

AGENDA FOR REGULAR MEETING OF COMMON COUNCIL

To be held on Tuesday, February 21, 2023 at 6:30 P.M. in the City Hall Council Chambers, 30 West Central Street, Chippewa Falls, WI

The meeting may be viewed via livestream at the www.chippewafalls-wi.gov/council livestream link.

1. CLERK CALLS THE ROLL
2. APPROVAL OF MINUTES OF PREVIOUS MEETING
 - (a) Approve minutes of the Council Meeting of February 7, 2023.
3. PERSONAL APPEARANCES BY CITIZENS - No matter presented by a citizen shall be acted on at the meeting except in emergencies affecting the public health, safety or welfare.
4. PUBLIC HEARINGS – None
5. COMMUNICATIONS – None
6. REPORTS
 - (a) Consider Board of Public Works minutes of February 13, 2023.
 - (b) The Plan Commission meeting of February 13, 2023 was cancelled due to a lack of agenda items.
7. COUNCIL COMMITTEE REPORTS in the order in which they are named in Section 2.21 of the Municipal Code
 - (a) Consider Joint Committee #1 Revenues, Disbursements, Water, and Wastewater and Committee #2 Labor Negotiations, Personnel, Policy and Administration minutes of February 21, 2023. (*minutes to be distributed prior to meeting*)
 - (b) Park Board minutes of February 14, 2023.
 - (c) Library Board minutes of January 11, 2023.
8. APPLICATIONS
 - (a) Consider Application for Temporary Class “B” Beer Retailer’s License from the McDonell Alumni Association for the McDonell Alumni Weekend to be held at McDonell Central Catholic High School, 1316 Bel Air Blvd, on March 31 – April 1, 2023.
 - (b) Consider Street Use Permit Application from Roger Skifstad for the Annual Chilly Chippewa 5K/1 mile Run/Walk on March 4, 2023 utilizing various City Streets (see attached map).
9. PETITIONS - None
10. MAYOR ANNOUNCES APPOINTMENTS - None
11. MAYOR’S REPORT - None
12. REPORT OF OFFICERS - None
13. ORDINANCES
 - (a) First Reading of **Ordinance #2023-02 Entitled:** An Ordinance Establishing the Width of Pavement on Chippewa Street (Canal Street to Depot Street) at 30 Feet Face to Face or Curbs.
 - (b) First Reading of **Ordinance #2023-03 Entitled:** An Ordinance Establishing the Width of Pavement on Columbia Street (Carson Street to Superior Street) at 30 Feet Face to Face of Curbs.
 - (c) First Reading of **Ordinance #2023-04 Entitled:** An Ordinance Establishing the Width of Pavement on Walnut Street (Pear Street to Main Street) at 30 Feet Fact to Face of Curbs.
 - (d) First Reading of **Ordinance #2023-05 Entitled:** An Ordinance Establishing the Width of Pavement on Columbia Street (Superior Street to Island Street) at 36 Feet Face to Face of Curbs.
 - (e) First Reading of **Ordinance #2023-06 Entitled:** An Ordinance Establishing the Width of Pavement on Walnut Street (Main Street to Woodward Avenue) at 38 Feet Face to Face of Curbs.
 - (f) First Reading of **Ordinance #2023-07 Entitled:** An Ordinance Establishing the Width of Pavement on Pearl Street (Mansfield Street to Stanley Street) at 38 Feet Face to Face of Curbs.
14. RESOLUTIONS - None

15. OTHER NEW OR UNFINISHED BUSINESS AS AUTHORIZED BY LAW

(a) Discuss and consider Development Agreement between the City of Chippewa Falls and Park West Townhomes, LLC (Park West Phase III).

16. CLAIMS

(a) Consider claims as recommended by the Claims Committee.

17. CLOSED SESSION – None

18. ADJOURNMENT

The Claims Committee will meet at 6:00 PM to review the claims of various boards and departments of the City.

NOTE: REASONABLE ACCOMMODATIONS FOR PARTICIPATION BY INDIVIDUALS WITH DISABILITIES WILL BE MADE UPON REQUEST. FOR ADDITIONAL INFORMATION OR TO REQUEST THIS SERVICE, CONTACT THE CITY CLERK AT 726-2719.

Due to COVID-19, public attendance is at your own risk.

**Please note that attachments to this agenda may not be final and are subject to change.
This agenda may be amended as it is reviewed.**

CERTIFICATION OF OFFICIAL NEWSPAPER

I, hereby, certify that a copy of this notice has been posted on the bulletin board at City Hall and a copy has been given to the Chippewa Herald on February 17, 2023 at 10:15 am by BNG.

MINUTES OF THE REGULAR MEETING OF THE COMMON COUNCIL

The regular meeting of the Common Council of the City of Chippewa Falls was held on Tuesday, February 7, 2023 in the City Hall Council Chambers. Mayor Greg Hoffman called the meeting to order at 6:30 pm. The Pledge of Allegiance was recited.

CLERK CALLS THE ROLL

Council Members present: John Monarski, Rob Kiefer, Chris Gilliam, Chuck Hull, Heather Martell, Paul Nadreau, and Jason Hiess.

Also Present: City Attorney Robert Ferg, Finance Manager/Treasurer Lynne Bauer, City Engineer/Public Works Director/Utility Manager Rick Rubenzer, City Planner/Transit Manager Brad Hentschel, Building/Zoning Inspector Paul Lasiewicz, Police Chief Matt Kelm, Fire Chief Jason Thom, Library Director Joe Niese, Scott Teigen of Kwik Trip, City Clerk Bridget Givens, and those on the attached sign in sheet.

APPROVAL OF MINUTES OF PREVIOUS MEETING

(a) Motion by Hiess/Kiefer to approve the minutes of the Council Meeting of January 17, 2023. **All present voting aye, motion carried.**

PERSONAL APPEARANCES BY CITIZENS - None

PUBLIC HEARINGS - None

COMMUNICATIONS - None

REPORTS

(a) The Board of Public Works meeting of January 23, 2023 was cancelled due to a lack of agenda items.

COUNCIL COMMITTEE REPORTS in the order in which they are named in Section 2.21 of the Municipal Code

(a) Motion by Monarski/Hull to approve the Joint Committee #1 Revenues, Disbursements, Water, and Wastewater and Committee #2 Labor Negotiations, Personnel, Policy and Administration minutes of February 7, 2023. Additional discussion was had relative to the flashing beacons that will be placed on the "Fire Station Ahead Signs" near Fire Station No. 1. **Roll Call Vote: Aye – Monarski, Hull, Martell, Nadreau, Hiess, Kiefer, Gilliam. Motion carried.**

(b) Motion by Kiefer/Gilliam to approve the Committee #3 Transportation, Construction, Public Safety and Traffic minutes of January 25, 2023. **Roll Call Vote: Aye – Kiefer, Gilliam, Hull, Martell, Nadreau, Hiess, Monarski. Motion carried.**

(c) Motion by Kiefer/Gilliam to approve the Committee #3 Transportation, Construction, Public Safety and Traffic minutes of February 1, 2023. Councilor Monarski questioned if a provision could be added to the Fireworks Permit which would restrict minors from making fireworks sales. Attorney Ferg will review statute and work with the Clerk on implementation. **Roll Call Vote: Aye – Kiefer, Gilliam, Hull, Martell, Nadreau, Hiess, Monarski. Motion carried.**

(d) Motion by Monarski/Hiess to approve the Department Head Review Committee minutes of January 18, 2023. **Roll Call Vote: Aye – Monarski, Hiess, Kiefer, Gilliam, Hull, Martell, Nadreau. Motion carried.**

APPLICATIONS

Motion by Monarski/Kiefer to consider items (a) – (b) in one motion. **All present voting aye, motion carried.**

Motion by Monarski/Kiefer to approve items (a) – (b) as follows:

(a) Application for Temporary Class "B"/"Class B" Beer and Wine Retailer's License from the Chippewa Falls Senior High School Athletic Booster Club for the Booster Club Extravaganza to be held at the Northern Wisconsin State Fairgrounds, 225 Edward Street, on April 22, 2023.

(b) Application for Class "E" Dance and Live Music License from the Chippewa Falls Senior High School Athletic Booster Club for the Northern Wisconsin State Fairgrounds, 225 Edward Street, on April 22, 2023.

All present voting aye, motion carried.

PETITIONS - None

MAYOR ANNOUNCES APPOINTMENTS - None

MAYOR'S REPORT - None

REPORT OF OFFICERS - None

ORDINANCES

(a) **Motion by Hiess/Nadreau** to approve **Ordinance #2023-01 Entitled:** An Amended Ordinance Attaching Chippewa Crossing Territory to the City of Chippewa Falls. **Roll Call Vote: Aye – Hiess, Nadreau, Monarski, Kiefer, Gilliam, Hull, Martell. Motion carried.**

RESOLUTIONS

(a) **Motion by Hiess/Hull** to approve **Resolution #2023-05 Entitled:** Resolution Final Plat of Park West III. **Roll Call Vote: Aye – Hiess, Hull, Martell, Nadreau, Monarski, Kiefer, Gilliam. Motion carried.**

OTHER NEW/UNFINISHED BUSINESS

(a) Scott Teigen of Kwik Trip presented the Sign Variance Request to place an 80' sign at their new location on Chippewa Crossing Boulevard. The results of Kwik Trip's study indicated that the sign should be at least 80' for proper visibility for the three entities that will be reflected on the sign; namely, Kwik Trip, Festival, and Culvers. Concerns were expressed including the significant deviation from the ordinance height of 30', residential impact, and impact on the Fire Station. **Motion by Kiefer/Monarski** to approve the Sign Variance Request of Kwik Trip to place an 80' sign at their new location on Chippewa Crossing Boulevard. **Roll Call Vote: Aye – Kiefer, Monarski, Gilliam, Hull, Martell, Nadreau, Hiess. Motion carried.**

CLAIMS

(a) **Motion by Kiefer/Hiess** to approve the claims as recommended by the Claims Committee.

City General Claims:	\$162,669.70
Authorized/Handwritten Claims:	\$388,414.63
Department of Public Utilities:	\$148,838.64
Total of Claims Presented	<u>\$699,922.97</u>

Roll Call Vote: Aye – Kiefer, Hiess, Monarski, Gilliam, Hull, Martell, Nadreau. Motion carried.

(b) **Motion by Kiefer/Hiess** to refer the claim of Joshua Radke, 637 Macomber Street, to the insurance company. **All present voting aye, motion carried.**

(c) **Motion by Nadreau/Kiefer** to refer the claim of Mary Rudd, 3201 60th Ave, Elk Mound, to the insurance company. **All present voting aye, motion carried.**

CLOSED SESSION

(a) The Council did not enter Closed Session nor was there any discussion or action taken on the agenda item below.

Closed Session under Wis. Stats. Sec. 19.85(1)(e) for "deliberating or negotiating the purchasing of public properties, the investing of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a Closed Session" to discuss and consider the following:

- a. All matters relative to procurement of a satisfactory Development Agreement with Chippewa Crossing Partners, LLC; WW Chippewa Falls, LLC; TD Chippewa Falls, LLC; SMW Chippewa Falls, LLC; MKB Chippewa, LLC; and CFX Properties, LLC.

ADJOURNMENT

Motion by Monarski/Martell to adjourn at 7:10 pm. **All present voting aye, motion carried.**

Submitted by:
Bridget Givens, City Clerk

CITY COUNCIL ATTENDANCE SHEET - February 7, 2023

NAME	ADDRESS
Scott Tergon	Kwik Trip
Jeremy Skaw - RLS	1871 186 th St CF

**CITY OF CHIPPEWA FALLS
BOARD OF PUBLIC WORKS
MEETING MINUTES
MONDAY, FEBRUARY 13, 2023 – 5:30 PM**

The Board of Public Works met in City Hall on Monday, February 13, 2023 at 5:30 PM. Attending were Mayor Greg Hoffman, Director of Public Works Rick Rubenzer P.E., Finance Manager Lynne Bauer, Alderperson Jason Hiess and Tom Hubbard.

1. **Motion** by Hubbard, seconded by Bauer to approve the minutes of the January 23, 2023 Board of Public Works meeting. **All present voting aye. MOTION CARRIED.**

2. **Motion** by Hiess, seconded by Hubbard to combine Board of Public Works agenda items 2-6. **All present voting aye. MOTION CARRIED.**

3. The Board of Public Works considered the width, functional classification and sidewalk locations of the following streets proposed for reconstruction in 2023. **Motion** by Hiess, seconded by Hubbard to recommend:
 - a). the common council set the street width of Chippewa Street(Canal Street to Depot Street) at 30 feet face of curb to face of curb, to not add any sidewalk in this section of street and to functionally classify this street as a Local Street.

 - b). the common council set the street width of Columbia Street(Carson Street to Superior Street) at 30 feet face of curb to face of curb, Columbia Street(Superior Street to Island Street) at 36 feet face of curb to face of curb, to keep the existing sidewalks in this section of street in place, replacing all condemnable sidewalks and to functionally classify this street as a Local Street.

 - c). the common council set the street width of Walnut Street(Pear Street to Main Street) at 30 feet face of curb to face of curb, Walnut Street(Main Street to Woodward Avenue) at 38 feet face of curb to face of curb, to replace condemnable sidewalk between Main Street and Duncan Street, to remove sidewalks between Duncan Street and Woodward Avenue and to functionally classify this street as a Local Street.

 - d). the common council set the street width of Prentice Street(Morris Street to First Avenue) at 30 feet face of curb to face of curb, to not add any sidewalk in this section of street and to functionally classify this street as a Local Street.

 - e). the common council set the street width of Pearl Street(Mansfield Street to Stanley Street) at 38 feet face of curb to face of curb, to keep the existing sidewalks in this section of street in place replacing all condemnable sidewalks and to functionally classify this street as a Local Street.
All present voting aye. MOTION CARRIED.

4. **Motion** by Hubbard seconded by Bauer to adjourn. **All present voting aye. MOTION CARRIED.** The Board of Public Works meeting adjourned at 5:32 P.M.


Richard J. Rubenzer, PE
Secretary, Board of Public Works

**CITY OF CHIPPEWA FALLS
BOARD OF PUBLIC WORKS
MEETING MINUTES
MONDAY, JANUARY 9, 2023 - 5:30 PM**

The Board of Public Works met in City Hall on Monday, January 9, 2023 at 5:30 PM. Attending were Mayor Greg Hoffman, Director of Public Works Rick Rubenzer P.E., Finance Manager Lynne Bauer, Alderperson Jason Hiess and Tom Hubbard. Also attending was Assistant City Engineer Bill McElroy P.E.

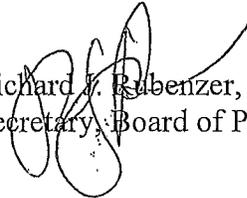
1. **Motion** by Hiess, seconded by Bauer to approve the minutes of the December 12, 2022 Board of Public Works meeting. **All present voting aye. MOTION CARRIED.**

2. Assistant City Engineer Bill McElroy presented the attached Preliminary Resolution Declaring Intent to Levy Special Assessments. It was noted that property owners along streets named on the resolution had received notice of the street improvement for at least each of the five previous years except for Pearl Street. Pearl Street was added in 2022 and each resident was sent a copy of the Board of Public Works minutes stating such. Mr. McElroy noted that the segment of Prentice Street didn't list any utilities for replacement/improvement because properties received utility service from side streets. **Motion** by Rubenzer, seconded by Hiess that the Common Council approve the attached Preliminary Resolution Declaring Intent to Levy Special Assessments for 2023. **All present voting aye. MOTION CARRIED.**

3. The Board of Public Works considered the attached list of 2023 Special Assessment Rates and corresponding resolution. Assistant City Engineer Bill McElroy stated that proposed rates had taken a large increase due to rising costs of materials and labors over the previous couple of years. The Board of Public Works discussed "capping" special assessment rates at certain values or percentages. Any project costs not recovered via special assessments would be funded by the general fund or the wastewater, water or storm utility rate payers. **Motion** by Hiess, seconded by Hubbard to recommend the Common Council approve the proposed special assessment rates for 2023 and the corresponding resolution. **All present voting aye. MOTION CARRIED.**

4. The Board of Public Works considered the attached resolution considering special charges for paving alleys in 2023. Paving downtown alleys was discussed along with considering residential neighborhood alleys. Assistant City Engineer Bill McElroy added the front foot paving special charge was based on previous costs and anticipated material costs for 2023. **Motion** by Hiess, seconded by Hubbard to recommend the Common Council approve the attached special charges for paving alleys in 2023 and the corresponding resolution. **All present voting aye. MOTION CARRIED.**

5. **Motion** by Hiess, seconded by Bauer to adjourn. **All present voting aye. MOTION CARRIED.** The Board of Public Works meeting adjourned at 5:51 P.M.


Richard J. Rubenzer, PE
Secretary, Board of Public Works

**Classification and Width Determination for Chippewa Street
Canal Street to Depot Street
BPW 2/13/2023**

Main Considerations:

- Traffic Count Information (August 2021):
 - Chippewa Street – (Canal Street to Vine Street): 56 vpd
 - Chippewa Street – (Vine Street to Depot Street): 44 vpd
- Existing Width:
 - Chippewa Street – (Canal Street to Vine Street): 34 feet from face to face of curb
 - Chippewa Street – (Vine Street to Depot Street): 25 feet from edge to edge of asphalt
- WisDOT Functional Classification – Local

Other Considerations:

- On-street parking is allowed in this segment of roadway, but not regularly utilized.
- Almost all of the properties abutting Chippewa Street have driveways entering onto Chippewa Street.
- Land Uses: Canal to Vine – single family residential, Vine to Depot – Industrial on west side, residential on east side
- Chippewa Street from Canal to Vine is a bus route for the elementary schools.
- Boulevard trees will be affected by this project regardless of width. Trees present in this section vary in size and some are currently impacting adjacent concrete and will be removed with the project.
- There is no existing sidewalk along Chippewa Street.
- Chippewa St (Canal - Depot) is not in the walk zone for either the elementary and high school.
- No major traffic crash concerns within this segment

Conclusions:

- Chippewa Falls Reconstruction Ordinance Functional Classification – Local Street

Width Recommendation:

- Chippewa Street: (Canal Street to Depot Street) – 30 feet face to face of curb
 - (Existing width – 34 feet face-face (Canal – Vine), 25 feet edge-edge (Vine-Depot))
- Recommend not adding sidewalk in this roadway segment.

Recommendations were based on traffic volumes, pedestrian usage, allowed parking, and impact to the surrounding neighborhood. No major traffic changes are anticipated for the life of the proposed street. A 30 foot wide street would still accommodate the expected traffic volumes and allow for parking while increasing the boulevard width to allow for additional greenscaping, boulevard trees, stormwater management, and snow storage. Curb and gutter will be constructed throughout the block to improve roadway drainage.

Functional Classification of Streets	Number of Traffic Lanes	Curb to Curb Width			
		No Parking		With Parking	
		Range of Normal Widths	Desirable	Range of Normal Widths	Desirable
Local	2	28'-32'	30'	30'-38'	36'
Collector	2	30'-34'	32'	36'-40'	38'
Minor Arterial	2	34'-36'	36'	40'-52'	42'
Principal Arterial - Other than freeways and expressways	2-4	36'-52'	2 ln - 36' 4 ln - 52'	-----	-----

**Classification and Width Determination for Columbia Street
Carson Street to Island Street
BPW 2/13/2023**

Main Considerations:

- Traffic Count Information (September 2021):
 - Columbia Street – (Carson Street to Albert Street): 621 vpd
 - Columbia Street – (Albert Street to Superior Street): 614 vpd
 - Columbia Street – (Superior Street to Pine Street): 635 vpd
 - Columbia Street – (Pine Street to Island Street): 553 vpd
- Existing Width:
 - Columbia Street – (Carson Street to Superior Street): 30 feet from face to face of curb
 - Columbia Street – (Carson Street to Island Street): 38 feet from face to face of curb
- WisDOT Functional Classification – Collector (based on traffic counts/patterns, Central and Governor Streets act more as the collectors in that neighborhood)

Other Considerations:

- From Carson to Superior, on-street parking is allowed in this section, but is minimally used. From Superior to Island, on-street parking is allowed and is more regularly utilized.
- Few driveways in this roadway segment as many of the homes have driveway access to either a side street or an alley.
- Land Uses – Single and Two Family Residential
- Columbia Street from Carson to Pine is a bus route for the elementary schools.
- From Pine Street to Island Street, Columbia Street has approximately 9.5% grade.
- Many retaining walls are utilized throughout Columbia Street.
- Boulevard trees will be affected by this project regardless of width. Trees present in this section vary in size and some are currently impacting adjacent concrete and will be removed with the project.
- Sidewalk is available on both side of the street.
- Columbia St (Carson - Island) is in the walk zone for both the elementary and high school.
- No major traffic crash concerns within this segment

Conclusions:

- **Chippewa Falls Reconstruction Ordinance Functional Classification – Local Street**

Width Recommendation:

- **Columbia Street: (Carson Street to Superior Street) – 30 feet face to face of curb**
 - (Existing width – 30 feet)
- **Columbia Street: (Superior Street to Island Street) – 36 feet face to face of curb**
 - (Existing width – 38 feet)
- **Recommend keeping sidewalk in their current locations, replacing all condemnable walks.**

Recommendations were based on traffic volumes, pedestrian usage, allowed parking, and impact to the surrounding neighborhood. No major traffic changes are anticipated for the life of the proposed street. The 30-foot wide section maintains continuity with the 30 foot wide section to the west as parking is rarely utilized in this section. A 36 foot wide street from Superior to Island would still accommodate the expected traffic volumes and allow for parking while increasing the boulevard width to allow for additional greenscaping, boulevard trees, stormwater management, snow storage and flexibility in driveway grades.

Functional Classification of Streets	Number of Traffic Lanes	Curb to Curb Width			
		No Parking		With Parking	
		Range of Normal Widths	Desirable	Range of Normal Widths	Desirable
Local	2	28'-32'	30'	30'-38'	36'
Collector	2	30'-34'	32'	36'-40'	38'
Minor Arterial	2	34'-36'	36'	40'-52'	42'
Principal Arterial - Other than freeways and expressways	2-4	36'-52'	2 ln - 36' 4 ln - 52'	-----	-----

**Classification and Width Determination for Walnut Street
Pear Street to Woodward Avenue
BPW 2/13/2023**

Main Considerations:

- Traffic Count Information (October 2022):
 - Walnut Street – (Pear Street to Main Street): 51 vpd
 - Walnut Street – (Main Street to Duncan Street): N/A due to amount of parked vehicles
 - Walnut Street – (Duncan Street to Woodward Ave): 98 vpd
- Existing Width:
 - Walnut Street – (Pear Street to Duncan Street): 38 feet from face to face of curb
 - Walnut Street – (Duncan Street to Woodward Ave): 32 feet from edge to edge of asphalt
- WisDOT Functional Classification – Local

Other Considerations:

- On-street parking is allowed in this segment of roadway. The parking is heavily utilized from Main to Duncan. It is little used in the remaining blocks.
- All of the properties abutting Walnut Street have driveways onto Walnut Street.
- Land Uses: Industrial, Single Family Residential, and City Owned Park.
- Walnut Street from Pear to Duncan is a bus route for the elementary schools.
- Boulevard trees will be affected by this project regardless of width. Trees present in this section vary in size and some are currently impacting adjacent concrete and will be removed with the project.
- Sidewalk currently exists on the north side of the street from Main Street to midblock between Duncan and Woodward.
- Walnut St (Pear - Woodward) is not in the walk zone for either the elementary and high school.
- No major traffic crash concerns within this segment

Conclusions:

- Chippewa Falls Reconstruction Ordinance Functional Classification – Local Street

Width Recommendation:

- **Walnut Street: (Pear Street to Main Street) – 30 feet face to face of curb**
 - (Existing width – 38 feet)
- **Walnut Street: (Main Street to Woodward) – 38 feet face to face of curb**
 - (Existing width – 38 feet, 32 feet)
- **Recommend replacing condemnable sidewalk between Main St and Duncan St. Recommend removing sidewalk between Duncan Street and Woodward Avenue.**

Recommendations were based on traffic volumes, pedestrian usage, allowed parking, and impact to the surrounding neighborhood. No major traffic changes are anticipated for the life of the proposed street. A 38 foot wide street is recommended between Main Street and Woodward to accommodate the on-street parking that is heavily utilized and to accommodate east-west pedestrian traffic. The 30-foot width between Pear and Main St would still accommodate the expected traffic volumes and allow for parking while increasing the boulevard width to allow for additional greenscaping, boulevard trees, stormwater management, and snow storage. Curb and gutter will be constructed throughout the segment to improve roadway drainage.

Functional Classification of Streets	Number of Traffic Lanes	Curb to Curb Width			
		No Parking		With Parking	
		Range of Normal Widths	Desirable	Range of Normal Widths	Desirable
Local	2	28'-32'	30'	30'-38'	36'
Collector	2	30'-34'	32'	36'-40'	38'
Minor Arterial	2	34'-36'	36'	40'-52'	42'
Principal Arterial - Other than freeways and expressways	2-4	36'-52'	2 ln - 36' 4 ln - 52'	-----	-----

**Classification and Width Determination for Prentice Street
Morris Street to First Avenue
BPW 2/13/2023**

Main Considerations:

- Traffic Count Information (October 2022):
 - Prentice Street – (Morris Street to Goldsmith Street): 68 vpd
 - Prentice Street – (Goldsmith Street to First Avenue): 61 vpd
- Existing Width:
 - Prentice Street – (Morris Street to Goldsmith Street): 34 feet edge to edge of asphalt
 - Prentice Street – (Goldsmith Street to First Avenue): 25 feet edge to edge of asphalt
- WisDOT Functional Classification – Local

Other Considerations:

- On-street parking is allowed in this section, but not heavily utilized by residents.
- Land Uses – Residential
- Recommended width adjustment will not have a major effect on boulevard trees as most are far enough away from the roadway and no sidewalk is present in this location.
- Pedestrian traffic would be neighborhood generated and no major sources of through pedestrian traffic have been noted. This segment of roadway is not within the walk zone of the school, but is located within a half mile walkshed of Parkview Elementary.
- Sidewalk does not currently exist on either side of the roadway. It is not recommended to add sidewalk due to the low traffic volumes, lack of pedestrian traffic generators, and lack of sidewalk on surrounding streets.
- Prentice Street is a bus route for the elementary schools.

Conclusions:

- **Chippewa Falls Reconstruction Ordinance Functional Classification – Local Street**

Width Recommendation:

- **Prentice Street: (Morris Street to First Avenue) – 30 feet face to face of curb**
 - (Existing width – 25 to 34 feet)
- **Recommend not adding sidewalk in this roadway segment.**

Recommendations were based on limited traffic crash incidents, low pedestrian usage, allowed parking, and impact to the surrounding neighborhood. A uniform width was used throughout the corridor. It was recommended to add curb and gutter throughout the project for uniformity and to help with stormwater drainage. No major traffic changes would be expected for the life cycle of the proposed street.

Functional Classification of Streets	Number of Traffic Lanes	Curb to Curb Width			
		No Parking		With Parking	
		Range of Normal Widths	Desirable	Range of Normal Widths	Desirable
Local	2	28'-32'	30'	30'-38'	36'
Collector	2	30'-34'	32'	36'-40'	38'
Minor Arterial	2	34'-36'	36'	40'-52'	42'
Principal Arterial - Other than freeways and expressways	2-4	36'-52'	2 ln - 36' 4 ln - 52'	-----	-----

**Classification and Width Determination for Pearl Street
Mansfield Street to Stanley Street
BPW 2/13/2023**

Main Considerations:

- Traffic Count Information: N/A – Due to timing of petition for street being reconstructed, traffic counts were not able to be done due to weather. It is anticipated that the traffic counts would be significantly less than those on Mansfield Street take in 2020 and averaged about 220 vpd.
- Existing Width:
 - Pearl Street – (Mansfield Street to Stanley Street): 38 feet from face to face of curb
- WisDOT Functional Classification – Local Street

Other Considerations:

- On-street parking is allowed in this section and is heavily utilized by the nearby church and school.
- Land Uses – Single Family Residential, Institutional
- Pearl Street is a not-bus route for any of the school.
- Boulevard trees will be affected by this project regardless of width. Trees present in this section vary in size and some are currently impacting adjacent concrete and will be removed with the project.
- Sidewalk is present on both sides of the street
- This segment is within the walk zone for the middle and high school and is not served by busses for those students.
- The segment is within close proximity to St Charles Elementary School.
- No major traffic crash concerns within this segment

Conclusions:

- Chippewa Falls Reconstruction Ordinance Functional Classification – Local Street

Width Recommendation:

- Pearl Street: (Mansfield Street to Stanley Street) – 38 feet face to face of curb
 - (Existing width – 38 feet)
- Recommend keeping sidewalk in their current locations, replacing all condemnable walks.

Recommendations were based on traffic volumes, pedestrian usage, allowed parking, and impact to the surrounding neighborhood. No major traffic changes are anticipated for the life of the proposed street. A 38 foot wide street would maintain the consistency of the street widths on Pearl Street as this project is only one block in length.

Functional Classification of Streets	Number of Traffic Lanes	Curb to Curb Width			
		No Parking		With Parking	
		Range of Normal Widths	Desirable	Range of Normal Widths	Desirable
Local	2	28'–32'	30'	30'–38'	36'
Collector	2	30'–34'	32'	36'–40'	38'
Minor Arterial	2	34'–36'	36'	40'–52'	42'
Principal Arterial - Other than freeways and expressways	2–4	36'–52'	2 ln - 36'	-----	-----
			4 ln - 52'		

PARKS, RECREATION & FORESTRY BOARD MEETING
Tuesday, February 14, 2023

1. Call to order by Beth Arneberg at 6:00 p.m.
Roll Call: Members Present: Audrey Stowell, Travis Siebert, Beth Arneberg, Justin Agnew and Reggie Geissler.
Absent: John Abbe and Christopher Gilliam
Staff present: John Jimenez
2. Approval of Minutes: January 10, 2023. **Motion by Siebert/Geissler to approve minutes of January 10, 2023. Motion passed.**
3. Personal Appearances by Citizens. None.

John Abbe arrives.

4. Discuss/Consider Special Event Applications. John J. presents renewal application for Farmers' Market at Allen Park from June to October 2023. **Motion by Arneberg/Agnew to approve application for Farmers' Market as presented. Motion passed.**
5. Discuss/Consider
 - a. Flag Hill Update. John J. gives update regarding restroom floor. Samples are coming this week, and then date will be scheduled. Committee as Whole will be meeting to decide on request for ARPA funds to match funds for the grant on February 21.
 - b. Pool Committee Meeting. John J. reports the goal of public forum at this point is simply to be a listening forum. Committee is planning for this to be held in early April. He reports that the committee also discussed concerns regarding financing, staffing, etc.
 - c. Hwy Signage for Irvine Park. John J. contacted the DOT regarding signage on Hwy 53 at Business 29. Discussion regarding current signs on 53 & S and 53 & Bus 29 and placement of potential new signs.
 - d. WPRA Conference Takeaways. John J. and Jack attended the conference and found it beneficial. Jack attended a lot of the aquatic sessions; John attended some and programming sessions.
 - e. Chippewa Store Collaboration. John J. has contacted Chippewa Store regarding printing and selling t-shirts, etc. He expects to hear back from them soon.
 - f. Recreation Report. Jack's prepared report is distributed. No action needed.

Reggie Geissler leaves the meeting.

- g. Director Report. John is meeting with both schools to discuss Casper Park and its operational costs. He met with Turf Tank, which is a robotic field painter. Discussed options and exploring the possibility. Discussed redesign of barns and possibly running electricity to those buildings. Phase

2 of Riverfront includes Allen Park – including pavilion for Farmers' Market and connectivity of path underneath the bridge.

6. Approve Claims. Questions answered regarding claims. **Motion by Siebert/Stowell to approve claims in the amount of \$68,489.19. Motion passed.**
7. Park Board Members' Concerns or Comments. Discussion regarding walkway in front of duck pond and extending past the bridge. Also discussed an archway for snowshoe and ski trail, possibly only for winter and/or having different colors for each. Signs are not being found by the users. Board members have received multiple comments on how wonderful the four-season bathroom at Flag Hill is.
8. Adjournment. **Motion by Siebert/Abbe to adjourn at 7:39 p.m. Motion passed.**

Submitted by:
Audrey Stowell, Secretary

**Minutes of the
Meeting of the Chippewa Falls Public Library Board of Trustees
January 11, 2023**

1. Call to Order

Meeting was called to order by President Ambelang at 5:00 p.m. in the Virginia O. Smith Meeting Room at the Chippewa Falls Public Library.

2. Roll Call of Members

Members Present: Ambelang, Drehmel, Jones, King, Martell, Newton, Russell

Members Absent: None

Others Present: Director Joe Niese, Confidential Administrative Assistant Deb Braden.

3. Approval of Agenda

Motion by King seconded by Jones to approve the agenda. All present Voting Aye. Motion carried.

4. Disposition of the minutes of the Board of Trustees meeting of December 14, 2022.

Motion made by Russell seconded by Newton to approve the minutes of the Board of Trustees meeting of December 14, 2022. All present Voting Aye. Motion carried.

5. Disposition of the vouchers to be paid from the 2022 budget after January 17, 2023.

Motion made by Jones seconded by Drehmel to approve the vouchers to be paid from the 2022 budget after January 17, 2023. Roll Call Vote. Voting Aye: Ambelang, Drehmel, Jones, King, Martell, Newton and Russell. Motion carried.

6. Disposition of the vouchers to be paid from the 2023 budget after January 17, 2023.

Motion made by Jones seconded by Newton to approve the vouchers to be paid from the 2023 budget after January 17, 2023. Roll Call Vote. Voting Aye: Ambelang, Drehmel, Jones, King, Martell, Newton and Russell. Motion carried.

7. Public Appearances

none

8. Correspondence

Thank you from the Spirit of Christmas for the collection of books for distribution to families.

9. Management Report

Director Niese talked about highlights from the Management Report. The Library has received a grant from the Community Foundation to be used for new shelving. This will allow a reconfiguration of the adult book space to allow a adult lounge space under the mezzanine. We have had excellent programming in the last month.

10. Current Business

a) Community Foundation Report.

We received the Community Foundation report that was distributed to the Board members. They had some questions and Director Niese will reach out to Jill Herriges for clarification.

11. Closed Session under WI Statues 19.85(1) "Considering employment, promotion, compensation or performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility. "To

a) Director Evaluation

Motion made by Drehmel, seconded by King to go into Closed Session under WI Statues 19.85(1) "Considering employment, promotion, compensation or performance evaluation data of any public employee over which the governmental body has jurisdiction or exercises responsibility. "To Director evaluation to include Director later in discussion. Roll Call Vote: Voting Aye: Ambelang, Drehmel, Jones, King, Martell, Newton and Russell. Motion carried. Time 5:15pm.

Motion made by King seconded by Jones to return to open session Time 6:17p.m.

12. Announcements

none

13. Items for future consideration

- a) Job titles
- b) Department Head presentations-visual presentation or face to face
- c) Annual Report
- d) Adult only time

14. Adjournment

Motion made to adjourn by Russell seconded by Jones. All present Voting Aye. Motion carried. Meeting adjourned at 6:27 p.m.

Respectfully Submitted,
Deb Braden, Confidential Administrative Assistant

Application for Temporary Class "B" / "Class B" Retailer's License

Call Nick when ready and he'll stop down to pick up

See Additional Information on reverse side. Contact the municipal clerk if you have questions.

FEE \$ 10.00

Application Date: 1/27/23

Town Village City of Chippewa Falls

County of Chippewa

The named organization applies for: (check appropriate box(es).)

- A Temporary Class "B" license to sell fermented malt beverages at picnics or similar gatherings under s. 125.26(6), Wis. Stats.
- A Temporary "Class B" license to sell wine at picnics or similar gatherings under s. 125.51(10), Wis. Stats.

at the premises described below during a special event beginning March 31st 2023 and ending April 1st 2023 and agrees to comply with all laws, resolutions, ordinances and regulations (state, federal or local) affecting the sale of fermented malt beverages and/or wine if the license is granted.

- 1. Organization** (check appropriate box) →
- Bona fide Club
 - Church
 - Lodge/Society
 - Chamber of Commerce or similar Civic or Trade Organization
 - Veteran's Organization
 - Fair Association

(a) Name McDonell Alumni Assoc.

(b) Address 1316 Bel Air BLVD

(Street)

Town Village City

(c) Date organized 1901

(d) If corporation, give date of incorporation N/A

(e) If the named organization is not required to hold a Wisconsin seller's permit pursuant to s. 77.54 (7m), Wis. Stats., check this box:

(f) Names, addresses and phone numbers of all officers:

President Nicholas Martell 10648 147th st 54729 CF, WI (715.271.2248)

Vice President Kari Stepp 16121 81st Ave CF, WI 54729 715-226-0178

Secretary Christopher Eckes 4404 115th St Chippewa Falls, WI 54729 715-225-1587

Treasurer Mary Beth Pfeifer 612 W Boardman St Chippewa Falls WI 54729 612-281-4204

(g) Name and address of manager or person in charge of affair: Christopher Eckes 4404 115th St Chippewa Falls, WI 54729

2. Location of Premises Where Beer and/or Wine Will Be Sold, Served, Consumed, or Stored, and Areas Where Alcohol Beverage Records Will be Stored:

(a) Street number 1316 Bel Air BLVD Chippewa Falls, WI 54729

(b) Lot _____ Block _____

(c) Do premises occupy all or part of building? Part (Commons & Gym)

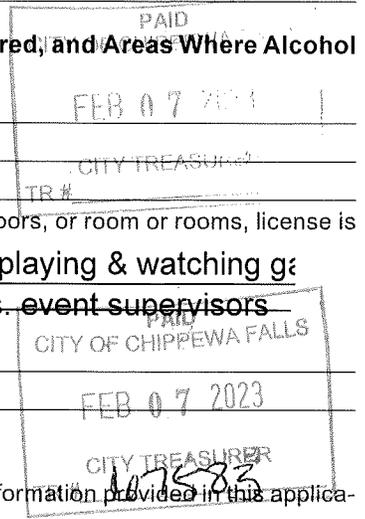
(d) If part of building, describe fully all premises covered under this application, which floor or floors, or room or rooms, license is to cover: _____

(e) Will minors be present? Yes Reason for minors being present: Volunteering, playing & watching games
Security measures: ID checking, wrist bands, event supervisors

3. Name of Event

(a) List name of the event McDonell Alumni Weekend

(b) Dates and times of event March 31st (5:00pm - 11:59pm) & April 1st (8:00am - 11:59pm)



DECLARATION

The Officer(s) of the organization, individually and together, declare under penalties of law that the information provided in this application is true and correct to the best of their knowledge and belief.

Officer [Signature] 1/26/23
(Signature/date)

Officer [Signature] 1/26/23
(Signature/date)

Date Filed with Clerk 2/7/23

Date Granted by Council _____

Police Department Approval [Signature]
2/9/23

McDonell Alumni Assoc.
(Name of Organization)

Officer Kari Stepp 1/26/23
(Signature/date)

Officer Mary Beth Pfeifer 1/24/23
(Signature/date)

Date Reported to Council or Board _____

License No. _____

Date _____ Wisconsin Department of Revenue



CITY OF CHIPPEWA FALLS STREET USE PERMIT APPLICATION

Rec'd
1/27/23

Applicant Name and Address: Roger Skifstad/Chippewa Falls HS 735 Terrill St, CF, WI, 54729	Applicant Phone Number: 715-523-9133
---	---

<input checked="" type="checkbox"/> Please check here if the applicant is the individual in charge of the event. If not, please indicate Name, Address and Phone Number of responsible individual.	Name, Address and Phone Number of the headquarters of the organization and responsible head of such organization: Mike Thompson, AD, CFHS, 735 Terrill St., CF, WI, 54729. 715-726-2406
--	--

Name of the event: 18th Annual Chilly Chippewa 5k/1mile (fun run)	Estimated number of persons participating: 150
--	---

Date and start and end times requested for street use:
~~March 2, 2019 10:00am - 11:15am~~ **March 4, 2023 10-11:15 AM**

Accurate description of the portion of the street or streets being requested for use (attach maps if necessary):
 See attached map

Use, described in detail, for which the street use permit is requested:
 Runners/walkers will participate in the event by using the streets on the map (near curbs, against traffic).

City services requested for the event (e.g., Street Department or Police Department staff time)
 None - we will provide volunteers at all intersections - we have orange cones and other necessary materials.

The applicant agrees to indemnify, defend, and hold the City and its employees and agents harmless against all claims, liability, loss, damage or expense incurred by the City or account of any injury to, or death of, any persons or any damage to property caused by or resulting from the activities for which the permit is granted. This Street Use Permit for the event may be terminated by the Chippewa Falls Police Department if the health, safety, and welfare of the public appears to be endangered by the activities or if the event is in violation of any of the conditions of the permit or regulations adopted by the Common Council. **Applicant understands they shall be present when the Board of Public Works or City Council considers the request for Street Use Permit. Failure to appear may be grounds for denial of the requested permit.**

Signature of Applicant: *Ron B. Skifstad* Date: 1/25/23

OFFICE USE ONLY

Estimated cost of City services requested (to be completed by Police Chief and Director of Public Works):
 2/1/23 - Notified from CFPD. \$106

Requirements of Applicant:

Approved by: *[Signature]* *[Signature]* PE 02/01/2023

Signature of Chief of Police Signature of Director of Public Works

Recommendation of Board of Public Works (if required): Approved Denied

Decision of City Council (required): Approved Denied

AN ORDINANCE ESTABLISHING THE WIDTH OF PAVEMENT ON
CHIPPEWA STREET (Canal St. to Depot St.)
AT 30 FEET FACE TO FACE OF CURBS

THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN, DO
ORDAIN AS FOLLOWS:

- 1. That Section 8.01 (4) (i) (4)(gg) be and is hereby created to read as follows:
 - 4. The roadway width shall be 30 feet face to face of curbs on the following streets:
 - gg) Chippewa Street – Canal St. to Depot St.
- 2. That this Ordinance shall take effect upon passage and publication.

Dated this 7th day of March, 2023.

1st READING: February 21, 2023

2nd READING: March 7, 2023

ADOPTED: _____

Council President

APPROVED: _____

Mayor

ATTEST: _____

City Clerk

PUBLISHED: _____

**AN ORDINANCE ESTABLISHING THE WIDTH OF PAVEMENT ON
COLUMBIA STREET (Carson St. to Superior St.)
AT 30 FEET FACE TO FACE OF CURBS**

**THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN, DO
ORDAIN AS FOLLOWS:**

- 1. That Section 8.01 (4) (i) (4)(hh) be and is hereby created to read as follows:
 - 4. The roadway width shall be 30 feet face to face of curbs on the following streets:
 - hh) Columbia Street – Carson St. to Superior St.
- 2. That this Ordinance shall take effect upon passage and publication.

Dated this 7th day of March, 2023.

1st READING: February 21, 2023

2nd READING: March 7, 2023

ADOPTED: _____

Council President

APPROVED: _____

Mayor

ATTEST: _____

City Clerk

PUBLISHED: _____

**AN ORDINANCE ESTABLISHING THE WIDTH OF PAVEMENT ON
WALNUT STREET (Pear St. to Main St.)
AT 30 FEET FACE TO FACE OF CURBS**

**THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN, DO
ORDAIN AS FOLLOWS:**

- 1. That Section 8.01 (4) (i) (4)(ii) be and is hereby created to read as follows:
 - 4. The roadway width shall be 30 feet face to face of curbs on the following streets:
 - (ii) Walnut Street – Pear St. to Main St.
- 2. That this Ordinance shall take effect upon passage and publication.

Dated this 7th day of March, 2023.

1st READING: February 21, 2023

2nd READING: March 7, 2023

ADOPTED: _____

Council President

APPROVED: _____

Mayor

ATTEST: _____

City Clerk

PUBLISHED: _____

**AN ORDINANCE ESTABLISHING THE WIDTH OF PAVEMENT ON
COLUMBIA STREET (Superior St. to Island St.)
AT 36 FEET FACE TO FACE OF CURBS**

**THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN, DO
ORDAIN AS FOLLOWS:**

1. That Section 8.01 (4) (i) (7)(e) be and is hereby created to read as follows:
 7. The roadway width shall be 36 feet face to face of curbs on the following streets:
 - e) Columbia Street – Superior St. to Island St.
2. That this Ordinance shall take effect upon passage and publication.

Dated this 7th day of March, 2023.

1st READING: February 21, 2023

2nd READING: March 7, 2023

ADOPTED: _____

Council President

APPROVED: _____

Mayor

ATTEST: _____

City Clerk

PUBLISHED: _____

**AN ORDINANCE ESTABLISHING THE WIDTH OF PAVEMENT ON
WALNUT STREET (Main St. to Woodward Ave.)
AT 38 FEET FACE TO FACE OF CURBS**

**THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN, DO
ORDAIN AS FOLLOWS:**

1. That Section 8.01 (4) (i) (1)(v) be and is hereby created to read as follows:
 1. The roadway width shall be 38 feet face to face of curbs on the following streets:
 - v) Walnut Street – (Main St. to Woodward Ave.)
 2. That this Ordinance shall take effect upon passage and publication.

Dated this 7th day of March, 2023.

1st READING: February 21, 2023

2nd READING: March 7, 2023

ADOPTED: _____

Council President

APPROVED: _____

Mayor

ATTEST: _____

City Clerk

PUBLISHED: _____

**AN ORDINANCE ESTABLISHING THE WIDTH OF PAVEMENT ON
PEARL STREET (Mansfield St. to Stanley St.)
AT 38 FEET FACE TO FACE OF CURBS**

**THE COMMON COUNCIL OF THE CITY OF CHIPPEWA FALLS, WISCONSIN, DO
ORDAIN AS FOLLOWS:**

1. That Section 8.01 (4) (i) (1)(u) be and is hereby created to read as follows:
 1. The roadway width shall be 38 feet face to face of curbs on the following streets:
 - u) Pearl Street – (Mansfield St. to Stanley St.)
 2. That this Ordinance shall take effect upon passage and publication.

Dated this 7th day of March, 2023.

1st READING: February 21, 2023

2nd READING: March 7, 2023

ADOPTED: _____

Council President

APPROVED: _____

Mayor

ATTEST: _____

City Clerk

PUBLISHED: _____

DEVELOPMENT AGREEMENT

THIS AGREEMENT ("Agreement") is made this ____ day of February, 2023, between the City of Chippewa Falls, a Wisconsin municipal corporation ("City"), and Park West Townhomes, LLC, a Wisconsin limited liability company ("Developer"). City and Developer may be referred to individually as a "Party" or collectively as the "Parties".

WITNESSETH THAT, the Parties hereto recite and agree as follow:

ARTICLE 1 - RECITALS

Section 1.1 Background. Developer wishes to enter into an agreement with the City where Developer will develop property which includes the construction of four eight-unit townhomes and five twelve-unit townhomes (the "Development").

Section 1.2 The Property. The Property which shall be improved are Lots 94 to 104 on the Plat for Park West III located in the NW 1/4 of the NW 1/4 and NE 1/4 of the NW 1/4 Section 1, T28N, R9W, City of Chippewa Falls, Chippewa County, Wisconsin, which is located in Lot 89 and Outlot 4 on the Plat for Park West II (collectively the "Property"). The Plat for Park West III is attached hereto as Exhibit "A". The Plan for the Property is attached hereto as Exhibit "B".

Section 1.3 Public Improvements. Developer requests, at its expense, to be allowed to prepare plans and specifications and to award contracts to construct the utilities, streets, water, sewer, and any other improvements necessary to serve the Development (the "Public Improvements"). A description of the Public Improvements is attached as Exhibit "C". City is willing to allow Developer to construct and install the Public Improvements, only if the conditions set forth in this Agreement are satisfied. All streets and utilities shall be labeled as either private or public.

Section 1.4 Public Improvements, Plans, and Specifications. City agrees to authorize its City Engineer, to review and approve the plans and specifications prepared by Developer for the Public Improvements (the "Plans and Specifications"). All utility, sanitary and water infrastructure will conform to City's Standard Construction Specifications. Approval of the Plans and Specifications for the Public Improvements is a condition of this Agreement.

Section 1.5 Public Improvements, Warranty. Developer agrees the Public Improvements will be constructed in a workmanlike manner; all materials and labor for the Public Improvements will be in strict conformity to the Plans and Specifications and any other requirements reasonably set forth by City. All work done pursuant to this Agreement is subject to the inspection and approval of the City Engineer, who will have the authority to suspend or stop work on the Public Improvements if any condition of this Agreement is breached or any law or administrative rule is violated, and such breach or violation is not cured or remedied to the satisfaction of the City Engineer after the City Engineer provides written notice of same to Developer. "To the extent that the Public Improvement work described herein may be subject to Wisconsin's Prevailing Wage Rates and Hours of Labor Laws, Developer will not undertake any work until the City Engineer is satisfied that Wisconsin's Prevailing Wage Rates and Hours of Labor Laws are being complied with and that Developer will continue to comply with said laws, as may be applicable."

If any material or labor that is supplied for the Public Improvements is rejected by the City Engineer as defective or unsuitable, then the rejected materials must be removed and replaced with

approved material, and the rejected labor will be redone to the reasonable satisfaction and approval of the City Engineer at the sole cost and expense of Developer. This warranty will extend for one year beyond the final acceptance of the Public Improvements by City. City agrees that acceptance of the Public Improvements will not be unreasonably delayed or withheld.

ARTICLE 2 – DEVELOPER’S REPRESENTATIONS

Developer represents to City that as of the date of this Agreement, the statements set forth in this section are true.

Section 2.1 No Disability. Developer knows of no legal disability that would prevent it from carrying out this Agreement.

Section 2.2 Execution. The execution, delivery and performance of this Agreement does not and will not result in any breach of, or constitute a default under, any indenture, mortgage, contract agreement or instrument to which Developer is a party.

Section 2.3 Litigation. There are no pending or, to the knowledge of Developer, threatened actions or proceedings before any court or administrative agency which will materially adversely affect the financial condition, business or operation of Developer.

Section 2.4 Compliance. Developer will comply with its obligations under this Agreement and all related documents and instruments.

ARTICLE 3 - PUBLIC IMPROVEMENT SCHEDULE

Developer will install the Public Improvements in accordance with the provisions in Article 3.

Section 3.1 Final Plat Approval. Provided that Developer is in compliance with this Agreement, City will approve the final Plat of Park West III in advance of acceptance of the Public Improvements within that Plat.

Section 3.2 Contracts for Work. Any contract awarded by Developer for work on the Public Improvements must contain the following provision:

(a) Failure to Perform. Developer may, by written notice to the contractor, immediately terminate the contract in the following circumstance: Failure to make satisfactory progress toward completion of the work after contractor has been given three (3) notices by Developer and contractor has failed in each case to make satisfactory progress toward completion of the work within seventy-two (72) hours of such notice.

Section 3.3 Dedication of Public Improvements. The Public Improvements will be dedicated to the public upon acceptance of the completed work by the City Engineer. Developers will be deemed to have no right, title or interest in or upon any element of the dedicated Public Improvements other than the parts of the Stormwater Management System as identified on the Stormwater Management Plan. Developer shall be responsible for any necessary changes to the Stormwater Management Plan as a result of Park West. A breakdown of the utilities being installed and their estimated cost and whether the utility will be public or private is attached hereto as Exhibit “D”.

ARTICLE 4 - SECURITY

Section 4.1 Security for Cost of Public Improvements. Prior to commencing work on the Public Improvements, Developer shall provide to City a performance bond or irrevocable letter of credit, with terms and conditions satisfactory to City, in the sum of not less than one hundred twenty-five percent (125%) of the estimated cost of the Public Improvements. The performance bond or irrevocable letter of credit is a guaranty to the City that the Public Improvements will be timely completed. The performance bond or irrevocable letter of credit will be maintained continuously by Developer until final acceptance of the Public Improvements by City. The performance bond or irrevocable letter of credit shall be released by City upon certification by the City Engineer the Public Improvements are accepted pursuant to this Agreement. Periodically, as payments are made by Developer for the completion of the Public Improvements, Developer may request the City reduce the amount of the performance bond or irrevocable letter of credit on a pro-rata basis.

The performance bond or irrevocable letter of credit will provide that City may draw upon it for the full-face amount of the cost of curing any default of Developer hereunder after City has provided written notice to Developer describing the default and Developer has not cured such default within thirty (30) days of receipt of such notice.

ARTICLE 5 - DEVELOPER'S RESPONSIBILITY

Section 5.1 Easements. Developer will execute and deliver to City upon request and without charge, permanent easements for the location, construction, installation, and operation of the Public Improvements. Any easements and deeds shall be in form and content satisfactory to City.

Section 5.2 Inspection. Developer shall instruct its engineer to provide adequate field inspection personnel to assure an acceptable level of quality control of the Public Improvements. City may inspect the work and inspections will be reported in a form similar to the attached Exhibit "E".

Developer shall pay City for engineering and construction observation of the Public Improvements performed by the City Engineer. Such engineering will include monitoring of construction, consultation with Developer and its engineer on status or problems regarding the work, coordination for final inspection and acceptance, project monitoring during the warranty period, and processing of request for reduction in security.

Section 5.3 Engineering Data. Developer, through its engineer, must provide all staking, surveying and other information required by the City Engineer, to assist the City Engineer in carrying out the City Engineer's duties under this Agreement in order to ensure that the Public Improvements conform to the Plans and Specifications.

Section 5.4 Erosion Control Measures During Construction. Developer and Developer's contractors shall comply with Chapter 30 (Construction Site Erosion Control) of City of Chippewa Falls Code of Ordinances in regard to construction of the Public Improvements.

Section 5.5 City Regulations. Developer acknowledges the Property is subject to regulation by City and that a default under applicable City ordinances or failure to meet or perform any condition of approval of any permit applicable to the Public Improvements shall be a default hereunder. The following conditions must be fulfilled to the satisfaction of the City Engineer before

construction of the Public Improvements begin. The requirement of any condition may be waived by the Common Council of the City if adequate assurances of compliance are provided by Developer.

(a) Developer shall comply with the existing filed Stormwater Management Plan for the Development.

(b) The Development shall be constructed according to any applicable Conditional Use Permit and all conditions imposed upon final Plat approval.

(c) City shall review and approve a grading plan, utilities plan, sidewalk and trail plan, driveway plan and phase plan for the Development. A copy of the proposed specifications is attached hereto as Exhibit "F".

(d) Developer shall obtain all required permits from local and state regulatory bodies.

Section 5.6 Damage to City or County Facilities. Developer will be responsible for any damage caused to any City facilities or improvements including roads, stormwater systems, sewer and water facilities whether done by Developer, its contractors, agents, or employees.

Section 5.7 Private Streets. Developer, or a homeowner association to be formed, shall maintain all private streets in the Development. Developer shall be responsible for any and all repair and replacement costs of pavement which is disturbed or damaged by Developer while repairing or replacing utilities, at no time shall City have any obligation or responsibility to maintain private streets within the Development.

Section 5.8 Streetlights. Developer may, in Developer's discretion, install streetlights in the Development. If streetlights are installed on streets that are to be dedicated to the public, the specifications and location of said lighting shall be approved by the City prior to installation and shall become the responsibility of the City upon public dedication of the roadway.

ARTICLE 6 - INSURANCE

Section 6.1 Insurance. Developer and its contractors will provide and maintain or cause to be maintained at all times during the process of constructing the Public Improvements and, from time to time at the request of City, furnish City with proof of payment of premiums on:

(a) Comprehensive general liability insurance (including operations, contingent liability, operations of subcontractors, completed operations and contractual liability insurance) together with an Owner's Contractor's policy with limits against bodily injury and property damage of not less than \$1,000,000 for each occurrence (to accomplish the above required limits, an umbrella excess liability policy may be used), and will be endorsed to show City as an additional insured to the extent of its interest,

(b) Comprehensive general public liability insurance, including personal injury liability for injuries to persons and/or property, including any injuries resulting from the operation of automobiles or other motorized vehicles involved in work on the Public Improvements, in the minimum amount for each occurrence of \$1,000,000, and will be endorsed to show City as an additional insured to the extent of its interest,

(c) Worker's Compensation insurance respecting all employees in amounts not less than the minimum required by statute.

ARTICLE 7 - INDEMNIFICATION

Section 7.1 Indemnification. Developer agrees to defend and hold City, and its officials, employees, and agents, harmless against any and all claims, demands, lawsuits, judgments, damages, penalties, costs and expenses arising out of actions or omissions by Developer, its employees and agents, in connection with the Public Improvements.

Section 7.2 Enforcement by City; Damages. Developer acknowledges the right of City to enforce the terms of this Agreement against Developer, by action for specific performance or damages, or both. Developer acknowledges its failure to perform any or all of its obligations under this Agreement may result in damages to City; that in the event of default hereunder by Developer, City may commence legal action to recover all damages, losses and expenses sustained by City associated with the enforcement of this Agreement.

ARTICLE 8 – EVENTS OF DEFAULT

Section 8.1 The following will be "Events of Default" under this Agreement and the term "Event of Default" will mean, whenever it is used in this Agreement, any one or more of the following events:

(a) Failure of Developer to commence or complete construction of the Public Improvements pursuant to the terms, conditions, and limitations of this Agreement after City has provided written notice to Developer describing the failure and Developer has not cured such failure within thirty (30) days of receipt of such notice.

(b) Failure of Developer to observe or perform any covenant, condition, obligation, or agreement on its part to be observed or performed under this Agreement after City has provided written notice to Developer describing the failure and Developer has not cured such failure within thirty (30) days of receipt of such notice.

Section 8.2 Remedies on Default. Whenever any "Event of Default" occurs, City may take any one or more of the following actions:

(a) Suspend work on the Public Improvement until it receives assurances from Developer they will cure its default and continue its performance under this Agreement.

(b) Take action, including legal or administrative action, as is necessary for City to secure performance of any provision of this Agreement or recover any amounts due under this Agreement from Developer or under the performance bond described in Section 4.1.

(c) Undertake to complete the Public Improvements itself, through its agents or through independent contractors and before the undertaking, draw upon the performance bond described in Section 4.1 for the full amount of the estimated work.

ARTICLE 9 - ADMINISTRATIVE PROVISIONS

Section 9.1 Notices. All Notices, certificates or other communications required to be given to City and Developers must be sufficiently given and will be deemed given when delivered, or when deposited in the United States mail in certified form with postage fully prepaid and addressed with return receipt requested, as follows:

City and Developer by notice given to the other, may designate different addresses to which subsequent notice, certificates or other communications will be sent.

If to City: Richard J. Rubenzer,
Director of Public Works/City Engineer
30 West Central Street
Chippewa Falls, WI 54729

If to Developer: Park West Townhomes, LLC
Attn: James G. Rooney
13167 County Highway 00
Chippewa Falls, WI 54729-7313

ARTICLE 10 - ADDITIONAL PROVISIONS

Section 10.1 Titles of Sections. Any titles of the several parts of this Agreement are inserted for convenience of reference only and will be disregarded in construing or interpreting any of its provisions.

Section 10.2 Counterparts. This Agreement may be executed in any number of counterparts, each of which will constitute one and the same instrument.

Section 10.3 Modification. If Developer is requested by the holder of a mortgage on the Property or by a prospective holder of a prospective mortgage on the Property to amend or supplement this Agreement in any manner whatsoever, City will, in good faith, consider the request, provided that the request is consistent with the terms and conditions of this Agreement.

Section 10.4 Law Governing. This Agreement will be governed by and construed in accordance with the laws of the State of Wisconsin.

Section 10.5 Severability. In the event any provision of this Agreement is held invalid or unenforceable by any court of competent jurisdiction, holding will not validate or render unenforceable any other provisions.

Section 10.6 Assignment. Developer may not assign this Agreement without prior written consent of City, which consent shall not be unreasonably withheld or delayed.

Section 10.7 Recording. This Agreement, or a memorandum thereof executed by the Parties, may be recorded in the office of the Register of Deeds for Chippewa County, Wisconsin, and will be enforceable against all owners of the Property and their successors and assigns.

ARTICLE 11 - TERMINATION OF AGREEMENT

Section 11.1 Termination. This Agreement will terminate at the time all of Developer's obligations hereunder have been fulfilled and when the cost of the Public Improvements have been paid in full and any default of Developer has been cured, or one (1) year after acceptance of the Public Improvements by City, whichever occurs later. Upon request of Developer, City shall promptly provide Developer with a certificate in recordable form that shall serve as evidence that Developer has completed its obligations hereunder.

SIGNATURES ON FOLLOWING PAGE

IN WITNESS WHEREOF, City has caused this Agreement to be executed in its corporate name by its duly authorized officers and sealed with its corporate seal; and Developer has executed this Agreement at Chippewa Falls, Wisconsin, on the day and year first above written.

CITY OF CHIPPEWA FALLS, a Wisconsin municipal corporation

By: _____ Gregory S. Hoffman, Mayor

By: _____ Bridget Givens, Clerk

STATE OF WISCONSIN)
) ss.
COUNTY OF CHIPPEWA)

Personally came before me this _____ day of _____, 2023, the above-named Gregory S. Hoffman, Mayor and Bridget Givens, Clerk, of the City of Chippewa Falls, to me known to be the persons and officers who executed the foregoing instrument and acknowledged that they executed the same as such officers by the authority of the City of Chippewa Falls.

Notary Public, State of Wisconsin
My Commission Expires _____

EXHIBIT A

PARK WEST III PLAT

(Attached)

SURVEYOR'S CERTIFICATE:
 I, PETER J. GARTMANN, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER (NW1/4-NW1/4) AND NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE1/4-NW1/4), SECTION 1, TOWNSHIP 28 NORTH, RANGE 9 WEST, CITY OF CHIPPEWA FALLS, CHIPPEWA COUNTY, WISCONSIN, HAVE BEEN SURVEYED, DIVIDED AND MAPPED SAID PLAT BY THE DIRECTION OF JIM ROONEY, OWNER OF SAID LAND.
 I, PETER J. GARTMANN, AS SURVEYOR REPRESENTATION OF ALL EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND THE SUBDIVISION THEREOF MADE, AND THE SUBDIVISION THEREOF MADE, THAT I HAVE FULLY COMPLIED WITH THE PROVISIONS OF CHAPTER 236 OF THE WISCONSIN STATUTES, AS AMENDED, AND THE SUBDIVISION REGULATIONS OF THE CITY OF CHIPPEWA FALLS IN SURVEYING, DIVIDING AND MAPPING THE SAME.

PETER J. GARTMANN, P.L.S. No. 2279 DATED THIS ____ DAY OF _____, 2023

CITY COUNCIL RESOLUTION: PLAT OF PARK WEST III, IN THE CITY OF CHIPPEWA FALLS, IS HEREBY APPROVED BY THE CITY COUNCIL OF THE CITY OF CHIPPEWA FALLS, CHIPPEWA COUNTY, WISCONSIN.

DATE APPROVED: _____ GREGORY S. JOHNSON, MAYOR

(SIGNATURE) _____ DATE: _____

GREGORY S. JOHNSON, MAYOR

I, HEREBY CERTIFY THAT THE FOREGOING IS A COPY OF A RESOLUTION ADOPTED BY THE CITY BOARD OF THE CITY OF CHIPPEWA FALLS, CHIPPEWA COUNTY, WISCONSIN.

(SIGNATURE) _____ BRIDGET OVENS, CITY CLERK

CERTIFICATE OF CITY TREASURER:
 STATE OF WISCONSIN
 COUNTY OF CHIPPEWA SS
 I, LYNNE BAUER, BEING THE DULY APPOINTED, ACTING AND QUALIFIED TREASURER OF THE CITY OF CHIPPEWA FALLS, DO HEREBY CERTIFY THAT THE RECORDS IN MY OFFICE SHOW NO UNPAID TAXES OR UNPAID TAXES OR UNPAID SPECIAL ASSESSMENTS AS OF THIS ____ DAY ____ 2023, ON ANY OF THE LANDS INCLUDED IN THE PLAT OF PARK WEST III IN THE CITY OF CHIPPEWA FALLS.

(SIGNATURE): _____ LYNNE BAUER, CITY TREASURER DATE: _____

CERTIFICATE OF COUNTY TREASURER:
 STATE OF WISCONSIN
 COUNTY OF CHIPPEWA SS
 I, PATRICIA SCHMEL, BEING THE DULY ELECTED, ACTING AND QUALIFIED TREASURER OF THE COUNTY OF CHIPPEWA, DO HEREBY CERTIFY THAT THE RECORDS IN MY OFFICE SHOW NO UNREDEEMED TAX SALES AND NO UNPAID TAXES OR UNPAID SPECIAL ASSESSMENTS AS OF THIS ____ DAY ____ 2023, ON ANY OF THE LANDS INCLUDED IN THE PLAT OF PARK WEST III.

(SIGNATURE): _____ PATRICIA SCHMEL, COUNTY TREASURER DATE: _____

OWNER'S CERTIFICATE OF DEDICATION:
 I, JAMES G. ROONEY, OWNER, HEREBY CERTIFIES THAT IT CAUSED THE LAND DESCRIBED ON THIS PLAT TO BE SURVEYED, DIVIDED, MAPPED AND DEDICATED AS REPRESENTED BY THIS PLAT. IT ALSO CERTIFIES THAT THIS PLAT IS REQUIRED BY S.236.10 OR S.236.12 TO BE SUBMITTED TO THE FOLLOWING FOR APPROVAL OR OBJECTION:
 _____ CITY OF CHIPPEWA FALLS
 _____ DEPARTMENT OF ADMINISTRATION
 _____ DEPARTMENT OF TRANSPORTATION

WITNESS THE HAND AND SEAL OF SAID OWNER THIS ____ DAY OF _____, 2023

JAMES G. ROONEY, MEMBER

STATE OF WISCONSIN
 COUNTY OF _____ SS
 PERSONALLY CAME BEFORE ME THIS ____ DAY OF _____, 2023, THE ABOVE NAMED JAMES G. ROONEY, WHO HAS BEEN IDENTIFIED TO ME AS THE PERSON WHO CAUSED THE FOREGOING INSTRUMENT AND ACKNOWLEDGED THE SAME TO BE THEIR OWN FREE ACT AND DEED.

MY COMMISSION EXPIRES: _____ NOTARY PUBLIC

OWNER'S CERTIFICATE OF DEDICATION:
 I, JAMES G. ROONEY, OWNER, HEREBY CERTIFIES THAT IT CAUSED THE LAND DESCRIBED ON THIS PLAT TO BE SURVEYED, DIVIDED, MAPPED AND DEDICATED AS REPRESENTED BY THIS PLAT. IT ALSO CERTIFIES THAT THIS PLAT IS REQUIRED BY S.236.10 OR S.236.12 TO BE SUBMITTED TO THE FOLLOWING FOR APPROVAL OR OBJECTION:
 _____ CITY OF CHIPPEWA FALLS
 _____ DEPARTMENT OF ADMINISTRATION
 _____ DEPARTMENT OF TRANSPORTATION

WITNESS THE HAND AND SEAL OF SAID OWNER THIS ____ DAY OF _____, 2023

JAMES G. ROONEY, MEMBER

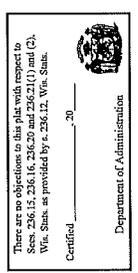
STATE OF WISCONSIN
 COUNTY OF _____ SS
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MY COMMISSION EXPIRES: _____ NOTARY PUBLIC

CONSENT OF CORPORATE MORTGAGEE:
 CHARTER BANK, A CORPORATION DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF WISCONSIN, MORTGAGEE OF PART OF THE LAND DESCRIBED ON THIS PLAT OF PARK WEST III AND DOES HEREBY CONSENT TO THE ABOVE CERTIFICATE OF PARKWEST TOWNHOMES, LLC, OWNERS OF SAID LAND, IN WITNESS WHEREOF, THE SAID CHARTER BANK HAS CAUSED THESE PRESENTS TO BE SIGNED BY,
 (PRINT NAME) _____ AND (PRINT NAME) _____
 AT _____ WISCONSIN AND ITS CORPORATE SEAL TO BE HEREIN AFFIXED
 THIS ____ DAY OF _____, 2023
 (SIGNATURE) _____ (title) _____
 (HHA) _____

STATE OF WISCONSIN
 COUNTY OF _____ SS
 PERSONALLY APPEARED BEFORE ME THIS ____ DAY OF _____, 2023, THE ABOVE NAMED _____ TO ME KNOWN TO BE THE PERSONS WHO CAUSED THE FOREGOING INSTRUMENT AND ACKNOWLEDGED THE SAME TO BE THEIR OWN FREE ACT AND DEED.

MY COMMISSION EXPIRES: _____ NOTARY PUBLIC



PARK WEST III
 IN THE NW1/4 OF THE NW1/4 AND NE1/4 OF THE NW1/4, SECTION 1, T28N, R9W, CITY OF CHIPPEWA FALLS, CHIPPEWA COUNTY, WISCONSIN
 BEING LOT 88 AND OUTLOT 4 OF PARK WEST I

EXHIBIT B

SITE AND UTILITY PLAN

(Attached)



TYPICAL PAVEMENT SECTION

BRITANNICUS PAVEMENT	3"
10" BASE COURSE	
12" GRANULAR SUB-COURSE	

ALL PAVEMENTS TO BE CONSTRUCTED PER STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. ALL DIMENSIONS ARE AS SHOWN UNLESS OTHERWISE NOTED.

- GENERAL NOTES**
- CONTRACTOR SHALL NOT DISTURB ANY P&W WORKS. ANY REMOVAL SHALL BE REPAIRED TO ORIGINAL CONDITION. OTHERWISE THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE DAMAGE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BEST MANAGEMENT PRACTICES THROUGHOUT THE PROJECT. COSTS FOR BEST MANAGEMENT PRACTICES ARE INCIDENTAL TO PROJECT.
 - IF DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR FINDS ANY DISCREPANCIES OR OMISSIONS IN THE PROPOSED SITE IMPROVEMENTS OR ANY OTHER INFORMATION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION AND REPAIR OF ANY OMISSIONS OR DISCREPANCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
 - PAINT LINE WORK ON ASPHALT PAVEMENT, CONCRETE CURBS, WALKS, AND RAMP SHALL BE PAINTED WITH ASPHALT PAINT. THE COLOR SHALL BE WHITE EXCEPT WHERE SHOWN OTHERWISE. ALL PAINT SHALL BE APPLIED TO ALL WALKWAYS AND RAMP SURFACES. TRAFFIC MARKING SHALL BE APPLIED TO ALL WALKWAYS AND RAMP SURFACES. TRAFFIC MARKING SHALL BE APPLIED TO ALL WALKWAYS AND RAMP SURFACES. TRAFFIC MARKING SHALL BE APPLIED TO ALL WALKWAYS AND RAMP SURFACES.

HATCHING LEGEND

[Hatched Box]	EXISTING ASPHALT
[Hatched Box]	PROPOSED BRITANNICUS PAVEMENT
[Hatched Box]	PROPOSED BASE COURSE
[Hatched Box]	PROPOSED GRANULAR PAVEMENT (CONCRETE, 4" THICKNESS) EXPOSED TO VEHICULAR TRAFFIC (P. THICKNESS)

PARK WEST TOWNHOMES

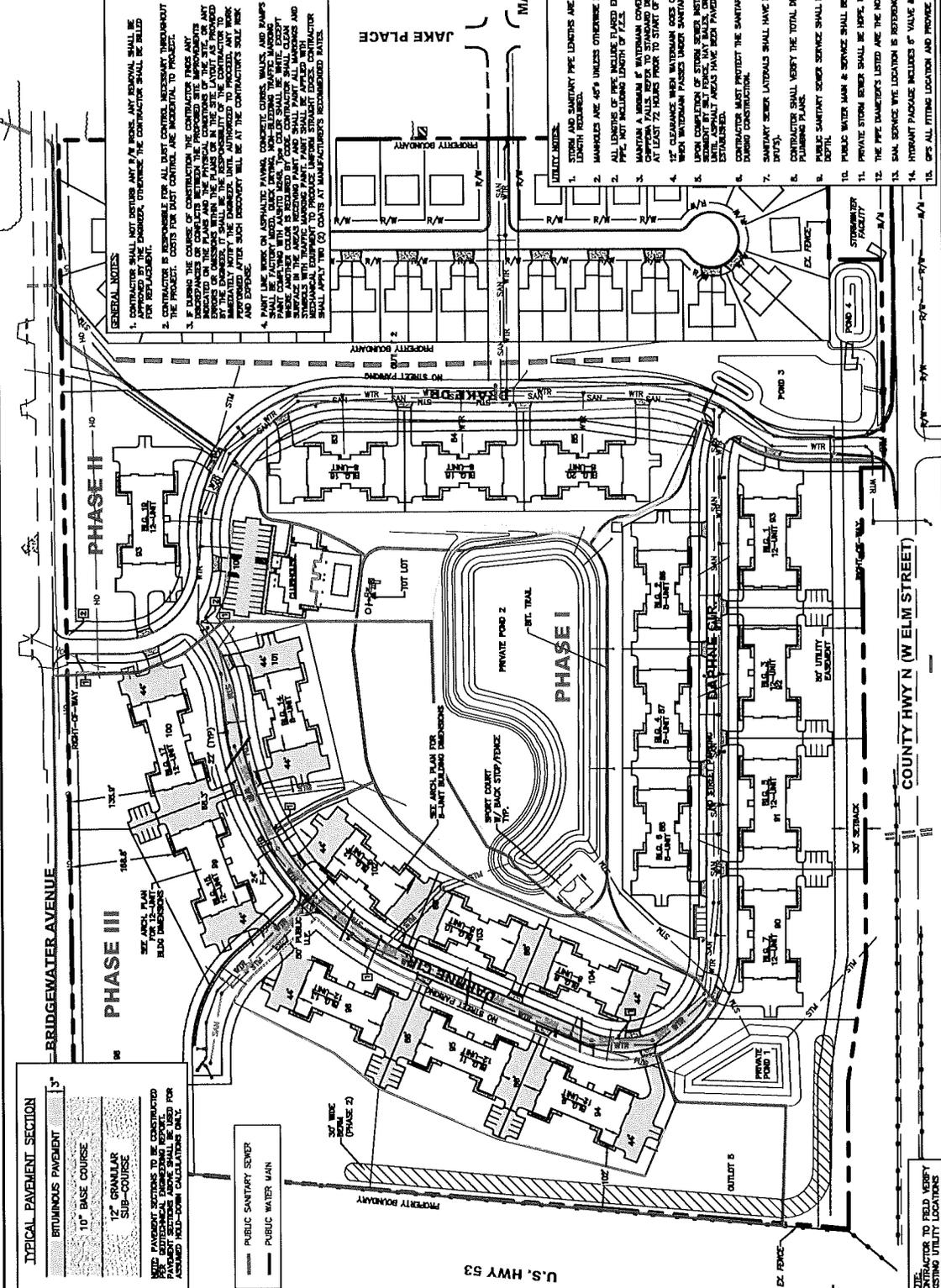
CONTRACT ZONING	PD
MULTI-FAMILY LOT SIZES	1,000-603 SF (2005 IAC)
EXISTING IMPROVED AREA	0.00-0.00-0.00 (0.00)
PROPOSED USE	(10) 8-UNIT APARTMENTS (10) 12-UNIT APARTMENTS
PROPOSED BUILDING	172,840-SF (10.00)
PROPOSED PAVEMENT	282,800-SF (18.00)
PROPOSED GREEN SPACE	47,000-SF (2.90)
OVERALL IMPROVEMENTS	1,120,000-SF (70.00)

UTILITY NOTES

- STORM AND SANITARY PIPE LENGTHS ARE TO CENTER OF MANHOLE CONTRACTOR TO VERIFY ACTUAL LENGTH REQUIRED.
- MANHOLES ARE 48" UNLESS OTHERWISE NOTED.
- ALL LENGTHS OF PIPE INCLUDE FLARED END SECTION (F.E.S.). CONTRACTOR WILL ONLY BE PAID FOR L.F. OF PIPE NOT INCLUDING LENGTH OF F.E.S.
- MAINTAIN A MINIMUM 6" WATERMAIN COVER. ALL WATERMAIN MUST BE INSTALLED ACCORDING TO CITY OF CHIPPERRIA FALLS STANDARDS. ALL WATERMAIN SHALL BE INSTALLED AT LEAST 72" DEEP PRIOR TO START OF UTILITY CONSTRUCTION.
- 4" E-PIPE SHALL BE USED FOR ALL WATERMAIN UNDER SANITARY, WATERMAIN OR STORM.
- UPON COMPLETION OF STORM SEWER INSTALLATION, STORM SEWER INLETS SHALL BE PROTECTED FROM DEBRIS BY METAL SCREENS. METAL SCREENS OR EQUIVALENT MEASURES SHALL REMAIN IN PLACE UNTIL ALL PAVED AREAS HAVE BEEN PAVED AND ALL HOME PAVED AREAS HAVE BEEN VEGRETATED.
- CONTRACTOR MUST PROTECT THE SANITARY LATERAL FROM ANY SAND, ROCK, ETC. ENTERING THE PIPE DURING CONSTRUCTION.
- SANITARY SEWER LATERALS SHALL HAVE MINIMUM SLOPE OF 1/8" PER FOOT FOR ALL 6-INCH PPE (700 DIPS).
- CONTRACTOR SHALL VERIFY THE TOTAL DRAINAGE FEATURE UNITS (DFU'S) AND PIPE SIZES WITH THE PLUMBING PLANS.
- PUBLIC SANITARY SEWER SERVICE SHALL BE PPE (800 20) < 20' BURIED DEPTH & (800 20) > 20' BURIED DEPTH.
- PUBLIC WATER MAIN & SERVICE SHALL BE 6-800 (DR 10).
- PRIVATE STORM SEWER SHALL BE 18" UNLESS OTHERWISE STATED.
- THE PIPE DIAMETERS LISTED ARE THE NOMINAL INSIDE DIAMETER.
- SHAL SERVICE VIE LOCATION IS REFERENCED FROM THE DOWN STREAM MANHOLE.
- HYDRANT PACKAGE INCLUDES 4" VALVE & BOX, HYDRANT LEAD, & HYDRANT.
- OPS ALL FITTING LOCATION AND PROVIDE COORDINATES TO CITY OF CHIPPERRIA FALLS.

STREET PLAN KEY NOTES

- STREET LIGHT
- STOP SIGN



NOTES: CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS

NO.	DATE	REVISIONS

DESIGNED BY: [Name] CHECKED BY: [Name]

DATE: 12/20/22

PROJECT: PARK WEST TOWNHOMES PH3 CHIPPERRIA FALLS, WI

SCALE: AS SHOWN

DATE: 12/20/22

5

18



ADVANCED ENGINEERING CONCEPTS
1200 INTERNATIONAL DR
EAU CLAIRE, WI 54601
TEL: 715-835-2000
WWW.AEC-INC.COM
COPYRIGHT 2022 AEC-INC.

EXHIBIT C

DESCRIPTION OF PUBLIC IMPROVEMENTS

(Attached)

EXHIBIT D

ESTIMATED COST OF PUBLIC
IMPROVEMENTS (PHASE III)

(Attached)

1/31/2023

ASSUMPTIONS:

All roads are private & not included in estimate

Water and Sanitary mains are public utilities

Water services is considered public up to utility easement

Sanitary services are all private

PHASE 3: PARK WEST TOWNHOMES PUBLIC INFRA.					
NO	ITEM	UNITS	QUANT.	PRICE	TOTAL PRICE
SANITARY					
1	CONNECT TO EXISTING (pipe)	EA	1	\$600.00	\$600.00
2	48" PRECAST CONCRETE MANHOLE (8)	VF	90.0	\$311.00	\$27,990.00
3	FRAME & COVER (Neeah R-1642)	EA	8	\$750.00	\$6,000.00
4	8" SANITARY SEWER	LF	1,297	\$41.75	\$54,149.75
SUBTOTAL					\$88,739.75
WATERMAIN					
1	CONNECT TO EXISTING (REMOVE PLUG)	EA	2	\$950.00	\$1,900.00
3	HYDRANT ASS'Y (hydrant, valve & lead)	EA	3	\$8,520.00	\$25,560.00
4	4-INCH VALVE & BOX	EA	9	\$1,850.00	\$16,650.00
5	6-INCH VALVE & BOX	EA	2	\$2,000.00	\$4,000.00
6	8-INCH VALVE & BOX	EA	4	\$2,700.00	\$10,800.00
7	8-INCH WATERMAIN (C900, DR18)	LF	1,538	\$45.75	\$70,363.50
8	WATER SERVICE, 6 INCH (C900, DR18)	LF	40	\$30.00	\$1,200.00
9	WATER SERVICE, 4 INCH (C900, DR18)	LF	262	\$25.75	\$6,746.50
SUBTOTAL					\$137,220.00
PHASE 3 PUBLIC CONSTRUCTION COSTS					\$225,959.75
CONTINGENCY (25%)					\$56,489.94
PHASE 3 SECURITY TO CITY OF CHIPPEWA FALLS					\$282,449.69

EXHIBIT E

INSPECTIONS FORM

(Attached)

Required Consultant Inspection Documents:

All documents must be submitted and reviewed prior to acceptance of the street and utilities

- Daily Inspection Records (see attached for example)
 - Contractors on-site
 - Workers & Equipment
 - Weather
 - Grade and depth check of utilities
 - Compaction methods (lift thickness, compaction method, etc)
 - Nature of existing material (clay, sand, groundwater, etc)
 - Subgrade and gravel elevation checks
 - Curb and gutter elevation & line checks
 - Quantities and location of items installed]
 - All required water and sanitary tests
 - Any other notes of significance
- Utility Service records (see attached example)
 - Length of service
 - Depth of service
 - Service material
 - Service Location (include sketch)
- Material records review
 - Materials submittals – with initial showing they were checked for compliance
 - Photos of materials in field demonstrating they match submittals
- Stormwater Inspection Documents
 - Submitted to Engineering Office weekly on WDNR forms
- Full As-builts
 - Show ALL changes to original plans
 - Note which facilities are public and which facilities are private
 - CAD File
 - As-built GPS Locations of
 - Manholes
 - Catch basins
 - Apron end walls
 - Any other significant changes
 - Include design polylines for all roadway geometrics
 - Draw in water and sanitary services based on field measurements
 - PDF File
 - Include all above information
 - Include date of as-built

EXHIBIT A

PARK WEST III PLAT

(Attached)

EXHIBIT B

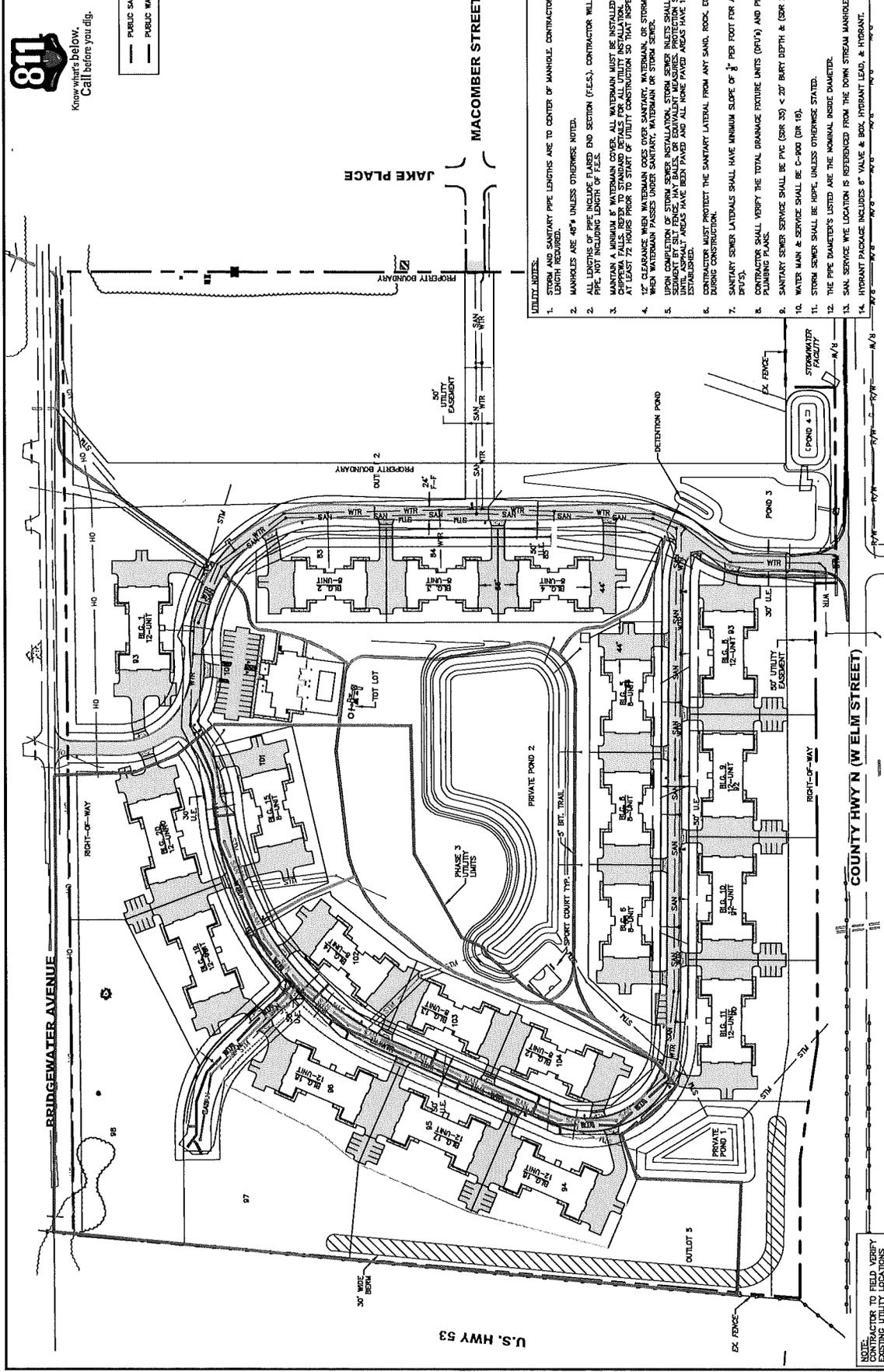
SITE AND UTILITY PLAN

(Attached)

EXHIBIT C

DESCRIPTION OF PUBLIC IMPROVEMENTS

(Attached)



- UTILITY NOTES:**
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 2. MANHOLES ARE 48" UNLESS OTHERWISE NOTED.
 3. ALL LENGTHS OF PIPE INCLUDE FLARED END SECTION (F.E.S.). CONTRACTOR WILL ONLY BE PAID FOR L.F. OF PIPE, NOT INCLUDING LENGTH OF F.E.S.
 4. CONTRACTOR SHALL VERIFY ALL WATERMAIN UNITS AS INSTALLED (ACCORDING TO CITY OF CUPPERVA FALLS) PRIOR TO STARTING WORK. CONTRACTOR SHALL CONTACT CITY INSPECTOR IMMEDIATELY PRIOR TO STARTING WORK TO VERIFY ALL UTILITY INSTALLATIONS. CONTACT CITY INSPECTOR AT LEAST 72 HOURS PRIOR TO START OF UTILITY CONSTRUCTION SO THAT INSPECTION CAN BE SCHEDULED.
 5. 12" CLEARANCE WHEN WATERMAIN GOES OVER SANITARY, WATERMAN, OR STORM SEWER & 18" SEPARATION WHEN WATERMAIN PASSES UNDER SANITARY, WATERMAN, OR STORM SEWER.
 6. UPON COMPLETION OF STORM SEWER INSTALLATION, STORM SEWER INLETS SHALL BE PROTECTED FROM DAMAGE BY STORM SEWER INLETS. CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL STORM SEWER INLETS. CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL STORM SEWER INLETS. CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL STORM SEWER INLETS.
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 9. CONTRACTOR SHALL VERIFY THE TOTAL DRAINAGE EXPOSURE UNITS (DFU's) AND PIPE SIZES WITH THE PLUMBING PLANS.
 10. SANITARY SEWER SERVICE SHALL BE PVC (SR 35) < 20' BURY DEPTH & (SR 20) > 20' BURY DEPTH.
 11. WATER MAIN & SERVICE SHALL BE C-900 (OR 16).
 12. STORM SEWER SHALL BE HDPE UNLESS OTHERWISE STATED.
 13. THE PIPE DIAMETER'S LISTED ARE THE NOMINAL INSIDE DIAMETER.
 14. SAN. SERVICE WYE LOCATION IS REFERENCED FROM THE DOWN STREAM MANHOLE.
 15. INFRANT PACKAGE INCLUDES 8" VALVE & BOX, INFRANT LEAD, & INFRANT.

DWG NAME: EX 18
 PUBLIC UTILITY
 DATE: 12/2022

PARK WEST TOWNHOMES PH3
 CUPPERVA FALLS, WI
 CUPPERVA FALLS, WI

PUBLIC IMPROVEMENT (PHASE 3)

ADVANCED ENGINEERING CONSULTANTS
 1400 W. WISCONSIN AVE
 CUPPERVA FALLS, WI 53007
 PH: 715-552-3330
 FAX: 715-552-3330
 COPYRIGHT 2022 AEC, LLC



PROJ. NO. 20408

NO.	DATE	REVISIONS	DRAWN BY	DESIGN BY	CHECKED

NOTE: CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS

EXHIBIT D

ESTIMATED COST OF PUBLIC
IMPROVEMENTS (PHASE III)

(Attached)

1/31/2023

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 - Length of service
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 - Service material
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 - Manholes
 - Catch basins
 - Apron end walls
 - Any other significant changes
 - Include design polylines for all roadway geometrics
 - Draw in water and sanitary services based on field measurements
 - PDF File
 - Include all above information
 - Include date of as-built

CHIPPEWA FALLS OBSERVATION RECORD

OBSERVER _____ PROJECT _____

DATE: _____ 20 START TIME _____ END TIME _____

WEATHER: SUNNY _____ PARTLY CLOUDY _____ CLOUDY _____

SHOWERS _____ RAINING _____ to _____ LOW TEMP _____ HIGH TEMP _____

CONTRACTOR: _____ FOREMAN _____ # of Workers _____

EQUIPMENT _____

CONTRACTOR _____ FOREMAN _____ # of Workers _____

EQUIPMENT _____

SANITARY SEWER MAINLINE STA. _____ TO _____

WATERMAIN MAINLINE STA. _____ TO _____

STORM SEWER MAINLINE STA. _____ TO _____

SEWER LATERIAL TOTAL _____ (SEE NOTES FOR LOCATIONS AND QUANTITIES)

WATER SERVICE TOTAL _____ (SEE NOTES FOR LOCATIONS AND QUANTITIES)

MANDREL TEST: _____

CONTINUITY TEST: _____

WATERMAIN PRESSURE TEST: _____

NOTES:

SAMPLE

SEWER AND WATER SERVICE

ADDRESS: 123 Chippewa St.

DATE: 6-01-2017 CLEAR 80° 12:00PM

CONTRACTOR: A-1

FORMAN: Jim (3) workers

SAN. LF PIPE: 40 SIZE: 4" WYE: 8x4

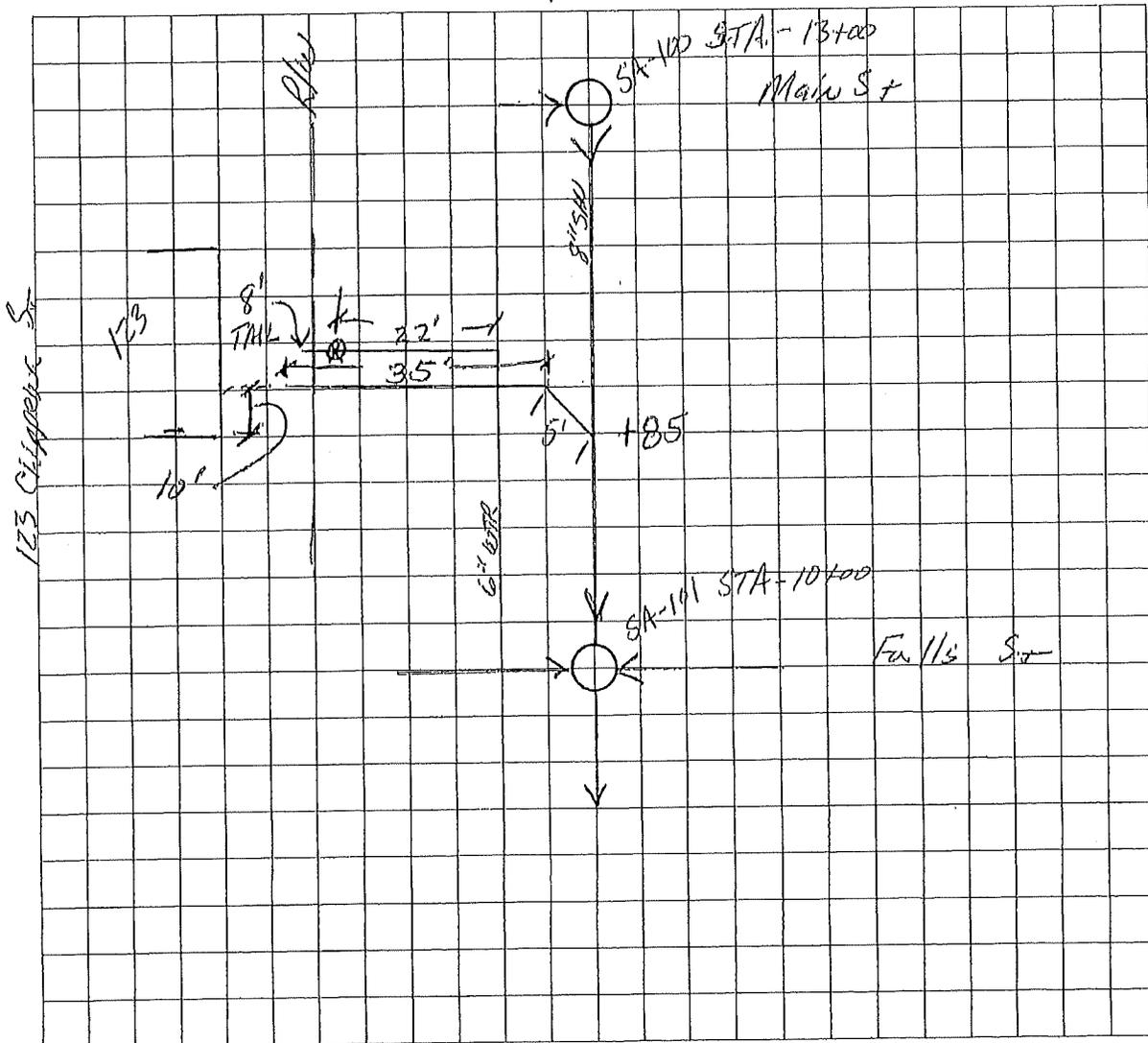
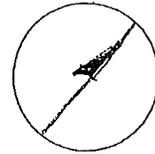
WTR. LF PIPE: 30 SIZE: 1" TYPE: Polly

SA-100 to SA-101 EXISTING SERVICE MATERIALS

Depth PL = SAN 10' WTR 8' SAN: 4" CAST

WATER: 1" COPPER

NORTH



SAMPLE SEWER AND WATER SERVICE

ADDRESS: 123-124 Chippewa Street

DATE: 6-01-2017 (RAIN) 60° 7:30 AM

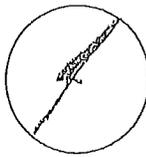
CONTRACTOR: HAAS & SON'S

FORMAN: WOLEY (E) working

SAN. LF PIPE: 36' 4" SIZE: 18" CHIP WYE: 8" C
39' 6" SIZE: 18" CHIP WYE: 8" C

WTR. LF PIPE: 28' 52" SIZE: 1" TYPE: Polly

NORTH



(2" 2x8 INSULATION)

EXISTING SERVICE MATERIALS
 SAN: (123) 4" CAST (124) 6" CLAY
 WATER: Both 1" Copper

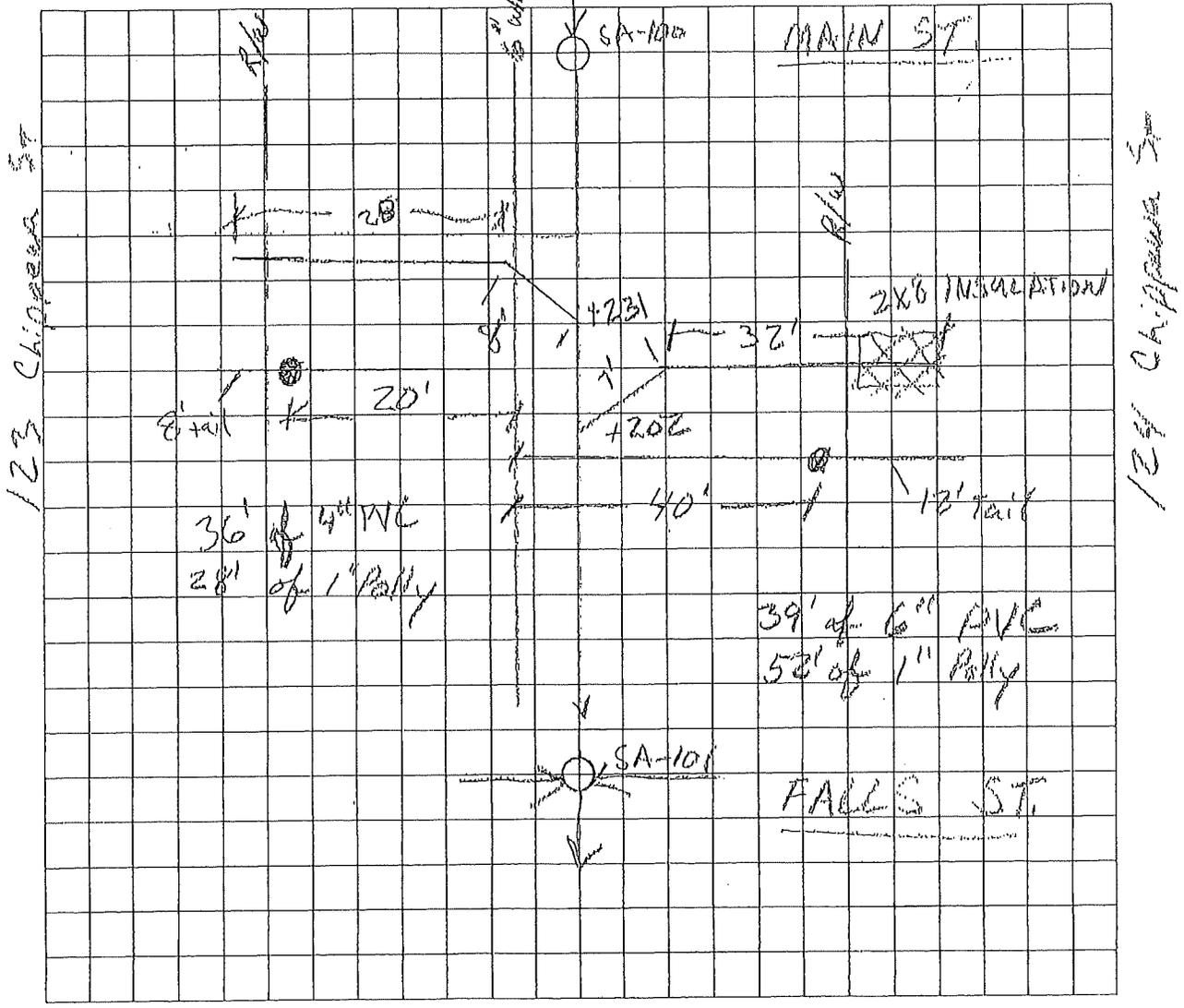


EXHIBIT F

SPECIFICATIONS (Attached)

General Specifications – Parkwest Townhomes Phase III
City of Chippewa Falls Standard Specifications
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GENERAL SPECIFICATIONS

1. Clearing and Grubbing

A Description

This section describes cutting and disposing of trees, brush, windfalls, logs, and other vegetation occurring within the clearing limits; and removing and disposing of roots, stumps, stubs, logs, and other timber occurring within the grubbing limits.

B (Void)

C Construction

1. Clear and grub all areas within the clearing and grubbing limits defined as follows:
 - a. Between lines 5 feet outside the grading limits of roadway cuts and fills, including intercepting embankments, channels, ditches, borrow pits, and marsh or waste disposal areas.
 - b. Other parts of the right of way the plans or special provisions designate.
 - c. Designated clear zone and clear vision areas.
 - d. With the Engineer's approval, areas with vegetation that interferes with excavation, embankment, marsh, or waste disposal.
 - e. The contractor does not have to grub the following:
 - i. Areas designated for occupation by earth embankments 6 feet or more in height.
 - ii. Areas used for marsh excavation disposal for which the State has obtained easements.
2. Preserve vegetation within the clearing limits as the plans show or the engineer directs. Cut off and dispose of all other trees, brush, shrubs, or other vegetation occurring within the clearing limits. Within the grubbing limits, remove debris not suitable for the roadway foundation, stumps and associated roots, logs, timber, brush, and matted roots to the following minimum depths:
 - a. In cut areas, one foot below final subgrade.
 - b. In embankment areas, one foot below the existing grade.
3. Do not remove trees and shrubs located beyond the clearing limits unless the engineer specifically authorizes their removal. If clearing where grubbing is not required, cut shrubs and brush to within 3 inches of the ground surface. Cut trees as nearly flush with the ground surface as is practical with tools ordinarily used for these operations.
4. Prevent the spread of oak wilt by treating all cut surfaces and abrasions sustained between April 1 and September 30 by healthy oak trees and saplings with a thorough application of tree paint immediately upon discovering a wound. Between these dates, also paint the cut surfaces of the stumps of all healthy oak trees and saplings immediately after cutting, whether remaining in place or grubbed.
5. If feasible, fell trees toward the center of the area being cleared. If this is not possible due to danger to traffic or injury to other trees, structures, or property, cut them into sections from the top down.
6. Do not injure or damage trees and shrubs left in place on the right of way. Symmetrically trim lower limbs or branches of trees left in place and overhanging the roadbed to at least 20 feet above the finished grade. Trim using generally accepted horticultural practices.
7. Dispose of stumps, roots, brush, waste logs and limbs, timber tops, and debris resulting from clearing and grubbing or occurring within the clearing and grubbing limits by burning, chipping or removing from the right of way.
8. For disposal by open burning, pile and burn materials within the clearing limits at times and in a way that does not injure trees or shrubs being left in place, create a nuisance, create a hazard to traffic, or cause damage to public or private property.
9. Unless disposed of in another manner, dispose of material off the right of way according to applicable solid waste disposal regulations. Obtain written permits for this disposal from the City of the property where placing the material, unless disposing of this material at a licensed waste disposal operation. Furnish permits, or copies of permits, to the engineer before disposal begins.
10. Chip, burn, or bury under not less than one foot of earth all elm wood consisting of trees, logs, stumps, stubs, branches, or windfalls with adhering bark, and all elm bark and debris within clearing and grubbing limits or resulting from clearing and grubbing operations.
11. Debark all elm logs salvaged, and all elm wood or stumps not disposed of by chipping, burning, or burying; and chip, burn, or bury the bark. For clearing and grubbing operations performed between April 1 and September 30, perform final disposal of elm wood, bark, or debris within 30 days. For clearing and grubbing operations performed between October 1 and March 31, perform final disposal of elm wood, bark, or debris before the succeeding May 1.
12. Dispose of all clearing and grubbing debris before proceeding with grading operations. If the contractor intends to burn debris but cannot secure burning permits on schedule, do not delay removing clearing debris from areas affected by other operations. While waiting to secure burning permits, pile clearing and grubbing debris beyond the limits affected by other work.

D Measurement

The owner will not measure Clearing and Grubbing rather refer to the plans and the limits shown.

E Payment

The Owner will pay measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Clearing & Grubbing	— Lump Sum

Payment for Clearing and Grubbing is full compensation for all clearing and grubbing required under this section and performed within the clearing and grubbing limits. Handling, hauling, piling, burning, burying, trimming, chipping, wound treatment, rehandling, and disposing of waste and debris. Excavations made to bury clearing and grubbing material, backfilling these excavations, and disposing of excess excavated material.

2. Removing or Abandoning Miscellaneous Structures

A. Description

This section describes wholly or partially removing or abandoning existing miscellaneous structures, disposing of the resulting materials, or if required, salvaging a storing designated materials.

B (Vacant)

C Construction

If retaining a portion of the existing structure, avoid damaging that portion during construction operations. Do not use any equipment or devices that might damage structures, facilities, or property to be preserved and retained. Complete all operations necessary to remove or abandon an existing structure and that might endanger the new construction before constructing new work.

C.1 Backfilling

1. Backfill all trenches, holes, and pits resulting from breaking down, removing, or abandoning miscellaneous structures as specified for backfilling trenches in Removing Old Culverts and Bridges.
2. Unless the contract specifies otherwise, backfill to the elevation of the natural ground, the proposed finished earth subgrade, or finished slopes, as necessary due to the location of the removed structure.

C.2 Salvaging or Disposing of Materials

1. Carefully remove all materials designated for salvage to avoid damage. Place salvaged materials in neat piles outside construction limits but within the right of way, at locations the engineer approves. Stockpile ballast, gravel, and surfacing materials designated for salvage at locations the engineer approves, without contaminating the material with dirt or foreign matter.
2. Dispose of all concrete, stone, brick, and other material not designated for salvage as specified for disposing of materials under Removing Old Culverts and Bridges.

C.3 Breaking Down and Removing

1. Unless specified otherwise, remove all structures that the contract designates for removal or that interfere with the new construction as follows:
 - a. From within the roadway.
 - b. From within the removal limits the plans show.
 - c. From within the limits designated under the Obliterating Old Road bid item, whether specified or subsequently found necessary and required.
 - d. If the contract specifies, also wholly or partially remove structural elements occurring outside the limits of construction and beyond the limits of Obliterating Old Road.
2. Unless the plans show otherwise, remove entirely or break down all walls, piers, surface drains, foundations, and similar masonry structures as follows:
 - a. Within the roadbed, to a depth at least 2 feet below the subgrade.
 - b. Outside the roadbed, to a depth at least 2 feet below the finished grade.
 - c. At any location, to the extent required to avoid interfering with the work.
3. If removing pavement, curb, gutter, sidewalk, crosswalk, and similar structures and portions of the existing structure are to remain in the surface of the finished work, remove the structure to an existing joint, or saw and chip the structure to a true line with a face perpendicular to the surface of the existing structure. Remove enough of the structure to provide proper grades and connection to the new work. Maintain drainage for drainage during construction.
4. The contractor becomes the City of the removed asphaltic pavement or surfacing and is responsible for its disposal.

C.4 Removing Items

1. Under the Removing Pavement bid item, remove concrete pavements, concrete alleys, concrete driveways, or rigid base including all surfaces or other pavements superimposed on them, except that asphaltic pavement salvaged under WisDOT section 490 bid items are not included in Removing Pavement.
2. Under the Removing Pavement Butt Joints bid item, remove concrete pavements to allow the construction of butt joints. Remove existing pavement to the depth the plans show by grinding, planing, chipping, sawing, or other engineer approved methods.
3. Under the Removing Asphaltic Surface bid item, remove all types of asphaltic pavement or surfacing not supported on rigid bases, or underlain by proposed excavation, or overlaid by proposed embankment. Also, remove asphaltic overlays of existing concrete pavements, bases, or bridge decks designated to remain in place.
4. Under the Removing Asphaltic Surface Butt Joints bid item, remove asphaltic pavement or surfacing to allow the construction of butt joints. Remove existing asphaltic pavements or surfacing to the depth the plans show by grinding, planing, chipping, sawing, or other engineer approved methods.
5. Under the Removing Asphaltic Surface Milling bid item, remove and dispose of existing asphaltic pavement or surfacing by milling at the location and to the depth the plans show. Mill the asphaltic pavement or surfacing as specified for milling salvaged asphaltic pavement in WisDOT 490.3.

6. Under the Removing Concrete Sidewalk bid item, remove concrete sidewalk, crosswalk, and steps.
7. Under the Removing Curb & Gutter bid item, remove curb to the plane of the pavement surface, +/- one inch.
8. Under the Removing Concrete Slope Paving bid item, restore the slope in front of the abutment to a smooth, plane surface after removing the slope paving.
9. Under the Removing Delineators and Markers bid item, remove delineators and markers.
10. Under the Removing Railroad Track bid item, remove all rails, paving, ties, track encasement, and other appurtenances. Remove concrete foundation, and leave in place crushed stone or gravel ballast, unless specified otherwise.
11. Under the Removing Manholes, Removing Catch Basins, and Removing Inlets bid items, rebuild, and properly reconnect all live sewers connected with them. Maintain satisfactory bypass service during these operations. Plug unused sewers as specified for abandoning pipes and structures under this specification.
12. Under the Removing Septic Tanks bid item, first completely remove the contents of the tank. Conform to the WDNR requirements for removal and disposal of these contents. Break down and remove the tank, to an elevation not less than 2 feet below the proposed ground surface, or 2 feet below the finished slopes or natural ground surface, as required due to the location of the tank. Before backfilling, break a hole in the bottom of any remaining portion of the tank to allow drainage. Backfill as specified for trenches, holes, and pits in this specification. If the septic tank disposal system includes a dry well, remove the dry well to not less than 2 feet below ground surface, and backfill it in the manner specified above for the septic tank.
13. Under the Site Clearance bid items, remove building foundations and concrete slabs, backfill exposed openings, and clear the site within the right of way at the locations the plans show. Materials removed from building sites under this bid item become the contractor's property. The contractor may incorporate these materials in the roadway embankment if the engineer approves. Clear the entire premises of all decomposable and combustible refuse, debris, and materials resulting from the removals and leave the premises in a neat condition.
14. Under the Removing Storm Sewer bid items, remove existing storm sewer. Backfill all resulting trenches with granular backfill.

D Measurement

1. The Owner will measure Removing Pavement, Removing Pavement Butt Joints, Removing Asphaltic Surface, and Removing Asphaltic Surface Butt Joints by the square yard acceptably complete regardless of the depth or number of courses encountered. The Owner will measure Removing Asphaltic Surface Milling by the square yard, or by the ton acceptably completed.
2. If removing curb, gutter, or curb & gutter is required in conjunction with removing pavement, the Owner will measure removing these structures by the square yard acceptably completed, under the Removing Pavement bid item.
3. If removing curb, gutter, or curb & gutter that is separate from and not removable in conjunction with removing pavement, the Owner will measure Removing Curb, Removing Gutter, and Removing Curb & Gutter by the foot acceptably completed, measured along the flow line of gutter for gutter, or curb & gutter, and along face of curb for curb.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Removing Pavement	SY

E.1 Removing Concrete Sidewalk, Concrete Pavement, Concrete curb and gutter

Payment for removing concrete sidewalk, concrete curb and gutter and pavement is full compensation for any equipment, material, sawcutting, and other items necessary to complete the work. No additional compensation for sawcutting will be provided unless it is included on the plan or directed by the Engineer.

Payment for removing or abandoning miscellaneous structures is full compensation for breaking down, removing, closing, plugging, or sealing; for removing and disposing of headwalls; for obtaining any required work permits; for hauling and disposing of materials; for providing any required bentonite, soil, brick, concrete block, or concrete; for restoring the roadway cross-section; and, unless the contract specifies granular backfill, for backfilling.

If the contract specifies or the engineer directs backfilling with granular backfill, the backfill will be considered incidental to the appropriate bid item.

Except for storm sewer, if the contract does not include a separate bid item for removing any of the miscellaneous structures listed above from within the limits of Obliterating Old Road, all work involved in the removal thereof, whether specified or subsequently found necessary and required, is incidental to Obliterating Old Road.

3. Roadway and Drainage Excavation

A Description

This section describes excavating and disposing of material taken from within the right of way for project construction. This section does not include material obtained from borrow pits outside the right of way limits, excavation for structures, or other excavation that separate bid items and specific measurement and payment are specified elsewhere in the specifications and contract.

B Materials

B.1 Classification

1. The Owner classifies all excavation as common.
2. The Owner classifies all EBS outside of marshes as common.

B.2 Common Excavation

Under the Excavation Common bid item, excavate all materials. For contracts without the Excavation Rock bid item, remove boulders having volumes of one cubic yard or more under the Excavation Common bid item.

C Construction

C.1 General

1. Excavate materials as the plans show or the engineer allows from within the right of way. Use excavated material in the work to the extent that it is practical. Use excavated material with suitable engineering properties to construct the roadway, roadbed, embankments, earth subgrade and shoulders, intersections, side ditches and dikes, channels, and waterways. Dispose of surplus or unsuitable material as specified in WisDOT 205.3.12.
2. Grade entrances, approaches, ditches, and channels beyond the right of way.
3. Unless specified otherwise, remove and dispose of surface and base, embankment surcharge, masonry walls, foundations of buildings, or other miscellaneous structures that lie within the right of way. Also, remove and dispose of stone fences, stone piles, and surplus and unsuitable materials.
4. Replace unsuitable material with satisfactory material. Trim and finish the roadway. Maintain the work done under section 205 in a finished condition until acceptance.

C.2 Preparing Roadway Foundation

1. Remove vegetation taller than one foot before excavating or placing embankment. Remove heavy sod, perishable material, unstable topsoil, muck, peat, and other undesirable material from the roadway foundation as defined in WisDOT 101.3. Also remove frozen material from the roadway foundation unless the engineer approves otherwise. Dispose of removed material as specified in 205.3.12 unless the contract or the engineer directs otherwise.
2. Salvage topsoil, as specified in WisDOT 625.3.2, from excavation areas and the roadway foundation. Remove excess unstable topsoil from the roadway foundation as EBS as specified in WisDOT 205.3.4.
3. Compact, or prepare otherwise as required, the existing ground within the roadway foundation as necessary to support the embankment and attain the specified embankment density.
4. If placing embankment on side slopes 10 feet high or higher and steeper than one vertical to 3 horizontal, provide vertically faced horizontal steps or benches in the slopes to support the embankment. The contractor may cut or form the steps or benches while placing the embankment.
5. Completely remove all pavement, asphaltic surface, and rigid base from within the roadbed slopes and underlying proposed embankments to a depth of 2 feet or more below the finished grade line, or to the depth the plans show.

C.3 Drainage During Construction

1. During construction, maintain roadway, ditches, and channels in a well-drained condition at all times by keeping the excavation areas and embankments sloped to the approximate section of the ultimate earth grade. Perform blading or leveling operations when placing embankments and during the process of excavation except if the excavation is in ledge rock or areas where leveling is not practical or necessary. If it is necessary in the prosecution of the work to interrupt existing surface drainage, sewers, or under drainage, provide temporary drainage until completing permanent drainage work.
2. If storing salvaged topsoil on the right of way during construction operations, stockpile it to preclude interference with or obstruction of surface drainage.
3. Seal subgrade surfaces as specified for subgrade intermediate consolidation and trimming in WisDOT 207.3.9.
4. Preserve, protect, and maintain all existing tile drains, sewers, and other subsurface drains, or parts thereof, that the engineer judges should continue in service without change. Repair, at no expense to the Owner, all damage to these facilities resulting from negligence or carelessness of the contractor's operations.

C.4 Excavation Below Subgrade

1. Remove deposits of frost-heave material, unstable silty soils, wet and unstable soil, material salvaged from old road cores in marshes, topsoil containing considerable amounts of humus or vegetable matter, rocks, or other undesirable foundation material to the depth below finished grade as the plans show or the engineer directs. If possible, slope and drain the excavation bottoms to prevent water accumulation.
2. Dispose of humus bearing soils and other excavated materials not suitable for embankment construction as specified for disposal of surplus or unsuitable material in WisDOT 205.3.12.
3. Use selected materials from roadway and drainage excavation having suitable engineering properties, borrow, or granular backfill, as the plans or special provisions show or as the engineer directs, to backfill excavated areas.

C.5 Grading the Roadway, Intersections, and Entrances

1. Use all material with suitable engineering properties removed from excavation, to the extent that it is practical, to construct the roadway. Use excess excavated material in other locations the plans show.
2. Undercut or under fill to the necessary depth, all excavated slopes or areas and all embankment slopes or areas designated to receive topsoil or salvaged topsoil in order to provide for placement and finish of the specified amount of topsoil or salvaged topsoil to the required grade lines and section.
3. Perform excavation to avoid removing or loosening any material outside the required slopes. Replace and thoroughly compact any material removed or loosened to the required cross-section.

4. Grade all intersecting roads, approaches, entrances, and driveways as the plans show or as the engineer lays out. Construct intersections and private entrances, trim shoulders and slopes, finish and blade the earth subgrade, and complete the ditches to the proper alignment, grade, and cross-section closely following the rough grading.

C.6 Constructing Ditches, Dikes, and Channels

1. Construct inlets, outlets, swamp, berm and intercepting ditches, dikes, or intercepting embankments and channels where and as the plans show or where and as the engineer directs. Maintain inlets, outlets, swamp, berm, and intercepting ditches, dikes, or intercepting embankments and channels to the required section until acceptance. Perform the work in proper sequence with other work to provide adequate drainage and to minimize erosion and siltation.
2. The Owner will include excavation from ditches and channels with the pertinent bid items classified under roadway and drainage excavation.
3. Use all material with suitable engineering properties excavated from ditches and channels, to the extent that it is practical, to construct the roadway and backfill abandoned ditches and channels. Dispose of unused excavated material as the plans show or as the engineer directs.
4. Do not deposit waste or surplus excavation within 3 feet of the edge of ditches or channels or within a greater distance as required to ensure stability of the side slopes. Spread waste or surplus material in thin, neatly shaped, uniform layers. Remove roots, stumps, logs, and other objectionable material in the slopes and bottoms of ditches and channels. Backfill the holes with suitable material, or cut the holes to conform to the cross-section the plans show. If necessary, provide sufficient openings in spoil banks to allow surface drainage of adjacent lands.
5. Provide suitable outlets or flumes from intercepting ditches to roadway ditches where necessary as the plans show.

C.7 Removing Embankment Surcharge

Remove and dispose of excess fill placed above the elevation for earth grade over deposits of unstable material to secure displacement or settlement. Remove surcharge only after the engineer determines the fill has reached stability or the required settlement.

C.8 Incorporating or Disposing of Surplus or Unsuitable Material

1. Dispose of all vegetation as specified for clearing and grubbing under 201.3. Save material containing humus or of a nature suitable to support vegetation but unsatisfactory for constructing embankments. Use this material in salvaged topsoil operations. The contractor may, if the engineer approves, use surplus humus-bearing soils, and other excavated materials not suitable for embankment construction but suitable to uniformly widen embankments, to flatten slopes, and to fill low places in the right of way for these purposes, unless specified otherwise.
2. Do not deposit excavated material along the roadsides above the elevation of the adjacent roadbed, unless the plans show or the engineer allows.

C.9 Approving Areas of Yielding Subgrade

1. After rough grading on all or a portion of the subgrade in cut areas and in areas requiring 2 feet or less embankment is complete and the grade is ready for blue tops, point out areas of yielding subgrade to the engineer. The engineer will evaluate the subgrade to determine if corrective work or EBS is required.
2. If the engineer requests, provide loaded trucks and run the subgrade as the engineer directs to confirm yielding areas. Perform EBS in yielding areas and backfill as the engineer directs.
3. If satisfied that an area requires no EBS, the engineer will approve that area for subsequent operations.

C.10 Finish Grading

1. Complete the grading, trimming, and finishing before constructing the subbase, base, or surface courses.
2. Make gradual adjustment in slopes to avoid injury to standing trees or to harmonize with existing landscape features, especially at the intersection of cuts and fills.
3. Round the crests of earth cut banks as the plans show or as the engineer directs.
4. Merge all constructed earth slopes with adjacent terrain and substantially conform to the plan crosssections. Use blading or other operations, to partially smooth the horizontal serrated condition of slopes ordinarily left by excavating equipment. Produce slopes that are slightly rough and irregular and have a general contour of the required slope.
5. Flatten, round, or modify the slopes and banks of existing ditches, channels, berms, and dikes within the clear zone to the extent necessary to remove obstacles or obstructions encountered by vehicles leaving the adjacent traveled way.
6. During grading operations and pending acceptance of grading or placement of subbase, base, or surface course, provide continuous maintenance of the entire roadbed and perform all blading and repair work necessary to keep the grade smooth and to the required grade and cross-section specified. The contractor is not required to maintain or restore the minimum required density in the graded roadway after completing shaping, trimming, and finishing operations, except as specified for preparing the foundation in WisDOT 211 before placing subbase or base under the contract.
7. Refill and compact washouts caused by erosion.

C.11 Preserving Trees and Shrubs

1. Protect trees and shrubs designated for preservation from scarring or other injury during grading operations.
2. If excavating around trees to be preserved, do not disturb the original ground around the trees within a minimum distance of one foot or twice the diameter of the tree, whichever is the greater distance. Cleanly cut exposed roots resulting from excavation, and cover them with humus-bearing soil.
3. If the plans, special provisions, or the engineer requires, construct tree wells to protect trees or shrubs surrounded by excavation or embankment.

C.12 Dust Control

Minimize dust dispersion from the subgrade during grading and maintenance operations, until the work is

accepted, by applying water or other engineer-approved dust control materials as the contract specifies or the engineer requires.

D Measurement

1. The Owner will measure all classes of roadway and drainage excavation by the lump sum acceptably completed as shown on the engineered plan.
2. The City will measure erosion control, fertilizing, and seeding for material disposal sites as specified for material disposal sites in WisDOT 628.4.1.1.

E Payment

The City will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
	Common Excavation	LS

4. Dense Grade Base

A Description

This section describes construction of Base Aggregate base course on a prepared subgrade as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

Base Aggregate (Type): In accordance with WisDOT Section 305.

C Construction

C.1 Placing and Mixing

1. Place aggregate in layers to produce maximum 3-inches of compacted thickness.
2. With vibratory compaction, place to produce maximum 6-inches of compacted thickness.
3. Deposit only the amount of aggregate that is intended to be spread and compacted the same day.
4. Add water as required during mixing to produce proper compaction.

C.2 Spreading and Compacting

1. Mix aggregate uniformly to maintain proper gradation.
2. Spread and compact each layer to the required cross section and density prior to placing the succeeding layer.
3. Compact each layer to 100-percent the Standard Procter Density.

C.3 Protection

1. Place initial surface course or otherwise protect the in-place aggregate base within 72-hours after placement.
2. Remove and replace any portion of the material that becomes contaminated after placement.

C.4 General

1. Provide for each aggregate material:
2. Name and location of source
3. Two sample gradations taken with the past 30-days from each potential source. Delivered to the Engineer at least 10-days prior to placement on the project.
4. Stockpile and drain aggregate removed from below water for minimum 24-hours prior to delivery.
5. Deposit aggregate only on dry, compact subgrade so that no rutting or displacement will occur under construction traffic.

D Measurement

1. If the contract specifies Base Aggregate Dense, Size by the CY the Owner shall measure by the CY compacted and in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Crushed Aggregate Base, 1 1/4-Inch (In-Place)	CY

Payment for this bid items is full compensation for preparing the foundation; and for stockpiling, placing, shaping, compacting, and maintaining the base. Water used in compaction shall be considered incidental to construction unless the contract provides for bid item.

5. HMA Pavement

A Description

This section describes construction of HMA Pavement, as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

All materials used under this section shall conform to WisDOT Specifications Sections 450, 455, & 460.

B.1 Asphaltic Surface

Asphaltic materials: Per plan typical sections and in conformance with WisDOT Section 460.

B.2 Asphaltic Material

See Plan Construction Details for project composition. Asphaltic materials must comply with WisDOT Section 455.

C Construction

Submit an asphalt mix design in accordance with WisDOT Section 460.2.7 to the Engineer 1-week prior to any paving operations.

C.1 Application

1. Construct pavement conforming to the general provisions of WisDOT 450.3.
2. Compaction of the pavement shall be in accordance with the HMA Pavement Density Maximum Density Method of WisDOT 460.3.3.
3. Pavement shall be installed in multiple lifts, unless plan requires one lift.
4. WisDOT 460.3.2 Thickness – This contract does allow for No.4 (12.5 mm) to have a minimum layer thickness of 1.5-inches.

C.2 Adjusting

Adjust valve boxes, manholes, cleanouts or other appurtenances to new surface elevation. The Engineer shall approve methods of adjustment.

D Measurement

1. The Owner will measure HMA Pavement by the SY based on the construction plans. Asphaltic materials required for and incorporated into the mixture will not be measured separately for payment. Any tack coat required between layers shall be considered incidental to the this contract.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Asphaltic Binder Course	SY
	Asphaltic Surface Course	SY

Payment is full compensation for completing all necessary Work and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

The Owner will not compensate for HMA materials that do not meet required specifications.

6. Pipe Culverts

A Description

This section describes providing culvert pipe, cattle pass, and apron endwalls where the material used is a contractor option; providing and removing temporary culvert pipe; and cleaning existing culvert pipes.

B Materials

B.1 Culvert Pipe

1. Furnish culvert pipe consistent with the diameter the bid item indicates. For class III, IV, and V pipe the contractor may furnish either corrugated steel pipe of the thickness the contract designates or reinforced concrete pipe of the designated class. For class III pipe the contractor also has the option of furnishing corrugated polyethylene pipe for diameters 36 inches and less.
 1. For the given materials, conform to the following:
 2. Corrugated steel pipe – WisDOT 521.2
 3. Reinforced concrete pipe – WisDOT 522.2.2
 4. Corrugated polyethylene pipe – WisDOT 530.2
 5. Under the Culvert Pipe Temporary bid items, use either new or used culvert pipe in a condition suitable for the purpose intended.

B.3 Apron Endwalls for Culvert Pipe

Under the Apron Endwalls for Culvert Pipe bid items, use steel apron endwalls for corrugated steel and corrugated polyethylene pipe culvert installations, and use concrete apron endwalls with concrete pipe culvert installations. For the given materials, conform to the following:

- Steel apron endwalls – WisDOT 521.2
- Concrete apron endwalls – WisDOT 522.2.4

B.4 Concrete Collars for Pipe

For concrete collars, furnish grade A, A-FA, A-S, A-T, A-IS, or A-IP concrete conforming to WisDOT 501 as modified in WisDOT 716.

C Construction

1. Unless the engineer authorizes otherwise in writing, the contractor shall not order and deliver pipe culverts for the project until the engineer furnishes a corrected list of sizes and lengths.
2. Provide all temporary drainage facilities necessary to protect the work and adjacent property. Maintain temporary drainage in effective operating condition, as the engineer approves, until the permanent culvert pipe installations are operational. Remove and dispose of temporary culverts after the permanent culvert pipe installations are operational.
3. Construct concrete collars where and as the plans show.

C.1 Excavating and Forming

1. If placing pipe culverts under any public highway in open trenches, either place them in an excavation in the existing ground, or in previously placed embankment compacted as specified for embankment in WisDOT 207. Place and compact the embankment to at least the elevation of the top of the culvert before excavating the trench. Avoid placing embankment to an elevation exceeding 2 feet above the top of the culvert before placing the culvert.
2. Perform trenching and excavating according to 29 CFR part 1926, OSHA subpart P for excavations. If the height of the proposed embankment or earth cover above the top of the pipe exceeds 6 feet, excavate the trench below the top of the pipe as vertical as possible.
3. For steel or concrete pipe, make the trench wide enough to allow for preparing the foundation, laying the pipe, and placing and compacting backfill as specified, except that the trench width shall not exceed the pipe's outside diameter by more than 36 inches. For polyethylene pipe, conform to ASTM D2321 and ensure that the trench is as wide or wider than the pipe outside diameter plus 16 inches or the pipe outside diameter times 1.25 plus 12 inches whichever is wider.
4. For pipe culverts, unless rock is present, the contractor may lay pipe either on a shaped, firm, earth subgrade, or on a backfilled granular foundation or bed.
5. If the pipe foundation is firm earth, shape the trench bottom to give full and continuous support to the pipe for at least the lower 1/10th of the outside height of circular pipes or pipe arches.
6. If backfilling the pipe foundation with granular material, excavate the trench to at least 6 inches below the elevation established for the bottom of the pipe. Backfill this depth with granular backfill as modified in WisDOT 209.2.1 for bedding under culvert pipes, or with engineer-approved graded aggregate, that passes a one inch sieve. Before laying the pipe on the backfilled granular material, compact the material. After laying circular pipe on this foundation, place additional granular material conforming to the above requirements under and around the pipe in layers not exceeding 6 inches. Compact this material by ramming, tamping, or vibrating to provide full and continuous support of the pipe for at least the lower 1/6th of its outside vertical diameter.
7. If placing pipe arches, excavate and backfill the trench as specified above, except backfill the trench, compact, and trim to a height that fully and continuously supports the pipe arch for at least the lower 1/6th of its height.
8. If the existing granular foundation material for at least 6 inches below the pipe bottom conforms to the above requirements for granular backfill, as the engineer determines, and if no rock exists within the specified depth for granular cushion, the contractor may omit excavation and backfill beneath the pipe, and may omit shaping the bed for circular pipe.
9. If rock, hardpan, or fragmented material exists, excavate the trench below the pipe to an amount equal to 1/2 inch per foot of proposed embankment above the top of the pipe, but not less than 6 inches, and backfill with material conforming to the above requirements to produce a granular cushion. Place additional granular material under and around the pipe as specified above.
10. Excavate recesses to receive bells if necessary.
11. If the plans show bedding types other than described above, conform to the plan details.

C.2 Private Entrance and Temporary Culverts

1. Shape the earth foundation for the pipe culverts for private entrances, and temporary installations to fit the pipe exterior with reasonable closeness for a height of at least 10 percent of the pipe's overall diameter.
2. If rock, hard pan, boulders, or fragmented material exist, bed the pipe on an earth, or granular cushion, compacted and shaped similarly to the above, for no less than 6 inches below the pipe.

C.3 Laying Pipe

1. Do not place any pipe culvert until the engineer approves the foundation. Additionally, do not place pipe culverts in cuts until completing the rough grading.
2. Unless the plans show otherwise, if laying 2 or more pipes next to each other, separate them by a distance equal to at least 1/2 the pipe diameter, with a minimum distance of 18 inches. For pipes with attached apron endwalls, separate them by a distance that provides a minimum of 6 inches between the apron endwalls. For cast-in-place concrete or other alternate endwall installations, space pipes as the plans show.
3. Lay concrete pipe with bells or grooves up grade and with spigot or tongue ends fully inserted in the bells or grooves. Protect each joint against backfill infiltration by providing a full circumferential wrap of geotextile fabric extending one

foot or more on each side of each joint and securing the wrap in place. The geotextile shall conform to WisDOT 645.2.4, schedule A.

4. The contractor may use sealers conforming to WisDOT 607.2 instead of the geotextile fabric joint wrap. Construction methods for sealing joints with these sealers shall conform to WisDOT 607.3.4.
5. Provide joint ties on the upstream and downstream ends of concrete culvert and concrete cattle pass installations. Tie the last 3 sections or, if using apron endwalls, the endwall and the last 2 sections. Ties are not required on culverts with masonry endwalls unless the plans show otherwise.
6. Lay riveted or spot-welded corrugated steel pipe so that flow is over the lap of the sheets, except for beveled end sections where the contractor may reverse the lap at the outlet end. Make field joints by joining the metal pipe sections together with a band bolted firmly in place. If elongation of the vertical diameter is specified, provide an appropriately modified prefabricated section.
7. Ensure that joints for polyethylene pipe are soil tight according to AASHTO M294.
8. Lay all pipes true to the designated line, grade, and required camber. Fit and match them to form a smooth and uniform invert.
9. Carefully fit the sections of pipe together to keep the size of joint openings to a minimum.
10. Clean sockets carefully before lowering pipes into trenches. Lower the pipes in a way that avoids unnecessary handling in the trench.

C.4 Backfilling

1. Backfill permanent pipe culvert installations under any public highway with selected material from excavation that is free of large lumps, clods, or rock. If the contract or engineer specifies, backfill with granular backfill conforming to WisDOT 209.2. If granular backfill contains 3-inch or larger rocks, place so that the rocks do not contact the pipe during compaction.
2. Place backfill in the trench over the top of the earth, granular foundation, or bed. Carefully place and thoroughly ram, tamp, or vibrate around the pipe in layers no greater than 6 inches deep, to the top of the pipe. Compact the entire length of each layer before placing the next layer.
3. Place and compact backfill material above the pipe in layers no more than 12 inches deep, to the top of the trench. Compact to the same degree as the material next to the trench.
4. Immediately after backfilling, cushion the installation as necessary by placing compacted earth embankment over the pipe for at least the trench width. Provide 2 feet or more cover, including backfill depth, above the pipe. Maintain this cushion during subsequent construction operations.
5. Place the remaining portion of the embankment, if any, above the top of the trench as specified for the adjacent embankment.
6. If the plans show the extent of excavation and backfill requirements for pipe culverts, conform to those plan details.

C.5 Placing Apron Endwalls

1. Excavate the bed for the apron endwall to the required width and grade. For metal aprons with toe plates, excavate a trench to allow placing the toe plate against the inner face of the trench if the apron is in its final position. After securing the apron to the pipe, backfill and firmly compact the trench.
2. Place the concrete apron endwall with its tongue or groove fully entered in the groove or tongue of the pipe.
3. Use the same backfill for the apron as required for the culvert pipe unless the engineer directs otherwise.

C.6 Cleaning Culvert Pipes

Clean the existing culvert pipes of all dirt and vegetation. Use all suitable materials removed from the culvert pipes in other areas requiring fill material within the project limits as the engineer directs. Dispose of surplus and unsuitable material appropriately.

C.7 Deflection

1. The City accepts polyethylene pipe based on testing with a City-approved mandrel. Test pipe as the engineer directs after installation but before paving or finish grading.
2. Provide a mandrel with a diameter equal to 92.5 percent of the pipe's nominal diameter and having cable attachment points on each end of the core. Ensure that the mandrel has nine fins or legs permanently marked to designate the pipe size and the allowable percent deflection.
3. The engineer will designate at least 10 percent of the installed length of pipe for testing. The mandrel must pass through the entire section in one pass when pulled by hand without using excessive force. If the designated length of pipe fails, engineer may require additional testing.

C.8 Protection After Laying

Protect all culvert pipes until final acceptance of the work. The contractor shall replace any pipe damaged, either through its operations, or through its failure to protect the installation.

D Measurement

1. The Owner will measure the Apron Endwalls bid items as each individual unit acceptably completed.
2. Cleaning Culvert Pipes is incidental to the project costs.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Steel Endwalls (xx-inch)	Each

The Owner will make no additional compensation to the contractor for using sealers instead of geotextile fabric as allowed under WisDOT 520.3.3.

~~Payment for the Culvert Pipe bid items is full compensation for providing, hauling, and placing the pipe, including bands, geotextile joint wrap if required, and joint ties; for all excavating, including foundation or bed, and any associated dewatering; for providing and placing granular backfill or graded aggregate for granular foundation or cushion; for backfilling unless granular backfill is specified; for maintaining temporary drainage; and for replacing damaged installations.~~

Payment for the Apron Endwalls for Culvert Pipe bid items is full compensation for providing, transporting, and installing the apron endwalls, including bands or connectors; for all excavating, including forming bed; and for backfilling unless granular backfill is

7. Concrete Curb and Gutter

A Description

This section describes the construction of Curb and Gutter as shown on the plans, as directed by the Engineer, and as hereinafter described.

B Materials

B.1 Materials

All materials shall be in accordance with the respective WisDOT Specifications as follows:

1. Concrete – WisDOT 501
2. Steel Reinforcement – WisDOT 505
3. Joint Filler – WisDOT 415.2.4
4. Granular Materials – WisDOT 209

B.2 Accessories

All materials shall be in accordance with the respective WisDOT Specification as follows:

1. Curing Materials:
 - a. Plastic Sheeting – WisDOT 415.2.4
 - b. Membrane Curing Compound – WisDOT 415.2.4
 - c. Wet Fabric Method – WisDOT 415.3.12.4

C Construction

C.1 Foundation Preparation

1. Excavate shape and compact foundation to the planned section and grade.
2. Remove unsuitable subgrade soil as directed.
3. Provide and compact granular material to the required depth as indicated on the Drawings.
4. If the plans show, provide drainage for curb and gutter, foundation with underdrains, constructed as specified for underdrains, where the plans show or the Engineer directs.

C.2 Installation

1. Provide forms that are capable of sustaining the concrete in the proper line, grade, and cross section until set.

C.3 Joint Construction

1. Construct joints perpendicular to the subgrade.
2. Align with similar joints in adjacent work.
3. Place transverse joints at right angles to alignment.
4. Transverse Expansion Joints
 - a. Fill with ½-inch preformed joint filler material.
 - b. Place as follows:
 - i. At 300-foot intervals on all tangent sections.
 - ii. Three feet on each side of all catch basins.
 - iii. At the end of all curved sections.
 - iv. At the end of curved portions of entrance and street returns.
 - v. Where new construction surrounds or adjoins any existing fixed object.
 - vi. To match the locations of expansion joints in adjacent concrete pavements.
5. Contraction Joints
 - a. Provide at 10-foot intervals in curb or gutter constructions.
 - b. Provide at 20-foot intervals in solid median construction.
 - c. Form or saw to a minimum 2-Inch depth from all exposed surfaces.

C.4 Metal Reinforcement

Provide and place as shown on the Drawings.

C.5 Placing and Finishing

1. Wet foundation and inside form faces immediately prior to concrete placement.
2. Fill all voids by hand tamping or internal vibration.
3. Strike off to the required grade and float smooth.
4. Hand-float top surface of curb face.

5. Round joints and edges to 1/2-inch radii.
6. Lightly brush all exposed surfaces to a uniform texture.
7. Fill cavities with mortar when side forms are removed.

C.6 Slip-form Machine Placement

1. Placement by an extrusion type machine in lieu of fixed forms is permitted.
2. Final product must meet standards for fixed form placement.
3. Hand finish as necessary to obtain specified finish and texture.

C.7 Curing and Protection

1. Provide curing for minimum 72-hour period after finishing.
2. During cold weather, protect concrete from frost damage.
3. Blanket Curing Method
 - a. Cover concrete with waterproof plastic after finishing.
 - b. Envelop concrete and prevent water vapor loss.
 - c. After curing, treat exposed surfaces with treating oil.
 - d. Apply two coats totaling 0.06 gallon/square yard coverage.

C.8 Membrane Curing Method

1. Coat all exposed surfaces with curing compound within 1-hour after finishing.
2. Apply uniformly at a rate of 1-gallon per 150 square feet of surface area with an approved airless sprayer.
3. Mix as required to maintain a homogenous mixture.
4. Respray as directed to provide proper coating.

C.9 Backfill Construction

1. Backfill and compact adjacent area with selected materials to the cross-section show on the Drawings.
2. Protect concrete from damage during backfill and compaction.

D Measurement

The Owner will measure Concrete Curb and Gutter by the linear foot along the face of the curb at the gutter line. No extra payment will be made for hand-form curb and gutter unless delineated in the contract as a separate pay item.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Concrete Curb & Gutter 18-Inch Barrier	LF

Payment is full compensation for furnishing and installing all materials and for furnishing all tools, labor, equipment and incidentals necessary to complete the work.

8. Concrete Sidewalks, Driveway Approaches, Safety Islands, Steps

A Description

This section describes the construction of concrete sidewalks, driveway approaches, safety islands and steps as shown on the plans, as directed by the Engineer, and as hereinafter described.

B Materials

1. All materials shall be in accordance with the respective WisDOT Specifications as follows:
 - a. Concrete Masonry – WisDOT 501
 - b. Expansion Joint Filler – WisDOT 415.2.3
 - c. Reinforcement – WisDOT 505
 - d. Granular Materials – WisDOT 209
 - e. Curb Ramp Detectable Warning Field – WisDOT Supplemental Specifications 602.5.4. Select from the WisDOT's approved materials list. Color shall be yellow.
 - f. Concrete cure and seal treatment materials shall conform to ASTM C1315, ASTM C309, and AASHTO M148 specifications and be produced by a manufacturer on the approved WisDOT list.
 - g. Curing Materials – WisDOT 415.2.4
2. Forms
 - a. Forms shall be of wood or metal with a smooth contact face.
 - b. Minimum form height shall be that of the proposed concrete thickness.
3. Mixture Proportions
 - a. Concrete shall be Grade A, A-WR, A-FA or A-IP.
 - b. Concrete shall be air entrained to within 4.5 to 7.5 percent.

C Construction

C.1 Preparation

1. Foundation
 - a. Excavate, shape and compact subgrade soils as shown on the Drawings.
 - b. Remove unstable subgrade soils as directed.
 - c. Provide and compact granular materials in accordance with the Drawings or as directed.
2. Forms
 - a. Coat the contact face with form treating material.
 - b. Stake sufficiently to prevent movement.

C.2 Concrete Installation

1. Placing and Finishing
 - a. Thoroughly wet foundation and forms prior to concrete placement.
 - b. Place and consolidate concrete to fill all voids.
 - c. Strike off to the required grade.
 - d. Float surface smooth.
 - e. Edge all joints.
 - f. Lightly brush surface to a uniform texture.
 - g. Maintain forms in-place for minimum 12-hours after concrete placement.
2. Tolerances:
 - a. Surface: plus or minus 3/16-inch from a 10-foot straight edge.
 - b. Edges: plus or minus 1/2-inch from the staked location and grade.
3. Joint Construction
 - a. Divide walk into uniform sized panels and outline with contraction or expansion joints.
 - b. Provide square panels with maximum 36 square feet of area.
 - c. Joints shall be:
 - i. Vertical and straight.
 - ii. Parallel to or at right angles to the edge of walk.
 - iii. Aligned with like joints in adjoining work.
 - iv. 1/8-inch wide for contraction joint.
 - v. 1/2-inch wide for expansion joint.
 - d. Round all joints and edges with a 1/4-inch radius edging tool.
 - e. Extend contraction joints to at least 1/3 of the thickness of the walk.
 - f. Extend expansion joints to the full thickness of the walk.
 - g. Place 1/2-inch preformed joint filler adjacent to all fixed objects.
4. Curing and Protection:
 - a. Provide curing for minimum 72-hour period after finishing.
 - b. Apply curing media within 30-minutes after side forms are removed.
 - c. During cold weather, protect concrete from frost damage.
 - d. Blanket Curing Method:
 - i. Cover concrete with waterproof plastic after finishing.
 - ii. Envelop concrete and prevent water vapor loss.
 - iii. After curing, treat exposed surfaces with 2-coats of treating oil totaling 0.06 gallons/square yard coverage.
 - e. Membrane and Extreme Service Curing Method:
 - i. Coat all exposed surfaces with curing compound within 1 hour after finishing.
 - ii. Apply uniformly at a rate of 1 gallon per 150 square feet of surface area with an approved airless sprayer.
 - iii. Mix as required to maintain a homogenous mixture.
 - iv. Respray as directed to provide proper coating.
 - f. Installation of Detectable Warning Field: Install per manufacturers recommendations and per Drawings and details.
 - g. Application rates for concrete sidewalk cure and seal treatment shall be in accordance with manufacturer's specifications.
5. Backfilling
 - a. Backfill areas adjacent to the walk with excavated materials.
 - b. Grade and finish adjacent areas in accordance with the proposed typical section.

D Measurement

The Owner will measure the following items:

1. Concrete Sidewalk
 - a. Measure in area in square feet.
 - b. Measure each thickness separately.
2. Driveway Approach
 - a. Measure in area in square feet.
 - b. Measure each thickness separately.
3. Curb Ramp Detectable Warning Field – Measure in area in square feet.
4. Placement of granular materials will be considered incidental.
5. Payment for walk construction shall be at the contract unit price as listed on the Bid Form. All associated work items shall

be considered incidental.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	6" Concrete Driveway Apron	SF
	6" Concrete Sidewalk	SF

Payment is full compensation for furnishing and installing all materials and for furnishing all tools, labor, saw cutting, equipment and incidentals necessary to complete the work.

9. Riprap

A Description

This section describes Riprap, Medium as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

1. Materials used Riprap shall conform to WisDOT Standard Specifications Section 606, except waste concrete shall not be acceptable.
2. Filter fabric shall conform to WisDOT Standard Specifications Section 645.

C.1 Construction

1. Excavate and shape foundation areas to the location and cross section staked by the Engineer.
2. Compact all loose foundation material prior to filter mater placement.
3. Provide smooth surface, free of stones, sticks, and other debris.

C.2 Filter Fabric

1. Place multiple fabric widths with the longest dimension parallel to the direction of water flow.
2. Splice multiple fabric widths by mechanical seaming or minimum 24-inch overlap (36-inches under water)
3. Overlap joints in shingle arrangement.
4. Bury upgrade edges of fabric to a minimum depth of 8-inches to prevent undermining.
5. Anchor fabric to prevent movement during riprap placement.
6. Do not operate equipment on fabric.

C.3 Riprap

1. Begin placement at the lowest elevation and work upgrade.
2. Do not drop stones from greater than 1-foot height.
3. Position stones to provide uniform size distribution and minimize void space.
4. Level surface to provide uniform thickness and appearance.
5. Seat smaller stones between the larger stones to produce a uniform surface.
6. Suitable material obtained from on-site rock excavation may be used as chinking.

C.4 Thickness

1. All areas – minimum 85-percent of specified thickness.
2. Average- minimum 95 percent of specified thickness.

D Measurement

1. The Owner will measure Riprap, Type by the cubic yard based on staked surface dimensions and specified thickness.
2. Riprap will be measured by each type and class separately.
3. Filter Fabric shall be considered incidental to riprap.

E Payment

The Owner will pay for measured quantities at the Contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Medium Riprap	CY

Payment is full compensation for furnishing, placing, and maintaining all materials; and for furnishing all tools, labor, fabric, equipment, maintaining, and incidentals necessary to complete

10. Storm Sewer

A Description

This section describes furnishing and installing new Storm Sewer as shown on the plans and as hereinafter provided.

B Materials

The materials furnished and used in the work shall conform to the requirements for the kind and size material specified herein and as shown on the construction plans. Where precedence is necessary these specifications shall have priority.

Pipe shall conform to the following:

Description	Class or Grade	Specification	Joint
Reinforced Concrete Pipe	Per Construction Plans	ASTM C 76	ASTM C 443 Rubber Gasket
Type PSM PVC	SDR 35	ASTM D 3034	ASTM D 3212 Bell-Spigot, Elastomeric
Type PSM PVC	SDR 26	ASTM D 3034	ASTM D 3212 Bell-Spigot, Elastomeric
PVC Corrugated (Smooth Interior)		ASTM F 949	ASTM D 3212 Bell-Spigot, Elastomeric
High Density Polyethylene		ASTM F2306	ASTM D 3212 Bell-Spigot, Elastomeric
Polypropylene		ASTM F2736	ASTM D 3212 Bell-Spigot, Elastomeric

C Construction

C.1 Preparation

1. Conform to lines, elevations and grades shown on the drawings.
2. Provide means for accurately transferring line and grade from ground surface stakes to the working point in the trench.

C.2 Concrete Pipe Installation:

1. Inspect pipe for defects and cracks while suspended before lowering into the trench.
2. Place pipe bell at upstream end of pipe length.
3. Install pipe from lower to higher invert elevation.
4. See Trench Excavation and Backfill of these Specifications for pipe foundation and backfill procedures.

C.3 PVC Pipe Installation

See ASTM F949 & ASTM 3034

C.4 General

1. Remove all dirt and foreign material from pipe and structure interiors.
2. The Contractor shall check pipe grade at a frequency not to exceed 100-feet.
3. The removal and disposal of existing storm sewer while installing new storm sewer is required when within 24-inches vertically and 4-feet horizontally of the new pipe and is considered incidental to the work.

D Measurement

The Owner will measure Storm Sewer, Size-Inch in lineal feet in place from the centerline of manhole to centerline of manhole, or from centerline of manhole to the end of a sewer stub not terminating in a manhole. All lengths will be measured in a horizontal plane unless the grade of the pipe exceeds 15 percent.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	XX" HDPE	LF

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, equipment, dewatering, rock excavation, trench requirements and incidentals necessary to complete the work.

11. Storm Manhole

A Description

This section describes the installation of Storm Manholes as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

1. See Drawings for diameter.
2. Provide gasket joint.
3. Provide base and cover slab as shown on the Detail Drawings.
4. Manhole Steps:
 - a. Provide a 16-inch wide step in accordance with the following:
 - i. Cast aluminum by Modern Metals Foundry (A-12)
 - ii. Polypropylene coated steel by M.A. Industries, Inc.
 - iii. Cast iron or aluminum by Neenah Foundries (R-1980-I)

C Construction

1. Place precast base on compacted granular subgrade.
2. Locate steps within 1-Inch of vertical alignment and within 1-Inch of required vertical spacing.
3. Install adjusting rings to provide final horizontal and vertical adjustment within tolerances.
4. Maximum horizontal tolerance: 2-Inches in any direction.
5. Construction shall be watertight to prevent groundwater infiltration.

D Measurement

The Owner will measure Storm Manhole, Size for each vertical foot of the structure. Manhole castings shall be measured as a separate bid item.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	36" Concrete Manhole	Each

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, equipment and incidentals necessary to complete the work

12. Inlet, Catch Basin

A Description

This section describes the installation of Inlets as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

1. See Drawing for dimensions.
2. Provide gasket joint
3. Provide sections as shown on the Detail Drawings.
4. Castings: Provide as shown on Plans and Detail Drawings

C Construction

1. Place precast base on compacted granular subgrade.
2. Locate steps within 1-Inch of vertical alignment and within 1-Inch of required vertical spacing.
3. Install adjusting rings to provide final horizontal and vertical adjustment within tolerances.
4. Maximum horizontal tolerance: 2-Inches in any direction.
5. Construction shall be watertight to prevent groundwater infiltration.

D Measurement

The Owner will measure Inlet, Type by the unit acceptably competed in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Catch Basins 2x3	Each

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, adjustments, equipment and incidentals necessary to complete the work.

13. Manhole, Catch Basin, Inlet Covers Type

A Description

This section describes furnishing and installing manhole casting, as shown on the plans, and as hereinafter provided.

B Materials

1. Supply castings for structures such as manhole frames and covers that conform to the requirements of ASTM A-48 (Gray iron castings), subject to the following supplementary conditions.
2. Casting dimensions, details, weights and class are as indicated in the plan details.
3. Lid-to-frame surfaces on round casting assemblies will be machine milled to provide true bearing around the entire circumference.
4. Manhole lids shall be Neenah R 1642 Type "C" machined lids, gaskets and two concealed pick holes.

C Construction

1. Provide adjusting rings according to plan details to establish required casting elevations.
2. Set casting on a full mortar bed.
3. Adjust the new castings in the pavement areas in two separate phases. The first phase will be setting the casting and adjustment rings to the grade established and consistent with the first lift of pavement. The second phase will be furnishing, installing and welding a metal casting adjustment ring to the casting to match the final pavement grade. Both phases of the adjusting manhole process will be considered incidental to construction.
4. Remove all dirt and foreign material from the interior of the structure.

C.1 New Covers

If the plans show, the contract provides, or the engineer directs, provide new covers, including frames, grates, or lids, as the plans show, on both new and existing structures.

C.2 Adjusting Catch Basin, Manhole, and Inlet Covers

1. Unless the contract provides otherwise, adjust existing covers, including frames or lids, to the required elevation. Remove the existing fixture, adjust the top of the existing structure, and reinstall the fixture. Support the fixture on a collar of concrete, brick masonry, concrete brick or block masonry, a precast concrete grade riser ring, or a grade adjustment ring from the City's approved products list, constructed to hold the covers firmly in place.
2. Instead of adjusting the covers as specified above, the contractor may adjust the lids of covers on resurfacing projects, if the engineer allows, by using engineer-approved adjustment castings designed for the purpose.
3. A vertical change exceeding one foot in the elevation of a cover, or requiring removal of masonry beyond the shimming or grade adjustment device, is a reconstruction and the contractor must comply with reconstruction of manholes.

D Measurement

The Owner will measure bid items under this section as each individual unit acceptably completed.

ITEM NUMBER	DESCRIPTION	UNIT
	Manhole Castings, Sanitary	Each
	Inlet Castings R-3067-V, Storm	Each
	Manhole Casting R-1792	Each
	Adjusting Inlet/Manhole Casings	Each

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

E.1 Manhole Covers, All Types

Payment for the Manhole Covers and Inlet Covers bid items is full compensation for removing and salvaging the existing covers; and for providing new covers, including frames, grates or lids, and all other required materials and for installing and adjusting each cover.

E.2 Adjusting Catch Basin Manhole, and Inlet Covers

Payment for Adjusting Catch Basin Covers, Adjusting Manhole Covers is full compensation for providing all required materials, exclusive of frames, grates or lids available and designated for adjusting; and for removing, reinstalling and adjusting the covers. The contractor shall replace covers rendered unusable by the contractor's operations, at no expense to the Owner.

14. Topsoil, Salvaged Topsoil

A Description

1. This section describes furnishing, placing, spreading, and finishing humus-bearing soil, adapted to sustain plant life, commonly known as topsoil, from locations the contractor furnishes beyond the limits of the right of way.
2. This section also describes removing topsoil from the sites of proposed roadway excavations and embankments in amounts and depths available and necessary to cover the work slopes. This work also includes reclamation, placing, spreading, and finishing of this topsoil.

B Materials

1. Topsoil consists of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life, and ensure this topsoil is in a Ph range of 6.0 to 7.0.
 - a. Contractor shall supply a composite soil sample for any topsoil supplied under this contractor. The soil sample shall consist of PH, nitrogen, phosphorus, and potassium. If supplied soil is found to be deficient of said nutrients, mitigation shall be supplied by the contractor. Upon test results if supplied soil is found deficient as per Wisconsin Department of Natural Resources Interim Turf Nutrient Management Table 1 & 2 at the "Optimal Level" Contractor shall spread the required nutrients to bring the soil to the "optimal level" with no additional compensation.
2. Salvaged topsoil consists of the loam, sandy loam, silt loam, silty clay loam or clay loam humus-bearing soils available from overlying portions of areas to be occupied by the completed roadway.

C Construction

C.1 Preparing the Roadway for Topsoil

Undercut or underfill all areas designated to receive topsoil to a degree that if covered to the required depth with topsoil the finished work conforms to the required lines, grades, slopes and cross sections the plans and drawings show.

C.2 Processing Topsoil or Salvaged Topsoil

1. Mow topsoil procurement areas to a height of approximately 6 inches. Remove litter such as brush, rock, and other materials that will interfere with subsequent vegetation establishment.
2. Strip off the humus-bearing soil. Take care to minimize removing the underlying sterile soil. Then stockpile the topsoil on the right of way or place it directly on the designated areas.
3. Under the Salvaged Topsoil bid item, remove topsoil from excavation areas and the roadway foundation up to the quantity necessary to cover the slopes for the bid items of Salvaged Topsoil and Topsoil. Salvage topsoil from embankment areas outside the roadway foundation only if that additional material is required to cover the slopes.
4. Use Salvaged Topsoil in excess of the contract quantity to replace contract quantities of Topsoil. Utilize excess topsoil on the project or dispose of as specified in WisDOT 205.3.12.

C.3 Placing

1. After preparing and finishing the areas designated for topsoil to the required lines, grades, slopes and cross section, place and spread the topsoil to a uniform depth as the plans show or the contract requires. If no depth is shown, place and spread the topsoil to a minimum depth of 4 inches in rural areas and a minimum depth of 6 inches in urban areas, or as the engineer designates.
2. Break down all clods and lumps using the appropriate equipment to provide a uniformly textured soil.
3. Where using either sod or seed mixture 40 ensure that, for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.
4. Remove rocks, twigs, foreign material, and clods that cannot be broken down. Dress the entire surface to present a uniform appearance. The engineer will not require rolling.
5. If light sandy soils are covered with heavier clay bearing loam topsoil, then mix or blend the 2 types of soils to a more or less homogeneous mixture by using the appropriate equipment.

D Measurement

D.1 Topsoil

1. The Owner will measure Topsoil acceptably completed by the Acre.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Stripping Topsoil	AC

E.1 Topsoil

Payment for Topsoil is full compensation for providing, excavating, testing, mitigation nutrients, loading, hauling, and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. The Owner will make no allowance, adjustment, or measurement for payment under the Excavation bid items for undercutting cut sections, or underfilling embankments.

E.2 Salvaged Topsoil

1. Payment for Salvaged Topsoil is full compensation for removing, stockpiling, reclaiming, hauling, and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. The Owner will make no deductions from the Excavation bid items for the quantities of Salvaged Topsoil material obtained from areas of cut sections. Additionally, the Owner will not measure or pay for the volumes of Salvaged Topsoil removed from sites of proposed embankments under the Excavation bid items, or make any allowance, adjustment, or measurement for payment under the Excavation bid items for undercutting cut sections, or underfilling embankments.
2. The Owner will not pay for removing topsoil from outside the roadway foundation in embankment areas unless that material is necessary to cover the slopes.

15. Mulching

A Description

This section describes furnishing, placing, and anchoring a mulch cover, usually in connection with seeding the surfaces of the roadway.

B Materials

1. Mulching material consists of straw or hay in an air-dry condition, wood excelsior fiber, wood chips, or other suitable material of a similar nature that the engineer approves, and is substantially free of noxious weed seeds and objectionable foreign matter. Only material that is hydraulically applied will be considered acceptable.
2. If using tackifier, the City will prequalify it before use. Select tackifiers from WISDOT erosion control product acceptability list (PAL). The contractor may obtain a copy of the WisDOT PAL and the prequalification procedure for products not on the WisDOT PAL from the City.

C Construction

C.1 General

1. Unless directed otherwise, place the mulch on the specified area within 2 days after completing the seeding.
2. The contractor shall not perform mulching during periods of excessively high winds that might preclude proper mulch placement.
3. Place the mulch loosely or open enough to allow some sunlight to penetrate and air to slowly circulate, but thick enough to shade the ground, conserve soil moisture, and prevent or reduce erosion.
4. Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes before final or partial acceptance of the work.

C.2 Placing

The contractor may perform the work as specified in one of the following ways: Method A, Method B, or Method C, or a combination of the 3, unless a specific method is specified in the contract. The City does not allow for non-hydraulically applied mulch.

C.3 Method A, Netting

1. Uniformly spread the mulching material over the designated areas to a loose depth of 1/2 to 1 1/2 inches. Use a specific rate of application; dependent on the character of the material, that results in a cover conforming to the requirements specified above. Loosen or make fluffy the mulch material from compacted bales before spreading in place. Unless directed otherwise, begin mulching at the top of the slopes and proceed downward.
2. Securely anchor straw or hay mulch by using engineer-approved netting anchored to the ground with pegs or staples to prevent it from floating as the vegetation grows. Instead of this anchorage, the contractor may secure mulch by heavy biodegradable twine fastened by pegs or staples to form a grid with 6 to 10 feet spacing.
3. The contractor may use City-approved erosion control mats, listed in the WisDOT PAL, instead of separately applying mulch and netting.

C.4 Method B, Tackifier

1. Treat straw or hay with a tackifier, blow from a machine, and uniformly deposit over designated areas in one operation. Place straw or hay uniformly over the area 1/2 to 1 inch deep, using 1/2 to 3 tons of mulch per acre. Mix and place tackifier according to the PAL. Within the above limits, the engineer will determine, on the job, the application rate of the mulch and the tackifier, and the engineer may vary the rates during mulching to produce the desired results. Use an engineer-approved machine to place the mulch that blows or ejects by constant air stream a controlled amount of mulch and applies a spray of tackifier to partially coat the straw or hay, sufficient to hold together and keep in place the deposited straw or hay. The contractor may apply the tackifier as an overspray in a separate operation after placing the straw or hay.
2. Apply wood fiber, wood chips, or similar material with engineer-approved blowing machines, or other engineer-approved methods, that place a controlled amount of mulch uniformly over the area 1/2 to 1 1/2 inches deep. Treat areas receiving wood chip mulch, with one pound of available nitrogen per 1000 square feet before or after applying the chips.
3. Throughout the process, feed the mulch material into the blowing machine to produce a constant and uniform ejection from the discharge spout, and operate in a position to produce mulch of uniform depth and coverage.

C.5 Method C, Crimping

1. Spread the straw or hay mulch uniformly over the designated areas to a loose depth of 1/2 to 1 1/2 inches, using 1/2 to 3 tons of mulch per acre, by blowing from a machine, as specified in Method B, or by other engineer-approved methods.
2. Immediately after spreading, anchor the mulch in the soil by using a mulch crimper consisting of a series of dull, flat discs with notched edges. Space the 20 inch diameter discs at about 8 inch centers. Equip the crimper with a ballast compartment to allow adjusting the weight for depth control.
3. Impress the mulch into the soil 1 1/2 to 2 1/2 inches deep in one pass of the crimper. The City will not allow mulch crimpers to operate on slopes so steep that damage to the mulch, seedbed, or soil occurs. Anchor the mulch on these areas by one of the following methods: Method A or Method B. Equip and operate tractors to minimize disturbing or displacing the soil. This process may require more than one pass of the crimper to ensure adequate anchoring of the mulch.
4. The contractor shall not use Method C if it cannot impress the mulch to a minimum of 1 1/2 inch.

D Measurement

1. The Owner will measure Mulching acceptably completed by the acre.
2. If measured by the acre, the measured quantity equals the number of acres of surface area that the contractor applied the mulch.

3. Tackifiers or nitrogen used for treating mulch are incidental to the cost of the work.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Restoration (Seed/Mulch/Fertilize w/ topsoil)	AC
	Temporary Restoration	AC

Payment for Mulching is full compensation for providing all materials, including tackifiers or nitrogen; for all hauling, treating, placing, spreading, and anchoring of the mulch material; and for maintaining the work and repairing all damaged areas.

16. Erosion Control

A Description

1. This section describes furnishing and installing, or constructing erosion control mats, bale checks or dikes, fences, screens, blankets, and other erosion control devices.
2. This section also describes cleaning sediment basins and mobilizations for erosion control.

B Materials

B.1 Acronyms

1. Interpret acronyms used throughout this section as follows:
 - a. PAL – WisDOT’s erosion control product acceptability list. The contractor may obtain a copy of the PAL and prequalification procedure for products not on the PAL from the City.
 - b. ECRM – Class I, II,, IIIA erosion control revegetative mats.
 - c. TRM – Class III B, C, and D turf reinforcement mats.

B.2 Product Acceptability

1. The Owner prequalifies selected erosion control products in the PAL. If the contract specifies, furnish products of the class, type, and subject to the seasonal limitations the PAL designates. Before installing a PAL product, submit to the engineer a written copy of the manufacturer’s specifications for installing that product on slopes, channels, shorelines, high wind locations, and next to live traffic lanes as applicable to the contract installation. Install PAL products conforming to those manufacturer’s specifications. The Owner may specify modifications to the manufacturer’s procedures for individual materials here within WisDOT 628.

B.3 Erosion Mat

1. The Owner must prequalify all erosion mat products before use. Furnish erosion mat products from the PAL.
2. The PAL identifies prequalified erosion mat products by class and type. Use the required class and type of erosion mat the plans show or the engineer specifies. The contractor may furnish any prequalified erosion mat product of the class and type the plans show or that the engineer specifies.
3. If using jute fabric for a Class II Type A erosion mat, use a woven fabric of a uniform open weave of single jute yarn. Use a jute yarn of loosely twisted construction with an average twist of not less than 1 ½ turns per one inch. Ensure the average size of the warp and weft yarns are approximately the same. Furnish the woven fabric in rolled strips. Submit a certificate of compliance certifying that the jute fabric erosion mat conforms to the following:
 - a. Is a minimum 48-inches wide with a tolerance of minus one inch.
 - b. Has 78 warp ends, +/- one for each 48 inches of width. Has 45 weft yarns, +/- 2, per linear yard of length.
 - c. - Weighs 92 pounds per 100 square yards +/- 10 percent, measured under average atmospheric conditions.
 - d. - Is non-toxic to vegetation.

B.4 Staples

Furnish U-shaped staples, made of No. 11 or larger diameter steel wire, or other engineer-approved material, are one to 2 inches wide, and not less than 6 inches long for firm soils and not less than 12 inches for loose soils. The contractor may use anchors the staple gun manufacturer recommends, either lighter gage staples or equivalent, for engineer-approved staple gun systems.

B.5 Silt Fence

B.5.A Geotextile Fabric

Furnish materials that conform to WisDOT 628.2.6.1.

B.5.B Fence Support System

Conform to plan requirements.

B.6 Inlet Protection

Use a type FF geotextile fabric conforming to WisDOT 645.2.1 except use a woven polypropylene fabric. Furnish type FF geotextile fabrics, or bags manufactured from type FF geotextile fabrics, from the PAL.

B.7 Tracking Pads

Furnish tracking pad aggregate conforming with WisDOT 312.2 for select crushed material except the material shall be substantially free of particles passing the No. 10 sieve. Furnish type R geotextile conforming to WisDOT 645.2.6.

C Construction

1. Arrange to have available a sufficient quantity of contract-required temporary erosion control materials to protect the project site from erosion at all times during construction. Include erosion mat, erosion bales, silt fence, manufactured alternative materials for temporary ditch checks, and other temporary erosion control materials the contract requires.
2. Ensure that erosion control products selected from the PAL are properly installed and maintained to remain in place and functioning as the contract specifies.

C.1 Erosion Mat

1. Furnish and install protective covering mats or soil retention mats for erosion control on prepared planting areas of slopes, ditches, channels, or shorelines, at locations the plans show or the engineer directs. Conform to the seasonal limitations designated in the PAL for photodegradable products.
2. Install as the manufacturer specifies except as follows:
 - a. Do not use single roll material less than 6-feet wide in channels.
 - b. Entrench mats approximately 3 inches deep along the edge facing traffic for all installations within 5 feet of active traffic lanes.
 - c. Overlap mats by 3 inches or less and anchor with anchoring devices selected from the PAL for all mats the PAL designates as urban.
3. Cover TRM's immediately after installation with materials from the PAL as follows:
 - a. On slopes use either an ECRM or a type A soil stabilizer. If using a soil stabilizer, apply at the manufacturer's recommended rate unless the contract or engineer specifies otherwise.
 - b. In channels use an ECRM of a class and type the PAL allows for channel applications.
4. Remove all stones, clods, roots, sticks, or other foreign material that prevent the mat from bearing completely on the surface before placing the mat.
5. Reseed any seeded areas damaged or destroyed during placement of the erosion mat as specified for the original seeding.
6. Dispose of all surplus excavation or materials, and all stones, clods, or other foreign material removed in preparing for placing the mat.
7. Apply water uniformly after placing the mat over a seeded area to sufficiently moisten the seedbed to a depth of 2 inches and in a way that precludes washing or erosion.
8. Maintain the erosion mat and repair any damaged areas until the work is accepted.
9. The contractor shall not overlap type urban erosion mat with type urban or other type erosion mat.

C.2 Silt Fence

C.2.A Installation and Removal

1. Erect the silt fence before starting a construction operation that might cause sedimentation or siltation at the site of the proposed silt fence.
2. If possible, construct the silt fence in an arc or horseshoe shape with its ends pointing up slope. Construct the silt fence to the dimensions, and according to the details the plans show. Remove silt fences, as the engineer determines, after stabilizing the slopes and ditches and developing the turf to the extent that future erosion is unlikely. Clean up and restore the surface after removal. The contractor owns all materials remaining after removal and is responsible for their disposal off the right of way.

C.2.B Inspection and Maintenance

1. Inspect all silt fences immediately after each rainfall and at least daily during prolonged rainfall. Correct any deficiencies immediately. Additionally, review the locations for silt fences and filter barriers in areas that construction activity changed the earth contour and drainage runoff on a daily basis to ensure that the silt fences are properly and effectively located. If deficiencies exist, install additional silt fences as the engineer directs or approves.
2. Remove sediment deposits when the build-up exceeds approximately 1/2 the volume capacity of the silt fence. The engineer may order the contractor to remove deposits if the engineer determines deposits exceed 1/2 the volume capacity of the silt fence. The contractor shall dress, to the existing grade, sediment deposits remaining in place after the silt fence is no longer required, this includes topsoiling, fertilizing, and seeding the affected area.

C.3 Cleaning Sediment Basins

1. Clean sediment basins when the engineer determines the sediment has accumulated to an extent that impairs the effectiveness of the sediment basin.
2. Dispose of the surplus material according to WisDOT 205.3.12 for disposal of surplus or unsuitable material.

C.4 Mobilizations for Erosion Control

1. Move personnel, equipment, and materials to the project site for constructing erosion control items at the stages the contract indicates or the engineer directs.
2. Submit for approval an ECIP required in 107.20 for accomplishing temporary and permanent erosion control work. Stage the ECIP erosion control work to conform to the number of Mobilizations Erosion Control bid items the contract plans show. The Owner will not allow any deviation from approved staging without the engineer's written approval. The engineer will direct each of the mobilizations. Mobilize with sufficient personnel, equipment, supplies, and incidentals, within 72 hours of the engineer's written order.

C.5 Mobilizations Emergency Erosion Control

1. Move personnel, equipment, and materials to the project site to install temporary erosion control items on an emergency basis as the engineer directs.
2. Mobilize with sufficient personnel, equipment, materials, and incidentals on the job site within 8 hours the engineer's written order to install temporary erosion control items on an emergency basis.
3. An emergency is a sudden occurrence of a serious and urgent nature, beyond normal maintenance of erosion control items and mobilizations the ECIP includes. Under this definition, an emergency mobilization requires immediate action to move necessary personnel, equipment, and materials to the emergency site followed by immediate installation of temporary erosion control measures.
4. Unless the engineer directs otherwise, replenish stockpiled material delivered as specified for plan quantities in WisDOT 628.3.1 and subsequently used for emergency erosion control to the pre-emergency totals of these stockpiles.

C.6 Inlet Protection

1. Furnish, install, maintain, and remove type FF geotextile fabric, and fabric hold down and support systems for inlet protection where the plans show or the engineer directs. The contractor may provide manufactured alternatives selected from the PAL.
2. For type A inlet protection, install around field inlets until establishing permanent soil stabilization; and around pavement inlets before placing curb, gutter, or curb & gutter.
3. For type B inlet protection, install on curb, gutter, curb & gutter, and pavement inlets after placing the surrounding pavement surfaces.
4. For type C inlet protection use a wooden 2 x 4, wrapped and secured in type FF geotextile fabric, installed in front of the curb head as the plans show. The wood shall not block the entire opening of the curb box.
5. For type D inlet protection, the contractor may make the bag from type FF geotextile fabric or choose a manufactured type FF bag from the PAL. Ensure that the device is designed to fit the size and shape of the inlet. At a minimum, inspect and maintain after every precipitation event.

C.7 Tracking Pads

1. Install tracking pads at the locations the plans show, locations consistent with an engineer-approved ECIP, or where the engineer directs before allowing construction traffic to leave the site. Ensure that the pad is wide enough to cover the full width of the egress point. Design the installation to divert surface water flow away from the pad and, if field conditions dictate, provide a culvert to channel flow under the pad.
2. Replace or rework material in the surface of the pad to ensure that the amount of material tracked onto public roads is minimized. Maintain the driving surface in a clean and safe operating condition. Remove the pad and restore the site upon completion of contract work.

D Measurement

D.1 Borrow Sites and Material Disposal Sites

Restoration at borrow sites and materials disposal sites is considered incidental to the respective bid item.

D.2 Erosion Mat

The Owner will measure Erosion Mat bid item by the square yard acceptably completed. The Owner will not make allowances for portions of the mat that must be entrenched in the soil for any end or junction slot, or for required overlaps.

D.3 Silt Fence

The Owner will measure Silt Fence by the linear foot acceptably completed. The Owner will measure along the base of the fence, center to center of end post, for each section of fence.

D.4 Cleaning Sediment Basins

The Owner considers cleaning sediment basins incidental.

D.5 Tracking Pads

The Owner will measure Tracking Pads as each individual location acceptably completed measured on at the locations the plans show, consistent with an engineer approved erosion control plan.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Silt Fence	LF
	Erosion Mat	SY
	Inlet Protection	Each
	Erosion Logs (8' Length)	Each
	Tracking Pads	Each

The City provide no compensation for quantities that are placed on borrow sites and material disposal sites unless they are included in the contract.

E.1 Erosion Mat

1. Payment for the Erosion Mat bid items is full compensation for providing, protecting, and storing erosion mat materials on the project; for placing and anchoring the mat, including staples; for preparing the seeded areas; for installing end and junction slots; for repairing and reseeded damaged areas; for providing and applying water; and for disposing of all surplus and waste materials.
2. The Owner will pay separately for covering class III types B, C, and D mats with an ECRM under the applicable Erosion Mat bid item, or with type A soil stabilizer under the Soil Stabilizer Type A bid item.

E.2 Silt Fence

Payment for Silt Fence is full compensation for providing, protecting, and storing silt fence on the project; for erecting fence, including all excavating, placing posts, backfilling, and attaching geotextile fabric; and for removing the fence at project completion.

E.3 Inlet Protection

Payment for the Inlet Protection bid items is full compensation for furnishing, transporting, and installing all materials; and for maintaining and removing the inlet protection devices.

E.4 Tracking Pads

Payment for Tracking Pads is full compensation for providing tracking pads including aggregate and geotextile; for replacing or reworking material as required to maintain performance; and for removing the pad and restoring the site.

17. Fertilizer Type B

A Description

This section describes furnishing and incorporating fertilizing material in the soil on areas of proposed seeding or proposed sodding.

B Materials

B.1 Fertilizers

1. Use fertilizers for seeding, sodding, or other planting that are standard, commercial, packaged or bulk products, in granular or liquid form conforming to Wisconsin statutes and the Wisconsin administrative code chapter ATCP 40. Ensure that each container of packaged fertilizer is plainly marked with the analysis of the contents showing minimum percentages of total nitrogen, available phosphoric acid, and soluble potash. If furnishing the fertilizer in bulk, include an invoice in each shipment indicating the minimum percentages of total nitrogen, available phosphoric acid, and soluble potash in the contents.
2. If using fertilizer with a total of nitrogen, phosphoric acid, and potash greater than 32 percent for type A or 50 percent for type B, apply them at a rate that provides equal nitrogen, phosphoric acid, and potash.

B.2 Type A

1. Type A fertilizer shall conform to the following minimum requirements:
 - a. Nitrogen, not less than 16%.
 - b. Phosphoric Acid, not less than 6%.
 - c. Potash, not less than 6%.
2. The total of nitrogen, phosphoric acid, and potash shall equal at least 32 percent.
3. Total nitrogen shall at least equal the sum of the phosphoric acid and soluble potash.

B.3 Type B

1. Type B fertilizer shall conform to the following minimum requirements:
 - a. Nitrogen, not less than 16%.
 - b. Phosphoric Acid, not less than 6%.
 - c. Potash, not less than 24%.
2. The total of nitrogen, phosphoric acid, and potash shall equal at least 50 percent.

C Construction

C.1 Fertilizer

1. Uniformly apply the fertilizer selected for the seeding areas and incorporate into the soil by light discing or harrowing. If applying granular fertilizer, ensure it is well pulverized and free from lumps.
2. If incorporating fertilizer into topsoiled areas, the contractor may apply it just before, and in conjunction with, final discing or harrowing, or if hand manipulating the topsoil, apply it just before final raking and leveling.
3. If placing fertilizer on surfaces with no topsoil, prepare the soil by discing or harrowing to at least 6 inches deep and then incorporate the fertilizer as specified above.
4. If sowing seeding areas by pressure sprayer, then fertilize by placing the required amount of fertilizer in the tank, mixing with the water and the seed, agitating constantly, and apply during the seeding operation. If applying fertilizer this way then the Owner will not require discing and harrowing after placement.
5. If fertilizing areas to receive sod, spread the fertilizer uniformly over the soil before sodding at the rate specified below, and then work the fertilizer into the soil while preparing as specified for preparing the earth bed in WisDOT 631.3.1.
6. If applying fertilizer for work specified under WisDOT 632, then apply the fertilizer as specified in that section.

C.2 Type A

Apply fertilizer containing 32 percent total of nitrogen, phosphoric acid, and potash at 7 pounds per 1000 square feet, unless the contract specifies otherwise. For type A fertilizer that contains a different percentage of components, determine the new application rate by multiplying the specified rate by a dimensionless conversion factor determined as follows:
Conversion Factor = 32 / New Percentage of Components

C.3 Type B

Apply fertilizer containing 50 percent total of nitrogen, phosphoric acid, and potash at 7 pounds per 1000 square feet, unless the contract specifies otherwise. For type B fertilizer that contains a different percentage of components, determine the new application rate by multiplying the specified rate by a dimensionless conversion factor determined as follows:
Conversion Factor = 50 / New Percentage of Components

D Measurement

The Owner will measure the Fertilizer bid items by the acre and under the bid item of Restoration (based on an application rate of 7 pounds per 1000 square feet).

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Restoration (Seed/Mulch/Fertilize)	AC

Payment for the Fertilizer bid items is full compensation for providing, hauling, placing, and incorporating in the work.

18. Seeding

A Description

1. This section describes preparing seed beds and furnishing and sowing the required seed on slopes, appurtenances, and other areas, and on borrow pits and material disposal sites.
2. This section also describes furnishing and sowing temporary seed mixture on the slopes and appurtenances of temporary embankments and roadways.

B Materials

B.1 Seed General Requirements

1. Conform to the Wisconsin statutes and Wisconsin administrative code chapter ATCP 20 regarding noxious weed seed content and labeling.
2. Use seed within one year of the test date appearing on the label.
3. Seed mixtures 30 and 40

B.2 Purity and Germination

Test seed according to the methods and procedures used for sampling and analyzing seed for purity, germination, and noxious weed seed content specified in the current edition of Rules for Testing Seed, published by the Association of Official Seed Analysts.

B.3 Inoculation

1. Inoculate legume seed (white clover, red clover, ladino clover, alsike clover, alfalfa, partridge pea, purple prairie clover, Canada tick-trefoil, and lupine) unless it has been pre-inoculated by the vendor. Follow the inoculation instructions that come with the culture purchases. If applying the seed according to method B, WisDOT 630.3.3.2, treat seeds requiring inoculation with 5 times the amount of inoculant recommended in the instructions.
2. Avoid exposure of the culture or inoculated seed to the sunlight, and in no case shall any exposure exceed 1/2 hour.

B.4 Storing Seed

Store any seed delivered before use in a way that protects it from damage by heat, moisture, rodents, or other causes. Discard and replace any previously tested and accepted seed that becomes damaged.

B.5 Seed Mixtures – Right of Way Permanent

1. Provide seed mixtures that meet WisDOT 630.

B.6 Borrow Pits and Material Diposal Sites

For seeding borrow pits and material disposal sites follow requirements in WisDOT 630.

C Construction

1. Perform seeding with the selected seed mixture, sown at the specified rate.

C.1 Preparation of Seed Bed

1. Complete grading, shouldering, topsoiling, and fertilizing, if part of the work under contract, before permanent seeding, except the contractor may place the fertilizer and seed mixture in one operation if using equipment designed for the purpose.
2. Just before seeding, work the area being seeded with discs, harrows, or other appropriate equipment to obtain a reasonably even and loose seedbed. Place topsoil as specified in WisDOT 625.3.3.

C.2 Sowing

Select the method of sowing from either method A, method B, method C, or an appropriate combination of methods A, B, and C. Obtain the engineer's approval for the sowing method and specific procedures used for each seed mixture used before sowing that mixture.

C.2.A Method A

1. Sow the selected seed mixture using equipment adapted to the purpose, or by scattering it uniformly over the areas to be seeded. Lightly rake or drag to cover the seed with approximately 1/4 inch of soil. After seeding, lightly roll or compact the areas using suitable equipment, preferably the cultipacker type, when the engineer judges the seedbed too loose, or if the seedbed contains clods that might reduce seed germination. The contractor shall not roll slopes steeper than 1:3.
2. If scattering seed by hand, perform this work with satisfactory hand seeders and only when the air is calm enough to prevent seeds from blowing away.

C.2.B Method B

Sow or spread the seed upon the prepared bed using a stream or spray of water under pressure and operated from an engineer-approved machine designed for that purpose. Place the selected seed mixture and water into a tank, provided within the machine, in sufficient quantities that when spraying the seed on a given area it is uniformly spread at the required application rate. During this process, keep the tank contents stirred or agitated to provide uniform distribution. Spread the tank contents within one hour after adding the seed to the tank. The engineer will reject seed that remains mixed with the water for longer than one hour. The engineer will not require dragging or rolling.

C.2.C Method C

1. For spring seeding of seed mixtures 70 and 70A into existing ground cover, mow existing vegetation to 4 inches or less in height 2 to 4 weeks before seeding. Ten to 14 days after mowing, spray with vegetation control herbicide conforming to 632.2.12.
2. For fall seeding of seed mixtures 70 and 70A into existing ground cover, mow existing vegetation to 4 inches or less in height 4 to 6 weeks before seeding. Ten to 14 days after mowing, spray with vegetation control herbicide conforming to 632.2.12. Retreat with vegetation control herbicide 10 to 14 days after initial application if live vegetation persists.
3. Seed with a rangeland type drill with one or more seed boxes that can be calibrated independently to deliver different sized seeds uniformly at the required rate and equipped with a rear-mounted press wheel for each seed drop tube. If seeding into existing vegetation or thatch, use a rangeland type drill equipped with a no-till attachment that can cut through the vegetation or thatch in front of the V disc and seed drop tube. If the configuration of the area to be seeded allows, apply seed at 1/2 the specified seed rate and apply the second 1/2 in a perpendicular direction.

C.3 Seeding Rates

1. Use the following sowing rate for seeds in pounds per 1000 square feet:
 - a. Seed Mixture No. 30 – 2.0 lbs.
 - b. Seed Mixture No. 40 – 2.0 lbs.
2. Determine the actual seeding rate by multiplying the equivalent seeding rate by the sum of the unadjusted and adjusted percentages of the various species in the seed mixtures as sown.
3. The unadjusted percentage equals the minimum percent of purity and germination specified in the table of seed mixtures contained in WisDOT 630.2.1.5.1.1.1 for the applicable species.
4. Obtain the adjusted percentage for each of the PLS species by dividing the specified percentage of the species by the product of the percent of purity and the percent of germination for each of the PLS species as delivered.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Restoration (Seed/Mulch/Fertilize)	AC
	Temporary Restoration	AC

Payment for the Seeding bid items is full compensation for providing, handling, and storing all seed; for providing the required culture and inoculating seed as specified; and for preparing the seed bed, sowing, covering and firming the seed.

19. Sawing

A Description

This section describes sawing of existing concrete or asphalt including pavement, curb & gutter, driveways, sidewalks, and similar work.

B (Vacant)

C Construction

C.1 Equipment

Use diamond blades for sawing concrete where a full-depth cut is required. The contractor may use carbide cutting wheels to saw concrete that will be overlaid or for full-depth cuts where the cut face does not join the new concrete.

C.2 Sawing Asphalt

Make straight saw cuts at least 2 inches deep. Saw so the surface remaining is generally vertical over its full depth. Saw to the depth the plan indicates or as the engineer directs or allows.

C.3 Sawing Concrete

1. Do not extend saw cuts into newly placed concrete pavement or into existing pavements more than 12 inches beyond the limits the engineer designates. Saw full-depth unless the plans indicate otherwise or the engineer directs or allows otherwise.
2. Remove sawing sludge after completing each saw cut. Minimize sludge on live traffic lanes. Remove sludge from all traffic control devices each day before dark. Dispose of sludge at an acceptable material disposal site or on engineer-approved areas of the roadway or roadside.

D Measurement

The Owner will measure Sawing Asphalt and Sawing Concrete by the linear foot acceptably completed. The Owner will not measure overcuts beyond the limits the plans show or the engineer directs.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Sawing	LF

Payment is full compensation for saw cutting pavement, sludge removal and for furnishing all tools, labor, equipment and incidentals necessary to complete the work.

20. Sanitary Sewer Main

A Description

This section describes furnishing and installing new sanitary main as shown on the plans and as hereinafter provided.

B Materials

The materials furnished and used in the Work shall conform to the requirements for the kind and size material specified herein and as shown on the construction plans. Where precedence is necessary these specifications shall have priority.

Pipe shall conform to the following:

Description	Class or Grade	Specification	Joint
Reinforced Concrete Pipe	Per Construction Plans	ASTM C 76	ASTM C 443 Rubber Gasket
Type PSM PVC	SDR 35	ASTM D 3034	ASTM D 3212 Bell-Spigot, Elastomeric
Type PSM PVC	SDR 26	ASTM D 3034	ASTM D 3212 Bell-Spigot, Elastomeric
PVC Corrugated (Smooth Interior)		ASTM F 949	ASTM D 3212 Bell-Spigot, Elastomeric

C Construction

C.1 Inspection

The Contractor shall inspect all pipes during the process of unloading. The Contractor shall notify the Engineer of all material found that has cracks, flaws, and defects. All material that is deemed unsatisfactory by the Engineer or Contractor shall promptly be removed from the site.

C.2 Trench Excavation, Backfill, and Pipe Bedding

Trench Excavation, Backfill and Pipe Bedding shall be in accordance with the provisions of these Specifications.

C.3 Laying Pipe

1. The pipe shall be inspected for defects before being lowered into the trench.

2. Remove all foreign matter or dirt from the inside of the pipe before it is lowered into its position in the trench and keep the pipe clean by approved means during and after the laying.
3. Pipe laying shall commence at the lowest point and shall proceed towards the upper end. The pipe shall be laid so that the spigot or tongue ends point in the direction of flow.
4. Lay all pipe according to the grade stakes established. The Contractor shall check the grades at a frequency not to exceed 100-feet. The Contractor shall provide competent workers to operate laser pipe laying equipment. The maximum allowable departure from a specified grade shall be ¼-inch per 100-feet of pipe installed. The maximum allowable departure from a specified line shall be 3-inches per 100-feet of installed pipe.
5. Blocking shall not be used to bring the pipe to grade.
6. Installation of PVC sewer pipes shall be in accordance with the latest revision of ASTM D-2321.
7. The finished sewer shall be substantially true to the line and grade required. Noticeable variations from true alignment and grade as determined by the Engineer will be considered sufficient cause for rejection of the Work.
8. Trench Dewatering shall be considered incidental and shall conform to current Wisconsin City of Natural Resources Standards and the Contractor shall get all applicable permits.
9. Removal of existing sanitary sewer within 24-inches vertically and 4-feet horizontally of the new sanitary sewer shall be considered incidental to the Work.
10. Remove ledge rock, boulders and large stones to provide clearance of at least 8-inches below the outside barrel of the pipe or fittings to a clear width of 12-inches on each side of the pipes. Provide adequate clearance for properly jointing pipe laid in rock trenches at bell holes.
11. Backfilling shall not take place at any time unless approved compaction equipment is available

C.4 Conflicts

In certain locations where the sanitary sewer is in direct conflict with existing water mains or water services the water main shall be lowered to provide at least 18-inches vertical separation between the bottom of the sanitary sewer and the top of the water main and water service or they shall be relocated in accordance with the plans or as directed by the Engineer. For water mains, one full pipe length shall be used at the crossing with the sewer centered so that both joints will be as far from the sewer as possible. Insulation shall be placed as directed by the Engineer.

C.5 Plugging Sewer Mains

1. Stubbed sewer lines, as directed by the plans, shall terminate with a bell end of a pipe and a watertight plug shall be provided in the following matter:
 - a. Sewers 30-inches or smaller in diameter shall be plugged with precast stoppers. Mortar discs for concrete pipe shall have a rubber gasket joint and shall have a thickness equal to the wall thickness of the main sewer or 2-inches, whichever is thinner.
2. Sewers 30-inches or greater in diameter shall be bulk headed with a minimum 6-inch wall composed of brick and mortar.
3. Plugging sanitary sewer main stubs will not be measured for payment and shall be considered incidental.
- 4.

C.6 Leakage Tests

Perform the following tests upon completion of sewer construction and prior to any external plumbing connections:

Infiltration test:

1. Manholes shall be watertight with no leakage permitted.
2. Place 90 degree V-notch weirs in locations directed by Engineer to measure leakage in sanitary sewer lines.
3. Allowable leakage rate shall be 100 gallons/day/inch diameter/mile of sewer between any adjacent manholes.
4. Provide corrective measures for line exceeding allowable leakage rates. After corrective actions are taken, duplicate the infiltration test to ensure compliance.

Air Test:

1. Place inflatable sewer stoppers in the manholes at each end of reach to be tested. Connect one end of an air hose to the plug used for the air inlet and the other end of the hose to the portable air control equipment. This equipment consists of valves and pressure gages used to control the rate at which the air flows to the test section and to monitor the air pressure inside the pipe. Add air to the pipe section and monitor the air pressure so that the pressure inside the pipe does not exceed 5.0 psig.
2. When pressure reaches 4.0 psig, stop the air supply so that the internal pressure is maintained for two minutes. These two minutes allow time for the temperature of the air to come to equilibrium with the pipe walls. During this time check all plugs with soap solution to detect any plug leakage. If plugs are found to leak, bleed off the air, tighten the plugs and reapply the supply of air.
3. After the temperature has been allowed to stabilize for the two-minute period, the air supply shall be disconnected and the pressure is allowed to decrease to 3.5 psig. When the pressure reaches 3.5 psig start the stopwatch and determine the time it takes for the pressure to drop to 2.5 psig.
4. The following timetable is used for allowable time. If the time required for the air pressure to drop 1.0 psig is greater than that indicated in the following table, the sewer line is acceptable.
- 5.

Pipe Diameter (in.)	Time (Min./100ft)
6	0.70
8	1.20

10	1.50
12	2.63
15	4.10
18	5.93
21	8.08
24	10.55
27	12.00
30	14.00
36	17.00
42	19.00
48	22.00
54	25.00
60	28.00

Deflection Test:

1. The Contractor shall perform deflection tests on the entire length of main line PVC sewer installed after placement and compaction of final backfill material is accomplished and prior to placement of gravel, bituminous or concrete street surfacing. The deflection test shall be performed using a mandrel furnished by the Contractor and approved by the Engineer. The test shall be performed without the aid of mechanical pulling devices. Maximum deflection may not exceed 5 percent within 30 days of placement of final backfill or 7.5 percent when testing occurs more than 30 days after placement of final backfill.
2. The Contractor shall receive no additional compensation for performing the deflection infiltration tests, air tests or deflection tests. Any sections of sewer failing to pass any of these tests shall be properly repaired and re-tested without direct compensation therefore. The Engineer shall observe all testing and shall be given 24-hour notice prior to testing.

D Measurement

The Owner will measure Sanitary Sewer Main, (Size), shall be measured in lineal feet in place from the centerline of manhole to centerline of manhole, or from centerline of manhole to the end of a sewer stub not terminating in a manhole. All lengths will be measured in a horizontal plane unless the grade of the pipe exceeds 15 percent.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Sanitary Sewer Main, 8-Inch	LF

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, equipment, dewatering, excavation, trench requirements and incidentals necessary to complete the work.

21. Sanitary Sewer Service & Riser 4-6-Inch

A Description

This section describes furnishing and installing new sanitary service and riser pipe as shown on the plans, as directed by the Engineer, and as hereinafter provided.

B Materials

Furnish pipes that conform to the following requirements:

Description	Class or Type	Specification	Joint
PVC Sewer Pipe (4"-6")	SDR 35	ASTM D3034	Elastomeric Gasket

C Construction

1. The location and size of sanitary sewer services as shown on the plans are approximate. Actual locations and size may vary from what is shown.
2. During the unloading process, inspect all pipe and accessories. Notify the Engineer of all material found defective. The Engineer will inspect the material and have the right to reject any materials found unsatisfactory. Promptly remove all rejected material from the job site.
3. Remove existing facilities, perform trench excavation and backfilling and restore the area in accordance to the provisions of these specifications.
4. Do not lay pipe in water or when the trench conditions are unsuitable for such work.

5. Removing the existing sanitary service within 24-inches vertically and 4-feet horizontally of the new sanitary service shall be considered incidental to the work.
6. Remove all foreign matter from the inside of the pipe before lowering it into its position in the trench. Keep the pipes clean using means approved by the Engineer during and after laying.
7. Lay pipe from the lowest end of the grade and face the bell ends of the pipe upward.
8. Fit pipes together and match them so that when they are laid they will form a sewer with a smooth and uniform invert.
9. Install in accordance to ASTM D2321. Compact haunching area to specified density required by ASTM D2321.
10. Install gaskets and forms, and use lubricants, cements and other installation requirements that are in accordance with manufacturer's recommendations.
11. Do all work using open trench excavation.
12. Drain trench water from the trench into natural drainage channels or storm sewers. Draining trench water into sanitary sewers or combined sewers will not be permitted.
13. Dewatering trenches will be incidental to the construction.
14. When the sewer trench is soft, muddy or wet and will not dry out, excavate it to an elevation of at least 6-inches below the elevation established for the bottom of the pipe. Backfill with Grade 1 granular backfill as modified in subsection 209.2 of the Standard Specifications for bedding under culvert pipes, or with Size No. 1 Coarse Aggregate for concrete as specified in subsection 501.2.2.4.4 of the Standard Specifications. Thoroughly compact the backfill. Also place this material under and around the pipe for at least the lower one-sixth of the outside vertical diameter of the pipe. Thoroughly compact this material in layers not exceeding 6-inches.
15. Ensure that backfill material at pipe zone is free of rock, boulders or other unsuitable substances. Deposit the backfill into the trench simultaneously on both sides of the pipe for the full width of the trench in 6-inch lifts. Thoroughly compact the backfill to a minimum elevation of 12-inches above the top of the pipe. Use mechanical tamping for mechanically compact the backfill.
16. Succeeding layers of backfill above the pipe zone may contain coarser material, but ensure that it is also free of pieces of rock, concrete, clay lumps, roots, stumps, rubbish, frozen materials and other similar materials that may cause excessive settlement. Place this backfill in uniform 12-inch lifts and compact each lift by mechanical means to a Standard Proctor Density of 95% under the upper 3-feet of the trench and to a Standard Proctor Density of 99% for the upper 3-feet of the trench.
17. Do not backfill at any time that approved compaction equipment is not available at the site. Place backfill in trenches on streets to an elevation that will permit the placement of base material and surfacing the material.
18. No pipe shall exceed a deflection of 5 percent.
19. The Owner will not give the Contractor any additional compensation for tests or corrective work necessary to reduce leakage below the amount allowed by the Specifications or correction of excess deflections.
20. Record the location, size, length and number of bends on services on a record drawing. Measure service locations from the closest downstream manhole. Submit sanitary record drawings to the City of Chippewa Falls upon completion of the sanitary portion of the project.
21. Reconnect services to the existing sewer and adjust the service without damaging the pipe. Make proper watertight connections and joints.
22. Install tracer wire along service from the connection at the main till the termination point. Terminate the wire at ground level in a tracer wire access box at the end point of the new service pipe.

D Measurement

The Owner will measure Sanitary Sewer Service Pipe & Riser 4-6-Inch, acceptably completed and in place, by length in linear feet from the center of the main to the end of the service.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
	6" Sanitary Service	LF

Payment is full compensation for furnishing all labor, tools, equipment, materials, tracer wire, testing, and incidentals necessary to complete the work and for maintaining existing sanitary sewer service.

Any work involved in forming a satisfactory foundation at depths below the bottom of the pipe is considered incidental and will not be paid for extra work.

22. Sanitary Manholes

A Description

This section describes furnishing and installing sanitary sewer manholes as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

1. Sanitary Sewer Manholes shall conform to the dimensional and other requirements indicated on the Standard Detail Drawings for the type of manhole specified for use. The Standard Details Drawings have been included with the construction plans. Precast reinforced concrete manhole risers and tops shall meet the requirements of ASTM C-478.

Manhole bases shall be 6-inches thick precast reinforced concrete or 8-inch thick when poured in place. Concrete for poured in place floors shall be 3,000 psi concrete.

2. Joints between manhole sections and other components shall consist of a rubber gasket and be water-tight.
3. Manholes shall be provided with steel reinforced plastic or gray cast iron steps. Steel reinforced plastic steps shall be equivalent to #PC1-PF manufactured by M.A. Industries. Cast iron steps shall be equivalent to R-1981-N manufactured by Neenah Foundry Company. When waterproofing is specified it shall be waterproofed with "Damtite" asphalt cement lining or an Engineer approved substitute.

C Construction

1. Excavation shall be to a depth and size to provide for construction of the manhole as shown on the plans and standard detail drawings.
2. Field poured or precast bases shall have a diameter equal to or greater than the outside diameter of the manhole used plus 8-inches. Field poured bases shall be a minimum of 8-inches thick and poured on a level foundation of undisturbed earth. Precast reinforced concrete bases shall be placed on a level compacted granular subgrade material.
3. For new manholes, the base under the drop section of the manhole shall be monolithic with the manhole base.
4. Steps shall be aligned so as to form a continuous ladder with steps equally spaced vertically in the completed manhole a distance of 16-inches center to center. The steps shall project a minimum clear distance of 4-inches from the interior manhole wall. Steps shall be located in the manhole so as not to be in-line with any connecting pipes.
5. Lift holes in precast sections shall be sealed with grout.
6. The invert of the manhole shall be grouted to have the same diameter as the larger of the adjoining sewer pipes and the surface of the bench shall be constructed to a height equivalent to one half the pipe diameters to the larger adjoining sewer pipe. The surface of the manhole bench shall have a minimum 1-inch per foot cross slope.

D Measurement

The Owner will measure Sanitary Manhole Size per vertical foot. Manhole castings shall be measured as a separate bid item.

E Payment

The Owner will pay for measured quantities at the Contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	48" Precast Concrete Manhole	VF

Payment is full compensation for furnishing and placing all materials; and for furnishing all tools, labor, equipment, dewatering, excavation, trench requirements and incidentals necessary to complete the work.

23. Connect to Existing Sanitary Sewer

A Description

This section describes Connected to Existing Sanitary Sewer Main as shown on the plan, as directed by the Engineer and as hereinafter provided.

B Materials

All materials used in connecting to the existing sanitary sewer system shall be as shown on the plans or approved by the Engineer.

C Construction

1. Connections to manholes with shorter than standard pipe lengths for reinforced concrete pipe shall have the reinforcing wires trimmed flush with the pipe end and the pipe shall be neatly finished with a cement plaster coat.
2. Rubber ring type water stops shall be used at all manhole connections with PVC or ABS sewer pipe.
3. Void spaces between connecting pipes and precast manhole walls shall be filled with brick mortar in place and the interior surface of the manhole wall at the connection shall be neatly finished with a cement plaster coat. All pipe connections to the manhole shall be water tight.
4. Any pipe to pipe connections shall be made with similar pipe and the appropriate fittings. If the existing sewer system pipe is no longer available a substitute may be approved by the Engineer. Any connections that are made must be approved by the Engineer and shall be watertight.

D Measurement

The Owner will measure Connect to Existing Sanitary Sewer Main by the unit acceptably completed in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Connect to Existing Sanitary Sewer	Each

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, pipe, equipment and incidentals necessary to complete the work.

24. Sanitary Sewer Connections.

A Description

This section describes all wyes, hubs or saddles to be installed as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

The materials furnished and used in the Work shall conform to the requirements for the kind and size material specified herein and as shown on the construction plans. Where precedence is necessary these specifications shall have priority.

Sanitary Service Connections shall conform to the following:

Description	Class or Grade	Specification	Joint
Type PSM PVC Pipe and Fittings	SDR 35	ASTM D 3034	ASTM D 3212 Elastomeric or ASTM D 2855 Solvent Weld
PVC DWV Pipe and Fittings	Sch. 40	ASTM D 2655	ASTM D 2855 Solvent Weld
PVC Corrugated Pipe and Fittings (Smooth Interior)	SDR 35	ASTM F 949	ASTM D 3212 Elastomeric or ASTM D 2855 Solvent Weld

C Construction

- The connections shall be inspected for defects before being lowered into the trench.
- Remove all foreign matter or dirt from the inside of the connections before it is lowered into its position in the trench and keep the pipe clean by approved means during and after the laying.
- The wyes, hub or saddle shall be installed so the connection has a slight upward vertical angle.

D Measurement

The Owner will measure Sanitary Service Connection as a unit complete in place.

E Payment

The Owner will pay for measured quantities at the Contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	8"x6" Wye	Each

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, equipment and incidentals necessary to complete the work.

25. Water Main

A Description

This special provision describes furnishing and installing new water main as shown on the plans and as hereinafter provided.

B Materials

Pipe shall conform to the following:

Description	Class or Grade	Specification	Joint
Cement Lined Ductile Iron	52	ANSI/AWWA C151/A21.5	Push-On
PVC	235 PSI	AWWA C900-07 & C905	Push-On

B.1 Joint conductivity for Ductile Iron Water Main

- Conductive gaskets as manufactured by American Ductile Iron Pipe Co. or Engineer approved equivalent.
- Field Application Methods:
 - Burndy – Thermoweld by Burndy Corp., Norwalk Connecticut.
 - Cadweld by Erico Products Co., Cleveland Ohio.
- Copper Jumpers
 - Minimum 1/16-Inch by 1/2-Inch wide flat copper strip.
 - Annealed round copper wire conforming to ASTM B152, Type DHP

d. Nuts and Bolts: Silicon Bronze

B.2 Hydrant Leads

Provide hydrant leads of ductile iron.

C Construction

C.1 General

1. Inspect water main for defects before placing in the trench.
2. Lay pipe to the required alignment and grade. Locate hydrants, valves, and fittings in accordance with the plans. Install valve and hydrant stems plumb. Remove all foreign matter from inside the pipe before installation.
3. Provide a minimum of 8-feet of cover over the pipe. Greater depths of cover over the pipe may be necessary to clear other utilities or provide for future finished grade above the pipe. Installing pipe at depths greater than 8-feet shall be considered incidental.
4. Do not lay pipe in water or on unsuitable foundation bedding as determined by the engineer.
5. Construct the pipe under the conflicting sewer where water pipe is in direct conflict with sewers. Provide a minimum 18-inch space when the water main crosses beneath the sewer. Provide a minimum 12-inch space when the water main crosses above the sewer.
6. Lay water main paralleling sanitary sewers at least 8-feet horizontally from a sanitary sewer. If it is not possible to meet the requirements, then lay the pipe so that the bottom of the water main is at least 18-inches above the top of the sewer and the minimum horizontal separation is 3-feet measured edge to edge.

C.2 Tracer Wire

1. Use a UL listed, type UF, 10 gauge stranded copper locating wire where plastic water service pipe is installed. Install along the entire length of the water main to form a continuous circuit. Provide wire that is rated for wet conditions and for underground installation. Provide blue wire coating.
2. Install the tracer wire so that it is taped to the top center of the service pipe at 10-foot maximum spacing to prevent movement during backfilling
3. Connect the tracer wire to the curb box corporation stop and curb stop adapted with set screws equal to those manufactured by the Ford Meter Box Company Inc., P.O. Box 443, Wabash, IN 46992-0443 or an approved equal.
4. Connect the tracer wire to the flange bolt of the tee for the hydrant lead. Make the connection using a stainless steel connector and conductivity clamp installed at the top most flange bolt.
5. Install a 24-inch loop of extra wire at locations where water main terminates.
6. Bury a one-pound magnesium anode with the pipe every 1,000 linear feet maximum for cathodic protection of the tracer wire.
7. Splices in the wire are not allowed except where the wire tees into water main. Make all splices, taps, connections and "Tee" connections UL listed moisture-proof connectors, self-sealing or heat-shrink type.
8. Test the conductivity of the tracer wire prior to acceptance of the pipe installation. Make connections for testing at above ground flange portion of the hydrant.
9. Provide and make all wire, connections and installations in accordance with National Electric code.
10. Bring tracer wire to the surface at or near fire hydrants and secure tracer wire within a tracer wire access box.

C.3 Connecting to Existing Water Main

1. Only representatives of the City are permitted to operate valves on the existing system.
2. Give the City at least 36-hour notice when it is necessary to take an existing water main out of service.
3. Only disrupt water service during a low usage period or when it is the least inconvenient to the user.
4. Have all proper materials and equipment immediately on hand when a water main is taken out of service for connection.

C.4 Testing

Perform the following test upon completion of the water main construction and prior to any external service connections.

C.4.1 Pressure Test Water Main Procedure

1. After the pipe has been laid and partially backfilled as specified, subject all newly laid pipe, or any valved section of it, unless otherwise specified, to a hydrostatic pressure of 150 pounds per inch. The duration of each pressure test shall be at least 120 minutes.
2. Slowly fill each valved area with water from a safe source, and apply the specified test pressure, measured at the lowest point of elevation, by means of a pump connected to the pipe in a satisfactory manner. Furnish the pump pipe connection gauges, and all necessary apparatus. Gauges and measuring devices must meet with the approval of the engineer and the necessary pipe tabs made as directed.
3. Expel all air from the pipe before applying the test pressure. To accomplish this, make taps, if necessary, at the points of highest elevation, and afterward plug them appropriately.
4. Carefully examine all exposed pipes, fittings, valves, hydrants and joints during the open trench test. If any cracks or defective pipes, fittings, valves, or hydrants are discovered as a consequence of the pressure test, remove and replace the pipe, fitting, valve, or hydrant with sound material in the manner provided and repeat the test until satisfactory to the engineer.

C.4.2 Pressure Test Services

Service pipes may be tested at the time of the foregoing test, if installed, at the contractor's option. However, testing of service pipes may be completed as a separate operation from main testing and, if so, the test pressure shall be 100 psi. Service pipe testing, if done separately, shall be done with the corporation open.

C.4.3 Leakage Test

Conduct leakage tests in accordance with AWWA C-600, except that the leakage shall not exceed one-half the amount allowed by AWWA C-600. Maximum length of main to be covered in any one test shall be 1000 feet.

Leakage is determined by the following formula:

$$L = (SD\sqrt{P})/133,200$$

L = Allowable leakage in gallons per hour

S = Length of pipe tested in feet

D = Nominal diameter of pipe, in inches

P = Average test pressure during test, in psi (gauge)

C.4.4 Electrical Conductivity Test

1. Perform a conductivity test on all iron pipe water mains within one week after completion of pressure testing of the main to establish that electrical thawing may be carried out in the future.
2. Test the system (pipeline, valves, fitting and hydrants) for electrical continuity and current capacity. Perform the electrical test after the hydrostatic pressure test and while the line is at normal operating pressure, and after backfilling has been completed. The line may be tested in sections of convenient length as approved by the engineer.
3. Pass through the pipeline for 5 minutes a direct current of 350 amperes plus or minus 10 percent. Measure current flow through the pipe continuously on a suitable ammeter; keep the current steady without interruption or excessive fluctuation throughout the 5-minute test period.
4. Insufficient current or intermittent current or arcing, indicated by large fluctuation of the ammeter needle, shall be evidence of defective contact in the pipeline. Isolate and correct the cause. Thereafter, the section in which the defective test occurred shall be retested as a unit and shall meet the requirements.
5. Sources of D.C. for these tests may be motor generators, batteries, or arc-welding machines. D.C. arc-welding machines will probably be the usual source. These machines are available in adequate capacity for these tests and are equipped with controls for regulating the current output. All such equipment shall be furnished by the Contractor, subject to the approval of the Engineer.
6. Cables from the power source to the section of the system under test shall be of sufficient size to carry the test current without overheating or excessive voltage drop. Usable sizes will probably be in the range of 2/0 to 4/0 AWG.
7. Make connections for the test at hydrants. Clamp the cable to the body of the hydrant.
8. NOTE: After the test, shut off the hydrant and loosen the cap to allow hydrant drainage. **TIGHTEN CAP AFTER DRAINAGE.**
9. A hook-on Type D.C. ammeter placed on one of the cables leading to the hydrant is a convenient method of measuring current.
10. In using arc-welding machines, set the current control at minimum before starting. After starting the machines, advance the control until the current indicated on the ammeter is at the desired test value. Caution: In case of open circuits at joints or connections, the voltage across the defective joint or connection will be in order of 50-100 volts.

C.5 Disinfecting New Water Main

C.5.1 Bacteriological Tests and Disinfection of New Ductile Iron Pipe Water Mains and Water Services

C.5.1.1 Disinfection/Chlorination

1. Disinfect all newly installed water main pipes, main stubs, and hydrant leads prior to placing the same into service. Prior to chlorination and disinfection of newly installed water mains, and stubs, present a sampling and method plan to the engineer for approval. The plan shall show, at a minimum, the order in which mains will be tested, flushing points, and sampling points. **NO water samples taken from a hydrant will be accepted or approved.** Chlorine used for disinfection purposes shall be calcium hypochlorite granules or 5-gram hypochlorite tablets containing approximately 65 percent available chlorine by weight. Place the granules or tablets during construction and place them in upstream pipe sections of all mains and connecting branches, and the minimum dosages and intervals as listed in the following table:

Pipe Diameter (Inches)	Dosage of Calcium hypochlorite granules in oz. Per 500' of main	No. of 5 gram hypochlorite tablets per 20 ft. pipe section
4	1.0	2
6	2.0	2
8	4.0	4
10	6.0	6
12	8.0	8
16 or larger	16.0	14

2. When hypochlorite tablets are used they shall be attached to the top interior section of pipe with Permatex No. 1 or equal.
3. The completed water main installation shall be slowly filled with water to assure proper contact of chlorine with interior pipe wall surfaces and to avoid washing the chlorine to pipe line extremities. The chlorine treated water shall remain in the test section for a minimum of 24 hours. Valves or other appurtenances, internal to the test section, shall be operated while the pipeline is filled with the chlorine treated water so as to disinfect such components.

C.6 Flushing

1. After the required retention period, flush the chlorine treated water from all pipes until no chlorine residual is evident. Make taps at the extremities of dead-end mains, main stubs and services to provide for flushing of the same. Taps made for flushing will not be measured for payment; cap the taps afterward by methods approved by the engineer.
2. Valves connected to the existing water system shall be operated by the City of Chippewa Falls water City personnel only.

C.7 Bacteriological Tests

1. After final flushing and successful completion of pressure and leakage tests, water samples shall be collected and tested for bacteriological quality and absence of coli form organisms. These samples shall be taken at the end of the new water main in sections not to exceed 1000 feet in length, and at the end of all new water main branches or stubs (including services). Two successive bacteria free samples collected at least 24 hours apart shall be obtained at each sample point prior to placing the new water main or appurtenance in service. Collect all samples in the presence of the engineer and place in a sealed container, and take said sealed container to an engineer approved testing facility and record the chain of custody. Fees for bacteriological tests shall be paid for by the contractor.

C.8 Rechlorination

1. Rechlorinate the new water main and new water main branches in the event that the required two successive bacteria free samples are not obtained with 4 sample attempts. Rechlorination shall consist of feeding a chlorine solution equivalent to 50 parts per million of chlorine into the pipe. This may be accomplished by using a commercial chlorinator feeder or other methods or equipment approved by the engineer. Repeat Rechlorination and sampling until satisfactory bacteriological tests are obtained.
2. No additional compensation will be allowed for cost associated with rechlorinating and resampling. Delays caused shall in no way create liability on the part of the City. If safe bacteriological tests still have not been obtained after water chlorination and rechlorination, with 4 sets of samples allowed per chlorination, the contractor shall pay for all City and engineer personnel time associated with additional chlorination, flushing, and sampling of the water main.

C.9 Disinfecting Repaired or Altered Section of Existing Water Main

1. Swab the interior of all pipe, valves, and fittings used in making repairs or alterations to an existing water main with a 5 percent solution of hypochlorite before installation. In addition, apply hypochlorite liberally to the open trench in the area of repair or alteration to lessen the potential for contamination.
2. Immediately upon completion of the repair or alteration, slowly fill the water main section and thoroughly flush it.
3. After flushing, take a bacteriological test sample from the water main that was repaired or altered. If the direction of flow is unknown, take samples on each side of the repaired section. If the bacteriological tests prove unsatisfactory, isolate the section of water main immediately, shut-off all service connection, and disinfect the isolated water main section in accordance with this specification at the contractor's expense.

D Measurement

The Owner will measure Water Main, (Size), along the axis of the pipe in linear feet, in place and acceptably completed. Segments between valves, fittings, and hydrants shall be measured from the center of the valves, fittings, and hydrants with no deductions. All lengths will be measured in a horizontal plane unless the grade of the pipe exceeds 15 percent.

E Payment

The Owner will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
	Water Main, 8-Inch C-900	LF

Payment is full compensation for furnishing and placing all materials, including tracer wire; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the work.

26. Water Service

A Description

This special provision describes furnishing and installing water services as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

Water Service Pipe shall conform to the following:

Description	Class or Grade	Specification	Joint
Type "K" Copper		ASTM B88	Compression Joint
PE	200 PSI	PE3408	Compression Joint

C Construction

1. The location of water services as shown on the plans is approximate. Actual locations may vary from what is shown.
2. Install service line continuous without joints between the corporation and curb stop with approximately 12 inches of slack at the corporation stop.
3. Disinfect water services by filling each service with a 50 parts per million chlorine solution and then flushing the service before connecting it to the building.
4. Water services shall have an 8-foot bury with the exception of those locations in which a conflict may occur with sewers. In case of conflicts, construct the water service below the sewer to permit 9-inches between the sewer invert and water service.
5. Remove and salvage any reusable water shut-off material. The City Water Utility City will pick up the material from the site.
6. The water service shall be thoroughly flushed prior to reconnecting to an existing service or peening of the end of the new service stub. Curb stops on new service stubs shall be turned off prior to backfilling.
7. No service connections will be allowed to newly installed water mains until all required tests are completed.

C.1 Installation of Plastic water service pipe

1. Where plastic water service pipe is installed, a UL listed, type UF, 10 gauge stranded copper locating wire shall be installed along the entire length of the water main to form a continuous circuit. Wire shall be rated for wet conditions and for underground installation. Color of wire coating shall be blue.
2. The tracer wire shall be taped to the top center of the service pipe at 10-foot maximum spacing to prevent movement during backfilling
3. Tracer wire shall be terminated in a tracer wire access box and be adjacent to the curb stop box top.
4. No splices in wire shall be allowed except where the wire tees into water main. All splices, taps, connections and "Tee" connections shall be made with UL listed moisture-proof connectors, self-sealing or heat-shrink type.
5. Conductivity of the tracer wire shall be tested prior to acceptance of the pipe installation. Connections for testing shall be made at above ground flange portion of the hydrant.
6. All wire, connections and installation shall be in accordance with National Electric code.

D Measurement

The Owner will measure Water Service, Size-Inch by length in linear feet, measured from the center of the water main to the center of the curb stop plus 12 inches for slack, acceptably completed in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Water Service – 4 inch (C-900)	LF

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, equipment, testing and incidentals necessary to complete the work.

27. Corporation Stop

A-Description

This Special Provision describes furnishing and installing water service corporation stops, as shown on the plans, directed by the Engineer, and as hereinafter provided.

B-Materials

Furnish corporation stops manufactured in accordance with AWWA C-800 and ASTM B-62, as indicated in the Contract or ordered by the Engineer. Corporation stops are to be Mueller H-15008 compression joint or approved equal, with Mueller threaded inlet and with conductive compression water service pipe outlet.

C-Construction

1. Place a double wrap of Teflon tape on the corporation stop threads prior to installing the corporation stop in the main.
2. Thoroughly clean the portion of the water main in the area of the tap and swab it with a 50 ppm chlorine solution prior to tapping of the water main. Disinfect each corporation stop by immersing it into a 50 ppm chlorine solution.
3. When a new corporation stop replaces an existing service, plug the old service at the old corporation stop location. Plugs for old services are incidental to the corporation stop item.
4. Record the size and location of each corporation stop on a record drawing. Measure corporation stop locations from the closest valve. Submit record drawings to the City of Chippewa Falls upon completion of the water main portion of the project.

D-Measurement

The Owner will measure Corporation Stop (Size) by the unit, acceptably completed in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
	Tap & Corporation Stop, 1 Inch	Each

Payment is full compensation for furnishing and installing all materials, cleaning and disinfecting the water main as necessary and for furnishing all tools, labor, equipment and incidentals necessary to complete the work.

28. Curb Stop with Box

A Description

This special provision describes furnishing and installing water service curb stop valves and boxes, as shown on the plans, as directed by the Engineer, and as hereinafter provided.

B Materials

1. Furnish Mueller H10287 compression joint curb stops or Engineer approved equal. Electrical conductivity shall be continuous through the curb stops between the connecting water service pipes.
2. Furnish curb boxes that have a Minneapolis pattern base, a minimum 1/4 inch inside diameter upper section and are adjustable up and down for 8.0 feet of cover. Bottom threads of the curb box will match the top threads of the curb stop.

C Construction

1. Locate curb stop and box as shown on the plans. Maintain all curb boxes in a plumb position and backfill in such a manner to avoid bending.
2. Disinfect each curb stop by immersing it into a 50 ppm chlorine solution.
3. The City will inspect all curb box installations before and after the installation of topsoil.

D Measurement

The Owner will measure Curb Stop with Box (Size) by the unit, acceptably completed in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
	Curb Stop with Box, 1 Inch	Each

Payment is full compensation for furnishing and placing all materials including curb stop, curb box and stationary rod, tracer wire, and for furnishing all tools, labor, equipment and incidentals necessary to complete the work. Adjustment of new boxes shall be included in the bid item for curb stops. Adjustment of existing stops and boxes (24" or less) shall be considered incidental to construction with no additional compensation therefore.

29. Connect to Existing Water Main

A Description

This special provision describes cutting into and connecting new water main to existing water main as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction

1. Connect to Existing Water Main will conform to industry standards. Only representatives of the City of Chippewa Falls Water Department are permitted to operate valves on the existing system. Give the Water Department at least a 36-hour notice when it is necessary to take an existing water main out of service.
2. Contact Water Department prior to any water disruption, and any disruptions lasting longer than 2-hours, contact the Water Department 24-hours in advance.
3. Disruption of water service will be during a low usage period or when it is the least inconvenient to the user. Have all the proper materials and equipment immediately on hand when a water main is taken out of service for connection.

D Measurement

The Owner will measure Connect to Existing Water Main by the unit each, acceptably completed.

E Payment

The Owner will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
1257.0080	Connect to Existing (remove Plug)	Each
1257.0151	Wet Tap, 8 Inch	Each

Payment is full compensation for cutting existing water main; connecting to existing water main; furnishing and placing all materials, including any required connecting sleeves and retainer glands; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the work.

Wet Tap, Size is full compensation for connection to existing water main, furnishing and placing all materials, including any required hardware, and for furnishing all tools, labor, equipment, and incidentals necessary to complete the work. The valve will be included under this specific bid item.

30. Gate Valve with Box

A Description

This section describes installing new water main Gate Valves and Boxes, as shown on the plans and as hereinafter provided.

B Materials

1. Furnish resilient-seated gate valves meeting the requirements of AWWA Standard C509 and designed for 235 psi working pressure. Valves are to be AFC Model 2500 or approved equal. The gate valves shall have a mechanical joint end, a non-rising operating stem with O-ring seals, a 2-inch square operating nut and open left. An open indicating arrow, the manufacturer's name, pressure rating and year of manufacture are to be cast on the body of valve.
2. Provide all valves with vertical valve boxes, Buffalo type, Tyler 68-60-G or approved equal. Valve boxes are to be cast iron, adjustable. Valve boxes are to be provided with 8- feet of cover, except where greater depths are indicated on the profile of the plans. Valve boxes are to be at least three pieces with sufficient adjustment to provide at least 6-inches adjustment above and below grade.
3. Install all extension sections in the middle of the box. Do NOT stack on top.

C Construction

1. Set valves with stems vertical and plumb. Firmly support valve boxes on a concrete block and maintain them center and plumb over the wrench nut of the valve, with the box cover flush with the surface of the finished pavement or at such other level as may be directed.
2. The City of Chippewa Falls Water City will inspect all valve installations before and after placing the base course layer. Ensure that all valve boxes are accessible for operation at all times during the project.
3. Completely uncover and reset valve boxes that become shifted or filled during backfilling.

D Measurement

1. The Owner will measure Gate Valve with Box Size-Inch by the unit, acceptably complete in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	8-Inch Valve	Each
	4-Inch Valve	Each

Payment is full compensation for removing the existing valve and box, furnishing and installing all materials, including any required connecting sleeves, valves and boxes and for furnishing all tools, labor, equipment, adjustments and incidentals necessary to complete the work.

Payment for Gate Valve Box is full compensation for removing the existing valve box, furnishing and installing all materials, including necessary gate valve box sections, and for furnishing all tools, labor, equipment, adjustments and incidentals necessary to complete the work. When gate valve box is included in the contract no additional compensation shall be awarded for adjustment of the Gate Valve Box for different phases of work.

31. Fire Hydrant

A Description

This special provision describes furnishing and installing new fire hydrant, connecting couplings, crushed rock, concrete base, and blocking, all as shown on the plans and as hereinafter required.

B Materials

Provide fire hydrants that are traffic model hydrants conforming to the latest issue of AWWA Standard C-502.

Provide fire hydrants that are either Waterous Pacer Model WB -67 or an approved equal.

Provide fire hydrants that have a 1 1/2-inch point to flat pentagon operating nut, 2- 2 1/2- inch National Standard thread hose nozzles, one 4 1/2-inch National Standard thread pumper nozzle, 6-inch mechanical joint pipe connection, nut type nozzle caps complete with chains, minimum 5 1/4-inch diameter main valve opening, minimum 7-inch inside diameter standpipe, and "O" ring stem seal. Bury

depth of all hydrants to be consistent with the plans and a 22-inch breakaway section from the ground line of the hydrant to the bottom of the connecting pipe unless otherwise noted on the construction plans.
Provide fire hydrants that are red in color.

Provide fire hydrants that have permanent marking which indicate manufacturer's name, year of manufacture, and bury depth.

No matter the composition of the main line water main section, provide all hydrant lead pipe that is Class 52 cement lined ductile iron pipe in conformance with the specifications set forth in water main special provision.

C Construction

Install fire hydrants at locations indicated on the plans and in accordance with the construction details.

Secure fire hydrants with retainer glands.

Place fire hydrants so that they stand plumb and have their pumper nozzle face the curb. Place two layer of 10-mil polyethylene over the rock to prevent backfill material from entering voids in the rock.

Where groundwater is present, plug drain hole and affix "Pump after Use" tag to the hydrant.

Disinfect hydrants in conjunction with and as part of the mainline disinfection process.

D Measurement

The Owner will measure Fire Hydrant by the unit complete (HYDRANT ASSEMBLY) in place, including hydrant, hydrant valve, hydrant lead, crushed rock, and concrete base.

E Payment

The Owner will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	HYDRANT ASSEMBLY	Each

Payment is full compensation for furnishing and placing all materials, including hydrant, crushed rock and concrete base; and for furnishing all tools, labor, equipment, and incidentals necessary to complete the work.

32. Water Main Fittings

A Description

This section describes furnishing and installing the necessary joint fittings as shown on the plans, as directed by the engineer in the field, and as hereinafter provided.

B Materials

Furnish Water Main Fittings that are ANSI A21.53, cement-lined ductile iron fittings.

C Construction

Provide Water Main Fittings that are mechanical type. Joint conductivity shall be provided by means of external copper jumpers. Each joint shall be capable of carrying 500 amps for an extended period.

C.1 Anchorage of Bends, Tees, Plugs, and Valves

Place concrete blocking:

- a. At all plugs, bends, and tees.
- b. Between the fitting and the undisturbed trench wall.
- c. Concrete blocking shall be minimum of 12-inches thick and the minimum area in square feet as follows:

Tee Pipe or Plug	¼ Bend (SF)	1/8 Bend	1/32, 1/16 Bend (SF)	(SF)	(SF)
6"	2.9		3.1	1.6	0.8
8"	3.7		5.3	2.9	1.4
10"	5.7		8.1	4.4	2.2
12"	8.1		13.4	6.6	3.2
16"	15.1		21.4	11.6	5.9
20"	23.2		30.2	18.1	9.3
24"	33.6		48.5	26.1	13.3

- a. Size concrete blocking to withstand pressure of the largest main line fittings exerting thrust force.

C.2 Ductile Iron Retainer Glands

- 1. Place on joints of all dead ends 6-inches through 12-inches commencing with the branch fitting.

2. Ductile iron retainer glands may be used on ductile iron pipe 6-inches through 12-inches in lieu of tie rods.
3. Place on joints as indicated on the details shown on the plans, typical fire hydrant installation, retainer gland detail, and typical gate valve and box installation.

D Measurement

Water Main Fittings will be incidental to the contract.

E Payment

Water Main Fittings will be incidental to the contract.

33. Insulation

A Description

This section describes placement of Insulation as shown on the plan, as directed by the Engineer, and as hereinafter provided.

B Materials

Insulation shall be equal to Dow Chemical Company Styrofoam SM brand plastic foam with a nominal thickness of 2 inches.

C Construction

Insulation board shall be placed with its long side (96") perpendicular to the axis of the pipe being insulated. This 96" dimension shall be centered over the pipe.

Approximately 6-inches of backfill material shall be placed between the insulating board and the pipe.

D Measurement

The Owner will measure Insulation by the number of 4'x8' sheets completed in place.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Insulation, (4x8 SHEET)	EA

Payment is full compensation for furnishing and placing all materials and for furnishing all tools, labor, equipment and incidentals necessary to complete the work.

34. Adjust Gate Valve Box

A Description

This section describes making final adjustments to existing gate valve boxes located in new pavements, as shown on the plans, as directed by the Engineer, and as hereinafter provided.

B (Vacant)

C Construction

1. Adjust existing gate valves so that they are flush with the new pavement or to the elevation directed by the Engineer.
2. The Water City will inspect all valve adjustments before and after placing the base course layer. Ensure that all valve boxes are accessible for operation at all times during the project.

D Measurement

The Owner will measure Adjusting Gate Valve Box by the unit acceptably completed in place. New water valve boxes will not be measured for payment.

E Payment

The Owner will pay for measured quantities at the Contract Unit Price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
	Adjusting Water Valve Box	Each

Payment is full compensation for making all necessary adjustments and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

35. Trench Excavation and Backfill

A Description

This section describes Trench Excavations, special pipe foundations, trench backfill, compaction, and pipe grade and alignment conflicts, as shown on the plans, as directed by the Engineer, and as hereinafter provided.

B Materials

1. Crushed Rock Pipe Foundation: In accordance with WISDOT 501.2.5.4.4 No. 2.
2. Granular Pipe Foundation: In accordance with WisDOT 209.
3. Replacement Backfill: In accordance with WISDOT 209.
4. Rock Excavation- unless otherwise defined, the definition of rock shall be in accordance with WISDOT 205.

C Construction

C1 Trench Excavation

1. Alignment and Grade:
 - a. Excavate trench to alignment and grade as staked.
 - b. Excavate no more than 100-feet in advance of pipe laying operation.
2. Trench width at pipe zone:
 - a. Center trench on pipe alignment
 - b. Minimum width: Pipe outside dimensions plus 12-inches.
 - c. Maximum width: Pipe outside dimension plus 24-inches. (Except rock excavation)
3. Excavated materials:
 - a. Use stable material for backfill.
 - b. Waste unstable material as directed.
 - c. Do not place materials on sidewalks, driveways or drainage paths.
4. Drainage:
 - a. Do not place materials on sidewalks, driveways or drainage paths.
 - b. Drain trench water into natural channels or storm sewer.
 - c. Do not drain trench water into the sanitary sewer.
5. Rock excavation:
 - a. Blasting shall conform to all local and State ordinances.
 - b. Submit blasting schedules for approval.
 - c. Minimum trench width: 36-inches
 - d. Provide a minimum 6-inch vertical clearance between pipe and rock trench bottom.
 - e. Provide minimum 12-inch horizontal clearance between pipe and rock trench walls.
 - f. Provide pipe foundation material for pipe in rock trenches.

C2 Pipe Foundations

1. The Engineer is to determine the stability of the trench bottom.
2. Stable trench bottom:
 - a. Shape trench bottom to conform to the bottom half of the pipe.
 - b. Excavate bell holes to permit proper jointing.
3. Unstable trench bottom:
 - a. Excavate below pipe grade to specified depth.
 - b. Refill with specified foundation material in accordance with drawing details and compact.

C3 Trench Backfill

1. Pipe Zone:
 - a. Use native material free of rocks and other unsuitable debris and materials.
 - b. Deposit material uniformly on both sides of the pipe throughout entire trench width.
 - c. Place material in 6-inch lifts and mechanically compact.
2. Above pipe zone:
 - a. Use native materials free of debris and rock, concrete or clay clumps with a volume greater than 1/3 cubic foot.
 - b. Place in uniform lifts no more than 1-foot thick.
 - c. Mechanically compact each lift of the upper 3-feet of trench to standard Proctor density of 100-percent.
 - d. Mechanically compact each lift under the upper 3-feet of trench to a standard Proctor density of 95-percent.
 - e. Do not backfill unless approved compaction equipment is on site and operational.
 - f. Fine grade street subgrade to staked elevation and cross-section.
3. Replacement backfill:
 - a. The Engineer is to determine suitability of native material for backfill.
 - b. Use replacement backfill in lieu of native material as directed.
4. Excess or deficient of backfill.
 - a. Dispose of excess backfill material as directed after all trenches are backfilled.
 - b. Provide replacement back as required to establish required surface elevation.

C5 Pipe Clearances and Conflicts

1. Provide clearance between sewers and water main as follows:
 - a. Maintain 8-foot minimum horizontal distance between pipes measured from centerline to centerline of pipe.
 - b. Maintain 18-inch vertical separation between pipes.
2. When 18-inch vertical separation between sewer and water main cannot be maintained provide special pipe crossing as follows:

- a. Advise the Engineer of the pipe conflict.
- b. Lower water main in accordance with the plans or as directed by the Engineer.
- c. Construct sewer using pipe material and joints equal to water main at crossing point.
- d. Center pipe lengths at crossing point.
- e. Provide special foundation material for both pipes.
- f. Place insulation as directed.

D Measurement

1. Trench Excavation and Backfill
 - a. Trench excavation and backfill shall be considered incidental to the furnishing and installing of sanitary sewer, water main, storm sewer and appurtenances.
2. Rock Excavation
 - a. Rock excavation shall be considered incidental to associated pipe installation, unless otherwise noted in these specifications.
3. Special Pipe Foundation
 - a. Special Pipe Foundation shall be considered incidental to associated pipe installation.
4. Replacement Backfill
 - a. Replacement backfill shall be considered incidental to associated pipe installation.
5. Compaction
 - a. Compaction shall be considered incidental to associated pipe installation.
6. Dewatering
 - a. Dewatering shall be considered incidental to associated pipe installation.

E Payment

If items under this section are not included in the contract they shall be considered incidental and no additional compensation provided.