Pierce County
Public Works and Utilities
Sewer and Water Utilities

PRE-CONSTRUCTION MEETING AGENDA

PROJECT: _____

SWLE No.: _____

DATE: _____

1. **Welcome and Introductions**
   a. Sign attendance roster
2. **General Comments**
   a. The project shall be built in accordance with the approved plans.
   b. Requests for modifications or alterations outside the authority of the Inspector shall be submitted by the Engineer for review and approval by the Sewer Utility prior to implementing the changes in the field.
   c. The Contractor shall keep the work area and premises in a neat and orderly condition, managing and properly disposing of debris and excess material as the work progresses.
   d. The *Pierce County Sanitary Sewer Developer Specifications*, *Standard Details* and standard forms are available at:

      www.piercecountywa.org/ciforms

3. **Inspections**
   a. Inspections will be performed on a regular basis as the work progresses. Normal working hours are 7:00 a.m. - 3:30 p.m. Owner approval is required for overtime for any administrative and office-related work performed by the Inspector.
   b. The Owner shall understand that all work performed by the Sewer Utility in relation to the project is done on a time and materials (TNM) basis until completion of the project. For public systems, this includes the inspection for release of the maintenance bond which will occur approximately ten (10) months after final acceptance.
   c. The Contractor shall call the Sewer and Water Utilities Division at (253) 798-4050 and notify the Inspector when work is in progress. If the Inspector is not made aware of construction activities, the Contractor may be required to expose all or a portion of the work that was performed without the benefit of inspection.
4. **Related Permits**
   a. Work within the public right-of-way (ROW) shall be performed in accordance with the requirements of the Jurisdiction Having Authority and the terms and conditions stated on the ROW permit. [review requirements, particularly work hour restrictions]

b. The ROW permit shall be in effect at the time of the pre-construction meeting. This means the permit is either “activated”, “issued”, “approved”, etc. depending on the jurisdiction’s vernacular.

c. The Contractor shall coordinate their work with any SWSR permit(s) that is/are issued concurrently with the SWLE permit.

5. **Traffic Control**

a. The Contractor shall provide proper signing, devices and lighting for traffic control in accordance with the *Manual of Uniform Traffic Control Devices* (MUTCD) and the traffic control plan, as approved by the Jurisdiction Having Authority.

6. **Trench Backfill**

a. Approved sources for trench backfill.

i. Gradation and sand equivalency test results on file.

ii. Proctor(s) on file for each approved source.

b. Construction requirements and compaction testing [Ref. Sec. 3.8.9 of the *Specifications*]

i. Pipe bedding material (initial backfill) shall be pea gravel only.

ii. Pipe bedding shall be placed from six (6) inches beneath the pipe to twelve (12) inches above the pipe crown, for the entire width of trench.

iii. Trench backfill shall be compacted to 95% of the material’s maximum dry density throughout the entire trench restoration section.

iv. Compaction test reports shall describe all test locations to the extent that the locations can be plotted on the plan and profile of the approved plans.

c. Alternative Trench Backfill Material

i. Testing and reporting requirements. All reports shall be provided to the Inspector via email or fax to (253) 798-4674.

d. Trench Dam [Ref. Sec. 3.16 of the *Specifications*]

i. Trench dam(s) shall be constructed of controlled density fill (CDF) in accordance with the dimensions provided in the *Standard Details Manual*.

ii. The trench dam shall extend twelve (12) inches above the top of the initial backfill (pea gravel).

iii. The Contractor shall submit a proposed mix design to the County for approval prior to use. No “dry pack” CDF will be allowed.

iv. Twenty-eight (28) day design strength: minimum = 50 psi; maximum = 300 psi.

v. Acceptance of CDF will be based upon a manufacturer’s certificate of compliance (certified load ticket) for each truckload.

7. **Safety**

a. The Contractor is solely responsible for worker safety.

b. The Contractor shall comply with Washington Industrial Safety and Health Act (WISHA) and WAC 296-155, Safety Standards for Construction Work.

c. The Contractor shall provide a “protective system” for excavations that are four (4) feet in depth or greater.

8. **Pipeline Construction**

   a. A preliminary as-built survey shall be conducted at each manhole as the work progresses for all pipe designed at or near minimum grade per DOE. [Table provided in Sec. 4.18.7 of the *Specifications*]

   b. Information obtained through a preliminary as-built survey shall be stamped, signed and dated by the Engineer (or Surveyor), and shall be submitted to the Inspector via email or fax on a “per-run” basis.

   c. The Engineer (or Surveyor) shall provide precise survey measurement of the horizontal and vertical position of the end of any sewer main stub (eight (8) inch diameter and larger), including the invert elevation, calculated pipe slope, and measured stationing/coordinates.

   d. Pipe shall be laid upgrade from the point of connection unless otherwise approved. Pipe which is not laid in such a manner shall be as-built surveyed similar to pipe designed at minimum grade (Items “b” and “c” above).

   e. Vertical Separation

      i. The minimum vertical separation for water lines is three (3) feet, as measured from the outer wall of the pipes, and one and a half (1.5) feet for all other utilities.

      ii. If minimum clearances cannot be achieved, the sewer pipe shall either be constructed of ductile iron or encased in concrete per the *Standard Details Manual*, and the required vertical separation may be reduced by half (one and a half (1.5) feet minimum for water lines and three quarter (0.75) foot minimum for all other utilities).

   f. Horizontal Separation

      i. Two (2) feet minimum horizontal separation is required between pressure side sewer stubs.

      ii. Two (2) feet minimum horizontal separation is required between gravity stubs on opposing sides of the sewer main.

      iii. Ten (10) feet minimum horizontal separation is required between gravity side sewer stubs on the same side of the sewer main.

      iv. Five (5) feet minimum horizontal separation is required between side sewer stubs and the outer wall of manholes unless the stub is connected to the manhole.

9. **Side Sewers**

   a. Review Standard Details

      i. 2% minimum slope.

      ii. Provide plastic film warning & tracer tape.

      iii. Provide a 2 x 4 inch wood stake at the end of the side sewer stub, adjacent to the ROW or easement line. The stake shall be painted white, and the invert elevation clearly marked with black enamel paint.

iv. Side sewer depth at the property line shall not exceed eight (8) feet unless approved by the Sewer Utility. The desirable range of depth is between five (5) feet and eight (8) feet.

v. Minimum cover over pipe shall be five (5) feet in driving surfaces and existing/proposed rights-of-way and three (3) feet in non-driving surfaces. Ductile iron pipe may be used where five (5) feet of cover cannot be obtained, but in no case shall the cover be less than three (3) feet.

10. **Manholes**

a. Grout/mortar used during the course of manhole construction shall meet the requirements of Section 5.7 of the *Specifications,* and is subject to the review and approval of the Sewer Utility prior to use.

b. Each new concrete manhole shall be constructed with a pre-channeled, GU®-lined base section in accordance with the approved plans. The base section shall be equipped with gasketed, watertight bell hubs to suit the pipe type(s) and grade alignments shown on the approved plans.

c. The manhole base shall be set on a layer of bedding material (pea gravel) placed to a depth of between four (4) inches and eight (8) inches.

d. All pick holes shall be filled with grout.

e. A minimum of one (1) and a maximum of two (2) grade rings shall be used on all new manholes. Each grade ring shall be between four (4) inches and twelve (12) inches high, and the total combined maximum grade ring height allowed is twelve (12) inches.

f. The manhole joint sealant system shall consist of a synthetic rubber gasket plus a pre-formed joint sealant (e.g. Kent Seal™ or Ram-Nek).

g. Frames & Covers – Review approved plans and details for public and/or private castings.

h. The exterior of all concrete manholes shall be coated with a bituminous coal tar epoxy to a minimum DFT of twenty-five (25) mils.

i. Locking Plugs: Review policy. Install in the downstream side of the first manhole upstream from the point of connection, without interruption to any existing sanitary sewer flow.

j. When connecting to an existing manhole, a Kor-n-Seal® boot shall be used to make the pipe-to-manhole connection. Coring should continue through the bench as far as practical, and into the manhole channel if possible. [Note: Field coring is not allowed on new manholes that are fabricated incorrectly]

k. Fittings and hardware for inside drops shall be stainless steel.

11. **CCTV Inspection**

a. CCTV – Level of Service Policy

i. Inspection will commence within five (5) working days of the Contractor's request for inspection.

ii. The Contractor shall raise all manholes as close to existing grade as possible, so as to provide clear, safe access for the CCTV crew.

iii. The Contractor shall ensure all sewer mains and manholes are cleaned by vactor truck prior to the scheduled CCTV inspection.

iv. The first inspection for each pipe run will be performed without charge to the Owner's TNM account. Subsequent CCTV inspections are charged to the TNM account.

v. All defects (e.g., sags, pulled joints, etc.) that generate a rating shall be repaired.

vi. The CCTV crew completes, on average, between eight (8) and ten (10) runs per day. To avoid overbooking, and for larger projects, schedule CCTV inspections in increments of approximately ten (10) runs, as work progress.

12. **Air & Vacuum Testing, Punch List**

a. The Contractor shall provide the Inspector twenty-four (24) hour minimum notice prior to scheduling air and/or vacuum testing.

b. Mainline air testing shall commence only after all other joint utility trenching has been completed and the sewer pipe run has been satisfactorily inspected by CCTV.

c. Air testing shall be completed prior to paving.

d. Vacuum testing of manholes and/or vaults shall commence only after paving has been completed and the frames and covers have been adjusted to finish grade.

e. The Inspector will provide the Contractor a written punch list at time of vacuum testing.

13. **Cleanup & Restoration**

a. Site cleanup and restoration work shall be performed in accordance with the *Specifications*, and with the requirements of the Jurisdiction Having Authority over the public ROW. Particular attention should be given to the terms and conditions on the ROW permit.

b. Public Easement Release Statements.

14. **As-Builts**

a. The Contractor (or Engineer/Surveyor) shall provide two (2) sets of as-built drawings, along with a completed As-Built Checklist, for review with each submittal. Incomplete submittals or submittals that do not include the checklist may be returned without review.

b. When the as-built drawings are acceptable, the Inspector will call and request three (3) original prints for acceptance signature.

15. **Maintenance Guarantee**

a. Application

i. All public sanitary sewer improvements.

ii. Public and private systems when alternative materials are used.

iii. The Contractor shall submit a construction cost letter on the Contractor's letterhead. The letter shall provide the minimum level of detail shown on the example form provided in the Contractor's Pre-Construction Packet.

b. Instruments Used for Maintenance Guarantees [standard forms available on Pierce County's website at www.piercecountywa.org/ciforms]

i. Maintenance Bond

ii. Assignment of Funds in lieu of Maintenance Bond.

c. Amount of Maintenance Guarantee

i. Public systems: $5,000.00 or 10% of the approved construction costs for the sanitary sewer improvements, whichever is greater.

ii. Public and private systems using alternative trench backfill material: 10% of the total construction costs.

d. Performance period

i. Public systems: twelve (12) months from date of acceptance.

ii. Public and private systems using alternative trench backfill material: twenty-four (24) months from date of acceptance.

16. **Miscellaneous Topics**