STORMWATER POLLUTION CONTROL PLAN (SWPCP)
FOR
DURHAM MEADOWS WATER MAIN EXTENSION PROJECT
DURHAM, CT

USACE CONTRACT NO. W912WJ19C0002

PREPARED ON BEHALF OF:
Ludlow Construction Company, Inc.
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PREPARED BY:
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NOTICE TO OWNER, CONTRACTORS, SUBCONTRACTORS

This document has been prepared in accordance with the State of Connecticut General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities as a preliminary Construction SWPCP document. Since the SWPCP is a living document, it will require consistent maintenance (updates) and additional information from the Permittee and contractors/subcontractors.

An updated copy of the SWPCP shall be maintained at the construction site from the date construction is initiated at the Site until the date construction at the site is completed. A project will be considered complete after the site has been stabilized for at least three months following the cessation of construction activities. A Site is not considered stabilized until there is no active erosion or sedimentation present and no disturbed areas remain exposed. The Permittee shall retain the SWPCP and all associated documentation and records for a period of at least five (5) years from the date of completion of construction. Inspection records must be retained for a period of five (5) years after the date of inspection.

A copy of the CGP and associated forms is included as an Appendix to this document.

This SWPCP is meant to address the general requirements of the permit and to present a framework for the Contractor to utilize for compliance. Site specific information contained in this report is based on GZA review of the Project Plans and Specifications and information provided by the Contractor or Owner, unless otherwise stated. Erosion and sediment controls for the project were designed by Others. Additional erosion and sediment controls beyond those shown on the plans and indicated on the SWPCP may be required to address changing needs for the Site during construction activities. The controls shown in the SWPCP by GZA are a minimum of what will be required for permit compliance. The Permittee and their Contractor are solely responsible for permit compliance; GZA takes no responsibility for permit compliance by the applicable parties.

1 INTRODUCTION

This Stormwater Pollution Control Plan (SWPCP) has been prepared on behalf of Ludlow Construction Co., Inc. by GZA GeoEnvironmental, Inc. (GZA), for the Durham Meadows Water Main Extension Project, in the Town of Durham, Connecticut; see Figure 1 for a Locus Map, Figure 2 for a Layout Plan, and the Exhibits section for the Erosion and Sediment Control Plan.

1.1 PROJECT LOCATION

Main Street (Route 17)
Durham, CT
Middlesex County

Latitude: 41° 29’ 00” N
Longitude: 72° 40’ 55” W

The Site’s latitude and longitude were determined using:

☐ USGS topographic map (specify scale: 1:24,000)
☐ EPA Web site
☐ GPS
☒ Other (specify): Google Earth

Horizontal Reference Datum:
☐ NAD 27
☒ NAD 83 or WGS 84

2 SCOPE OF WORK

The work under this Contract shall consist of a water line utility construction project, including the installation of of water main and associated curb stops within the right of way on Town of Durham and State of Connecticut Roads, within the Town of Durham. About 125 properties in Durham will be connected to the new water main, and a pressure relief valve vault will be constructed. The work is comprised of clearing and grubbing, shallow trench excavation approximately 6 feet deep and 5 feet wide, installation of water main pipes, fittings, and valves, backfilling, hot mix asphalt paving, pavement markings, landscape restoration, and other incidental items of work as listed in the project plans and specifications and as required to complete the work.

Additional detail regarding the linear water main and work at the pressure relief valve vault is presented below:

Linear Project

The entire linear project includes about 20,300 linear feet of water main and several hundred feet of curb stop, as follows:

- Route 17 (Main Street in Durham): The project will connect to the existing City of Middletown water system at the intersection of South Main Street (Route 17) and Acorn Drive at the Durham/Middletown line and extent into Durham to the intersection with Old Cemetery Road. Approximately 8,200 linear feet of water main and associated curb stops in Durham. A curb stop will be installed to all properties along this route.

- Talcott Lane (Durham): Approximately 613 linear feet of water main and associated curb stops will be installed in Talcott Lane from Main Street to Maple Avenue.

- Maple Ave (Durham): Approximately 4,088 linear feet of water main and associated curb stops will be installed in Maple Avenue from the existing pump station to the intersection with Talcott Lane.

- Maiden Lane (Durham): Approximately, 2,600 linear feet of water main and associated curb stops will be installed in Maiden Lane from Main Street to Pickett Lane.

- Pickett Lane (Durham): Approximately, 3,855 linear feet of water main and associated curb stop will be installed on Pickett Lane from Main Street to Maiden Lane.

- Route 68 (Wallingford Road in Durham): Approximately 950 linear feet of water main and associated curb stop will be installed on Wallingford Road (Route 68) from Main Street to just past Maple Ave.

Pressure Relief Valve Vault
Approximately 0.05 acres of area within the CTDOT right-of way for Main Street in Durham just north of Middlefield Road (Route 147) will be cleared to install a concrete pressure relief valve.

A construction office and staging area will be located at 281 Main Street in Durham.

In-Water Work - Stream Crossings

As part of this project work will be required within the stream channel of Allyn Brook to establish crossings at Maple Avenue and Pickett Lane. Construction of the stream crossings will require temporary diversion of Allyn Brook and shall be performed in accordance with the Contractor's Water Diversion Plan.

2.1 SEQUENCE OF MAJOR ACTIVITIES

A general sequence for the project is described in the following sections. **The intended timing of these activities should be appended to the SWPCP by the Contractor to ensure completeness of this document. A form for this purpose in provided in Appendix A.** In addition, amendments to this sequence shall also be appended to the SWPCP by the Contractor as appropriate. **To the extent possible, the project shall be phased to avoid the disturbance of over five (5) acres at any one time. The Contractor should be aware that this is a specific requirement of the CGP.** Refer to Environmental Protection Plan for additional requirements related to the project sequence.

- Mobilization.
- Installation of temporary erosion and sedimentation control measures[1].
- Operational date of temporary erosion and sedimentation control measures.
- Selective demolition.
- Clearing and grubbing as needed.
- Site preparation.
- Trenching for water line installation.

[1] Any downgradient sediment controls must be installed and made operational by the time earth-disturbing activities in any given portion of the site have begun, or immediately following the initial earth disturbance if it is infeasible to install the controls prior to earth disturbance. All controls must be installed in accordance with good engineering practices and following the manufacturer's specifications, and any departures from the specifications must be documented in the SWPCP.

- Creation of soil and vegetation stockpiles.
- Installation of water line and associated utilities.
- Backfilling.
- Paving and surfacing.
- Temporary or final stabilization of exposed soil.
- Seeding and landscaping.
- Removal of temporary erosion and sedimentation controls upon final stabilization of disturbed areas.
- Cessation of construction activities on the Site, either temporarily or permanently.

2.2 ESTIMATES OF DISTURBED AREA

TOTAL SITE AREA: 3.5 acres

DISTURBED SITE AREA: 3.5 acres

2.3 LOCUS MAP / SITE PLAN / EROSION AND SEDIMENT CONTROL PLAN

A locus map is attached as Figure 1 of this SWPCP. The Site Plan / Erosion and Sediment Control Plan is included in the Exhibits section. Erosion and Sediment Control Plans are integrated with the Project Plans and are included by reference to this document. A reduced size partial drawing set including the utility layout plans for the project that show locations of erosion and sediment controls added, as well as selected detail drawings, are included as Exhibits. Due to the complexity of the project and its linear nature, it was impractical to have a single sheet, but BMPs are included throughout the plan set and detail sheets. The Site Plan / Erosion and Sediment Control Plan illustrates drainage patterns and approximate extent of post-grading slopes, areas and limits of soil disturbance, locations of major structural and non-structural controls, locations of stabilization practices, areas which will be vegetated following construction, locations of stormwater discharges to surface waters (both during and post-construction and including monitored outfalls), and identifies surface waters, impaired waters and TMDLs, high quality waters, and inland, tidal, and fresh-tidal wetlands.

3 SITE DESCRIPTION

3.1 RECEIVING WATERS AND WETLANDS

3.1.1 Receiving Waters

The Project Site is within the subregional drainage basin for the Coginchaug River. The first surface water(s) receiving discharge of stormwater from the Site include:

- Unnamed wetlands associated with unnamed tributary to Coginchaug River
- Unnamed wetlands associated with unnamed tributary to Ball Brook
- Allyn Brook
- Hersig Brook
- Ball Brook

All of the immediate receiving water(s) eventually drain to Coginchaug River.

The Coginchaug River is impaired and is included within the Mattabesset River Regional Basin E.coli TMDL and the CT Statewide Bacteria TMDL.

3.1.2 Wetlands

Wetland field surveys were conducted by an AECOM Certified Professional Soil Scientist, as documented in Appendix C of the Basis of Design Report – Durham Waterline Remedial Design, Durham Meadows Superfund Site, May 2018 (BOD Report). AECOM identified any wetlands and watercourses observed within 150 feet of the project route where access could be attained. A total of nine (9) wetlands and five (5) watercourses were delineated along the project route in Durham. Copies of the wetland maps from the BOD Report are provided in the Exhibits section of this document.

Wetland – W10 and Streams – MDS1 and MDS2 are located on the Middletown/Durham town line. Wetland 10 is located on the proposed Meter Station site. The NRCS maps this area as a somewhat excessively drained Hartford sandy loam; however the area has been deeply excavated possibly to serve as a detention/retention pond for stormwater from the adjacent residential subdivision.

Stream MDS2 is located approximately 120 feet south of MDS1 on the west side of South Main Street. Both streams are intermittent, likely with a significant stormwater component to their hydrology, and drain approximately 100 feet in a westerly direction into a large palustrine forested wetland system.

Two unflagged wetlands were identified by AECOM at the Durham/Middletown/Middlefield town line.

Wetland – W3 demarcates a Palustrine Scrub-shrub wetland system containing a small fire pond on the west side of Maple Avenue and an intermittent watercourse which flows from east to west beneath Maple Avenue through a 18" diameter culvert along the southern edge of the fire pond. In addition, there is a stormwater ditch which flows in a westerly direction along a paved parking lot, and into a drop-culvert beneath Maple Avenue.

Wetland – W7 and Stream – S4 demarcates the top of bank, and limits of hydric soils along a small perennial stream that is a tributary to Hersig Brook. The stream and wetlands are located on both sides of Maiden Lane and drain in a southerly direction beneath Maiden Lane near its intersection with Brick Lane. On the south side of Maiden lane is an old manmade farm pond that is approximately 0.11 acres in size that drains to the south eventually tying into S4 further downstream.

Wetland – W8 demarcates the limits of a roadside stormwater swale that drains in an easterly direction, into a small drop-culvert that presumably empties into Stream – S4. The roadside swale contains hydric soils and hydrophytic vegetation.

Wetland – W5 is located along the north side of Maiden Lane near its intersection with Pickett Lane. The wetland appears to be former agriculture and/or pasture, portions of which are still fenced in with an electric fence. The wetland boundary begins within the fenced area to the east, extends along Maiden Lane for approximately 150 feet, and then turns back to the north away from the road.

Wetland – W6 demarcates the limits of a Palustrine Forested wetland located along the north side of Maiden Lane. The boundary extends for approximately 450 feet along the edge-of-pavement of Maiden Lane.

Wetland – W9 is located on the south side of Maiden Lane, directly across the street from Wetland – W6. No culverts beneath Maiden Lane were observed connecting surface hydrology of Wetland –W6 with Wetland –W9. However, these are part of the same wetland system and soil and vegetation characteristics are very similar.

Wetland – W114R and Stream – S114R is located on the north side of Maiden Lane and demarcates the boundaries between wetland areas associated with Ball Brook (Stream S114R) and upland areas of glacial till uplands, and historic fill placed for access to farm lands behind 114R Maiden Lane. Ball Brook is a small perennial stream flowing in a westerly direction beneath a mostly closed canopy of wetland forest. The brook is approximately 3-6 feet wide and has a cobble-gravel bottom with soft mud accumulation in the interstitial spaces. The brook flows through a 48-inch steel corrugated culvert beneath the driveway to 114R Maiden Lane.

Wetland – W2 and Stream – S1 demarcates the top of bank, hydric soils, and floodplain soils along Allyn Brook next to Old Cemetery Road.

Stream – S2 demarcates the top of bank, and hydric soils along Hersig Brook. Hersig Brook is an approximately 15 to 20 feet wide perennial stream with moderate to strong flow and a rock/cobble substrate. It flows in a westerly direction, crossing Pickett Lane beneath a recently constructed bridge overpass. Areas in the vicinity of the new bridge have been landscaped with small red maple saplings, seeded and maintained as grass cover, and with large rip-rap placed at the wing-walls extending out from the bridge abutment.

3.1.3 Floodplains and Riparian Buffers

The proposed water main alignment crosses the Special Flood Hazard Area Zone AE (area subject to flooding by the 1% annual chance flood) for Ball Brook and Hersig Brook, as indicated by the Flood Insurance Rate Map (FIRM) for Middlesex County, Connecticut (FEMA, effective date August 28, 2008).

3.2 THREATENED AND ENDANGERED SPECIES

AECOM corresponded with Connecticut DEEP regarding the Natural Diversity Data Base (NDDB) on several occasions during the project design to identify habitat mapping updates in the project areas as necessary. Based on the latest correspondence dated March 8, 2016, March 12, 2016 and July 28th, 2017 for work areas in Middletown and Durham, NDDB identified portions of Maple Avenue, Old Cemetery Road and small areas on Talcott Lane and Main Street (SR-17) that are located in environmentally sensitive areas. In addition, a species of special concern (Wood Turtle, Glyptemys insculpta) is indicated in the several areas within the project:

- off the access driveway to the Cherry Hill Tank off Talcott Ridge Drive,
- the Meter Vault at the intersection with SR-17 and Acorn Drive, and
- areas near the Allyn Brook and Hersig Brook crossings.

In addition, several wetland and aquatic dependent species were noted in the vicinity of the proposed Allyn Brook crossings, including Slimy Sculpin (Cottus cognatus). The letters and attachments noted above are included in Appendix D.

Based on the NDDB response, the following BMPs shall be used in the construction of the project to the extent possible: Recommendations for protection of these rare species habitats include the following:

- If possible, stream crossings will not be constructed during the months of late August through September or from Mid-March through May, as these are the times that amphibians and reptiles are most active near wetlands.
- If possible, stream crossings will be constructed in November when stream flows are low and amphibian activity has slowed.
- Silt fencing shall be installed around work areas prior to construction where applicable to exclude Wood Turtles from the work area. The use of erosion control products that are embedded with netting shall not be used since these can snare turtles.
- To protect wood turtles, silt fencing shall be used around stockpiles of dirt to exclude them from nesting. Nesting season is in early spring and late summer.
- Vehicles and machinery shall not be parked in turtle habitat. Turtle habitat includes wetlands and undisturbed forest floor.
- Any turtles discovered shall be moved to an appropriate area as outlined in the NDDB recommendations.
- A subsequent NDDB request shall be submitted if construction has not begun on this project by July 28th, 2019.
- Special care shall be taken for work conducted during early morning and evening hours so as not to harm basking or foraging individuals.

All construction shall be limited to the smallest practicable area to minimize impacts to the habitats of fauna which utilize the area for nesting and feeding including those mentioned above.

3.3 HISTORIC PROPERTIES

A historical and archaeological evaluation was performed to assess potential impacts on cultural resources within the Durham Project area, as required by the Section 106 of the National Historic Preservation Act (NHPA). A historical effects evaluation was conducted in 2015 and 2016 to identify historically significant architectural resources and to analyze the effects of the project on those resources. A Section 106 Finding Documentation Report, which identified the resources along with measures to mitigate potential impacts, was submitted to the Connecticut State Historic Preservation Officer (CT SHPO) in March 2016. The report concluded that, although the project would have an effect on the Durham Main Street Historic District, no adverse impacts would occur. The CT SHPO concurred with the findings.

A Phase 1A Archaeological Assessment was completed to determine the potential for encountering National Register-eligible archaeological resources in areas where subsurface disturbance will occur as a result of project actions. Proposed locations within the Durham Project area were identified for further evaluation. The report was submitted to the CT SHPO in April 2016, and CT SHPO concurrence was received on May 3, 2016. A Phase 1B Archaeological reconnaissance Survey, which involved a shovel test pit survey, was conducted between November 2015 and January 2018. A report summarizing the results was submitted to the CT SHPO in January 2018 for review and approved by the CTSHPO on May 2, 2018. The

report concluded that the project will have No Effect on NRHP eligible archaeological resources. The CT SHPO approval letter is included in Appendix E of the Basis of Design Report (AECOM, May 2018).

3.4 EXISTING SOILS

Based on a review of the USDA Soil Survey of Middlesex County, Connecticut, onsite soils are primarily loams, silt loams and Udorthents-Urban land complex, as shown in Appendix E.

3.5 AQUIFER PROTECTION AREAS

There are no Aquifer Protection Areas within Durham.

4 CONTROLS

Controls shall be in accordance with the project plans and specifications and the City of Middletown Erosion and Sedimentation Control Guidelines and the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended (the Guidelines), the *Stormwater Quality Manual*, or the DOT Qualified Products List (http://www.ct.gov/dot/lib/dot/documents/dresearch/conndot_qpl.pdf).

4.1 SITE MANAGEMENT

4.1.1 Minimize Soil Compaction

In areas of the Site where final vegetative stabilization will occur or where infiltration practices will be installed, vehicle and equipment use shall be restricted to the extent practicable to avoid over compacting soil. Should over-compaction occur in these areas, techniques to condition the soils to support vegetative growth shall be applied prior to seeding or planting areas.

4.1.2 Dewatering Wastewaters

The discharge of turbid groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation is prohibited, unless such waters are first effectively managed by appropriate controls in accordance with the Guidelines. Discharge of dewatering wastewaters directly to drainage systems, wetlands, watercourses, or water bodies is prohibited.

Dewatering wastewaters discharged to surface waters after treatment shall be discharged in a manner that minimizes the discoloration of the receiving waters and no discharge of dewatering wastewater(s) shall contain or cause a visible oil sheen, floating solids, or foaming in the receiving water.

Operational and structural measures shall be used to ensure that dewatering wastewaters will not cause scouring or erosion or contain suspended solids in amounts that could reasonably be expected to cause pollution of surface waters of the State. Such measures may include, but are not limited to, sediment basins or traps, sediment socks, dewatering tanks, tube settlers, weir tanks, and/or filtration systems that are designed to remove sediment. Dewatering measures shall be installed on upland soils.

Dewatering wastewaters shall be discharged to a sediment trap with a suitable velocity dissipation device, as shown on the Erosion and Sediment Control Details Plan, included in the Exhibits.

4.2 EROSION AND SEDIMENTATION CONTROLS

The primary activities occurring onsite are clearing and grubbing, shallow trench excavation approximately 6 feet deep and 5 feet wide, installation of water main pipes, fittings, and valves, backfilling, hot mix asphalt paving, pavement markings, landscape restoration, and other incidental items of work as listed in the project plans and specifications and as required to complete the work. Controls for these activities are addressed in the following sections based on information provided by the project designer in the project plans and specifications. GZA has not modified the controls and was not involved in the design process. GZA was contracted to prepare a SWPCP based on the controls designed by others. These controls, their implementation and specific requirements will also be discussed in the project plans and specifications.

Erosion and sedimentation measures shall be in place prior to commencement of construction activities and shall be maintained until all disturbed areas have been permanently stabilized. Stockpiling of construction materials within 100 ft of waterways is prohibited.

The Contractor is responsible for inspecting, maintaining, modifying, or introducing structural controls such that sediment shall be prevented from migrating off of the Site into adjoining properties or nearby waterbodies. Temporary excavations, embankments, stockpiles and other soil disturbing activities shall be controlled in such a manner as to protect adjacent areas. The Contractor is responsible for the installation, maintenance, repair, and ultimate removal of these controls, with the exception of any permanent erosion control measures (e.g., erosion control matting) which will remain in place after the conclusion of the project. The Contractor is also responsible for the ultimate stabilization of disturbed areas associated with these controls.

Should additional or modified erosion control and stabilization measures be necessary or desirable to control the transport of pollutants from the Project Site via stormwater, **the Contractor shall provide, install, maintain and inspect additional controls as needed.** For additional information on stormwater pollution controls for construction activities, the Contractor is directed to the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* (the Guidelines), as amended. GZA takes no responsibility for the selection, design, or application of such controls.

4.2.1 Stabilization Practices

In general, stabilization practices may include but are not limited to:

- Temporary seeding,
- Permanent seeding,
- Mulching,
- Geotextiles,
- Sod stabilization,

- Vegetative buffer strips,
- Protection of trees,
- Preservation of mature vegetation, and
- Other vegetative and non-structural measures as may be identified by the Guidelines.

Temporary Stabilization: Areas that will remain disturbed but inactive for at least thirty days shall receive temporary seeding or soil protection within seven (7) days in accordance with the Guidelines. Areas that will remain disturbed beyond the seeding season as identified in the Guidelines, shall receive long-term, non- vegetative stabilization and protection sufficient to protect those portions of the Site through the winter. All material stockpiles areas shall be protected with sediment control fence or hay bales.

Long term and winter stabilization will conform to the provisions of the Best Management Practice (BMP), CT DOT Standards Specifications and Guidelines.

Permanent Stabilization: Where construction activities have permanently ceased or when final grades are reached in any portion of the Site, stabilization and protection practices as specified in Chapter 5 of the Guidelines shall be implemented within seven (7) days.

Areas to be graded with slopes steeper than 3 Horizontal to 1 Vertical (3H:1V) and higher than 15 feet shall be graded with appropriate reverse slope benches, except when engineered slope stabilization structures or measures are included or a detailed soil mechanics analysis has been conducted to verify stability. Engineered analyses and measures must be designed by a CT licensed Professional Engineer with experience in geotechnical engineering or soil mechanics.

Once final stabilization of any portion of the Site is achieved, the Contractor may mark this area as “final stabilized” on the S&ECP and no further SWPCP or inspection requirements will apply to that portion of the Site, other than the requirements found in the CGP and repeated in Section 5 of this SWPCP.

Disturbed portions of the Site shall be stabilized by restoring surfaces to match pre-construction condition.

Silt fence shall be removed upon stabilization of the Site.

4.2.2 Structural Controls

Structural practices to divert flows away from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from the Site may include but are not limited to:

- Earth dikes (diversions),
- Drainage swales,

- Sediment traps,
- Check dams,
- Subsurface drains,
- Pipe slope drains,
- Level spreaders,
- Storm drain inlet protection,
- Outlet protection,
- Reinforced soils retained systems,
- Gabions, and
- Temporary or permanent sediment basins and chambers.

Structural measures shall be installed on upland soils.

The primary structural control BMP(s) shall be erosion control barrier (silt fence) located upgradient of wetland resource areas as shown on the Project plans included in the Exhibits section, and compost silt socks, sediment filter bags, and sediment traps. In conjunction with the silt fence, all existing catch basins shall be protected. Existing catch basins shall have "Dandy Sacks" or other equivalent erosion control measure installed before construction starts. "Dandy Sacks" or equivalent shall remain in place until the area draining to the catch basin is completely paved or otherwise stabilized. They shall be maintained periodically, as noted in regular inspections of the Site.

The Contractor is responsible for inspecting, maintaining, modifying, or introducing structural controls such that all sediment shall be prevented from migrating off of the Site onto adjoining properties or into nearby waterbodies. Any modification, removal or addition of structural controls must be marked on the Erosion and Sediment Control Plan by the Contractor. The structural controls shall be implemented to divert flows from exposed soils, retain flows, or limit runoff from exposed areas.

Perimeter Controls: Sediment controls, such as filter berms, silt socks, silt fences, staked straw bale barriers, and temporary diversion dikes shall be installed along the perimeter areas of the site that will receive stormwater runoff from earth disturbing activities. Controls shall be maintained by removing sediment before it has accumulated to one-half of the above-ground height of the perimeter control.

Stabilized Construction Entrance/Exit: A temporary stabilized construction entrance shall be installed where applicable on the project prior to all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit. The purpose of the construction entrance is to remove soil attached to vehicle tires and minimize its transport and deposition onto public road surfaces. The construction entrance shall consist of turf mats or be composed of a 6-inch thick (minimum) bed of crushed stone that extends a minimum length of 50 feet and a minimum width of 25 feet. The

crushed stone bed shall be replenished as necessary to retain proper function and shall be removed at the conclusion of the project.

Catch Basin Protection: Catch basin protection shall be completed prior to commencing construction activities. Existing catch basins shall be protected by installation of "Dandy Sacks" or equivalent into each catch basin. The bags shall remain in place until the area draining to the catch basin is completely paved or otherwise stabilized. The bags shall be maintained and emptied as needed, based on sediment loading observed during routine inspection.

Silt Fence: Silt fence is a synthetic permeable mesh fabric, typically incorporating wooden support stakes at intervals sufficient to support the fence itself, and any water and sediment retained by the fence. The fence, although porous, retains the sediment laden water long enough to promote settlement of suspended solids. The retained water slowly filters though the mesh fabric and discharges downstream, leaving the majority of sediment trapped on the upstream side of the silt fence.

Silt fence shall be placed at the limits of the work as indicated on the Erosion and Sediment Control Plan. Typically, they shall be installed adjacent to resource areas, where soil will be exposed due to construction activities, as depicted on the plans. It shall be placed in a sturdy, upright position and anchored/supported to withstand the forces of the elements and construction activities. The fence shall be installed as described in the project plans and specifications, in a manner that will prevent runoff from passing over, under, or around the fencing.

Silt fence shall meet the specifications described for Geotextiles in the ConnDot Qualified Products List:
(http://www.ct.gov/dot/LIB/dot/documents/dresearch/conndot_qpl.pdf).

Maintenance of the silt fence structures is critical. Any noted deficiencies, such as punctures, gaps, or failures shall be remediated immediately and accumulated sediments shall be removed and properly disposed in a timely manner, as detailed in Section 5.

Straw Bale Barrier: Straw bales shall be provided as a temporary structural practice to minimize erosion and sediment runoff. Bales shall be properly placed to effectively retain sediment immediately after completing each phase of work where erosion would occur in the form of sheet and rill erosion (e.g., tree and stump removal, grading, excavation, etc.), and in each independent runoff area. Bales shall be placed as work progresses and shall be removed/replaced/relocated as needed for work to progress in the drainage area. Straw bales shall be installed as required by the Contractor's construction methods. The bales shall be installed as described in the project plans and specifications, in a manner that will prevent runoff from passing over, under, or around the bales. Final removal of straw bale barriers shall be upon approval by the Contracting Officer. Rows of bales of straw shall be provided as follows:

a. Along the downhill perimeter edge of all areas disturbed.
b. Along the top of the slope or top bank of drainage ditches, channels, swales, etc. that traverse disturbed areas.
c. Along the toe of all cut slopes and fill slopes of the construction areas.
d. Perpendicular to the flow in the bottom of existing drainage ditches, channels, swales, etc., that traverse disturbed areas or carry runoff from disturbed areas.
e. Perpendicular to the flow in the bottom of new drainage ditches, channels, and swales.
f. At the entrance to culverts that receive runoff from disturbed areas.

Compost Filter Log (i.e., Silt Sock, Filter Sock): Filter logs are erosion and sediment control barriers that allow runoff water to penetrate it and continue to flow while filtering sediment and pollutants from the water. Compost filter logs shall be installed on contours perpendicular to sheet or concentrated flow.

Compost filter logs shall be placed as indicated on the project plans. Typically, they shall be installed adjacent to resource areas, where soil will be exposed due to construction activities, as depicted on the plans. The filter logs shall be tamped down to ensure proper soil contact and then anchored using untreated hardwood stakes at a maximum 5' apart. For slopes longer than 50' with a 3H:1V ratio, additional logs or larger diameter logs may be required.

Maintenance of the compost filter log structures is critical. Any noted deficiencies, such as punctures, gaps, or failures shall be remediated immediately and accumulated sediments shall be removed and properly disposed in a timely manner, as detailed in Section 5.

Sediment Traps: For points of discharge from disturbed areas with a total contributing drainage area of between two (2) and five (5) acres, a temporary sediment trap must be designed and installed according to the Guidelines. Temporary sediment traps are depressions constructed down slope of construction activity and located such that storm water runoff from uplands is diverted through the traps.

Maintenance of the temporary sediment traps is critical. Any noted deficiencies or failures shall be remediated immediately and accumulated sediments shall be removed of and properly disposed of in a timely manner, as detailed in Section 5.

4.3 POST-CONSTRUCTION STORM WATER MANAGEMENT

4.3.1 Storm Drainage System

Areas disturbed by water main installation will be restored to match existing materials and grade. Installation of the concrete pressure relieve valve vault will result in approximately 400 square feet of new impervious cover. Stormwater runoff generated over the valve vault will discharge to the surrounding vegetated areas and will infiltrate. No specific post-construction stormwater control measures are proposed as part of this Project.

4.4 GOOD HOUSEKEEPING BMPS

4.4.1 Storage, Handling, and Disposal of Construction Products, Materials, and Wastes

Diesel Fuel, Oil, Hydraulic Fluids, Petroleum Products, and Other Chemicals: All chemical and petroleum product containers stored on the Site (excluding those contained within vehicles and equipment) shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area except for those chemicals stored in containers of 100 gallon capacity or more, in which case a roof is not required. Double-walled tanks satisfy this requirement.

Hazardous or Toxic Wastes: Hazardous or toxic wastes including, but not limited to, paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids shall be separated from construction and domestic waste and stored in sealed containers constructed of suitable materials to prevent leakage and corrosion and labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and applicable Federal, State, Tribal, and Local requirements. Containers shall be stored under cover or within appropriately sized secondary containment and spill kits shall be readily available. Comply with the manufacturer's recommended disposal method and applicable Federal, State, Tribal, and Local disposal requirements. Spills shall be cleaned up immediately in accordance with the Spill Prevention and Response Plan presented in Section 4.4.7 of this SWPCP.

Construction and Domestic Waste: All waste materials shall be collected and stored in a manner that will prevent materials from entering watercourses, wetlands, or other off site areas. Waste containers of sufficient size and number to contain wastes shall be provided. Wastes shall be placed in designated waste containers on a daily basis. Material shall be regularly collected and disposed of off site in a manner consistent with applicable Federal, State and Local regulations. Waste materials for this project may consist of material packaging, earthen materials, granular materials, and any surplus materials.

Sanitary Waste: During construction, all sanitary waste shall be collected in portable sanitary units, which shall be positioned so that they are secure and will not be tipped or

knocked over. These units shall be emptied as necessary by a qualified contractor and disposed of in accordance with all State and Local regulations.

4.4.2 Off-Site Vehicle Tracking and Dust Control

Vehicles shall be inspected for mud, dirt, or debris prior to exiting the Site and precautions shall be taken as necessary to prevent tracking of excess materials from the Site. Vehicle use shall be restricted to designated exit points. Anti-tracking pads or turf mats shall be installed at designated exit points to provide sediment removal prior to vehicle exit. Additional controls to remove sediment from vehicle tires, such as wheel washing, rumble strips, and rattle plates shall be used when necessary.

Where sediment track out has occurred, the deposited sediment must be removed by the end of the same work day by sweeping, shoveling, or vacuuming. The streets and construction sites shall be cleaned and swept on a daily basis to the satisfaction of the Town of Durham and CTDOT. Hosing or sweeping sediment into any surface water, storm drain structure, or stormwater conveyance is prohibited, unless the storm drain or stormwater conveyance is connected to a sediment basin, sediment trap, or other sediment control.

Dump trucks hauling material to or from the Site shall be covered with a tarpaulin. Wet dust suppression shall be used, in accordance with section 22a-174-18(b) of the Connecticut General Statutes, for any construction activity that causes airborne particulates. No discharge of dust control water shall contain or cause a visible oil sheen, floating solids, visible discoloration, or foaming in the receiving water.

4.4.3 Discharge of Solid Materials to Waters of the U.S.

All waters of the U.S. (as defined at 40 CFR Section 122.2) and State of CT (as defined by section 22a-38 of the Connecticut General Statutes) located on site or adjacent shall be protected from discharge of solid materials, except those as authorized by a permit issued under Section 404 of the Clean Water Act. Solid materials may include solid waste, building materials, fill, sewage, sediment, or any other solid substance. Structural BMPs located upgradient of waters of the U.S., such as silt fence and straw bales, sediment basins, and deep sump catch basins may act to trap or block solid materials from entering waters of the U.S. Proper waste disposal and sanitary waste collection, as described in Section 4.4.1 shall also minimize the discharge of solid materials to waters of the U.S. The Contractor is responsible for preventing any discharge of solid materials to waters of the U.S.

4.4.4 Vehicle/Equipment Maintenance Area

Discharges of fuels, oils, or other chemicals used in vehicle equipment operation and maintenance are prohibited. Vehicle or construction equipment refueling is prohibited within 100 feet of any wetland, watercourse, or water body. Routine maintenance of vehicles and equipment shall not be conducted onsite.

If vehicle fueling or emergency maintenance of equipment (limited maintenance required to restore equipment functionality that cannot otherwise be performed off-site) is required to be completed onsite, a designated area shall be established in a controlled and covered area, when possible, **and marked on the Erosion and Sediment Control Plan by the Contractor**. The area shall be located away from surface waters and stormwater inlets or conveyances, and/or secondary containment shall be provided (e.g., spill berms, decks, spill containment pallets). Drip pans and absorbents shall be placed under or around leaky vehicles.

The fueling and maintenance area shall have a spill kit that is located in a visible and accessible location. Examples of typical items which should be included in a spill kit are provided in this document. Spills or contaminated surfaces shall be cleaned up immediately, using dry clean up measures where possible, and the source of the spill shall be eliminated. Surfaces shall not be cleaned by hosing the area down.

Recycle oil and oily wastes shall be disposed in accordance with applicable Federal, State, Tribal, and Local requirements. If applicable, the Contractor shall comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR 112 and Section 311 of the Clean Water Act.

4.4.5 Vehicle/Equipment Washing Area

Vehicle wash water is an allowable non-storm water discharge under the Construction General Permit, when detergents, soaps, or solvents are not used. Non-storm water discharges should be eliminated or reduced to the extent feasible. Discharges of wash water can be eliminated through infiltration. **Vehicle washing using detergents, soaps, or solvents is not permitted on Site.** Detergent-free wash water discharges should only be directed to areas that are stabilized to minimize erosion, and should not be discharged to disturbed areas. Discharges with a sediment load shall be directed to pass through a sediment collection or filtering structural control prior to entering the receiving water body.

If vehicle and equipment washing is to be completed onsite, a designated area shall be established in a contained area, **and marked on the Erosion and Sediment Control Plan by the Contractor**. The area shall be located away from surface waters and stormwater inlets or conveyances.

4.4.6 Concrete Truck Washout Area & Washing of Applicators & Containers used for Paint, Concrete, or Other Materials

4.4.7 The washout of concrete, and washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials is prohibited onsiteSpill Prevention and Response Plan

The locations of material storage areas (i.e., for chemicals and other liquids) shall be noted on the Erosion and Sediment Control Plan by the Contractor.

The following good housekeeping and material management practices shall be followed to reduce the risk of spills or other accidental exposure of hazardous materials to storm water runoff:

- Store quantities of materials required for the project and not more,
- Store materials onsite in a neat, orderly manner in appropriate labeled containers,
- Store materials indoors or under cover,
- Follow manufacturers' recommendations for proper use and disposal of materials,
- Monitor all onsite vehicles for leaks and perform preventive maintenance to reduce the potential for leaks,
- Conduct vehicle fueling and maintenance activities in a controlled or covered area or off-site, when possible, and
- Work applied fertilizer into the soil to limit exposure to storm water and store partially used bags of fertilizer in sealable plastic bins.
- Use drip pans or absorbents under or around leaky vehicles.
- Manufacturers' recommended methods for spill cleanup shall be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- Adequate supplies of spill kit materials and equipment shall be kept in the hazardous material storage area and any onsite fueling and maintenance areas. Spill kit equipment and materials shall include but not be limited to: spill pads, absorbent booms, brooms, dust pans, mops, rags, gloves, goggles, speedi-dri, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

If an emergency spill or release occurs, site personnel shall immediately report the spill or release to the Contractor's Site Health and Safety Officer (SHSO), the Resident Engineer, and/or site management and evacuate the area. All employees shall receive Awareness Level training as part of their hazard communication training. Only employees trained at the First Responder Operations Level of 29 CFR 1910.120(q) will be authorized to respond in a defensive manner to emergency spills or releases of fuel and other materials.

If a spill occurs, the SHSO and/or site management shall be contacted and the SHSO and/or site management with assistance from appropriately trained personnel will contain the spill. If necessary the SHSO and/or site management will contact an emergency response contractor and will also notify the Engineer and all other authorities and agencies in accordance with State and Local regulations. Absorptive materials and other supplies will be used as needed to clean up and prevent the spill from spreading. The source of the spill shall be eliminated immediately. Water shall not be used to wash the spill down. Recycle oil and oily wastes shall be disposed in accordance with applicable Federal, State, Tribal, and Local requirements.

Any discharge, spillage, uncontrolled loss, seepage or filtration of oil or petroleum or chemical liquids or solid, liquid or gaseous products or hazardous wastes, shall be immediately reported to the Connecticut Department of Energy and Environmental Protection (DEEP), Emergency Response Unit, 860-424-3338 or toll free 1-866-DEP-SPIL (1-866-337-7745), 24 hours/day. Should these numbers become unavailable for any reason, call 860-424-3333. Information that shall be reported includes:

- the location;
- the quantity and type of substance, material or waste;
- the date and the cause of the incident;
- the name and address of the owner; and
- the name and address of the person making the report and his relationship to the owner.

A report to the local fire department is also recommended (911 throughout Connecticut).

The National Response Center (NRC) must be notified at 800-424-8802 where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period. A description of the release, the circumstances leading to the release, and the date of the release must be provided within 7 calendar days of the knowledge of the release.

Additional information regarding Spill Control is included in the Environmental Protection Plan prepared by Ludlow Construction Company, Inc.

4.4.8 Training

Training of staff and subcontractors in the basics of erosion and sediment control, good housekeeping and pollution prevention will reinforce proper implementation of the SWPCP. It is the responsibility of the Contractor to ensure that site personnel understand the requirements of the SWPCP and their specific responsibilities.

Personnel must be trained to understand the following if related to the scope of their job duties:

- The location of all stormwater controls on the Site required by this SWPCP, and how they are to be maintained,
- The proper procedures to follow with respect to the SWPCP's pollution prevention requirements, and
- When and how to conduct inspections, record applicable findings, and take corrective actions.

Any training conducted should be documented in the SWPCP. Include dates, number of attendees, subjects covered, and length of training.

5 MAINTENANCE AND INSPECTION

5.1 INSPECTION SCHEDULE

5.1.1 Plan Implementation Inspections

The Site shall be inspected at least once and no more than three times during the first 90 days following commencement of the construction activity on the Site to confirm compliance with the CGP and proper initial implementation of all control measures designated in the SWPCP for the Site for the initial phase of construction.

5.1.2 Routine Inspections During Construction

All areas disturbed by construction that have not undergone temporary or final stabilization shall be formally inspected at least once per week and within 24 hours of the end of a storm that generates a discharge, using the form included in Appendix B.

For storms that end on a weekend, holiday or other time after which normal working hours will not commence within 24 hours, an inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For storms of less than 0.5 inches, an inspection shall occur immediately upon the start of subsequent normal working hours.

A rain gauge shall be maintained on-site to document rainfall amounts.

5.1.3 Stabilized Area Inspections

All areas that have been temporarily or finally stabilized shall be inspected at least once per month, continuing for three months following final stabilization, at a minimum.

5.1.4 Final Stabilization Inspection

The Site shall be inspected to confirm final stabilization after the Site has been stabilized for at least three months.

5.2 INSPECTION PROCEDURES

5.2.1 Personnel

Personnel performing inspections shall meet the requirements of a Qualified Inspector as defined in Section 2 of the CGP. The person(s) responsible for conducting inspections and their qualifications shall be indicated in Appendix B.

5.2.2 Items to be Inspected

Routine Inspections must include all areas of the Site disturbed by construction activities. Inspectors must look for evidence of, or the potential for, pollutants entering the stormwater conveyance system or surface waters. All BMPs, erosion and sedimentation controls, and entrance/egress points must also be included in the inspection. More specific requirements are listed in the Table at the end of this section. Sample inspection forms are included as Appendix B. The Contractor is responsible for making sure that all inspection information required by the Construction General Permit is collected, maintained, and responded to, as per Permit terms. The completed inspection forms should be maintained with the SWPCP.

5.2.3 Record Keeping

A written report summarizing the scope of the inspection, the name(s) and qualifications of inspection personnel, the date and time of the inspection, weather conditions including precipitation information, major observations relative to erosion and sediment controls and the implementation of the SWPCP, a description of the stormwater discharge(s) from the Site, and any water quality monitoring performed during the inspection and actions taken shall be completed within 24 hours of the inspection. This report shall be signed by the Inspector and the Permittee. Sample forms for this reporting process are included in Appendix B. Inspection records shall be retained as part of the SWPCP for at least five years after the date of inspection. Report certification shall comply with permit conditions, such as those included in Section 5.(i) of the CGP.

5.3 MAINTENANCE

5.3.1 General

Routine maintenance procedures should be initiated immediately after the need for maintenance is recognized. The Contractor shall utilize/enforce good housekeeping practices to minimize the possibilities of spills or leaks of potential pollutants. Hazardous materials shall be handled with the utmost care in accordance with all regulations and the recommendations of the manufacturer. **Section 4.4 contains further details about good housekeeping BMPs.**

5.3.2 Maintenance of Erosion Controls

Erosion controls shall be maintained in accordance with the Guidelines, and as noted in the Table at the end of this section.

When installation of a new erosion/sediment control or a significant repair is needed, work must be completed and operational in accordance with the timelines described in Section 5.4 of this SWPCP.

Inspection and Maintenance Procedures

Item	**Inspection Procedure**	**Maintenance Procedure**
General	Disturbed areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Construction areas and perimeter of the Site shall be inspected for any evidence of debris that may blow or wash off site, and for debris that has blown or washed off site. Construction areas shall be inspected for any spills or unsafe storage of materials that could pollute off site waters. Identify any locations where new or modified stormwater controls are necessary.	Any debris blowing or flowing off the Site shall be immediately cleaned up. Any unsafe storage practices noted in the inspection shall be immediately remedied.
Perimeter Controls (Silt fence)	Silt fence shall be inspected to ensure that fence line is intact with no breaks or tears, and that the bottom of the fabric is securely buried in the ground. Areas where fence is excessively sagging or where support posts are broken or uprooted shall be noted. Depth of sediment behind the fence shall be noted.	Sediment shall be removed when it reaches one-half of the height of the silt fence. Care shall be taken to avoid damaging the fence during cleanout. Any areas of damaged or torn fabric, broken posts or undermined fence shall be repaired.
Compost filter logs/Sediment Logs	Compost logs shall be inspected to insure that the logs are intact and remain snugly butted to each other and firmly embedded in the ground. Depth of sediment behind the logs shall be noted.	Any broken, excessively tilted or undermined logs shall be promptly replaced. Sediment shall be removed when it builds up behind the logs to over one half of the height of the logs.

Item	**Inspection Procedure**	**Maintenance Procedure**
Discharge points	Identify all points of the property from which there is a discharge. All discharge points shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Discharge points shall also be inspected to ensure that erosion protection measures at the discharge are functioning. If a discharge is occurring, observe and document the visual quality and characteristics of the discharge, including color, odor, floating, settled, or suspended solids, foam, and oil sheen.	Any sediment or debris accumulated at discharge points shall be removed and properly disposed of in accordance with applicable regulations.

Item	**Inspection Procedure**	**Maintenance Procedure**
Vehicle entrances/ exits	Locations where vehicles enter or exit the Site shall be inspected for evidence of off-site sediment tracking.	Any material tracked onto roadways shall be removed daily by sweeping. Crushed stone shall be added to stabilized construction entrances as necessary to maintain a firm surface free of ruts and mud holes.

Item	**Inspection Procedure**	**Maintenance Procedure**
Material storage areas / Soil stockpile areas	Areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, conditions that could lead to spills, leaks, or pollutants entering the drainage system.	Any material storage areas found to be releasing pollutants to the drainage system or to areas offsite shall be modified to prevent the release of pollutants. Modifications may include, but are not limited to, covering material storage areas to reduce exposure to precipitation, installing secondary containment around storage containers, or installing erosion and sediment controls downgradient of storage areas.
Vehicle/ Equipment Maintenance Area	Areas used for vehicle/equipment maintenance shall be inspected for evidence of, or the potential for, conditions that could lead to spills, leaks, or pollutants entering the drainage system.	Any maintenance areas found to be releasing pollutants to the drainage system or to areas offsite shall be modified to prevent the release of pollutants. Modifications may include, but are not limited to, covering maintenance areas to reduce exposure to precipitation, installing secondary containment around the area, or installing erosion and sediment controls downgradient of maintenance areas.
Vehicle/ Equipment Washing Area	Areas used for vehicle/equipment washing shall be inspected for evidence of, or the potential for, conditions that could lead to spills, leaks, or pollutants entering the drainage system. No detergents shall be used onsite.	A washout depression found to not be performing its function of preventing vehicle/equipment washings from entering the drainage system or surface waters shall be discontinued, modified, or repaired as necessary.

Item	**Inspection Procedure**	**Maintenance Procedure**
Concrete Truck Washout Area	Area used for concrete truck washout shall be inspected for evidence of, or the potential for, conditions that could lead to spills, leaks, or concrete washings entering the drainage system or surface waters.	A washout depression found to not be performing its function of preventing concrete washings from entering the drainage system or surface waters shall be discontinued, modified, or repaired as necessary.
Waste Storage Areas	Waste storage areas shall be inspected for evidence of, or the potential for, conditions that could lead to spills, leaks, or wastes entering the drainage system or surface waters.	Any waste storage areas found to be releasing pollutants to the drainage system or to areas offsite shall be modified to prevent the release of pollutants. Modifications may include, but are not limited to, covering waste storage areas to reduce exposure to precipitation, installing secondary containment around the area, or installing erosion and sediment controls downgradient of the areas.
Swales/ Drainage ways/ Flowing Surface Waters within or immediately adjacent to the property	Check for signs of visible erosion & sedimentation that are attributable to site discharges.	Any accumulated sediment or debris shall be removed and properly disposed of in accordance with applicable regulations. Corrective actions to remove the source of sediment shall be taken. Any discharges causing erosion shall be removed or modified using velocity dissipation controls.
Stabilization Measures	Check that stabilization measures are intact and functioning as intended. Inspect areas of vegetation growth and note if re-seeding, watering, or fertilization is required. Geotextiles or other non-vegetative measures shall be inspected to ensure that the measures are secure, that there are no gaps, and erosion is not occurring beneath the measures.	Stabilization measures shall be maintained, corrected or replaced as necessary if not functioning effectively.

Item	**Inspection Procedure**	**Maintenance Procedure**
Straw bales	Straw bale lines shall be inspected to ensure that bales are intact and remain snugly butted to each other and firmly embedded in the ground. Depth of sediment behind the bales shall be noted.	Any broken, excessively tilted or undermined straw bales shall be promptly replaced. When sediment builds up behind the straw bales to over one half of the height of the bales, the sediment shall be removed or a second layer of straw bales added.
Catch basin protection	Protective measures shall be inspected to ensure that sediment is not entering the catch basins. Catch basin sumps shall be monitored for sediment deposition. "Dandy Sacks" or equivalent shall be inspected to ensure that no clogging has occurred.	Any damage to "Dandy Sacks" or equivalent, or other protective measure shall be repaired immediately. Clogged "Dandy Sacks" or equivalent shall be replaced. Any sediment accumulated in the catch basin sumps shall be removed when it accumulates to one half of the sump depth.
Temporary Sediment Settling Basin	Basin bottom and crushed stone filter shall be monitored for sediment deposition. If present, embankment, emergency spillway, and outlet shall be inspected for erosion damage. Embankment shall also be inspected for settlement, seepage, slumping or piping. Area shall be inspected for trash and debris.	Sediment shall be removed when the basin becomes half full. Any erosion damage, settlement, seepage, slumping or piping shall be repaired immediately. Trash and debris shall be removed. Gravel shall be cleaned or replaced when sediment pool does not drain properly.

5.4 CORRECTIVE ACTIONS

Corrective actions include actions taken to bring the Site into compliance with the terms and conditions of the SWPCP and the CGP.

As soon as possible after a condition requiring a corrective action is found, interim measures shall be implemented to minimize or prevent the discharge of pollutants, until a permanent solution is installed and made operational.

Non-engineered corrective actions (as identified in the Guidelines) shall be implemented on site within 24 hours and incorporated into a revised SWPCP within three (3) calendar days of the date of inspection. Engineered corrective actions (as identified in the Guidelines) shall be implemented on Site within seven (7) days and incorporated into a revised SWPCP within ten (10) calendar days of the date of inspection.

A Corrective Action Log form is included in Appendix B to document actions taken to bring the Site back into compliance. The Corrective Action Log form identifies non-engineered and engineered corrective actions. The Corrective Action Log form must be signed and certified in accordance with CGP certification requirements.

5.4.1 Revisions to Stormwater Pollution Prevention Plan

The SWPCP must be amended in response to the following conditions:

- If the actions required by the SWPCP fail to prevent pollution or fail to otherwise comply with any other provision of the CGP,
- Whenever there is a change in contractors or subcontractors at the site, and/or
- Whenever there is a change in design, construction, operation, or maintenance at the Site which has the potential for discharge of pollutants to waters of the state and which has not otherwise been addressed in the SWPCP.

PROJECT LOCATION MAP

Durham Meadows Waterline RD
Middletown and Durham, Connecticut

SCALE	DATE	PROJECT NO.
1:24,000	5/19	60275749

AECOM

Figure Number

1

Existing Middletown Water System
Existing Long Hill Pump Station
Booster Station
Cherry Hill Water Storage Tank
Meter Vault
Material Staging Area
Pressure Relief Valve and Vault
Construction Office and Staging Area
Existing Durham Center Water System
Brush Hill Rd
Long Hill Rd
S. Main St
Round Hill Rd
Talcott Ridge Dr
Acorn Dr
Royal Oak Dr
Parson Ln
Woodland Dr
Winsome Rd
Middlefield Rd
Oak Ter
Haddam Quarter Rd
Talcott Ln
Main St
Brick Ln
Maiden Ln
Wallingford Rd
Maple Ave
Pickett Ln
Fowler Ave
Town House Rd
Main St
Cherry Ln
Higganum Rd

FIGURE 2.

DURHAM MEADOWS SUPERFUND SITE ALTERNATIVE WATER SUPPLY COMPONENT OF CLEANUP

Legend

- Existing Water Main
- New Water Main - Construction 2019
- New Water Main - Construction 2020
- Parcel Boundary

Durham property lines are based on Town of Durham Assessor Maps. Middletown property lines from CT DEEP

AECOM

0 500 1,000 2,000 Feet

G:\Projects\HAZWASTE\60445033DUR\MAPS\Fig_2_RecommendedInfrastructure.mxd

APPENDIX A REQUIRED SWPCP DOCUMENTATION

(ATTACH ADDITIONAL PAGES AS NECESSARY IN ORDER TO FILL OUT AS COMPLETELY AS POSSIBLE.)

This section contains forms for the recording of documentation that must be included with this SWPCP, maintained and updated as appropriate.

CONTRACTOR'S AND SUBCONTRACTOR'S CERTIFICATION

All contractors and subcontractors that will perform actions on the Site that have the potential to cause pollution of the waters of the State or are responsible for implementing the measures identified in this SWPCP must sign this certification statement. This includes all contractors responsible for individual lots within subdivisions, regardless of lot size or disturbed area. All certifications must be added to and maintained with this SWPCP. (COPY FORM TEMPLATE SO THAT EACH CONTRACTOR CAN FILL OUT AND SIGN.)

SITE: Durham Meadows Water Main Extension Project, Middletown, CT

COMPANY NAME: Ludlow Construction Co. Inc.

ADDRESS: 19 Carmelina's Circle
Ludlow, MA 01056

BUSINESS PHONE: 413-583-2522

"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this general permit, and must comply with the terms and conditions of this general permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site."

SIGNATURE: Michael J Pio **Date:** 7-17-19

of

Name & Title: Michael J Pio, Project Manager

CONTRACTOR'S AND SUBCONTRACTOR'S CERTIFICATION

All contractors and subcontractors that will perform actions on the Site that have the potential to cause pollution of the waters of the State or are responsible for implementing the measures identified in this SWPCP must sign this certification statement. This includes all contractors responsible for individual lots within subdivisions, regardless of lot size or disturbed area. All certifications must be added to and maintained with this SWPCP. (COPY FORM TEMPLATE SO THAT EACH CONTRACTOR CAN FILL OUT AND SIGN.)

SITE: Durham Meadows Water Main Extension Project,Durham, CT

COMPANY NAME: Ludlow Construction Co. Inc.

ADDRESS: 19 Carmelina's Circle
Ludlow, MA 01056

BUSINESS PHONE: 413-583-2522

"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this general permit, and must comply with the terms and conditions of this general permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site."

SIGNATURE: Michael J Pio **Date:** 7-17-19
of
Name & Title: Michael J. Pio, Project manager

CONTRACTOR'S AND SUBCONTRACTOR'S CERTIFICATION

All contractors and subcontractors that will perform actions on the Site that have the potential to cause pollution of the waters of the State or are responsible for implementing the measures identified in this SWPCP must sign this certification statement. This includes all contractors responsible for individual lots within subdivisions, regardless of lot size or disturbed area. All certifications must be added to and maintained with this SWPCP. (COPY FORM TEMPLATE SO THAT EACH CONTRACTOR CAN FILL OUT AND SIGN.)

SITE: Durham Meadows Water Main Extension Project,Durham, CT

COMPANY NAME: _____

_____

ADDRESS: _____

_____

_____

BUSINESS PHONE: _____

"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. I understand that as a contractor or subcontractor at the site, I am authorized by this general permit, and must comply with the terms and conditions of this general permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site."

SIGNATURE: _____ **Date:** _____
of
Name & Title: _____

SEQUENCE OF MAJOR ACTIVITIES

The general proposed sequencing of major activities is described in Section 2.1. Refer to Exhibit 3 for detailed construction schedule, with intended timing of major activities, and the specific locations of the Site Activities. The table below provides a listing of the major types of construction and anticipated erosion and sediment control measures to be installed as part of the work. Contractor shall update the table below with any changes or modifications to the nature of the work or erosion and sediment controls to be installed.

Work Activity	**Description of Elements of Construction**	**Temporary E&S Controls**
Water Main Installation	Install turtle barriers per Turtle Protection Plan, install temporary E&S controls, saw cut pavement, excavate trench, install water main and associated curb stops, valves, hydrants, etc., backfill, stabilize (pave) and remove dispose of E&S controls	perimeter controls (silt fence, straw wattles, filter logs) catch basin / inlet protection street sweeping, dust control
Water Service Installation	Install turtle barriers per Turtle Protection Plan, install temporary E&S Controls, saw cut pavement or strip and stockpile topsoil, excavate trench, install water line, backfill, stabilize (pave or seeding), and remove E&S controls	perimeter controls (silt fence, straw wattles, filter logs) catch basin / inlet protection street sweeping, dust control
Stream Crossings	Install turtle barriers per Turtle Protection Plan, install temporary E&S Controls, install water diversion and excavation dewatering systems, install support of excavation, excavate trench or jacking/receiving pits, install water line, backfill trench or jacking/receiving pits, remove support of excavation and dewatering system(s), restore streambed and/or landscaped areas, remove water diversion, remove temporary E&S controls	perimeter controls (silt fence, straw wattles, filter logs) stabilized construction entrance straw wattles straw bales filter logs coffer dam/water diversion
Pressure Reducing Valve Vault	Install turtle barriers per Turtle Protection Plan, install temporary E&S Controls, install temporary construction entrance, clear and grub tank site, construct water tank and valve vault, restore/stabilize landscaped areas, pave road, remove temporary E&S controls.	perimeter controls (silt fence, straw wattles, filter logs) stabilized construction entrance straw wattles straw bales filter logs street sweeping

APPENDIX B TEMPLATE INSPECTION AND MAINTENANCE REPORTS

(COPY REPORT TEMPLATE AND FILL OUT AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AS PART OF YOUR ROUTINE INSPECTION ACTIVITIES. MAINTAIN ALL INSPECTION AND MAINTENANCE REPORTS HERE.)

Stormwater Construction Site Inspection Report

Purpose
This Stormwater Construction Site Inspection Report is designed to assist you in preparing inspection reports in accordance with Section 5 of the SWPCP.

Overview of Inspection Requirements

Areas That Need to Be Inspected
During each inspection, you must inspect the following areas of your site:

- Cleared, graded, or excavated areas of the site;
- Stormwater controls (e.g., perimeter controls, sediment basins, inlets, exit points etc.) and pollution prevention practices (e.g., pollution prevention practices for vehicle fueling/maintenance and washing, construction product storage, handling, and disposal, etc.) at the site;
- Material, waste, or borrow areas covered by the permit, and equipment storage and maintenance areas;
- Areas where stormwater flows within the site;
- Stormwater discharge points; and
- Areas where stabilization has been implemented.

What to Check For During Your Inspection
During your site inspection, you are required to check:

- Whether stormwater controls or pollution prevention practices require maintenance or corrective action, or whether new or modified controls are required;
- For the presence of conditions that could lead to spills, leaks, or other pollutant accumulations and discharges;
- Whether there are visible signs of erosion and sediment accumulation at points of discharge and to the channels and streambanks that are in the immediate vicinity of the discharge;
- If a stormwater discharge is occurring at the time of the inspection, whether there are obvious, visual signs of pollutant discharges; and
- If any permit violations have occurred on the site.

Instructions for Using This Template

The following tips for using this template will help you ensure that the minimum permit requirements are met:

- **Complete all required text fields.** Fill out all text fields. (Note: Where you do not need the number of rows provided in the template form for your inspection, you may leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)
- **Use your site map to document inspection findings.** Where you are asked for location information, reference the point on your SWPCP site map that corresponds to the requested location on the inspection form. Using the site map as a tool in this way will help you conduct efficient inspections, will assist you in evaluating problems found, and will ensure proper documentation.
- **Sign and certify each inspection report.** Each inspection report must be signed and certified by the inspector and permittee to be considered complete.
- **Include the inspection form with your SWPCP.** Once your form is complete, include a copy of the inspection form in your SWPCP.
- **Retain copies of all inspection reports with your records.** You must also retain in your records copies of all inspection reports. These reports must be retained for at least 5 years from the date of inspection.

Corrective Action Needed?
Answer "yes" if during your inspection you found any of the following conditions to be present: (1) a required E&S control was never installed, was installed incorrectly, or not in accordance with the Guidelines; (2) you become aware that the inadequacy of the E&S control has led to an exceedance of an applicable water quality standard; or (3) Corrective action for an E&S control is required as a result of a permit violation found during an inspection. If you answer "yes", you must implement the corrective action on site within seven (7)

days and incorporate it into the SWPCP within ten (10) days of the inspection. Note: You should answer "yes" if work to fix the problem from a previous inspection is still ongoing.

Notes
For each E&S control and the area immediately surrounding it, note whether the control is properly installed and whether it appears to be working to minimize sediment discharge. Describe any problem conditions you observed such as the following, and why you think they occurred as well as actions (e.g., repairs, maintenance, or corrective action) you will take or have taken to fix the problem:

1. Failure to install or to properly install a required E&S control
2. Damage or destruction to an E&S control caused by vehicles, equipment, or personnel, a storm event, or other event
3. Mud or sediment deposits found downslope from E&S controls
4. Sediment tracked out onto paved areas by vehicles leaving construction site
5. Noticeable erosion at discharge outlets or at adjacent streambanks or channels
6. Erosion of the site's sloped areas (e.g., formation of rills or gullies)
7. E&S control is no longer working due to lack of maintenance

If repairs, maintenance, or corrective action is required, briefly note the reason. If repairs, maintenance, or corrective action have been completed, make a note of the date it was completed and what was done.

CONSTRUCTION SITE INSPECTION REPORT

Durham Meadows Water Main Extension Project

Location: **Durham, CT**

USACE 404 Permit:

GZA Project No: **15.0166765.00**

TYPE OF INSPECTION: ☐ Weekly ☐ Storm Event[+] ☐ Reduced Frequency[++]
☐ Other:

Date: _____ Time: _____ [+]Within 24 hrs. of the end of a storm that generates a discharge

+Storm event info (approx): Start date/time: _____ Duration: _____ Amount of rainfall (inches): _____

++Once per month for stabilized areas.

Inspector name(s), title(s) and qualifications:

Inspector contact information:

Weather conditions (time of inspection & future outlook):

CONSTRUCTION SITE SEQUENCING AND DISTURBANCE

Describe inspection location:

Present phase of construction:

Disturbed area and ongoing work (acreage & description):

INSPECT DRAINAGE SYSTEM AND RECEIVING WATERS

Describe locations of sediment accumulation, if present; and note maintenance/repairs needed.

SURFACE WATER QUALITY

Storm water discharge from the site at the time of inspection? ☐ YES ☐ NO

Note location(s) below, and describe discharge:

Location:	Description:	Visible signs of erosion or sediment accumulation?
		☐ YES ☐ NO
		☐ YES ☐ NO
		☐ YES ☐ NO
		☐ YES ☐ NO

PROJECT TEAM

PROPERTY OWNER
Attn:
Phone:
Email:

CONTRACTOR
Attn:
Phone:
Email:
Cell:

ENVIRONMENTAL CONSULTANT
Attn:
Phone:
Email:

OTHER
Attn:
Phone:
Email:

SUBCONTRACTOR
Attn:
Phone:
Email:

OTHER
Attn:
Phone:
Email:

TEMPORARY EROSION AND SEDIMENTATION CONTROLS (TESC)

Installed and functioning per the SWPCP? ☐ YES ☐ NO ☐ N/A

If not, explain necessary repairs or other maintenance to be taken for each of the following categories. Detail what needs to be done, in what location, and what has been corrected since the last monitoring inspection.

- ☐ Erosion prevention (stabilize exposed soils):
- ☐ Runoff control (direct storm water):
- ☐ Sediment control (manage sediment/sediment-laden storm water):
- ☐ Concrete truck or other washout areas:
- ☐ Construction entrances:

Are any corrective actions required?* ☐ YES ☐ NO If so, please describe:

** Note: The permit differentiates between conditions requiring repairs and maintenance, and those requiring corrective action. Corrective actions are triggered only for specific, more serious conditions and require a corrective action form be filled out. Please refer to Part 5 of the CGP for additional information.*

PERMANENT EROSION AND SEDIMENTATION CONTROLS (PESC)

Disturbed areas must have a uniform perennial vegetative cover with 85% density, or equivalent physical stabilization, to be considered permanently stabilized (per the SWPCP).

Installed and functioning per the SWPCP? ☐ YES ☐ NO ☐ N/A

If not, explain what was not performed correctly (construction/stabilization). Detail what/where needs to be corrected, and what has been corrected since the last monitoring inspection.

SUMMARY

In the judgement of the Qualified Inspector, the Site is: ☐ In compliance ☐ Out of compliance

with the terms and conditions of the SWPCP and General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.

IF THE SITE IS OUT OF COMPLIANCE, PROCEED TO THE CORRECTIVE ACTION LOG FORM.

CERTIFICATION:

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute."

Inspector:	Permittee or his/her authorized representative:
SIGNATURE: _____	SIGNATURE: _____
PRINTED NAME: _____	PRINTED NAME: _____
TITLE: _____	TITLE: _____
AFFILIATION: _____	AFFILIATION: _____
ADDRESS: _____	ADDRESS: _____
PHONE: _____	PHONE: _____
DATE: _____	DATE: _____

Corrective Action Log Form

Purpose
This Corrective Action Log Form is designed to assist you in preparing corrective action reports.

Instructions for Using This Log Form

- **Complete all required text fields.** Fill out all text fields. (Note: Where you do not need the number of rows provided in the corrective action report form, you leave those rows blank. Or, if you need more space to document your findings, you may add an additional sheet.)
- **Include the corrective action report form with your SWPCP.** Once your form is complete, make sure to include a copy of the corrective action report form in your SWPCP.
- **Retain copies of all corrective action reports with your records.** You must retain copies of your corrective action reports in your records. These reports must be retained for at least 5 years from the date construction is completed.

Name of Project
Enter the name for the project.

Today's Date
Enter the date you completed this form.

Date/Time Problem First Discovered
Specify the date on which the triggering condition was first discovered. Also specify the time of the discovery.

Name/Contact Information
Provide the individual's name, title, and contact information as directed in the form.

Description of the Site Condition
Provide a summary description of the condition you found that triggered corrective action and the specific location where it was found. Be as specific as possible about the location; it is recommended that you refer to a precise point on your site map. If you have already provided this explanation in an inspection report, you can refer to that report.

Deadline for Completing Corrective Action
This deadline is fixed in CGP Section 5.(b)(4)(B)(iii). For all projects, the deadline is either: (1) within 24 hours from the date you discovered the problem for non-engineered corrective actions, or (2) within seven (7) days for engineered corrective actions. Non-engineered and engineered corrective actions are defined within the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and are listed on the back of the Corrective Action Log Form.

CORRECTIVE ACTION LOG FORM

Durham Meadows Water Main Extension Project

Location: **Durham, CT**

GZA Project No: **15.0166765.00**

Date: _____ Time: _____

Inspector name(s), title(s) and qualifications:

Inspector contact information:

Provide a brief description of the problem, and date/time problem first discovered:	Recommended control (see below):	Date control was implemented:

Deadline for completing corrective action:
Non-engineered corrective actions (as identified in the Guidelines) shall be implemented on site within 24 hours and incorporated into a revised SWPCP within three (3) calendar days of the date of inspection unless another schedule is specified in the Guidelines.

Engineered corrective actions (as identified in the Guidelines) shall be implemented on site within seven (7) days and incorporated into a revised SWPCP within ten (10) days of the date of inspection unless another schedule is specified in the Guidelines or is approved by DEEP.

Select control(s) from the following list:

Engineered controls

1. Land Grading
2. Permanent TRM
3. Retaining Walls
4. Riprap
5. Gabions
6. Permanent Slope Drain
7. Channel Grade Stabilization Structure
8. Temporary Lined Chute
9. Temporary Pipe Slope Drain
10. Vegetated Waterway
11. Temporary Lined Channel
12. Permanent Lined Waterway
13. Temporary Stream Crossing
14. Temporary Diversion
15. Permanent Diversion
16. Subsurface Drain
17. Detention Basin
18. Level Spreader
19. Outlet Protection
20. Stone Check Dam
21. Temporary Sediment Basin
22. Dewatering of Earth Materials

Non-engineered controls

23. Topsoiling
24. Surface Roughening
25. Dust Control
26. Temporary Seeding
27. Permanent Seeding
28. Sodding
29. Landscape Planting
30. Temporary Soil Protection
31. Mulching
32. Temporary Erosion Control Blanket
33. Stone Slope Protection
34. Temporary Fill Berm
35. Water Bar
36. Temporary Sediment Trap
37. Hay Bale Barrier
38. Silt Fence
39. Turbidity Curtain
40. Vegetative Filter
41. Construction Entrance
42. Pump Intake and Outlet Protection
43. Pumping Settling Basin
44. Portable Sediment Tank

APPENDIX C GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES

APPENDIX D ENDANGERED AND THREATENED SPECIES DOCUMENTATION

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

July 28, 2017

Mr. Sean Maxwell
AECOM, Inc.
250 Apollo Drive
Chelmsford, MA 01824
sean.maxwell@aecom.com

Project: Durham Meadows Waterline Remediation Meter Vault and Waterline along route 17 and Acorn Drive in Middletown and Middlefield, Connecticut
NDDB Determination No.: 201705726

Dear Sean,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the proposed Durham Meadows Waterline Remediation Meter Vault and Waterline along route 17 and Acorn Drive in Middletown and Middlefield, Connecticut. According to our information there are extant populations of State Special Concern *Glyptemys insculpta* (wood turtle) in the area where this work will occur. Thank you for including in your NDDB review application materials the protection strategies that will be in place for this turtle. You have indicated that you will implement the following conservation protocols:

Recommended Box Turtle Protection Strategies:

If any work will occur when these turtles are active (April 1st to September 30th) the following protection strategies will be implemented in order to protect these turtles:

- Silt fencing will be installed around the work area prior to construction, please avoid erosion control products that are embedded with netting as these can be fatal to wildlife;

- Where possible, you will avoid installing sediment and erosion control materials from late August through September and from March through mid-May. These two time periods are when amphibians and reptiles are most active, moving to and from wetlands to breed;

- After silt fencing is installed and prior to construction, a sweep of the work area will be conducted to look for turtles;

- Workers will be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);

- Any turtles that are discovered will be moved, unharmed, to an area immediately outside of the fenced area, and position in the same direction that it was walking;

- No vehicles or heavy machinery will be parked in any turtle habitat;

- Work conducted during early morning and evening hours will occur with special care not to harm basking or foraging individuals; and

- All silt fencing will be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

- Stockpiles of soil will be cordoned off with silt fencing so turtles do not attempt to try and nest in them.

Thank you for implementing these protection measures for this turtle. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by July 28, 2019.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

March 12, 2016

Mr. Sean Maxwell
AECOM, Inc.
250 Apollo Drive
Chelmsford, MA 01824
sean.maxwell@aecom.com

Project: Durham Meadows Water System in Street Rights-of-Way and Two Stream Crossings at Allyn Brook and Hersig Brook in Durham, Connecticut
NDDB Determination No.: 201601369

Dear Sean,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the proposed Durham Meadows Water System in street rights-of-way and two stream crossings at Allyn Brook and Hersig Brook in Durham, Connecticut. According to our information there are extant populations of State Special Concern *Cottus cognatus* (slimy sculpin) and *Glyptemys insculpta* (wood turtle) in much of the area where this work will occur. We also have several wetland dependent species in the Allyn Brook Crossing area and special care should be taken if work will occur during April through October to minimize impacts and utilize best management practices to prevent sedimentation and soil erosion.

Slimy Sculpin
Please be advised that a DEEP Fisheries Biologist will review the permit applications you may submit to DEEP regulatory programs to determine if your project could adversely affect slimy sculpin. DEEP Fisheries Biologists are routinely involved in pre-application consultations with regulatory staff and applicants in order to identify potential fisheries issues and work with applicants to mitigate negative effects, including to endangered species. If you have not already talked with a Fisheries Biologist about your project, you may contact the Permit Analyst assigned to process your application for further information, including the contact information for the Fisheries Biologist assigned to review your application.

Wood Turtle: Habitat destruction, degradation or alteration and fragmentation all threaten Wood Turtle populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. Disturbances to stream and riparian habitats and activities that change the hydrology of the stream, the physical habitat itself and water quality are all potentially detrimental activities for the Wood Turtle. Although Wood Turtles are found within forested areas, they prefer areas that do not have a fully closed canopy cover. The greatest concern during projects occurring in wood turtle habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency that motorized vehicles enter Wood Turtle habitat would be beneficial in minimizing direct mortality of adults.

Recommended Box Turtle Protection Strategies:

If any work will occur when these turtles are active (April 1st to September 30th) I recommend the additional following protection strategies in order to protect these turtles:

- Silt fencing should be installed around the work area prior to construction, please avoid erosion control products that are embedded with netting as these can be fatal to wildlife;

- Where possible, AVOID installing sediment and erosion control materials from late August through September and from March through mid-May. These two time periods are when amphibians and reptiles are most active, moving to and from wetlands to breed;

- After silt fencing is installed and prior to construction, a sweep of the work area should be conducted to look for turtles;

- Workers should be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);

- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and position in the same direction that it was walking;

- No vehicles or heavy machinery should be parked in any turtle habitat;

- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and

- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

- Stockpiles of soil should be cordoned off with silt fencing so turtles do not attempt to try and nest in them.

- Use native plantings if possible. Any plantings should be composed of species native to northeastern United States and appropriate for use in riparian habitat.

Thank you for implementing these protection measures for this turtle. I have attached fact sheets for this turtle so that you may educate project workers. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by March 12, 2017.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

March 8, 2016

Mr. Sean Maxwell
AECOM, Inc.
250 Apollo Drive
Chelmsford, MA 01824
sean.maxwell@aecom.com

Project: Durham Meadows Waterline Remediation with Water System and Tank Installation off Talcott Ridge Drive in Middletown, Connecticut
NDDB Determination No.: 201601361

Dear Sean,

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map provided for the proposed Durham Meadows Waterline Remediation with Water System and Tank Installation off Talcott Ridge Drive in Middletown, Connecticut. According to our information there are extant populations of State Special Concern *Glyptemys insculpta* (wood turtle) in much of the area where this work will occur. We also have several wetland dependent species in the Allyn Brook Crossing area and special care should be taken if work will occur during April through October to minimize impacts and utilize best management practices to prevent sedimentation and soil erosion.

Wood Turtle: Habitat destruction, degradation or alteration and fragmentation all threaten Wood Turtle populations. Turtles are also particularly vulnerable to any activity that consistently reduces adult survivorship. Disturbances to stream and riparian habitats and activities that change the hydrology of the stream, the physical habitat itself and water quality are all potentially detrimental activities for the Wood Turtle. Although Wood Turtles are found within forested areas, they prefer areas that do not have a fully closed canopy cover. The greatest concern during projects occurring in wood turtle habitat are turtles being run over and crushed by mechanized equipment. Reducing the frequency that motorized vehicles enter Wood Turtle habitat would be beneficial in minimizing direct mortality of adults.

Recommended Protection Strategies:

If any work will occur when these turtles are active (April 1st to September 30th) I recommend the additional following protection strategies in order to protect these turtles:

- Silt fencing should be installed around the work area prior to construction, please avoid erosion control products that are embedded with netting as these can be fatal to wildlife;

- Where possible, AVOID installing sediment and erosion control materials from late August through September and from March through mid-May. These two time periods are when amphibians and reptiles are most active, moving to and from wetlands to breed;

- After silt fencing is installed and prior to construction, a sweep of the work area should be conducted to look for turtles;

- Workers should be apprised of the possible presence of turtles, and provided a description of the species (http://www.ct.gov/dep/cwp/view.asp?a=2723&q=473472&depNav_GID=1655);

- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the fenced area, and position in the same direction that it was walking;

- No vehicles or heavy machinery should be parked in any turtle habitat;

- Work conducted during early morning and evening hours should occur with special care not to harm basking or foraging individuals; and

- All silt fencing should be removed after work is completed and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

- Stockpiles of soil should be cordoned off with silt fencing so turtles do not attempt to try and nest in them.

- Use native plantings if possible. Any plantings should be composed of species native to northeastern United States and appropriate for use in riparian habitat.

Thank you for implementing these protection measures for this turtle. I have attached fact sheets for this turtle so that you may educate project workers. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by March 8, 2017.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

WILDLIFE IN CONNECTICUT

STATE SPECIES OF SPECIAL CONCERN

Wood Turtle

Glyptemys insculpta

Background

Wood turtles may be found throughout Connecticut, but they have become increasingly rare due to their complex habitat needs. Wood turtles also have become more scarce in Fairfield County due to the fragmentation of suitable habitat by urban development.

Range

Wood turtles can be found across the northeastern United States into parts of Canada. They range from Nova Scotia through New England, south into northern Virginia, and west through the Great Lakes region into Minnesota.

© PAUL J. FUSCO

Description

The scientific name of the wood turtle, *Glyptemys insculpta*, refers to the deeply sculptured or chiseled pattern found on the carapace (top shell). This part of the shell is dark brown or black and may have an array of faint yellow lines radiating from the center of each chiseled, pyramid-like segment due to tannins and minerals accumulating between ridges. These segments of the carapace, as well as those of the plastron (bottom shell), are called scutes. The carapace also is keeled, with a noticeable ridge running from front to back. The plastron is yellow with large dark blotches in the outer corners of each scute. The black or dark brown head and upper limbs are contrasted by brighter pigments ranging from red and orange to a pale yellow on the throat and limb undersides. Orange hues are most typical for New England's wood turtles. The hind feet are only slightly webbed, and the tail is long and thick at the base. Adults weigh approximately 1.5 to 2.5 pounds and reach a length of 5 to 9 inches.

Habitat and Diet

Wood turtles use aquatic and terrestrial habitats at different times of the year. Their habitats include rivers and large streams, riparian forests (adjacent to rivers), wetlands, hayfields, and other early successional habitats. Terrestrial habitat that is usually within 1,000 feet of a suitable stream or river is most likely used. Preferred stream conditions include moderate flow, sandy or gravelly bottoms, and muddy banks.

Wood turtles are omnivorous and opportunistic. They are not picky eaters and will readily consume slugs, worms, tadpoles, insects, algae, wild fruits, leaves, grass, moss, and carrion.

Life History

From late spring to early fall, wood turtles can be found roaming their aquatic or terrestrial habitats. However, once temperatures drop in autumn, the turtles retreat to rivers and large streams for hibernation. The winter

is spent underwater, often tucked away below undercut riverbanks within exposed tree roots. Dissolved oxygen is extracted from the water, allowing the turtle to remain submerged entirely until the arrival of spring. Once warmer weather sets in, the turtles will become increasingly more active, eventually leaving the water to begin foraging for food and searching for mates. Travel up or down stream is most likely, as turtles seldom stray very far from their riparian habitats.

Females nest in spring to early summer, depositing anywhere from 4 to 12 eggs into a nest dug out of soft soil, typically in sandy deposits along stream banks or other areas of loose soil. The eggs hatch in late summer or fall and the young turtles may either emerge or remain in the nest for winter hibernation. As soon as the young turtles hatch, they are on their own and receive no care from the adults.

Turtle eggs and hatchlings are heavily preyed upon by a wide variety of predators, ranging from raccoons to birds and snakes. High rates of nest predation and hatchling mortality, paired with the lengthy amount of time it takes for wood turtles to reach sexual maturity, present a challenge to maintaining sustainable populations. Wood turtles live upwards of 40 to 60 years, possibly more.

Conservation Concerns

Loss and fragmentation of habitat are the greatest threats to wood turtles. Many remaining populations in Connecticut are low in numbers and isolated from one another by human-dominated landscapes. Turtles forced to venture farther and farther from appropriate habitat to find mates and nesting sites are more likely to be run over by cars, attacked by predators, or collected by people as pets.

Other sources of mortality include entanglements in litter and debris left behind by people, as well as strikes from mowing equipment used to maintain hayfields and other early successional habitats.

The wood turtle is imperiled throughout a large portion of its range and was placed under international trade regulatory protection through the Convention on International Trade in Endangered Species (CITES) in 1992. Wood turtles also have been included on the International Union for Conservation of Nature's (IUCN) Red List as a vulnerable species since 1996. They are listed as a species of special concern in Connecticut and protected by the Connecticut Endangered Species Act.

How You Can Help

- *Conserve riparian habitat. Maintaining a buffer strip of natural vegetation (minimum of 100 feet) along the banks of streams and rivers will protect wood turtle habitat and also help improve the water quality of the stream system. Stream banks that are manicured (cleared of natural shrubby and herbaceous vegetation) or armored by rip rap or stone walls will not be used by wood turtles or most other wildlife species.*
- *Do not litter. Wood turtles and other wildlife may accidentally ingest or become entangled in garbage and die.*
- *Leave turtles in the wild. They should never be kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed reduces the ability of the population to maintain itself.*
- *Never release a captive turtle into the wild. It probably would not survive, may not be native to the area, and could introduce diseases to wild populations.*
- *As you drive, watch out for turtles crossing the road. Turtles found crossing roads in June and July are often pregnant females. They should* ***not*** *be collected but can be helped on their way. Without creating a traffic hazard or compromising safety, drivers are encouraged to avoid running over turtles that are crossing roads. Also, still keeping safety precautions in mind, you may elect to pick up turtles from the road and move them onto the side in the direction they are headed. Never relocate a turtle to another area that is far from where you found it.*
- *Learn more about turtles and their conservation concerns, and educate others.*
- *If you see a wood turtle, leave it in the wild, take a photograph, record the location where it was seen, and contact the Connecticut Department of Environmental Protection (DEP) Wildlife Division at dep.wildlife@ct.gov, or call 860-424-3011 to report your observation.*

State of Connecticut
Department of Environmental Protection
Bureau of Natural Resources
Wildlife Division
www.ct.gov/dep

4/2011

Natural Diversity Data Base Areas

DURHAM, CT

September 2015

State and Federal Listed Species & Significant Natural Communities

Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources . Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

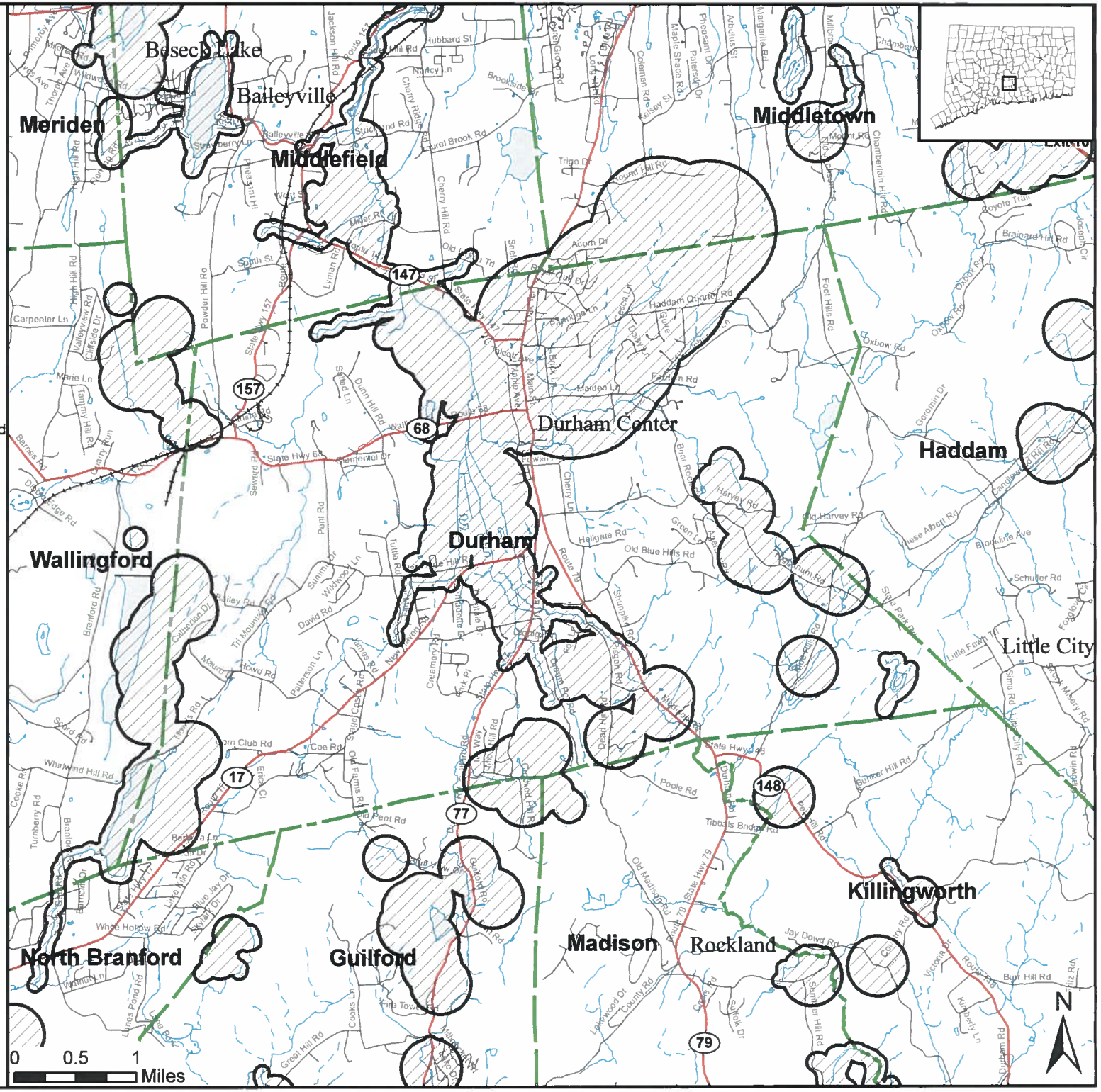
This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

www.ct.gov/deep/nddbrequest

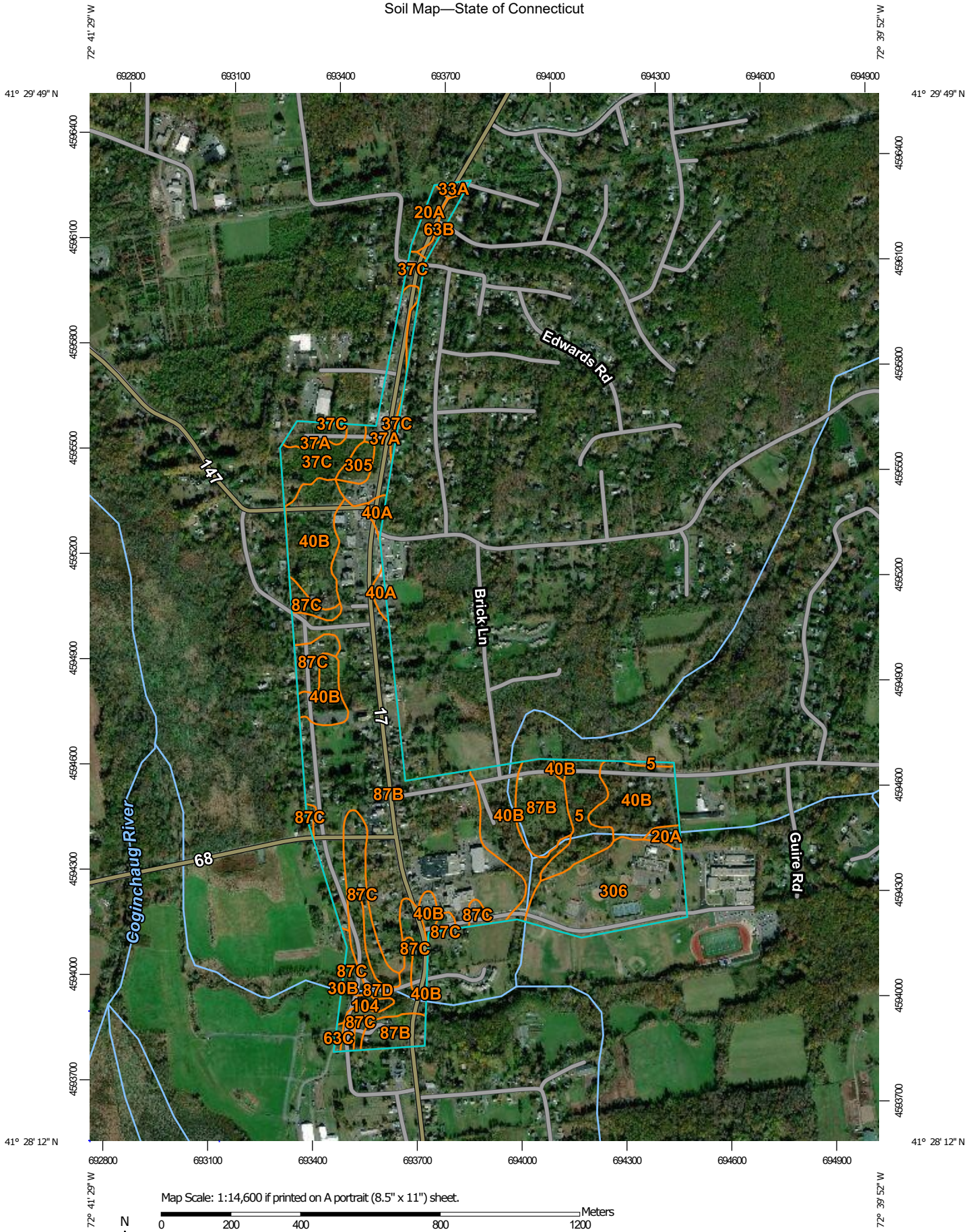
Use the CTECO Interactive Map Viewers at www.cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St., Hartford CT 06106
Phone (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



APPENDIX E SOILS MAP



Map Scale: 1:14,600 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 200 400 800 1200

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 18, Dec 6, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 30, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5	Wilbraham silt loam, 0 to 3 percent slopes	8.4	3.8%
20A	Ellington silt loam, 0 to 5 percent slopes	3.3	1.5%
30B	Branford silt loam, 3 to 8 percent slopes	0.0	0.0%
33A	Hartford sandy loam, 0 to 3 percent slopes	0.7	0.3%
37A	Manchester gravelly sandy loam, 0 to 3 percent slopes	11.5	5.2%
37C	Manchester gravelly sandy loam, 3 to 15 percent slopes	8.5	3.9%
40A	Ludlow silt loam, 0 to 3 percent slopes	1.8	0.8%
40B	Ludlow silt loam, 3 to 8 percent slopes	38.2	17.4%
63B	Cheshire fine sandy loam, 3 to 8 percent slopes	1.2	0.5%
63C	Cheshire fine sandy loam, 8 to 15 percent slopes	0.4	0.2%
87B	Wethersfield loam, 3 to 8 percent slopes	93.6	42.6%
87C	Wethersfield loam, 8 to 15 percent slopes	18.1	8.2%
87D	Wethersfield loam, 15 to 25 percent slopes	7.6	3.4%
104	Bash silt loam	1.7	0.8%
305	Udorthents-Pits complex, gravelly	2.0	0.9%
306	Udorthents-Urban land complex	23.0	10.4%
Totals for Area of Interest		**219.9**	**100.0%**

APPENDIX F LIMITATIONS

LIMITATIONS

USE OF PLAN

1. GZA GeoEnvironmental, Inc. (GZA) prepared this Plan on behalf of, and for the exclusive use of, our Client for the stated purpose(s) and location(s) identified in the Plan. However, GZA acknowledges and agrees that the Plan may be conveyed to other parties associated with the implementation of the Plan. Use of this Plan, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the Plan, for any use, without our written permission, shall be at the party's sole risk, and without any liability to GZA.
2. This Plan has been prepared for the exclusive use of LUDLOW CONSTRUCTION CO., INC. for specific application to the Durham Meadows Water Main Extension Project located in Durham, CT, in accordance with generally accepted engineering practices. The Site is defined as the Project or Facility to which this Plan applies.

STANDARD OF CARE

3. The information contained in this Plan was prepared in accordance with practices and standard of care typically exercised by members of our profession at the time of our services and under conditions similar to those we encountered while performing our services. No warranty, express or implied, is made.
4. Any observations described in this Plan were made under the conditions stated herein. Any conclusions presented in this Plan were based solely upon the services described, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by Client.
5. In preparing this Plan, GZA relied upon certain information made available by public agencies, the Client, and/or Others, and on information contained in the files of state and/or local agencies available to GZA at the time of the services. Although there may have been some degree of overlap in the information provided by these various sources, GZA did not attempt to independently verify the accuracy or completeness of this information.
6. Observations made of the Site and of structures on the Site are indicated within the Plan. Where access to portions of the Site or to structures on the Site was unavailable or limited, GZA renders no opinion on its condition.
7. GZA prepared this Plan based on information made available to GZA and observations made while preparing the Plan. Site conditions are subject to change, so conditions at any given time could differ from the conditions described in the Plan.

ADDITIONAL INFORMATION

8. In the event that the Client or others authorized to use this Plan obtain information on issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify this Plan.

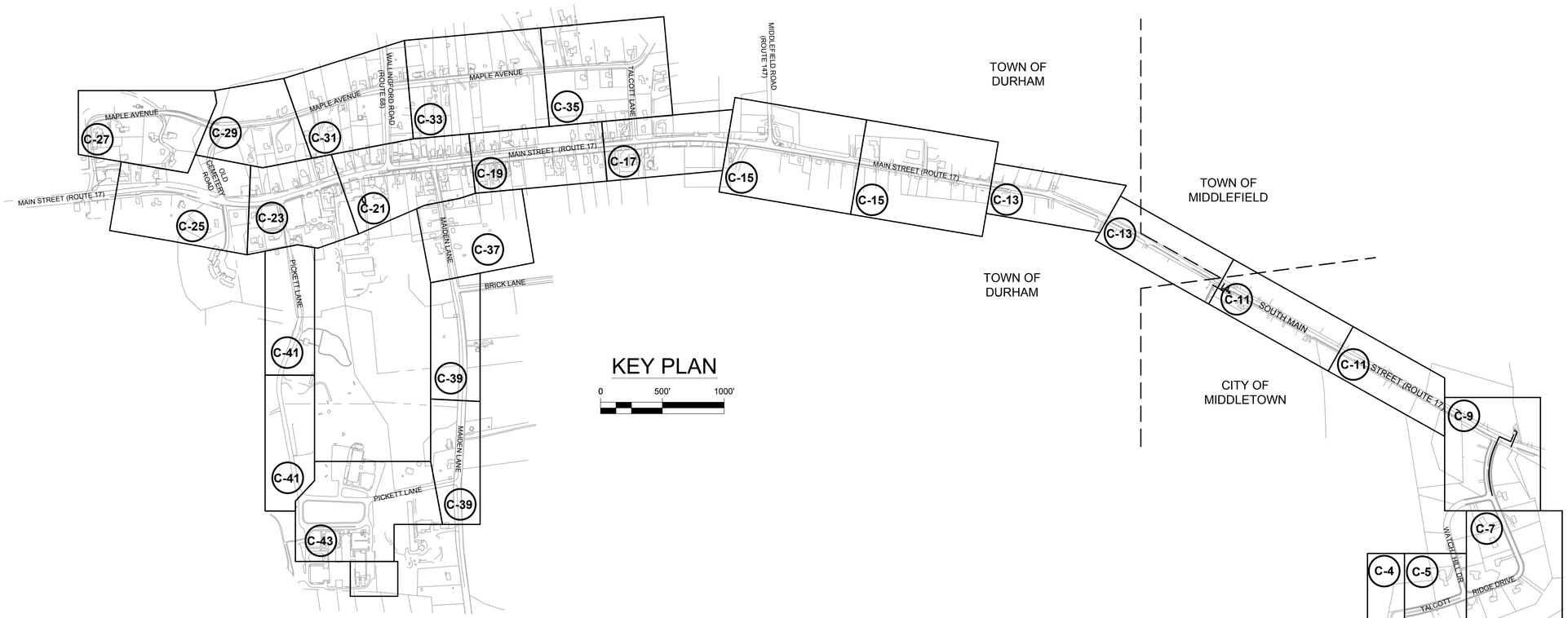
EXHIBITS

SITE PLAN / EROSION AND SEDIMENT CONTROL PLAN

The Erosion and Sediment Control Plan was prepared by Others. Various site management practices shall be decided by the Contractor during construction and are likely to change during the course of construction. **The following list of items must be added to or updated on the Erosion and Sediment Control Plan(s) by the Contractor on site, if applicable.** Changes on site during the course of construction must also be updated on the Erosion and Sediment Control Plans. The following list is not intended to be all inclusive and the Contractor is directed to the Construction General Permit (CGP) for more information.

The Contractor shall indicate on the Erosion and Sediment Control Plan the areas that have reached final stabilization.

- ☐ Materials/equipment storage areas including stockpiles;
- ☐ Area(s) of soil disturbance (note phasing);
- ☐ Locations of major structural controls (BMPs) and stabilization practices (both temporary and permanent);
- ☐ Locations where vehicles will exit onto paved roads and stabilized construction entrance(s)/exit(s);
- ☐ Locations of storm water and dewatering discharges to a surface water;
- ☐ Areas that have reached final stabilization;
- ☐ Locations of portable toilets;
- ☐ Locations of fuel tanks;
- ☐ Limits of staging areas;
- ☐ Waste storage areas (dumpsters, chemical and other liquid storage areas, etc.);
- ☐ Designated area for onsite vehicle/equipment maintenance;
- ☐ Designated area for onsite vehicle/equipment washout;
- ☐ Designated area for onsite concrete truck washout;
- ☐ Designated area for onsite washout and cleanout of any chemicals or construction materials; and
- ☐ Updates regarding controls used to reduce pollutants from construction or waste materials expected to be stored on site.



KEY PLAN

0 500' 1000'

C-1 - PLAN SHEET NUMBER

REFER TO SHEET G-2 FOR PROFILE SHEET NUMBERS

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

REVISIONS

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-3600

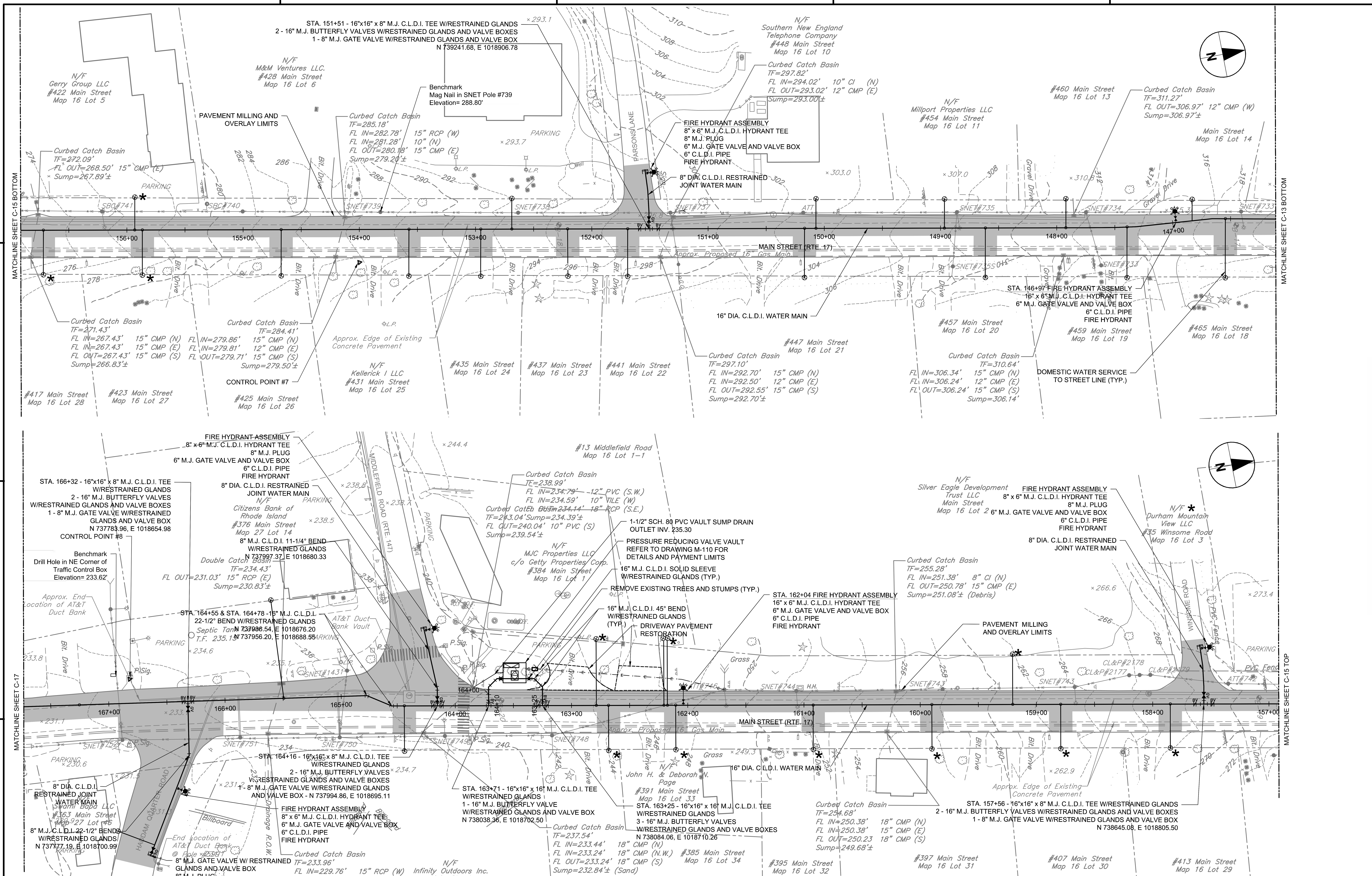
EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

CITY OF MIDDLETOWN & TOWN OF
KEY PLAN
GENERAL

PROJECT NO:	60275749
CAD DWG FILE:	G-DUR-004
DESIGNED BY:	NAV
DRAWN BY:	NAV
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	1" = 500'

G-4

ANSI D – 22-Jan-18



NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO INSTALLATION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATION DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. LOCATION OF AT&T DUCT BANK TO BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION.

NOTES CONTINUED:

4. ALL TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. ALL TRAFFIC SIGNAL LOOP DETECTORS MUST BE REPAIRED WITHIN 24 HOURS OF BEING DAMAGED OR DISTURBED.
5. WATER SERVICE PIPES CROSSING UNDER SIDEWALKS ARE TO BE INSTALLED BY EARTH PIERCING ("HOLE HAWG") TRENCHLESS METHODS SO AS NOT TO DISTURB THE EXISTING SIDEWALKS.
6. * - PRESSURE REDUCING VALVE REQUIRED FOR THESE WATER SERVICES WHEN CONNECTED TO A BUILDING AND PLACED IN SERVICE

SCALE: 1" = 40'

0 40' 80'

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				REVISIONS

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

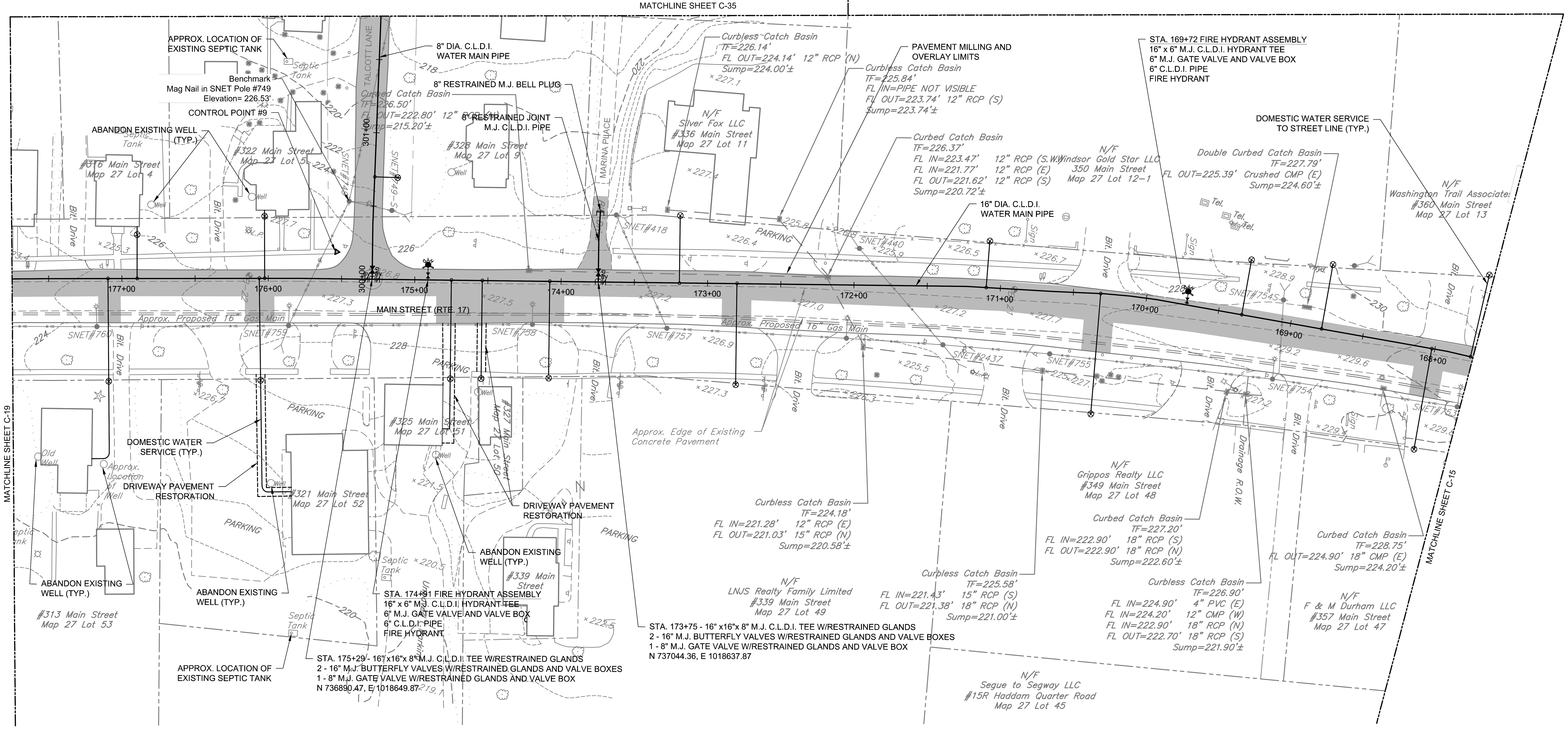
PLAN - MAIN STREET (ROUTE

STA. 146+11 TO 167+73

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-015
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-15

ANSI D — 22-Mar-18



MATCHLINE SHEET C-35
APPROX. LOCATION OF EXISTING SEPTIC TANK
Benchmark Mag Nail in SNET Pole #749 Elevation= 226.53'
CONTROL POINT #9
ABANDON EXISTING WELL (TYP.)
8" DIA. C.L.D.I. WATER MAIN PIPE
8" RESTRAINED M.J. BELL PLUG
8" RESTRAINED JOINT M.J. C.L.D.I. PIPE
TALCOTT LANE
MARINA PLACE
Curbless Catch Basin TF=226.14' FL OUT=224.14' 12" RCP (N) Sump=224.00'±
PAVEMENT MILLING AND OVERLAY LIMITS
Curbless Catch Basin TF=225.84' FL IN=PIPE NOT VISIBLE FL OUT=223.74' 12" RCP (S) Sump=223.74'±
Curbed Catch Basin TF=226.37' FL IN=223.47' 12" RCP (S.W.) FL IN=221.77' 12" RCP (E) FL OUT=221.62' 12" RCP (S) Sump=220.72'±
STA. 169+72 FIRE HYDRANT ASSEMBLY 16" x 6" M.J. C.L.D.I. HYDRANT TEE 6" M.J. GATE VALVE AND VALVE BOX 6" C.L.D.I. PIPE FIRE HYDRANT
DOMESTIC WATER SERVICE TO STREET LINE (TYP.)
N/F Silver Fox LLC #336 Main Street Map 27 Lot 11
N/F Windsor Gold Star LLC 350 Main Street Map 27 Lot 12-1
Double Curbed Catch Basin TF=227.79' FL OUT=225.39' Crushed CMP (E) Sump=224.60'±
N/F Washington Trail Associates #360 Main Street Map 27 Lot 13
16" DIA. C.L.D.I. WATER MAIN PIPE
#316 Main Street Map 27 Lot 4
#322 Main Street Map 27 Lot 5
#328 Main Street Map 27 Lot 9
MAIN STREET (RTE. 17)
Approx. Proposed 16" Gas Main
177+00 176+00 175+00 174+00 173+00 172+00 171+00 170+00 169+00 168+00
PARKING
MATCHLINE SHEET C-19
MATCHLINE SHEET C-15
DOMESTIC WATER SERVICE (TYP.)
DRIVEWAY PAVEMENT RESTORATION
#325 Main Street Map 27 Lot 51
#327 Main Street Map 27 Lot 50
#321 Main Street Map 27 Lot 52
Approx. Edge of Existing Concrete Pavement
N/F Grippos Realty LLC #349 Main Street Map 27 Lot 48
Curbless Catch Basin TF=224.18' FL IN=221.28' 12" RCP (E) FL OUT=221.03' 15" RCP (N) Sump=220.58'±
Curbed Catch Basin TF=227.20' FL IN=222.90' 18" RCP (S) FL OUT=222.90' 18" RCP (N) Sump=222.60'±
Curbed Catch Basin TF=228.75' FL OUT=224.90' 18" CMP (E) Sump=224.20'±
Drainage R.O.W.
ABANDON EXISTING WELL (TYP.)
#339 Main Street
N/F LNJS Realty Family Limited #339 Main Street Map 27 Lot 49
Curbless Catch Basin TF=225.58' FL IN=221.43' 15" RCP (S) FL OUT=221.38' 18" RCP (N) Sump=221.00'±
Curbless Catch Basin TF=226.90' FL IN=224.90' 4" PVC (E) FL IN=224.20' 12" CMP (W) FL IN=222.90' 18" RCP (N) FL OUT=222.70' 18" RCP (S) Sump=221.90'±
N/F F & M Durham LLC #357 Main Street Map 27 Lot 47
#313 Main Street Map 27 Lot 53
STA. 174+91 FIRE HYDRANT ASSEMBLY 16" x 6" M.J. C.L.D.I. HYDRANT TEE 6" M.J. GATE VALVE AND VALVE BOX 6" C.L.D.I. PIPE FIRE HYDRANT
STA. 173+75 - 16" x16"x 8" M.J. C.L.D.I. TEE W/RESTRAINED GLANDS 2 - 16" M.J. BUTTERFLY VALVES W/RESTRAINED GLANDS AND VALVE BOXES 1 - 8" M.J. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX N 737044.36, E 1018637.87
STA. 175+29 - 16"x16"x 8" M.J. C.L.D.I. TEE W/RESTRAINED GLANDS 2 - 16" M.J. BUTTERFLY VALVES W/RESTRAINED GLANDS AND VALVE BOXES 1 - 8" M.J. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX N 736890.47, E 1018649.87
N/F Segue to Segway LLC #15R Haddam Quarter Road Map 27 Lot 45

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATION DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. ALL TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. TRAFFIC LOOP DETECTORS DAMAGED DURING CONSTRUCTION MUST BE REPAIRED WITHIN 24 HOURS OF BEING DAMAGED.
4. WATER SERVICE PIPES CROSSING UNDER SIDEWALKS ARE TO BE INSTALLED BY EARTH PIERCING ("HOLE HAWG") TRENCHLESS METHODS SO AS NOT TO DISTURB THE EXISTING SIDEWALKS.
5. REFER TO DRAWING C-36 FOR TALCOTT LANE PROFILE VIEW.

SCALE: 1" = 40'

0 40' 80'

ANSI D – 22–Mar–18

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

REVISIONS

AECOM, INC. 500 ENTERPRISE DRIVE ROCKY HILL, CT 06067 PHONE (860) 263-5800

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

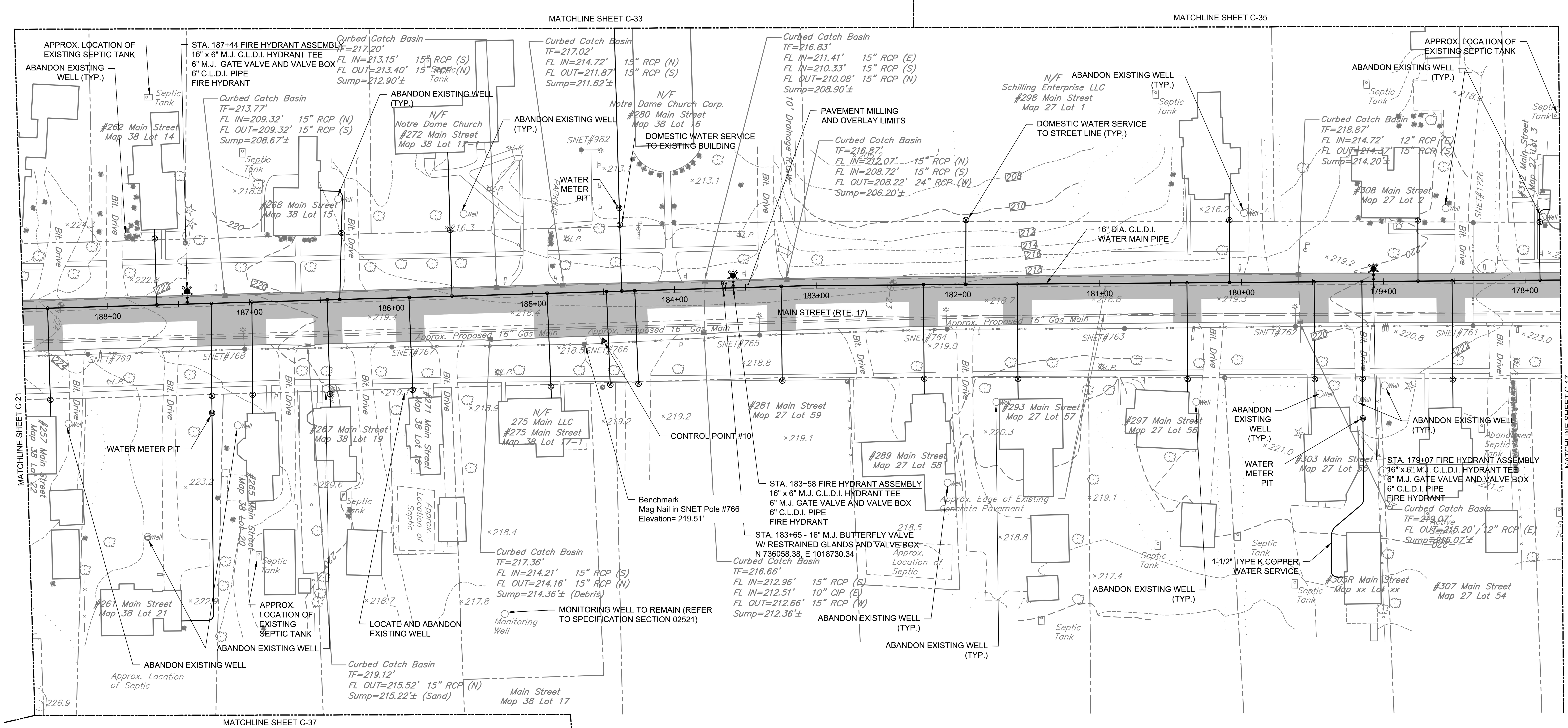
TOWN OF DURHAM

PLAN - MAIN STREET (ROUTE 17)

STA. 167+73 TO STA.177+75

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-017
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-17



NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATION DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. ALL TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION AND ALL TRAFFIC SIGNAL LOOP DETECTORS MUST BE REPAIRED WITHIN 24 HOURS OF BEING DAMAGED.
4. WATER SERVICE PIPES CROSSING UNDER SIDEWALKS ARE TO BE INSTALLED BY EARTH PIERCING ("HOLE HAWG") TRENCHLESS METHODS SO AS NOT TO DISTURB THE EXISTING SIDEWALKS.

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

REVISIONS

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

PLAN - MAIN STREET (ROUTE

STA. 177+75 TO STA. 188+60

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-019
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-19

ANSI D – 22–Mar–18

MATCHLINE SHEET C-31

MATCHLINE SHEET C-33

MATCHLINE SHEET C-19

MATCHLINE SHEET C-23

MATCHLINE SHEET C-37

Curbed Catch Basin
TF=226.42'
FL IN=222.42' 12" CMP (N)
FL IN=221.92 15" CMP (E)
FL OUT=221.92' 15" RCP (S)
Sump=221.82'± (Debris)

PAVEMENT MILLING AND OVERLAY LIMITS

ABANDON EXISTING WELL (TYP.)

APPROX. LOCATION OF EXISTING SEPTIC TANK

APPROXIMATE LIMITS OF EXISTING REINFORCED CONCRETE BASE

#208 Main Street
Map 38 Lot 55

N/F
Church Basement Enterprises llc
#216 Main Street
Map 38 Lot 54

PAVEMENT MILLING AND OVERLAY LIMITS

ABANDON EXISTING WELL (TYP.)
#220 Main Street
Map 38 Lot 57

WALLINGFORD RD (RTE. 68)

United Churches Corporation
#228R Main Street
Map 38 Lot 6

CONTROL POINT #11

12" DIA. C.L.D.I. WATER MAIN PIPE

ABANDON EXISTING WELL (TYP.)

16" DIA. C.L.D.I. WATER MAIN PIPE

ABANDON EXISTING WELL (TYP.)

N/F
United Churches Corporation
#236 Main Street
Map 38 Lot 7

PARKING

Curbed Catch Basin
TF=232.78'
FL IN=228.33' 12" RCP (S.E.)
FL OUT=228.18' 15" RCP (N)
Sump=228.28'± (Debris)

N/F
238 Main St. Durham LLC
#238 Main Street
Map 38 Lot 8

#242 Main Street
Map 38 Lot 9

APPROX. LOCATION OF EXISTING SEPTIC TANK

STA. 191+63 - 16" x16"x12" M.J. C.L.D.I. TEE W/RESTRAINED GLANDS
2 - 16" M.J. BUTTERFLY VALVES
W/RESTRAINED GLANDS AND VALVE BOXES
1 - 12" M.J. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
N 735266.01, E 1018825.62

#246 Main Street
Map 38 Lot 10

#248 Main Street
Map 38 Lot 11

Curbed Catch Basin
TF=227.34'
FL IN=222.99' 15" RCP (S)
FL IN=223.04' 12" RCP (E)
FL OUT=223.04' 15" RCP (N)
Sump=223.04'± (Debris)

APPROX. LOCATION OF EXISTING SEPTIC TANK

ABANDON EXISTING WELL (TYP.)
#254 Main Street
Map 38 Lot 12

#256 Main Street
Map 38 Lot 13

Approx. Proposed 8" Gas Main

Approx. Proposed 16" Gas Main

MAIN STREET (RTE. 17)

Approx. Edge of Existing Concrete Pavement

#215 Main Street
Map 38 Lot 45

N/F
Town of Durham
#205 Main Street
Map 38 Lot 47

#217 Main Street
Map 38 Lot 44

#233

#235

#239 Main Street
Map 38 Lot 42

N/F
Durham Family Eye Care LLC
Main Street
Map 38 Lot 24

N/F
Durham Family Eye Care LLC
#243 Main Street
Map 38 Lot 25

#253 Main Street
Map 38 Lot 26

DRIVEWAY PAVEMENT RESTORATION

DOMESTIC WATER SERVICE TO STREET LINE (TYP.)

ABANDON EXISTING WELL (TYP.)

Approx. Location of Septic

Curbed Catch Basin
TF=227.81'
FL IN=224.26' 12" PVC (N.E.)
FL OUT=223.51' 12" RCP (W)
Sump=223.51'± (Debris)

STA. 400+85 FIRE HYDRANT ASSEMBLY
12" x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

12" DIA. C.L.D.I. WATER MAIN PIPE

PAVEMENT MILLING AND OVERLAY LIMITS

ABANDON EXISTING WELL (TYP.)

APPROX. LOCATION OF EXISTING SEPTIC TANK

CONVERT EXISTING WELL TO MONITORING WELL (REFER TO SPECIFICATION SECTION 02521)

ABANDON EXISTING WELL (TYP.)

APPROX. LOCATION OF EXISTING SEPTIC TANK

STA. 197+85 - 16" x16"x4" M.J. C.L.D.I. TEE W/RESTRAINED GLANDS
1 - 4" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
N 1018914.25, E 734651.41

WATER METER VAULT

POOL

DRIVEWAY PAVEMENT RESTORATION - USE TOWN ROAD TEMPORARY TRENCH PAVEMENT DETAIL

Curbed Catch Basin
TF=226.56'
FL OUT=222.81' 15" RCP (S)
Sump=222.96'± (Debris)

STA. 195+26 - 16" x16"x12" M.J. C.L.D.I. TEE W/RESTRAINED GLANDS
2 - 16" M.J. BUTTERFLY VALVES
W/RESTRAINED GLANDS AND VALVE BOXES
1 - 12" M.J. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
N 1018868.94, E 734905.76

4" C.L.D.I. WATER SERVICE WITH RESTRAINED JOINTS

CONVERT EXISTING WELL TO MONITORING WELL (REFER TO SPECIFICATION SECTION 02521)

OVER EXCAVATE TRENCH AND REMOVE CONTAMINATED SOIL TO ELEVATION 205.9 IN THIS AREA AND REFILL WITH COMPACTED BANK RUN GRAVEL - WRAP ENTIRE PERIMETER OF TRENCH EXCAVATION IN ORANGE GEOTEXTILE FABRIC - DO NOT UNDERMINE BUILDING FOUNDATION

WORK IN THIS AREA SHALL BE PERFORMED IN ACCORDANCE WITH CERCLA HAZARDOUS WASTE SITE PROCEDURES. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

N/F
Durham Manufacturing Company
#203R Main Street
Map 38 Lot 46

APPROX. LOCATION OF EXISTING SEPTIC TANK

DRIVEWAY PAVEMENT RESTORATION

ABANDON EXISTING WELL (TYP.)

STA. 194+50 FIRE HYDRANT ASSEMBLY
16" x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

ABANDON EXISTING WELL (TYP.)

APPROX. LOCATION OF EXISTING SEPTIC TANK

ABANDON EXISTING WELL (TYP.)

N/F
Carol-Durham Llc
#233 & #235 Main Street
Map 38 Lot 43

#17 Maiden Lane
Map 38 Lot 41

#17 Maiden Lane
Map 38 Lot 40

MAIDEN LANE

Crushed Stone Drive

ABANDON EXISTING WELL (TYP.)

APPROX. LOCATION OF EXISTING SEPTIC TANK

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATION DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. ALL TRAFFIC SIGNALS SHALL REMAIN OPERATIONAL DURING CONSTRUCTION. TRAFFIC LOOP DETECTORS DAMAGED DURING CONSTRUCTION MUST BE REPAIRED WITHIN 24 HOURS OF BEING DAMAGED.
4. WATER SERVICE PIPES CROSSING UNDER SIDEWALKS ARE TO BE INSTALLED BY EARTH PIERCING ("HOLE HAWG") TRENCHLESS METHODS SO AS NOT TO DISTURB THE EXISTING SIDEWALKS.
5. REFER TO DRAWING C-38 FOR MAIDEN LANE PROFILE VIEW .
6. REFER TO DRAWING C-45 FOR WALLINGFORD ROAD PROFILE VIEW.

SCALE: 1" = 40'

0 40' 80'

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

REVISIONS

AECOM, INFRASTRUCTURE
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-3600

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-0105

TOWN OF DURHAM

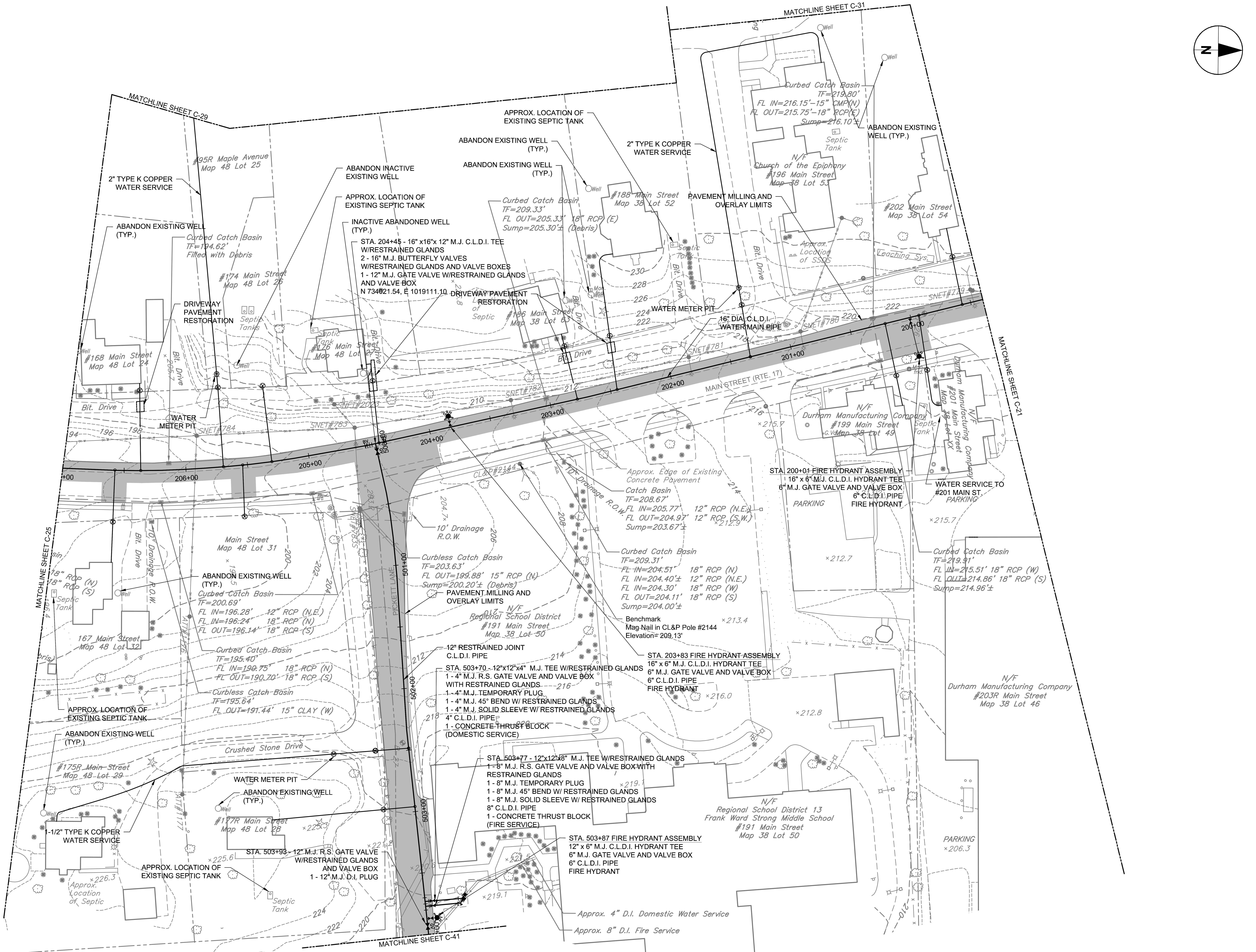
PLAN - MAIN STREET (ROUTI

STA.188+60-STA.199+40, STA.400+00-STA.403+25 & STA.6

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-021
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-21

ANSI D – 22-Mar-18



NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. REFER TO DRAWING C-42 FOR PICKETT LANE PROFILE VIEW.

SCALE: 1" = 40'

0 40' 80'

ANSI D – 22–Mar–18

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

REVISIONS

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-5800

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

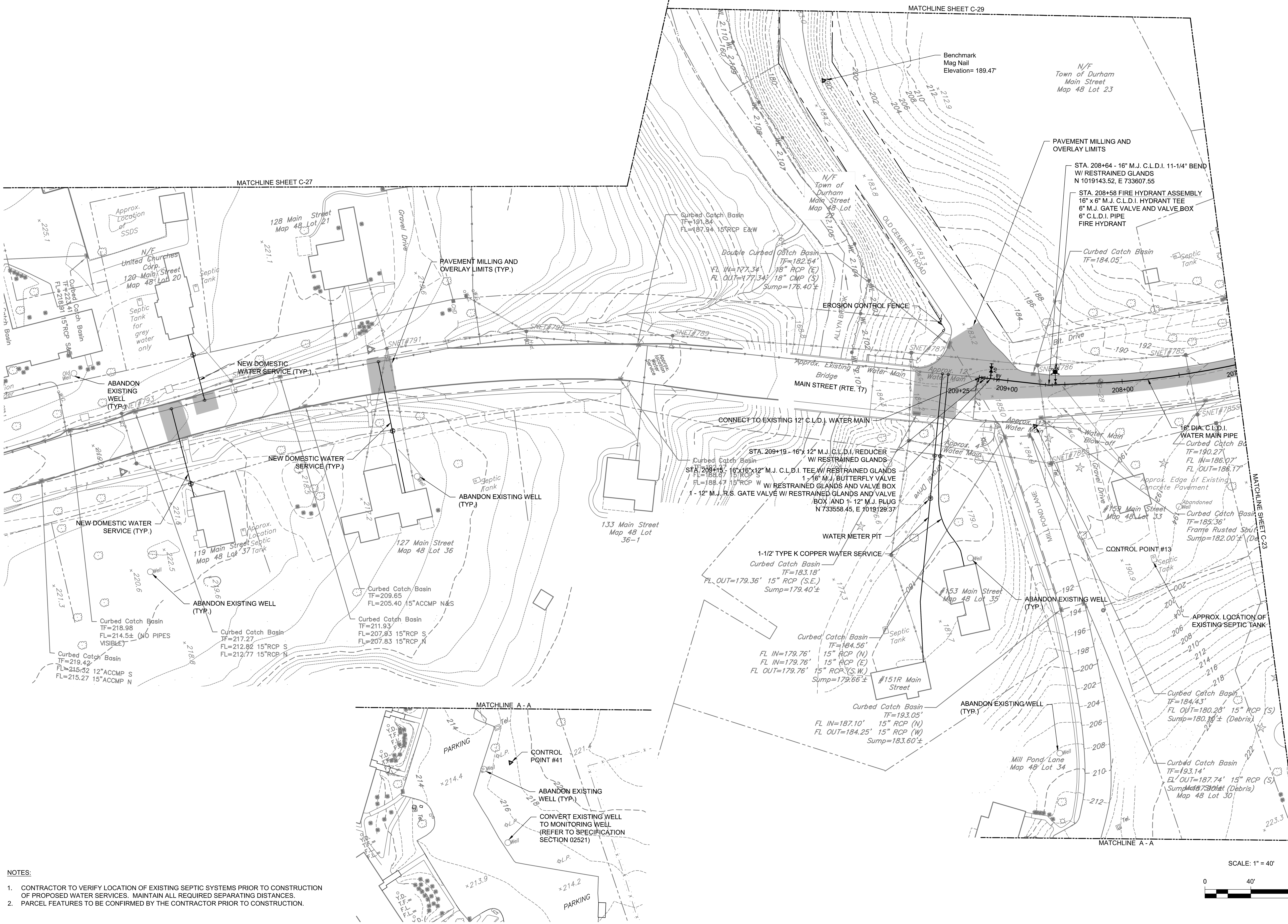
TOWN OF DURHAM

PLAN - MAIN STREET (ROUT

STA. 199+40 TO STA. 207+00 & STA. 500+00 TO ST

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-023
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-23



NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

ANSI D – 22–Mar–18

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				REVISIONS

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-5800

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM
PLAN - MAIN ST (ROUTE 17)
STA. 207+00 TO STA. 209+25

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-025
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-25

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL SUBMIT HIS PROPOSED SEDIMENTATION AND EROSION CONTROL METHODS, EXCAVATION SUPPORT METHODS, AND DEWATERING METHODS FOR INSTALLATION OF THE WATER MAIN IN THE VICINITY OF THE ALLYN BROOK STREAM CROSSING FOR CONTRACTING OFFICER REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION IN THE AFFECTED AREA.

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

REVISIONS

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-5800

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

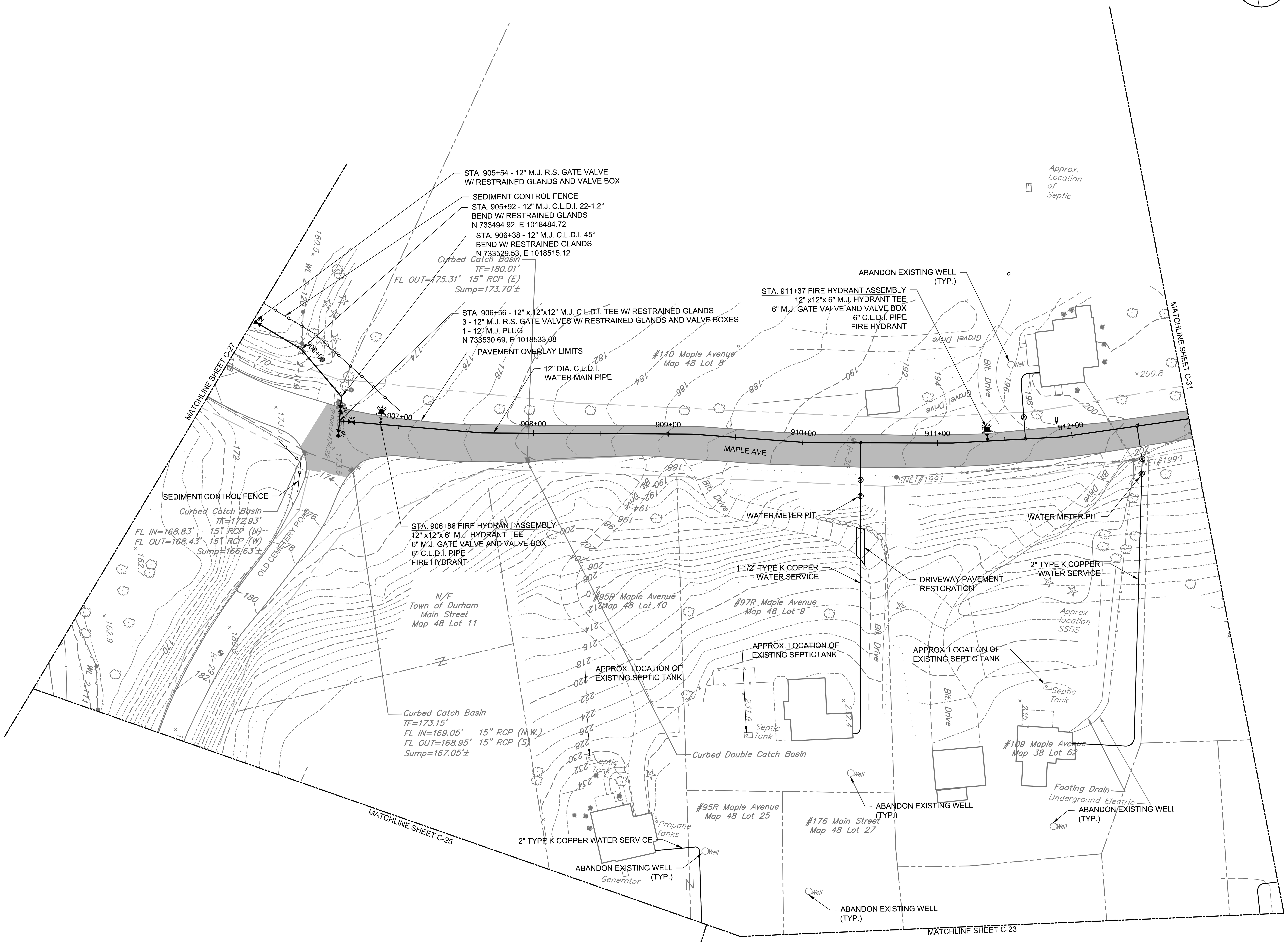
PLAN - MAPLE AVENUE

STA. 900+00 TO STA. 905+50

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-027
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-27

ANSI D – 22–Mar–18



STA. 905+54 - 12" M.J. R.S. GATE VALVE W/ RESTRAINED GLANDS AND VALVE BOX
SEDIMENT CONTROL FENCE
STA. 905+92 - 12" M.J. C.L.D.I. 22-1.2" BEND W/ RESTRAINED GLANDS N 733494.92, E 1018484.72
STA. 906+38 - 12" M.J. C.L.D.I. 45" BEND W/ RESTRAINED GLANDS N 733529.53, E 1018515.12
Curbed Catch Basin TF=180.01' FL OUT=175.31' 15" RCP (E) Sump=173.70'±
STA. 906+56 - 12" x 12"x12" M.J. C.L.D.I. TEE W/ RESTRAINED GLANDS 3 - 12" M.J. R.S. GATE VALVES W/ RESTRAINED GLANDS AND VALVE BOXES 1 - 12" M.J. PLUG N 733530.69, E 1018533.08
PAVEMENT OVERLAY LIMITS
12" DIA. C.L.D.I. WATER MAIN PIPE
ABANDON EXISTING WELL (TYP.)
STA. 911+37 FIRE HYDRANT ASSEMBLY 12" x12"x 6" M.J. HYDRANT TEE 6" M.J. GATE VALVE AND VALVE BOX 6" C.L.D.I. PIPE FIRE HYDRANT
Approx. Location of Septic
#110 Maple Avenue Map 48 Lot 8
MATCHLINE SHEET C-27
MATCHLINE SHEET C-31
MATCHLINE SHEET C-25
MATCHLINE SHEET C-23
907+00
908+00
909+00
910+00
911+00
912+00
MAPLE AVE
SNET #1991
SEDIMENT CONTROL FENCE
Curbed Catch Basin TF=172.93' FL IN=168.83' 15" RCP (N) FL OUT=168.43' 15" RCP (W) Sump=166.63'±
OLD CEMETERY ROAD
STA. 906+86 FIRE HYDRANT ASSEMBLY 12" x12"x 6" M.J. HYDRANT TEE 6" M.J. GATE VALVE AND VALVE BOX 6" C.L.D.I. PIPE FIRE HYDRANT
WATER METER PIT
1-1/2" TYPE K COPPER WATER SERVICE
DRIVEWAY PAVEMENT RESTORATION
WATER METER PIT
2" TYPE K COPPER WATER SERVICE
N/F Town of Durham Main Street Map 48 Lot 11
#95R Maple Avenue Map 48 Lot 10
#97R Maple Avenue Map 48 Lot 9
Approx. location SSDS
APPROX. LOCATION OF EXISTING SEPTICTANK
APPROX. LOCATION OF EXISTING SEPTIC TANK
APPROX. LOCATION OF EXISTING SEPTIC TANK
Septic Tank
Curbed Catch Basin TF=173.15' FL IN=169.05' 15" RCP (N.W.) FL OUT=168.95' 15" RCP (S) Sump=167.05'±
Curbed Double Catch Basin
#109 Maple Avenue Map 38 Lot 62
Footing Drain
Underground Electric
#95R Maple Avenue Map 48 Lot 25
#176 Main Street Map 48 Lot 27
ABANDON EXISTING WELL (TYP.)
ABANDON EXISTING WELL (TYP.)
Propane Tanks
2" TYPE K COPPER WATER SERVICE
ABANDON EXISTING WELL (TYP.)
Generator
ABANDON EXISTING WELL (TYP.)

SCALE: 1" = 40'

0 40' 80'

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

ANSI D – 22–Mar–18

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

REVISIONS

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-5800

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM
PLAN - MAPLE AVENUE
STA. 905+50 TO STA. 912+88

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-029
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-29

MATCHLINE SHEET C-29

Benchmark
Mag Nail in SNET Pole #692
Elevation= 204.37'

#126 Maple Avenue
Map 38 Lot 1

Maple Avenue
Map 37 Lot 15

End of Cast Iron Pipe
Elevation=195.82'

ABANDON EXISTING WELL (TYP.)

12" DIA. C.L.D.I. WATER MAIN PIPE

PAVEMENT OVERLAY LIMITS

MAPLE AVENUE

#146 Maple Avenue
Map 37 Lot 16

STA. 606+87 - 12"x 8" M.J. C.L.D.I. REDUCER
W/ RESTRAINED GLANDS

STA. 920+80 - 12"x12" x 8" M.J. C.L.D.I. TEE W/ RESTRAINED GLANDS
1-12" M.J. R.S. GATE VALVE
1-8" M.J. R.S. GATE VALVE
W/ RESTRAINED GLANDS AND VALVE BOXES
N 734892.67, E 1018190.08

STA. 920+27 - 12" M.J. C.L.D.I. 11-1/4° BEND W/ RESTRAINED GLANDS
N 734854.87, E 1018206.31

APPROX. LOCATION OF EXISTING SEPTIC TANK

Curbless Double Catch Basin
TF=188.37'
FL IN=185.72' 18" HDPE (N.E.)
FL IN=185.62' 12" HDPE (E)
FL OUT=185.17' 24" HDPE (W)
Sump=185.10'±

Storm Drainage Manhole
TF=195.52'
FL IN=193.12' 18" CMP (E)
FL IN=192.66' 12" RCP (S)
FL OUT=192.42' 18" CMP (W)
Sump=192.7'±

#148 Maple Avenue
Map 37 Lot 17

Approx. Location of Septic

STA. 609+46 - 8" M.J. R.S. GATE VALVE
W/ RESTRAINED GLANDS AND VALVE BOX
N 734874.47, E 1017924.13

ABANDON EXISTING WELL (TYP.)

CONTROL POINT #55

ABANDON EXISTING WELL (TYP.)

ABANDON EXISTING WELL (TYP.)

STA. 609+50 FIRE HYDRANT ASSEMBLY
8" x8"x 6" M.J. HYDRANT TEE
8" M.J. PLUG
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

#47 Wallingford Avenue
Map 37 Lot 5

8" DIA. C.L.D.I.
WATER MAIN PIPE

STA. 921+68 FIRE HYDRANT ASSEMBLY
8" x8"x 6" M.J. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

ABANDON EXISTING WELL, (TYP.)

#138 Maple Avenue
Map 37 Lot 6

#62 Maple Avenue
Map 37 Lot 7

MATCHLINE SHEET C-33

WATER METER PIT

STA. 916+14 FIRE HYDRANT ASSEMBLY
12" x12"x 6" M.J. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

STA. 913+73 - MANUAL AIR RELEASE VALVE
SEE DETAIL SHEET C-502
N 734234.57, E 1018411.03

STA. 913+64 - 12" M.J. R.S. GATE VALVE
W/ RESTRAINED GLANDS AND VALVE BOX
N 734226.08, E 1018414.02

1-1/2" TYPE K COPPER WATER SERVICE

1-1/2" TYPE K COPPER WATER SERVICE

#119 Maple Avenue
Map 38 Lot 61

ABANDON EXISTING WELL (TYP.)

ABANDON EXISTING WELL (TYP.)

WATER METER PIT

#139 Maple Avenue
Map 38 Lot 59

Approx. Location of Septic

#133 Maple Avenue
Map 38 Lot 60

N/F
The Church of the Epiphany
#129 Maple Avenue
Map 38 Lot 53

Curbless Catch Basin
TF=198.72'
FL OUT=197.02' 12" HDPE (S)
Sump=Filled with Debris

Curbless Catch Basin
TF=202.55'
FL IN=198.65' 12" TILE (N)
FL OUT=198.80' 18" RCP (W)
Sump=198.80'±

Curbed Catch Basin
TF=198.81'
FL IN=197.01' 8" PVC (S)
FL IN=196.71' 12" HDPE (N)
FL OUT=196.66' 12" RCP (W)
Sump=194.30'±

MATCHLINE SHEET C-23

MATCHLINE SHEET C-21

Benchmark
Mag Nail in SNET Pole #514
Elevation= 199.57'

STA. 920+65 - 12"x12" x12" M.J. C.L.D.I. TEE W/ RESTRAINED GLANDS
2-12" M.J. R.S. GATE VALVES
W/ RESTRAINED GLANDS AND VALVE BOXES
N 1018204.96, E 734893.20

#22 Wallingford Road
Map 38 Lot 58

WATER METER PIT

1-1/2" TYPE K COPPER WATER SERVICE

ABANDON EXISTING WELL (TYP.)

WALLINGFORD ROAD (RTE 68)

8" DIA. C.L.D.I. WATERMAIN PIPE

12" DIA. C.L.D.I. WATER MAIN PIPE

PARKING

Double Curbed Catch Basin
TF=195.18'
FL OUT=191.53' 18" CMP
Sump=191.50'±

N/F
First Church of Christ
Congregational
#17 Wallingford Road
Map 38 Lot 5

ABANDON EXISTING WELL (TYP.)

Benchmark
Mag Nail in SNET Pole
Elevation= 235.63'

PARKING

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. REFER TO SHEET C-45 FOR FOR WALLINGFORD ROAD PROFILE.

SCALE: 1" = 40'

0 40' 80'

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

REVISIONS

AECOM, INFINGE DRIVE
WETHERSFIELD, CT
ROCKY HILL, CT 06067
PHONE (860) 263-3600

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-0105

TOWN OF DURHAM

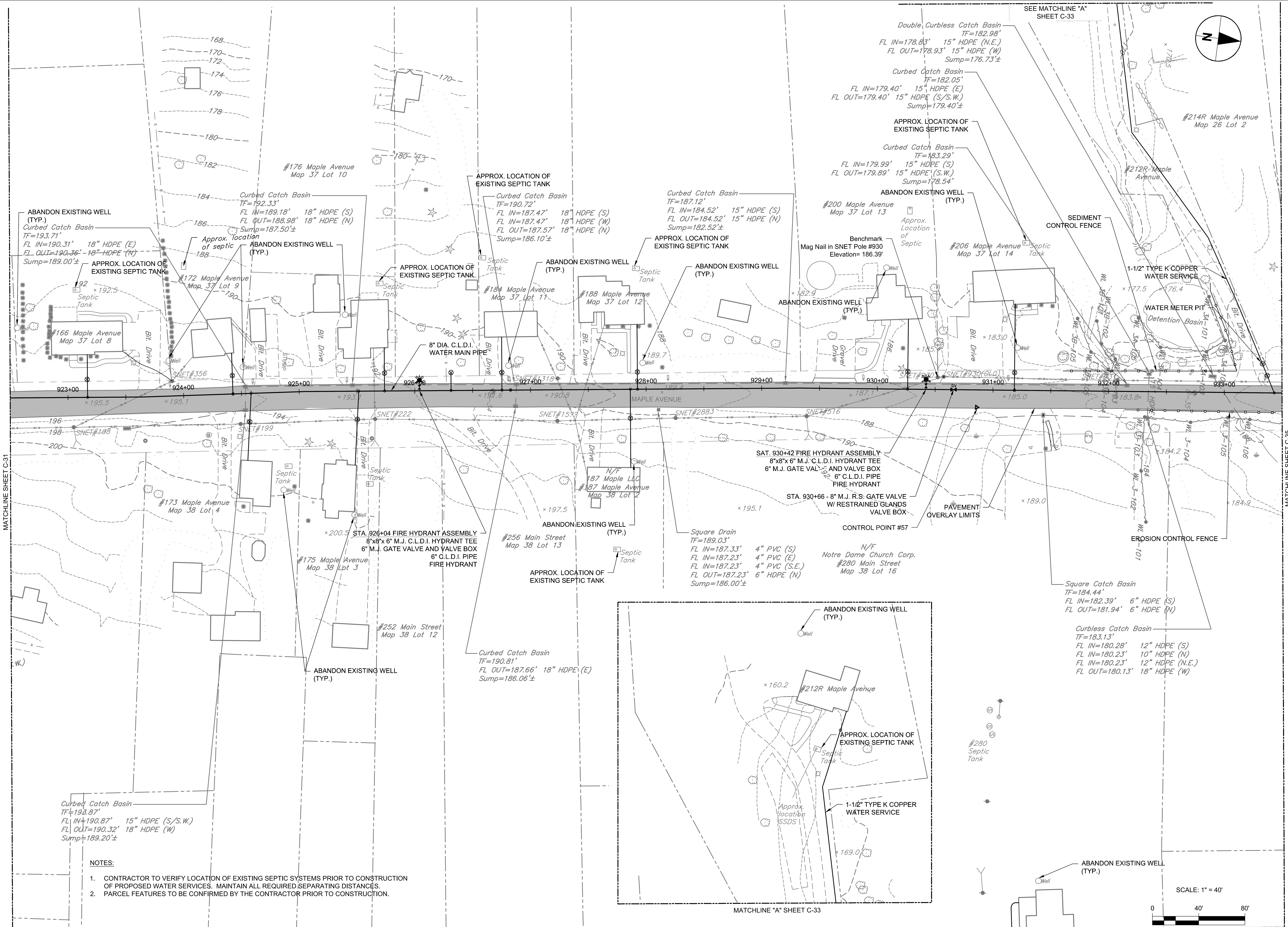
PLAN - MAPLE AVE & WALLINGFORD

STA 912+88 TO STA. 922+50 & STA. 602+01 TO STA

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-031
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-31

ANSI D – 22-Mar-18



NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

REVISIONS

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM
PLAN - MAPLE AVENUE
STA. 922+50 TO STA. 933+50

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-033
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-33

ANSI D – 22–Mar–18

MATCHLINE A - A

#228R Maple Avenue
Map 26 Lot 4-1

ABANDON EXISTING WELL (TYP.)

ABANDON EXISTING WELL (TYP.)

Approx. location of septic

Septic Tank

#224 Maple Avenue
Map 27 Lot 3

1-1/2" TYPE K COPPER WATER SERVICE

#230 Maple Avenue
Map 26 Lot 4

WATER METER PIT

1-1/2" TYPE K COPPER WATER SERVICE

WATER METER PIT

PAVEMENT OVERLAY LIMITS

WATER METER PIT

Approx. Location of SSDS

LOCATE AND ABANDON EXISTING WELL

#236 Maple Avenue
Map 26 Lot 5

Crushed Stone Drive

Gravel Drive

Bit. Drive

ABANDON EXISTING WELL (TYP.)

#244 Maple Avenue
Map 26 Lot 6

Septic Tank

ot Septic

#254 Maple Avenue
Map 26 Lot 7

ABANDON EXISTING WELL (TYP.)

DRIVEWAY PAVEMENT RESTORATION

CONTROL POINT #50

STA. 940+52 - 8"x8"x8" M.J. C.L.D.I TEE
W/RESTRAINED GLANDS
3 - 8" M.J. R.S. GATE VALVES
W/ RESTRAINED GLANDS AND VALVE BOXES
N 736858.09, E 1018037.39

MAPLE AVENUE

934+00 935+00 936+00 937+00 938+00 939+00 940+00 940+88

306+00 306+13

STA. 940+88 - 8" M.J. R.S. GATE VALVE
W/RESTRAINED GLAND AND VALVE BOX
8" M.J. PLUG
N 736892.47, E 1018029.35

STA. 940+70 - 8" M.J. C.L.D.I. 22-1/2"
BEND W/ RESTRAINED GLANDS

Benchmark N 736876.08, E 1018036.79
Mag Nail in SNET Pole #753
Elevation= 222.03'

Gravel Drive

#28 Marina Place
Map 26 Lot 23

#235 Maple Avenue
Map 27 Lot 7

Approx. Location of Septic

#245 Maple Avenue
Map 27 Lot 6

Septic Tank

ABANDON EXISTING WELL (TYP.)

STA. 935+49 FIRE HYDRANT ASSEMBLY
8"x8"x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

Maple Avenue
Map 27 Lot 8

ABANDON EXISTING WELL (TYP.)

Maple Avenue
Map 27 Lot 8

STA. 305+41 FIRE HYDRANT ASSEMBLY
8"x8"x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. R.S. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

305+00

Approx. Location of Septic

#25 Talcott Lane
Map 26 Lot 22

Gravel Drive

ABANDON EXISTING WELL (TYP.)

TALCOTT LANE

304+00

#21 Marina Place
Map 27 Lot 10

Maple Avenue
Map 27 Lot 8

2" TYPE K COPPER WATER SERVICE

Flow Line of 12" RCP
Elevation=213.49'

WATER METER PIT

Flow Line of 12" RCP
Elevation=213.60'

8" DIA. C.L.D.I. WATER MAIN PIPE

ABANDON EXISTING WELL (TYP.)

Crushed Stone Drive

303+00

#14 Talcott Lane
Map 27 Lot 5-1

#328 Main Street
Map 27 Lot 9

ABANDON EXISTING WELL (TYP.)

Septic Tank

APPROX. LOCATION OF EXISTING SEPTIC TANK

N/F
Adams Commons LLC
Main Street
Map 27 Lot 12

302+00

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

MATCHLINE SHEET C-19

MATCHLINE SHEET C-17

MATCHLINE SHEET C-33

SCALE: 1" = 40'

0 40' 80'

REVISIONS				
MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

AECOM, INC.
250 APPLEWOOD DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-3600

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

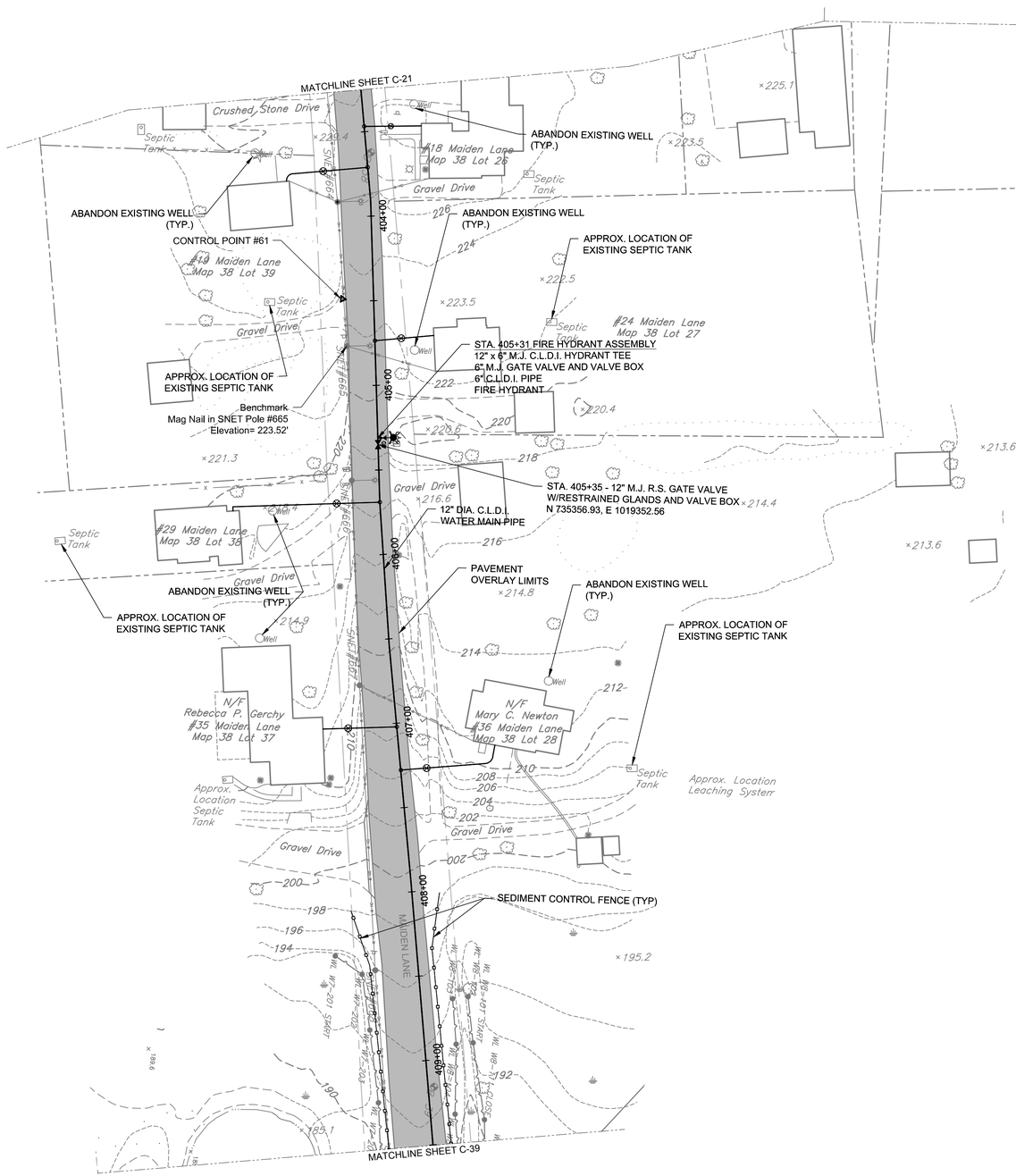
PLAN - MAPLE AVENUE & TALCO

STA.933+50 TO STA. 940+88 & STA. 301+80 TO STA

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-035
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-35

ANSI D – 22-Mar-18



NOTES:

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2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

SCALE: 1" = 40'

0 40' 80'

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

REVISIONS

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-5800

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

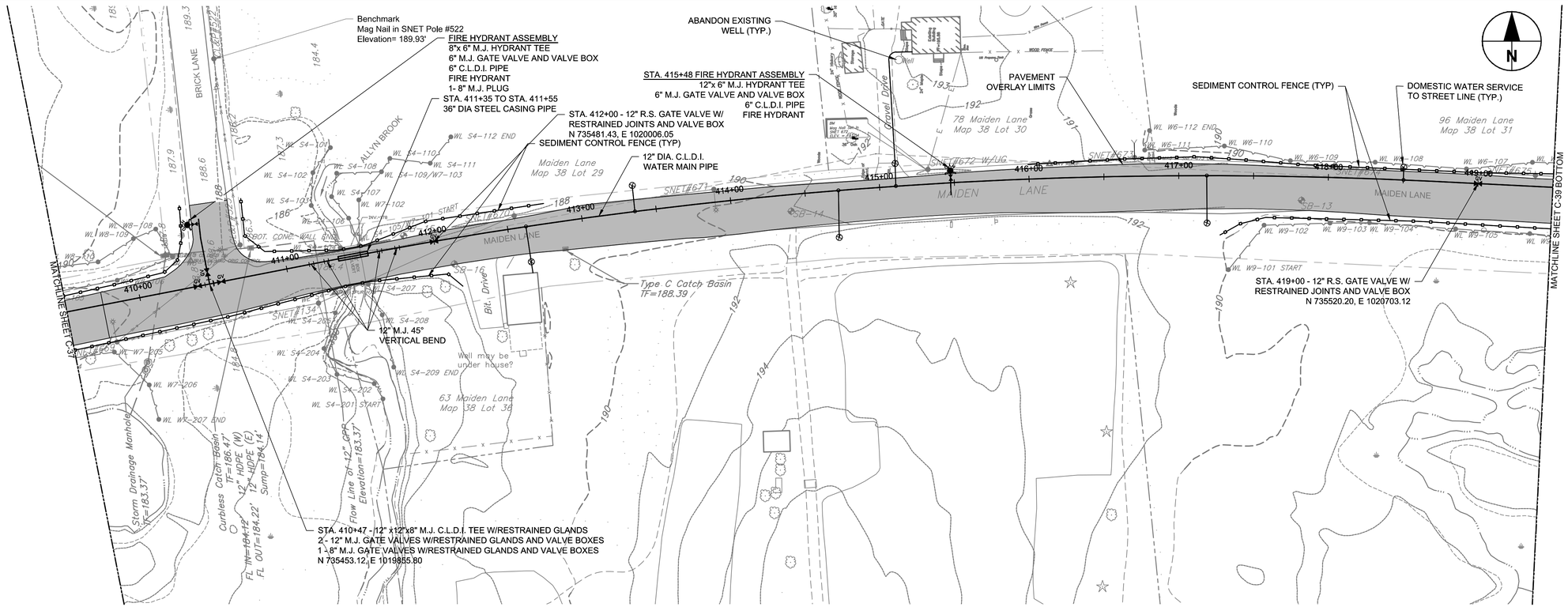
PLAN - MAIDEN LANE

STA. 403+25 TO STA. 409+50

PROJECT NO: 60275749
CAD DWG FILE: CZ-DUR-037
DESIGNED BY: KPR
DRAWN BY: KPR
DEPT CHECK: GRS
PROJ CHECK: RMB
DATE: APRIL 2018
SCALE: AS NOTED

C-37

ANSI D - 22-Mar-18



NOTES:

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2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL SUBMIT HIS PROPOSED SEDIMENTATION AND EROSION CONTROL METHODS, EXCAVATION SUPPORT METHODS, AND DEWATERING METHODS FOR INSTALLATION OF THE WATER MAIN IN THE VICINITY OF THE ALLYN BROOK STREAM CROSSING FOR CONTRACTING OFFICER REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION IN THE AFFECTED AREA.
4. SEE DRAWING C-46 FOR 114R MAIDEN LANE WATER SERVICE PLAN.

REVISIONS					
DESCRIPTION	CHECKED	MADE BY	DATE	MARK
100% SUBMITTAL				

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-3600

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

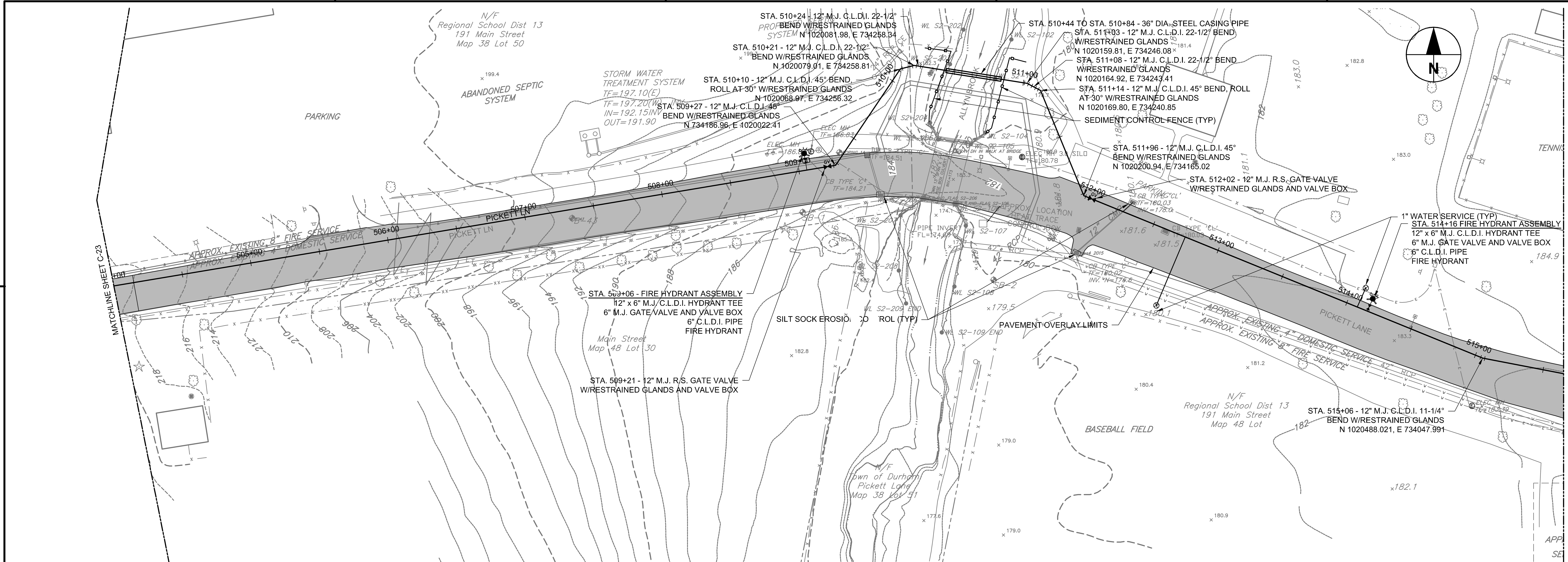
PLAN - MAIDEN LANE

STA. 409+50 TO STA. 426+14 & STA. 536+40 TO STA

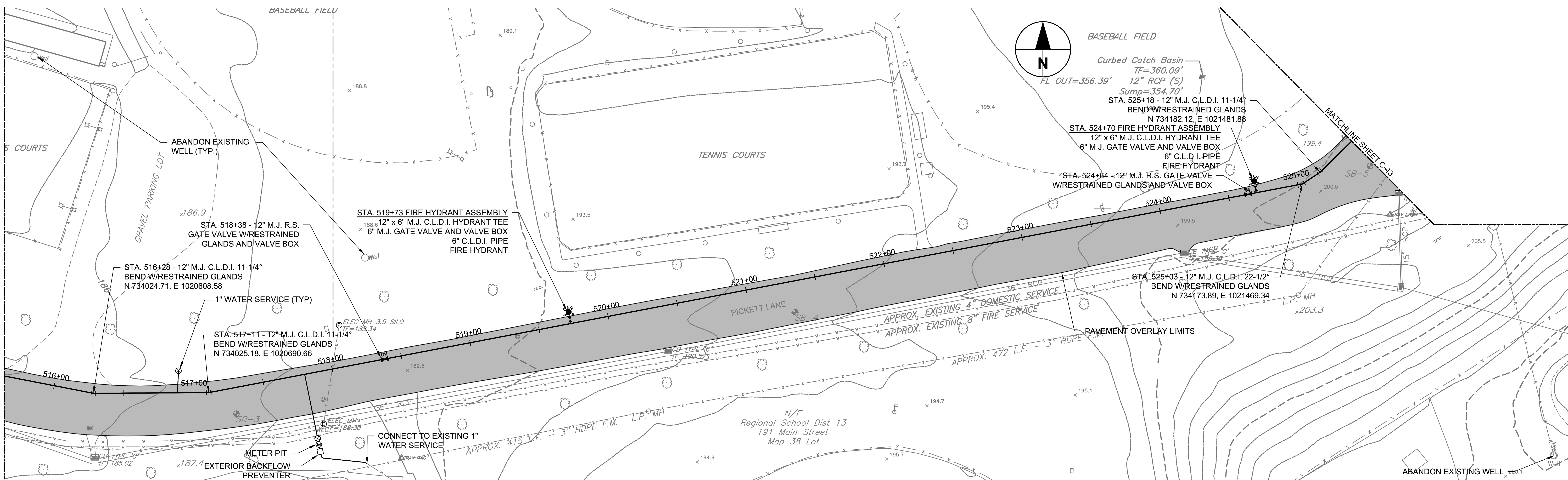
PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-039
DESIGNED BY:	KPR
DRAWN BY:	KPR
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-39

ANSI D – 22-Mar-18



STA. 510+24 - 12" M.J. C.L.D.I. 22-1/2" BEND W/RESTRAINED GLANDS N 1020081.98, E 734258.34
STA. 510+21 - 12" M.J. C.L.D.I. 22-1/2" BEND W/RESTRAINED GLANDS N 1020079.01, E 734258.81
STA. 510+10 - 12" M.J. C.L.D.I. 45° BEND, ROLL AT 30° W/RESTRAINED GLANDS N 1020068.97, E 734256.32
STA. 509+27 - 12" M.J. C.L.D.I. 45° BEND W/RESTRAINED GLANDS N 734186.96, E 1020022.41
STA. 510+44 TO STA. 510+84 - 36" DIA. STEEL CASING PIPE
STA. 511+03 - 12" M.J. C.L.D.I. 22-1/2" BEND W/RESTRAINED GLANDS N 1020159.81, E 734246.08
STA. 511+08 - 12" M.J. C.L.D.I. 22-1/2" BEND W/RESTRAINED GLANDS N 1020164.92, E 734243.41
STA. 511+14 - 12" M.J. C.L.D.I. 45° BEND, ROLL AT 30° W/RESTRAINED GLANDS N 1020169.80, E 734240.85
SEDIMENT CONTROL FENCE (TYP)
STA. 511+96 - 12" M.J. C.L.D.I. 45° BEND W/RESTRAINED GLANDS N 1020200.94, E 734165.02
STA. 512+02 - 12" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
1" WATER SERVICE (TYP)
STA. 514+16 FIRE HYDRANT ASSEMBLY
12" x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT
STA. 509+06 - FIRE HYDRANT ASSEMBLY
12" x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT
SILT SOCK EROSION CONTROL (TYP)
PAVEMENT OVERLAY LIMITS
STA. 509+21 - 12" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
STA. 515+06 - 12" M.J. C.L.D.I. 11-1/4" BEND W/RESTRAINED GLANDS N 1020488.021, E 734047.991
N/F Regional School Dist 13 191 Main Street Map 38 Lot 50
STORM WATER TREATMENT SYSTEM
ABANDONED SEPTIC SYSTEM
PARKING
PICKETT LN
PICKETT LANE
APPROX. EXISTING 8" FIRE SERVICE
APPROX. EXISTING 4" DOMESTIC SERVICE
Main Street Map 48 Lot 30
N/F Town of Durham Pickett Lane Map 38 Lot 31
N/F Regional School Dist 13 191 Main Street Map 48 Lot
BASEBALL FIELD
MATCHLINE SHEET C-23
MATCHLINE SHEET C-41 BOTTOM
N



ABANDON EXISTING WELL (TYP.)
STA. 518+38 - 12" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
STA. 516+28 - 12" M.J. C.L.D.I. 11-1/4" BEND W/RESTRAINED GLANDS N 734024.71, E 1020608.58
1" WATER SERVICE (TYP)
STA. 517+11 - 12" M.J. C.L.D.I. 11-1/4" BEND W/RESTRAINED GLANDS N 734025.18, E 1020690.66
STA. 519+73 FIRE HYDRANT ASSEMBLY
12" x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT
CONNECT TO EXISTING 1" WATER SERVICE
METER PIT
EXTERIOR BACKFLOW PREVENTER
STA. 525+18 - 12" M.J. C.L.D.I. 11-1/4" BEND W/RESTRAINED GLANDS N 734182.12, E 1021481.88
STA. 524+70 FIRE HYDRANT ASSEMBLY
12" x 6" M.J. C.L.D.I. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT
STA. 524+84 - 12" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
STA. 525+03 - 12" M.J. C.L.D.I. 22-1/2" BEND W/RESTRAINED GLANDS N 734173.89, E 1021469.34
PAVEMENT OVERLAY LIMITS
ABANDON EXISTING WELL
TENNIS COURTS
BASEBALL FIELD
GRAVEL PARKING LOT
PICKETT LANE
APPROX. EXISTING 4" DOMESTIC SERVICE
APPROX. EXISTING 8" FIRE SERVICE
N/F Regional School Dist 13 191 Main Street Map 38 Lot
Curbed Catch Basin TF=360.09' 12" RCP (S) Sump=354.70' FL OUT=356.39'
MATCHLINE SHEET C-41 TOP
MATCHLINE SHEET C-43
N
SCALE: 1" = 40'
0 40' 80'

NOTES:
1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL SUBMIT HIS PROPOSED SEDIMENTATION AND EROSION CONTROL METHODS, EXCAVATION SUPPORT METHODS, AND DEWATERING METHODS FOR INSTALLATION OF THE WATER MAIN IN THE VICINITY OF THE ALLYN BROOK STREAM CROSSING FOR CONTRACTING OFFICER REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION IN THE AFFECTED AREA.

ANSI D – 22–Mar–18

100% SUBMITTAL

MARK	DATE	MADE BY	CHECKED	DESCRIPTION

REVISIONS

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

PLAN - PICKETT LANE

STA. 504+00 TO STA. 525+50

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-041
DESIGNED BY:	NAV
DRAWN BY:	NAV
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-41

ABANDON EXISTING WELL

RESTRAIN 25' OF EXISTING PIPE WITH SPLIT BELL RESTRAINT HARNESSES

4" RESTRAINED JOINT C.L.D.I. DOMESTIC SERVICE CONNECT TO EXISTING LINE

STA. 530+35 - 12"x12"x4" M.J. TEE W/RESTRAINED GLANDS
1 - 4" M.J. R.S. GATE VALVE AND VALVE BOX WITH RESTRAINED GLANDS
1 - 4" M.J. D.I. TEMPORARY PLUG
2 - 45° M.J. BENDS W/ RESTRAINED GLANDS
1 - 4" M.J. SOLID SLEEVE W/ RESTRAINED GLANDS (DOMESTIC SERVICE)

STA. 525+75 - 12" x 4" M.J. C.L.D.I. TEE W/RESTRAINED GLANDS
4" M.J. GATE VALVE W/ RESTRAINED GLANDS AND VALVE BOX
N 734221.75, E 1021522.11

STA. 525+80 - 12" 45° M.J. BEND W/RESTRAINED GLANDS
N 734225.26, E 1021525.6

STA. 526+00 - 12" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX

STA. 529+84 FIRE HYDRANT ASSEMBLY
12"x 6" M.J. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

8" RESTRAINED JOINT C.L.D.I. FIRE SERVICE CONNECT TO EXISTING LINE

8" GATE VALVE W/ POST INDICATOR AND RESTRAINED GLANDS

STA. 530+60 - 12"x12"x8" M.J. TEE W/RESTRAINED GLANDS
1 - 8" M.J. R.S. GATE VALVE AND VALVE BOX WITH RESTRAINED GLANDS
1 - 8" M.J. D.I. TEMPORARY PLUG
2 - 45° M.J. BENDS W/ RESTRAINED GLANDS
1 - 8" M.J. SOLID SLEEVE W/ RESTRAINED GLANDS (FIRE SERVICE)

STA. 530+90 - 12" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX

STA. 534+30 FIRE HYDRANT ASSEMBLY
12"x 6" M.J. HYDRANT TEE
6" M.J. GATE VALVE AND VALVE BOX
6" C.L.D.I. PIPE
FIRE HYDRANT

STA. 534+60 - 12" M.J. R.S. GATE VALVE W/RESTRAINED GLANDS AND VALVE BOX
N 735099.06, E 1021475.78

ABANDON EXISTING WELL (TYP.)

MATCHLINE SHEET C-41 BOTTOM

MATCHLINE SHEET C-39 BOTTOM

SILT SOCK (TYP)

SEDIMENT CONTROL FENCE (TYP)

4" RESTRAINED JOINT C.L.D.I. WATER SERVICE MAIN

4" M.J. C.L.D.I. 45° BEND W/RESTRAINED GLANDS
N 734153.86, E 1021588.97

WATER METER VAULT - SEE DETAIL SHEET C-503

CONNECT TO EXISTING SERVICE WITH 4" M.J. SOLID SLEEVE W/ RESTRAINED GLANDS

PAVEMENT MILLING AND OVERLAY LIMITS

STA. 529+56 - 12"x12"x8" M.J. TEE W/RESTRAINED GLANDS
1 - 8" M.J. R.S. GATE VALVE AND VALVE BOX WITH RESTRAINED GLANDS (FIRE SERVICE)

STA. 529+64 - 12"x12"x4" M.J. TEE W/RESTRAINED GLANDS
1 - 4" M.J. R.S. GATE VALVE AND VALVE BOX WITH RESTRAINED GLANDS (DOMESTIC SERVICE)

STA. 531+52 & STA. 531+57 - 12" M.J. 45° VERTICAL BEND W/RESTRAINED GLANDS

8" RESTRAINED JOINT C.L.D.I. FIRE SERVICE

4" RESTRAINED JOINT C.L.D.I. DOMESTIC SERVICE

FIRE HYDRANT ASSEMBLY
8"x6" M.J. HYDRANT W/ TEE
6" M.J. GATE VALVE W/ RESTRAINED GLANDS
6" C.L.D.I. M.J. 90° BEND W/ RESTRAINED GLANDS
6" C.L.D.I. PIPE
FIRE HYDRANT

STA. 551+78 - 8" GATE VALVE WITH POST INDICATOR AND RESTRAINED GLANDS

DRIVEWAY PAVEMENT REPAIR SEE TEMORARY TRENCH PAVEMENT DETAIL SHEET C-505

STA. 552+63 - 8"x8"x8" M.J. TEE W/RESTRAINED GLANDS
3 - 8" M.J. R.S. GATE VALVES AND VALVE BOXES WITH RESTRAINED GLANDS
2 - 8" 45° M.J. BENDS W/ RESTRAINED GLANDS
1 - 8" 90° M.J. BEND W/ RESTRAINED GLANDS (FIRE SERVICE)

1 - 4"x4"x4" M.J. TEE W/RESTRAINED GLANDS
3 - 4" M.J. R.S. GATE VALVES AND VALVE BOXES WITH RESTRAINED GLANDS (DOMESTIC SERVICE)

TEMPORARY RESTRAINED M.J. TAPPED PLUG

MATCHLINE A - A THIS SHEET

MATCHLINE A - A THIS SHEET

CONVERT EXISTING WELL TO MONITORING WELL (REFER TO SPECIFICATION SECTION 02521)

SCALE: 1" = 40'

0 40' 80'

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING SEPTIC SYSTEMS PRIOR TO CONSTRUCTION OF PROPOSED WATER SERVICES. MAINTAIN ALL REQUIRED SEPARATING DISTANCES.
2. PARCEL FEATURES TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
3. WATER SERVICE CONNECTIONS MUST BE COORDINATED WITH THE CONTRACTING OFFICER AND SCHOOL FACILITIES.
4. REFER TO DRAWING C-501 FOR HIGH SCHOOL FIRE SERVICE PROFILE.

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

REVISIONS

AECOM, INC.
SOUTH WINDSOR DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-3600

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

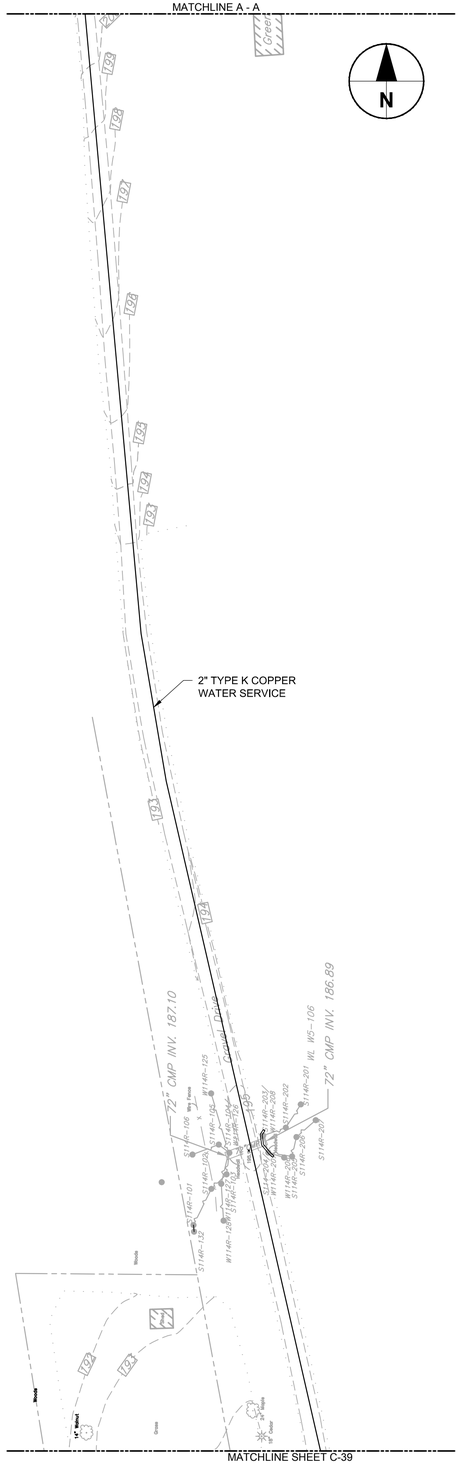
PLAN - PICKETT LANE

STA. 525+50 TO STA. 536+40

PROJECT NO:	60275749
CAD DWG FILE:	CZ-DUR-043
DESIGNED BY:	NAV
DRAWN BY:	NAV
DEPT CHECK:	GRS
PROJ CHECK:	RMB
DATE:	APRIL 2018
SCALE:	AS NOTED

C-43

ANSI D – 22-Mar-18



114R MAIDEN LANE WATER SERVICE PLAN

FOR CONTINUATION REFER TO SHEET C-39

TALCOTT RIDGE BOOSTER STATION SUCTION PROFILI

STA. 700+00 TO STA. 701+33

FOR PLAN REFER TO SHEET C-9

TALCOTT RIDGE BOOSTER STATION DISCHARGE PROFILE

STA. 750+00 TO STA. 756+51

FOR PLAN REFER TO SHEET C-9

SCALES HORIZONTAL 0 40' 80' 1" = 40'

VERTICAL 0 10' 20' 1" = 10'

ANSI D – 4–May–18

MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

REVISIONS

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-5800

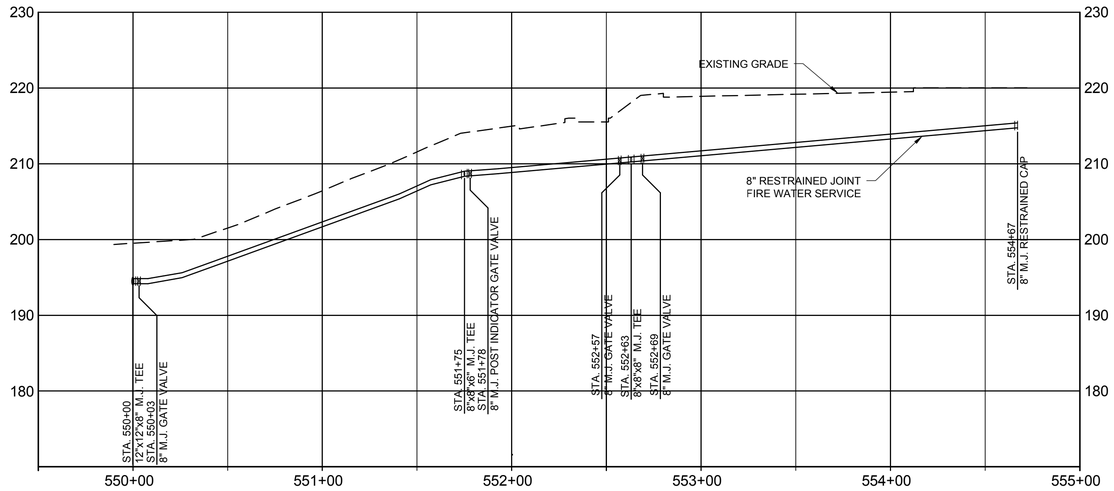
EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

TOWN OF DURHAM

PROFILES - MISCELLANEO

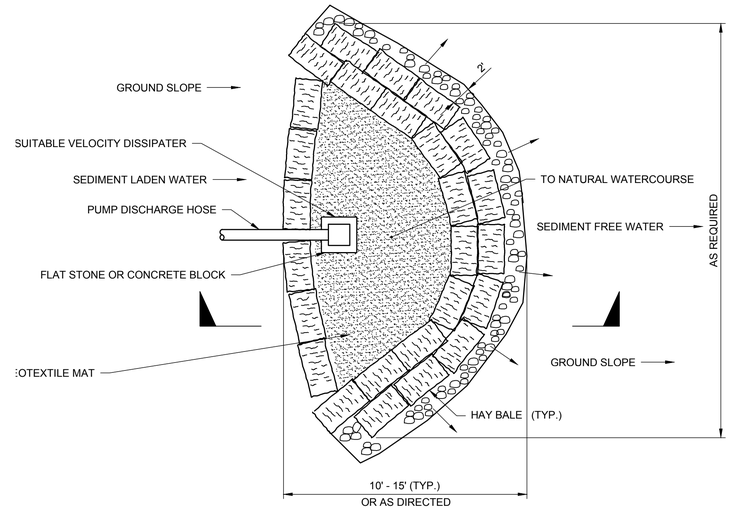
PROJECT NO: 60275749
CAD DWG FILE: CZ-DUR-046
DESIGNED BY: NAV
DRAWN BY: NAV
DEPT CHECK: GRS
PROJ CHECK: RMB
DATE: APRIL 2018
SCALE:

C-46

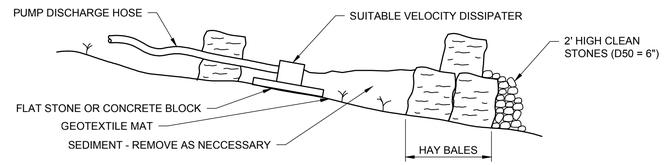


HIGH SCHOOL FIRE WATER SERVICE PROFILE VIEW

STA. 550+00 TO STA. 554+67
FOR PLAN REFER TO SHEET C-43



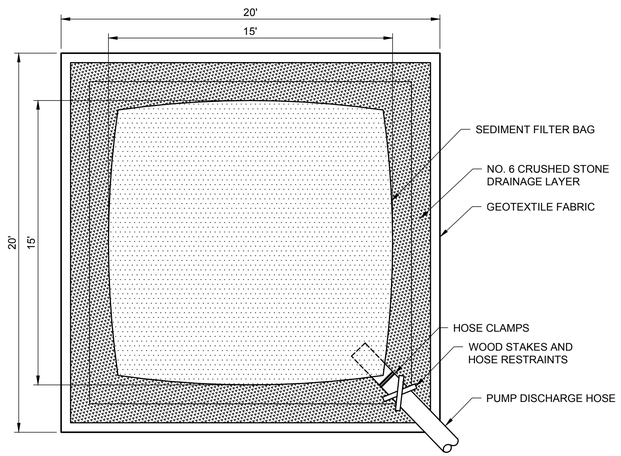
PLAN



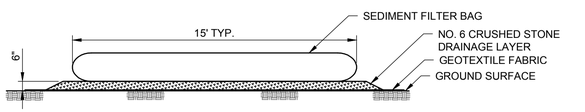
SECTION

SEDIMENT TRAP DETAIL

NOT TO SCALE



PLAN

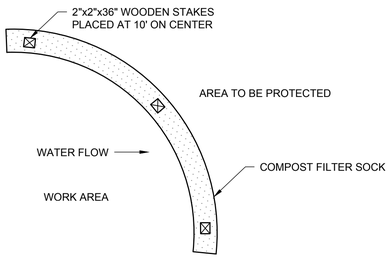


SECTION

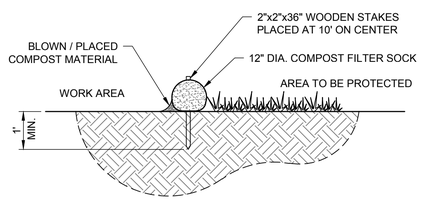
NOTES:
1. ONE DISCHARGE HOSE PER FILTER BAG.
2. CONTRACTOR TO REMOVE FILTER BAG AND ACCUMULATED SEDIMENT UPON PROJECT COMPLETION.

SEDIMENT FILTER BAG DETAIL

NOT TO SCALE



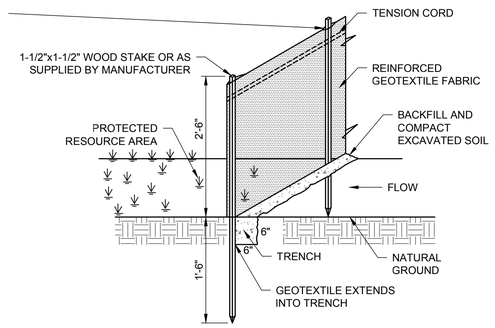
PLAN



SECTION

COMPOST SILT SOCK EROSION BARRIER DETAIL

NOT TO SCALE



SEDIMENT CONTROL FENCE DETAIL

NOT TO SCALE

EROSION AND SEDIMENTATION CONTROL NOTES:

1. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL CONFORM TO THE *"2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL"*, AS AMENDED.
2. EROSION AND SEDIMENTATION MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES AND SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
3. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A PRECIPITATION EVENT OF 0.5 INCHES OF RAIN OR GREATER TO ASSESS MAINTENANCE NEEDS. ANY MAINTENANCE NEEDS FOUND SHALL BE IMMEDIATELY ADDRESSED.
4. THE CONTRACTOR SHALL MONITOR FOR AND CONTROL AIRBORNE CONTAMINANTS AND DUST DURING CONSTRUCTION ACTIVITIES.
5. THE CONTRACTOR SHALL PROVIDE INTERIM EROSION AND SEDIMENTATION CONTROL MEASURES AT ACTIVE WORK ZONES.
6. ALL DISTURBED AREAS THAT WILL BE EXPOSED FOR A PERIOD GREATER THAN ONE MONTH SHALL HAVE TEMPORARY VEGETATION ESTABLISHED.
7. ALL MATERIAL STOCKPILE AREAS SHALL BE PROTECTED WITH SEDIMENT CONTROL FENCE OR HAY BALES.
8. VEHICLE OR CONSTRUCTION EQUIPMENT REFUELING IS PROHIBITED WITHIN 100 FEET OF ANY WETLAND, WATERCOURSE, OR WATER BODY.
9. DISCHARGE OF DEWATERING DISCHARGES DIRECTLY TO DRAINAGE SYSTEMS, WETLANDS, WATERCOURSES, OR WATER BODIES IS PROHIBITED.

REVISIONS				
MARK	DATE	MADE BY	CHECKED	DESCRIPTION
				100% SUBMITTAL

AECOM, INC.
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067
PHONE (860) 263-3600

EPA CONTRACT NO. EP-S1-06-01
DURHAM MEADOWS WATERLINE RD
DURHAM AND MIDDLETOWN, CONNECTICUT
TASK ORDER NO. 0060-RD-RD-01D5

EROSION AND SEDIMENTAT CONTROL DETAILS

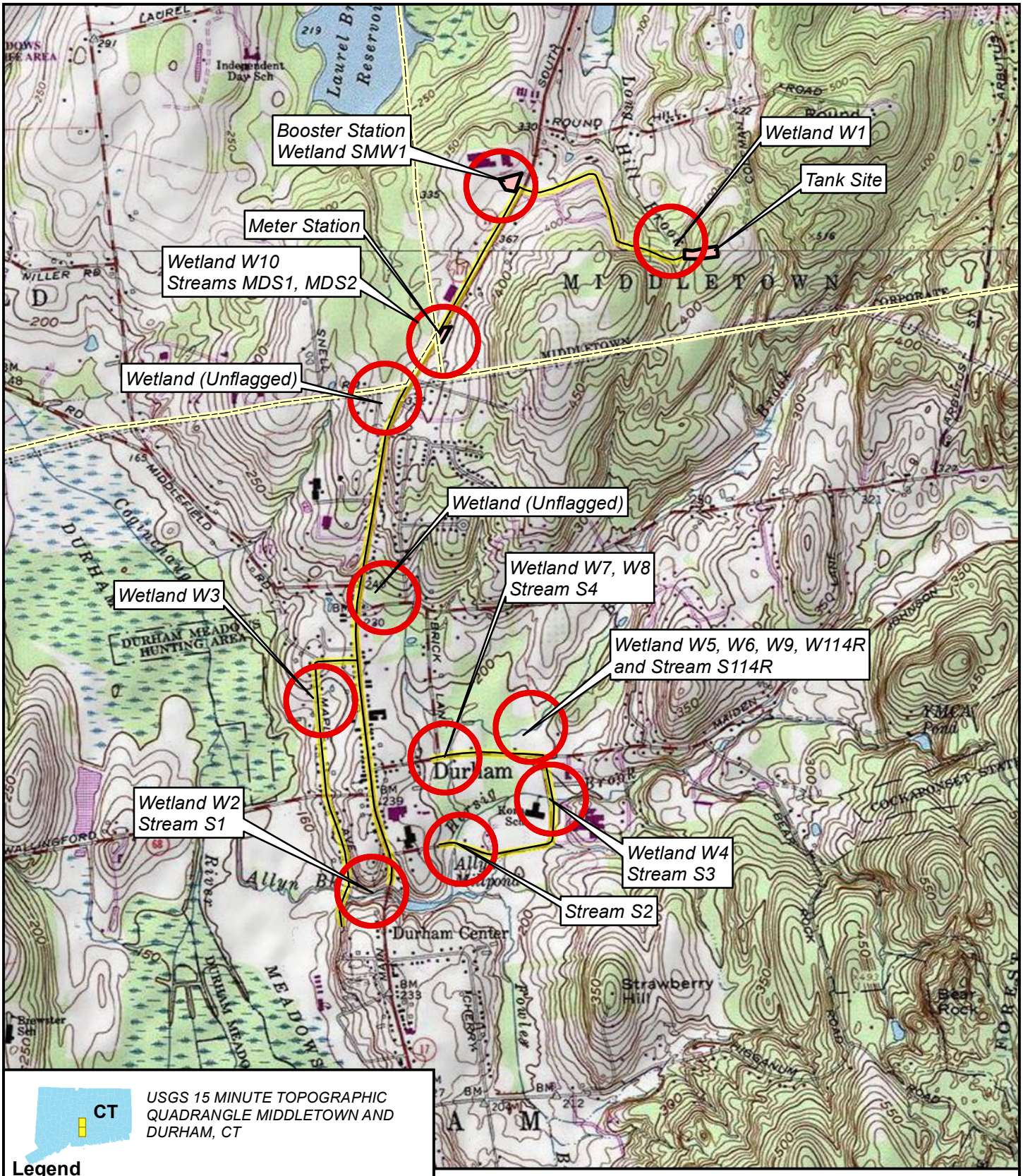
CIVIL

PROJECT NO:	60275749
CAD DWG FILE:	CZDUR501
DESIGNED BY:	MCC
DRAWN BY:	MCC
DEPT CHECK:	GRS
PROJ CHECK:	MWM
DATE:	APRIL 2018
SCALE:	AS NOTED

C-501

ANSI D – 26-Jan-18

EXHIBIT 2



SITE LOCUS

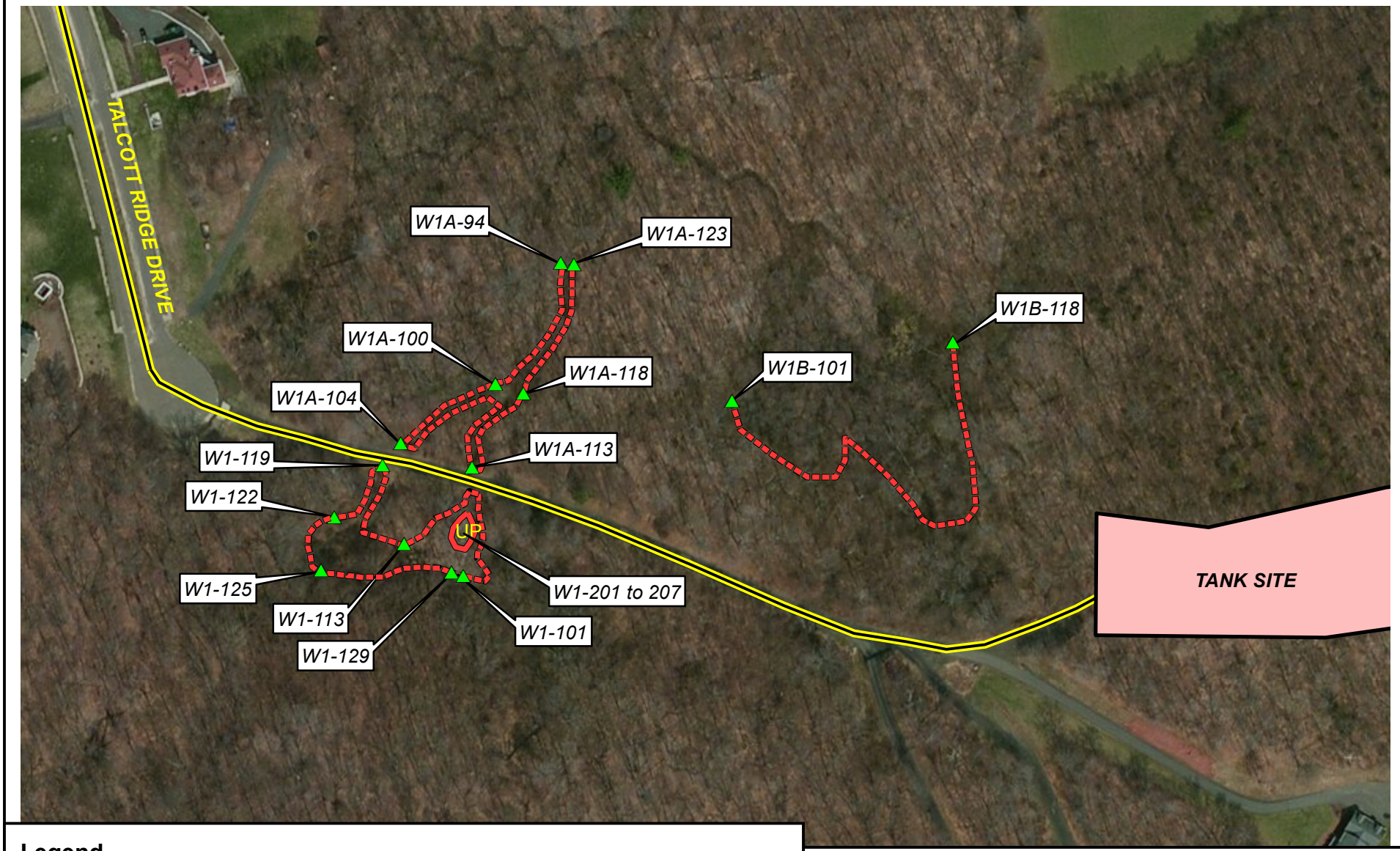
Durham Meadows Waterline RD
Middletown and Durham, Connecticut

SCALE	DATE	PROJECT NO.
1:24,000	07/17	60275749

AECOM

Figure Number

1



Legend

- Tank Site Parcel
- Proposed Water Line
- Approximate Wetland Boundaries

0 100 200 400 600 800 Feet

Approximate Wetland Boundaries

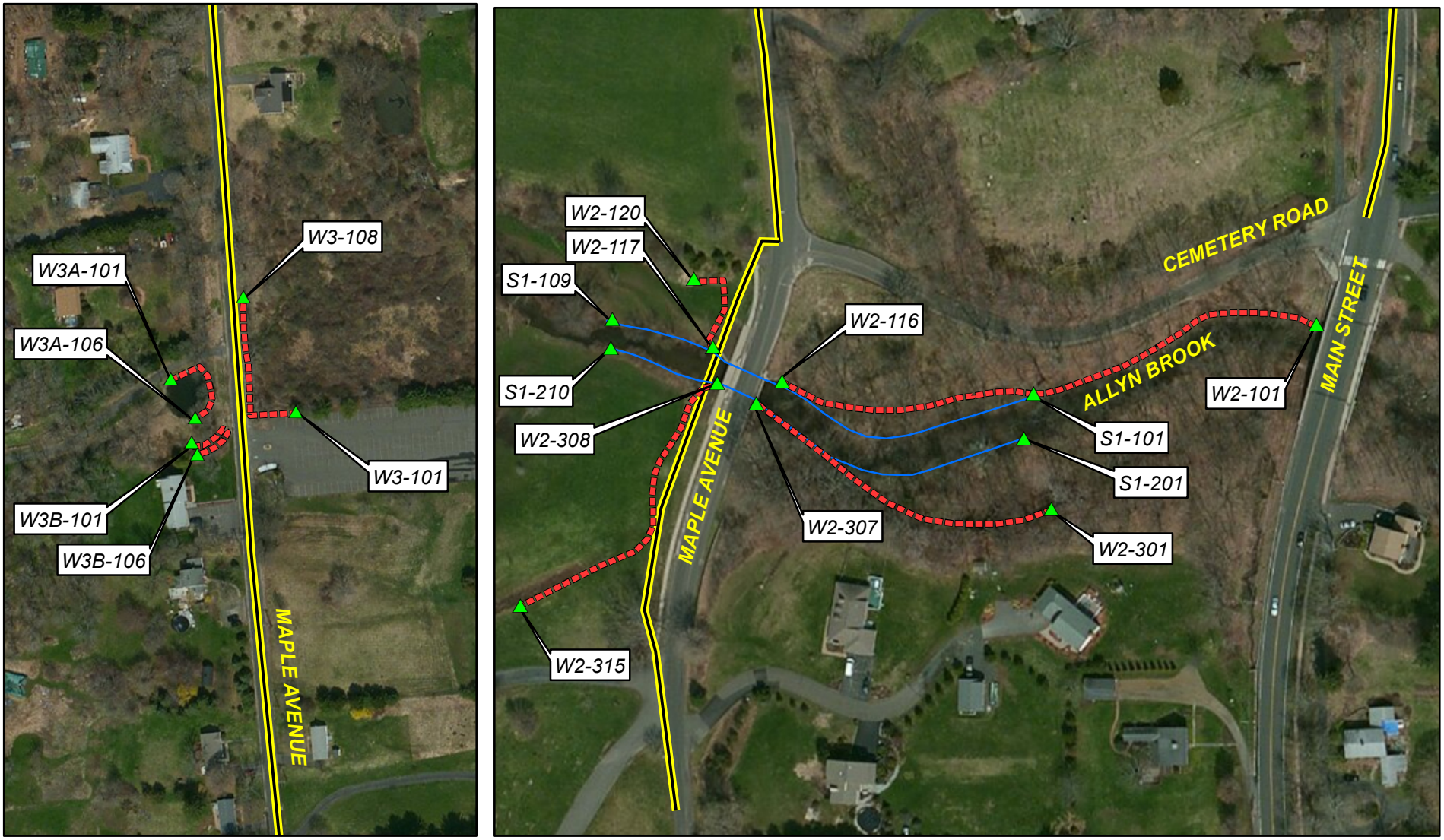
Durham Meadows Waterline RD
Middletown and Durham, Connecticut

SCALE	DATE	PROJECT NO.
1:1800	11/14	60275749

AECOM

Figure Number

2



Legend

- Proposed Water Line
- Approximate Wetland Boundaries
- Approximate Top of Bank Line

0 100 200 400 600 800 Feet

Approximate Wetland Boundaries

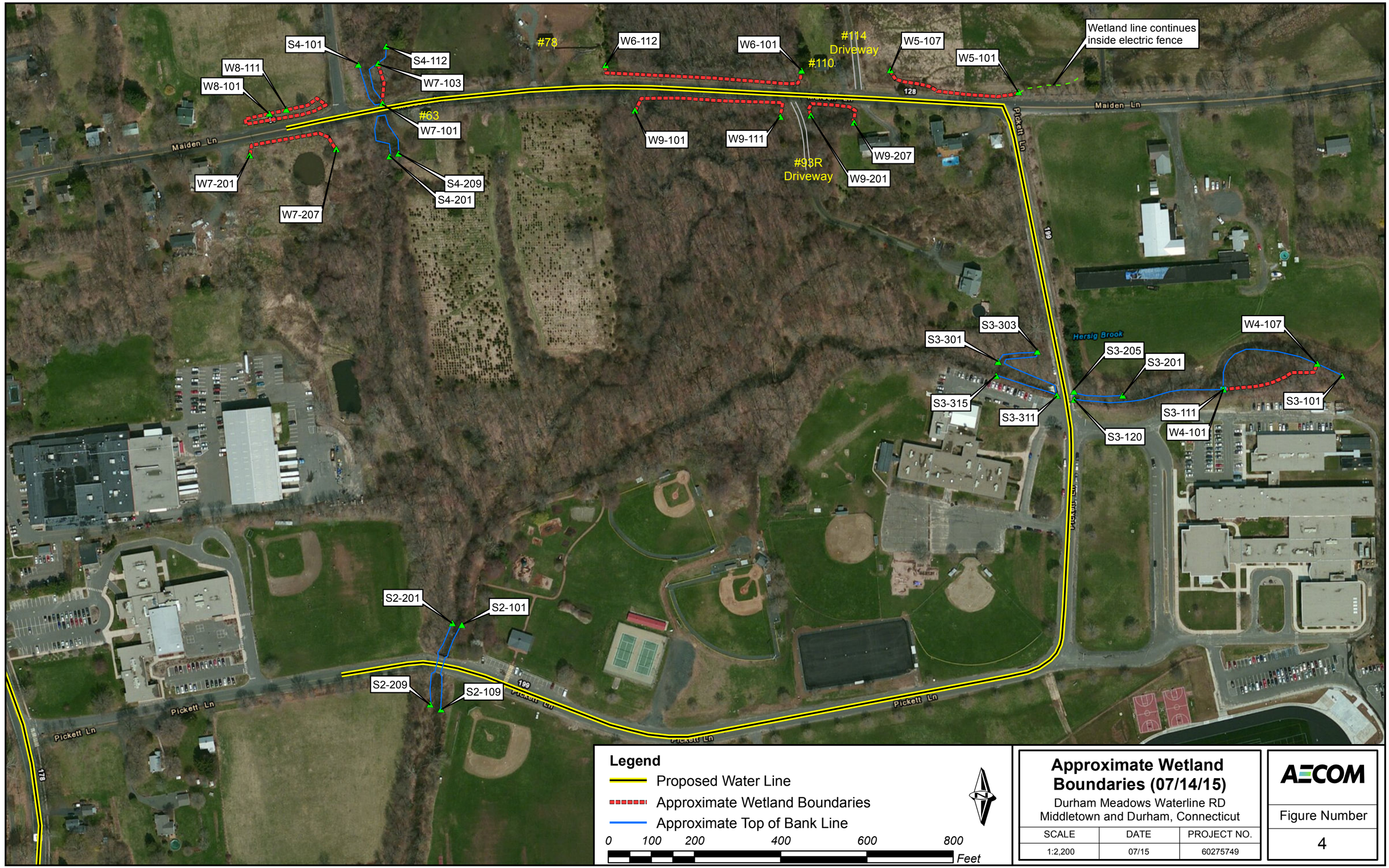
Durham Meadows Waterline RD
Middletown and Durham, Connecticut

SCALE	DATE	PROJECT NO.
1:1800	11/14	60275749

AECOM

Figure Number

3



Approximate Wetland Boundaries (07/14/15)

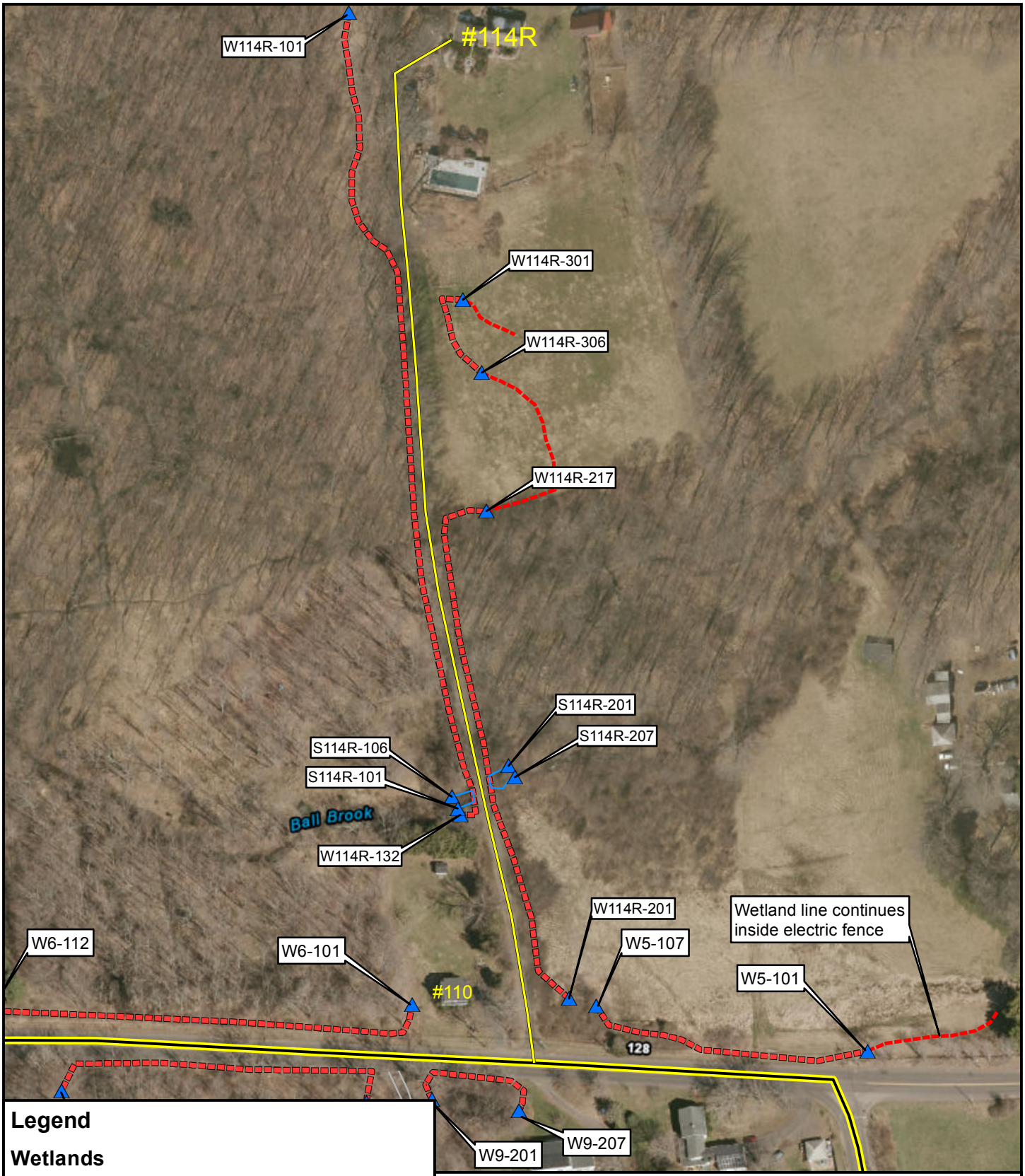
Durham Meadows Waterline RD
Middletown and Durham, Connecticut

SCALE	DATE	PROJECT NO.
1:2,200	07/15	60275749

AECOM

Figure Number

4



Legend

Wetlands

- Approx Wetland - Photo Interpreted
- Approx Wetland - Field Delineated
- Watercourse
- Wetland Flags
- Proposed Water Line
- Proposed Service Line

Approximate Wetland Boundaries (07/13/17)

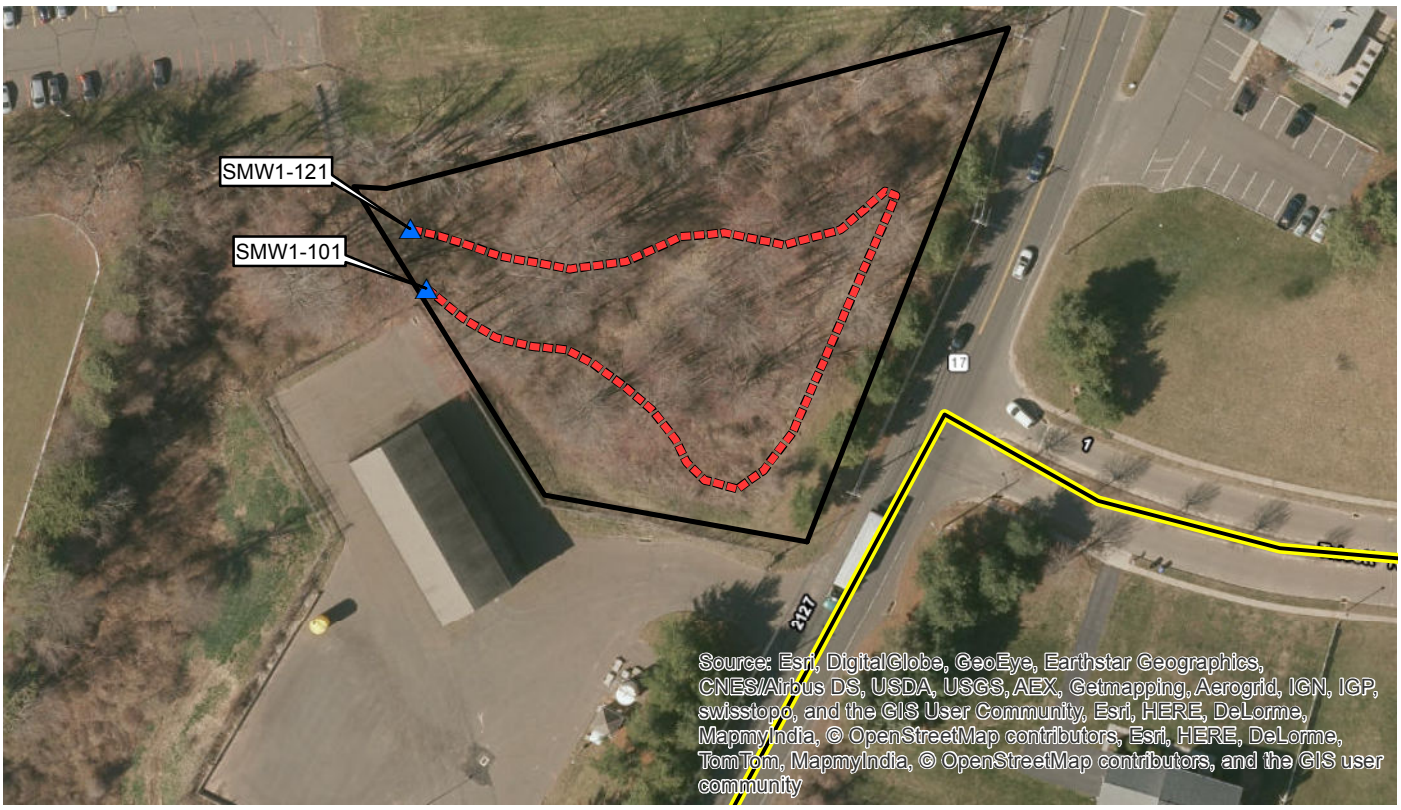
Durham Meadows Waterline RD
Middletown and Durham, Connecticut

SCALE	DATE	PROJECT NO.
1:1,800	07/17	60275749

AECOM

Figure Number

5



Legend

Wetlands

- Approx Wetland - Photo Interpreted
- Approx Wetland - Field Delineated
- Watercourse
- Wetland Flags
- Approx Property Boundaries
- Proposed Water Line

Approximate Wetland Boundaries (07/13/17)

Durham Meadows Waterline RD
Middletown and Durham, Connecticut

SCALE	DATE	PROJECT NO.
1:1,200	07/17	60275749

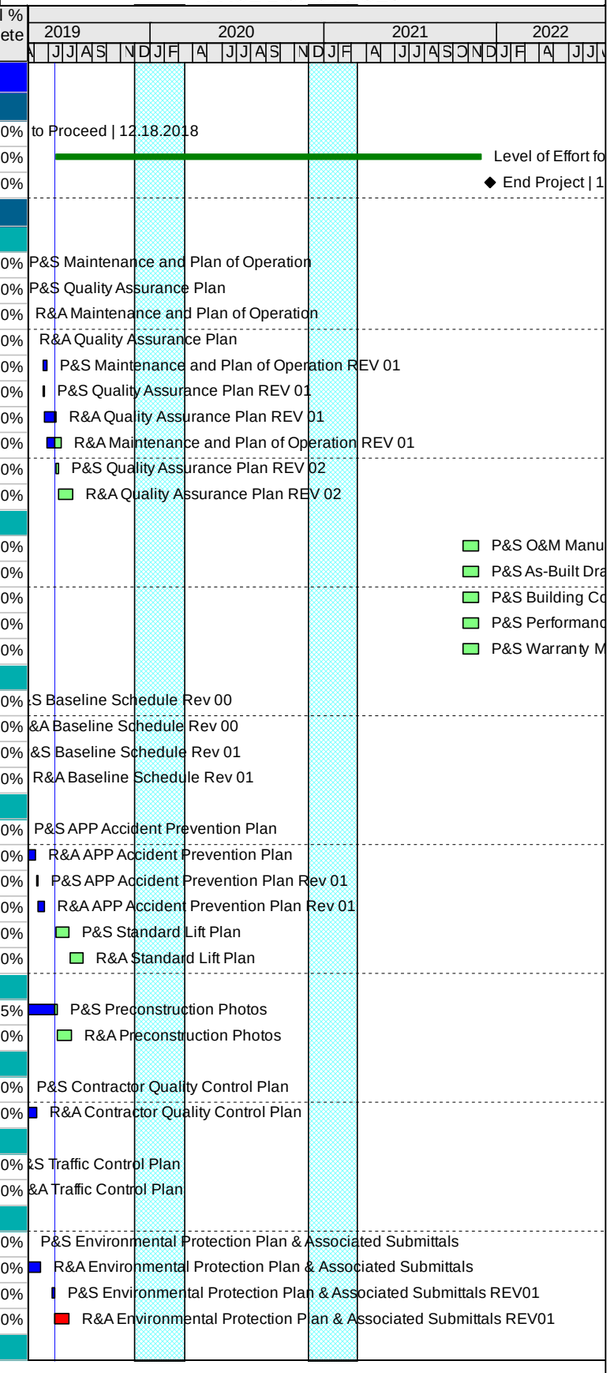
AECOM

Figure Number

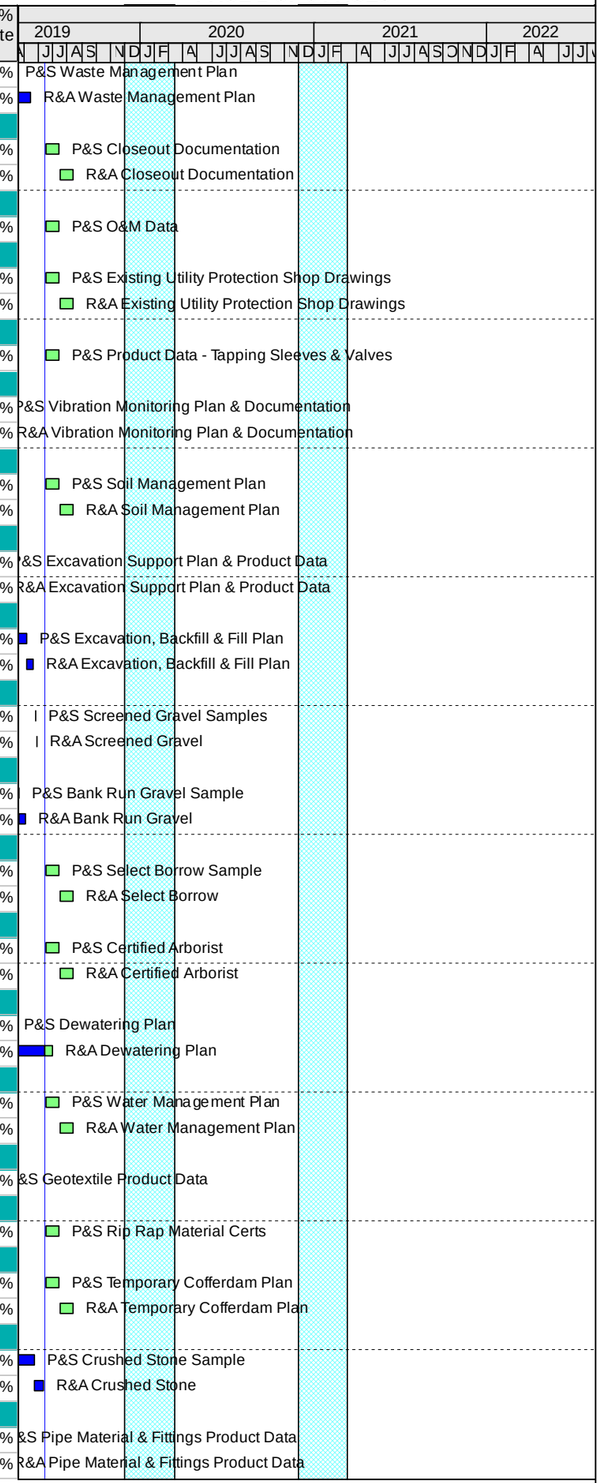
6

EXHIBIT 3

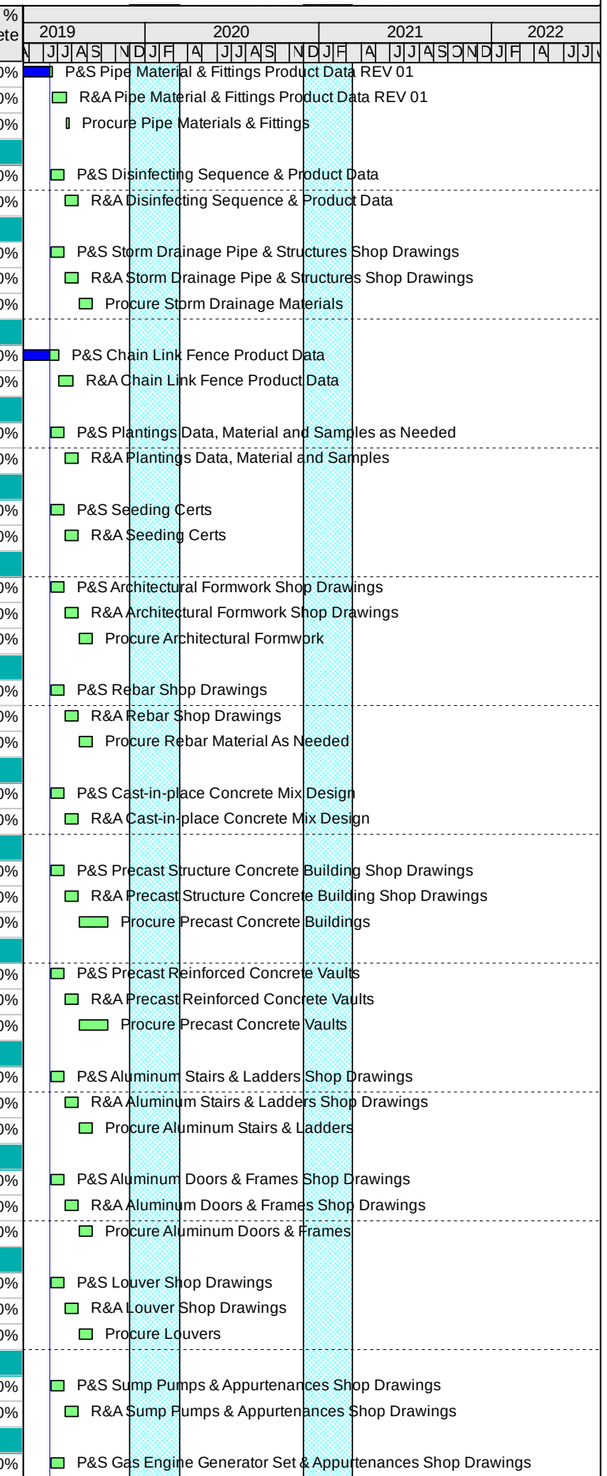
Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
DD6.18.18 Durham Meadows Waterline - UP03										
Milestones										
A1000	Notice to Proceed | 12.18.2018	0		18-Dec-18 A		23-Jun-19		Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7650	Level of Effort for Cost Loading	576	0	15-Feb-19 A	30-Nov-21	01-Apr-19	30-Nov-21	Out of Roadway Work - Days	414	0%
A1020	End Project | 12.17.2021	0	0		17-Dec-21*		17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	0	0%
Submittals & Procurement										
01 11 00 - Preconstruction Submittals										
A7740	P&S Maintenance and Plan of Operation	30		20-Feb-19 A	25-Mar-19 A	22-Jul-19	22-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7760	P&S Quality Assurance Plan	30		04-Mar-19 A	25-Mar-19 A	27-Jun-19	27-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7750	R&A Maintenance and Plan of Operation	30		26-Mar-19 A	08-Apr-19 A	22-Jul-19	22-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7770	R&A Quality Assurance Plan	30		26-Mar-19 A	15-Apr-19 A	27-Jun-19	27-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7850	P&S Maintenance and Plan of Operation REV 01	5		20-May-19 A	29-May-19 A	22-Jul-19	22-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7870	P&S Quality Assurance Plan REV 01	5		20-May-19 A	24-May-19 A	27-Jun-19	27-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7880	R&A Quality Assurance Plan REV 01	30	11	24-May-19 A	17-Jun-19	27-Jun-19	28-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	2	0%
A7860	R&A Maintenance and Plan of Operation REV 01	30	36	29-May-19 A	27-Jun-19	22-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	12	0%
A8030	P&S Quality Assurance Plan REV 02	5	11	18-Jun-19	22-Jun-19	29-Jun-19	03-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	5	0%
A8040	R&A Quality Assurance Plan REV 02	30	11	23-Jun-19	22-Jul-19	04-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
01 11 00 - Closeout Submittals										
A7780	P&S O&M Manuals	30	25	23-Oct-21	22-Nov-21	18-Nov-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A7790	P&S As-Built Drawings	30	25	23-Oct-21	22-Nov-21	18-Nov-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A7800	P&S Building Commissioning Plan	30	25	23-Oct-21	22-Nov-21	18-Nov-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A7810	P&S Performance Verification Testing	30	25	23-Oct-21	22-Nov-21	18-Nov-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A7820	P&S Warranty Management Plan	30	25	23-Oct-21	22-Nov-21	18-Nov-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
01 32 01 - Project Schedule										
A3310	P&S Baseline Schedule Rev 00	30		01-Jan-19 A	15-Feb-19 A	26-Oct-21	26-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3320	R&A Baseline Schedule Rev 00	30		15-Feb-19 A	01-Mar-19 A	26-Oct-21	26-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3330	P&S Baseline Schedule Rev 01	15		01-Mar-19 A	05-Mar-19 A	26-Oct-21	26-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3340	R&A Baseline Schedule Rev 01	30		05-Mar-19 A	01-Apr-19 A	26-Oct-21	26-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	0	100%
01 35 26 - Governmental Safety Requirements										
A3350	P&S APP Accident Prevention Plan	30		12-Feb-19 A	05-Apr-19 A	12-Jul-19	12-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3360	R&A APP Accident Prevention Plan	30		06-Apr-19 A	06-May-19 A	12-Jul-19	12-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7830	P&S APP Accident Prevention Plan Rev 01	14		07-May-19 A	10-May-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A7840	R&A APP Accident Prevention Plan Rev 01	30		10-May-19 A	23-May-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3370	P&S Standard Lift Plan	30	280	16-Jun-19	15-Jul-19	22-Mar-20	20-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3380	R&A Standard Lift Plan	30	280	16-Jul-19	14-Aug-19	21-Apr-20	20-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
01 39 00 - Pre- and Post- Construction Surveys										
A3390	P&S Preconstruction Photos	30	13	01-Apr-19 A	20-Jun-19	29-Jun-19	03-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	5	75%
A3400	R&A Preconstruction Photos	30	13	21-Jun-19	20-Jul-19	04-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
01 45 00 - Quality Control										
A3410	P&S Contractor Quality Control Plan	30		12-Feb-19 A	10-Apr-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3420	R&A Contractor Quality Control Plan	30		11-Apr-19 A	09-May-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
01 50 00 - Temporary Construction Facilities and Controls										
A3430	P&S Traffic Control Plan	30		04-Feb-19 A	19-Feb-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3440	R&A Traffic Control Plan	30		20-Feb-19 A	26-Feb-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
01 57 20 - Environmental Protection										
A3450	P&S Environmental Protection Plan & Associated Submittals	30		20-Feb-19 A	18-Apr-19 A	24-Jun-19	24-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3460	R&A Environmental Protection Plan & Associated Submittals	30		19-Apr-19 A	16-May-19 A	24-Jun-19	24-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A8010	P&S Environmental Protection Plan & Associated Submittals REV01	5		10-Jun-19 A	14-Jun-19 A	24-Jun-19	24-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A8020	R&A Environmental Protection Plan & Associated Submittals REV01	30	8	14-Jun-19 A	13-Jul-19	24-Jun-19	21-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	28	0%
01 74 19 - Construction and Demolition Waste Management										



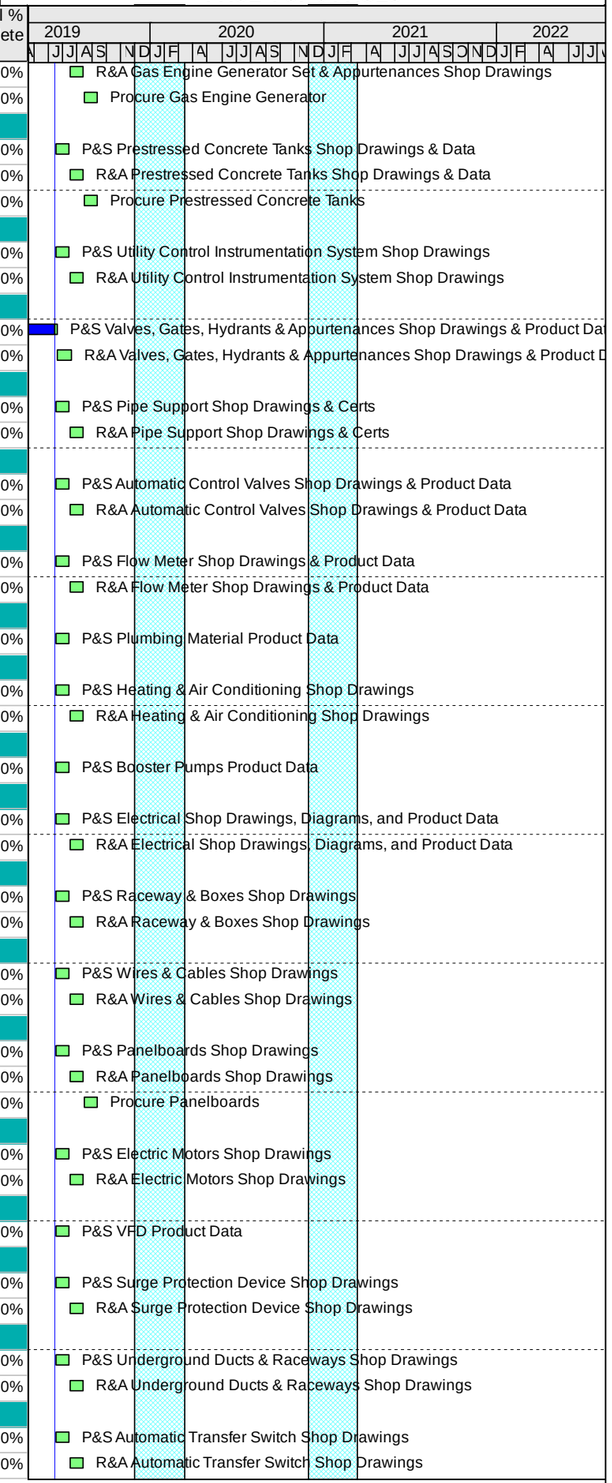
Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
A3470	P&S Waste Management Plan	30		12-Feb-19 A	08-Apr-19 A	01-Apr-20	01-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3480	R&A Waste Management Plan	30		08-Apr-19 A	16-May-19 A	01-Apr-20	01-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	0	100%
01 78 00 - Closeout Submittals										
A3490	P&S Closeout Documentation	30	856	16-Jun-19	15-Jul-19	19-Oct-21	17-Nov-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3500	R&A Closeout Documentation	30	856	16-Jul-19	14-Aug-19	18-Nov-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
01 78 23 - Operation and Maintenance Data										
A3510	P&S O&M Data	30	886	16-Jun-19	15-Jul-19	18-Nov-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02012 - Protecting Existing Underground Utilities										
A3520	P&S Existing Utility Protection Shop Drawings	30	85	16-Jun-19	15-Jul-19	09-Sep-19	08-Oct-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3530	R&A Existing Utility Protection Shop Drawings	30	85	16-Jul-19	14-Aug-19	09-Oct-19	07-Nov-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02013 - Connection to Existing Buried Pipelines										
A3540	P&S Product Data - Tapping Sleeves & Valves	30	18	16-Jun-19	15-Jul-19	04-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02018 - Vibration Monitoring										
A3550	P&S Vibration Monitoring Plan & Documentation	30		04-Mar-19 A	14-Mar-19 A	29-Jul-19	29-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3560	R&A Vibration Monitoring Plan & Documentation	30		15-Mar-19 A	18-Mar-19 A	29-Jul-19	29-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
02053 - Excavated Material Management Plan										
A3570	P&S Soil Management Plan	30	782	16-Jun-19	15-Jul-19	06-Aug-21	04-Sep-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3580	R&A Soil Management Plan	30	782	16-Jul-19	14-Aug-19	05-Sep-21	04-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02160 - Excavation Support System										
A3590	P&S Excavation Support Plan & Product Data	30		25-Feb-19 A	08-Mar-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3600	R&A Excavation Support Plan & Product Data	30		09-Mar-19 A	14-Mar-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
02210 - Earth Excavation, Backfill, Fill and Grading										
A3610	P&S Excavation, Backfill & Fill Plan	30		29-Mar-19 A	09-May-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3620	R&A Excavation, Backfill & Fill Plan	30		09-May-19 A	22-May-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
02223 - Screened Gravel										
A3630	P&S Screened Gravel Samples	30		27-May-19 A	28-May-19 A	30-Apr-20	30-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3640	R&A Screened Gravel	30		29-May-19 A	30-May-19 A	30-Apr-20	30-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	0	100%
02224 - Bank Run or Crushed Gravel										
A3650	P&S Bank Run Gravel Sample	30		28-Mar-19 A	22-Apr-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3660	R&A Bank Run Gravel	30		22-Apr-19 A	04-May-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
02225 - Select Borrow										
A3670	P&S Select Borrow Sample	30	230	16-Jun-19	15-Jul-19	01-Feb-20	01-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3680	R&A Select Borrow	30	230	16-Jul-19	14-Aug-19	02-Mar-20	31-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02230 - Site Clearing										
A3690	P&S Certified Arborist	30	92	16-Jun-19	15-Jul-19	16-Sep-19	15-Oct-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3700	R&A Certified Arborist	30	92	16-Jul-19	14-Aug-19	16-Oct-19	14-Nov-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02240 - Dewatering										
A3710	P&S Dewatering Plan	30		18-Mar-19 A	05-Apr-19 A	18-Jul-19	18-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3720	R&A Dewatering Plan	30	32	06-Apr-19 A	01-Jul-19	18-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	16	50%
02241 - Construction Water Management										
A3730	P&S Water Management Plan	30	335	16-Jun-19	15-Jul-19	16-May-20	15-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3740	R&A Water Management Plan	30	335	16-Jul-19	14-Aug-19	15-Jun-20	15-Jul-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02273 - Geotextile Fabric										
A3750	P&S Geotextile Product Data	30		25-Feb-19 A	28-Feb-19 A	24-Apr-20	24-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	0	100%
02371 - Riprap										
A3760	P&S Rip Rap Material Certs	30	290	16-Jun-19	15-Jul-19	01-Apr-20	30-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02400 - Temporary Cofferdam										
A3770	P&S Temporary Cofferdam Plan	30	277	16-Jun-19	15-Jul-19	19-Mar-20	17-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3780	R&A Temporary Cofferdam Plan	30	277	16-Jul-19	14-Aug-19	18-Apr-20	17-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02435 - Crushed Stone										
A3790	P&S Crushed Stone Sample	30		25-Mar-19 A	24-May-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3800	R&A Crushed Stone	30		24-May-19 A	11-Jun-19 A	03-Aug-19	03-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
02510 - Water Utilities										
A3810	P&S Pipe Material & Fittings Product Data	30		04-Feb-19 A	26-Feb-19 A	25-Jun-19	25-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%
A3820	R&A Pipe Material & Fittings Product Data	30		27-Feb-19 A	14-Mar-19 A	25-Jun-19	25-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	0	100%



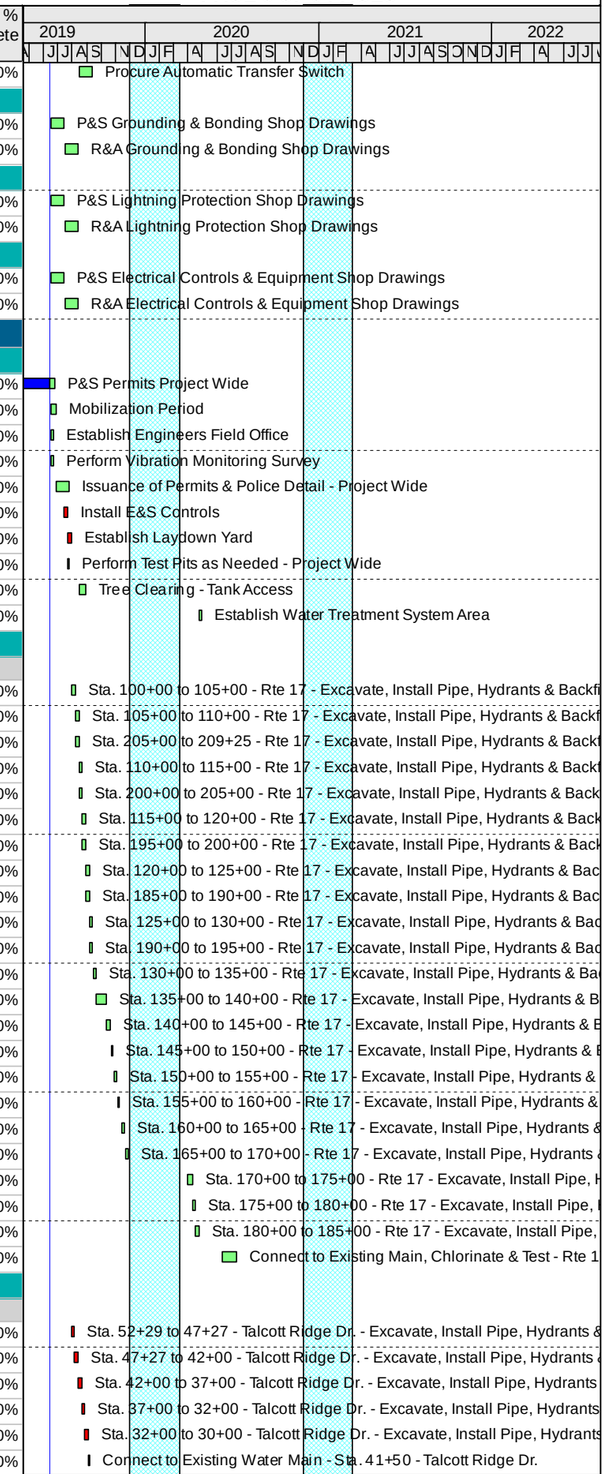
Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
A7890	P&S Pipe Material & Fittings Product Data REV 01	5	9	15-Apr-19 A	19-Jun-19	25-Jun-19	28-Jun-19	Cure, Milestone, & Submittal - 7D/Wk	4	0%
A7900	R&A Pipe Material & Fittings Product Data REV 01	30	9	20-Jun-19	19-Jul-19	29-Jun-19	28-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4520	Procure Pipe Materials & Fittings	5	9	20-Jul-19	24-Jul-19	29-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	5	0%
02515 - Disinfecting Water Utility Distribution Systems										
A3830	P&S Disinfecting Sequence & Product Data	30	721	16-Jun-19	15-Jul-19	06-Jun-21	05-Jul-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3840	R&A Disinfecting Sequence & Product Data	30	721	16-Jul-19	14-Aug-19	06-Jul-21	04-Aug-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02630 - Storm Drainage Utilities										
A3850	P&S Storm Drainage Pipe & Structures Shop Drawings	30	223	16-Jun-19	15-Jul-19	25-Jan-20	23-Feb-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3860	R&A Storm Drainage Pipe & Structures Shop Drawings	30	223	16-Jul-19	14-Aug-19	24-Feb-20	24-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4530	Procure Storm Drainage Materials	30	223	15-Aug-19	13-Sep-19	25-Mar-20	23-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02820 - Chain Link Fences & Gates										
A3870	P&S Chain Link Fence Product Data	30	368	08-Apr-19 A	03-Jul-19	18-Jun-20	05-Jul-20	Cure, Milestone, & Submittal - 7D/Wk	18	50%
A3880	R&A Chain Link Fence Product Data	30	368	04-Jul-19	02-Aug-19	06-Jul-20	04-Aug-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02900 - Planting										
A3890	P&S Plantings Data, Material and Samples as Needed	30	795	16-Jun-19	15-Jul-19	19-Aug-21	17-Sep-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3900	R&A Plantings Data, Material and Samples	30	795	16-Jul-19	14-Aug-19	18-Sep-21	17-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
02922 - Hydroseeding										
A3910	P&S Seeding Certs	30	782	16-Jun-19	15-Jul-19	06-Aug-21	04-Sep-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3920	R&A Seeding Certs	30	782	16-Jul-19	14-Aug-19	05-Sep-21	04-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
03100 - Concrete Formwork										
A3930	P&S Architectural Formwork Shop Drawings	30	306	16-Jun-19	15-Jul-19	17-Apr-20	16-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3940	R&A Architectural Formwork Shop Drawings	30	306	16-Jul-19	14-Aug-19	17-May-20	15-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4540	Procure Architectural Formwork	30	306	15-Aug-19	13-Sep-19	16-Jun-20	15-Jul-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
03200 - Concrete Reinforcement										
A3950	P&S Rebar Shop Drawings	30	306	16-Jun-19	15-Jul-19	17-Apr-20	16-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3960	R&A Rebar Shop Drawings	30	306	16-Jul-19	14-Aug-19	17-May-20	15-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4550	Procure Rebar Material As Needed	30	306	15-Aug-19	13-Sep-19	16-Jun-20	15-Jul-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
03300 - Cast-In-Place Concrete										
A3970	P&S Cast-in-place Concrete Mix Design	30	336	16-Jun-19	15-Jul-19	17-May-20	15-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A3980	R&A Cast-in-place Concrete Mix Design	30	336	16-Jul-19	14-Aug-19	16-Jun-20	15-Jul-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
03410 - Precast Structural Concrete Building										
A3990	P&S Precast Structure Concrete Building Shop Drawings	30	217	16-Jun-19	15-Jul-19	19-Jan-20	17-Feb-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4000	R&A Precast Structure Concrete Building Shop Drawings	30	217	16-Jul-19	14-Aug-19	18-Feb-20	18-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4560	Procure Precast Concrete Buildings	60	217	15-Aug-19	13-Oct-19	19-Mar-20	17-May-20	Cure, Milestone, & Submittal - 7D/Wk	60	0%
03420 - Precast Reinforced Concrete Vaults										
A4010	P&S Precast Reinforced Concrete Vaults	30	217	16-Jun-19	15-Jul-19	19-Jan-20	17-Feb-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4020	R&A Precast Reinforced Concrete Vaults	30	217	16-Jul-19	14-Aug-19	18-Feb-20	18-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4570	Procure Precast Concrete Vaults	60	217	15-Aug-19	13-Oct-19	19-Mar-20	17-May-20	Cure, Milestone, & Submittal - 7D/Wk	60	0%
05515 - Aluminum Stairs and Ladders										
A4030	P&S Aluminum Stairs & Ladders Shop Drawings	30	250	16-Jun-19	15-Jul-19	21-Feb-20	21-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4040	R&A Aluminum Stairs & Ladders Shop Drawings	30	250	16-Jul-19	14-Aug-19	22-Mar-20	20-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4580	Procure Aluminum Stairs & Ladders	30	250	15-Aug-19	13-Sep-19	21-Apr-20	20-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
08111 - Flush Panel Aluminum Doors and Frames										
A4050	P&S Aluminum Doors & Frames Shop Drawings	30	250	16-Jun-19	15-Jul-19	21-Feb-20	21-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4060	R&A Aluminum Doors & Frames Shop Drawings	30	250	16-Jul-19	14-Aug-19	22-Mar-20	20-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4590	Procure Aluminum Doors & Frames	30	250	15-Aug-19	13-Sep-19	21-Apr-20	20-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
10200 - Louvers										
A4070	P&S Louver Shop Drawings	30	250	16-Jun-19	15-Jul-19	21-Feb-20	21-Mar-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4080	R&A Louver Shop Drawings	30	250	16-Jul-19	14-Aug-19	22-Mar-20	20-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4600	Procure Louvers	30	250	15-Aug-19	13-Sep-19	21-Apr-20	20-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
11316 - Sump Pumps and Appurtenances										
A4090	P&S Sump Pumps & Appurtenances Shop Drawings	30	291	16-Jun-19	15-Jul-19	02-Apr-20	01-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4100	R&A Sump Pumps & Appurtenances Shop Drawings	30	291	16-Jul-19	14-Aug-19	02-May-20	31-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
11397 - Gas Engine Generator Set and Appurtenances										
A4110	P&S Gas Engine Generator Set & Appurtenances Shop Drawings	30	268	16-Jun-19	15-Jul-19	10-Mar-20	08-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%



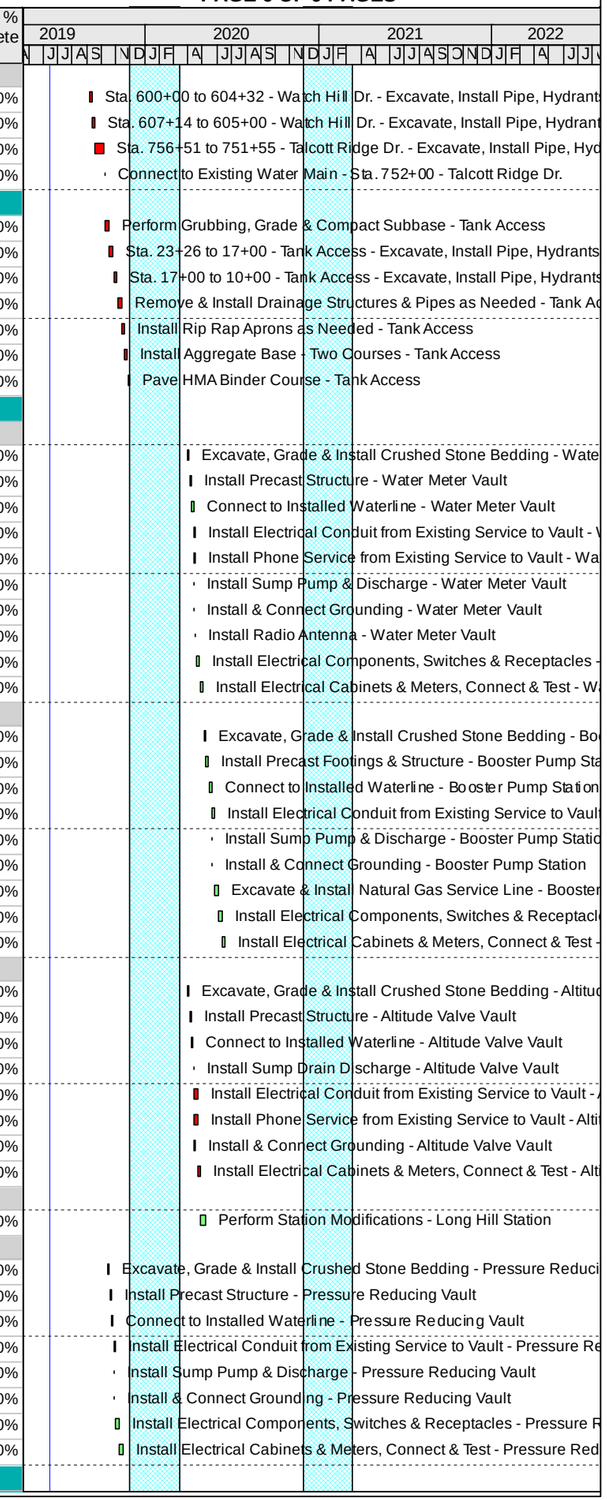
Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
A4120	R&A Gas Engine Generator Set & Appurtenances Shop Drawings	30	268	16-Jul-19	14-Aug-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4610	Procure Gas Engine Generator	30	268	15-Aug-19	13-Sep-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
13225 - Prestressed Concrete Tanks										
A4130	P&S Prestressed Concrete Tanks Shop Drawings & Data	30	331	16-Jun-19	15-Jul-19	12-May-20	10-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4140	R&A Prestressed Concrete Tanks Shop Drawings & Data	30	331	16-Jul-19	14-Aug-19	11-Jun-20	10-Jul-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4620	Procure Prestressed Concrete Tanks	30	331	15-Aug-19	13-Sep-19	11-Jul-20	09-Aug-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
13300 - Utility Control Instrumentation System										
A4150	P&S Utility Control Instrumentation System Shop Drawings	30	414	16-Jun-19	15-Jul-19	03-Aug-20	01-Sep-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4160	R&A Utility Control Instrumentation System Shop Drawings	30	414	16-Jul-19	14-Aug-19	02-Sep-20	01-Oct-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
15101 - Valves, Gates, Hydrants, and Appurtenances										
A4170	P&S Valves, Gates, Hydrants & Appurtenances Shop Drawings & Product Data	30	14	25-Mar-19 A	19-Jun-19	30-Jun-19	03-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	4	0%
A4180	R&A Valves, Gates, Hydrants & Appurtenances Shop Drawings & Product Data	30	14	20-Jun-19	19-Jul-19	04-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
15105 - Pipe Supports for Process Piping										
A4190	P&S Pipe Support Shop Drawings & Certs	30	644	16-Jun-19	15-Jul-19	21-Mar-21	19-Apr-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4200	R&A Pipe Support Shop Drawings & Certs	30	644	16-Jul-19	14-Aug-19	20-Apr-21	19-May-21	Cure, Milestone, & Submittal - 7D/Wk	30	0%
15112 - Self-Contained Automatic Control Valves and Appurtenances										
A4210	P&S Automatic Control Valves Shop Drawings & Product Data	30	414	16-Jun-19	15-Jul-19	03-Aug-20	01-Sep-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4220	R&A Automatic Control Valves Shop Drawings & Product Data	30	414	16-Jul-19	14-Aug-19	02-Sep-20	01-Oct-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
15115 - Flow Meter										
A4230	P&S Flow Meter Shop Drawings & Product Data	30	414	16-Jun-19	15-Jul-19	03-Aug-20	01-Sep-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4240	R&A Flow Meter Shop Drawings & Product Data	30	414	16-Jul-19	14-Aug-19	02-Sep-20	01-Oct-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
15400 - Plumbing Systems										
A4250	P&S Plumbing Material Product Data	30	465	16-Jun-19	15-Jul-19	23-Sep-20	22-Oct-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
15806 - Heating, Ventilating, and Air Conditioning										
A4260	P&S Heating & Air Conditioning Shop Drawings	30	298	16-Jun-19	15-Jul-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4270	R&A Heating & Air Conditioning Shop Drawings	30	298	16-Jul-19	14-Aug-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
15809 - Water Booster Pumps and Appurtenances										
A4280	P&S Booster Pumps Product Data	30	399	16-Jun-19	15-Jul-19	19-Jul-20	17-Aug-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16050 - Electrical Work - General										
A4290	P&S Electrical Shop Drawings, Diagrams, and Product Data	30	298	16-Jun-19	15-Jul-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4300	R&A Electrical Shop Drawings, Diagrams, and Product Data	30	298	16-Jul-19	14-Aug-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16110 - Raceway and Boxes for Electrical Systems										
A4310	P&S Raceway & Boxes Shop Drawings	30	298	16-Jun-19	15-Jul-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4320	R&A Raceway & Boxes Shop Drawings	30	298	16-Jul-19	14-Aug-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16120 - Electric Wires & Cables										
A4330	P&S Wires & Cables Shop Drawings	30	298	16-Jun-19	15-Jul-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4340	R&A Wires & Cables Shop Drawings	30	298	16-Jul-19	14-Aug-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16160 - Panelboards										
A4350	P&S Panelboards Shop Drawings	30	268	16-Jun-19	15-Jul-19	10-Mar-20	08-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4360	R&A Panelboards Shop Drawings	30	268	16-Jul-19	14-Aug-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4630	Procure Panelboards	30	268	15-Aug-19	13-Sep-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16220 - Electric Motors										
A4370	P&S Electric Motors Shop Drawings	30	298	16-Jun-19	15-Jul-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4380	R&A Electric Motors Shop Drawings	30	298	16-Jul-19	14-Aug-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16260 - Low Voltage Variable Frequency Drive Unit										
A4390	P&S VFD Product Data	30	317	16-Jun-19	15-Jul-19	28-Apr-20	27-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16400 - Surge Protection Devices										
A4400	P&S Surge Protection Device Shop Drawings	30	285	16-Jun-19	15-Jul-19	27-Mar-20	25-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4410	R&A Surge Protection Device Shop Drawings	30	285	16-Jul-19	14-Aug-19	26-Apr-20	25-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16402 - Underground Ducts and Raceways for Electrical Systems										
A4420	P&S Underground Ducts & Raceways Shop Drawings	30	287	16-Jun-19	15-Jul-19	29-Mar-20	27-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4430	R&A Underground Ducts & Raceways Shop Drawings	30	287	16-Jul-19	14-Aug-19	28-Apr-20	27-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16415 - Automatic Transfer Switches										
A4440	P&S Automatic Transfer Switch Shop Drawings	30	268	16-Jun-19	15-Jul-19	10-Mar-20	08-Apr-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4450	R&A Automatic Transfer Switch Shop Drawings	30	268	16-Jul-19	14-Aug-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%



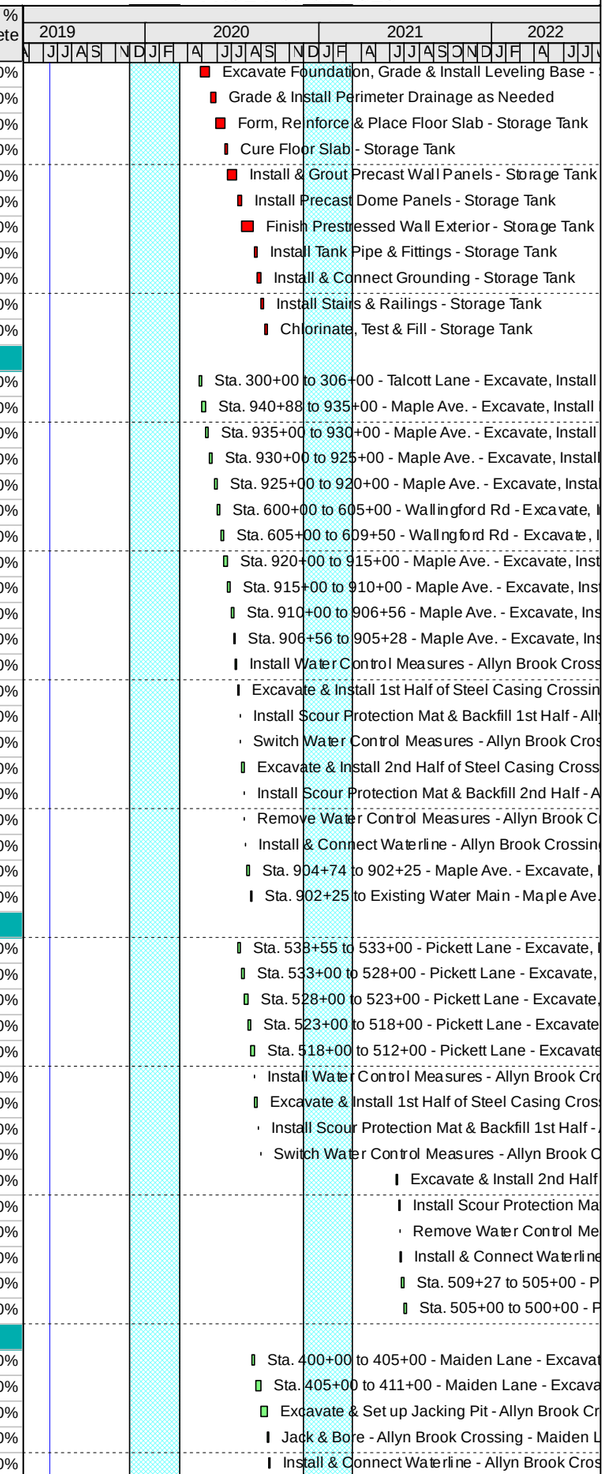
Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
A4640	Procure Automatic Transfer Switch	30	268	15-Aug-19	13-Sep-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16450 - Grounding and Bonding for Electrical Systems										
A4460	P&S Grounding & Bonding Shop Drawings	30	293	16-Jun-19	15-Jul-19	04-Apr-20	03-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4470	R&A Grounding & Bonding Shop Drawings	30	293	16-Jul-19	14-Aug-19	04-May-20	02-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16601 - Lightning Protection										
A4480	P&S Lightning Protection Shop Drawings	30	293	16-Jun-19	15-Jul-19	04-Apr-20	03-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4490	R&A Lightning Protection Shop Drawings	30	293	16-Jul-19	14-Aug-19	04-May-20	02-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
16900 - Electrical Controls and Miscellaneous Electrical Equipment										
A4500	P&S Electrical Controls & Equipment Shop Drawings	30	298	16-Jun-19	15-Jul-19	09-Apr-20	08-May-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A4510	R&A Electrical Controls & Equipment Shop Drawings	30	298	16-Jul-19	14-Aug-19	09-May-20	07-Jun-20	Cure, Milestone, & Submittal - 7D/Wk	30	0%
Construction										
Start-up										
A7720	P&S Permits Project Wide	30	7	18-Feb-19 A	26-Jun-19	23-Jun-19	03-Jul-19	Cure, Milestone, & Submittal - 7D/Wk	11	80%
A1120	Mobilization Period	10	18	17-Jun-19	28-Jun-19	12-Jul-19	26-Jul-19	Out of Roadway Work - Days	10	0%
A4650	Establish Engineers Field Office	5	18	17-Jun-19	21-Jun-19	12-Jul-19	19-Jul-19	Out of Roadway Work - Days	5	0%
A4680	Perform Vibration Monitoring Survey	5	28	17-Jun-19	21-Jun-19	29-Jul-19	02-Aug-19	Out of Roadway Work - Days	5	0%
A7730	Issuance of Permits & Police Detail - Project Wide	30	7	27-Jun-19	26-Jul-19	04-Jul-19	02-Aug-19	Cure, Milestone, & Submittal - 7D/Wk	30	0%
A1140	Install E&S Controls	5	4	15-Jul-19	22-Jul-19	22-Jul-19	26-Jul-19	Out of Roadway Work - Days	5	0%
A1160	Establish Laydown Yard	5	4	23-Jul-19	29-Jul-19	29-Jul-19	02-Aug-19	Out of Roadway Work - Days	5	0%
A4660	Perform Test Pits as Needed - Project Wide	3	6	23-Jul-19	25-Jul-19	31-Jul-19	02-Aug-19	Out of Roadway Work - Days	3	0%
A5280	Tree Clearing - Tank Access	10	56	15-Aug-19	29-Aug-19	15-Nov-19	29-Nov-19	Out of Roadway Work - Days	10	0%
A7550	Establish Water Treatment System Area	5	111	24-Apr-20	30-Apr-20	15-Oct-20	22-Oct-20	Out of Roadway Work - Days	5	0%
Route 17 South Main Street										
Rte 17 - Sta 100+00 to 209+25										
A4670	Sta. 100+00 to 105+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	6	5	29-Jul-19	08-Aug-19	03-Aug-19	15-Aug-19	In Roadway Work - Nights	6	0%
A4700	Sta. 105+00 to 110+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	08-Aug-19	15-Aug-19	15-Aug-19	22-Aug-19	In Roadway Work - Nights	5	0%
A5100	Sta. 205+00 to 209+25 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	55	08-Aug-19	15-Aug-19	09-Nov-19	20-Nov-19	In Roadway Work - Nights	5	0%
A4720	Sta. 110+00 to 115+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	15-Aug-19	22-Aug-19	22-Aug-19	29-Aug-19	In Roadway Work - Nights	5	0%
A5080	Sta. 200+00 to 205+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	55	15-Aug-19	22-Aug-19	20-Nov-19	27-Nov-19	In Roadway Work - Nights	5	0%
A4740	Sta. 115+00 to 120+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	22-Aug-19	29-Aug-19	29-Aug-19	06-Sep-19	In Roadway Work - Nights	5	0%
A5060	Sta. 195+00 to 200+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	55	22-Aug-19	29-Aug-19	27-Nov-19	09-Apr-20	In Roadway Work - Nights	5	0%
A4760	Sta. 120+00 to 125+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	29-Aug-19	06-Sep-19	06-Sep-19	13-Sep-19	In Roadway Work - Nights	5	0%
A5020	Sta. 185+00 to 190+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	55	29-Aug-19	06-Sep-19	09-Apr-20	16-Apr-20	In Roadway Work - Nights	5	0%
A4780	Sta. 125+00 to 130+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	06-Sep-19	13-Sep-19	13-Sep-19	20-Sep-19	In Roadway Work - Nights	5	0%
A5040	Sta. 190+00 to 195+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	55	06-Sep-19	13-Sep-19	16-Apr-20	23-Apr-20	In Roadway Work - Nights	5	0%
A4800	Sta. 130+00 to 135+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	13-Sep-19	20-Sep-19	20-Sep-19	11-Oct-19	In Roadway Work - Nights	5	0%
A4820	Sta. 135+00 to 140+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	20-Sep-19	11-Oct-19	11-Oct-19	19-Oct-19	In Roadway Work - Nights	5	0%
A4840	Sta. 140+00 to 145+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	11-Oct-19	19-Oct-19	19-Oct-19	26-Oct-19	In Roadway Work - Nights	5	0%
A4860	Sta. 145+00 to 150+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	21-Oct-19	26-Oct-19	26-Oct-19	02-Nov-19	In Roadway Work - Nights	5	0%
A4880	Sta. 150+00 to 155+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	28-Oct-19	02-Nov-19	02-Nov-19	09-Nov-19	In Roadway Work - Nights	5	0%
A4900	Sta. 155+00 to 160+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	04-Nov-19	09-Nov-19	09-Nov-19	20-Nov-19	In Roadway Work - Nights	5	0%
A4920	Sta. 160+00 to 165+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	13-Nov-19	20-Nov-19	20-Nov-19	27-Nov-19	In Roadway Work - Nights	5	0%
A4940	Sta. 165+00 to 170+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	20-Nov-19	27-Nov-19	27-Nov-19	09-Apr-20	In Roadway Work - Nights	5	0%
A4960	Sta. 170+00 to 175+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	01-Apr-20	10-Apr-20	09-Apr-20	16-Apr-20	In Roadway Work - Nights	5	0%
A4980	Sta. 175+00 to 180+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	10-Apr-20	17-Apr-20	16-Apr-20	23-Apr-20	In Roadway Work - Nights	5	0%
A5000	Sta. 180+00 to 185+00 - Rte 17 - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	5	17-Apr-20	24-Apr-20	23-Apr-20	30-Apr-20	In Roadway Work - Nights	5	0%
A7540	Connect to Existing Main, Chlorinate & Test - Rte 17 - 16" WL	20	65	12-Jun-20	13-Jul-20	22-Sep-20	22-Oct-20	Out of Roadway Work - Days	20	0%
Talcott Ridge Dr. & Watch Hill Dr.										
Talcott Ridge Dr. - 16" Waterline										
A5120	Sta. 52+29 to 47+27 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	33	30-Jul-19	05-Aug-19	18-Sep-19	08-Oct-19	In Roadway Work - Days	5	0%
A5140	Sta. 47+27 to 42+00 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	33	06-Aug-19	12-Aug-19	09-Oct-19	16-Oct-19	In Roadway Work - Days	5	0%
A5160	Sta. 42+00 to 37+00 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	33	14-Aug-19	20-Aug-19	17-Oct-19	23-Oct-19	In Roadway Work - Days	5	0%
A5180	Sta. 37+00 to 32+00 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 16" WL	5	33	21-Aug-19	27-Aug-19	24-Oct-19	30-Oct-19	In Roadway Work - Days	5	0%
A5200	Sta. 32+00 to 30+00 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 20" WL	3	33	28-Aug-19	03-Sep-19	31-Oct-19	04-Nov-19	In Roadway Work - Days	3	0%
A7520	Connect to Existing Water Main - Sta. 41+50 - Talcott Ridge Dr.	2	39	04-Sep-19	05-Sep-19	05-Nov-19	07-Nov-19	Out of Roadway Work - Days	2	0%



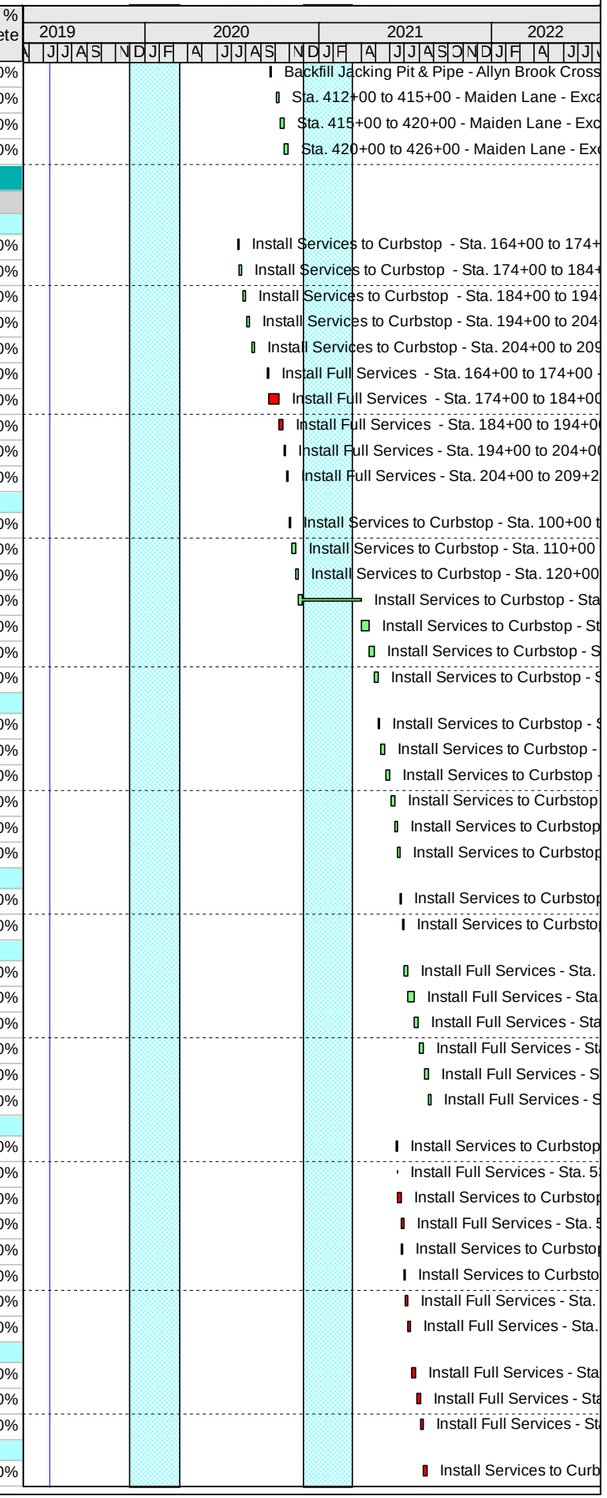
Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
Talcott Ridge Dr. & Watch Hill Dr. - 8" Waterline										
A5260	Sta. 600+00 to 604+32 - Watch Hill Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	33	06-Sep-19	12-Sep-19	08-Nov-19	15-Nov-19	In Roadway Work - Days	5	0%
A5240	Sta. 607+14 to 605+00 - Watch Hill Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	2	33	13-Sep-19	16-Sep-19	18-Nov-19	20-Nov-19	In Roadway Work - Days	2	0%
A5220	Sta. 756+51 to 751+55 - Talcott Ridge Dr. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	33	17-Sep-19	07-Oct-19	21-Nov-19	27-Nov-19	In Roadway Work - Days	5	0%
A7530	Connect to Existing Water Main - Sta. 752+00 - Talcott Ridge Dr.	1	31	08-Oct-19	08-Oct-19	29-Nov-19	29-Nov-19	Out of Roadway Work - Days	1	0%
Tank Access Driveway										
A5290	Perform Grubbing, Grade & Compact Subbase - Tank Access	5	31	09-Oct-19	17-Oct-19	01-Apr-20	07-Apr-20	Out of Roadway Work - Days	5	0%
A5300	Sta. 23+26 to 17+00 - Tank Access - Excavate, Install Pipe, Hydrants & Backfill - 20" WL	5	31	18-Oct-19	25-Oct-19	09-Apr-20	16-Apr-20	Out of Roadway Work - Days	5	0%
A5320	Sta. 17+00 to 10+00 - Tank Access - Excavate, Install Pipe, Hydrants & Backfill - 20" WL	5	31	28-Oct-19	01-Nov-19	17-Apr-20	23-Apr-20	Out of Roadway Work - Days	5	0%
A5350	Remove & Install Drainage Structures & Pipes as Needed - Tank Access	5	31	04-Nov-19	12-Nov-19	24-Apr-20	30-Apr-20	Out of Roadway Work - Days	5	0%
A5360	Install Rip Rap Aprons as Needed - Tank Access	3	31	14-Nov-19	18-Nov-19	01-May-20	05-May-20	Out of Roadway Work - Days	3	0%
A5340	Install Aggregate Base - Two Courses - Tank Access	5	31	19-Nov-19	25-Nov-19	07-May-20	14-May-20	Out of Roadway Work - Days	5	0%
A5370	Pave HMA Binder Course - Tank Access	3	31	26-Nov-19	29-Nov-19	15-May-20	19-May-20	Out of Roadway Work - Days	3	0%
Vaults & Stations										
Water Meter Vault										
A6150	Excavate, Grade & Install Crushed Stone Bedding - Water Meter Vault	3	65	01-Apr-20	03-Apr-20	13-Jul-20	15-Jul-20	Out of Roadway Work - Days	3	0%
A6160	Install Precast Structure - Water Meter Vault	2	65	06-Apr-20	07-Apr-20	16-Jul-20	17-Jul-20	Out of Roadway Work - Days	2	0%
A6170	Connect to Installed Waterline - Water Meter Vault	3	65	09-Apr-20	13-Apr-20	20-Jul-20	22-Jul-20	Out of Roadway Work - Days	3	0%
A6190	Install Electrical Conduit from Existing Service to Vault - Water Meter Vault	3	65	14-Apr-20	17-Apr-20	23-Jul-20	27-Jul-20	Out of Roadway Work - Days	3	0%
A6200	Install Phone Service from Existing Service to Vault - Water Meter Vault	3	70	14-Apr-20	17-Apr-20	30-Jul-20	03-Aug-20	Out of Roadway Work - Days	3	0%
A6180	Install Sump Pump & Discharge - Water Meter Vault	1	72	14-Apr-20	14-Apr-20	03-Aug-20	03-Aug-20	Out of Roadway Work - Days	1	0%
A6230	Install & Connect Grounding - Water Meter Vault	1	71	14-Apr-20	14-Apr-20	31-Jul-20	31-Jul-20	Out of Roadway Work - Days	1	0%
A6320	Install Radio Antenna - Water Meter Vault	1	71	16-Apr-20	16-Apr-20	03-Aug-20	03-Aug-20	Out of Roadway Work - Days	1	0%
A6330	Install Electrical Components, Switches & Receptacles - Water Meter Vault	5	65	20-Apr-20	24-Apr-20	28-Jul-20	03-Aug-20	Out of Roadway Work - Days	5	0%
A6210	Install Electrical Cabinets & Meters, Connect & Test - Water Meter Vault	5	65	27-Apr-20	01-May-20	05-Aug-20	11-Aug-20	Out of Roadway Work - Days	5	0%
Booster Pump Station										
A6440	Excavate, Grade & Install Crushed Stone Bedding - Booster Pump Station	3	65	04-May-20	07-May-20	13-Aug-20	17-Aug-20	Out of Roadway Work - Days	3	0%
A6450	Install Precast Footings & Structure - Booster Pump Station	4	65	08-May-20	14-May-20	18-Aug-20	21-Aug-20	Out of Roadway Work - Days	4	0%
A6460	Connect to Installed Waterline - Booster Pump Station	4	65	15-May-20	20-May-20	24-Aug-20	27-Aug-20	Out of Roadway Work - Days	4	0%
A6470	Install Electrical Conduit from Existing Service to Vault - Booster Pump Station	4	65	21-May-20	27-May-20	28-Aug-20	02-Sep-20	Out of Roadway Work - Days	4	0%
A6480	Install Sump Pump & Discharge - Booster Pump Station	2	93	21-May-20	22-May-20	13-Oct-20	15-Oct-20	Out of Roadway Work - Days	2	0%
A6490	Install & Connect Grounding - Booster Pump Station	2	93	21-May-20	22-May-20	13-Oct-20	15-Oct-20	Out of Roadway Work - Days	2	0%
A7510	Excavate & Install Natural Gas Service Line - Booster Pump Station	5	65	28-May-20	03-Jun-20	03-Sep-20	11-Sep-20	Out of Roadway Work - Days	5	0%
A6510	Install Electrical Components, Switches & Receptacles - Booster Pump Station	5	65	04-Jun-20	11-Jun-20	14-Sep-20	21-Sep-20	Out of Roadway Work - Days	5	0%
A6520	Install Electrical Cabinets & Meters, Connect & Test - Booster Pump Station	4	81	12-Jun-20	17-Jun-20	16-Oct-20	22-Oct-20	Out of Roadway Work - Days	4	0%
Altitude Valve Vault										
A6070	Excavate, Grade & Install Crushed Stone Bedding - Altitude Valve Vault	3	31	01-Apr-20	03-Apr-20	20-May-20	22-May-20	Out of Roadway Work - Days	3	0%
A6080	Install Precast Structure - Altitude Valve Vault	2	31	06-Apr-20	07-Apr-20	26-May-20	27-May-20	Out of Roadway Work - Days	2	0%
A6090	Connect to Installed Waterline - Altitude Valve Vault	2	31	09-Apr-20	10-Apr-20	28-May-20	29-May-20	Out of Roadway Work - Days	2	0%
A6140	Install Sump Drain Discharge - Altitude Valve Vault	1	31	13-Apr-20	13-Apr-20	01-Jun-20	01-Jun-20	Out of Roadway Work - Days	1	0%
A6110	Install Electrical Conduit from Existing Service to Vault - Altitude Valve Vault	4	31	14-Apr-20	20-Apr-20	02-Jun-20	05-Jun-20	Out of Roadway Work - Days	4	0%
A6120	Install Phone Service from Existing Service to Vault - Altitude Valve Vault	4	31	14-Apr-20	20-Apr-20	02-Jun-20	05-Jun-20	Out of Roadway Work - Days	4	0%
A6220	Install & Connect Grounding - Altitude Valve Vault	3	32	14-Apr-20	17-Apr-20	03-Jun-20	05-Jun-20	Out of Roadway Work - Days	3	0%
A6130	Install Electrical Cabinets & Meters, Connect & Test - Altitude Valve Vault	5	31	21-Apr-20	27-Apr-20	08-Jun-20	15-Jun-20	Out of Roadway Work - Days	5	0%
Long Hill Station Modifications										
A6540	Perform Station Modifications - Long Hill Station	8	257	28-Apr-20	08-May-20	05-Oct-21	20-Oct-21	Out of Roadway Work - Days	8	0%
Pressure Reducing Valve Vault										
A6340	Excavate, Grade & Install Crushed Stone Bedding - Pressure Reducing Vault	3	57	15-Oct-19	18-Oct-19	18-May-20	20-May-20	Out of Roadway Work - Days	3	0%
A6350	Install Precast Structure - Pressure Reducing Vault	2	57	21-Oct-19	22-Oct-19	21-May-20	22-May-20	Out of Roadway Work - Days	2	0%
A6360	Connect to Installed Waterline - Pressure Reducing Vault	2	57	24-Oct-19	25-Oct-19	26-May-20	27-May-20	Out of Roadway Work - Days	2	0%
A6370	Install Electrical Conduit from Existing Service to Vault - Pressure Reducing Vault	3	57	28-Oct-19	30-Oct-19	28-May-20	01-Jun-20	Out of Roadway Work - Days	3	0%
A6390	Install Sump Pump & Discharge - Pressure Reducing Vault	2	63	28-Oct-19	29-Oct-19	05-Jun-20	08-Jun-20	Out of Roadway Work - Days	2	0%
A6400	Install & Connect Grounding - Pressure Reducing Vault	1	64	28-Oct-19	28-Oct-19	08-Jun-20	08-Jun-20	Out of Roadway Work - Days	1	0%
A6420	Install Electrical Components, Switches & Receptacles - Pressure Reducing Vault	5	57	31-Oct-19	07-Nov-19	02-Jun-20	08-Jun-20	Out of Roadway Work - Days	5	0%
A6430	Install Electrical Cabinets & Meters, Connect & Test - Pressure Reducing Vault	4	57	08-Nov-19	15-Nov-19	09-Jun-20	15-Jun-20	Out of Roadway Work - Days	4	0%
Cherry Hill Storage Tank										



Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
A7240	Excavate Foundation, Grade & Install Leveling Base - Storage Tank	12	31	28-Apr-20	15-May-20	16-Jun-20	01-Jul-20	Out of Roadway Work - Days	12	0%
A7320	Grade & Install Perimeter Drainage as Needed	8	31	18-May-20	28-May-20	02-Jul-20	15-Jul-20	Out of Roadway Work - Days	8	0%
A7250	Form, Reinforce & Place Floor Slab - Storage Tank	12	31	29-May-20	16-Jun-20	16-Jul-20	31-Jul-20	Out of Roadway Work - Days	12	0%
A7260	Cure Floor Slab - Storage Tank	7	47	17-Jun-20	23-Jun-20	03-Aug-20	09-Aug-20	Cure, Milestone, & Submittal - 7D/Wk	7	0%
A7270	Install & Grout Precast Wall Panels - Storage Tank	12	30	24-Jun-20	13-Jul-20	10-Aug-20	26-Aug-20	Out of Roadway Work - Days	12	0%
A7300	Install Precast Dome Panels - Storage Tank	8	30	14-Jul-20	23-Jul-20	27-Aug-20	08-Sep-20	Out of Roadway Work - Days	8	0%
A7280	Finish Prestressed Wall Exterior - Storage Tank	15	30	24-Jul-20	17-Aug-20	10-Sep-20	01-Oct-20	Out of Roadway Work - Days	15	0%
A7290	Install Tank Pipe & Fittings - Storage Tank	5	30	18-Aug-20	24-Aug-20	02-Oct-20	08-Oct-20	Out of Roadway Work - Days	5	0%
A7420	Install & Connect Grounding - Storage Tank	5	30	25-Aug-20	31-Aug-20	09-Oct-20	19-Oct-20	Out of Roadway Work - Days	5	0%
A7310	Install Stairs & Railings - Storage Tank	5	30	01-Sep-20	08-Sep-20	20-Oct-20	27-Oct-20	Out of Roadway Work - Days	5	0%
A7330	Chlorinate, Test & Fill - Storage Tank	3	30	10-Sep-20	14-Sep-20	28-Oct-20	30-Oct-20	Out of Roadway Work - Days	3	0%
Maple Avenue, Talcott Lane, Wallingford Rd. - Line Installation										
A5730	Sta. 300+00 to 306+00 - Talcott Lane - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	4	24-Apr-20	30-Apr-20	30-Apr-20	07-May-20	In Roadway Work - Days	5	0%
A5400	Sta. 940+88 to 935+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	4	4	01-May-20	07-May-20	08-May-20	13-May-20	In Roadway Work - Days	4	0%
A5420	Sta. 935+00 to 930+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	4	08-May-20	14-May-20	14-May-20	21-May-20	In Roadway Work - Days	5	0%
A5440	Sta. 930+00 to 925+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	4	15-May-20	22-May-20	22-May-20	29-May-20	In Roadway Work - Days	5	0%
A5460	Sta. 925+00 to 920+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	4	26-May-20	01-Jun-20	01-Jun-20	05-Jun-20	In Roadway Work - Days	5	0%
A5750	Sta. 600+00 to 605+00 - Wallingford Rd - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	4	01-Jun-20	06-Jun-20	05-Jun-20	13-Jun-20	In Roadway Work - Nights	5	0%
A5770	Sta. 605+00 to 609+50 - Wallngford Rd - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	4	09-Jun-20	16-Jun-20	15-Jun-20	20-Jun-20	In Roadway Work - Nights	5	0%
A5480	Sta. 920+00 to 915+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	4	16-Jun-20	22-Jun-20	22-Jun-20	29-Jun-20	In Roadway Work - Days	5	0%
A5500	Sta. 915+00 to 910+00 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	5	4	23-Jun-20	29-Jun-20	29-Jun-20	07-Jul-20	In Roadway Work - Days	5	0%
A5520	Sta. 910+00 to 906+56 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	4	4	30-Jun-20	06-Jul-20	07-Jul-20	13-Jul-20	In Roadway Work - Days	4	0%
A5540	Sta. 906+56 to 905+28 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	2	3	07-Jul-20	09-Jul-20	13-Jul-20	15-Jul-20	Out of Roadway Work - Days	2	0%
A7160	Install Water Control Measures - Allyn Brook Crossing - Maple Ave	2	3	10-Jul-20	13-Jul-20	15-Jul-20	17-Jul-20	Out of Roadway Work - Days	2	0%
A7170	Excavate & Install 1st Half of Steel Casing Crossing - Allyn Brook Crossing - Maple Ave	4	107	14-Jul-20	17-Jul-20	30-Apr-21	06-May-21	Out of Roadway Work - Days	4	0%
A7180	Install Scour Protection Mat & Backfill 1st Half - Allyn Brook Crossing - Maple Ave	1	107	20-Jul-20	20-Jul-20	07-May-21	07-May-21	Out of Roadway Work - Days	1	0%
A7190	Switch Water Control Measures - Allyn Brook Crossing - Maple Ave	1	107	21-Jul-20	21-Jul-20	10-May-21	10-May-21	Out of Roadway Work - Days	1	0%
A7200	Excavate & Install 2nd Half of Steel Casing Crossing - Allyn Brook Crossing - Maple Ave	4	107	22-Jul-20	27-Jul-20	11-May-21	17-May-21	Out of Roadway Work - Days	4	0%
A7210	Install Scour Protection Mat & Backfill 2nd Half - Allyn Brook Crossing - Maple Ave	1	107	28-Jul-20	28-Jul-20	18-May-21	18-May-21	Out of Roadway Work - Days	1	0%
A7220	Remove Water Control Measures - Allyn Brook Crossing - Maple Ave	1	107	29-Jul-20	29-Jul-20	19-May-21	19-May-21	Out of Roadway Work - Days	1	0%
A7230	Install & Connect Waterline - Allyn Brook Crossing - Maple Ave	2	107	30-Jul-20	31-Jul-20	20-May-21	21-May-21	Out of Roadway Work - Days	2	0%
A5560	Sta. 904+74 to 902+25 - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" WL	4	107	03-Aug-20	07-Aug-20	24-May-21	27-May-21	Out of Roadway Work - Days	4	0%
A5580	Sta. 902+25 to Existing Water Main - Maple Ave. - Excavate, Install Pipe, Hydrants & Backfill - 8" '	3	100	10-Aug-20	13-Aug-20	28-May-21	02-Jun-21	In Roadway Work - Days	3	0%
Pickett Lane - Line Installation										
A5900	Sta. 538+55 to 533+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	2	14-Jul-20	21-Jul-20	17-Jul-20	24-Jul-20	Pickett Lane School Zone - Days	5	0%
A5920	Sta. 533+00 to 528+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	2	22-Jul-20	28-Jul-20	24-Jul-20	31-Jul-20	Pickett Lane School Zone - Days	5	0%
A5940	Sta. 528+00 to 523+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	2	29-Jul-20	04-Aug-20	31-Jul-20	07-Aug-20	Pickett Lane School Zone - Days	5	0%
A5960	Sta. 523+00 to 518+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	2	05-Aug-20	11-Aug-20	07-Aug-20	14-Aug-20	Pickett Lane School Zone - Days	5	0%
A5980	Sta. 518+00 to 512+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	2	12-Aug-20	18-Aug-20	14-Aug-20	21-Aug-20	Pickett Lane School Zone - Days	5	0%
A7000	Install Water Control Measures - Allyn Brook Crossing - Pickett Lane	1	2	19-Aug-20	19-Aug-20	21-Aug-20	24-Aug-20	Pickett Lane School Zone - Days	1	0%
A7010	Excavate & Install 1st Half of Steel Casing Crossing - Allyn Brook Crossing - Pickett Lane	4	2	20-Aug-20	25-Aug-20	24-Aug-20	01-Sep-20	Pickett Lane School Zone - Days	4	0%
A7050	Install Scour Protection Mat & Backfill 1st Half - Allyn Brook Crossing - Pickett Lane	2	2	26-Aug-20	27-Aug-20	01-Sep-20	15-Jun-21	Pickett Lane School Zone - Days	2	0%
A7020	Switch Water Control Measures - Allyn Brook Crossing - Pickett Lane	1	2	01-Sep-20	01-Sep-20	15-Jun-21	16-Jun-21	Pickett Lane School Zone - Days	1	0%
A7030	Excavate & Install 2nd Half of Steel Casing Crossing - Allyn Brook Crossing - Pickett Lane	4	2	14-Jun-21	17-Jun-21	16-Jun-21	22-Jun-21	Pickett Lane School Zone - Days	4	0%
A7060	Install Scour Protection Mat & Backfill 2nd Half - Allyn Brook Crossing - Pickett Lane	2	2	18-Jun-21	21-Jun-21	22-Jun-21	24-Jun-21	Pickett Lane School Zone - Days	2	0%
A7070	Remove Water Control Measures - Allyn Brook Crossing - Pickett Lane	1	2	22-Jun-21	22-Jun-21	24-Jun-21	25-Jun-21	Pickett Lane School Zone - Days	1	0%
A7040	Install & Connect Waterline - Allyn Brook Crossing - Pickett Lane	1	2	23-Jun-21	23-Jun-21	25-Jun-21	28-Jun-21	Pickett Lane School Zone - Days	1	0%
A6000	Sta. 509+27 to 505+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	4	2	24-Jun-21	29-Jun-21	28-Jun-21	02-Jul-21	Pickett Lane School Zone - Days	4	0%
A6020	Sta. 505+00 to 500+00 - Pickett Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	4	2	30-Jun-21	06-Jul-21	02-Jul-21	09-Jul-21	Pickett Lane School Zone - Days	4	0%
Maiden Lane - Line Installation										
A5790	Sta. 400+00 to 405+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	100	14-Aug-20	20-Aug-20	03-Jun-21	09-Jun-21	In Roadway Work - Days	5	0%
A5810	Sta. 405+00 to 411+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	6	100	21-Aug-20	31-Aug-20	11-Jun-21	18-Jun-21	In Roadway Work - Days	6	0%
A7090	Excavate & Set up Jacking Pit - Allyn Brook Crossing - Maiden Lane	8	106	01-Sep-20	14-Sep-20	21-Jun-21	30-Jun-21	Out of Roadway Work - Days	8	0%
A7100	Jack & Bore - Allyn Brook Crossing - Maiden Lane	2	106	15-Sep-20	17-Sep-20	01-Jul-21	02-Jul-21	Out of Roadway Work - Days	2	0%
A7150	Install & Connect Waterline - Allyn Brook Crossing - Maiden Lane	2	106	18-Sep-20	21-Sep-20	06-Jul-21	07-Jul-21	Out of Roadway Work - Days	2	0%



Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
A7130	Backfill Jacking Pit & Pipe - Allyn Brook Crossing - Maiden Lane	3	106	22-Sep-20	24-Sep-20	08-Jul-21	12-Jul-21	Out of Roadway Work - Days	3	0%
A5830	Sta. 412+00 to 415+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	102	05-Oct-20	09-Oct-20	13-Jul-21	20-Jul-21	In Roadway Work - Days	5	0%
A5850	Sta. 415+00 to 420+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	5	102	13-Oct-20	19-Oct-20	21-Jul-21	27-Jul-21	In Roadway Work - Days	5	0%
A5870	Sta. 420+00 to 426+00 - Maiden Lane - Excavate, Install Pipe, Hydrants & Backfill - 12" WL	6	102	20-Oct-20	27-Oct-20	28-Jul-21	04-Aug-21	In Roadway Work - Days	6	0%
Service Installations										
Service Installations										
Route 17 - Services										
A7920	Install Services to Curbstop - Sta. 164+00 to 174+00 - Route 17	4	60	13-Jul-20	17-Jul-20	23-Oct-20	29-Oct-20	In Roadway Work - Nights	4	0%
A7930	Install Services to Curbstop - Sta. 174+00 to 184+00 - Route 17	5	60	17-Jul-20	24-Jul-20	29-Oct-20	05-Nov-20	In Roadway Work - Nights	5	0%
A7940	Install Services to Curbstop - Sta. 184+00 to 194+00 - Route 17	6	60	24-Jul-20	01-Aug-20	05-Nov-20	17-Nov-20	In Roadway Work - Nights	6	0%
A7950	Install Services to Curbstop - Sta. 194+00 to 204+00 - Route 17	5	60	03-Aug-20	08-Aug-20	17-Nov-20	24-Nov-20	In Roadway Work - Nights	5	0%
A7960	Install Services to Curbstop - Sta. 204+00 to 209+25 - Route 17	4	61	12-Aug-20	18-Aug-20	25-Nov-20	03-Apr-21	In Roadway Work - Nights	4	0%
A6560	Install Full Services - Sta. 164+00 to 174+00 - Route 17	4	24	14-Sep-20	18-Sep-20	31-Oct-20	06-Nov-20	In Roadway Work - Nights	4	0%
A6570	Install Full Services - Sta. 174+00 to 184+00 - Route 17	5	24	18-Sep-20	09-Oct-20	06-Nov-20	17-Nov-20	In Roadway Work - Nights	5	0%
A6580	Install Full Services - Sta. 184+00 to 194+00 - Route 17	5	24	09-Oct-20	17-Oct-20	17-Nov-20	24-Nov-20	In Roadway Work - Nights	5	0%
A6590	Install Full Services - Sta. 194+00 to 204+00 - Route 17	5	24	19-Oct-20	24-Oct-20	24-Nov-20	03-Apr-21	In Roadway Work - Nights	5	0%
A6600	Install Full Services - Sta. 204+00 to 209+25 - Route 17	4	24	26-Oct-20	30-Oct-20	07-Apr-21	13-Apr-21	In Roadway Work - Nights	4	0%
Route 17 - Services to Curbstop										
A6680	Install Services to Curbstop - Sta. 100+00 to 110+00 - Route 17	3	24	30-Oct-20	04-Nov-20	13-Apr-21	16-Apr-21	In Roadway Work - Nights	3	0%
A6690	Install Services to Curbstop - Sta. 110+00 to 120+00 - Route 17	5	24	04-Nov-20	13-Nov-20	16-Apr-21	23-Apr-21	In Roadway Work - Nights	5	0%
A6700	Install Services to Curbstop - Sta. 120+00 to 130+00 - Route 17	5	24	13-Nov-20	20-Nov-20	23-Apr-21	30-Apr-21	In Roadway Work - Nights	5	0%
A6710	Install Services to Curbstop - Sta. 130+00 to 140+00 - Route 17	5	24	20-Nov-20	02-Apr-21	30-Apr-21	07-May-21	In Roadway Work - Nights	5	0%
A6720	Install Services to Curbstop - Sta. 140+00 to 150+00 - Route 17	9	24	02-Apr-21	17-Apr-21	07-May-21	22-May-21	In Roadway Work - Nights	9	0%
A6730	Install Services to Curbstop - Sta. 150+00 to 160+00 - Route 17	9	24	17-Apr-21	30-Apr-21	24-May-21	05-Jun-21	In Roadway Work - Nights	9	0%
A6740	Install Services to Curbstop - Sta. 160+00 to 164+00 - Route 17	5	24	30-Apr-21	07-May-21	07-Jun-21	12-Jun-21	In Roadway Work - Nights	5	0%
Maple Avenue, Talcott Ln. & Wallingford Rd.- Curbstop										
A6750	Install Services to Curbstop - Sta. 300+00 to 306+00 - Talcott Lane	2	23	07-May-21	10-May-21	14-Jun-21	15-Jun-21	In Roadway Work - Days	2	0%
A6790	Install Services to Curbstop - Sta. 940+88 to 930+00 - Maple Ave	8	23	11-May-21	21-May-21	16-Jun-21	25-Jun-21	Out of Roadway Work - Days	8	0%
A6800	Install Services to Curbstop - Sta. 930+00 to 920+00 - Maple Ave	6	23	24-May-21	01-Jun-21	28-Jun-21	06-Jul-21	Out of Roadway Work - Days	6	0%
A6810	Install Services to Curbstop - Sta. 920+00 to 907+00 - Maple Ave	6	23	02-Jun-21	10-Jun-21	07-Jul-21	15-Jul-21	Out of Roadway Work - Days	6	0%
A6820	Install Services to Curbstop - Sta. 907+00 to 900+00 - Maple Ave	5	23	11-Jun-21	17-Jun-21	16-Jul-21	22-Jul-21	Out of Roadway Work - Days	5	0%
A6770	Install Services to Curbstop - Sta. 600+00 to 609+50 - Wallingford Rd.	4	23	17-Jun-21	23-Jun-21	22-Jul-21	28-Jul-21	In Roadway Work - Nights	4	0%
Talcott Ridge Dr. & Watch Hill Dr. - Curbstop										
A6970	Install Services to Curbstop - Sta. 52+00 to 42+00 - Talcott Ridge Dr.	3	23	23-Jun-21	25-Jun-21	28-Jul-21	30-Jul-21	Out of Roadway Work - Days	3	0%
A6980	Install Services to Curbstop - Sta. 42+00 to 30+00 - Talcott Ridge Dr.	3	23	28-Jun-21	30-Jun-21	02-Aug-21	04-Aug-21	Out of Roadway Work - Days	3	0%
Maple Avenue, Talcott Ln. & Wallingford Rd. - Building Services										
A6760	Install Full Services - Sta. 300+00 to 306+00 - Talcott Lane	4	32	01-Jul-21	07-Jul-21	20-Aug-21	26-Aug-21	Out of Roadway Work - Days	4	0%
A6830	Install Full Services - Sta. 940+88 to 930+00 - Maple Ave	9	32	08-Jul-21	21-Jul-21	26-Aug-21	10-Sep-21	Out of Roadway Work - Days	9	0%
A6840	Install Full Services - Sta. 930+00 to 920+00 - Maple Ave	7	32	22-Jul-21	30-Jul-21	10-Sep-21	22-Sep-21	Out of Roadway Work - Days	7	0%
A6850	Install Full Services - Sta. 920+00 to 907+00 - Maple Ave	7	32	02-Aug-21	10-Aug-21	22-Sep-21	01-Oct-21	Out of Roadway Work - Days	7	0%
A6860	Install Full Services - Sta. 907+00 to 900+00 - Maple Ave	5	32	12-Aug-21	19-Aug-21	01-Oct-21	12-Oct-21	Out of Roadway Work - Days	5	0%
A6780	Install Full Services - Sta. 600+00 to 609+50 - Wallingford Rd.	4	32	20-Aug-21	25-Aug-21	12-Oct-21	19-Oct-21	Out of Roadway Work - Days	4	0%
Pickett Lane - Services										
A7970	Install Services to Curbstop - Sta. 538+55 to 530+00 - Pickett Lane	2	1	14-Jun-21	15-Jun-21	15-Jun-21	17-Jun-21	Pickett Lane School Zone - Days	2	0%
A6930	Install Full Services - Sta. 538+55 to 530+00 - Pickett Lane	2	5	16-Jun-21	17-Jun-21	23-Jun-21	25-Jun-21	Pickett Lane School Zone - Days	2	0%
A7980	Install Services to Curbstop - Sta. 530+00 to 520+00 - Pickett Lane	6	1	16-Jun-21	23-Jun-21	17-Jun-21	25-Jun-21	Pickett Lane School Zone - Days	6	0%
A6940	Install Full Services - Sta. 530+00 to 520+00 - Pickett Lane	6	1	24-Jun-21	01-Jul-21	25-Jun-21	06-Jul-21	Pickett Lane School Zone - Days	6	0%
A7990	Install Services to Curbstop - Sta. 520+00 to 510+00 - Pickett Lane	3	3	24-Jun-21	28-Jun-21	29-Jun-21	02-Jul-21	Pickett Lane School Zone - Days	3	0%
A8000	Install Services to Curbstop - Sta. 510+00 to 500+00 - Pickett Lane	4	3	29-Jun-21	02-Jul-21	02-Jul-21	09-Jul-21	Pickett Lane School Zone - Days	4	0%
A6950	Install Full Services - Sta. 520+00 to 510+00 - Pickett Lane	3	1	02-Jul-21	07-Jul-21	06-Jul-21	09-Jul-21	Pickett Lane School Zone - Days	3	0%
A6960	Install Full Services - Sta. 510+00 to 500+00 - Pickett Lane	4	1	08-Jul-21	13-Jul-21	09-Jul-21	15-Jul-21	Pickett Lane School Zone - Days	4	0%
Maiden Lane - Services										
A6900	Install Full Services - Sta. 400+00 to 410+00 - Maiden Lane	7	0	15-Jul-21	23-Jul-21	15-Jul-21	26-Jul-21	Out of Roadway Work - Days	7	0%
A6910	Install Full Services - Sta. 410+00 to 420+00 - Maiden Lane	7	0	26-Jul-21	03-Aug-21	26-Jul-21	04-Aug-21	Out of Roadway Work - Days	7	0%
A6920	Install Full Services - Sta. 420+00 to 426+00 - Maiden Lane	5	0	04-Aug-21	10-Aug-21	04-Aug-21	12-Aug-21	Out of Roadway Work - Days	5	0%
Maiden Lane - Curbstop										
A6870	Install Services to Curbstop - Sta. 400+00 to 410+00 - Maiden Lane	6	1	11-Aug-21	18-Aug-21	12-Aug-21	20-Aug-21	In Roadway Work - Days	6	0%



Activity ID	Activity Description	Orig. Dur.	Total Float	Early Start	Early Finish	Late Start	Late Finish	Calendar	Remaining Duration	Physical % Complete
A6880	Install Services to Curbstop - Sta. 410+00 to 420+00 - Maiden Lane	5	1	19-Aug-21	25-Aug-21	20-Aug-21	30-Aug-21	In Roadway Work - Days	5	0%
A6890	Install Services to Curbstop - Sta. 420+00 to 426+00 - Maiden Lane	5	1	27-Aug-21	02-Sep-21	30-Aug-21	07-Sep-21	In Roadway Work - Days	5	0%
Well Abandonments										
A7660	Abandon Wells - Maiden Lane	5	1	03-Sep-21	13-Sep-21	07-Sep-21	16-Sep-21	Out of Roadway Work - Days	5	0%
A7710	Abandon Wells - Rte 17	5	1	14-Sep-21	21-Sep-21	16-Sep-21	23-Sep-21	Out of Roadway Work - Days	5	0%
A7700	Abandon Wells - Pickett Lane	5	1	22-Sep-21	28-Sep-21	23-Sep-21	30-Sep-21	Out of Roadway Work - Days	5	0%
A7670	Abandon Wells - Maple Ave	5	1	29-Sep-21	05-Oct-21	30-Sep-21	08-Oct-21	Out of Roadway Work - Days	5	0%
A7680	Abandon Wells - Talcott Lane	5	1	06-Oct-21	15-Oct-21	08-Oct-21	19-Oct-21	Out of Roadway Work - Days	5	0%
A7690	Abandon Wells - Wallingford Rd.	5	1	18-Oct-21	22-Oct-21	19-Oct-21	26-Oct-21	Out of Roadway Work - Days	5	0%
Project Wide Finishes										
In Roadway Finishes										
A7390	Mill & Overlay Roadway - Talcott Ridge Dr.	6	23	01-Jul-21	09-Jul-21	05-Aug-21	13-Aug-21	In Roadway Work - Days	6	0%
A7370	Pave HMA Overlay - Pickett Lane	4	28	12-Jul-21	15-Jul-21	20-Aug-21	25-Aug-21	Pickett Lane School Zone - Days	4	0%
A7400	Mill & Overlay Roadway - Watch Hill Dr.	3	23	12-Jul-21	15-Jul-21	16-Aug-21	18-Aug-21	In Roadway Work - Days	3	0%
A7380	Mill & Overlay Roadway - Route 17	12	23	15-Jul-21	31-Jul-21	19-Aug-21	04-Sep-21	In Roadway Work - Nights	12	0%
A7580	Install Traffic Loops - Pickett Lane	2	28	16-Jul-21	19-Jul-21	26-Aug-21	31-Aug-21	Pickett Lane School Zone - Days	2	0%
A7570	Install Traffic Loops - Wallingford Rd.	2	53	20-Jul-21	21-Jul-21	22-Oct-21	26-Oct-21	In Roadway Work - Days	2	0%
A7410	Mill & Overlay Roadway - Wallingford Rd.	2	23	02-Aug-21	04-Aug-21	04-Sep-21	09-Sep-21	In Roadway Work - Nights	2	0%
A7340	Pave HMA Overlay - Maple Avenue	5	23	04-Aug-21	11-Aug-21	09-Sep-21	15-Sep-21	In Roadway Work - Days	5	0%
A7350	Pave HMA Overlay - Talcott Lane	3	23	12-Aug-21	16-Aug-21	16-Sep-21	04-Oct-21	In Roadway Work - Days	3	0%
A7500	Driveway Paving HMA & Aprons - Project Wide	10	26	17-Aug-21	31-Aug-21	08-Oct-21	26-Oct-21	In Roadway Work - Days	10	0%
A7360	Pave HMA Overlay - Maiden Lane	6	11	03-Sep-21	13-Sep-21	05-Oct-21	14-Oct-21	In Roadway Work - Days	6	0%
A7450	Install Permenant Pavement Markings - Project Wide	8	12	13-Sep-21	07-Oct-21	14-Oct-21	26-Oct-21	In Roadway Work - Nights	8	0%
A7460	Install Traffic Loops - Rte 17	4	14	14-Sep-21	17-Sep-21	20-Oct-21	26-Oct-21	In Roadway Work - Days	4	0%
Out of Roadway Finishes										
A5380	Pave HMA Surface Course & Curb - Tank Access	2	61	12-Jul-21	13-Jul-21	18-Oct-21	20-Oct-21	Out of Roadway Work - Days	2	0%
A5390	Install Merritt Parkway Guiderail System - Tank Access	4	61	15-Jul-21	20-Jul-21	20-Oct-21	26-Oct-21	Out of Roadway Work - Days	4	0%
A6530	Perform Booster Station Modifications - Durham Booster Station	2	42	12-Aug-21	13-Aug-21	20-Oct-21	22-Oct-21	Out of Roadway Work - Days	2	0%
A7440	Install Loam & Seed - Project Wide	6	34	12-Aug-21	20-Aug-21	05-Oct-21	15-Oct-21	Out of Roadway Work - Days	6	0%
A7490	Disposal of Contaminated Material as Needed - Project Wide	5	41	12-Aug-21	19-Aug-21	19-Oct-21	26-Oct-21	Out of Roadway Work - Days	5	0%
A7560	Convert Wells as Needed - Project Wide.	5	41	12-Aug-21	19-Aug-21	19-Oct-21	26-Oct-21	Out of Roadway Work - Days	5	0%
A7480	Decomission Durham Fairground Well - Durham Fairground	2	42	16-Aug-21	17-Aug-21	22-Oct-21	26-Oct-21	Out of Roadway Work - Days	2	0%
A7430	Install Plantings - Project Wide	10	34	23-Aug-21	03-Sep-21	18-Oct-21	29-Oct-21	Out of Roadway Work - Days	10	0%
Closeout										
A1060	Substantial Field Completion Request	1	3	23-Oct-21	23-Oct-21	26-Oct-21	26-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	1	0%
A1070	Contractor Pre-Final Inspection	5	3	23-Oct-21	28-Oct-21	27-Oct-21	31-Oct-21	Cure, Milestone, & Submittal - 7D/Wk	5	0%
A1090	Correction of Punch List from Contractors Pre-Final Inspection	10	1	28-Oct-21	15-Nov-21	01-Nov-21	16-Nov-21	In Roadway Work - Days	10	0%
A1080	Demobilization	5	4	15-Nov-21	23-Nov-21	23-Nov-21	30-Nov-21	Out of Roadway Work - Days	5	0%
A1100	Government's Pre-Final Inspection	5	1	15-Nov-21	20-Nov-21	17-Nov-21	21-Nov-21	Cure, Milestone, & Submittal - 7D/Wk	5	0%
A3180	Correction of Punchlist from Governments Pre-Final Inspection	5	0	22-Nov-21	30-Nov-21	22-Nov-21	30-Nov-21	In Roadway Work - Days	5	0%
A1110	Final Inspection	17	0	01-Dec-21	17-Dec-21	01-Dec-21	17-Dec-21	Cure, Milestone, & Submittal - 7D/Wk	17	0%