

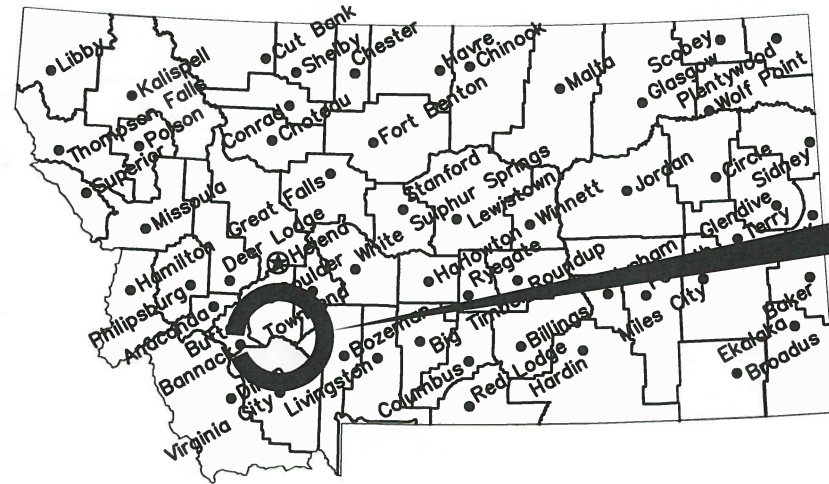
MONTANA FISH, WILDLIFE & PARKS

BANNACK EAST END WWTS IMPROVEMENTS

S01, T08S, R12W

CONSTRUCTION-BID PLAN SET

FWP # 7176131



Location Map

No Scale

Project Location



Vicinity Map

No Scale

Project Location

North



CONSTRUCTION-BID
PLAN SET

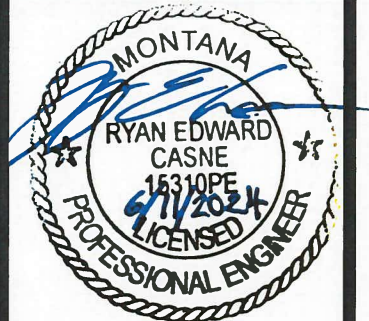
MONTANA FISH, WILDLIFE AND PARKS
DESIGN AND CONSTRUCTION

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HELENA, MT 59601

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- 1 OF 4 COVER SHEET
- 2 OF 4 SITE PLAN & OVERALL WASTEWATER IMPROVEMENTS
- 3 OF 4 WASTEWATER IMPROVEMENTS DETAILS
- 4 OF 4 GENERAL ELECTRICAL REQUIREMENTS



CASNE & ASSOCIATES	6/11/2024	APPROVED BY:	DATE:	APPROVED BY:	DATE:
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**MONTANA FISH,
WILDLIFE & PARKS**

COVER SHEET

BANNACK SP 4200 BANNACK ROAD, DILLON, 59725

SHEET: 1 of 4

GENERAL WORK REQUIREMENTS:

BANNACK IS A UNIQUE CULTURAL AND HISTORICAL LANDMARK. NO STRUCTURE, REGARDLESS OF APPEARANCE, CAN BE MOVED OR IMPACTED WHILE BUILDING THE SEPTIC SYSTEM REPLACEMENT. IF CONFLICT WITH ANY STRUCTURE IS UNAVOIDABLE, CONTRACTOR TO STOP WORK AND NOTIFY OWNER IMMEDIATELY. IF ANY OBJECT OTHER THAN EXPECTED SOIL, ROCK, AND EXISTING SEPTIC COMPONENTS IS UNEARTHED, CONTRACTOR TO STOP WORK AND NOTIFY OWNER IMMEDIATELY.

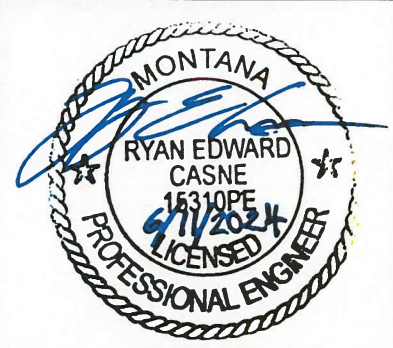
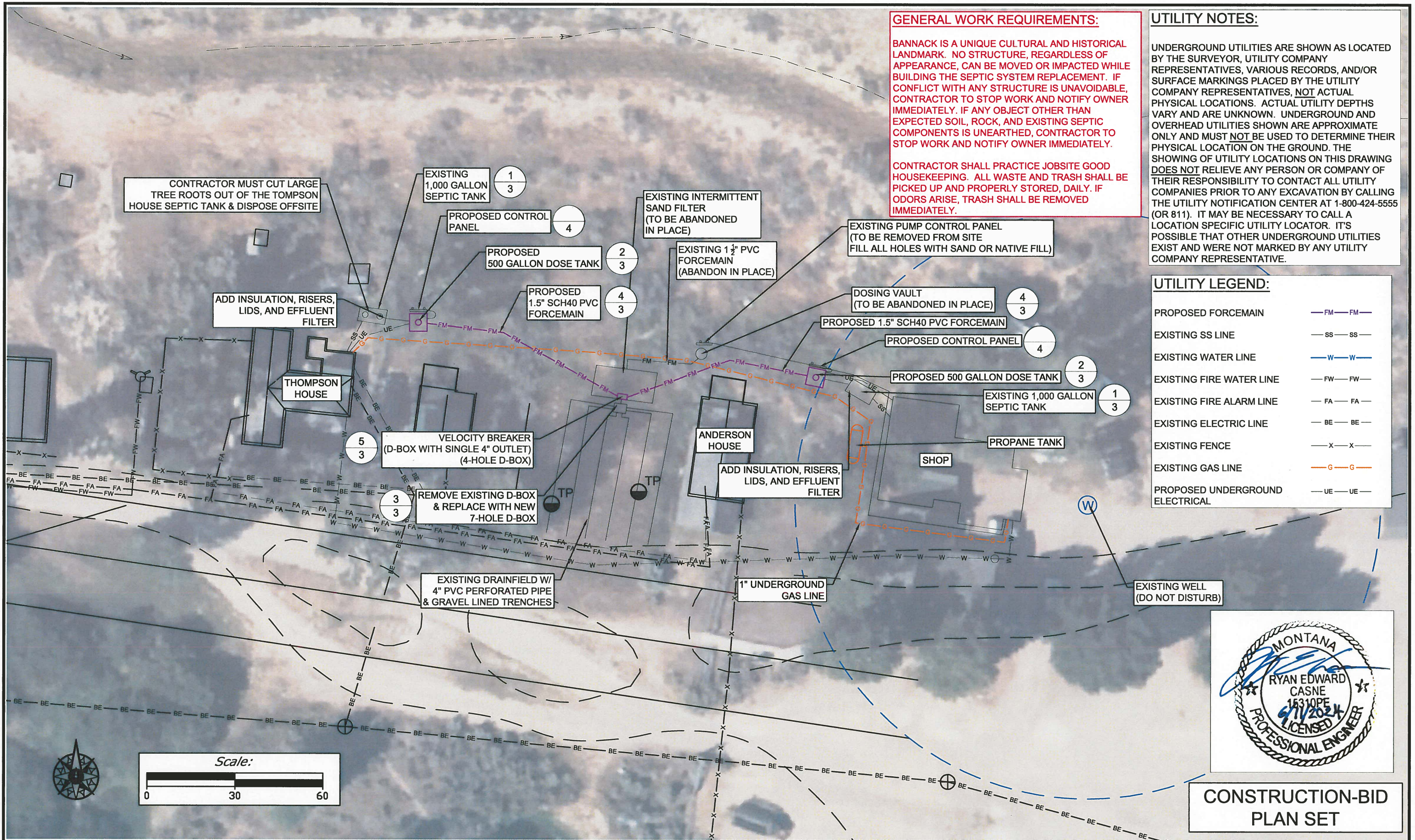
CONTRACTOR SHALL PRACTICE JOBSITE GOOD HOUSEKEEPING. ALL WASTE AND TRASH SHALL BE PICKED UP AND PROPERLY STORED, DAILY. IF ODORS ARISE, TRASH SHALL BE REMOVED IMMEDIATELY.

UTILITY NOTES:

UNDERGROUND UTILITIES ARE SHOWN AS LOCATED BY THE SURVEYOR, UTILITY COMPANY REPRESENTATIVES, VARIOUS RECORDS, AND/OR SURFACE MARKINGS PLACED BY THE UTILITY COMPANY REPRESENTATIVES, NOT ACTUAL PHYSICAL LOCATIONS. ACTUAL UTILITY DEPTHS VARY AND ARE UNKNOWN. UNDERGROUND AND OVERHEAD UTILITIES SHOWN ARE APPROXIMATE ONLY AND MUST NOT BE USED TO DETERMINE THEIR PHYSICAL LOCATION ON THE GROUND. THE SHOWING OF UTILITY LOCATIONS ON THIS DRAWING DOES NOT RELIEVE ANY PERSON OR COMPANY OF THEIR RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION BY CALLING THE UTILITY NOTIFICATION CENTER AT 1-800-424-5555 (OR 811). IT MAY BE NECESSARY TO CALL A LOCATION SPECIFIC UTILITY LOCATOR. IT'S POSSIBLE THAT OTHER UNDERGROUND UTILITIES EXIST AND WERE NOT MARKED BY ANY UTILITY COMPANY REPRESENTATIVE.

UTILITY LEGEND:

- PROPOSED FORCEMAIN — FM — FM —
- EXISTING SS LINE — SS — SS —
- EXISTING WATER LINE — W — W —
- EXISTING FIRE WATER LINE — FW — FW —
- EXISTING FIRE ALARM LINE — FA — FA —
- EXISTING ELECTRIC LINE — BE — BE —
- EXISTING FENCE — X — X —
- EXISTING GAS LINE — G — G —
- PROPOSED UNDERGROUND ELECTRICAL — UE — UE —



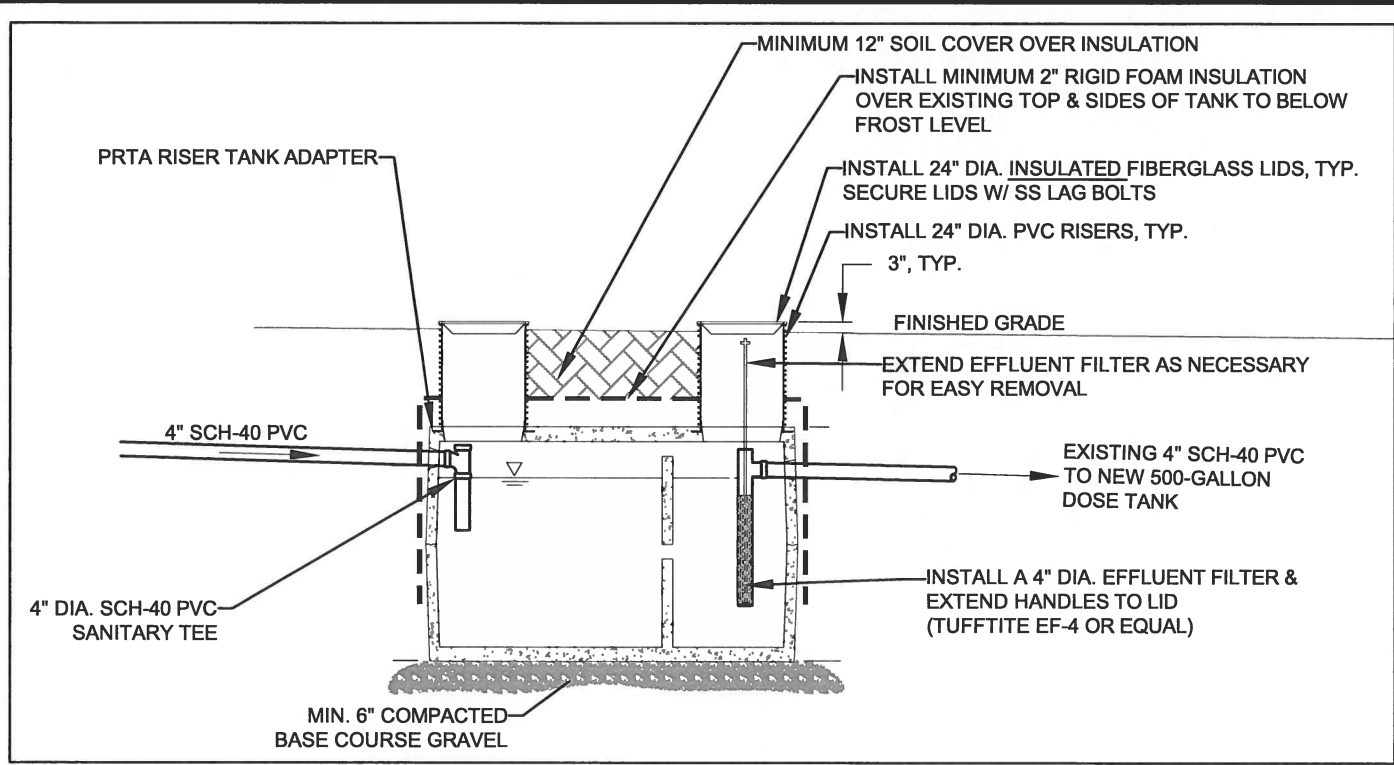
**CONSTRUCTION-BID
PLAN SET**

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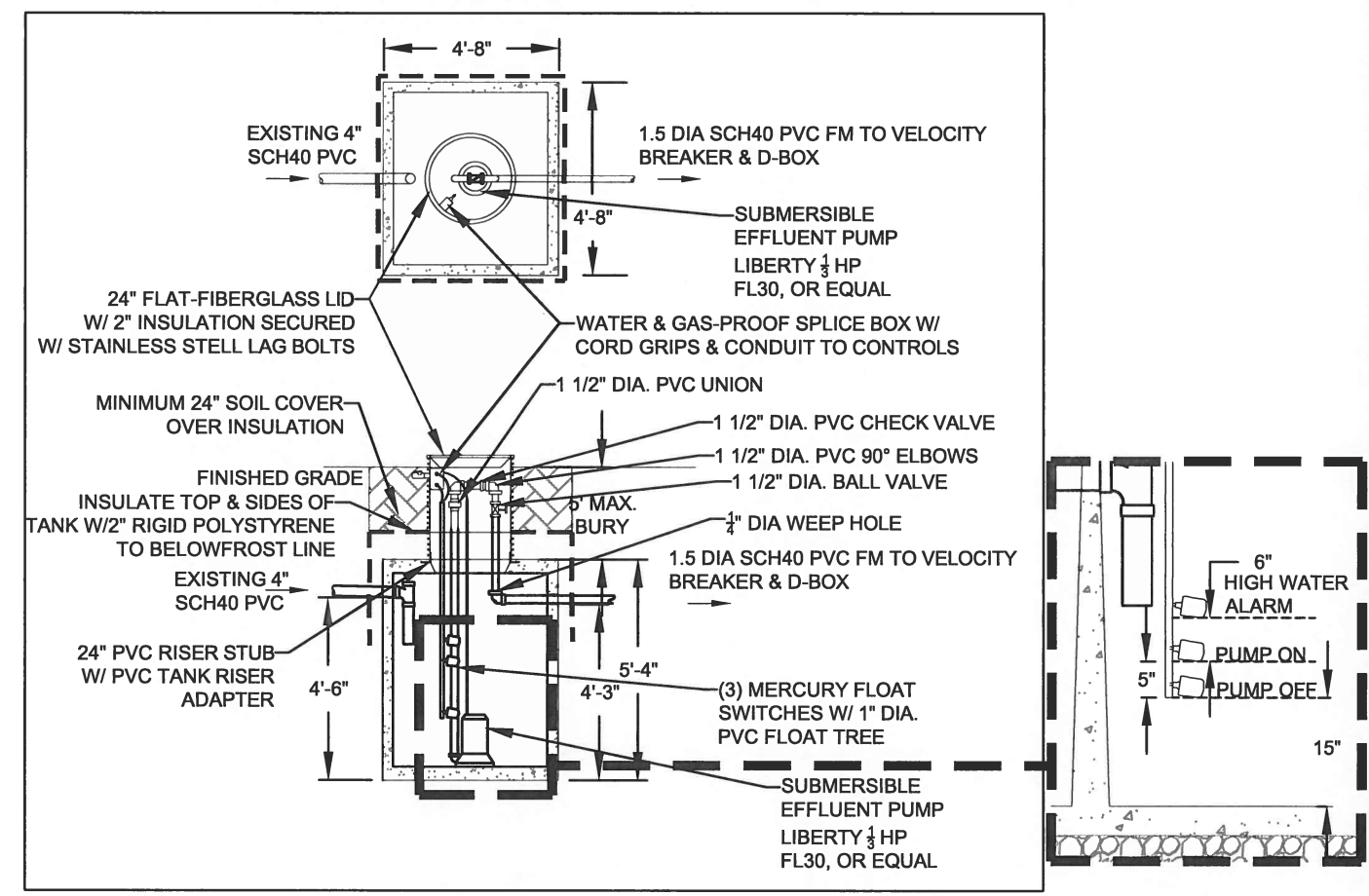


SITE PLAN & OVERALL WASTEWATER IMPROVEMENTS
BANNACK SP 4200 BANNACK ROAD, DILLON, 59725

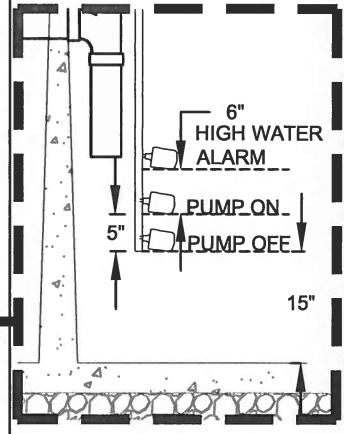
SHEET: **2** of **4**



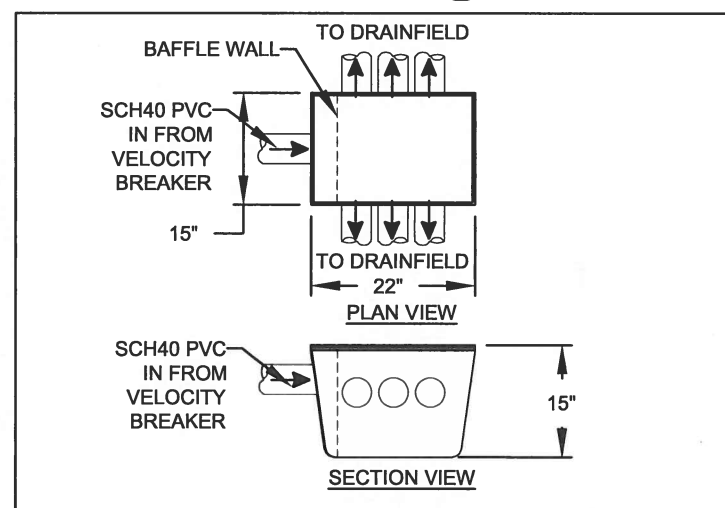
1 EXISTING 1000 GALLON SEPTIC TANKS (1 OF 2)
3 N.T.S.



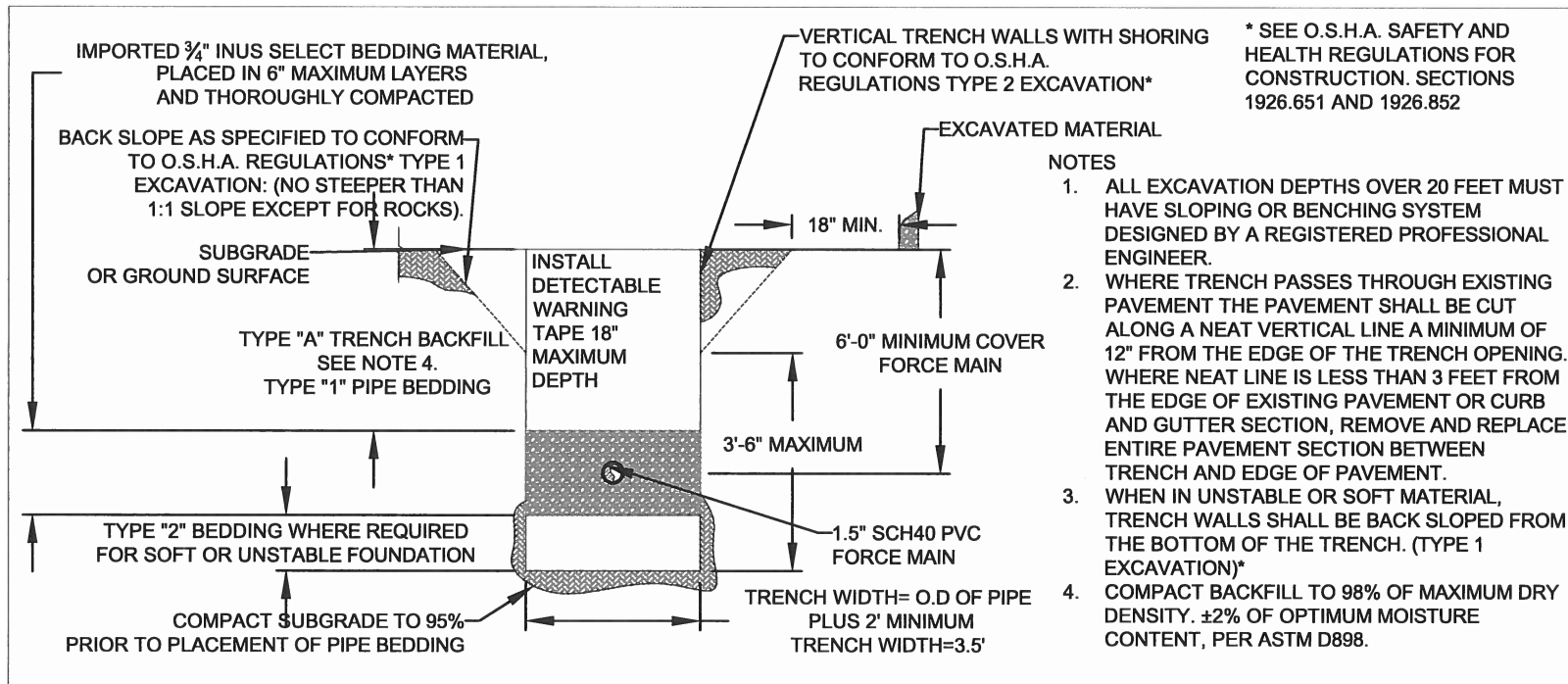
2 PROPOSED 500 GALLON DOSE TANKS (1 OF 2)
3 N.T.S.



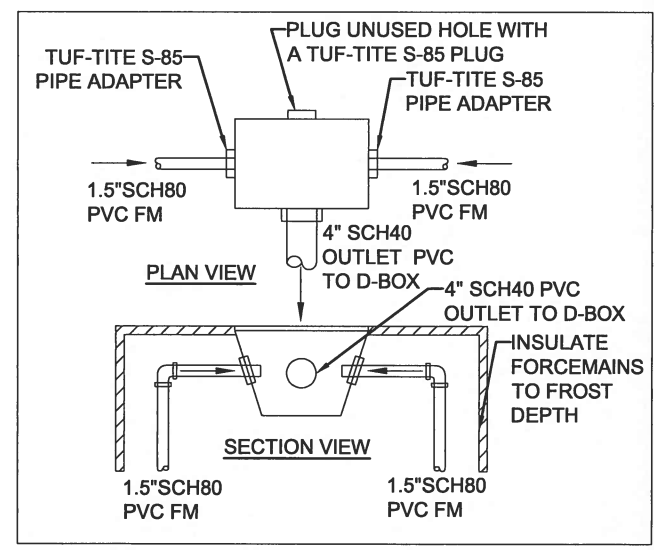
FLOAT SETTINGS
N.T.S.



3 7 HOLE DISTRIBUTION BOX (TUF-TITE 7HD2, OR EQUAL)
3 N.T.S.

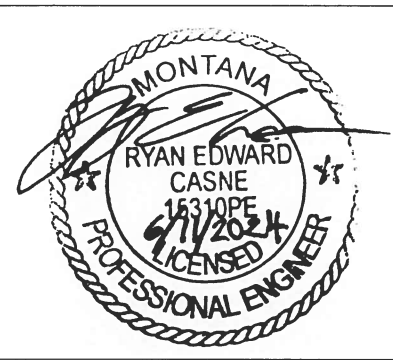


4 FORCEMAIN TRENCH
3 N.T.S.



5 VELOCITY BREAKER (TUFF-TITE 4HD2 OR EQUAL)
3 N.T.S.

**CONSTRUCTION-BID
PLAN SET**



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**MONTANA FISH,
WILDLIFE & PARKS**

WWTS IMPROVEMENT DETAILS
BANNACK SP 4200 BANNACK ROAD, DILLON, 59725

SHEET: 3 of 4

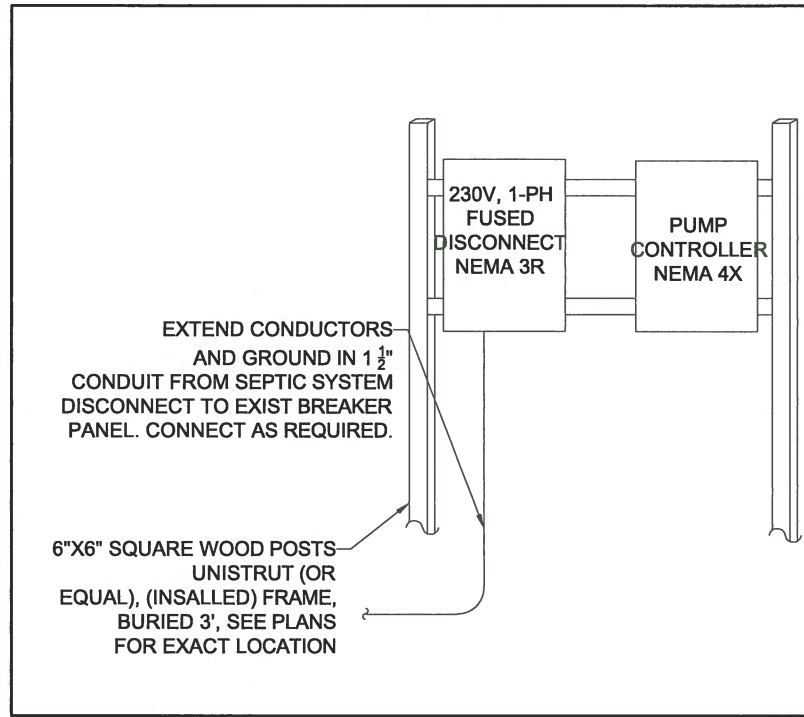
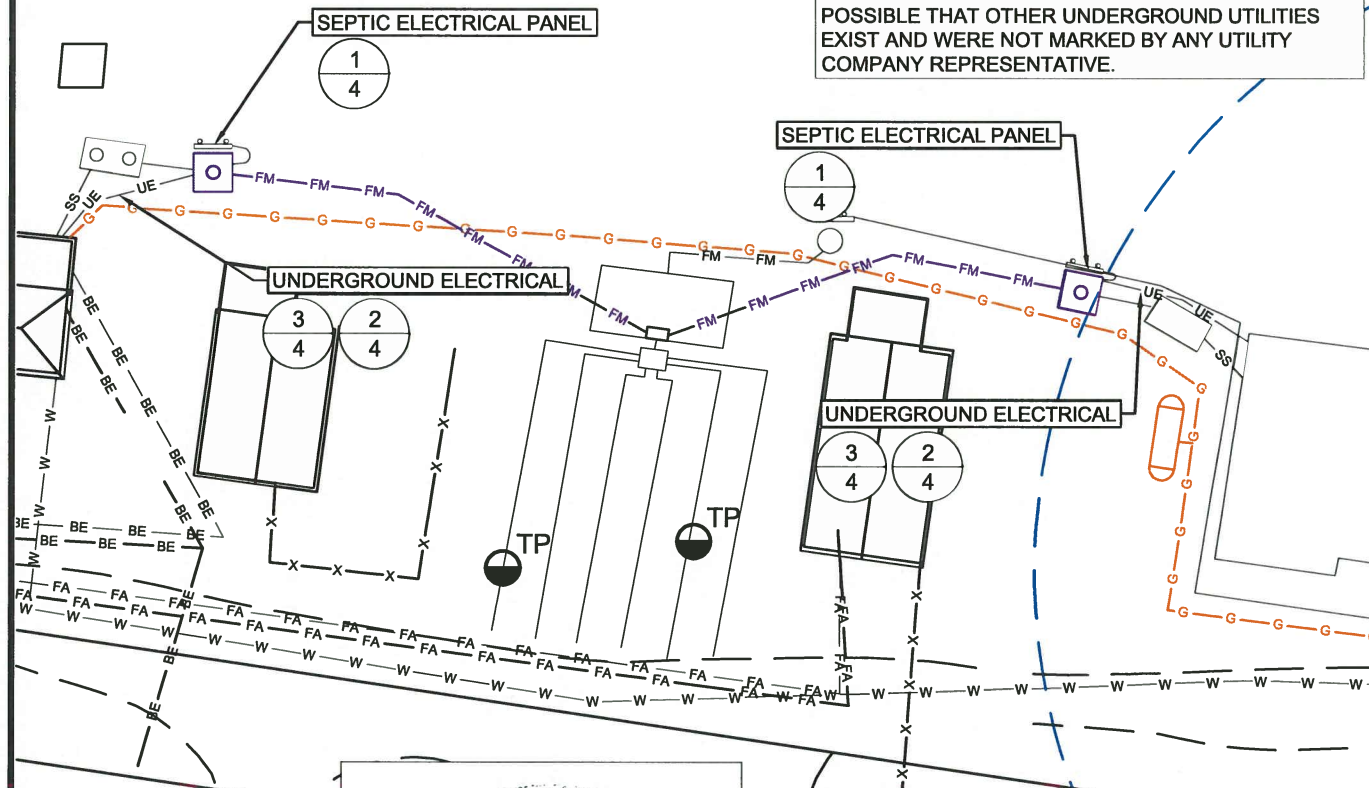
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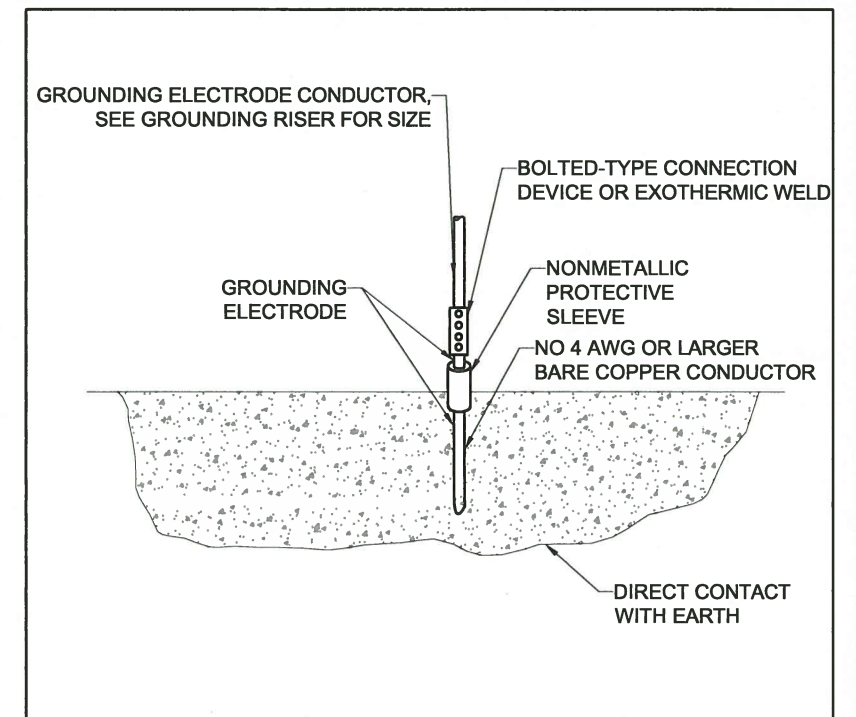
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UTILITY NOTES:

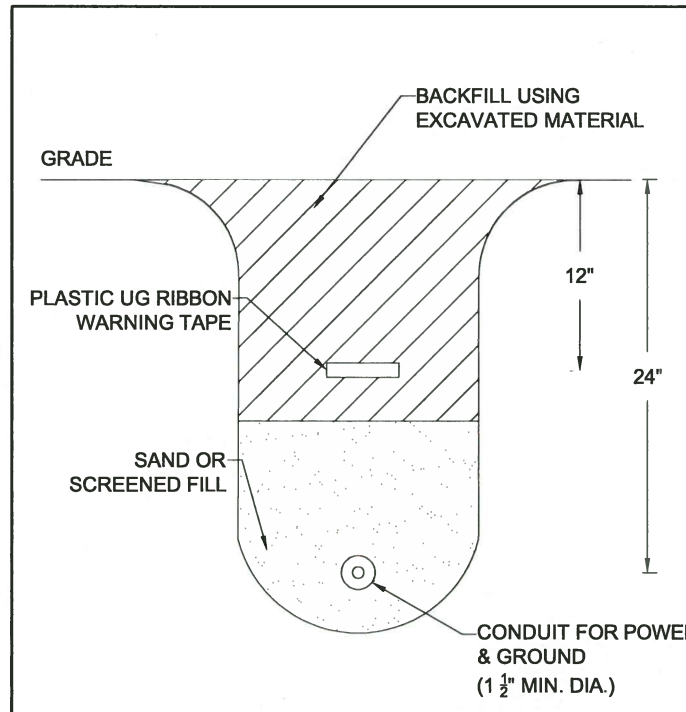
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1 SEPTIC SYSTEM ELECTRICAL DETAIL
4 N.T.S.

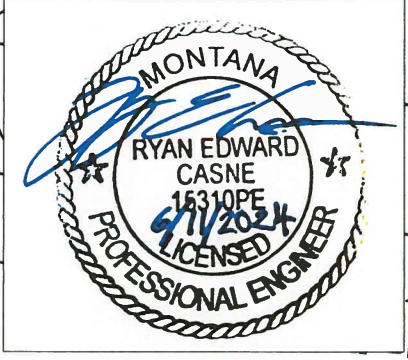


2 GROUNDING ELECTRODE DETAIL
4 N.T.S.



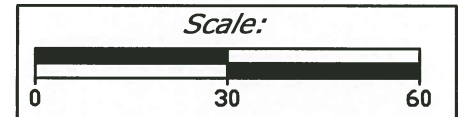
3 ELECTRICAL TRENCH DETAIL
4 N.T.S.

CONSTRUCTION-BID PLAN SET



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- EXISTING FENCE — X — X —
- EXISTING GAS LINE — G — G —
- PROPOSED UNDERGROUND ELECTRICAL — UE — UE —



- General Electrical Requirements**
- General**
The Contractor shall provide the complete electrical system needed for proper operation of the wastewater treatment system described within the Plans and these Specifications. All electrical work shall be completed by a licensed electrician. Regardless of the service location, the contractor is responsible for providing a separate service disconnect, to be mounted with the pump control panels where shown on the Plan Sheets.
The Contractor shall provide all labor, materials, tools, equipment and services required to complete the furnishing, installation, wiring, connection, calibration, adjustment, testing and operation of all electrical equipment and components necessary to complete the wastewater treatment system.
 - Source Power**
Power supply will be single-phase, 230V. The electrical meter/main disconnect at the WWTS area shall be a 100A NEMA 3R panel located near the pump control panels. The Panel board(s) shall be sized appropriately for the pump control panels and service disconnect equipment and shall be constructed galvanized UniStrut® metal bracing and cast-in-place concrete pier supports. The panel board shall provide a power source and hook up points for the pump control panel(s).
Conduit and electrical lines shall be installed from the new service location or from the feed from the Visitor's Center to the wastewater treatment system area. One or two panel boards and backboards shall be installed at the sewage treatment system area.
 - Electrical Equipment**
It will be the Contractors responsibility to supply and install all required conduits, meters, service disconnects/breakers, pump controller(s) for the recirculation tank and dose tank pumps, as well as the high water alarm panel for the septic tank.
 - Junction Boxes & Wiring**
All junction boxes shall be located outside of the tank risers and shall be housed within fiberglass irrigation control boxes. The splice boxes shall be UL listed and approved for wet locations. UL listed waterproof butt connectors shall also be used. Coat all connections with corrosion protection sealant and ensure box has a water and gas-tight seal at the cord grips and lid. The splice boxes shall be connected to the pumps, floats, and/or panels using individual 1" diameter PVC electrical conduits.
Septic & Dose Tank gasses must be sealed out of the splice boxes and conduit. Conduit shall be gas sealed in accordance with Engineer Representative's instructions. All wire shall be color coded; tagging of wire is not an acceptable equal. The Contractor shall provide a wiring schematic for each tank upon project completion. This schematic will be integrated within the Operation & Maintenance Manual.
Entire electrical components shall comply with UL508. Adequate electrical cord length shall be provided so the floats can be removed from the tanks without breaking electrical connection with the splice box.
 - Standards and Codes**
 - Permits, licenses, approvals and other arrangements for work shall be obtained and paid for by the Contractor and included in the bid price.
 - Electrical work shall be executed in strict accordance with the latest edition of the National Electrical Code and local ordinances and regulations.
 - All electrical equipment, materials, construction methods, tests and definitions shall be in strict conformity with the established standards of the following in their latest adopted revision:
 - Underwriters' Laboratories, Inc. (UL)
 - National Electrical Manufacturers Association (NEMA)
 - Canadian Standards Association (CSA)
 - Electrical Testing Laboratories (ETL)
 - Factory Mutual (FM)
 - All materials and equipment specified herein shall, within the scope of UL Examination Services, be approved by the Underwriter's Laboratories for the purpose for which they are used and shall bear the UL label.
 - All materials shall be new, free from defects, of current manufacture, of quality specified or shown. Each type of material shall be of the same manufacturer throughout the work.

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GENERAL ELECTRICAL REQUIREMENTS
BANNACK SP 4200 BANNACK ROAD, DILLON, 59725