



North Dakota Department of Transportation

Grant Levi, P.E.
Director

Doug Burgum
Governor

January 31, 2017

ADDENDUM 2 – JOB 19

TO: All prospective bidders on project SU-8-984(152)155 and IM-8-029(166)062, Job No. 19 scheduled for the February 3, 2017 bid opening.

The following plan and request for proposal revisions shall be made:

Plan Revisions:

See attached summary from Matthew T. Kinsella, PE; Apex Engineering Group dated January 31, 2017 for an explanation.

Request for Proposal Revisions:

Remove and replace pages 6 and 7 of 22 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed pages revised 1/31/2017.

Page 6 of 22:

Item 203 0122 TOPSOIL-DEPT OPTION BORROW AREA; quantity increased from 350 to 6800 CY.

Item 251 0200 SEEDING CLASS II; quantity increased from 2 to 10 ACRE.

Item 251 2000 TEMPORARY COVER CROP; quantity increased from 2 to 10 ACRE.

Item 253 0101 STRAW MULCH; quantity increased from 2 to 10 ACRE.

Page 7 of 22:

Item 261 0112 FIBER ROLLS 12IN; quantity increased from 31,091 to 34,591 LF.

This addendum is to be incorporated into the bidder's proposal for this project.

AASHTOWare Project Bids files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> and load it into the AASHTOWare Project Bids program.


For CAL J. GENDREAU – CONSTRUCTION SERVICES ENGINEER
80:plm
Enclosure

January 31, 2017

ADDENDUM 2 – JOB 19

TO: All prospective bidders and suppliers on Projects SU-8-984(152)155 and IM-8-029(166)062, Job No. 19 scheduled for the February 3, 2017 bid opening.

The following revisions shall be made:

Plan Revisions:

REMOVE the following plan sheets, and REPLACE with the enclosed sheets revised on 01/31/17:

- Section 6 Sheets 1-9
- Section 8 Sheets 1-6

SECTION 6

Sheet 1:

- Reprinted to keep revision date consistent with other associated Section 6 Notes sheets.

Sheet 2:

- Revised Plan Note 203-P04 BORROW CLUES – added information on borrow clue Site 2.
- Revised Plan Note 251-P01 EROSION CONTROL FOR BORROW CLUE SITES – added information on borrow clue Site 2.

Sheet 3:

- Revised Plan Note 251-P01 EROSION CONTROL FOR BORROW CLUE SITES – added information on borrow clue Site 2 (note continued on to Sheet 3).

Sheet 4:

- Reprinted due to notes shifting pages due to above changes.

Sheet 5:

Reprinted due to notes shifting pages due to above changes.

Sheet 6:

Reprinted due to notes shifting pages due to above changes.

Sheet 7:

Reprinted due to notes shifting pages due to above changes.

Sheet 8:

Reprinted due to notes shifting pages due to above changes.

Sheet 9:

Reprinted due to notes shifting pages due to above changes.

SECTION 8

Sheet 1:

- Item 203 0122 TOPSOIL-DEPT OPTION BORROW AREA – IM AND TOTAL quantity increased from 350 CY to 6,800 CY.
- Item 251 0200 SEEDING CLASS II – IM and TOTAL quantity increased from 2.000 ACRE to 10.000 ACRE.
- Item 251 2000 TEMPORARY COVER CROP – IM and TOTAL quantity increased from 2.000 ACRE to 10.000 ACRE.
- Item 253 0101 STRAW MULCH – IM and TOTAL quantity increased from 2.000 ACRE to 10.000 ACRE.

Sheet 2:

- Item 261 0112 FIBER ROLLS 12IN – IM quantity increased from 24,315 LF to 27,815 LF; TOTAL quantity increased from 31,091 LF to 34,591 LF.

Sheet 3:

- Reprinted to keep revision date consistent with other associated Section 8 Quantities sheets.

Sheet 4:

- Reprinted to keep revision date consistent with other associated Section 8 Quantities sheets.

Sheet 5:

- Reprinted to keep revision date consistent with other associated Section 8 Quantities sheets.

Sheet 6:

- Reprinted to keep revision date consistent with other associated Section 8 Quantities sheets.

This addendum is to be incorporated into the bidder's proposal for this project.

Sincerely,
Apex Engineering Group, Inc.



Matthew T. Kinsella, PE
Project Manager

BID ITEMS

Projects: SU-8-984(152)155 (PCN-21261) and IM-8-029(166)062 (PCN-21262)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
017	203	0121	TOPSOIL-WETLAND	CY	662.				
018	203	0122	TOPSOIL-DEPT OPTION BORROW AREA	CY	6,800.				
019	203	0138	COMMON EXCAVATION-SUBCUT	CY	1,300.				
020	203	0140	BORROW-EXCAVATION	CY	32,774.				
021	210	0050	BOX CULVERT EXCAVATION	EA	1.				
022	210	0099	CLASS 1 EXCAVATION	L SUM	1.				
023	210	0201	FOUNDATION PREPARATION	EA	1.				
024	210	0210	FOUNDATION FILL	CY	2,050.				
025	210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA	1.				
026	216	0100	WATER	M GAL	1,204.				
027	230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	46.470				
028	251	0200	SEEDING CLASS II	ACRE	10.				
029	251	0300	SEEDING CLASS III	ACRE	25.477				
030	251	1000	WETLAND SEED	ACRE	.820				
031	251	2000	TEMPORARY COVER CROP	ACRE	10.				
032	253	0101	STRAW MULCH	ACRE	10.				

BID ITEMS

Projects: SU-8-984(152)155 (PCN-21261) and IM-8-029(166)062 (PCN-21262)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$	000	\$\$\$\$	00
033	253	0201	HYDRAULIC MULCH	ACRE	36.038				
034	253	0301	BONDED FIBER MATRIX	ACRE	16.363				
035	255	0103	ECB TYPE 3	SY	452.				
036	258	0100	CONCRETE SLOPE PROTECTION	SY	220.700				
037	258	0200	REMOVE & REPLACE CONCRETE SLOPE PROTECTION	SY	44.700				
038	260	0100	SILT FENCE UNSUPPORTED	LF	2,600.				
039	260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	2,600.				
040	261	0112	FIBER ROLLS 12IN	LF	34,591.				
041	261	0113	REMOVE FIBER ROLLS 12IN	LF	15,093.				
042	302	0050	TRAFFIC SERVICE AGGREGATE	TON	2,500.				
043	302	0101	SALVAGED BASE COURSE	CY	27,984.				
044	430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	3,566.				
045	550	0310	10IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	35,834.				
046	550	0320	12IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	20,728.				
047	570	0210	PCC PAVEMENT GRINDING	SY	12,848.				
048	570	0963	TRANSVERSE PCC JOINT CLEANING & SEALING	LF	17,325.				

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NOTES

100-P01 COORDINATION OF PROJECTS: The following projects are planned to occur in the vicinity of this project during the 2017 construction season:

- NDDOT Project IM-NHU-9-999(369), PCN 21572, Bid Date 02/03/17 – This is a statewide project that will provide maintenance for existing high mast lighting. The luminaires will be replaced on the high mast light standards at the 32nd Ave S interchange. Coordinate with this project to ensure that electrical work and traffic control are accommodated.
- City of Fargo Project PR-17-G1 – Seal coating 32nd St, 33rd St, and 35th Ave S
- Xcel Energy – burying the overhead power lines on the north side of 32nd Ave S from 36th St to east of 32nd St. Anticipated completion date for Xcel's project is July 15, 2017.

105-110 PAVEMENT SWEEPING: Sweep paved areas that were used by construction traffic before opening these areas to public traffic.

Sweep all newly constructed pavement no more than 24 hours before a scheduled final inspection.

Use a vacuum or pick-up type sweeper to perform this work.

105-200 UTILITY COORDINATION: A utility coordination meeting is required.

107-700 HAUL ROADS: The Engineer will not designate paved roads off the state system as haul roads.

107-710 HAUL ROADS: Before submitting a proposal, contact the appropriate State, County, Township, or City officials to determine if there are any roadways that will be designated as "no haul routes".

107-P01 SHARED USE PATH: Maintain access on the shared use path within the 32nd Avenue Interchange during Phases 1 & 2 as shown in Sec 100 Work Zone Traffic Control plan sheets.

107-P02 MAINTAINING TRAFFIC – EDGE DROP-OFFS: Leave the work area free any type of obstruction, drop-offs greater than 2-inches or embankment areas steeper than 4:1 adjacent to traffic lanes during non-working hours. Fill with a temporary 4:1 wedge at any drop-off greater than 2-inches.

The Engineer will not measure material used to construct the wedge. Include cost for the additional aggregate or embankment required for this operation in the price bid for aggregate or earthwork pay items.

Minimize the time of the pavement drop-off by coordinating the surfacing removal with the aggregate and paving operations.

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.

Organize a biweekly meeting with business owners and residents along the 32nd Avenue South project corridor, including side streets. The meeting shall follow the same requirements of the weekly planning meeting.

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 develop effective media releases, 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 a "Weekly Planning and Reporting Meeting".
2. Provide information for news releases on construction activities to the Engineer, Fargo District, and to the City of Fargo prior to and during construction. News releases should inform the public on construction activities, schedules, street closures, width or height restrictions to traffic, and traffic detour routes. Update information for news releases regarding construction activities every other week, at a minimum.
3. Be available for media interviews.
4. Work directly with property owners and businesses affected by construction activities. The coordinator must have sufficient knowledge and authority to resolve property owner and business concerns regarding scheduling, maintaining access, and construction operations.

155-P01 CONCRETE EQUIPMENT: Provide a NRMCA Certified plant for concrete used in Sections 550, "Concrete Pavement", 602 "Concrete Structures", and 622 "Pilings".

201-P01 CLEARING & GRUBBING: Remove existing shrubs, bushes, wood mulch, landscaping rock, landscaping fabric and concrete edging located within the limits of construction.

East of the existing pedestrian box culvert under the NE Ramp, reshape the topsoil to re-establish positive drainage for a distance of approximately 50 LF from structure.

Include all costs for landscaping removal and minor reshaping in the price bid for "Clearing & Grubbing – Site 2".

This document was originally issued and sealed by Matthew T. Kinsella, Registration Number PE-5692, on 01/31/17 and the original document is stored at the North Dakota Department of Transportation.

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- 202-P01 REMOVAL OF PAVEMENT: Removal of pavement consists of removing and salvaging concrete and bituminous pavements, median paving, sidewalks, curb and gutter and aggregate base. The tonnage of "Removal of Pavement" is based on the existing typical sections shown in Section 30. The tonnage includes the entire surfacing and the aggregate base, except the bottom two inches of aggregate base. The bottom two inches of aggregate base is considered unsuitable and will be paid for as "Common Excavation – Type A."
- 202-P02 REMOVAL OF EDGEDRAIN: Remove any edgedrain impacted by the reconstruction/widening of 32nd Avenue. Plug or cap any edgedrain that can remain in place that is not impacted as directed by the Engineer. Include all cost for removal of edgedrain in the price bid for "Removal of Pavement".
- 202-P03 REMOVAL OF PIPE ALL TYPES AND SIZES: Backfill cavities from removed pipes from Sta 92+78 to Sta 115+75, and from Sta 138+95 to Sta 157+72, with Aggregate Base Course Class 3 and compact to 95% of standard proctor density.
- 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 COMPACTION AND DENSITY CONTROL: Compact material to 95% of the maximum dry density (as specified in Section 203.04E.2.b "ND T 99") with moisture content no less than the optimum moisture and no more than 7 percentage points above the optimum moisture.
- Compaction of all earth material shall follow the requirements of ND T 99, but ND T 180 is required for the granular base material for the pipe backfills. The earth material to be compacted for the pipe backfill shall be in accordance with ND T 99.
- 203-P02 PROOF ROLLING: In addition to density/moisture testing, perform a proof roll test to verify the uniformity of support and to identify unstable areas which will require correction. Perform a proof roll test on subgrade located under the roadway. In fill areas, perform a proof roll test per one foot of each compacted lift.
- Complete proof rolling by using a fully loaded tandem dump truck. Other heavy equipment may be substituted to complete proof rolling upon prior approval of the Engineer. Offset each trip of the proof roller by no more than one tire width.
- If the grade shows no signs of pumping, cracking, or rutting, the grade being tested is considered acceptable. Correct any defective areas discovered during proof rolling and proof roll again.
- Include all costs associated with performing the proof roll test and any corrective work in price bid for "Common Excavation-Type A."

- 203-P03 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-P04 BORROW CLUES: The NDDOT has identified two potential sites for any embankment needed for widening/reconstruction of 32nd Avenue South. All borrow material available at Site 1 must be used prior to obtaining any borrow from Site 2.

Site 1: NDDOT Radio Tower Site at the West Fargo I-94 Interchange

There is approximately 9,500 CY of material available from Site 1. Upon removal of the embankment material, grade the area for proper drainage. Any borrow material excavated shall be paid for as "Borrow-Excavation".

The existing topsoil located on Site 1 is approximately 2" to 3" in depth. A quantity of 350 CY of topsoil has also been provided for this location. The topsoil is paid for as "Topsoil – Dept Option Borrow Area".

Site 2: I-29 & Cass County Road 20 Interchange

The remaining borrow material required for construction is available from Site 2. Upon removal of the embankment material, grade the area for proper drainage. Slopes shall be graded at a rate of 6:1 or flatter. Any borrow material excavated shall be paid for as "Borrow-Excavation".

The existing topsoil located on Site 2 is approximately 6" in depth. A quantity of 6450 CY of topsoil has also been provided for this location. The topsoil is paid for as "Topsoil – Dept Option Borrow Area".

- 203-P05 BENCHING: As shown in the 32nd Avenue South typical sections, bench all slopes where new embankment is placed against existing slopes in accordance with 203.04 E, regardless of the steepness of the existing slope.

- 203-P06 COMMON EXCAVATION-SUBCUT: A quantity of 1,300 CY has been included to be used as directed by the Engineer.

- 251-P01 EROSION CONTROL FOR BORROW CLUE SITES: Seed and mulch disturbed areas within the borrow sites after acquiring needed borrow material. The following quantities have been added for this work.

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NOTES

Site 1: 2.00 Acres – “Temporary Cover Crop”, “Seeding Class II” & “Straw Mulch”
 Site 2: 8.00 Acres – “Temporary Cover Crop”, “Seeding Class II” & “Straw Mulch”

Additionally, 3500 LF of “Fiber Rolls 12IN” has been provided for erosion control at Site 2.

251-P02 SEEDING CLASS III: Use the following seed mix for all permanent seeding.

Species	Percentage by Weight	Purity	Germination
Kentucky Bluegrass	60%	90%	85%
Creeping Red Fescue	10%	90%	85%
Fine Leaf Perennial Ryegrass	30%	95%	90%

Rate of Seeding = 220 Lbs/Acre

Prior to or during grading and tillage operations, rake and clear the ground surface of all stumps, brush, sticks, roots, stones larger than 1/2 inch in diameter, concrete chunks, rebar, wire or other material that may hinder seeding and maintenance operations. Dispose of any accumulated material at no additional cost to the City/State.

Water the seeded areas sufficiently to moisten the seedbed to a depth of 2 inches. Apply water in a manner that provides uniform coverage and prevents erosion and damage to the final surface. Provide daily watering for the first five days and sufficient water to maintain surface moisture in the top 2 inches of the soil until such time as the grass (not cover crop) has been evenly established to a height of 2 inches. Include all cost for labor, equipment and materials necessary to complete the work in the price bid for "Seeding Class III".

251-P03 MOWING: If areas of seeding are completed and the turf becomes established, mow and maintain the seeded areas. Mow within 48 hours of notification by the Engineer in the field. Remove any clippings that land on locations other than the grassed area. Mow when grass is longer than 3" and/or as directed by the Engineer in the field. If the turf has not been established prior to project completion the mowing requirement shall be waived as directed by the Engineer. Include all cost for labor, equipment and materials necessary to complete the work 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 SALVAGED BASE COURSE: Do not substitute processed virgin aggregate in-place of the Salvaged Base Course as stated in Section 817.01 A. Only use processed virgin aggregate after exhausting all removed material and incorporating it into the Salvaged Base Course.

Measure Salvaged Base Course as in-place compacted volume (CY) for mainline aggregate. Do not adjust the measured volume due to additional shrinkage or loss.

302-P02 TRAFFIC SERVICE AGGREGATE: A quantity of 2,500 tons has been included to be used as shown in the plans and as directed by the Engineer.

570-P01 PCC PAVEMENT GRINDING: Grinding is anticipated to be required on existing pavement to remove conflicting existing grooved pavement markings and to blend existing to new pavement. The Engineer will determine the extent of grinding after new pavement is installed. This bid item should be used on existing pavements only.

704-100 TRAFFIC CONTROL SUPERVISOR: Provide a Traffic Control Supervisor.

704-900 ATTENUATION DEVICE TYPE B: Install either of the following attenuation devices:

- The barrel type shown on standard D-704-01; or
- The water filled attenuation device described in this note.

Install liquid filled attenuation devices that are 2.5 feet wide.

Before installing devices, provide the Engineer a Certificate of Compliance stating that the devices are NCHRP Report 350 or MASH approved and a copy of an acceptance letter from FHWA showing approval for use on the NHS.

Use devices rated for the MPH designation used in the item description.

Install devices according to the manufacturer's specifications.

Add calcium magnesium acetate or potassium acetate to the water when the ambient air temperature is expected to drop below 32°F. Contact the Engineer and the NDDOT Environmental and Transportation Services Division in the case of a spill leaving the roadway. Dispose of the mixture inside the device as specified in Section 107.17, "Removed Material".

Provide replacement pieces for each location, up to a maximum of 20 pieces per project. Include a minimum of 2 nose pieces in the replacement pieces. Stage replacement pieces on the project site.

Immediately replace any damaged pieces. The Department will reimburse the Contractor for damaged pieces based on the invoice price plus 10 percent. All other costs associated with installing and maintaining replacement pieces will be at no additional cost to the Department.

704-P01 PRECAST CONCRETE MEDIAN BARRIERS - STATE FURNISHED: Obtain 377 barriers (10' x 2.5' units) from the NDDOT Maintenance Yard located in Casselton. Return the barriers to the same location upon completion of the project. The address for the Casselton Maintenance Yard is provided below:

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Casselton Maintenance Yard
15482 37th Street SE
Casselton, ND 58012

Provide the connection bolt hardware for each 10' section of precast concrete median barrier, in accordance with Standard Drawing D-704-51. The hardware provided will become property of the NDDOT at the completion of the project. Include the cost for hardware in the contract unit price for "Precast Concrete Median Barrier - State Furnished".

Some 4 inch x 4 inch boards are available at the return location. Provide any additional 4 inch x 4 inch boards necessary to stack barriers. The boards will become property of the Department. Include the cost for boards in the contract unit price for "Precast Concrete Median Barrier - State Furnished".

704-P02 PORTABLE CHANGEABLE MESSAGE SIGN: Install Portable Changeable Message Signs (PCMS) before work begins on the project. Four PCMS have been provided in the quantities for this project. The Engineer will determine the locations for PCMS installation. Relocate 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. The operator shall program the message within one hour of the Engineer's request to change the message.

704-P03 BRIDGE DETOURS: The structure widening that is required at the 32nd Avenue South Interchange will require a bridge canopy to be constructed, partial bridge demolition, and placing new beams. Detour traffic in accordance with Standard Drawing D-704-52 with the addition of a portable changeable message signs at each off ramp location. Include any grading or surfacing required for construction of the detour in other items. These described detours shall only be permitted at night between the hours of 8:00 pm to 6:00 am or as approved by the Engineer in the field.

Prior to closing Interstate 29, notify the Public Information Coordinator (PIC), City of Fargo and NDDOT Fargo District 48 hours in advance of implementing the interstate detour. Make all signal timing modifications, and coordinate with the City of Fargo.

704-P04 TRAFFIC CLOSURES: Lane closures are not allowed on I-29 during the hours of 7:00 AM to 9:00 AM for NB I-29 and 4:00 PM to 6:00 PM for SB I-29 (weekdays) unless approved by the project Engineer.

An extended lane closure will be allowed for the construction of the SW Loop pavement adjacent to SB I-29. The outside lane of SB I-29 can be closed to accommodate the pavement removal and replacement. This lane closure will only be allowed for a maximum of 5 continuous calendar days.

704-P05 OVERHEAD SIGN STRUCTURES: Remove the overhead sign structure located on the NW Ramp of 32nd Avenue Interchange prior to placing head-to-head traffic on the NW Ramp as shown in Phase 2 WZTC. This includes the sign, sign truss, barriers, attenuating crash cushion and foundation.

The overhead sign structure to be removed over the traffic lanes for the 32nd Avenue NW exit ramp will require the ramp to be closed to traffic. A night-time closure of the exit ramp will be permitted for one night, between the hours of 10:00 pm and 6:00 am, to complete this work. During this time, provide a detour using a changeable message sign at the exit ramp location directing traffic to use 52nd Avenue South. The Engineer will determine the location and the message to be displayed.

706-P01 FIELD OFFICE: Provide a field office which meets the following requirements:

1. Minimum total area of 800 square feet
2. Indoor bathroom facilities with weekly cleaning services
3. Hookups for heat, electricity, sewer, and potable water
4. Minimum cabinet space of 32 cubic feet
5. Minimum counter space of 60 square feet
6. A heating and cooling system that is capable of maintaining the temperature between 65°F and 78°F
7. Lighting with a minimum of 110 foot-candles
8. Photocopy/Printer with scanning capabilities capable of 11x17 photocopies and toner to last the duration of the project. Other features to include digital copying and scanning. Provide a copier/printer machine with operating software compatible with that used by the NDDOT.
9. Supply a photocopier with enough toner to last the length of the project and with the following capabilities:
 - a. Printing;
 - b. Scanning; and
 - c. Producing 11 x 17 photocopies and prints.

Place the field office on the project, or as close to the project as possible. The Contractor is responsible for the pay for the following:

- Rental fees
- Cleaning service
- Heating
- Electrical
- Sewer
- Potable water

Make the field office available for occupancy one week before the start of the project and remain through project completion. The Engineer will approve the location and the condition of the office.

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The Engineer is responsible for the following items:

- Furnishing office equipment;
- Supplying paper; and
- Supplying and paying for internet service.

All requirements of the Field Office are subject to approval by the Engineer. Include the costs for the field office in the bid item "Field Office".

Schedule for Payments:

- 25% when set up on site.
- 50% when 30% of the work is complete.
- 75% when 60% of the work is complete.
- 100% when project is complete.

708-P01 INLET PROTECTION SPECIAL: Place inlet protection as per the details. 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 1st, 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 UNDERGROUND UTILITY INSTALLATION – "SU" PROJECT: Use the City of Fargo Standard Specifications for Construction (most current version) along with these Notes to govern the underground utility construction on this project from Sta 92+78 to Sta 115+75, and from Sta 138+95 to Sta 157+72. Backfill pipes within these station limits with Aggregate Base Course Class 3. Include all costs for backfill in the price bid for "Pipe Conc Reinf ____ CI III-Storm Drain."

714-P02 STORM SEWER MANAGEMENT: Manage all storm sewer systems for the duration of the project. This includes, but is not limited to phasing or optimizing the storm sewer removals and installation to maintain storm sewer drainage. If temporary storm sewer connections are unable to be completed, then pumping of storm water from existing to proposed drainage structures will be allowed, as long as traffic is not impacted. The Contactor shall submit a storm water management plan to the Engineer for approval before the start of the project. All costs associated with storm water management shall not be paid for separately but included in the price bid for "Pipe Conc Reinf ____ CI III-Storm Drain."

714-P03 SILTED PIPES: Clear all silt and debris from any pipe that is to be extended. Include all costs of removing the silt in the price bid for the pipe items.

714-P04 PIPE CONDUIT- STORM DRAIN CONNECTIONS: No field cutting of spiral rib pipe shall be allowed. Attach metal end sections to the ends of spiral rib pipe by standard metal bands or as approved by the Engineer.

714-P05 REMOVAL OF STORM SEWER PIPE AND STRUCTURES: Removal of all storm pipe shall be paid for under bid item "Removal of Pipe All Types and Sizes" on a linear foot basis and includes removing, backfilling, and disposing of all storm sewer pipe irrespective of the depth, pipe material, and/or size of pipe according to Section 1050 of the City of Fargo Standard Specifications. Backfilling shall be ND Modified Class 3 Aggregate and compacted to 95% of Standard Proctor Density.

714-P06 CONNECT TO EXISTING PIPE: For connections of proposed pipe to existing pipe and/or existing pipe to proposed manholes or inlets, the joints and/or connections shall meet the requirements of Section 1500 of the City of Fargo Standard Specifications or be per Manufacturer's recommendations, as approved by the Engineer. The existing pipe material and size shown in Section 55 of the plan set is based on record drawings and field data, no additional compensation will be paid if the pipe is any different material or size.

714-P07 PLUG PIPE: At locations designated on the plans for plug and abandon pipe, blow the pipe full of sand or pump the pipe full of controlled density backfill to prevent any future collapse or failure of the abandoned pipe. Include all costs for labor, materials, and equipment in the price bid for "Plug Pipe – All Types and Sizes".

714-P08 PIPE CONDUIT 24IN – SLIP LINER PIPE: Slip line the existing 36" CSP with a 24" Spiral Rib Pipe Conduit at Sta 118+41 and include the following:

1. Use coupler bands that will accommodate the limited clearance on the outside of the liner pipe.
2. Construct a temporary bulkhead at each end of the liner pipe to allow placement of grout. Place grout in a controlled manner to ensure balanced filling on all sides. Fill the void to its entirety.
3. Take steps necessary to counter the buoyancy of the liner pipe during the grouting process.
4. Clean all silt and debris out of the existing pipe before installing the liner pipe.

Include all costs to isolate the work area and to furnish and install the 24" Spiral Rib Pipe Conduit in the 36" CSP in the price bid for the item "Pipe Conduit 24IN – Storm Drain".

714-P09 EDGEDRAIN NON PERMEABLE BASE: Achieve the openings required to outlet edge drains by coring the openings into manholes, inlets, and reinforced concrete pipe after they have been placed in the field. Connect all existing edge drains encountered to proposed edge drains or structures. Jackhammering will not be allowed to create these openings. A hand-held coring machine, capable of producing a clean cut circular hole, must be used. Placement of the edge drain openings must be such that the proposed grade of the edge drain is maintained. The diameter of the hole shall be sized to allow for a tight fitting seal and shall be water tight on each side of the inlet or manhole. All costs

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required for the described coring shall be included in the price bid for "Edgedrain Non Permeable Base."

- 714-P10 PIPE BENDS: Between Inlet 55B and 55A, a 41° deflection angle is required in the "PIPE CONDUIT 15IN - STORM DRAIN" conduit, as shown in the plans. Install either a single prefabricated bend section or combine various smaller angle prefabricated bend sections to accomplish the required deflection.

Between Sta 118+40 - 98' Lt. and Manhole 55, a 52.5° deflection angle is required in the "PIPE CONDUIT 30IN - STORM DRAIN" conduit, as shown in the plans. Install either a single prefabricated bend section or combine various smaller angle prefabricated bend sections to accomplish the required deflection.

Slight deflections of adjacent pipe joints (up to one degree per joint) may be necessary and will be acceptable to field fit these installations.

Include the cost for furnishing and installing the prefabricated bend sections in the prices bid for the items "PIPE CONDUIT 15IN - STORM DRAIN" and "PIPE CONDUIT 30IN - STORM DRAIN."

- 722-P01 INLETS AND MANHOLES: Inlets 51A, 55B, and 58B have been specified with a minimum 4-foot riser height. The lowest pipe invert elevation is higher than the (RCP) pipe wall thickness above the base elevation of the structure. Fill the void between inlet or manhole base and bottom of lowest pipe with Class AE-3 concrete, and then slope the inlet or manhole bottom to drain using concrete in accordance with the Section 20 Details. Include the costs to accomplish this work in the unit price bid for the respective inlet or manhole pay item.

- 722-P02 MANHOLE CASTING TYPE 1: Provide a Neenah R-1733, EJ1205Z, or approved equal manhole frame, solid lid with self-sealing lid and concealed pick bar or approved equal. See Section 20 Details.

- 722-P03 MANHOLE CASTING TYPE 2: Provide a Neenah R-1955-1 manhole frame, solid lid with self-sealing lid and concealed pick bar or approved equal. Replace existing manhole locations with a grated lid with a new, similarly grated lid approved by the Engineer. Replace the existing manhole castings in the new concrete pavement with a floating manhole casting. See Section 20 Details.

- 722-P04 ADJUST MANHOLE AND ADJUST INLET: Height adjustment of manholes and inlets outside the paving section shall be performed using engineered polymer rings.

Height adjustment of manholes and inlets within the paving section shall be performed using either engineered polymer rings or precast reinforced concrete rings.

When using precast reinforced concrete rings, the rings shall be free from cracks, voids, and other defects. Interior I/I Barrier, manufactured by Strike Products or approved equal, shall be used when height adjustment is performed utilizing round precast reinforced concrete rings. The casting and between each ring shall be sealed

with a minimum 1/2" x 1/2" double bead of butyl rubber sealant in caulking form. Preformed butyl tape will not be allowed. Precast reinforced concrete rings shall be wrapped with nonwoven geotextile fabric, secured around the outside of the rings from three (3) inches below the top of the manhole/inlet structure to the top of the rings. When minor shimming is required, the voids shall be filled with concrete. All precast reinforced concrete rings shall receive a four (4) inch wide concrete encasement placed around the outside of the rings from three (3) inches below the top of the structure to the frame casting.

Height adjustment of manholes and inlets is limited to a maximum of 12" of adjustment and no more than 4 adjusting rings. Taller rings shall be used where required to limit adjustment to 4 adjusting rings.

All existing manholes and inlets that are adjusted to grade shall receive new adjusting rings from existing structure to casting.

- 722-P05 ADJUST MANHOLE SPECIAL: For Manhole 54 located at Sta 118+41, 53' Lt – Lower the top elevation of the existing 60" storm sewer manhole by 1 foot. Remove the manhole casting, rings, concrete cover and top section of manhole riser. Replace the top section of riser with a new riser that is 1' shorter than the existing. Reset the concrete cover, rings and casting onto the new top riser section. Verify the required riser length prior to ordering materials. The contractor has the option of cutting 1' from the existing manhole riser in lieu of replacing the riser. Sawcut the existing riser with a diamond blade to create a level finished sawcut surface.

For other manholes on the project that require lowering or raising existing castings by greater than 1 foot – remove the existing cover, modify the existing manhole, and adjust the height of the existing manhole by removing or adding to the overall manhole build. If manhole has cone section, Contractor can remove the existing cone section and replace it with the appropriate section (an intermediate section or a shorter section). This bid item will only be used in areas that require height adjustment on existing structures due to new street grades. A maximum of 4 adjustment rings will be allowed per casting.

Section 50 of the plans shows the approximate adjustment heights required. Field verify the actual adjustment height prior to submitting work drawings. Include the costs for removal, disposal, materials, equipment and labor in the price bid for "Adjust Manhole Special".

- 722-P06 MANHOLES: Fabricate Manholes 52 and 55 in accordance with NDDOT Standard Drawing D-722-5. Include the cost for the manhole riser in the price bid for "Manhole ____". Construct all other manholes in accordance with the Section 20 Details shown in the plans. All new manholes on this project that are within the roadway pavement shall be floating castings.

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The bottom of inlets or manholes shall be filled with concrete up to the elevation that will accommodate the lowest invert elevation. All joints for plastic pipe and edge drain connections shall be sealed gasketed joints. All costs to accomplish this work will be included in the unit price bid for the respective inlet or manhole.

724-P01 WATER MAIN SHUT DOWNS: Included in the plans is a water main layout for the immediate area. Water main valves requiring shut down for water connections as part of this project are shown along with their corresponding location ties. Using this information, the Contractor will be responsible for the following:

- Gate valve location
- Coordination with Mains and Hydrants Department for cleaning and operating if required. Contact Terry Schmidt or Bob Hoffman with Mains and Hydrants at 241-1453.
- Complying with all other provisions of Section 1300.3.b of the City of Fargo Standard Specifications.
- Notify all properties affected by shutdown a minimum of 48 hours prior to shutdown. The Contractor will be required to work with affected properties/businesses to schedule a time frame to shut down the water main that would be acceptable. All shut downs shall be scheduled to be completed after hours (when businesses are closed) or during acceptable non-peak hours. If an agreement cannot be reached, provide temporary water service to the business paid for as "Temporary Water Service."

724-P02 WATER TOWER AT 3220 32ND AVE S: Contact Troy Hall, City of Fargo Water Utility Director, 701-476-6741 minimum of 48 hours prior to work commencing, to coordinate on scheduling shutdown for installation of the new gate valve at Sta 148+47 Rt.

724-P03 REMOVE HYDRANT: Remove and salvage hydrant, hydrant valve, and valve box and deliver to City Personnel at the City of Fargo cold storage site at 2401 5th Avenue North, Fargo. All costs for removing, salvaging, and delivery of the hydrants shall be included in the price bid for "Remove Hydrant."

724-P04 CONNECTION TO EXISTING MAIN: This item includes all costs associated with the work to connect proposed pipe to existing pipe. The joints, couplings, and/or connections shall meet the requirements of Section 1500 of the City of Fargo Standard Specifications or be per manufacturer's recommendations, as approved by the Engineer. The existing pipe material and size shown in Section 55 of the plan set is based on record drawings. Removing existing water main plugs prior to making a new connection to the existing main shall be included in the price bid for "Connection to Existing Main."

724-P05 WATERMAIN DISINFECTION: Excavate the existing water main to provide a minimum 18 inches of clearance all around the pipe. Pump the discharge water and maintain a level below the existing water main to prevent contaminates entering existing water main system. Maintain a flow from each direction of existing water main to prevent backflow into pipe.

Disinfect all pumping equipment, piping, appurtenances and all other equipment in contact with potable water prior to use. Do not use water trucks for disinfection of water main.

Prior to installation:

- Jet all new sections of water main pipe both directions with pressurized potable water to remove any debris. Pressure wash all new couplings, valves, and fittings with potable water.
- Swab or spray the pipe, couplings, valves, and fittings with a minimum 1 % chlorine solution to disinfect the interior surfaces.
- Protect the interiors of pipes, couplings, valves, and fittings from contamination until installation.

Following installation:

- Flush the main.
- Coordinate with all property owners affected by shutdowns to flush their systems.

Include all costs for disinfecting and flushing water main in the price bid for "Watermain ___ PVC."

724-P06 EXISTING WATERMAIN ELEVATION: To verify the existing water main elevation, expose the top of pipe in various locations (up to 3) as directed by Engineer prior to installing the underground utilities. Include all costs for this work in the price bid for "Watermain ___ PVC."

724-P07 GATE VALVE BOXES: Inspect the gate boxes and drop a key on each valve prior to construction.

750-P01 PIGMENTED IMPRINTED CONCRETE: Develop a mix design using any size coarse aggregate specified in 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.

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1. Number 338 Leather, produced by Solomon Colors, Inc.
<http://www.solomoncolors.com/>;
2. Number 61078 Adobe, produced by Davis Colors <http://www.daviscolors.com/>

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. Pattern shall be Pinwheel Brick Pattern.

Cure concrete using curing compound that meets the requirements of ASTM C 309, Type 1.

750-P02 SIDEWALK CONCRETE REINF: Saw contraction joints in a timely manner and construct every 4.5' on the 8 or 10' wide shared use path and every 4.5' on the sidewalk. Place one half-inch expansion joint at intervals not to exceed 150'.

Use a No. 3 deformed reinforcing bar placed 24" o.c. both ways on all sidewalks. The bar shall be six (6) inches shorter than the width of the slab and placed accurately at one-half the depth of the slab. Use plastic chairs.

Use No. 3 bars 24" o.c. both ways on the shared use path. Use four (4) No. 3 bars 10' long, centered over new utility trenches for both the sidewalk and shared use path. Place and compact the aggregate base to the required uniform section prior to setting forms for the concrete sidewalk.

Saw all longitudinal and transverse joints. Saw a centerline longitudinal joint on the 8' or wider shared use path. Match the existing elevation for newly placed concrete within +/-1/8" of all adjoining concrete. Remove any placed concrete not properly matching elevations as deemed by the Engineer, and replace at the contractor's expense. Include all items listed above in the price bid for "Sidewalk Concrete Reinf" and "Sidewalk Concrete 4In."

750-P03 DETECTABLE WARNING PANELS: Use cast-in-place, unpainted cast iron plates manufactured by East Jordan Iron Works, Neenah Foundry, or approved equal.

752-P01 CHAIN LINK FENCE: The contractor may salvage the existing chain link fence fabric from the fence that is removed. He shall be allowed to use this salvaged fabric for the proposed fencing that is required. Portions of the chain link fabric shall only be re-used if it is determined to be of satisfactory condition by the engineer in the field. If it is determined that the fabric is in unsatisfactory condition, the proposed fence shall be constructed with new material. Include all costs for this described work in the price bid for "Fence Chain Link".

752-P02 TEMPORARY SAFETY FENCE: A quantity of 1,000 LF has been added to be used as directed by the Engineer. Payment includes the removal of the temporary safety fence.

754-P01 OBJECT MARKERS - CULVERTS: Remove existing object markers located at culvert end sections that are impacted by earthwork activities and pipe replacements. Include the cost for removal and disposal in the price bid for "Object Markers – Culverts".

762-P01 TEMPORARY PAVEMENT MARKING: If the project is not complete by the completion date, place temporary pavement markings at the permanent marking locations shown in the Section 120 plans. Use epoxy for all temporary markings. Quantities for temporary markings are shown in Section 10 Basis of Estimate. Obliteration of temporary pavement markings as shown and described in Section 10, shall not be paid for separately but shall be included in the price bid for "EPOXY PVMT MK _____".

766-P01 MAILBOX: If a mailbox is shown to be reset to a different location along the street than where it was originally, notify the affected businesses and the US Postal Service of the new location.

806-P01 GROUT: Use the pressure grout method to fill the voids between the 24" spiral rib liner and 36" CSP.

Form the opening sufficiently at the inlet and outlet ends of the pipe to provide a smooth, even surface between the liner and the existing 36" CSP.

Use a grout mixture of one part cement and five parts fine aggregate, by volume, with 7 pounds of bentonite added for each sack of cement (based on a 200-barrel yield bentonite.) Adjust the amount of bentonite added per sack of cement proportionally, if the yield of bentonite varies. Use the minimum slump necessary to facilitate placement. Use grout materials that meet the following requirements:

1. Cement as specified in Section 804 of the Standard Specifications.
2. Fine aggregate meeting the requirements of Subsection 802.01 C.3 of the Standard Specifications.
3. Commercially packaged bentonite.

Maintain grout injection pressures to fill the void without causing deformation of the liner. Include mixing and batching facilities, a pump specifically designed for pressure injection of grout, pipe, hose, and fixtures to convey the grout into the void in the grouting equipment. Calibrate all equipment before beginning work. Continually monitor grout pump pressures with a liquid-filled diaphragm in-line gauge.

Include all costs of materials, equipment and labor to pressure grout the void in the price bid for "Grout".

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930-P01 CONCRETE MODULAR BLOCK RETAINING WALL: The concrete modular block wall shall conform to the following requirements:

1. Special Provision 392(14) – “Modular Retaining Wall System”.
2. The concrete modular block retaining wall shall be constructed to the same lines and grades as shown in the plans. The wall shall have a modular block facing.
3. Following approval of a block type, color samples of the block units shall be submitted to the Fargo District for selection.

970-P01 REPLANT TREES (“IM” PROJECT): This work consists of removing and replanting trees within the “IM” portion of the project (32nd Avenue South Interchange, Sta 115+75 to Sta 138+95). The described trees were originally planted in 2004. Remove and replant the trees as shown in the Landscaping plan sheets (IM project) shown in Section 85. Remove 61 trees and replant only 51. The contractor shall pick the healthiest trees to be replanted. Transplant the trees prior to the earth moving operations.

Transplant trees only when dormant, preferably in the early spring, unless otherwise directed by the Engineer. Remove the trees with a solid ball of earth around the roots. Provide a ball with a diameter not less than 10 times the diameter of the trunk of the tree measured 1 ft above the surface of the ground. Provide a ball depth not less than 60% of its diameter for balls up to 48 in diameter. For balls over 48 in diameter provide a ball with sufficient depth to maintain a solid structure and to encompass all the feeding roots under the ball area. Use a mechanical tree spade to replant the trees. Power shovels and similar machinery may not be used in digging the ball except with written permission.

Prior to placing topsoil within the tree pits rototill the bottom of the tree pit to a minimum 6” depth within. Break up large clumps, remove any extraneous material, and re-shape the subgrade prior to placing topsoil.

Water the root ball of the tree thoroughly prior to removal to keep the root ball intact and reduce as much soil loss as possible during transports. Maintain the ball as a solid unit when moving the tree. Keep the ball moist at all times during transplanting operations.

Take care to prevent injury to the tree during the transplanting operation. Protect all parts of the tree. Tie branches out of the way of possible injury. Do not attach chains, cables, or heavy ropes to the trunk or branches without protective padding adequate to prevent bruising or other injury.

Replant the trees to a 40’ center to center tree spacing. Position the tree in the new hole 2-3” higher than the original grade to allow for settling. Water the newly transplanted trees by the end of the same day they are planted so the original soil ball and surrounding soil is saturated to a depth of 12”. Apply water slowly to entire area, allowing adequate penetration. Complete the watering operation in a manner such that the tree settles into a plumb position.

Stake the trees with two or more painted T-shaped steel posts securely inserted to a 3’ depth and outside the root system. Extend a galvanized guy wire from the tree stake to a polypropylene strap around the tree trunk.

Provide mulch materials that are free of all foreign debris. Present mulch samples to the Engineer for approval. Obtain approval for mulch material prior to installation. Mulch material installed without prior approval will be removed from the project. Ensure that all plant pits and beds are entirely free of weed or grass growth and free of live roots at the time mulch is applied. Keep mulch 6” away from the tree trunks. Cover the disturbed surface area of plant beds and pits evenly and uniformly to a 4” depth with bark mulch or as directed by the Engineer.

Protect and care for the trees until November 1, 2017. Water them weekly during dry weather or as otherwise directed. Provide a 20 gallon slow release supplemental water bag for each tree transplanted. Protect the trees from damage and from diseases and insect pests.

Include the cost for all equipment, materials, and labor required to remove and replant, maintain and water the trees in the unit price “Replant Trees.”

970-P02 TREES (“SU” PROJECT): The work for planting new trees as shown in Section 85 within the “SU” portion of this project (32nd Avenue South from Sta 92+78 to Sta 115+75, and from Sta 138+95 to Sta 157+72), shall conform to Section 7000 of the City of Fargo Standard Specifications for Construction (most current version). New trees shall have a minimum caliper of 1.5 inches.

970-P03 LANDSCAPE PLANTINGS: Restore all disturbed landscaping, rock beds, planting beds, irrigation systems, and electrical systems on private property to their original condition, to the satisfaction of the Engineer. Include all costs associated with this work in the price bid for “Landscape Plantings.”

970-P04 TREES LOCATED IN TEMPORARY CONSTRUCTION EASEMENT: Do not disturb or remove any trees located within the temporary construction easement north of 32nd Avenue South near the Flying J Travel Plaza.

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ESTIMATE OF QUANTITIES								
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU-8-984(152)155	IM-8-029(166)062	IM-8-029(166)062 Drainage	City of Fargo	TOTAL
103	0100	CONTRACT BOND	L SUM	0.4	0.6	-	-	1.0
108	0001	CRITICAL PATH METHOD SCHEDULE	L SUM	0.4	0.6	-	-	1.0
201	0331	CLEARING & GRUBBING-SITE 1	L SUM	1	-	-	-	1
201	0332	CLEARING & GRUBBING-SITE 2	L SUM	-	1	-	-	1
202	0111	REMOVAL OF CONCRETE	L SUM	-	1	-	-	1
202	0113	REMOVAL OF CONCRETE	CY	-	30	-	-	30
202	0136	REMOVAL OF PAVEMENT	TON	37,635	22,508	-	-	60,143
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	2,508	1,232	-	-	3,740
202	0210	REMOVAL OF MANHOLES	EA	4	2	-	-	6
202	0230	REMOVAL OF INLETS	EA	25	9	-	-	34
202	0235	REMOVAL OF CATCH BASIN	EA	6	-	-	-	6
202	0310	REMOVAL OF CHAIN LINK FENCE	LF	-	449	-	-	449
202	0312	REMOVE EXISTING FENCE	LF	107	-	-	-	107
202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	4	81	-	-	85
203	0101	COMMON EXCAVATION-TYPE A	CY	9,779	25,884	-	-	35,663
203	0109	TOPSOIL	CY	2,676	19,256	-	-	21,932
203	0121	TOPSOIL-WETLAND	CY	-	662	-	-	662
203	0122	TOPSOIL-DEPT OPTION BORROW AREA	CY	-	6,800	-	-	6,800
203	0138	COMMON EXCAVATION-SUBCUT	CY	1,300	-	-	-	1,300
203	0140	BORROW-EXCAVATION	CY	-	32,774	-	-	32,774
210	0050	BOX CULVERT EXCAVATION	EA	-	1	-	-	1
210	0099	CLASS 1 EXCAVATION	L SUM	-	1	-	-	1
210	0201	FOUNDATION PREPARATION	EA	-	1	-	-	1
210	0210	FOUNDATION FILL	CY	-	2,050	-	-	2,050
210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA	-	1	-	-	1
216	0100	WATER	M GAL	539	665	-	-	1,204
230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	46.47	-	-	-	46.47
251	0200	SEEDING CLASS II	ACRE	-	10.000	-	-	10.000
251	0300	SEEDING CLASS III	ACRE	3.487	21.990	-	-	25.477
251	1000	WETLAND SEED	ACRE	-	0.820	-	-	0.820
251	2000	TEMPORARY COVER CROP	ACRE	-	10.000	-	-	10.000
253	0101	STRAW MULCH	ACRE	-	10.000	-	-	10.000
253	0201	HYDRAULIC MULCH	ACRE	3.487	32.551	-	-	36.038
253	0301	BONDED FIBER MATRIX	ACRE	3.487	12.876	-	-	16.363
255	0103	ECB TYPE 3	SY	20	432	-	-	452
258	0100	CONCRETE SLOPE PROTECTION	SY	-	220.7	-	-	220.7
258	0200	REMOVE & REPLACE CONCRETE SLOPE PROTECTION	SY	-	44.7	-	-	44.7
260	0100	SILT FENCE UNSUPPORTED	LF	-	2,600	-	-	2,600

32nd Avenue South
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ESTIMATE OF QUANTITIES								
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU-8-984(152)155	IM-8-029(166)062	IM-8-029(166)062 Drainage	City of Fargo	TOTAL
260	0101	REMOVE SILT FENCE UNSUPPORTED	LF	-	2,600	-	-	2,600
261	0112	FIBER ROLLS 12IN	LF	6,776	27,815	-	-	34,591
261	0113	REMOVE FIBER ROLLS 12IN	LF	3,388	11,705	-	-	15,093
302	0050	TRAFFIC SERVICE AGGREGATE	TON	2,500	-	-	-	2,500
302	0101	SALVAGED BASE COURSE	CY	16,218	11,766	-	-	27,984
430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	2,651	915	-	-	3,566
550	0310	10IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	20,729	15,105	-	-	35,834
550	0320	12IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	10,546	10,182	-	-	20,728
570	0210	PCC PAVEMENT GRINDING	SY	12,848	-	-	-	12,848
570	0963	TRANSVERSE PCC JOINT CLEANING & SEALING	LF	8,688	8,637	-	-	17,325
570	0965	LONGITUDINAL PCC JOINT CLEANING & SEALING	LF	8,477	7,334	-	-	15,811
602	0130	CLASS AAE-3 CONCRETE	CY	-	374.4	-	-	374.4
602	1130	CLASS AE-3 CONCRETE	CY	-	119.6	-	-	119.6
602	1134	PILE SUPPORTED APPROACH SLAB	SY	-	553.8	-	-	553.8
602	1135	BRIDGE APPROACH SLAB-REMOVE & REPLACE	SY	-	553.8	-	-	553.8
602	1250	PENETRATING WATER REPELLENT TREATMENT	SY	-	3,151	-	-	3,151
606	1209	12FT X 9FT PRECAST RCB CULVERT	LF	-	90	-	-	90
606	5209	12FT X 9FT PRECAST RCB END SECTION	EA	-	2	-	-	2
612	0115	REINFORCING STEEL-GRADE 60	LBS	-	14,494	-	-	14,494
612	0116	REINFORCING STEEL-GRADE 60-EPOXY COATED	LBS	-	79,265	-	-	79,265
616	5890	STRUCTURAL STEEL	L SUM	-	1	-	-	1
622	0020	STEEL PILING HP 10 X 42	LF	-	3,150	-	-	3,150
622	0040	STEEL PILING HP 12 X 53	LF	-	1,890	-	-	1,890
624	0126	PEDESTRIAN CANOPY	LF	-	264.3	-	-	264.3
650	0704	OVERLAY CONCRETE	CY	-	144	-	-	144
650	0710	CLASS 1-H REMOVAL	SY	-	2,702	-	-	2,702
650	0711	CLASS 2-H REMOVAL	SY	-	675	-	-	675
650	0712	CLASS 3-H REMOVAL	SY	-	135	-	-	135
702	0100	MOBILIZATION	L SUM	0.4	0.6	-	-	1.0
704	0100	FLAGGING	MHR	8,060	5,000	-	-	13,060
704	1000	TRAFFIC CONTROL SIGNS	UNIT	8,770	3,761	-	-	12,531
704	1035	ATTENUATION DEVICE-TYPE B-25	EA	-	2	-	-	2
704	1045	ATTENUATION DEVICE-TYPE B-75	EA	-	4	-	-	4
704	1051	TYPE II BARRICADE	EA	23	-	-	-	23
704	1052	TYPE III BARRICADE	EA	134	58	-	-	192
704	1060	DELINEATOR DRUMS	EA	1,450	414	-	-	1,864
704	1067	TUBULAR MARKERS	EA	100	63	-	-	163
704	1072	FLEXIBLE DELINEATORS	EA	300	-	-	-	300

32nd Avenue South
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ESTIMATE OF QUANTITIES								
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU-8-984(152)155	IM-8-029(166)062	IM-8-029(166)062 Drainage	City of Fargo	TOTAL
704	1080	STACKABLE VERTICAL PANELS	EA	-	295	-	-	295
704	1085	SEQUENCING ARROW PANEL-TYPE A	EA	4	-	-	-	4
704	1087	SEQUENCING ARROW PANEL-TYPE C	EA	-	3	-	-	3
704	1500	OBLITERATION OF PAVEMENT MARKING	SF	3,305	4,210	-	-	7,515
704	3510	PRECAST CONCRETE MED BARRIER-STATE FURNISHED	EA	-	377	-	-	377
704	4011	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2	2	-	-	4
706	0400	FIELD OFFICE	EA	1	1	-	-	2
706	0500	AGGREGATE LABORATORY	EA	-	1	-	-	1
708	1531	INLET PROTECTION-FIBER ROLL 12IN	EA	26	-	-	-	26
708	1533	REMOVAL INLET PROTECTION-FIBER ROLL 12IN	EA	14	-	-	-	14
708	1540	INLET PROTECTION-SPECIAL	EA	114	20	-	-	134
708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	50	20	-	-	70
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	-	210	-	-	210
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	40,013	1,275	-	-	41,288
710	0410	REMOVAL OF TEMP CONNECTION	EA	-	1	-	-	1
714	0210	PIPE CONC REINF 15IN CL III-STORM DRAIN	LF	853	-	-	-	853
714	0315	PIPE CONC REINF 18IN CL III-STORM DRAIN	LF	950	-	-	-	950
714	0405	PIPE CONC REINF 21IN CL III-STORM DRAIN	LF	365	-	-	-	365
714	0620	PIPE CONC REINF 24IN CL III-STORM DRAIN	LF	262	14	-	-	276
714	0870	PIPE CONC REINF 33IN CL III-STORM DRAIN	LF	51	-	-	-	51
714	3005	END SECT-CONC REINF 15IN	EA	1	-	-	-	1
714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	-	224	258.0	-	482
714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	-	965	-	-	965
714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	-	305	137	-	442
714	4112	PIPE CONDUIT 30IN-STORM DRAIN	LF	-	55	-	-	55
714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	-	238	-	-	238
714	4124	PIPE CONDUIT 36IN-JACKED OR BORED	LF	-	504	-	-	504
714	7030	PIPE PVC 12IN	LF	114	110	-	-	224
714	9680	PLUG PIPE-ALL TYPES & SIZES	EA	-	3	-	-	3
714	9696	EDGEDRAIN NON PERMEABLE BASE	LF	8,504	-	-	-	8,504
722	0100	MANHOLE 48IN	EA	6	-	-	-	6
722	0110	MANHOLE 60IN	EA	2	-	-	-	2
722	0120	MANHOLE 72IN	EA	-	1	-	-	1
722	0130	MANHOLE 84IN	EA	-	1	-	-	1
722	0317	MANHOLE CASTING TYPE 1	EA	3	-	-	-	3
722	0318	MANHOLE CASTING TYPE 2	EA	10	-	-	-	10
722	2490	MANHOLE STORM CONNECTION	EA	19	-	-	-	19
722	2500	MANHOLE SPECIAL	EA	3	-	-	-	3
722	3499	INLET	EA	7	-	-	-	7
722	3510	INLET-TYPE 2	EA	15	15	-	-	30
722	3520	INLET-TYPE 2 DOUBLE	EA	16	2	-	-	18

32nd Avenue South
Estimate of Quantities

IM-8-029(166)062

ESTIMATE OF QUANTITIES								
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU-8-984(152)155	IM-8-029(166)062	IM-8-029(166)062 Drainage	City of Fargo	TOTAL
722	3701	INLET SPECIAL-TYPE 2 48IN	EA	2	2	-	-	4
722	3766	INLET SPECIAL-TYPE 2 72IN	EA	-	1	-	-	1
722	3910	INLET SLOTTED DRAIN 15IN	LF	-	130	-	-	130
722	6160	ADJUST INLET	EA	8	-	-	-	8
722	6200	ADJUST MANHOLE	EA	10	-	-	-	10
722	6201	ADJUST MANHOLE SPECIAL	EA	15	1	-	-	16
722	6240	ADJUST UTILITY APPURTENANCE	EA	19	-	-	-	19
724	0210	FITTINGS-DUCTILE IRON	LBS	-	-	-	630	630
724	0270	REMOVE GATE VALVE & BOX	EA	-	-	-	11	11
724	0300	GATE VALVE & BOX 6IN	EA	-	-	-	7	7
724	0317	GATE VALVE & BOX 16IN	EA	-	-	-	1	1
724	0410	HYDRANT-INSTALL 5IN	EA	-	-	-	10	10
724	0430	REMOVE HYDRANT	EA	-	-	-	10	10
724	0550	TAPPING SLEEVE & VALVE 16IN X 6IN	EA	-	-	-	3	3
724	0670	TEMPORARY WATER SERVICE	L SUM	-	-	-	1	1
724	0810	WATERMAIN 6IN PVC	LF	-	-	-	235	235
724	0852	WATERMAIN 16IN PVC	LF	-	-	-	47	47
724	0944	CONNECTION TO EXISTING MAIN	EA	-	-	-	11	11
724	1536	CURED-IN-PLACE PIPE-36IN	LF	-	-	-	1,296	1,296
748	0120	CURB & GUTTER MOUNTABLE-TYPE I	LF	168	-	-	-	168
748	0140	CURB & GUTTER-TYPE I	LF	9,692	3,504	-	-	13,196
748	0190	CURB & GUTTER-TYPE I 30IN	LF	8,743	6,696	-	-	15,439
748	0520	CURB-TYPE I	LF	53	-	-	-	53
750	0030	PIGMENTED IMPRINTED CONCRETE	SY	2,319	2,575	-	-	4,894
750	0101	SIDEWALK CONCRETE REINF	SY	6,250	1,660	-	-	7,910
750	0115	SIDEWALK CONCRETE 4IN	SY	-	43	-	-	43
750	0200	CONCRETE MEDIAN PAVING	SY	-	153.4	-	-	153.4
750	0210	CONCRETE MEDIAN NOSE PAVING	SY	50	79	-	-	129
750	1021	DRIVEWAY CONCRETE 8IN REINFORCED	SY	1,102	-	-	-	1,102
750	2115	DETECTABLE WARNING PANELS	SF	582	88	-	-	670
752	0600	FENCE CHAIN LINK	LF	-	490	-	-	490
752	0911	TEMPORARY SAFETY FENCE	LF	500	500	-	-	1,000
752	3100	CORNER ASSEMBLY CHAIN LINK	EA	-	7	-	-	7
752	4160	DOUBLE BRACE ASSEMBLY CHAIN LINK	EA	-	2	-	-	2
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	321	314	-	-	635
754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	104	160	-	-	264
754	0193	FLEXIBLE DELINEATORS-TYPE D	EA	27	5	-	-	32
754	0196	DIAMOND GRADE DELINEATORS-TYPE B	EA	-	8	-	-	8
754	0198	DIAMOND GRADE DELINEATORS-TYPE D	EA	-	18	-	-	18
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	736	245	-	-	981
754	0210	GALV STEEL POST-STANDARD PIPE	LF	-	288	-	-	288

32nd Avenue South
Estimate of Quantities

IM-8-029(166)062

ESTIMATE OF QUANTITIES								
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU-8-984(152)155	IM-8-029(166)062	IM-8-029(166)062 Drainage	City of Fargo	TOTAL
754	0214	GALV STEEL POSTS-W-SHAPE POSTS(TWO OR MORE)	LF	-	209	-	-	209
754	0530	PANEL FOR SIGNS-TYPE XI REFLECTIVE SHEETING	SF	-	1,865	-	-	1,865
754	0534	PANEL FOR SIGNS-TYPE IV REFLECTIVE SHEETING	SF	-	726	-	-	726
754	0541	OVERLAY PANEL-TYPE IV REFLECTIVE SHEETING	SF	-	257	-	-	257
754	0542	OVERLAY PANEL-TYPE XI REFLECTIVE SHEETING	SF	-	740	-	-	740
754	0592	RESET SIGN PANEL	EA	7	3	-	-	10
754	0801	OBJECT MARKERS - TYPE I	EA	-	1	-	-	1
754	0805	OBJECT MARKERS - CULVERTS	EA	-	31	-	-	31
754	1100	CLASS AE CONCRETE-SIGN FOUNDATIONS	CY	-	25.9	-	-	25.9
754	1104	REMOVE SIGN FOUNDATION	EA	-	17	-	-	17
754	1211	OVERHEAD SIGN STR BRIDGE MOUNTED	EA	-	2	-	-	2
754	1220	REMOVE OVERHEAD SIGN STR BRIDGE MOUNTED	EA	-	2	-	-	2
754	1240	REVISE OVERHEAD SIGN STR BRIDGE MOUNTED	EA	-	1	-	-	1
754	1305	OVERHEAD SIGN STR 20FT CANTILEVER	EA	-	1	-	-	1
754	1314	OVERHEAD SIGN STR 29FT CANTILEVER	EA	-	1	-	-	1
754	1390	REMOVE OVERHEAD SIGN STR CANTILEVER	EA	-	2	-	-	2
754	1590	REMOVE OVERHEAD SIGN STR TRUSS	EA	-	1	-	-	1
754	1599	REVISE OVERHEAD SIGN STR TRUSS	EA	-	2	-	-	2
762	0112	EPOXY PVMT MK MESSAGE	SF	829	880	-	-	1,709
762	0113	EPOXY PVMT MK 4IN LINE	LF	5,964	19,796	-	-	25,760
762	0114	EPOXY PVMT MK 6IN LINE	LF	2,408	171	-	-	2,579
762	0115	EPOXY PVMT MK 8IN LINE	LF	8,748	9,774	-	-	18,522
762	0116	EPOXY PVMT MK 16IN LINE	LF	621	-	-	-	621
762	0117	EPOXY PVMT MK 24IN LINE	LF	-	488	-	-	488
762	0122	PREFORMED PATTERNED PVMT MK-MESSAGE(GROOVED)	SF	829	880	-	-	1,709
762	0420	SHORT TERM 4IN LINE-TYPE R	LF	1,585	-	-	-	1,585
762	0424	SHORT TERM 8IN LINE-TYPE R	LF	6,345	-	-	-	6,345
762	0425	SHORT TERM 16IN LINE-TYPE R	LF	650	-	-	-	650
762	0440	SHORT TERM MESSAGE-TYPE R	SF	1,329	-	-	-	1,329
762	1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED	LF	3,116	17,616	-	-	20,732
762	1307	PREFORMED PATTERNED PVMT MK 6IN LINE-GROOVED	LF	2,408	171	-	-	2,579
762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	8,748	9,774	-	-	18,522
762	1317	PREFORMED PATTERNED PVMT MK 16IN LINE-GROOVED	LF	621	-	-	-	621
762	1325	PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED	LF	-	488	-	-	488
762	1344	PREF PATT PVMT MK 7IN LINE CONTRAST-GROOVED	LF	2,848	2,180	-	-	5,028
764	0131	W-BEAM GUARDRAIL	LF	-	104	-	-	104
764	0145	W-BEAM GUARDRAIL END TERMINAL	EA	-	2	-	-	2
764	0151	REMOVE W-BEAM GUARDRAIL & POSTS	LF	-	104	-	-	104
764	2081	REMOVE END TREATMENT & TRANSITION	EA	-	2	-	-	2

32nd Avenue South
Estimate of Quantities

Revised 1/20/17 Revised 1/31/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
	ND	SU-8-984(152)155	8	6

IM-8-029(166)062

ESTIMATE OF QUANTITIES								
SPEC	CODE	ITEM DESCRIPTION	UNIT	SU-8-984(152)155	IM-8-029(166)062	IM-8-029(166)062 Drainage	City of Fargo	TOTAL
764	9010	ATTENUATING CRASH CUSHION TL-2	EA	-	4	-	-	4
764	9030	REMOVE ATTENUATING CRASH CUSHION TL-2	EA	-	5	-	-	5
764	9035	REMOVE ATTENUATING CRASH CUSHION TL-3	EA	-	2	-	-	2
766	0100	MAILBOX-ALL TYPES	EA	5	-	-	-	5
770	0003	LIGHTING SYSTEM A	EA	1	-	-	-	1
770	0004	LIGHTING SYSTEM B	EA	-	1	-	-	1
770	4525	REVISE LIGHTING SYSTEM	EA	-	1	-	-	1
772	0450	INTERCONNECT CABLE	LF	-	1,128	-	-	1,128
772	2800	INTERIM TRAFFIC SIGNALS	EA	3	3	-	-	6
772	3125	REMOVE TRAFFIC SIGNAL SYSTEM	EA	-	3	-	-	3
772	9200	IT SYSTEM	EA	-	1	-	-	1
772	9201	IT SYSTEM A	EA	1	-	-	-	1
772	9811	TRAFFIC SIGNAL SYSTEM - SITE 1	EA	-	1	-	-	1
772	9812	TRAFFIC SIGNAL SYSTEM - SITE 2	EA	-	1	-	-	1
772	9813	TRAFFIC SIGNAL SYSTEM - SITE 3	EA	-	1	-	-	1
772	9814	TRAFFIC SIGNAL SYSTEM - SITE 4	EA	1	-	-	-	1
772	9815	TRAFFIC SIGNAL SYSTEM - SITE 5	EA	1	-	-	-	1
772	9816	TRAFFIC SIGNAL SYSTEM - SITE 6	EA	1	-	-	-	1
806	0300	GROUT	CF	-	-	360.0	-	360
930	3000	BRIDGE BENCH MARKS	SET	-	1	-	-	1
930	7012	ROADWAY CANOPY	L SUM	-	1	-	-	1
930	8670	CONCRETE SLEEPER SLAB	EA	-	4	-	-	4
930	8700	3 IN EXPANSION JOINT	LF	-	216	-	-	216
930	9537	ABUTMENT UNDERDRAIN SYSTEM	EA	-	2	-	-	2
930	9551	CONCRETE MODULAR BLOCK RETAINING WALL	SF	-	1,099	-	-	1,099
930	9612	SPALL REPAIR	SF	-	16	-	-	16
970	0001	LANDSCAPING APPURTENANCES	L SUM	-	1	-	-	1
970	1011	LANDSCAPE PLANTINGS	L SUM	1	-	-	-	1
970	1025	REPLANT TREES	EA	-	51	-	-	51
970	2032	AUTUMN SPLENDOR BUCKEYE	EA	11	-	-	-	11
970	2045	AMUR CHOKECHERRY	EA	7	-	-	-	7
970	2050	COMMON HACKBERRY	EA	18	-	-	-	18
970	2150	NORTHERN ACCLAIM HONEYLOCUST	EA	17	-	-	-	17
970	2202	SPRING SNOW CRABAPPLE	EA	9	-	-	-	9
970	2330	BUR OAK	EA	11	-	-	-	11
970	2392	IVORY SILK LILAC	EA	3	-	-	-	3
970	2436	HARVEST GOLD LINDEN	EA	20	-	-	-	20
970	2449	ACCOLADE ELM	EA	12	-	-	-	12
970	2472	PRINCETON ELM	EA	15	-	-	-	15
980	0816	VERTICAL ROAD CLOSURE GATE-40FT	EA	-	1	-	-	1
980	0820	REMOVE ROAD CLOSURE GATE	EA	-	1	-	-	1

32nd Avenue South
Estimate of Quantities