

200 HORIZONTAL DIRECTIONAL DRILLING (HDD)

201 SCOPE: This section sets forth safety guidelines and practices for projects utilizing horizontal directional drilling (HDD) techniques in order to protect existing underground utilities and minimize risks to public safety.

202 APPLICABLE STANDARDS: Applicable standards include the Horizontal Directional Drilling Good Practices Guidelines by the HDD Consortium, and the HDD manufacturer's equipment operation manual.

The HDD Contractor shall become familiar with and follow the safety guidelines established in the above standards at all times.

203 GENERAL: The HDD Contractor shall implement the following general safety guidelines and practices:

.01 Occupational and Safety Health Act (OSHA): The HDD contractor shall perform all operations in compliance with OSHA guidelines.

.02 Training: The HDD Contractor shall ensure all personnel are properly trained and equipped.

.03 Planned Emergency Response: The HDD Contractor shall prepare an emergency response plan in the event of a utility strike. The plan shall be submitted and on-file with the City of Shawnee prior to the issuance of any permits within the City utilizing HDD techniques.

204 PRE-CONSTRUCTION: Prior to the start of construction, the HDD Contractor shall complete the following:

.01 Work Area Familiarization: The HDD Contractor shall familiarize itself with the work area and the technical requirements of the plans.

.02 Utility Locates. The HDD Contractor shall request utility locates and complete all other utility coordination requirements.

.03 Marking and Staking: The HDD Contractor shall complete construction marking/staking in the field to establish HDD entry and exit locations and the proposed HDD alignment at 50-foot (max.) intervals.

205 DURING CONSTRUCTION : While the work is being performed, the HDD Contractor shall complete the following:

- .01 Calibration and Tracking:** The HDD Contractor shall calibrate the tracking and locating equipment at the beginning of each work day and maintain a calibration log.
- .02 Pressure Potholes:** The HDD Contractor shall pothole the alignment of the bore at 50-foot intervals (approximately) to relieve fluid pressure build-up. Pressure potholes shall be no larger than 12 inches in diameter and the depth shall be adequate so that the fluid may be released as it builds pressure.
- .03 Monitoring and Recording:** The HDD Contractor shall monitor and record alignment and depth readings provided by the tracking system every 25-30 feet for normal conditions, and every 5-10 feet when precise alignment control is necessary.
- .04 Maintain Drilling Fluid Circulation:** The HDD Contractor shall maintain drilling fluid circulation throughout the HDD process including the initial pilot hole installation, and the reaming and back pull process. The pull back shall not exceed the fluid circulation rate capabilities.
- .05 Back-reaming:** The HDD contractor shall back-ream as required to accommodate the product size. Compaction reamers are not permissible. The HDD Contractor shall plan the back pulling operations carefully to ensure that all back pulling operations can be completed without stopping and within the permitted work hours.
- .06 Clearances.** The HDD Contractor shall maintain all required clearances and offsets from existing utilities.
- .07 Documentation:** The HDD Contractor shall at all times and for the entire length of the HDD alignment be able to demonstrate and provide the horizontal and vertical position of the alignment, the fluid volume used, return rates, and pressures.
- .08 Inspection:** The HDD Contractor shall inspect the work and surrounding area to ensure damage has not occurred to existing utilities due to HDD construction operations.

206 CONSTRUCTION RECORDS: The HDD Contractor shall keep detailed and accurate records of all activities associated with the HDD operation.

- .01 Data and Logs:** The Contractor shall provide data and work logs upon the request of the City of Shawnee while the work is being done at the completion of HDD operation. Data shall include, but not be limited to, tracking and calibration logs, type of tracking equipment used,

installation length and depth, steering adjustments, equipment performance parameters, and the names of the HDD operators performing the work.

End of Section