

**INVITATION TO BID (ITB)
FOR CONSTRUCTION OF
52' X 68' EQUIPMENT BUILDING**

**FOR
GRAND FORKS COUNTY
IN THOMPSON, ND**

BIDS MUST BE MAILED OR HAND DELIVERED TO:

GRAND FORKS COUNTY FINANCE AND TAX DIRECTOR
151 4TH Street South
PO Box 5726
Grand Forks ND 58206

NO LATER THAN 10:00 A.M. ON TUESDAY, MARCH 26, 2019
FAXED BIDS SHALL NOT BE ACCEPTED
FOR ADDITIONAL INFORMATION CALL 701-780-8248

GRAND FORKS COUNTY COMMISSIONERS

ADVERTISEMENT FOR BIDS FOR
52' X 68' EQUIPMENT BUILDING

NOTICE TO BUILDING CONTRACTORS:

By the order of the Board of County Commissioners of Grand Forks County, North Dakota, I hereby give notice that sealed bids will be received by the undersigned at the office of the County Director of Finance and Tax up until 10:00 o'clock a.m., March 26th, 2019. Bids will be publicly opened and read at 10:00 a.m. for 52' x 68' EQUIPMENT BUILDING for the county, as per specifications prepared by and available at the office of the County Highway Department, 1700 N Columbia Road, Grand Forks ND 58203. Construction generally entails:

- One equipment storage building – 52' wide x 68' long x 18' high, wooden framed, insulated, steel panel exterior
- Concrete floor with floor heat
- Watermain, sanitary sewer, electric & natural gas service
- Electrical wiring

In compliance with Section 11-11-28 of the North Dakota Century, bids to be opened and considered must be accompanied by a bond. A bid shall be accompanied by a separate envelope containing a bidder's bond in a sum equal to five percent of the full amount of the bid, executed by the bidder's as principal and by a surety company authorized to do business in the State as a guaranty that the bidder will enter into the contract if it is awarded to him and he will furnish the necessary bond. Also to be included with the envelope containing the bid bond shall be the contractor's license.

The Board reserves the right to reject any or all bids, in whole or in part, and to waive any technicalities.

Bids must be enclosed in a sealed envelope, with a separate envelope for the bidder's bond and contractor license both addressed to the County Director of Finance and Tax and Marked on the outside what the bid is for. The County Auditor is located at 151 4th Street South and the mailing address is P.O. Box 5726, Grand Forks, ND 58206.

Dated at Grand Forks, North Dakota, this 6th day of March, 2019.

Debbie Nelson
County Director of Finance and Tax
Grand Forks, North Dakota

(Publish March 9, 16 & 23, 2019)

LEGAL NOTICE

CONTRACT

STATE OF NORTH DAKOTA)
COUNTY OF GRAND FORKS)

CONTRACT FOR THE: construction of **52' x 68' EQUIPMENT BUILDING**.

THIS AGREEMENT, made this ___ day of _____ 2019, by and between _____
_____ party of the first part and Grand Forks County, party of the second part.

WITNESSETH, that whereas the County Commission of Grand Forks County on this day 6th day of March, 2019 order certain work, to wit;

52' x 68' EQUIPMENT BUILDING, for Grand Forks County, ND.

WHEREAS at a public sale of the job of 52' x 68' EQUIPMENT BUILDING, Grand Forks, ND. held on the 2th day of April, 2019, the Party of the second part did duly award and sell to the party of the first part, the job of: 52' x 68' EQUIPMENT BUILDING, for Grand Forks County, ND., in accordance with the plans and specifications theretofore filed in the proceedings, said firm being the lowest and best responsible bidder, therefore;

The party of the first part further covenants and agrees that he will complete the same in every respect to the satisfaction and approval of the County Commission of Grand Forks County, North Dakota and in accordance with the plans and specifications on file in said proceedings. The project shall be completed by **October 1, 2019**.

The party of the first part further covenants and agrees that he will guaranty all work performed under this contract for a period of one (1) year beyond the date that Grand Forks County determines that all work has been completed.

The party of the first part, further agrees that time shall be of the essence in this contract and that if there is a failure to perform any of the work herein described according to the terms of this contract, and within the time limits herein, and according to the plans and specifications, that it shall forfeit and pay to the party of the second part the sum of \$900.00 each calendar day that such failure shall continue, and that no extension of the time within which to complete said work shall affect the right of the party of the second part to enforce such forfeiture.

Grand Forks County has the right to modify the plans and specifications as the work proceeds and as circumstances require. In this event, the change in cost resulting from the changes will be paid by the second party at a rate not greater than the amount for similar work in the contract.

Upon the completion of said work according to the terms hereof and the inspection and approval thereof by Grand Forks County, the party of the second part agrees to pay the party of the first part for said work, the sum of = Total Contract Amount = _____ Dollars (\$ _____).

Pursuant to the terms and conditions of the advertisement for bids, and as a condition precedent to the enforceability of this contract, the party of the first part, has furnished and attached hereto a corporate surety bond in the sum of One Hundred (100%) percent of the contract price for the purpose of guaranteeing the party of the first part, performance hereunder, together with a payment bond attached hereto in the sum of One Hundred (100%) percent of the contract price for the purpose of guaranteeing payment to all persons, firms and corporations furnishing materials for or performing labor in the prosecution of the work provided for in this contract.

IN WITNESS WHEREOF, the party of the first part has caused this instrument to be executed by its Chairman and its Auditor with its seal affixed and the party of the second part has caused this instrument to be executed the day and year first above written.

Contractor:

By _____
Print Name _____
Title _____
Date _____

and _____
(Witness) Print Name _____

Grand Forks County:

By _____
Print Name _____
(Chairman of the Board of Grand Forks County)
Date: _____

and _____
(Grand Forks County Auditor)
Print Name _____

**SECTION ONE
PERFORMANCE SPECIFICATIONS**

1.0 GENERAL

Intent of this solicitation is to secure bids for construction of an Equipment Building in the Thompson, ND. Building is to be located on the lot at 323 6th St, Thompson, North Dakota for the Grand Forks County Highway Department. See included site plan.

1.01 Description:

- A. Provide construction for a 52' x 68', 3536 square-foot building with an inside clearance of 18' to 18.5', 6-inch reinforced concrete floor, wood framed weather-tight building. Building shall be suitable for storage of road maintenance trucks and equipment. Building shall meet or exceed performance and dimensional criteria and other requirements of this specification. Building shall be constructed using a slab on grade thickened edge concrete floor, floor heat with gas boiler, unit heater, dimensional lumber, and pre-engineered trusses. There shall be two 24' wide x 16' high insulated overhead doors, and one 3' wide walk-in solid door.

1.02 Bid Package Requirements and Conditions:

- A. Owner reserves the right to consider bids and options for buildings varying in minor respects from any specific requirement herein, but judged to meet the intent of this specification. Owner reserves the right to waive minor irregularities and to reject any or all bids.
- B. Definitions:
 - a. Term "Owner" means Grand Forks County.
 - b. Term "Contractor" means vendor awarded contract with Grand Forks County.
- C. Bid Guaranty:
 - a. Bids must be accompanied by a bidder's bond, in a sum equal to five percent of full amount of bid, executed by Bidder as principal and by a surety company authorized to do business in the State of North Dakota. If within 10 days after notice of an award, successful Bidder fails to sign a contract with Owner, Principle and Surety shall forfeit to Owner the bidder's bond accompanying bid on which there is a default. **Bond shall be in a separate envelope from bid.**

- b. All bonds, except the awarded contractor, shall be returned to bidders when Owner has determined to whom contract is to be awarded. Bond of responsible Contractor submitting best bid shall be retained until contract has been awarded and executed properly. Bond of other Contractors submitting bids shall be returned after contract has been awarded and executed.

D. Related Work:

- a. Site Inspection: The County Engineer recommends that all Contractors inspect the site prior to bidding so that the Contractor fully understands the scope of the project. Questions about the project shall be directed to Nick West at (701) 780-8248 or nick.west@gfcounty.org.
- b. Pre-bid Meeting: There shall not be a pre-bid meeting.
- c. Permits, Fees, Rules and Licenses:
 - i. Building Permit: Contractor shall secure a building permit from the City of Thompson and pay the fee.
 - ii. City Sanitary Sewer, East Central Water, Xcel Electric and Gas: The Owner shall obtain the permits and pay the fees. The Contractor shall assist in coordinating between the utility companies and the Owner and Contractor shall be required to abide by the permit requirements.
 - iii. The Contractor shall follow the City of Thompson Rules for New Construction. (see attached).

The City of Thompson has given site plan approval.

- d. Materials: Contractor shall provide materials that have a proven track record, and shall be responsible for all products, components, accessories and methods used in constructing this building. It shall be the Contractors responsibility to prove that any material that deviates from a specified material, is equal in quality, workmanship, components, features, warranty, etc.
- e. Minimum printed code standard requirements of the following organizations for material quality, fabrication, and installation procedures shall be met or exceeded, for applicable methods employed in building construction. Latest published version of the following code publications shall be referenced for design and construction of this facility.
 - i. Air Conditioning and Refrigeration Institute (API).
 - ii. American Institute of Steel Construction (AISC).
 - iii. American Concrete Institute (ACI).
 - iv. American Institute of Timber Construction (AITC).

- v. American Iron and Steel Institute (AISI).
- vi. American Welding Society (AWS).
- vii. American Plywood Association (APA).
- viii. American Softwood Lumber Standard (ALSC).
- ix. American Society of Testing and Materials (ASTM).
- x. International Building Code (IBC).
- xi. State and/or Local Building Codes.
- xii. Uniform Plumbing Code and State Plumbing Code.
- xiii. National Electrical Code (NEC) and State Electrical Code.
- xiv. State Fire Code.
- xv. International Mechanical Code (IMC) and State Boiler Rules.

1.03 Award and Execution of Contract:

- A. Contractor's Qualifications: Full name and address of business organization shall be stated and parent company identified if a subsidiary. Contractors shall specify branch office or other subordinate element which shall perform, or assist in performing on any business partnerships, and state in which Contractor is incorporated or licensed to operate.
- B. Bid package of successful Contractor shall be incorporated into project contract. Bid package shall become a part of subsequent contractual documents. Failure of Contractor to accept this obligation may result in cancellation of any award. Any damages accruing to the Owner, as a result of Contractor's failure to contract, may be recovered from Contractor.
- C. The successful Contractor shall enter into a contract for performance of work proposed in this Invitation To Bid. Failure by successful Contractor to execute a Contract and file a successful Contract Bond shall be considered cause for annulment of award and forfeiture of Bid Guaranty to Owner. Award may be made to next best bid, or work re-advertised.
- D. Contract shall incorporate all applicable provisions of this ITB.
- E. Owner shall accept one prime bid. Bids shall be evaluated according to quality, performance, and price. Owner reserves right to reject any or all bids.
- F. Owner reserves the right to, in its sole discretion, to award contract to another Contractor if low bidder fails to enter into a contract.
- G. All costs attributable in preparation of a bid or any presentation required to supplement or clarify bid are borne by Contractor.
- H. All Bids remain valid for a minimal period of 30 days subsequent to ITB closing date, unless an extension is agreed to by both parties.

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- I. To be eligible for award of project, Contractor shall meet all requirements of this ITB.
- a. Contractor shall be licensed to do business in the State of North Dakota.
 - b. Amount of the bid shall not exceed license limit.
 - c. Contractor shall list names, addresses, telephone numbers, and primary contact names of at least three references of customers. Owner reserves the right to contact any or all of these references, or any other person or entity with relevant information.
 - d. Failure to provide satisfactory performance data may result in cancellation of award. No bid may be read or considered if it does not fully comply with requirements of North Dakota Century Code Section 48.
- J. Upon execution of Contract, successful bidder shall furnish a Performance Bond and a Payment Bond in an amount equal to 100% of Contract, issued by a responsible Surety, and approved by Owner. If Bond is voided or is no longer in force, Contractor shall obtain another Contract Bond of an amount equal to original.
- K. Insurance: The Contractor shall furnish a certificate of insurance of the following minimum kinds and amounts:
- a. Workman's compensation – Statutory
 - b. Public Liability: Type of Policy: Comprehensive General
 - i. Limits of Liability
 - 1. Bodily Injury Liability - \$1,000,000 Each Person
\$1,000,000 Each Occurrence
 - 2. Property Damage Liability - \$1,000,000 Each Occurrence
\$1,000,000 Aggregate
 - ii. Coverage to be provided:
 - 1. Operations of Contractor
 - 2. Completed Operations
 - iii. Property Damage Liability includes:
 - 1. Damage due to collapse
 - 2. Broad Form Property Damage
- L. The Owner shall obtain builders risk insurance.
- 1.04 Submittals: Furnish following information as proof of conformity to design and performance criteria requirements of this specification.
- A. Indicate manufacture's or contractor's warranties available for all products and installations being proposed.
 - B. Owner is not responsible for errors, omissions, or deviations from original proposed material lists discovered during construction of this facility.

C. Construction phase:

1. The General Contractor shall provide stamped engineered plans of all structural and building items being utilized in this project prior to ordering material. The electrical contractor shall submit plans of the electrical layout. At a minimum the plans shall include:
 - i. Side Elevations
 - ii. Floor Plan
 - iii. Lighting, Ceiling Fan and Outlet Layout
 - iv. Fixture Schedule
 - v. Electrical Panel Circuit Schedule
2. Following construction, provide Operation and Maintenance Manuals including manufacturer's instructions, as-built drawings, warranty information and other operation and/or maintenance information for all necessary equipment.

- D. Each Bid must be submitted on enclosed Bid Form. Lump sum bid price must be submitted for all labor, materials, and equipment required to build the facility described in this ITB. Quantities are intended to describe general scope of work and are not fixed quantities, unless noted otherwise.
- E. Sealed Bids shall be received by Grand Forks County at time and place stated on cover of this bid package at which time bids shall be publicly opened and read. Any bid received after that time is deemed non-responsive and shall not be opened.
- F. Bidder's bond shall be placed in a separate envelope, and this envelope shall be attached to the outside of the envelope containing the bid. Bids shall be sealed and endorsed "Grand Forks County Equipment Building". Late bids shall be returned unopened.
- G. No Bids shall be accepted by oral communications, telephone, electronic mail, telegraphic transmission, or facsimile transmission.

1.05 Inquiries:

- A. All communications regarding information concerning this ITB shall be made to:
Nick West, (701) 780-8248
- B. Changes to ITB shall be issued by written addendum and mailed, emailed or faxed to parties requesting ITB. Such addenda issued prior to time that Proposals are received shall be considered part of ITB. Contractor shall be required to consider and acknowledge receipt of such in their Bid Form. It shall be the Contractor's responsibility to verify with the Owner if an addendum has been issued, as the Owner may not know which Contractors are considering bidding the project.

1.06 Negotiations:

- A. Contractor shall include name, address, and telephone number of person in Contractor's organization authorized to negotiate contract terms and render binding decisions on contract matters.
- B. Owner reserves the right to waive minor irregularities.
- C. Owner reserves the right to reject any and all Bids.

1.07 Time of Completion:

- A. Contractor awarded the project shall have the project completed by **October 1, 2019**.
- B. For each calendar day that the works remains incomplete after October 1, 2019, the Owner shall deduct \$900 from any money due to the Contractor.
- C. Contract award shall begin immediately after selection committee has reached a decision on successful Contractor.
- D. General contractor shall be responsible for coordinating all construction activities of all trades throughout the project. General contractor shall provide the Owner a construction schedule at the pre-construction meeting, which shall be held prior to start of the project.

1.08 Payment for Work:

- A. Partial payment may be requested by the Contractor once each month. Owner and Contractor shall review percentage of work completed and pay accordingly. Ten percent (10%) retainage shall be held back and paid within 60 days after building is completed and approved by the County.
- B. The Contractor shall provide signed lien waivers from all suppliers and sub-contractors prior to the 10% retainage being released.

1.09 Warranty:

- A. Contractor shall provide as part of the Bid Package a minimum one-year warranty covering all materials, labor, equipment and workmanship. Bid package shall list building components, and electrical equipment with minimum one year warranty. The warranty shall start upon accepted completion. Utility trench settlement and street pavement settlement shall be included in the warranty.
- B. Electrical subcontractor must coordinate all work efforts with General Contractor to adhere to all manufacturers' guidelines so warranties are not jeopardized.

1.10 Condition of Work:

- A. Contractors must inform themselves of the conditions relating to construction of project and employment of labor thereon. Failure to do so shall not relieve a successful Contractor of any obligation to furnish all material and labor necessary to carry out provisions of contract.

1.11 Contract Coordination:

- A. General Contractor shall provide coordination for all subcontractors and trades. All Contractors are required to comply with General Contractor's directions in order that the project is completed satisfactorily. Contractors must employ such methods or means as shall not cause an interruption or interference with work of any other Contractor.
- B. All costs incurred due to lack of coordination of work are the responsibility of the Contractor not following construction schedule. Contractor not following schedule or employing methods or means that cause interruption of or interference with work of any other Contractor, shall incur all costs for extra work caused by delaying construction sequence.

SECTION TWO**CONSTRUCTION CRITERIA****2.0 GENERAL**

- 2.01 Contractor shall keep fully informed with, and observe and comply with all Federal, State, and local laws and ordinances, including legal requirements governing safety, health, sanitation, and performance of contract in general.
- 2.02 Questions and change order requests regarding construction of building shall be approved by Owner. Owner shall conduct construction inspection and oversight.
- 2.03 Earthwork and Excavation: The Contractor shall perform preliminary site preparations. The Contractor shall provide excavation and structurally compacted conditioned backfill for concrete slabs and utility trenches. The Owner shall provide granular materials required for construction of building. Contractor must verify with Owner the height of finish floor and concrete slab elevations.
- 2.04 Final cleanup, finish grading, and site restoration: Contractor shall be responsible for cleanup of site during and after construction is completed. Contractor shall provide for all final grading.
- 2.05 Contractor shall take precautions and be responsible for all aspects of safety and shall provide protection to prevent damage, injury, or loss to:
- A. Employees on the project site and other persons who may be affected.
 - B. Materials and equipment, whether in storage on or off the site, under care, custody or control of Contractor or Contractor's subcontractors.
 - C. Property at site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, culverts, yard materials, landscaping, and utilities not designated for removal, relocation, or replacement in course of construction.
- 2.06 The Contractor shall furnish and submit to the Owner for evaluation, a complete set of plans and specifications for the building prior to construction activities and ordering of materials. The submittal shall bear the seal of a Professional or Structural Engineer, Registered in the State of North Dakota, thereby certifying that the structural design of the building fulfills the minimum requirements of building code, and including: 1) these specifications, 2) 30 psf live roof load, 3) 90 mph wind load, 4) 42 psf snow load.

**SECTION THREE
BUILDING DESIGN CRITERIA**

3.0 GENERAL CONTRACTOR

3.01 Minimum Dimensional Requirements for Building:

Width: 52 feet
Length: 68 feet
Vertical Side Wall Height: 18- to 18.5-foot clearance

3.02 Building Structural Requirements

- A. Provide a self-supporting wood frame structure comprised of dimensional lumber walls and pre-engineered trusses complete with necessary thickened edge concrete required to securely and permanently support roof and wall construction. No design reductions allowed.
- B. The walls shall be constructed with 2" x 6" dimensional lumber. The bottom plate of all walls shall be pressure treated lumber.
- C. Truss spacing and components shall be determined by the structural engineer.
- D. Building shall meet or exceed the following minimum structural design criteria, or as designed by the structural engineer:
 - a. Roof Live Load: 30 pounds per square foot or as per 2018 International Building Code or per local building code whichever is greater.
 - b. Wind Load: 90 miles per hour or as per 2018 International Building Code or per local building code whichever is greater.
 - c. Snow Load: 42 pounds per square foot or as per 2018 International Building Code or per local building code whichever is greater.
 - d. Dead Load: 6 pounds per square foot on top chord and 6 pounds per square foot on bottom chord or as per 2018 International Building Code or per local building code whichever is greater.

3.03 Concrete Foundation and Slabs:

A. Concrete Specifications:

- a. Concrete shall have a minimum compressive strength of 4,000 PSI at 28 days. Maximum 1" aggregate, air entrained 5% to 8%, with a maximum slump of 4 inches. This mix would be comparable to NDDOT AE3. The Contractor shall provide a copy of all redi-mix concrete delivery tickets to the Owner, prior to payment.
- b. Concrete shall utilize a proven mix design. Concrete Mix design may contain fly ash up to a maximum of 30% replacement of cement.
- c. Concrete shall be designed and placed with a maximum water cement (w/c) ratio of 0.45. Water content shall include all mixing water and free water on surface of aggregate, but shall not include water absorbed by aggregate. Fly ash shall be included in cement content by actual weight for determination of the w/c ratio.
- d. Contractor shall start concrete curing process as soon as the curing cover can be placed without marring the concrete. Curing shall be accomplished using a wetted fabric or a liquid membrane cure. Curing shall occur for a minimum of 72 hours. The liquid membrane cure shall be of high quality and color approved by owner. Curing membrane shall be evenly sprayed on top of the concrete floor and outside slabs. The membrane shall be installed as per manufactures recommendations. The contractor shall furnish owner with manufactures certificate of color, lot number and coverage spread rate before used by the Contractor.

B. Concrete Slab:

- a. Concrete slab (interior and exterior) shall be at least 6 inches thick, reinforced with #4, Grade 40 deformed rebar or equivalent fiberglass deformed rebar, at a maximum spacing of 24-inches on center in both directions. Rebar shall be placed on blocking or chairs approximately 2 inches from bottom of concrete. The equipment drainage area (as shown on interior layout) shall be sloped to drain towards the floor drain.
- b. The perimeter of the building slab shall be a thickened edge. The thickened edge shall be 1-foot thick and extend 1-foot into the building, then taper to the normal 6-inch thick slab.
- c. The wall shall be anchored to the floor with 10-inch cast-in-place anchors. Anchors shall be at least 1-foot from each corner, and spaced 6-feet apart or less.

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- d. Joints shall be sawed to a depth of 2 inches within 24 hours after placement. Maximum joint spacing shall be 12 feet each way. Verify locations of control joints with owner before placing floor concrete.
 - e. Outside slab shall have a broom finish. Inside slabs shall have a smooth steel trowel finish.
 - f. Inside slab shall be furnished with a floor drain system, see sanitary sewer section below.
 - g. The Contractor shall form the concrete floor under each overhead door so the bottom of the door shall meet the concrete floor, providing a weather-tight fit.
 - h. Place and properly compact a minimum of a 6-inches NDDOT Class 5 aggregate or recycled crushed concrete & 6-inches sand under all concrete. Owner to supply aggregate & sand material on site, Contractor shall install.
 - i. The exterior concrete slab shall be provided with a 1/2" expansion material and tied to inside slab with rebar, where the exterior slab is in direct contact with the building slab.
 - j. Insulation: Insulation under and around the interior slab shall be extruded polystyrene (XPS), suitable for underground application.
 - i. The perimeter of the thickened edge slab shall be insulated. The Contractor has the option to insulate one of three following preapproved methods, or approved equivalent:
 1. Utilize the Mono Slab EZ Form system, or approved equivalent. The Form size shall be 24"x24"x8".
 2. Utilize R-10 for 48-inches vertical. The corners shall be R-15 for 5-feet each way.
 3. Utilize R-10 for 24-inches vertical and then 24-inches horizontal away from the building. The corners shall be R-15 for 5-feet each way.
 - ii. The interior concrete slab shall have 1-inch thick R-5 insulation between the granular base and the concrete slab. The insulation shall have sufficient compressive strength to withstand the construction process and the weight of the concrete slab without damage.

3.04 Roof and Wall Specifications:

- A. The exterior wall shall be steel sheeting, two toned in color, the bottom three feet shall be dark blue, the remaining wall and roof shall be off-white.
- B. The Owner shall select the final colors for roof, walls, trim, and fascia.

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- C. All exterior steel shall be 29 gauge or heavier in 36" wide panels, full length on walls and roof. Panels shall have 5/8" ribs 9" on center, or approved equal, and shall overlap each other to form a water tight joint. All steel shall be installed with neoprene washers and screws furnished by steel supplier for this purpose. All screws shall be colored same as steel colors. All steel shall be screwed as per steel suppliers or Engineers recommendations, whichever is greater. All screw locations shall be predrilled or similar procedure to eliminate an indentation.
 - D. The exterior walls and roof shall be sheeted with 7/16 OSB or plywood, or approved equal.
 - E. The exterior walls shall be completely covered with a house wrap. The wrap shall be a weather barrier made of a continuous, nonwoven, non-perforated sheet of high-density polyethylene (HDPE) fibers that are not fused together, to for a strong uniform web. The wrap shall be DuPont Tyvek or approved equal.
 - F. The exterior roof shall be sheeted in 7/16 OSB or plywood, and covered with a synthetic roof membrane, membrane shall be manufacture recommended compatible with metal roofing.

3.06 Gutters and Down Spouts:

- A. The building shall be constructed with gutters extending along both north and south sides of building; color shall be selected by Owner.
- B. The downspouts shall be located on the east end of the buildings. Thus the gutters are required to drain the entirety of the 68-foot run.

3.07 Interior:

- A. The basic requirement is that the interior walls are insulated to an R-21 and ceiling is insulated to an R-49. The bottom 8-feet of the walls shall be covered with a positive hard-surfaced waterproof covering that is capable of being pressure washed, similar to steel panels, or a PVC Liner Panel, or approved equal. The interior color shall be white. Beyond this, the Owner is flexible with the finishing of the interior walls and ceiling. A 6-mil vapor barrier shall be installed as per code, where needed, depending on Contractor option.
- B. The remaining top 10-feet of the walls and ceiling, the Contractor has the option to finish with steel panels, PVC Liner Panel, utilize the Simple Saver System, or use a permanent style insulation fabric/system suitable for this application or leave exposed with spray foam closed-cell insulation that has been painted white.

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- C. If the Contractor chooses to spray foam closed-cell insulation, then no attic ventilation or soffits or truss extensions are required.
 - E. If the Contractor chooses to use loose fill insulation, the insulation shall be fiberglass blow-in style, and proper attic ventilation shall be required, including a continuous ridge vent at the peak, and vented soffits. Fascia and soffits shall be covered with metal. Vented soffits shall be vented between each truss with an attic vent chute. Trusses shall be designed for 2-foot overhangs with extension of top chord for the overhang. No add-on extensions allowed.
 - F. Office & Bathroom area: The Contractor shall frame the north wall of the bathroom to provide a place for utilities, floor boiler, electric panel, water meter & appurtenances, and provide a wooden sill connection plate on the exterior walls to support a future ceiling, with storage, to the office/bath area. In the future, the Owner shall frame and finish the office/bath area.
- 3.08 Doors and Windows: The color of the doors shall be white. Any scratches or scuffs resulting from installation shall be touched-up to restore door to original painted finish. Doors shall be maintenance free and prefinished.
- A. Overhead Doors:
 - a. Building shall have a total of two overhead doors, 24'x16' opening. Doors shall be Raynor ThermaSeal TM 300 or approved equal. Both doors face south. Doors shall be 3-inch thick, minimum R-21 insulation, 26-gauge steel, white in color, proper Ubar stiffening as needed, with 24" x 8" windows, galvanized 3-inch track, torsion spring with minimum 25,000 cycle life, heavy duty rollers, weather-stripped jambs and headers.
 - b. Each door shall be equipped with a Liftmaster Model T or approved equal, minimum ½ horse power, industrial trolley type operators, 115 volt, single phase, open/close/stop push button station. Each door shall have two (2) 3-button radio-frequency remote transmitter and receiver system, photoelectric safety system and any other safety device required by code and necessary control wire. Wired by the electrician.
 - c. Overhead door jambs and trim shall be completely wrapped with maintenance free metal.
 - B. Exterior Walk-In Door:
 - a. There shall be one exterior walk-in door, 36" wide and 6'8" tall, steel door. Door located on the south side of the building.

- b. Exterior door and frame shall be Plyco Series 92 commercial door or approved equal. The doors shall have full thermal break, painted 16 gauge steel frame door with 24 gauge smooth steel plane, 3 fixed pinned hinges. Panel drilled to receive standard 2-3/4" backset with face plated plunger style lockset. Door shall be complete with threshold and header. Door shall have polyurethane foam core insulation and a minimum R value of 13. Door shall be supplied with deadbolts – Titan ANSI A156.5 grade rating or approved equal.
 - c. All door locks shall be keyed to match the existing Owner key. Lever-type commercial door handles shall be utilized.
 - d. Door shall be supplied with a mechanical surface mounted door closer.
- C. Windows: The building shall have no windows (except in overhead doors).

3.09 Site Preparation Specifications:

- A. The Contractor shall prepare the site for height of sub-grade for concrete floor and slabs (rough grading). All elevations shall be approved by the Owner. The goal would be that the finish floor elevation be approximately 1-foot higher than the surrounding ground. The Contractor shall be responsible for fine grading of the site to fit the slopes and concrete slabs. It shall be the Contractors responsibility to notify the Owner to seek elevation approval prior to work commencing.
- B. The Contractor shall excavate approximately 6-inches of existing material out of the building area, then fine grade the concrete areas with 6-inches base material NDDOT Class 5 gravel or recycle concrete and 6-inches sand, under all concrete areas. The aggregate material shall be supplied to the site by the Owner and install by the Contractor. The Contractor shall use the excavate material to transition slope around the perimeter of the building.
- C. The subgrade shall be proof rolled in the presents of the County Engineer. Any soft spots determined from the proof roll, in the opinion of the County Engineer, shall be repaired to the satisfaction of the County Engineer. Any additional costs to repair or improve the subgrade shall be negotiated as a change order.

3.10 Workmanship:

- A. The Contractor shall do all construction in a workman like method following the latest construction practices and shall cooperate with the owner, City of Thompson and/or Owner's representatives. Any construction that does not meet this specification or, approval of the Owner, shall be removed and replaced at the Contractor's expense.

4.0 UTILITY CONNECTIONS AND PERMITS**4.01 Electrical Service:**

- A. One 200 Amp, 120/240V/1Ø service shall be required for this facility. The main distribution panels shall have a 200A main circuit breaker with a minimum 24k AIC rating to serve as main disconnect switch and be service entrance rated. Panel shall have a minimum of 40 circuits. 200A main circuit breaker shall have a 200A frame with an 80% trip rating. Provide ¾" fire-retardant painted plywood backboard for mounting of electrical panel. Provide a type-written panel directory mounted on inside of panel door. The panel shall be located such that future circuits can easily be added, particularly for the office/bathroom.
- B. The Contractor shall verify with Owner the location of all electrical components including: main distribution panels, ceiling fans, outlets, switches and light fixtures.
- C. At a minimum the bid shall include:
 - a. One main panel
 - b. Two commercial ceiling fans with ground level variable speed control.
 - c. Light switches adjacent to walk-in door to control light fixtures
 - d. Power to overhead doors, controls & required safety features.
 - e. External duplex: one outlet on the south side and one on the west side of the building.
 - f. Internal duplex: one outlet on the south side (not in office), two on east side, three on north side, and three on the west side (not in office/bath) of the building, and three duplex outlets on the north wall of bathroom, or as needed.
 - g. Lighted exit sign at walk-in door with battery backup.
 - h. Power ran to fuel tank (tank supplied by county)
 - i. Power to gas boiler
 - j. Power to unit heater & thermostat (ceiling mounted)
 - k. Welder Outlet, 240v
 - l. Air Compressor Outlet, 240v
 - m. Lighting as described below.
- D. Lighting: All lights shall be LED, UL listed suitable for wet outside conditions, cold weather starting, 120 volt, 5000K (cool) color temperature.
 - a. External – Four external lights shall be installed. One light over the walk in door (< 2000 lumens, downlight not flood), one over each overhead door (< 7000 lumens), and one over the fuel tank (< 2000 lumens). The lights shall be controllable with a photocell sensor, motion detector and manual indoor switches.

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- b. Internal – The minimum lighting requirement shall be 50 foot candles per square foot in the equipment storage area (eastern 2/3 of building), and 100 foot candles per square foot in the work bench & walk-in area (western 1/3 of building). The electrician shall determine the spacing and number of lighting fixtures. Separate control shall be provided for the two zones described above.
 - E. The Owner shall obtain the electric connection permit or service application from Xcel Energy and pay those fees to Xcel Energy.
 - F. The Electrical Subcontractor shall be responsible for coordinating with the Owner and Xcel in getting power to the building and for service/metering requirements required by the electric provider. Contractor shall provide a lever by-pass meter socket. Xcel shall provide the meter. The Contractor shall provide for the underground service drop from the building to power pole on the south side of 6th St. The underground service shall be directional bored under 6th St. The Contractor shall follow the attached detail/spec from Xcel, SC-30 for underground service. The Contractor shall include all costs associated to complete the electrical system in the bid.
 - G. Electrical Subcontractor shall coordinate with prime Contractor on whether or not temporary service for construction is necessary. If temporary service is needed, then that shall be included in the lump sum bid price. The Owner shall pay Excel Energy for costs of energy used.
 - H. All electrical circuitry shall be installed in conduit according to national, state and/or local codes, whichever is greater.
 - I. All electrical equipment furnished in this project must be new from manufacturer. No refurbished equipment shall be allowed to be installed in this facility.
 - J. Disconnects and starters shall be heavy-duty rated and be labeled as to device it serves.
 - K. Receptacles and switches shall be specification grade. All devices shall match existing building in color throughout the facility.
 - L. Each duplex outlet shall be on its own 20-amp circuit.
 - M. The Electrical Subcontractor has the option to install wiring inside the wall cavity or externally in conduit.
 - N. Electrical Subcontractor is responsible for issuing a wiring certificate with the North Dakota State Electrical Board and City of Thompson inspection department and paying all associated inspection fees.

4.02 Natural Gas Service:

- A. The Owner shall obtain the gas connection permit or service application from Xcel Energy and pay those fees to Xcel Energy.
- B. Xcel Energy shall provide the gas meter and underground service to the building.
- C. Interior gas piping shall be schedule 40 black iron piping with 150 lb malleable iron threaded fittings. Piping shall be adequately sized to the total connected load. All exterior piping shall be painted. All joints shall be adequately pressure and soap tested and inspected prior to firing of any heating equipment.
- D. The Contractor shall connect natural gas to the 120,000 BTU ceiling mounting gas unit heater (over bathroom) and the 100,000 BTU boiler.
- E. The Plumbing Subcontractor is responsible for issuing a plumbing/gas certificate with the State of North Dakota and the City of Thompson and pay all associated inspection fees.

4.03 Water Service:

- A. The Owner shall obtain the water connection permit and membership from East Central Regional Water District (ECRWD) and pay associated fees.
- B. The Contractor must be bonded, licensed and insurance with ECRWD.
- C. The obtained membership shall supply the Contractor the following materials: connection tee, corporation stop, curb stop, meter, pressure regulator, expansion tank and backflow valve. The Contractor shall install the provided materials and coordinate with ECRWD and the Owner. The Contractor shall make the tapping connection to the existing watermain in the presence of an ECRWD representative. The curb stop shall be installed on the property line.
- D. The Contractor shall install all plumbing appurtenances and supply other valves and miscellaneous materials.
- E. The service line shall be 1-inch 160 psi HDPE. No splices allowed. The excavation shall be mechanical compacted backfill in maximum 1-foot lifts. Contractor shall maintain 7.5-foot minimum cover. Interior pipe shall be ¾" PEX.
- F. The Owner shall install the future water heater and plumb the bathroom.
- G. The Contractor shall provide one interior hose bib, and extend the pipe sufficiently for the future bathroom.

4.04 Sanitary Sewer Service:

- A. The Owner shall obtain the sanitary sewer hook-up permit and membership from the City of Thompson and pay associated fees.
- B. Contractor shall be a licensed plumber and coordinate inspection by the City inspector.
- C. The sanitary sewer shall require connecting to the existing 8-inch vitrified clay (VC) sewer under 6th St. The Contractor shall saw cut the existing asphalt, excavate down to existing sewer approximately 10-feet deep, remove one full section of VC pipe, install one equivalent length 8-inch PVC SDR 26 with a 8"x8"x6" gasketed wye. The equivalent length pipe shall be positively connected to the VC pipe, with one end slid into the existing VC bell end, and the other end utilizing a Fernco RC series, 8" clay to plastic straight coupling # F100288-RC.
- D. Under the roadway, the Contractor shall use the Owner provided sand to backfill around pipe and fittings to a depth of 1-foot, then backfill with in-situ soil, then reconstruct the roadway with a geotextile fabric, 1-foot of Owner supplied recycled concrete and 4-inches of Contractor supplied hot mix asphalt. It is imperative that the backfill be mechanically compacted in 8-inch or less lifts. Part of the 1-year warranty shall include the settlement of this trench. Tamping the material with the excavator bucket shall not be considered sufficient compaction.
- E. The service shall be a 6-inch PVC line with a 1.0% grade or steeper and buried a minimum of 7.5-feet. The pipe shall be embedded in an Owner supplied sand envelope to top of pipe. The remainder of the backfill shall be in-situ material. The excavation shall be mechanically compacted backfill in maximum 1-foot lifts. Tamping the material with the excavator bucket shall not be considered sufficient compaction.
- F. The Contractor shall furnish and install a continuous floor trench drain system along the center of the building, see building layout. The drain shall be approximately 40-feet in length, a minimum of 5-inches in overall width and furnished with a slotted ductile iron grating with a capacity of 56,000 pounds (capable of supporting a loaded tandem truck or motor grader). Invert shall be continuously sloped to drain. Trench drain system shall be equal to ACO K100S system or approved equal. The system shall be equipped with a sand and oil interceptor/separator pits inside the building. The pits shall have removable lids for cleaning access. The system shall meet state and local codes. The concrete surrounding the trench system shall be thickened under and around and reinforcing shall be tied under and around the floor trench system to provide a full and continuous support.
- G. A cleanout shall be installed outside at the 90-degree turn. The cleanout shall have a removable cover for access.

5.0 Mechanical Work:**5.01 Plumbing**

- A. All plumbing must be completed according to state and local codes, whichever is greater. Plumbing work included in contract will be for rough-in only for future fixtures as indicated in bid package. Actual location of plumbing will be determined in the field. Reference attached floor plan for approximate location of plumbing fixtures. Verify actual locations with General contractor and Owner prior to final rough in.
- B. Minimum sewer rough-in required for the following plumbing fixtures :
 - a. Bathroom: One sink, one toilet.
- C. Furnish and install one floor drain in bathroom. Tie floor drain into sanitary sewer.
- D. The Plumbing Subcontractor is responsible for issuing a plumbing/gas certificate with the State of North Dakota and the City of Thompson and pay all associated inspection fees.
- E. See sanitary sewer service section above for further specifications.

5.02 Heating System:

- A. The primary heating source shall be provided by a hydronic floor heating system. The secondary heating system shall be a suspended unit heater above the bathroom.
- B. The Contractor shall provide all the fittings, connectors, manifolds, hangers, piping, regulators, cut, patch, sealing, etc as required to deliver a complete and functioning system.
- C. All systems and equipment are to be installed per equipment manufacturer's recommendations and requirements set forth by the applicable State and Local codes.
- D. Zones: The hydronic floor heating system shall have two zones, one for the office/bath area (190 sq ft), and second zone for the shop/storage area (3346 sq ft).

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- E. Floor Tubing: Floor tubing shall be 5/8" cross-link PEX-b run through-out the entire zones. Tubing shall be spaced 6-inches on center for the first 2-feet of the perimeter, and spaced 12-inches on center for remaining area. Tubing located in front of the overhead and walk-in doors shall be spaced 6-inches on center for the first 3-feet to prevent ice buildup. Tubing shall be stapled to insulation. Single tubing circuits shall not exceed 350-feet in overall length. Tubing shall be connected to a central manifold with a stainless steel body, brass port connections, EDPM seals, integral ball valves, flow fittings & thermometers. EZRoute or approved equal, shall be provided at the slab to protect the pex tubing as it penetrates the slab. Piping shall be insulated as required per the International Energy Codes as adopted by the State.
- F. Insulation: see Concrete Slab spec.
- G. Natural Gas Boiler: Hot water shall be generated by a single wall hung condensing 100,000 BTU boiler. Boiler shall be an HTP model UFT-100 or approved equal. Each zone shall be serviced via single phase inline pumps, adequately sized to deliver the required flow to each zone to satisfy the heat call. Pumps shall be B&G PL series or approved equal.
- H. Zone Control: Each zone shall be controlled via a separate wall-mounted digital thermostat. Each thermostat shall be controlled via a slab sensor to measure slab temperature. The sensor shall be located at least 5 feet from an exterior wall. One sensor/thermostat shall be in the office/bath area, and one sensor/thermostat shall be in the shop/storage area. Temperature controls shall be stand alone.
- I. Circulating Liquid: The system shall be filled with a 40% propylene glycol / 60% water solution for freeze protection. Piping & tubing shall be adequately cleaned & flushed prior to adding glycol/water solution.
- J. Secondary heating: The secondary heating system shall be a natural gas unit heater, suspended from the ceiling above the bathroom. The heater shall have a minimum 120,000 BTU rating. The heater shall be a Reznor UDAS 125 or equivalent. The heater shall have an aluminized steel heat exchanger, one-piece burner assembly, separated combustion feature to use outside air for combustion through a flue pipe, utilize an electronic spark ignitor (no standing pilot light), power vented exhaust and intake, and a separate digital wall thermostat.
- K. Appurtenances: The heating system shall have isolation valves distributed throughout for equipment & manifold isolation. Isolation valves, air vents, etc shall be readily accessible. System shall have an adequately sized air separator, expansion tank, relief valve, flow switches, low water cut-off, air bleeders, combustion air & vent pipe as per code. Air control devices shall be equal to B&G, or approved equal. Piping between the boiler and manifold shall be Type L sweat copper.

EQUIPMENT BUILDING

Grand Forks County

BID FORM

In accordance with the provisions of the ITB, the undersigned hereby proposes to furnish all labor, equipment and materials per the enclosed specifications for the construction of an Equipment Building to be constructed at 323 6th St, Thompson, North Dakota.

Total Bid \$ _____

Receipt of the following addenda to the RFP, by date, is acknowledged:

SIGNED: _____

FULL NAME: _____
(Please Print)

TITLE: _____

FIRM NAME: _____

FIRM ADDRESS: _____

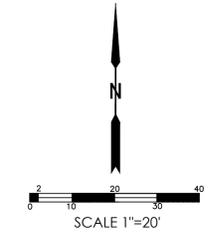
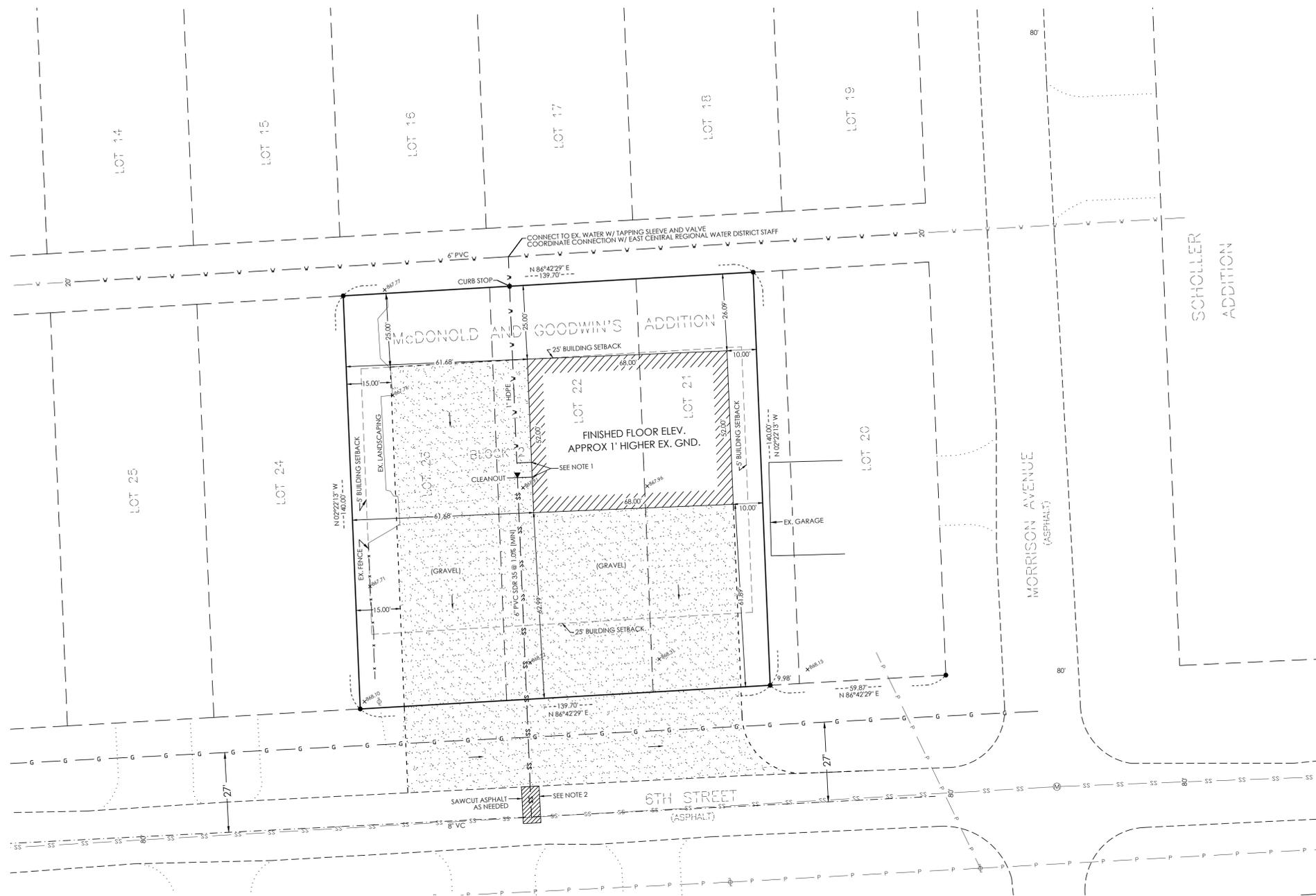
PHONE NUMBER: _____

EMAIL: _____

Include list of three references.

SITE PLAN

GRAND FORKS COUNTY HIGHWAY DEPARTMENT - THOMPSON, NORTH DAKOTA



LEGEND

- MONUMENT FOUND
- BOUNDARY LINE THIS SURVEY
- EXISTING LOT LINE
- BUILDING LINE
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SANITARY SEWER LINE
- EXISTING SANITARY SEWER LINE
- POWER LINE
- EXISTING ROADWAY
- CENTERLINE ROADWAY
- GRAVEL
- MANHOLE
- GATE VALVE
- CLEANOUT

LAND ZONING

R-1 Residential District

LAND DESCRIPTION

Lot 22, Lot 23, and the Westerly 40 feet of Lot 21, Block 2, McDonald and Goodwin's Addition to the City of Thompson, Grand Forks County, North Dakota.

SITE DATA

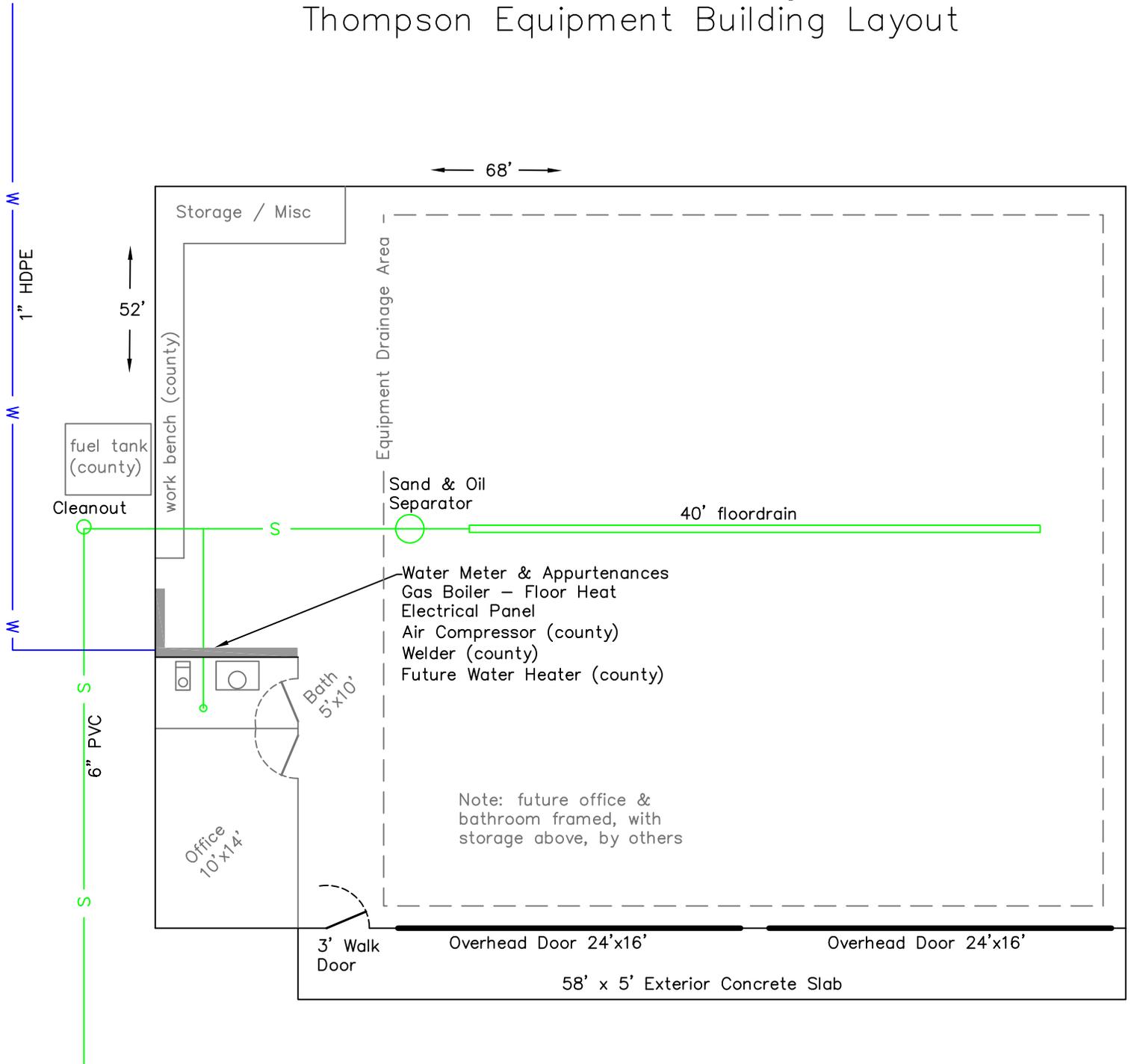
Street Address: TBD
 Proposed Building Height: xxx ft
 Max. Building Height: 35 ft
 Proposed Building Area: 3,536 s.f.
 Lot Area: 19,555 s.f.
 Min. Lot Area: 10,000 s.f.
 Proposed Impervious Area = 7,822 s.f. (40%)
 Max. Imp. = (R1 - Residential District - 40%)
 Front Yard Requirement: 25 ft
 Side Yard Requirement: 5 ft
 Rear Yard Requirement: 25 ft

PLAN NOTES

1. Contractor to verify size, location, and elevation of all services with mechanical engineer/owner prior to installation. The exact location of water and sanitary sewer mains are unknown. Locations shown on drawing are based on sketches from the City of Thompson and aerial imagery.
2. All work performed within the public right-of-way shall be coordinated and approved by the City of Thompson staff prior to commencing work. Sawcut asphalt shall be replaced with 4" asphalt with mechanically compacted native backfill material in 8" maximum lifts.
3. Proposed building will not utilize sump pumps.
4. Contractor shall maintain 7.5 foot minimum cover over water and sanitary sewer services.
5. Proposed building will be constructed without a basement.
6. Erosion control measures shall be implemented in accordance with City of Thompson requirements. The contractor shall place controls as required to control storm water and sediment from leaving site or as required by permitting requirements. Contractor to sweep sediment from hard surfaces as soon as possible and in no case later than end of working days.
7. Contractor shall take care to leave as much grass area undisturbed as possible. All disturbed soil shall be re-seeded and stabilized in a timely manner.
8. Erosion control to be removed only after site has been permanently stabilized (70% ground cover).
9. Contractor to protect any stockpiles to prevent any sediment from leaving the site. Any temporary stockpiles shall not be placed in surface waters, stormwater conveyance systems, curb and gutter systems, conduits or ditches.

SITE PLAN		REVISED:	DATE: 2-12-2019
Grand Forks County Highway Department TBD Thompson, North Dakota			DRAWN BY: BP
REQUESTED BY: Nick West - Grand Forks County Highway Department 1700 North Columbia Road Grand Forks, ND 58203		PROJECT NO. 19-0212	SCALE: 1" = 20'
PRIBULA ENGINEERING, PLLC 208 3RD AVENUE NW EAST GRAND FORKS, MN 56721		701-772-7058	DRAWING NO. C - 1

Grand Forks County Thompson Equipment Building Layout



Project Scope
 52' x 68' = 3536 sq ft
 Wall Height 18' to 18.5'
 6" Reinforced Concrete Floor
 Floor Heat - Gas Boiler
 Unit Heater

Sewer & Water Layout Shown
 is Approximate



City of Thompson New Construction Rules

THE FOLLOWING RULES APPLY TO THE NEW CONSTRUCTION:

- Applicant must notify Building Inspector of intent to build.
- Minimum 5 feet to bottom of footing from top of grade.
- Homes must be built at least 25 feet from the front and back property lines and 5 feet from side property lines. On corner lots, the 25 foot frontage must be on both street sides of the lot, except Maxine's Second Addition will be 7 feet from side property lines and on the corner lot 15 feet from the front street.
- A sewer hook-up fee is due upon issuance of this Building Permit.
- All sewer hook-ups to city main are to be installed by a licensed plumber and inspected by the City inspector.
- Basements must be Masonry and/or Concrete or Wood provided they are on concrete footings.
- Building Permits must be posted on lot, under poly, while under construction. Once building is enclosed, permit should be posted in front window.
- All new buildings must meet uniform building codes.
- Federal law may require this construction project conform with the Americans With Disability Act Accessibility Guidelines for Buildings and Facilities.
- Maximum driveway width not to exceed 32 feet where open ditches apply for drainage, and 38 feet for curb and gutter sections. The length of the actual culvert will be determined by calculating proposed width of actual driveway surface and adding required amount of culvert to obtain a 3:1 slope on sides of driveway to ditch bottom. These widths will be calculated on case by case basis due to the depth of ditches varying throughout the city.

Truck Traffic Weights:

- No truck or combination of truck and trailer is permitted to travel on paved roads within the City while carrying a load of more than ***forty thousand (40,000) pounds gross weight or five (5) cubic yards of ready mix concrete.***
- Any truck or combination of truck and trailer traveling on paved roads within the City, and carrying a load within the prescribed limits set forth in the paragraph must be equipped with a ***minimum of three (3) axles.*** This paragraph 4(a) shall not apply to Class A Authorized Emergency Vehicles as defined in North Dakota Century Code Section 39-01-01 and/or licensed passenger buses.

ALL PERMITS MUST BE POSTED WHILE CONSTRUCTION IS IN PROCESS

THIS PERMIT IS REGULATED BY ORDINANCE OF THE CITY.

ANY AND ALL PERMITS MAY BE REVOKED FOR CAUSE BY ACTION OF THE CITY COUNCIL.

“Separate permits are required for electrical, plumbing, and mechanical (HVAC). Work under this permit must commence within 180 days of permit issuance and once commenced, work may not be suspended for more than 60 days. Permittee must comply with all codes and ordinances applicable to the work. Issuance of this permit does not grant any authority to erect, modify or use any structure in violation of any code or ordinance. All required inspections, including a final inspection, must be requested by the Permittee. In consideration for connection to City utilities, Permittee agrees to pay all applicable utility fees and charges pursuant to City Ordinance. The permit creates no warranties with regard to construction or code compliance. The inspections under this permit are for the benefit of the public and not the Permittee and the inspections do not create a duty to the Permittee, the owner or to a subsequent purchaser with regard to quality of construction or code compliance.”

Permit Holder/Contractor is responsible for maintaining cleanliness of streets throughout the project, and upon completion.

Applicant Initials

ADOPTED BY THE CITY COUNCIL November 6, 2017

Effective Date: November 15, 2018

TABLE OF RESPONSIBILITY

Drawing SC-30

ITEM, MATERIAL OR WORK DESCRIPTION	PARTY TO FURNISH, OWN AND MAINTAIN	PARTY TO INSTALL
Permits and Inspections	Customer	N/A
Underground Service Lateral (Residential)	Company	Company
Underground Service Lateral (Commercial) (except WI and MI)	Customer	Customer
Slip Sleeve/Expansion Joint	Customer	Customer
Service Entrance Conduit	Customer	Customer
Meter Socket	Customer	Customer
Line Side Conductor Terminations (except WI and MI)	Customer	Customer
Billing Meter	Company	Company
Load Side Conduit and Conductor	Customer	Customer
Ground Rod(s)	Customer	Customer

Point of Delivery:

Underground Service Residential (6 meters or fewer)

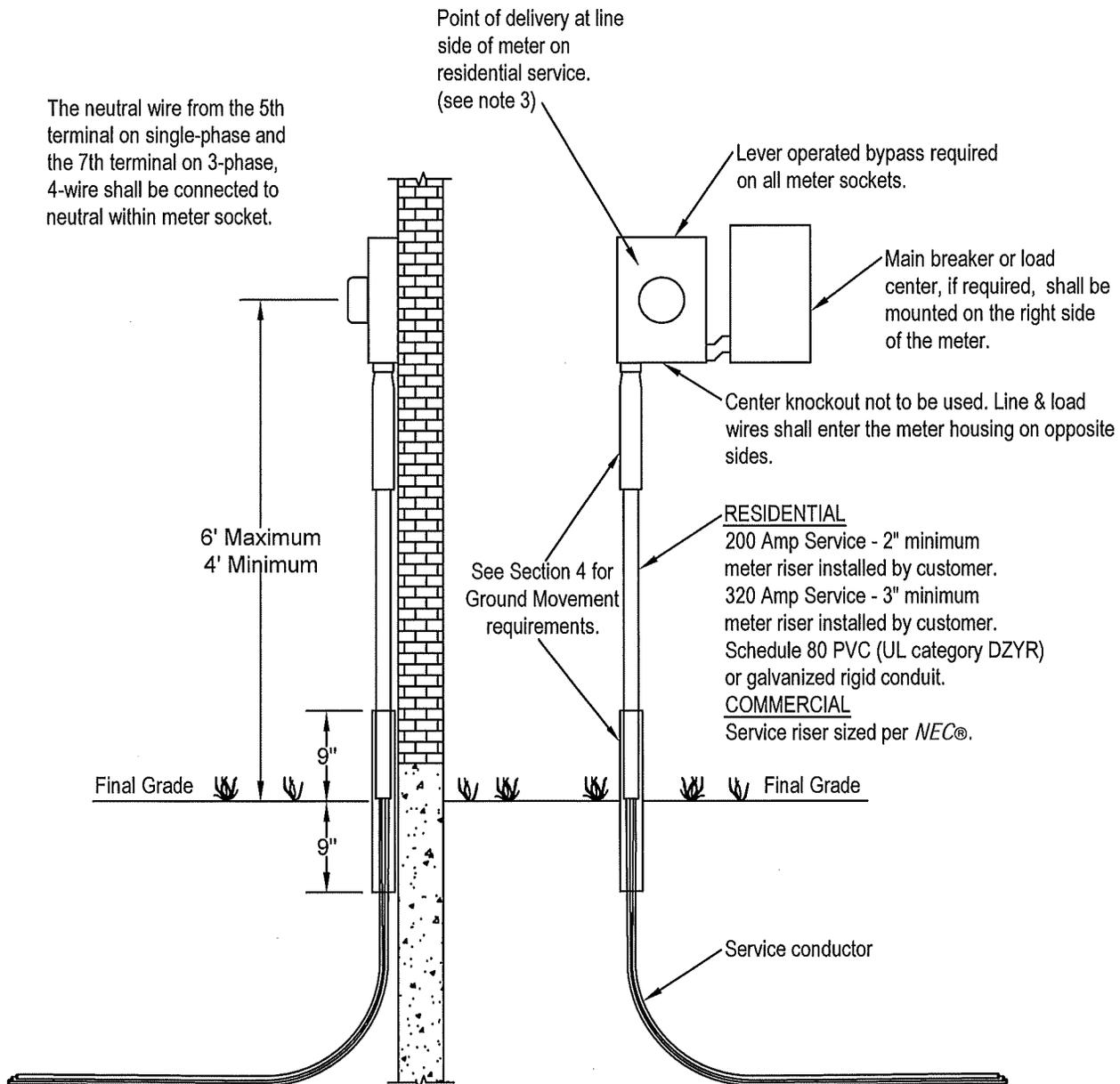
- At line side terminals of meter socket; or
- Line side of disconnect if main disconnect is used ahead of metering.

Underground Service Commercial – Point where the *Company's* facilities are first connected to the electric facilities of the customer.

* Note: In TX/NM only, all Overhead to Underground Service Laterals that do not utilize a secondary pedestal will be Company owned. For service laterals extending directly from a pad mounted transformer, residential services will be Company owned while commercial services will be Customer owned unless Customer owned metering cabinet is on the same pad as the transformer. For all installations utilizing a secondary connection cabinet or a secondary pedestal, the Service Lateral will be Customer owned.

DRAWING SC-30

DIRECT BURIAL FROM
AN UNDERGROUND SECONDARY SUPPLY
Services up to 320 amp 1Ø-3Ø
Residential or Commercial
(Hot Sequence Installation Shown)



NOTES:

1. See Sections 4.17 and 4.18 for cold and hot sequence metering requirements.
2. See Section 4.3.1(3) and check with the Company's local Electric Meter Department to determine if ice and snow shield are required. Refer to Drawing SC-20 and SC-20A for details.
3. Point of delivery at Company facilities on commercial service in Wisconsin and Michigan.