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Durham Meadows Waterline
Middletown and Durham, CT
Contract No. W912WJ9C0002

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Submittal 02210-2.1

Excavation, Backfilling, and Filling Plan

- A. Sequence of Excavation Work: In 2019 a Ludlow will install the 16" DI water main on Rt 17 all the way to Maiden Lane. Another Ludlow crew will work on installing the water main up Talcott Ridge Dr. and up to the tank site. The tank road will be built and the water main installed, as well as the altitude vault. The crews will then install the booster station, water meter vault and pressure reducing vault. In spring of 2020, Ludlow Construction crews will be installing main water lines on Maple Ave, Wallingford Ave, and then to Pickett Lane and Maiden Lane, and installing water services to curb stops. The tank construction will occur in the spring and summer of 2020. Once the tank and vaults are fully operational, water service from the curb stops to the houses can commence in the fall of 2020. In the 2021, water services from the curb stops to the houses will be completed project wide.
- B. General Description of Construction Methods: The excavator will excavate 3 to 4 ft of earth from the trench, and then a shoring box will then be installed. Excavation will then occur until subgrade is reached. The fabric and stone bedding will be installed and then the piping. The piping will then be backfilled with the sand bedding. This will be hand tamped and then compacted with a jumping jack rammer on both sides of the pipe in 6 inch lifts. More sand bedding will then be placed to 1 ft above the pipe and compacted with a jumping jack. Then screened suitable material will be installed in 1.5 ft lifts and compacted with a large vibratory compactor. A compaction test may then occur depending on the frequencies listed below. The processed aggregate will then be installed and compacted, and tested based on the frequencies listed below. On CT DOT roadways compaction tests will occur every 25 lineal feet on each lift. On town roads, compaction testing will occur every 500 lineal feet on each lift installed. Compaction testing will be completed by JTC Consulting, an independent company certified by the USACE, CT DOT, AASHTO, and NSIT.

Excavations on roadways will be backfilled at the end of each work day. Any excavations for vaults, stations, and tank work that will remain overnight will be properly secured with steel plates and/or temporary fencing.

Suitable/unsuitable material will be determined by the Site Superintendent. Excavations shall be performed in the dry, and kept free from water, snow, and ice during construction. Bedding and backfill material shall not be placed in water. Water shall not be allowed to rise upon or flow over the bedding and backfill material.

Excavation, backfilling, and filling will be done as to eliminate possibility of undermining or disturbing foundations of partially and completed structures, pipelines, and embankments or existing structures and pipelines.

Excavations and trench widths will vary based upon the elevations shown on the plans. A typical trench width will be 4-5 feet wide and depth 5-9 ft deep.

Excavations will be backfilled and restored as soon as practicable.

- C. Equipment:
- Cat Excavator 330/328 with Conveyor 88,000 lbs
 - Volvo 145/170 Excavator 40,000 lbs
 - Volvo/Cat 938 loader 30,000 lbs
 - Volvo/Cat 950 Loader 40,000 lbs
 - Triaxle Dump Truck 28,000 lbs
 - Wacker Plate Compactor 1,090 lbs
 - Wack Neuson Rammer 176 lbs
 - Vibratory Roller 7,000 lbs
- D. Details of dust control measures: Sweeper with water will be used to sweep the site daily. Also, water will be used as necessary to alleviate any dust.
- E. Proposed Location of Excavation and backfill materials: Lot across from 60 Commerce Dr, Durham CT 06422. This storage yard will be used as temporary storage for materials used in the backfilling process. It will also be used for storing excavated material removed from excavations that may be processed and re-used or properly disposed of. Backfill materials such as Stone, sand, Bank Run Gravel, and Processed Aggregate will also be supplied and delivered by Haynes Materials and stockpiled at our storage yard.
- F. Surplus excavated Material disposal: Haynes Materials, 24 Woodbury Rd, Deep River, CT 0641. Surplus excavated material will be evaluated by CT DEEP guidelines to determine if materials are suitable for disposal as clean fill. Boulders removed from excavations will be brought to the temporary storage yard, where they will be broken down and then disposed of at Haynes Materials.
- G. Erosion and sediment Control: Erosion sediment control devices will be installed as shown on the contract drawings and details C- 501, and as shown in the Environmental Protection Plan.