JOB # 2
NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION

UGP-8-992(041)

Case County
Downtown Sheyenne Street
Main Ave to 7th Ave
Grading, Aggregate Base, PCC Concrete Pavement, Storm Sewer, Sidewalk, Landscaping, Signing, Pavement Markings, Street Lighting, & City Utilities

STATE COUNTY MAP

DESIGN DATA
Traffic
Average Daily
Current 2018
Pass: 7500
Trucks: 275
Total: 7775
Forecast 2040
Pass: 9450
Trucks: 250
Total: 9700

Clear Zone Distance: 14 FT
Minimum Sight Dist. for Stopping: 155 FT
Minimum Sight Dist. for No Passing Zone: 450 FT

Design Speed: 25 MPH

Pavement Design Life 35 years

Design Accumulated One-way ESALs: 2,032,000

MOORE ENGINEERING, INC.
Kevin J. Knott

City of West Fargo Street Improvement Dist 3003

APPROVED DATE _______08/28/20____________

This document was originally issued and sealed by Kevin J. Knott, Registration Number PE-5676, on 08/28/20 and the original document is stored at the City of West Fargo.
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100-P01 COMPLETION DATES:

Interim Completion Date No. 1: All Work from the south project limit at Station 7+99 to north of 4th Avenue at Station 18+59, except the curb, sidewalk, and driveways around The Heights (Bell Bank Downtown property) between 4th Avenue and 9th Avenue as indicated in Section 100 plans.

Interim Completion Date No. 1 is July 24, 2021. Liquidated damages will be assessed at a rate of $4,000.00 for each calendar day that expires after July 24, 2021.

Interim Completion Date No. 2: All Work from north of 4th Avenue at Station 18+59 to north of 9th Avenue at Station 25+86.

Interim Completion Date No. 2 is September 18, 2021. Liquidated damages will be assessed at a rate of $4,000.00 for each calendar day that expires after September 18, 2021.

Interim Completion Date No. 3: All Work from north of 2nd Avenue at Station 25+86 to north project limit at Station 32+47, and curb, sidewalk, and driveways around The Heights (Bell Bank Downtown property) as indicated in Section 100 plans.

Interim Completion Date No. 3 is November 6, 2021. Liquidated damages will be assessed at a rate of $4,000.00 for each calendar day that expires after November 6, 2021.

Final Completion: The project will be complete, including achieving Final Stabilization and the removal of all temporary erosion protection and sediment control devices.

Final Completion is June 15, 2022. Liquidated damages will be assessed at a rate of $350.00 for each calendar day that expires after June 15, 2022.

Liquidated Damages: Liquidated damages for failing to timely attain any completion dates are not additive and will not be imposed concurrently.

100-P02 COORDINATION OF PROJECTS: Multiple projects will be occurring in the vicinity during the 2021 construction season. Coordinate scheduling, work activities and construction traffic control devices between projects. The following list summarizes the projects that may occur and are subject to change:

1. The Heights (Bell Bank Downtown) – private site redevelopment
2. TAU-8-992(042) _ Drain 45 Multi-Use Path – Phase I (7th Ave to 13th Ave)
3. City of West Fargo Street Improvement Dist 2256 – 7th Ave West – 1st Ave to Oak St
4. City of West Fargo Storm Sewer Lift Station (SM-79) – 7th Ave W

100-P03 WORKING HOURS: Monday through Saturday from 7:00 AM to 7:00 PM, unless otherwise noted. Sunday and holidays by permission only. Submit request to Engineer for approval a minimum of 48 hours in advance.

Working hour restrictions do not apply to relief sawing. Coordinate green sawing operations with City and provide notification to property owners.

100-P04 CONTRACTOR PARKING/STAGING AREA RESTRICTIONS: Parking of personal vehicles, construction equipment, storage of construction materials, or work areas on private property is prohibited without written permission by the property owner.

Staging of construction material, storing of personal vehicles or construction equipment in the City’s right of way outside of the construction work zone is prohibited.

105-P01 POTHOLE UTILITY: Pothole to locate existing 14” CIP Sanitary Sewer Forcemain at 2nd Avenue in 3 locations as determined by Engineer. Include all costs for labor, materials, and equipment for locating forcemain in “Pothole Utility.”

105-P02 PAVEMENT SWEEPING: Sweep the roadway adjacent to the construction area at the end of each day. Sweep paved areas that were used by construction traffic before opening these areas to public traffic. Sweeping new constructed pavement no more than 24 hours before a scheduled final inspection. Use a vacuum type sweeper to perform this work.

107-P01 MAINTAINING TRAFFIC – DROP-OFFS: If, at the end of the work-day, drop-offs greater than 2 inches and less than 18 inches or slopes steeper than 4:1 exist between the edge of a traffic lane and the outside edge of the proposed roadway, perform one of the following actions:

- Construct a traversable wedge in the area of the drop-off or steep slope; or
- Close the lane adjacent to the drop-off or steep slope and provide 24-hour flagging.

When constructing a wedge, construct a wedge composed of aggregate or earthen materials with a 4:1 or flatter slope along the entire length of the area. Compact materials using Type C compaction, as specified in 203.04 E.4, “Compaction Control Type C”.

Install stackable vertical panels that meet the requirements of Section 704.03 H, “Stackable Vertical Panels”, along the edge of the driving lane closest to the wedge.

The Engineer will measure stackable vertical panels as specified in Section 704.05, “Method of Measurement” and will pay for panels as specified in Section 704.06, “Basis of Payment”.

The Engineer will not measure material used to construct the wedge. Include the cost of materials, equipment, labor, and incidentals required for this operation in the price bid for aggregate pay items.

If a 4:1 or flatter wedge is not installed, provide 24 hour flagging or pilot car operations and associated traffic control at no additional cost to the Department.

The requirements of Section 704.04 O, “Traffic Control for Uneven Pavement” apply to drop-offs created by milling or the placement of hot mix asphalt.
107-P02 TREE PRECAUTIONS: Use care when working near trees. Protect the trees and the root zone during construction.
1. Minimize equipment on the boulevards. Use Common access points when possible.
2. Roots over 4" diameter that are cut will require an inspection by a Forestry Department Arborist or other City designated representative.
3. Cut, clean, and backfill exposed tree roots as quickly as possible to avoid drying out.
4. Avoid unnecessary grading.
5. Contact the City Forestry Department will determine the extent of the impact. Mitigate any impacts identified to the extent details by the City Forestry Department at no cost to the NDDOT.

City Forestry Department contact:
Chad Zander
(701)-433-5400
Chad.zander@westfargond.gov

108-P01 WEEKLY PLANNING & REPORTING MEETING: A weekly planning and reporting meeting is required. Provide a suitable meeting facility. Have the room approved by the Engineer.

108-P02 PUBLIC RELATIONS COORDINATOR: Provide a public relations and information coordinator.
The coordinator cannot be the project superintendent or construction foreman. The coordinator should be knowledgeable in construction operations, be able to provide information for effective media releases to the City, possess written and verbal communication skills, and be able to organize productive meetings.

Provide the name, work address, and work phone number to the relevant project, community, and media personnel.
The public relations coordinator is responsible for providing the following:
1. Organizing, scheduling, and conducting the meeting specified in Note 108-P01 WEEKLY PLANNING & REPORTING MEETING.
2. Advise Melissa Richard, from the City of West Fargo, PH: of upcoming construction activities resulting in street closures and traffic detours so that City police, emergency services, schools, and other pertinent City agencies may be notified. Minimum 48 hour notice required prior to closing a road.
3. Provide necessary information for news releases and necessary drawings to the City before and during construction. News release information will inform the public on construction detour routes. Minimum 48 hour notice for press releases prior to any closure, restrictions, or detour route modification. Update news releases regarding construction activities every other week, at a minimum.
4. Be available for media interviews.

201-P01 REMOVAL OF TREES: Do not remove trees unless marked by the Engineer. Provide 48 hour advance notice to Engineer for tree marking.

201-P02 CLEARING & GRUBBING: Remove existing shrubs, bushes, wood mulch, landscaping rock, landscaping boulders, edging, landscaping fabric, & concrete edging located within the limits of construction. Coordinate with Engineer prior to removal of tree. Include all costs for removals in the price bid for “Clearing & Grubbing”. The following locations have been identified for clearing and grubbing:
1. All trees less than 8IN in diameter
2. Landscaping as indicated on plans along Sheyenne St in front of Furniture for Less (Francis First Addition Block 1 Lots 9-16)
3. Landscaping as indicated on plans along Sheyenne St in front of Choice Bank (Francis Second Addition Block 6 Lots 1-3)

202-P01 SALVAGE EXISTING FACILITIES: Salvage existing manhole castings and inlet castings. Deliver to City of West Fargo Public Works Building at 810 12th Street NW. Coordinate delivery with City of West Fargo Public Works Street Foreman Dan Birnbaum at 701-433-5400, a minimum of 24 hours in advance. All cost to complete this work will be included in the price bid for “Removal of Manhole” and “Removal of Inlet”.

202-P02 REMOVAL OF EXISTING RETAINING WALL: Remove existing retaining wall located at Sta 25+74 Rt (Shepherd of the Valley Church). Protect existing sign and foundations while removing retaining wall. Protect adjacent sidewalk ramp not indicated to be removed. If damage occurs, remove and replace all damaged sidewalk panels and repair sign at the contractor’s expense. Include all costs for labor, materials, and equipment necessary to remove retaining wall, wood mulch, and plantings in price bid for “Remove Retaining Wall.”

202-P03 REMOVAL OF AGGREGATE SURFACING AND BASE: Removal of aggregate base for streets, sidewalks, and driveways to be included in the price bid for “Common Excavation – Type A”.

202-P04 REMOVAL OF SEWER PIPE: Remove existing sanitary sewer and storm sewer pipe, all types and sizes, as designated on the plans. Include all costs for labor, materials, and equipment necessary to remove existing sanitary sewer and storm sewer pipe in the price bid for “Removal of Sewer Pipe.”

202-P05 REMOVAL OF PIPE-ALL TYPES AND SIZES: At locations designated on the plans for removal of Asbestos Cement Pipe Water Main, remove and dispose of in accordance with all applicable regulations as described in SP99(20). Include all costs for labor, materials, equipment necessary to remove existing ACP in price bid for “Removal of Pipe-All Types and Sizes.”

202-P06 REMOVE EXISTING FENCE: Salvage existing fence at Sta 25+67 Rt (Shepherd of the Valley Church). Provide salvaged fence to property owner in a manner that leaves the materials undamaged and in reusable condition. Include all costs for labor, materials, and equipment necessary to salvage existing fence in the price bid for “Remove Existing Fence.”

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NOTES

202-P07 REMOVAL OF STRUCTURE-SITE 1: Remove & reset existing pylon sign located at Sta 21+26 34.8’ Rt (Payroll Express). Install new foundation at Sta 21+15 35.0’ Rt to accommodate existing sign. Verify existing foundation dimensions and power supply requirements for new foundation. Remove existing sign foundation. Include all costs for labor, materials, and equipment necessary to remove & reset existing sign in the price bid for “Removal of Structure-Site 1.”

202-P08 REMOVAL OF STRUCTURE-SITE 2: Remove & reset existing pylon sign located at Sta 25+75 42.2’ Lf (Furniture for Less). Install new foundation at Sta 25+83 59.0’ Lf to accommodate existing sign with 2’ of base exposed. Verify existing foundation dimensions and bolt pattern for new foundation. Remove existing sign foundation. Include all costs for labor, materials, and equipment necessary to remove & reset existing sign in the price bid for “Removal of Structure-Site 2.”

202-P09 REMOVAL OF STRUCTURE-SITE 3: Remove & reset existing pylon sign located at Sta 30+38 34.0’ Rt (Classic Floral). Install new foundation at Sta 30+10 36.5’ Rt to accommodate existing sign. Verify existing foundation dimensions for new foundation. Remove existing sign foundation. Include all costs for labor, materials, and equipment necessary to remove & reset existing sign in the price bid for “Removal of Structure-Site 3.”

203-010 SHRINKAGE: 25 percent additional volume is included for shrinkage in earth embankment.

203-385 AVERAGE HAUL: No average haul has been computed for this project.

203-P01 CONTRACTOR FURNISHED PROCTORS: Determine the optimum moisture and density, as specified in ND T 99, for each type of earth material encountered that requires compaction control. In addition, determine the optimum moisture and density, as specified in ND T 180, for granular material to be used as pipe backfill. Perform a multi-point test using a minimum of 4 points. Submit the results to the Engineer along with a split sample of each material. The Engineer will perform comparison tests using the same procedure on the split sample. Use the Engineer’s results for determining in place density of material.

203-P02 COMPACTION AND DENSITY CONTROL: Compact material as specified in Section 203.04 E.2.b, “ND T-99”. Compact embankment and pipe backfill material to 95% of the maximum dry density with moisture content no less than optimum moisture and no more than 5.0 percentage points above the optimum moisture.

203-P03 TESTING FREQUENCY: Embankment will be tested per the frequency listed below.

- Compaction Curve: 1 for each change in soil density and moisture: 1 test per 350 feet of roadway per 12” lift, 1 test per city block per 12” lift, or 1 test per 500 cubic yards of fill.

203-P04 COMMON EXCAVATION-SUBCUT: A quantity of 500 CY has been included to be used as directed by the Engineer.

210-P01 FLOWABLE FILL: Contractor to backfill between structures that are within 36 inches of separation with flowable fill with a strength of 100 psi. 50 CY has been estimated to completely fill the void between structures from the base to subgrade elevation. All cost for labor, materials, and equipment associated with filling void in price bid for “Flowable Fill.”

216-P01 WATER FOR GRASS ESTABLISHMENT: Immediately begin watering all seeded and mulched areas to provide a minimum of 1.0 inch depth of moisture per week, no more than 2 times per week, until Final Stabilization per ND Department of Health Construction General Permit NDR10-000. Water only during early morning hours. Reduce water as necessary to account for rainfall during each week. Provide the Engineer weekly reports of watering operations including dates, times and quantity of watering or rainfall amounts to indicate minimum moisture is being obtained. Include all cost for labor, equipment, and water to complete the work in the price bid for “Water.”

230-P01 SUBGRADE PREPARATION: Scarify and recompact subgrade areas under the roadway section to a depth of 6 inches.

Proof roll all pavement subgrades prior to aggregate placement, along all travel lanes to verify the uniformity of the underlying subgrade throughout the roadway section and to check for the presence of localized soft or weak zones. Perform proof roll under the observation of the engineer with a fully loaded, tandem axle dump truck with a weight of approximately 25 tons or an approved equal. Proof roll at a vehicle speed of between 1 1/2 and 3 miles per hour along the pavement subgrades such that unrolled areas between wheel paths are not wider than 1 foot. Limit yielding to less than 1 1/2-inches for pavement subgrades, provided the underlying subgrade does not display permanent deformation. Correct areas that display excessive yielding, pumping or rutting during the proof roll. Repeat proof roll procedures until accepted by the Engineer.

Excavation and embankment to be incidental to subgrade preparation.

All costs associated with excavation, embankment, scarifying, recompacting, and proof rolling the subgrade are to be included in the price bid for “Subgrade Preparation-Type A.”

251-P01 SEEDING CLASS III: Seed disturbed ground. Apply hydraulic-mulch or bonded fiber matrix after the seed is raked into the topsoil. Use a seed mixture as follows:

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<tr>
<th>Species</th>
<th>Pounds Live Seed/Acre</th>
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<tbody>
<tr>
<td>Kentucky Bluegrass</td>
<td>120</td>
</tr>
<tr>
<td>Perennial Ryegrass</td>
<td>60</td>
</tr>
<tr>
<td>Durahard Fescue</td>
<td>20</td>
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</table>

After to seeding wait fertilizer manufacturer recommended time before applying fertilizer. Use fertilizer mixture of 5-10-5 applied at a rate of 50 pounds per acre. Water until grass is established as determined by the Engineer. All cost for labor, equipment, fertilizer, and materials necessary to complete the work included in the price bid for “Seeding Class III”.

302-110 BASE COURSE: Trim base course as specified in Section 302.04 C.1, “Surface Tolerance Type B.”

302-P01 AGGREGATE BASE COURSE FOR SUBCUT REPAIRS: Aggregate used in subcut repairs is subject to the requirements of 302.04 B. A quantity of 500 CY has been included to be used as directed by the Engineer. Aggregate used in subcut repairs will be paid at the contract unit price for “Aggregate Base Course Cl 5.”

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NOTES

302-P02 TYPE II PIPE BEDDING: Use Type II Pipe Bedding as directed by the Engineer to replace soft, spongy, or other unsuitable material encountered in the trench bottom when installing sanitary sewer, storm drain, or water main. Type II bedding material consists of 1” to 2” washed rock. Provide dewatering as necessary according to site conditions. Include all costs associated with dewatering, excavation, and disposal of unsuitable material in the price bid for “Type II Pipe Bedding”. A quantity has been provided in the plans that represents 25% of the overall underground pipe length.

302-P03 AGGREGATE BASE COURSE CL 5: Meet the gradation as shown in specification Section 816 for Aggregate Base Course CL 5, revising Percent Passing for No. 200 sieve as follows:

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<th>Sieve Size</th>
<th>Percent Passing</th>
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<tr>
<td>No. 200</td>
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302-P04 AGGREGATE BASE: Proof roll all aggregate bases prior to paving along all travel lanes to verify the uniformity of the underlying base throughout the roadway section and to check for the presence of localized soft or weak zones. Perform proof roll under the observation of the Engineer with a fully loaded, tandem axle dump truck with a weight of approximately 25 tons or an approved equal. Proof roll at a vehicle speed of between 1 1/2 and 3 miles per hour along the aggregate base such that unrolled areas between wheel paths are not wider than 1 foot. Limit yielding less than 1/2-inches for aggregate bases, provided the aggregate base does not display permanent deformation. Correct areas that display excessive yielding, pumping or rutting during the proof roll. Repeat proof roll procedures until accepted by the engineer.

Include all costs associated with proof rolling the aggregate base in the price bid for “Aggregate Base Course Cl5”.

550-P01 SLIP FORM PAVING: All main line concrete pavement is to be placed with a slip form paver. Contractor to provide written request with specific proposed paving plan if slip form paving is not possible. Submit request to Engineer for approval a minimum of 48 hours in advance of paving operations.

704-P02 TRAFFIC CONTROL PHASING: See Section 100 plan sheets, “Work Zone Traffic Control” for overview and detailed layouts of the construction phasing plan. Any alterations require the Engineer’s approval a minimum of 2 weeks prior to implementing.

Phase 1
- Close Sheyenne Street to all through traffic from north of 7th Avenue north of 4th Avenue. Contractor to maintain access points for commercial and residential properties as detailed in Section 20 and 100 plan sheets.
- Install temporary watermain connection from Phase 1 watermain at Station 18+56 to existing watermain as detailed in Section 100.
- Complete all work indicated in Interim Completion Date No. 1 prior to changing to Phase 2 traffic control.

704-P03 TRAFFIC CONTROL DEVICES: The traffic control devices list for each phase has been developed using traffic control sign layouts (shown in Section 100) and Standard Drawings as listed below:

- D-704-04 Work Zone Business Sign Detail
- D-704-07, 8, 9, 10: Are applicable.
- D-704-13, 14: Are applicable.
- D-704-21 Type I for detour sign layout
- D-704-26: Type EE and GG for maintaining temporary access.
- D-704-51: Portable precast concrete median barriers.

Maintain a minimum 11 foot wide lane at all times.

704-P04 PORTABLE CHANGEABLE MESSAGE SIGN: Install two (2) Portable Changeable Message Signs (PCMS) at the beginning and end locations of the project 2 weeks prior to commencing of work and operating for 3 weeks. The Engineer will determine the locations for PCMS installation. Rotate the PCMS as directed by the Engineer.

Provide an operator trained in the use of the PCMS.

The Engineer will determine the message to be displayed. Program the message within one hour of the Engineer's request to change the message.
704-P05 TRAVERSABLE DRIVING SURFACE: To facilitate traffic during different phases of construction a traversable driving surface is required where indicated. A traversable surface may be defined as the existing roadway surface, completed concrete roadway surface, completed asphalt wear course surface, completed asphalt base course surface, or an aggregate surface a minimum of 6 inches in depth. A quantity of 100 TON of Traffic Service Aggregate has been included to be used as directed by the Engineer. Include all labor, materials, and equipment necessary to install, maintain, and remove the traversable driving surface in the price bid for “Traffic Service Aggregate.”

704-P06 MAINTAINING ACCESS: Maintain a traversable driving surface for two way traffic at all times for resident and business properties along Sheyenne Street. Coordinate and alert residents/businesses regarding phase changes. Coordinate and alert residents/businesses regarding changes to access points, shifting traffic control, and temporary access restrictions along the construction zone with in each phase a minimum of 24 hours in advance. A total of 50 additional delineator drums has been provided to maintain traffic throughout each of the construction phases. Additional signing for changing roadway surfaces, per Standard Detail 704-26 Layout EE and GG, have been accounted for in Section 100 to be used at the Engineer’s discretion.

There are four access point conditions that occur on the project. Refer to the following for guidelines related to paving the four access points:

- Residential Driveway - Resident access may be limited for no more than one week in order to construct driveways. Allow residents to park on newly constructed roadway while driveways are not accessible. Locations as described in Section 20.
- Commercial Driveway Type 1 - Two access points, A and B, provided. Alternate access A and B to maintain traffic while constructing driveways. Locations as described in Section 20.
- Commercial Driveway Type 2 - Construct the driveway in phases to maintain traffic. Contractor to contact Lynx Logistics, Dean Pfeifer, 701-371-0660 for access coordination. Locations as described in Section 20.
- 1st Ave - Construct in phases as described in Section 100. Contractor to contact West Fargo Public Schools, Levi Bachmeier, 701-499-1077 for 1st Ave access coordination.

Contractor to minimize disruption to loading dock at Furniture for Less. Coordinate impacts and schedule with owner.

704-P07 WORK ZONE BUSINESS SIGNS: Work zone business way finder signs have been provided and shown in Section 100 for local businesses. Any additional business signs needed throughout the construction of the project will be developed in accordance with Standard Detail D-704-4. As business access changes through the life of the project, per Section 20 Sheet 23, relocate business way finder signs as needed. Exact sign location and names will be determined by the Engineer prior to installation. Include all costs for creating, installing, adjusting by phase, and removing work zone business signs at end of project in the price bid for “Traffic Control Signs”.

704-P08 PEDESTRIAN CHANNELIZATION: Provide pedestrian channelization that meets the following requirements:

- Interlocked with a 1” maximum gap between devices;
- Upper rail with a smooth continuous guide handrail positioned 32 to 38 inches above the walkway;
- A smooth lower edge on the pedestrian side of the wall to allow sight impaired cane tapping positioned based on the following requirements:
  - The bottom edge is less than 2 inches above the walkway; and
  - The top edge a minimum of 6 inches above the walkway
- Openings in the bottom of the wall to allow for water passage;
- Support legs that do not impede the clear walkway;
- In compliance with NCHRP Report 350 or MASH Test Level 3 (TL3);
- Channelization portions are orange or white, or a combination of orange and white, in color.

Include all labor to furnish, install, maintain, relocate, and remove pedestrian channelization in the price bid for “Pedestrian Channelization”.

708-P01 INLET PROTECTION SPECIAL: Place inlet protection into inlets. Inlet Protection Special to be Flexstorm Catch It by Inlet Pipe Protection Inc., Siltsack Type C by ACF Environmental, or approved Equal. Include all costs for furnishing, installing, maintaining (cleaning), and replacing damaged devices in the bid price for “Inlet Protection Special”. Keep all installed devices in place until the turf has been established. If the turf has not been established by November 6th, remove all installed devices in the street section that have potential to cause damage to snow removal equipment. Reinstall these devices in the spring as directed by the Engineer. No additional compensation will be provided as this work is considered normal maintenance.

714-P01 STORM SEWER: All quantities shown for storm sewer are quantified to the center of structure. Payment will be based on Section 714.05 A of the Standard Specifications.

714-P02 STORM DRAIN: Provide bell and spigot with rubber gasket joints for reinforced concrete pipe storm drain.

Install all storm drain pipe crossings of roadways by means of open trenching.

714-P03 LARGE DIAMETER STORM SEWER PIPE: Install POPIT plugs in pipe lift holes (i.e. no concrete plugs) for all 42IN diameter and larger R.C.P. storm sewer.

714-P04 FLAP GATE 18IN: Install Flap Gate 18IN in ST19. Use Tideflex Series TF-2 with an Outside Diameter of 24 inches. Tideflex product to be constructed with curved end oriented to the north. Product to be manufactured with Pure Gum Rubber (PGR) or Neoprene. Include costs for labor, equipment, and materials necessary to complete installation in the price bid for “Flap Gate 18IN.”

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**714-P05** PIPE POLYETHYLENE CORR PERF 4IN DRAIN: Install 4-inch corrugated drainpipe, wrapped in polyester sock as shown in Sect 85 plan sheets. Encase drainpipe in a 6-inch x 8-inch pea gravel pit. Install perforated drainpipe only within landscape planters; solid pipe to be located between planting beds and storm drain. Drainpipe runs underground to be solid 4-inch drainpipe terminating at nearest drain inlet. Ensure positive slope of drain tile to drain inlet. Include the all materials and aggregate necessary to install the curbing in the unit price for “Pipe Polyethylene Corr Perf 4in Drain.”

**722-P01** INLETS AND MANHOLE OFFSETS: All inlet and manhole offsets indicated in Section 50, Inlet and Manhole Summary, are to the center of structure. For Inlet Special structures, cast opening in center of cover.

**722-P02** MANHOLE CASTINGS: Manhole castings to be installed are as follows. Storm drain castings will have open pickholes and “Storm Sewer” lettering. Sanitary sewer castings will have two closed pickholes, gaskets, and “Sanitary Sewer” lettering.

**Grass or Asphalt Pavement:**
- a) Neenah R-1733
- b) East Jordan Iron Works 1205 (Storm Drain)
- c) East Jordan Iron Works 1205 A.G.S. (Sanitary Sewer)
- d) Approved Equal

**Concrete Pavement:**
- a) Neenah R-1955-1
- b) East Jordan Iron Works 3025 SELFLEVEL
- c) Approved Equal

**722-P03** INLET CASTINGS: Inlet castings to be installed in curb and gutter, grass, or outside of pavement are as follows:

**Grass or Outside Pavement:**
- a) Neenah R-2577 with Convex Casting Grate
- b) East Jordan Iron Works 1205-M2 with Convex Casting Grate
- c) Approved Equal

**Curb & Gutter:**
- a) Neenah R-3067-C with 2” Radius Open Curb Box
- b) East Jordan Iron Works 7030-M2 with T1 Back
- c) Approved Equal

**Valley Gutter:**
- a) Neenah R-3347-A
- b) Approved Equal

**722-P04** CITY OF WEST FARGO SPECIFICATIONS: Refer to Special Provision 99(20) for specifications regarding sanitary sewer and water main items.

**722-P05** MANHOLE CASTING: Remove and replace existing manhole castings to be located within proposed concrete paving with floating castings where indicated on the drawings. Include all labor, materials, and equipment to remove and salvage the existing casting, remove existing concrete or plastic adjusting rings, install new plastic adjusting rings, and install new casting in the price bid for “Manhole Casting.”

**722-P06** ADJUST INLET: Remove casting and adjusting rings, install Inlet Catch Basin base with mastic seal, and backfill excavation. Include all labor, materials, and equipment associated with removing casting and installing cover in the price bid for “Adjust Inlet.”

**722-P07** ADJUST MANHOLE SPECIAL: Remove casting, adjusting rings, and precast cover of 72” Manhole at Sta 13+45 25.1‘ Lt. Install new precast cover in accordance with Standard Drawing D-722-5, 1’ concrete adjusting ring and other rings as necessary, and Type (Y) casting as specified in Sect 50. Include all labor, materials, and equipment to adjust manhole in the price bid of “Adjust Manhole Special.”

**722-P08** MANHOLE STORM CONNECTION: All connections to existing storm sewer or sanitary sewer may involve cutting existing structures. Saw storm sewer opening, install pipe and mortar close. Core sanitary sewer opening, install rubber boot, and install pipe. Include all labor and materials required to perform this work in the price bid for storm drain and sanitary sewer bid items.

**722-P09** MANHOLES: Storm and sanitary sewer manholes to include external chimney seals by Cretex Specialty Products, Strike Products, or Sealing Systems Inc. Provide steps in only the bottom section of storm sewer manholes and no steps in sanitary sewer manholes. Include all labor, equipment, and manhole external chimney seals in bid price for “Manhole __ In” and “Sanitary Manhole.”

**722-P10** SANITARY SEWER PIPE: Contractor to accommodate existing sewage flow with installation of new sanitary sewer pipe. Include all labor, materials, and equipment, including possible temporary pumping, necessary to install sanitary sewer pipe in the price bid of “8IN Sanitary Sewer Pipe.”
NOTES

724-P01 TEMPORARY WATER SERVICE: Contractor to supply temporary water to City water users affected by work.

Residential: Contractor must provide temporary water service to all affected residential City water users if water service is to be interrupted for more than 4 hours per day.

Businesses: Contractor to provide temporary water service to all businesses affected by this work. A list of known businesses and estimated existing services sizes are provided below:

- Casey’s General Store – 1” Service
- Sheyenne Plaza – 6” Fire Line & 4” Domestic Line
- West Funeral Home – 1” Service
- Hieb Dentistry – 1” Service
- Payroll Express – 1” Service
- Pioneer Place – 6” Fire Line & 4” Domestic Line
- Silver Dollar Flying Pig – 1” Service
- West Fargo Chiropractic – 1” Service
- Choice Bank – 1” Service
- Shepherd of the Valley Church – 1” Service
- Dasch’s Duds / Westside Wellness – 2” Service
- Lynx Logistics – 1” Service
- Classic Floral – 1” Service
- Bernie’s Winces – 1” Service
- Sandy’s Donuts – 1” Service (on Main Ave)
- Cenex – 1” Service (on Main Ave)

Notify the Engineer and City 48 hours prior to disruption of water service. Contact City of West Fargo Public Works Water Foreman Brian Matzke at 701-433-5400 to locate gate valves & coordinate water shut off. Provide a written notice to any home or business 48 hours before disruption of the water service explaining anticipated method of providing temporary water service. Written notice to be approved by Engineer. Include all cost for labor, equipment and materials necessary for the installation and removal of temporary water service system in the price bid for “Temporary Water Service.”

724-P02 ABANDON WATER MAIN SERVICE LINE: Where indicated on the plans, fill existing water main pipe completely with controlled density fill or sand, and cap or plug the ends with 4000 psi concrete. Include all labor, materials, and equipment associated with abandoning pipe in the price bid for “Abandon Water Main.”

724-P03 ABANDON STORM SEWER: Where indicated on the plans, fill existing storm sewer pipe completely with controlled density fill or sand, and plug the ends with 4000 psi concrete. Include all labor, materials, and equipment, including traffic control, associated with abandoning pipe in the price bid for “Abandon Storm Sewer.”

724-P04 WATER LINE CONNECTION 4 IN: Remove existing tapping sleeve and connect to existing gate valve at Sta 15+05 12.4’ LT, Sta 20+45 12.0’ LT, & Sta 20+64 12.3’ LT. Include all labor, materials, and equipment necessary to complete connection in the price bid for “Water Line Connection 4 In.”

724-P05 WATER LINE CONNECTION 6 IN: Remove existing tapping sleeve and connect to existing gate valve at Sta 15+05 12.4’ LT, Sta 20+45 12.0’ LT, & Sta 20+64 12.3’ LT. Include all labor, materials, and equipment necessary to complete connection in the price bid for “Water Line Connection 6 In.”

724-P06 WATER LINE CONNECTION 8 IN: Temporarily connect Watermain PVC 8 In to existing 8 In ACP Watermain between phases 1 & 2 and phases 2 & 3 & as shown in Sect 100 plan sheets. Temporary watermain connection to consist of necessary fittings, pipe, removal of ACP watermain, and removal of temporary watermain connection. ACP watermain removal and disposal to follow all applicable regulations as described in SPXXXX(XX). Include all costs for labor, materials, equipment necessary to connect to existing watermain and remove temporary watermain connection in price bid for “Water Line Connection 8 In.”

724-P07 CONNECT WATER SERVICE: Verify existing water service size, material, and location prior to installation of connection at watermain and provide necessary fittings to connect new water service from curb stop & box to existing water service. Include all costs for labor, equipment, and material necessary to disconnect and reconnect water service in price bid for “Water Service Connection In.”

724-P08 SPRINKLER RELOCATION: Existing irrigation systems are located within the project limits. Remove and reset irrigation systems to the right of way line. Repair damaged pipe and sprinkler heads. The locations of existing known irrigation systems are listed below:

- West Fargo Chiropractic Center
- Choice Bank
- West Funeral Home

Include all labor, material, and equipment necessary to remove existing sprinkler systems to outside of the right of way in the price bid for “Sprinkler Relocation.”

724-P09 ABANDON VALVE BOX: Remove top section of gate valve box and fill bottom sections with sand. Include all labor, materials, and equipment necessary to the abandonment of existing gate valve boxes in the price bid for “Abandon Valve Box.”

724-P10 WATERMAIN 16 IN PVC: Salvage existing 16”x8” Tee at Sta 32+35 12.5’ LT, deliver to City of West Fargo Public Works Building at 810 12th Street NW, remove 5 LF 16” PVC Watermain, install new 5 LF of 16” PVC Watermain C900, and connect to new 16”x8” Tee. Include all costs for labor, materials, and equipment necessary to deliver salvaged 16”x8” Tee to City of West Fargo Public Works, remove 16” Watermain, install 16” Watermain, and connect to new 16”x8” Tee in price bid for “Watermain 16IN PVC.”

748-P01 CURB TYPE I: Pour curb integral with adjacent sidewalk. Include all costs for the labor, equipment, and material necessary to construct the integral curb in the price bid for “Curb Type I.”
748-P02 CURB HEADER-TYPE I: Construct 6-inch wide by 18-inch high cast-in-place concrete curb as shown in the plans. Install (2) two No. 4 deformed reinforcing bar centered vertically with 3-inches clear, both top and bottom and 12-inch No. 4 vertical deformed reinforcing bar spaced 24-inch on center. Provide a ½-inch tooled radius on the top corners of all planter curbs. Saw cut control joints at a minimum of 6-foot not to exceed 8-foot on center; align with adjacent sidewalk slab control joints where possible. Finish grade of the top of all planter curbs will be 6-inches higher than the sidewalk concrete immediately adjacent. Utilize salvaged base course material to construct the required 6-inch depth compacted base. Curb Header-Type I locations shown in Section 85.

Include all costs for the labor, equipment, and material necessary to construct the planter curbs in the price bid for “Curb Header-Type I”.

748-P03 CURB & GUTTER-TYPE 1 SPECIAL: Construct 6-inch wide cast-in-place concrete curb and 12-inch wide gutter, with 5-inch depth, as shown in the plans. Install (3) three No. 4 deformed reinforcing bar centered vertically with 3-inches clear, both top and bottom. Contractor to dowel curb into adjacent concrete pavement with an 18-inch No. 4 smooth dowel spaced 24-inch on center. Provide a ½-inch tooled radius on the top corners of all planter curbs. Saw cut control joints at a minimum of 6-foot not to exceed 8-foot on center; align with adjacent sidewalk slab control joints where possible. Utilize salvaged base course material to construct the required 4-inch depth compacted base. Curb & Gutter-Type 1 Special locations shown in Section 85.

Include the base course necessary to install the curbing in the unit price for “Curb & Gutter-Type 1 Special”.

748-P04 VALLEY GUTTER-TYPE I 48IN: Construct valley gutter in accordance with the details in Section 20 of the plans. All roadway curb and gutter types shown in the plans, 4 ft Valley Gutter and 8 ft Valley Gutter, will be included in the bid price for “Valley Gutter-Type I 48in.”

750-P01 DRIVEWAYS: Driveways to be the thickness as indicated in Section 90 plan sheets and constructed in accordance with the detail in Section 20 plan sheets. Reinforced driveways with No. 4 bars @ 24” on center both ways, placed mid-depth in the slab. All driveways are to be tied to curb and gutter or sidewalk by No. 4 x 12” dowel bars placed mid depth at 24” on center. All joints are to be sawed.

“Driveway Concrete” to be 7 in reinforced concrete.

Include all costs for the labor, equipment, and material necessary to construct the driveways in the price bid for “Driveway Concrete” and “Driveway Concrete 6in Reinforced”.

750-P02 SIDEWALKS: Sidewalks to be the thickness as indicated in Section 90 plan sheets and constructed in accordance with the detail in Section 20 and 85 plan sheets. Reinforce all sidewalks with No. 4 deformed reinforcing bar placed 24 inches on center both ways. Include an 18 inch minimum lap at splice locations. Use plastic chairs to support the bars at mid-depth of the slab and ensure a clearance of 3 inches to all side forms.

Saw all longitudinal and transverse contraction joints at indicated per Section 20 and 85. Saw joints in a timely manner to prevent any uncontrolled random cracking. If random cracking occurs, remove and replace all damaged panels at the contractor’s expense.

All sidewalk ramps to be 6” thick for a minimum of 6’ or to top of ramp, whichever is longer from existing curb and to be tied to curb and gutter with No. 4 x 12” epoxy coated rebar placed mid depth at 18” on center.

Protect surface of adjacent pigmented imprinted concrete from white concrete cure compound.

Include all costs for the labor, equipment, and material necessary to construct the sidewalks in the price bid for “Sidewalk Concrete 4IN” and “Sidewalk Concrete 5IN Reinf.”

750-P03 DETECTABLE WARNING PANELS: Provide gray cast iron materials as specified in Section 885 of the Specification. Install radial or straight panels as indicated in Sect 20 details.

750-P04 PIGMENTED IMPRINTED CONCRETE: Develop a mix design using any size coarse aggregate specified in specification Section 802.01 C.2, “Coarse Aggregate” and with a 60-40 fine aggregate-coarse aggregate ratio.

Provide a pigment from the list below or provide an approved equal. To be considered an approved equal, pigments must meet the requirements of ASTM C 979.

2. Number 860 Dark Gray (Iron Oxide), produced by Davis Colors http://www.daviscolors.com/

When pigmented imprinted concrete abuts existing pigmented imprinted concrete, match existing color and pattern. Provide 4”x10” test section of color and pattern for Engineer for approval.

Use the same supplier for all colored concrete placed under the contract.

Add pigment at the ratio recommended by the manufacturer directly into the mixer along with the aggregate, cement, and water. Add pigment while the mixer is operating at mixing speed. Continue mixing for 5 to 10 minutes or between 50 and 100 revolutions.

Form a pattern in the concrete using a roller to create a Fracture Slate pattern.

Cure concrete using curing compound that meets the requirements of ASTM C 309, Type 1. Provide a cure from the list below or provide an approved equal. To be considered an approved equal, the cure must have a minimum of 25% acrylic solids. Apply 2 coats in opposite directions.

1. Clear Guard® Cure and Seal by Butterfield Color
2. Dress & Seal 30™ by L&M Construction Chemicals

Protect surface of adjacent sidewalk concrete from pigmented concrete stains while paving.

Before beginning work, submit a reinforcement jointing plan for pigmented imprinted concrete to the Engineer for approval.

Pigmented Imprinted Concrete to be thickened to 6 inches at curb ramp locations as described in the Sidewalk Note.

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752-P01 TEMPORARY SAFETY FENCE: A quantity of 1000 LF has been added to be used as directed by the Engineer.

754-P01 FLAT SHEET FOR SIGNS: Flat Sheet For Signs-Type XI Refl Sheeting to be 3M Diamond Grade (DG3). Flat Sheet For Signs-Type IV Refl Sheeting to be 3M High Intensity Prismatic Reflective.

754-P02 REMOVE SIGNS & SUPPORTS: Salvage street signs, sign panels, and surface mounted breakaway bases. Deliver to the City of West Fargo Sign Shop at 327L 34th Avenue East. Coordinate delivery with City of West Fargo Street Foreman Dan Birnbaum at 701-433-5400 a minimum of 24 hours in advance.

Include all costs to remove and deliver signs and supports in the price bid for “Flat Sheet for Signs-Type __ Refl Sheeting” and “Steel Galv Posts-Telescoping Perforated Tube”.

754-P03 REMOVE SIGN FOUNDATION: Remove existing sign foundations located at Sta. 24+06 40.6’ Lt (Choice Bank). Include all costs to remove foundation, dispose offsite, and backfill in the price bid for “Remove Sign Foundation”.

762-050 PAVEMENT MARKING: If the Engineer and Contractor agree, plan quantity will be used as the measurement for payment for pavement marking items.
REMOVE LIGHT STANDARD AND LUMINAIRE: Remove portions of the existing lighting circuits shown on the plans. Coordinate removal with the City of West Fargo. The lighting to remain in place until construction activities require its removal. Poles and fixtures to be turned over to owner and stored at location as directed by owner. Remove existing abandon circuit conductors and conduit as much as possible. Remove and dispose of concrete base and provide compacted backfill in its place. The cost of removing the light standard and base to be paid for at the contract bid price for “Lighting System A.”

LIGHT STANDARDS: The lighting standards to be 18 feet tall, tapered, painted extruded aluminum, with double bar decorative arm, decorative base with 12” bolt circle, 1” anchor bolts, GFCI receptacle with in use weatherproof cover (15’ above grade), and fixed flag holder. The pole finish to be black. Leveling nuts to be used for all anchor bolts. Provide inline fuses with 10A fuses in each phase conductor for each luminaire and receptacle. Furnish enough slack to withdraw fuse holders and all wire connections through handhole 2”. Gelcap surface mount kit is to be used on all connections. The cost of installing light standards to be paid for at the contract bid price for “Lighting System A.”

LIGHT STANDARD FOUNDATION: The light standard foundations to be 24 inch diameter round top and 24 inch diameter below the top to a depth of 6 feet. The elevation of the top of base and exact location to be verified with Engineer. Provide a minimum of (2) 2 inch conduit stub-outs from each base. Provide steel reinforcement cage consisting of (4) #3x64” vertical rebar and (4) #3 horizontal rings at 18 inches on center. Provide 1/2”x10’ copper clad round rebar. The cost of installing light standard bases to be paid for at the contract bid price for “Lighting System A.”

LED LUMINAIRE: Luminaries as finished and installed to be approved equal to: Sun Valley OVI-LED-GRB-III-84LED-CW-350MA-MT-1-RAL9005-T (BLK)-CSP-HS , Type III (R3) distribution, multi-volt, wired for 240 V., 5,000K, black finish. All wiring within the lighting standards between distribution conductors and luminaries to be #10 A.W.G. stranded copper clad round rebar and (4) #3 horizontal rings at 18 inches on center. Provide all branch circuit conduit, junction boxes, conduit rough ins, and wiring associated with feedpoint as shown on plan.

New Feedpoint #1

Remove the existing feedpoint and turn over to the owner. Provide new 22KAIC rated feedpoint to serve the (4) lighting circuits, (4) festoon circuits, power for portable power distribution boxes, planter receptacles, and future power connections to Focus Areas. The new pad mount feedpoint to be manufactured by Northwoods, States Electric, Povolny or approved equal. The free-standing enclosure to be stainless steel with integral 200 amp single phase meter socket and photocell, with a viewing window for each. The enclosure to be service entrance rated at 200 amp, with a 42 circuit distribution panel with 200 amp main circuit breaker, convenience receptacle, (4) 60/2 breakers for the lighting circuits, (4) 60/2 circuit breakers for festoon circuits, (2) 20/1 circuit breakers for the control circuit and convenience receptacle, (3) 50/2 breakers to be used for owner power distribution box receptacles, and (18) 20/1 GFCI circuit breakers for planter receptacle circuits and future Focus Areas.

New Feedpoint #2

Provide (3) 50 amp, 4 wire receptacles in individual backboxes with covers in the enclosure for cord and plug connected portable power distribution boxes. Provide (1) 3” PVC threaded nipple with threaded caps low on each sidewall of the enclosure to be used for temporary cord entrance.

Provide (8) 60A, 2 pole contactors for light circuit control and festoon circuit control. (4) 30A 2 pole contactors for planter circuit control. Provide an HOA switch for the lighting, HOA switch for festoon circuit control, and an HOA switch for planter circuit control. Auto mode to be photocell controlled.

Provide branch circuit conduit, junction boxes, conduit rough ins, and wiring associated with feedpoint as shown on plan.

The existing concrete pedestal for the new free standing feedpoint to be reused. The existing concrete pedestal measures 28’x28” and is elevated 16’ above grade. The new feedpoint to be manufactured to fit on the existing concrete pedestal. The secondary service conductors to the feedpoint to be furnished by Xcel Energy. The cost of removing existing feedpoint and installing new feedpoint #1 and associated branch circuiting to be paid for at the contract bid price for “Lighting System A.”

Lighting System A.

New Feedpoint #2

Provide new 22KAIC rated feedpoint on concrete pedestal to serve the power for portable power distribution boxes, planter receptacles, and future power connections to Focus Areas. The new pad mount feedpoint to be manufactured by Northwoods, States Electric, Povolny or approved equal. The free standing enclosure to be stainless steel with integral 200 amp single phase meter socket and photocell, with a viewing window for each. The enclosure to be service entrance rated at 200 amp, with a 42 circuit distribution panel with 200 amp main circuit breaker, convenience receptacle, (2) 20/1 circuit breakers for the control circuit and convenience receptacle, (3) 50/2 breakers for owner power distribution box receptacles, and (18) 20/1 GFCI circuit breakers to serve planter receptacles circuits and future Focus Areas.

Provide (3) 50 amp, 4 wire receptacles in individual backboxes with covers in the enclosure for cord and plug connected portable power distribution box receptacles. Provide (1) 3” PVC threaded nipple with threaded caps low on each sidewall of the enclosure to be used for temporary cord entrance.

Provide (6) 30A 2 pole contactors for planter circuit control. Provide an HOA switch for planter circuit control. Auto mode to be photocell controlled.

Provide branch circuit conduit, junction boxes, conduit rough ins, and wiring associated with feedpoint as shown on plan.

The concrete pedestal to be elevated 18” above grade. Coordinate with utility to provide a 120/240 volt, 200 amp, single phase service to the feedpoint. The secondary service conductors to the feedpoint to be furnished by Xcel Energy. The cost of installing new feedpoint #2 and associated branch circuiting to be paid for at the contract bid price for “Custom Electrical Panel.”

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New Feedpoint #3

Provide 22KVAIC rated feedpoint on concrete pedestal to serve the power for portable power distribution boxes, planter receptacles, and future power connections to Focus Areas. The new pad mount feedpoint to be manufactured by Northwoods, States Electric, or Povolny or approved equal. The free standing enclosure to be stainless steel with integral 200 amp single phase meter socket and photocell, with a viewing window for each. The enclosure to be service entrance rated at 200 amp, with a 42 circuit distribution panel with 200 amp main circuit breaker, convenience receptacle, (2) 20/1 circuit breaker for the control circuit and the convenience receptacle, (3) 50/2 breakers for owner power distribution box receptacles, and (18) 20/1 GFCI circuit breakers to serve planter receptacle circuits and future Focus Areas. Provide (3) 50 amp, 4 wire receptacles in individual backboxes with covers in the enclosure for cord and plug connected portable power distribution box receptacles. Provide (1) 3” PVC threaded nipples with threaded caps low on each sidewall of the enclosure to be used for temporary cord entrance.

Provide (10) 30A 2 pole contactors for planter circuit control. Provide an HOA switch for planter circuits control. The Auto mode to be photocell controlled. Provide all branch circuit conduit, junction boxes, conduit rough ins, and wiring associated with feedpoint as shown on plan.

The concrete pedestal to be elevated 18” above grade. Coordinate with utility to provide a 120/240 volt, 200 amp, single phase service to the feedpoint. The secondary service conductors to the feedpoint to be furnished by Xcel Energy. The cost of installing new feedpoint #3 and associated branch circuiting to be paid for at the contract bid price for “Custom Electrical Panel.”

770-P06 2 INCH DIAMETER RIGID CONDUIT AND UNDERGROUND CONDUCTOR: Furnish and install rigid conduit and single USE conductors for the street lighting and festoon circuits sized as shown on plans. The cost to furnish conduit and conductors to be paid for at the contract price bid for rigid and underground conductors. The cost of installing conduit with single conductors to be paid for at the contract bid price for “Lighting System A.”

770-P07 INGROUND LIGHTING; Furnish and install (4) in-ground lighting fixtures at each Focus Area as shown on plans sheets. Locate fixture base as shown on Hardscape plan sheets details. The fixtures to be an approved equal to: Hydrel M9400C, round door, double lens, stainless steel door and trim ring, 20W, 4000K, narrow flood, flat lens clear, 10 degrees optical tilt, slip resistant. Wire and connect to lighting circuit in adjacent light base as shown on plan via ¾” C, 2 #10+G. Provide fuse holder for each phase conductor in the light base fused at 5 amps. The cost of installing in-ground lighting to be paid for at the contract bid price for “Lighting System (Landscape).”

770-P08 COMMUNICATION CONDUIT/JUNCTION POINTS; Furnish and install in-ground junction points and communication conduits as shown on plans sheets. Provide a fiber optic “backbone” cable in one 2” conduit as described on plan sheets. Provide conduit rough ins from j-points to designated areas as shown on the plan sheets. The cost of installing communication j-points, conduit rough ins, and Fiber Optic cabling to be paid for at the contract bid price for “IT System.”

OUTDOOR GROUND BOXES; Furnish and install outdoor ground boxes in the planter beds as shown on plans sheets. Provide ¾”, (2) 10 #10 G to feedpoint or junction box as shown on the plan sheets. The cost of installing outdoor ground boxes and cabling to be paid for at the contract bid price for “Service Outlets.”

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NOTES

SECTION 85

930-P01 RETAINING WALL. Construct seat-wall planter as shown in the plans and per details. Provide cast-in-place wall over concrete piers and grade beam. Place 4-inch void form between concrete piers. Brick face to be running bond pattern with 3/8” mortar joints. Recess the third brick course from the top by 1/2”-inch. Dowel coping to concrete wall and top of brick face with a mortar setting bed. Approved manufacturers for brick and coping are as follows:

   Modular Brick
   Color Mix:
      • 40% Opus
      • 40% Slate Gray Smooth
      • 20% Sea Gray #12, Texture: Velour

Or approved equal

Precast Coping
Color: Standard available colors
Finish: Honed
Edge: 1/2-inch Round over

Include all costs for the labor, equipment, and material, including foundations, necessary to construct the seat-wall planters in the price bid for “RETAINING WALL”.

970-P01 LANDSCAPE PLANTINGS. Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule as indicated on Drawings and complying with ANSI Z60.1, the American Standard for Nursery Stock, as published by American Hort 2014. Install plantings per following notes:

   Install trees with root flare visible before planting.
   Prepare planting area for soil placement and mix planting soil according to 970-P03 “Planting Soil”. Place and mix planting soil in-place over exposed subgrade. Before planting, obtain Landscape Architect’s acceptance of finish grading. Restore planting areas if eroded or otherwise disturbed after finish grading.
   Excavate planting pits with sides sloping inward. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation. Excavate approximately three times as wide as ball diameter. Excavate at least 12 inches wider than root spread and deep enough to accommodate vertical roots for bare-root stock. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
   At time of planting, landscape contractor to verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, landscape contractor to verify that root ball still meets size requirements.
   Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break. Set each plant plumb and in center of planting pit with root flare 1 inch above adjacent finish grades.
   Balled and Burlapped Stock: Utilize planting soil according to 970-P03. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
   Container-Grown Stock: Carefully remove root ball from container without damaging root ball or plant.
   Backfill around root ball in layers, tampering to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
   Continue backfilling process. Water again after placing and tamping final layer of soil.
   Remove only dead, dying, or broken branches. Do not prune for shape. Do not apply pruning paint to wounds.
   Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
   Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents. Apply pesticides and other chemical products and biological control agents according to authorities having jurisdiction and manufacturer’s written recommendations. Coordinate applications with Owner’s operations and others in proximity to the Work. Contractor to notify Owner prior to each application.
   Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
   At time of Substantial Completion, verify that tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.
   Contractor to provide warranty for all plant material of one growing season, but no more than one year, from the date of Substantial Completion.

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970-P02  STRUCTURAL SOIL. Furnish and install structural planting soil Structural soil mix to be a uniformly blended mixture of crushed Stone, Clay Loam and Hydrogel, mixed to the following proportion:

- Material: Unit of Weight:
  - Crushed Stone 100 units dry weight
  - Loam as determined by the test of the mix (approx. 20 units)
  - Hydrogel 0.03 units dry weight
- Total moisture AASHTO T-99 optimum moisture

Install subsurface drain lines as shown in the plans prior to installation of Structural Soil material.

Excavate and compact the proposed subgrade to depths, slopes and widths as shown in the plans. Compacted subgrades of adjacent pavement or structures to not be over excavated.

Install Structural Soil in 6-inch lifts and compact each lift.

Install Structural Soils to finished grades as shown in the plans. Structural Soil material to be protected from contamination by toxic materials, trash, debris, water containing cement, clay, silt or materials that will alter the particle size distribution of the mix with plastic or plywood as directed by the Architect.

After the initial placement and rough grading of the Structural Soil but prior to the start of fine grading, the Contractor to request review of the rough grading by the Landscape Architect. The Contractor to set sufficient grade stakes for checking the finished grades. Adjust the finish grades to meet field conditions as directed. Provide smooth transitions between slopes of different gradients and direction. Fill all dips with structural soil and remove any bumps in the overall plane of the slope. The tolerance for dips and bumps in Structural Soil areas to be a 3” deviation from the plane in 10’. All fine grading to be inspected and approved by the Landscape Architect prior to the installation of other items to be placed on the Structural Soil.

Include all work required to furnish, prepare, deliver, and install planting soil to the depths shown in the plans in the price bid for “Structural Soil”.

970-P03  PLANTING SOIL. Furnish and install planting soil mixture in the areas and depths shown in the plans, including all tree pits and planting beds within sidewalks and curb extension areas as described below.

Remove topsoil and subsoil excavated in each proposed planting hole.

Backfill all tree pits with imported soil, see details in Sect 85.

Apply and mix unamended soil with amendments on-site to produce required planting soil.

Amend topsoil with a mixture of peat moss, topsoil, and sand in a ratio of 1:1:1 by volume. Provide sand that 100% passes a 3/8-inch sieve. Provide peat moss, finely divided or of granular texture with 100 percent passing through a 1/2-inch sieve, a pH of 3.4 to 4.8, and a moisture content not exceeding 60% by weight.

Clean topsoil to be free of the following:
- Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
- Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of 8 percent by dry weight of the imported soil.
- Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 2 inches in any dimension.

Spread unamended soil to total depth as required to achieve finish grades after mixing with amendments and natural settlement. Do not spread if soil or subgrade is frozen or excessively wet.

Lifts: Apply and mix unamended soil and amendments in lifts not exceeding 8 inches in loose depth for material compacted by compaction equipment, and not more than 6 inches in loose depth for material compacted by hand-operated tampers.

Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
- Storage of construction materials, debris, or excavated material.
- Parking vehicles or equipment.
- Vehicle traffic.
- Foot traffic.
- Erection of structures.
- Impoundment of water.
- Excavation or other digging unless otherwise indicated.

Include all work required to furnish, prepare, deliver, and install planting soil to the depths shown in the plans in the price bid for “Planting Soil”.

970-P04  WOOD MULCH. Furnish and install triple shredded hardwood mulch. Install pre-emergent herbicide on exposed soils, per manufacturer’s written instructions prior to placement of mulch. Mulch backfilled surfaces of planting areas and other areas indicated. Apply 4-inch average thickness of mulch over whole surface of planting area, to a height matching adjacent finish grade or 2 inches below planter edges. Do not place mulch within 2 inches of trunks or stems.

Include all work required to deliver and install wood mulch to planting beds as shown in the plans in the price bid for “Wood Mulch”.

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970-P05 LANDSCAPE INTERLOCKING BLOCK. Furnish and install solid interlocking concrete paving units complying with ASTM C 936/C 936M made from normal-weight aggregates over graded aggregate base. Approved manufacturers are as follows:

- County Materials Corporation (Influence™ Pavers)
- Unlock (Promenade™ Plank Paver)
- Or approved equal

Concrete Pavers: Solid paving units complying with ASTM C 1491, made from lightweight concrete.

Style: Plank Paver consisting of 3 or more paver units where depth and height are equal and have varying lengths to create a running bond pattern.

Thickness: 3 1/8-inches

Face Size and Shape: Rectangular with sizes based on manufacturer’s product line.

Color: Match Landscape Architect's sample and blend as basis of design:

- County Materials- Influence Pavers
  - Color: Proprietary Color
  - Face Size and Shape: Rectangular with sizes based on manufacturer
  - Light Grey: Dream
  - Charcoal: Reflection
  - Cream: Vision
  - Color: Black

Compact soil subgrade uniformly. Place aggregate base, compact by tamping with plate vibrator, and screed to depth indicated. Place 4 oz. separation geotextile filter fabric over compacted base course, overlapping ends and edges at least 12 inches. Woven geotextile fabric, manufactured for separation applications; made from polyolefins or polyesters, with elongation less than 50 percent; complying with AASHTO M 288.

Place sand leveling course and screed to a thickness of 1 inch, taking care that moisture content remains constant and density is loose and uniform until pavers are set and compacted. Sand to be Sound, sharp, washed, natural sand or crushed stone complying with gradation requirements in ASTM C 33/C 33M for fine aggregate.

Set pavers with a minimum joint width of 1/16 inch and a maximum of 1/8 inch, being careful not to disturb leveling base. If pavers have spacer bars, place pavers hand tight against spacer bars. Use string lines to keep straight lines. Fill gaps between units that exceed 1/2-inch with pieces cut to fit from full-size unit pavers. Cut unit pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible. Hammer cutting is not acceptable.

Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500- to 5000-lbf compaction force at 80 to 90 Hz. Use vibrator with neoprene mat on face of plate or other means as needed to prevent cracking and chipping of pavers. Perform at least three passes across paving with vibrator.

Spread dry polymeric sand, a mixture of polymer binders and calibrated sand, that meets ASTM C144 for gradation; fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of sand on the surface for joint filling.

Include all work necessary to provide and install trash receptacles in the unit price bid for “Trash Receptacles”.

970-P06 BENCH. Furnish and install bench seating. All benches to be surface mounted to the concrete pavement at the proposed locations per manufacturer’s recommendations and standard details. Use stainless steel hardware for securing and leveling benches. Install benches after landscaping and paving have been completed. Install bench seating level, plumb, true, and securely anchored at locations indicated on Drawings. Approved manufacturers are as follows:

- Victor Stanley, Bench with backrest, 6-foot
  - Model: CBF-12
  - Color: Black
  - Installation: Surface mount

- Sitescapes, Bench with arched backrest, 6-foot
  - Model: CV-1210
  - Color: Onyx
  - Installation: Surface mount

Include all work necessary to provide and install trash receptacles in the unit price bid for “Trash Receptacles”.

970-P07 TRASH RECEPTACLE. Furnish and install trash receptacles. All trash receptacles to be surface mounted to the concrete pavement at the proposed locations per manufacturer’s recommendations and standard details. Use stainless steel hardware for securing and leveling trash receptacles. Unless otherwise indicated, install trash receptacles after landscaping and paving have been completed. Install trash receptacles level, plumb, true, and securely anchored at locations indicated on Drawings. Approved manufacturers are as follows:

- Victor Stanley, Domed trash receptacle
  - Model: A-36
  - Color: Black
  - Installation: Surface mount

- Forms+Surfaces, Domed trash receptacle
  - Model: SLURB-36SO
  - Grillwork Design: Vertical
  - Color: Black
  - Installation: Surface mount

- Sitescapes, Domed trash receptacle
  - Model: CV-2001PF
  - Size: 36 Gallon
  - Lid Option: Dome Top
  - Installation: Surface mount
  - Color: Black Powder Coat

Include all work necessary to provide and install trash receptacles in the unit price bid for “Trash Receptacles”.

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BIKE RACKS. Furnish and install bike racks. All bike racks to be surface mounted to the concrete pavement per manufacturer’s recommendations and standard details. Use stainless steel hardware for securing and leveling bike rack. Install site furnishings after landscaping and paving have been completed. Install site furnishings level, plumb, true, and securely anchored at locations indicated on Drawings. Approved manufacturers are as follows:

- **Dero**, Bike rack
  - Model: Arc Rack
  - Color: Black
  - Installation: Surface mount

- **Forms+Surfaces**
  - Model: SKTWS
  - Color: TBD (Color from standard options)
  - Installation: Surface mount

- **Sitescapes**
  - Model: CR2-02-SM
  - Color: Black
  - Installation: Surface Mount

Include all work necessary to provide and install bike racks in the unit price bid for “Bike Rack”.

CAST IRON TREE GRATES. Furnish and install 48” square cast iron tree grates as shown on plans, per manufacturer’s instructions. Install tree grate frame from same manufacturer as the tree grate. Coordinate with other trades to ensure proper placement and installation of embedded tree grate frames. The following are approved manufacturers:

- **EJ Americas**, Tree grate and frame
  - Model: Sunray (00867103)
  - Tree Opening: 24-inch Dia.
  - Installation: Surface mount
  - Frame: 48954011 or 48954010

Include all work necessary to provide and install bike racks in the unit price bid for “Cast Iron Tree Grate”.

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970-P10  LANDSCAPE PREPARATIONS: Remove & reset landscaping features such as landscape rock, landscape fabric, landscape block, edging, and mulch in areas indicated in Section 40 plan sheets. Locations of landscaping material to be removed & reset include:
  • 601 Sheyenne St
  • Hieb Dentistry

Include all costs for the labor, equipment, and material necessary to remove & reset landscaping in the price bid for “Landscaping Preparations.”

970-P11  REPLANT TREES: Relocate tree at Sta 24+42 45.2’ Lt to Sta 24+20 52.8’ Lt. Include removing and resetting landscape metal edging and landscape rock, installing new 4 oz. non-woven landscape fabric, relocating tree, and restoring site in price bid for “Replant Tree”.

990-P01  GUARD POST-REMOVABLE: Install removable bollard with sleeve insert into concrete as described in Section 20 plan sheets. Install 24” x 24” concrete base with #4 rebar cage reinforcement. Include all labor, materials, and equipment necessary to complete the work in price bid for “Guard Post-Removable.”
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</tbody>
</table>
Material Unit Weights – Proposed
Commercial Grade Hot Mix Asphalt: 2.0 TON/CY
Aggregate Base (Includes 25% Shrinkage Factor): 1.875 TON/CY

Asphalt Pavement
HBP Tack Coat to be placed at 0.05 Gal/SY. One application of tack between each lift. Included with bid item Commercial Grade Hot Mix Asphalt.
PG 58H-28 Asphalt Cement at 6% of Hot Bituminous Pavement. Included with bid item Commercial Grade Hot Mix Asphalt.

Water
Dust Palliative: 25 M Gal/Mile
Aggregate: 20 Gal/Ton
Embankment: 10 Gal/CY
Seeding: 5.6 Gal/SY/Week  *Assume 8 weeks
Subgrade Preparation: 25 M Gal/Mile

Herbicide Weed Control
2 applications over the total area of permanent seeding for weed control as needed.

### 230 0300 SUBGRADE PREPARATION-TYPE A (Federally Eligible)

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<thead>
<tr>
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<th>Quantity</th>
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<td>24.47 Sta</td>
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Total = 30.1 Sta

### 722 0315 MANHOLE CASTING

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<td>Storm Sewer</td>
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Total= 2 EA

### 722 6201 ADJUST MANHOLE SPECIAL

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<tr>
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<td>Sta 13+45</td>
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Total= 1 EA

### 990 0221 GUARD POST-REMOVABLE

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</thead>
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<td>Removable</td>
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<td>1 EA</td>
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<td>&lt;PRSHEYENNE&gt;</td>
<td>Sta 24+76</td>
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Total= 6 EA
1. Bed frame in mortar, install precast two-inch rings, and plaster inside and out with mortar.
2. When installing an existing box out, drill 20" - #5 rebar into existing pavement 6" deep - 15" OC.
3. The length of anchor bolts varies with the number of adjusting rings.
4. Include installation costs at existing locations in the unit price bid for "MANHOLE CASTING."
5. Include installation costs at new manhole locations in the unit price bid for "MANHOLE ______ IN."

A. (3) 6" full thread adjusting bolt and bracket (To be removed after concrete cures.)
B. Provide 3/4" diameter stainless steel bolts, nut assemblies, and "#2 x 4" x 4" plates to extend through the manhole cover, or provide anchor bolts to extend a minimum of 4" into the MH cover. Provide 4 bolts per casting.
C. Provide 3/4" diameter stainless steel bolts with nuts to extend 5" below the adjusting rings. Provide 4 bolts per casting.
D. Wrap and tape 6 mil polyethylene on casting above the rubber gasket and tape to adjusting rings below the gasket.

NOTES:
STORM SEWER PIPE CONNECTION

NO SCALE

PIPE SIZE

27" AND SMALLER

30"-60"

4"

3"

6"

1

BACKFILL IN MAXIMUM OF 6" LIFTS

FINISHED GROUND SLOPE AS PER OSHA SAFETY SPECIFICATIONS

D

2

1

3

B

D + 24"

(OD+B)/8

VARIES

2/3 OD

4" MAX.

4" MAX.

4" MAX.

6" MIN.

6" MIN.

6" MIN.

3' MIN.

MANHOLE HEIGHT OF 3

1

BACKFILL IN 8"

LOOSE LIFTS

IF TYPE II ROCK BEDDING

4" MAX.

4" MAX.

4" MAX.

6" MIN.

6" MIN.

6" MIN.

3' MIN.

MANHOLE INSTALLATION.

BEDDING AND COMPACTED GRANULAR MATERIAL ARE INCIDENTAL TO ROCK BED MATERIAL SHALL BE 1-1/4" CRUSHED ROCK. ROCK FOR EXCAVATED MATERIAL.

COMPACT TO 95% MINIMUM ND T99 DENSITY. BACKFILL WITH EXISTING EXCAVATED MATERIAL.

4" MAX.

4" MAX.

4" MAX.

6" MIN.

6" MIN.

6" MIN.

3' MIN.

MANHOLE/CATCH BASIN TRENCH

NO SCALE

BACKFILL IN MAXIMUM OF 12" LIFTS

ROCK BED MATERIAL SLOPE AS PER OSHA SAFETY SPECIFICATIONS

RCP STORM SEWER TRENCH

NO SCALE

BACKFILL IN MAXIMUM OF 6" LIFTS

FINISHED GROUND SLOPE AS PER OSHA SAFETY SPECIFICATIONS

RCP STORM SEWER TRENCH

MANLINE - SHEYENNE ST

ST-1 to ST-17

MANHOLE/CATCH BASIN TRENCH

MANLINE - SHEYENNE ST

ST-1 to ST-17

FLAP GATE 18IN

NO SCALE

MANHOLE/CATCH BASIN TRENCH

NO SCALE

BACKFILL IN MAXIMUM OF 12" LIFTS

ROCK BED MATERIAL SLOPE AS PER OSHA SAFETY SPECIFICATIONS

RCP STORM SEWER TRENCH

NO SCALE

BACKFILL IN MAXIMUM OF 6" LIFTS

FINISHED GROUND SLOPE AS PER OSHA SAFETY SPECIFICATIONS

RCP STORM SEWER TRENCH

MANLINE - SHEYENNE ST

ST-1 to ST-17

MANHOLE/CATCH BASIN TRENCH

MANLINE - SHEYENNE ST

ST-1 to ST-17

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Sheyenne Street

Storm Details
EDGEDRAIN DETAIL

NOTES:

1. USE POLYVINYL CHLORIDE SEWER PIPE WITH SOLVENT CEMENTED JOINTS AS SPECIFIED IN ASTM SPEC. NO. 3034.
2. DO NOT USE BENDS OR FITTINGS UNLESS APPROVED BY THE ENGINEER. IF USED, USE PERFORATED PVC PIPE.
3. USE SOLVENT WELD FITTINGS.
4. USE POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.
5. PROVIDE KNOCKOUTS IN INLETS TO ACCOMMODATE 4" PVC PERFORATED PIPE. INCLUDE COST OF KNOCKOUTS AND RUBBER BOOT CONNECTION IN THE PRICE BID FOR "EDGEDRAIN NON PERMEABLE BASE".
6. PERFORATIONS TO BE CIRCULAR AND 1/4" ± 1/16" IN DIAMETER. ARRANGE IN ROWS PARALLEL TO THE AXIS OF THE PIPE AND SPACED APPROXIMATELY 3" CENTER TO CENTER ALONG THE ROWS. THE PLACEMENT AND TOTAL NUMBERS OF THE ROWS TO BE AS SHOWN BELOW. THE PIPE AND ROCK TO BE BETWEEN 3/8" AND 3/4" ROCK COURSE AGGREGATE.
7. PERFORATIONS TO BE UNPERFORATED FOR A LENGTH EQUAL TO THE DEPTH OF THE JOINT TO BE UNPERFORATED FOR A LENGTH EQUAL TO THE DEPTH OF THE JOINT.
8. PIPE SIZE: 4"
9. ROWS OF PERFORATIONS: 4
10. PERFORATIONS PER ROW: 48 (FOR 12.5' PIPE LAYING LENGTHS)

PERFORATED PVC PIPE DETAIL

MANHOLE/INLET CONNECTION

NOTICE:

1. USE KNOCKOUTS IN INLETS CONNECTED WITH POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.
2. USE KNOCKOUTS IN INLETS CONNECTED WITH POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.
3. USE KNOCKOUTS IN INLETS CONNECTED WITH POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.
4. USE KNOCKOUTS IN INLETS CONNECTED WITH POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.
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8. USE KNOCKOUTS IN INLETS CONNECTED WITH POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.
9. USE KNOCKOUTS IN INLETS CONNECTED WITH POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.
10. USE KNOCKOUTS IN INLETS CONNECTED WITH POLYETHYLENE CORR PERF 4IN DRAIN BOOT CONNECTION.

Sheyenne Street
Edgedrain & Underdrain Details

8/15/2020 4:32:22 PM  djk@citywestfargo.com U:\PROJECTS\19924\08992.041\Design\Plan\020GD_004_Edgedrain.dgn

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**WATER PIPE BELOW CROSSING**

**WATER PIPE ABOVE CROSSING**

**PLAN VIEW**

**WF-331113-4 02.18.15**

**FINISHED GROUND**

**WATER MAIN OR SERVICE TRENCH**

**HYDRANT**

**WATER INSULATION FOR STORM CROSSING**

**VALVE AND BOX**

**WATER MAIN RELOCATE**

**NOTES:**

1. **NOTES:**
   - WATER INSULATION FOR STORM CROSSING
   - BOARD INSTALLED ON PIPE BEDDING
   - PIPE BEDDING

2. **NOTES:**
   - 4" INSULATION BOARD INSTALLED ON PIPE BEDDING
   - PIPE BEDDING

3. **NOTES:**
   - 4" INSULATION BOARD INSTALLED ON PIPE BEDDING
   - PIPE BEDDING

4. **NOTES:**
   - 4" INSULATION BOARD INSTALLED ON PIPE BEDDING
   - PIPE BEDDING

5. **NOTES:**
   - 4" INSULATION BOARD INSTALLED ON PIPE BEDDING
   - PIPE BEDDING
SANITARY INSULATION FOR STORM CROSSING

NOTES:

1. THE DETAIL APPLIES TO BOTH MAINS & SERVICES WHERE CROSSING IS WITHIN 24".
2. SERVICES MAY BE INSULATED WITH AN APPROVED ENDOCASEMENT INSTALLATION IN LENT OF DETAIL.

SANITARY SEWER TRACER WIRE

NOTES:

1. TRACER WIRE SHALL BE INSTALLED AT SOUTH AND EAST SIDE OF MANHOLE.
2. TRACER WIRE SHALL BE INSTALLED IN VARIOUS POINTS OF TERMINATION WHERE NO ACCESSIBILITY WITHIN MANHOLE.

CARRIER PIPE - CASING PIPE INSTALLATION

NOTES:

1. CARRIER PIPE TO BE INSTALLED WITH PULL-ON END SEAL.
2. CASING PIPE TO BE INSTALLED WITH LINK END SEAL.
3. PROVIDE CASING SPACERS.
4. CASING PIPE - CARRIER PIPE INSTALLATION WITH STAINLESS STEEL CLAMPS.

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NOTES:
1. ALL JOINTS TO BE SPACED AT 4' FOR SIDEWALK CONCRETE. JOINT PATTERN INDICATED IN SECTION 85.
2. EXPANSION JOINTS TO BE SPACED AT 4' FOR SIDEWALK CONCRETE. JOINT PATTERN INDICATED IN SECTION 85.
3. SAW ALL JOINTS ON 6' PATH AND WIDER. LESS THAN 6' MAY BE TOOLED OR SAWED.
4. PLACE EXPANSION JOINTS AT PROPERTY LINES WHERE POSSIBLE.
5. JOINTS TO BE SPACED AS INDICATED IN SECTION 85.
6. USE CHAIRS OR APPROVED SUPPORT DEVICES TO SUPPORT REINFORCEMENT BARS AT JOINTS.
7. PLACE EXPANSION JOINTS AT PROPERTY LINES WHERE POSSIBLE.
8. USE CHAIRS OR APPROVED SUPPORT DEVICES TO SUPPORT REINFORCEMENT BARS AT JOINTS.
9. CURE WITHIN 24 HOURS. SEAL AFTER 14 DAYS WITH A MAXIMUM OF 30 DAYS.
10. PLACE EXPANSION JOINTS AT PROPERTY LINES WHERE POSSIBLE.

SIDEWALK CONCRETE:

NOTE:
1. JOINTS TO BE SPACED AT 4' FOR SIDEWALK CONCRETE. JOINT PATTERN INDICATED IN SECTION 85.
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10. PLACE EXPANSION JOINTS AT PROPERTY LINES WHERE POSSIBLE.

PIGMENTED IMPRINTED CONCRETE:

NOTE:
1. JOINTS TO BE SPACED AT 4' FOR SIDEWALK CONCRETE. JOINT PATTERN INDICATED IN SECTION 85.
2. EXPANSION JOINTS TO BE SPACED AT 4' FOR SIDEWALK CONCRETE. JOINT PATTERN INDICATED IN SECTION 85.
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8. USE CHAIRS OR APPROVED SUPPORT DEVICES TO SUPPORT REINFORCEMENT BARS AT JOINTS.
9. CURE WITHIN 24 HOURS. SEAL AFTER 14 DAYS WITH A MAXIMUM OF 30 DAYS.
10. PLACE EXPANSION JOINTS AT PROPERTY LINES WHERE POSSIBLE.

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Transverse Joint Dowel Bars

Grade 60 Longitudinal Joint Tie Bars

<table>
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<tr>
<th>Bar Size x Length</th>
<th>Dia x Length</th>
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Grade 40 Longitudinal Joint Tie Bars

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<tr>
<th>Bar Size x Length</th>
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<td>6 x 30&quot;</td>
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</tr>
<tr>
<td>5 x 45&quot;</td>
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</tbody>
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Mainline Centerline

PCC Depth 9"

Joint Location Dia x Length
ML d1 1/2" x 18"

Sawed longitudinal joint

Transverse joint spacing 15"

Deformed joint bars

Dowel bar support

Transverse Joint Dowel Bars

Sheyenne Street

PCC Pavement Joint Details
Ada Ramp & Sidewalk Reinforcing Detail

No Scale

Sheyenne Street
Roadway Details
Notes:
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.
LEGEND

- 12:1 Maximum Longitudinal Slope
- 5:1 Maximum Cross Slope
- 20:1 Maximum Longitudinal Slope
- 50:1 Maximum Cross Slope
- 3:1 Maximum flare Slope
- 4:1 Maximum flare Slope

Notes:
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.

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Sheyenne Street
ADA & Street Grading
5th Ave W
Notes:
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field-fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type 1 details.

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Sheyenne Street
ADA & Street Grading
5th Ave E
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.

Notes:
- 12:1 Maximum Longitudinal Slope
- 50:1 Maximum Cross Slope
- 10:1 Maximum Flare Slope
- 30:1 Maximum Longitudinal Slope
- 50:1 Maximum Cross Slope
- 50:1 Maximum Landing Slope (All Dir. (Landing))
- 4:1 Maximum Flare Slope

LEGEND

- ME Match Existing
- Grade Break
- Street Crown Line
- Proposed Intal.

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LEGEND

- 4:1 Maximum Flare Slope
- Match Existing Curb Height
- 10:1 Maximum Flare Slope
- 20:1 Maximum Cross Slope
- 50:1 Maximum Longitudinal Slope
- 50:1 Maximum Landing Slope (All Drw Lighting)
- 4:1 Maximum Flare Slope

Notes:
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.

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Sheyenne Street
ADA & Street Grading
3rd Ave
Notes:
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.
LEGEND

- 12:1 Maximum Longitudinal Slope
- 5:1 Maximum Cross Slope
- 4:1 Maximum Flare Slope
- ME Match Existing
- 10:1 Maximum Flare Slope
- 20:1 Maximum Longitudinal Slope
- 50:1 Maximum Cross Slope
- 50:1 Maximum Cross Slope
- 12:1 Maximum Longitudinal Slope
- Street Crown Line
- Proposed Slop
- Cut Height
- Landig Slope (All Dir.) (Landing)
- Grade Break
- 3"
- 0"
- 6"
- All curb ramp flares are graded unless otherwise noted.

Notes:
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.
LEGEND

- 12:1 Maximum Longitudinal Slope
- 10:1 Maximum Flare Slope
- 20:1 Maximum Longitudinal Slope
- 50:1 Maximum Cross Slope
- 20:1 Maximum Cross Slope
- 50:1 Maximum Landing

Notes:
1. Any ramp found to be in noncompliance will be removed and replaced by the contractor at their own expense.
2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.

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Notes:
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2. Dimensions shown may vary from actual. Contractor will field fit and adjust if maximum slopes cannot be met with dimensions shown.
3. All curb ramp flares are graded unless otherwise noted.
5. See Curb-Type I detail.

4:1 Maximum Flare Slope
10:1 Maximum Flare Slope
50:1 Maximum Cross Slope
20:1 Maximum Longitudinal Slope
ME Match Existing
Grade Break
Street Crown Line

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Sheyenne Street
ADA & Street Grading Points
### Sheyenne Street

**ADA & Street Grading Points**

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Sheyenne Street
General Details
Temporary Water Layout

Note:
Sheyenne street watermain separation from existing ACP watermain to new watermain is minimal and could be less than 4'.
Removing concrete pavement from Sta. 8+00 to 9+00.

- Sidewalks: 19 SY
- Driveways: 17 SY

Removing curb & gutter from Sta. 8+00 to 9+00.

- Lt (left) side: 100 LF
- Rt (right) side: 100 LF

Additional notes:
- Contractor to avoid disturbance to Lots 1-2, 13-14.
- Temporary easement for Lots 15-18 not granted.

Legend:
- [Symbol] Removal of bituminous surfacing
- [Symbol] Removal of concrete roadway
- [Symbol] Removal of concrete sidewalk
- [Symbol] Removal of concrete driveway
- [Symbol] Removal of landscaping material
- [Symbol] Limits of pavement removal

City of West Fargo
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202
0114  REMOVAL OF CONCRETE PAVEMENT

Sta 9+00 to 15+00
3259 SY

Sidewalks Sta 9+00 to 15+00
711 SY

Driveways Sta 9+00 to 15+00
48 SY

Driveways-6th Ave W Side (City Funded)
23 SY

Sidewalks-6th Ave E Side (City Funded)
16 SY

Driveways-6th Ave E Side (City Funded)
19 SY

Sidewalks-6th Ave W Side (City Funded)
3 SY

Driveways-6th Ave W Side (City Funded)
33 SY

Sidewalks-6th Ave W Side (City Funded)
102 SY

Driveways-6th Ave E Side (City Funded)
133 SY

Sidewalks-6th Ave E Side (City Funded)
77 SY

202
0130  REMOVAL OF CURB & GUTTER

Sta 9+00 to 15+00 Lt
480 LF

Sta 9+00 to 15+00 Rt
581 LF

6th Ave W Side (City Funded)
37 LF

6th Ave E Side (City Funded)
70 LF

5th Ave W Side (City Funded)
74 LF

5th Ave E Side (City Funded)
282 LF

202
0132  REMOVAL OF BITUMINOUS SURFACING

6th Ave W Side (City Funded)
62 SY

6th Ave E Side (City Funded)
106 SY

5th Ave W Side (City Funded)
72 SY

5th Ave E Side (City Funded)
447 SY

Legend

- REMOVAL OF CONCRETE SIDEWALK
- REMOVAL OF CONCRETE DRIVEWAY
- REMOVAL OF CURB & GUTTER
- REMOVAL OF BITUMINOUS ROADWAY
- REMOVE & RELOCATE MATERIAL
- REMOVE & RELOCATE CONCRETE
- REMOVE & RELOCATE COMMON MATERIAL
- REMOVE & RELOCATE PAVEMENT
- REMOVE & RELOCATE LIMITS
- REMOVE & RELOCATE PAVEMENT LIMITS

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REMOVAL OF INLETS

REMOVAL OF SEWER PIPE

REMOVAL OF MANHOLES

REMOVE GATE VALVE & BOX

ABANDON VALVE BOX

ABANDON PIPE

REMOVAL OF PIPE

LEGEND

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Sheyenne Street
Removals - Underground
Sta 15+00 to Sta 21+00 (PRESHEYENNE)
**Manhole No.** ST- 1  891.31  ST- 2  892.09  ST- 3  891.82  ST- 4  892.54

**Inlet No.** 7A  897.30  7A  897.30  7A  897.30  7A  897.30

**Grate Style** (A)  891.31  (A)  891.31  (A)  891.31  (A)  891.31

**Base Elev.** 891.31  891.31  891.31  891.31

**Invert Elev.** 892.4  892.4  892.4  892.4

**Rim Elev.** 897.30  897.30  897.30  897.30

**Casting Style** (A)  891.31  (A)  891.31  (A)  891.31  (A)  891.31

**Code** Neenah R-1955-1  11.5  11.5

**Inlet and Manhole Summary**

**City of West Fargo**

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**Inlet and Manhole Summary**

- **Sheyenne Street**
- Inlet and Manhole Summary
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</table>

**Note:** The information provided is a summary of the inlets and manholes listed. Each inlet and manhole has specific details such as elevation, invert elevation, and type of installation. This information is crucial for understanding the layout and construction of the drainage system in the area.
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Sheyenne Street
Drainage Layout
Sla 9+00 to Sta 15+00 (PRSHEYENNE)
<table>
<thead>
<tr>
<th>SHEET No.</th>
<th>ND</th>
<th>PROJECT No.</th>
<th>STATE</th>
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<td>5</td>
<td>55</td>
<td>UGP-4-952(041)</td>
<td>ND</td>
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**EQUIPMENT SPECIFICATION**

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<th>UNIT</th>
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<tbody>
<tr>
<td>714 01</td>
<td>FRANCIS FIRST SUBDIVISION</td>
<td>31+00</td>
<td>INLET-TYPE 2 DOUBLE</td>
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<tr>
<td>714 02</td>
<td>FRANCIS FIRST SUBDIVISION</td>
<td>3510</td>
<td>PIPE CONC REINF 33IN CL III-STORM DRAIN</td>
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<tr>
<td>722 01</td>
<td>MAIN AVENUE</td>
<td>ST22, ST24, ST26, ST26-1</td>
<td>MANHOLE GEN</td>
</tr>
<tr>
<td>722 11</td>
<td>MAIN AVENUE</td>
<td>ST22, ST24, ST26, ST26-1</td>
<td>MANHOLE BASE 300MM</td>
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<tr>
<td>722 35</td>
<td>INLET TYPE 2</td>
<td>ST24A, ST26A, ST26B, ST26-1A, ST26-1</td>
<td>DOUBLE</td>
</tr>
<tr>
<td>722 39</td>
<td>INLET BLOTTED DRAIN 12IN</td>
<td>28IN</td>
<td>DOUBLE</td>
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<tr>
<td>722 61</td>
<td>ADJUST INLET</td>
<td>28IN</td>
<td>YES</td>
</tr>
</tbody>
</table>

**NOTES:**
- Keep manhole castings for CF wheel paths.
- Sta 27-00 to Sta 33+00 (PR/SHeyerene)

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City of West Fargo

6th Avenue W
Drainage Layout
Sta 60+00 to Sta 62+00 (PR6TH_W)
<table>
<thead>
<tr>
<th>SPEC CODE</th>
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<tbody>
<tr>
<td>714 0210</td>
<td>PIPE CONC REINF 15IN CL III-STORM DRAIN</td>
<td>39</td>
<td>LF</td>
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<td>30</td>
<td>LF</td>
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<td>714 0315</td>
<td>PIPE CONC REINF 18IN CL III-STORM DRAIN</td>
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<tr>
<td>722 3701</td>
<td>INLET SPECIAL-TYPE 2 48IN</td>
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**NOTE:**
- Keep manhole castings out of wheel path.
- No disturbance to these Lots.

**Temperatures for Lots 15-20 have not been granted.**

Exst Cl Profile:
- 36'-15" RCP @ 0.69%
- Ppsd 54" RCP
- Ppsd 8" San

Exst Wastewater:
- 36'-15" RCP @ 2.43%

Finished Profile:
- 36'-15" RCP @ 1.00%

6th Avenue E

Drainage Layout

Sta 70+00 to Sta 72+00 (PR6TH_E)
**NOTE:**

- Keep manhole castings out of wheel path.
- Drainage Layout

**Exst Cl Profile**
5th Ave

**Finished Profile**

**ST4A** to **ST4C**
15IN CL III-STORM DRAIN
26 LF

**ST4** to **ST4B**
7 LF

**ST4A, ST4C**
INLET-TYPE 2
2 EA

**ST4B**
INLET-TYPE 2 DOUBLE
1 EA

Tem Esm for Lots 15-20 Has Not Been Granted.

24" RCP
12" RCP
18" RCP

15" RCP
12" P VC
24" RCP

**ST5A**

City of West Fargo

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4th Avenue E
Drainage Layout
Sta 100+00 to Sta 103+00 (PR4TH)
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document is stored at the
City of West Fargo

1st Avenue E

Drainage Layout
Sta 140+00 to Sta 142+00 (PR1ST)
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<tbody>
<tr>
<td>724 0210</td>
<td>FITTINGS-DUCTILE IRON</td>
<td>36</td>
<td>LBS</td>
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<td>724 0300</td>
<td>GATE VALVE &amp; BOX 6IN</td>
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<td>724 0810</td>
<td>WATERMAIN 6IN PVC</td>
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<td>724 0830</td>
<td>WATERMAIN 8IN PVC</td>
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Connect to Existing Watermain

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Registration Number 08/15/20

City of West Fargo
Connect to Existing Watermain
Exst Sanitary
Exst Cl Profile

Top 889.6
8" 45° Bend
Top 884.4
8" 45° Bend

Finished Profile

Exst R/W Exst R/W Exst R/W

6th Avenue E
Water Layout
Sia 70+00 to Sia 72+00 (PR6TH_E)
5th Avenue W

Water Layout

Sia 80+00 to Sia 82+03 (PR5TH_W)
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<table>
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<tr>
<td>709</td>
<td>0751</td>
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<td>714</td>
<td>9996</td>
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**Spec Code Details**
- **0751**: GEOSYNTHETIC MATERIAL TYPE R1
  - Sta 8+00 to Sta 9+00
- **9996**: EDGEDRAIN NON-PERMEABLE BASE
  - Sta 7+99 23.0' Lt to 9+00 15.6' Lt
  - Sta 7+99 23.0' Rt to 9+00 15.6' Rt

**Additional Notes**
- Connect to existing edge drain
- Contractor to avoid disturbance to these lots.
- Temp est for Lots 1-2, 13-14 has not been granted.
- Connect to existing edge drain.

**Plan and Profile**
- Sta 3+00 to Sta 9+00 (PRSBHEYENNE)

**Legend**
- Imprinted Concrete
- Reinforced Concrete 4in
- Reinforced Concrete 5in
- Reinforced Concrete 7in
- Reinforced Concrete 7in
- Reinforced Concrete 10in
- Reinforced Concrete 12in
- Reinforced Concrete 15in
- Reinforced Concrete 18in
- Reinforced Concrete 21in
- Reinforced Concrete 24in
- Reinforced Concrete 27in
- Reinforced Concrete 30in
- Reinforced Concrete 33in
- Reinforced Concrete 36in
- Reinforced Concrete 39in
- Reinforced Concrete 42in
- Reinforced Concrete 45in
- Reinforced Concrete 48in
- Reinforced Concrete 51in
- Reinforced Concrete 54in
- Reinforced Concrete 57in
- Reinforced Concrete 60in
- Reinforced Concrete 63in
- Reinforced Concrete 66in
- Reinforced Concrete 69in
- Reinforced Concrete 72in
- Reinforced Concrete 75in
- Reinforced Concrete 78in
- Reinforced Concrete 81in
- Reinforced Concrete 84in
- Reinforced Concrete 87in
- Reinforced Concrete 90in
- Reinforced Concrete 93in
- Reinforced Concrete 96in
- Reinforced Concrete 99in

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LEGEND

- 7in reinforced concrete
- 9in non reinfor.
- 7in non reinforced concrete
- 5.5in hbp
- 9in reinforced.
- 9in pigmented concrete
- 9in non reinforced.
- 9in reinf. concrete
- Pervious concrete
- Edgedrain (see section 29 for details)
- Edgedrain

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Sheyenne Street
Plan and Profile
Sla 9+00 to Sla 15+00 (PR SHEYENNE)
**SPEC CODE**

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<td>Sta 90+41 to 91+95 (City Funded)</td>
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<td>714</td>
<td>9696</td>
<td>EDGEDRAIN NON PERMEABLE BASE</td>
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<tr>
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<td>Sta 90+41 12.0' Rt to 91+75 9.1' Rt</td>
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<td>Sta 90+41 12.0' Lt to 91+89 18.9' Lt</td>
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<td>Sta 90+00 to Sta 92+00 (PR5TH_E)</td>
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**PROFILE**

- **VPI 90+40.96**
  - EL 897.44
  - -0.5180%
- **VPI 90+55.79**
  - EL 897.47
  - 0.2023%
- **VPI 91+34.66**
  - EL 897.88
  - 0.5198%
- **VPI 91+64.67**
  - 2.85'LT

**LEGEND**

- **IMPRINTED CONCRETE**
- **PIGMENTED**
- **6IN REINFORCED DRIVEWAY CONCRETE**
- **7IN REINFORCED DRIVEWAY CONCRETE**
- **SECTION 20 FOR DETAILS)**

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3rd Avenue E
Plan and Profile
Sta 110+00 to Sta 113+00 (PR3RD)

LEGEND

- CONCRETE 4IN REINF SIDEWALK CONCRETE 4IN
- CONCRETE 5IN REINF SIDEWALK CONCRETE 4IN
- 6IN REINFORCED DRIVEWAY CONCRETE
- 7IN REINFORCED DRIVEWAY CONCRETE
- IMPRINTED CONCRETE (SECTION 29 FOR DETAILS)
- PILOTI CONCRETE 3IN REINF
- PILOTI CONCRETE 4IN REINF
- PILOTI CONCRETE 5IN REINF

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8/15/2020 4:32:55 PM
LEGEND

- SKIN NON-REINFORCED CONCRETE PAVEMENT CLASS AS
- REINFORCED CONCRETE PAVEMENT CLASS AE
- C.R. base - 2"
- DRAINAGE CURB
- CURB AND GUTTER
- SIDEWALK CONCRETE 4"
- REINF SIDEWALK CONCRETE 5"
- 7IN REINFORCED CONCRETE 7" PVC CURB AND GUTTER
- 9IN NON REINF CONCRETE 9"
- BOND BEAM 6"
- PIGMENTED REINF SIDEWALK CONCRETE 4"
- SECTION 20 FOR DETAILS

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2nd Avenue W
Plan and Profile
Sta 120+00 to Sta 123+00 (PR2ND_W)
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<tr>
<td>709</td>
<td>INLET PROTECTION - SPECIAL</td>
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**Sheyenne Plaza First Addition**

**Francis Second Subdivision**

**Pioneer Place First Addition**

---

**Legend**

- **Hydraulic Mulch**
- **Flow Direction**
- **Inlet Protection - Special**
- **Grading Tie Line**

---

**Temporary Erosion Control**

Kevin J. Knott, PE, 5679

Issued and sealed by

City of West Fargo

8/15/2020
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**Sta 27+00 to 33+00 Rt (City Funded)**
- Sta 27+00 to 33+00 Lt (City Funded)
- Sta 27+00 to 33+00 Rt (City Funded)
- Sta 27+00 to 33+00 Lt (City Funded)

**Sta 27+28 25.2' Lt**
- 1EA

**Sta 27+28 23.0' Rt**
- 1EA

**Sta 28+84 288.9' Rt**
- 1EA

**Sta 29+12 287.1' Rt**
- 1EA

**Sta 29+35 23.7' Lt**
- 1EA

**Sta 29+40 23.9' Rt**
- 1EA

**Sta 32+08 24.9' Lt**
- 1EA

**Sta 32+08 22.8' Rt**
- 1EA

**Sta 32+56 38.8' Lt**
- 1EA

**Sta 32+56 38.5' Rt**
- 1EA

**LEGEND**
- HYDRAULIC MULCH
- FLOW DIRECTION
- GRADING TIE LINE

This document was originally issued and sealed by
Kevin J. Knott,
Registration Number
PE-8579,
on 08/15/20 and the original document is stored at the
City of West Fargo.

Sheyenne Street
Temporary Erosion Control
Sta 27+00 to Sta 33+00 (PR SHEYENNE)
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LEGEND

- 6" TOPSOIL, SEEDING, SECT 76
- INLET PROTECTION - SPECIAL INSTALLED IN
- FLOW DIRECTION
- GRADING TIE LINE
- CHURCH COMMUNITY PRESBYTERIAN
- SOOPER STOP (VACANT)
- HOUSING AUTHORITY OF CASS COUNTY

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SPEC CODE  BID ITEM  QTY  UNIT
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Sta 9+00 to Sta 15+00 Lt (City Funded)  0.01  ACRE
Sta 9+00 to Sta 15+00 Rt (City Funded)  0.02  ACRE
Sta 9+00 to Sta 15+00 Lt  0.01  ACRE
Sta 9+00 to Sta 15+00 Rt  0.04  ACRE
253  0201  HYDRAULIC MULCH
Sta 9+00 to Sta 15+00 Lt (City Funded)  0.01  ACRE
Sta 9+00 to Sta 15+00 Rt (City Funded)  0.02  ACRE
Sta 9+00 to Sta 15+00 Lt  0.01  ACRE
Sta 9+00 to Sta 15+00 Rt  0.04  ACRE
708  1540  INLET PROTECTION - SPECIAL
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ST4A, ST4B, ST4C  4  EA
ST5A  1  EA
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ST29A  1  EA
ST30A  1  EA
Sta 14+39 19.0' Lt  1  EA

LEGEND
6" TOPSOIL, SEEDING, SECT 76 SPECIAL INSTALLED IN
INLET PROTECTION - SPECIAL
EXCEPT WHERE SPECIFIED IN
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INLET PROTECTION - SPECIAL
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**Legend**

- Grading Tie Line
- Flow Direction
- Inlet Protection - Special
- Hydraulic Mulch

**City of West Fargo**

Sheyenne Street

Permanent Erosion Control

Sta 21+00 to Sta 27+00 (PRSHENENNE)
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**Legend**

- **Flow Direction**
- **Grading Tie Line**
- **Inlet Protection - Special**

**Project Details**

- **Sheyenne Street**
- **Sta 27+00 to Sta 33+00 (PRSHEYENNE)**
- **Permanent Erosion Control**

**City of West Fargo**

This document was originally issued and sealed by Kevin J. Knott, Registration Number PE-5879, on 08/15/20 and the original document is stored at the City of West Fargo.
## Preliminary Survey Coordinate and Curve Data -

### Horizontal Alignment

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## Notes:

- Date Survey Completed: 8/15/2020

All coordinates on this sheet are Cass County ground coordinates. They are derived from the NAD83(2011) reference frame; North Dakota South Zone.

Assumed Coordinates: All coordinates on this document derived from the International Foot definition.

**INITIALIZING BENCH MARK**

- NAVD88: 0.000
- NGVD29: 0.000
- NGVD02: 0.000
- NAVD09: 0.000
- NAVD10A: 0.000

This document was originally issued and sealed by Shawn M. Thomasson, Registration Number LS-5909, on 08/15/20 and the original document is stored at the City of West Fargo.
Sheyenne Street
Survey Coordinate and Curve Data
Alignment Overview
Survey Coordinate and Curve Data
PR1ST, PR2ND_W & PR2ND_E

Sheyenne Street

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Registration Number PE- 5679 ,
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City of West Fargo

8/15/2020 4:33:34 PM  dylan.dunn  U:\PROJECTS\19924\08992.041\Design\Plan\081CD_004_1st_2nd.dgn
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Feature: Alignment 2.5
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Ending chain PR3RD description

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Beginning chain PR4TH description
Feature: Alignment 2.5
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Point 54  N  4600513.5057  E  2848.2731599  Sta  104=00.00
Ending chain PR4TH description

Sheyenne Street
Survey Coordinate and Curve Data
PR3RD & PR4TH
Contractor to Avoid Disturbance to These Lots.

Temp Esmt for Lots 1-2, 13-14 Has Not Been Granted.

Sta 7+00 to Sta 9+00 (PRSHHEYENNE)
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Sheyenne Street
Survey Data Layouts
Sta 13+00 to Sta 15+00 (PRSHEYENNE)
Sheyenne Street

Survey Data Layouts
Sta 17+00 to Sta 19+00 (PRSHEYENNE)
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Survey Data Layouts
Sta 23+00 to Sta 25+30 (PRESHEYENNE)
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Registration Number
PE- 5679,
on 08/15/20 and the original document is stored at the
City of West Fargo.

Sheyenne Street
Survey Data Layouts
Sta 31+00 to Sta 33+00 (PRSHYEENNE)
SAWCUT CONTRACTION JOINTS TO BE
EQUALY SPACED BETWEEN
CONSTRUCTION AND EXPANSION JOINTS
(MIN. 3-6" MAX 4'-6") E.W.

NOTE:
NO TEMPORARY CONSTRUCTION EASEMENT ON EAST SIDE OF
SHEYENNE ST. FROM 6TH AVE. S. TO 5TH AVE. S.
CONTRACTION JOINTS ARE ILLUSTRATIVE. CONTRACTOR TO FIELD
VERIFY CONSTRUCTION AND EXPANSION JOINTS AND PLACE
CONTRACTION JOINTS AS SHOWN ON PLAN. CONTRACTOR TO
NOTIFY LANDSCAPE ARCHITECT IF THERE ARE DEVIATIONS FROM
THIS PLAN

PRIVATE RESIDENCE

SAWCUT CONTRACTION JOINTS TO BE
EQUALY SPACED BETWEEN
CONSTRUCTION AND EXPANSION JOINTS
(MIN. 3-6" MAX 4'-6") E.W.

KEYNOTES
1. RAISED PLANTER, SEE S.D. 1/13
2. PAVER INLAY, SEE S.D. 4/14
3. PLANTER WALL, SEE S.D. 2/13
4. BIKE RACK, SEE S.D. 3/16
5. TRASH RECEPTACLE, SEE S.D. 2/16

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PLA-144
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CITY OF WEST FARGO, NORTH DAKOTA
SHEYENNE STREET
UGP-8-992 (041)
HARDSCAPE PLAN
STA 10+00 TO STA 12+00
SHEYENNE STREET
EXISTING R/W
SAWCUT CONTRACTION JOINTS TO BE EQUALLY SPACED BETWEEN CONSTRUCTION AND EXPANSION JOINTS (MIN. 3'-6" MAX 4'-6") E.W.

BERG AUTO SUPPLY PARKING LOT

SAWCUT CONTRACTION JOINTS TO BE EQUALLY SPACED BETWEEN CONSTRUCTION AND EXPANSION JOINTS (MIN. 3'-6" MAX 4'-6") E.W.

SHEYENNE PLAZA PARKING LOT
(CITY OF WEST FARGO)

PRIVATE RESIDENCE

NOTE:
NO TEMPORARY CONSTRUCTION EASEMENT ON EAST SIDE OF SHEYENNE ST. FROM 6TH AVE. S. TO 5TH AVE. S.

CONTRACTION JOINTS ARE ILLUSTRATIVE. CONTRACTOR TO FIELD VERIFY CONSTRUCTION AND EXPANSION JOINTS AND PLACE CONTRACTION JOINTS AS SHOWN ON PLAN. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT IF THERE ARE DEVIATIONS FROM THIS PLAN

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KEYNOTES

1. RAISED PLANTER, SEE S.D. 1/13
2. PAVING INLAY, SEE S.D. 4/14
3. PLANTER WALL, SEE S.D. 2/13
4. BIKE RACK, SEE S.D. 3/16
5. TRASH RECEPTACLE SEE S.D. 2/16
6. BENCH, SEE S.D. 1/16
7. TREE GRATE SEE S.D. 3/15
8. PLANTER DRAIN TILE SEE S.D. 4/16
9. CURB PLANTER SEE S.D. 3/14

GROUND COVER LEGEND

- PLANTING SOIL
- STRUCTURAL SOIL
- SITE FEATURE

LEGEND

- DRAIN INLET
- LIGHT FIXTURE
- MANHOLE
- FIRE HYDRANT
SAWCUT CONTRACTION JOINTS TO BE EQUALLY SPACED BETWEEN CONSTRUCTION AND EXPANSION JOINTS (MIN. 3'-6" MAX 4'-6") E.W.

NOTE:
CONTRACTION JOINTS ARE ILLUSTRATIVE. CONTRACTOR TO FIELD VERIFY CONSTRUCTION AND EXPANSION JOINTS AND PLACE CONTRACTION JOINTS AS SHOWN ON PLAN. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT IF THERE ARE DEVIATIONS FROM THIS PLAN.
SAW CUT CONTRACTION JOINTS TO BE EQUALLY SPACED BETWEEN CONSTRUCTION AND EXPANSION JOINTS (MIN. 3'-6" MAX 4'-6") E.W.

TEMPORARY EASEMENT EXISTING R/W
SAWCUT CONTRACTION JOINTS TO BE SPACED EQUALLY BETWEEN CONSTRUCTION AND EXPANSION JOINTS (MIN. 3'-6" MAX 4'-6")

STATE PROJECT NO. SECTION NO. SHEET NO.
ND UGP-8-992 (041) 85 6

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KEYNOTES

1. RAISED PLANTER, SEE S.D. 1/13
2. PAVER INLAY, SEE S.D. 4/14
3. PLANTER WALL, SEE S.D. 2/13
4. BIKE RACK, SEE S.D. 3/16
5. TRASH RECEPTACLE, SEE S.D. 2/16

NOTE:
CONTRACTION JOINTS ARE ILLUSTRATIVE. CONTRACTOR TO FIELD VERIFY CONSTRUCTION AND EXPANSION JOINTS AND PLACE CONTRACTION JOINTS AS SHOWN ON PLAN. CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT IF THERE ARE DEVIATIONS FROM THIS PLAN

GROUNDCOVER LEGEND

- PLANTING SOIL
- STRUCTURAL SOIL

SITE FEATURE LEGEND

- DRAIN INLET
- LIGHT FIXTURE
- MANHOLE
- FIRE HYDRANT

This document was originally issued and sealed by Bradley Garcia PLA-144 on 8/14/2020 and the original document is stored at the City of West Fargo, North Dakota.
SHEYENNE STREET
3RD AVE W
SAWCUT CONTRACTION JOINTS TO BE
EQUALLY SPACED BETWEEN
CONSTRUCTION AND EXPANSION JOINTS
(MIN. 3'-6" MAX 4'-6") E.W

PAYROLL EXPRESS

SAWCUT CONTRACTION JOINTS TO BE
EQUALLY SPACED BETWEEN
CONSTRUCTION AND EXPANSION JOINTS
(MIN. 3'-6" MAX 4'-6") E.W

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VERIFY CONSTRUCTION AND EXPANSION JOINTS AND PLACE
CONTRACTION JOINTS AS SHOWN ON PLAN. CONTRACTOR TO
NOTIFY LANDSCAPE ARCHITECT IF THERE ARE DEVIATIONS FROM
THIS PLAN

KEYNOTES
1. RAISED PLANTER, SEE S.D. 1/13
2. PAVER INLAY, SEE S.D. 4/14
3. PLANTER WALL, SEE S.D. 2/13
4. BIKE RACK, SEE S.D. 3/16
5. TRASH RECEPTACLE, SEE S.D. 2/16
6. BENCH, SEE S.D. 1/16
7. TREE GRATE, SEE S.D. 3/15
8. PLANTER DRAIN TILE, SEE S.D. 4/16
9. CURB PLANTER, SEE S.D. 3/14
10. BENCH, SEE S.D. 1/16
11. TREE GRATE
12. PLANTER DRAIN TILE
13. CURB PLANTER

GROUNDCOVER LEGEND
■ PLANTING SOIL
■ STRUCTURAL SOIL
■ SITE FEATURE

SITE FEATURE

NOTES:
- CONTRACTION JOINTS ARE ILLUSTRATIVE. CONTRACTOR TO FIELD
- VERIFY CONSTRUCTION AND EXPANSION JOINTS AND PLACE
- CONTRACTION JOINTS AS SHOWN ON PLAN. CONTRACTOR TO
- NOTIFY LANDSCAPE ARCHITECT IF THERE ARE DEVIATIONS FROM
- THIS PLAN

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**SHEYENNE STREET**

Equal joint spacing b/w major jointing to vary from min. 3' - 0" to max 4' - 0"

Sawcut contraction joints equally between construction and expansion joints (min. 3"-6" max 4"-6") E.W

Temporary easement

**KEYNOTES**

1. Raised planter, see S.D. 1/13
2. Paver inlay, see S.D. 4/14
3. Planter wall, see S.D. 2/13
4. Bike rack, see S.D. 3/16
5. Trash receptacle, see S.D. 2/16
6. Bench, see S.D. 1/16
7. Tree grate, see S.D. 3/15
8. Planter drain tile, see S.D. 4/16
9. Curb planter, see S.D. 3/14
10. Bench, see S.D. 1/16

**NOTE:**

Contraction joints are illustrative. Contractor to field verify construction and expansion joints and place contraction joints as shown on plan. Contractor to notify landscape architect if there are deviations from this plan.

**GROUND COVER LEGEND**

- Planting soil
- Structural soil

**SITE FEATURE LEGEND**

- Drain inlet
- Light fixture
- Manhole
- Fire hydrant

---

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STATE: ND
PROJECT NO.: UGP-8-992 (041)
SECTION NO.: 85
SHEET NO.: 9

QUANTITIES (THIS SHEET)

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<tr>
<td>748</td>
<td>CURB + GUTTER TYPE I SPECIAL</td>
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<td>748</td>
<td>CURB HEADER TYPE-I</td>
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<tr>
<td>990</td>
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<tr>
<td>970</td>
<td>LANDSCAPE INTERLOCKING BLOCK</td>
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<tr>
<td>970</td>
<td>PLANTING SOIL</td>
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<td>970</td>
<td>BENCH</td>
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<td></td>
</tr>
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<td>970</td>
<td>TRASH RECEPTACLE</td>
<td>1 EA</td>
<td></td>
</tr>
<tr>
<td>970</td>
<td>BIKE RACKS</td>
<td>1 EA</td>
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KEYNOTES

1. RAISED PLANTER, SEE S.D. 1/13
2. PAVER INLAY, SEE S.D. 4/14
3. PLANTER WALL, SEE S.D. 2/13
4. BIKE RACK, SEE S.D. 3/16
5. TRASH RECEPTACLE, SEE S.D. 2/16
6. BENCH, SEE S.D. 1/16
7. TREE GRATE, SEE S.D. 3/15
8. PLANTER DRAIN TILE, SEE S.D. 4/16
9. CURB PLANTER, SEE S.D. 3/14

GROUND COVER LEGEND

- PLANTING SOIL
- STRUCTURAL SOIL

SITE FEATURE LEGEND

- DRAIN INLET
- LIGHT FIXTURE
- MANHOLE
- FIRE HYDRANT

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### Quantities (This Sheet)

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<th>Item Description</th>
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<td>Curb + Gutter Type 1 Special</td>
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<td>Retaining Wall</td>
<td>930</td>
<td>204′ SF</td>
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<tr>
<td>Cast Iron Tree Grate</td>
<td>970</td>
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<tr>
<td>STA 26+13.7' - 24.7' LT, 1 EA</td>
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<td></td>
</tr>
<tr>
<td>STA 26+48.7' - 24.3' RT, 1 EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STA 28+3.7' - 19.7' RT, 1 EA</td>
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<td></td>
</tr>
<tr>
<td>Pipe PE Corr. Perf. 4&quot; Drain</td>
<td>970</td>
<td>96′ SF</td>
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<tr>
<td>Landscape Interlocking Block</td>
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<td></td>
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<tr>
<td>Existing R/W</td>
<td>970</td>
<td>26′ CY</td>
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<tr>
<td>Structural Soil</td>
<td>970</td>
<td>100′ CY</td>
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<tr>
<td>Bench</td>
<td>970</td>
<td>STA 26+3.9' - 24.3' LT, 1 EA</td>
</tr>
<tr>
<td>STA 26+14.1' - 19.7' RT, 1 EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bike Rack</td>
<td>970</td>
<td>STA 26+9.3' - 19.7' RT, 1 EA</td>
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<tr>
<td>STA 26+14.7' - 19.7' RT, 1 EA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retaining Wall</td>
<td>970</td>
<td>204′ SF</td>
</tr>
<tr>
<td>Landscape Interlocking Block</td>
<td></td>
<td></td>
</tr>
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### Keynotes
- Raised Planter,
  - See S.D. 1/13
- Paver Inlay,
  - See S.D. 4/14
- Planter Wall,
  - See S.D. 2/13
- Bike Rack,
  - See S.D. 3/16
- Trash Receptacle
  - See S.D. 2/16
- Bench,
  - See S.D. 1/16
- Tree Grate
  - See S.D. 3/15
- Planter Drain Tile
  - See S.D. 4/16
- Curb Planter
  - See S.D. 3/14
- Planting Soil
- Structural Soil
- Site Feature

### Groundcover Legend
- Planting Soil
- Structural Soil
- Site Feature

### Site Feature Legend
- Drain Inlet
- Light Fixture
- Manhole
- Fire Hydrant

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EXISTING R/W

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KEYNOTES
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2. PAVER INLAY, SEE S.D. 4/14
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5. TRASH RECEPTACLE, SEE S.D. 2/16
6. BENCH, SEE S.D. 1/16
7. TREE GRATE, SEE S.D. 3/15
8. PLANTER DRAIN TILE, SEE S.D. 4/16
9. CURB PLANTER, SEE S.D. 3/14

GROUND COVER LEGEND
- PLANTING SOIL
- STRUCTURAL SOIL
- SITE FEATURE LEGEND
- DRAIN INLET
- LIGHT FIXTURE
- MANHOLE
- FIRE HYDRANT

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6. PLANTER DRAIN TILE, SEE S.D. 4/16
7. CURB PLANTER, SEE S.D. 3/14
8. TREE GRATE, SEE S.D. 3/15
9. BENCH, SEE S.D. 1/16

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GROUNDCOVER LEGEND

- PLANTING SOIL
- STRUCTURAL SOIL
- SITE FEATURE

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1. PLANK CONCRETE PAVERS TO HAVE MIXED LENGTHS AND COLORS AS SHOWN.
2. MANUFACTURER BASIS OF DESIGN: COUNTY MATERIALS, INFLUENCE PLANK PAVER. SEE PLAN NOTES 930-P05 FOR APPROVED EQUALS.
3. PAVER LAYOUT TO BE RANDOM IN RUNNING BOND.
4. PAVER SEAMS SHALL NOT MATCH OR BE LOCATED WITHIN 2" OF ADJACENT RUN SEAM.

**COLOR**

<table>
<thead>
<tr>
<th>PROPRIETARY COLOR</th>
<th>PERCENT OF MIX</th>
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<tbody>
<tr>
<td>LIGHT GREAY</td>
<td>DREAM 40%</td>
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<tr>
<td>CHARCOAL</td>
<td>REFLECTION 40%</td>
</tr>
<tr>
<td>CREAM</td>
<td>VISION 20%</td>
</tr>
</tbody>
</table>

**UNIT SIZE**

- **UNIT A**: 5 3/4"x9 11/16"
- **UNIT B**: 5 3/4"x11 5/8"
- **UNIT C**: 5 3/4"x13 5/8"
- **UNIT D**: 5 3/4"x17 1/2"
- **UNIT E**: 5 3/4"x19 1/2"

*PAVER THICKNESS TO BE 3 1/8" MIN.
4" PERF. PVC ENCASED IN 6"X8" PEA GRAVEL CHANNEL

PREPARED SUBGRADE

4" PERF. PVC ENCASED IN 6"X8" PEA GRAVEL CHANNEL

36" DEPTH STRUCTURAL SOIL PIT (SEE PLANS)

36" DEPTH STRUCTURAL SOIL PIT (SEE PLANS)

TREE GRATE AND FRAME SEE S.D. 3/15

STD. CONC FRAME ANCHOR

3/8"-16 ZINC HX HD BOLTS WISS NUT AND WASHER

1 3/4" x 1 3/4" x 1/4" ANGLE

(2) HALVES OF FRAME BOLTED TOGETHER

1" SQ. BAR ANCHORS, TYP.

12" SQ. BAR ANCHORS, TYP.

FRAME

EXPANSION JOINT

PLANTING SOIL

6" COMPACTED BASE

ADJACENT CONCRETE PAVEMENT

1'-6" EXPANSION JOINT

#4 VERT

#4 HOR

#4 VERT

#4 HOR

45°

45°

1/4" ANGLE

1 3/4" x 1 3/4" x 1/4" ANGLE

FRAME PLAN VIEW

FRAME

SECTION A-A'

SECTION B-B'

GRATE PLAN VIEW

SIDE VIEW

CAST IRON TREE GRATE

TREE ROOT BALL

TREE STAPLE STABILIZER BELOW GRADE. HAMMERED IN STABILIZATION SYSTEM FOR 1.5" CALIPER TREE (TREE STAPLES INCIDENTAL)

TREE GRATE PLAN VIEW

CURB HEADER-TYPE 1

15

2

CAST IRON TREE GRATE

1

15

2

CURB HEADER-TYPE 1

15

15

15

15
1 16 BENCH

6" FROM EDGE OF PLANTER

(2) S.S. 3/8" x 3" EXPANSION ANCHOR

DRILL 3/8" Ø HOLES

NOTE: USE STAINLESS STEEL WASHERS TO LEVEL BENCH, IF NECESSARY

2 16 TRASH RECEPTACLE

6" FROM EDGE OF PLANTER

MOUNT PER MANUFACTURER'S INSTRUCTIONS

NOTE: USE STAINLESS STEEL WASHERS TO LEVEL BENCH, IF NECESSARY

3 16 BIKE RACK

BIKE RACK 970-P08, SEE PLAN NOTES

(4) STAINLESS STEEL 3/8" x 3" EXPANSION ANCHOR

DRILL 3/8" Ø HOLES

NOTE: USE STAINLESS STEEL WASHERS TO LEVEL BENCH, IF NECESSARY

4 16 PIPE PE CORR PERF 4IN DRAIN

4" CURROGATED PERF. PVC W/SOCK, INSTALL AT BOTTOM OF BED OR PIT, ENCASED IN PEA ROCK

SOLID PVC UNDER PAVEMENT AND BETWEEN PLANTING BEDS OR PITS

SPIGOT END ADAPTER FITTING

HDPE FITTINGS AS NEEDED

SNAP COUPLER, TYP.

SOLID END CAP

TYP. STRUCTURE

PRECAST MANHOLE SEAL

TRASH RECEPTACLE 970-P07, SEE PLAN NOTES

PLANTING BED OR PIT
(SEE PLANS)

FINISH SURFACE

FINISH SURFACE

DRRAIN AT STREET

6" FROM EDGE OF PLANTER

NOTE: USE STAINLESS STEEL WASHERS TO LEVEL BENCH, IF NECESSARY

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NOTE: NO TEMPORARY CONSTRUCTION EASEMENT ON WEST SIDE OF SHEYENNE ST. FROM 7TH AVE. S. TO 6TH AVE. S.
NOTES:
NO TEMPORARY CONSTRUCTION EASEMENT ON EAST SIDE OF SHEYENNE ST. FROM 6TH AVE. S. TO 5TH AVE. S.
NOTE: NO TEMPORARY CONSTRUCTION EASEMENT ON WEST SIDE OF SHEYENNE ST. FROM 7TH AVE. S. TO 10TH AVE. S.
QUANTITIES (THIS SHEET)

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<th>Code</th>
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<td>Wood Mulch</td>
<td>0074</td>
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<tr>
<td>970</td>
<td>Trees</td>
<td>1000</td>
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GROUNDCOVER LEGEND

- DOUBLE-SHREDDED HARDWOOD_MULCH
- HYDROSEED TURF, SEE SECTIONS 76 & 77

The document details a landscape plan for Pioneer Place in West Fargo, North Dakota, with a focus on existing parking lot curb and gutter, temporary construction easement, and payroll express. Quantities include 970 cubic yards of wood mulch and 1000 trees. The plan includes sections STA 20+49.7' - 19.7' RT and STA 20+64.7' - 19.7' RT.
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2ND AVE S

FURNITURE FOR LESS PARKING LOT

EXISTING R/W

TEMPORARY CONSTR. EASEMENT

NEW R/W

SHEPHERD OF THE VALLEY

WEST FARGO CHIROPRACTIC CENTER

TEMPORARY CONSTR. EASEMENT

SHEFENNE STREET

EXISTING R/W

DOUBLE-SHREDDED HARDWOOD MULCH

HYDROSEED TURF, SEE SECTIONS 76 & 77

QUANTITIES (THIS SHEET)

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<thead>
<tr>
<th>ID</th>
<th>Description</th>
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<tbody>
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<td>970</td>
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<td>Trees</td>
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<th>Item</th>
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<td>Trees</td>
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<td>STA 26+78.7' - 36.0' LT</td>
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<td>STA 27+13.7' - 36.0' LT</td>
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<td>STA 27+48.7' - 36.0' LT</td>
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<td></td>
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<td>STA 27+83.7' - 36.0' LT</td>
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<td></td>
<td></td>
<td>STA 27+89.5' - 19.7' RT</td>
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GROUNDCOVER LEGEND

- DOUBLE-SHREDDED HARDWOOD MULCH
- HYDROSEED TURF, SEE SECTIONS 76 & 77
QUANTITIES (THIS SHEET)

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<th>Item</th>
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<tr>
<td>Perennials Group A</td>
<td>214 EA</td>
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PLANT KEY

- **KFR**: Foerster's Feather Reed Grass
- **MNS**: Grape Gumball Bee Balm
- **ASR**: Smooth Aster
- **LBS**: Standing Ovation Little Blue Stem
- **WLC**: Walker's Low Catmint
- **LSS**: Little Spire Russian Sage
- **AJS**: Autumn Joy Sedum
- **SDY**: Sno Cap Shasta Daisy
- **PDS**: Prairie Dropseed
- **SAL**: May Night Salvia
- **CND**: Powwow White Coneflower
- **CNG**: Green Jewel Coneflower
- **CMM**: Magnus Coneflower
- **BES**: Black-Eyed Susan
- **MNG**: Grandmum Bee Balm
- **BSG**: Meadow Blazing Star
- **BSW**: Floristan White Blazing Star
- **ALG**: Globemaster Ornamental Onion
- **RSE**: Nearly Wild Rose
- **RSM**: Meadow Rose

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PLANTING PLAN

SHEYENNE STREETSCAPE

QUANTITIES (THIS SHEET)

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Shrubs Group A

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Perennials Group A

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<th>QUANTITY</th>
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</thead>
<tbody>
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<td>33</td>
<td>135 EA</td>
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</tbody>
</table>

PLANT KEY

- KFR: Foeister’s Feather Reed Grass
- MNS: Grape Gumball Bee Balm
- ASR: Smooth Aster
- LBS: Standing Ovation Little Blue Stem
- WLC: Walker’s Low Catmint
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- SVD: Sno Cap Shasta Daisy
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- CMN: Magnus Coneflower
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PLANT KEY

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MNS  GRAPE GUMBALL BEE BALM
ASR  SMOOTH ASTER
BSG  MEADOW BLAZING STAR
LBS  STANDING OVATION LITTLE BLUESTEM
WLC  WALKER'S LOW CATMINT
LSS  LITTLE SPIRE RUSSIAN SAGE
AJS  AUTUMN JOY SEDUM

SDY  SNO-CAP SHASTA DAISY
PDS  PRAIRIE DROPSEED
SAL  MAY NIGHT SALVIA
POW  POWOW WHITE CONEFLOWER
CNG  GREEN JEWEL CONEFLOWER
CNM  MAGNUS CONEFLOWER
BES  BLACK-EYED SUSAN

MNG  GRANDMUM BEE BALM
BSG  MEADOW BLAZING STAR
BSW  FLORISTAN WHITE BLAZING STAR
ALG  GLOBEMASTER ORNAMENTAL ONION
RSE  NEARLY WILD ROSE
RSM  MEADOW ROSE

QUANTITIES (THIS SHEET)

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**Tree Installation**

1. Measure height of root ball. Subtract the depth of soil over the first root from the height of the root ball. Dig hole for adjusted depth.
2. Mulch should be spread up to but not touch the trunk of tree.
3. If tree in a container, remove container and discard before planting.

**Shrub Installation**

1. Prune all dead, broken, diseased and weak branches.
2. Entire container shall be removed.

**Perennial Installation**

1. Remove all pots and containers before planting.
2. Remove damaged stems and spent blooms after planting.
3. Water immediately after planting is completed.
**SPEC CODE BID ITEM**

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**NOTE:**
- Keep manhole castings out of wheel path.
- Sta 100 to 103 for 4th Ave E

**4th Ave Paving Layout**

Sta 100+00 to Sta 103+00 (PR4TH)
LEGEND

- PAVEMENT REINFORCEMENT
- DOWELED JOINT
- TIED JOINT W/ HOT POUR SEAL
- UNTIED JOINT
- 2" CORE HOLE

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Sheyenne Street
Paving Layouts
Sta 16+00 to Sta 20+00 (PR SHEYENNE)
LEGEND

- PAVEMENT REINFORCEMENT
- DOWELED JOINT
- TIE JOINT W/ HOT POUR SEAL
- UNTIED JOINT
- 2" CORE HOLE

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Sheyenne Street
Paving Layouts
Sta 20+00 to Sta 24+00 (PRSHYENNE)
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This document was originally issued and sealed by James D. Jackson, Registration Number PE-9469, on 8/15/20 and the original document is stored at the City of West Fargo.
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### Traffic Control Devices List

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**LEGEND**

- **1** ROAD CLOSED
- **2** R11-2-48
- **3** R11-4-60
- **4** R9-9-24
- **5** W16-9p-24
- **6** CONSIGN 1
- **7** CONSIGN 2
- **8** CONSIGN 3
- **9** W3-1a-48
- **10** CONSIGN 4
- **11** CONSIGN 5
- **12** CONSIGN 6
- **13** CONSIGN 7
- **14** CONSIGN 8
- **15** CONSIGN 9
- **16** STOP
- **17** R1-1-48
- **18** DETOUR 30 FT
- **19** ROAD CLOSED AHEAD
- **20** W20-2-48
- **21** W20-3-48
- **22** CONSIGN 10
- **23** CONSIGN 11
- **24** CONSIGN 12
- **25** CONSIGN 13
- **26** CONSIGN 14
- **27** CONSIGN 15
- **28** CONSIGN 16
- **29** CONSIGN 17
- **30** CONSIGN 18

**Stack Assembly**

- **TT SIGN**

- **Type 3 Barricade**

- **Sidewalk Barricade**

- **Work Area**

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Sheyenne Street

Work Zone Traffic Control

Phase 2
Legend:
- PAVING WORK AREA
- UNDERGROUND WORK AREA
- CONSTRUCTION ZONE
- TEMPORARY ASPHALT
- SIDEWALK BARRICADE
- TRAFFIC FLOW
- DELINEATOR DRUM
- PEDESTRIAN CHANNELIZATION

Temporary Watermain Connection Installation

Inset A

Temporary Watermain Installation

PE- , Registration Number issued and sealed by James D. Jackson, PE, on 08/15/20 and the original document is stored at City of West Fargo

This document was originally issued and sealed by James D. Jackson, Registration Number PE- , on 08/15/20 and the original document is stored at City of West Fargo.
Maintain access for residents and businesses along 1st Ave W.

This document was originally issued and sealed by James D. Jaiskun, Registration Number PE-9469, on 08/15/20 and the original document is stored at the City of West Fargo.

Sheyenne Street
Work Zone Traffic Control
Phase 3A
THRU TRAFFIC TO STREET CLOSED

LEGEND

CONSTRUCTION ZONE
TEMPORARY ASPHALT DELINEATOR DRUM
TYPE III BARRICADE SIGN
SIDEWALK BARRICADE
TRAFFIC FLOW CHANNELIZATION
PEDESTRIAN PAVING WORK AREA
WORK AREA UNDERGROUND FENCE

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Sheyenne Street
Work Zone Traffic Control Phase 3A
Sta 27+00 to Sta 33+00 (PR/SHYENNE)
THRU TRAFFIC
TO
STREET CLOSED

DO NOT
ENTER

R11-4a-60

in phases to maintain traffic access

Construct 1st Ave asphalt paving

LEGEND

CONSTRUCTION ZONE
TEMPORARY ASPHALT
DELINEATOR DRUM
TYPE III BARRICADE
SIGN
SIDEWALK BARRICADE
TRAFFIC FLOW
CHANNELIZATION
PEDESTRIAN
PAVING WORK AREA
WORK AREA
UNDERGROUND
FENCE
TEMPORARY SAFETY

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Sheyenne Street
Work Zone Traffic Control
Phase 3B
Sta 27+00 to Sta 33+00 (PRSHYENNE)
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<th>Color</th>
<th>Symbol</th>
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<th>Letter Position (X)</th>
<th>Letter Position (Y)</th>
<th>Letter Location (X)</th>
<th>Letter Location (Y)</th>
<th>Note</th>
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<td></td>
<td>3'-0&quot; x 1'-6&quot;</td>
<td>0.5&quot; (inset 0&quot;)</td>
<td>1.5&quot;</td>
<td>Ground</td>
<td>Blue</td>
<td>IV Reflective</td>
<td>White</td>
<td></td>
<td></td>
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<td>Panel edge to lower left corner</td>
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<tr>
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<td>1.5&quot;</td>
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<td>White</td>
<td>IV Reflective</td>
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<tr>
<td></td>
<td>10'-0&quot; x 1'-0&quot;</td>
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<td>1&quot;</td>
<td>Ground</td>
<td>Blue</td>
<td>IV Reflective</td>
<td>White</td>
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<td>23.7</td>
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**Sheyenne Street**

Work Zone Traffic Control

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<th>Y</th>
<th>WID</th>
<th>HT</th>
<th>AREA</th>
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Dimensions are in inches.tenths

- Letter locations are panel edge to lower left corner

**LYNX LOGISTICS DASCH'S DUDS**

**SANDY'S DONUTS BERNIE'S WINE**

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Sheyenne Street

Work Zone Traffic Control

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<th>Sign Assembly No.</th>
<th>Flat Sheet For Signs</th>
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<th>Vert Clearance</th>
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This document was originally issued and sealed by James D. Jackson
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Sheyenne Street
Signing - Removals
Sta 3+00 to Sta 9+00 (PRSHYENNE)
Sheyenne Street

Signing - Removals

Sta 27+00 to Sta 33+00 (PRSHEYENNE)
**SPECIAL ASSEMBLY A**

**NOTES:**
- Design Area: 8.25 SF
- Pay Area: 8.25 SF

**SPECIAL ASSEMBLY B**

**NOTES:**
- Design Area: 5.50 SF
- Pay Area: 5.50 SF

**SPECIAL ASSEMBLY C**

**NOTES:**
- Design Area: 9.00 SF
- Pay Area: 9.00 SF

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Left Turn Arrow
Right Turn Arrow
Yellow Dbl Barrier
White Channel Line
White Stop Bar

Sheyenne Street
Pavement Marking
Sta 3+00 to Sta 9+00 (PRSHYENNE)
762 0113  EPOXY PVMT MK 4IN LINE
Yellow Dbl Barrier
150 LF

762 1305 4IN LINE-GROOVED
PREFORMED PATTERNED PVMT MK
Yellow Dbl Barrier
962 LF
White Gore
95 LF
White Parking Line
68 LF

762 1325 24IN LINE-GROOVED
PREFORMED PATTERNED PVMT MK
White Continental Crosswalk
330 LF
White Stop Bar
40 LF

CITY OF WEST FARGO

This document was originally issued and sealed by
James D. Jelskun,
Registration Number
PE-9469,
on 08/15/20 and the original
document is stored at the
City of West Fargo.
<table>
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<td>762 1305</td>
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<td>LF</td>
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<td>762 1309</td>
<td>PREFORMED PATTERNED PVMT 8IN LINE-GROOVED</td>
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<td>762 1325</td>
<td>PREFORMED PATTERNED PVMT 24IN LINE-GROOVED</td>
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This document was originally issued and sealed by James D. Jasko, Registration Number PE-9469, on 08/15/20 and the original document is stored at the City of West Fargo.
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<td></td>
<td>762</td>
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<td>(Choice Bank)</td>
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<td></td>
<td>Blue Edge/Handicap Stall Parking Lines</td>
<td>118</td>
<td>LF</td>
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<td></td>
<td>(West Funeral Home)</td>
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<td></td>
<td>Blue Edge/Handicap Stall Parking Lines</td>
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<td>762</td>
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Handicap Symbol

Blue Thermoplastic Background

White Thermoplastic (3" Min. Line Width)

2'-4" Min.

4" Min.

4'-0"

4" Blue Thermoplastic Line

4" Yellow Parking Line

4" Blue Thermoplastic Line

4" Blue Thermoplastic Line

Protect sign in place
1. Disconnect and remove existing feederpoint. Replace with new feederpoint as specified in plan notes. Coordinate with service provider to install new secondary service conductors to the line side of meter socket (20ca).

2. Existing 2" NM with (2) 60 amp rated multi-phase branch circuits to remain. Each multi-phase circuit consists of (2) #6 phase conductors, (1) #6 neutral, and (1) #6 ground. These (2) existing feeders to the feederpoint location shall be reduced to serve circuit #1 and circuit #2. Pull in an additional (1) #6 phase conductor from feederpoint to existing junction box to serve the north circuit #2 pole receptacle circuit.

3. The existing multi-phase branch circuit in place for the (12) existing pole assemblies shall be extended to new poles as shown. The receptacle at the new poles shall be tapped at alternating phase conductors.

4. Intersect #2 stub-out at junction point. Extend to new base height.

5. Provide #2" from feederpoint location to new base location and new base location, pull in new #2" branch circuit conductors and a branch circuit for the receptacle circuit.

6. Existing street lighting poles in place from Sta. 75+80, south to 15th Ave S will remain in place (17 poles total). Provide temporary feed to existing light circuits from existing street lighting circuit that originates at a feederpoint located at the southeast corner of the intersection of 15th Ave S. and Sheyenne Street. Here and connect existing light poles to remain to the street light circuit located in the north circuit #2 base at the northwest signal base at the intersection utilizing the space #2" between the bases. Provide a #6 triplex overhead span from the north circuit #2 signal standard to the light pole adjacent to the signal base. The triplex shall enter signal pole at upper bend hole and enter the light pole at space #2" base pole. The underground circuit between the light pole adjacent to the north circuit #2 signal base and the adjacent pole to the north is out of service due to damage that occurred when parking lot entrance from Sheyenne Street was constructed. The electrical contractor shall repair the existing underground circuit. Intersect existing circuit, pull-in-ground wire point and provide new #4 EMT to existing pole as required. Here and connect the existing street lighting circuit to the existing circuit in place at the north circuit #2 base. This connection will remain in place until the phase 3 project is complete. When phase 3 complete, disconnect and remove the temporary connection. Provide permanent connection from the new circuits to all the existing pole located at Sta. 7+80, via #2", (4) NM-60.

7. Electrical contractor to provide (2) 2" INCRE ELECTRIC METAL CONDUIT FOR COMMUNICATIONS METAL TUBE. SECURE TUBE AT EAST AND WEST SIDES OF SHEYENNE AVENUE, FROM THE EXISTING IN GROUND COMMUNICATION JUNCTION POINT LOCATED AT SOUTHEAST CORNER OF THE MAIN AVE / SHEYENNE STREET INTERSECTION, TO THE SOUTH CONSTRUCTION BOUNDARY, WITHOUT, TEN FEET PAVEMENT SHALL BE ROUTE APPROXIMATELY SIXTEEN FEET NORTH AND SHALL BE AS SHOWN BY FIELD ENGINEER, CONTRACTOR SHALL INSTALL A SINGLE-PHASE FIBER OPTIC BACKBONE CABLE IN ONE OF THESE CONDUITS, ON EACH SIDE OF ROADWAY FROM THE EXISTING FIBER OPTIC IN-GROUND JUNCTION POINT TO THE NEW IN-GROUND JUNCTION POINT SHOWN IN THE AREA OF STATION 75+80. THE CABLE SHALL BE UNPLUGGED FROM END TO END AND CONTRACTOR SHALL LEAVE 100' OF COILED CABLE AT EACH IN-GROUND JUNCTION POINT SHOWN. THE FIBER OPTIC BACKBONE CABLE WILL BE A #6 FIBER SINGLE MODE AS DESCRIBED IN PLAN NOTES. THE FIBER SHALL MESH THAT PRESENTLY USED BY THE CITY OF FARGO. ONE CONDUIT SHALL BE FOR FUTURE USE, PROVIDE HOLE FULL STRONG IN SPARE 2" Conduit.

8. Provide a 40x96x52" Reinforced concrete block in a ground point equal to quayzite hardman or approved equal in sand. Pull full point shall be as located by field engineer. Unit shall be gray in color with cover stamp of fiber optic. Field coordinate exact location with fiber optic engineer.

9. Contractor to remove abandoned conduit and markings as much as possible.

10. Extend the (2) 2" INCREASED FROM JUNCTION POINT TO A POINT AS DIRECTED BY FIELD ENGINEER. SEAL FOR FUTURE USE.

11. Provide #18, #14, #12, #10, #8, and #6 GUT-BURN BETWEEN THE DESIGNATED GALVANIZED STEEL BURNT LOCATIONS.

12. Provide (1) #4, from each "FIRE AREA" to the first communication junction point as shown. Route to edge of fire block inlay, stub-up to #6 beneath grade and gap for future use for communication cable.

13. Here and connect in-ground lighting at the fire areas to the adjacent light base shown via #4 NM. Here and connect to light circuit via (2) #4's.

14. Contractor shall provide sand cuts and concrete removal as required to install communication conduits to existing pole as required. Here and connect the existing directional boxes methods. Replace concrete as existing.

This document was originally issued and sealed by
Kevin Rice,
Registration Number I.E.C. 4996,
on 08/15/96 and the original document is stored at the
City of West Fargo

Sheyenne Street
Lighting / Communication
Sta 07+00 to Sta 03+00
Light bases shall be located as noted by Field Engineer.
Light bases shall be located as stated by Field Engineer.
PLAN NOTES (SHEETS 6-9)

1. FURNISH AND INSTALL OUTDOOR GROUND BOX IN RAISED PLANTERS AND SEAT WALL PLANTERS WHERE SHOWN. THE GROUND BOX SHAL BE INSTALLED AT CENTER OF PLANTER ON THE STREET SIDE. THE GROUND BOXES SHALL BE FURNISHED AND INSTALLED AS DESCRIBED IN THE PLAN NOTES.

2. PROVIDE A 24"X24"X24" G PoYerin CONCRETE IN-GROUND J-BOX EQUAL TO QUALITEE, HOFFMAN OR APPROVED EQUAL. IN-GROUND J-POINTS SHALL BE AS LOCATED BY FIELD ENGINEER. J-POINTS SHALL BE GRAY IN COLOR WITH COVER STAMPED "ELECTRIC".

3. PROVIDE (4) IN-GROUND LED LIGHT FIXTURES AT "FOCUS AREA" LOCATIONS SHOWN. FIXTURES SHALL BE LOCATED AS SHOWN ON THE HARDSCAPE PLAN SHEET DETAILS, FURNISHED AND INSTALL AS DESCRIBED IN THE PLAN NOTES.

4. FURNISH AND INSTALL A MITER POWER DISTRIBUTION FEED-POINT AS DESCRIBED IN THE PLAN NOTES.

5. PROVIDE (1) G FROM EACH "FOCUS AREA" TO THE NEAREST POWER JUNCTION POINT AS SHOWN, ROUTE TO EDGE OF PAVING BLOCK INLAY, TO J-POINT TO CHARRED GRACE AND GAP FOR FUTURE USE FOR POWER CONNECTIONS.

6. PROVIDE (5) G (120V CIRCUIT) FOR EACH RECEPTACLE CIRCUIT AT EACH LOCATION, THE QUANTITY OF RECEPTACLE CIRCUITS IS SHOWN ON PLAN, FULL IN (7) #100.

7. PROVIDE (5) W. TO CONNECT GROUND BOX TO IN-GROUND J-POINT. PROVIDE 5" WIRE BETWEEN GROUND BOX AS SHOWN, FULL IN (2) #100 WIRE AND CONNECT TO CIRCUIT BREAKER AT FEEDPOINT. USE NERGILIGHT SEL-CAP TYPE CONNECTORS.

8. PROVIDE (4) W FROM FEEDPOINT TO IN-GROUND JUNCTION POINTS OF THE 5TH AVE LOCATION. PROVIDE (2) W FROM FEEDPOINT TO THE LIGHT POLE BASE AT THE 4TH AVE AND 5TH AVE LOCATION. THE 2" W. SHALL BE ROUGHED INTO POLE BASE ADJACENT TO BASE COVER.

Light bases shall be located as verified by Field Engineer.
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The existing multilevel check in place at Hotchka shall be moved to feed third check in.

**Light-Order Information:**

Light in southeastern quadrant...

Note: All levels shown are approximative. Final levels established as shown by Field Engineer.

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Shayenne Street
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**Lighting System Quantities**

- **Concrete Footing - Lighting**: 42 EA
- **26 AWG Diameter PVC Conduit (Lighting)**: 400 LF
- **Underground Conductor 6 MCM Type THW**: 2715 LF
- **Underground Conductor No. 4 - Type THW**: 18016 LF
- **Feed Point - Pad Mounted**: 1 EA
- **LT STD 18 MWT**: 42 EA
- **LRD LUMINARIES**: 42 EA
- **Renew Light Standard**: 10 EA
- **Renew Concrete Foundation**: 10 EA
- **Lighting System A**: 1 EA

---

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Shayanne Street
Lighting Data Tables
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