

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION
REQUEST FOR PROPOSAL

STATE FEDERAL AID PROJECT NO. IM-8-094(105)350 (PCN-22628)

0.945 Miles

LIFT STATION AND STORM SEWER IMPROVEMENTS
I94, 25TH ST E TO UNIVERSITY DR (US 81B) - FARGO

CASS COUNTY

DBE Race Neutral Goal - 0%

BID OPENING: The bidder's proposal will be accepted via the Bid Express on-line bidding exchange at www.bidx.com until **09:30AM Central Time on February 03, 2023.**

Prior to submitting a Proposal, the Bidder shall complete all applicable sections and properly execute the Proposal Form in accordance with the specifications.

Proposal Form of:

(Firm Name)

(Address, City, State, Zipcode)

(For official use only)

PAGE INTENTIONALLY LEFT BLANK

Project: IM-8-094(105)350 (PCN-22628)

The company, firm, corporation, or individual hereby acknowledges that it has designated a responsible person or persons as having the authority to obligate the company, firm, or individual, through electronic or paper submittal, to the terms and conditions described herein and in the contract documents. The designated responsible person submitting this proposal shall be hereafter known as the bidder. By submitting this proposal, the bidder fully accepts and agrees to all the provisions of the proposal. The bidder also certifies that the information given in this proposal is true and the certifications made in this proposal are correct.

The bidder acknowledges that they have thoroughly examined the plans, proposal form, specifications, supplemental specifications, special provisions and agrees that they constitute essential parts of this proposal.

The bidder acknowledges that all line items which contain a quantity shall have a unit price bid. Any line item which is bid lump sum shall contain a lump sum bid price.

The bidder acknowledges that they understand that the quantities of work required by the plans and specifications are approximate only and are subject to increases and decreases; the bidder understands that all quantities of work actually required must be performed and that payment therefore shall be at the prices stipulated herein; that the bidder proposes to timely furnish the specified materials in the quantities required and to furnish the machinery, equipment, labor and expertise necessary to competently complete the proposed work in the time specified.

NON-COLLUSION AND DEBARMENT CERTIFICATION

The bidder certifies that neither he/she, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid.

By submitting this proposal, the bidder certifies to the best of his/her knowledge and belief that he/she and his/her principles:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal Department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or perform a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property

Project: IM-8-094(105)350 (PCN-22628)

-
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph b. of the certification; and
 - d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or Local) terminated for cause or default

Where the prospective bidder is unable to certify to any of the statements in this certification, the bidder shall submit an explanation in the blanks provided herein. The explanation will not necessarily result in denial of participation in a contract:

Explanation: _____

If the prequalified bidder's status changes, he/she shall immediately submit a new fully executed non-collusion affidavit and debarment certification with an explanation of the change to the Contract Office prior to submitting the bid.

Failure to furnish a certification or an explanation will be grounds for rejection of a bid.

BID LIMITATION (Optional)

The bidder who desires to bid on more than one project on which bids are to be opened on the same date, and who also desires to avoid receiving an award of more projects than the bidder is equipped to handle, may bid on multiple projects and limit the total amount of work awarded to the bidder on selected projects by completing the "Bid Limitation".

The Bid Limitation must be filled in on each proposal form for which the Bidder desires protection. Each such proposal must be covered by a proposal guaranty.

The bid limitation can be made by declaring the total dollar value of work OR total number of projects a bidder is willing to perform.

The Bidder desires to disqualify all of his/her bids on this bid opening that exceed a total dollar value of
\$ _____

OR

that exceed a total number of _____ projects.

The Bidder hereby authorizes the Department to determine which bids shall be disqualified.

Project: IM-8-094(105)350 (PCN-22628)

PERMISSIBLE DISCOUNT (optional)

Only when invited to do so in the Request for Proposal by Special Provision, Bidders are permitted to offer a discount on a specific project (discount project) if they are awarded the contract on one or more additional projects bid at the same bid opening time and date. The bidder must present the proposal so that it can be considered with or without the discount. The bid or discount offered on the "discount project" will not affect the determination of the low bid of any other project.

When discounts are offered, they must be presented as a reduction in the unit price for one or more items of work in the specified proposal (discount project).

Space for Offering Discounts:

Item No: _____

Description: _____

Unit: _____

Proposal Quantity: _____ Unit Price Reduction: \$ _____ Discount: \$ _____

Item No: _____

Description: _____

Unit: _____

Proposal Quantity: _____ Unit Price Reduction: \$ _____ Discount: \$ _____

Item No: _____

Description: _____

Unit: _____

Proposal Quantity: _____ Unit Price Reduction: \$ _____ Discount: \$ _____

TOTAL DISCOUNT _____

It is understood that the discount will only apply if awarded under the conditions as listed above and signed by the bidder.

Project: IM-8-094(105)350 (PCN-22628)

PROPOSAL GUARANTY

A proposal guaranty is required. The proposal guaranty must comply with Section 102.09, "Proposal Guarantee" of the Standard Specifications.

TYPE OF PROPOSAL GUARANTY APPLIED TO THIS PROJECT (Check one):

Annual Bid Bond*

Single Project Bid Bond

Certified or Cashier's Check

*Annual Bid Bond is required when submitting proposals electronically

BID ITEMS

Project: IM-8-094(105)350 (PCN-22628)

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
001	103	0100	CONTRACT BOND	L SUM	1.				
002	201	0330	CLEARING & GRUBBING	L SUM	1.				
003	202	0130	REMOVAL OF CURB & GUTTER	LF	67.				
004	202	0136	REMOVAL OF PAVEMENT	TON	480.				
005	202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	123.				
006	202	0210	REMOVAL OF MANHOLES	EA	2.				
007	202	0277	REMOVAL OF LIFT STATION	L SUM	1.				
008	203	0109	TOPSOIL	CY	258.				
009	216	0100	WATER	M GAL	5.				
010	251	0300	SEEDING CLASS III	ACRE	.320				
011	251	2000	TEMPORARY COVER CROP	ACRE	.320				
012	253	0201	HYDRAULIC MULCH	ACRE	.320				
013	253	0301	BONDED FIBER MATRIX	ACRE	.320				
014	261	0112	FIBER ROLLS 12IN	LF	1,240.				
015	265	0100	STABILIZED CONSTRUCTION ACCESS	EA	1.				
016	302	0120	AGGREGATE BASE COURSE CL 5	TON	270.				

BID ITEMS

Project: IM-8-094(105)350 (PCN-22628)

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	550	0315	11IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	400.				
018	702	0100	MOBILIZATION	L SUM	1.				
019	704	0100	FLAGGING	MHR	150.				
020	704	1000	TRAFFIC CONTROL SIGNS	UNIT	1,798.				
021	704	1035	ATTENUATION DEVICE-TYPE B-25	EA	1.				
022	704	1052	TYPE III BARRICADE	EA	14.				
023	704	1060	DELINEATOR DRUMS	EA	49.				
024	704	1067	TUBULAR MARKERS	EA	62.				
025	704	1087	SEQUENCING ARROW PANEL-TYPE C	EA	2.				
026	704	3510	PRECAST CONCRETE MED BARRIER-STATE FURNISHED	EA	28.				
027	704	4011	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.				
028	708	1540	INLET PROTECTION-SPECIAL	EA	6.				
029	708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	6.				
030	709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	448.				
031	714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	36.				
032	714	4136	PIPE CONDUIT 60IN-STORM DRAIN	LF	182.				

BID ITEMS

Project: IM-8-094(105)350 (PCN-22628)

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	714	9696	EDGEDRAIN NON PERMEABLE BASE	LF	67.				
034	722	0140	MANHOLE 96IN	EA	2.				
035	722	1110	MANHOLE RISER 60IN	LF	16.470				
036	722	1140	MANHOLE RISER 96IN	LF	19.160				
037	722	2500	MANHOLE SPECIAL	EA	1.				
038	722	3297	ABANDON STORM SEWER	LF	153.				
039	722	9999	THIS IS A TEMPORARY DESCRIPTION -- PLEASE CHANGE	L SUM	1.				
040	724	0891	WATERMAIN MODIFICATIONS	L SUM	1.				
041	724	1155	PIPE DUCTILE IRON 18IN	LF	300.				
042	748	0140	CURB & GUTTER-TYPE I	LF	67.				
043	762	0420	SHORT TERM 4IN LINE-TYPE R	LF	1,275.				
044	762	0424	SHORT TERM 8IN LINE-TYPE R	LF	160.				
045	762	1344	PREF PATT PVMT MK 7IN LINE CONTRAST-GROOVED	LF	80.				
046	770	0050	CONCRETE FOUNDATION-FEED POINT-TYPE A	EA	1.				
047	920	0091	LIFT STATION-SITE 1	EA	1.				
048	920	0092	LIFT STATION-SITE 2	EA	1.				

Project: IM-8-094(105)350 (PCN-22628)

Type of Work: LIFT STATION AND STORM SEWER IMPROVEMENTS

County: CASS

Length: 0.9450 Miles

TIME FOR COMPLETION:

The undersigned Bidder agrees, if awarded the contract, to prosecute the work with sufficient forces and equipment to complete the contract work within the allowable time specified as follows:

WORKING DAY CONTRACT: NA working days are provided. The Department will begin charging working days beginning NA or the date work begins on the project site, whichever is earlier.

CALENDAR DAY CONTRACT: NA calendar days are provided. The completion date will be determined by adding NA calendar days to NA or the date work begins on the project site, whichever is earlier.

COMPLETION DATE CONTRACT The project completion date is 12/02/2023 *. The Department provides a minimum of NA working days. The Department will begin charging working days beginning NA or the date work begins on the project site, whichever is earlier.

***REFER TO NOTE 704-P03 UNIVERSITY DRIVE INTERIM COMPLETION FOR ADDITIONAL TIME AND LIQUIDATED DAMAGE REQUIREMENTS.**

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Job 22628, IM-8-094(105)350

Lift Station and Storm Sewer Improvements

INDEX OF PROVISIONS

Road Restriction Permits

Hot Line Notice

Price Schedule for Miscellaneous Items dated October 1, 2014 (PS-1)

SP DBE Program - Race Neutral dated March 1, 2022

E.E.O. Affirmative Action Requirements dated March 15, 2014

Required Contract Provisions Federal Aid Construction Contracts
(Form FHWA 1273 Rev. July 5, 2022)

SP Certified Payrolls, dated 9-6-17

SP DBE Project Payment Reporting, dated 10-3-17

Labor Rates from U.S. Department of Labor dated October 21, 2022 (Mod. No. 1)

On-The-Job Training Program 2023

SSP 1 Temporary Erosion & Sediment Best Management Practices

SSP 5 Limitations of Operations

SSP 8 Federal Prohibition on Certain Technological Hardware

SSP 10 E-Ticketing

SSP 11 Buy America

SP 337(20) Lift Station

SP 434(20) Utility Coordination

SP Fuel Cost Adjustment Clause dated September 8, 2006

NOTICE

TO: All prospective bidders on all North Dakota Department of Transportation Highway Construction Projects.

Contractors moving construction equipment to NDDOT highway construction projects are subject to the Road Restriction Policy with the following modifications:

- A. The contractor may purchase up to 10 single trip permits for each NDDOT highway construction project at a cost ranging from \$20 to \$70 each. These permits must be purchased from the Motor Carrier Division of the Highway Patrol at the central office of the NDDOT in Bismarck, North Dakota.
- B. The \$1 per mile fee will not be charged for Gross Vehicle Weights (GVW) exceeding 105,500 pounds, 105,500 pounds, and 105,000 pounds for highways Restricted by Legal Weights, 8 Ton, and 7 Ton highways respectively.
- C. The \$5 per ton per mile fee will be charged only for loads exceeding a GVW of 130,000 pounds, 120,000 pounds, 110,000 pounds and 80,000 pounds for highways Restricted by Legal Weights, 8 Ton, 7 Ton, and 6 Ton highways respectively.
- D. The maximum weights per axle for each of the class restrictions still apply. If it is shown that more axles cannot be added, movement may be authorized; however, a \$1 per ton per mile fee will be charged for all weight in excess of the restricted axle limits.
- E. These construction equipment single trip permits apply to State and US Highways only.
- F. The District Engineers and Highway Patrol will select the route of travel.
- G. Contractors moving equipment to other than NDDOT highway construction projects are subject to all fees as shown in the Road Restriction Permit Policy.
- H. Contractors must call the Highway Patrol prior to movement of all overweight loads on all State and US Highways.

ROAD RESTRICTION PERMITS

Permits shall be issued for the movement of non-divisible vehicles and loads on state highways which exceed the weight limits during spring road restrictions. The issuance of permits may be stopped or posted weights changed at any time based on the varying conditions of the roadways. Permits can be obtained from the Highway Patrol.

RESTRICTION CLASSIFICATIONS WITH ALLOWABLE AXLE WEIGHTS AND GROSS VEHICLE WEIGHTS	PERMIT AND TON/MILE FEES
<p>Highways Restricted by Legal Weight</p> <p>Single Axle -- 20,000 lbs. Tandem Axle -- 34,000 lbs. Triple Axle -- 48,000 lbs. 4 Axles or more -- 15,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 105,500 lbs.</p> <p>Note: The above weights apply to state highways restricted by legal weights, other than interstate highways, in areas where road restrictions are in force. When the gross weight of an axle grouping exceeds 48,000 pounds, the \$1 per ton per mile shall apply to all weight in excess of 15,000 pounds per axle.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>105,501 lbs. to 130,000 lbs. GVW -- \$1 per mile</p> <p>Over 130,000 lbs. GVW -- \$1 per mile plus \$5 per ton per mile for that weight exceeding 130,000 lbs. GVW</p> <p>Exceeding axle limits -- \$1 per ton per mile</p>
<p>8-Ton:</p> <p>Single Axle -- 16,000 lbs. Tandem Axle -- 32,000 lbs. 3 Axles or more -- 14,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 105,500 lbs.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>105,501 lbs. to 120,000 lbs. GVW -- \$1 per mile</p> <p>Over 120,000 lbs. GVW -- \$1 per mile plus \$5 per ton per mile for that weight exceeding 120,000 lbs. GVW</p> <p>Exceeding restricted axle limits -- \$1 per ton per mile</p>
<p>7-Ton:</p> <p>Single Axle -- 14,000 lbs. Tandem Axle -- 28,000 lbs. 3 Axles or more -- 12,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 105,500 lbs.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>105,500 lbs. to 110,000 lbs. GVW -- \$1 per mile</p> <p>Over 110,000 lbs. GVW -- \$1 per mile plus \$5 per ton per mile for that weight exceeding 110,000 lbs. GVW</p> <p>Exceeding restricted axle limits -- \$1 per ton per mile</p>
<p>6-Ton:</p> <p>Single Axle -- 12,000 lbs. Tandem Axle -- 24,000 lbs. 3 Axles or more -- 10,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 80,000 lbs.</p>	<p>Permit Fee: \$20-\$70 per trip</p> <p>Ton Mile Fee:</p> <p>\$5 per ton per mile for all weight exceeding 80,000 lbs. GVW</p> <p>Exceeding restricted axle limits -- \$1 per ton per mile</p>
<p>5-Ton:</p> <p>Single Axle -- 10,000 lbs. Tandem Axle -- 20,000 lbs. 3 Axles or more -- 10,000 lbs. per axle</p> <p>Gross Vehicle Weight -- 80,000 lbs.</p>	<p>No overweight movement allowed</p>

SINGLE UNIT FIXED LOAD VEHICLES SUCH AS TRUCK CRANES AND WORKOVER RIGS

- A. Permit Fee and Ton Mile Fee for Self-Propelled Fixed Load Vehicles .
1. Permit Fee: \$25 per trip
 2. \$1 per ton per mile for all weight in excess of restricted axle limits or in excess of legal limits on state highways in areas where road restrictions are in force. When the gross weight of an axle grouping exceeds 48,000 pounds, the \$1 per ton per mile shall apply to all weight in excess of 15,000 pounds per axle (see weight classification chart in section C.)
 3. **\$5 per ton per mile** for all movements exceeding the following gross vehicle weight limits:
 - a. 105,500 lbs. GVW on unrestricted state highways, other than interstate highways, in areas where road restrictions are in force.
 - b. 105,500 lbs. GVW on 8-ton highways.
 - c. 105,500 lbs. GVW on 7-ton highways.
 - d. 80,000 lbs. GVW on 6-ton highways.
 - e. No overweight movement allowed on 5-ton highways
- B. Permit Fees for Work-Over Rigs and Special Mobile Equipment Exceeding 650 but not 670 Pounds Per Inch Width of Tire.
1. Permit Fee:
 - a. \$50 per trip on work-over rigs up to 650 pounds per inch width.
 - b. \$75 per trip on work -over rigs that exceed 650 but not 670 pounds per inch width of tire.
 2. The work-over rig shall be stripped to the most minimum weights.
 3. A minimal number of state highway miles shall be used.
 4. District engineer approval shall be obtained prior to movement when vehicle exceeds restricted axle weights by more than 5,000 pounds.
 5. A validation number ending in TM must be obtained from the Highway Patrol prior to using a self-issue single trip movement approval form.
 6. The ton mile shall be waived .

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION

"HOT LINE"

As part of its continuing investigation into Highway Construction Contract Bid Rigging and abuses in the Disadvantaged Business Enterprise Program, the Inspector General for the Department of Transportation (DOT) has established a "HOT LINE" to receive information from contractors, suppliers, or anyone with knowledge of such activities.

The toll-free "HOT LINE" telephone number is 1-800-424-9071 and will be manned during normal working hours (8 a.m. to 5 p.m. EST). This operation is under the direction of DOT's Inspector General. All information will be treated confidentially and anonymity will be respected.

CALL

Inspector General's 'HOT LINE'
Toll Free 1-800-424-9071
Washington, DC Area:
202-366-1461
Fax: 202-366-7749

WRITE

Inspector General
Post Office Box 23178
Washington, DC 20026-0178

Email: hotline@oig.dot.gov

The field office address and telephone number for NORTH DAKOTA is:

CHICAGO REGIONAL OFFICE

Special Agent-in-Charge
Commercial: 312-353-0106
111 N. Canal St., Suite 677
Chicago, Illinois 60606

10/1/2014

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
PRICE SCHEDULE FOR MISCELLANEOUS ITEMS (PS-1)**

The Contractor agrees to accept the following unit prices for each listed item of work and or material when no project contract unit price exists for that item. Each price listed will be full compensation for the cost of labor, material and equipment necessary to provide the item of work and/or material, complete in place, including (but not limited to) royalty, disposal of unsuitable material, equipment rental, sales tax, use tax, overhead, profit, and incidentals.

Each listed item is referenced to the Standard Specifications by Section number and Section name.

SECTION NO.	SECTION NAME	ITEM NAME	PRICE PER ITEM
107.08	Haul Roads	Water	\$27 per M Gal
107.08	Haul Roads	Bitumen for Mix	Invoice Price ¹ + 10%
107.08	Haul Roads	Bituminous Mix	\$42 per Ton ²
107.08	Haul Roads	Aggregate Base	\$17 per Ton ²
203.01 B	Rock Excavation	Rock Excavation	\$11 per CY
203.01 C	Shale Excavation	Shale Excavation	Common Excavation Price + \$1.00 per CY
203.01 D	Muck Excavation	Muck Excavation	\$9 per CY
203.05 H.3	Embankment	Overhaul	\$1.40 per CY - Mile
260	Silt Fence	Mucking Silt Fence	\$3.90 per LF
260	Silt Fence	Removal of Silt Fence ³	\$4.25 per LF
261	Fiber Rolls	Mucking of Fiber Rolls	\$3.90 per LF
261	Fiber Rolls	Removal of Fiber Rolls ³	\$4.25 per LF
420.04 E	Bituminous Seal Coat	Blotter Sand	\$27 per Ton ²
430.04 G	Hot Mix Asphalt (Exc. Material Hauled to Disposal Area)	Bituminous Mixture	Machine Placed: Bid or Invoice Price + \$31 per ton Hand Placed: Bid or Invoice Price + \$48 per Ton
704	Temporary Traffic Control	Flagging	\$32 per MHR

¹Price paid for bituminous material will be invoice price plus freight costs.

²Price Includes haul up to 10 miles. Payment for haul exceeding 10 miles will be according to Section 109.03 E, "Force Account." The haul distance for aggregate base and bituminous mix will be based on the average haul. The haul distance for blotter sand will be from the point where the haul begins to the point where it enters the project.

³This is only for pre-existing items that were not installed under the Contract.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION: DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

PROJECT IM-8-094(105)350 (PCN-22628)

RACE/GENDER NEUTRAL GOAL: 0%

NDDOT Contact Information	
Contractor Sign In & Submit Advertisements https://apps.nd.gov/dot/cr/csi/login.htm	Amy Conklin, DBE Program Administrator 701-328-3116 - or - aconklin@nd.gov
Submit quotes and post-bid documentation to: subquotes@nd.gov	Ramona Bernard, Civil Rights Division Director 701-328-2576 - or - rbernard@nd.gov
DBE Directory https://dotnd.diversitycompliance.com/	All times are stated in Central Time. The day of the bid opening is not counted as one of the business days.

PURPOSE

These provisions:

1. Provide an explanation of the federal law and outline the obligations to comply with the Federal DBE requirements applicable to this contract,
2. Explain the process NDDOT will follow to evaluate bidders' efforts to obtain DBE participation
3. Provide the standards NDDOT will use to measure compliance with the requirements
4. Identify sanctions for failing to comply with DBE program requirements.

QUOTES:

All bidders (regardless of whether they are apparent low bidder in this bid opening) should submit a completed [SFN 52013-List of Businesses Submitting Quotes](#) (Form B) by 4:00 pm CST, within 5 business days after the bid opening. Copies of quotes are no longer accepted, however, submitting a list in another format (Excel or other) is acceptable if all the information is clearly provided. This process is necessary in identifying "ready, willing, and able" contractors upon which to base the NDDOT Triennial DBE Goal. The number of contractors and the types of work they have bid/quoted will be used in the calculation of the DBE goal for each goal setting period.

All subcontractors, suppliers, manufacturers, regular dealers, vendors, and brokers should email quotes to the Department no later than 9 PM the day before each bid opening.

All DBEs quoting on this project should submit all quotes and a list of contractors they quoted to NDDOT no later than 9 PM the day before each bid opening.

Prime contractors preparing to bid on NDDOT highway projects have requested that quotes be sent to them the day before the bid opening by:

- 2 PM Central - Suppliers (brokers/regular dealers), vendors, & manufacturers
- 5 PM Central - Subcontractors under \$500,000
- 8 PM Central - Subcontractors over \$500,000

REQUIREMENTS FOR ALL BIDDERS:

- ALL BIDDERS are strongly encouraged to submit all documentation at the time of bid opening.
- Must submit Form A (DBE utilization identification) with bid package at the time of bid opening.
- Must submit [SFN 52160 – Notification of Intent to Use](#) (Form C) for DBE(s) used by 4:00 pm CST, within 2 business days after the bid opening. If no DBE's are used, Form C is not required.
- Completed Form B, or a spreadsheet containing all the information on Form B, should be submitted by 4:00 pm, CST within 5 business days after the bid opening.
- Prime contractors are strongly encouraged to submit their bid documentation in one electronic file.
- If required documents are not submitted by the deadline or submitted incorrectly, the Department may consider the bid non-responsive and could be rejected per 102.12 Irregular Bid, NDDOT Standard Specification for Road and Bridge Construction.

To maximize subcontracting opportunities the following actions are encouraged.

ADVERTISE

All DBE and Non-DBE prime contractors and all subcontractors (over/under \$500,000), vendors, regular dealers/suppliers, and manufacturers, are encouraged to advertise using one of the two options:

OPTION 1: Place an advertisement soliciting DBE participation using the electronic DBE Advertisement System.

- Submit the required information online at <https://apps.nd.gov/dot/cr/csi/login.htm> no later than noon, 15 calendar days before the bid opening.

OPTION 2: Directly contact by email or fax, all DBEs certified in the specific work type (NAICS) required for the job.

- Make contact with DBEs no later than 5 PM 7 calendar days before the bid opening.
- Use the DBE Directory to determine the DBE firms certified in the work to be subcontracted.

Either method of advertisement should:

- Provide the name, email address, telephone, and fax number of the company contact who will be available to discuss and/or receive quotes.
- Offer assistance to DBEs in interpreting plans; quantities; expected overtime; project scheduling; pit and batch plan locations, length of haul, type of road; method of measurement (seeding by the mile or acre, hauling by hour or by ton-mile) or other issues that may affect a price quote.

Indicate your intention to bid and/or receive quotes on specific jobs by using the Department's Bid Opening Sign in System

- The **Bid Opening Sign-In** web application located at <https://apps.nd.gov/dot/cr/csi/login.htm>. Sign-In opens at 8 AM 7 calendar days prior to the bid opening and closes at 11 AM the day before the bid opening.
- Fill in the online form fields as required.
- Log in to download the "Bid Opening Contact Report" at <https://apps.nd.gov/dot/cr/csi/public/listBidOpenings.htm>

RECEIVE & EVALUATE ALL QUOTES GIVEN

All prime contractors and all subcontractors over \$500,000 should receive and evaluate all quotes offered.

All quotes given for each job should be faxed or emailed to prime contractors or subcontractors no later than the day before the bid opening. DBE subcontractors interested in work on the advertised jobs are encouraged to quote all contractors on the Sign-In report.

POST-AWARD REQUIREMENTS

FEDERAL AUTHORITY

The following paragraph must be included in all subcontracts of all tiers in accordance with 49 CFR § 26.13(b):

The contractor or all tiers of subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR § 26.13 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as NDDOT deems appropriate which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible

It is the prime contractors' responsibility to ensure all tiers of subcontractors, brokers, manufacturers, suppliers, vendors, and regular dealers comply with the requirements of this special provision. In addition, the prime contractor has the responsibility to monitor DBE performance on the project.

PRIME CONTRACTOR'S MONITORING, RESPONSIBILITIES, REPORTING

For the life of the project, the prime contractor is responsible for the DBEs listed on Form C and for the specific spec/code items or products that the prime committed to during the award process.

The prime contractor is responsible to:

- Report payments to DBEs used to meet the project goal.
 - Monthly audits are required through the Certification and Compliance System (CCS) on all federally funded projects, regardless of DBE goal. Once the prime receives progress payments from NDDOT they will be required to report DBE payments every month for the life of the project, including reporting zeros on months when no payments are made. The DBE will either confirm the payment amount and date paid is correct or they will open a discrepancy if the information the prime submitted differs from their records. The prime and DBE are encouraged to find resolution to the discrepancy on their own. If resolution cannot be attained, the project engineer and CRD will become involved in the process.
 - See DBE Program Manual for further information about CCS and prompt pay requirements
- Invite and encourage all subcontractors and all DBEs listed on Form C to the pre-construction conference.
- Provide minutes to any DBE not in attendance at the pre-construction conference.
- Ensure their firm as well as any subcontractors, manufacturers, and regular dealers/suppliers comply with the requirements of this special provision.
- Provide all subcontractors with Proposed Project Schedules and any necessary updates.
- Maintain project records and documentation of payments to DBEs for three years following acceptance of the final payment from NDDOT (per FHWA-1273, Section II Nondiscrimination #11).
 - This reporting requirement also applies to any certified DBE.
 - NDDOT may perform interim audits of contract payments to DBEs to ensure that the actual amount paid to DBEs equals or exceeds the dollar amount stated on Form C.
 - Make these records available for inspection, upon request, by an authorized representative of the NDDOT or USDOT.

If any requirements are not met, progress payments will be withheld from the prime until completed.

NDDOT MONITORING AND ENFORCEMENT MECHANISMS

The Department will bring any false, fraudulent, or dishonest conduct in connection with the DBE program to the attention of USDOT. USDOT may pursue action as provided in 49 CFR § 26.107. Actions include referral to the Department of

Justice for criminal prosecution or referral to the USDOT Inspector General for action under suspension and debarment, or Program Fraud and Civil Remedies rules. The Department will also consider similar action under its own legal authority, including responsibility determination in future contracts.

COMMERCIALLY USEFUL FUNCTION

DBEs are required to perform a commercially useful function (CUF). CUF refers to those services the DBE is certified to perform. Certified services for each DBE are listed in the online DBE Directory. It is a DBE's responsibility to immediately notify the prime contractor in writing if the DBE is unable to perform a CUF.

The Department counts participation to a DBE contractor toward DBE goals only if the DBE is performing a CUF on that contract.

- A. A DBE performs a CUF when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a CUF, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, installation and paying for the material itself. 49 CFR § 26.55(c)(1)
- B. A DBE does not perform a CUF if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. 49 CFR § 26.55(c)(2)
- C. If a DBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, the Department must presume that it is not performing a CUF. 49 CFR § 26.55(c)(3)
- D. When a DBE is presumed not to be performing a CUF as provided in paragraph C (above), the DBE may present evidence to rebut this presumption. 49 CFR § 26.55(c)(4)
- E. The Department's decisions on CUF matters are subject to review by Federal Highway Administration, but are not administratively appealable to USDOT. 49 CFR § 26.55(c)(5)

COUNTING RACE/GENDER NEUTRAL DBE PARTICIPATION - 49 CFR § 26.55

The Department does not count the participation of a DBE subcontractor toward a contractor's final compliance with its DBE obligations on a contract until the amount being counted has actually been paid to the DBE. 49 CFR § 26.55 (h)

The Department will count DBE participation toward our overall annual goal as noted below.

Manufacturer: Manufacturer credit is appropriate when the DBE maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications. Alterations or customization of a "stock" product would be eligible for manufacturer credit. DBE credit is awarded at 100% for this type of work. Delivery type is not relevant in this type of credit.

Broker Credit (Manufacture Representative, Procurement Specialist, Leasing): Broker credit is appropriate when the DBE arranges or expedites the transaction of materials or supplies that it does not manufacture or deliver and is never in possession of the products. In this type of transaction, a DBE would serve as a third-party intermediary between the manufacturer and the contractor providing project driven sales. The DBE assumes little to no risk in this transaction and is awarded DBE credit for the "mark-up" of the product only. Drop ship transactions would only be eligible for broker credit. There is no maintained facility where inventory is kept on a regular basis for sale. For direction on how a specialty item can be eligible for supplier credit, see the information provide below. A specialty item that does not fully meet these requirements can only be credited at brokerage rates.

Regular Dealers/Suppliers: Supplier credit is appropriate when the DBE owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business sells to the general public with inventory on hand. If a legitimate public warehouse exists, that regularly stocks, deals and sells to the walk-in public, then the method of delivery of the goods is not examined. Supplier credit would be awarded at 60% of the cost of the materials. 49 CFR 26.55 (e)(ii).

Bulk Items 49 CFR 26.55 (e)(ii)

A DBE may be eligible for supplier credit in regard to non-specialty bulk items (i.e. petroleum, steel, asphalt, aggregate) without a warehouse or storefront. If bulk items are purchased directly from the manufacturer the DBE must both own and operate its own distribution equipment. The DBE may supplement its own distribution equipment through a long-term lease (defined as more than one year) but the DBE must demonstrate unimpeded access to the leased equipment and operate the equipment with the DBE's own employees. If all these circumstances do not exist, the DBE is only eligible for broker credit.

Specialty Products

Specialty products are those products that are ordered contract-specific for a job. Examples may include, but are not limited to, steel beams, concrete beams, box culverts or piping. Supplier credit is available in two different scenarios:

- Supplier credit would be available if the DBE owns its own facility and is in the business of selling products and materials to the public and sells products of similar nature to the specialty item and the DBE must take possession of the specialty item to determine quality and quantity of the specialty item(s). To be eligible for supplier credit, the DBE must deliver the specialty item with its own distribution equipment and employees.
- Supplier credit would be available if the DBE does not own its own facility but does own its own distribution equipment which it uses to pick up the specialty item(s) and deliver to the job site with the DBE's own employees

Any other scenario dealing with specialty products would only be eligible for broker credit.

Regular Dealers vs. Brokers/Expeditors/Facilitators: On a case-by-case basis, DBE regular dealers may count only the fees/commissions charged for providing procurement assistance as a manufacturer's representative or expeditor of transactions. The key factor in this determination is whether the prime and/or its subcontractors could have ordered the materials without the DBE's assistance. If a non-DBE contractor could have procured the materials or supplies without the intervention of the DBE, the DBE is not performing a regular dealer capacity. To assist in determining the difference, the Department may poll each regular dealer to request their ordering and delivery process.

Trucking: The Department counts DBE trucking on a one-for-one basis. A DBE, on each of its contracts, must first own and operate at least one fully licensed, insured, and operational truck. A DBE may then supplement its fleet using lease/broker agreements. Only trucks leased from a reputable dealer count towards the firm's DBE participation. Full credit is given for the transportation value of leased/brokered trucks owned, operated and insured by other DBEs.

- Example: DBE A owns/operates 2 trucks and subcontracts to DBE B who owns/operates 3 DBE trucks. All 5 DBE owned/operated trucks count towards the DBE participation on the project.

A DBE trucking firm may subcontract to non-DBE trucking firms. If a DBE subcontracts trucks from non-DBEs, the total value of trucking services provided by non-DBEs cannot exceed the value of trucking services provided by DBEs. This is referred to as the 1:1 DBE Trucking Ratio (Ratio).

- Example: DBE owns 2 trucks and subcontracts 2 non-DBE match trucks. The total number of trucks that may be counted towards DBE participation is the amount paid for all 4 trucks (100%)
- Example: DBE owns 5 trucks and subcontracts 5 trucks from non-DBE(s). The total number of trucks that may be counted towards DBE participation is the amount paid for 5 of the 10 trucks (100%)
- Example: DBE owns 1 truck and subcontracts 4 non-DBE trucks. 1 of the non-DBE trucks acts as a match truck and the other 3 are non-DBE non-match trucks. The amount of the total subcontract with the DBE that may be counted is 40%.

When a DBE leases more non-DBE than DBE trucks, only the fee or commission the DBE trucker receives is credited for the extra non-DBE trucks.

- Example: DBE owns 2 trucks and subcontracts 4 trucks from non-DBE(s). Total DBE participation is amount paid for 4 of the 6 trucks plus the brokerage or other fee may also be counted toward DBE participation for the 2 non-DBE non-match trucks.

No DBE participation is given for the use of DBE trailers without DBE trucks and DBE employed drivers. A DBE trucking firm cannot count the materials they are hauling unless they are a legitimate DBE supplier or manufacturer of the materials (see Regular Dealer/Supplier and Manufacturer sections).

A legitimate subcontract must be in place between the DBE and non-DBE trucking firm to count participation. The non-DBE trucking firm must be added to the Utilization Plan/Contract in CCS under the DBE and the DBE is required to report

payments to the non-DBE trucking firm for the participation to be counted. Additional reporting lines under the DBE on the contract within CCS may also be necessary to report non-DBE non-match payments and/or brokerage/fees for non-DBE non-match trucks if applicable. Certified payroll requirements also apply.

A DBE trucker is responsible for identifying the number of trucks to be used on a project for DBE participation credit. If a DBE trucking firm utilizes the Ratio and is used by a Prime contractor that was the apparent low bidder, the number of trucks (DBE, non-DBE Match & non-DBE non-Match) must be identified on the Form C as well as the total dollar amount allocated to each and the non-DBE firm(s) the DBE intends to use. SFN 60781 DBE Weekly Trucking Report is required to be completed and submitted to the project engineer weekly when the Ratio is being utilized, which will indicate the number of DBE-owned trucks and the number of non-DBE trucks the DBE has provided for use on the contract. DBE trucking firms that are utilizing the 1:1 DBE Trucking Ratio must also display signage in the non-DBE match trucks on the job site that identify them as subcontracting to the DBE as part of the overall project DBE participation. The signage must be clear enough for project personnel to easily identify them while on site.

The CUF form includes a section for 1:1 DBE Trucking that must also be completed by the project engineer.

If you have any further questions about counting DBE participation, please contact the DBE Program Administrator.

DEFINITIONS

The definitions specified below apply only to this Special Provision and may contain differences from NDDOT Standard Specifications.

Apparent low bidder (ALB) means the bidder whose bid is read as low bid at the bid opening.

Bid Opening Sign-In System means the Department's online system to which all prime contractors and subcontractors must register to indicate their interest in quoting or bidding prior to each bid opening.

Bidder means a contractor intending to serve as the prime contractor for highway construction projects.

Commercially Useful Function (CUF) describes a DBE's responsibilities and involvement in a project, see section Commercially Useful Function of this SP.

Contractor means all DBE and non-DBE firms, including prime contractors, brokers, vendors, regular dealers/suppliers, and manufacturers at any tier.

DBE Goal means a percentage of the total contract targeted for the hiring of DBE subcontractors to do specific bid items for which the DBE has been certified to perform. Project goals are set by assessing the project's bid items, location, whether DBEs are available to do the work.

DBE Participation means the percentage achieved when the dollar amount committed to the DBE is divided by the dollar amount of all contract items.

Department means the project owner regardless of whether the owner is NDDOT, a city or a county project.

Disadvantaged business enterprise or DBE means a for-profit small business concern that is certified by the Department and listed in the DBE Directory available on the Department's web site. DBEs must first be certified in the work intended before any DBE achievement may be counted toward the project goal.

Manufacturer means a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications. See Counting DBE Participation section.

NAICS Codes means industry codes assigned by North American Industry Classification System. When certified, DBE businesses are assigned NAICS codes which are identified in the DBE Directory.

NDDOT Certification & Compliance System (CCS) refers to the online compliance reporting system whereby contractors report/submit job related payments, commitments, and Utilization Plan documentation.

Prime contractor means bidders who are submitting proposals on this project, regardless of the size of the project.

Quoter means DBE or a non-DBE subcontractors, brokers, vendors, regular dealers/suppliers, and manufacturers at any tier who submits quotes to another contractor.

Race/Gender Neutral (RGN) means a zero (0) percent goal that is used to assist all small businesses.

Responsible Bid Proposal means a bidder's proposal in which the project goal has been achieved, or the bidder demonstrates Good Faith Efforts (GFE) as outlined in this Special Provision timely.

Subcontractor means any firm intending to perform work, or intending to perform work and supply the materials, which were intended for their work on the project.

Broker means an agent who, without having custody of the property, a) negotiates contracts of purchase, work, lease, or sale; b) buys and sells goods; or c) negotiates between buyers and sellers. See Counting DBE Participation section.

Regular Dealer/Supplier means a DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials supplies, articles, or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. See Counting DBE Participation section.

Tier means various levels of contractors on the job. For example a prime contractor's subcontractor (B) is referred to as the second tier. When B subcontracts with C, C becomes the third tier, etc.

Tied quote means the quote will be considered only if all of the bid items are included.

Untied quote means that any item or group of items quoted may be used for price noted on the quote whether one or all are used.

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
EEO AFFIRMATIVE ACTION REQUIREMENTS**

March 15, 2014

Bidders shall become familiar with the following requirements and be prepared to comply in good faith with all of them:

APPENDIX A

Notice or Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246).

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:
 - a. Goals for Female Participation in Each Trade – Statewide6.9%
 - b. Goals for Minority Participation in Each Trade by County:
Barnes, Cass, Dickey, Eddy, Foster, Griggs, LaMoure, Logan,
McIntosh, Ransom, Richland, Sargent, Steele, Stutsman, Traill0.7%
 - Grand Forks1.2%
 - Benson, Cavalier, Nelson, Pembina, Ramsey, Towner, Walsh2.0%
 - Burleigh, Morton0.4%
 - Adams, Billings, Bowman, Dunn, Emmons, Golden Valley, Grant,
Hettinger, Kidder, Mercer, Oliver, Sheridan, Sioux, Slope, Stark, Wells . . .1.3%
 - Bottineau, Burke, Divide, McHenry, McKenzie, McLean, Mountrail,
Pierce, Renville, Rolette, Ward, Williams4.4%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR 60-4 shall be based on its implementation of the Equal Opportunity Clause specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3 (a),

and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall notify the Office of Federal Contract Compliance Programs, in writing, within ten working days of award of any subcontract in excess of \$10,000. The notification shall include the name, address, and telephone number of the subcontractor and their employer identification number; dollar amount of the contract, estimated starting and completion dates of the contract; the contract number; and geographical area in which the contract is to be performed.

Notification should be sent to:

U.S. Department of Labor/ESA
OFCCP
Denver District Office
1244 Speer Boulevard
Denver, Colorado 80202
Phone: 720-264-3200
Fax: 720-264-3211

4. As used in this "Notice" and in the contract for this project, the "covered area" is the State of North Dakota.

APPENDIX B

Standard Federal Equal Employment Opportunity Construction Contract Specifications
(Executive Order 11246)

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the proposal from which this contract resulted.
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:

- (1) Black (all persons having origins in any of the Black African racial groups, not of Hispanic origin);
 - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish Culture or origin, regardless of race);
 - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation of community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the proposal from which this contract resulted.
 3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft.
 5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
 6. In order for the nonworking training hours of apprentices and trainees to be counted

in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor. (Training programs approved by the North Dakota Department of Transportation are recognized by the U.S. Department of Labor.)

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all Foremen, Superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources; provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its union have employment opportunities available, and maintain a record of the organization's responses.
 - c. Maintain a current file of the names, addresses, and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union, or if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to

the sources compiled under 7b above.

- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the Company newspaper, annual report, etc., by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the Company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the Company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination, or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing it with the Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students, and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minorities and women, and where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of the Contractor's work force.
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these to seek or to prepare for, through appropriate training, etc., such opportunities.
- m. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring

- all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n. Ensure that all facilities and Company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and Suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all Supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligation.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a Contractor association, joint Contractor- union, Contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's, and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. Goals for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minorities, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termina-

tion, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the Company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government, and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form, however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding (29 CFR 5.5)

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics,

including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees (29 CFR 5.5)

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State

Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the

corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor

set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility (29 CFR 5.5)

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

3. Withholding for unpaid wages and liquidated damages.

The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or

equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on longstanding interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders

or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.
2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**CONTRACT SPECIAL PROVISION
MANDATORY USE OF
AUTOMATED CERTIFIED
PAYROLL**

All contractors on NDDOT federal-aid projects, including city/county projects, must file weekly Certified Payrolls, as required under Davis-Bacon and Related Acts (DBRA). **The NDDOT requires the use of LCPtracker, a paperless online system for entering and filing these certified payrolls. Certified payrolls in paper form will no longer be accepted, and all contractors must file their payroll electronically.**

After award, the Prime Contractor (Prime) must:

1. Designate an individual as Prime Approver for the project. The Prime Approver will oversee DBRA payroll for all subcontractors of all tiers on the project. A contractor may inform the NDDOT Civil Rights Division (CRD) that the same individual will be Prime Approver on all projects. CRD will set up the Prime Approver Account for the project. Thereafter, the Prime Approver will have the responsibility to use the Account to approve all payroll on the project. Until payroll is approved by the Prime Approver, it cannot be viewed by the NDDOT and it is not deemed submitted to the NDDOT.
2. The prime contractor has the responsibility to assign subcontractors within the LCPtracker system to the project and to ensure that all subcontractors are aware of the necessity to file payrolls electronically and are set up within the system. Any subcontractor not on Approved Subcontractor List or the Qualified Contractor List must register and be placed one of these lists before entry of the subcontractor into LCPtracker. These lists may be found at <https://www.dot.nd.gov/pacer/qualified.htm> and <https://www.dot.nd.gov/pacer/registered.htm>. Only Prime Approvers or the CRD may enter subcontractors into LCPtracker.
3. The prime contractor has the responsibility to see that all required payrolls are filed by subcontractors of all tiers. If payroll is rejected or project staff otherwise requests a correction of payroll by any subcontractor on the project, the prime contractor has a responsibility to see that corrected payroll is submitted.
4. For further information on certified payroll, go to the NDDOT Labor Compliance/LCPtracker page at <https://www.dot.nd.gov/divisions/civilrights/laborcompliance.htm>. On this page, contractors will find a Getting Started on LCPtracker Guide and a Prime Approver Guide. Recorded trainings are also available on this page for both contractors and prime approvers. Contractors can obtain an LCPtracker user name and password by calling the NDDOT Civil Rights Division at (701) 328-2605 or (701) 328-2576.

09/06/2017

**CONTRACT SPECIAL PROVISION
MANDATORY USE OF ONLINE
DBE PROJECT PAYMENT REPORTING**

Payments made to all tiers of subcontractors must be reported electronically using the B2GNow system. Paper forms (Monthly Record of DBE Project Payments – SFN 60638) will no longer be accepted.

After award, the Prime Contractor (Prime) must:

1. Create a new account if not already in the system. Create a user for each employee who will use the system. If there is no account already set up, you can email Customer Support directly from the Account Lookup page. Your email address will be your user ID. Customer Support will email you with the information you need to log in.
2. Once the project has been awarded and the Utilization Plan (UP) has been created in the system and assigned to the contractor it must be filled out and submitted. An automated email message will be sent to a designated individual within the company alerting them that a UP is pending. Log into the system using the link provided in the email. For each contract the Prime must add all DBE and non-DBE subs being used on the project. When all information has been provided submit the UP. Civil Rights will review the UP and if everything is in order it will be approved. If changes need to be made the UP will be returned to the contractor and they will have 7 days to make the necessary adjustments and resubmit. If DBE or non-DBE subcontractors are added after the initial UP is set up the Prime can submit a request for them to be added.
3. Once the UP is submitted the project is “locked in” after Financial Management has processed the project in their system. After a UP is locked in payments from NDDOT to the Prime are reported through the system. The Prime must start reporting DBE and non-DBE subcontractor payments through the system in accordance with prompt pay guidelines outlined in the contract.
4. A user manual for UP’s and recording project payments is available to the contractors within the system. After login they can go to View>>My Utilization Plans and they will find the guide on the top of the Utilization Plan screen. They do not have to have a current UP assigned to them to see this guide. The guide is also on the actual UP page when a UP is assigned to them.
5. For further information on the Certification and Compliance System, go to the NDDOT Civil Rights page at <https://www.dot.nd.gov/divisions/civilrights/civilrights.htm>. There is various training available on a regular basis, to sign up for training go to the main Certification and Compliance System page and click the “Training and Events” box. Contractors that need to obtain an account or need subcontractors set up within the system should call the NDDOT Civil Rights Division at (701) 328-3116 or email civilrights@nd.gov

10/3/2017

NDDOT's *Davis-Bacon Wage and Payroll Requirements Handbook* is available at:
www.dot.nd.gov/manuals/civilrights/davisbacon.pdf

U.S. DEPARTMENT OF LABOR

<small>STATE</small> NORTH DAKOTA	<small>COUNTY</small> STATEWIDE	ND20220001 Page 1 <small>DATE OF DECISION</small> 10-07-22 Revised 10/21/2022 (Mod No. 1)
--------------------------------------	------------------------------------	--

CARPENTERS

CEMENT MASONS/FINISHERS

LINE CONSTRUCTION:

- Lineman
- Cable Splicer
- Line Equipment Operator
- Groundman

ELECTRICIANS:

- Electrician
- Cable Splicer
 (Adams, Billings, Bottineau, Bowman, Burke, Divide, Dunn, Emmons, Golden Valley, Grant, Hettinger, McHenry, McKenzie, Mclean, Mercer, Mountrail, Oliver, Pierce, Renville Rolette, Sheridan, Sioux, Slope, Ward and Williams Counties)

- Electrician
- Cable Splicer
 (Barnes, Benson, Cavalier, Dickey, Eddy, Foster, Grand Forks, Griggs, Kidder, La-Moure, Logan, Mcintosh, Nelson, Pembina, Ramsey, Ransom, Richland, Sargent, Steele, Stutsman, Towner, Traill, Walsh, and Wells Counties)

- Electrician
- Cable Splicer
 (Burleigh, Morton and Stark Counties)

- Electrician
 (Cass County)

WELDERS:

Receive rate prescribed for craft performing operation to which welding is incidental

Basic Hourly Rates	Fringe Benefits Payments
	H & W/Pensions
\$33.85	\$ 7.60
33.85	7.60
48.00	7.80 + 29.5%
48.00	7.80 + 29.5%
40.75	7.80 + 29.5%
27.17	7.80 + 19.5%
48.00	7.80 + 29.5%
48.00	7.80 + 29.5%
37.20	11.35 + 11.5%
38.82	11.35 + 11.5%
48.00	7.80 + 29.5%
48.00	7.80 + 29.5%
14.72	3.40

LABOR RATES

Page 2 of 5

10-07-2022

Revised 10/21/2022 (Mod No. 1)

ND20220001

Page 2

LABORERS:

Group 1

General Construction Laborers: Sack Shaker (cement and mineral filler); pipe handler; drill runner tender; salamander heater and blower tender; light truck; pickup driver; flaggers; pilot car drivers.

Group 2

Semi Skilled Laborer: bulk cement handler; conduit layer, telephone or electrical, form setter (pavement); gas electric or pneumatic tool operator; chipping hammer; grinders and paving breakers (tamper-dirt); concrete vibrator operator; chain saw operator; concrete curing man (not water); bituminous worker (shoveler, dumper, raker and floated); kettleman (bituminous or lead); concrete bucket signalman; power buggy operator; brick and mason tender; multi-plate pipelayer; culvert pipe layers; carpenters tenders.

Group 3

Caisson Worker: Bottom Man (Sanitary sewer, storm sewer, water and gas liners); Concrete Mixer Operator (one bag capacity); Mortar Mixer.

Group 4

Drill Runner (includes Wagon Chum or Air Track); Pipe Layers (sanitary sewer, storm sewer, water, and gas lines); Powderman; gunite and sandblast; Nozzleman; Rein forcing Steel Sellers/Tiers; Concrete Finisher Tender.

POWER EQUIPMENT OPERATORS:

Group 1

All Cranes 60 tons and over; Cranes doing piling, sheeting, dragline/clam work; Derrick (Guy and Stiff); Gentry Crane Operator; Helicopter Operator; Mole Operator or Tunnel Mucking Machine; Power Shovel; 3-1/2 CY and over; Traveling Tower Crane.

Group 2

All Cranes 59 tons and under; Backhoe Operator 3 CY. and over; Creter Crane; Dredge Operator 12" and over; Equipment Dispatcher; Equipment Foreman; Finish Dozer; Finish Motor Grader; Front End Loader Operator 8 CY. and over; Master Mechanic (when supervising 5 or more Mechanics); Mon-O-Rail Hoist Operator; Power Shovel up to and including 3 CY; Tugboat.

Basic Hourly Rates	Fringe Benefits Payments
	H & W/Pensions
\$25.65	\$ 3.15
25.90	3.15
26.05	3.15
26.80	3.15
32.85	19.85
31.45	19.85

LABOR RATES

Page 3 of 5

10-07-2022

Revised 10/21/2022 (Mod No. 1)

ND20220001

Page 3

POWER EQUIP. OPERATORS: (CONT.)

Group 3

Asphalt Paving Machine Operator; Asphalt Plant Operator; Automated Grade Trimmer; Backhoe Operator, 1 CY. up to and including 2-1/2 CY.; Boom Truck Hydraulic 8 tons and over; Cableway Operator; Concrete Batch Plant Operator (electronic or manual); Concrete Mixer Paving Machine Operator; Concrete Paver Bridge Decks; Concrete Pump; Concrete Spreader Operator and Belt Placer; Crushing Plant Operator; Dozer Operator; Dredge Operator or Engineer 11" and under; Drill Rigs, Heavy Duty Rotary or Churn or Cable Drill; Front End Loader Operator, 3-1/2 CY up to and including 7-1/2 CY; Gravel Washing and Screening Plant Operator; Lazer-Screed Operator; Locomotive, all types; Mechanic or Welder(Heavy Duty); Motor Grader Operator; Pavement Breaker (Non-Hydro Hammer Type, Pipeline Wrapping, Cleaning and Bending Machine Operator); Power Actuated Auger and Horizontal Boring Machine Operator 6" and over; Refrigeration Plant Engineer; Rota Milling Machine (Surface Planer) 43" and over; Scraper Operator; Slip Form Concrete Paving Operator; Tandem Pushed Quad 9 or similar; Tractor with Boom Attachment; Trenching Machine Operator 100 H.P. and over.

Group 4

Articulated/Off Road Hauler; Asphalt Dump Person(Controls the spread of asphalt); Asphalt Paving Screed Operator; Backhoe, up to and including 1/2 CY; Boring Machine Locator; Console Board Operator; Curb Machine Operator; Distributor Operator (Bituminous); Forklift Operator; Front End Loader, 1-1/2 CY up to and including 3 CY; Fuel/ Lube Truck Operator; Grade Person(Responsible for establishing and determining grade through instrumentation); Gravel Screening Plant Operator (not Crushing or Washing); Greaser; Hydro Vac and Hydro Excavator self propelled; Longitudinal Float and Spray Operator; Micro Surfacer Machine; Motor Grader Operator (Haul Roads); Paving Breaker HydroHammer Type; Pugmill Operator; Push Tractor; Roller, Steel and Rubber on Hot Mix Asphalt Paving; Rotomilling Machine (Surface Planer), up to and including 42"; Rumble Strip Machine; Sand and Chip Spreader; Self-Propelled Sheepsfoot Packer with or without Blade Attachment; Self Propelled Traveling Soil Stabilizer; Sheepsfoot Packer with Dozer Attachment 100 H.P. and over; Shouldering Machine; Slip Form, Curb and Gutter Operator; Slurry Seal Machine; Tamping Machine Operator; Tie Tamper and Ballast Machine; Trenching Machine Operator, 46 H.P. up to and including 99 H.P.; Truck Mechanic; Tub Grinder; Well Points.

Group 5

Boom Truck, A-Frame or Hydraulic 2 tons up to and including 7 tons; Broom Self-Propelled; Concrete Saw (power operated); Cure Bridge Operator; Front End Loader Operator, less than 1-1/2 CY; Mobile Cement Mixer-Non-Truck; Power Actuated Auger and Horizontal Boring Machine Operator up to and including 5"; Roller (on other than hot mix asphalt

Basic Hourly Rates	Fringe Benefits Payments
	H & W/Pensions
\$31.20	\$19.85
31.05	19.85

LABOR RATES

Page 4 of 5

10-07-2022

Revised 10/21/2022 (Mod No. 1)

ND20220001

Page 4

POWER EQUIP. OPERATORS: (CONT.)

Group 5 (CONT.)

paving); Oilers; Vibrating Packer Operator (Pad Type) (Self Propelled); Water Spraying Equipment-Self Propelled; Skidsteer Operator with attachments.

Group 6

Assistant/Apprentice Operator; Brakeman or Switchman; Dredge or Tugboat Deckhand; Drill Truck Gravel/Testing Operator; Form Trench Digger (Power); Guniting Operator; Gunall; Paint Machine Striping Operator; Pickup Sweeper, 1 CY and over Hopper Capacity; Scissor Jack {Self -Propelled} Platform Lift; Straw Mulcher, Blower and straw press; Stump Chipper Operator; Tillage Equipment Operator; Tractor Pulling Compaction or Aerating Equipment and no till drills; Trenching Machine Operator up to and including 45 H.P.

TRUCK DRIVERS:

Single-Axle Truck

Tandem- and Tri-Axle Truck

Tandem- and Tri-Axle Semi, Lowboy

Off Road Heavy Duty End Dumps 20 Yards and Under

Euclid, Over 20 Yards

Basic Hourly Rates	Fringe Benefits Payments
	H & W/Pensions
\$30.20	\$19.85
29.40	19.85
30.87	16.00
30.99	16.00
31.30	16.00
31.30	16.00
32.82	16.00

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses [29 CFR, 5.5 (a) (1) (ii)].

LABOR RATES

Page 5 of 5

10-07-2022

Revised 10/21/2022 (Mod No. 1)

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing the contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and work protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION (NDDOT)

ON-THE-JOB TRAINING SPECIAL PROVISION

The bidder's signature on the proposal sheet indicates the bidder agrees to take part in the On-the-Job Training (OJT) Program and to follow the OJT Program Manual and Special Provision. Contractors that fail to do so will be subject to suspension of progress payments or sanctions up to and including revocation of bidding privileges.

OJT is training conducted in a highway construction work environment designed to enable minority, female, and economically disadvantaged individuals to learn a bona fide skill and qualify for a specific occupation through demonstration and practice.

After a training program and trainee candidate have been approved, the contractor begins training its regular employee according to the approved program. The goal of this training is to retain the trainee as a permanent employee within the ND Highway Construction industry. OJT involves individuals at the entry level. Training is designed to help participants reach their fullest potential and become self-sufficient in the job.

I. POLICY STATEMENT

The purpose of the OJT Program is to provide training in the highway construction industry for minority, female, and economically disadvantaged individuals, from this time known as the targeted group. Pursuant to 23 Code of Federal Regulations Part 230, Subpart A, Appendix B - Training Special Provisions, this program provides for on-the-job training aimed at developing journey-level workers in skilled trades.

The Contractor shall take all necessary and reasonable steps to ensure that minorities and women have the opportunity to compete for and participate as trainees or apprentices and to develop as journey-level workers employed in the skilled trades.

Contractors should select a training program(s) based on their company's employment/staffing needs as stated in the OJT Program Manual.

II. INTRODUCTION/PROGRAM BACKGROUND

The OJT Program was originally prepared through the cooperative efforts of the Associated General Contractors of North Dakota (AGC); the Federal Highway Administration (FHWA); the North Dakota Department of Transportation (Department); and, other program stakeholders.

Successful operation of the OJT Program requires contractors to follow uniform and basic training procedures, keep records of trainee progress, and report each trainee's completion or termination.

III. ASSIGNED OJT POSITIONS

A. Trainee positions are assigned based only on federal highway dollars awarded to contractors from April to March. Trainee assignments are not project specific; that means the contractor may train program participants on any project where training opportunities exist within the state of North Dakota.

The number of trainee positions assigned will be determined by formula based on calculations involving particular project specification numbers on applicable projects.

Once the formula calculations are determined the OJT Program Administrator completes a further analysis based on number of trainees per contractor, contractor work type, location, past assignments, etc.

The types of projects NOT applicable in the calculation to assign trainee positions are:

- County-only or state-only funded projects
 - Emergency relief, concrete pavement repair (CPR), electrical, rest area, signing, striping projects
 - Projects subject to Tribal Employment Rights Ordinances (TERO)
 - Projects not let as part of NDDOT bid openings
- B. Contractors will receive the number of positions assigned and links to resources necessary for completion of program requirements via email.
- C. The number of trainee positions assigned to each contractor will increase proportionately, as shown below, for any applicable federally funded projects awarded to them.

For all federal highway dollars awarded from April to March the following year:

8,000,000 to 16,000,000	1	trainee
16,000,001 to 24,000,000	2	trainees
24,000,001 and above	3	trainees

A maximum of three (3) trainee positions in a federal fiscal year will be assigned to any prime contractor regardless of dollar amount. Carryover positions from a prior construction season are not included in the three trainee maximum, e.g., a contractor with one carryover and three assigned positions may have a total four trainees.

Failure to follow this OJT Special Provision and the accompanying OJT Program Manual may result in suspension of progress payments or sanctions up to and including revocation of bidding privileges.

IV. FUNDING

The Department will establish an OJT fund annually from which contractors may bill the Department directly for eligible trainee hours. The funds for payment of trainee hours on federal-aid projects will be made available based on 23 USC 504(e) to a maximum of \$100,000. The funds for payment of trainee hours on state-aid only projects will be allocated to a maximum of \$10,000.

V. ONLINE RESOURCES

SFN 60226 Request for On-the-Job Training Program and Trainee Approval:
<http://www.dot.nd.gov/forms/sfn60226.pdf>

SFN 51023 Voucher for On-the-Job Training Program Hourly Reimbursement:
<http://www.dot.nd.gov/forms/sfn51023.pdf>

SFN 62136 On-The-Job Training (OJT) Program Dependent Child Care Reimbursement:
<https://www.dot.nd.gov/forms/sfn62136.pdf>

Davis-Bacon and Related Acts (DBRA) Handbook:

VI. APPROVALS REQUIRED

- A. Requests for Approval of Training Programs and Trainee Candidates must be submitted to Civil Rights Division (CRD). Contractors must request and receive program and trainee candidate approval in order to pay trainees less than the established Davis-Bacon wage for the job classification concerned. **No training program hours will count toward the fulfillment of an assigned trainee position or be eligible for reimbursement without prior approval.** No retroactive approval will be granted.
1. Submit SFN 60226 *Request for On-the-Job Training Program and Trainee Approval* with each trainee's employment application. <http://www.dot.nd.gov/forms/sfn60226.pdf> and the pre-approved training curriculum for each trainee position assigned by April 1 or within fifteen (15) calendar days of notification.
 2. Submit *SFN 7857 Application for Eligibility* directly to Job Service North Dakota (JSND) for approval of an economically disadvantaged individual for participation in the OJT Program.
- B. Pre-approved curriculum: NDDOT's OJT Program Manual contains pre-approved training curriculum for a number of skilled trade positions. Contractors should select a training program(s) based on their company's employment/staffing needs.
- C. Customized curriculum: To request a training curriculum not included in the pre-approved curriculum, submit a written request for approval by NDDOT Civil Rights Division.

The request must include:

- A training curriculum, including the classification requested, minimum number of hours required, and type of training the individual will receive to achieve journey-level worker status.
- A minimum wage scale.

If approved, each new classification must comply with the provisions specified in the OJT Program Manual. No hours worked prior to approval will be credited toward completion of the customized training program. Training programs for classifications not covered by the Davis-Bacon and Related Acts (DBRA) will be considered on a limited basis.

The contractor may commence its "customized" training as of the date of the written approval.

- D. Union apprenticeship and on-the-job training programs registered with the Bureau of Apprenticeship and Training (BAT), U.S. Department of Labor, may be used for trainee positions assigned under the OJT Program, provided the trainees or apprentices are minority, female, or economically disadvantaged. Nonminority males not certified as economically disadvantaged may only be used when the contractor has requested and received approval, from the Department, for additional trainee positions. The apprenticeship indenture agreements serve as the trainee's job application and must be provided prior to any hours being credited toward OJT

Program completion.

E. Power Equipment Operators:

The contractor may train an individual on a combination of equipment if each piece of equipment falls within the same groups of power equipment operators identified in the training curricula (groups 1-3 and groups 4-6). These power equipment operator groups are referenced to the federal DBRA wage rates contained in the contract proposal. As an example, a "utility operator" may receive training on a broom, a front-end loader less than 1½ cubic yards, or other piece of equipment that is used around a paver if each piece falls within either groups 1-3 or groups 4-6. When multiple wage rates apply, the trainee's wage will be based on the equipment being operated at the time or on the highest of the applicable wage rates.

Use of the classification "pickup machine operator (asphalt dump-person)" as a group 4 power equipment operator is considered standard industry practice. The classification is defined as: "Operates the controls on the pickup machine that runs in front of the paver, trips the levers on the dump trucks, and balances the loads for the paver. The pickup machine operates on similar principles as a shouldering machine."

F. Contractors not qualifying for the OJT Program, or contractors desiring to train more than the allotted number of trainees, may apply to the Department for additional trainee positions. Approval of additional positions will be at the sole discretion of the Department. The Department will take into consideration whether there is enough work for the trainee to successfully complete the curriculum and whether the contractor will be exceeding the allowable ratio of trainees to journey-workers (generally considered to be one trainee or apprentice to every three to five journey-workers).

The additional positions may be filled by individuals outside of the targeted groups. The contractor may pay the reduced training rates to additional trainees outside of the targeted groups but will not receive hourly reimbursement for any individuals who are outside the targeted groups.

VII. NDDOT'S RESPONSIBILITIES

- A. The NDDOT OJT supportive services (OJTSS) consultant will monitor excerpts from the weekly certified payrolls or LCP Tracker for NDDOT projects submitted with the monthly vouchers for reimbursement. On contracts where certified payrolls are not required and not available for supporting documentation, contractors may enter trainee wages, hours in training, and the project control number(s) (PCN) in a spreadsheet to support their reimbursement vouchers. In this case, contractors should work with OJTSS to assure that all information required for payment is provided.
- B. The OJTSS will review Daycare Reimbursement Forms and make recommendations to CRD on approvals. CRD approves any reimbursements and the OJTSS will process any payments. OJTSS tracks funds available/expended in order to stay within the limit of available funds that season/year. OJTSS Daycare reimbursements are made using OJTSS funding, which may be limited or unavailable year to year.
- C. The OJTSS consultant will assess when the trainees have completed the specified number of hours and their wages are increased accordingly. The OJTSS consultant will also assure that applicable fringe benefits are paid either directly to the trainees or for the trainee into approved plans, funds, or programs.

- D. The OJTSS consultant is charged with visiting trainees and monitoring their progress under the OJT Program. To facilitate the on-site visits, the OJTSS consultant will contact contractors for the location of the trainees weekly.

VIII. CONTRACTOR'S RESPONSIBILITIES

- A. Consistently demonstrate efforts to recruit, hire, and train candidates for the OJT Program.
- B. Assign each trainee to a particular person—either a supervisor or an employee proficient in the skills to be trained—who shall see that the trainee is given timely, instructional experience. This person must be familiar with the OJT Program, keep proper records, and ensure completion of the required training hours in accordance with the training curriculum.
- C. Appoint a company employee who will be available and responsive to weekly contacts by the OJTSS consultant. OJTSS monitors the status of assigned trainee positions (e.g., program and trainee approvals, trainees' progress, etc.). The OJTSS consultant will contact the individual listed on the company's approved SFN 60226 Request for OJT Trainee Approval. This person must reply to communications from the Department and the OJTSS consultant in a timely manner.
- D. Must have trainees available to the OJTSS consultant for at least two on-site visits during the construction season. The OJTSS consultant will be provided a private location to meet with the trainee and the trainee will be allowed as much time away from the project as necessary to complete the on-site visit.
- E. Make the trainer and project superintendent available to the OJTSS consultant for at least two on-site visits each construction season.
- F. Make trainees aware they are formally enrolled in the OJT program.
- G. Inform trainees on availability of Daycare Reimbursement Program while in an approved training curriculum and assist them with completing the required paperwork, if applicable.
- H. Identify trainees on the payroll excerpts, for example: "grp. 4 roller operator trainee." This includes trainees in job classifications not covered by DBRA. Handwritten notes are appropriate for identification.
- I. Notify the Department when a trainee completes the number of hours required to graduate from the OJT Program. The Department will issue the trainee a confirmation letter as proof of the graduate's successful training program completion.
- J. Notify the Department to "propose graduation" or discontinue the training period of a trainee who has completed 90% or more of their hours and thereafter advance the trainee to journey-worker status.
- K. Elect to upgrade proficient trainees from one power equipment operator group or truck driver group to another, with the approval of CRD. Fewer hours are required to complete the upgraded position.

Minimum number of hours required:

Power Equipment Operator Groups 4-6 to Groups 1-3 = 400 hrs.
Class C Truck Driver to Class B = 200 hrs.

Class B Truck Driver to Class A = 200 hrs.

Depending on the variety of experience the trainee has gained under the previous curriculum, the difference in the hours may be deducted from the actual operation of the piece of equipment or truck. The contractor will need to review the trainee's past performance to make this determination.

- K. May hire commercial driver's license (CDL) holders as truck driver trainees. Those having over-the-road driving experience, with little or no highway construction experience, may be considered to have completed the Class C truck driver training curriculum and, therefore, are eligible to be upgraded to a Class B truck driver trainee, with the approval of CRD.
- L. May transfer trainees from one project to another to complete the OJT Program. If transfers are made, CRD must be notified and provided with the name of the trainer.
- M. May train trainees on municipal, private, or other non-highway work. These training hours must be paid at the OJT minimum wage scale to count toward their OJT Program completion; however, no program reimbursement will be made for those hours. Payrolls of employees trained on non-NDDOT projects must be provided to prove appropriate wages are paid.
- N. Must train trainees on projects within North Dakota. Cannot train trainees on projects located outside of the state lines. The OJTSS consultant must be able to visit the trainee twice during their program. It is unreasonable for the OJTSS consultant to make these visits outside of the state.
- O. May delegate or reassign trainee positions to subcontractors, with the acceptance of the subcontractors and the approval of CRD. The prime contractor must verify that the trainee will be able to accumulate enough hours to complete his or her training program. If approved, the subcontractor must obtain training program and trainee approval from CRD before the trainee begins work under the OJT program. Program reimbursement will be made directly to the prime contractor. The trainee position will remain the responsibility of the prime contractor.
- P. May use trainees on projects subject to TERO requirements as part of the core crew. The training hours will count toward overall OJT Program completion; however, no program reimbursement will be made for those hours unless it is a NDDOT let project.
- Q. Must not use one trainee to simultaneously fill multiple trainee positions
- R. May use a trainee on a piece of equipment in groups 1-3 or groups 4-6 for one assigned trainee position, then once that trainee has completed the program, the trainee may be trained on a different piece of equipment in groups 1-3 or groups 4-6 to fulfill a second assigned trainee position. When a trainee is used for a second time within a group, the contractor must pay that trainee at the higher wage rate as described in paragraph B under Wage Rates (page 8).

IX. CLASSROOM TRAINING

- A. Classroom training may be used to train employees. Each classroom training curriculum must be approved by CRD if the contractor wishes to count the classroom hours as training hours and be reimbursed.

Submit a proposed classroom training curriculum to CRD for approval. Define the type of training the individual will receive, classroom training curriculum, and the

minimum number of hours required. The Department will determine the number of hours of credit each trainee will receive toward their training. No retroactive approval will be granted.

Contractors will be reimbursed for classroom training hours after the trainee has completed 80 hours of work on highway construction projects.

Reimbursement for classroom training will be limited to 60 hours per trainee per construction season.

- B. The minimum wage scale to be used for classroom training will be that of the first federal-aid highway construction project on which the trainee will be employed. If the trainee is already employed on a federal-aid highway construction project, the trainee will be paid in accordance with the minimum wage scale applicable to that project. However, if the first project on which the trainee will be employed is a state funded only contract, the minimum wage scale to be used for the classroom training will be that of the appropriate DBRA wage in effect at the time of award of the state funded contract.

X. WAGE RATES

- A. When the contractor is submitting the trainee's hours toward training program, wages paid shall in no case be less than that of those stated in the approved curriculum. A trainee working on a non-federal aid project, must be paid the DBRA wage rate in effect at the time of award for the type of work the trainee is performing as a trainee. Current and prior labor rates can be found on the NDDOT website at: <https://www.dot.nd.gov/divisions/civilrights/laborcompliance.htm>
- B. The minimum wage rates shall not be less than 80% of the journey-worker rate for the first two quarters of training, 85% of the journey-worker rate for the third quarter, and 90% of the journey-worker rate for the fourth quarter.
- Under the power equipment operator training curricula only, once a trainee has completed a training curriculum in either groups 1-3 or groups 4-6, the contractor may enroll the trainee in another training curriculum on a different piece of equipment in either groups 1-3 or groups 4-6.
 - The minimum wage rate under the trainee's second program shall not be less than 85% of the journey-worker rate for the first two quarters of training, 90% of the journey-worker rate for the third quarter, and 95% of the journey-worker rate for the fourth quarter.
 - For the purpose of the OJT Program, a quarter is 25% of the hours the trainee works toward completion of their approved program. The first two quarters of a 550-hour training curriculum would end after 275 hours, the third quarter after 138 hours, and the fourth after 137 hours.
- C. At any time hours are being attributed toward the completion of the approved training program, trainees shall be paid full fringe benefit amounts, where applicable, in accordance to DBRA requirements. DBRA requirements can be found on the NDDOT website at <https://www.dot.nd.gov/divisions/civilrights/laborcompliance.htm>
- D. At the completion of the OJT Program, the trainee shall receive the wages of a skilled journey-worker.

XI. RECRUITMENT AND SELECTION

A. Prerequisites:

Trainees must possess basic physical fitness for the work to be performed, dependability, willingness to learn, ability to follow instructions, and an aptitude to maintain a safe work environment. Trainees must be a North Dakota resident during their training program.

B. Licenses:

Truck driver trainees must possess appropriate driver permits or licenses for the operation of Class A, B, and C trucks. When an instructional permit is used in lieu of a license, the trainee must be accompanied by an operator who:

1. Holds a license corresponding to the vehicle being operated;
2. Has had at least one year of driving experience; and
3. Is occupying the seat next to the driver.

C. Recruitment:

1. Place notices and posters setting forth the contractor's Equal Employment Opportunity (EEO) Policy and the availability of the OJT Program in areas readily accessible to employees, applicants for employment, and potential employees.
2. Employ members of the targeted group (minority, female, or economically disadvantaged individuals) for all trainee positions assigned in accordance with the OJT Program. Additional positions requested by the contractor may be filled by individuals outside of the targeted groups.
3. Conduct systematic and direct recruitment through public and private employee referral sources.
4. Screen present employees for upgrading to higher skilled crafts. A present employee may qualify as a trainee; however, no work hours will be reimbursed or counted toward program completion prior to training program and trainee approval by CRD.

D. Selection:

1. Hire and enroll OJT trainee candidates who qualify as an individual in the targeted group.
2. Select a training program(s) based on their company's employment/staffing needs.
3. Individuals in the targeted group having experience in the selected curriculum may be eligible to participate in the OJT Program providing they:
 - are not or have not been journey-workers in the selected curriculum, and/or
 - have not been previously trained in the selected curriculum.

E. Daycare Reimbursement Program:

Approved trainees may apply for the OJT Daycare Reimbursement Program and be eligible for up to \$3,500 in reimbursement of daycare costs. The trainee must be the legal primary custodial guardian of the dependent(s) they are requesting reimbursement for. Dependent(s) must reside at the same address as the trainee for

more than 50% of the calendar year. Proof of cost and other documentation will be required to be submitted with the OJT Dependent Child Care Reimbursement Form.

- Availability of program and eligible funds depending on funding from FHWA each year.
- Once funds for the program year have been expended no further reimbursements are available.
- W-9 will be required prior to any reimbursement.
- Only daycare services provided during the dates/times the trainee is being trained in their approved OJT program will be reimbursed.

XII. BASIS OF PAYMENT

- E. Contractors will be paid \$4.00 for each hour of training in accordance with the OJT Program Manual.
- F. Reimbursement will be made directly to the contractor. Complete SFN 51023 Voucher for On-the-Job Training Program Hourly Reimbursement for each trainee. LCPTracker must be utilized on NDDOT projects for reporting certified payrolls. The OJTSS consultant will be verifying hours submitted on NDDOT projects through this online reporting system. For non-NDDOT projects the firm must attach excerpts from the weekly certified payrolls showing the trainee's hours, rate of pay, and how applicable fringe benefits were paid. Vouchers without excerpts from payrolls will not be paid until the excerpts are provided. If the excerpts from the payrolls are not provided within one week, the voucher will not be paid, and the trainee's hours will not be credited toward completion.
- G. On contracts where certified payrolls are not required and not available for supporting documentation, contractors may enter trainee wages, hours in training, and the project control number(s) (PCN) in a spreadsheet to support their reimbursement vouchers. In this case, contractors should work with OJTSS to assure that all information required for payment is provided.
- H. Submit completed vouchers to CRD for approval and processing by the fifteenth (15th) calendar day of every following month the trainee is employed under the OJT Program.

Regardless, all vouchers for trainee hours worked on state funded only projects from July 1 to June 30 must be received by CRD no later than July 15 in order to be reimbursed. All vouchers for trainee hours worked on federally funded projects from October 1 to September 30 must be received by CRD no later than October 15 in order to be reimbursed. This is due to state and federal end-of-the-year budget fiduciary requirements.

XIII. FAILURE TO PROVIDE THE TRAINING OR HIRE THE TRAINEE AS A JOURNEY-WORKER

- A. The contractor is required to consistently demonstrate efforts to recruit, hire, and train candidates for the OJT Program.
- B. If the contractor does not show in a timely manner good faith efforts to recruit, hire, and train candidates in the targeted group, the Department may withhold progress payments

- C. If payments have been made, the Department will deduct the amount paid from the contractor's progress payment.
- D. No payment shall be made to a contractor for failure to provide the required training or failure to hire the trainee as a journey-worker when such failure is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirements of this OJT Program Special Provision.
- E. Hiring a trainee to begin training as soon as feasible after start of work is evidence of a contractor's good faith efforts to comply with the OJT Program requirements. Additional evidence supporting a contractor's good faith efforts would be to keep the trainee employed as long as training opportunities exist in the approved work classification or until the trainee has completed his or her training program.
- F. It is not required that all trainees be employed for the entire length of the construction season. A contractor will have fulfilled its responsibilities under this OJT Special Provision if it has provided acceptable training to the number of trainees assigned.

XIV. UNFILLED OR INCOMPLETE TRAINEE POSITIONS

- A. By October 1, provide written explanation of the firm's good faith efforts for unfilled or incomplete trainee assignments to CRD. CRD will decide, on a case-by-case basis, whether to carry the assigned positions over to the next construction season.
- B. Positions carried over from the previous construction season must be among the first positions filled at season startup. To notify CRD of the trainee's rehiring, submit *SFN 60226 Request for On-the-Job Trainee Approval*, marking 'Check if Carryover Trainee' in the Approved Training Program section of the form. There is no need for the training position or a returning trainee to be re-approved.
- C. Sanctions, up to and including revocation of bidding privileges, may be imposed on the contractor for failure to provide sufficient explanation and documentation for reasons assigned trainee positions when unfilled or incomplete.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

1. GENERAL

Install, maintain, and remove appropriate Temporary Erosion and Sediment Control Measures (ESCMs).

Definitions:

A. Temporary Erosion and Sediment Control Measures are to be installed and maintained before and during the term of the land disturbance activity. These items are removed when permanent erosion and sediment ESCMs are installed.

B. Permanent Erosion and Sediment Control Measures are to be installed and maintained once the project is completed so that the applicable permits can be terminated.

In some instances, individual temporary and permanent erosion and sediment ESCMs for a site may consist of identical ESCMs. In these cases, the temporary erosion and sediment ESCMs may be used as the permanent erosion and sediment ESCMs if they meet the following criteria:

1. The ESCM was installed correctly,
2. Is in a functional condition,
3. Has had all accumulated sediment removed.

C. The Stormwater Pollution Prevention Plan (SWPPP) is the document that identifies potential sources of sediment or other pollution from construction activity and ensures practices are used to reduce the contribution of pollutants from construction site runoff.

D. Contractor Controlled Areas are project areas not included in the contract, but are obtained and solely controlled by the Contractor (e.g., concrete or asphalt batch plants, concrete washout areas, equipment staging yards, material storage areas, excavated material disposal areas, Contractor furnished borrow areas, etc.).

E. Maintenance is any action taken to keep an ESCM in working condition. These actions may consist of repairing failures of the ESCM itself.

F. Noncompliance is any action or inaction that violates the regulations imposed by the applicable permits or the requirements of this special provision and other contract documents. Failure of an ESCM does not necessarily constitute noncompliance as long as the ESCM is repaired, replaced or supplemented within the timelines established in the applicable permits and no sediment is discharged from the site or into a water of the state.

2. CONSTRUCTION REQUIREMENTS

Develop a SWPPP specific to the project. The creation of the SWPPP is a cooperative effort between the NDDOT who creates the project plan sheets and the Contractor who creates a complete SWPPP which incorporates the plan sheets and the Contractor's means and methods. The project plan sheets by themselves do not meet the requirements of a complete SWPPP and should not be considered as such. The Contractor has the flexibility to modify the design and implementation of the temporary erosion and sediment controls to match the Contractor's means and methods and/or field conditions. These changes must be documented in the SWPPP and meet all regulatory requirements.

Obtain appropriate permit coverage for the activities conducted in Contractor Controlled Areas. A permit will be required for these areas regardless of their size. The NDDOT will have no responsibility for these areas. Provide copies of the completed and signed Notice of Intent submitted for permit coverage to the Engineer before activities in these areas commence. Do not commence activities in these areas until after permit coverage has begun. Provide copies of Permit Coverage Letters for these areas to the Engineer within 7 days of receiving them from the regulating agency.

Install perimeter erosion and sediment ESCMs according to the plans/SWPPP prior to site disturbance.

Change the location of temporary erosion and sediment ESCMs to fit the field conditions.

Update the SWPPP as work progresses, or as directed by the Engineer. Update the SWPPP to show changes due to revisions in work schedules or sequence of construction. Update the site map to reflect erosion and sediment ESCMs that have been installed, changed, or removed.

Do not rely on perimeter ESCMs as the sole method of controlling erosion. As the project progresses, install temporary erosion and sediment ESCMs within the perimeter ESCMs to control erosion resulting from the construction of the project.

Use temporary erosion and sediment ESCMs to prevent contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment.

Coordinate temporary erosion and sediment ESCMs with the construction of permanent erosion and sediment ESCMs to provide continuous erosion control. Do not install

temporary erosion and sediment ESCMs when permanent erosion and sediment ESCMs are able to be installed. Once the permit is terminated or transferred to the Department, the maintenance of the permanent erosion and sediment ESCMs becomes the responsibility of the NDDOT.

Install stabilization ESCMs (mulch, seeding and mulch, etc.) in areas that have been disturbed where work has temporarily or permanently ceased following the timelines established in the applicable permits. If implementation of stabilization is precluded by snow cover, undertake such measures as soon as conditions allow.

Maintain the effectiveness of the temporary erosion and sediment ESCMs as long as required to contain sediment runoff. Inspect the temporary erosion and sediment ESCMs and complete the inspection and maintenance reports every 14 days and within 24 hours of a rainfall event of 0.25 inch or more. During prolonged rainfall (more than 1 day), conduct an inspection within 24 hours of the first day of the event and within 24 hours after the end of the event. Inspections are required only during normal business hours. Install a rain gauge to monitor rainfall amounts as required by the appropriate permit.

Correct any deficiencies in the ESCMs within the timelines established in the applicable permits. If conditions do not permit access to the ESCM, corrective actions can be taken by installing additional ESCMs. Correct the original deficiencies as soon as conditions allow access to their location without causing additional damage to the slopes. In the inspection logs, document the conditions that prohibit access.

Provide copies of all inspections, documentation, record keeping, maintenance, remedial actions, and repairs required by the applicable permits to the Engineer. Provide inspection and maintenance reports within 3 working days after an inspection has been conducted.

Provide, at the preconstruction conference, documentation of any Subcontractor hired for erosion control showing that the Subcontractor's on-site supervisor is certified through the NDDOT Erosion & Sediment Control Construction (ESCC) Certification Training. This certification must be maintained by the Subcontractor's onsite supervisor through the term of the contract. The Engineer will provide a verification of their certification through the NDDOT ESCC Certification Training at the preconstruction conference and will maintain that certification through the term of the contract.

For projects covered by an Environmental Protection Agency (EPA) Construction General Permit, provide at the preconstruction conference, the documentation of EPA construction inspection certification for all individuals conducting inspections under this permit.

Provide immediate written notification to the Engineer of proposed changes to the erosion control plan or SWPPP. The Engineer will review the proposed changes and determine if they are adequate. Documentation of maintenance and inspections that does not affect the erosion control plan or SWPPP does not require approval by the Engineer.

Remove the temporary devices when directed by the Engineer or when permanent erosion and sediment controls are installed.

3. Erosion and Sediment Control Supervisor.

A. General. Designate an erosion and sediment control supervisor. Provide the name and contact information for the supervisor at the preconstruction meeting. If this erosion and sediment control supervisor becomes unavailable on the project, designate a replacement supervisor. Notify the Engineer if this supervisor changes and provide the contact information for the new supervisor.

B. Qualifications. The supervisor shall be:

1. An employee of the Prime Contractor;
2. Familiar with installation, maintenance, and removal of ESCMs and the requirements of the erosion and sediment control plans, applicable permit requirements, specifications, plans and this provision;
3. Competent to supervise personnel in erosion and sediment control operations; and
4. Certified through the NDDOT ESCC Certification Training and maintain that training throughout the term of the contract. The EPA construction inspection course cannot take the place of the NDDOT ESCCC. No other certifications may take the place of this requirement.

C. Duties. The supervisor shall:

1. Provide erosion and sediment control as required by the SWPPP, Plans, and Specifications.
2. Be on the site to supervise the installation, operation, inspection, maintenance, and removal of the erosion and sediment ESCMs.
3. Update the SWPPP as work progresses to show changes due to revisions in work schedules or sequence of construction, or as directed by the Engineer. Update the site map to reflect erosion and sediment ESCMs that have been installed, changed, or removed.
4. Propose changes to improve erosion and sediment control.
5. Be accessible to the job site within 24-hours.
6. Provide the Engineer with documentation of all erosion and sediment control activities and inspections as required above.

4. Erosion And Sediment Control Inspector for EPA Construction General Permit

For projects covered by EPA Construction General Permit, provide individuals conducting the Erosion and Sediment Control Inspections that have taken the EPA Construction inspection course developed for this permit. These individuals must have passed the exam or hold a valid construction inspection certification or license from an equivalent program.

The NDDOT ESCC certification cannot take the place of EPA construction inspection certification. Only third-party training that is listed as EPA approved on the EPA website will be considered equivalent.

Provide the names of any individuals who will be conducting the Erosion and Sediment Control inspections on EPA projects. Notify the Engineer if this person changes and provide the new contact information.

The EPA Construction Inspection Certification or License must be active for the duration of the project.

5. PERFORMANCE

Correct all areas of noncompliance within 24 hours after notification of noncompliance. If corrective actions are not taken within 24 hours, the Engineer may:

1. Assess a contract price reduction of \$500 per day per instance;
2. Have deficiencies corrected by another Contractor and deduct the cost of the work from the monies due or to become due to the Contractor;
3. Suspend all work; or
4. Withhold payment on other contract items/pay estimates.

These actions will be applied until deficiencies have been corrected.

6. BASIS OF PAYMENT

ESCM installation will be paid for at the contract unit price for erosion and sediment control for the appropriate items and sections. The plans will detail the required ESCMs for temporary and permanent installations. The same bid items may be used for temporary and permanent ESCMs.

ESCM items will be measured as specified in the "Method of Measurement" portion of the appropriate section of the specifications.

ESCM item removal will be paid for at the contract unit price for "Remove _____" in the appropriate section of the specifications.

Include the costs for labor, materials, maintenance, equipment, disposal, adherence to the permit, and SWPPP modifications in the respective pay items.

When the Engineer directs the replacement of temporary erosion and sediment ESCMs that are no longer functional because of deterioration or functional incapacity and those items were installed as specified in the Contract or as directed by the Engineer, the Department will pay for replacement ESCMs

No payment will be made for replacing temporary erosion and sediment ESCMs that the Engineer determines are ineffective because of improper installation, lack of maintenance, or the Contractor's failure to pursue timely installation of permanent erosion and sediment ESCMs as required in the Contract.

No payment will be made for replacing temporary erosion and sediment ESCMs due to contractor operations. Include the cost to move Flotation Silt Curtain as work progresses in the price bid for "Flotation Silt Curtain".

Erosion and sediment controls for Contractor Controlled Areas are the responsibility of the Contractor and will not be paid for by the Department.

Removal of sediment from silt fence and fiber rolls will be paid for at the price listed in the "Price Schedule PS-1."

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

LIMITATIONS OF OPERATIONS

DESCRIPTION

Section 108.05, "Limitations of Operations" is no longer valid. Use this Special Provision in its place.

108.05 LIMITATION OF OPERATIONS

A. General.

Perform the work in a manner and sequence that minimizes interference to traffic, and with due regard to the location of detours and provisions for handling traffic. Do not begin work to the prejudice or detriment of work already started; the contract may require a section of roadway to be finished before starting additional sections if the opening of the section is essential to public convenience.

If the prosecution of the work is discontinued, provide the Engineer at least 24-hours notice before resuming operations.

B. Holidays.

Unless the contract allows work on holidays, perform work on holidays only with the Engineer's prior written approval. Submit a written request to the Engineer by noon 2 business days before the requested holiday.

C. Night-time Operations and Extended Hours.

1. General.

When performing work in low light conditions, implement proper safety precautions and provide adequate lighting for the performance and inspection of the work.

2. Nighttime Operations.

Unless the contract allows for nighttime operations, perform work at night only with the Engineer's prior written approval.

Submit a written request to the Engineer a minimum of 7 calendar days before anticipated nighttime operations. The Engineer may deny the request or delay approval if it would require additional staffing considerations. If nighttime operations requires the Engineer to hire additional forces, nighttime operations may not be allowed for up to 30 days from the receipt of the request.

When requesting to perform nighttime operations, include a plan to ensure the safety of all individuals on the project site, including the Contractor's and subcontractor's workers, Department representatives, and the traveling public.

The Department bears no liability for costs or delays resulting from the Engineer's approval, rejection, or delay for staffing purposes of a request to perform nighttime operations.

3. Extended Hours.

Extended hours are allowed before sunrise with verbal notice given to the Engineer the previous day. Extended hours are allowed after sunset with verbal notice given to the Engineer that same day.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION

FEDERAL PROHIBITION ON CERTAIN TECHNOLOGICAL HARDWARE

DESCRIPTION

This Special Provision details technological items that are prohibited from use on Department contracts. The contents of this SP take precedent over requirements regarding affected equipment in all other contract documents.

CONTRACT REQUIREMENTS

A. Technological Equipment Prohibitions.

Equipment, services, and systems using telecommunications equipment or services are prohibited from containing equipment produced by:

- Huawei Technologies Company;
- ZTE Corporation; and
- Any subsidiary or affiliate of the named entities.

Video surveillance and telecommunications equipment are prohibited from containing equipment produced by:

- Hytera Communications Corporation;
- Hangzhou Hikvision Digital Technology Company;
- Dahua Technology Company; and
- Any subsidiary or affiliate of the named entities.

B. Contractor Certification.

The Prime Contractor must complete the information below, sign this Special Provision, and submit the signed document to the Engineer at the preconstruction conference. This signature affirms that no prohibited products will be used in the project.

Project Number(s): _____

PCN(s): _____

Company Name: _____

Signatory Name (printed): _____

Signature: _____

Date: _____

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

E-Ticketing

DESCRIPTION

This Special Provision modifies the NDDOT Standard Specifications to allow for the use of electronic haul tickets (E-Tickets) when delivering material. If E-Tickets are utilized the Engineer and Contractor each have the right to revert to the use of paper tickets upon providing a written notice to the other party.

CONTRACT REQUIREMENTS

A. Material Accepted by Weight.

In addition to the paper documents described in Section 109.01 J.6, "Documentation", the Engineer will accept E-Tickets as haul documentation.

Provide the Engineer with access, instruction, and assistance in obtaining E-Tickets.

Produce both paper and E-Tickets. The Engineer may waive the requirement for dual production if the E-Tickets prove to be reliable.

B. Concrete Batch Plants.

Batch tickets generated for concrete as specified in Section 155.02 B.2, "Batch Tickets" may be either paper or E-Tickets.

Provide the Engineer with access, instruction, and assistance in obtaining E-Tickets.

Produce both paper and E-Tickets. The Engineer may waive the requirement for dual production if the E-Tickets prove to be reliable.

BASIS OF PAYMENT

Include the cost of producing material documentation and batch tickets in the contract unit price for applicable items.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

BUY AMERICA

DESCRIPTION

Replace Section 106.08, "Buy America", with the following:

BUY AMERICA

A. General.

Provide materials from domestic sources when products are permanently incorporated into the work.

The requirements of this SP are not applicable to equipment, tools, and temporary items, including materials left in place at the Contractor's convenience.

B. Certifications.

All certifications are submitted by the prime Contractor. When submitting certifications for materials that are subject to the requirements of this provision, the prime Contractor shall include a signed letter stating that the submitted documentation is the documentation that was received by the prime Contractor for material incorporated into the work. The prime Contractor's signature on the Department's Certificate of Compliance form meets this requirement.

C. Determination of Material Category.

1. General.

Only single category of Buy America requirements will apply to an item.

Some contract items are composed of multiple components that may fall into different categories. Individual components will be categorized based on their nature when they arrive at the work site.

2. Iron and Steel.

An item will be considered iron or steel if it is predominantly composed of iron or steel.

3. Manufactured Products.

A waiver exists for Manufactured Products and are therefore currently not subject to Buy America requirements; however, they are included in this Special Provision to maintain the category definition and consistency with Federal language.

An item will be considered a manufactured product if:

- It consists of two or more of the materials identified as construction materials in Section C.4 of this provision; or
- It consists of at least one of the materials identified as construction materials in Section C.4 of this provision and a material not listed.

4. Construction Materials.

The category of construction materials excludes cement and cementitious materials, aggregates such as stone, sand, or gravel, or aggregate binding agents or additives.

Construction materials are materials that consist primarily of:

- Non-ferrous metals;
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- glass (including optic glass);
- lumber; or
- drywall.

D. Steel and Iron Certification.

1. General.

Ensure all manufacturing processes, including applications of coatings, occur in the United States. A coating includes all processes required to apply the coating to a product to protect or enhance the value of the product.

2. Bulk Manufactured Steel and Iron Materials.

In addition to the requirements of Section 106.01 C, "Certificate of Compliance", submit a contractor's Certificate of Compliance stating that the iron and steel products listed in Table 1 that are permanently incorporated into the work are of domestic origin.

Table 1

Mailbox supports	Cable Fence Materials
Chain Link Fence Materials	Barbed Wire Fence Materials
Guardrail Components	Woven Wire Fence Materials
Culvert Markers	Delineators
Perforated Tube Sign Supports and Related Materials	

3. Other Steel and Iron Products.

For steel and iron products permanently incorporated into the work that are not listed in Table 1, submit a manufacturer's Certificate of Compliance as specified in Section 106.01 C, "Certificate of Compliance" and the following information:

- a. A signed mill test report.
- b. A signed certification from each fabricator and manufacturer that has handled the steel and iron products affirming that all processes performed on the steel and iron products were conducted in the United States.
- c. Material descriptions, quantities, and a means of material identification (lot number, bin number, heat number, or factory identification) for each process performed on the steel and iron products.

Each certification shall contain the material identification from all previous fabricators and manufacturers in the process.

3. Foreign or Uncertified Products.

These requirements allow the use of steel and iron products produced and manufactured outside the United States, or products that cannot be certified as originating in the United States, of a total value less than 0.1 percent of the original contract amount, or \$2,500, whichever is greater.

The total value is that shown to be the cost of the steel and iron products as delivered to the project site.

Document the cost of:

- Foreign steel and iron products, plus
- Steel and iron products which cannot be certified as originating in the United States.

Submit the documentation of foreign and uncertified products with the required certifications.

E. Manufactured Products

A waiver exists for Manufactured Products and are therefore currently not subject to Buy America requirements; however, they are included in this Special Provision to maintain the category definition and consistency with Federal language.

Provide manufactured products produced in the United States.

A manufactured product is acceptable under this provision if:

- The manufactured product was manufactured in the United States; and
- The cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product.


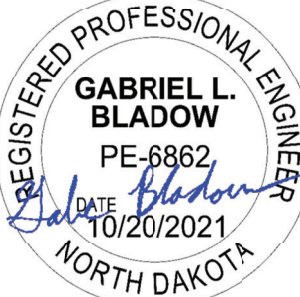
F. Construction Materials

Ensure the final manufacturing process and the immediately preceding manufacturing process for construction materials occur within the United States.

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
STORM SEWER LIFT STATION**

Project: IM-8-094(105)350 – PCN 22628

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am duly Licensed Professional Engineer or Architect under the laws of the State of North Dakota.

Electrical Division 26	Troy D. Vareberg Vareberg Engineering, Ltd	
Hydraulic Divisions 40, 43	Gabriel Bladow Houston Engineering Inc.	

1. SUMMARY

- A. Several Components of the stormwater lift station are not addressed by NDDOT Standard Specifications. These items are included herein.

2. GENERAL

- A. All related requirements in these specifications not included in this special provision will default to the NDDOT Standard Specifications for Road and Bridge Construction. This includes references to legal requirements, quality assurance, product delivery, storage, and handling, submittals, substitutions, and other references omitted from these specifications.

3. MEASUREMENT AND PAYMENT

- A. This Special Provision addresses 2 pay items of the contract. These include:
- i. 920-0091 LIFT STATION – SITE 1
 - ii. 920-0092 LIFT STATION – SITE 2

- B. The pay items are defined as follows:
- i. 920-0091 – This pay item refers to the replacement of the existing submersible pumps and pump motor control panel at the 25th Street Lift Station. The pumps, motor control panel, level detection switches, SCADA equipment, temporary pumping and any required modifications required to replace the existing pumps and motor control panel, control and SCADA programming and integration and costs associated with delivering the salvaged pumping equipment to the NDDOT District are incidental to the pay item Lift Station Pumping Equipment.
 - ii. 920-0092 - This pay item refers to the cast in place pump station at the University Drive/US-81 and Interstation 94 Interchange. The pay item includes all work and materials including the excavation, dewatering, temporary pumping, concrete, concrete embedments, gates, thimbles, ladders, catwalks, hatches, railings, fence, pumps (including motors, base elbow, guide rails, and other appurtenances not specifically stated herein), piping, fittings, and miscellaneous features as shown on the plan and/or required by the specifications or reasonably inferred thereby. The price bid for this item also includes the cost to purchase and supply the meter socket, and supply and install the control panel, including generator receptacle, transformer, and other control panel appurtenances not specifically stated herein), controls, and instruments. Control and SCADA programming and integration are included in the lift station pay item. All costs in connection with the work, including the furnishing of materials, machinery, supplies, and appurtenances; providing all construction plant, equipment and tools; and performing all necessary labor, coordination, supervision and management to fully complete the work are included in this item. The inlet pipe is paid under a separate pay item. The forcemain discharge lines beginning at the outside wall of the lift station to the downstream discharge structure will be paid as a separate pay item. The connections to the lift station and the discharge structure will be incidental to the respective structures. Pumps, motor control panel, and SCADA equipment are included in the lift station pay item.
- C. These items will be paid on a lump sum basis. Partial Payments may be made for portions of the work. Partial payments will be based on a percentage completed of the pay items. The percentage will be determined by the Engineer. Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

4. TABLE OF CONTENTS

DIVISION 26 – ELECTRICAL

26 05 00	Electrical General Conditions
26 05 19	Low Voltage Electrical Conductors and Cables
26 05 26	Grounding and Bonding for Electrical Systems

- 26 05 33 Raceway and Boxes for Electrical Systems
- 26 05 50 Excavating, Trenching, and Backfilling
- 26 05 53 Labeling and Equipment Identification
- 26 21 00 Electrical Service
- 26 29 99 Lift Station Controls

DIVISION 40 – PROCESS INTERCONNECTIONS

- 40 05 06 Pipe Couplings
- 40 05 07 Pipe Supports
- 40 05 19 Ductile Iron Pipe
- 40 91 07 Level Detection

DIVISION 43 – MATERIAL HANDLING EQUIPMENT

- 43 20 00 Pumps, General
- 43 25 06 Submersible Solids-Handling Pumps

SECTION 26 05 00
ELECTRICAL GENERAL CONDITIONS

PART 1: GENERAL

1.01 SUMMARY

- A. Work generally consists of two (2), complete electrical systems, each consisting of, but not limited to: 277/480 VAC, 3 phase main electrical service, pump control panel, instrumentation, and connections to pumps, as well as other miscellaneous electrical work as called for per electrical drawings and special provisions as applicable.
- B. Provide all supervision, labor, material, equipment, machinery and any other items necessary to complete the electrical systems. All items of equipment are specified in the singular; however, the number of items of equipment as indicated on the Drawings, and as required for complete systems will be provided and installed.

1.02 CODES, RULES, PERMITS, FEES

- A. Give all necessary notices, obtain all permits and pay all government and state sales taxes, fees, and other costs, including utility connections or extensions, in connection with the work; file all necessary plans, prepare all documents and obtain all necessary approvals of all governmental departments having jurisdiction; obtain all required certificates of inspection for the work and deliver same to the Engineer before request for acceptance and final payment of the work.
- B. All materials furnished and all work installed will comply with the 2020 Edition of the National Electrical Code, with the requirements of local utility companies, and with the requirements of all governmental departments having jurisdiction.
- C. All material and equipment for the electrical portion of the system will bear the approval label, or will be listed by Underwriter's Laboratories, Incorporated or another Nationally Recognized Testing Laboratory (NRTL) approved by OSHA.

1.03 INTENT

- A. It is the intention of these specifications and drawings to call for finished work, tested, and ready for operation. Wherever the word "provide" is used, it means "furnish and install complete and ready for use."

1.04 SURVEYS AND MEASUREMENTS

- A. Base all measurements, both horizontal and vertical from established benchmarks. All work will agree with these established lines and levels. Verify all measurements at site and check correctness of same as related to the work.
- B. Should the Contractor discover any discrepancy between actual measurements and those indicated, which prevents following good practice or the intent of the drawings and specifications, they will notify the Engineer, through the General Contractor, and will not proceed with the work until he has received instructions from the Engineer.

1.05 DRAWINGS

- A. Drawings are diagrammatic and indicate the general arrangement of systems and work included in the contract. Examine the engineering drawings and details for exact

locations of fixtures and equipment. Where they are not definitely located, obtain this information from the Engineer.

- B. Follow drawings in laying out work and check drawings of other trades to verify spaces in which work will be installed.

1.06 "OR EQUAL"

- A. Wherever the words "or equal" or "equal to" or "equivalent" are used in connection with any specified material, it is to be understood that such words mean any material or work of any kind claimed to be an equal in quality to the work or material specified but does not require prior written approval by the Engineer.
- B. Wherever the words "approved equal" are used in connection with any specified material, it is to be understood that such words mean any material or work of any kind claimed to be an equal in quality to the work or material specified and will be so approved in writing by the Engineer.
- C. It is further understood that no material or work will be presented to the Engineer as work or material equal to that specified with the full understanding on the part of the manufacturers and agents for the so called "equal" material, and the full understanding on the part of the Contractor, that the Engineer is to use their own judgment in the matter, that their decision is final, and that in the event of an adverse condition, no claim of any sort will be made against the Owner or Engineer.

1.07 WORK DRAWINGS

- A. Submit for approval, detailed work drawings of all equipment and all material required to complete the project, and no material or equipment may be delivered to the job site or installed until the Contractor has in their possession the approved work drawings for the particular material or equipment.

1.08 EQUIPMENT DEVIATIONS

- A. Where the Contractor proposes to use an item of equipment other than that specified or detailed on the drawings, which requires any redesign of the structure, partitions, foundations, piping, wiring, or any other part of the mechanical, electrical, or structural layout, all such redesign and all new drawings and detailing required therefore will be prepared by the Contractor at their own expense and approved by the Engineer.
- B. Where such approved deviation requires a different quantity and arrangement of wiring, conduit, and equipment from that specified or indicated on the drawings, the Contractor will furnish and install any such controllers, motors, starters, electrical wiring and conduit, and any other additional equipment required by the system at no additional cost to the Owner.

1.09 COOPERATION WITH OTHER TRADES

- A. Give full cooperation to other trades and furnish in writing to the Contractor, with copies to the Engineer, any information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay.
- B. Where the work of the Contractor will be installed in close proximity to, or will interfere with work of other trades, they will assist in working out space conditions to make a satisfactory adjustment. If the Contractor installs their work before coordinating with

other trades or so as to cause any interference with work of other trades, they will make the necessary changes in their work to correct the condition without extra charge.

- C. Furnish to other trades, as required, all necessary work details for the proper installation of work and for the purpose of coordinating adjacent work.
- D. Refer to other Divisions of the Specifications for equipment furnished by others and work required thereof by the Contractor.

1.10 PROTECTION

- A. The Contractor will protect all work and material from damage by his work or workmen and will be liable for all damage thus caused.
- B. The Contractor is responsible for work and equipment until finally inspected, tested, and accepted; they will protect work against theft, injury or damage; and will carefully store material and equipment received on site, which is not immediately installed. Close open ends of work with temporary covers or plugs during storage and construction to prevent entry of obstructing material.

1.11 SCAFFOLDING, RIGGING, HOISTING

- A. Furnish all scaffolding, rigging, hoisting, and services necessary for erection and delivery into the premises of any electrical equipment and electrical apparatus furnished. Remove same from premises when no longer required.

1.12 MATERIAL AND WORKMANSHIP

- A. All materials and apparatus required for the work, except as specifically specified otherwise, will be new of first class quality, and will be furnished, delivered, erected, connected, and finished in every detail, and will be so selected and arranged as to fit properly into the available spaces. Where no specific kind or quality of material is given, a first class standard article as approved by the Engineer will be furnished.
- B. Furnish the services of an experienced superintendent who will be constantly in charge of the installation or work, together with all skilled workmen, helpers, and labor required to unload, transfer, erect, connect up, adjust, start, operate, and test each system. The job superintendent will be a Master Electrician licensed in the State that the work is being performed.
- C. Unless otherwise specifically indicated on the plans or specifications, all equipment and materials will be installed with the approval of the Engineer in accordance with the recommendations of the manufacturer. This includes the performance of such tests as the manufacturer recommends.

1.13 APPLICABLE STANDARDS

- A. Provide work in accordance with applicable rules, codes, ordinances and regulations of local, state, federal governments, and other authorities having lawful jurisdiction. Conform to the latest editions and supplements of codes, standards, and recommended practices.
- B. Drawings and specifications indicate minimum construction standards. Should any work indicated be substandard to any ordinances, lower codes, rules or regulations bearing on work, the Contractor will promptly notify the Engineer in writing, through the General Contractor, of any necessary changes to be adjusted. However, if Contractor provides any

work knowing it to be contrary to any ordinances, laws, rules and regulations, they will thereby have assumed full responsibility and bear all costs involved for correction and compliance. In any instance where the specifications call for materials for construction of a better quality or larger size than required by codes, provisions of these specifications shall take precedence. Codes shall govern in case of direct conflict between codes, plans and specifications.

1. SAFETY CODES:
 - a. National Electrical Safety Code Handbook H30-National Bureau of Standards
 - b. Occupational Safety and Health Standard (OSHA) - Department of Labor
2. NATIONAL FIRE CODES:
 - a. NFPA NO. 70 - NATIONAL ELECTRIC CODE, 2020 Edition.
3. UNDERWRITERS LABORATORIES, INC.
 - a. UL508A Standard: Industrial Control Panels intended for general industrial use, operating from a voltage of 600 volts or less. Control Panel is intended for installation in ordinary locations, in accordance with the National Electrical Code, ANSI/NFPA 70, where the ambient temperature does not exceed 40 degrees C (104 degrees F) maximum.
4. NORTH DAKOTA STATE ELECTRICAL BOARD
5. Laws, Rules and Wiring Standards of North Dakota

1.14 TESTS AND OPERATION RECORDS

- A. General: Test all equipment installed under this specification and demonstrate its proper operation to the Engineer. No equipment will be tested or operated for any other purpose, such as checking motor rotation, until it has been fully lubricated in accordance with manufacturer's instructions and, if it is a centrifugal pump, until it has been connected to piping systems and supplied with sufficient water so that it will not run dry.
 1. Any defects in workmanship, material, equipment or any grounds or short circuits will be corrected by the Contractor before final acceptance.
 2. Submit at least three (3) paper copies and one (1) electronic copy of data noted below to Engineer prior to final inspection.
 3. Maintain a marked set of drawings to record all deviations made from routes, locations, circuiting, etc. shown on contract drawings. Prior to final inspection submit one new set of project drawings with deviations and changes clearly indicated.
- B. Testing: The entire electrical system will be tested by Contractor in presence of the Engineer. Every local switch, panelboard, service breaker, safety switch, and circuit breaker will be operated under load conditions. Every fixture and equipment tested and operated. Test will include any tests specified in any part of this section.
 1. Measure resistance of electrical system with a "Megger" from busses of main switch to ground with main breaker open, and bonding jumper between neutral and ground temporarily removed. Values are to be determined with all panelboards, motor controls and switch circuits open. If any value measured is less

than 100,000 ohms, each feeder will be measured and must exceed those set forth in Article 110 of National Electrical Code, before they will be accepted. Furnish typewritten test results to the Engineer.

C. Recording and Distribution

1. Record nameplate horsepower, amperes, volts, phase, efficiency, service factor and other necessary data on motors, and other electrical equipment furnished and/or connected under this contract.
2. Record motor starter catalog number, size and rating and/or catalog number of thermal overload units installed in all motor starters furnished and/or connected under this contract. See motor starter specifications for instructions for proper sizing of thermal overload units.
3. Record ampere per phase at normal or near normal loading of each item of equipment furnished and/or connected.
4. Record voltage and ampere per phase readings taken at service entrance equipment after completion of project with operation at normal electrical load.
5. Record all instrumentation and device calibration settings.
6. Distribute copies of all recorded information to the Engineer along the project O&M manuals.

1.15 DEMONSTRATION OF COMPLETED ELECTRICAL SYSTEMS

- A. General: Upon completion of entire electrical systems, Contractor will demonstrate to Engineer's satisfaction that all installed electrical systems are in perfect operating condition, that they perform all power and control functions intended and that they are installed in strict accordance with project drawings and specifications.
- B. Materials: Provide all necessary testing equipment, tools, materials, dummy loads, etc., required to properly demonstrate performance.

1.16 OPERATING AND MAINTENANCE INSTRUCTIONS

- A. Provide O&M manuals for all electrical equipment. Include (3) printed hard copies and (1) electronic copy, in PDF format.

END OF SECTION 26 05 00

SECTION 26 05 19
LOW VOLTAGE ELECTRICAL CONDUCTORS AND CABLES

PART 1: GENERAL

1.01 SUMMARY

A. Section Includes:

1. Furnish and install all conductors to accomplish the circuiting, control and power distribution as shown on the Drawings.

B. Related Work:

1. Section 26 05 33 – Raceway for Electrical Systems and Boxes.

1.02 REFERENCE STANDARDS:

- A. U.L. 486A - Wire connectors
- B. NEMA WC5-1973
- C. NEMA WC30-1976
- D. NEPA 70 (National Electrical Code)

1.03 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver conductors to project on standard coils or reels and suitably protected from weather and damage during storage and handling.

PART 2: PRODUCTS

2.01 CONDUCTORS

A. Manufacturer: Essex or equal.

B. Construction:

1. No. 10 AWG and smaller: Stranded Copper, (THWN/XHHW). Solid copper is acceptable for lighting and branch circuits.
2. No. 8 AWG and larger: Stranded Copper, (THWN/XHHW)
3. Aluminum conductors not permitted.

C. Feeder Conductors:

1. 98 percent conductivity copper, 600 volt insulation.

D. Branch Circuit Conductors:

1. 98 percent conductivity copper, 600 volt insulation.
2. Conductors smaller than No. 12 AWG not permitted except in control panel.

2.02 CORD CONNECTOR GRIPS

- A. Manufacturer: Killark "Z" series or equal

- B. Type: Aluminum cord connector, stainless steel mesh grips, straight or 90° as required in eliminating sharp cable bending radii.
- C. Use: To support all cables/cords from the enclosure at their point of use and/or wherever cables/cords enter or leave the bottom of conduit risers (above grade). Required for all cord connections to motors or enclosures.

2.03 BOLTED, PRESSURE TYPE CONNECTORS

- A. Manufacturer: Burndy or equal
- B. Use: Connecting conductors to busbars, suitable for copper and aluminum conductors.
- C. Size: As required for conductor.

2.04 SOLDERLESS CONNECTORS

- A. Manufacturer: 3M "Scotchlok" or equal
- B. Type: Twiston, spring tension.
- C. Use: With copper conductors only.

PART 3: EXECUTION

3.01 INSTALLATION

- A. Draw conductors into conduit only after conduit system is complete. Install in a manner so as not to injure insulation.
- B. Use stranded, copper conductors only. Solid conductors are not acceptable.
- C. Make splices on branch circuit conductors with solderless strapless, mechanical wire connectors.
- D. Tighten bolted, pressure type connectors to manufacturer's recommendations.
- E. No. 10 AWG and smaller will be stranded copper for all motor and control circuits. Branch circuits for lighting and convenience outlets will be solid copper.
- F. Make splices and terminations in control panel by using bolted, pressure type connections. Install according to manufacturer's recommendations.
- G. Provide strain relief cord connectors and stainless steel mesh on all cords entering motor termination boxes, junction boxes or conduits.
- H. Use factory color coded conductors with separate color for each phase and neutral conductor by integral pigmentation for all conductor sizes.
- I. Use following codes:

CONDUCTOR SYSTEM VOLTAGE-277/480, THREE PHASE

Phase A	Brown
Phase B	Orange
Phase C	Yellow

Neutral	Gray
Equipment Ground	Green

- J. Lace or clip groups of feeder conductors in control panel, pull boxes, and wireways.
- K. Use wiring pulling lubricant for pulling No. 4 AWG and larger wire.
- L. Splice only in accessible junction or outlet boxes.

END OF SECTION 26 05 19

SECTION 26 05 26
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1: GENERAL

1.01 SUMMARY

A. Section Includes:

1. Furnish and install a complete grounding system for all electrical equipment.

B. Related Work:

1. Section 26 05 33 – Raceway for Electrical Systems and Boxes
2. Section 26 05 19 – Low Voltage Conductors and Cables
3. Section 26 21 00 - Electrical Service

1.02 DESCRIPTION OF SYSTEM

- A. Bond the control panel to the metallic conduit system through conduit connectors or bonding jumpers, as required, to provide effective electrical continuity.

1.03 QUALITY ASSURANCE

- A. NFPA - 70, Article 250.

PART 2: PRODUCTS

2.01 GROUNDING CONDUCTORS

- A. Copper, with green identification as specified in Section 26 05 19 – Low Voltage Conductors and Cables.

2.02 GROUND RODS

- A. Type: Copper clad steel, 5/8-inch diameter, 10 feet long.

2.03 GROUND CLAMPS (CONCEALED)

- A. Manufacturer: Equal to Cadweld. Exothermic welding process.

2.04 GROUND FITTINGS AND LUGS (EXPOSED)

- A. Manufacturer: Equal to Burndy Company

2.05 GROUND LUG

- A. Located in electrical equipment as indicated on the Drawings.

PART 3: EXECUTION

3.01 POWER SYSTEM GROUNDING

A. Main Service

1. Provide a grounding grid consisting of driven ground rods with bare stranded copper interconnecting conductor as indicated on the Drawings.

- B. Provide a properly sized copper grounding conductor in all branch circuit and feeder conduits. Size the conductor according to Table 250-122 of the National Electric Code. Connect the grounding connector to grounding points (grounding bars, ground studs, etc.) in all electrical enclosures, electrical equipment, junction boxes and outlet boxes.
- C. Ground and bond in accordance with National Electric Code, Article 250.

END OF SECTION 26 05 26

SECTION 26 05 33
RACEWAY FOR ELECTRICAL SYSTEMS AND BOXES

PART 1: GENERAL

1.01 SUMMARY

A. Section Includes:

1. Furnish and install a complete conduit system for all conductors. Low voltage control conductors will be installed within a conduit as well.

B. Related Work:

1. Section 26 05 19 – Low Voltage Conductors and Cables
2. Section 26 05 50 - Excavating, Trenching and Backfilling

1.02 REFERENCE STANDARDS:

- A. U.L. 6 - Rigid metal conduit.
- B. U.L. 360 - Liquid-tight flexible steel conduit.
- C. U.L. 651 - Rigid non-metallic conduit.
- D. NEMA Standard Publication TC-2 - Rigid PVC for underground installations.
- E. NEMA Standard Publication RN 1-2005 – PVC coated rigid steel conduit.

1.03 DELIVERY, STORAGE AND HANDLING:

- A. Store in a dry area, protected from the weather.

PART 2: PRODUCTS

2.01 PVC EXTERNALLY COATED STEEL CONDUIT

- A. Manufacturer: Equal to Rob Roy
- B. Type: PVC externally coated, galvanized steel.
- C. Minimum trade size is 3/4"; other sizes as required by NEC based on quantity of conductors.

2.02 FLEXIBLE METAL CONDUIT (LIQUID-TIGHT)

- A. Manufacturer: Equal to Alfex
- B. Type: Steel
- C. Weatherproof covering

2.03 METALLIC EXPANSION FITTINGS

- A. Manufacturer: Equal to OZ Electrical Manufacturing Company.
- B. Minimum trade size is 3/4-inch.

2.04 HANGERS AND SUPPORTS

- A. Manufacturer: Equal to BLine Products.

2.05 NON METALLIC CONDUIT (HEAVY WALL)

- A. Manufacturer: Equal to Carlon.
- B. Minimum trade size is 3/4-inch.
- C. Type: Schedule 80 polyvinyl chloride, except where Schedule 40 is specifically called for on Drawings.

2.06 NON METALLIC EXPANSION FITTINGS

- A. Manufacturer: Equal to Carlon.
- B. Type: Suitable for use with nonmetallic conduit.
- C. Minimum trade size is 3/4-inch.

PART 3: EXECUTION**3.01 INSTALLATION**

- A. Provide flexible conduit as required at transitions from buried cabling to concrete structure to accommodate potential structure settlement without damage to the conduit or cabling.
- B. Size conduits as shown on the Drawings or as required by National Electrical Code (whichever is larger) for number and size of conductors installed.
- C. Minimum trade size for home runs is 3/4-inch.
- D. Cut conduit joints square and ream smooth. Make bends with an approved bender or utilize standard conduit elbows.
- E. Core drill walls or coordinate reinforced, boxed out areas as required to install all conduit in a neat and workmanlike manner. Patch all wall penetrations and prepare surface for final paint by General Contractor. Coordinate routing of all conduits with other trades and with Field Engineer prior to installation.
- F. Securely fasten conduit and raceways with stainless steel unistrut and hangers with suitable fastenings. Intent is to keep an air gap between conduit and finished wall surfaces to reduce the potential of moisture induced corrosion. All anchors will be stainless steel, expansion type with stainless steel hardware.
- G. Tie wires to hang or strap conduits not permitted.
- H. Route conduit continuous from outlet to outlet, outlet to cabinets, outlet to pull or junction boxes. Secure conduit to all boxes with locknuts and bushings in such manner that each system is electrically continuous throughout.
- I. Use PVC coated RMC sweeps whenever penetrating concrete. Use schedule 80 PVC below grade for direct burial application, PVC Coated galvanized rigid metal conduit above grade, and PVC coated RMC for conduits cast into concrete. All transitions from

below grade PVC back to rigid steel before exposing above grade will be made via below grade transition couplings and PVC coated rigid steel elbows/sweeps.

- J. Cap ends of conduit to prevent entrance of foreign materials during construction.
- K. Locate conduits poured in concrete entirely in the middle 1/3 of the concrete member or on top of the bottom mat of rebar as coordinated in the field with the structural engineer.
- L. Provide watertight installation where conduits pass through the wetwell.
- M. Conduit systems must be installed complete before conductors are pulled in.

3.02 ELECTRICAL METALLIC TUBING

- A. Not permitted.

3.03 ALUMINUM CONDUIT

- A. Not permitted.

3.04 FLEXIBLE METAL CONDUIT: (PVC JACKETED)

- A. Use rain tight flexible metal conduit with rain tight fittings for final connections to motors and fixed control devices that do not come with factory installed cords.
- B. Provide sufficient length conduit to avoid transmission of vibration and noise, 12 inch minimum.

3.05 RIGID NON-METALLIC CONDUIT (HEAVY WALL)

- A. Use rigid nonmetallic, Schedule 80 PVC conduit for all direct burial applications. Cut conduit square with round edges removed from ends to protect the wires from abrasion. Make connections by solvent welding. Install fittings in accordance with the manufacturer's recommended procedures. All elbows 2" and larger will be rigid metal conduit. Use PVC coated RMC sweeps whenever penetrating through concrete.
- B. Provide grounding conductor in all control circuit, branch circuit and feeder conduits.

END OF SECTION 26 05 33

SECTION 26 05 50
EXCAVATING, TRENCHING AND BACKFILLING

PART 1: GENERAL

1.01 SUMMARY

A. Section Includes:

1. Provide all trenching/backfill/compaction/surface restoration required to install all electrical as noted in drawings and specifications.

B. Related Work:

1. Section 26 05 33 – Raceway for Electrical Systems and Boxes

1.02 QUALITY ASSURANCE:

- A. Properly protect existing surfaces and items not included in this work and repair any damage to original condition.
- B. Take precautions to guard against movement, settlement, collapse, or other damage of existing construction and finish grade and repair any damage to original condition.

1.03 EXISTING CONDITIONS:

- A. Determine exact locations of existing utilities before commencing work. Contractor is responsible for damages incurred by his failure to locate and preserve underground utilities. It is Contractor's responsibility to contact "One Call Locators" prior to performing any excavation.

PART 2: PRODUCTS

N/A

PART 3: EXECUTION

3.01 INSTALLATION

- A. Excavate to depths as indicated on Drawings or as required by NEC, whichever is greater.
- B. Provide electrical ribbon marker tape above conduits in each trench.
- C. Notify Engineer immediately if during progress of work, subsurface conditions are encountered which are different from those ordinarily encountered.

3.02 ROUGH GRADING

- A. Clean areas of foreign material. Using stockpile excavation materials or off-site material of equal quality, bring grades to within 6 inches of finish grade elevations.

3.03 FINISH GRADING

- A. Using stockpile topsoil from stripping or off-site topsoil of equal quality finish grade areas within construction limits to given minimum of 6 inches material depth. Bring to elevations indicated on Drawings or existing elevations.

END OF SECTION 26 05 50

SECTION 26 05 53
LABELING AND EQUIPMENT IDENTIFICATION

PART 1: GENERAL

1.01 SUMMARY

A. Section Includes:

1. Equipment to be identified includes system control panels and all wires and terminations.

B. Related Work:

1. Section 26 29 99 - Lift Station Controls

PART 2: PRODUCTS

2.01 INSTRUCTION SIGNS

- A. Plastic sandwich-type construction of contrasting colors. Engraving through top layer exposes inner layer.
- B. Color: Black with white letters.
- C. Letters: 1/8-inch height, standard block type.
- D. Punched or drilled for mechanical fasteners. Fasteners will be self-tapping stainless steel screws with nuts and flat lock washers.

2.02 EQUIPMENT IDENTIFICATION LABELS

- A. Mechanically fastened, engraved, laminated acrylic or melamine label.
- B. Color: Black with white letters.
- C. Letters: 3/8-inch minimum height, standard block type.
- D. Punched or drilled for mechanical fasteners. Fasteners will be self-tapping stainless steel screws with nuts and flat lock washers.

2.03 WIRE MARKERS

- A. Manufacturer: Raychem, Brady or equal
- B. Type: Shrink tubing type with typewritten wire codes.

2.04 WARNING LABELS AND SIGNS

- A. Comply with NFPA 70 and 29 CFR 1910.145.
- B. Self-adhesive labels, configured for display on front cover, door, or other access to equipment unless otherwise indicated. Weather resistant, non-fading, metal backed or baked enamel signs to be used for outdoor installations.

PART 3: EXECUTION**3.01 INSTALLATION**

- A. Identify with black laminated plastic plates with white engraved letters mounted with drive pins or other approved fasteners.

3.02 LIFT STATION CONTROL PANEL

- A. Label panel per NEC Article 210.5 (C) and with the following information: Panel name, voltage, phase and amperage/type of main.

EXAMPLE:

LIFT STATION 82 CONTROL PANEL

277/480 VOLT, 3 PHASE

200A MAIN CIRCUIT BREAKER

- B. Wire markers will be provided by the Contractor and placed on both ends of all wires prior to termination.
- C. All wiring will be checked for circuit completeness to verify correct circuiting, identification and labeling at the terminals. Terminal markings and wire markings will match "record schematics" as provided by Control Integrator.
- D. Hand lettering of identification not permitted. Completely remove temporary labels used during construction and repaint surface if required.

3.03 CONDUIT AND CIRCUIT LABELING AT POINT OF ENTRY TO LARGE ENCLOSURES

- A. Use a black permanent marker and hand label all conduits and circuits at the point of entry to large enclosures (control panels, pull boxes, junction boxes, motor control centers, etc.) with the circuit's purpose.
- B. Labeling will be done on the interior of the enclosure or on the floor near each conduit/circuit, or on the conduit itself in some cases. Label all conduits/circuits that enter enclosures.
- C. Labeling with a permanent marker will be in addition to any circuit tags installed around the cables themselves.

END OF SECTION 26 05 53

**SECTION 26 21 00
ELECTRICAL SERVICE**

PART 1: GENERAL

1.01 SUMMARY

A. Section Includes:

1. Furnish and install an electrical service from the Utility Company's connection point to the new electrical service for each new lift station.

B. Related Work:

1. Section 26 05 33 – Raceway for Electrical Systems and Boxes
2. Section 26 05 19 – Low Voltage Conductors and Cables

C. All costs associated for bringing electric service to the Lift Station site will be paid by the North Dakota DOT.

1.02 QUALITY ASSURANCE

A. NFPA 70 - National Electric Code.

1.03 EXISTING CONDITIONS

A. Contact the Utility Company for verification of exact connection point for each service required.

PART 2: PRODUCTS

2.01 CONDUIT

A. Section 26 05 33 – Raceway for Electrical Systems and Boxes

2.02 CONDUCTORS

A. Section 26 05 19 – Low Voltage Conductors and Cables

PART 3: EXECUTION

3.01 INSTALLATION

A. Verify requirements and installation locations with Utility Company before installation.

B. Make ground connection from bushing to ground bus.

C. The serving electric Utility Company is:

Xcel Energy

Attn: Travis Lill

Phone: (701) 241-8663

Email: travis.r.lill@xcelenergy.com

- D. Coordinate all work with Utility Company and Owner.
- E. Summary of the electrical service is as follows:
 - 1. 277/480 VAC, 3 phase, 4 wire, Amperage as sized Per Plans
 - 2. Pad mount transformer furnished and installed by serving electric utility.
 - 3. Concrete pad for transformer furnished and installed by Electrical Contractor (EC), per serving electric utility company pad requirements.
 - 4. (6) 2" PVC conduits stubbed from primary section of transformer pad by EC, to be used by serving electric utility for their primary cables.
 - 5. Primary underground service to transformer by serving electric utility company.
 - 6. Primary terminations within transformer by serving electric utility company.
 - 7. Meter will be furnished by serving electric utility and installed on a contractor furnished meter socket by the EC. Coordinate exact metering/meter socket requirements with serving electric utility company. Mount the meter socket to the control panel as shown on the Drawings.

END OF SECTION 26 21 00

SECTION 26 29 99
LIFT STATION CONTROLS

PART 1: GENERAL

1.01 DESCRIPTION

- A. Furnish and install, complete, a lift station control panel and field instruments for each lift station to be constructed. All internal buswork and wiring will be completed by the control panel manufacturer and where connections must be completed between equipment sections in the field, the wiring or buswork, will be terminated in each section of equipment in a manner to facilitate field connections. Furnish, properly sized and coordinated, connectors for the conductors entering the equipment. All equipment will meet the requirements of NEMA standards and the latest edition of the National Electrical Code, where applicable.

1.02 SUBMITTALS

- A. Submit complete work drawings, instruction manuals, and record drawings to the Engineer for review, approval and forwarding to the Owner. The quantity and general format are defined in the General Conditions. Include the following information:
1. System schematic drawings.
 2. Component schematic drawings.
 3. Dimension drawings, wiring and/or piping drawings.
 4. Equipment specification sheets.
 5. Fabrication and nameplate legend drawings on panels and other enclosures.
 6. Complete control panel layout, structural, panel and equipment location
- B. Furnish to the engineer for transmittal to the Owner, bound books containing the record drawings in addition to complete information in connections with the assembly, operation, adjustments, maintenance and repair of all equipment, together with a detailed parts list with drawings and photographs after installation and before the final acceptance of the equipment.
- C. Provide approval work drawings of the lift station control panel.
- D. A review of the work drawings will be completed before any equipment is accepted or installed. The Contractor, manufacturer and supplier accept total responsibility for any modifications to equipment or any costs incurred due to the removal and replacement of equipment that has not had work drawings reviewed with no exceptions being taken.

1.03 BASIS OF BID

- A. In order to assure uniform quality, ease of maintenance, and minimal parts storage, it is the intent of the specification that all equipment called for under this section will be supplied by a single manufacturer. The equipment manufacturer will, in addition to the Contractor, assume the responsibility for proper installation and functioning of the equipment.

- B. This project requires the services of a prequalified control systems manufacturer. The approved control system manufacturers are as follows:
1. Sweeney Controls Company, Fargo, ND (701) 232-3644
 2. Quality Control & Integration, Inc., New Prague, MN (952) 758-9445
 3. Engineer Approved Equal

PART 2: PRODUCTS

2.01 LIFT STATION CONTROL PANEL

- A. All control panels will be listed by Underwriter's Laboratories, Inc., for industrial control panels and will bear the UL 508 Listing mark. The entire assembled panel will be listed, not just individual components. The panel(s) will be shop inspected by UL or constructed in a UL recognized facility. System manufacturer will provide satisfactory evidence that panel is listed. Panels will bear a serialized UL label indicating acceptance under Standards 508A.
- B. Enclosure
1. The enclosure will be rated as NEMA 4X minimum and be tamper resistant. All panels will be of not less than 12-gauge type 304 stainless steel with continuously welded seams. The enclosure will contain an interior subpanel for mounting all control components and the enclosure will be sufficiently large to accept all control components without crowding. Larger enclosures will contain door and panel stiffeners as required. The front door will have a rolled lip and the door flanged and the corners ground smooth. All enclosure welding seams will also be ground smooth.
 2. Fasten the door to the enclosure with a continuous type stainless steel piano hinge and locking three-point minimum, stainless steel hardware. The three-point latch hardware will accept an Owner furnished padlock. The inside of the door will contain data pockets.
 3. Enclosure will have full height dead front inner hinged doors that house all front panel components including switches, indicating lights, circuit breaker operating handles, running time meters, overload reset pushbuttons, and other controls that require operator access.
 4. Include full panel skirting around control panel legs.
- C. Programmable Logic Controller (PLC)
1. The System Integrator will complete all PLC programming. See Paragraph 3.01. for sequence of operation requirements.
- D. Operator Interface Terminal (OIT)
1. Screen:
 - a. Size: 6.5-inch
 - b. Type: Color TFT
 - c. Input Type: Touch

2. Communications:
 - a. Ethernet TCP/IP – 10/100
 3. Programming:
 - a. The System Integrator will complete OIT programming. See Paragraph C.1. for sequence of operation requirements.
 4. Memory:
 - a. On board memory.
 - b. USB Port for Data storage and application backup.
 5. Power:
 - a. 24VDC
 6. Manufacturer/Model:
 - a. Allen Bradley Panel View Plus 6
 - 1) Part #: 2711P-T7C4D8K
 - b. No exceptions
- E. Uninterruptable Power Supply (UPS)
1. Provide a 700VA Eaton 9SX700 UPS. Provide terminal blocks near the UPS with control wiring wired to the PLC which will be used to provide a “UPS Trouble” condition and an input side control power relay for monitoring to the PLC. Furnish all required miscellaneous DC power supply and current sensitive DC relay interface equipment as required.
- F. Solid State Motor Controllers - SMC (Electronic Soft Starter)
1. Manufacturer/Model: Allen Bradley SMC-3 or equal.
 2. Voltage Rating: 480V, 3 Phase
 3. Assembly will bear the U.L. label.
 4. Electronic soft starter will have the following features:
 - a. Furnish with line side circuit breaker, internal automatic bypass contactor which bypasses the power electronics once the soft starter is up to speed and other components and features as indicated on the Drawings.
 - b. Provide PFCC as indicated on drawings.
 - c. Furnish control power transformer to supply control power to the soft starter and soft starter auxiliaries (fans, indicating lights, relays, respective motor condensation heaters, pump lube oil solenoid, etc.). Size the control power transformer to handle the connected load with 50% spare capacity, minimum.
 - d. Furnish soft starter with auxiliary NO, “Running” (up to speed) and “Overload / Fault” contacts rated 0.6 amps at 120VAC, minimum.
 - e. Size the soft starters for motors as shown on the Drawings. Additionally, the soft starter will be size at a minimum of 115% of the respective motor nameplate FLA.

- f. Provide all ancillary equipment including indication lights, control switches, etc... as shown on the Drawings.
 - g. Schedule: As per plans
- G. Control Devices
 - 1. All control devices including, but not limited to, selector switches, pushbutton switches, limit switches, and indicating lights will be of the heavy duty, oil tight type. The contacts will meet NEMA rating designation A600. The devices will be Cutler Hammer Type T, Allen Bradley Bulletin 800T, or Square D Class 9001 units, Idec, Omron, or equal. Each will be supplied complete with escutcheon and nameplate.
 - 2. Provide the following control devices
 - a. Pump HOAs
 - b. Float Test Switches
 - c. 3-Position Alternator Switch
 - 1) Positions: 1-2, 2-1, AUTO
 - d. Pump Thermal Reset PB
- H. Control Relays
 - 1. Relays will be of the plug-in type with associated sockets and retaining clips. The relays will have dust covers. All contacts will be rated for not less than 10 amps at 120 VAC with 3/16" diameter gold flashed silver cadmium oxide moving and stationary points. Insulation resistance will be 1000 megohms, nominal, at 500 VDC between all non-connected terminals. Dielectric withstand will be 2,000 VAC between non connected terminals.
- I. Circuit Breakers
 - 1. All circuit breakers will be UL labeled and will be of the size shown. All breakers will have an interrupting rating of not less than 35,000 amps, sym.
- J. Receptacles
 - 1. The interior convenience receptacle for portable tools, etc. will be a 20A specification grade, UL listed ground fault interrupter.
 - 2. Provide (1) 20A specification grade receptacle in weatherproof metal box capable of being locked with a padlock, with in-use cover, and install on the exterior side of the control panel.
 - 3. See the Electrical Drawings for additional information
- K. Terminals and Wiring
 - 1. Terminate all field wiring on terminal strips. The terminal strips will be of the barrier type. Each terminal will be of the two-screw type. The contacts will be tin plated copper, capable of carrying 10 amps at 600 VAC. The contacts will be large enough to accept up to and including No. 12 AWG wire. The barrier strip will have a minimum voltage withstand of 5,000 volts. The barrier strip will be suitable for the required number of contacts.
 - 2. Terminate power wiring on barrier type blocks sized for the application.

3. Number all terminals and tag all conductors to correlate with manufacturers' drawings.
- L. Surge Arrestors
1. Controls will include surge protectors on all incoming phases, Square D Class 6671 or equal.
- M. Indicating Lights
1. Nominal 1 inch diameter, opaque colored lens.
 2. Press-to-test feature.
 3. Heavy-duty, oil-tight.
 4. Indicating lights must be large enough to allow hand replacement without the use of special tools.
 5. LED type.
 6. Provide the following indicating lights (color as indicated in the drawings):
 - a. Pump Run Lights (qty. 2)
 - b. Pump Fail Lights (qty. 2)
 - c. 3-Phase Power OK Light (qty. 1)
- N. Running Time Meters
1. Six digit, hours and tenths.
 2. Non-resettable.
 3. 3-inch diameter front, nominal
- O. Enclosure Heat
1. Manufactured unit with aluminum housing and integral thermostat and 0 - 100F adjustable range.
 2. UL labeled.
 3. Provide quantity and size as required to meet temperature requirements specified.
 4. Hoffman DAH Series or equal.
- P. Alarm Light
1. Weatherproof, vandal proof unit with polycarbonate globe and operated from 120VAC
 2. Suitable for top mounting on panel. Space lights 12" apart minimum.
 3. UL labeled.
 4. Approved Models:
 - a. High Level/Common Alarm
 - 1) Red Constant On: Edwards Model #: 125XBRMR120AB
 - b. Pump(s) Running
 - 1) Green Constant On: Edwards Model #: 125XBRMG120AB
 - c. 3-Phase Power OK

1) Blue Constant On: Edwards Model #: 125XBRMB120AB

Q. Power Monitor

1. The power monitor will de-energize the motor control circuits upon an abnormality. When "normal" power is restored, the unit will automatically re-energize the control circuits. Fit the unit with instrument fuses that feature a 0.5 second delay to prevent nuisance operation.
2. The relay will sense negative sequence voltages when a single phasing condition occurs. The relay will "pick up" when the negative sequence voltage exceeds 4% (nominal). The relays will sense line-to-line undervoltage conditions and "pick up" at 83% (nominal) of the normal conditions with an inverse time/voltage relationship.
3. Manufacturer/Model
 - a. SymCom MotorSaver 460
 - b. Or prior approved equivalent.

R. Control Transformer

1. The Systems Integrator will provide a step-down control power transformer to create a 120/240V, 1PH control power voltage from the incoming 480V service voltage. Locate the transformer inside of the main enclosure. See the Electrical Drawings for further details.

S. Provide reverse service portable generator receptacle (Appleton #ADJA 20044-200-RS style1) mounted on AJA angle adapter and back box. Plug shall be compatible with NDDOT portable generator receiver sleeve cord end (Appleton AP20044ERS). Wire and connect to 200A generator breaker via stranded (DLO) locomotive cable. The PLC shall monitor the auxiliary contact on the generator breaker. By default, the PLC shall "lock out" one of the two pumps when the portable generator is on-line. In addition, provide a supplemental lockout bypass switch within the Operator Interface Terminal (OIT) to manually override the "lock out" to allow both pumps to run. Provide Lenco LC-40 grounding terminal fitting with male end compatible with NDDOT generator cord system. Also add #1 welding cable for the grounding pigtail with the LC-40 plug. Pigtail should be 12" minimum.

T. SCADA System

1. Provide Insight SCADA Web Platform as manufactured by Sweeney Controls Company, Fargo, ND - (701) 232-3644 to match existing system and include one (1) year of Web Service.

2.02 INSTRUMENTATION

A. Float Switches

1. General Specifications
 - a. Polypropylene with encapsulated mechanical tilt (mercury) switch.
 - b. Extra flexible cord in length as required for application.
2. Manufacturer/Model:
 - a. Anchor Scientific Model S60NO or equal.

3. Schedule:
 - a. FS-1: High Level Alarm
 - b. FS-2: Low Level Alarm
 - c. FS-3: Lead Pump On
 - d. FS-4: Lag Pump On
 - e. FS-5: Lead Pump Off
 - f. FS-6: Lag Pump Off

PART 3: EXECUTION

3.01 SEQUENCE OF OPERATIONS

A. Normal Pump Operation - Automatic (PLC Controlled)

1. The operator will be able to select through the OIT which pump is to be placed in service. Program the PLC such that the pumps will alternate starting.
 - a. When the level in the wet well rises to the Start Lead Pump float set point, the lead pump will be called to start. If the capacity of the lead pump is greater than the influent flow, the lead pump will stop upon the wet well level reaching the Stop Lead Pump float set point. Anytime a pump is running the external indicating light will be illuminated green.
 - b. If the capacity of the lead pump is less than the influent flow, the lag pump will be called to start upon the wet well level reaching the Start Lag Pump float set point. If the influent flow decreases to less than the capacity of both pumps running in parallel the lag pump will be called to stop upon the wet well level reaching the Stop Lag Pump setpoint.
 - c. If the High Level Alarm float is reached the backup mode is initiated as described below. The external alarm light will be illuminated red anytime an alarm float is activated. An alarm is logged as "Backup Operation Initiated" in PLC alarm History.
 - d. The following level set points will be provided for control. The System Integrator will provide a typed "set point" schedule which indicates the final settings for all level and time delay settings indicated in this section and/or appear on the set points screen of the OIT. This schedule will be protected and viewable through a plastic sleeve adhered to the inside of the outer door of the control panel. The system integrator will also provide the final schedule for each lift station to the Owner in Microsoft Excel format.
 - 1) Float Elevation Points - Site 1

a) Start Lead Pump	886.44 ft
b) Stop Lead Pump	880.44 ft
c) Start Lag Pump	889.94 ft
d) Stop Lag Pump	880.44 ft
e) High Level Alarm	890.94 ft
f) Low Level Alarm	879.44 ft
 - 2) Float Elevation Points – Site 2

a) Start Lead Pump	886.00 ft
b) Stop Lead Pump	883.50 ft
c) Start Lag Pump	887.00 ft

- | | | | |
|--|----|------------------|-----------|
| | d) | Stop Lag Pump | 884.00 ft |
| | e) | High Level Alarm | 889.50 ft |
| | f) | Low Level Alarm | 883.00 ft |
- e. The following timers will be adjustable from the “Timers” screen on the OIT as explained in this section.
- | | | | |
|--|----|-----------------------|--------|
| | 1) | Lead Pump Start Delay | 15 sec |
| | 2) | Lead Pump Stop Delay | 15 sec |
| | 3) | Lag Pump Start Delay | 15 sec |
| | 4) | Lag Pump Stop Delay | 15 sec |
- B. Pump Operation (Automatic - Float Backup, PLC Faulted)
1. The system will enter this mode in the event that the PLC is not running or has faulted. In this mode, the floats will operate the pumps however some of the functionality of running it through the PLC will be removed, specifically the alternation and any monitoring or alarming of the pumps.
 2. The pumps will operate using the floats as indicated in the “Normal Pump Operation - Automatic” mode above, but any timers associated with the calls will be replaced with adjustable “hardware” time delays. While in this mode, the outside alarm light will activate indicating an alarm.
 3. This mode will be “latched in” until the station is manually reset by an operator. The reset will be made accessible by opening the dead front doors granting access to the inner doors of the control panel. There will also be a red “Redundant Backup System Active” light located on the inner doors of the control panel indicating that the system is in this mode.
 4. The PLC will include an “Always ON” output that is used to prevent operating in this mode. Any time the output shuts off, the control system will automatically enter this mode. Upon power-up of the control panel, there will be a time delay relay installed to prevent latching in of this mode.
- C. Operator Interface Requirements:
1. Program the OIT with the screens listed below. All set point modifications will be password protected. Viewing screens will not be password protected. Mount the OIT on the dead front door inside the control panel.
 - a. Operator Interface Overview Screen
 - 1) Main menu of the system with current wet well level indicated and access to all other screens used for lift station operation.
 - b. Main Overview Screen
 - 1) Graphic display screen of the respective lift station indication and pumps shown as they are in the field. Screen also gives pump information including status of each pump and the overall condition of each pump.
 - c. Pump Alternator Screen
 - 1) Screen used to set alternation sequence of the pumps as well as place pumps into out of service.
 - d. Lift Station Set Points Screen

- 1) Screen used to change all set points as described previously in this section.
 - 2) Screen will also have a graphic display image of the wet well with current level. The wet well image will be used to display the level of all set points in relation to each other and the current wet well level. The range of the wet well display will be from 0 feet to 1 foot higher than the wet well high level float set point.
- e. Timer Screen
- 1) Screen is used to change all time delays described previously in this section.
- f. Alarm Screen
- 1) The screen will consist of a history and current alarm conditions that exist. The history screen will store alarms that have been acknowledged over the past 1 year. The current screen will indicate alarms that have not yet been acknowledged.
- g. Systems Integrator Screen
- 1) Screen shows System Integrator contact information.
- h. Other Items
- 1) The Drawings contain detailed descriptions on other notable sequence of operation items including pump alternation requirements, etc. The Systems Integrator will review the Drawings in their entirety and include all items contained within.
- i. Manual Pump Operation - Hand
- 1) The "hand" position of the pump HOA will initiate a manual start of the respective pump.

3.02 START UP SERVICES

- A. Confirm proper operation of all features and functions. Demonstrate operation to Owner and Engineer. Provide follow-up service twelve (12) months after initial installation to make any adjustments as requested by the Owner.

3.03 SUPPLIES

- A. Twenty percent (20%) spare fuses and lamps, but not less than six (6) of each type furnished.
- B. Two (2) spare relays of each type furnished.
- C. Two (2) spare floats
- D. Two (2) replacement lamps for each type of indication light used
- E. Provide all expendable items such as lamps, fuses, etc. for system start up and checkout.

END OF SECTION 26 29 99

**SECTION 40 05 06
PIPE COUPLINGS**

PART 1: GENERAL

1.01 SUMMARY

- A. Provide pipe couplings indicated, complete and operable, in accordance with the Contract Documents.
- B. The provisions of this Section apply to piping in Divisions 40, and on the Drawings.
- C. Provide the couplings, adapters and joints with restraining devices to restrict pipe axial movement. Where the restraining devices and/or details are not indicated on the Drawings, it is the Contractor's responsibility to provide the devices/details necessary to restrain the piping system.
- D. The Items specified in this section include the following:
 - 1. Groove Couplings
 - 2. Sleeve Couplings
 - 3. Miscellaneous Adapters

1.02 CONTRACTOR SUBMITTALS

- A. Work Drawings: Include the following information in the work drawings:
 - 1. Product submittals specifically identifying the applicable style or series designation, pressure rating, coating system, and restraint system if applicable.
 - 2. Provide coupling schedule or layout indicating where the couplings will be installed.
- B. Certifications:
 - 1. Obtain necessary certificates, test reports, and affidavits of compliance.

1.03 MATERIAL DELIVERY, STORAGE, AND PROTECTION

- A. Deliver piping couplings, adapters and joints accessories in a clean and undamaged condition and stored off the ground for protection against oxidation caused by ground contact.
- B. Replace defective or damaged materials with new materials.

PART 2: PRODUCTS

2.01 GENERAL

- A. Extent of Work:
 - 1. Provide piping couplings, adapters, joints and accessories in accordance with the requirements of the applicable Sections of Division 40 and as indicated.
 - 2. Substitutions of any other type of coupling in lieu of the couplings as specified herein are not allowed unless approved by the Engineer.

3. Assign the responsibility to the coupling manufacturer to review the piping connection to the equipment and submit any modifications to the Engineer for review.
- B. Pressure Rating:
 1. Design couplings, adapters and joints for the pressure as defined in respective pipe sections.
 - C. Seals:
 1. Select seal or gasket elastomer materials to be compatible with the fluid service, pressure and temperature, and composed of elastomeric-compound material that will not deteriorate from age under normal storage or use conditions.
 - D. Coating:
 1. Coat and line all couplings at the factory, unless otherwise indicated.
 2. Coat and line all couplings with fusion bonded epoxy.
 - E. Hardware:
 1. Provide stainless steel rods, bolts and nuts.

2.02 GROOVED TYPE COUPLINGS

- A. General:
 1. Provide cast grooved type couplings where indicated, conforming to the requirements of AWWA C606 – Grooved and Shouldered Joints.
 2. Conform to the coupling manufacturer's recommendations to suit the highest expected pressure.
 - a. If grooved connections are used, the remaining thickness of pipe material after grooving is required to be adequate to carry the load imparted to the joint. Joints for thin wall pipes banded or welded with a collared end to fit coupling.
 - b. Rolled pipe ends are not acceptable as a means of connection for metallic piping.
 3. Electrically bond couplings.
 4. For uniformity and compatibility of the piping components, furnish, by the same manufacturer as the coupling, grooving tools, grooved fittings, couplings, and valves.
 5. Use grooving tools from the same manufacturer as the grooved components.
- B. Grooved Type Couplings Manufacturer, or Equal:
 1. Provide grooved couplings for ductile iron piping with flush seal gaskets.
 - a. **Victaulic Company, Style 31 (flexible or rigid)**

2.03 SLEEVE COUPLINGS

- A. General:

1. Provide sleeve couplings specifically designed suitable for the fluid service and pressure rating.
2. Substitutions of sleeve-split coupling, or any other type in lieu of sleeve coupling not allowed unless approved by the Engineer.
3. Provide restraint system where indicated.

B. Construction:

1. Provide sleeve couplings in accordance with AWWA C219 – Standard for Bolted Sleeve-Type Couplings for Plain-End Pipe.
2. Construct couplings without pipe stop.
3. Provide couplings of sizes to fit the indicated pipe and fittings.
4. Provide couplings with middle ring at least the same wall thickness as the pipe to which the coupling is connected and not less than 1/4-inch thick.
5. If the strength of the middle ring material is less than the strength of the pipe material, increased the thickness of the middle ring to have the same strength as the pipe.
6. For standard sleeve couplings, provide couplings at least 12 inches long for pipe diameters up to and including 30-inch and 16 inches long for pipe diameters greater than 30-inch.
7. Provide followers with single-piece contoured mill sections welded and cold-expanded as required for the middle rings and of sufficient strength to accommodate the number of bolts necessary to obtain adequate gasket pressures without excessive rolling.
8. Provide follower with shape designed as to provide positive confinement of the gasket.
9. Fusion-bonded epoxy coat and line all buried sleeve-type couplings at the factory in accordance with AWWA C213.

C. Gaskets:

1. Provide gaskets for sleeve-type couplings of rubber-compound material that will not deteriorate from age or exposure to air under normal storage or use conditions.
2. Gaskets composed of Buna N, Grade 60, or equivalent suitable elastomer.
3. Rubber in the gasket meeting the following specifications:
 - a. Color: jet black
 - b. Surface: non-blooming
 - c. Durometer Hardness: 74, plus and minus 5
 - d. Tensile Strength: 1000 psi minimum
 - e. Elongation: 175 percent minimum
4. Provide gaskets immune to attack by impurities normally found in water or wastewater.

D. Sleeve-Type Couplings Manufacturer, or Equal:

1. **World Wide Metric, Inc. (Dresser)**
2. **Ford Meter Box Company, Inc.**
3. **Smith-Blair, Inc.**
4. **Romac Industries, Inc.**

2.04 MISCELLANEOUS ADAPTERS

- A. A special pipe adapter may be required to provide proper connection between different type of pipes, equipment, and/or fittings that are not indicated in the plans. It is the Contractor's responsibility to ensure proper connection between various type of pipes, equipment, and pipe appurtenances. Provide adapters as required whether specifically indicated or not.
- B. Provide piping adapter products specifically designed suitable for the fluid service and manufactured for the piping applications.

PART 3: EXECUTION

3.01 GENERAL

- A. Installation, inspection and field testing of the pipes will be in accordance with the requirements of Section 40 05 19 – Ductile Iron Piping.

Provide coupling manufacturer's service representative verification of the correct choice and application of couplings and gaskets, and the workmanship, to assure a correct installation.

3.02 INSTALLATION

- A. Where couplings are shown to connect piping to mechanical equipment such as pumps, compressors, and blowers, align the piping with the equipment point of connection perpendicular to the axis of the flange or fitting for which the piping is to be connected.
- B. Install couplings and piping so as not to impose excessive stress to the equipment connection or cause misalignment of the equipment.
- C. Pipe preparation for sleeve-type couplings
 1. Where indicated, prepare the ends of the pipe for flexible steel couplings.
 2. Provide plain ends for use with couplings that are smooth and round for a distance of 12 inches from the ends of the pipe, with an outside diameter not more than 1/64 inch smaller than the nominal outside diameter of the pipe.
 3. The weld of the middle ring is subjected to air test for porosity.

END OF SECTION 40 05 06

SECTION 40 05 07
PIPE SUPPORTS

PART 1: GENERAL

1.01 THE SUMMARY

- A. Provide pipe supports, hangers, guides, and anchors, complete and in place, as indicated in accordance with the Contract Documents.
- B. Where pipe support systems are not indicated on the Drawings, design and provide the supports in accordance with this Section for the Engineer to approve. The absence of pipe supports and details on the Contract drawings does not relieve the Contractor of responsibility for sizing and providing the pipe supports.

1.02 CONTRACTOR SUBMITTALS

- A. Work Drawings:
 - 1. Submit Work Drawings that include the following information:
 - a. Drawings of pipe supports, hangers, anchors, and guides.
 - b. Pipe support schedule or layout indicating where the supports will be installed.

PART 2: PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Code Compliance
 - 1. Piping systems and pipe connections to equipment properly anchored and supported in order to prevent undue deflection, vibration, and dislocation due to seismic events, line pressures, pipe weight, fluid weight, liquid movement, thermal changes, vibration, and probable forces applied during construction as well as stresses on piping, equipment, and structures.
- B. Structural Members
 - 1. Wherever possible, support pipes from structural members.
- C. Materials of Construction:
 - 1. Provide pipe support assemblies, including framing, hardware, and anchors of steel construction, galvanized after fabrication, unless otherwise indicated.
- D. Concrete Anchors:
 - 1. Unless otherwise indicated, provide concrete anchors for pipe supports in accordance with the following table: consult the Engineer for any anchor applications not appearing on the table.

Pipe Support Application	Type of Concrete Anchor
New Concrete	Use embedded concrete insert anchors on a grid pattern. Use Grinnell (Anvil International), Tolco , or equal.
Existing Concrete	Use non-shrink grouted anchors or epoxy anchors. Epoxy anchors are not permitted for vertical hanging applications or where sustained tension is exerted on the anchor. Exceptions: Epoxy anchors are not permitted for pipe supports subject to vibrating loads. Epoxy anchors are not permitted where the concrete temperature is in excess of 100-degree F or higher than the limiting temperature recommended by the manufacturer.
Vibratory Loads and High-Temperature Conditions	Use non-shrink grouted anchors.

2.02 SUPPORT SPACING

- A. Supports for piping with the longitudinal axis in approximately a horizontal position spaced to prevent excessive sag, bending, and shear stresses in the piping, with special consideration given where components such as flanges and valves impose concentrated loads.
- B. Vertical supports to prevent the pipe from being overstressed from the combination of loading effects.
- C. Ductile Iron Pipe:
 1. Install supports for ductile iron pipe in accordance with the recommendations of the Ductile Iron Pipe Research Association (DIPRA) Design of Ductile Iron Pipe on Supports.
 2. As a minimum, where support spacing is not indicated on the Drawings, the spacing indicated in the following schedule, and include all the proposed support locations in the Work Drawings for the Engineer approval:

Nominal Pipe Diameter, inches	Support Configuration
All diameters	two supports per full pipe length (18-ft) , with one of the two supports located at a joint behind the pipe bell

2.03 MANUFACTURED SUPPORTS

- A. Stock Parts:

1. Where not specifically indicated, designs that are generally accepted as exemplifying good engineering practice and using stock or production parts will be utilized wherever possible.
2. Such parts to be locally available, new, of best commercial quality, and designed and rated for the intended purpose.

2.04 COATING

- A. Unless otherwise indicated, fabricated pipe supports other than stainless steel or non-ferrous supports: blast-cleaned after fabrication and hot-dip galvanized in accordance with ASTM A 123 – Zinc (Hot-Dip Galvanized).

PART 3: EXECUTION

3.01 INSTALLATION

- A. General:
 1. Pipe supports, hangers, brackets, anchors, guides, and inserts installed in accordance with the manufacturer's printed instructions and per ANSI/MSS SP-58 Pipe Hangers and Supports- Materials, Design, Manufacture, Selection, Application and Installation.
 2. Coordinate embedded concrete inserts for pipe hangers and supports with the formwork.
- B. Appearance:
 1. Position pipe supports and hangers in order to produce an orderly, neat piping system.

3.02 FIELD FABRICATION

- A. Quality Control:
 1. Fabricate and install field fabricated pipe hangers and supports by experienced welders and fitters, using the best welding procedures available.
 2. Fabricate hangers and supports neat in appearance without sharp corners, burrs, or edges.

END OF SECTION 40 05 07

SECTION 40 05 19
DUCTILE IRON PIPING (AWWA C151, MODIFIED)

PART 1: GENERAL

1.01 THE REQUIREMENT

- A. Provide ductile iron pipe and appurtenant Work, complete and in place, in accordance with the Contract Documents.
- B. A single pipe manufacturer will be made responsible for furnishing pipe, specials, fittings, and appurtenances such as bolts and gaskets for the Work.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

AWWA C105	Polyethylene Encasement for Ductile-Iron Pipe Systems
AWWA C110	Ductile-Iron and Gray-Iron Fittings, 3 in through 48 in for Water
AWWA C111	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
AWWA C115	Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
AWWA C116	Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings for Water Supply Service.
AWWA C150	Thickness Design of Ductile-Iron Pipe
AWWA C151	Ductile-Iron Pipe, Centrifugally Cast for Water
AWWA C153	Ductile-Iron Compact Fittings for Water Service
AWWA C210	Liquid-Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines
AWWA C222	Polyurethane Coatings for the Interior and Exterior of Steel Water Pipelines and Fittings
AWWA C600	Installation of Ductile Iron Water Mains and Their Appurtenances
AWWA C606	Grooved and Shouldered Joints
ASTM C 150	Portland Cement

1.03 CONTRACTOR SUBMITTALS

- A. Work Drawings:
 - 1. Certified dimensional drawings of valves, fittings, and appurtenances.
 - 2. Pipeline layout and marking diagrams which indicate the specific number of each fitting and the location and the direction of each fitting in the completed line. In addition, the line layouts will include: the pipe station and invert elevation at changes in grade or horizontal alignment; elements of curves and bends, both in

horizontal and vertical alignment; and the limits of each reach of restrained joints, or of concrete encasement.

- B. **Certifications:** Certified affidavit of compliance for pipe and other products or materials furnished under this Section and as specified in the referenced standards and the following supplemental requirements:
 - 1. Physical and chemical properties.
 - 2. Hydrostatic test reports.
- C. Perform and pay for sampling and testing as necessary for the certifications.

1.04 QUALITY ASSURANCE

- A. **Tests:** Except as modified herein, test materials used in the manufacture of the pipe in accordance with the requirements of the referenced standards as applicable.
- B. Perform said material tests as part of the Work. It is the Engineer's right to witness testing conducted by the Contractor; provided, that the Contractor's schedule is not delayed for the convenience of the Engineer.
- C. In addition to those tests specifically required, the Engineer may request additional samples of any material including lining and coating samples for testing by the Owner. Furnish additional samples as a part of the Work.

PART 2: PRODUCTS

2.01 PIPE GENERAL

- A. Ductile iron pipe conforming to AWWA C151, C104, and C105 subject to the supplemental requirements in this Section of the diameter and class indicated, provided complete with rubber gaskets, specials, and fittings as required under the Contract Documents.
- B. **Markings:** Legibly mark specials in accordance with the laying schedule and marking diagram. Mark each fitting at each end with top field centerline.
- C. **Handling and Storage:** Handle pipe as a minimum at the 1/3 points by use of wide slings, padded cradles, or other devices designed and constructed to prevent damage to the pipe coating/exterior. The use of chains, hooks, or other equipment that might injure the pipe coating/exterior will not be permitted. Support stockpiled pipe on padded skids, sand or earth berms free of rock exceeding 3-inches diameter, sandbags, or suitable means so that the coating will not be damaged. Do not roll pipe and secure pipe to prevent accidental rolling
- D. **Laying Lengths:** Nominal pipe laying lengths are 20-feet.
- E. **Finish:** Provide pipe finished with smooth dense interior surfaces free from fractures, excessive interior surface crazing, and roughness.

2.02 SPECIALS AND FITTINGS

- A. Provide fittings for ductile iron pipe conforming to the requirements of AWWA C153 or AWWA C110 with minimum pressure rating of 250 psi.

2.03 DESIGN OF PIPE

- A. Provide pipe designed, manufactured, tested, inspected, and marked according to AWWA C150 and C 151 except where modified by this Section with a minimum pressure class of 150 psi, or as indicated in the plan.
- B. Pipe Dimensions: Provide pipe of the diameter and class indicated.
- C. Fitting Dimensions: Provide fittings of the diameter and class indicated.
- D. Joint Design: Provide ductile iron pipe and fittings for buried pressure service with push-on restrained joints, unless otherwise indicated. Provide flanged joints and fittings for exposed ductile iron pipe
 - 1. Mechanical and push-on joints conforming to AWWA C111.
 - 2. Flanged joints conforming to AWWA C115. Where threaded flanges are provided, the pipe wall thickness under the cut threads will not be less than the calculated net thickness required for the pressure class of the pipe.
 - 3. Provide restrained joints of **Flex-Ring or Lok-Ring** restrained joint by **American Ductile Iron Pipe**, **TR FLEX** restrained joint by **U.S. Pipe**, or approved equal.
 - 4. If joint restraining devices that impart point loads and/or wedging action on the pipe wall as a means of joint restraint are required, provide **MegaLug Model 1100** as manufactured by **EBAA Iron** or approved equal.
- E. For bell-and-spigot ends with rubber gaskets, the clearance between the bells and spigots when combined with the gasket groove configuration and the gasket itself, will provide watertight joints under all operating conditions when properly installed. The Submit pipe manufacturers details complete with significant dimensions and tolerances and also submit performance data indicating that the proposed joint has performed satisfactorily under similar conditions. In the absence of a history of field performance, submit the results of a test program.
- F. Hold back shop-applied interior linings and exterior coatings from the ends of the pipe as indicated.

2.04 EPOXY LINING

- A. Fusion Bonded Epoxy Lining
 - 1. Shop apply fusion bonded epoxy lining in accordance with AWWA C116.
- B. Ceramic Epoxy Lining

1. Provide amine cured novalac epoxy lining material containing at least 20% by volume of ceramic quartz pigment.
2. Prior to abrasive blasting, inspect the entire area to receive the protective compound for oil, grease, etc. Any areas where oil or grease is present, or any substance which can be removed by solvent, solvent clean to remove these substances. After the surface has been made free of grease, oil or other substances, abrasive blast all areas to receive the protective compounds using compressed air nozzles with sand or grit abrasive material. Strike with the blast media the entire surface to be lined so that all rust, loose oxides, etc., are removed from the surface. Only slight stains and tightly adhering oxide may be left on the surface. Any area where rust reappears before lining must be reblasted.
3. Minimum 40 mils DFT total lining thickness. Do not apply lining when the substrate or ambient temperature is below 40°F.
4. Manufacturer: **Protecto 401**, or approved equal.

2.05 EXTERIOR PROTECTION OF PIPE

- A. Exterior Coating of Exposed Piping: thoroughly clean and then give a shop coat of rust-inhibitive primer and minimum 2 coats of epoxy conforming to the requirements summarized in the following schedule on the exterior surfaces of pipe which will be exposed to the atmosphere inside structures or above ground:

1. Materials:

Type	high build, amine cure epoxy
VOC content, g/L max	220
Demonstrated suitable for	steel, long term immersion in water and wastewater, resistant to corrosion, chemical fumes, good color retention

2. Application and Manufacturers:

Surface Preparation	Products (2 coats or more)	Total System DFT
SSPC SP 10/NACE 2	Tnemec Epoxoline Series 66HS or approved equal.	15 to 17 mils

- B. Exterior Coating of Buried Piping: Wrap the exterior coating in a polyethylene sleeve confirming to the AWWA C105 requirements.

2.06 MODULAR MECHANICAL SEALS FOR PIPING PENETRATIONS

- A. Where indicated and where required in order to prevent flow of water or air, seal the passages of piping through wall sleeves and cored openings with modular interlocking link mechanical closures.
- B. Provide individual links constructed of EPDM rubber, suitable for temperatures between minus 40 and plus 250 degrees F and shaped to fill the annular space between the outside of the pipe and the inside of the wall sleeve or cored opening.
- C. Assemble the links using Type 316 stainless steel bolts and nuts to form a continuous rubber belt around the pipe.
- D. Provide with pressure plates under each bolt and nut fabricated of a corrosion-resistant composite material.
- E. After the seal assembly is positioned in the sleeve, tighten the bolts against the pressure plates to expand the rubber links and form the watertight seal.
- F. Size and install sleeves and assemblies in accordance with the manufacturer's recommendations.
- G. Modular Mechanical Seals Manufacturer, or Equal:
1. EnPro Industries Company (GPT), Link-Seal
 2. Proco Products, Inc., Pen-Seal

PART 3: EXECUTION**3.01 INSTALLATION OF PIPE**

- A. Inspect each pipe and fitting prior to installation to insure that there are no damaged portions of the pipe. Repair or replace pipe damaged prior to Substantial Completion.
- B. Before placement of pipe in the trench, thoroughly clean any foreign substance from each pipe which may have collected thereon and keep clean at all times thereafter.
- C. Pipe Laying: Install the pipe in accordance with AWWA C600.

- D. Lay pipe directly on the bedding material. No blocking will be permitted. Install bedding such that it forms a continuous, solid bearing for the full length of the pipe. Form bell holes at the ends of the pipe to prevent point loading at the bells or couplings. Excavate as needed outside the normal trench section at field joints to permit adequate access to the joints for field connection operations and for application of coating on field joints.
- E. Lay each section of pipe in the order and position shown on the plans. Lay each section to the line and grade, within approximately one-inch plus or minus.
- F. Where necessary to raise or lower the pipe due to unforeseen obstructions or other causes, the Engineer may change the alignment and/or the grades. Make changes by deflecting joints, using bevel adapters, or by using additional fittings, as indicated by the Engineer. In no case deflect the joint in excess of 75 percent of the maximum deflection recommended by the pipe manufacturer.
- G. Except for short runs that may be permitted by the Engineer, lay pipes uphill on grades exceeding 10 percent. Block and hold in place pipe that is laid on a downhill grade until sufficient support is furnished by the following pipe to prevent movement.
- H. Cold Weather Protection: Do not install pipe upon a foundation into which frost has penetrated or at any time that there is a danger of the formation of ice or penetration of frost at the bottom of the excavation before backfilling occurs.
- I. Pipe Cleanup: As pipe laying progresses, keep the pipe interior free of debris. Completely clean the interior of the pipe of sand, dirt, mortar splatter, and any other debris following completion of pipe laying and will perform any necessary interior repairs prior to testing and disinfecting the completed pipeline.

3.02 RUBBER GASKETED JOINTS

- A. Rubber Gasketed Joints: Immediately before jointing pipe, thoroughly clean the bell end of the pipe, and place a clean rubber gasket in the bell groove. Carefully clean and lubricate the spigot end of the pipe and the inside surface of the gasket. Provide lubricant suitable for lubricating the parts of the joint for assembly. Insert the spigot end of the pipe section into the bell of the previously laid joint and telescoped into its proper position. Tilting of the pipe to insert the spigot into the bell will not be permitted.

3.03 POLYETHYLENE SLEEVE UNBONDED PROTECTION

- A. Encase buried ductile iron pipe in polyethylene encasement in accordance with the requirements of AWWA C105, and installed using Method A.
- B. Overlap polyethylene sleeves a minimum of 24-inches at all seams. Tape all seams.
- C. Protect the polyethylene from damage and do not walk on the polyethylene or contact it with compacting equipment at any time. Repair or replace any polyethylene that becomes damaged, including tears, abrasions, pinholes, or any other defects.

3.04 INSTALLATION OF PIPE APPURTENANCES

- A. Protection of Appurtenances: Where pipe is encased in polyethylene sleeves, also encase buried appurtenances in polyethylene.

3.05 FIELD TESTING FOR PRESSURE PIPING

- A. Prior to enclosure or burying, piping systems, pressure test for a period of not less than two hours. Where no pressures are indicated, subject the pipes to 1-1/2 times the maximum working pressure. Furnish test equipment, labor, materials, and devices as part of the Work.
- B. Determine leakage by loss of pressure, soap solution, chemical indicator, or other positive and accurate method. Disconnect fixtures, devices, or other accessories which are to be connected to the lines and which would be damaged if subjected to the test pressure and plug or cap ends of the branch lines as required during the testing procedures.
- C. Repair leaks and re-test the system until no leaks are found.

END OF SECTION 40 05 19

**SECTION 40 91 07
LEVEL DETECTION**

PART 1: GENERAL

1.01 SUMMARY

- A. Provide level detection switches, complete and operable, in accordance with the Contract Documents.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Division 40 – Process Integration.
- B. Division 26 – Electrical.

1.03 ACTION SUBMITTALS / INFORMATIONAL SUBMITTALS

- A. Submit drawings of proposed level detection switches.

PART 2: PRODUCTS

2.01 TIPPING FLOAT TYPE LEVEL SWITCHES

- A. Manufacturers: Anchor Scientific Roto-Float or approved equal.
- B. Description: Tipping float level switch consisting of a switch, a moving float, and a connecting cable that is anchored at the midpoint of a differential band. As the level rises and falls the float rights itself or inverts causing switching actions. Protect the cable anchoring point from strain. Protect all submerged cable with anti-rodent stainless-steel mesh to the extent possible without interfering with float operation.
- C. Performance / Design Criteria: The hermetically sealed switches with SPDT output with a minimum rating of 10 Amps at 120 VAC.

Materials / Components: Mercury tilt type. Float material in accordance with the manufacturer's recommendations for the intended service and installation application and as indicated in the data sheet.

PART 3: EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Handle, install, calibrate, and performance test float switches as part of controls system integration. Provide manufacturer's service, supervision, and training.

END OF SECTION 40 91 07

**SECTION 43 20 00
PUMPS, GENERAL**

PART 1: GENERAL

1.01 THE SUMMARY

- A. Provide pumps and pumping appurtenances, complete and operable, as indicated in accordance with the Contract Documents.
- B. The provisions of this Section apply to pumps and pumping equipment throughout the Contract Documents, except where otherwise indicated.
- C. Single Manufacturer
 - 1. Where two or more pump systems of the same type are required, provide pumps produced by the same manufacturer.

1.02 CONTRACTOR SUBMITTALS

A. Work Drawings

- 1. Submit pump name, identification number, and specification Section number.
- 2. Performance Information
 - a. Submit performance data curves showing head, capacity, horsepower demand, NPSHr3 required, and pump efficiency over the entire operating range of the pumps. Submit efficiency curves of motors.
 - b. Indicate the head, capacity, required horsepower, pump efficiency, and NPSHr corresponding to each flow condition indicated in the respective performance requirement paragraph of each individual pump specification section. Indicate on the pump curve the Allowable Operating Region (AOR), Preferred Operation Region (POR), and minimum submergence required at maximum flow for vertical and submersible pumps.
- 3. Operating Range
 - a. Indicate the limits on the performance curves recommended for stable operation without surge, cavitation, or excessive vibration.
- 4. Submit assembly and installation drawings, including shaft size, seal, coupling, bearings, anchor bolt plan, part nomenclature, material list, outline dimensions, and shipping weights.
- 5. Submit work drawings showing the location of equipment within the pump station, including, but not limited to controls equipment, pumps, hatches, piping, and pipe supports.

6. Submit an elevation drawing of the proposed local control panel, showing panel-mounted devices, details of enclosure type, a single-line diagram of power distribution, current draw of the panel, and a list of terminals required to receive inputs or to transmit outputs from the local control panel.
7. Submit a wiring diagram of field connections, with identification of terminations between local control panels, junction terminal boxes, and equipment items.
8. Submit a complete electrical schematic diagram.
9. Submit a plan for field testing of pumps for approval by Engineer. Testing plan should identify source, means, and methods of supplying water and power for testing.

B. Technical Manual

1. Submit a Technical Manual for pumps and appurtenances.

C. Protective Coatings

1. Submit manufacturer information indicating coating materials and performance ratings.

D. Spare Parts List

1. Submit a list of spare parts to be provided by manufacturer.

E. Factory Test Data

1. Submit signed, dated, and certified factory test data for each pump system which requires factory testing.
2. Submit these data before shipment of equipment.

F. Certifications

1. Submit the manufacturer's certification of proper installation.
2. Submit the Contractor's certification of satisfactory field testing.

PART 2: PRODUCTS

2.01 GENERAL

A. Performance Curves

1. Provide centrifugal pumps with a continuously rising pump curve, or with a pump curve that does not cross the system curve within the pump curve's "dip region."
2. Required shaft horsepower for the entire pump assembly at any point on the performance curve cannot exceed the rated horsepower of the motor or encroach on the service factor.

B. Compatibility

1. Provide entirely compatible components of each pump system provided under the specific pump Sections.
2. In each unit of pumping equipment, incorporate basic mechanisms, couplings, electric motors or engine drives, necessary mountings, and appurtenances.

2.02 MATERIALS

- A. Provide materials suitable for the intended application.
- B. For materials not indicated, provide high-grade, standard commercial quality, free from defects and imperfections that might affect the serviceability of the product for the purpose for which it is intended, and conforming to the following requirements:
 1. Bowls and Casings
 - a. Provide cast iron pump casings constructed of close-grained gray cast iron, conforming to ASTM A 48 - Gray Iron Castings, Class 30, or equal. Unless otherwise indicated on the specific pump sections, cast iron-fitted pumps will be epoxy lined and coated for better efficiency.
 2. Impellers
 - a. Cast iron impellers: Provide epoxy coated impellers constructed of close-grained gray cast iron, conforming to ASTM A 48 - Gray Iron Castings, Class 30, or equal.
 3. Provide pump shafts constructed of Type 416 or 316 stainless steel.
 4. Provide anti-friction bearings or zero-lead bronze bearings. Bronze bearings will be Bismuth Tin Bronze ASTM B 584 C89835, or equal.
 5. Provide miscellaneous stainless-steel parts of Type 316.
 6. Provide anchor bolts, washers, and nuts of stainless steel.

2.03 PUMP APPURTENANCES

- A. Nameplates
 1. Equip each pump with a stainless-steel nameplate indicating serial number(s), rated head and flow, impeller size, pump speed, and manufacturer's name and model number.

2.04 PROTECTIVE COATINGS

- A. Description
 1. Provide complete multicoat system formulated and recommended by manufacturer for intended applications and in indicated thicknesses.
- B. High – Build Epoxy Coating

1. Provide high-solids, two component poly-amidoamine epoxy coating.

C. Protection

1. Protect coating from damage during delivery, staging, and installation.
2. Repair coating damaged during delivery, staging, and installation.

2.05 FACTORY TESTING

A. Conduct the following tests on each indicated pump system:

1. Certified Factory Non-Witnessed Test

- a. Perform factory non-witnessed tests on centrifugal pumps in accordance with the ANSI/HI 14.6, Rotodynamic Pumps for Hydraulic Performance Acceptance Test to meet hydraulic acceptance criteria Grade "1U" unless otherwise indicated. Such tests will, at a minimum, consist of the following:
 - 1) Hydrostatic test
 - 2) Performance Test
 - a) Conduct performance testing at maximum speed, obtain a minimum of 5 hydraulic test readings between shutoff head and 25 percent beyond the maximum indicated capacity, and record on data sheets as defined by the Hydraulic Institute Standards.
 - b) Submit pump curves showing head, flow, bhp, NPSHr and efficiency results with visible manufacturer's certification on each submitted curve. Unless required by specific pump sections, NPSHr may be reported from catalog performance curves in lieu of testing.
 - c) Limit mechanical test to observation during the hydraulic performance test for any abnormal bearing temperature and pump vibration. Correct any deficiencies
 - d) Perform additional tests as indicated in the specific pump specification sections.
- b. Testing of prototype models will not be accepted.
- c. Submit certification signed by a senior official of the pump manufacturer that the required pump shaft horsepower did not exceed the rated motor horsepower of 1.0 service rating at any point on the curve.
- d. No equipment will be shipped until the test data have been approved by the Engineer.

2. Acceptance

- a. In the event of failure of any pump to meet any of the requirements, make necessary modifications, repairs, or replacements in order to conform to the requirements of the Contract Documents, and re-test the pump until found satisfactory.

PART 3: EXECUTION**3.01 MANUFACTURER'S SERVICES****A. Inspection, Startup, and Field Adjustment**

1. Where required by the specific pump Section, furnish an authorized service representative of the manufacturer at the Site continuously to supervise the following items and to certify in writing that the equipment and controls have been properly installed, aligned, lubricated, adjusted, and readied for operation:
 - a. installation of the equipment
 - b. inspection, checking, and adjusting the equipment
 - c. startup and field testing for proper operation, and
 - d. performance of field adjustments to ensure that the equipment installation and operation comply with the indicated requirements

B. Instruction of Owner's Personnel

1. Where required by the individual pump Section, furnish an authorized training representative of the manufacturer at the Site for the number of Days indicated in the specific pump Section, to instruct the Owner's personnel in the operation and maintenance of the equipment, including step-by-step troubleshooting with necessary test equipment.
2. Furnish instruction specific to the model of equipment provided.
3. Qualifications
 - a. Furnish a representative with at least 2 years' experience in training.
 - b. Submit a resume for the representative.
4. Schedule the training a minimum of 3 weeks in advance of the first session.
5. Lesson Plan Review
 - a. Submit the proposed training material and a detailed outline of each lesson for review.
 - b. Incorporate review comments into the material.
6. The trainees will keep the training materials.
7. The Owner may videotape the training for later use with the Owner's personnel.

3.02 INSTALLATION**A. General**

1. Install pumping equipment in accordance with the manufacturer's written recommendations.

B. Alignment

1. Field-test the equipment in order to verify proper alignment and freedom from binding, scraping, shaft run out, or other defects.
2. Ensure that the equipment is secure in position and neat in appearance.

C. Lubricants

1. Provide the necessary oil and grease for initial operation.

3.03 FIELD TESTS

A. Field-test each pump system after installation simulating all of the operational scenarios as specified in order to demonstrate:

1. satisfactory operation without excessive noise and vibration
2. no material loss caused by cavitation, and
3. no overheating of bearings

B. Conduct the following field testing:

1. Startup, check, and operate the pump system over its entire speed range.
2. If the pump is driven by constant speed, test the pump and motor at the maximum RPM.
3. Obtain concurrent readings of motor voltage and amperage at maximum RPM.
4. Check each power lead to the motor for proper current balance.
5. Bearing Temperatures
 - a. Precede this test with a run time sufficient to stabilize bearing temperatures unless an insufficient liquid volume is available to furnish such a run time.
6. Ensure that electrical and instrumentation tests conform to the requirements of the Section under which that equipment is specified.

C. Witnessing

1. Field testing will be witnessed by the Engineer.
2. Furnish two-week advance notice of field testing.

D. If the pumping system fails to meet the indicated requirements, modify, or replace the pump and re-test as indicated above until it satisfies the indicated requirements.

E. Certification

1. After each pumping system has satisfied the requirements, certify in writing that it has been satisfactorily tested and that final adjustments have been performed.
 2. Include the date of the field tests, a listing of persons present during the tests, and the test data.
- F. Include all costs associated with field test performance, including related services of the manufacturer's representative, and the cost of power and water to complete testing in the price bid for "Lift Station – Site X".

END OF SECTION 43 20 00

Section 43 25 06
Submersible Solids-Handling Pumps

1.01 THE SUMMARY

- A. Provide submersible solids-handling pumps and appurtenant Work, complete and operable, in accordance with the Contract Documents.
- B. Examine the Site conditions, intended application, and operation of the pump system and recommend the pump that will best satisfy the indicated requirements.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. The following standards are applicable in this Section:
- | | |
|------------|---|
| HI 9.1-9.5 | (2015) Pumps – General Guidelines for Type, Applications, Definitions, Sound Measurements and Documentation |
| HI 11.6 | (2012) Submersible Pump Tests |
| HI 14.6 | (2011) Rotodynamic Pumps for Hydraulic Performance Acceptance Test |

1.03 EXTENDED PERIOD FOR CORRECTION OF DEFECTS

- A. Furnish a warranty for the pumping system to be free of defects for a period of 5 years from the date of Substantial Completion. The warranty will be non-prorated. Correct defects in the pumping system upon notification from the Owner within 5 years from the date of Substantial Completion. Complete corrections within 5 Days after notification.

PART 2: GENERAL**2.01 GENERAL DESCRIPTION**

- A. Identification:

Pump Name	Submersible Pumps	Submersible Pumps
Location	LIFT STATION SITE 1 25 th St	LIFT STATION SITE 2 University Drive
Quantity	2	2

- B. Operating Conditions:

Location	Lift Station Site 1	Lift Station Site 2
Duty	Continuous	Continuous
Drive	Constant speed	Constant speed
Ambient environment	Submerged	Submerged
Ambient temperature, degrees F	35 to 108	35 to 108

Ambient relative humidity, percent	0 to 100	0 to 100
Fluid service	Storm water	Storm water
Fluid temperature, degrees F	33 to 70	33 to 70
Fluid pH range	6 to 8	6 to 8
Fluid specific gravity	1.0	1.0
Project site elevation, ft msl	900	900

C. Performance Requirements:

Location	SITE 1	SITE 2
Maximum shutoff head, ft	72	63
Design Flow Capacity, gpm	2,400	6,800
Design head TDH, ft	31	23
Design flow minimum efficiency, percent	65	70
Design flow minimum available NPSH, ft absolute	39	34
Maximum flow capacity at minimum static head, gpm	2,800	7,900
Maximum flow head TDH, ft, plus 5-feet, minus 2-feet	24	19
Maximum flow minimum efficiency, percent	60	64
Maximum flow minimum available NPSH, ft absolute	50	42
Maximum Pump Speed, RPM	1200	900
Maximum Motor size, hp	35	70

D. Pump Dimensions:

Location	SITE 1	SITE 2
Discharge pipe diameter*, in	8	18
Discharge flange rating ANSI, psi	150	150

*Provide DIP reducer if pump discharge diameter is different than discharge pipe diameter. Include all costs associated with furnishing and installing reducer in the bid price for "LIFT STATION – SITE X".

2.02 PUMP REQUIREMENTS

A. General

1. Provide pumps capable of continuous operation at full load with a water level of 60-inches above the invert of the wet pit, without cavitation or overheating of the motor.
2. Provide pumps, with their cables and appurtenances, able to withstand continuous submergence to a minimum depth of 65-feet, whether running or off, without leakage into the motor and / or control housing.
3. Provide pumps able to operate for short periods at zero static head without causing any damage to any part of the unit.

B. Construction: Conform to the following requirements:

Connections	Machined metal-to-metal quick disconnect type, for withdrawal of unit from above without disconnecting pipe. When lowered into place, the pumps automatically connect and lock into a specific discharge elbow support assembly provided by the pump manufacturer, allowing for zero leakage at all anticipated pump heads.
Pump Design	Single stage, centrifugal type, close-coupled to sealed or submersible electric motor, for operation in dry or wet pit, without external cooling.
Impeller	Maximum 3-port non-clog type with replaceable wear rings on impeller and in casing, to handle raw unscreened sewage, solids, and fibrous materials.
Bearings	Permanently lubricated, heavy duty axial and radial ball or roller bearings top and bottom, with a minimum L-10 life of 50,000 hours, at continuous, maximum load and speed, supported by detailed calculations, to be submitted with the Work Drawings.
Seals	Dual mechanical tandem, one stationary and one revolving shaft seals with individual springs, tungsten carbide or silicon carbide ring, each not requiring any maintenance, and capable of withstanding 1.5 times pump shutoff head. Oil lubricated seals, with moisture detector probes, alarm, and test circuits.
Oil Chamber	To supply oil for lubrication and cooling of the shaft seals.
Bottom Support	A specific cast duckfoot bend or discharge elbow with machined face support mounting system furnished by the pump manufacturer for each pump, anchored to sump floor, providing mounting support and zero leak connections for the pump and discharge piping.
Cables	Include necessary cables for power connection, moisture detection, and overload protection, sheathed, coded, and suitable for submersible pumps, and of sufficient length for direct connection to the terminal boxes indicated. Connect cables to the pumps and test at the factory. Provide anti-rodent stainless steel mesh on all pump cables.
Lifting Devices	Type 316 stainless steel guide rails with brackets and stainless-steel lifting system of sufficient operating length, or with a stainless-steel guide cable system with hooks and tension device, all rated at least 5 times the weight of the pump and motor.

C. Materials

Pump, volute, oil casing, sliding bracket, motor frame, bottom support	Cast iron
Impeller	Cast iron, statically and dynamically balanced
Pump shaft	Type 420 stainless steel, or 1045 carbon steel with Type 420 stainless steel sleeve
Exposed bolts, nuts, washers	Type 316 stainless steel
Mechanical seals	Independently operating tandem tungsten-carbide or silicon carbide and carbon rings with stainless steel springs
Wear rings	Type 304 or 416 stainless steel and nitrile rubber with steel insert, with a Brinnell hardness of 300 on impeller and 350 on case

2.03 MOTOR

- A. Approval: Pumping system, including the motor, and wiring, approved by a nationally approved testing agency for explosion-proof service. Rated Class I, Division 1, Group C and D service as determined by the National Electric Code and approved by a nationally recognized testing agency (UL or FM) at the time of opening Bids. Include in the Bid a copy of the certificate of approval.
- B. Insulation: Pump motors designed for continuous duty in hazardous locations. Moisture-resistant stator and stator-leads, triple varnished and insulated according to Class F, capable of withstanding a temperature rise of up to 155 degrees C. Allowable temperature rise of the motor at full load condition not to exceed 80 degrees C.
- C. Stator: Mount the motor stator in an air-filled, watertight casing, not fixed in place by externally mounted screws which may cause leakage in the motor.
- D. Motor Rating: Provide motors with service factors of 1.10 or greater.
- E. Junction Box: Motor junction box capable of being sealed completely from the stator casing to prevent leakage through the junction box into the stator housing should a motor cable be damaged or have some other means to prevent leakage into the junction box under any condition.
- F. Cable Entry: Cable entry water seal designed such that it precludes specific torque requirements to ensure a watertight and submersible seal. Permit no entry of water into any high voltage area even if the cable is severed below the water level.
- G. Cooling System: Provide pumps with adequately designed cooling systems using a wastewater jacket and thermal radiator integrally cast with the stator casing. Non-clogging cooling medium channels and ports by virtue of their dimensions. Wastewater

jackets are not required for motors that are designed to operate continuously at full load with ambient cooling.

- H. Motor Protection: Integral thermal sensors in the motors, one for each phase, to monitor stator temperatures. Sensors used in conjunction with and supplemented by external motor over-current protection located at the control panel.
- I. Leak Detection
 - 1. Lower seal failure alarm: Provide leakage sensor in the oil chamber to activate an alarm when water concentration exceeds 30%.
 - 2. Stator Leakage Sensor: Activate an alarm and stop the motor when any water is detected.
- J. Motor Protection Module: Provide protection relay to monitor the motor thermal and leakage sensors and provide alarm contacts for each. Alarm contacts to be used in the pump starter controls. Provide relay to be installed by others in the RVSS starters. Module provided by the pump manufacturer and compatible with the supplied pumps.

2.04 PROTECTIVE COATING

- A. Protect all metal surfaces coming into contact with the pumped media with a rust inhibitive primer followed by a high solids epoxy paint finish.

2.05 PUMP CONTROLS

- A. Pumps shall be controlled in accordance with Section 26 29 99 Lift Station Controls.

2.06 SPARE PARTS

- A. Furnish spare parts for each pump as indicated
 - 1. One set of bearings
 - 2. One impeller

2.07 FACTORY TESTING AND SHIPMENT

- A. Include the following procedures with the factory test prior to shipment, in addition to the factory tests in Section 43 20 00:
 - 1. Verification of cavitation-free service and absence of motor overheating during conditions simulating the actual operating conditions after installation, whether submerged, semi-submerged, or dry.
 - 2. Pump seals designed for complete water tightness at 65-feet submergence for 30 minutes and data on factory testing and quality control shall be submitted with the Work Drawings.
 - 3. Parts properly lubricated and protected so that no damage or deterioration will occur even during a prolonged delay from the time of shipment until installation is completed and the pumps are ready for operation.
 - 4. Properly protect finished ferrous surfaces not painted to prevent rust and corrosion.

5. Protect the finished surfaces of exposed flanges by strong wooden blind flanges.
6. Properly crate each pump to protect against damage during shipment.

2.08 MANUFACTURERS, OR APPROVED EQUAL

- A. Flygt Corporation
- B. Sulzer

PART 3: EXECUTION

3.01 INSTALLATION

- A. Field test the submersible pump guide rail system in the presence of the Engineer and Owner by removing and reinstalling each submersible pump three times. Correct, with no additional cost to the Owner, any deficiencies observed with either the mounting rails or seating to the discharge elbow.

3.02 SERVICES OF MANUFACTURER

- A. Inspection, Startup, and Field Adjustment: Presence of the service representative of the manufacturer is required continuously at the Site to furnish the services required by Section 43 20 00 – Pumps, General
- B. Instruction of Owner's Personnel: Presence of the training representative of the manufacturer is required at the Site for 1 Day to furnish the services required by Section 43 20 00 – Pumps, General.
- C. A Day is defined as an 8-hour period at the Site, excluding travel time.
- D. The Engineer may require that the inspection, startup, and field adjustment services above be furnished in 3 separate trips.

END OF SECTION 43 25 06

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

UTILITY COORDINATION

5-094(105)350 – PCN 22628

DESCRIPTION

This work consists of coordinating the construction schedule with third party utility companies owning facilities within the project limits, verifying the location of those facilities during construction, and resolving issues with those utilities.

The requirements in the Special Provision replace the requirements of Section 105.03, "Cooperation With Utility Owners" and do not supersede the Section 105 notes in the plans.

ATTACHMENTS

Appendix A – Utility Exhibits and Coordination Table

DEFINITIONS

Conflict: A utility in need of relocation or adjustment for the construction to proceed in that area.

Protect in Place (PIP): A utility that does not need relocation, but needs precautions to protect the utility during construction activities.

Utility Encounter (UE): A Conflict or Protect in Place situation involving an existing third party owned utility.

CONTRACTOR RESPONSIBILITIES

A. Responsibilities.

The responsibilities for utility coordination include the following:

- Conduct the preconstruction utility coordination meeting;
- Main point of contact for all utility companies;
- Maintain a schedule for utility activities;
- Hold weekly utility meetings in addition to the weekly planning and reporting meeting and report on the utility meetings at the weekly planning and reporting meeting;
- Follow up with any utility companies that do not show up to construction meetings;
- Coordinate work efforts of the utility companies, revise work schedules and traffic control as necessary to ensure adequate cooperation between UE and construction work;
- Develop and update the utility coordination plan;
- Provide a weekly written summary for contacts and meetings to the Engineer; and
- Coordinate with all of the other parties to update the project schedule specified in Section 108.03, "Progress Schedule".

B. Utility Coordination Plan.

Develop a utility coordination plan with each utility company that includes the phasing and scheduling requirements for UE.

C. Record of Utility Outage Notifications.

Request a copy of notifications that utility companies provide to customers for service outages. Maintain copies of all notifications until the Contractor signs the final estimate.

D. Utility Coordination Schedule.

Create and maintain a construction schedule that includes timelines for the phasing of utility coordination work. Include information contained in the contract documents and information obtained during coordination discussions with utility owners. Written agreements between the Contractor and a utility company will govern over information contained in contract documents; however, the agreements must be signed by the NDDOT, Contractor and Utility Company to be effective. Written agreements are considered contract revisions, however they are not eligible for additional compensation or additional time unless agreed to separately by the Engineer.

The Utility Coordination Table contains information related to the utility coordination requirements at each area designated as a UE. The timelines included on the Table may be longer than shown if the Contractor requests multiple resolutions simultaneously. Adjust work schedules as required to accommodate utility resolutions.

Revisions to the construction schedule due to a utility company or companies non-conformance with agreed upon schedules or failure to reasonably coordinate work efforts with the Contractor will be considered excusable, non-compensable delays as specified in Section 108.06, "Determination of and Extensions to the Contract Time".

Failure by the Contractor to reasonably coordinate schedules with a utility company or companies for UE identified in the contract, or failure to document coordination efforts will be considered non-excusable delays as specified in Section 108.06, "Determination of and Extensions to the Contract Time".

CONSTRUCTION REQUIREMENTS

A. General.

The vertical and horizontal utility locations shown in the plans are approximate. Plan locations should not be interpreted as exact for bidding or construction purposes.

Utility facilities shown on the plans, if any, are for reference purposes only and may not constitute an exhaustive representation of all utility facilities within the project. Notify the North Dakota One Call System (811) before starting the work, so they may locate and mark all utility facilities within the project. Receive utility locates for Department-owned, publicly-owned, and privately-owned utility facilities, whether on or off the One Call System.

Comply with Chapter 49-23 of the NDCC in determining the location of underground utilities.

B. Utilities Identified in Plans.

Coordinate UE work with the affected utility owners. Maintain continuous communication with the Engineer, affected subcontractors, and affected utility owners until UE will no longer affect or be affected by the Contractor.

Cooperate with utility owners in relocating and adjusting utility facilities to minimize interruption to service and duplication of work by utility owners.

The Contract documents show all known UE for the project.

If a UE identified as a Protect in Place is determined to be a Conflict during construction, the Engineer will make necessary revisions to the Contract as specified in Section 104.02, "Contract Revisions". These types of changes will be considered excusable, compensable delays as specified in Section 108.06, "Determination of and Extensions to the Contract Time".

C. Utilities Encountered During Work.

1. General

Neither of the cases discussed in this subsection relieve the Contractor of liability that may arise under provisions of the NDCC.

2. Unidentified Utility Encounters

The Department will bear costs associated with revisions to the work as specified in Section 104.02 B, "Differing Site Conditions" only if the Engineer determines that all of the following conditions exist:

- a UE exists that was not designated in the plans; and
- the UE is in a location that affects the prosecution of the work to construct the project as designed.

3. Utility Encounters Created Due to Actions Performed by the Contractor

If a new UE is created due to actions performed by the Contractor for the Contractor's convenience; the Contractor shall account for and protect the affected facilities. Before performing these actions, the Contractor shall coordinate with the utility owner. The Department will not make additional payments to the Contractor nor the utility owner for UE created in this manner and will not provide additional time to the Contractor for completing the work.

If utility companies incur costs, the Department will not participate in those costs and will not make payment to the Contractor for those costs.

D. Utility Coordination Meetings.

1. Preconstruction Utility Meeting.

Arrange the meeting with the utility owners, the Contractor and affected subcontractors, local agency representatives, and the Engineer to occur no later than two weeks after the preconstruction meeting. At the meeting, provide an agenda and a tentative construction schedule for planning UE work; after the meeting, publish minutes and distribute a copy to all meeting attendees within 48 hours of the conclusion of the meeting.

2. Weekly Utility Coordination Meeting.

Organize a weekly meeting to discuss utility coordination efforts with utility companies and affected subcontractors, local authorities, the Engineer and others who may have an interest in utility coordination efforts. Hold the weekly utility coordination meeting immediately before the weekly planning and reporting meeting. Publish minutes and distribute copies to all meeting attendees within 48 hours of the conclusion of the meeting.

The intent of this meeting is to disseminate information regarding ongoing and upcoming UE work and to ensure that all affected parties are collaborating and sharing information related to that work.

Provide a summary of the discussion at the weekly planning and reporting meeting.

E. Fire Hydrants.

Before starting work that affects a fire hydrant, coordinate with the local fire authority to determine if provisions need to be in place before starting the work. If provisions are necessary, obtain the approval of the local fire authority before beginning the work affecting the fire hydrant.

F. Damage and Interruptions.

If the Contractor causes damage to utility facilities, the Contractor is responsible for the costs of restoring or repairing the damaged utility facility to a condition equal to or better than the condition existing before the damage occurred. Immediately notify the utility owner of the damage or, if the owner is unknown, the One Call System. Do not conceal, attempt to conceal, or make repairs to the utility facilities until approved by the utility owner. If this damage causes interruption to utility service, continuously coordinate with the utility owner until the service is fully restored.

The Department will not pay the Contractor for the cost to restore utility facilities or repair damage to utility facilities and will consider any delays resulting from this damage to be non-excusable in accordance with Section 108.06, "Determination of and Extensions to the Contract Time."

G. Utility Criteria.

The Utility Coordination Table and Utility Exhibits contain specific information related to each UE location.

Rev. 2021-10-20

Utility Coordination Table Appendix A of SP 434(20)

IM-8-094(105)350 PCN 22628

Sorted By Station

UE ID #	Utility Coordination Exhibits	Approx. Sta From	Approx. Sta To	LT/RT or Crossing or Point Location	Roadway (Alignment/Chain)	Approx. Qty	Unit	Max Excavation Cut (-) / Fill (+) Feet	Encounter Level	Comments	Utility Company	Type of Facility	After Notification - Time For Utility to Mobilize (D = Working Day, W = Week)	Estimated Time to Complete Relocation (D = Working Day, W = Week, H = Hours)	UTILITY ENCOUNTER TYPE (UE)	
															Protect in Place	Conflict
XCEENE-1		2+39	to -	Crossing	PR_OCL_ND50	1.0	EA	-11	Level 3	Gas crossing at proposed pipe and existing pipe to be removed. Depth of utility unknown. Xcel Energy to lower gas line.	Xcel Energy	Gas Line	20 D	2 W		X
Totals:															0	1

Utility Company Information

Utility Company	Contact Name	Phone Number	Email
Xcel Energy	Chadrick Walsh	701-241-8647	chadrick.walsh@xcelenergy.com

Utility Conflict Level Designations

Level 1	Utility not exposed by proposed improvements, no impacts.
Level 2	Utility exposed by proposed improvements but no permanent impacts, contractor to protect in place and perform careful excavation.
Level 3	Utility permanently impacted by proposed improvements and requires vertical adjustment only. Horizontal location of utility will not change.
Level 4	Utility permanently impacted by proposed improvements and requires complete relocation. Vertical and horizontal location of utility will change.

DESIGN DATA (I-94)			
Traffic		Average Daily	
Current 2020	Pass: N/A	Trucks: N/A	Total: N/A
Forecast	Pass: N/A	Trucks: N/A	Total: N/A
Clear Zone Dist. N/A		Design Speed: 55 MPH	
Minimum Sight Dist. for Stopping: N/A		Bridges: N/A	
Full Control of Access, No Point of Access Other Than at Interchange Ramps			
Pavement Design Life N/A (years)			
Design Accumulated One-way Rigid ESALs: N/A			

STATE	PROJECT NO.	PCN	SECTION NO.	SHEET NO.
ND	IM-8-094(105)350	22628	1	1

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

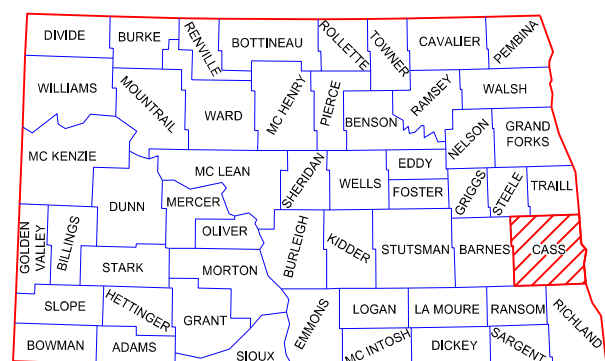
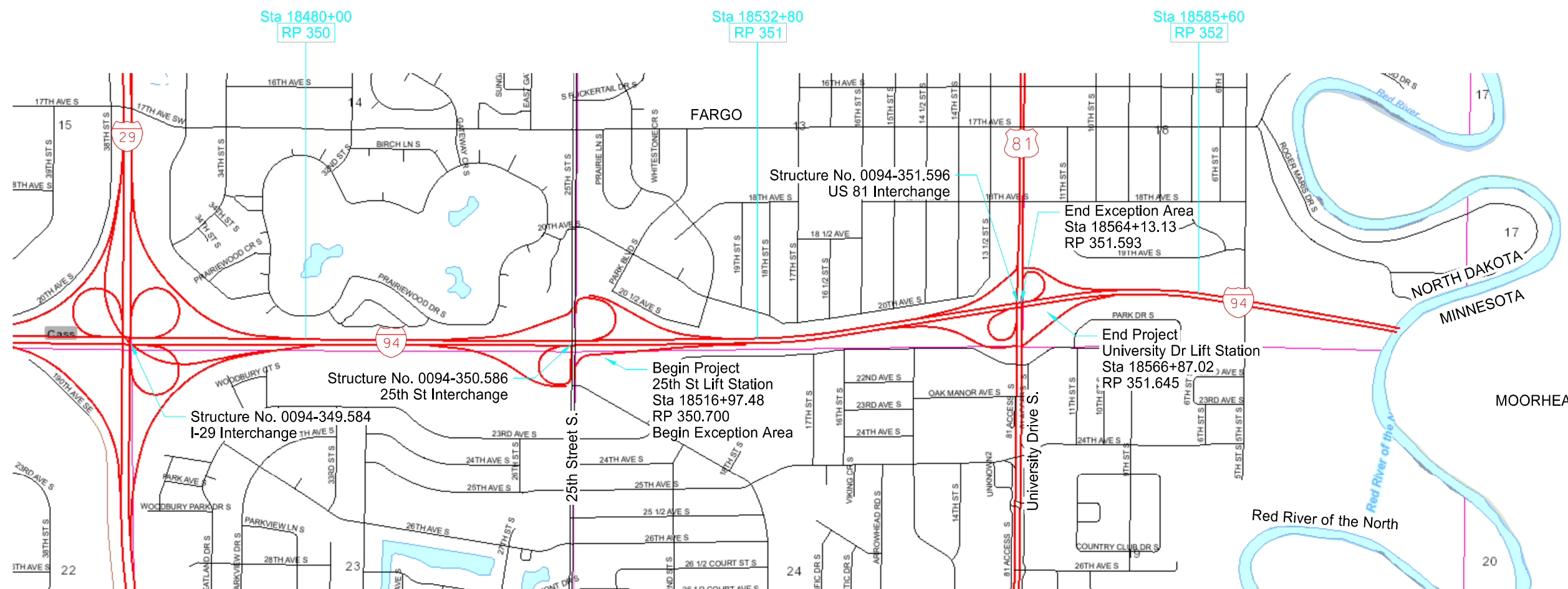
IM-8-094(105)350

Cass County
25th Street Interchange to University Drive Interchange

Lift Station and Storm Sewer Improvements

GOVERNING SPECIFICATIONS	Date Published and Adopted by the North Dakota Department of Transportation
Standard Specifications	10/1/2020
Supplemental Specifications	NONE

PROJECT NUMBER \ DESCRIPTION	NET MILES	GROSS MILES
IM-8-094(105)350	0.052	0.945



STATE COUNTY MAP

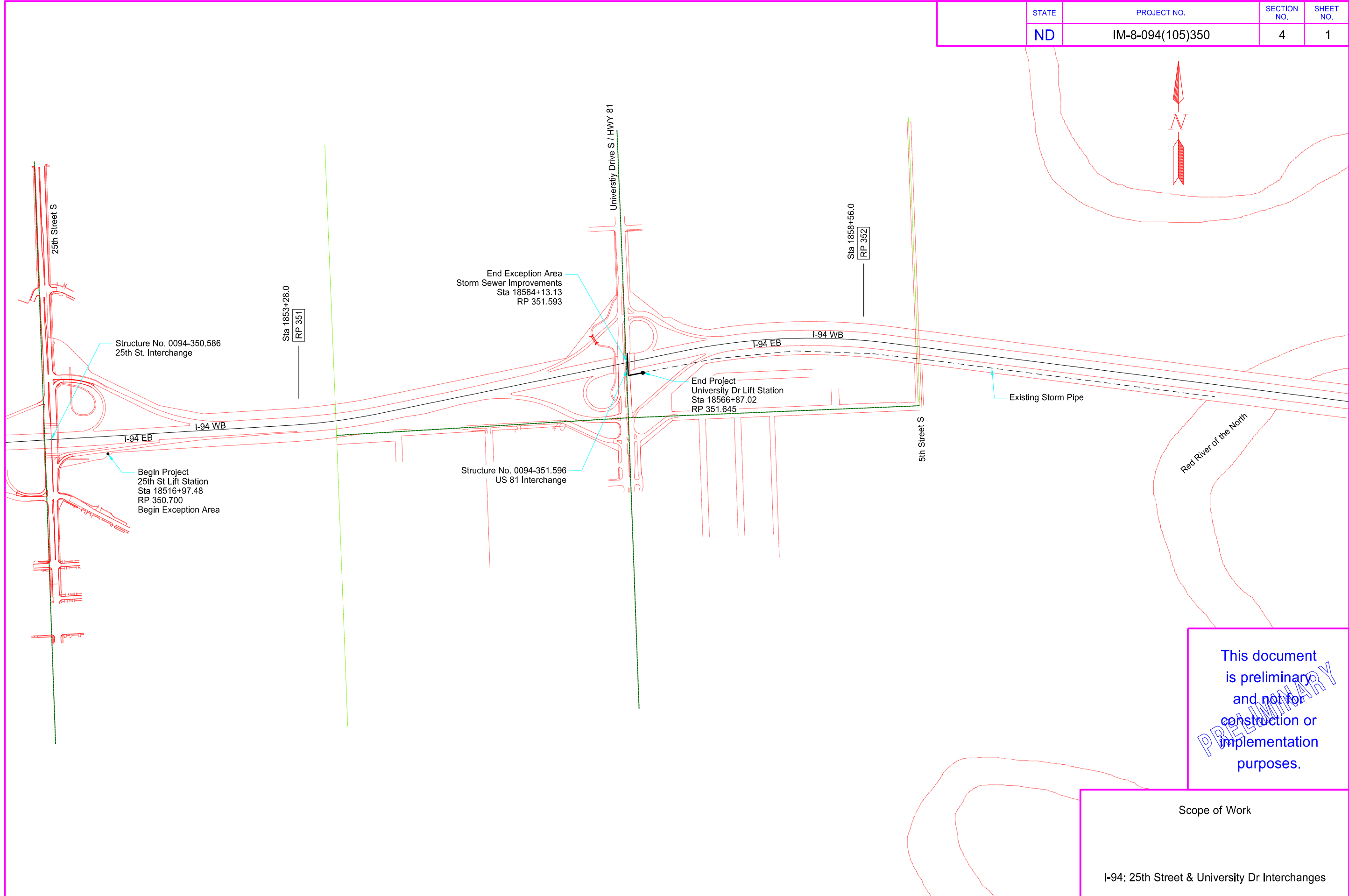
OTHER REVIEW

ND DEPARTMENT OF TRANSPORTATION
OFFICE OF PROJECT DEVELOPMENT

HOUSTON ENGINEERING INC.

This document
is preliminary
and not for
construction or
implementation
purposes.

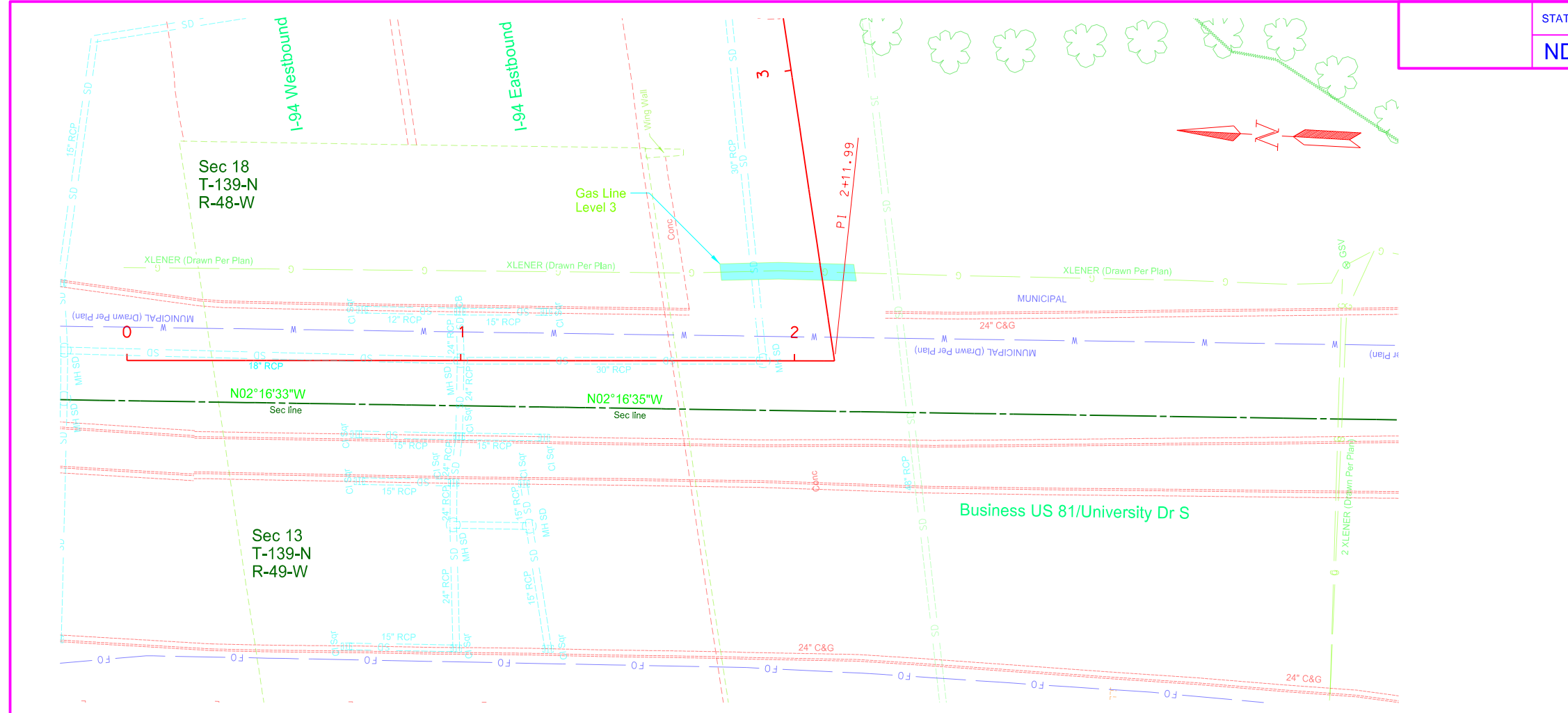
STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	IM-8-094(105)350	4	1



This document
is preliminary
and not for
construction or
implementation
purposes.

Scope of Work

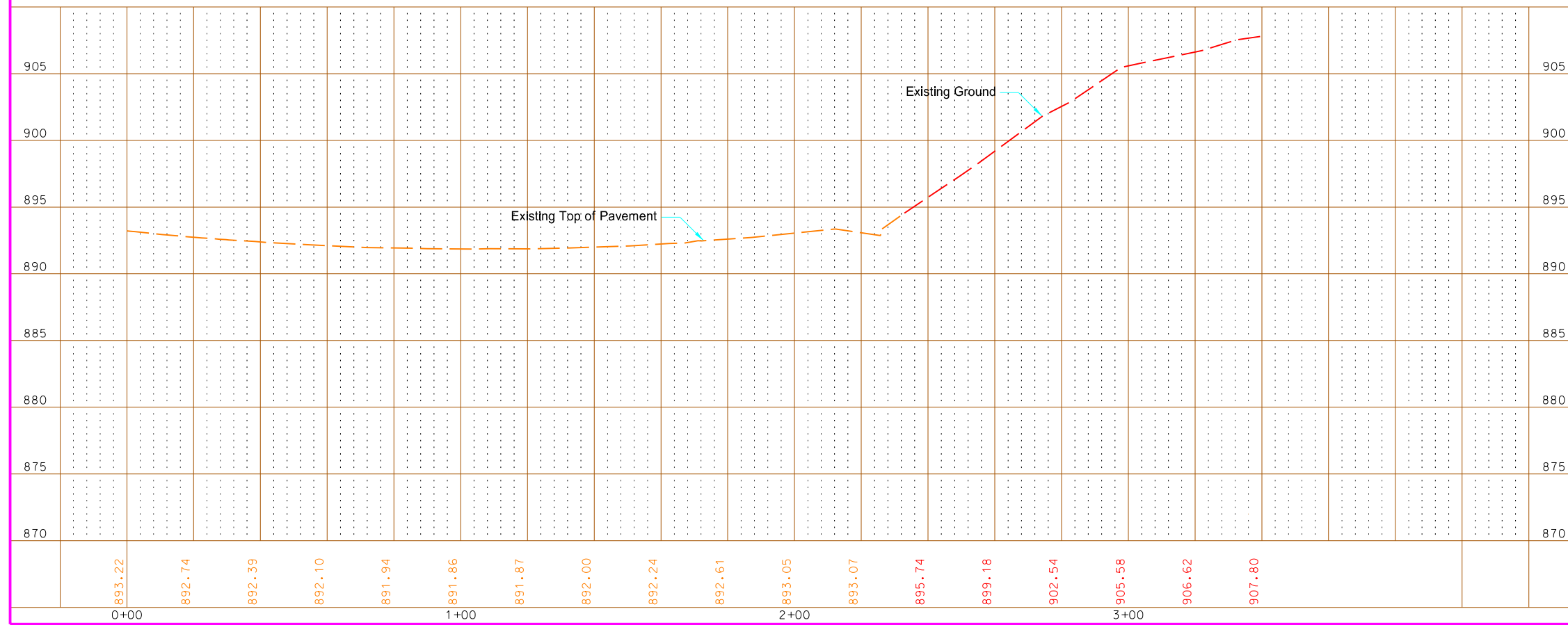
I-94: 25th Street & University Dr Interchanges



- Impacted Utilities - Legend**
- Level 2 Utility Conflict
Protect in Place
 - Level 3 Utility Conflict
Vertical Adjustment Only
 - Level 4 Utility Conflict
Vertical & Horizontal Adjustment

- Text Color - Legend**
- Conflict With Water & Fiber Optic
 - Conflict With Fuel
 - Conflict With Gas
 - Conflict With Electrical
 - Conflict With Overhead & Utility Pole
 - Conflict With Telephone
 - Conflict With Unknown
 - Utility Resolution Text

- Construction - Legend**
- Construction Limit (Fill)
 - Construction Limit (Cut)
 - Existing Right of Way Line
 - Proposed Right of Way Line
 - Temporary Easement Line



This document
is preliminary
and not for
construction or
implementation
purposes.

Storm Drain Plan & Profile
University Drive

I-94: 25th Street & University Dr Interchanges

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION

FUEL COST ADJUSTMENT CLAUSE

Revision Date: 9/8/2006

Introduction

This Special Provision provides for price adjustments to the Contract when significant changes in the cost of motor fuels and burner fuels occur while completing the Contract work. Participation in fuel cost adjustment program is not mandatory. A Contractor is not required to notify the Department at the time of submitting bids whether the Contractor will or will not participate in the fuel cost adjustment provision.

The North Dakota Department of Transportation (NDDOT) will send the low responsible bidder a "Fuel Cost Adjustment Affidavit" (SFN 58393) with the proposed Contract. The Contractor shall return a completed Fuel Adjustment Affidavit with the signed Contract as specified in Standard Specification Section 103.06, Execution and Approval of the Contract. The affidavit shall be returned on all Contracts with this provision even if the Contractor elects not to participate in the provision.

Compensation adjustments for motor fuels and burner fuels consumed in prosecuting the Contract shall be determined by the Engineer in accordance with the provisions set forth herein. Compensation adjustments will be assessed monthly for the cost of the motor fuels and burner fuels whenever the Current Fuel Index (CFI) is outside the given threshold of the Base Fuel Index (BFI) for the Contract.

If the Contractor has a fixed price for fuel for motor or burner fuels to complete the work, no fuel cost adjustments will be made for that fuel type. If there is no fixed fuel price for motor or burner fuels, participation in the Fuel Adjustment provision is the decision of the prime Contractor.

If the prime Contractor decides not to participate, no fuel cost adjustments will be made to the Contract for the Contractor or any subcontractors. If the prime Contractor elects to participate in the fuel cost adjustment provision, the prime Contractor shall include the anticipated fuel cost of subcontractors who wish to participate. If fuel cost adjustments are made to the Contract, the prime Contractor shall ensure that participating subcontractors including second and lower tier, are included in the adjustments in proportion to the percentage of work and anticipated fuel cost by that subcontractor.

Fuel Indexes

Each month, NDDOT will record the average wholesale price for No. 2 diesel fuel and the average wholesale price for unleaded gasoline (87 octane). The monthly average will be the average of the daily rack prices for the month as reported by DTN Energy for Fargo ND.

The burner fuel index will be the No. 2 diesel fuel index regardless of the type of burner fuel actually used.

The Base Fuel Index (BFI) price for motor fuels and burner fuel to be used in the Contract will be the average wholesale price for the month prior to the bid opening.

The Current Fuel Index (CFI) price for motor fuels and burner fuel to be used for each monthly adjustment will be the average wholesale price for the month prior to the adjustment month.

Fuel Ratio

For motor fuels diesel and unleaded gas, the fuel ratio of the Contract will be determined by dividing the Contractor's affidavit costs for each motor fuel by the original Contract amount.

For burner fuels, the fuel ratio of the contract will be determined by dividing the Contractor's affidavit cost for burner fuels by the original Contract amount of plant-mixed hot bituminous pavement paid by the ton. Asphalt cement, binders and other miscellaneous bituminous items shall not be included.

The fuel ratio of the contract for motor and burner fuels will remain the same throughout the length of the contract. The sum of the affidavit fuel costs shall not exceed 15% of the original Contract amount.

The fuel ratio for the three fuel types will be determined by the following equation:

Fuel Ratio_(x, y, z) = Affidavit Cost_(x, y, z) / Original Contract Amount_(x, y, z)		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel
Fuel Ratio _(x, y, z)	=	Fuel ratio of the contract for each respective fuel type
Affidavit Cost _(x, y, z)	=	Fuel costs from Fuel Adjustment Affidavit (SFN 58393)
Original Contract Amount _(x, y)	=	Total of the original contract amount excluding lane rental, and Part B of the bid (when A+B bidding is used), if applicable.
Original Contract Amount _(z)	=	Total original contract amount for all hot bituminous pavement bid items combined, excluding bid items for asphalt cement, sawing and sealing joints, coring, etc. Only hot bituminous pavement bid items measured by the Ton will be included in the calculation.

Cost Change

The monthly change in fuel costs will be determined by the following equation:

Cost Change_(x, y, z) = (CFI_(x, y, z) - BFI_(x, y, z)) / BFI_(x, y, z)		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel (use diesel prices)
Cost Change _(x, y, z)	=	The relative change in the current CFI and the BFI for each fuel type
CFI _(x, y, z)	=	Current Fuel Index for each fuel type
BFI _(x, y, z)	=	Base Fuel Index for each fuel type

Contract Adjustments

Contract adjustments will be made for the cost of motor and burner fuels whenever the cost change exceeds a ±0.10 threshold. No fuel cost adjustment will be made for work done under liquidated damages. Adjustments will be determined for Motor Fuel (diesel), Motor Fuel (unleaded), and Burner Fuel (burner) separately and shall be computed on a monthly basis.

When the cost change is greater than 0.10, the rebate to the Contractor for each fuel type shall be computed according to the following formulas:

$FCA_{(x, y, z)} = \text{Fuel Ratio}_{(x, y, z)} \times \text{Estimate}_{(x, y, z)} \times (\text{Cost Change}_{(x, y, z)} - 0.10)$		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel
$FCA_{(x, y, z)}$	=	Fuel Cost Adjustment for each of the fuel types
Fuel Ratio $_{(x, y, z)}$	=	Fuel Ratio for each of the fuel types
Estimate $_{(x, y)}$	=	The monthly total of work done on estimates issued in the current month excluding incentive or disincentive payments, pay factor adjustments and any work completed under liquidated damages.
Estimate $_{(z)}$	=	The monthly total of hot bituminous pavement work done on estimates issued in the current month, excluding bid items for asphalt cement, sawing and sealing joints, coring, etc. Only hot bituminous pavement bid items measured by the Ton will be included in the calculation. Hot bituminous pavement work completed under liquidated damages will not be included.
Cost Change $_{(x, y, z)}$	=	The monthly change in fuel costs for each of the fuel types

When the cost change is less than -0.10, the credit to the Department for each fuel type shall be computed according to the following formulas:

$FCA_{(x, y, z)} = \text{Fuel Ratio}_{(x, y, z)} \times \text{Estimate}_{(x, y, z)} \times (\text{Cost Change}_{(x, y, z)} + 0.10)$		
(x)	=	Motor Fuel (Diesel)
(y)	=	Motor Fuel (Unleaded)
(z)	=	Burner Fuel
$FCA_{(x, y, z)}$	=	Fuel Cost Adjustment for each of the fuel types
$\text{Fuel Ratio}_{(x, y, z)}$	=	Fuel Ratio for each of the fuel types
$\text{Estimate}_{(x, y)}$	=	The monthly total of work done on estimates issued in the current month excluding any incentive or disincentive payments, pay factor adjustments and any work completed under liquidated damages.
$\text{Estimate}_{(z)}$	=	The monthly total of hot bituminous pavement work done on estimates issued in the current month, excluding bid items for asphalt cement, sawing and sealing joints, coring, etc. Only hot bituminous pavement bid items measured by the Ton will be included in the calculation. Hot bituminous pavement work completed under liquidated damages will not be included.
$\text{Cost Change}_{(x, y, z)}$	=	The monthly change in fuel costs for each of the fuel types

Payments

Adjustments will be determined by the Engineer monthly. Adjustments will be made under the following spec and code for each fuel type:

109 0100	Motor Fuels (Diesel)
109 0200	Motor Fuels (Unleaded)
109 0300	Burner Fuel

When significant payment adjustments are made on final estimates to account for final in-place measured quantities, the Engineer may prorate the adjustments back to the months when the work was done.

Attachments

For informational purposes, a 'Fuel Cost Adjustment Affidavit' (SFN 58393) is included as Attachment A.

FUEL COST ADJUSTMENT AFFIDAVIT

North Dakota Department of Transportation, Construction Services
 SFN 58393 (8-2017)

SP Fuel Cost Adjustment Clause
 6 of 6

Attachment A

PCN	Project Number		
<p>The Contractor is not required to notify the Department at the time of submitting bids whether he will or will not participate in the fuel cost adjustment program. The Contractor shall return the affidavit on all Contracts with this Provision even if the Contractor elects not to participate.</p>			
<p>Check the box for each fuel type that has a fixed price. No adjustments in fuel price will be made for the boxes that are checked.</p> <p style="text-align: center;"> <input type="checkbox"/> Diesel <input type="checkbox"/> Unleaded <input type="checkbox"/> Burner </p>			
<p>Does your company elect to participate in a fuel adjustment for this contract for the fuels that do not have a fixed price? No adjustments in fuel prices will be made if No is checked .</p> <p style="text-align: right;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </p>			
<p>If yes, provide the total dollars for each of the applicable fuels:</p>			
Diesel (D)		<p>% of Original Contract Amount *</p>	
Unleaded (U)			
Burner Fuel (B)			
Sum (D+U+B)			
<p>*The sum of the D, U, and B may not exceed 15% of the original contract amount.</p>			
<p>Under the penalty of law for perjury of falsification, the undersigned,</p>			
Name (print or type)		Title (print or type)	
Contractor (print or type)			
<p>hereby certifies that the documentation is submitted in good faith, that the information provided is accurate and complete to the best of their knowledge and belief, and that the monetary amount identified accurately reflects the cost for fuel, and that they are duly authorized to certify the above documentation on behalf of the company.</p>			
<p>I hereby agree that the Department or its authorized representative shall have the right to examine and copy all Contractor records, documents, work sheets, bid sheets and other data pertinent to the justification of the fuel costs shown above.</p>			
Signature			Date

Acknowledgement

State of	
County of	
Signed and sworn to (or affirmed) before me on this day _____	
(month, day, year)	
Name of Notary Public or other Authorized Officer (Type or Print)	Affix Notary Stamp
Signature of Notary Public or other Authorized Officer	
Commission Expiration Date (if not listed on stamp)	