacing projects where the manhole frames shall only be adjusted after the lower layer(s) of hot mix asphalt pavements is completed). Otherwise frames shall be "wedged" high enough during concrete paving that the aggregates in the agitated concrete mix can move freely under the frame, and thus allow the frame to sit on solid concrete.

If the condition of the structure to be adjusted requires masonry repairs beyond 6 inches of vertical feet from the bottom of the frame, the additional repairs beyond this limit shall be paid per the relevant bid item, or if no bid item exists the Fixed Extra rate.

b. ADJUSTING WATER VALVES

The Contractor shall furnish all labor and equipment necessary to adjust all water valve boxes within the street right-of-way within the actual work limits. This work requires the boxes to be placed at finished grade and be operational. After the concrete is installed, if the City Water Department determines the valve is inoperable due to displacement or faulty adjusting or lack of protection, the Contractor will be required to perform all work necessary to correct the condition with materials, and make the valve operational at the Contractor's own expense within 5 days of notification by the City.

c. SURFACE REQUIREMENTS

The Contractor shall set the frames, grates, lids, and water valves accurately so the complete installation is at the correct elevation required to fit the adjoining surfaces. The frames shall be set in pavement areas so that they comply with the following surface requirements.

Place a 6 foot straightedge over the centerline of each frame or water valve parallel to the direction of traffic at the completion of the paving. Make a measurement at each side of the frame and average the two measurements. If this average is greater than 5/8 inch, reset the frame to the correct plane and elevation. If this average is 5/8 inch or less but greater than 3/8 inch, the City will allow the frame to remain in place but shall pay only 50% of the contract unit price for adjusting catch basin frames, manhole frames or water valves. If the frame is higher than the adjacent pavement, then make the two measurements at each end of the straightedge and average them. Frames protruding more than 1/8 inch above the pavement grade shall be reset based on the average.

After the concrete is installed, if the City Water Department determines the valve is inoperable due to displacement or faulty adjusting or lack of protection, the Contractor will be required to perform all work necessary to correct the condition with materials, and make the valve operational at the Contractor's own expense within 5 days of notification by the City.

621.4 PLACING CONCRETE

After all the form work has been completed and inspected, and before placing concrete, the forms shall be oiled, checked for correct line and grade, and the compacted base checked for correct elevation. All debris shall be removed from the pouring area. The compacted base shall then be sprinkled with sufficient water to thoroughly dampen it.

The concrete shall then be placed in as nearly a continuous operation as possible to the proper height, consolidated, and stuck-off flush with the top of the forms in a manner which the Engineer finds satisfactory. No concrete that has partially hardened or been contaminated by foreign material shall be deposited on the work, nor shall re-tempered concrete be used. The Engineer reserves the right to reject any nonconforming concrete at any time.

2. EXPANSION JOINTS

Expansion joints of ½ inch thick material, i.e. "felt", shall be used at any location where sidewalks abut other buildings or pavements, e.g. driveways and curb heads, or any other location as directed by the Engineer. They shall also be placed approximately every 100 feet or as directed by the Engineer when pouring continuous, new sidewalk. Expansion joints in curbs shall conform to 601.3.6 of the State Specs. Unless otherwise directed by the Engineer, place expansion joints at 3 feet on either side of an inlet frame. The Engineer may further decide to have expansion joints placed at any spot and in any thickness where they see fit, and **at all locations the expansion material must be to the full depth of the cross section.**

Expansion joints are also required around any hydrant, power pole, light pole base, or structure next to which concrete is being poured, and at any other location as directed by the Engineer. Felted isolation box outs around applicable items above shall be 30" x 30" unless otherwise shown in the plans or directed by the engineer.

3. TIME OF HAULING READY MIXED CONCRETE

Concrete shall be discharged at the work site within 1-1/2 hours after the cement has been added to the water and/or the aggregates, except for high-early strength concrete mixes which shall be discharged within 45 minutes of water added to cement and SHES concrete shall be discharged per the requirements in 416.2.5 of the State Specs. The Engineer, at their discretion, may still choose to reject loads at the Contractor's expense if the discharged concrete does not appear to reasonably meet the mix specifications, regardless of whether the allotted discharge time for that mix type has passed.

4. SIDEWALK

Sidewalks shall be a minimum of 7 inches thick at alleys and driveways and 5 inches thick at all other locations unless otherwise noted in the plans or directed by the Engineer.

The cross-slope of the walk shall be ¹/₄ inch per foot (approximately 2%) unless otherwise directed or shown on the plans.

The detectible warning fields used in pedestrian ramps shall be **cast iron of a natural patina** finish unless otherwise directed by the Engineer. Warning fields with coatings of any kind are not allowed unless directed by the Engineer. Installation shall conform to the manufacturer's recommended procedures.

The surface of sidewalk construction shall be finished by troweling and brushing, and sidewalks shall be 5 feet wide unless otherwise noted or directed by the Engineer. The Contractor must provide compacted crushed aggregate when

necessary to fill up to subgrade for walk construction. Compacted crushed aggregate is to be considered incidental to the work unless otherwise stated as a separate bid item. Expansion joints must be used where sidewalks abut any other pavement or as directed by the Engineer. All joints must be hand cut. Where sidewalk is being installed on a radius of less than 250 feet flexible forms shall be used.

Where non-continuous walk removal and replacement is encountered, the Contractor shall replace the walk sections within 4 business days after removal. In the case of walk abutting commercial properties such as hospitals, churches, businesses, schools, or as directed by the Engineer, the walk shall be replaced within 1 calendar day. Backfilling and cleanup at each work location shall be completed within 5 business days after the finishing operation. Extensions to these deadlines may be made with written approval of the Engineer. Requests to use temporary access must be submitted to and approved in writing by the Engineer. Temporary access shall be at the Contractor's expense unless otherwise explicitly noted in writing by the Engineer.

a. TREE ARCS

Where "half moon" tree arccs are required, roots shall be cut manually, using only hand tools, after the adjacent concrete slabs have been removed. Manual root cutting shall be performed along the line needed to accommodate the flexible form used to construct the tree arc. Nonmanual means to cut roots shall not be permitted unless otherwise approved in writing by the Engineer.

Contractor shall make every effort to safeguard and preserve all trees and tree roots not within the limits of root removal specified and/or approved by the Engineer.

b. ROOTS OUTSIDE OF TREE ARCS

Tree roots at sidewalk slabs marked with a "T" not at tree arcs shall be cut by the contractor at six (6) inches outside of the sidewalk area using hand tools, a root cutting machine, or other engineer approved method. Machine root cutting must be completed prior to removing adjacent concrete slabs. Root cutting using hand tools may be done after the adjacent concrete slabs have been removed.

Machine cuts shall be made along the length of the slabs only where slabs are marked for removal with a "T" due to root damage. Root cutting before slab removal is not allowed at any other locations. Cuts shall be made perpendicular to the lenth of the root and shall be done in a manner so as not to splinter the wood. Cutting depth shall be nine (9) inches from the proposed sidewalk surface.

5. DRIVE APPROACHES

The drive approaches and drives shall be constructed so the width at the sidewalk edge is equal to the width of the private portion of the driveway, or as directed by the Engineer. The approaches and flares for approaches shall be placed as directed by the Engineer (typically 3 feet from the start of the flare to the start of the transition), and the transitions in the curb head from the bottom of the driveway to the end of the flare shall be 1 foot unless otherwise directed by the Engineer. The shape shall be as marked by the Engineer.

The Engineer may require moving replacement service walks and adjusting driveways. The Contractor shall leave curb openings for driveway approaches as indicated and as further directed by the Engineer. Approaches shall have expansion joints where they abut other pavements and sidewalk, unless otherwise directed by the Engineer.

All approaches, including at alleys, shall have a minimum of 7 inches of concrete and 6 inches of mechanically compacted crushed recycled aggregate unless otherwise noted or directed by the Engineer.

Backfilling and cleanup at each work location shall be completed within 5 business days after the finishing operation, unless otherwise approved by the Engineer.

6. CURB & GUTTER

All curb heads must be 7 inches thick and 6 inches high (to the gutter line), with a 24 inch wide gutter and 1-1/4 inches in the pan, unless otherwise shown in the plan. Refer to the "Concrete Curb and Gutter Detail" in the plans for more information. One (1) inch expansion material shall be installed at 3' from the edges of inlets and catch basin castings. When abutting asphalt pavements, curb joints shall be 10-12 foot intervals, except as specifically noted in the plans and special provisions, or as directed by the Engineer. One (1) inch expansion material is required at the end of all radius points at intersections or sharp curves in the street and at a maximum interval of 300'.

Honeycombing occurring along the back of the curb and the flange face shall be pointed with mortar (1 part Portland Cement to three parts Fine Aggregate) after removal of the forms. All excess concrete behind the curb shall be removed before backfilling.

7. CONCRETE STEPS

The existing concrete step shall be completely removed and new step formed and poured.

621-8

The dimensions of the new step shall match the existing one as closely as practicable, however the Engineer may change the final dimensions as they see fit. Any reinforcement for the step(s) required by the Engineer shall be considered incidental to the contract. No additional payments shall be made for any concrete required by a change in dimensions.

8. SLIP FORM MACHINES

During slip-form construction, the Contractor shall not leave up overnight the lines which control the machine sensors ("string line") unless authorized by the Engineer. If permitted, the Contractor shall take all measures to ensure the string line is visible and shall verify that the line and grade is correct prior to beginning or continuing slip-form construction.

The Contractor may, with prior approval of the Engineer, elect to use a machine for placing, forming, and consolidating concrete pavement and ancillary concrete. The resulting concrete work shall be of such quality as to equal or exceed that produced by hand methods.

Before pouring with the slip form machine, the following should be checked by the Contractor: the tracing area shall be uniformly graded so as not of produce undue stress on the self-leveling mechanisms, the machine must have an operational, calibrated variable slope control in order to vary the flange or widening pitch, and **the cross-section of the slip form machine shall be the cross-section called for on the plans**. All vibrators must be operational and the machine must be set at the correct line and grade.

Curb and gutter machinery and/or machines which form integral curb and pavement shall not be utilized to construct curbs with a radius of 30 feet or less.

Supports for the line and grade control line shall have a maximum spacing of 25 feet.

If machine methods are used for forming and finishing curb and gutter, the Contractor may saw contraction joints approximately 1/8th inch thick and 2 inches deep, cut to the cross section of the curb. The equipment used in sawing shall meet the approval of the Engineer. The sawing shall be done as soon as practicable after the concrete has set sufficiently to preclude raveling during the sawing and before any cracking takes place in the concrete.

621.5 CONCRETE JOINTS

The depth of joints must be 1/3 the thickness of the pavement. Joints in the curb section must be a minimum of 2 inches deep. Joints in pavement and curb section shall be sawed unless otherwise permitted by the Engineer.

Contraction joints shall be cut in drive approaches as specified and shown on the plans or details, or as directed by the Engineer at a minimum depth of 1-3/4 inches.

Sawing expansion joints and joints in sidewalks is prohibited.

Any required tie bars shall be considered incidental to any concrete work

1. PAVEMENT

Transverse joints in concrete pavement are required at 10-15 foot intervals as directed by the Engineer, except as otherwise indicated. The Engineer may require joints to vary to match the center of a driveway, utility cover, or any other structure as they see fit. Curb joints must match pavement joints.

a. CONSTRUCTION JOINTS: Shall be constructed at the formed edges of all pavement slabs. Reinforcing bars, No. 4 bar x 30 inches long deformed bars shall be placed at 30 inch centers midway between the top and bottom of the slab. The ends of the rods shall be bent down or suitable chairs provided so that the main portion of the bar is parallel to the surface of the slab. The reinforcing bars shall be straightened after the forms are removed and before the adjacent slab is poured. Transverse constrution joints with pavement thicknesses 8" or greater shall be doweled.

Construction joints shall be provided at the end of each day's pour or at locations where the interval of time between loads of concrete exceeds 1 hour. Construction joints shall be constructed only at regular planned joint locations.

b. CONTRACTION/TRANSVERSE JOINTS: All transverse joints shall be installed at right angles or radial to the centerline of the pavement unless otherwise shown in the plans or directed by the Engineer. Contraction joints shall be provided at approximately 10-15 foot intervals or as directed by the Engineer. The joint spacing and the decision concerning the location of sawed or formed contraction joints shall be entirely at the discretion of the Engineer. Pavement thicknesses 8" thick or greater shall be doweled.

Sawed contraction joints shall be provided to a depth of 1/3rd of the pavement thickness by using a blade that cuts approximately 1/8th of an inch in width. During the finishing sequence, hand cut joints shall be provided at a minimum of approximately 80 foot intervals. The length of time between the finishing of

the concrete and the sawing of joints shall not exceed 12 hours for transverse joints and 24 hours for longitudinal joints. "Soft-cut" or other methods for the construction of contraction joints shall be subject to the approval of the Engineer prior to their use.

<u>c. LONGITUDINAL JOINTS:</u> Reinforcing bars, No. 4 bars x 30 inches in length, shall be placed at 36 inch centers midway between the top and bottom of the slab during pouring. Longitudinal joints shall be constructed as and in the locations shown on the plans. Joints shall be true to line and perpendicular to the surface of the pavement. Longitudinal joints may consist of construction joints where new work joins work previously completed. All other longitudinal joints shall be constructed by sawing in accordance with the plans, or any method approved by the Engineer.

The equipment used in any sawing of joints shall meet the approval of the Engineer. The sawing shall be done as soon as practicable after the concrete has set sufficiently to preclude raveling during the sawing and before any cracking takes place in the concrete.

d. BASE PATCHING:

Base Patching Construction shall conform to the State Specs 390.3 for concrete patching and as modified by these specifications. Base patching shall use grade A concrete, grade B concrete is not permitted. A minimum of 6 inches in depth of 1 ¼ inch base aggregate shall be placed prior to pouring the concrete base patch. Base aggregate shall be incidental to the base patching Item(s) unless otherwise noted in the plans.

Base Patching shall be tied with reinforcing bars, No. 6 x 12 inches in length at 30 inch centers midway between the top and bottom of the slab, on all sides to the existing concrete. Transverse joints in base patching for pavement thicknesses 8 inches thick or greater shall be doweled at intermediate joints within the repair area and at construction joints where matching transverse joints in the existing/adjacent pavements. Required reinforcing bars and dowel bars shall be included within the costs of the Base Patching item(s).

e. CONCRETE REPAIR AND REPLACEMENT:

Concrete Pavement Repair and Replacement shall conform to the State Specs 416.3.7 and as modified by these specifications. The existing base shall be removed and new 1 ¼ inch base aggregate a minimum of 6 inches in depth shall be placed unless otherwise noted in the plans or approved by the Engineer. Base aggregate shall be incidental to the Concrete Pavement Repair and Replacement item(s) unless otherwise noted in the plans.

Transverse joints in Concrete Pavement Repair and Replacement for pavement thicknesses 8 inches thick or greater shall be doweled and dowels shall be

included in the costs of the Concrete Pavement Repair and Replacement item(s). Reinforcing bars, No. 6 bars x 12 inches in length, shall be placed at 30 inch centers midway between the top and bottom of the slab along longitudinal joints. Required reinforcing bars and dowel bars shall be included within the costs of the Concrete Pavement Repair and Replacement item(s).

2. CURB & GUTTER

When concrete curb and gutter abuts new concrete pavement, contraction joints shall be constructed coincident with pavement joints at approximately 10-15 foot intervals or as directed by the Engineer. Contraction joints abutting other pavement types other than concrete shall be placed at approximately 10 foot intervals or as directed by the Engineer. Joints are required at the beginning and end of each radius. Trim ends of existing curbs to be joined to a vertical plane.

The curb and gutter section shall be tied to the concrete pavement or concrete base by reinforcing tie bars, with spacing no greater than 30 inches on center. Curbs shall be tied in at the pan only – no rebar shall be installed in the curb head. Parting strips shall be used when practicable or as directed by the Engineer. The Contractor may elect, at their own expense, to drill in tie bars after the concrete has hardened. The cost of reinforcement shall be included in the price for curb and gutter. **Tie bars between existing and proposed curbs shall be in the flange/gutter only and NOT in the curb head.**

Backfilling behind curb and gutter is considered incidental to the work.

3. SIDEWALK

Joints shall be tooled in at a minimum of 1-3/4 inches deep. Joints for sidewalks shall be cut at approximately 5 foot intervals unless directed otherwise by the Engineer.

621.6 FINISHING

A metal straightedge must be used on the gutter lines along driveway openings. The curb and gutter crew must also be provided with templates or "gauges" in order to obtain the proper depth from the top of a back form to the top of the concrete along driveway openings. At said driveway openings, construction procedure must provide a smooth and uniform vertical plane along the back in order to receive the expansion joint material. The height of this back edge shall be level with the flange edge of the curb unless otherwise directed by the Engineer.

Excessive troweling and watering will not be permitted. Surface applications to hasten hardening are prohibited. Patching will not be permitted except upon approval of the Engineer.

All concrete construction shall have applied approved curing compounds as stated in Section 415.2.4 of the State Specs, forming emulsions or emulsifiable concentrates for curing and protection of concrete surfaces, as soon as practicable after the surface water sheen has disappeared from the fresh concrete. Costs shall be included with the price of the concrete.

The Contractor shall make an impression of an arrowhead in the concrete curb to indicate the location of all new and existing street lighting conduit crossings, which shall be incidental, or they may elect to grind in equivalent arrows after the concrete has hardened. Marking of all new and existing street lighting conduit crossings shall be incidental to the contract.

The alignment of the curbs in existing streets must be matched in all locations. The proposed dimension at the sidewalk for each new concrete approach is indicated on the plan or marked in the field by the Engineer. All portions of non-concrete service walks necessarily disturbed for the curb construction must be salvaged and piled in such a manner as to protect them from damage during the work and shall be replaced in kind when work is complete, except concrete walks indicated by the Engineer for removal and new replacement. This work shall be incidental unless otherwise noted in the plans or directed by the Engineer.

The Contractor shall provide for a minimum of one finisher to remain on the project site after final finishing of all concrete until such time as said concrete has hardened sufficiently to resist surface scarring caused by footprints, handprints, or any other type of imprint, malicious or otherwise. An unreasonable amount of leaf imprints will be considered nonconforming. The finisher shall actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above. The cost for providing the finisher(s) and necessary equipment and materials shall be considered incidental to the contract unit price for each specific concrete item.

1. PAVEMENT

a. GENERAL

The sequence of operations shall be strike-off, consolidation, screeding, float finishing, straight-edging, and final surface finish. The machine method of strike-off and consolidation shall be employed, except for those areas where the slab width is variable for strips or lanes of pavement uniformly less than 10 feet in width, and other areas where the use of machine methods is impractical, as determined by the Engineer who will then allow hand methods. All finishing equipment and tools shall be cleaned immediately after use and kept clean so as to maintain such equipment in satisfactory condition during use. The Contractor shall provide whatever assistance is requested by the Engineer to check the adjustment and operating condition of the machine.

b. MACHINE STRIKE-OFF

- After the concrete is deposited, the surface of the pavement shall be struck off by the use of an approved type of finishing machine. The screeds shall be adjusted to the grades indicated on the plans. The surface of the pavement shall be struck off a sufficient number of times to form a consolidated mass of concrete with a mortar surface at finished grade.
- 2. Immediately after the last pass of the finishing machine, the surface of the pavement shall be floated by the use of an approved mechanically operated float or a "pan" attached to the finishing machine. Each type of float finisher shall be in first class mechanical condition, adjusted to conform to required crown and grade and shall be capable of producing the required surface finish. The width of the "pan" type of float shall be less than the width to be paved.
- 3. The finishing of the pavement shall comply with the provisions of "Hand Strike-Off" as described in section "c" below. Unless otherwise specified, provide a final finish with an Engineer approved artificial turf drag or equal. Use a drag made of molded polyethylene with synthetic turf blades approximately 0.85 inches long containing approximately 7200 individual blades per square foot. Use a seamless strip of artificial turf approximately full pavement width and of sufficient size that during the finishing operation approximately 2 feet of turf, measured parallel to the pavement centerline, is in contact with the pavement surface. Pull the drag with an Engineer approved device that allows control of the time and rate of texturing. Operate the drag in the longitudinal direction to produce a finish acceptable to the Engineer. Weight the drag as necessary to maintain contact with the pavement. Keep each drag clean and free of particles of hardened concrete. Replace the drag as necessary to produce the desired finish.
- 4. All edges of each slab, including the edges of the joints, shall be floated by hand and finished with an edging tool with a ½ inch radius. At the proper time, depending upon the rate of set of the concrete, the contraction joints shall be re-cut and the finishing of the joints completed. The completed pavement surface, including areas at expansion and contraction joints, shall not deviate more than 1/8th of an inch from the edge of a 10 foot testing device.
- 5. <u>SLIP FORM MACHINE STRIKE-OFF</u>: Before constructing pavement with slip form machines, the following shall be checked by the Engineer and Contractor: the tracking area shall be uniformly graded so as not to produce undue stress on the self-leveling mechanisms. The machine must have an operational, calibrated, variable slope control. The machine must

have the ability to produce a cross section complying with the required crown sections shown on the plans or in the special provisions.

All vibrators must be in good operating condition. Slumped edges must be immediately corrected by the use of forms. In all cases, the use of the slip form machine shall produce a continuous cross section as shown on the plans. The use of hand methods in conjunction with the slip form equipment may be allowed only with the permission of the Engineer. The Engineer reserves the right to reject the use of this machine.

c. HAND STRIKE-OFF

- 1. After the concrete is deposited, the surface of the pavement shall be struck off with an approved type of screed that is cut to the required form of the pavement surface. A mechanical vibrator shall be attached to the screed. The surface of the pavement shall be struck off a sufficient number of times to form a consolidated mass of concrete with a mortar surface at finished grade.
- 2. The entire surface shall then be floated by means of a long handled float until all surface irregularities are corrected. The pavement must then be checked by pulling a 10 foot metal straight edge over the surface. For this purpose, the Contractor shall furnish and use an accurate 10 foot straight edge with a handle at least 3 feet longer than one-half the width of the slab. The straight edge shall then be held in successive positions parallel to the street centerline in contact with the surface and the whole area gone over from one side of the slab to the other as necessary. Advance along the street in successive stages of not more than one-half the length of the straight edge. Any depressions found shall be immediately filled with fresh concrete, struck off, consolidated, and refinished. Projections also shall be struck off and finished. The straight edge testing and refloating shall continue until the entire surface is found to be free from observable deviations or irregularities and the slab has the required grade and contour. Following this, the pavement shall be finished by dragging a seamless strip of artificial turf or a broom over the full width of the pour. This operation shall be done at such times and in such a manner that will produce a surface texture satisfactory to the Engineer.
- 3. All edges of each slab, including the edges of the joints, shall be floated by hand and finished with an edging tool with ½ inch radius. At the proper time, depending upon the rate of set of the concrete, the contraction joints shall be re-cut and the finishing of the joint completed. The completed pavement surface, including areas at expansion and contraction joints, shall not deviate more than 1/8th of an inch from the edge of 10 foot testing device.

4. CONCRETE BASE

- a. After depositing the concrete, the surface of the pavement shall be struck off with an approved type of screed that is cut to the required form of the pavement surface. A mechanical vibrator shall be attached to the screed unless otherwise allowed by the Engineer. The surface of the pavement shall be struck off a sufficient number of times to form a consolidated mass of concrete with a mortar surface at the depth below finished grade as indicated on the plans. A finishing machine will not be required unless stipulated in the Special Provisions.
- b. The entire surface shall then be floated by means of a long handled float until all the surface irregularities are corrected.
- c. Concrete Base to receive a asphalt overlay does not require a broomed finish and shall not have curing compound applied.

2. SIDEWALK

After deposing the concrete, the surface of the walk shall be struck off at finished grade with an approved type of screed. A mechanical vibrator shall be attached to the screed if directed by the Engineer.

The surface shall then be worked with metal floats until a uniform mortar surface is obtained. A hand float operated in a circular motion shall be the final floating operation. Immediately after the water glaze or sheen has disappeared, the surface troweling shall be performed with a rectangular steel trowel operated by hand in a circular motion. The application of neat cement to the surface is prohibited.

As soon as the concrete will retain its shape, the joints shall be re-cut with the jointer and the edges of all slabs rounded with an edging tool having 1/4 inch radius. After all troweling and edging is completed and the concrete has attained a partial set, the surface shall be brushed with a damp, soft bristle brush.

3. CURB & GUTTER

Immediately after depositing and spading the concrete, the exposed surfaces shall be floated with metal floats, troweled, and edged. As soon as the concrete has sufficiently set, the face forms shall be removed and separator plates withdrawn. All exposed surfaces shall be checked with a clean metal straight edge 10 feet in length. All deviations shall be immediately corrected. The edges along the back of curb, flange, and the joints shall be finished with suitable tools.

The radii at the top and bottom of the curb face shall be rounded with special tools that fit the cross section. All exposed surfaces shall then be troweled smooth.

As soon as partial set has taken place and the water glaze or sheen has disappeared, the surface shall be brushed lightly with a damp, soft bristle brush.

621.7 CURING TIME AND CLEANUP

Before opening the street to vehicular traffic, the Contractor shall clean the area of all forms, lumber, dirt, and other debris to the satisfaction of the Engineer.

The newly placed concrete shall be protected from carrying vehicular traffic until sufficient curing time has elapsed to permit traffic to use the area, i.e. when the concrete reaches 3000 psi or more in compressive strength. If new concrete is opened to traffic before the results of cylinder breaks are delivered, and the strength is found to be below 3000 psi on the day traffic was first allowed, to be determined by the Engineer, the City may require the Contractor to credit the project all or part of the cost for the concrete work since such pavement would be nonconforming. In severe cases the City may direct the Contractor to remove and replace the pavement at the Contractors own expense.

When a concrete saw has been utilized to cut joints, the Contractor will be required to clean the area of all forms, lumber, dirt, and other debris. All debris and residue created by the sawcutting shall be removed in accordance with Section 620.1.3 of the specifications.

The Contractor shall restore in an acceptable manner all property, both public and private, which has been damaged in the prosecution of the work, and shall remove all surplus and discarded materials, rubbish, and temporary structures from the right-of-way and any adjacent properties to the satisfaction of the Engineer. The Contractor shall restore all work completed under other previous contracts which has been damaged by the Contractors operations, in a manner in conformance with the specifications for the item(s) involved.

All cleanup, repair, and restoration work shall be considered incidental unless otherwise indicated as separate bid items in the proposal.

621.8 CONCRETE WORK DURING COLD WEATHER

Concrete shall be placed in accordance with Section 415 of the State Specs. The Engineer, at their discretion, may order the concrete work to cease, irrespective of air temperature, if it is anticipated that the temperature and/or wind chill will drop below freezing.

The Contractor shall remove and replace at their expense any concrete damaged by frost or freezing, irrespective of the fact that the Contractor may have had the approval of the Engineer to pour said concrete.

When concreting during cold weather, the water and the aggregates in the concrete mixture may be heated. When specifically allowed by the Engineer, the Contractor may use magnesium free calcium chloride as an admixture in the concrete at their own expense. The maximum quantity to be used shall not exceed 1% of the cement content of the mix.

Other methods of protection from freezing may be used with the written approval of the Engineer.

All costs, including but not limited to associated with cold weather concrete work shall be at the expense of the Contractor, unless specifically called out as a base bid item. If cold weather protection for concrete is required, the covering shall remain in place for the full duration of the concrete curing period when temperatures fall within ranges requiring concrete to be covered.

621.9 JOINT SEALING

Joint Sealing shall consist of cleaning the joint in preparation for sealing and sealing all contraction and expansion joints in the concrete pavement with a hot applied joint sealing material. The work shall conform to the plan details and as follows.

Joints shall not be sealed until they have been inspected and approved by the Engineer. All contraction and expansion joints in concrete pavement shall be sealed with a hot-poured sealer. All sawed transverse and longitudinal joints shall be sealed with a hot-poured sealer.

The operation of sealing shall be performed as soon as practicable upon elapse of the curing period and, in any event, prior to the time traffic of any kind uses the pavement unless otherwise approved by the Engineer. Application of the joint sealer shall be made when the joint surfaces are clean and dry.

- Immediately before sealing the joint, thoroughly clean the joints of all laitance, curing compound, and other foreign material. Exposed joint faces shall be cleaned by sandblasting or water blasting with sufficient pressure to thoroughly and completely clean the joint. A multiple-pass technique shall be used until the surfaces are free of material that might prevent bonding. For the final cleaning immediately prior to installation of the sealer, the joints shall be blown clean with oil-free compressed air. The joint faces must be surface dry when sealant is applied.
- 2. The sealing compound shall be heated to the pouring temperature recommended by the manufacturer in an approved kettle or tank,

constructed as a double boiler, with the space between the inner and outer shells filled with oil or other satisfactory heat transfer medium. The heating kettle shall be equipped with a mechanical agitator, positive temperature control, and an approved dial thermometer for checking temperatures of the compound. The heating kettle, if and when operated on concrete, shall be properly insulated against the radiation of heat to the concrete surface.

- 3. The sealing compound shall NOT be heated above the maximum safe heating temperature as specified by the manufacturer. Any material heated above the maximum safe heating temperature shall be discarded.
- 4. Pouring of joints shall be made when the sealing material is at the required temperature and, insofar as practicable, the sealing compound shall be maintained at a uniform temperature during pouring operations. Pouring shall not be permitted when the temperature of the sealing compound in the applicator, as it is applied to the joint, is more than 10° F below the recommended pouring temperature. Pouring of the molten sealer in the joint opening shall be done with such equipment that the sealer completely fills the joint opening without overflowing on the adjoining surface and when finished and, after shrinkage, the sealer is approximately flush with the adjoining surfaces. In the event satisfactory sealing of a joint is not accomplished in a single pouring, the sealing compound shall be placed in two pourings. At least one-half of the required amount shall be placed in the first pouring, and the second pouring shall follow the first as soon as practicable after the first pouring has attained maximum shrinkage, but not later than one hour after the first pouring.

621.10 TESTING

The Engineer may, at any time, perform one or a combination of concrete tests including, but not limited to, strength, air content, slump, and temperature as they see fit. The Engineer may also perform plant inspections and source material testing in accordance with the State Specs. The Contractor is free to perform their own testing at their own expense whenever they choose.

Should the Engineer perform testing but the Contractor chooses not to test on their own, the Contractor waives their right to dispute any testing results, except in cases where gross negligence of acceptable industry methods was documented. The Contractor is solely responsible to cast strength cylinders for their use to determine the permissible timing to reopen concrete pavements, approaches, and sidewalk to use that they determine necessary and/or to meet specific contract requirements. If strength cylinders are not cast, the contractor shall not open concrete to traffic until the concrete has accrued the specified number of curing days as outlined in section 415.3.15 of the State Specs.

621.11 PAYMENT

1. THICKNESS TOLERANCES

Payment adjustments for thickness for any pavement items, including but not limited to streets, alleys, walks, and drives, may be made in accordance with the table shown below, at the discretion of the Engineer:

Deficiency in Thickness Determined by Cores (in.)	Proportional Part of Bid Price Allowed
0.00 to 0.25	100%
0.26 to 0.35	80%
0.36 to 0.45	72%
0.46 to 0.55	68%
0.56 to 0.75	57%
0.76 to 1.00	50%
Greater than 1.00	Remove & Replace

Areas of pavement determined to be deficient in thickness by more than 1 inch shall be removed and replaced by the Contractor at their expense with concrete pavement of specified plan thickness. The Engineer may permit the deficient pavement to remain in place, in which case the value of the nonconforming area will be deducted from monies owed to the Contractor.

If sidewalk requires coring to determine thickness, a panel that is cored will be required to be removed and replaced. If any deficiency in thickness greater than 0.25" exists in the cored panel, the contractor shall remove and replace the cored panel at cost to the City. If the panel is of acceptable thickness, the City will pay under the contract bid price the cost to remove and replace the panel.

2. VERIFICATION TESTING

City Verification cylinders will be at a minimum taken as follows by HTCP or ACI certified technicians:

- a. Class I Concrete, as defined by Section 715 of the State Specs, will have
 (3) cylinders made for testing at least once per 800 CY of concrete placed or at minimum of once daily.
- b. Class II Concrete, as defined by Section 716 of the State Specs, will have
 (3) cylinders made for testing at least once per 400 CY of concrete placed.

c. Class III Concrete, as defined by Section 716 of the State Specs, is tested at random and at the direction of the Engineer.

The City will have a certified testing lab test the cylinders for compressive strength. Payment adjustments for any concrete items, including but not limited to streets, alleys, walks, and drives, may be made in accordance with the table shown below, at the discretion of the Engineer, for the full amount of concrete placed between City Verification Cylinders:

Deficiency in Average Strength	Proportional Part of	
Determined by Cast Cylinders	Bid Price Allowed	
3600 PSI or Greater	100%	
3400 – 3599 PSI	95%	
3000 – 3399 PSI	90%	
2500 – 2999 PSI	80%	
Less than 2500 PSI	Remove & Replace	

The Contractor, at their own cost, may elect to take cylinders at the same or increased frequency for their own quality control purposes.

621.12 BRICK PAVERS

The paving block installation shall be rigid and shall not be displaced even when subjected to heavy loads. Paving Blocks shall be reset to match the existing pattern. They shall be sawcut as required to fit existing conditions and shall tightly abut all existing construction without gaps. Material for setting bed course and the joints between the pavers shall consist of a wet mixture of 1-part Portland cement to 10 parts mason sand. Where Paving Blocks abut existing curb, the finished surface shall be 1/2-inch above the top-of-curb.

Sealant shall be placed at all joints between paver block and water, gas, or other utility boxes. Sealant for joints around utility boxes shall be SikaFlex 1A, as manufactured by Sika Corp, Lyndhurst, NJ, 800-933-7452, or approved equal. Color shall be concrete gray unless otherwise specified or noted in the plans. Seal around all utility boxes with specified material in accordance with manufacturer's requirements.

Where there are existing gaps wider than ½ inch between blocks to be removed and reset or replaced, paver blocks shall be cut with a saw to provide the pieces necessary to fill in the gaps.

Bricks that are part of an adjacent driveway, sidewalk, carriage walk, or other feature shall be removed as necessay to complete the scope of work, salvaged and stored in a safe location and reinstalled within 5 days of the sidewalk being replaced even if these bricks are within the right-of-way. Reinstallation of privately owned sidewalk bricks shall match the existing condition of the

sidewalk prior to the work taking place. Removal, salvaging, storing and reinstallation of bricks that are part of an adjacent driveway, sidewalk, carriage walk, or other feature shall be considered incidental to the contract.

621.13 MUDJACKING

1. GENERAL

The Contractor shall furnish all equipment, tools, and other apparatus necessary for the proper construction and acceptable completion of the work specified under this contract. The equipment shall be approved by the Engineer prior to starting the work, and maintained in good working condition by the Contractor during the progress of the work.

All necessary hoses, valves, valve manifolds, and positive cut-off and bypass provisions to control pressure and volume, pressure gauges with gauge protectors, expanding packers for positive seal grout injection, wood plugs, hole washing tools, and drill steel and bits shall be provided by the Contractor.

Prior to jacking any pavement, the slabs shall be closely examined for any existing cracks. This investigation shall be performed by the Contractor and the Engineer. Both parties shall agree regarding the existing condition of the pavement, and existing cracks shall be noted or marked.

The Contractor shall replace or repair any slabs broken due to jacking as determined by the Engineer. The Engineer may require the removal and replacement of the entire slab or a portion of the slab damaged by radial or transverse cracks.

2. WATER SUPPLY

If water tanks are not an integral part of the grout delivery machine, the Contractor shall supply water for delivery to the work site. See section 605.1.02A. Use of City Water for more information.

3. INJECTION HOLES & DRILLING

An air compressor and rock drill or other device capable of drilling the grout injection holes through the sidewalk slab and base material shall be provided. The equipment shall be in good condition. The holes shall be vertical and round. Down-feed pressure whether by hand or mechanical means shall not exceed 200 psi. Holes shall be drilled to prevent breakout at the bottom of the pavement.

Grout injection holes shall be drilled in a pattern approved by the Engineer. Holes shall not be larger than 2 inches in diameter, drilled vertically to a depth sufficient to penetrate through any chemically stabilized base, but not more than 3 inches into the subgrade. Holes shall be drilled so that breakout shall not occur at the bottom of the slab.

Subject to the Engineer's approval, holes may be washed or air blown to create a small cavity to allow the initial spread of grout.

After jacking has been completed at any one hole, the packer shall be removed and the hole temporarily plugged immediately with a tapered wooden plug. The temporary wooden plugs shall not be removed until the grout has set sufficiently so that back pressure will not force it through the hole. Each hole shall be permanently sealed flush with the pavement surface with a fast setting sand/cement or other patch material approved by the Engineer. The patch material shall have a minimum thickness of 3 inches.

4. WEATHER LIMITATIONS

Pavement mudjacking shall not be performed when the ambient temperature at the bottom of the pavement slab is less than 40° F, or when the subgrade or subbase is frozen.

5. GROUT MIXTURE

At least 2 weeks before the start of mudjacking operations, the Contractor shall submit the grout mix design to the Engineer for approval. Submit a mix design for each type of grout or blended material including a complete list of ingredients, admixtures, and set time.

6. JACKING

An expanding rubber packer or other approved device providing a positive seal and connected to the discharge hose on the grout plant shall be lowered into the holes. The discharge end of the packer or hose shall not extend below the lower surface of the concrete pavement. The Contractor shall pump in a pattern and in the amount required to raise the pavement to within 1/4 inch of finial grade. Grade tolerances shown in this section shall be applicable to transverse grades as well as longitudinal grades. Continuous pressures to 200 psi will be permitted. Pressures to 300 psi will be allowed only for short periods. In the event the pavement is bonded to the subgrade, brief pressure rises (10 seconds or less) to 600 psi will be allowed. **Loss of grout through cracks, joints, other injection holes, or from back pressure in the hose or in the shoulder area will not be tolerated.** Grout held in the mixer or in the injection pump or hose for more than 1 hour after mixing shall not be used for jacking.

The slabs shall not be raised more than 1/4 inch when pumping in any one hole at any time. No part of the slab shall lead any other part of the slab or any

adjacent slab more than 1/4 inch at any time. The entire slab and all adjacent slabs shall be kept on the same plane at all times, within the 1/4 inch tolerance. The Contractor shall make observations to assure that when pumping from one hole, the grout flows to adjacent holes to ensure that all voids are filled. The Contractor may cut a slab to prevent breakage when it is bound against an adjoining slab. If the temperature is 80° F, or higher during the jacking operation, the slabs shall be sufficiently moistened to prevent expansion of the slabs.

Upon completion of jacking operations, slabs within the work area shall present an even grade at each joint and shall not vary from the final elevations by more than 1/4 inch. If slabs are found that are lower than the specified tolerance from the final grade, these slabs shall be further jacked until the tolerance is met. Should any over-jacking be greater than 1/4 inch the Engineer has the option to require removal and replacement of the pavement. These repairs shall be accomplished at no additional cost to the City.

The Contractor shall not permit pedestrian traffic on the pavement slab until the grout has set for a minimum of 24 hours.

7. ACCEPTANCE OF WORK

Prior to acceptance, the Contractor shall remove loose concrete, joint filler, or grout spilled on the surface or shoulder. Waste construction material shall be removed and the surrounding areas shall be left in a neat, orderly condition by the Contractor prior to opening to traffic or final acceptance.

SECTION 670 CONTENTS

670 - STREETLIGHTING

605.1 -	Ge	eneral	670-3
	Α.	 Project Requirements	670-3 670-4 670-4 670-5 670-5 670-5
	В.	 General Material Requirements	670-6 670-6 670-7 670-7 670-7 670-8 670-9 670-9 670-9 670-9 670-9 670-10 670-11 670-11 670-12 670-17 670-18 670-19
	C.	 Removal of Existing Lighting 1. Lighting Units 2. Cable, Duct, and Conduit 3. Signs on Poles 4. Pull Boxes 5. Cabinets 	670-21 670-22 670-22 670-22 670-23 670-23
	D.	 Installation 1. HDPE Duct	670-23 670-23 670-24 670-24 670-25 670-26

	 Pull Boxes Poles a. Pole Connections Luminaires/Fixtures 	670-26 670-27 670-27 670-27
E.	Splicing Requirements1. Lighting Units2. Pull Boxes/Underground3. Bollards	670-28 670-28 670-28 670-28
F.	Warranty	670-28
G.	Submittal Requirements 1. Substitutions a. Manufacturer's Cut Sheets b. Luminaires	670-29 670-29 670-30 670-30
H.	Circuit Identification Requirements	670-31
I.	Branch Circuit Tag Out Requirements	670-31
J.	Equipment Bonding Requirements	670-31
K.	Testing Requirements 1. Insulation Testing/"Megger" Test	670-31 670-32
L.	As-Built Information	670-33
M.	Energy Rebates	670-33
N.	Example Testing Report	670-34

SECTION 670 – Street Lighting

<u> 670.1 – GENERAL</u>

The Contractor shall coordinate with WE Energies to energize service at electrical service/lighting control cabinets and disconnect any electrical services as needed at their own expense.

A. PROJECT REQUIREMENTS

All electrical work shall be performed by a state licensed electrical contractor, and where pertinent, conform to the State of Wisconsin Electrical Code and good electrical construction practices. The Contractor shall maintain the street lighting systems in such a fashion as to provide for their continuous operation throughout the contract to extent required, which shall be incidental to the work unless stated as a separate bid item.

Work shall conform to Sections 204, 651, 652, 653, 654, 655, 656, 657 and 659 of the latest State Specs and the latest adopted State of Wisconsin Electrical Code, except as modified herein, and the City Specs.

The work under this section includes additions and modifications to the existing City of Wauwatosa street lighting system as shown on the drawings and as specified. All work, including repairs, shall be inspected by City staff. The Contractor shall furnish and install, as incidental unless specifically noted as a separate bid item, all items needed to make the proposed system complete from the source of supply to the most remote unit. Such items include, but are not limited to, wire nuts, grommets, tape, connectors, conduit lock-nuts varnish, and putty.

The Contract drawings for electrical work are in part diagrammatic, intended to convey the scope of work and indicate the general arrangement of, including but not limited to, equipment, cable, conduits, and approximate sizes and locations of equipment and material. They are not to be used for obtaining lineal runs of wire or conduit. Unless otherwise noted, no measurement of an electrical drawing derived by scaling shall be used as a dimension with which to work. Dimensions noted are subject to field measurement of existing construction. All required measurements shall be performed by the Contractor prior to the installation of equipment.

Traffic control devices required for the street lighting work shall be considered incidental to the work under this Contract if a bid item for traffic control is not listed in the proposal. See Section 605 General Provisions in the City Specs for more details on traffic control requirements.

1. CONTINUOUS OPERATION OF STREET LIGHTS

If there are overhead and underground utility facilities located within the project limits, refer to the plans and specifications for any anticipated utility adjustments.

The Contractor shall coordinate his construction activities with a call to Diggers Hotline or a direct call to the utilities which have facilities in the area as required per statutes (see General Provisions for a detailed list of utility contact information).

Contractor shall be responsible for locating existing underground street lighting and traffic signal cables within the project limits.

Bidders are advised to contact each utility company prior to preparing their bids. Any damage to public or private utilities shall become the responsibility of the Contractor. Satisfactory repair or replacement shall be completed at the Contractor's expense.

Where there is enclosed or unenclosed lighting cable within the project limits, care must be exercised by the Contractor to avoid damage to the cable during work. Where the Contractor or any of his subcontractors damage any part of the lighting system which results in inoperative street lights or traffic signals, or an outage has occurred anywhere within the project limits, the damage shall be repaired by a qualified electrician at the Contractor's expense in accordance with City specifications. All lighting systems shall be kept 100% operational.

a. TIME LIMITS FOR REPAIRS

The Contractor shall have **24 hours** from the report of a problem to inspect and identify the cause. Repairs shall be made no later than **3 days** after the problem is identified. The Contractor may also, at their own expense, install overhead facilities to accelerate the return of functional electrical systems to meet the time limits outlined herein.

Should these limits be exceeded, the Engineer reserves the right to hire a third party, independent of the Contractor, or use City workers to perform the repair(s). The cost of hiring a third party or using City workers and having them repair the damage will be paid for by the Contractor. Contractor agrees they will be informed of the final cost, which will be deducted from monies owed in a subsequent payment. In lieu of hiring a third party or using their own staff, the Engineer may also choose to fine the Contractor as they see fit for the circumstances, to be charged each day the lights are not properly functioning outside of aforementioned time limits, and to be deducted from monies owed to the Contractor.

b. TEMPORARY LIGHTING

If no plans for temporary lighting are included in the Contract Documents, the Contractor may choose, at their own expense, to maintain street lighting via overhead connections to existing poles, the installation of temporary poles and luminaires with their own wiring, or splicing (in existing wires only) around new and/or old poles and/or pole bases, as needed.

Temporary lighting systems shall maintain equal or better lighting levels throughout the area of construction. The Contractor may propose to reduce these levels by submitting a plan to the City for review and approval to reduce light levels on the project. The plan shall indicate all existing and new lighting proposed to be in service and show what lighting is being proposed to be reduced or removed as part of the temporary lighting for the project. If the City does permit reduced lighting levels within the construction, the Contractor is still responsible for maintaining connections to allow 100% lighting capacity for any circuit(s) that continue beyond the construction limits of the project.

Whenever the Contractor is doing work that involves splicing into existing lighting systems, a tag system shall be employed at the distribution center.

The Contractor shall attach an appropriate tag on all circuits which are required to be opened during the course of his work. Such tags shall bear the date, Contractor's name, and individual worker's name indicating to others that work is being performed on the system.

At the conclusion of work operations on a particular distribution center, the Contractor shall remove such tags and re-energize the affected circuits.

See section 670.1 B. 8 below for detailed requirements.

- i. All temporary lighting shall be in accordance with Wisconsin Electrical Code, the sections of the State Specs as mentioned in Section 670.1 A. above, the City Specs, and any applicable Federal, State, and Local laws.
- 2. PERSONNEL QUALIFICATIONS

Perform all electrical work using a journey worker electrician or an

electrical apprentice under the onsite supervision of a journey worker electrician. Electrical work is defined as any electrical and related construction required to be performed by the Contractor under this contract.

3. QUALITY ASSURANCE

All electrical materials shall conform to the latest requirements of the Wisconsin State Electrical Code (defined as the NEC plus the Wisconsin Supplemental Volumes).

All electrical materials to be furnished and installed under the contract shall comply with the provisions of the Underwriters Laboratories, Inc. and shall be UL listed and labeled.

B. GENERAL MATERIAL REQUIREMENTS

All materials furnished by the Contractor for lighting installation under this contract are subject to approval by the Engineer. Materials and equipment by manufacturers other than those specifically named will not be considered. Unless otherwise stipulated in the specifications or noted on the drawings, all materials and equipment incorporated in the work shall be new and unused and in complete accordance with the specification requirements. Materials and/or work not specifically identified as or in a bid item shall be considered incidental to work, and shall be included with the cost in appropriate bid item(s). All electrical materials to be furnished and installed under the contract shall comply with the provisions of the Underwriters Laboratories, Inc. (UL) and shall be UL listed and labeled.

It is the Contractor's responsibility to verify the catalog numbers shown on the plans and specifications, and update same before submitting shop drawings. Any catalog number revisions or subsequent material cost increases shall be made at no additional cost to the contract whether it is because of a different type or mounting due to project conditions, discontinued catalog numbers or other such issues. In the case of discontinued catalog numbers, the electrical contractor shall bring it to the Engineer's attention with the manufacturer's recommended substitution before shop drawings are submitted so that the appropriate equipment can be selected by the Engineer.

Bonding wire shall be installed in conduits for equipment grounding. All equipment shall be grounded as required.

- 1. CABLE, DUCT, AND CONDUIT
 - a. ELECTRICAL WIRE

LATEST REVISION - 2023.01.22

All conductors and tracer wire shall be in strict accordance with Section 655 of the State Specs. Conductors shall be of the gage indicated on the plans, stranded copper, XLP insulated, USE rated wire, placed where indicated on the plans, with number of required conductors as indicated on the plans. Conductors shall be installed in duct. No direct-bury proposed conductors shall be allowed without the written permission of the Engineer. Feeder conductors shall be black or red, and where two of this type are called for on the plans, one shall be black and one shall be red. Neutral conductors shall be white and grounding conductors shall be green. Tracer wire shall be orange or of the color indicated on the plans. Other cable types shall be of the color indicated on the plans or as directed by the Engineer.

b. HDPE Duct

Duct shall be in accordance with Section 655 of the State Specs, Type TC7, Schedule 40, UL listed, and shall be black with a red stripe for electrical installations. Duct shall be installed in the size(s), location, and number as indicated on the plans, and all the way through the tops of bases.

c. Nonmetallic Conduit/PVC

All conduits and sleeves shall be rigid PVC Schedule 40 in accordance with Section 652 of the State Specs, and of the size(s) indicated on the plans. Conduit sleeves for HDPE duct shall be installed at any roadway crossing, in concrete bases, and any other location as shown on the plans and in the detail drawings.

In junction boxes, ducts that are entering shall be cut off no higher than one-half the depth of the box but a minimum of 3" above the gravel base in the box unless otherwise approved by the Engineer.

2. FIXTURES/LUMINAIRES

The contractor shall consult the plans and/or proposal for product numbers and types of fixtures/luminaires to be installed. Either a 10% overage of fixtures or 3 each, whichever is greater, shall be delivered to the City Department of Public Works and shall be incidental to the bid item for fixtures/luminaires.

LED luminaires shall be of a slim, low profile design that minimizes wind loading. Luminaires shall be constructed of cast and extruded aluminum with integral, weather-tight LED driver components with high performance aluminum heat-sinks. Each luminaire shall use a terminal block for power input suitable for #6 through #14 AWG wire.

The arm mount luminaire shall be designed for installation on a 2-inch nominal diameter mast arm.

Luminaire design shall be modular to accommodate varied lighting output by use of LED light bar modules and/or differing driver outputs. The LED shall have a nominal color temperature of 3000K with a minimum of 70 CRI. Drivers shall operate with an input voltage ranging from 120-277V, 50/60 Hertz, +/-10% as standard. LED drivers shall have a power factor greater than 90%. Anticipated L90 at 25°C shall be 100,000 hours or greater. All luminaires shall come equipped with an integral surge suppression protection standard and a quick disconnect harness suitable for mate and break under load provided on power feed to the driver.

The finish shall be factory applied powder coat durable Gray topcoat, providing resistance to corrosion, ultraviolet degradation, and abrasion. Luminaire manufacturer shall provide a minimum of 10 year warranty on materials and finish.

Luminaires shall be rated and/or certified UL listed for wet locations, IP-66 minimum enclosure rating, IDK dark sky full cutoff compliant, and Design Light Consortium (DLC) qualified. Luminaires shall be provided in a 3000K temperature color unless otherwise specified or directed by the Engineer.

Pole and Bracket Cable shall consist of two insulated single conductors for each luminaire. Conductors shall be stranded copper, AWG #10, 600V, Type XLP-USE having an insulation thickness of at least 45-mils. The conductors shall be continuous, without splices from the underground feeder connection or fuse holder, to the terminals at the luminaire. A sufficient length of excess cable shall be provided at each pole to permit the removal and servicing of the fuse assembly from outside the pole.

3. THREADED FASTNER REQUIREMENTS

These special provisions require the corrosion preventative compound described in Sections 657.3.1(3) and 657.3.5 of the State Specs. Any and all fasteners and other attachment hardware used on the pole

shaft shall be stainless steel unless otherwise approved by the Engineer.

All threaded fasteners (including but not limited to anchor bolts, screws, and bolts) shall be liberally coated with an Engineer approved anti-seize compound, and excess shall be wiped off. Excepting fasteners inside control cabinets, fasteners up to half an inch in diameter shall be stainless steel. Rust, corrosion, and anti-seize protection shall be provided at all threaded assemblies by coating all mating surfaces with an Engineer approved compound. Aerosol cans of anti-seize material are NOT acceptable. Anti-seize material shall be painted or dipped on threads.

4. FINISH REPAIRS

Unless otherwise specified, mars and scratches on painted equipment shall be touched up with two coats of color matched synthetic resin enamel, or with two coats of color matched zinc rich paint acceptable to the Engineer or as directed by the Engineer. Cold galvanizing paint shall be applied to steel surfaces prior to applying paint.

5. PULL BOXES

Covers for pull boxes shall say "STREET LIGHTING" when used in a lighting circuit.

Pull boxes shall be rectangular precast polymer concrete, reinforced by a heavy-weave fiberglass (Quazite or Engineer approved equal), 17"x30" with 18" depth, style Quazite PT, open bottom (flared), and Tier 15 rated. Covers shall be heavy duty, bolted, skid resistant with a minimum coefficient of friction of 0.5, and in concrete gray color. The cover fasteners shall be stainless steel captive 3/8-inch hex head bolts with stainless steel inserts.

Pull boxes shall be placed at all locations indicated on the plans or approved by the Engineer. When indicated on the plans, "communications" pull boxes, as described below, shall be used in the street lighting work where shown, and shall read "STREET LIGHTING" on the cover.

a. COMMUNICATIONS

Pull boxes for communications shall be the same as described above, except they shall have nominal sizes of 24"x36" and 42" LATEST REVISION – 2023.01.22 deep, unless otherwise shown on the plans. The cover shall read "COMMUNICATIONS".

6. LIGHT POLES

a. ALUMINUM LIGHT POLES

Light poles shall be Valmont brand or Engineer approved equal.

The completed lighting unit shall be of such design as will withstand all loads to which the units will be subjected in the field, including the loads applied by the materials attached to the lighting units, in conformance with the latest edition of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals. Use a design life of 25 years. Design to withstand a 3 second gust wind speed of 90mph (145km/h).

Poles shall be one extruded piece of 25-foot tapered aluminum, with 6063 satin finish, 0.156 wall thickness, 4-bolt mounting with 11 ¹/₂" bolt circle, and single member 6-foot mast arm, or as shown in the plan details. Pole shall be Part No.RTA25C8B4 with No. 69772-001 mast arm as manufactured by Hapco Aluminum Pole Products or Engineer approved equal, unless otherwise shown. Any and all fasteners and other attachment hardware for the pole shaft shall be stainless steel unless otherwise directed or approved by the Engineer, and shall be incidental to the pole.

Shafts with arm mounted luminaires shall have a J-hook at the top of each pole to provide strain relief for the cable.

Provide a welded mounting plate to accommodate side mount luminaire(s) as incidental to the pole. Exact dimensions to be coordinated with the luminaire to match end (arm) dimensions.

b. CONCRETE POLES

The poles shall be sky gray colored, polished finished with acrylic seal.

All standards furnished shall be cast in metal molds true to design. Time of mixing shall be sufficient to ensure that all particles shall be thoroughly wetted. The pole shafts shall be fiber reinforced, air-entrained concrete, with 5/8" minimum coverage over reinforcement (7,000 psi minimum). Concrete shall be placed in one continuous operation. When filled, the mold shall be rotated at a high speed to insure a dense concrete by centrifugal force, and produce a cable raceway throughout the length of the standard not less than 2 $\frac{1}{2}$ " at the location of the hand holes and a minimum of 1 $\frac{1}{2}$ " at top of pole. The poles shall then be polished to a smooth ground finish. Reinforcing shall be in accordance with this specification to assure that no cracking shall occur during normal handling.

The span concrete poles are to be octagonal in shape and carry a 0.125 inch/foot taper, and have a sky gray finish. Shaft length is in general to be a minimum of 27'-7" and a maximum of 28'-0". The pole is to be 23'-0" above grade. The butt diameter shall be 8" minimum and the top diameter shall be 5" minimum. The hand hole shall be 2 $\frac{1}{2}$ " x 12" minimum and 18" above grade and located on the opposite side of the pole from the curb. Two cable entrances shall be provided across from one another to run parallel with the curb line. Cable entrances shall be 18" below grade and a minimum size of 2-1/4" x 8". Cable entrances shall be sufficient in size to allow a single 1" conduit to enter the pole and terminate no less than 3" below the hand hole but no more than 6" below the hand hole.

The hand-hole cover shall be flush with pole. Poles shall be furnished with flush aluminum cover plate for hand hole and all other necessary hardware. This hardware shall include a removable metal cap which will protect the required open cable raceway at the top from the weather, nonferrous inserts for securing accessories such as cast aluminum pole cap, bracket brace, hand hole cover, etc., 6'-0" x 2" dia. mast arm of galvanized steel or aluminum with 1-1/4" slip fitter, stainless steel or silicone bronze nuts and bolts. Brackets for mast arm are to be one piece (no welds).

Manufacturer's conformance to specifications shall be certified by an independent testing laboratory.

All poles shall be guaranteed against defect for a period of 5 yrs. If defects are discovered, poles shall be replaced on a two-for-one basis.

c. POLE CABLE & FUSE

Conductors from the underground cable network shall be Type RHW-2/USE-2 (XLP) individual conductors. In each utilized phase

conductor in the hand-hole, there shall be installed a 1-pole secondary inline 600 VAC fuse assembly as manufactured by BUSS Tron HEB series fuse holder with weatherproof boots, or Engineer approved equal, with a KTK fuse. Conductors shall have sufficient length to permit removal of the fuse assembly through the hand-hole of the pole.

Exposed ends of fuse holders shall be taped thoroughly with 3M 130C linerless rubber insulating tape and 3M Scotch Super 88 vinyl tape or Engineer approved equal.

d. BASES

Shall be constructed in accordance with Section 654 of the WisDOT Standard Specifications and as shown on the plans, and the requirements of the pole manufacturer.

Light pole bases shall be round, 20" diameter by 5' deep reinforced concrete, unless otherwise shown on the plans. Bases shall have anchor bolts cast in place with the base. The Contractor shall confirm bolt placing and circle diameters with the pole supplier(s) before pouring bases. Bases of a non-circular shape will not be accepted unless such bases are noted to be installed in the plans.

Bases shall be excavated by use of a circular auger. Top surfaces of concrete bases shall be trowel finished and level with a 1-inch chamfer around the entire top edge. Backfilling and compaction of areas disturbed by construction operations shall be considered incidental. All form material exposed to view shall be removed by the contractor.

Factory made PVC elbows shall be cast in the base as sleeves for the cable-in-duct, incidental to the base. Location and size shall be as shown on the details or directed by the Engineer. Elbows shall be installed in an orientation as to permit conduit to be installed in as nearly a straight-line run as possible, without bends. It is acceptable to the Engineer if the Contractor achieves this by "crisscrossing" the vertical portions of the elbows in the base, and/or orienting the elbows so the tops protrude from the top of the base and are cut down later, in order to create a more gradual curve inside the concrete. The sleeve opening in the side of the base shall be no less than 18" below the concrete top of the base.

Bases shall be constructed so as to center the pole on the concrete. The Engineer may require off-center pole bases to be removed and reinstalled at the Contractor's expense, or the Engineer may reduce payment for each off-center base. Sonotube

and other forming materials shall be removed from the exposed portion of bases before completion.

7. LIGHTING CONTROL CABINET

The lighting control cabinet shall include a new concrete foundation, NEMA 3R enclosure, panelboard, time clocks, contactors, photocontrol, circuit breakers, wiring, and all equipment and materials as shown in the plans and as listed below, as incidental to the cabinet item. The cabinet with all of its electrical components, wiring and parts shall be listed and labeled by Underwriters Laboratories (UL) or other nationally recognized testing laboratory as a completely assembled unit.

All materials furnished for this portion of the work shall be Listed and Labeled by UL or other National Recognized Testing Laboratory.

Provide factory PAINTED finish on enclosure, meter pedestal and exterior mounted disconnect switch and any exposed conduits to match color of street lighting poles/luminaires.

Provide "LIGHTING CONTACTOR" or "RECEPTACLE CONTACTOR" (1/4") engraved identification plaque on respective contactor.

Provide "LIGHTING" or "RECEPTACLE" (1/4") engraved identification plaque on respective H-O-A switch.

a. ENCLOSURE

Control enclosure shall be manufactured by Bison Pro Fab (800) 825-5805, APX Enclosures (717) 328-9399, or Engineer approved equal.

Control enclosure shall be NEMA-3R made from 12-gauge Type 304 stainless steel. Seams shall be continuously welded and ground smooth. All hardware shall be type 304 stainless steel.

Enclosure shall be free standing with an overall height of 54-inches, a width of 48-inches and a depth of 24-inches. Enclosure shall have a 2-inch wide inside flange at the front, back, and sides for anchoring to base. Side and back walls shall be stiffened with 2 vertical stainless steel equipment mounting rails per wall. The door frame shall be double flanged. The cabinet top shall be sloped to drain and shall have a drip shield over door. Provide screened vent slots $(1/8-inch \times 1-inch)$ under the cabinet overhang located in the top face above door opening.

Outer door shall be NEMA 3R, 12-gauge stainless steel, with cellular neoprene gasket and a three position door stop rod. Door shall be hinged with a continuous 14-gauge stainless steel hinge secured with ¼-20 stainless steel carriage bolts. Provide 3-point latching system with ¾-inch diameter stainless steel padlocking handle. Also provide a Corbin No.2 deadbolt lock with 2 keys.

Enclosure shall have a 0.125-inch thick 5052-H32 aluminum mounting panel at back (interior) of enclosure.

Provide plastic print pocket attached to inside of door.

All abandoned cables shall be removed from the lighting control cabinet.

b. MAIN DISCONNECT

Fusible 200A, 2-pole, 600VAC, NEMA 4X stainless steel, heavy duty with insulated groundable neutral assembly, service ground kit and lockable in ON & OFF positions. Mount directly to back of enclosure as appropriate. Provide Bussmann 200A, 600V FRS-R Class RK5 fuses.

c. CONTACTORS

Contactors shall be 200A, 2-pole, mechanically held, 120V coil, Square-D #8903-SVO10-V02, and shall be mounted directly to back panel. The Contractor shall construct a separate latching/unlatching circuit using an 8-pin DPDT relay and socket (120Vcoil, 10A contacts) Square-D or Engineer approved equal.

d. CONTROL TRANSFORMER

Shall be 240VAC Primary, 120VAC Secondary, 1PH, 3KVA, Square-D #3S1F. The Contractor shall furnish Square-D #9080FB1211R fuse block assembly with 15A fuse to protect the line side of the transformer.

e. TIME CLOCK

The time clock shall be astronomical with non-volatile EEPROM memory, battery backup, -40°F to 155°F operating range, LCD display, daylight saving time and leap year correction. The Contractor shall provide an Intermatic #ET8215C.

f. SECONDARY LOAD CENTER

The Contractor shall provide circuit breaker enclosure for secondary circuits, Square-D #QO24L70S with one 20A breaker (#QO120) for maintenance circuit, one 15A breaker (#QO115) for photocell circuit, and one #PK0GTA2 Ground Bar.

g. PHOTOCELL

The photocell shall be of the button type and installed in the overhang of the control cabinet facing north. The Contractor shall apply silicon caulk to maintain the integrity of the enclosure. The photocell shall be rated for 120V, 1800W with 30-60 second delay between "ON-OFF" operations and be warranted for 5-years by the manufacturer. Photocell shall be Intermatic #K4021C or Engineer approved equal.

h. HAND-OFF-AUTO SWITCH

Switch shall be Square-D #9001-KS43B switch body, #9001-KA1 contact block and #9001-KN760WP nameplate mounted in Hoffman #E-1PB one hole box.

i. OTHER DEVICES

Furnish one 120V GFI duplex service receptacle in the surface mounted box and one 120V LED light fixture. The light fixture shall be surface mounted type with gasketed vapor tight globe, wire guard, lamp, and separate on/off switch in surface mounted box.

- j. DUPLEX GFCI RECEPTACLE Shall be Hubbell #GFR20ILA (20A)
- k. 4" SQ DEEP BOX Shall be Appleton #4SDEK with #8362 Cover
- I. VAPOR TIGHT FIXTURE Shall be E-conolight #E-VT1L141NG
- m. 4" OCT. BOX Shall be Appleton #4SDEK with #8362 cover

n. LAMP – Shall be GE 60W/A19 LATEST REVISION – 2023.01.22
- o. LIGHT SWITCH Shall be Hubbell #CS1221I (20A)
- p. 4" SQ DEEP BOX Shall be Appleton #4SDEK with #8361 Cover
- q. NEUTRAL AND GROUND BAR 240V CIRCUITS

Shall be 1/4"x4"x12" Copper Bus Bar with mounting hardware. The Contractor shall provide Burndy #KA4C (#14-#4 AWG) or #KA25 (#4-#1/0 AWG) copper mechanical lugs for all conductors to the bus bar, or Engineer approved equal. Appropriate sizes and quantities shall be determined from the plans and details, and space shall be left for future lugs on the bar. Insulated standoffs shall be provided for the neutral bar. A separate copper grounding bar shall be mounted within the cabinet, identical to the Neutral Bar, for terminating field equipment grounding conductors.

r. PANELBOARD

Panelboard shall include 240/480 volt, 400A Square 'D' panel, 200A main circuit breaker, and 40A branch circuit breakers and ground bar as follows:

- i. Panelboard: (1) Square-D 400A, 600V, I-Line, #HKA-225-S4
- ii. Ground Bar: (1) Square-D #PK0GTA2
- iii. Main Breaker: (1) Square-D 2-Pole, 200A, 600V, I-Line, #JGA26200AB
- iv. Circuit Breakers: (12) Square-D I-Line one pole, 40A, #FA-14040

Fillers (Square-D #HNM1BL or #HNM4BL) shall be provided as required.

s. METER PEDESTAL

A new meter pedestal ('Milbank' or Engineer approved equal) shall be furnished and installed under this item. The Contractor shall arrange for and pay all permits and fees associated with installation of the meter pedestal as incidental to the cabinet work unless a separate bid item is noted.

The Contractor shall furnish and install an Engineer approved meter pedestal, conduit fittings (10,000 AIC or as required by the LATEST REVISION – 2023.01.22 local utility), ground rod(s) and connection(s), and all necessary conductors and equipment required by the State Electrical Code and the utility for a service connection. Meter shall be located on the side of the cabinet as appropriate.

t. CONCRETE BASE

The concrete base shall be as shown on the plans and shall comply with the requirements of Section 654 of the WDOT Standard Specifications. Conduit shall be Schedule 80 PVC electrical conduit and shall conform to the requirements of Section 652 of the State Specs.

Anchor rods, nuts, and washers shall conform to the requirements of ASTM A449 or A687 (Grade 105). The entire length of the anchor rods, and the nuts and washers thereof, shall be hot-dip zinc coated in accordance with AASHTO M232. Concrete Masonry shall conform to the requirements of Concrete Masonry, Grade A, AFA, A-S, A-IS or A-IP, Section 501 of the State Specs.

u. CONSTRUCTION

The cables shall be trained in straight horizontal and vertical directions and be parallel next to and adjacent to other cables whenever possible, using cable clamps attached with #10 screw to mounting panel, Panduit CCH series or Engineer approved equal. Adhesive type clamps are not allowed. All equipment shall be mounted to the panel in the enclosure unless otherwise indicated on the plans or directed by the Engineer. Refer to the plans and details for equipment layout within the cabinet. The cabinet interior shall be cleaned of all construction debris prior to final acceptance.

v. PROGRAM TIME CLOCKS AS FOLLOWS

Lights: turn on 20 minutes after sunset and off 20 minutes before sunrise.

Receptacles: turn on 1 hour prior to sunset and turnoff at midnight. Verify with City or Engineer prior to programming

8. TEMPORARY LIGHTING (WHERE APPLICABLE)

Temporary lighting shall be installed where called out on the plans. If no plans for temporary lighting are provided, the Contractor may still choose – at their own expense – to install Engineer approved temporary lighting (see Section 670.1 A. 1. b. above for additional information).

Regardless of whether temporary lighting is on the plans or the Contractor elects to install it, they shall be responsible for determining and providing any and all materials, labor, equipment, and miscellaneous supplies as needed to maintain lighting during construction, as incidental to the temporary lighting. All temporary lighting shall require submittals (and if applicable, plan drawings) approved by the Engineer. Maintenance of temporary lighting shall be incidental to the work.

- a. MATERIALS
 - i. WOOD POLES

All temporary poles shall be wood unless otherwise approved in writing by the Engineer. Wooden poles shall be Class V or larger with a 35 ft. overall length, but this length shall be adjusted as needed to accommodate locations below existing utility poles and/or lines, and adjustments shall be incidental to the poles. The poles shall be northern pine in accordance with ANSI Standard 05.1 for Specifications and Dimensions of Wood Poles. All poles shall be pressure treated with 5% pentachlorophenol with a minimum of 8 pounds per cubic foot net retention of the oilborne preservative. Provide 4 AWG copper wiring in accordance with Section 655 for pole wiring. The depth of the wood pole in the ground shall not be less than 5 feet or as directed by the engineer.

ii. DOWN GUYS

All down guys shall be galvanized, 3/8-inch nominal diameter, 7 strand, zinc coated steel wire conforming to ASTM A475, with 11,500 lbs. minimum breaking strength, and utilities grade or better. All guys shall have a 7-foot PVC or plastic guy guards. All guys shall have a guy strain insulator in accordance with ANSI Class 54-2, a tensile strength of 12,000 lbs., and a maximum cable diameter of 1/2-inch.

Anchor rods shall be twin-eye 5/8-inch nominal diameter with a minimum breaking strength of 11,500 lbs. Anchors shall be expanding or plate type with an expanded area of 125 square inches or greater. A screw type anchor may be used provided the anchor is at least 10-inches in diameter, has 78 square inches of an area, and an anchor rod diameter 1-1/4inch by 66-inches or larger, and galvanized.

Guy wire clamps shall be 3-bolt and have a minimum breaking strength of 11,500 lbs. A galvanized service sleeve shall be used to hold down the loose guy ends beyond the guy clamp.

The dead ends shall be made of the same material as the guy wire.

iii. LUMINAIRES AND ARMS

Fixtures shall be high pressure sodium or LED cutoff luminaires of appropriate output, and mast arms shall be of appropriate length.

iv. AERIAL CABLE

The aerial cable shall consist of #2 AWG triplex or quadplex assembly of two or three XLP insulated power aluminum conductors, respectively, with an ACSR bare messenger wire (may be used as ground conductor if needed).

- b. CONSTRUCTION
 - i. POLES

The depth of pole in the ground shall be no less than 5-feet, or as directed by the Engineer. All poles which are at the end of an aerial cable run, or where aerial cable tension could cause the pole to lean, shall have down guys installed. Any backfill in the hole around the buried section of pole shall be either stone chips, slurry, or other non-compressible material approved by the Engineer. Backfill shall be incidental to the pole.

ii. CABLE LATEST REVISION – 2023.01.22 The Contractor shall install the overhead lines in a manner which is safe and in accordance with all applicable codes, and shall correct excessive sag or loose connections until removal of the temporary system is acceptable to the Engineer, or until the final payment of the contract.

Cable shall be a minimum of 20-feet above any roadway or driving surface, and minimum 15-feet above all other surfaces.

Where necessary to connect to existing underground circuiting, the Contractor shall provide an appropriately sized, temporary junction box at the base of the wood pole for an above-ground splice. The cable that extends above grade shall be appropriately protected by a plastic cable guard or conduit for a minimum of 10 vertical feet.

iii. REMOVALS

Temporary lighting shall only be removed when the proposed permanent system is fully tested and functional, or with the express written permission of the Engineer. Once criteria for removals are met, all materials shall be removed as soon as practicable, and any voids or holes left by the temporary system shall be backfilled in compliance with Section 670.1 C. of the City Specs below.

iv. FAILURES, DAMAGE, AND MALFUNCTIONS

All temporary lighting shall be maintained in accordance with Section 670.1 A. 1 of the City Specs, as incidental to the contract, from the time of installation through the time of disconnection at the start of removals.

In the event of circuit failures in and near the project area during construction suspected to relate to construction activities, the Contractor, at his expense, shall respond to and troubleshoot outages. Whether or not the problem or solution lies within the project limits, he shall immediately make the necessary repairs per City specifications. The Contractor shall lay out his own work and shall be responsible for determining exact locations for equipment and rough-ins and the exact routing of conduits so as to best fit the layout of his work.

Since damaged cable may not be discovered until nonworking hours, the Contractor shall maintain a telephone number by which he can be contacted for said repairs 24 hours/day, 7 days/week, including holidays and weekends. Repairs must be permanent in nature and may include installation of an entire conduit crossing with pull boxes, trenching, cable replacement and other work needed as determined by the City Electrician.

Contractor shall be responsible for making repairs to street lighting and traffic signal systems which are believed to have been damaged as a result of the contractor's construction operations. After the Contractor has made sufficient repairs, should the Contractor demonstrate, to the satisfaction of the Engineer, that damage to the underground cable was obviously not a result of construction operations under this contract, and such cables were directed to be repaired by the Engineer, the Contractor shall be reimbursed by the City for actual costs of labor, equipment and material used on a cost-plus-limited basis per the terms of the contract.

The Contractor shall also be responsible for repairs for failure to the street lighting cable within the one-year warranty period following contract acceptance which are shown to be a result of the Contractor's construction activities. If the Contractor fails to abide by the requirements herein, the City reserves the right to complete the work independently of the Contractor and deduct the cost thereof from monies due the Contractor under this contract.

The Contractor or his representative shall respond to all emergency calls from the City of Wauwatosa within one (1) hour after notification and provide immediate corrective action. When equipment has been damaged or becomes faulty beyond repair, the contractor shall replace it with new and identical working equipment within one (1) working day. The cost of furnishing and installing the replaced equipment shall be borne by the contractor at no additional expense. The contractor may institute actions to recover damages from a responsible third party. If at any time, the contractor fails to perform all work as specified herein to keep the

LATEST REVISION – 2023.01.22

temporary lighting system in proper operating condition; and if the contractor's designated personnel cannot be contacted, the City shall have the normal maintaining authority to perform the required repair. The cost of the repair shall be paid by the contractor.

C. REMOVAL OF EXISTING LIGHTING

Holes left by all removals shall be backfilled with an Engineer approved material. This work shall be incidental to removals.

Where indicated on the plans or as directed by the Engineer, the Contractor may be required to salvage and deliver selected existing light poles, arms, luminaires, pull boxes, frames/covers, signs, or other materials – to be determined on a contract-by-contract basis – to the City of Wauwatosa Public Works Yard at 11100 W. Walnut Rd., Wauwatosa, WI 53226. Contact Randy Michelz, Traffic and Electrical Supervisor, (414) 471-8429

1. LIGHTING UNITS

Where indicated on the plans, lighting units shall be completely removed including pole (direct-bury or base mounted), base (as applicable), mast arm, luminaire, pole wiring, and all appurtenances, and the existing underground cables and conduits/ducts shall be cut off and safely abandoned below ground or temporarily spliced as required to maintain operation of the street lighting, all incidental to the removal unless otherwise noted as a separate base bid item. Except where noted on the plans, all of the above materials shall be disposed of offsite by the Contractor as incidental to all removals. The Contractor shall notify the Wauwatosa Electrical Supervisor 48 hours prior to the removal of the lighting units.

Any partial removal of lighting units shall only be as specifically indicated on the plans, or as directed by the Engineer.

2. CABLE, DUCT, AND CONDUIT

Where new underground conduit or duct is to be installed, the Contractor shall remove existing underground conduits/ducts (note conduits and ducts only need to be removed where exposed after abandonment; no filling or pulling of abandoned runs required) and their wiring, and dispose of/recycle offsite in an appropriate manner, as incidental to removals and proposed installations. All unused or abandoned wires shall be removed from light poles, junction boxes, ducts, conduits, and the lighting control cabinet. Incidental splices shall be made where needed to maintain continuous operation of the lighting system.

3. SIGNS ON POLES

Signs attached to the existing poles shall be removed by the Contractor. The signs shall be placed on temporary posts, salvaged, or disposed of offsite as directed by the Engineer or shown on the plans. The Contractor shall reinstall the signs, or install new signs if so called for on the plans, on the nearest available new lighting unit or as indicated on the plans. Removing, temporarily posting, disposing of (where applicable), and reinstalling existing signs or installing new ones shall be considered incidental to the work unless otherwise noted as a separate base bid item. It may be noted on the plans the City of Wauwatosa is furnishing some signs.

4. PULL BOXES

Where indicated on the plans, existing pull boxes, frames, hardware, and covers shall be completely removed. The existing pull box frames, covers, hardware, and all other materials therein shall be disposed of off-site by the Contractor as incidental to removals. The existing underground cables and conduits/ducts in the pull box shall be cut off and safely abandoned below ground or temporarily spliced as required to maintain operation of the street lighting, incidental to the removal.

5. CABINETS

Cabinets shall be removed where indicated on the plans. Cabinets shall have all conductors and electric services disconnected in a safe manner. Unless otherwise indicated on the plans, removal shall include as incidental to the work the entire cabinet, the entire base including conduits, ducts, and cable, all internal and external electrical components, wiring, and hardware, meter pedestal (where applicable; unless otherwise indicated as a separate bid item), and any other interior or exterior attachments and their materials. The Contractor shall coordinate cabinet removals with WE Energies, the Engineer, and the City of Wauwatosa Electrical Supervisor as incidental to the removal.

D. INSTALLATION

LATEST REVISION - 2023.01.22

1. HDPE DUCT

Duct shall be installed 6"-12" from the back of curb, at a depth of 24"-30" of cover from the top of curb. The Contractor shall lay or bore the duct empty, i.e. without any proposed cable inside.

In the roadway (not driveways or walks), duct shall be installed in a 3" PVC Schedule 40 conduit sleeve at a depth of 18"-24" of cover for the sleeve from the top of pavement unless otherwise noted in the plans, but the sleeves shall be installed empty before the duct is pulled through. Duct shall NOT be placed in any sleeves before the sleeves are installed. PVC crossings shall extend 6"-12" beyond the back of curb. Compacted gravel (or spoils in turf areas) may be used for bedding and backfill material but it must be free from all rocks, pebbles, broken concrete, clay chunks or other material that may cause damage to the duct (or conduit). Backfill in these areas shall be thoroughly compacted to prevent future settlement. In paved (or brick paver) areas, the backfill for trenches shall be slurry where directed by the Engineer. Mason sand bedding is only required around directburied cable.

Should two or more crossings be required at a location, each crossing shall have its own HDPE duct in its own PVC sleeve, and the crossings shall be laid side-by-side at the same depth. Separate borings and trenches are not required.

The location of each crossing through a roadway shall be marked by arrowhead chisel marks or stamps in the curb edge at the top of curb. If curb at the crossings is to be replaced as part of this contract or from damage, then these marks shall be made in the proposed curb after it is installed.

a. SLC TRANSITION/SHUR-LOCK II BENDS

Where indicated on the plans or as directed by the Engineer, Duraline Shur-Lock II couplers shall be used with Schedule 40 PVC conduit bends, of the size to match the HDPE conduit, to accomplish 90° turns in duct alignments. Couplers shall be sized as appropriate. Where used, Shur-Lock II fittings shall be noted on the as-built drawings and the Contractor shall verify to the Engineer the installation of the SLC transition is complete prior to backfilling. Transitions shall not be paid for unless confirmation of their installation has been made by the Engineer, or proof of their installation is provided to the Engineer, AND they are clearly shown on the as-built drawings. If the Contractor fills their excavation without notifying the Engineer or before the Engineer is able to confirm installation, the Contractor shall, at their own expense, reexcavate and re-fill around the SLC for the Engineer's verification.

2. PVC CONDUIT

Unless otherwise noted on the plans, PVC conduit shall only be used as a sleeve for HDPE duct. Boring is only required where indicated on the plans. Boring in areas where it is not shown or directed by the Engineer shall NOT require any additional payment to the Contractor, unless the Engineer agrees in writing to extra costs before the work is performed.

Where the earth trench meets conduit that is either above or below the trench line, the trench line shall be sloped at a grade of not more than two inches (2") per foot to the conduit. The conduit is not to be bent up to meet the trench line. Where trench is excavated around the conduit end; any fill material placed beneath such conduit shall be properly compacted.

The material excavated from the trench shall be stored in such a manner as to do no damage to the adjacent public or private property. All surplus material shall be removed at the Contractor's expense and on the same day as it is excavated unless otherwise permitted in writing by the Engineer. The Contractor shall be strictly responsible for any damage done to adjacent public or private property arising from the excavation of the cable trench, laying the cables, or backfilling the trench. During the period trenches are left open, they shall be either covered or barricaded to the satisfaction of the Engineer.

Conduit sleeves shall be installed at any location where cable needs to cross under a roadway pavement (sleeves at driveways, walks, and trees are not required). These sleeves shall be installed perpendicular to the centerline of the road, at a depth of 18"-24" of cover from the top of pavement. The ends of these sleeves shall extend 6"-12" behind the back of curb. Compacted gravel (or spoils in turf areas) may be used for bedding and backfill material but it must be free from all rocks, pebbles, broken concrete, clay chunks or other material that may cause damage to the duct (or conduit). Backfill in these areas shall be thoroughly compacted to prevent future settlement. In paved (or brick paver) areas, the backfill for trenches shall be slurry where directed by the Engineer. Mason sand bedding is only required around direct-buried cable.

a. BASES

Sleeves shall be placed in all bases (including, but not limited to, for light poles and cabinets), with PVC bends oriented to

accommodate future pulling of duct and cable, and of the size and quantity as indicated on the plans.

For light pole bases, factory made PVC elbows shall be cast in the base as sleeves for the cable-in-duct, incidental to the base. Location and size shall be as shown on the plans or directed by the Engineer. Elbows shall be installed in an orientation as to permit conduit to be installed in as nearly a straight-line run as possible, without bends. It is acceptable to the Engineer if the Contractor achieves this by "crisscrossing" the vertical portions of the elbows in the base, and/or orienting the elbows so the tops protrude from the top of the base and are cut down later, in order to create a more gradual curve inside the concrete. The sleeve opening in the side of the base shall be no less than 18" below the concrete top of the base.

3. CABLE

All new cable shall be installed in HDPE duct. Cable shall NOT be installed before the duct is placed in the ground or bases. The Contractor shall exercise care in the installation of the cable-in-duct to insure that the completed raceway is smooth and free of kinks and sharp bends. The Contractor shall verify that the conductors are free to move in the duct after installation. At the request of the Engineer, the Contractor shall demonstrate free movement of the conductors within the duct after installation and that the conductors can be easily removed and replaced.

Frost loops of at least 12 inches shall be provided where cables enter conduit systems. At any location where existing direct-buried cable is exposed, mason sand shall be used as a bedding material around the cable before backfilling.

Conductors in poles, pull boxes, or other terminations shall be marked with blue tape wrap to identify the set of conductors emanating from the distribution center (feeder). Neutral conductors shall be identified with white tape wrap, and grounding conductors shall be identified with green tape wrap.

4. PULL BOXES

Ground rods (5/8" x 8') shall be installed in all pull boxes where new construction meets the existing lighting system, and where indicated on the plans. Ground rods shall be paid per the bid item in the plans; if no such bid item exists, ground rods shall be incidental to the contract.

The new pull boxes shall be installed flush with grade, on 12 inches of crushed stone base, or as shown on the plan details, if applicable. Where the pull box joins new and existing cable, sections of existing electrical cables shall be routed through the new box and placed so as to be slack and readily accessible. In locations where new concrete is to be placed around the new box, the seam between the cover and the rim of the box and the bolt holes in the cover shall be taped to prevent accidental introduction of concrete into the seam or bolt holes.

The Contractor shall make every effort to prevent any damage to the existing electrical cables during the removal and installation process. Damage to cables incurred during the removal or installation process shall be repaired by the Contractor at the Contractor's expense.

The pull boxes shall be set flush with the grade or pavement and installed on aggregate per plan details.

All junction box covers are to be bolted down.

5. POLES

Each light pole shall be identified with 5-character, self-adhesive street light numbers. This identification shall consist of 2.5-inch tall black letters (2-inch on residential streets), numbers on a white background, die cut from engineer grade reflectorized sheeting. The identification number shall be assembled as a vertical label applied to the streetlight poles on the quadrant of the surface on the pole that faces oncoming traffic. The top of the label shall be installed at 5 feet above the ground line. Verify pole numbers with Engineer prior to installation of identification labels.

Poles on residential streets and decorative style poles shall NOT have number labels installed on the outside of the pole unless specifically called for on the plans.

Furnish and install all incidental items, such as hardware, transformer, pole wiring/fusing, grommets, etc. necessary to make the unit complete.

Furnish only items (Pole assembly and transformer) are to be delivered (in appropriate packaging/protective materials) to the City of Wauwatosa Public Works Yard at 11100 W. Walnut Road, Wauwatosa, WI 53226. Contact Randy Michelz, Traffic and Electrical Supervisor, 414-471-8429.

a. POLE CONNECTIONS

In circuits with two feeds, red cable shall be used for even numbered poles, and black cable shall be used for odd numbered poles. Contractor shall verify the circuit is appropriately balanced amongst all appurtenances it powers.

6. LUMINAIRES/FIXTURES

Luminaires and their respective arms (where applicable) shall be installed in accordance with Sections 657 and 659 of the State Specs and the manufacturer's requirements.

E. SPLICING REQUIREMENTS

Insulated cables shall be installed in continuous lengths without splices from terminal to terminal. Splicing will be permitted only in hand holes of poles, transformer bases, junction boxes or as otherwise provided on the plans. All splices other than underground cast-in-place splices shall be readily accessible.

Existing direct-buried cable may be spliced into new poles, cabinets, and pull boxes, but new cable-in-duct shall not.

1. LIGHTING UNITS

Splices in poles shall be made with reusable set-screw type connectors. Penn Union SX-2 or equal, copper service entrance connector, or Engineer approved equal. Complete splice with layer of nonstick varnished cambric insulating tape, followed by multiples laps of Scotch 130C rubber insulating tape, followed by multiple laps of Scotch Super 88 vinyl insulating tape. Split bolt compression connectors are not acceptable for this contract. Splice blocks will not be accepted.

Splices in poles shall be incidental to the pole bid item.

2. UNDERGROUND/PULL BOXES

Splices shall accept quantity and size of conductors required at individual pull boxes (which may be of differing configurations), be direct burial and submersible rated. Utilize multi-cable compression connectors with the splice encased in a Scotchcast 85 series multimold permanent resin compound. Split bolts are not allowed. No splices are allowed in pull boxes, unless indicated on the plans or otherwise approved by the Engineer. Splices underground are only for extension of direct buried cables or repairs as approved by the City.

3. BOLLARDS

Utilize silicon-filled wire connectors of proper size equal to King Dryconn waterproof connectors.

F. WARRANTY

The electrical contractor shall provide a written labor warranty for a minimum of 1 year after final acceptance of project installation. Warranty shall include materials damaged by Contractor's installation, otherwise materials shall be warranted by manufacturer. The Contractor shall be responsible during warranty period to coordinate replacement materials under warranty.

G. SUBMITTAL REQUIREMENTS

The Contractor shall furnish a <u>complete</u> list and cut sheets/shop drawings of materials to be furnished and used for lighting and electrical. Such list shall include the names and addresses of manufacturers, together with catalog numbers, certificates of compliance, specifications, and other product information requested by the Engineer. Catalog numbers shall be identified on respective data sheet. The list and cut sheets/shop drawings shall be submitted within 21 calendar days of the award of the contract. No materials shall be incorporated into the lighting system prior to the written approval of the Engineer. Approval does not change the intent of the specifications. The Contractor shall not substitute or make changes in material without resubmittal for approval.

The following list is a general list of items shall be submitted for approval and shall not be considered an exhaustive list of items to be submitted:

- Lighting Control Cabinet (materials and equipment layout/wiring diagrams)
- Fuse Holders/Fuses
- Splices
- Duct
- Conduit (including connectors)
- Electrical Wire (underground and pole wiring)
- Wire Identification
- Pull Boxes
- Poles
- LED Luminaires

- LED Bollards (if applicable)
- Temporary Lighting Plan and Materials (if applicable)
- As-built Drawings (Prior to final payment).

The Contractor is allowed 1 submittal of each item for approval. If more submittals are required, the Contractor will be charged \$250 per item (e.g. duct, electrical wire) for additional review time with payment made with re-submittal, to be deducted from monies owed to the Contractor.

1. SUBSTITUTIONS

Any request for substitutions will only be reviewed by the City and Engineer after the award of the contract following the bid opening. Materials, equipment or methods of installation other than those named, will be considered only if such articles are in accordance with the general requirements and are similar in composition, dimension, construction, capacity, aesthetics, finish and performance.

In any case where the Contractor wishes to use equipment or methods other than those listed by name, such equipment shall be considered a substitution and must be approved by the City and Engineer. To gain approval for substitutions, the Contractor shall submit the following to the City and Engineer for review.

Documentation from the equipment manufacturer indicating where this equipment meets and does not meet the specifications or drawings as written. This documentation shall state all exceptions taken to the specification and the reasons for such exceptions. All documentation relative to the request for substitution shall be submitted on the manufacturer's letterhead and signed by a representative of the manufacturer. Equipment and materials submitted for review without proper documentation will be rejected without review.

- a. <u>MANUFACTURER'S CUT SHEETS:</u> Cut sheets shall be originals as are contained in the manufacturer's catalog. Photocopies of these sheets will not be accepted for review.
- b. <u>LUMINAIRES</u>: Request for substitutions shall include photometric test reports performed by an independent testing laboratory, as well as a summary of energy loading. Calculations indicating lighting levels and uniformities based on plan layout shall be included in the request. Photometric calculations for specified luminaire and submitted substitution shall be submitted for review. Substitutions shall meet or exceed photometric and energy use of specified luminaires. No substitution request will be considered if calculations are not submitted. Any luminaires on project that have specified same manufacturer/luminaire family elsewhere will require

acceptable substitution requests for ALL related luminaires from an equivalent manufacturer/luminaire family - no exceptions.

The Contractor shall provide samples of the proposed equipment for the Engineer's review, if requested by the latter, and any other information or materials as requested by the Engineer to establish equality.

The Contractor shall acknowledge that they have reviewed the submission criteria for the request for substitution by stamping the submission with a review stamp or acknowledgment by an accompanying letter.

Review fees are \$250 per each bid item substitution request, to be deducted from monies owed to the Contractor.

H. CIRCUIT IDENTIFICATION REQUIREMENTS

Color coding shall be accomplished by use of cable jackets of the proper color. All tails of all splices shall be coded. Secondary distribution circuits shall be color-coded with even circuits red, odd circuits black, neutral conductor white, and the ground conductor shall be green.

Each of the line-side underground conductors at every pole, bollard and pull box shall additionally have a 6" wrap of blue electrical tape applied to identify the set of conductors emanating "from" the control cabinet.

Each accessible location of underground cable in control cabinets, pull boxes, and pole/transformer bases shall have a permanent embossed 304 stainless steel tag with 3/16" characters (equal to Panduit #MEHT187 system) attached in a "flag" manner using a black outdoor rated nylon tie. The tag shall include information identifying the cabinet and conductor circuit number (i.e. L-3).

I. BRANCH CIRCUIT TAG OUT REQUIREMENTS

The Contractor may, at his option, work on live circuits or he may disconnect and tag out circuits. Any branch circuit not disconnected and tagged out shall be considered live, and the Contractor shall restrict his work force to those qualified to work on live circuits. Disconnection may be made by disconnecting branches at the overcurrent device.

Tag outs shall be made with manufactured electrical warning tags furnished by the Contractor and endorsed with the name of the Contractor, the date, and the project I.D. The Contractor shall clear all completed tag outs by the end of the workday.

J. EQUIPMENT BONDING REQUIREMENTS

Bonding wire shall be installed in conduits for equipment grounding. All equipment shall be grounded as required.

K. TESTING REQUIREMENTS

The Contractor shall perform acceptance tests for circuits installed under this project, and shall record that information on "Insulation and Equipment Testing Schedule" at the end of this Section 670 after construction is completed, as incidental to the contract. The Contractor shall create and provide all documentation to the City at completion of tests, with all system issues corrected at the Contractor's expense and all tests passing.

All testing shall occur in the presence of the Engineer or the City Electrical Superintendent. The Contractor and the City shall agree on a time for testing of the completed installation with the required parties present.

The contractor shall create and provide all documentation to the City at completion of tests (with all system issues corrected).

The cost of testing shall be considered incidental to the installation of all electrical items and will not be paid for separately or as an extra/change order.

The lighting system is not complete until all electrical work is complete and inspected by the Engineer, and all electrical systems work properly.

A general system "Test Burn" shall be performed with any failed luminaires being replaced, along with any other non-functioning component(s) at the Contractor's expense. Only one test burn for the purpose of identifying initial failures will be required. Insulation testing shall also be performed, as detailed below.

1. INSULATION TESTING/"MEGGER" TEST

On new underground conductors, fuses shall be removed from all fuse holders to not damage LED luminaire drivers during testing. Each conductor (entire length) shall have its insulation tested to ground from the control cabinet. The conductors shall have a reading of infinity at 1000Vdc impressed voltage to be accepted. If any readings do not meet the infinity requirement, the Contractor shall sequentially test each portion of the lighting circuit between termination points until the issue(s) can be identified. The issue(s) shall be mitigated by corrections or replacements including, but not limited to, tightening lugs, or replacing defective splices and conductors. Additional splices will NOT be allowed. Testing instruments shall be accurate and reliable. It is strongly recommended that this testing be carried out after each span of cable is installed in a section of duct.

Light fixtures (LED and HPS) and existing conductors shall NOT be part of the insulation testing.

If equipment associated with the project does not operate properly or fails the tests as outlined, it is the Contractor's responsibility to determine issues and to correct and/or repair each defect at their own expense. If the Contractor does not test the new installation(s) prior to backfilling, paving, or any other surface restoration, they shall bear the expense of any excavations and/or removals required to complete repairs and testing

L. AS-BUILT INFORMATION

Upon completion of the project, the Contractor shall prepare an easily readable as-built plan and deliver one original copy to the Engineer. All changes from the original plan that were built into the project shall be noted in **red permanent ink** upon the original plans. As-built information shall be turned over along with testing results.

Any angled segments/shortcuts, bends, or any other locations where the new construction deviates from the specified plan locations, dimensions, alignments, or materials, shall be CLEARLY noted in the as-built so the City can provide accurate locating services in the future. As-built plans shall be submitted to the City within 3 weeks of the Engineer granting substantial completion of the project or for any portion of the project granted substantial completion.

M. ENERGY REBATES

The Contractor shall provide the Engineer with a copy of material invoice (pricing not necessary) for indicating proof of purchase, quantities, and complete manufacturer name/catalog number of luminaires provided on project. The City shall use this information to apply for any available rebates.

N. EXAMPLE TESTING REPORT TABLE

INSULATION AND EQUIPMENT TESTING FOR PROJECT:					COMPANY:
EQUIPMENT OR CIRCUIT NAME:	TEST BY:	TEST RESULT: PASS OR FAIL	DATE TESTED:	OWNER OR ENGINEER PRESENT:	COMMENTS:

SECTION 700 - CONTRACT

THIS contract made this _____ Day of _____ , 20 by and

between

hereinafter called the "Contractor" and the City of Wauwatosa, Wisconsin, hereinafter called the "City".

WITNESSETH, that the Contractor and the City for the consideration stated herein, agree as follows:

ARTICLE I. <u>SCOPE OF WORK</u> The Contractor shall perform everything required to be performed and shall provide and furnish all labor, material and equipment for the work of

all in strict accordance with the Plans and Specifications, including any or all addenda prepared by the City of Wauwatosa Engineering Services Division under the direction of the Director of Public Works, acting and in these contract documents referred to as the Director of Public Works, which plans and specifications are made a part of this contract in strict compliance with the Contractor's proposal and the other contract documents herein mentioned which are a part of this contract and the Contractor shall do everything required by this contract and the other constituting a part hereof.

ARTICLE II. <u>THE CONTRACT PRICE</u> In consideration of the completion of the work described herein and in fulfillment of all stipulations of this contract to the satisfaction and acceptance of the Director of Public Works and the City, the City shall pay and the Contractor further agrees to receive and accept payment based on the prices hereto attached, which prices shall agree with those in the accepted Contractor's proposal as filed with the City of Wauwatosa, Wisconsin on the _____ day of _____, 20____, as full compensation subject to the additions or deductions provided therein, in current funds.

ARTICLE III. <u>COMPONENT PARTS OF THE CONTRACT</u> This contract consists of the following component parts, all of which are as fully a part of this contract as if herein set out verbatim, if not attached as if hereto attached.

- 1. Addenda (if applicable)
- 2. Special Provisions (Section 600)
- 3. Plans
- 4. General Conditions (Section 500; Section 501, if applicable)
- 5. Advertisement for Bids (Section 100)
- 6. Instructions to Bidders (Section 200)
- 7. Contractor's Proposal (Section 300)
- 8. Federal Funding Requirements & Minimum Wage Scale (Section 400)
- 9. Contract (Section 700)
- 10. All Other Specifications
- 11. Appendices and other documents intended to be incorporated into the contract
- 12. Bonds (Section 800)

In the event any provision in any of the above component parts of this contract conflicts with any provision in any other of the component parts, the provision in the component part first enumerated above shall govern over any component part which follows it numerically except as may otherwise be specifically stated. IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed in four original counterparts the day and year first above written.

(SEAL)		
		Contractor
Attest:		Address
	Ву	
	_	T :4-
(SEAL)		litte
(0=: -)		CITY OF WAUWATOSA
Attest:	_	Owner
	By	
City Clerk	· _	Mayor
	_	City Clerk
same. Liability in excess of the original a additional endorsement hereon by the Cir, 20	mount ty Com	of this contract may accrue only after aptroller as to provision of funds therefor.
		City Comptroller
Approved as to form		, 20
	_	City Attornoy
*00000		
	ATEC	
Ι,	ce	ertify that I am the
of the Corporation named as Contracto	r herei	nabove; that
, wh	o sign	ed the foregoing contract on behalf of the
Contractor was then		of said Corporation; that
said contract was duly signed for and in governing body, and is within the scope	n behal e of its	f of said Corporation by authority of its Corporate Powers.
		Corporate Seal

* If the Contractor is a corporation, the above Corporate Certificate should be executed.

If the contract is signed by the secretary of the Corporation, the above certificate should be executed by some other officer of the Corporation, under the corporate seal. In lieu of the foregoing certificate, there may be attached to the contract copies of so much of the records of the Corporation as will show the official character and authority of the officers signing, duly certified by the secretary or assistant secretary under the corporate seal to be true copies.

The full name and business address of the Contractor should be inserted and the contract should be signed with his official signature. Please have the names of the signing party or parties typewritten or printed under all signatures to the contract.

If the contractor should be operating as a partnership, each partner should sign the contract. If the contract is not signed by each partner, there should be attached to the contract a duly authenticated power of attorney evidencing the signer's (signers') authority to sign such contract for and in behalf of the partnership.

If the contractor is an individual, the trade name (if the contractor is operating under a trade name) should be indicated in the contract and the contract should be signed by such individual. If signed by one other than the contractor, there should be attached to the contract a duly authenticated power-of-attorney evidencing the signer's authority to execute such contract for and in behalf of the Contractor.

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	COMMERCIAL GENERAL LIABILITY					PRODUCTS-COMP/OP AGG	\$
	CLAIMS MADE OCCUR					PERSONAL & ADV INJURY	\$
	OWNER'S & CONTRACTOR'S PROT					EACH OCCURRENCE	\$
						FIRE DAMAGE (Any one fire)	\$
						MED EXP (Any one person)	\$
	AUTOMOBILE LIABILITY ANY AUTO					COMBINED SINGLE LIMIT	\$
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	OTHER						\$
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DES	CRIPTION OF OPERATIONS/LOCATION	VVEHICLES/SPECIAL ITEMS					
0				CANCEL	ATION		
CERTIFICATE HOLDER Citv of Wauwatosa			CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL MAIL 10 DAYS WRITTEN NOTICE TO THE CITY OF WAUWATOSA.				
7725 W. North Avenue Wauwatosa, WI 53213			AUTHORIZED REPRESENTATIVE:				

CERTIFICATION OF COMPLIANCE WITH UNEMPLOYMENT INSURANCE AND SOCIAL SECURITY ACT REQUIREMENTS

The Contractor hereby certifies that he has heretofore complied and will during the progress of the work, comply with the Wisconsin Unemployment Insurance Act and will hold the City harmless from any liability for benefits under such Act or Acts by reason of discontinuance by the Contractor of the employment of any person engaged by the Contractor upon the work. The Contractor also hereby certifies that he will during the progress of the work comply with the Federal Social Security Act and will hold the City harmless from any Social Security payments and provisions required by such Act respecting his or his subcontractors' employees.

Contractor Name

Contractor Signature

Date

Accepted by City:

City Attorney

Date

DEBARMENT CERTIFICATION FORM

The Contractor certifies that, neither the Contractor firm nor any owner, partner, director, officer, or principal of the Contractor, nor any person in a position with management responsibility or responsibility for the administration of federal funds:

(a) Is presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from covered transactions by any federal or state department/agency;

(b) Has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public transaction or contract (federal, state, or local); violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Is presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (b) above; or

(d) Has within a three-year period preceding this certification had one or more public transactions or contracts (federal, state, or local) terminated for cause or default.

If the contractor is "Actively" registered with SAMS (Service for Award Management), the following UEI (Unique Entity ID) number has been assigned: _____

The Contractor further certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from covered transactions by any federal or state department/agency.

Dated this	day of	, 20
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By_____ Authorized Signature for Contractor

Printed Name and Title

Subscribed and sworn to before me this

, 20_____

(Notary Signature)

Notary Public, State of

My Commission expires:

SECTION 800 - BONDS BID BOND

KNOW ALL MEN BY THESE PRESENTS, THAT we

(hereinafter called the Principal) and

(hereinafter called the Surety), A corporation	n chartered and ex	isting under the		
laws of the State of	, with its princi	oal offices in the		
City of	, and authorize	ed to do business		
in Wauwatosa, Wisconsin, in the full and just	t sum of			
Do	llars (\$) good and		
lawful money of the United States of America, to be paid upon demand of the				
CITY OF WAUWATOSA, WISCONSIN, to w	hich payment, we	ll and truly to be		
made, the Principal and the Surety bind ther	nselves, their heirs	s, executors,		
administrators and assigns, jointly and sever	rally and firmly by	these presents.		

<u>WHEREAS</u>, The Principal is about to submit, or has submitted to the City of Wauwatosa, Wisconsin, a proposal for furnishing all labor, materials, equipment and incidentals necessary to

and;

<u>WHEREAS</u>, The Principal desires to file this bond in accordance with law, in lieu of a certified bidder's check otherwise required to accompany this proposal.

<u>NOW, THEREFORE:</u> The conditions of this obligation are such that if the Proposal is accepted, the Principal shall, within ten days after the date of receipt of a written notice of award of contract, execute a contract in accordance with the Proposal and upon the terms, conditions, and price(s) set forth therein, of the form and manner required by the City of Wauwatosa, Wisconsin and execute a sufficient and satisfactory contract performance bond payable to the City of Wauwatosa, Wisconsin, in an amount of One Hundred Percent (100%) of the total Contract price, in form and with security satisfactory to said City, then this obligation to be void; otherwise to be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid City, upon demand, the amount hereof in good and lawful money of the United States of American, not as a penalty but as liquidated damages. IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed and sealed this _____ day of _____ 20 ___.

	Principal
	Filicipal
Ву	
	(Seal)
	Surety
	(Seal)
Countersigned	
Loool Posident Producing Agent for	
Local Resident Producing Agent for	

(Note: This form of bond must be executed after the award of the contract.)

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, That we, _____

_____as Principal, and _____

as Surety, are held and firmly bound unto the City of Wauwatosa, 7725 W. North Avenue, Wauwatosa, Wisconsin 53213, hereinafter called the City, in the penal sum of ______

Dollars, (\$) and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The condition of this Obligation is such, that whereas the principal has executed the attached Agreement dated ______

Now, Therefore, if the attached agreement is executed on behalf of the City and if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said agreement, and any and all duly authorized modifications of the said agreement that may hereafter be made and shall pay to each and every person or party entitled thereto all the claims for work or labor performed or materials furnished, including premiums for Worker's Compensation Insurance, for or in or about or under such agreement as provided in Section 779.14 and 779.15 of the Wisconsin Statutes, and any such authorized extension or modification of said agreement, then this obligation to be void, otherwise to remain in full force and virtue.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the agreement or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligations on this bond, it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement to the work or to the specifications.

IN WITNESS WHEREOF the above-bounden parties have executed this instrument, in ______ original counterparts, under their several seals this ______ day of ______, 20____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In presence of:				
				(SEAL)
			(Individual Principal)	(<u> </u>
			(Business Address)	
				(SEAL)
			(Business Address)	
Attest:				
			(Corporate Principal)	
			(Business Address)	
		By		(Affix
Attest:				Corporate Gear)
			(Corporate Surety)	
			(Business Address)	
		By		(Affix
				Corporate Seal)
Approved	, 20			
		_		
	May	<u>or</u>		
(Title)				

NOTE: The Bond must be approved and the approval dated in every case; refer to Section 779.14 and 779.15 Wisconsin Statutes. The title of the person signing must be indicated.

LABOR & MATERIAL PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That

as Principal, hereinafter called Principal, and _____

(Here insert full name and address or legal title of surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the City of Wauwatosa, 7725 West North Avenue, Wauwatosa, Wisconsin 53213, as Obligee, hereinafter called City for the use and benefit of claimants as hereinbelow defined, in the amount of ______

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Dollars (

WHEREAS, Principal has by written agreement dated ______, 20 ___, entered into a contract with City for ______

(Here insert full name, address and description of project) in accordance with Drawings and Specifications prepared by

(Here insert full name and address or legal title of Director of Public Works) which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor, material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use, in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above name Principal and Surety hereby jointly and severally agree with the City that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The City shall not be liable for the payment of any costs or expenses of any such suit.

No suit or action shall be commenced hereunder by any claimant:
 a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the City, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for

which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, City or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (1) year following the date on which Principal ceased work on said Contract or after the expiration of one (1) year following the date of Substantial Completion of the Project, whichever is later, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the State in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this	day of	, 20
	(Principal)	(Seal)
(Witness)	<u>By</u>	
(whitess)		
	(Surety) By	(Seal)
(Witness)	(Attorney-in-	Fact)

<u>AFFIDAVIT</u>

(To be attached to all contracts)

STATE OF WISCONSIN))SS. COUNTY)

being first
duly sworn on oath deposes and says he is
(Attorney-in-fact or agent) of
(Bonding Company)
surety on the attached contract number executed by
(Contractor).
Affiant further deposes and says that no officer, official or employee of the
City of Wauwatosa has any interest directly or indirectly, or is receiving any
premium, commission fee or other thing of value on account of the same or
furnishing of the bond, undertaking or contract of indemnity, guaranty, or
suretyship in connection with the above mentioned contract.
Signed
Subscribed and sworn to before me
This day of A.D.; 20
(Notary Public)
County, Wisconsin
My Commission expires

WHEREAS, it is the sense of the Board of Public Works of the City of Wauwatosa that it is necessary to perform Alley Improvements work in the City of Wauwatosa and work incidental thereto under City Contract 25-11 / Project 1025.

NOW, THEREFORE, BE IT RESOLVED, the Board of Public Works of the City of Wauwatosa hereby approves the following:

Section 1. That the plans and specifications and form of contract and bond, together with the contract documents submitted therewith for furnishing all labor, materials, and equipment necessary to complete the 2025 Alley Reconstruction project and work incidental thereto, be and the same are hereby approved with authorization given to City staff to make minor plan and specification adjustments prior to publishing the project documents.

Section 2. That the work is intended to be done during the 2025 construction season in the City of Wauwatosa, all in accordance with said plans and specifications.

Section 3. That the work is to be let to the lowest responsible bidder following competitive bidding therefore.

Section 4. That the City Clerk be and he is hereby authorized and instructed to advertise for bids for City Contract 25-11 / Project 1025, 2025 Alley Reconstruction on March 19, 2025 and March 26, 2025. Bids are to be opened on April 9, 2025 and to provide in so doing that bids may be submitted with a contract and bond, with sureties, as prescribed by the form furnished, complete with the exception of the signatures on the part of the City; and in lieu of the foregoing provision that the bidder may accompany his bid with a certified check equal to five (5) percent of the bid, payable to the City as a guarantee that if his bid is accepted, he will execute and file the proper contract and bond within ten (10) days after the award, all in accordance with the provision of the Wisconsin Statutes.



Staff Report

File #: 25-0267

Agenda Date: 3/12/2025

Agenda #: 10.

2024 MS4 Annual Stormwater Report

Submitted by:

Maggie Anderson, Senior Civil Engineer Department Engineering

A. Issue

Accepting and placing on file the 2024 MS4 Annual Stormwater Report

B. Background/Options

The City currently maintains a permit with the WI DNR to discharge stormwater from all portions of the Municipal Separate Storm Sewer System (MS4) under the Wisconsin Pollutant Discharge Elimination System (WPDES). The current permit was effective on April 01, 2020 with an expiration date of March 31, 2025. The City is currently working with the WDNR to draft our next 5-year permit.

A term of the permit is to submit an annual report to the DNR that summarizes that year's activities. The report is submitted through the DNR's epermitting website. The full report with appendices is attached and summarizes these activities.

C. Strategic Plan (Area of Focus)

Well maintained infrastructure.

D. Fiscal Impact

The MS4 program is funded through the stormwater utility fund

E. Recommendation

Place annual report on file.

Recommendation: Common Council
Submittal of Annual Reports and Other Compliance Documents for Municipal Separate Storm Sewer System (MS4) Permits

NOTE: Missing or incomplete fields are highlighted at the bottom of each page. You may save, close and return to your draft permit as often as necessary to complete your application. After 120 days your draft is **deleted**.

Form 3400-224(R8/2021)				
Reporting information				
Will you be completing the Annual Report or other submittal type? 💿 Annual Report 🔘 Other				
Droiget Name	2024 Appual Papart			
Project Name:				
County:	<u>Milwaukee</u>			
Municipality:	Wauwatosa, City			
Permit Number:	S065404			
Facility Number:	31319			
Reporting Year:	<u>2024</u>			
Is this submittal also satisfying an Urban Nonpoint Source Grant funded deliverable? 🛛 🔿 Yes 💿 No				

Required Attachments and Supplemental Information

Please complete the contents of each tab to submit your MS4 permit compliance document. The information included in this checklist is necessary for a complete submittal. A complete and detailed submittal will help us review about your MS4 permit document. To help us make a decision in the shortest amount of time possible, the following information must be submitted:

Annual Report

- Review related web site and instructions for <u>Municipal storm water permit eReporting</u> [Exit Form]
- Complete all required fields on the annual report form and upload required attachments
- Attach the following other supporting documents as appropriate using the attachments tab above
 - Public Education and Outreach Annual Report Summary
 - Public Involvement and Participation Annual Report Summary
 - Illicit Discharge Detection and Elimination Annual Report Summary
 - Construction Site Pollution Control Annual Report Summary
 - Post-Construction Storm Water Management Annual Report Summary
 - Pollution Prevention Annual Report Summary
 - Leaf and Yard Waste Management
 - Municipal Facility (BMP) Inspection Report
 - Municipal Property SWPPP
 - Municipally Property Inspection Report
 - Winter Road Maintenance
 - Storm Sewer Map Annual Report Attachment
 - Storm Water Quality Management Annual Report Attachment

- TMDL Attachment
- Storm Water Consortium/Group Report
- Municipal Cooperation Attachment
- Other Annual Report Attachment
- Attach the following permit compliance documents as appropriate using the attachments tab above
 - Storm Water Management Program
 - Public Education and Outreach Program
 - Public Involvement and Participation Program
 - Illicit Discharge Detection and Elimination Program
 - Construction Site Pollutant Control Program
 - Post-Construction Storm Water Management Program
 - Pollution Prevention Program
 - Municipal Storm Water Management Facility (BMP) Inventory
 - Municipal Storm Water Management Facility (BMP) Inspection and Maintenance Plan
 - Total Maximum Daily Load documents (*If applicable, see permit for due dates.)
 - TMDL Mapping*
 - TMDL Modeling*
 - TMDL Implementation Plan*
 - Fecal Coliform Screening Parameter *
 - Fecal Coliform Inventory and Map (S050075-03 general permittees Appendix B B.5.2 document due to the department by March 31, 2022)
 - Fecal Coliform Source Elimination Plan (S050075-03 general permittees Appendix B document due to the department by October 31,2023)
- Sign and Submit form

Municipal Contact Information- Complete

Notice: Pursuant to s. NR 216.07(8), Wis. Adm. Code, an owner or operator of a Municipal Separate Storm Sewer System (MS4) is required to submit an annual report to the Department of Natural Resources (Department) by March 31 of each year to report on activities for the previous calendar year ("reporting year"). This form is being provided by the Department for the user's convenience for reporting on activities undertaken in each reporting year of the permit term. Personal information collected will be used for administrative purposes and may be provided to the extent required by Wisconsin's Open Records Law [ss. 19.31-19.39, Wis. Stats.]. **Note:** Compliance items must be submitted using the Attachments tab.

Municipality Information

Name of Municipality	Wauwatosa, City
Facility ID # or (FIN):	31319
Updated Information:	Check to update mailing address information
Mailing Address:	7725 W. North Ave
Mailing Address 2:	
City:	Wauwatosa, City
State:	WI
Zip Code:	53213 xxxxx or xxxxx-xxxx

Primary Municipal Contact Person (Authorized Representative for MS4 Permit)

The "Authorized Representative" or "Authorized Municipal Contact" includes the municipal official that was charged with compliance and oversight of the permit conditions, and has signature authority for submitting permit documents to the Department (i.e., Mayor, Municipal Administrator, Director of Public Works, City Engineer).

Select to <i>create new</i> primary contact				
First Name:	Maggie			
Last Name:	Anderson, P.E.			
Select to <i>update</i> current contact information				
Title:	Senior Civil Engineer			
Mailing Address:	7725 W. North Ave			
Mailing Address 2:				
City:	Wauwatosa			
State:	WI			
Zip Code:	53213 xxxxx or xxxxx-xxxx			
Phone Number:	414-479-3444 Ext: xxx-xxx-xxxx			
Email:	manderson@wauwatosa.net			

Additional Contacts Information (Optional)

✓ I&E Program

Individual with responsibility for: (Check all that apply)	 IDDE Program IDDE Response Procedure Manual Municipal-wide Water Quality Plan Ordinances Pollution Prevention Program Post-Construction Program Winter roadway maintenance 			
First Name:	Jacob			
Last Name:	Fincher			
Title:	Executive Director	•		
Mailing Address:	600 E Greenfield A	٩ve		
Mailing Address 2:				
City:	Milwaukee			
State:	WI			
Zip Code:	53204	xxxxx or	- xxxxx-xxxx	
Phone Number:	262-716-2211	Ext:		xxx-xxx-xxxx
Email:	jessswan@hotma	il.com		
Individual with responsibility for: (Check all that apply)	 I&E Program IDDE Program IDDE Response Municipal-wide Ordinances Pollution Preve Post-Construct Winter roadwa 	Proced Water ention P ion Prog ny maint	ure Manua Quality Pla rogram gram enance	l n
First Name:	Eva			
Last Name:	Ennamorato			
Title:	Communication Manage			
Mailing Address:	7725 W North Ave			
Mailing Address 2:				
City:	Wauwatosa			
State:	<u>WI</u>			
Zip Code:	53213	xxxxx or	xxxxx-xxxx	
Phone Number:	414-479-8916	Ext:		xxx-xxx-xxxx
Email:	eenamorato@wa	uwatosa	a.net	

Individual with responsibility for: (Check all that apply)	 IDDE Program IDDE Response Procedure Manual Municipal-wide Water Quality Plan Ordinances Pollution Prevention Program Post-Construction Program Winter roadway maintenance 				
		iy mamu	enance		
First Name:	Jessica				
Last Name:	Henderson				
Title:					
Mailing Address:	7725 W North Ave	5			
Mailing Address 2:					
City:	Wauwatosa				
State:	<u>WI</u>				
Zip Code:	53213	xxxxx or	xxxxx-xxxx		
Phone Number:	414-479-8978	Ext:		xxx-xxx-xxxx	
Email:	jhenderson@wau	watosa.	net		
Individual with responsibility for: (Check all that apply)	 I&E Program IDDE Program IDDE Response Municipal-wide Ordinances Pollution Preve Post-Construct Winter roadwa 	Proced Water ention P ion Prog ny maint	ure Manua Quality Pla rogram gram enance	l in	
First Name:	Jason				
Last Name:	Blasiola				
Title:	Operations Superint				
Mailing Address:	11100 W Walnut Rd				
Mailing Address 2:					
City:	Wauwatosa				
State:	<u>WI</u>				
Zip Code:	53213	xxxxx or	- xxxxx-xxxx		
Phone Number:	414-471-8427	Ext:		xxx-xxx-xxxx	
Email:	jblasiola@wauwat	tosa.net			

Municipal Billing Contact Person (Authorized Representative for MS4 Permit)

Select to <i>create new</i> Billing contact				
First Name:	Kristen			
Last Name:	Kilsdonk			
Select to <i>update</i> current contact information				
Title:	Business Manager			
Mailing Address:	11100 W Walnut Rd			
Mailing Address 2:				
City:	Wauwatosa			
State:	<u>WI</u>			
Zip Code:	53213 xxxxx or xxxxx-xxxx			
Phone Number:	414-831-0804 Ext: xxx-xxx-xxxx			
Email:	kkilsdonk@wauwatosa.net			

1. Does the municipality rely on another entity to satisfy some of the permit requirements?

✓ Public Education and Outreach SWWT
✓ Public Involvement and Participation SWWT
Illicit Discharge Detection and Elimination
Construction Site Pollutant Control
Post-Construction Storm Water Management

2. Has there been any changes to the municipality's participation in group efforts towards permit compliances (i.e., the municipality has added or dropped consortium membership)?

 \bigcirc Yes \odot No

• Yes O No

Missing Information

Do not close your work until you SAVE.

Note: For the minimum control measures, you must fill out all questions in sections 1 through 7.

Form 3400-224 (R8/2021)

Minimum Control Measures- Section 1: Complete

1. Public Education and Outreach

- a. Does MS4 conduct any educational efforts or events independently (not with a group) Yes ○ No
- b. How many total educational events were held during the reporting year: 54
- c. Were any of the public education and outreach delivery mechanisms conducted during the reporting year active or interactive? \odot Yes \bigcirc No
- d. Please select all storm water topics, target audiences, and delivery mechanisms used in the reporting year

Public Education and Outreach Delivery Mechanisms (Active and Passive)			
Active/Interactive Mechanisms	Passive Mechanisms		
 Education activities (school presentations, summer camps) Information booth at event Targeted group training (contractors, consultants, etc.) Government event (public hearing, council meeting) Workshops Tours Other: 	 Passive print media (brochures at front desk, posters, etc.) Distribution of print media (mailings, newsletters, etc.) via mail or email. Media offerings (radio and TV ads, press release, etc.) Social media posts Signage Website 		
Tours Other:	└── Signage ✓ Website └── Other:		

Topics Covered	Target Audience
Illicit discharge detection and elimination	🗹 General Public
Household hazardous waste disposal/pet waste management/vehicle	✓ Public Employees
washing	✓ Residents
Yard waste management/pesticide and fertilizer application	✓ Businesses
Stream and shoreline management	✓ Contractors
✓ Residential infiltration	✓ Developers
Construction sites and post-construction storm water management	□ Industries
✓ Pollution prevention	✓ Public Officials
Green infrastructure/low impact development	Other:
✓ Other: General watershed education, Snow a	

e. Will additional information/summary of these education events be attached to the annual report?
 ● Yes ○ No

If no, please provide additional comment in the brief explanation box below. *Limit response to 250 characters and/or attach supplemental information on the attachments page.*

See Attachment I for more information about the activities performed in partnership with Sweet Water.

Do not close your work until you SAVE.

Note: For the minimum control measures, you must fill out all questions in sections 1 through 7

Form 3400-224 (R8/2021)

Minimum Control Measures - Section 2 : Complete

2. Public Involvement and Participation

a. <u>Permit Activities</u>. Select all of the following topics the Permittee did to engage public participation and involvement.

Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
✓ MS4 Annual Report	🗹 General Public 🗌	<u>11-50</u>	⊖ Yes ⊙ No
🗹 Storm Water Management	Public Employees		
Program	Residents		
Storm Water related ordinance	Businesses		
🗋 Other:	Contractors		
Presentation to Board of Public	Developers		
	Industries		
	Public Officials		
	🗌 Other		

b. <u>Volunteer Activities</u>. Select all of the following audiences targeted for volunteer involvement and participation related to storm water.

□ NA (Individual Permittee)

Topics Covered	Target Audience	Estimated People Reached (Optional)	Regional Effort (Optional)
Volunteer Opportunity	✓ General Public	<u>51-100</u>	⊖Yes ●No
	Public Employees		
	Residents		
	Businesses		
	Contractors		
	Developers		
	🗆 Industries		
	Public Officials		
	🗆 Other		

c. Brief explanation on Public Involvement and Participation reporting. *Limit response* to 250 characters and/or attach supplemental information on the attachments page.

See Attachment I for more information about the activities performed in partnership with Sweet Water. See Attachment II for City efforts to educate and involve public officials, residents, businesses, etc.

	Do not close your work until yo	ou SAVE.	
Not	e: For the minimum control measures, you must fill out all questions in sections 1 through 7	Form 3400-224 (R	8/2021
N	linimum Control Measures - Section 3 : Complete		
3	Illicit Discharge Detection and Elimination		
a.	How many total outfalls does the municipality have?	173	
b.	How many major outfalls does the municipality have?	47	
C.	How many outfalls did the municipality evaluate as part of their routine ongoing field screening program?	49	
d.	From the municipality's routine screening, how many were confirmed illicit discharges?	0	
e.	How many illicit discharge complaints did the municipality receive?	1	
f.	From the complaints received, how many were confirmed illicit discharges?	0	
g.	How many of the identified illicit discharges did the municipality eliminate in the reporting year (from both routine screening and complaints)? (If the sum of 3.c. and 3.e. does not equal 3.f., please explain below.)	0	
h.	What types of regulatory mechanisms does the municipality have av compliance with this program? Check all that are available and how were used in the reporting year.	ailable to compel many times each	

1.11

✓ Verbal Warning	0
Written Warning (including email)	0
✓ Notice of Violation	0
✓ Civil Penalty/ Citation	0

Additional Information:

^{i.} Brief explanation on Illicit Discharge Detection and Elimination reporting. *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

Supplemental information on the IDDE reporting is included in Appendix IV.

Missing Information

Do not close your work until you SAVE.

Note: For the minimum control measures, you must fill out all questions in sections 1 through 7

N	linimum Control Massuras - Section 4 : Comple	to	
4.	Construction Site Pollutant Control		
a.	How many total construction sites with one acre disturbing construction activity were active at ar reporting year?	12	
b.	How many construction sites with one acre or m disturbing construction activity did the municipa in the reporting year?	4 for	
c.	How many erosion control inspections did the m in the reporting year (at sites with one acre or m disturbing construction activity)?	ete 68	
d.	What types of regulatory mechanisms does the compliance with this program? Check all that ar were used in the reporting year.	municipality have e available and ho	available to compel w many times each
	✓ Verbal Warning	1	
	Written Warning (including email)	15	
	Notice of Violation	7	
	Civil Penalty/ Citation	0	
	✓ Stop Work Order	0	
	✓ Forfeiture of Deposit	0	
	Other - Describe below		

e. Brief explanation on Construction Site Pollutant Control reporting . *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

See Attachment VI for supplemental information for Construction Site Pollutant Control.

Missing Information

Do not close your work until you SAVE.

Note: For the minimum control measures, you must fill out all questions in sections 1 through 7

		Form 3400-224 (R8/2021)
N	inimum Control Measures - Section 5 : Complete	
5.	Post-Construction Storm Water Management	
a.	How many new structural storm water management Best Management Practice (BMP) have received local approval ?	4
	*Engineered and constructed systems that are designed to provide storm water quality control such as wet detention ponds, constructed wetlands, infiltration basins, grassed swales, permeable pavement,	
b.	Does the MS4 have procedures for inspecting and maintaining private storm	\odot Yes \bigcirc No

8

- c. If Yes, how many privately owned storm water management facilities were inspected in the reporting year ? Inspections completed by private landowners should be included in the reported number.
- d. Does the municipality utilize privately owned storm water management
 Yes No BMP in its pollutant reduction analysis?
- e. Does MS4 have maintenance authority on these privately owned BMPs?
 Yes No
- ^{f.} What types of enforcement actions does the municipality have available to compel compliance with the regulatory mechanism? Check all that apply and enter the number of each used in the reporting year.

✓ Verbal Warning	0
Written Warning (including email)	0
✓ Notice of Violation	0
Civil Penalty/ Citation	
✓ Forfeiture of Deposit	0
✓ Complete Maintenance	0
✓ Bill Responsible Party	0

^{g.} Brief explanation on Post-Construction Storm Water Management reporting. If marked 'Unsure' on any questions above, justify your reasoning. Limit your response to 250 characters and/or attach supplemental information on the attachments page.

See Attachment VII for supplemental information for Post-Construction Stormwater Management.

Missing Information

Do not close your work until y	you SAVE.
--------------------------------	------------------

Note: For the minimum control measures, you must fill out all questions in sections 1 through 7 Form 3400-224 (R8/2021)

Minimum Control Measures - Section 6 : Complete	
6. Pollution Prevention	
Storm Water Management Best Management Practice Inspections 🗌 Not A	Applicable
^{a.} Enter the total number of "municipally owned" (i.e., publicly owned BMP or operated (i.e., privately o wned BMPs) structural storm water	s) 35
management best management practices.	

b.	How many new municipally owned storm water management best
	management practices were installed in the reporting year ?

- c. How many municipally owned (public) storm water management best management practices were inspected in the reporting year?
- ^{d.} What elements are looked at during inspections (250 character limit)?
 See supplemental information in Appendix V.
- e. How many of these facilities required maintenance?
- ^{f.} Brief explanation on Storm Water Management Best Management Practice inspection reporting. *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

See supplemental information in Appendix V

Public Works Yards & Other Municipally Owned Properties that require a stormwater pollution prevention plan (SWPPP)*

- ^{g.} How many municipal properties require a SWPPP?
- h. How many inspections of municipal properties have been conducted in the reporting year?
- i. Have amendments to the SWPPPs been made?
 Yes No
- ^{j.} If yes, describe what changes have been made. Limit response to 250 characters and/or attach supplemental information on the attachment page:

An updated draft SWPPP has been created by Sigma on behalf of the City. We would appreciate any comments/review that the DNR can provide.

^{k.} Brief explanation on Storm Water Pollution Prevention Plan reporting. *If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

An updated draft SWPPP has been created by Sigma on behalf of the City. We would appreciate any comments/review that the DNR can provide.

* Any municipally owned property that has the potential to generate stormwater pollution should have a SWPPP. For example, if a municipal property stores compost piles, material storage, yard wastes, etc., outside and can contaminate stormwater runoff—a SWPPP is required.

Collection Services - Street Sweeping Program \Box Not Applicable

I.	Did the municipality conduct street sweeping during the reporting year?
	\odot Yes \bigcirc No

m.	lf known,	how many	tons of	f material	was removed	?
----	-----------	----------	---------	------------	-------------	---

667		
○ Yes	○ No	

- n. Does the municipality have a <u>low hazard exemption</u> for this material?
- ^{o.} If street sweeping is identified as a storm water best management practice in the pollutant loading analysis, was street cleaning completed at the assumed frequency?
 - Yes Explain frequency every 5-6 weeks

1 4

2

25

0

	○ No - Explain						
	\bigcirc Not Applicable						
Сс	ollection Services - Catch Basi	n Sump C	leaning	g Program	🗌 Not App	licable	
p.	 p. Did the municipality conduct catch basin sump cleaning during the reporting year? ● Yes ○ No 						
q.	How many catch basin sump	s were c	leaned	in the repo	orting year?	607	
r.	If known, how many tons of	material	was co	llected?		90	
s.	Does the municipality have a material?	a low haz	ard exe	emption fo	r this	⊖Yes (⊖No
t.	If catch basin sump cleaning in the pollutant loading analysis	is identif ysis, was	ied as a cleanir	a storm wa ng complet	ater best ma ed at the as	anagemer ssumed fr	nt practice requency?
	• Yes- Explain frequency \underline{Every}	other yea	r				
	○No - Explain						
	\bigcirc Not Applicable						
Сс	ollection Services - Leaf Collec	tion Prog	gram 🗆	Not Appl	icable		
u.	Does the municipality conduc	ct curbsic	le leaf o	collection?)	Yes	○ No
v.	Does the municipality notify	homeow	ners ab	out pickup)?	• Yes	○ No
w.	Where are the residents dire	cted to st treet 🔲	tore the Bags or	e leaves fo n terrace	r collection	?	
	□ Other - Describe						
x.	What is the frequency of colle Every 2 weeks from Oct - Dec	ection?		_			
у.	Is collection followed by stree	et sweep	ing?			Yes	○ No
z.	 ^{z.} Brief explanation on Collection Services reporting. Limit response to 250 characters and/or attach supplemental information on the attachments page 						
	See supplemental information in Appendix XVII						
W	inter Road Management 🗌 N	lot Applie	cable				
*N aa.	ote: We are requesting information How many lane-miles of roa doing snow and ice control? <i>lane miles</i> .)	on that go dway is t (<i>One mi</i>	es beyo he mur le of a t	nd the repo nicipality re wo-way rc	rting year, an esponsible f oad equals t	swer the k or 40 wo	oest you can. 08
ab.	Provide amount of de-icing	products	used b	y month la	ist winter se	eason?	
	Solids (tons) (ex. sand, or sa	lt-sand)					
	Due dui st		1	D	lau:	E ala	D. A auto

Liquids (gallons) (ex. brine)

		Oct	Nov	Dec	Jan	Feb	Mar
<u>Brine</u>		0	1635	23720	7705	29783	0
ac. 🗸	Vas salt applying mach	ninerv calik	prated in t	he reportir	ng vear?		Yes 🔿 No
ad. F	lave municipal person	nel attend	ed salt rec	duction stra	ategy train	ing in \bigcirc	Yes No
t	he reporting year?						
	Training Date	7	raining Name	2		# Attendance	2
_							
ae. Brief explanation on Winter Road Management reporting. <i>If you marked Unsure for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page</i>						any ach	
ç	See supplemental information	ation in App	endix XII				
late	weel (Ctoff) Education	9 Common					
Inte	rnal (Staff) Education a	& Commur	nication				
 or education to staff implementing the municipality's procedures for each of the pollution prevention program element ? If yes, describe what training was provided (250 character limit): Prior to the winter season and in advance of each snow event, the staff is directed on corrusage of salt and/or brine. ^{ag.} Describe how the municipality has kept the following local officials and municipal staff aware of the municipal storm water discharge permit programs, procedure and pollution prevention program requirements. Elected Officials Common Council presentation on 03/18/25 of 2024 MS4 Annual Report 					d on correc municipal ocedures		
	Municipal Officials						
	Board of Public Work	ks presenta	ation on O	3/12/2025	of 2024 N	1S4 Annua	l Report
	Appropriate Staff (su with public)	ich as oper	ators, Dep	oartment h	eads, and	those that	t interact
	Meetings with SWW	Т					
ah.	Brief explanation on I questions above, just attach supplemental	Internal Ed ify the reas informatio	ucation re soning. Lin n on the a	eporting. nit respons attachment	If you mai se to 250 ci ts page.	rked Unsu haracters	re for any and/or
	See Attachment I for me SWWT.	ore informa	tion about	the activities	s performed	d in partner	ship with

Missing Information

Do not close your work until you SAVE.

Note: For the minimum control measures, you must fill out all questions in sections 1 through 7

Minimum Control Measures - Section 7: Complete

7. Storm Sewer System Map

^{a.} Did the municipality update their storm sewer map this year?

○ Yes ● No

If yes, check the areas the map items that got updated or changed:

- Storm water treatment facilities
- Storm pipes
- Vegetated swales
- Outfalls
- □ Other Describe below

^{b.} Brief explanation on Storm Sewer System Map reporting. *If you marked Unsure for an question for any questions above, justify the reasoning. Limit response to 250 characters and/or attach supplemental information on the attachments page.*

See Appendix XIII

Do not close your work until you SAVE.

Form 3400-224 (R8/2021)

Final Evaluation - Complete

Fiscal Analysis

Complete the fiscal analysis table provided below. For municipalities that do not break out funding into permit program elements, please enter the monetary amount to your best estimate of what funding may be going towards these programs.

Annual	Budget	Budget	Source of Funds
Expenditure	Reporting Year	Upcoming	
Reporting Year		Year	
Element: Public Edu	cation and Out	reach	
0	0	0	Storm water utility
Element: Public Invo	olvement and Pa	articipation	
0	0	0	Storm water utility
Element: Illicit Disch	arge Detection	and Elimination	
0	0	0	Storm water utility
Element: Construction	on Site Pollutar	nt Control	
0	0	0	Storm water utility
Element: Post-Cons	truction Storm	Water Managen	nent
0	0	0	Storm water utility
Element: Pollution I	Prevention		
0	0	0	Storm water utility
Other (describe)			
			Storm water utility

Please provide a justification for a "O" entered in the Fiscal Analysis. *Limit response to 250 characters*. See budget summary of Stormwater Management Reserve in Appendix XII

Water Quality

a: Were there any known water quality improvements in the receiving waters to which the

municipality's storm sewer system directly discharges to?○ Yes ● No ○ Unsure If Yes, explain below:

b: Were there any known water quality degradation in the receiving waters to which the municipality's storm sewer system directly discharges to?
Yes

No
Unsure
If Yes, explain below:

c: Have any of the receiving waters that the municipality discharges to been added to the impaired waters list during the reporting year?

 \bigcirc Yes \bigcirc No \bigcirc Unsure

d: Has the municipality evaluated their storm water practices to reduce the pollutants of concern? ● Yes ○ No ○ Unsure

Storm Water Quality Management

a. Has the municipality completed or updated modeling in the reporting year (relating to developed urban area performance standards of s. NR 151.13(2)(b)1., Wis. Adm. Code)? \bigcirc Yes \odot No

b. If yes, enter percent reduction in the annual average mass discharging from the entire MS4 to surface waters of the state as compared to implementing no storm water management controls:

Total suspended solids (TSS) 17.3

Total phosphorus (TP) 11.9

Additional Information

Based on the municipality's storm water program evaluation, describe any proposed changes to the municipality's storm water program. *If your response exceeds the 250 character limit, attach supplemental information on the attachments page.*

na

Do not close your work until you SAVE.



Form 3400-224 (R8/2021)

Requests for Assistance on Understanding Permit Programs

Would the municipality like the Department to contact them about providing more information on understanding any of the Municipal Separate Storm Sewer Permit programs?

Please select all that apply:

- Public Education and Outreach
- □ Public Involvement and Participation
- □ Illicit Discharge Detection and Elimination
- Construction Site Pollutant Control
- □ Post-Construction Storm Water Management
- □ Pollution Prevention
- □ Storm Water Quality Management
- □ Storm Sewer System Map
- □ Water Quality Concerns
- Compliance Schedule Items Due
- □ MS4 Program Evaluation

Do not close your work until you SAVE.

Form 2400 224(PS/2021)				
Required Attachments and Supp	lemental Information			
Any other MS4 program information for the Add Additional Attachments to add	or inclusion in the Annual I I multiple documents.	Report may be attac	ched on here. Use	

Upload Required Attachments (15 MB per file limit) - <u>Help reduce file size and trouble shoot file uploads</u> *Required Item

Note: To replace an existing file, use the 'Click here to attach file ' link or press the to delete an item.

Municipal Facility SWP	PP	
I File Attachment	2024.06.03 - Wauwatosa DPW SWPPP- 21231 -DRAFT.pdf	
Attach - Other Support	ing Documents	
<u>AR EO</u>		
File Attachment	I City of Wauwatosa 2024 SWWT Report.pdf	
<u>AR_IP</u>		
File Attachment	II_Wauwatosa Stormwater Education and Public Involvement Efforts.docx	
AR_CSPC		
File Attachment	VI_Construction Site Pollutant Control.pdf	
AR_PCSSW		
III File Attachment	VII_Post Construction SW Information.pdf	
AR_MuniFacInsp		_
File Attachment	VIII Public Works Yard Inspections-2024.pdf	
AR_WintRdMain		
File Attachment	XII WINTER ROADWAY MAINTENANCE GUIDE.pdf	
AR_LeafYardMgmt		
I File Attachment	XVIII Leaf Management.pdf	

AR BMPInspSum

File Attachment

Green Alley Cleaning Records.pdf

AR_SWMap

Ile Attachment

XIII STORM SEWER SYSTEM MAP.pdf

AR_Other

I File Attachment

XII_BUDGET.pdf

AR_IDDE

File Attachment

IV_IDDE Reporting.pdf

(To remove items, use your cursor to hover over the attachment section. When the drop down arrow appears, select remove item)

- Public Education and Outreach Annual Report Summary
- Public Involvement and Participation Annual Report Summary
- Illicit Discharge Detection and Elimination Annual Report Summary
- Construction Site Pollution Control Annual Report Summary
- Post-Construction Storm Water Management Annual Report Summary
- Pollution Prevention Annual Report Summary
 - Leaf and Yard Waste Management
 - Municipal Facility (BMP) Inspection Report
 - Municipal Property SWPPP
 - Municipally Property Inspection Report
 - Winter Road Maintenance
- Storm Sewer Map Annual Report Attachment
- Storm Water Quality Management Annual Report Attachment
- TMDL Attachment
- Storm Water Consortium/Group Report
- Municipal Cooperation Attachment
- Other Annual Report Attachment

Attach - Permit Compliance Documents

(To remove items, use your cursor to hover over the attachment section. When the drop down arrow appears, select remove item)

Missing Information

Draft and Share PDF Report with the permittee's governing body or delegated representatives.

Press the button below to create a PDF. The PDF will be sent to the email address associated with the WAMS ID that is signed in. After the annual report has been reviewed by the governing body or delegated representative, return to the MS4 eReporting System to

Draft and Share PDF Report

Form 3400-224(R8/2021)

Sign and Submit Your Application

Steps to Complete the signature process

- 1. Read and Accept the Terms and Conditions
- 2. Press the Submit and Send to the DNR button

NOTE: For security purposes all email correspondence will be sent to the address you used when registering your WAMS ID. This may be a different email than that provided in the application. For information on your WAMS account click <u>HERE</u>.

Terms and Conditions

Certification: I hereby certify that I am an authorized representative of the municipality covered under Wauwatosa, City MS4 Permit for which this annual report or other compliance document is being submitted, and that the information contained in this submittal and all attachments were gathered and prepared under my direction or supervision. Based on my inquiry of the person or persons under my direction or supervision involved in the preparation of this document, to the best of my knowledge, the information is true, accurate, and complete. I further certify that the municipality's governing body or delegated representatives have reviewed or been apprised of the contents of this annual report. I understand that Wisconsin law provides severe penalties for submitting false information.

Signee (must check current role prior to accepting terms and conditions)

○ Authorized municipal contact using WAMS ID.

○ Delegation of Signature Authority (Form 3400-220) for agent signing on the behalf of the authorized municipal contact.

○ Agent seeking to share this item with authorized municipal contact (authorized municipal contact must get WAMS id and complete signature).

	Name:	
	Title:	
Authorized Signature.		

I accept the above

terms and conditions.

After providing the final authorized signature, the system will send an email to the authorized party and any agents. This email will include a copy to the final read only version of this application.

APPENDIX I through XVIII

February 2025

2024 Sweet Water Public Education Report

City of Wauwatosa





Prepared by:

Southeastern WI Watersheds Trust Inc (Sweet Water) Great Lakes Research Facility 600 E Greenfield Ave Milwaukee, WI 53204 Prepared for:

City of Wauwatosa 7725 W. North Ave Wauwatosa, WI 53213

Table of Contents

1. Public Education + Outreach 2024 Programs Summary	2
2. Respect Our Waters (Permit Section II.A)	3
2.A. MS4 Permit Compliance Portal	4
2.B. Website	4
2.C. Materials	5
2.D. Fact Sheets	6
2.E. Facebook	6
2.F. Linkedin Campaign	8
2.G. Wisconsin Stormwater Week	8
2.H. Events	9
2.H.1. General Public Events	9
2.H.2. Professional Event	10
3. Technical Education (Permit Section II.B)	10
3.A. Individual Activity Progress	10
3.B. Additional MS4 Activities	10
3.B.1. Technical Education Meeting	10
3.B.2. MS4 Trainings	11
4. Supplemental Media Coverage	11
4.A. Sweet Water Feature Story	11
Appendix A. MS4 Permit Compliance Portal	12
Appendix B. Respect Our Waters Materials	45
Appendix C. Fact Sheets	56
Appendix D. Stormwater Week Information	58
Appendix E. 2024 Events	59
Appendix F: Technical Education Report	64



1. Public Education + Outreach 2024 Programs Summary

The following document was prepared for the City of Wauwatosa to include in their 2024 annual MS4 eReport. It includes a summary of activities conducted to engage in effective public education as mandated by Wisconsin's administrative code - NR216. If you have any questions or would like more information, please contact Paige Orals, Watershed Program Manager of Southeastern Wisconsin Watersheds Trust, Inc. (orals@swwtwater.org).

The Respect Our Waters program identifies the target pollutants of concern, the target audiences, the delivery mechanism, and the entity responsible for implementation (*II.A.1*). In 2024, the program focused on developing materials and implementing mechanisms to educate residents, restaurants, business owners, developers, and designers in the City of Wauwatosa about pollutants not covered by the TMDL (ie. certain chemicals & chlorides). Education and outreach mechanisms include but are not limited to the distribution of print materials, website development, a regional social media campaign, and attending in-person community events. The Respect Our Waters campaign addressed more than three permit topics in 2024 (*II.A.2*) which are outlined in the Respect Our Waters 2024 completed plan. In addition, the program provided a mechanism to track and report the results of this cooperative program (*II.A.*).

Through the Technical Education Program, opportunities to meet and discuss relevant topics were provided, including presentations and moderated meetings. Access to training and additional materials for personalization were developed on an ongoing basis and provided for use. Sweet Water also finalized the individual education and outreach activity (*II.B*) by conducting an evaluation of the activity that was designed for the City of Wauwatosa and carried out in 2023 (*II.B.2.a*). The final results were consolidated into a report and submitted to the DNR with permit reapplication. Sweet Water also assisted the City of Wauwatosa with the permit reapplication process. In addition to organizing meetings, language was provided related to specific program sections.



Respect Our Waters 2024 Completed Plan					
Audience		General Permit Topic	Activity Completed		
	1	Illicit Discharge Detection &	MS4 Permit Portal and Print/Promotional Materials Developed- Section 2.A and 2.C		
	1	Elimination	Watershed Wednesday and Wisconsin Stormwater Week,- 2.E and 2G		
	2	Household Hazardous Waste Disposal/ Pet Waste	MS4 Permit Portal and Print/Promotional Materials Developed- Section 2.A and 2.C		
		Management/ Vehicle Washing	Watershed Wednesday- 2.E		
	3	Yard Waste Management/Pesticide and	MS4 Permit Portal and Print/Promotional Materials Developed- Section 2.A and 2.C		
Residents		Fertilizer Application	Watershed Wednesday- 2.E		
	5	Residential Infiltration	MS4 Permit Portal and Print/Promotional Materials Developed- Section 2.A and 2.C		
			Watershed Wednesday- 2.E		
	9		MS4 Permit Portal and Print/Promotional Materials Developed- Section 2.A and 2.C		
		Snow and Ica Control	Website Update- Section 2.B		
		Snow and Ice Control	Fact Sheets 2.D		
			Watershed Wednesday and Wisconsin Stormwater Week,- 2.E and 2G		
			MS4 Permit Portal and Print/Promotional Materials Developed- Section 2.A and 2.C		
Restaurants, Food Trucks,		Dollation Drayontion	Website - Section 2.B		
Companies		Pollution Prevention	Fact Sheets and Linkedin 2.D and 2F		
			Watershed Wednesday and Wisconsin Stormwater Week- 2.E and 2.G		
Businesses	9	Snow and Ice Control	Fact Sheets 2.D		
Developers and designers	8	Green Infrastructure/Low Impact Development	MS4 Permit Portal and Print/Promotional Materials Developed- Section 2.A and 2.C		

2. Respect Our Waters (Permit Section II.A)



2.A. MS4 Permit Compliance Portal

In 2024, Sweet Water staff developed and launched our MS4 Permit Compliance Portal. The "MS4 Permit Compliance Portal" is a simple, interactive mechanism that provides a series of monthly prompts to help fulfill education and outreach permit compliance activities. The Portal is tailored to the City of Wauwatosa unique community needs and increases the strength of compliance programming.

The intention was to allow the City of Wauwatosa and other partners to use outreach mechanisms most utilized by their residents, such as municipal newsletters, social media accounts, and other platforms, to share educational materials. These topics included:

- Snow and Ice Tips
- Household Hazardous Waste Disposal
- Residential Infiltration Techniques (Native Plants)
- Alternatives to Traditional Fertilizer
- Fertilizer Guidance
- Pollution Prevention at Landscaping Companies
- Illicit Discharge Detection and Elimination
- Leaf Management
- Pollution Prevention for Restaurants and Food Trucks
- Green Infrastructure
- Snow and Ice Control

The portal is created with a built-in tracking mechanism for MS4 partners to report when and how they used resources, as well as other activities that they performed to educate the public. See Appendix A for examples of the portal and Wauwatosa's reports submitted to Sweet Water through the 2024 MS4 Permit Compliance Portal.

2.B. Website

In 2024, Sweet Water and Root-Pike Watershed Initiative Network (RPW) continued to collaborate on maintaining and updating the Respect Our Waters webpage. This involved adding educational materials tailored to municipality needs and updating links. The following educational materials were added to the website in 2024:

- Chemical Pollution Prevention Tips for Landscaping Companies
- Snow and Ice Control Fact Sheet

Existing web pages for residential and non-residential audiences include the following topics:

- Watersheds and Stormwater
- Yard Management
 - Fertilizer and Pesticide Use



- Mowing Properly
- Leaf it Out of the Water
- Watering Properly
- Yard Maintenance- Planting with a Purpose
- Waterproof/Impervious Surfaces
 - Rain Barrels- They Make a Difference!
 - Pervious/Permeable/Porous Pavements
 - Stormwater Trees- Hardworking Trees
 - Native Rain Gardens
- Pet Waste is a Pollutant
- Ice and Snow Control- The Problem with Salting Freshwater
- At-Home Construction
- Dangerous Dumping/Illicit Discharge
- Waterfront Properties
 - Shoreline Landscaping
 - Stream and Shoreline Management
 - Stormwater Ponds
- Agriculture
- Streambanks and Shorelines: Erosion

In 2024, the Respect Our Waters website had a total of 10,797 visitors¹, with 10,206 being unique², and 13,762 page views³. The newly developed Chemical Pollution Prevention Tips for Landscaping Companies and Snow and Ice Control for Businesses fact sheets had 210 and 123 views respectively. In addition, analytical data shows that residents in the City of Wauwatosa were directed to Respect Our Waters directly from a municipal site and 18 members of their community visited the website.

2.C. Materials

In 2024, Sweet Water staff created flyers and graphics for in-person and virtual forms of outreach. In 2021, a webpage was created to store all of these materials so that the City of Wauwatosa and other partners could also access and use these materials. The webpage is accessible at https://www.swwtwater.org/request-support.

New materials that were developed in 2024 and are available on this page include:

- Snow and Ice Tips
- Household Hazardous Waste Disposal
- Benefits of Native Plants

³ Page views is the total number of views (page requests) across all of your pages.



¹ Total visitors are tracked by visit with a browser cookie that expires after 30 minutes. Any hits within that 30-minute browsing session count as one visit.

² Unique visitors is an estimate of the total number of actual visitors that reached your site.

- Alternatives to Traditional Fertilizer
- Fertilizer Checklist
- Pollution Prevention at Landscaping Businesses
- Protecting Lake Michigan from Illicit Spills
- Leaf Management
- Pollution Prevention at Restaurants and Food Trucks
- Combating Winter Weather with Green Infrastructure
- Ice and Snow Control for Residents

See examples of these graphics in Appendix B.

2.D. Fact Sheets

In 2024, Sweet Water staff created fact sheets to provide more detailed information on stormwater pollutants such as the causes, environmental impacts, human health implications, and best management practices for pollutant reduction. These fact sheets were shared with municipalities through the MS4 Permit Compliance Portal. The intention was to direct interested individuals to more in-depth information. Fact sheets addressed the following permit topics in 2024:

- Chemical Pollution Prevention Tips for Landscaping Companies
- Snow and Ice Control for Businesses

Fact pages are available at swwtwater.org/request-support and respectourwaters.org. See examples of the fact sheets in Appendix C.

2.E. Facebook

The Respect Our Waters Facebook page serves as a repository of posts for the City of Wauwatosa and other partners to share directly with their residents. This page is used to directly reach the general public of southeastern Wisconsin municipalities and counties.

The first campaign was developed to allow municipalities with Facebook accounts to seamlessly share valuable information with their residents. These posts were strategically synchronized with MS4 permit compliance portals and linked within municipal portals. It's important to highlight that the majority of these posts were not sponsored advertisements; rather, their reach and engagement were organically generated as municipalities actively shared the content with their residents.

Snow and Ice Control				
Date	Subtopic	Link Number	Reach	Engagements

Table 1: 2024 Respect Our Waters MS4 Permit Compliance Portal Campaign Metrics



6

22-Jan	Snow and Ice Tips	763203389170926	3,795	171			
18-Nov	Ice and Snow Control	967327425425187	6,649	615			
Residenti	al Infiltration						
20-Mar	Native Plant Benefits	799046548919943	3,808	88			
Green In	frastructure						
21-Oct	Winter Benefits of Green Infrastructure	946541324170464	2,950	87			
Pollution	Pollution Prevention						
17-Sep	Restaurants and Food Trucks	919778783513385	1,360	28			
Yard Wa	Yard Waste Management/Pesticide and Fertilizer Application						
17-Apr	Alternatives to traditional fertilizers	816671087157489	3,099	63			
22-May	Fertilizer Checklist	827515019406429	4,880	230			
Househol	d Hazardous Waste	·		·			
21-Feb	Household Hazardous Waste Disposal	782021720622426	3,678	71			

The second Facebook campaign conducted in 2024 is our "Watershed Wednesday" campaign. This is a joint initiative between Sweet Water and the Root-Pike Watershed Initiative Network (RPW), where stormwater education information is published every Wednesday and is boosted to ensure the message is received in municipalities and counties throughout our service region.

Yard Was	te Management			
Date	Subtopic	Link Number ⁴	Reach ⁵	Engagements ⁶
General S	tormwater Information			
5-Jun	Overview of a Watershed	850403043784293	6,736	123
12-Jun	Where do storm drains take rainwater and debris?	854737850017479	2,652	43

Table 2: 2024 Respect Our Waters Watershed Wednesday Campaign Metrics

⁶ Engagements: The number of reactions, comments, shares and clicks on your post.



⁴ Link Number: The unique post number. Access the post by typing <u>www.facebook.com/RespectOurWaters/posts/</u> and then the unique post number after the back-slash.

⁵ Reach: The number of people who saw the post at least once. Reach is different from impressions, which may include multiple views of your post by the same people. This metric is estimated by Facebook.

Yard Mainte	nance			
14-Aug	Reducing Fertilizer Pollution	895769419247655	3,802	190
3-Jul	Grass Clippings Pollution	868695961955001	5,885	363
21-Aug	Leaf Management	900704958754101	3,576	276
Stream and S	Shoreline Management	•	•	
31-Jul	Shoreline Erosion Solutions	886562153501715	2,779	313
Residential I	Pollution Prevention	ŀ		
10-Jul	Household Hazardous Waste Disposal	873065761518021	5,669	282
7-Aug	Pet Waste Management	891038273054103	4,190	181
Illicit Discha	rge Detection and Elimination			
24-Jul	Protecting Lake Michigan from Illicit Spills	881896760634921	5,977	299
Residential I	nfiltration + G.I		-	
17-Jul	Benefits of Native Plants	877546804403250	6,315	350
26-Jun	Native Plants Absorb Water	864021055755825	6,981	1110
Pollution Pro	evention		•	
19-Jun	Pollution Prevention at Landscaping Companies	859039266254004	7,238	242

2.F. Linkedin Campaign

In 2024, the Sweet Water staff initiated a strategic educational campaign targeting non-residential audiences through LinkedIn advertising. Educational materials were developed that were tailored to resonate with the unique needs of businesses, developers, and designers. Sweet Water utilized the advertisement software to reach these specific audiences within our municipal service area. This precision targeting ensured our educational messaging was delivered to the target audience.

Table 3: 2024 Sweet Water Linkedin Campaign Metrics



Date	Торіс	Target Audience	Impressions ⁷	Reach ⁸
13-Jun	Chemical Pollution Prevention	Landscaping Companies	39,402	13,221

2.G. Wisconsin Stormwater Week

Sweet Water was a part of the second annual Wisconsin Stormwater Week in 2024. Stormwater Week is a collaborative effort of organizations throughout the State that work to raise awareness about the sources of water pollution. This was signed into proclamation by the governor. In alignment with our campaign, Sweet Water published the following posts:

Reach⁹ Date Topic Platform Impressions¹⁰ Engagements¹¹ Clicks¹² 109 104 10 Instagram Wisconsin 20-Sep Stormwater Facebook 151 11 Week Calendar LinkedIn 78 10 -_ Instagram 24 24 4 A Salty Situation 24-Sep Facebook 20 _ 5 _ Webinar Information 49 LinkedIn _ 1 _ Pond Problems. Instagram 35 35 1 Solutions and Facebook 65 4 25-Sep Reporting _ _ Webinar LinkedIn 52 3 _ _ Information Is Stormwater Instagram 13 13 0 _ Treated? 26-Sep Webinar Facebook 43 2 Information

Table 4: 2024 Sweet Water Wisconsin Stormwater Week Campaign Metrics

¹² Clicks: The total number of clicks on the post.



⁷ Impressions are the total number of exposures to your content. This can include the same person seeing your content multiple times.

⁸ Reach: The number of people who saw the post at least once. Reach is different from impressions, which may include multiple views of your post by the same people. This metric is estimated by Facebook.

⁹ Reach: The number of people who saw the post at least once. Reach is different from impressions, which may include multiple views of your post by the same people. This metric is estimated by Facebook.

¹⁰ Impressions: The total number of times content is displayed, regardless of whether it was clicked.

¹¹ Engagements: The number of reactions, comments, shares and clicks on your post.

	LinkedIn	-	39	-	3
--	----------	---	----	---	---

In addition, Sweet Water developed a "Stormwater Week" Portal which listed ways to get involved in WI Stormwater Week such as sharing resources and attending the webinars. The City of Wauwatosa posted Stormwater Week flyers at the library, city hall, and senior center which likely reached over a hundred individuals. See additional 2024 Stormwater Week information in Appendix D.

2.H. Events

2.H.1. General Public Events

In 2024, Respect Our Waters attended multiple regional and local community events. In 2024, we were able to increase the number of events attended which totaled over 23 different events spanning over 21 days reaching 1900+ booth visitors. We developed and used an interactive booth that had a stormwater plinko game, informational brochures, and various educational prizes such as stickers and magnets.

See a list of events attended in 2024 below and more information about reach, topics covered, and more in Appendix E.

2.H.2. Professional Event

On October 18th, 2024, Sweet Water attended the MMSD Fish Fry for SWMBEs (Small, Women, Minority, and Veteran-Owned Businesses and prime contractors/consultants). This networking event allowed staff to connect with various organizations across the Milwaukee River Basin that are involved in stormwater management.

3. Technical Education (Permit Section II.B)

3.A. Individual Activity Progress

As a technical education program member, the City has been working with Sweet Water to choose, design, carry out and measure the impacts of an educational activity within the MS4 boundary. The Individual needs, submitted in 2021, served as the guide for activity selection. The activity was carried out for the topic identified and in 2024, using the metrics plan developed the previous year, the impact was measured. For a summary of the City's Individual Activity results, see Appendix F.



3.B. Additional MS4 Activities

3.B.1. Technical Education Meeting

Sweet Water hosted meetings for Technical Education to address relevant topics of concern.

- I. MS4 Quarterly Meeting 1/22/24
 - Location: Brookfield City Hall
 - Topics included: Wisconsin Department of Natural Resources presentation on permit reapplication, Cost-effective Stormwater solutions presentation
- II. MS4 Quarterly Meeting 4/11/24
 - Location: Brookfield City Hall
 - Topics included: Permit reapplication recap
- III. MS4 Quarterly Meeting 7/22/24
 - Location: Brookfield City Hall
 - Topics included: The Wisconsin Department of Natural Resources answered questions regarding the permit reapplication process and proposed modifications.

3.B.2. MS4 Trainings

As a technical education program member, the City has access to Sweet Water's "one-stop-shop". The one-stop-shop is a resource hub for MS4 staff training materials and materials to support public involvement activities. Permit topics covered on the hub include Illicit Discharge Detection and Elimination, Stormwater Pollution Prevention Planning, Winter Road Management/Salt Strategy, and Green Infrastructure.

4. Supplemental Media Coverage

4.A. Sweet Water Feature Story

In 2024, Sweet Water's work was featured in multiple news articles. This media can be accessed in the table below.

Date	Type of Media	Link
8-Jul	Article	https://urbanmilwaukee.com/2024/07/08/how-18-muncipalities- work-together-on-water-quality/
Nov	Article	https://www.lwm-info.org/828/The-Municipality-Magazine

Table 5: 2024 Supplemental Media Coverage



Appendix A. MS4 Permit Compliance Portal

2024 MS4 Portal metrics were recorded on January 13th, 2025. Any information uploaded after this date is not included in this report.


Sweet Water MS4 Permit Compliance Portal 2024

Brought to you by: Southeastern Wisconsin Watersheds Trust, Inc. Contact Info: orais@swwtwater.org



Double click HERE to read instructions

March Tasks:	Action Item				
Completed	Please share the following stormwater education information	Newsletter	Downcad the informatives news, include the feet in the cell to the right,	When it comes to household hazardous waste it is essential to dispose of properly. The first step should always be to thoroughly read the label to understand how to handle excess materials and properly store it. Chemicals such as paints, fertilizers, and cleaning items have the potential to cause harm to both the environment and human health if mishandled. If these chemicals are improperly disposed of by being dumed directly into drains or placed in leaky garbage containers, they can enter our storm sever systems and contaminate our treshvaler sources. The presence of hazardous waste in the environment can have such the effects on aquatic life, plants, livestock, and can even lead to contamination of tool sources. Remember to always read the label and explore your local read our fact page.	w000
Completed	Are there any additional educational activies you have completed this month?	Example: I did X (activity/event) and talked to X people about X topic on X date . If no additional activities please write "none" in cell to right.	nane		-
March Tasks Complete			-		

April Tasks:	Action Item				
Completed	Please share the following stormwater education information	'Tv Display	Download the Informatic Terrs	۵.	10000
Completted	Reminder: CIS and Sweet Water Lunch and Learn April 30th	Learn about the Fresh Coast Protection Partnership (FCPP) and how its projects can reduce flooding and stormwater runoff in your community while also helping municipalities to meet Municipal Separate Storm Sever System (MS4) permit requirements.	Click here to registive formed		



Completed	Are there any additional educational activies you have completed this month?	Example: I did X (activity/event) and talked to X people about X topic on X date . If no additional activities please write "none" in cell to right.	nane	
April Tasks Complete				

May Tasks:	Action Item					
Completed	Please share the following stomwater education information	Newsletter	Download the integrateries name include the ted in the cell to the right	Lawns and plants cannot always absorb the nitrogen, phosphonus, and ammonia in chemical and organic fertilizers. The excess nutriests and chemicals not absorbed will nu off our yards into storm drains and enter waterways during rain events. This can lead to toxic algae blooms and dead zones that can containated dinking water and lead to beach shutdowns. To limit the amount of tertilizer entering our waters we can all do our part. Use organic matter first, test your soil to determine what and how much nutrients it needs, plant native plants that can naturally thrive without help. We can all do our part to keep our waters these of chemicals and nutrients its spring and summer. Visit www.rispectoursaters.org/yard- chemicals to learn more!	4000	
Completed	Are there any additional educational activies you have completed this month?	Example: I did X (activity/event) and talked to X people about X topic on X date . If no additional activities please write "none" in cell to right.	No Mow May		4	
May Tasks Complete-						

June Tasks:	Action Item		
Completed	Please share the following stormwatter education Tv Display	Desiriting the Manufacture sere.	10080
Completed	Are there any additional educational activies you have completed this month? Example: I did X (activity/event) and talked to X people about X topic on X date. If no additional activities please write "none" in cell to right.	name	



June Tasks Complete					
July Tasks:	Action Item			and the second	
Completed	Please share the following stormwater education information	Email blast	Duwnluad the infographics tiers: include the text in the cell to the right.	Attention Professional Landscaping Companies! With summer maintenance in full awing, have you considered how your business impacts water quality? Chemical applications of herbicides, pesticides, and fertilizers don't always stay where they are supposed to and can end up poliuting local waterways. When it rains, stormwater can carry these harmful chemicals into nearby storm drains. In communities with a separate storm server system, the poliuted water is discharged directly into local waterways? Overall, these chemicals harm aquatic life and degrade the waterways hart human enjoy recreationally. Specifically, tertilizers create algal blooms, which outcompete native plants and increase bacterial growth. Pesticides can damage the aquatio inset commuty which heads the entite river accession. Herbicides are more damaging to aquate plants than benesitie bates. As a blookenedee compete harts have	192
Not Complete	Link the yard chemical webpage on your municipal webpage.	Late Near In End yant chemicals webpage.	Did you share It? (double click to respond)		
Not Complete	Are there any additional educational activities you have completed this month?	Example: I did X (activitylevent) and talked to X people about X topic on X date. If no additional activities please write 'none' in cell to right.	"Activity?" Dete? #People reached?" What stormwater (optic(\$))?	€	
July Tasks Incomplete					

August Tasks:	Action Item			
Completia	Please share the tollowing stormiwater education Tv Desplay	Download the integrachic heat,		1888
Completed	Whenever possible, we love to feature the good work of our municipal partners on the news or via other publications, Do you have a "stormwater story" to share?	Maybe, need more information	If you have a story to share, please provide some basic information here and Swett Water will follow up.	



Completed	Are there any additional educational activies you have completed this month? Example: / dd X (activity/event) and talked to X people about X topic on X date . If no additional activities please write "none" in cell to right.	yone	
August Tasks Complete			

September Tasks:	Action item			
Completed	Please share the following stormwater education Email blast	Download the infographics here, lockude the feet in the pell to the right.	Proper leaf management is important in reducing stormwater poliution and preventing flooding. Leaves that accumulate in storm drains can create blockages which cause localized flooding during heavy rainfall. This can cause property damage and poses sately concerns for pedestrians and drivers. Proper leaf management ensures that stormwater systems function effectively, reducing the risk of such incidents and keeping neightorhoods sate. In addition to flood prevention, proper leaf management plays an important role in protecting water quality. Leaves release nutrients such as nitrogen and phosphorus, which deplete oxygen levels in the water and harm aquatic life. By keeping leaves out of storm drains, we help preserve the health of our waterways, ensuring they remain vibrant ecosystems for fish, plants, and other	4000
Optional	(Optional) Sweet Water plays a pivotal role in the upcoming Wisconsin Stormwater Week (september 21-29, 2024) and by proxy, your municipality is represented on the <u>statewise fail of partners</u> . The goal of Wi Stormwater Week is to elevate individual education campaigns throughout the State by working together for one week a year.	We appreciate your support in getting the word out about Wi Stormwater Week, here are some ways to get involved: <u>Create a municipal provisionation</u> to support stormwater week. Share resources with your <u>Uppry</u> and <u>softeds</u> . <u>Historica week</u> . Attend a <u>weenac</u> .		Riyers at Abrary, city hall, senior center. Disply reacted a taw bunches.
Completed	Are there any additional educational activies you have completed this month? Example I did X (activity/event) and talked to X people about X topic on X date . If no additional activities please write 'none'' in cell to right.	none		
September Tasks incomplete				

October Tasks:	Action Item				
Completed	Please share the following stormwater education information	Email blast	Download the infographics here, individe the text in the cell to the right.	Do you own a restaurant or a food truck? Remember that you can mitigate stormwater pollution at your business. It is important to store cooking oil, chemicals, and trash properly so these pollutants do not wash into nearby storm drains and pollute our waterways. Used cooking oil should be stored inside if possible, or outside far away from storm drains. Containers must be sealed tightly except when adding or removing oil. Monitor the storage container for leaks and clean up any spills immediately. Dumpsters should be covered except when adding trash. Avoid placing liquid in dumpsters as the liquid can leak out and wash into storm drains. Monitor the dumpster for leaks and clean up any seepage immediately. Spills	4002



Completed	There is a community conservation corps that is interested in partnering with SWWT to provide municipalities/counties with labor needed for cleanups, weeding, tree planting, and more. Please let us know if you are interested, and if so, do you have a specific project you need assistance with?	What is your level of interest? (double click to respond)	(Optional) Do you have a specific project you need assistance with?	
Completed	Are there any additional educational activies you have completed this month?	Example: I did X (activity/event) and talked to X people about X topic on X date. If no additional activities please write "none" in cell to right.	name	
October Tasks Complete				

Novamber Tasks:	Action Item			
Completed	Please share the following stormwater education Tv Display	Collineed the Integrachic hem.	~	18802
Completed	Are there any additional educational activies you have completed this month? Example: I did X (activity/event) and talked to people about X topic on X date. If no additio activities please write "none" in cell to right	oX nal name		
November Tasks Complete				

December Tasks:	Action flam				
Completed	Please share the following stormwater education information	Newsletter	Download the infographics type, include the text in the cell to the right.	Winter weather is approaching and it's important to be mindful of the amount of road sait used to de-ice surfaces. One testspoon of road sait can permanently contaminate 5 gailons of freshwater. Increased saininy levels make freshwater environments toxic to aquate tife as well as mammals and brids that rely on freshwater systems. As little as 12 ounces of sait does not increase its effectiveness. Dros sait is applied faalt does not increase its effectiveness. Dros sait is applied when temperatures dip below 15 degrees or when is a smort han '% inch thick. In these situations it will be more effective to use materials that increase traction such as sand, thid seed, or cali little. Biodegradable de-icors can be used in place of or in conjunction with road sait to mell ice and add traction. These atternatives include beer juice, molasses, and place juice. Visit respectourwaters org to learn more about snow and ice	W005.



Completed	Link the snow and ice control webpage on your municipal webpage.	cos and Show Centre Webpare	Yes	
Completed	Are there any additional educational activies you have completed this month?	Example: I did X (activity/event) and talked to X people about X topic on X date. If no additional activities please write "none" in cell to right.	none	 -
December Taska Complete				



Municipality	Month	Торіс	Mechanism	Details
Bayside (Village of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 250.
Bayside (Village of)	February 2024	Adopt Your Drain Promotion	Inspection Report	Staff promoted the Adopt-A-Drain program as the weather was warmer for this time of year and Adopt-A-Drain inspection reports were sent to those who have adopted drains.
Port Washington (City of)	February 2024	Snow and Ice Control	Social Media	Posted the graphic on Facebook.
Glendale (City of)	February 2024	Snow and Ice Control	Emails	Shared graphic through email with an estimated reach of 2200.
Glendale (City of)	February 2024	Snow and Ice Control	Webinar/Training	4 DPW staff attended the Winter Salt Awareness Week webinars Monday-Friday, January 22-26, 2024 at 12:30pm CT to learn about salt reduction strategies.
Fox Point (Village of)	February 2024	Snow and Ice Control	Website	Shared graphic on Village website with an estimated reach of 100-250.
Fox Point (Village of)	February 2024	Residential Infiltration and Yard Maintenance	News Blast Village Website	News blast on Village website from December- January and email blast about preparing rain barrels and yard for the winter reached over 200.
Fox Point (Village of)	February 2024	Snow and Ice Control	Training	Salt application education with DPW crew on January 25, 2024.
Whitefish Bay (Village of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 583.



Brookfield (City of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 50.
Brookfield (City of)	February 2024	MS4 Permit	Meeting	Meeting held on 01/22/2024 with 18 attendees. Topics included new infiltration testing methods and MS4 Permit goals.
Butler (Village of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Butler (Village of)	February 2024	Stormwater Education	Flyers	Displayed stormwater materials given to us by Sweet Water to residents as they came in to pay their taxes.
Germantown (Village of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 50.
Greenfield (City of)	February 2024	Snow and Ice Control	Website	Shared graphic on City website with an estimated reach of 10,000+.
Milwaukee (City of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Twitter with an estimated reach of 6500.
Milwaukee (County of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
Wauwatosa (City of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook.
West Allis (City of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	February 2024	Snow and Ice Control	Newsletter	Shared graphic in Newsletter with an estimated reach of 600.



Cedarburg (City of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook 2/29/2024 with a reach of 100.
Cedarburg (City of)	February 2024	MS4 Permit	Meeting	Discussed MS4 permit with Department Heads on 2/19/24, 12 attendees.
Grafton (Village of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook to approximately 1.7k followers.
Mequon (City of)	February 2024	Snow and Ice Control	Newsletter	Shared graphic in newsletter with an estimated 140 reach.
Mequon (City of)	February 2024	Snow and Ice Control	Social Media	Facebook Post
Ozaukee (County of)	February 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 31.
Saukville (Village of)	February 2024	Snow and Ice Control	Newsletter	Shared graphic in newsletter with an estimated reach of 630.
Port Washington (City of)	February 2024	Snow and Ice Control	Newsletter	Shared graphic in newsletter with an estimated reach of 100.
Port Washington (City of)	February 2024	Snow and Ice Control	Website	Posted graphic on City website.
Bayside (Village of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 250.
Bayside (Village of)	March 2024	Culvert Cleaning	Village Newsletter	Article in the Bayside Buzz newsletter regarding cleaning culverts to ensure proper flow of stormwater.
Bayside (Village of)	March 2024	-	Meeting	DPW committee meeting was held on 3/14/24.
Brookfield (City of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 60.
Brookfield (City of)	March 2024	Wetland protection and preservation	-	Wetland encroachment violation notices to residents in March 2024, reach of 41. Wetland protection and preservation



Butler (Village of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Cedarburg (City of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 100.
Cedarburg (City of)	March 2024	Respect Our Waters Program	Meeting	Respect Our Waters kick-off meeting 3/12/24
Elm Grove (Village of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 1500.
Elm Grove (Village of)	March 2024	MS4 Permit	Meeting	A representative from Ruekert & Mielke was in attendance at the March 26, 2024 Board of Trustees meeting to give a presentation on the MS4 Stormwater Permit to about 20 people.
Fox Point (Village of)	March 2024	Household Hazardous Waste	Village website	Shared graphic on Village website with an estimated reach of 100.
Germantown (Village of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 50.
Glendale (City of)	March 2024	Household Hazardous Waste	Newsletter	Shared graphic in newsletter with an estimated reach of 2000.
Glendale (City of)	March 2024	Stormwater Asset Management	Training/Event	Stormwater Asset Management: Three Essential Building Blocks Every MS4 Program Needs February 22, 2024 MS-4 Permit
Grafton (Village of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook to approximately 1.7k followers.
Greenfield (City of)	March 2024	Household Hazardous Waste	City Website Newsflash	Shared graphic on website newsflash with an estimated reach of 500.
Mequon (City of)	March 2024	Household Hazardous Waste	Newsletter	Shared graphic in newsletter with an estimated reach of 148.



Milwaukee (City of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 6500.
Milwaukee (County of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
Ozaukee (County of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook to 243 followers.
Ozaukee (County of)	March 2024	Watershed Education	Event/Presentation	We did a soil health and water quality presentation and talked to 20 NOSD middle school students about watersheds, soil health and its importance on water quality, and what they can do to improve water quality on 3/19/2024.
Ozaukee (County of)	March 2024	MS4 Public Education and Outreach	Meeting	MS4 Public Education and Outreach program meeting on 3/12/24.
Port Washington (City of)	March 2024	Household Hazardous Waste	Word Document	Shared graphic through Word document with an estimated reach of 100.
Port Washington (City of)	March 2024	Auto Maintenance	Social Media	Posted the graphic on Facebook.
River Hills (Village of)	March 2024	Fecal Coliform	Presentation/Workshop	Presentation and workshop introduction for Chicken and Beekeepers to address Fecal Coliform
Saukville (Village of)	March 2024	Household Hazardous Waste	Email blast	Shared graphic via email blast with an estimated reach of 650.
South Milwaukee (City of)	March 2024	Household Hazardous Waste	City website	Shared graphic on City website with an estimated reach of over 100.
South Milwaukee (City of)	March 2024	Pollution Prevention	City Website	Shared pollution prevention graphic on city website



Wauwatosa (City of)	March 2024	Household Hazardous Waste	Newsletter	Shared graphic in newsletter.
West Allis (City of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	March 2024	Household Hazardous Waste	Newsletter	Shared graphic in newsletter with an estimated reach of 600.
Whitefish Bay (Village of)	March 2024	Household Hazardous Waste	Social Media	Shared graphic on Facebook with an estimated reach of 265.
Butler (Village of)	March 2024	Stormwater BMPs	Village Newsletter	Provided information on proper recycling in our newsletter as well as stormwater management best practices. We reached 512 people.
Port Washington (City of)	March 2024	Auto Maintenance	City Website	Posted graphic on City Website.
Port Washington (City of)	March 2024	MS4 Public Education and Outreach	Meeting	MS4 Public Education and Outreach program kick off 3/14/2024.
Bayside (Village of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 250.
Fox Point (Village of)	April 2024	No Mow May	Village website	Posted No Mow May information on the Village website.
Glendale (City of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 2000.
Fox Point (Village of)	April 2024	Residential Infiltration	Village website	Shared graphic on Village website including links to native plantings and other stormwater projects with an estimated reach of 150-250.



Fox Point (Village of)	April 2024	Arbor Day	Event/Presentation	Forester presented a program at Stormonth School and planted a tree.
Fox Point (Village of)	April 2024	Residential Infiltration	Village Website	Posted on website info and links to how to plan summer yard/garden, links to GI projects, and water management on property.
Fox Point (Village of)	April 2024	Residential Infiltration	Email	Seasonal Update emailed to residents: advertised tree planting session, rain barrel/rain garden/porous pavement installation and stormwater credit.
Whitefish Bay (Village of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 616.
Elm Grove (Village of)	April 2024	Residential Infiltration	Newsletter	Shared graphic in newsletter with an estimated reach of 1000.
Brookfield (City of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 50.
Brookfield (City of)	April 2024	River Cleanup	Posters	Milwaukee Riverkeeper Annual Cleanup Event posters were up in March and April with an estimated reach of 150.
Butler (Village of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook on 3/21/24 with an estimated reach of 1200.
Butler (Village of)	April 2024	Stormwater BMPs	Village Newsletter	Put various stormwater education materials in our biweekly newsletter to residents and businesses, "Why care about stormwater?" and "StormWater Management Best Practices", March 15th, 2024 with an estimated reach of 485.
Germantown (Village of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 50.



Greenfield (City of)	April 2024	Residential Infiltration	City Website Newsflash	Shared graphic on website newsflash with an estimated reach of 500.
Milwaukee (City of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Twitter and Facebook with 4 likes and 1 share.
Milwaukee (City of)	April 2024	Residential Infiltration	Social Media	Posted graphic on Facebook on 4/8/24 with 4 likes and 1 share.
Milwaukee (County of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
West Allis (City of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	April 2024	Residential Infiltration	Newsletter	Shared graphic in newsletter with an estimated reach of 800.
Cedarburg (City of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 250.
Grafton (Village of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook to approximately 1.7k followers.
Mequon (City of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook with an estimated reach of 109.
South Milwaukee (City of)	April 2024	Residential Infiltration	City Website	Shared graphic on City website with an estimated reach of over 100.
South Milwaukee (City of)	April 2024	Earth Day	City Website	Shared Earth Day graphic on City website with over 100 views.
Ozaukee (County of)	April 2024	Residential Infiltration	Social Media	Shared graphic on Facebook.
Ozaukee (County of)	April 2024	Stormwater Pollution and BMPs	Flyers	We had handouts about stormwater pollution and BMPs at our Horse event on 4/10/2024. Also talked about the negative impact of horse



				manure runoff on water quality. 24 people were in attendance.
Ozaukee (County of)	April 2024	Residential Infiltration	Event	Tree sale event on 4/25/2024.
Saukville (Village of)	April 2024	Residential Infiltration	Email Blast	Shared graphic via email blast with an estimated reach of 650.
Port Washington (City of)	April 2024	Residential Infiltration	Word Document	Shared graphic through Facebook, website, and City newsletter with an estimated reach of 100.
Bayside (Village of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook with an estimated reach of 104.
Bayside (Village of)	May 2024	Residential Infiltration	Social Media	Posted rain barrel information on social media platforms on May 28, 2024 with an estimated reach of 300.
Brookfield (City of)	May 2024	Yard Maintenance	Poster	Native grasses poster highlighted lawn alternatives and maintenance from May-June with an estimated reach of 100.
Butler (Village of)	May 2024	Stormwater Runoff	Village Newsletter	Shared stormwater information in the Village newsletter in early May with topics about runoff. 511 people were reached.
Elm Grove (Village of)	May 2024	Fertilizer Use	Social Media	Posted about fertilizer use on Facebook on April 18th, 2024 with an estimated reach of 600.
Fox Point (Village of)	May 2024	Residential Infiltration	Workshop	Tree planting workshop on May 4th, 2024 with educational talks by Wachtel tree experts.
Ozaukee (County of)	May 2024	Stormwater BMPs	Flyers	Stormwater display board and BMP flyers.
South Milwaukee (City of)	May 2024	Household Hazardous Waste	City Website	Shared household hazardous waste graphic on the City website on 5/1/24.



Wauwatosa (City of)	May 2024	Fertilizers	Newsletter	Shared graphic in City newsletter with an estimated reach of 4000.
Wauwatosa (City of)	May 2024	-	-	No Mow May
Whitefish Bay (Village of)	May 2024	Household Hazardous Waste/Recycling	Event	On Saturday, May 4, 2024, the Village hosted its annual Recycle Day in the Bay. We had nearly 350 attendees drop off various items to be reused, recycled, or disposed of. Vendors who participated were the Friends of the Whitefish Bay Public Library, Lion's Club, American Legion, Goodwill, Midwest Computer Recycling, and WI Bike Federation. As part of this event, we also shared resources for proper disposal of items that we cannot take in normal collection, such as household hazardous waste, batteries and lightbulbs, etc.
Fox Point (Village of)	May 2024	Household Hazardous Waste	Social Media	Posted/advertised May 4th, 2024 MMSD Home Hazardous Materials drop-off at Augustine Prep campus.
Ozaukee (County of)	May 2024	Stormwater BMPs	Brochures	Handed out BMP brochures to people in line for the Clean Sweep event on 5/4/2024.
Glendale (City of)	May 2024	Fertilizers	Newsletter	-
Fox Point (Village of)	May 2024	Fertilizers	Village Website	-
Whitefish Bay (Village of)	May 2024	Fertilizers	Social Media	Shared graphic on Instagram with an estimated reach of 120.
Elm Grove (Village of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook with an estimated reach of 600.



Brookfield (City of)	May 2024	Fertilizers	Flyer	-
Butler (Village of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Germantown (Village of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook with an estimated reach of 50.
Greenfield (City of)	May 2024	Fertilizers	Next Door	Shared graphic on Nextdoor with an estimated reach of 500.
Milwaukee (City of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook with an estimated reach of 6500.
Milwaukee (County of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
West Allis (City of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	May 2024	Fertilizers	Flyer	Shared flyer with an estimated reach of 500.
Grafton (Village of)	May 2024	Fertilizers	Social Media	Shared graphic on Facebook to approximately 1.7k followers.
Mequon (City of)	May 2024	Fertilizers	Newsletter	Shared graphic in newsletter with an estimated reach of 140.
South Milwaukee (City of)	May 2024	Fertilizers	City Website	Shared graphic on City website with an estimated reach of over 100.
Ozaukee (County of)	May 2024	Fertilizers	Social Media	-
Saukville (Village of)	May 2024	Fertilizers	Flyer	Shared graphic as a flyer with an estimated reach of 150.
Port Washington (City of)	May 2024	Fertilizers	Word Document	Shared graphic through Word document with an estimated reach of 100.



Bayside (Village of)	June 2024	Pollution Prevention	Instagram	Posted graphic on Instagram with an estimated reach of 120.
Bayside (Village of)	June 2024	Adopt-A-Drain Program	Drain Inspection	Adopt-a-drain communications with participants, 4, and submittals from their inspections. Discussed the importance of checking since we have been getting lots of rainfall.
Wauwatosa (City of)	June 2024	Pollution Prevention	TV Display	Shared graphic on TV display with an estimated reach of 10000.
Glendale (City of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook with an estimated reach of 2000.
Glendale (City of)	June 2024	Snow and Ice Control	Meeting	The Glendale Common Council Meeting was held on 5/22/2024 with a focus on Road Salt Reduction Education and Glendale's Snow and Ice Control Operations in regard to salt use reduction. About 30 attendees.
Fox Point (Village of)	June 2024	Pollution Prevention	Village website	-
Fox Point (Village of)	June 2024	Watershed Education	Event	Village Open House on June 15, 2024. Vendors included 5 organizations that addressed storm runoff either directly or indirectly through trees, plants/planting, invasive species, pollution, and stormwater control topics. Vendors reported contact with 70-125 individuals.
Whitefish Bay (Village of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Instagram with an estimated reach of 192.
Elm Grove (Village of)	June 2024	Pollution Prevention	Newsletter	-



Elm Grove (Village of)	June 2024	Fertilizer	Social Media	Posted the Fertilizer Checklist graphic to the Village Facebook account on Wednesday, June 5th, 2024.
Brookfield (City of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook with an estimated reach of 40.
Brookfield (City of)	June 2024	Lawn Care	Event/Training	Grass on Roadways June 25, 2024. Educating HOA on why not to blow grass clippings into the roadways with an estimated reach of 14.
Butler (Village of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Butler (Village of)	June 2024	Household Hazardous Waste	Village Newsletter	Included hazardous waste disposal information in our biweekly newsletter in the first week of June with an estimated reach of 520.
Germantown (Village of)	June 2024	Pollution Prevention	Newsletter	-
Greenfield (City of)	June 2024	Pollution Prevention	City Website Newsflash	Shared graphic on website newsflash with an estimated reach of 500.
Milwaukee (City of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Twitter with an estimated reach of 6800.
Milwaukee (County of)	June 2024	Pollution Prevention	Flyer	Shared graphic as flier with an estimated reach of 20000.
West Allis (City of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Allis (City of)	June 2024	Watershed Education	Event	West Allis DPW Open House - About 300 people attended on May 16, 2024. Public outreach for stormwater quality improvements. MMSD and Sweetwater were both in attendance.



West Milwaukee (Village)	June 2024	Pollution Prevention	Newsletter	Shared graphic in newsletter with an estimated reach of 500.
Cedarburg (City of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook with an estimated reach of 500.
Grafton (Village of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook to approximately 1.7k followers.
Mequon (City of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook with an estimated reach of 150.
South Milwaukee (City of)	June 2024	Pollution Prevention	City Website	Shared graphic on City website with an estimated reach of over 100.
Ozaukee (County of)	June 2024	Pollution Prevention	Social Media	Shared graphic on Facebook with an estimated reach of 30.
Ozaukee (County of)	June 2024	Watershed Education	Brochures	Pollinator Sale on 6/14/2024 had brochures about stormwater posted.
Saukville (Village of)	June 2024	Pollution Prevention	Flyer	Shared graphic as a flyer with an estimated reach of 150.
Port Washington (City of)	June 2024	Pollution Prevention	Word Document	Shared graphic through Word document with an estimated reach of 300.
Bayside (Village of)	July 2024	Chemical Pollution - Landscaping	Instagram	Posted graphic on Instagram with an estimated reach of 80.
Bayside (Village of)	July 2024	Adopt-A-Drain Program	Social Media	3 more Adopt A Drain drains were adopted this month due to an increase in social media awareness of the program.



Wauwatosa (City of)	July 2024	Chemical Pollution - Landscaping	Email Blast	Shared graphic via email blast with an estimated reach of 100.
Glendale (City of)	July 2024	Chemical Pollution - Landscaping	Email Blast	-
Glendale (City of)	July 2024	Snow and Ice Control	Webinar	Webinar: Fire and ICE! Strategies for dealing with ice on roadways 7/10/2024 6 staff Chloride reduction
Fox Point (Village of)	July 2024	Chemical Pollution - Landscaping	Village website	-
Whitefish Bay (Village of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Instagram with an estimated reach of 241.
Whitefish Bay (Village of)	July 2024	Green Infrastructure	Event	The Whitefish Bay Garden Club hosted an educational garden walk on Saturday, July 20, which featured some of the Village's parks and bioswales.
Elm Grove (Village of)	July 2024	Chemical Pollution - Landscaping	Newsletter	-
Elm Grove (Village of)	July 2024	Lawn Care	Social Media	Posted the Watershed Wednesday Facebook post to the Village's Facebook page on June 19, 2024. The post reached approximately 258 people.
Whitefish Bay (Village of)	July 2024	Plastics Reduction	Village Newsletter	We shared tips for reducing plastic use in one of our Village weekly e-newsletters.
Brookfield (City of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook with an estimated reach of 50.
Butler (Village of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook with an estimated reach of 1200.



Butler (Village of)	July 2024	Watershed Education	Utility Bill	Mailed out 700 stormwater information page inserts with our water bills on June 9th, 2024.
Germantown (Village of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook with an estimated reach of 50.
Greenfield (City of)	July 2024	Chemical Pollution - Landscaping	City Website Newsflash	Shared graphic on website newsflash with an estimated reach of 500.
Milwaukee (City of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Twitter with an estimated reach of 6800.
Milwaukee (County of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
West Allis (City of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	July 2024	Chemical Pollution - Landscaping	Newsletter	Shared graphic in newsletter with an estimated reach of 500.
Cedarburg (City of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook with an estimated reach of 1000.
Grafton (Village of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook to approximately 1.7k followers.
Mequon (City of)	July 2024	Chemical Pollution - Landscaping	Newsletter	Shared graphic in newsletter with an estimated reach of 115.
South Milwaukee (City of)	July 2024	Chemical Pollution - Landscaping	City Website	Shared graphic on City website with an estimated reach of over 100.
Ozaukee (County of)	July 2024	Chemical Pollution - Landscaping	Social Media	Shared graphic on Facebook with an estimated reach of 12.
Saukville (Village of)	July 2024	Chemical Pollution - Landscaping	Email Blast	Shared graphic via email blast with an estimated reach of 650.



Bayside (Village of)	August 2024	IDDE- Illicit Spills	Newsletter	Posted graphic on Facebook and Instagram on 8/22/2024 with an expected combined reach of 350.
Bayside (Village of)	August 2024	Pet Waste	Social Media	Posting about our Poop the Scoop program to remind residents about collecting their pet's feces and how it helps the environment to do so.
Bayside (Village of)	August 2024	Adopt-A-Drain Program	Inspection Report	Adopt-A-Drain monthly inspection reports completed and turned in.
Bayside (Village of)	August 2024	Watershed Education	Event	Sweet Water came to myBlue Night and had a table and educational materials.
Glendale (City of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 2000.
Glendale (City of)	August 2024	Snow and Ice Control	Webinar	Webinar: Fire and ICE! Strategies for dealing with Ice on roadways July 10, 2024 6 DPW staff Chloride reduction
Fox Point (Village of)	August 2024	IDDE- Illicit Spills	Village website	-
Whitefish Bay (Village of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Instagram with an estimated reach of 179.
Elm Grove (Village of)	August 2024	IDDE- Illicit Spills	Newsletter	-
Elm Grove (Village of)	August 2024	Illicit Discharge Detection and Elimination	Social Media	We posted the "Watershed Wednesday" illicit spill Facebook post on Wednesday, August 7th. This post reached approximately 300 people.



Butler (Village of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Butler (Village of)	August 2024	Household Hazardous Waste and Yard Maintenance	Village Newsletter	Included information about brush pickup and hazardous waste disposal in the biweekly Village newsletter with an estimated reach of 550.
Germantown (Village of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook.
Greenfield (City of)	August 2024	IDDE- Illicit Spills	City Website Newsflash	Shared graphic on website newsflash with an estimated reach of 500.
Milwaukee (City of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 6800.
Milwaukee (County of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
Wauwatosa (City of)	August 2024	IDDE- Illicit Spills	TV Display	Shared graphic on TV display with an estimated reach of 10000.
West Allis (City of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	August 2024	IDDE- Illicit Spills	Newsletter	Shared graphic in newsletter with an estimated reach of 1000.
Cedarburg (City of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 500.
Grafton (Village of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook to approximately 1.8k followers.
Mequon (City of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 255.
South Milwaukee (City of)	August 2024	IDDE- Illicit Spills	City Website	Shared graphic on City website with an estimated reach of over 100.



Ozaukee (County of)	August 2024	IDDE- Illicit Spills	Social Media	Shared graphic on Facebook with an estimated reach of 10.
Saukville (Village of)	August 2024	IDDE- Illicit Spills	Newsletter	Shared graphic in newsletter with an estimated reach of 650.
Port Washington (City of)	August 2024	IDDE- Illicit Spills	Word Document	Shared graphic through word document.
Bayside (Village of)	September 2024	Leaf Management	Newsletter	Posted graphic on Facebook and Instagram on 9/20/2024 with an expected combined reach of 350.
Glendale (City of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook with an estimated reach of 2000.
Glendale (City of)	September 2024	Snow and Ice Control	Webinar	Webinar: The Salt Watch Community Science Initiative September 11, 2024 6 DPW Staff attended Chloride reduction
Fox Point (Village of)	September 2024	Leaf Management	Village Website	-
Whitefish Bay (Village of)	September 2024	Leaf Management	Social Media	Shared graphic on Instagram with an estimated reach of 168.
Whitefish Bay (Village of)	September 2024	Green Infrastructure	Event	We started promoting our "Stroll Whitefish Bay" event, which will involve a tour showing the new stormwater basins on Wilson Drive. Our DPW will be presenting on the project's benefits, and the Whitefish Bay Garden Club will explore the use of native plants in these designs. The event will be hosted on Wed, Oct 9, from 5:30-6:30 p.m.



Elm Grove (Village	September 2024	Leaf Management	Newsletter	-
Elm Grove (Village of)	September 2024	Leaf Management	Social Media	We posted the "Watershed Wednesday" Leaf Management Facebook post on Wednesday, September 4th. The post reached approximately 300 people.
Butler (Village of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Butler (Village of)	September 2024	Household Hazardous Waste and Yard Maintenance	Village Newsletter	Put in the September newsletter to not place grass clippings in streets and included hazardous waste depositing info. This newsletter reached 568 people.
Germantown (Village of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook.
Greenfield (City of)	September 2024	Leaf Management	City Website Newsflash	Shared graphic on website newsflash with an estimated reach of 500.
Milwaukee (City of)	September 2024	Leaf Management	Social Media	Shared graphic on Twitter with an estimated reach of 6800.
Milwaukee (County of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
Wauwatosa (City of)	September 2024	Leaf Management	Email Blast	Shared graphic via email blast with an estimated reach of 4000.
West Allis (City of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Allis (City of)	September 2024	Residential Infiltration	Workshop	Rain Barrel Workshop on September 9, 2024
West Milwaukee (Village)	September 2024	Leaf Management	Newsletter	Shared graphic in newsletter with an estimated reach of 1000.



Cedarburg (City of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook with an estimated reach of 500.
Grafton (Village of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook to approximately 1.8k followers.
Mequon (City of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook with an estimated reach of 198.
South Milwaukee (City of)	September 2024	Leaf Management	City Website	Shared graphic on City website with an estimated reach of over 100.
Ozaukee (County of)	September 2024	Leaf Management	Social Media	Shared graphic on Facebook with an estimated reach of 18.
Ozaukee (County of)	September 2024	Watershed Education	Event/Training	Testing the Waters, 9/25/2024, 50 people, soil health and water quality, surface water runoff topics
Ozaukee (County of)	September 2024	Watershed Education	Presentation	Classroom presentation, 9/26/2024, 60 students, soil health and water quality, surface water runoff topics
Saukville (Village of)	September 2024	Leaf Management	Email Blast	Shared graphic via email blast with an estimated reach of 650.
Bayside (Village of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook with an estimated reach of 200.
Bayside (Village of)	October 2024	Green Infrastructure	Event	GI Stormwater Topics Event Landscape architect and Village employee presented and Sweetwater had a demonstration. 9 attendees
Bayside (Village of)	October 2024	Green Infrastructure	Event/Presentation	Green Tier Legacy Community Presentation



				Village of Bayside presented on community GI projects to the other GTL communities. About 50 attendees
Glendale (City of)	October 2024	Pollution Prevention- Restaurants	Newsletter	-
Fox Point (Village of)	October 2024	Pollution Prevention- Restaurants	Flyer	-
Whitefish Bay (Village of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Instagram with an estimated reach of 270.
Whitefish Bay (Village of)	October 2024	Green Infrastructure	Event	On October 9, 2024, from 5:30-6:30 p.m., we hosted a walk, in partnership with the Whitefish Bay Garden Club and MMSD, to show residents the new bioswales along Wilson Drive in Whitefish Bay and teach about the benefits of stormwater management.
Elm Grove (Village of)	October 2024	Pollution Prevention- Restaurants	Newsletter	-
Elm Grove (Village of)	October 2024	Pollution Prevention	Social Media	Posted the Food Truck pollution Facebook post on Thursday, October 17th with an estimated reach of 300.
Butler (Village of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Greenfield (City of)	October 2024	Pollution Prevention- Restaurants	City Website Newsflash	Shared graphic on website newsflash with an estimated reach of 500.
Milwaukee (City of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Twitter with an estimated reach of 12000.
Milwaukee (County of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook with an estimated reach of 20000.



Wauwatosa (City of)	October 2024	Pollution Prevention- Restaurants	Email blast	Shared graphic through email blast with an estimated reach of 4000.
West Allis (City of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	October 2024	Pollution Prevention- Restaurants	Newsletter	Shared graphic in newsletter with an estimated reach of 1000.
Cedarburg (City of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook with an estimated reach of 500.
Grafton (Village of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook to approximately 1.9k followers.
Mequon (City of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook with an estimated reach of 197.
South Milwaukee (City of)	October 2024	Pollution Prevention- Restaurants	City website	Shared graphic on City website with an estimated reach of over 100.
Ozaukee (County of)	October 2024	Pollution Prevention- Restaurants	Social Media	Shared graphic on Facebook with an estimated reach of 19.
Ozaukee (County of)	October 2024	Residential Infiltration and Pollinators	Presentation	Pollinator Presentation at the Oscar Grady Library in Saukville on 10/1/2024. Geoff talked to 3 people about rain gardens and pollinators.
Saukville (Village of)	October 2024	Pollution Prevention- Restaurants	Email blast	Shared graphic via email blast with an estimated reach of 650.
Port Washington (City of)	October 2024	Pollution Prevention- Restaurants	Word Document	Shared graphic through Word document with an estimated reach of 100.
Glendale (City of)	November 2024	Green Infrastructure	Newsletter	Shared graphic in newsletter with an estimated reach of 2200.



Glendale (City of)	November 2024	Snow and Ice Control	Meeting	Glendale - Winter Maintenance Round table November 11, 2024 Salt Reduction, 30 attendees
Fox Point (Village of)	November 2024	Green Infrastructure	Village website	Shared graphic on Village website.
Fox Point (Village of)	November 2024	Snow and Ice Control	Event	Saltwise talk with DPW staff attending 11/15/24 session was recorded for future use with staff education. Spectrum News came before the meeting and did a story on strategies to keep roads clear of ice/snow in winter.
Whitefish Bay (Village of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Instagram with an estimated reach of 201.
Elm Grove (Village of)	November 2024	Green Infrastructure	Newsletter	Shared graphic in newsletter with an estimated reach of 850.
Butler (Village of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Butler (Village of)	November 2024	Shoreline Management	Village Newsletter	Discussed the upcoming Waukesha County/Village of Butler streambank stabilization project in our newsletter that was sent out to about 500 people.
Greenfield (City of)	November 2024	Green Infrastructure	Newsletter	Shared graphic in newsletter with an estimated reach of 500.
Milwaukee (City of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Facebook with an estimated reach of 12000.
Milwaukee (County of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Facebook with an estimated reach of 20000.
West Allis (City of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Facebook with an estimated reach of 10000.



Wauwatosa (City of)	November 2024	Green Infrastructure	TV Display	Shared graphic on TV display with an estimated reach of 10000.
West Milwaukee (Village)	November 2024	Green Infrastructure	Newsletter	Shared graphic in newsletter with an estimated reach of 1000.
Cedarburg (City of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Facebook with an estimated reach of 500.
Grafton (Village of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Facebook to approximately 2k followers.
Mequon (City of)	November 2024	Green Infrastructure	Newsletter	Shared graphic in newsletter with an estimated reach of 175.
South Milwaukee (City of)	November 2024	Green Infrastructure	City website	Shared graphic on City website with an estimated reach of over 100.
Ozaukee (County of)	November 2024	Green Infrastructure	Social Media	Shared graphic on Facebook with an estimated reach of 29.
Saukville (Village of)	November 2024	Green Infrastructure	Email blast	Shared graphic via email blast with an estimated reach of 650.
Port Washington (City of)	November 2024	Green Infrastructure	Word Document	Shared graphic through Word document with an estimated reach of 100.
Whitefish Bay (Village of)	December 2024	Snow and Ice Control	Instagram	-
Glendale (City of)	December 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 3000.
Fox Point (Village of)	December 2024	Snow and Ice Control	Village website	Shared graphic on Village website.
Elm Grove (Village of)	December 2024	Snow and Ice Control	Newsletter	Shared graphic in Village newsletter with an estimated reach of 1000.



Elm Grove (Village of)	December 2024	Snow and Ice Control	Social Media	We posted the Ice and Snow Control Facebook post on Wednesday, December 4th with an estimated reach of 300.
Butler (Village of)	December 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 1200.
Greenfield (City of)	December 2024	Snow and Ice Control	City Website	Shared graphic on City website with an estimated reach of 500.
Milwaukee (City of)	December 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook.
Wauwatosa (City of)	December 2024	Snow and Ice Control	Newsletter	Shared graphic in City newsletter with an estimated reach of 4000.
West Allis (City of)	December 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 10000.
West Milwaukee (Village)	December 2024	Snow and Ice Control	Newsletter	Shared graphic in Village newsletter with an estimated reach of 1000.
Grafton (Village of)	December 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 2000 followers.
Mequon (City of)	December 2024	Snow and Ice Control	Social Media	Shared graphic on Facebook with an estimated reach of 200.
South Milwaukee (City of)	December 2024	Snow and Ice Control	City Website	Shared graphic on City website with an estimated reach of 100+.
Saukville (Village of)	December 2024	Snow and Ice Control	Newsletter	Shared graphic in Village newsletter with an estimated reach of 650.
Port Washington (City of)	December 2024	Snow and Ice Control	Word Document	Shared graphic in Word document with an estimated reach of over 100.



Appendix B. Respect Our Waters Materials





Household Hazardous Waste

Never throw out excess pesticides, paint, oils, cleaners or batteries. Instead:

y r

Look out for waste collection events in your community. Be sure to check what materials are accepted

Give extra products to family, friends, or neighbors to use up rather than wasting them.
















Landscaping businesses have a vital role in protecting our waters from chemical pollution.

Herbicides	Aquatic plants are very sensitive to herbicides. Do not spray if rain is expected.
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Pesticides

Pesticides harm people, wildlife and pollute our rivers. Follow instructions on the label to ensure proper use.

Fertilizers

Fertilizers cause nutrient overloads in our rivers and lakes. Do not apply when rain is in the forecast.





Protecting Lake Michigan from Illicit Spills

Are you caring for a lawn?

Use lawn and garden chemicals sparingly and sweep up any excess

Do you have a pet?



Pick up after your pet and dispose of in a securely sealed bag

Are you washing your car?

Use a commercial car wash or wash your vehicle on the grass

Do you have household chemicals?

Bring any oil, antifreeze, and paints to a Hazardous Waste Collection facility







🔹 Leaf 🔍 🖉

Reducing the amount of leaves that enter stormwater drainage systems is crucial for preventing clogs, flooding, and water pollution.

How Do Leaves Affect Our Stormwater Systems?

- Leaves can clog storm drains and cause localized flooding.
- When it rains, leaves that are left in the street release nutrients, such as phosphorus, that negatively impact aquatic ecosystems when washed into storm drains.



<u>Leaf Management Tips to Reduce</u> <u>Stormwater Pollution</u>

Compost your leaves to create nutrient rich fertilizer to use in your garden.

Mulch your leaves in place to keep the nutrients in the soil and you won't need to fertilize in the spring!

If you rake your leaves into the street for municipal pickup, clear storm drains after pickup and avoid raking into the street if there is a forecasted rain event.

To learn more about leaf management and how to reduce stormwater pollution, visit <u>RespectOurWaters.org</u>





How can restaurants and food trucks help prevent stormwater pollution? RESPECT OUR WATERS



Every time it rains, pollutants left on streets, parking lots, and lawns are picked up by stormwater runoff and brought into nearby storm sewers. This untreated water is then discharged directly into local rivers, lakes and streams, and eventually into Lake Michigan. Products commonly used in restaurants such as cooking oil, cleaning supplies, and food waste can pollute stormwater if disposed of incorrectly. Listed below are 4 simple ways you can prevent your restaurant or food truck from contributing to stormwater pollution.



Store used cooking oil properly in sealed containers

Keep dumpsters covered, avoid placing liquids inside, and check for leaks







Clean up oil, chemical, or other spills immediately and contact your local government about hazardous waste disposal

Empty dirty mop water in indoor sinks and never dispose of washwater in storm drains







Combating Winter Weather with Green Infrastructure



During rain events and snowmelt, pollutants are washed into storm drains and public waterways. Green infrastructure options not only help infiltrate polluted stormwater before it reaches waterways but can have a number of benefits for private residents and commercial developers alike.



Pervious pavements allow for infiltration of storm water run-off, and require less salt for de-icing.

Green roofs facilitate infiltration and evaporation of stormwater and lower cold-weather energy costs.



2





For more information on safe road salt usage, visit respectourwaters.org



Appendix C. Fact Sheets



snowmelt pick up toxic storm drain. In many

> Feeds beneficial soil microbes

- Provides a steady supply of nutrients
- Boosts plant health naturally
- Leaves no harmful artificial compounds behind
- Does not pollute groundwater or contribute to toxic algae blooms
- Does not require protective clothing or special equipment

For more information on stormwater pollution and how to reduce it visit respectourwaters.org

Chemical Pollution Prevention Tips for Landscaping Companies

Chemical stormwater pollution occurs when rain or snowmelt pick up toxic chemicals as it flows over impervious surfaces to the storm drain. In many communities, stormwater does not flow into a treatment plant but directly into our local waterways. Polluted stormwater degrades water quality, harms the environment and negatively impacts human health. Landscaping companies are a major contributor of chemical stormwater pollution. Understanding how to prevent chemical pollution will ensure the safety/health of our waterways.

If using Pesticides and Fertilizers

- Do not apply pesticides or fertilizers before rain events to prevent chemicals from washing into nearby storm drains.
- Blow or sweep any fertilizer on paved surfaces back into the lawn.
- Do not use pesticides or fertilizers within 20 feet of storm drains or streams.
- Test your soil and only add the nutrients that are needed.
- Avoid combining fertilizers and pesticides.
- Use organic fertilizers over synthetic ones.

Alternative Options

Mulch: In garden beds cover compost-rich soil with a thick layer of mulch to protect your soil from direct sunlight. This helps lock in moisture, lessen your maintenance workload, and prevent erosion. Healthy soil promotes plant vigor and limits pests and diseases.

Make sure any dyed mulch is certified to be free of harmful chemicals

Avoid rubber mulch

Vegetation: Reduce the amount of paved areas when designing outdoor spaces and increase the vegetation. Native plants have deep-set roots that can trap and filter chemical runoff before it reaches our local waterways.

Equipment: Ensure your gas-powered maintenance equipment is working properly to prevent unwanted leaks and spills that could contribute to stormwater pollution.





Winter in Wisconsin means colder temperatures and plenty of snow and ice. Private residents, businesses, and governments use road salt to improve driving and walking conditions. Despite its commonness, road salt poses a great threat to the health of freshwater systems. Learn more below about road salt pollution and what you can do to help prevent further contamination of our waterways.

WHAT IS ROAD SALT

Road Salt is an impure form of mineral salt, or sodium chloride (NaCl). Road Salt is commonly used as a de-icer as it lowers the freezing point of water. The State of Wisconsin uses, on average, 452,000 tons of road salt each winter.

HOW TO HELP

Practice mindful salt usage

- When applying to driveways and sidewalks, make sure to use the correct amount of salt
- Make sure the conditions are right for salt application: Road salt is less effective when temperatures drop below 15 degrees and on ice more than 1/2 an inch thick
- Sweep up excess salt
- Shovel snow early and often to prevent formation of ice on driveways and sidewalks

Explore ways to reduce salt usage

 Pervious pavements reduce the amount of ice on roadways, therefore reducing the amount of salt needed for de-icing

THE PROBLEM WITH ROAD SALT

Small amounts of road salt can permanently contaminate freshwater

- One tsp of salt can permanently contaminate 5 gallons of freshwater
 At high levels, salt has the ability to
- At high levels, salt has the ability to concentrate and mobilize other pollutants present in water and soil
- pollutants present in water and soil
 50 lakes and one stream in Wisconsin have been declared impaired due to high salinity levels

Contaminated freshwater threatens aquatic life

- Consumption of salt granules can poison wildlife
- Increased salinity levels effect the ability of fish to osmoregulate
- Increased mortality of fish, aquatic invertebrates, and amphibians disrupts food chains
- Road salt is corrosive in large quantities, threatening the integrity of infrastructure and vehicles
 - · Chlorides corrode metal and concrete
 - Cause damage to roads, vehicles, bridge, and pipes
 - According to the USEPA, road salt causes \$5 billion in damages each year

For more information on snow and ice control, visit respectourwaters.org



Date Posted	Торіс	Facebook Link	Infographic Link	Webinar Link	Caption
9/20/2024	Stormwater Week Promotion	<u>Link</u>	Stormwater Week Calendar 2024	None	Next week is Wisconsin Stormwater Week! Join residents from around Wisconsin to learn how you can protect and preserve Wisconsin's waterways from stormwater pollution. #WIStormwaterWeek #waterislife Learn more at https://www.wistormwater.com/stormwater-week-topics/
9/24/2024	A Salty Situation Webinar Promotion	Link	<u>A Salty</u> <u>Situation</u> <u>Graphic</u>	<u>A Salty</u> <u>Situation</u> <u>Webinar</u>	Join us today, Tuesday, September 24th (12-1 pm) for a FREE statewide webinar on A Salty Situation. Salt is essential for winter safety but can harm our waterways and infrastructure when it washes into storm drains. Learn how salt affects stormwater and what we can do to minimize its impact. #WIStormwaterWeek #ASaltySituation #waterislife https://www.wistormwater.com/stormwater-week-topics/rain-collection-101
9/25/2024	Pond Problems, Solutions and Reporting Webinar Promotion	<u>Link</u>	Pond Problems, Solutions and Reporting Graphic	Pond Problems, Solutions and Reporting Webinar	Join us today, Wednesday, September 25th (5:30 - 6:30 pm) for a FREE statewide webinar on Pond Problems, Solutions and Reporting. Learn how stormwater Best Management Practices (BMPs) help control runoff and protect our water resources. Discover simple and effective techniques to manage stormwater and keep our environment healthy. #WIStormwaterWeek #StormwaterBMPs #waterislife https://www.wistormwater.com/stormwater-week-topics/lawn-care-101
9/26/2024	Is Stormwater Treated? Webinar Promotion	Link	<u>Is</u> <u>Stormwater</u> <u>Treated?</u> <u>Graphic</u>	<u>Is</u> <u>Stormwater</u> <u>Treated?</u> <u>Webinar</u>	Join us today, Thursday, September 26th (12- 1 pm) for a FREE statewide webinar on Stormwater Treatment. Learn how stormwater and wastewater are managed differently in combined and separate sewer systems. Explore the key differences, benefits, and challenges of each system to understand their impacts on our environment. #WIStormwaterWeek #StormwaterTreatment #waterislife https://www.wistormwater.com/stormwater-week-topics/leaves-101



Event	Date	Topics Covered	Materials Provided	Metrics	Other Details
Rock the Green	April 20	- Infiltration Practices	- Stormwater Plinko	60 Visitors	-
		- Household Hazardous Waste	- Adopt Your Drain		
		- Pet Waste	Information		
		- Salt Reduction Strategies	- Respect Our		
		- Watershed Education	Waters		
		- Yard Maintenance	Educational		
			Materials		
Earth Care Fair	April 27	- Household Hazardous Waste	- Stormwater Plinko	70 Visitors	-
		- Pet Waste	- Adopt Your Drain		
		- Salt Reduction Strategies	Information		
		- Watershed Education	- Respect Our		
		- Yard Maintenance	Waters		
			Educational		
			Materials		

Appendix E. 2024 Events



Washington County	July 23	- Illicit Discharges	- Stormwater Plinko 1097 Visitors -
Fair		- Infiltration Practices	- Adopt Your Drain
		- Household Hazardous Waste	Information
		- Local Municipal Information	- Respect Our
		- Non-Point Source Pollution	Waters
		- Pet Waste	Educational
		- Salt Reduction Strategies	Materials
		- Green Infrastructure	
		- Stormwater Management	
		- Watershed Education	
		- Yard Maintenance	
Green and Healthy	August 21	- Watershed Education	- Stormwater Plinko 32 Visitors -
Schools Conference		- Infiltration Practices	- Adopt Your Drain
			and Respect Our
			Waters
			Information
Tosa Green Summit	September 14	- Infiltration Practices	- Adopt Your Drain 36 Visitors -
		- Pet Waste	and Respect Our
		- Watershed Education	Waters
			Information
			- Various
Tosa Green Summit	September 14	 Infiltration Practices Pet Waste Watershed Education 	and Respect OutWatersInformation- Adopt Your Drainand Respect OurWatersInformation- Various



			Educational		
			Brochures		
Molson Coors Beer	September 26	- Stormwater Management	-	200	Mequon Nature Preserve
Imprint Clean Up				Volunteers	hosted the Molson Coors
					Beer Imprint Clean Up
					event. An estimated 1000
					trees and shrubs were
					planted in partnership with
					MMSD to reduce
					stormwater runoff.
Harbor Fest	September 29	- Infiltration Practices	- Stormwater Plinko	67 Visitors	-
		- Local Municipality Information	- Adopt Your Drain		
		- Salt Reduction Strategies	Magnets		
		- Stormwater Management	- Household		
		- Watershed Education	Hazardous Waste		
			Fliers		
			- Sweet Water		
			Stickers		
			- Fall Respect Our		
			Waters Reminders		



Molson Coors	October 9	- Adopt Your Drain	- Adopt Your Drain	~ 50	-
Employee Health		- Watershed Education	Magnets		
and Safety Fair			- Various		
			Educational		
			Brochures		
MMSD Fish Fry for	October 18	- Watershed Education	-	-	Networking Event
SWMBEs (Small,					
Women, Minority,					
and Veteran-Owned					
Businesses and					
prime					
contractors/consulta					
nts)					



Appendix F: Technical Education Report







City of Wauwatosa II.B.2

A summary of the results from the individual education efforts in MS4 Permit Section II.B.2 and the planned education efforts for the next permit term.



required by City ordinance. To enhance compliance and understanding of BMP owner's legal obligations, the City determined more education was needed to help private BMP owners understand the importance of long-term maintenance and also their obligation to follow through with the maintenance plan for their property. To address this need, the City mailed notifications to BMP owners regarding their legal obligations to maintain their facilities that included informational fliers on maintenance and inspection tips. The City also requested BMP owners submit maintenance plans and inspection reports for privately owned BMPs. A survey was also mailed to private BMP owners to gauge behavior changes resulting from the targeted outreach and education activity.







Results

PARTICIPANTS:

Private BMP owners in the City of Wauwatosa

METRICS:

A survey was administered to private BMP owners to gauge what was learned from the informational materials, if steps were taken to maintain BMPs, or if there are plans for long term maintenance. Number of reports received was also tracked

Results Summary

Notification letters and informational fliers were mailed to a list of private BMP owners in the City of Wauwatosa in June 2023. 34 properties responded in 2024, compared to 15 in 2023 submitted their annual reports, marking a 56%. This percent increase in compliance highlights the efficacy of targeted outreach on the importance of fulfilling legal obligations related to the maintenance of their facilities. A secondary survey was mailed to private BMP owners in April 2024 to gauge the impacts of the notification letter any educational materials from the June 2023 mailing which did not receive any responses.

Planned Education Efforts for the Next Permit Term

Given the success of this activity, Wauwatosa would like to continue to support private BMP owners. During the next permit cycle, the City will focus on creating onboarding materials for private BMP owners, working with them to get feedback and make modifications. The City will also develop and promote a stormwater website and track visits. The City of Wauwatosa will also revisit and reprioritize their community needs to ensure that the stated educational effort is the most appropriate activity.

















Common Stormwater BMPs in Wauwatosa: Maintenance and Inspection Tips

Porous Pavement

Porous pavement must be vacuumed swept on schedule after storms make sure that rainwater properly drains through the material

Follow guidelines for ice and snow





Underground Detention Systems

Annual inspections are best practice for all underground systems

Inspection and maintenance efforts help ensure

underground pipe systems used for stormwater storage continue to function as intended

When an inspection reveals accumulated sediment or trash, detention systems should be cleaned thoroughly

Wet Detention Ponds

Mowing, trimming, and keeping vegetation under control

Keep pond clear of trash and debris Remove excess sediment from the basin, outflow and inflow pipes



















sweet water

OUTHEASTERN WISCONSIN WATERSHEDS TRUST, INC.



Survey Questions

B You s if the	I U GO hould have receive letter and educatio	X d a letter from the nal materials wer	e City last year i re useful. Pleas	regarding your j e give us your f	privately owned B eedback!	MP. We want to know
Did t	ne letter heln vou	understand you	r responsibilit	es as a BMP	owner?	
0	les				10	
Ĭ						
0.	ło					
Were	the resources pr	ovided in the let	ter useful to y	ou?		
0,	'es					
0,	No.					
0 \$	Somewhat					
Did y	ou submit your ar	nnual report to ti	he City Engine	ering Departn	nent?	
0,	'es					
0	10					
0	Not Sure					
If you	u did not submit y	our report, what	prevented yo	u from doing s	:0?	







City of Wauwatosa Stormwater Education and Public Involvement Efforts

In 2024, we shared stormwater education in several formats. Here are several examples:

• Communicated to residents about the City's catch basin cleaning program and how this keeps our streams and rivers clean, and promoting residents help in keeping the grates clear of debris in March of 2024.



 Worked with the Sustainability Committee to update the <u>city's sustainability website</u> with consumer resources, city initiatives and links to Respect Our Water SW Education -<u>https://www.wauwatosa.net/discover-tosa/sustainability</u>

Wauwatosa, WI						
Discover Tosa Explore, Events, Recreation	Get Involved Services Public Safety Government Volunteer, Report, Help Pay, Find, Learn Volunteer, Report, Help Departments, City Council	How Do I Apply, Get, Pay				
Advertise in Wauwatosa	Discover Tosa >					
* About Wauwatosa	Sustainability					
* Bike Walk Tosa	oustainability					
+ Community Events	Font Size: 🚺 🗖 Share & Bookmark 🔫	Feedback 😑 Print				
City News	A D IA TOC	A				
Construction News		1				
Jobs in Wauwatosa		- HOLDER				
Neighborhood Greenways	CP	in in				
Library						
Tosa Cemetery	SIMMER AND	The second				
Parking in the Village						
Parking in Wauwatosa	Wauwatosa has a strong community sustainability commitment manifested in ener	rgy-efficient				
* Parks	that is investing in its future and very desirable for individuals and employers seek	ing to relocate				
Public Art	to the area.					
Recreation	Wauwatosa Clean Energy Goals	>				
Resident Guide	Consumer/Business Resources					
* Rental Facilities						
School District	City Initiatives	>				
Senior Center	Wauwatosa Sustainability Committee	>				
The Village in Wauwatosa						
New Residents						
Sustainability	RESPECT OUR WATERS					
Colar Foormu						

Social Media

WHAT IS BACTERIA POLLUTION?

If you have ever seen beach, river or lake closures a cause of this is likely bacteria pollution, which may have come from untreated stormwater. Microbiological water pollution is usually a natural form of water pollution caused by microorganisms. Bacteria can be found in stormwater and is usually from failing septic systems, wastewater treatment plant releases, livestock, urban stormwater, and waste from animals (including pets).

Bacteria and viruses are naturally present in the environment. Most bacteria are beneficial, serving as food for larger organisms and playing critical roles in natural processes such as organic matter decomposition and food digestion. Around 10% of bacteria are harmful, including *E. Coli*, which if ingested by humans or animals, can cause sickness or even **death**.

Some bacteria and pathogens will always be present in surface waters. While most of the bacteria and pathogens from fecal waste in the water will die off over time, some may survive. Pathogens from fecal waste generally die off in the environment much faster than bacteria. While there is not a way to rid water bodies of all pathogens, there are many ways we can reduce bacteria in surface waters.



To learn more about how to reduce bacteria pollution and Respect Our Waters explore below!



Pollution Prevention at Businesses: Stormwater from industrial and commercial properties can be a major source of bacteria pollution that affects local waterways. Businesses that deal with food handling, such as grocery stores and restaurants, have the greatest potential to release bacteria into our waterways. To learn more tips about how to prevent bacteria pollution at your business click here (coming soon!).

Green Infrastructure and Low Impact Development: Low Impact Development are systems and practices that use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality

HOME PARTNERS EVENTS

Secured media coverage about progress on citywide sustainability goals. (Journal Sentinel, May 2024 - https://www.jsonline.com/story/communities/north/2024/05/13/wauwatosa-sustainability-report-shows-decrease-in-city-emissions-need-for-community-decrease/73604658007/)

milwaukee journal sentinel

To get there, the city, Tosa residents and local businesses will need to decrease the use of emission-producing sources – especially fossil fuels like nat liquid fuels that <u>are top contributors to climate change</u> – and take efficient changes. **What do**

ETPLACE

Place Classifieds

A new report from Wauwatosa's Sustainability Committee details t operations are on track to decrease emissions, community and bus up the majority of Wauwatosa's overall greenhouse gas emissions c Here's what to know.

What does the Sustainability Committee Report include?

The Wauwatosa Sustainability Committee's annual report compares energy and greenhouse gas emissions used in city operations, as well as in the residential and commercial sectors, over 2023 and previous years. The full report can be read on the city's public meeting portal website.

Wauwatosa's city-owned emissions make up a sliver of the city's total greenhouse gas emissions, the report shows. Residential emissions make up a third of emissions and commercial emissions at businesses and companies make up the other nearly two thirds.



Wauwatosa's city operations make up a tiny part of the community's overall greenhouse gas emissions. Commercial emissions make up about two thirds of emissions, while residential emissions make up the other third, according to the Sustainability Committee's report. Wauwatosa Sustainability Committee

Measurements of emissions focus on the three major areas of energy use in the city: electricity, natural gas and liquid fuels. The data in the report doesn't include transportation emissions.

It can be a challenge to compare energy use because of fluctuating factors like more hot or cold days in a year, the report states. Overall spending will also change depending on the price of fuel, according to the report. 458 Media coverage about the Tosa Green Summit and Wauwatosa's status as Bird City (<u>Milwaukee</u> <u>Record, August 2024</u> - <u>https://milwaukeerecord.com/city-life/bird-city-milwaukee-county-</u> <u>exploring-and-advocating-for-birds-in-wauwatosa/</u>)



Bird City, Milwaukee County: Exploring and advocating for birds in Wauwatosa

Kyle Arpke August 21, 2024



Bird City, Milwaukee County is a monthly column celebrating the 11 cities, to that have achieved Bird City status within Milwaukee County. Citizens of thes made bird conservation a priority, protecting land, writing ordinances, and lic on issues concerning our avian neighbors. You can learn more about the by visiting its website. This month: the City of Wauwatosa.

t's August which means summer is in full swing, yet the anticipation of time high. We traditionally think of fall migration as September and of gration has already started. Many shorebirds have left the area, while certain warblers are on the move. I want to encourage people to go out birds leave, and Wauwatosa has the perfect place to get your bird on be Terminator with a hasta la vista for the year. Tosa is a Bird City "High Fly of reasons we'll get into. One of those reasons is the **Tosa Green Summ** 14th year. Jeff Roznowski, co-founder of the summit and Bird City advocus about this year's event. So circle September 7 and 14 in your calendar birding in the great city of Wauwatosa!



MR: What advice do you have for communities looking to start their own summit or become a Bird City itself?

JR: The first thing to do is to find and recruit like-minded people who share the passion for the planet, for being green and sustainable, who love the outdoors. This will generate the creativity, the energy, the hands and the feet to make this happen. As the saying goes, "many hands make light work." To achieve a critical mass of support, it is often helpful to frame any green efforts around the three Ps: 1. People, for the quality of life benefits. 2. Planet, for the environmental benefits. And 3. Profit, for the economic benefits (e.g. money saved by diverting items from landfills).

Second, do the research, find out what your community is already doing in areas such as recycling and conservation. Does a baseline and foundation already exist? Are there like-minded groups already doing related activities?

Third, talk to other communities and find out how they are being green or became a Bird City. There are a lot of great efforts already out there, so no need to "reinvent the wheel." And I offer myself and Wauwatosa as places to start and help out.



• Negotiated contract with Thomas Dambo for art sculpture made of recycled materials to be installed in Firefly Grove Parking in Spring 2025.

https://www.wauwatosa.net/Home/Components/News/News/3174/17

Wauwatos	sa, WI		Search Q
Discover Tosa Explore, Events, Recreation	t Involved Help Pay, Find, Learn	Public Safety G Volunteer, Report, Help Depar	iovernment How Do I tments, City Council Apply, Get, Pay
Community Organizations Connect with Us Contact City Staff Contact Elected Officials	Bird City Employment Meeting Portal	Neighborhood Associations	Volunteer Citizen Committees Poll Workers Police Reserve Program
City News Construction News Jobs in Wauwatosa	Wauwatosa Welcon Sculpture to Enchar World-famous artist's work wi	nes a Giant: Thomas nt New Park ill be the exclusive piece in Wisco	Dambo's Troll
Neighborhood Greenways Library Tosa Cemetery Parking in the Village Parking in Wauwatosa Parking in Wauwatosa Parks Public Art Recreation Resident Guide * Rental Facilities School District Senior Center	The Wauwatosa Tourism Commo captivating new addition to Fire upcoming park: a giant troll scu- internationally acclaimed artist inspiring artwork is set to beco- landmark for both residents and Thomas Dambo, renowned for made from recycled materials, worldwide with his imaginative makes the Wauwatosa installat Wisconsin. "We are thrilled to bring Thoma Tourism Specialist of the City of new park but also position Wate The new sculpture will join Wate vibrant mural district on North painting competition. These ini culture and creating engaging p Thomas Dambo's work, which of	nission is thrilled to announce a efly Grove Park, Wauwatosa's ulpture crafted by the Thomas Dambo. This awe- me a unique and enchanting nd visitors to enjoy. his larger-than-life sculptures has captivated audiences creations. His vision of placing a tion particularly special, as it will l as Dambo's incredible artistry to ' f Wauwatosa. "His giant troll scul uwatosa as a vibrant arts destina uwatosa's growing collection of p Avenue and events like ART 64 – tiatives reflect the city's commitm public spaces. emphasizes sustainability and co	Wauwatosa," said Beth Gleesing, pture will not only enhance our tion." ublic art initiatives, including the the Midwest's largest live nent to fostering a dynamic arts
The Village in Wauwatosa New Residents Sustainability Solar Energy Social Media	Wauwatosa's values. The giant showcasing the beauty of eco- on the environment. Major works of art like Milwauk Bean are known to become vis is expected to positively impact visits, further boosting local bu "At Visit Milwaukee, we see eve drive tourism to a region. That" undertakes another public art tourism destination," said Pegg successful ART 64 event, which Wauwatosa's future Thomas Do opportunity for Greater Milwau with the City of Wauwatosa to p help welcome this work next sp	troll sculpture will be constructed friendly art and inspiring visitors of kee's Bronze Fonz, Madison's stat itor attractions. Adding Thomas I t the community by attracting over sinesses and tourism. Bry day how iconic public works of s why we are thrilled to support to project that will surely help solidi gy Williams-Smith, President & CE has become the Midwest's large ambo troll sculpture will soon be ukee area residents and visitors a promote its incredible tourism as pring."	d using recycled materials, to consider the impact of waste ue of Vel Phillips, or Chicago's Dambo's sculpture in Wauwatosa ernight guests and extended f art can inspire imaginations and the City of Wauwatosa as it fy its reputation as a premier arts O of Visit Milwaukee. "Like its st live painting competition, come a must-stop photo like. We're so proud to partner issets year-round and can't wait

 Promoted awareness of Wauwatosa businesses who are winning sustainability awards, such as Irgens (March 2024) <u>https://finance-commerce.com/2024/03/wisconsin-project-first-in-state-to-win-sustainable-landscape-award/</u>



Innovation Campus includes a green roof with solar panels on top of a 633-stall parking structure. Milwaukee-based Irgens won certification under the Sustainable SITES Initiative for promoting sustainable and resilient landscape development. (Submitted Photo: Irgens)

Wisconsin project first in state to win sustainable landscape award

Ethan Duran, BridgeTower Media Newswires // March 25, 2024 // 3 Minute Read



Listen to this article

WAUWATOSA, Wis. — Irgens on Wednesday announced the first phase of Innovation Campus in Wauwatosa won certification under the Sustainable SITES Initiative through Green Business Certification Inc., making it the first Wisconsin project certified for promoting sustainable and resilient landscape development.

The developer is working on Innovation Campus adjacent to County Ground Parks, one of the largest and last remaining undeveloped areas in Milwaukee County. The area is home to various wildlife and an old growth forest.

Irgens established a goal to steward the 7.74-acre parcel to protect the area while planning the first phase of campus development, officials said. The developer took input from project team members and local stakeholders to improve the land's overall resilience and used nature-based solutions to develop the land responsibly, officials added.

• In the city budget, a part-time sustainability position was approved. This was discussed across our communication channels and at city meetings.



• Wauwatosa's Sustainability Committee attended a few community events, including the Tosa Farmers Market and a family movie screening at the Wauwatosa Public Library where they demonstrated how to use the City's popular "Waste Wizard" tool found on the City website.



• Promoted holiday recycling via city newsletter (December 2024)



Holiday Recycling Help and Christmas Tree Collection

Many items often get placed in the wrong collection cart this time of year. Some items can be thrown in the garbage, while others should be recycled or — if possible — composted. To make sorting through your holiday waste a little easier, plan on using Wauwatosa's Waste Wizard — our online tool that tells you how to dispose of specific holiday items. Taxanple, those old string lights you don't plan on using anymore? Trash. Extra plastic wine corks lying around? Trash. Aluminum baking trays? Recycling.

Beginning Monday, Jan. 6, through Friday, Jan. 31, 2025, Christmas tree curb collection begins for Wauwatosa residents. Please remove all decorations or other items from your real tree before bringing it out to the curb. We don't collect artificial trees or trees in bags or wreaths. After collection, we turn Christmas trees into mulch. Communicated about how road salt impacts freshwater in News in Brief (December 2024)

4

How Road Salt Impacts Freshwater

Winter weather is here and it's important to be mindful of the amount of road salt used to de-ice surface of the amount of road salt used to de-ice surface of the association of the as



salt can melt 20 feet of driveway. Using excessive amounts of salt does not increase its effectiveness. Once salt is applied, sweep up excess salt for later use. Road salt does not work when temperatures dip below 15 degrees or when ice is more than ½ inch thick. In these situations it will be more effective to use materials that increase traction such as sand, bird seed, or cat litter. Biodegradable de-icers can be used in place of or in conjunction with road salt to melt ice and add traction. These alternatives include beet juice, molasses, and pickle juice. Learn more about snow and ice control.

Learn More

'Learn More' links to the Respect Our Waters Webpage as shown below:



ICE AND SNOW CONTROL - THE PROBLEM WITH SALTING FRESHWATER

Snow brings hazardous traveling conditions. Fortunately, snow and ice control can be accomplished in a manner that both ensures public safety and protects local woter quality!

Winter salt and deicers are common water pollutants. Once extracted from the earth and connected with water, chiorides are nearly impossible to remove with only one tsp of road salt needed to permanently pollute 5 gallons of freshwater.

In spring, salt will move with snowmelt down storm drains and into the nearest bodies of freshwater causing a variety of environmental and economic issues. High salinity in freshwater is toxic to aquatic life, birds, and other organisms that make up innortant parts of the food chain. Additionable communities raw in damage to local



• Published the <u>Wauwatosa dashboard</u> where we feature sustainability numbers like energy usage and trees planted - <u>https://dashboard.wauwatosa.net/sustainability</u>



In 2023, the solar panels on Public Works' building offset our electric energy usage. In fact, we produced more kilowatt-hours

Sustainability Measures

Wauwatosa's 2020 Energy Resolution set a goal for the city to obtain at least 25% of energy for municipal operations from local, renewable sources. Solar panels on top of city buildings are helping us meet this goal. We're also exploring the use of hybrid and electric vehicles to reduce carbon emissions.



 Sustainability Committee presented their annual report at Government Affairs (<u>April 2024</u>) <u>https://wauwatosacitywi.granicus.com/player/clip/2898?view_id=1&redirect=true</u>

Summary of 2024 Outfall Testing Results

Outfalls Tested:	49
Flow Present:	23
No Flow Present:	26

Testing Variable	Limit/Range	Range of Samples	# Samples above limit	Percentage above limit
Copper	1 mg/L	0.78-2.29	18	36.73%
Chlorine	0.2 mg/L	0.00-0.07	0	0.00%
Ammonia	19 mg/L	0.00-1.0	0	0.00%
Detergent	0.25 mg/L	0.00-0.5	7	14.29%
рН	6.00-9.00	5.50-8.00	1	0.00%

											City of Wa 2024 Outfa	uwatosa II Testing												
Structure ID:	Todays Date:	Investigator:	Rainfall Last 24HRS (IN):	Rainfall Last 72HRS (IN):	Submerged with Water:	Submerged with Sediment:	Flow Present:	Flow Description:	Temperature (F):	pH:	Copper (mg/l):	Chlorine (mg/l):	Ammonia (mg/l):	Color:	Detergent (ppm):	Flow Color:	Color Severity:	Surface Cover:	Flow Odor:	Debris Around Outfall:	Turbidity:	Debris in Pipe:	Vegetation:	Outfall Damage:
ST10-091	9/5/2024 20:00	VALERIA BREIMON- FLORES	0	0	NO	NO	YES	MODERATE	62	6.5	1.86	0	0.75	363	0	CLEAR	CLEARLY VISIBLE IN BOTTLE	FOAM	NONE	NONE	CLOUDY	NONE	NONE	CORROSION
ST19 061	0/10/2024 16:26	VALERIA BREIMON-	0	0	NO	NO	NO	INTERNATIONT												TRACH		TRACH	EXCESS GROWTH	
3118-001	5/10/2024 10:50	VALERIA BREIMON-	0	0	NO	NO	NO	INTERNITTENT												noon		TRAGH	EXCESS GROWTH	
ST9A-365	9/12/2024 17:45	FLORES VALERIA BREIMON-	0	0	PARTIALLY	PARTIALLY	NO	INTERMITTENT								BROWN	CLEARLY VISIBLE IN		NONE		CLOUDY		NORMAL	
ST9B-001	9/12/2024 18:04	FLORES	0	0	NO	NO	YES	MODERATE	75.7	5.5	2.13	0.04	0.5	77	0.15	CLEAR	BOTTLE	NONE	NONE	OTHER	CLEAR	NONE	EXCESS GROWTH	CRACKING
ST11-009	9/12/2024 18:54	FLORES	0	0	NO	NO	NO	INTERMITTENT														NONE	NORMAL	
ST8-175	9/12/2024 19:04	VALERIA BREIMON- FLORES	0	0	NO	NO	YES	INTERMITTENT	63.2	6.5	2.05	0	0.75	112	0.25	CLEAR	CLEARLY VISIBLE IN BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NORMAL	NONE
ST12-010	9/12/2024 19:51	VALERIA BREIMON- FLORES	0	0	NO	NO	YES	MODERATE								CLEAR	CLEARLY VISIBLE IN OUTFALL FLOW	NONE					NORMAI	
ST28-001	9/18/2024 13:53	DAVID GIL	0	0	PARTIALLY	PARTIALLY	NO	INTERMITTENT												NONE		NONE	NONE	NONE
ST27-010	9/18/2024 14:49	DAVID GIL	0	0	PARTIALLY	PARTIALLY	YES	LOW	64.3	7	1.62	0.04	1	276	0.5	CLEAR	BOTTLE	NONE	NONE	OTHER	CLEAR	SEDIMENT	EXCESS GROWTH	NONE
ST29-008	9/18/2024 15:13	DAVID GII	0	0	PARTIALLY	NO	NO	INTERMITTENT								GRAY	CLEARLY VISIBLE IN OUTFALL FLOW	SCUM	NONE	NONE	CLOUDY	SEDIMENT	NORMAI	NONE
				-													CLEARLY VISIBLE IN							
5161-001	9/18/2024 15:58	DAVID GIL	0	0	NU	NU	YES	LOW	67.7	8	0.96	-0.02	1	139	0.5	CLEAR	CLEARLY VISIBLE IN	NONE	NONE	NONE	CLEAR	NUNE	NURMAL	NONE
ST26-010	9/9/2024 17:02	DAVID GIL	0	0	NO	NO	YES	LOW	60.3	7	0.78	0	1	149	0.25	CLEAR	BOTTLE CLEARLY VISIBLE IN	NONE	NONE	NONE	CLEAR	NONE	NONE	NONE
ST32-015	9/12/2024 13:33	DAVID GIL	0	0	NO	NO	YES	MODERATE	66.9	7	1.11	0.01	0.5	161	0.5	CLEAR	BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NONE	NONE
ST33-010	9/12/2024 13:56	DAVID GIL	0	0	NO	NO	YES	MODERATE	62.2	7	1.26	-0.03	1	91	0.5	CLEAR	BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NORMAL	OFFSET JOINTS
ST5-001	9/12/2024 14:14	DAVID GIL	0	0	NO	NO	YES	MODERATE	61.3	7	0.99	0	0.5	94	0.25	CLEAR	CLEARLY VISIBLE IN BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NONE	CHIPPING
ST7A-148	9/12/2024 17:47	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												NONE		TRASH	NONE	NONE
ST7-300	9/12/2024 17:12	DAVID GIL	0	0	NO	NO	YES	LOW	60.1	8	1.36	0	1	146	0.25	CLEAR	BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NORMAL	NONE
ST6-317	9/12/2024 16:50	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												NONE		NONE	NORMAL	NONE
ST7A-001	9/19/2024 19:05	DAVID GIL	0	0	FULLY	FULLY	NO	INTERMITTENT												NONE		SEDIMENT	NORWAL	NONE
ST14-031	9/19/2024 20:40	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												NONE		NONE	NORMAL	OFFSET JOINTS
5119-111	9/10/2024 14:37	DAVID GIL	U	U	NO	NU	NU	LOW									CLEARLY VISIBLE IN			NONE		NUNE	NUNE	NONE
ST18-059	9/10/2024 15:34	DAVID GIL	0	0	NO	NO	YES	MODERATE	66.3	7	1.21	-0.02	0.5	107	0.25	CLEAR	BOTTLE	NONE	NONE	NONE	CLEAR	TRASH	NORMAL	NONE
ST13-010	9/30/2024 13:48	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												0.00		OTHER	EXCESS GROWTH	CORROSION
ST18-010	9/30/2024 14:37	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												NONE		NONE	EXCESS GROWTH	SPALLING
ST18-051	9/30/2024 15:12	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												NONE		NONE	NONE	NONE
																	CLEARLY VISIBLE IN							
ST14-049	9/30/2024 15:05	DAVID GIL	0	0	NO	NO	YES	MODERATE	62.7	7	2.16	0.01	1	12	0.25	CLEAR	BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NONE	CORROSION
ST16-001	9/10/2024 19:10	DAVID GIL	0	0	NO	NO	NO	MODERATE												NONE		NONE	NONE	NONE
ST14-073	9/10/2024 19:44	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												OTHER		OTHER	EXCESS GROWTH	OFFSET JOINTS
ST16-122	9/30/2024 18:16	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												NONE		NONE	NONE	CRACKING
	a tao ta									_							CLEARLY VISIBLE IN							
ST17-048	9/30/2024 18:03	DAVID GIL	0	0	NO	NO	YES	LOW	63.4	7	1.34	-0.05	1	30	0.25	CLEAR	BOTTLE	NONE	NONE	TRASH	CLEAR	NONE	EXCESS GROWTH	OFFSET JOINTS
ST1F 000	10/2/2024 14:17	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												OTHER		NONE	NORIVIAL	OFFEET JOINTS
ST45-099	10/3/2024 14:33	DAVID GIL	0	0	NO	PARTIALLY	NO	INTERMITTENT												NONE		OTHER	NONE	NONE
ST3-010	10/2/2024 17:35	DAVID GIL	0	0	PARTIALLY	PARTIALLY	NO	INTERMITTENT												NONE		SEDIMENT	NORMAL	NONE
ST2-001	10/3/2024 16:07	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT										NONE		NONE		NONE	NONE	CHIPPING
ST36-109	10/3/2024 17:54	DAVID GIL	0	0	NO	NO	YES	MODERATE	58.4	7	1.68	0	1	63	0.5	CLEAR	CLEARLY VISIBLE IN BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NONE	NONE
ST34-021	10/2/2024 16:11	DAVID GIL	0	0	PARTIALLY	NO	YES	LOW	58.7	8	2.21	-0.02	0.5	62	0.5	CLEAR	BOTTLE	SCUM	NONE	NONE	OPAQUE	NONE	NONE	NONE
ST34-300	10/2/2024 16:13	DAVID GIL	0	0	PARTIALLY	NO	YES	LOW	58.4	7	1.62	-0.06	1	74	0.25	CLEAR	BOTTLE	SCUM	NONE	NONE	SLIGHTLY CLOUDY	NONE	NONE	NONE
ST43-300	10/4/2024 17:16	DAVID GIL	0	0	NO	NO	NO	INTERMITTENT												NONE		SEDIMENT	NORMAL	NONE
ST36-001	10/4/2024 15:17	DAVID GIL	0	0	PARTIALLY	NO	NO	INTERMITTENT	60.4	8	1.61	0	1	16	0					NONE		NONE	NONE	CORROSION
ST41-007	10/4/2024 18:06	DAVID GIL	0	0	PARTIALLY	NO	YES	LOW								BROWN		NONE	NONE	NONE	SLIGHTLY CLOUDY	NONE	NORMAL	NONE
5157-001	10/8/2024 14:25	DAVID GIL	U	U	PARTIALLY	NU	165	LOW								BRUWW	CLEARLY VISIBLE IN	NUNE	NUNE	NUNE	CLOUDT	NUNE	NUNE	NUNE
ST38-024	10/4/2024 21:12	DAVID GIL	0	0	NO	NO	YES	LOW	57.3	8	2.15	0.01	0	53	0.25	CLEAR	BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NORMAL	NONE
ST38-010	10/8/2024 16:30	DAVID GIL	0	0	NO	NO	YES	LOW	54.9	8	2.29	0.07	0	77	0.5	BROWN	BOTTLE	FOAM	NONE	NONE	CLOUDY	NONE	NONE	SPALLING
ST40-116	10/8/2024 17:35	DAVID GIL	0	0	NO	NO	YES	LOW		7	1.45	0.02	0.5	56	0.25	CLEAR	CLEARLY VISIBLE IN BOTTLE	NONE	NONE	NONE	CLEAR	NONE	NORMAL	NONE
ST39-011	10/8/2024 16:01	DAVID GIL	0	0	NO	NO	YES	LOW		7	1.55	0.03	0.5	103	0.25	BROWN	FAINT COLORS IN BOTTLE	SCUM	NONE	NONE	OPAQUE	NONE	NORMAL	NONE

ID	BORDERING STREETS, N-E-S-W	Installed	Contractor Rebuild	Trackless Broom	Power Wash	Vacuum Broom	Vacuum Broom2	Brush Chips Back in	Jetted	Last Inspected
0001	Meinecke-64th-North-65th	2015	Х							
0002	North-102nd-Fisher Pkwy-103rd	2015	х	10/14/22	10/14/22	10/14/22		10/14/22		
0003	Elm Lawn-Watertown Plank-85th	2016	х							
0004	WTP-Robertson-Gridley-Elm Lawn	2016	х							
0005	Center-74th-Clark-75th	2016	х							
0006	Center-68th-Clarke-69th	2017		5/18/23	5/18/23	5/18/23	3/17/24	5/18/23	х	
0007	Center-69th-Clarke-70th	2017		5/18/23	5/18/23	5/18/23	3/17/24	5/18/23	х	
0008	Meinecke-90th-North-91st	2017		5/15/23	5/15/23	5/15/23	3/17/24	5/15/23	х	
0009	North-90th-Jackson Park-Swan	2017		5/22/23	5/22/23	5/22/23	3/17/24	5/22/23	х	
0010	Meinecke-91st-North-Swan	2017		5/15/23	5/15/23	5/15/23	3/17/24	5/15/23	х	
0011	Stickney-Swan-Men River Pkwy-93rd	2017		5/16/23	5/16/23	5/16/23	3/17/24	5/16/23	х	
0012	North-106th-Garfield-107th	2018		10/14/22	10/14/22	10/14/22	3/17/24	10/14/22	in 2023	
0013	North-103rd-Fisher Pkwy-104th	2018		10/13/22	10/13/22	10/13/22	3/17/24	10/13/22	in 2023	
0014	Garfield-116th-Gilbert-117th	2018		5/12/23	5/12/23	5/12/23	3/17/24	5/12/23	in 2023	
0015	North-117th-Garfield-118th	2018		5/11/23	5/11/23	5/11/23	3/17/24	5/11/23	in 2023	
0016	North-118th-Garfield-119th	2018		5/10/23	5/10/23	5/10/23	3/17/24	5/10/23	in 2023	
0017	North-122nd-Garfield-124th	2018		5/9/23	5/9/23	5/9/23	3/17/24	5/9/23	in 2023	
0018	Hadley-73rd-Center-74th_EW LEG	2020		10/17/22	n/a	10/17/22	3/17/24	10/17/22	1/0/00	
0019	Hadley-73rd-Center-74th_NS LEG	2020		10/17/22	n/a	10/17/22	3/17/24	10/17/22	in 2025	
0020	Center-67th-Clarke-68th	2020		10/17/22	n/a	10/17/22	3/17/24	10/17/22	in 2025	
0021	Meinecke-66th-North-67th	2020		10/18/22	n/a	10/18/22	3/17/24	10/18/22	in 2025	
0022	Meinecke-67th-North-68th	2020		10/18/22	n/a	10/18/22	3/17/24	10/18/22	in 2025	
0023	North-81st-Jackson Park Blvd-83rd	2021		5/19/23	n/a	5/19/23	3/17/24	5/19/23	in 2026	
	Washington Blvd-60th-Vliet-									
0024	Washington Cr	2021		10/18/22	n/a	10/18/22	3/17/24	10/18/22	in 2026	
0025	Hampton-110th-Derby-Mayfair	2021		5/23/23	n/a	5/23/23	3/17/24	5/23/23	in 2026	
	Hart Park			х	n/a	х		n/a	n/a	
	Police Department	2020		х	n/a	х		n/a	n/a	
	Paver Parking Stalls 116th & Walnut			x	n/a	х		n/a	n/a	
GREEN ALLEY MAINTENANCE

The key maintenance objective for permeable pavement systems is to prevent void spaces from becoming clogged or requiring sediment removal. Infiltration issues can be identified when runoff ponds on the surface or is no longer infiltrating into the surface rapidly. Regular vacuum cleaning of the paver joints will help prevent clogging and extend the longevity of the system. Over the course of use, the paver aggregate may also need replenishment for proper use.

1. Preventative Maintenance: Generally recommended at least two times per year, in the spring and fall, using appropriate equipment. Regenerative air vacuums are effective if regular preventive maintenance is performed. Pure air vacuums are most effective for regular maintenance, but are more expensive to operate. Two times per year is recommended for typical applications

2. Restorative Maintenance: For heavily clogged areas where water ponds longer than 30 minutes after a storm, extra effort, such as pressure washing and/or use of higher end (pure air vacuum) equipment, may be required. Restorative maintenance usually first relies upon an initial vacuum sweeper to remove as much surface debris as possible.

3. Visual inspection for porous pavements will be beneficial after rainfall to observe if clogging is occurring. The appropriate inspection frequency will be site specific and may adjust with the age of the systems. The City should regularly observe porous pavement areas that receive runoff from adjacent areas as these areas are more prone to clogging.

Vacuum Sweeper Technologies

1. "Pure Air" Vacuum. Pure air vacuums are the most effective at loosening and removing sediment from the openings in porous pavement. Fine particles are vacuumed out of the pavement matrix in a concentrated vacuum column and are collected in the sweeper hopper.

2. Regenerative Air. Regenerative air sweepers contain a blower system that generates a high velocity air column, forcing it against the pavement at an angle, and creating a peeling or knifing effect. The high volume air blast loosens the debris from the pavement surface, then transports it across the width of the sweeping head and lifts it into the containment hopper via a suction tube. Regenerative air sweepers are generally not recommended for heavily clogged areas because the technology may not be effective at all.

3. Both pure air vacuum and regenerative air systems need to be used carefully on paver block systems so as to prevent aggregate removal between pavers if required by the paver specification. Alternatively, some of the aggregate between the pavers can be sacrificed and replaced periodically to maintain a highly permeable system.

4. Some paver types recommend compressed air cleaning between pavers instead of vacuuming.

5. The term sweeper is a partial misnomer, since the vacuum function is not actually providing mechanical sweeping; however, sweeper is the common noun used to describe the unit.

6. Using the existing Elgin Pelican fleet is not recommended for porous pavement maintenance, since they rely upon mechanical sweeping

OPERATION AND MAINTENANCE CONSIDERATIONS

Regular maintenance and key maintenance considerations and procedures consist of the following:

Documentation

A log must be kept with the following information:

Date, time and alley location of inspection

• Work performed: vacuumed, swept, debris removal, weed control, replacement of infill

Inspection

• Performance inspections, general observations (spalling, cracking, missing paver blocks, etc.) pavement condition and verification of infiltration should be performed at least annually, either during a rain event or after a major storm (within 48 hours): to ensure that water infiltrates into the surface.

- Check for standing water at or below the surface of the permeable pavers.
- Check surface stability. Repair subgrade if pavers are loose or wobbly.
- · If ponding or poor infiltration persists, remove and replace the subgrade drainage
- · Fill joints between pavers with specified granular material.

Debris removal

- · Keep surfaces clean and free of trash, debris, and sediment accumulation.
- Debris should be removed routinely as a source control measure.
- Replacement of the Pavement or Infill Material If surface is completely clogged and rendering a minimal surface infiltration rate, restoration of surface infiltration can be achieved by removing the first ½ to 1 inch of soiled aggregate infill

Sweeping

- · Sweep surfaces regularly
- Sweeping with a regenerative air sweeper (not a broom sweeper) should be performed approximately two times per year.

Vacuuming

- Sweeping with a vacuum sweeper has shown to be effective for removing solids and debris from the void space of permeable pavement. Weed control
- Do control weeds when they are small if killed when large, dead weed biomass can clog pavement
- · Weed control applications should be used on any weeds that grow in permeable pavement.
- Weeds should not be pulled, as doing so can damage the fill media and pull up pavers.
- · Grass growth is a sign of Sediment Accumulation

Snow removal

- Plowing is a recommended snow removal process.
- Conventional liquid treatments (deicers) will not stay at the surface of a permeable pavement as needed to be effective.
- Sand should never be applied to a permeable pavement, as it will reduce infiltration.

Construction Site Pollutant Control

Supplemental Information

There were 10 active private development construction sites, and 2 public construction sites with a disturbance of 1 acre or more in the City of Wauwatosa during the 2024 permit year. City Engineering Department staff completed 68 erosion control inspections at the private development sites, along with weekly and post rainfall inspections at the City's 116th Street Park construction site and DPW/DOT fill site during the 2024 permit year. The erosion control inspections were conducted on all active construction sites at a minimum of every 45 days as required.

Attached is the inspection tracking list of all active erosion control permits in the 2024 permit year, as well as an example of an inspection in which a written warning for a private development site at 850 N Mayfair Rd that decided to keep a large topsoil stockpile on site following project completion over the winter months so that the soil could be used on another site the following year. The City worked with the property owner to confirm the long-term plan and how the large stockpile would be stabilized. The inspection form, photos, and email correspondence between the City and the contractor and owner has been included for reference.

City Engineering staff attended the NASECA Construction Site Erosion Control and Stormwater Permit Compliance Training course on December 11-12, 2024. Details of that training course is outlined at the following website:

https://nasecawi.org/events-training/erosion-control-compliance-training/

2024 Erosion Control Inspection Tracking - Active Construction Greater than 1 Acre

Site Plan	Permit					Initial		Act	ive Construc	tion Inspec	tion Freque	ncy - every 45	days		Final
Permit	Number	Permit Type	Address	Contractor Name	Project Name	Inspection				(60 days	if inactive)				Inspection
						Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
-		EROSION	DPW/DOT Fill Site		DPW Yard Fill Site for WisDOT Zoo I/C	12/19/2022		Ins	pect weekly	and after ra	ainfalls great	er than 0.5-in	ches		i
	BC2022-0225														i
	and BC2022-					12/19/2022	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024	10/2/2024	11/12/2024	ł
-	0224	EROSION	9455 Watertown Plank Rd	Payne & Dolan	MRMC West-Pavement Pulverizing and Stockpiling										ł
19-03	BC2022-0109	EROSION	1401 N Mayfair Rd		Staybridge Suites	4/18/2023	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024	10/2/2024	11/12/2024	l
SP2022-0008	BC2022-0225	EROSION	9250 W Doyne Ave		Froedtert Parking Structure	6/7/2023	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024	10/2/2024	11/12/2024	l
SP2023-0005	BC2022-0225	EROSION	MRMC Parking Lot		Parking Lot at WTP & 92nd St	10/9/2023	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024	10/2/2024	11/12/2024	l
SP2023-0018	BC2022-0235	EROSION	MCW Cancer Research Bldg			10/9/2023	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024	10/2/2024	11/12/2024	l
SP2023-0003	BC2023-0108	EROSION	MSP Development (Mayfair Collection	n)	3325 and 3375 Foundry Way	10/9/2023	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024			8/20/2024
SP2023-0004	BC2023-0281	EROSION	Irgens - Research Drive		850 and 800 N Mayfair Rd	10/9/2023	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024	10/2/2024		l
SP2023-0027	BC2023-0272	EROSION	4545 N 92nd St.	CG Schmidt	Luther Manor	1/30/2024	1/30/2024	3/6/2024	4/24/2024	6/3/2024	7/11/2024	8/20/2024	10/2/2024	11/12/2024	i
SP2023-0008	BC2024-0043	EROSION	3029 N 112th St.		Jilly's Car Wash				4/24/2024	6/3/2024	7/11/2024	8/20/2024			8/20/2024
SP2023-0040	BC2024-0140	EROSION	10201 W Watertown Plank Rd.		Vel R Phillip's Juvenile Justice Center	8/20/2024						8/20/2024	10/2/2024	11/12/2024	1
SP2023-0030		EROSION	11100 Walnut Rd.		116th St. Park			Ins	pect weekly	and after ra	ainfalls great	er than 0.5-in	ches		1

Table 2: Construction Site Inspection Frequency

Site	Inspection Frequency
(1) All sites	* New projects shall be inspected within the first two weeks of
one acre or	commencement of land disturbing activity
more in size	* All active sites shall be inspected at least once every 45 days
	* All inactive sites shall be inspected at least once every 60 days
(2) Follow up	* Follow up inspections are required within 7 days of any sediment
inspection	discharge or inadequate control measure, unless corrections were made
	and observed by the inspector during initial inspection or corrections
(3) Final	* Confirm that all graded areas have reached final stabilization and that
inspection	all temporary control measures are removed, and permanent storm



CONSTRUCTION SITE INSPECTION REPORT

Form 3400-187 (rev. 9/04)

Page 1 of 2

Notice: Use of this specific form is voluntary, but the information contained on this form must be collected and kept by the permittee under s. NR 216.48(4), Wis. Adm. Code, for a construction site covered under the General WPDES Construction Site Storm Water Discharge Permit, Permit No. WI-0067831-2. This form is provided for the convenience of the permittee to meet the requirements of s. NR 216.48(4), Wis. Adm. Code. Multiple copies of this form may be made to compile the inspection report.

Inspections of implemented erosion and sediment control best management practices must be performed weekly and within 24 hours after a precipitation event 0.5 inches or greater which results in runoff.

Weekly written reports of all inspections conducted by or for the permittee must be maintained throughout the period of general permit coverage.

The information maintained in accordance with s. NR 216.48 (4) must be submitted to the Department upon request.

Name of Permittee:				
Construction Site Name	(Project):			Construction Site ID No.:
Location:				County:
Contractor:				Field Office Phone:
Note: Weekly inspection maintained on site and m	reports, a nade availa	along v able up	vith erosion oon reques	n control and stormwater management plans, are required to be .t.
Date of inspection (mm/d	id/yy):			Type of inspection:
Time of inspection: St	tart:		a.m./p.m.	Name(s) of individual(s) performing inspection:
E	nd:	i	a.m./p.m.	
Weather:				
Description of present pl	nase of co	nstruc	tion:	
Modifications Required	Yes	No	Not Applicable	Comments/Recommendations about the overall effectiveness of the erosion and sediment control measures. Note: For each item checked "Yes", complete the follow-up information on page 2.
Ditch Checks				
Erosion Control Plan				
Erosion Mat				
Grading Practices				
Inlet Protection				
Mulch				
Offsite Sediment				
Permanent Seeding				
Schedule / Phasing				
Silt Fence				
Silt Screen				
Sod				
Stabilized Outlet				
Temp. Diversion Channel				
Temp. Settling Basin				
Temporary Seeding				
Tracking Pads				
Turbidity Barrier				
Other (specify) see below				

CONSTRUCTION SITE INSPECTION REPORTForm 3400-187(rev. 9/04)Page 2 of 2

Name of Permittee:						
Construction Site Name (Project):	Construction Site ID No.:				
	Use the space below for detailed follow-u	p action items.				
Exact place of erosion/sediment control inspected	Type of erosion/sediment control and its observed condition	Description of any necessary maintenance or repair to erosion/sediment control, including anticipated date of completion				



Irgens Site EC Inspection – 10-02-24







Jessica Henderson

To: Subject: Nate Peksa RE: [External] RE: Irgens-Research Park Stockpile

Email thread below regarding the stockpiling at Irgens. EC inspection photos from 10-02-24 are from when the stockpiling was initially noticed to still be on site after construction. There are some additional photos of the stockpile from 10-29 in the photos folder of the project (SP2023-0004). EC inspection from 11-12-24 are photos from post hydroseeding following the correspondence with Rob below.

Let me know if you need any other info on these things. Nate

From: Rob Oldenburg <<u>roldenburg@irgens.com</u>>
Sent: Friday, November 1, 2024 2:28 PM
To: Nate Peksa <<u>npeksa@wauwatosa.net</u>>; Max Metz <<u>mmetz@irgens.com</u>>; Tim Gasperetti
<<u>TGasperetti@irgens.com</u>>; Alex Blethen <<u>ablethen@irgens.com</u>>;
Cc: Jennifer Stilling <<u>jstilling@wauwatosa.net</u>>; Jessica Henderson<<u>jhenderson@wauwatosa.net</u>>;
Subject: [External] RE: Irgens-Research Park Stockpile

Nate,

The pile will ultimately be removed next spring.

To provide stability in the interim, our plan is to hydroseed the pile with a Flexterra additive, which is a tackifier. We will also anchor the existing silt logs into the subgrade to prevent silt from getting under the silt logs.

Please let me know if you have any further concerns.

Thank you,

ROB OLDENBURG

Senior Vice President, Development | Irgens DIRECT 414.443.2526 | CELL 847.401.7164 | roldenburg@irgens.com

Follow us on: Facebook | LinkedIn | Twitter | YouTube

From: Nate Peksa <<u>npeksa@wauwatosa.net</u>>

Sent: Thursday, October 31, 2024 8:50 AM

To: Max Metz <<u>mmetz@irgens.com</u>>; Tim Gasperetti <<u>TGasperetti@irgens.com</u>>; Alex Blethen <<u>ablethen@irgens.com</u>>; Rob Oldenburg <<u>roldenburg@irgens.com</u>>;

Cc: Jennifer Stilling <jstilling@wauwatosa.net>; Jessica Henderson <jhenderson@wauwatosa.net>

Subject: Irgens-Research Park Stockpile

Hello,

Engineering conducted a final erosion control inspection for 850 N Mayfair Rd. and noticed a large stockpile of soil still remaining on the south side of the site. WDNR requires that any stockpile that remains inactive for 7 days or longer, must be stabilized as needed along with the proper installation of silt fence or other perimeter control. Currently on site there are silt socks surrounding the stockpile, however those are visibly ineffective in containing all washout of material

within the boundaries. Attached photos shows sediment spread across the southern parking lot and entering multiple storm inlets. It is our understanding that this material was to remain on site for future construction of a multi-family building, however with recent changes to that plan the remaining stockpile must be addressed. The stockpile must be stabilized and installed with effective erosion control measures, or completely removed from the site. Please let us know what your thoughts are on how you will proceed. Please reach out if there are any questions.

Thank you, Nate

Nathan Peksa

Civil Engineer City of Wauwatosa 7725 W. North Avenue Wauwatosa, WI 53213 262.202.1632 npeksa@wauwatosa.net

Wauwatosa Self Service Online Permitting Portal

Post-Construction Storm Water Management

Supplemental Information

The City's ordinance requires that a Maintenance Agreement be created for all BMP's required for storm water management. The City sends out a letter to all Maintenance Agreement owners to request maintenance and inspection records on an annual basis. See attached letter template sent out in November 2024 and the list of BMP owners this was sent to.

Four additional sites were approved to construct storm water management facilities to meet the City's stormwater requirements in 2024. However, the request letter for maintenance and inspection records is only sent to properties with BMP's that have been fully constructed for at least 1 year.

2024 Private BMP Inspection and Maintenance Record Requests

Image Image <t< th=""><th></th><th>1</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-</th><th>1</th><th></th><th></th><th></th></t<>		1								-	1			
No. Number Landschuld der Versternen Nu	Parking Permit #	Recorded?	PROJECT NAME	PROJECT ADDRESS	OWNER NAME_1	OWNER NAME_2	OWNER COMPANY	OWNER ADDRESS	CITY	STAT	IZIP	PHONE	Email	BMP(s)
Image: Solution of the second secon			Wisconsin Lutheran College Academic											Underground Detention and Dry
No. No. In all all all all all all all all all al		No	Facility	88TH St. & Wisconsin Avenue	Gary Schmid	Vice President of Finance	Wisc Lutheran College	8800 W Bluemound Rd	Milwaukee	WI	53226	414-443-8590	gary.schmid@wlc.edu	Retention
No. 80. No. 80. <t< td=""><td></td><td>No</td><td>Froedtert Memorial Lutheran Hospital</td><td>92ND St. & Wisconsin Avenue</td><td>Ryan Marks</td><td>Vice President</td><td>Facility and Planning Development</td><td>9200 W Wisconsin Ave</td><td>Milwaukee</td><td>WI</td><td>53226</td><td>414-805-3000</td><td>ryan.marks@froedtert.com</td><td>Sumped CB's(4);Oil/sand interceptor</td></t<>		No	Froedtert Memorial Lutheran Hospital	92ND St. & Wisconsin Avenue	Ryan Marks	Vice President	Facility and Planning Development	9200 W Wisconsin Ave	Milwaukee	WI	53226	414-805-3000	ryan.marks@froedtert.com	Sumped CB's(4);Oil/sand interceptor
No. No. No. Participant duration of participant dura														Detention Pond (2,798 s.f); Sumped CB's
No. No. <td>3-26</td> <td>No</td> <td>VNA Hospice</td> <td>7620 Honey Creek Parkway</td> <td>Liana M Wayda</td> <td></td> <td>Visiting Nurse Assoc of Wisconsin</td> <td>11333 W National Ave</td> <td>Milwaukee</td> <td>WI</td> <td>53227</td> <td>(414) 327-2295</td> <td></td> <td>and Diversion Swale</td>	3-26	No	VNA Hospice	7620 Honey Creek Parkway	Liana M Wayda		Visiting Nurse Assoc of Wisconsin	11333 W National Ave	Milwaukee	WI	53227	(414) 327-2295		and Diversion Swale
Abs Description statute First Proceedings Number of the statute Description statute Descripion statute Descr														
1 1	4-02	No	Wisconsin Lutheran College	8800 W. Bluemound Road	Gary Schmid	Vice President of Finance	Wisc Lutheran College	8800 W Bluemound Rd	Milwaukee	WI	53226	414-443-8590	gary.schmid@wlc.edu	
1 b0.0.0.0			Wisconsin Lutheran College Athletic											
Norm Norm <th< td=""><td>3-05</td><td>No</td><td>Fields</td><td>10200 Watertown Plank Road</td><td>Gary Schmid</td><td>Vice President of Finance</td><td>Wisc Lutheran College</td><td>8800 W Bluemound Rd</td><td>Milwaukee</td><td>WI</td><td>53226</td><td>414-443-8590</td><td>gary.schmid@wlc.edu</td><td>Detention Pond</td></th<>	3-05	No	Fields	10200 Watertown Plank Road	Gary Schmid	Vice President of Finance	Wisc Lutheran College	8800 W Bluemound Rd	Milwaukee	WI	53226	414-443-8590	gary.schmid@wlc.edu	Detention Pond
No. No. <td></td> <td></td> <td>Milwaukee Regional Medical Center</td> <td></td>			Milwaukee Regional Medical Center											
100 10 10 100 100 100 100 100 1000 10000 100000 1000000 $1000000000000000000000000000000000000$			(MRMC)	95TH St. & Watertown Plank Road	Mark Geronime	Vice President of Operations	MRMC	8700 Watertown Plank Rd (Mail stop 5)	Milwaukee	WI	53226		mgeronime@mrmcffl.org	
1001														CB's (12); Vortsentry Unit and Tricon CB
1/12 $1/12$ $1/1$	10-05	Yes	Bryant & Stratton College	10950 W. Potter Road	Paula Armato		F Street 10950 LLC	1134 N 9th Street, Suite 200	Milwaukee	WI	53233	(262) 348-6986	paula@fstreetgroup.com	inserts for filtration
100NoDistrict StateObservationDistrict StateDistrict StateDistri														Vortsentry Unit for underground
1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +	7-17	No	Mayfair Medical	2999 N. Mayfair Road	Natalie Brooks	Environmental Compliance Manager	St. Luke's Medical Center	2900 W. Oklahoma Ave.	Milwaukee	WI	53215	(920)-312-2851	natalie.brooks@aah.org	detention
1101101001	0.40						New York Construction Production					(0.1.0) 70.1 70.15		Sumped CB's (10), Porous Pavement
No. And Constructional Dial Constructional Dial Constructional Dial Dial Dial Dial Dial Dial Dial Di	8-12	Yes	Renner Kia Redevelopment (Pick n Save	1717 N. Maytair Road	TCB Pick Owner, LLC	Alex Smith	Newport Capital Partners	353 N. Clark Street, Suite 3625	Chicago	IL	60654	(312) 724-7045	alex@newportcapitalptrs.com	(2,400 SY), Biofiltration Islands (3)
$ \sqrt{100} \sqrt{100} \sqrt{1000} \sqrt{1000} $														3 BIOIIIITATION DASINS: E OI SCHOOL
No. No. <td></td> <td>No</td> <td>Learning Gardens at Kradwell School</td> <td></td> <td>Natalio Prooks</td> <td>Environmental Compliance Manager</td> <td>St. Luke's Medical Center</td> <td>2900 W. Oklahoma Avo</td> <td>Milwaukoo</td> <td>\A/I</td> <td>52215</td> <td>(020) 212 2851</td> <td>natalia brooks@aab.org</td> <td>(1,25551), W OI SCHOOL (55951), N OI</td>		No	Learning Gardens at Kradwell School		Natalio Prooks	Environmental Compliance Manager	St. Luke's Medical Center	2900 W. Oklahoma Avo	Milwaukoo	\A/I	52215	(020) 212 2851	natalia brooks@aab.org	(1,25551), W OI SCHOOL (55951), N OI
No.No.AlthouseName duringParted Name Plane Theory Flane StateNormal LawNormal LawNorm		INU	Learning Gardens at Kradweir School	1220 Dewey Avenue	INdialle DIOOKS				wiiiwaukee	VVI	55215	(920)-312-2831	<u>Hatalle.brooks@aan.org</u>	Dot Rond 1 (2 550 s f): Dot Rond 2
Dist Operating Dist	10.09	No	Codar Clan Apartments (Mt. Tosa)	1661 Pivors Bond Lano	Elizaboth Sili	Regional Managor	Harizan Managamont Sanvisos, Inc.	2000 S Prairie Hill Lane	Graanfield	\A/I	52220	(414) 727 2621	a sili@barizondbm.com	(1,400 s f): Pioswalo (72,092 s f)?
1-retinintermed and a factor for a	10-05	NO	cedar Gien Apartments (Mt. 103a)	1001 Nivers Bend Lane	Liizabetti Siii		nonzon wanagement Services, inc.		Greenneid	VVI	55220	(414)727-2021	e.sin@nonzondbm.com	(1,400 3.1.), bioswale (73,002 3.1.):
R_{10} R_{10	12-08	No	Aurora Psych Presidents House		Natalie Brooks	Environmental Compliance Manager	St. Luke's Medical Center	2900 W. Oklahoma Ave	Milwaukee	\A/I	53215	(920)-312-2851	natalie brooks@aab.org	Dry Pond (~3 500sf)
111NuOperationDistance of provide stance	12-08	INU	Autorarisychi residentis nouse	1220 Dewey Avenue	INALAILE DI UOKS	Environmental compliance manager	St. Luke 3 Medical Center		winwaukee	VVI	55215	(920)-312-2831	natalie.brooks@aan.org	22 hiofiltration basin and nermeable
100 100 <td>12 11</td> <td>No</td> <td>LIM/M Inpovation Bark</td> <td>1225 Discovory Parkway</td> <td>Androa Mulling</td> <td>Innovation Compute Owners Association Inc.</td> <td>Innovation Compute Owners Association</td> <td>1401 Discovery Parkway, Suite 100</td> <td>Milwaukoo</td> <td>\A/I</td> <td>52226</td> <td>414 442 0700</td> <td>A Mulling @irgons.com</td> <td>22 biointration basin and permeable</td>	12 11	No	LIM/M Inpovation Bark	1225 Discovory Parkway	Androa Mulling	Innovation Compute Owners Association Inc.	Innovation Compute Owners Association	1401 Discovery Parkway, Suite 100	Milwaukoo	\A/I	52226	414 442 0700	A Mulling @irgons.com	22 biointration basin and permeable
10.1 10. Main March Markel Control Markel Markel Main	15-11	NO	<u>o www.minovacion.r.ark</u>		Andrea Widinins	innovation campus owners Association inc.	innovation campus owners Association	1401 Discovery Farkway, Suite 100	WIIWdukee	VVI	55220	414-443-0700	Awaminis@irgens.com	pavement within Abb parking lot
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	13-03	No	Mayfair Mall	2500 N. Mayfair Boad	Chris laeger	Senior General Manager	Mayfair Retail	2500 N Mayfair Boad	Wauwatosa	w/i	53226	(414) 207-5830	chrisiaeger@hnretail.com	
10.20 10.0 Index and Markan Notice State 20 <	15-05	NO			chills saeger	Senior General Manager			wadwatosa	VVI	55220	(414) 207-5850	chinslaeger @ opretail.com	2 underground detention vaults porous
1.24 1.00 1.000 0.0000 0.000 0.000	12-10	No	Mayfair Collection	11500 W. Burleigh Street	Claudette Zoch		HSA Commercial Inc	16955 West Wisconsin Ave	Brookfield	\ \ /I	53005	(262) 938-0911	czoch@bsacommercial.com	asphalt sumped CB's
19.409.409.409.409.1129.	12-10	NO	Mayran concetion					10555 West Wisconsin Ave	DIOOKIICIU	VVI	55005	(202) 558-0511		StormTrap (or equal) Water quality
148 100 Resumption 11/15/16/and/ Name Nam	14-04	No	Meijer-277	11123 W. Burleigh Street	Dan Gezon		Mieier	2350 3 Mile Rd NW	Grand Rapids	мі	49544	(616) 735-8142	Daniel Gezon@meijer.com	swale sumped CB's
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1.40 1.41 1.42 1.42 1.42 1.44 1.42 1.44 <th< td=""><td>14-03</td><td>No</td><td>Apartments at 1215 (The Reef)</td><td>1215 N. 62ND Street</td><td>Wayne Wiertzema</td><td></td><td>Wangard Investment</td><td>1200 N Mayfair Rd Suite 220</td><td>Milwaukee</td><td>wi</td><td>53202</td><td>(414) 777-1200</td><td>wwiertzema@wangard.com</td><td></td></th<>	14-03	No	Apartments at 1215 (The Reef)	1215 N. 62ND Street	Wayne Wiertzema		Wangard Investment	1200 N Mayfair Rd Suite 220	Milwaukee	wi	53202	(414) 777-1200	wwiertzema@wangard.com	
1 sincNo1 dog W2 d														Underground Detention; Sumped CB's;
14-0 No Nome at Martine Factor 1110 W. Confer variet Note for Watching and Grandh Wasseland School Burlet 1111 W. Note Are Weevalue No Description of Burlet Difference	14-08	No	La Z Boy	10830 W. Burleigh Street	Sheri Carlisle		La-Z-Boy Retail	10830 W Burleigh St	Wauwatosa	WI	53222	(732) 966-2293	sheric.amf@outlook.com	Grass Swales
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14-21 Ver. Base Decare Lis 190 N. Martin Tod Garge Some Finite Direct Warger Will MSD Calculate Will MSD	14-09	No	Whitman Athletic Fields	11100 W. Center Street	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	WI	53226	(414) 773-1053	heuske@wauwatosa.k12.wi.us	
International Processing Synt Magnet State Synt Magnet State <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Russ Darrow Wauwatosa Real Estate</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							Russ Darrow Wauwatosa Real Estate							
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Stoch No Numerical West Arbiter Selfs 1140W. Center Street Development of Rulinges and Grounds Unit Water Analysis Distance Distance <td>15-01</td> <td>No</td> <td>UW Credit Union</td> <td>6510 W. State Street</td> <td>Todd Peterson</td> <td>Building & Grounds Manager</td> <td>UW Credit Union</td> <td>3500 University Ave</td> <td>Madison</td> <td>WI</td> <td>53507</td> <td>(608) 206-5033</td> <td>tpeterson@uwcu.org</td> <td></td>	15-01	No	UW Credit Union	6510 W. State Street	Todd Peterson	Building & Grounds Manager	UW Credit Union	3500 University Ave	Madison	WI	53507	(608) 206-5033	tpeterson@uwcu.org	
15-50NoNo maximum Vest Allytics Reich1100 W. Certer StreetNeich Vest Diellich and Grandes1111 W. North AverWaawakolaVis 322241.41 273-1031Medelemanytotics L2.2 ausGrandes15-50Ves200 M. Weyl West Diellich and Origin1100 W. Weyl West Diellich1111 W. North AverBoddiellich <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>, , , , , , , , , , , , , , , , , , ,</td><td></td><td></td><td></td><td></td><td></td><td>Outlet Controls Structure for turf</td></t<>								, , , , , , , , , , , , , , , , , , ,						Outlet Controls Structure for turf
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1510NaInst. America155 M. Mayfar AnadCurret OwnerCurret OwnerGaleway Tosi Li Li Cu Alder Popery Partners Li, Cu Alder P	15-07	Yes	2100 Mayfair	2100 N. Mayfair Road	Sheila Baker	Vie President	Hoffman Mangement Company	150 N Sunny Slope Rd #240	Brookfield	WI	53005	(262) 814-9877	sbaker@hoffmanmgt.com	Sumped CB's
15:10YesGos Contrar(15)WesCost Contrar(14)(43)(43)(43)(43)(43)(43)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)(43)(44)														
No. Reserve at Marylar 1011 W. North Avenue Andrew Schulk Maintenance Director Maintenance Director Schule Partners Schule Rauly Partners	15-10	Yes	<u>Tosa Center</u>	1155 N. Mayfair Road	Current Owner		Gateway Tosa HC LLC	300 N. Lake Ave, Suite 620	Pasadena	CA	91101	(414) 443-2598	mhunefeld@irgens.com	Biofiltration basin; Sumped CB's
1NewRescuence at Mardain1011 W. North AvenueAndrew SchultMaintenane DirectorMaintenane DirectorMaintenane DirectorAllantaAllantaAllantaAAllantaAAllantaAAllantaAAllantaAAllantaAllantaAllantaAllantaAllantaAllantaAllantaAllantaAllantaAAllanta														
15:10 Yee The Rescover at Morial 1011 W. North Avenue Andrew Schule Maintenance Director Atlantic Realy Partners 3300 Lancx Ré site 1250 Abit Bater 6.4 9322.6 (Add) 1932.4291 Bateronic@Boarp.com Similitation 15:20 No Same Factory 1145 W. Surliegh Street Claudette Zoch Procession <							Mayfair Property Partners LLC, C/O							
13-20 No Jame Factory 1415 W. Burlejb Street Caudette Zoch HCA HCA Indexter	15-15	Yes	The Reserve at Mayfair	11011 W. North Avenue	Andrew Schalk	Maintenance Director	Atlantic Realty Partners	3500 Lenox Rd Suite 1250	Atlanta	GA	30326	(404) 591-2491	Raaronson@goarp.com	Sumped CB's
15-20 No Stamp factory 1145 W. Burlegh Street Chudette Zoch HSA Commercial Inc. 1695 Wett Wisconsin Ave Brochfield Wisconsin (Ave														Biofiltration islands (6), biofiltration
15-22VisSt. Carrillus1010 W. Wisconsin AvenueDave SinkulaDirector of Plant OperationsSt Camillus1010 W. Wisconsin AveWauvatosWi5226(4/4) 29-3751cinkul@ statuncomIndice of Plant OperationsRestore March16 05VisStorenzy at the District (District Lieft)11220 and 11240 District DivineMalloy SaltnessDistrict ManagerNew Earth Residential999 18th Street #11205DenverC08020(206) 984-8085march marrintin Enewerathres.comUndergrou16 06VisWauvatosWauvatosMalloy C. Center StreetKein HeusDirector of Buildings and GroundsWauwatosSchool District12121 W North AvenueVis522644-773-1053heuse@wauwatos A12.wi.scUndergrou16 17NoAurora Pixch - Devery House1220 Devery AvenueNate Groin FeedProvince of Buildings and GroundsMawatosSchool District1212 W North AvenueVis522.641-773-1053heuse@wauwatos A12.wi.scPortoco17-70VisMager Davie Maldel School Softball (P)7000 North AvenueRevin HeusDirector of Buildings and GroundsMawatos School District1212 W North AvenueVis522.641-773-1053heuse@wauwatos A12.wi.scPortoco17-70VisMager Davie Maldel School Softball (P)7000 North AvenueRevin HeusDirector of Buildings and GroundsMawatos School District1212 W North AvenueVis522.641-773-1053heuse@wauwatos A12.wi.scPortoca17-73VisMa	15-20	No	Stamp Factory	11415 W. Burleigh Street	Claudette Zoch		HSA Commercial Inc	16955 West Wisconsin Ave	Brookfield	WI	53005	(262) 938-0911	czoch@hsacommercial.com	basin, dry pond, underground detention
D12rssproduct modelproduct modelproductionprod	15-22	Voc	St. Camillus	10101 W. Wisconsin Avenue	Dave Sinkula	Director of Plant Operations	St Camillus	10101 W Wisconsin Ave	Wauwatosa	\A/I	53226	(111) 259-3751	dsinkula@stcam.com	Bioretention Basin
16-05 Vrs. Synergy at the District (District Lofts) 11220 and 11240 District Drive Mallory Saltness District Manager New Earth Residential 999 18h Street #1120S Derver C0 80202 (206) 984-8885 Synergy mattel Residential Work unit, 3 16-06 Vrs. Wauwatosa Wet Softball Field 1400 W. Center Street Kevin Heus Director of Buildings and Grounds Wauwatosa School District 1212 W North Ave Wauwatosa Wis 53226 414-773-1053 heuske@wauwatosa k12.wi.us Bioffittation 17-01 No Aurora Psych - Dewey House 1220 Dewey Avenue Natalie Brooks@iand Grounds St.Luk's Medical Center 2900 W. Cikahoma Ave. Milwaukee wis 53226 qla-773-1053 heuske@wauwatosa k12.wi.us Horderson 17-05 Vrs. Longfellow Middle School Soltball Field 7600 W. North Avenue Kevin Heus Director of Buildings and Grounds Wauwatosa School District 1212 W North Ave Wauwatosa wis 53226 414-773-1053 heuske@wauwatosa k12.wi.us Porosa as Porosa as 140-773-1053 heuske@wauwatosa k12.wi.us Porosa as 210 doregy Porosa as 140-773-1053 heuske@wauwatosa k12.wi.us	13-22	163	<u>et cumito</u>	Lo Lo L W. Wisconsin Avenue		encetor or nume operations	st summus		waawat03a	VVI	33220	(717) 235-3731	astrikulue steamteom	Underground detention underground
Desc	16-05	Yes	Synergy at the District (District Lofts)	11220 and 11240 District Drive	Mallory Saltness	District Manager	New Farth Residential	999 18th Street #1120S	Denver	co	80202	(206) 984-8085	synergymaint@newearthres.com	WO unit sumped CB's
16-06YesYauwatosa West Softball Field1440 W. Center StreetKevin HeusDirector 6 Buildings and GroundsWauwatosa School District1212 W North AveWauwatosaWi53226414-773-1053heusk@wauwatosa.k12.wi.usUndergrou16-19YesUugrades9250 Watertown Plank RoadMark GeronimeVice President of OperationsMRMC8700 Watertown Plank Rd (Mail stop 5)MilwaukeeWi53226Partnageronime@mmrcffl.orgdefentions17-01NoAurora Psych - Dewey House1220 Dewey AvenueNatalle BrooksEnvironmental Compliance Manager5L. Uke's Medical Center2900 W. Oklahoma Ave.MilwaukeeWi53226414-773-1053natalle brooks@aah.orgBioretenti17-05YesLongfellow Middle School Softball Field7600 W. North AvenueKevin HeusDirector of Buildings and GroundsWauwatosa School District12121 W North AveWauwatosaWi5326414-773-1053heusk@wauwatosa.k12.wi.usPiorosa sp17-07YesWauwatosa West Parline Log11400 W. Center StreetKevin HeusDirector of Buildings and GroundsWauwatosa School District12121 W North AveWauwatosaWi5326414-773-1053heusk@wauwatosa.k12.wi.usPiorosa sp17-07YesMauwatosa West Parline Log11400 W. Center StreetKevin HeusDirector of Buildings and GroundsWauwatosa School District12121 W North AveWauwatosaWi5326414-773-1053heusk@@wauwatosa.k12.wi.usPiorosa sp18-04Yes </td <td>10 05</td> <td></td> <td>Synergy at the bistnet (bistnet cons)</td> <td></td> <td>indianal y banchess</td> <td></td> <td></td> <td></td> <td>Bennei</td> <td></td> <td>00202</td> <td>(200) 50 1 0005</td> <td>synergynanite new cartinesiton</td> <td></td>	10 05		Synergy at the bistnet (bistnet cons)		indianal y banchess				Bennei		00202	(200) 50 1 0005	synergynanite new cartinesiton	
Infering MRMC-Thermal Permanent Plant. Upgrades 9250 Watertown Plank Road Mark Geronime Vice President of Operations MRMC 8700 Watertown Plank Rd (Mail stop 5) Milwaukee Wit 53226 Milwaukee Wit S3226 Milwaukee Wit	16-06	Yes	Wauwatosa West Softball Field	11400 W. Center Street	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	wi	53226	414-773-1053	heuske@wauwatosa.k12.wi.us	Underground detention, sumped CB's
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$ \begin{array} $	47.01	AL .	Aurent Dauch Dauch II	1220 Daman Array	Natalia Darad	Facility and the Construction of the	Ch. Lukola Masteri Courte		NAIL		52245	(020) 212 2051	antalia kanala Orak arr	Disastantian Desite
17-05 Yes Longfellow Middle School Softball Fiel 760 W. North Avenue Kevin Heus Director of Buildings and Grounds Wauwatosa School District 1212 W North Ave Wauwatosa Wauwatosa <td>17-01</td> <td>NO</td> <td>Aurora Psych - Dewey House</td> <td>1220 Dewey Avenue</td> <td>Natalie Brooks</td> <td>Environmental Compliance Manager</td> <td>St. Luke's Medical Center</td> <td>2900 W. Oklahoma Ave.</td> <td>Milwaukee</td> <td>WI</td> <td>53215</td> <td>(920)-312-2851</td> <td>natalie.brooks@aah.org</td> <td>Bioretention Basin</td>	17-01	NO	Aurora Psych - Dewey House	1220 Dewey Avenue	Natalie Brooks	Environmental Compliance Manager	St. Luke's Medical Center	2900 W. Oklahoma Ave.	Milwaukee	WI	53215	(920)-312-2851	natalie.brooks@aah.org	Bioretention Basin
17-05 Yes Undergrow Middle School Solidar Heigh 7600 W. North Avenue <	17.05	Vee	Lengfeller Middle Cebeel Cofficell Field	7C00 W/ North Augrus	Kerrie Herre	Disector of Buildings and Crowndo	Manusteen Cohool District	12121 W/ North Aug	14/0		52220	414 772 1052	havele Querustees 112 visue	Underground detection overland CD's
17-07 Yes Mawatosa West Parking Lot 1400 W. Center Street Kevin Heus Director of Buildings and Grounds Wawatosa School District 1212 W North Ave Wawatosa Wa 532.6 414-773-1053 Heuske@wawatosa.k12.wi.us Boins 17-15 Yes U-Hau! 1700 W. Capital Drive Jim Christianson U-Hau! 1700 W. Capital Drive Wawatosa Wi 532.6 414-773-1053 Heuske@wawatosa.k12.wi.us bains 17-15 Yes Longfellow Middle School Paving Impo 7600 W. North Avenue Kevin Heus Director of Buildings and Grounds Wawatosa School District 1212 W North Avenue Wawatosa Wi 532.6 414-773-1053 Heuske@wawatosa.k12.wi.us bains 18-04 Yes Longfellow Middle School Paving Impo 7600 W. North Avenue Kevin Heus Director of Buildings and Grounds Wawatosa School District 1212 W North Aven Wawatosa Wi 532.6 414-773-1053 Heuske@wawatosa.k12.wi.us Porous any Porous any Wi 532.6 414-773-1053 Heuske@wawatosa.k12.wi.us Porous any Porous any Wi 532.6 414-773-1053 Heuske@wawatosa.k12.wi.us Porous any Porous any </td <td>17-05</td> <td>res</td> <td>Longrellow Ivildale School Sottball Field</td> <td>7000 W. NORTH AVENUE</td> <td>Kevin Heus</td> <td>Director of Buildings and Grounds</td> <td>wauwatosa school District</td> <td>12121 W NOTULAVE</td> <td>wauwatosa</td> <td>VVI</td> <td>53220</td> <td>414-773-1053</td> <td>neuske@wauwatosa.k12.WI.Us</td> <td>Porous asphalt payament, biorotontian</td>	17-05	res	Longrellow Ivildale School Sottball Field	7000 W. NORTH AVENUE	Kevin Heus	Director of Buildings and Grounds	wauwatosa school District	12121 W NOTULAVE	wauwatosa	VVI	53220	414-773-1053	neuske@wauwatosa.k12.WI.Us	Porous asphalt payament, biorotontian
Ar or121 or Notified1210 World AveWadwatosa billoor District1211 World AveWadwatosa billoor District12121 World AveWadwatosaWi53220144-773-1053Hetske@wadwatosa.k12.Wi.LSDashib17-15YesU-Haul11700 W. Capital DriveJim ChristiansonU-HaulU-Haul700 W. Capital DriveWalwatosaWi53226262-343-6730jim christianson@uhaul.com2016/trat18-04YesLongfellow Middle School Paving Impro 7600 W. North AvenueDirector of Buildings and GroundsWalwatosa billoorMawatosaWi53226414-773-1053heuske@wauwatosa.k12.wi.usPorous asj18-04YesLutheran Home Memory Care7500 W. North AvenueKevin HeusDirector of Buildings and GroundsWauwatosa billoorVii53213414-528-6171 ext. 309heuske@wauwatosa.k12.wi.usPorous asj18-14YesLutheran Home Memory Care7500 W. North AvenueMark RoseMark RoseThe Lutheran Home7500 W. North AvenueWu53213414-528-6171 ext. 309mark.rose@thelutheranhome.orgflow filters18-22YesRenaissance Hotel200 N. Mayfair RoadDon KramerChief Engineer of Plant OpperationsMayfair Hotel Holdings LLC172 N BroadwayWi53226414-520-3951dinkula@stcam.comSunderdgr19-07YesSt Camillus Tower10100 W. Blue Mound RoadDavid SinkulaExtende to the Sinkula@stcam.comSt. Camillus Health System, Inc.10101 W. Wisconsin AveWu53226414-259-3751	17.07	Voc	Wauwatosa West Parking Lot	11/00 W/ Center Stroot	Kevin Heur	Director of Buildings and Grounds	Wauwatosa School Dictrict	12121 W North Ave	Wauwatoca	14/1	53226	414-773-1052	heuske@wauwatosa.k12.wi.us	hasing
A 20 A 20 A 200 W. Capital Diffe A 100 W. Capital Diffe Walwardsa Will 53220 202-93-07-30 Init Ciritstatistation@utilati.Cum 2010/100 18-04 Yes Longfellow Middle School Paving Impro 7600 W. North Avenue Kevin Heus Director of Buildings and Grounds Walwardsa Vill 53226 414-773-1053 heuske@wauwatosa.k12.wi.us Porous asp 18-04 Yes Lutheran Home Memory Care 7500 W. North Avenue Mark Rose Inite Ciritstatistation@waiwatosa.k12.wi.us Porous asp 2 Undergr 18-14 Yes Lutheran Home Memory Care 7500 W. North Avenue Mark Rose The Lutheran Home 7500 W. North Ave Walwatosa Vill 53213 414-528-6171 ext. 309 mark.rose@thelutheranhome.org flow filters 18-22 Yes Renaissance Hotel 2300 N. Mayfair Road Don Kramer Chief Engineer of Plant Opperations Mayfair Hotel Holdings LLC 172 N Broadway Vill 53203 414-520-3953 don kramer@concordhotels.com sundergr 19-07 Yes St. Camillus Hoult Noter St. Camillus Health System, Inc. 1010 W. Wisconsin Ave Wull 53226 414-529-3751 don k	17-07	Yes		11700 W. Centel Sileet	lim Christianson	II-Haul	Haul	17000 W. Capital Drive	Wauwatosa	VV I \//I	53220	262-343-6730	iim_christianson@ubaul.com	2 hiofiltration basins sumped CB's
18-04 Yes Longfellow Middle School Paving Impro 760 W. North Avenue Revin Heus Director of Buildings and Grounds Wauwatosa 1212 W North Avenu Wauwatosa Will 53226 414-773-1053 Heuske@wauwatosa.k12.wi.us Porous sate 18-04 Yes Lutheran Home Memory Care 7500 W. North Avenue Mark Rose The Lutheran Home Memory Yauwatosa Will 53213 414-728-6171 ext. 309 mark.rose@thelutheranhome.org flow filteran 18-24 Yes Renaissance Hotel 3300 N. Marfair Road Don Kramer Chief Engineer of Plant Opperations Marfair Hotel Holdings LLC 172 N Broadway Mil waukee Nil 53203 414-259-3751 don.kramer@concordhotels.com sumped C 19-07 Yes St. Camillus Tower Not W. Succonsin Avenue Not Wauwatosa Nil 5326 414-259-3751 dsinkula@stcam.com flow filteran	17-13	165							vvauwal05d	VVI	33220	202-343-0730	In constanson@unaul.com	2 biointration basins, sumpeu CB s
Lot in the sequence integration of the integration of	18-04	Yes	Longfellow Middle School Paving Impro	7600 W. North Avenue	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	w/i	53226	414-773-1053	heuske@wauwatosa.k12.wi.us	Porous asphalt pavement sumped CB's
18-14 Yes Lutheran Home Memory Care 7500 W. North Avenue Mark Rose The Lutheran Home Memory 7500 W. North Avenue Mark Rose Internation of the Lutheran Home Memory Mark Rose Mark Rose The Lutheran Home Memory Mark Rose Ma	10 04	103									55220			2 Underground detention systems 2 un-
18-22 Yes Renaissance Hotel 2300 N. Mayfair Road Don Kramer Chief Engineer of Plant Opperations Mayfair Hotel Holdings LLC 172 N Broadway Milwaukee WI 532.03 414-520-395.3 don.kramer@concordhotels.com Sumped C 19-07 Yes St. Camillus Tower 10100 W. Blue Mound Road David Sinkula St. Camillus Health System, Inc. 10101 W. Wisconsin Ave WI 532.05 414-259-3751 dsinkula@stcam.com Flow filters	18-14	Yes	Lutheran Home Memory Care	7500 W. North Avenue	Mark Rose		The Lutheran Home	7500 W. North Ave	Wauwatosa	wi	53213	414-258-6171 ext. 309	mark.rose@thelutheranhome.org	flow filters, sumped CB's
18-22 Yes Renaissance Hotel 2300 N. Mayfair Road Don Kramer Chief Engineer of Plant Opperations Mayfair Hotel Holdings LLC 172 N Broadway Milwaukee VI 532.3 414-520-395.3 don.kramer@concordhotels.com sumped Calescence 19-07 Yes St. Camillus Tower 1010 W. Blue Mound Road David Sinkula Camillus Health System, Inc. 1010 W. Wisconsin Ave Wa VI 532.6 414-259-3751 dsinkula@stcam.com Flow filters										1				Controlled Rooftop Detention and 10
19-07 Yes St Camillus Tower 10100 W. Blue Mound Road David Sinkula	18-22	Yes	Renaissance Hotel	2300 N. Mayfair Road	Don Kramer	Chief Engineer of Plant Opperations	Mayfair Hotel Holdings LLC	172 N Broadway	Milwaukee	WI	53203	414-520-3953	don.kramer@concordhotels.com	sumped CB's
19-07 Yes St. Camillus Tower Walk David Sinkula David Sinkula flow filters														2 underground detention systems, 3 up
	19-07	Yes	<u>St Camillus Tower</u>	10100 W. Blue Mound Road	David Sinkula		St. Camillus Health System, Inc.	10101 W. Wisconsin Ave	Wauwatosa	WI	53226	414-259-3751	dsinkula@stcam.com	flow filters and 2 dry detention basins

												Dry Pond, Permeable Pavement,
												Synthetic Turf-Underdrain system,
19-09	Yes	Underwood Elementary School	11132 W. Potter Road	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	WI 53226	414-773-1053	heuske@wauwatosa.k12.wi.us	Sumped CB's (12)
		Wauwatosa East H.S. Site										Biofiltration basins, porous pavement,
19-12	Yes	Improvements	7500 Milwaukee Avenue	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	WI 53226	414-773-1053	heuske@wauwatosa.k12.wi.us	sumped CB's
												2 Biofiltration basins, Turf-Underdrain
												system, permeable pavers, 15 sumped
19-14	Yes	Lincoln Elementary School	1741 Wauwatosa Avenue	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	WI 53226	414-773-1053	heuske@wauwatosa.k12.wi.us	CB's
												2 Biofiltration basins, Turf-Underdrain
19-24	Yes	Wilson/WSTEM Elementary School	1060 Glenview Avenue	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	WI 53226	414-773-1053	heuske@wauwatosa.k12.wi.us	system
												Biofiltration basin, Turf-underdrain
19-25	Yes	McKinley Elementary School	2435 N 89th Street	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	WI 53226	414-773-1053	heuske@wauwatosa.k12.wi.us	system, permeable pavers
19-30	No	Mayfair Collection Phase 4										2 Underground detention systems
19-31	Yes	River Parkway	6400-6442 River Parkway	Alyssa Klecker		MSP Real Estate, Inc	7901 W National Ave	West Allis	WI 53214	414-259-2108	aklecker@msphousing.com	Underground detention system
22.07												
20-07	Yes	Amazon	11800 W Burleigh St	Beth Rummel	Property Manager	Phoenix Investors, LLC	401 E Kilbourn Ave, Suite 201	Milwaukee	WI 53202	414-719-6779	brummel@phoenixinvestors.com	Underground Stormtrap Detention
22.42				in the second		Ronald McDonald House Charities of				P:414-475-5333		
20-18	Yes	Ronald McDonald House	8984 W Watertown Plank Rd	Kelsey Stoltz	Assistant Facilities Manager	Eastern WI	8948 W. Watertown Plank Rd	Wauwatosa	WI 53226	D:414-935-6525	kstoltz@rmhc-easternwi.org	2 Dry Detention Basins
												2 biofiltration basins, permeable
												pavement draining to an underground
21-01	Yes	Watertown Apartments	9150 W Watertown Plank Rd	Ryan Maurer	Assistant Property Manager	Watertown Apartments, LLC	9150 Watertown Plank Rd	Wauwatosa	WI 53226	414-386-2500	rmaurer@oakbrookcorp.com	storage layer
21-07	Yes	<u>Campbell Apartments</u>	2929 N Maytair Rd	Tony Rossi Sr		M&R Mayfair Venture, LLC	1 North Franklin, Suite 700	Chicago	IL 60606	312-407-6702	tony@rmk.com	Underground detention system
24.44		Descent Flammater		Keele Here		Manual and Calmad District	12121 WALLSHEARS			44.4 772 4052		T of an dealer's content
21-11	Yes	Roosevelt Elementary	2535 N 73rd St	Kevin Heus	Director of Buildings and Grounds	Wauwatosa School District	12121 W North Ave	Wauwatosa	WI 53226	414-773-1053	heuske@wauwatosa.k12.wi.us	l urf-underdrain system
24.00						Innovation Campus Owners Associatio						Green Roof above parking structure;
21-08	Yes	Irgen's UWM Innovation Campus	1301-1425 Discovery Parkway	Andrea Mullins	Innovation Campus Owners Association Inc	. Inc. c/o Irgens Partners, LLC	1401 Discovery Parkway, Suite 100	Milwaukee	WI 53226	414-443-0700	AMullins@irgens.com	Bioretention Basins (B, C and D series)
22-02	Yes	Uptown Quick Lane Service Center	1501 N Mayfair Rd	John Pentler		Sonshine 1501 LLC	2111 N Mayfair Rd	Wauwatosa	WI 53226	262-93-5709	jpentler@uptownmotors.com	Wet Detention Basin
												Wet Detention Basin (NW corner of
22-11	Yes	St Joe's Parking Lot Reconstruction	12130 W Center Street	Julie McKendry	Business Administrator	St. Joseph Congregation	12130 W Center St.	Wauwatosa	WI 532222	414-771-4626 ext. 103	mckendryj@stjoetosa.com	parking lot)
22.45												Underground detention basin, catch
22-15	Yes	larget	3900 N 124th St.	Current Owner		larget Corporation	PO Box 9456	Minneapolis	MN 55440			basins
												Storm sewer system, permeable pavers,
23-03	NO	MSP at Mayfair	3325 Foundry Way	Alyssa Klecker		MSP Real Estate, Inc	7901 W National Ave	West Allis	WI 53214	414-259-2108	aklecker@msphousing.com	bio-retention basin
22.27	Vee	Luther Mener		Kan dall Channy's s	Maintenna Cunan inga	Luthan Manag		\A/a	WI 52225	414 021 0057	KChampion Olythermonen (Commond antals basing
23-27	res	Luther Manor	4545 92NO ST.	Kendali Champion	iviaintenance Supervisor	Lutrier Manor	4545 N 92NO ST.	wauwatosa	VVI 53225	414-831-8957	KCnampion@luthermanor.org	Sumped catch basins

November 13th, 2024



Current Owner New Synergy I, and New synergy II,LLC 999 18th Street #1120S Denver CO 80202

RE: Stormwater Management Maintenance Agreement - Synergy at the District (District Lofts)

Dear Current Owner:

As the owner of a property with a Stormwater Management Maintenance Agreement, you are required to perform certain maintenance actions to ensure that your Stormwater Best Management Practices (BMP's) continue to function as they were designed. These actions are outlined in your maintenance plan and include such things as monthly visual inspections and the completion of any needed repairs. Our records show a stormwater maintenance agreement for the Synergy at the District (District Lofts) located at 11220 and 11240 District Drive.

Please submit copies of your inspection reports, as outlined in your maintenance plan by December 29, 2024. It is strongly recommended that you have a qualified, engineering professional complete your annual BMP inspection with your facilities manager. By doing so, your facilities manager can be educated as to what to look for during the monthly inspections. Once the report is completed, please send us an electronic PDF copy via email to <u>npeksa@wauwatosa.net</u>.

If you need a copy of your maintenance plan or agreement, please contact Nate Peksa at 414-831-5549 or <u>npeksa@wauwatosa.net</u>.

Sincerely,

the Jubsen

Nate Peksa Civil Engineer



Routine Inspection and BMP Maintenance

May 2023

The Importance of Routine Maintenance

BMPs require on-going inspection and maintenance by property owners to ensure that they are achieving their desired treatment goals. Inspections also reduce the risk of damages such as flooding. Even when a BMP appears as if it is working, it's possible that it is not functioning as designed. Therefore, regular inspection and maintenance is required.

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City of Wauwatosa 7725 W. North Avenue Wauwatosa, WI 53213





www.wauwatosa.net

Stormwater Maintenance Best Management Practices (BMPs)

What is a stormwater? Why do we have Stormwater BMPs?

Stormwater runoff is water that "runs off" the land after precipitation occurs. Developed land As development increases the area of impervious surfaces, reducing the ability of stormwater to infiltrate (or soak) into the ground. The result is an increase in runoff. Runoff picks up fertilizer, oil, pesticides, dirt, bacteria and other pollutants as it travels over land and through storm drains and ditches, untreated, to our streams, rivers, and lakes. This is one of the leading causes of water quality pollution in Wisconsin.

Stormwater BMPs offer a variety of benefits. They improve water quality, protect downstream water bodies, reduce flooding, and can be aesthetically pleasing. Stormwater BMPs can be designed to meet a variety of management goals. Many are designed primarily to provide volume control to reduce flooding, while others are designed to help meet water quality goals, or both.

Who is legally responsible for maintenance?

When a property is developed or re-developed, the developer must incorporate stormwater BMPs and provide a plan for these BMPs to be properly maintained over time. When the developer finishes the project, ownership of the stormwater BMPs is turned over to the Homeowners' Association (HOA) or property owner.

Property owners are legally responsible for ensuring that stormwater BMPs on their sites are properly inspected and maintained. See Section 24.13.040 Wauwatosa Municipal Code.

Resources on BMP Types

To better understand your BMP, see the WDNR's technical standards for constructing various types fo BMPs. Ongoing maintenance requirements will vary depending on the BMP.

https://dnr.wisconsin.gov/topic/Stormwater/standards/postconst_standards.html

Common Stormwater BMPs in Wauwatosa: Maintenance and Inspection Tips

Porous Pavement

- Porous pavement must be vacuumed swept on schedule
- Biannually, after storms make sure that rainwater properly drains through the material
- Follow guidelines for ice and snow





Underground Detention Systems

- Annual inspections are best practice for all underground systems
- Inspection and maintenance efforts help ensure underground pipe systems used for stormwater storage continue to function as intended
- When an inspection reveals accumulated sediment or trash, detention systems should be cleaned thoroughly

Wet Detention Ponds

- Mowing, trimming, and keeping vegetation under control
- Keep pond clear of trash and debris
- Remove excess sediment from the basin, outflow and inflow pipes





Biofiltration Basins

- Check for erosion near inflow points
- Inspect plants for signs of disease and pest infection
- Inspect for sediment accumulation and clogging
- Identify and remove weeds
- Remove litter to ensure flow paths are not hindered

Catch Basins

- Sweep pavement regularly to reduce the need for catch basin cleaning
- Inspect for debris build up in sump and blocked outlets
- Inspect structural integrity





Proprietary Systems

- Maintenance varies depending on the specific model
- Always follow the manufacturer's operation and maintenance guide
- Proprietary systems should be inspected yearly

Quarterly site inspections are performed to evaluate the effectiveness of controlling stormwater contamination and to identify any additional measures that can be feasibly implemented. The Public Works Yard Storm Water Pollution Prevention Plan identified the following areas for inspection:

1. Drainage conditions.

-Inspect site for possible erosion problems.

Restake silt fence when ground unthaws to ensure silt fence is tight and functional -Determine if drainage off the Property has changed.

Drainage has not changed

-Are there any new areas of ponding or streaming?

None

2. Potential Pollution Sources

-Is there any indication of oils or greases in the outdoor material storage areas?

No

-Is there any standing water with sheens, sludge, foam, etc.?

No

-Are there any signs of erosion or sediment transport into inlets or off site from storage areas? No - Ensure daily clean up of spilled soil/gravel from covered storage areas

-Is there any litter or debris not associated with normal operations (such as snow removal)?

No

-Are there any signs of spills or other contaminants on the Property?

No

-Is there any cracking or other signs of wear on the fuel island pump hoses?

No

3. Catch Basins

-Is there sediment buildup that requires cleaning (sump should be no more than 40% full). No

- Is there any floating oils or greases in catch basins?

No

4. Other Observations:

- Take note of anything else at the Property that may be of significance to the Storm Water Pollution Prevention Plan. *None*

Signed:	Nate Peksa	Printed Name:	Nate Peksa
•		·	

Title: <u>Civil Engineer</u>

Date:_____03/06/2024_

Quarterly site inspections are performed to evaluate the effectiveness of controlling stormwater contamination and to identify any additional measures that can be feasibly implemented. The Public Works Yard Storm Water Pollution Prevention Plan identified the following areas for inspection:

1. Drainage conditions.

-Inspect site for possible erosion problems.

Potentially install a second line of silt fence since vegetation is growing over top of silt fence height -Determine if drainage off the Property has changed. Drainage has not changed -Are there any new areas of ponding or streaming? None 2. Potential Pollution Sources -Is there any indication of oils or greases in the outdoor material storage areas? No -Is there any standing water with sheens, sludge, foam, etc.? No -Are there any signs of erosion or sediment transport into inlets or off site from storage areas? No - Ensure daily clean up of spilled soil/gravel from covered storage areas -Is there any litter or debris not associated with normal operations (such as snow removal)? No -Are there any signs of spills or other contaminants on the Property? No -Is there any cracking or other signs of wear on the fuel island pump hoses? No 3. Catch Basins -Is there sediment buildup that requires cleaning (sump should be no more than 40% full). No - Is there any floating oils or greases in catch basins? No 4. Other Observations: - Take note of anything else at the Property that may be of significance to the Storm Water Pollution Prevention Plan. None

Signed	: Nate Peksa	Printed Name:	Nate Peksa	
. 0				

Title: <u>Civil Engineer</u>

Date: 05/21/2024

Quarterly site inspections are performed to evaluate the effectiveness of controlling stormwater contamination and to identify any additional measures that can be feasibly implemented. The Public Works Yard Storm Water Pollution Prevention Plan identified the following areas for inspection:

1. Drainage conditions.

-Inspect site for possible erosion problems.

Potentially install a second line of silt fence since vegetation is growing over top of silt fence height -Determine if drainage off the Property has changed. Drainage has not changed -Are there any new areas of ponding or streaming? None 2. Potential Pollution Sources -Is there any indication of oils or greases in the outdoor material storage areas? No -Is there any standing water with sheens, sludge, foam, etc.? No -Are there any signs of erosion or sediment transport into inlets or off site from storage areas? No - Ensure daily clean up of spilled soil/gravel from covered storage areas -Is there any litter or debris not associated with normal operations (such as snow removal)? No -Are there any signs of spills or other contaminants on the Property? No -Is there any cracking or other signs of wear on the fuel island pump hoses? No 3. Catch Basins -Is there sediment buildup that requires cleaning (sump should be no more than 40% full). No - Is there any floating oils or greases in catch basins? No 4. Other Observations: - Take note of anything else at the Property that may be of significance to the Storm Water Pollution Prevention Plan. None

Signed	Nate Peksa	Printed Name:	Nate Peksa	
0.0				

Title: <u>Civil Engineer</u>

Date: 07/17/2024

Quarterly site inspections are performed to evaluate the effectiveness of controlling stormwater contamination and to identify any additional measures that can be feasibly implemented. The Public Works Yard Storm Water Pollution Prevention Plan identified the following areas for inspection:

-Inspect site for possible erosion problems.
Beenive arain in DPW Parking lot has debris surrounding structure along with storm inlet hear fire training tower. Both should be cleaned of any mud and debris build up.
-Determine if drainage off the Property has changed.
Drainage has not changed
-Are there any new areas of ponding or streaming?
None
2. Potential Pollution Sources
-Is there any indication of oils or greases in the outdoor material storage areas?
No
-Is there any standing water with sheens, sludge, foam, etc.?
No
-Are there any signs of erosion or sediment transport into inlets or off site from storage areas?
No - Ensure daily clean up of spilled soil/gravel from covered storage areas
-Is there any litter or debris not associated with normal operations (such as snow removal)?
No
-Are there any signs of spills or other contaminants on the Property?
No
-Is there any cracking or other signs of wear on the fuel island pump hoses?
No
3. Catch Basins
-Is there sediment buildup that requires cleaning (sump should be no more than 40% full).
No
- Is there any floating oils or greases in catch basins?
No

4. Other Observations:

- Take note of anything else at the Property that may be of significance to the Storm Water Pollution Prevention Plan. *Materials storage structure gutter is hanging and non functional.*

Signed:	Nate Peksa	Printed Name:	Nate Peksa

Title: <u>Civil Engineer</u>

Date: 08/20/2024



SANITARY SEWER & STORM WATER MANAGEMENT RESERVES



BUDGET SNAPSHOT

	2024	2025	Change
Exp	\$ 13,547,279	\$ 12,225,646	\$(1,321,633)
Rev	\$17,207,484	\$18,585,506	\$ 1,378,022
Net Cost	\$ (3,660,205)	\$ (6,359,860)	\$ (2,699,655)
FTE's			

MAJOR CHANGES

- Transition \$77,000 (10%) of forestry labor expenses from the general fund to the storm water utility in order to better reflect storm water benefits from street trees.
- Reduction in the Storm Water Utlity Budget for storm sewer televising to reflect the option to utilize inhouse televising and/or CIP funded televising for larger projects.

CORE RESPONSIBILITIES

- Manage and/or complete inspections, cleaning, and repair of the City's 800,000 linear feet of sanitary sewers, 4,230 sanitary manholes, 540,000 linear feet of storm sewers and 7,247 storm inlets.
- Responsible for responding to flooding and other emergencies related to blocked inlets or waterways.
- Respond to emergencies related to water in basement complaints caused by sanitary sewer issues.

PERFORMANCE MEASURES







The above chart shows the gallons of stormwater runoff that will be avoided over the life span of the new trees planted each year. This data was produced with the i-Tree Planting Calculator.

NEXT YEAR'S GOALS

- Expand the in-house televising program to include televising CIP sanitary sewer projects and proactive condition assessments of a portion of the city's sanitary sewer system each year.
- Work with Common Council Committee/s to establish policy and budget parameters for the Schoonmaker Watershed and Sewershed project following the conclusion of the preliminary alternatives analysis.
- Apply for an MMSD grant to study the effectiveness of the sanitary sewer grouting program.

SANITARY SEWER RESERVE BUDGETARY CHANGES

PRIVATE LATERAL PROGRAM INCREASE (NEXT YEAR BUDGETARY CHANGE \$360,000.00)

The private lateral program operates on a project-by-project basis, depending on the number of laterals addressed in each contract. Two projects are planned for 2025:

- Watertown Plank Road sanitary lateral grouting \$280,000.00
- Wisconsin Avenue sanitary lateral relay \$180,000.00

We expect to receive \$150,000.00 in grant funding from the Milwaukee Metropolitan Sewerage District (MMSD) for the Wisconsin Avenue lateral relay project. This funding is anticipated in 2025, with the project's completion scheduled for spring/summer and reimbursement expected in the fall.

MMSD GRANT FUND DECREASE (NEXT YEAR BUDGETARY CHANGE \$220,000.00)



MMSD PPII grant funds for the WA3009 sanitary sewer lining and lateral grouting project are expected to be received in 2025. \$150,000 will now be budgeted for the Wisconsin Avenue lateral relay project.

STORM WATER MANAGEMENT RESERVE BUDGETARY CHANGES

STREET SWEEPING FLEET TRACKING/RECORDING SOFTWARE (CURRENT YEAR BUDGETARY REESTIMATE \$3,780.00)

After extensive research and analysis of the benefits of adding a tracking and recording system to certain city vehicles, we have decided to implement Samsara Automatic Vehicle Location (AVL) tracking and dash cameras on our fleet of street sweeping trucks which will lead to cost savings and the following benefits:

- Dash cameras provide clear evidence in the event of accidents, reducing legal fees and settlement costs.
- Enhanced driver behavior monitoring encourages safer driving practices, leading to fewer accidents.
- Proactive vehicle monitoring ensures we identify maintenance issues before they become significant problems. Engine codes are sent directly to the fleet department in real-time, giving us a head start on maintenance.
- AVL tracking ensures efficient dispatching for return service, ensuring our trucks are used optimally, decreasing fuel consumption, and lowering overall fuel costs.

STORMWATER MANAGEMENT OUTREACH FEE INCREASE (NEXT YEAR BUDGETARY CHANGE \$14,375.00)

The city partners with Southeastern Wisconsin Watersheds Trust, Inc. (Sweet Water) on MS4 permit compliance activities. While updated fees for the MS4 compliance program were not available in time for the 2024 budget, they have been determined for 2025. The budgetary change reflects the increase in fees from 2023 to 2025.

STORM SEWER TELEVISING EXPENSE REDUCTION (NEXT YEAR BUDGETARY CHANGE \$77,000)

The expense for storm sewer televising contracted with an outside vendor will be reduced. The televising will be performed in-house with the DPW sewer televising program, which was established for sanitary sewers in 2024, and/or through larger CIP-funded projects.

ARBORIST SALARY TRANSFER TO STORM WATER UTILITY (NEXT YEAR BUDGETARY CHANGE \$77,000.00)

To better reflect the benefits the city's street tree program provides to the storm water management program and as part of the levy reduction, 10% of the City's arborist position salary expense will be allocated to the Storm Water Utility.



BUDGET SUMMARY TABLE

Sanitary Fund #51

Expenditures

	2024				2025 / 2024
2023	Adopted	2024		2025	% of
Actual	Budget	Revised	Name	Budget	Change
313,586	481,104	481,104	Wages	540,813	12.4%
14,000	14,000	14,000	Overtime	14,000	0.0%
145,765	171,675	171,675	Benefits	273,022	59.0%
362	528	528	Other Compensation	526	-0.3%
21,200	21,200	21,200	Operating Expenses	21,200	0.0%
10,000	10,000	10,000	Commodities	10,000	0.0%
4,913,792	5,203,347	5,862,027	Services	4,918,839	-5.5%
10,496	10,674	10,924	Utilities	11,184	4.8%
1,452,168	1,426,271	1,427,470	Fixed Charges	1,506,673	5.6%
551,840	577,653	601,453	Internal Charges	631,774	9.4%
5,937,691	5,031,322	9,022,660	Capital Outlay	460,000	-90.9%
(3,402,691)	(3,681,322)	(3,681,322)	Asset Purchase Contra		-100.0%
9,968,209	9,266,451	13,941,718	TOTAL	8,388,031	-9.5%

Revenues 2024 2023 Adopted 2024 2025 % of Actual Budget Revised Name Budget Change 132,000 113,000 92,800 Fines and Penalities 97,500 -13.7% 370,000 370,000 InterGov Revenues 1,450,000 150,000 -59.5% 21,200 360,250 486,900 Miscellaneous 435,000 20.7% 27,260 55,355 55,355 Other Sources -16.5% 46,196 10,409,964 11,140,700 Public Charges 11,454,200 11.7% 10,251,220 12,040,424 11,149,825 12,145,755 TOTAL 12,182,896 9.3% Net Cost 1,795,963 TOTAL 101.5% (2,072,215) (1,883,374) (3,794,865)



Storm Sewer Fund #52

Expenditures

	2024				2025 / 2024
2023	Adopted	2024		2025	% of
Actual	Budget	Revised	Name	Budget	Change
420,471	438,003	438,003	Wages	535,475	22.3%
15,000	30,000	30,000	Overtime	30,000	0.0%
197,178	214,525	214,525	Benefits	254,160	18.5%
362	672	672	Other Compensation	670	-0.3%
21,425	28,425	28,425	Operating Expenses	42,800	50.6%
138,350	138,350	164,350	Commodities	138,350	0.0%
508,876	533,178	742,310	Services	318,514	-40.3%
5,352	5,450	6,200	Utilities	5,789	6.2%
1,474,977	1,551,400	1,638,923	Fixed Charges	2,047,768	32.0%
419,782	472,539	472,539	Internal Charges	464,089	-1.8%
163,385	168,286	80,175	Other Expenses	-	-100.0%
4,560,093	11,904,361	12,838,883	Capital Outlay	-	-100.0%
(3,860,093)	(11,204,361)	(11,204,361)	Asset Purchase Contra	-	-100.0%
4,065,158	4,280,828	5,450,643	TOTAL	3,837,615	-10.4%

Revenues						
2023 Actual	2024 Adopted Budget	2024 Revised	Name	2025 Budget	% of Change	
50,000	41,600	43,500	Fines and Penalties	45,700	9.9%	
357,530	57,680	57,680	InterGov Revenues	-	-100.0%	
4,800	66,100	224,200	Miscellaneous	137,700	108.3%	
55,910	71,938	81,793	Other Sources	64,331	-10.6%	
5,945,739	5,820,341	5,976,116	Public Charges	6,154,879	5.7%	
6,413,979	6,057,659	6,383,289	TOTAL	6,402,610	5.7%	
Net Cost						
(2,348,821)	(1,776,831)	(932,646)	TOTAL	(2,564,995)	44.4%	
			_			

PERSONNEL SCHEDULES

Sensible Salting Program

The Sensible Salt Programs goal is to reduce salt usage by 30% and keep the environment cleaner. Under this program, Wauwatosa will limit salting on secondary roads; limit overnight salting; focus application at hills, intersections, curves, and bridges; and implement spot salting, or salting at 150 ft. intervals on main roads.

Sensible Salting: "the right amount in the right place at the right time."

Sensible salting requires, among other things, careful application of salt, good spreading equipment, calibration of spreaders, automatic controls, adequate covered storage, proper maintenance around storage areas and an awareness by all who use salt of the need to protect the environment.

Sensible Salting Practices lead to a 30% reduction in salt usage and help to keep our environment clean. Sensible Salting Practices include the following policies used by the City of Wauwatosa Department of Public Works:

- Limited Salting During the Late Evening/Early Morning Hours: From 11:00 p.m. 4:00 a.m. very limited salting will take place, as salting is not effective due to low traffic volumes. The goal of the DPW during this time is to ensure passable roads, which means only intersections, hills, curves, and bridges will be salted. Beginning at 4:00 a.m., DPW prepares the roads for rush hour. There may be some snow pack in the middle of the block until sun, traffic and salt tracking melts snow.
- Salting During Snow Events: During periods of 1' inch per hour snowfall or greater, main roads will be plowed as frequently as possible. These roads will also be salted at intersections, hills, curves, bridges, and school zones. "Spot Salting" will also be utilized which means roads will be salted at 150 ft. intervals to allow the salt to be effectively spread around.
- Limited Salting on Secondary Roads: Secondary Roads (side streets) will be plowed as often as possible, but will only be salted at intersections, bridges, hills, curves, and school zones for 200 ft. intervals. Spot Salting will also be used when necessary.
- Proper Training of Employees and Communication of this Policy: The Director of Public Works is responsible for ensuring all employees understand and follow the City's Sensible Salting Practices.
- Proper Calibration of Equipment: All equipment will be calibrated to ensure the Sensible Salting Practices are implemented correctly.
- Investigation of Alternative Products: The Department of Public works will continue to investigate, purchase, and utilize other alternative products such as brine and other enhanced deicers.

When conditions warrant, such as those found during and after an ice storm, the City has the ability to salt as necessary, as safety of the residents and visitors of the City of Wauwatosa remains our main priority.





Figure 5-1 MS4 Storm Sewer System Map City of Wauwatosa Stormwater Quality Management Plan



ponds) associated with Federal Aviation Administration requirements due to the proximity of Timmerman field.

Potential future regional practices that are being considered by the City include the new 116th Street Park, which is currently in the planning stages by the City and has secured a consultant to assist with evaluating options for the drainage areas tributary to the new park project, and an area near the western limits of Chippewa Park on the City's south side. Options for stormwater treatment associated with the 116th Street Park will be further evaluated by a consultant in 2023, but the Chippewa Park area was evaluated as part of this project. The project in consideration would divert the storm sewer on W. Mt Vernon Avenue to the south along 116th Street along with the W. Park Hill Avenue storm sewer, discharging at Chippewa Park, creating a 39-acre drainage area. WinSLAMM modeling suggests that a wet detention pond with a surface area of 0.5 acres situated in the western limits of Chippewa Park would remove 63.3 percent TSS (2.46 tons) and 46.4 percent TP (18.5 lbs). The pond footprint includes a 20-foot buffer from roadways.

Challenges with implementing this alternative include the presence of potential wetlands in the identified wet pond area based on a review of the WDNR Surface Water Data Viewer. An endangered resources preliminary assessment was conducted and indicated that an Endangered Resources (ER) Review by the WDNR would be necessary to comply with Wisconsin's Endangered Species Law and the Federal Endangered Species Act. A wetland delineation would be required as well as discussion with the WDNR on permitting the project and the potential increased cost to purchase wetland mitigation credits if wetlands are impacted. The cost of this potential project was not estimated at this time due to uncertainty related to features that would impact the cost effectiveness such as wetland mitigation measures.

While the City has not given up on the potential to implement regional practices, it is recognized that they will be more challenging and/or expensive. The City will look to potential projects to partner with other Menomonee River Watershed permittees as well as developers if opportunities arise and can also consider alternatives to traditional wet pond surface detention, such as underground wet detention facilities. Additionally, the WDNR is in the process of developing a guidance document (anticipated to be completed in 2023) to using sand filters based on research conducted by the University of Minnesota. These practices would typically contain a sediment forebay or chamber to trap heavier particles, a dry detention basin to temporarily store water and allow it to run through a sand filter area that can have additives incorporated into the sand such as iron filings or slag to improve total phosphorus removal. The facility would be designed to drain down within approximately a 48-hour period so would not contain long-standing ponded water and are anticipated to have high TSS and TP removals when constructed according to the guidance document.

4.5 Leaf Management

The City of Wauwatosa operates a bulk leaf collection program as a service to the public. The WDNR has recognized that there may be beneficial changes in municipal leaf management programs that can reduce phosphorus discharges to waters of the state. Based on research conducted by the WDNR and USGS, the WDNR developed guidance ("Municipal Phosphorus Reduction Credit for Leaf Management Programs", effective February 17, 2022) to provide criteria for numeric credit for leaf collection programs outside of the WinSLAMM modeling tool. The existing City of Wauwatosa bulk leaf management program was evaluated and compared against the WDNR guidance as summarized in the following sections.



4.5.1 Existing City Bulk Leaf Management Program

The existing City leaf collection program currently starts in early October and goes until late November. Specific information on the City's annual program (schedule and interactive map) are posted on the City's website. Leaves are collected throughout the City up to four times during the season (three passes and one final collection after the final posted rake out deadline). Currently, like many communities, the City asks residents to rake their leaves in the fall into the gutter of the roadway for pickup by the City.

The City utilizes several pieces of equipment in this operation including:

- 7 Mt Trackless Units
- 5 Rear Loader Refuse Trucks
- 1 Freightliner FL80 Buncher Truck
- 1 John Deer Loader
- 1 Leaf Vacuum Trailer
- 1 Freightliner, Elgin Megawind (street cleaner)
- 1 Elgin Pelican NP (street cleaner)

City DPW Operations Staff push the leaves together, bunches them to reduce the leaf volume and then take them to the public works yard for composting. The streets are swept following the bulk pickup operation. On average the City collected about 4,000 tons of leaves annually however the total tonnage is quite variable, ranging from 3,205 tons in 2021 to 5,436 tons in 2019 (information based on "2011-2021 Fall Leaf Collection Comparison" document provided by the City).

The City currently receives no specific stormwater quality credit or reduction for their leaf collection program. The WDNR has developed a guidance document that allows a municipality to take credit for a bulk leaf collection program that meets the criteria in residential land use areas as outlined in their 2022 guidance. Future research may allow credit in additional land use areas or applications but are not considered in the current guidance document. The City can only take credit for increased numeric stormwater pollution reduction as allowed under WDNR guidance when the conditions outlined in the guidance are met by the City. Non-numeric credit can be taken for other land uses that are not currently outlined for numeric credit and can be a component of the City's implementation plan and evidence of working towards TMDL pollutant reduction goals. The current and potential WDNR leaf collection program modification options and the City's evaluation of potential changes are discussed in the following sections.

4.5.2 Eligible Areas for Numeric Credit from Leaf Management

Under WDNR guidance, there are conditions that define the area that is eligible for leaf management credit. To be eligible, the area must have a residential land use, curb and gutter streets, a high level of tree canopy, and not be treated by a downstream structural SMP (such as a pond).

To determine whether there is a high level of tree canopy, there are two options provided by the WDNR as follows:

- Option A: An average of one or more medium to large canopy trees located between the sidewalk and the curb for every 80 linear feet of curb.
- Option B: An average of 40 percent or greater leaf canopy over the pavement, or 45 percent tree canopy or greater over the right-of-way determined using leaf-on aerial photography.

The analysis was conducted using Option A, utilizing the City of Wauwatosa GIS tree dataset. This dataset represents trees within City property which includes the right-of-way and parks. The dataset includes various attributes regarding trees, including the tree diameter. It was assumed that a

Brown AND Caldwell

diameter at breast height of 12-inches or greater equated to a medium to large trees. In conjunction with the tree data, the City's street centerline GIS file was utilized. The street centerline file was clipped to areas meeting the land use and street section criteria. The number of medium or large trees along each segment (intersection to intersection) was then counted. The length of the street segment was then multiplied by two to account for curb and gutter on both sides of the street. This length was divided by the count of trees along each segment to calculate the average medium or large tree spacing. If the tree spacing was less than 80-feet the segment was identified as eligible. Figure 4-2 shows the areas within the City that meet these criteria.

The resulting areas were compared to other available sources to see if the identified areas were reasonable. The following items were considered:

- 1. Google street view was utilized to spot check residential areas throughout the City. It was generally observed that the images in street view correlated with the tree dataset.
- The WDNR community tree canopy mapping application (<u>https://dnr.wisconsin.gov/topic/urbanforests/ufia/plan-treecanopy</u>) was reviewed. This mapping data showed a city-wide tree canopy of 37.9 percent. The data could be further reviewed at a detailed level. At the "Block" level (see tree canopy image), most blocks in the City are in the upper two tree canopy designations (between 30 and 100 percent tree coverage).





City of Wauwatosa Tree Canopy Image Courtesy of WDNR Tree Canopy Mapping Application

4.5.3 Existing Leaf Management Program and WDNR Guidance Criteria

In addition to the criteria regarding areas that are eligible for leaf management credit, the WDNR guidance document established leaf management programmatic criteria. The following section describes the requirements of the WDNR guidance document and how the City's program compares:

- 1. WDNR Criteria #1: The municipality has an ordinance prohibiting residents from placement of leaves in the street.
 - a. The City's Municipal Code currently does not include a provision that prohibit the placement of leaves in the street.
 - b. To comply with this criteria, the City would need to make a code change.
- 2. WDNR Criteria #2: The municipality has a policy that leaves are placed by residents on the street terrace and collected at a specified frequency and timing. As part of the collection, the leaves are collected by loading them into an enclosed vehicle without being left in the street overnight.



- a. Per the "Fall Leaf Collection" guidance on the City's website, residents are directed to place leaves in the gutter of the street for City pickup.
- b. To comply with this criteria, the City would need to change their leaf collection operation and guidance. Further complicating this potential practice is the narrow terraces in many areas of the City.
- 3. WDNR Criteria #3: If on street parking densities are greater than "light", there is an ordinance or enforceable policy to restrict parking during leaf collection and street cleaning.
 - a. Within residential areas of the City, the parking densities are light.
- 4. WDNR Criteria #4: The leaf collection program starts no later than October 7 each year. The guidance document should be consulted for further information regarding when street cleaning and bulk collection activities associated with street cleaning begins.
 - a. The "Fall Leaf Collection" guidance on the City's website identifies a start date of October 10, 2022, for the leaf collection program.
 - b. This date is close to the October 7 date indicated by WDNR and no major program change is anticipated; however, based on the WDNR guidance, the leaf accumulation conditions in the street will need to be monitored, and collection and street cleaning activities may need to begin earlier.
- 5. WDNR Criteria #5: The leaf collection program occurs three to four times throughout October and November.
 - a. Per the "Fall Leaf Collection" guidance on the City's website, the City generally makes three passes through the City with one final collection occurring after the final rake out deadline (November 20, 2022).
 - b. It is believed that the City complies with this criteria as the adequate number of collection cycles is completed. It is possible that the City's program may need to be extended to the end of November to meet the requirements. The WDNR should be consulted to verify how long collection activities should occur.

With meeting the criteria above, there are two levels of TP reduction that can be achieved by leaf management activities under the current guidance document. These levels are described below:

- 1. Numeric Credit Option #1: Within 24-hours of leaf collection the streets within the collection area are cleaned with either a mechanical or high-efficiency street cleaner. A 17 percent TP reduction credit is achieved under this option.
 - a. Currently the City is not believed to be complying with this requirement due to resource limitations.
- 2. Numeric Credit Option #2: Weekly street cleaning occurs with high efficiency street cleaners in addition to the loose-leaf collection. A 25 percent TP reduction credit is achieved under this option.
 - a. Currently, the City does not feel it has the resources to implement a weekly street cleaning program and therefore would not be eligible for Credit Option #2 at this time.

4.5.4 Leaf Management Program Potential Modification Considerations and Costs

Based on Section 4.5.3, the City's current leaf management program would not qualify for any additional leaf management credit. However, the City has explored the possibility of modifying its program and conducted a small leaf collection pilot study in 2019. For this project, an analysis of the potential phosphorus reduction and cost associated with modifying the City's program to meet the WDNR Credit Option #1 was calculated. The "with controls" database was utilized to calculate the TP



pollutant loads from eligible areas and the associated numeric credit was applied for the identified eligible land use areas as summarized in Table 4-10.

Table 4-10. Potential Leaf Management Total Phosphorus Load Reduction Results						
TMDL Reachshed	Total Potential Eligible Area (ac)	No Controls TP Load (lbs/year)	With Controls TP Load (Ibs/year)	With Controls TP Reduction % (compared to no-controls total load)	Potential TP Reduction Increase Due to Leaf Collection (Ibs/year)	Potential TP Reduction % Increase Due to Leaf Collection
MN-10	74.5	66.4	61.0	8.1%	5.9	8.9%
MN-12	143.3	130.9	122.4	6.5%	13.7	10.5%
MN-13	22.6	21.9	20.6	5.5%	2.5	11.5%
MN-14	141.2	135.4	120.0	11.4%	7.6	5.6%
MN-15	52.6	51.2	48.4	5.6%	5.9	11.4%
MN-16	901.3	900.1	832.0	7.6%	84.9	9.4%
Totals	1,335.5	1,306.0	1,204.5		120.5	

The impact of a potential leaf management program to reduce TP on a Citywide basis is shown in Table 4-11. There is no credit for TSS in this program, so TSS loads and reductions would remain unchanged.

Table 4-11. Proposed Leaf Management Pollutant Loading Results						
TMDL Reachshed	Analyzed Area (ac)	With Controls TP Load Reduction (lbs/year)	Potential TP Load Reduction (lbs/year)	Potential TP Load Reduction %		
MN-10	1,046	72	78	8.3%		
MN-12	1,775	217	230	14.8%		
MN-13	152	8	11	7.5%		
MN-14	509	47	56	11.6%		
MN-15	133	8	14	10.5%		
MN-16	2,307	301	390	17.4%		
Totals	5,921	654	780	14.2%		

As noted previously, the City conducted a pilot test in 2019 to compare the effort and cost of modifying the City's leaf collection activities to be more aligned with the WDNR's criteria in order to be eligible to obtain the additional phosphorus reductions. The pilot consisted of modifying the leaf collection process for a portion of the leaf collection operation that year. Table 4-9 summarizes a comparison of the two programs based on this relatively small pilot project.


Table 4-12. P	rogram Cost Comparisor	1
Comparative Element	Current Leaf Collection Method	Modified Leaf Collection Program
Leaves Collected (tons)	5,572	149
Labor Cost	127,842	8,272
Labor Cost Per Ton	23	56
Equipment Cost	57,859	8,411
Equipment Cost Per Ton	10	56
Total Cost	185,701	16,683
Total Cost Per Ton	33	112

Based on the pilot, the results suggest that a modified leaf collection program sufficient to meet the WDNR's criteria could be almost 3.4 times the cost of the current program. However, it could be suggested that the staff's limited experience with this approach of leaf management resulted in inefficiencies and over time the program could increase in efficiency. It was also initially assumed that the City has the staff resources and equipment to be able to implement a program change.

In 2021, labor and equipment costs over the 49 days of the leaf management operation, were \$131,301 and \$93,444.90 respectively for a total of \$224,745.90. Total program costs have generally risen and estimating an inflation of 5 percent from 2021 costs, the current program costs are estimated at approximately \$235,000. If one were to assume that a modified leaf management program cost increase was only 3 times that of the current program, then using the estimated 2022 program cost, the incremental increase in cost for the program would be approximately \$470,000.

Applying this cost to the potential phosphorus reduction credit of 120.5 lbs/year under Alternative 1 would result in a cost of over \$3,900/lb of TP. To implement Alternative 2 would require adding in the annual street cleaning Alternative 2 costs of approximately \$380,000/yr (for incremental staff needs only), resulting in a much higher annual program increase but a slightly better cost effectiveness of \$3,800/lb of TP. However, based on feedback from the City on the feasibility of implementing a weekly street cleaning program, this alternative is also not considered feasible at this time.

Additionally, in discussion with the City as part of the alternatives evaluation workshop, there was a consensus that additional costs and challenges exist to implementing the program. The City has not conducted an equipment needs evaluation but anticipates additional equipment would be needed to collect leaves based on the pilot program and also to meet the street cleaning requirements. Additionally, as discussed as part of the street cleaning alternatives evaluation, additional staff time would be needed for the program but in a very focused timeframe during the year. It is possible, and reasonable, that staff could be shared between the leaf management and street cleaning program efforts. Finally, the City is concerned with the physical constraint that exist to implement a program of this nature. Terraces on the majority of City streets are very narrow and with the density of trees in the City, are likely unable to contain the leaf matter. This could result in overflow into the street (a violation of program credit requirements) or into sidewalks (a safety concern).

The City does have some areas of wider terraces on the west side and will continue to look into the potential to create a focused implementation of a leaf management program change in the future, especially if these areas are in reachsheds with higher TP reduction goals. In the meantime, the City will make an effort to limit the amount of time that leaves are in the street and in addition to

Brown AND Caldwell

evaluating terrace sizes in areas of the City, will also utilize their extensive GIS tree inventory to see if, based on tree type, other modifications to their leaf management program may be possible to make incremental progress to improve stormwater quality.

4.6 Impacts of Redevelopment

As part of this Citywide water quality plan, it was desired to understand the impacts that future redevelopment of existing areas will have on water quality pollutant loadings. As the City redevelops, there will be an incremental positive impact on the City's overall level of pollutant reduction. A few Wisconsin municipalities are changing their ordinances to require higher levels of pollution control/reduction to place more of the burden on new development and redevelopment sites, such as in the Fox Valley area, but as of the time of this report, no municipalities in the Menomonee River Permit group have done so. These changes can provide increased incremental improvements in water quality but are also impactful to developers and can be challenging to convince development stakeholders (internal and external) to accept such a change.

4.6.1 Redevelopment Impact Potential

The impact of future redevelopment areas on the City's ability to make progress towards meeting the various TMDL reachshed goals was evaluated under two scenarios. The first scenario considered the impact of redevelopment under the City's current ordinance and the second scenario considered the impact of modifying the City's ordinance to require development to achieve the various TMDL reduction targets.

The City's current post-construction stormwater management ordinance requires sites of one acre and larger to reduce TSS by 40 percent for parking lot and road/driveway source areas. This would have an approximate impact of 27 percent reduction in TP following a common rule of thumb used by the WDNR.

Because different land uses and developments have differing source areas and sizes, for the first scenario analysis it was assumed that the resulting impact on a parcel wide basis of the ordinance was a TSS reduction of 30 percent and a TP reduction of 20 percent. From data provided by the City for permit requests, the average number of redevelopment acres per year from 2014 to 2021 was approximately 30 acres. Estimating the impact of redevelopment over 10-, 20-, and 30-years would mean that a corresponding total land area of 300, 600, and 900 acres would redevelop.

To understand the impact this would have on a reachshed basis, the amount of land available to be redeveloped first needs to be estimated. This was accomplished by identifying parcels of one acre or larger in the City that had land uses corresponding to commercial, industrial, institutional, parks, open space, and multifamily residential. The current no-controls for each parcel was then checked based on the evaluations conducted in Section 3 of this report. Those areas that are already achieving a parcel based TSS reduction of 40 percent or greater were removed from consideration as those parcels would need to provide TSS reduction equal to or greater than the current parcel wide performance. Parcels with less than a 40 percent TSS reduction were aggregated on a reachshed basis and the no controls and with controls loads were summed. Potential reachshed loads were then calculated for the available areas by assuming a 30 percent reduction for TSS and 20 percent reduction for TP were achieved. Based on the nearly 2,000 acres of available redevelopment acreage, the percentage of available land area estimated to redevelop over the 10-, 20-, and 30-year time periods is approximately 15, 30, and 45 percent. These reductions were then compared to the reachshed existing reductions with controls, to calculate the potential incremental TSS and TP reductions. The redevelopment acreage was then prorated equally among all reachsheds for 10-, 20-, and 30-year increments to estimate the TSS and TP reductions for each of the





Staff Report

File #: 25-0342

Agenda Date: 3/12/2025

Agenda #: 11.

Approval of Final Payment for Contract 23-60 Fire Station Bunk House Remodel

Submitted by: Chuck Pomerenke, Manager Department: Facilities

Dear Board Members:

J.H. Hasslinger has completed the work of the Fire Station 52 and 53 Bunk house remodel project and work incidental thereto under Contract 23-60 / Project 6624. The work took place at 4187 N. Mayfair Rd and 10525 Watertown Plank Rd.

The final contract value due to the contractor is \$1,010,255.00. The contract award amount was \$909,996.00. The final amount due the contractor is \$50,051.80. There were several change orders for a net increase in the contract of \$100,259.00.

I hereby certify that the work on Contract 23-60 / Project 6624 was completed in a manner satisfactory to the City of Wauwatosa and recommend acceptance of the same by the Board of Public Works.

Sincerely,

Chuck Pomerenke Facilities Manager

Enclosure(s): 23-60 Final Pay Application

Recommendation: Common Council

ALA Docume	nt G702 [™] – 1992		
Application and Certificate for Pa	ayment		
TO OWNER:	PROJECT: Eiro Ctatione #E7 and #E2	APPLICATION NO: 9	Distribution to:
Lity of Wauwatosa	FIFE Stations # 32 and # 33 7775 North Avenue	PERIOD TO: 2/29/2024	OWNER []
Wauwatosa, WI 53213	Wauwautosa, WI 53213	CONTRACT FOR: Fire Stations #52 and #53	ARCHITECT
FROM CONTRACTOR:	VIA ARCHITECT:	CONTRACT DATE: 3/27/2023 CON	NTRACTOR
J.H. HASSINGER, INC.		PROJECT NOS: 2201157-01	FIFID
N60 W16289 Kohler Lane Menomonee Falls, WI 53051		INVOICE NO: 12262	OTHER
CONTRACTOR'S APPLICATION FOR	PAYMENT	The undersigned Contractor certifies that to the best of the Contractor's knowled and helise the Work covered by this Amilionition for pownent has hear conclusion	dge, information
Application is made for payment, as shown below, in co AIA Document G703 TM , Continuation Sheet, is attached.	nnection with the Contract.	with the Contract Documents, that all amounts have been paid by the Contract with the contract Documents, that all amounts have been paid by the Contract	tor for Work for
1. ORIGINAL CONTRACT SUM	<u>\$ 909,996,00</u>	which previous Centrictates for rayinght were issued and payinghts received from that current payment shown herein is now due.	I IIIe Owner, and
2. NET CHANGE BY CHANGE ORDERS	\$ 91,040.00	CONTRACTOR: J.H. HASSINGER WIND DIT SITURATION	
3. CONTRACT SUM TO DATE (Line I ± 2)	s <u>1,001,036.00</u>	By: Date: 0 Date: 0 Date: 0 Date: 0 Dot	hear
4. TOTAL COMPLETED & STORED TO DATE (Column G o	on G703) \$ 1,001,036.00	State of: WI	
5. RETAINAGE:		County of: Waukesha	
a. $\mathbf{\overline{5}}^{6}$ of Completed Work		Subscribed and sworn to before day of Following to M.M.	1
b. 0% of Stored Material		ANTE DELEVERT	~
(Column F on G703)	s0.00_	Notary Public: Shelly Ritzowing here of 0.4	
Total Retainage (Lines 5a + 5b, or Total in Column I	of G703) \$ 50,051.80	My commission expires: 8/1/2027/10/00000000000000000000000000000	
3. TOTAL EARNED LESS RETAINAGE	\$ 950,984.20	ARCHITECT'S CERTIFICATE FOR PAYMENT	
(Line 4 minus Line 5 Total)	© 040 148 80	In accordance with the Contract Documents, based on on-site observations and the this application, the Architect certifies to the Owner that to the best of the Archite	data comprising ect's knowledge,
(Line 6 from prior Certificate)		information and belief the Work has progressed as indicated, the quality of accordance with the Contract Documents, and the Contractor is entitled to p	the Work is in payment of the
3. CURRENT PAYMENT DUE	\$ 1,835.40	AMOUNT CERTIFIED.	
3. BALANCE TO FINISH, INCLUDING RETAINAGE		AMOUNT CERTIFIED	
(Line 3 minus Line 6)	\$ 50,051.80	(Attach explanation if amount certified differs from the amount applied. Initial all fi Application and on the Continuation Sheet that are changed to conform with the am	igures on this nount certified.)
CHANGE ORDER SUMMARY	ADDITIONS DEDUCTIONS	ARCHITECT:	
Total changes approved in previous months by Owner 3	§ 89,108.00 \$ 0.00	By: Date:	
Cotal approved this month	s 1,932.00 \$ 0.00	This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the	he Contractor
TOTAL \$	91,040.00 \$ 0.00	named herein. Issuance, payment and acceptance of payment are without prejudice t	to any rights of
NET CHANGES by Change Order	91,040.00		
CAUTION: You should sign an original AIA Contract D	ocument, on which this text appears in R	ED. An original assures that changes will not be obscured.	
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SHEET AIA DOCUMENT G703 (Instructions on reverse side) PAGE OF PAGE	TION AND CERTIFICATE FOR PAYMENT,APPLICATION NO.:Page 3Certification, is attached.APPLICATION DATE:9are stated to the nearest dollar.PERIOD TO:2/26/2024ere variable retainage for line items may apply.ARCHITECT'S PROJECT NO.:2/29/2024	C D E F G 2201157-01 I	WORK COMPLETED MATERIALS TOTAL BALANCE	WORKSCHEDULEDFROM PREVIOUSPRESENTLYCOMPLETED%THOREIAINAGEWORKVALUEAPPLICATIONTHIS PERIODSTOREDNOT INTO DATE(G ÷ C)FINISHRATE)(D + E)(D + E)D OR E)(D + E + F)(G - G)(G - G)(G - G)RATE)	1,932.00 0.00 1,932.00 0.00 1,932.00 100 96.60 96.60	1,001,036.00 999,104.00 1,932.00 0.00 1,001,036.00 100 50,051.80	INUATION SHEET FOR G702 • 1992 EDITION • AIA® • ©1992 • THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK C 20006.5300 • WAR PUNK- Indigensed introconving violates U.S. convrigitit laws and will subject the violator to legial prosecution.
I SHEET AIA	CATION AND CERTIFICATE FOR PAYMENT, d Certification, is attached. s are stated to the nearest dollar. where variable retainage for line items may	C	DM M	DF WORK SCHEDULED FROM PRE VALUE APPLICAT (D + 1)	1,932.00	1,001,036.00	NTINUATION SHEET FOR G702 • 1992 EDITION • AIA
CONTINUATION	AIA Document G702, APPLIC containing Contractor's signed In tabulations below, amount: Use Column I on Contracts w	AB		ITEM NO.	23 CO#5		AIA DOCUMENT G703 • CO

Application and Certificate for Payment TO OWNER: PROJECT: TO OWNER: PROJECT: City of Wauwatosa PROJECT: T725 W. North Ave. 7725 North Ave. Wauwatosa, WI 53213 PROJECT: T725 W. North Ave. 7725 North Ave. Wauwatosa, WI 53213 PROM CONTRACTOR: T725 W. North Ave. Wauwautosa, WI 53213 FROM CONTRACTOR: NIA ARCHITECT: J.H. HASSINGER, INC. WIA ARCHITECT: J.H. HASSINGER, INC. W	ins #52 and #53 th Avenue 53, WI 53213	() ()
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1. ORIGINAL CONTRACT SUM 2. NET CHANGE BY CHANGE ORDERS \$ 3. CONTRACT SUM TO DATE (<i>Line 1 ± 2</i>) \$ 5 \$	Jiluacı.	with the Contract Documents, that all amounts have been paid by the Contractor for Work for
2. NET CHANGE BY CHANGE ORDERS	00,996,000	which previous Certificates for rayment were issued and payments received from the Owner, and that current payment shown herein is now due.
3. CONTRACT SUM TO DATE (<i>Line 1 ± 2</i>)	91,040.00	CONTRACTOR: J.H. HASSINGER, INC.
	1,001,036.00	By: Date: And Dord
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5. RETAINAGE:		County of: Waukesha
a. 0% of Completed Work		Subscribed and sworn to befere TARY TARY
(Columns $D + E$ on $G7(03)$ 5	0.00	me this
(Column F on G703) \$	0.00	Notary Public: Shelly Ritzow
Total Retainage (Lines 5a + 5b, or Total in Column 1 of G703) \$	0.00	My commission expires: 8/1/2027U = WULLER W
6. TOTAL EARNED LESS RETAINAGE	1,001,036,00	ARCHITECT'S CERTIFICATE FOR PAYMENT
(Line 4 minus Line 5 Total)	050 084 20	In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's knowledge,
(Line 6 from prior Certificate)		information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the
8. CURRENT PAYMENT DUE	50,051.80	AMOUNT CERTIFIED.
9. BALANCE TO FINISH, INCLUDING RETAINAGE		AMOUNT CERTIFIED
(Line 3 minus Line 6) \$	0.00	(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount certified.)
CHANGE ORDER SUMMARY ADDITIONS DE	DEDUCTIONS	ARCHITECT:
Total changes approved in previous months by Owner 8 91,040.00 \$	0.00	By: Date:
Total approved this month \$ 0.00 \$	0.00	This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor
TOTAL \$ 91,040.00	0.00	named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract
NET CHANGES by Change Order \$ 91,040.00		
CAUTION: You should sign an original AIA Contract Document, on which this	this text appears in R	teb. An original assures that changes will not be obscured.

Ö	DNTINUATION SHEET	-	AIA DOC	CUMENT G70	3 (Instructions o	n reverse side)		PAG	E OF PAGES
AIA con ln t Use	Document G702, APPLICATION AND taining Contractor's signed Certification abulations below, amounts are stated to Column I on Contracts where variable	CERTIFICATE FOF 1, is attached. the nearest dollar retainage for line	t PAYMENT, items may apply.		AR	APPLICATION APPLICATION PERIC CHITECT'S PROJEC	NN NO.: V DATE: OD TO: CT NO.:	10 2/26/2024 2/29/2024	Page 2
1	B	C	D	ш	H	IJ		10-/511022	-
			WORK CO	MPLETED	MATERIALS	TOTAL		BALANCE	
ΕŻ	EM DESCRIPTION OF WORK O.	SCHEDULED VALUE	FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD	PRESENTLY STORED (NOT IN D OR E)	AND STORED TO DATE (D+E+F)	(G ÷ C)	TO FINISH (C - G)	(IF VARIABLE) RATE)
Ч	Bonds	11,500.00	11,500.00	0.00	0.00	11,500.00	100	0.00	0.00
2	General Conditions	87,850.00	87,850.00	0.00	0.00	87,850.00	100	0.00	0.00
m ·	Demolition	43,500.00	43,500.00	0.00	0.00	43,500.00	100	0.00	0.00
41	Concrete	2,100.00	2,100.00	0.00	0.00	2,100.00	100	0.00	0.00
n u	Carpentry	58,000.00	58,000.00	0.00	0.00	58,000.00	100	0.00	0.00
חס	Carpenry Materials	00.994.00	00.4964,08	00.0	0.00	00.466,60	100	0.00	00.0
~ 00	Drwall	108,800.00	108,800.00	0.00	0.00	108,800.00	100	0.00	0.00
م	Acoustical Ceilings	9,300.00	9,300.00	0.00	0.00	9,300.00	100	0.00	00.00
10	Resilient Flooring	45,000.00	45,000.00	0.00	0.00	45,000.00	100	0.00	0.00
11	Specialty Flooring	6,800.00	6,800.00	0.00	0.00	6,800.00	100	0.00	00.00
12	Painting	21,000.00	21,000.00	0.00	0.00	21,000.00	100	0.00	00.00
13	Accessories	5,500.00	5,500.00	00.00	0.00	5,500.00	100	0.00	0.00
14	Furnishings	11,000.00	11,000.00	0.00	0.00	11,000.00	100	0.00	0.00
ų	Plumbing	83,000.00	83,000.00	00.00	0.00	83,000.00	100	0.00	0.00
16	HVAC	105,800.00	105,800.00	00.00	0.00	105,800.00	100	0.00	0.00
1	P Electrical	143,000.00	143,000.00	0.00	0.00	143,000.00	100	0.00	0.00
18	Alternate 1	24,852.00	24,852.00	0.00	0.00	24,852.00	100	0.00	0.00
19	CO#1	76,736.00	76,736.00	0.00	0.00	76,736.00	100	0.00	0.00
20	0 CO#2	8,573.00	8,573.00	0.00	0.00	8,573.00	100	0.00	00.00
21	CO#3	2,697.00	2,697.00	0.00	0.00	2,697.00	100	0.00	00.00
22	CO#4	1,102.00	1,102.00	00.0	0.00	1,102.00	100	0.00	0.00
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Mark Docume	nt G702 ["]	" - 1992	
Application and Certificate for Pa	ayment		
TO OWNER: City of Wauwatosa	PROJECT: Fire Statior	ıs #52 and #53	APPLICATION NO: 11 Distribution to PERIOD TO: 1/10/2025
//25 W. North Ave. Wauwatosa, WI 53213 FROM CONTRACTOP.	Vauwauto	i Avenue sa, WI 53213	CONTRACT FOR: Fire Stations #52 and #53 ARCHITECT
J.H. HASSINGER, INC.	VIA AKCHILECI:		CONTRACT DATE: 3/27/2023 CONTRACTOR CONTRACTOR
N60 W16289 Kohler Lane Menomonee Falls, WI 53051			INVOICE NO: 2201157-01 / FIELD
CONTRACTOR'S APPLICATION FOR	PAYMENT		The undersigned Contractor certifies that to the best of the Contractor's knowledge, informatio
AlA Document G703 TM , Continuation Sheet, is attached.	nnection with the Contr.	act.	with the Contract Documents, that all amounts have been paid by the Contractor for Work fi
1. ORIGINAL CONTRACT SUM	\$ 	00.966,606	which previous Centrificates for Fayment were issued and payments received from the Owner, and that current payment shown herein is now due.
2. NET UTAINGE BT UTANGE URDERS	~ ·	100,259.00	CONTRACTOR: J.H. HASSINGERNUNDING
4. TOTAL COMPLETED & STORED TO DATE (Column G o	n G703) \$	1.010.255.00	By: Date: 110 100
5. RETAINAGE:			County of: Waukesha
$\overline{(Columns D + E on G703)}$	÷		Subscribed and sworn to before
b. 90 of Stored Material		0.00	Internis JULIC AND ALL ON THE COMMUNICATION
(Column F on G703)	es.	0.00	Notary Public: Shelly Ricow
Total Retainage (Lines 5a + 5b, or Total in Column I	of G703) \$	00.0	My commission expires: 8/1/2027 WEVENULT LAZA
6. TOTAL EARNED LESS RETAINAGE	\$	1,010,255.00	ARCHITECT'S CERTIFICATE FOR PAYMENT
(Line 4 minus Line 5 Total) 7. LESS PREVIOUS CERTIFICATES FOR PAYMENT	\$	1,001,036.00	In accordance with the Contract Documents, based on on-site observations and the data comprisin this application, the Architect certifies to the Owner that to the best of the Architect's knowledge
(Line 6 from prior Certificate)			information and belief the Work has progressed as indicated, the quality of the Work is i accordance with the Contract Documents, and the Contractor is entitled to payment of the
0 BALANCE TO EINIGU MICHIGUE STATISTICS	\$	9,219.00	AWOONI CENTIFIED.
3. DALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 minus Line 6)	8	0.00	AMOUNT CERTIFIED
CHANGE ORDER SUMMARY	ADDITIONS	EDUCTIONS	ARCHITECT:
Total changes approved in previous months by Owner	5 91,040.00 ⁵	0.00	By: Date:
1 Otal approved this month TOTAI 9	9,219.00%	0.00	This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor
NET CHANGES by Change Order	100.259.00	0.00	named nerem. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.
CAUTION: You should sign an original AIA Contract D	ocument, on which th	is text appears in R	KED. An original assures that changes will not be obscured.
AIA Document G702 ^{1%} – 1992. Copyright © 1953, 1963, 1965, and International Treatles. Unauthorized reproduction or dist possible under the law. Purchasers are permitted to reproduce t counsel, copyright@aia.org.	1971, 1978, 1983 and 199 ribution of this AIA [®] Doci en (10) copies of this docu	2 by The American Inst ument, or any portion ment when completed.	titule of Architects. All rights reserved. WARNING: This AIA [®] Document is protected by U.S. Copyright Law of it, may result in severe civil and criminal penalities, and will be prosecuted to the maximum extent To report copyright violations of AIA Contract Documents, e-mail The American Institute of Architects' legal

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AIA DOCUMENT G703 (Instructions on reverse side)

PAGES G703-1992 RETAINAGE (IF VARIABLE) RATE) $\begin{array}{c} 0.00\\$ 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 age z OF PAGE 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 BALANCE TO FINISH (C - G) 2201157-01 1/10/2025 1/10/2025 Η 11 APPLICATION DATE: PERIOD TO: ARCHITECT'S PROJECT NO .: ΰ APPLICATION NO.: 100 100 100 100 100 100 100 % ·ŀ 3 AIA DOCUMENT G703 • CONTINUATION SHEET FOR G702 • 1992 EDITION • AIA[®] • ©1992 • THE AMERICAN INSTITUTE OF ARCHITECTS, 1735 NEW YORK AVENUE, N.W., WASHINGTON, D.C. 20006-5292 • WARNING: Unlicensed photocopying violates U.S. copyright laws and will subject the violator to legal prosecution. TOTAL COMPLETED AND STORED TO DATE (D+E+F) G 9,300.00 21,000.00 5,500.00 11,000.00 83,000.00 105,800.00 143,000.00 24,852.00 76,736.00 8,573.00 2,697.00 1,102.00 11,500.00 87,850.00 43,500.00 2,100.00 58,000.00 85,994.00 57,000.00 08,800.00 45,000.00 6,800.00 MATERIALS PRESENTLY STORED (NOT IN D OR E) 0.00 ц THIS PERIOD 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 00.0 0.00 0.00 0.00 0.00 0.00 0.00 8.0 Э WORK COMPLETED FROM PREVIOUS APPLICATION (D + E) Use Column I on Contracts where variable retainage for line items may apply. 9,300.00 45,000.00 21,000.00 11,000.00 83,000.00 .05,800.00 43,000.00 24,852.00 11,500.00 87,850.00 43,500.00 2,100.00 58,000.00 85,994.00 57,000.00 08,800.00 6,800.00 5,500.00 76,736.00 8,573.00 2,697.00 1,102.00 AIA Document G702, APPLICATION AND CERTIFICATE FOR PAYMENT, A In tabulations below, amounts are stated to the nearest dollar. 5,500.00 8,573.00 SCHEDULED 2,697.00 1,102.00 11,500.00 37,850.00 43,500.00 2,100.00 58,000.00 85,994.00 57,000.00 08,800.00 9,300.00 45,000.00 6,800.00 21,000.00 11,000.00 83,000.00 05,800.00 43,000.00 24,852.00 76,736.00 containing Contractor's signed Certification, is attached. VALUE υ DESCRIPTION OF WORK Doors and Hardware Carpentry Materials **Seneral Conditions** Acoustical Ceilings В Specialty Flooring **Resilient Flooring** Accessories ⁻urnishings Demolition Alternate Carpentry Jumbing Concrete ainting Electrical Drywall HVAC C0#3 Bonds 20#2 CO#4 CO#1 ITEM NO. A **m m** 90

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Staff Report

File #: 25-0408

Agenda Date: 3/12/2025

Agenda #: 12.

Project Updates

Submitted by:

Nick Deming, Construction Manager Department: Engineering

23-90 - 2023 Fiber

- Work has started to finish conduit and handhole installation within WisDOT right of way.
- Work is on-going.

• <u>Elm Grove Water Main Extension</u>

- The remaining water main has been dedicated to the City of Wauwatosa
- Additional lateral work will resume once weather is favorable in the spring of 2025.

• <u>24-01 - Potter Road & 109th St.</u>

• Work on 109th St. is resuming the week of March 10th.

<u>24-02 - 116th St. Park</u>

- Work on the retaining wall on the south end of the project is ongoing along with certain items around the playground area.
- Work is expected to pick up on late March and early April as the weather breaks.

25-01 Wisconsin Avenue

- Preconstruction meeting to be held Friday, March 14th
- Work expected to begin in late March or Early April

25-07 Watertown Plank/116th/115th

- Preconstruction meeting to be held in Early April
- Work expected to begin around Mid-April

Wisconsin Ave Bridge

• WE Energies Gas is closing Wisconsin Ave ahead of the Wisconsin Avenue Bridge project the week of March 10th.