

Daily Report

Project:	Durham Meadows Pipeline Installation	Date:	December 12, 2019
Location:	Middletown and Durham, CT	Day of Week:	Thursday
Project #:	AECOM: 60445033	Report No:	46
Contractor:	Ludlow Construction	Page:	1 of 14

Weather Conditions			
Conditions:	Daylight hours. Sunny and hazy, winds 5-10 mph.		
Temperature (°F):	High 36°F	Low 19°F	

Contractors & Subcontractors Workforce							
Trade	#	x	hrs				
USACE							
Field Engineer	1	x	8				

Visitors:	Ed Hathaway (EPA)
	Steve Dunn (USACE)

Notes: Todays activities included chipping wood from the clearing up at the tank site, excavating the 12” valve at the turn in Talcott Ridge Dr. in order to install a stand pipe to access the gate valve, and pressure testing the lines on Talcott Ridge and Watch Hill Drives.

Wood Chipping Tank Site: Northern Land Clearing arrived on site today with a large-scale chipper and two semi’s. After unloading the chipper in the cul-de-sac at the top of Talcott Ridge Northern drove it to the tank site, where their grappler and cutter were already warming up. Once the chipper was in place, Northern backed the semi’s down the driveway to the base of the road up to the tank site. Due to a hydraulic leak (pin hole in the grappler), which Northern followed all proper procedures to secure the leak, Northern was delayed for a little over an hour in their operations and were still there at 1400 hours, planning to fill the two semi’s with a second round of chips. Other than the leak there were no issues, except for where the nearest neighbor would like his share of the wood left.

Valve Access Standpipe: The valve box for the 12” valve Tee, located at the bend in Talcott Ridge Drive, was not installed during the installation of the valve assembly. Ludlow excavated the assembly and installed the valve box. They then backfilled and compacted and hot patched the excavation.

Water System Pressure Test: After running a pre-test yesterday, Ludlow set up to test the water line with John Ewanowski from the Town of Middletown water department. The test was broken into to sections. The first section – Test 1 - included all piping from the tri-valve connection to the S. Main Street line up to the tri-valve assembly at the bend in Talcott Ridge Drive, including the 8” spur up lower Watch Hill Drive to the new hydrant. The second section – Test 2 – ran from the tri-valve at the bend in Talcott Ridge up to the end of the line in the cul-de-sac and included the 8” spur up upper Watch Hill to the new fire hydrant.

Test 1: Includes 1,160 feet of 16” DIP, 213 feet of 8” DIP, and 61 feet of 6” hydrant legs. According to standards acceptable leakage

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would be just under 4 gallons at 200 PSI. After some debate as to what pressure to set in the system – Town of Middletown requires a 200 PSI test and Ludlow indicated that the valves were only rated to 150 PSI - the system was pressurized to 170 PSI at the new hydrant located at Talcott and S. Main. A second gauge was placed at the new hydrant located on lower Watch Hill, which ready 157 PSI. This pressure was maintained without dropping over the next hour. During that time it was decided at the weekly meeting, after assurances from the Middletown water department that the valves could handle the 200 PSI, that the pressure should be raised to 200 PSI for the second hour of the test. This came via word of mouth from Chris Stinson – HDR – whom was at the meeting. Ludlow asked to wait for Middletown to return before raising the pressure. In the first attempt to raise the pressure, the gauge appeared to stop at 190 PSI \pm 2 PSI. Ludlow continued to pump water into the system to bring the pressure up and after approximately 30+ gallons I was asked to check the other gauge on lower Watch Hill – which was pegged at over 300 PSI. At this point Ludlow release pressure, closed and reopened the hydrants and swapped out the gauge for a new gauge, thinking that the first one was faulty (at the Talcott/S. Main St. hydrant). Once this was done the system was established at 200 PSI and Ludlow moved to the upper portion of the system to set up Test 2. After setting up Test 2, Ludlow, Middletown, and myself started to monitor Test 1. From this point to the end of the day, The Test 1 section failed to maintain pressure despite attempts to get air out of the line and checking valves and covers. Pressure in the system would drop steadily after each time the system pressure was re-established. Eventually, the 16" DIP was shut off from everything east of lower Watch Hill Drive, including the Watch Hill 8" spur. The system continued to lose pressure even then. Note that the backside of the tri-valve at the junction of Talcott and S. Main was not full of water at the time. Another attempt will be made tomorrow, after letting the system settle overnight.

Test 2: Includes 857 feet of 16" DIP, 216 feet of 20" DIP, 429 feet of 8" DIP, and 80 feet of 6" DIP Hydrant legs. Acceptable leakage at 200 PSI would be 4 gallons. This test was set to 200 PSI at the new hydrant located at the corner of Talcott Ridge and upper Watch Hill Drives. A second gauge was installed on the new hydrant on upper Watch Hill and was reading 188 PSI at the time of the test. After two hours, the gauges read 196 and 184 PSI respectively, or a drop of 4 PSI. Ludlow then returned the system pressure to 200 PSI at the Talcott Ridge/Watch Hill hydrant by adding water. Using a measured bucket, it was determined that the amount of water required to return the system to 200 PSI was 1 gallon. Test 2 passed without incident.

Payment Items:

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Figure 1 –Chipper and semi on upper Watch Hill preparing to deploy into the tank site.

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Figure 2 – Unloading the chipper in the cul-de-sac on Talcott Ridge.

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Figure 3 – Backing the semi into position to receive chipper output.

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Figure 4 – Overview of the operation. Semi backed up to chipper, grapple feeding the pile into the chipper.

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Figure 5 – Small hydraulic leak in the grapple delayed work by 1-2 hours while parts were retrieved to repair the leak. Note the ‘diapers’ on the ground behind the grapple; proper procedure was followed to minimize loss. Ludlow H&S stated it was a pin hole size leak that was caught right away.

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Figure 6 – Feeding the ‘beast’. Track mounted chipper brought in to chip all the small stuff cut from the tank site.

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Figure 7 – Facing northwest at the bend in Talcott Ridge, where excavation is just under way to install the stand pipe and valve riser for the 12” valve. The riser was omitted accidentally when the assembly was installed

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Figure 8 – Looking northwest at excavation and installation of valve box for 12” gate valve at tee.

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Figure 9 – Facing north, sweeping up after the valve box installation and before hot patch arrives.

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Figure 10 –Facing east, finished installation of missing valve box for the 12” gate valve (center gate box).

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Figure 11 – Facing southwest, new hydrant located at bottom of Talcott Ridge and S. Main Street (below the repaired leak).



Figure 12 – Gauge on hydrant located at intersection of Talcott Ridge and S. Main Street. Reading 167 PSI.

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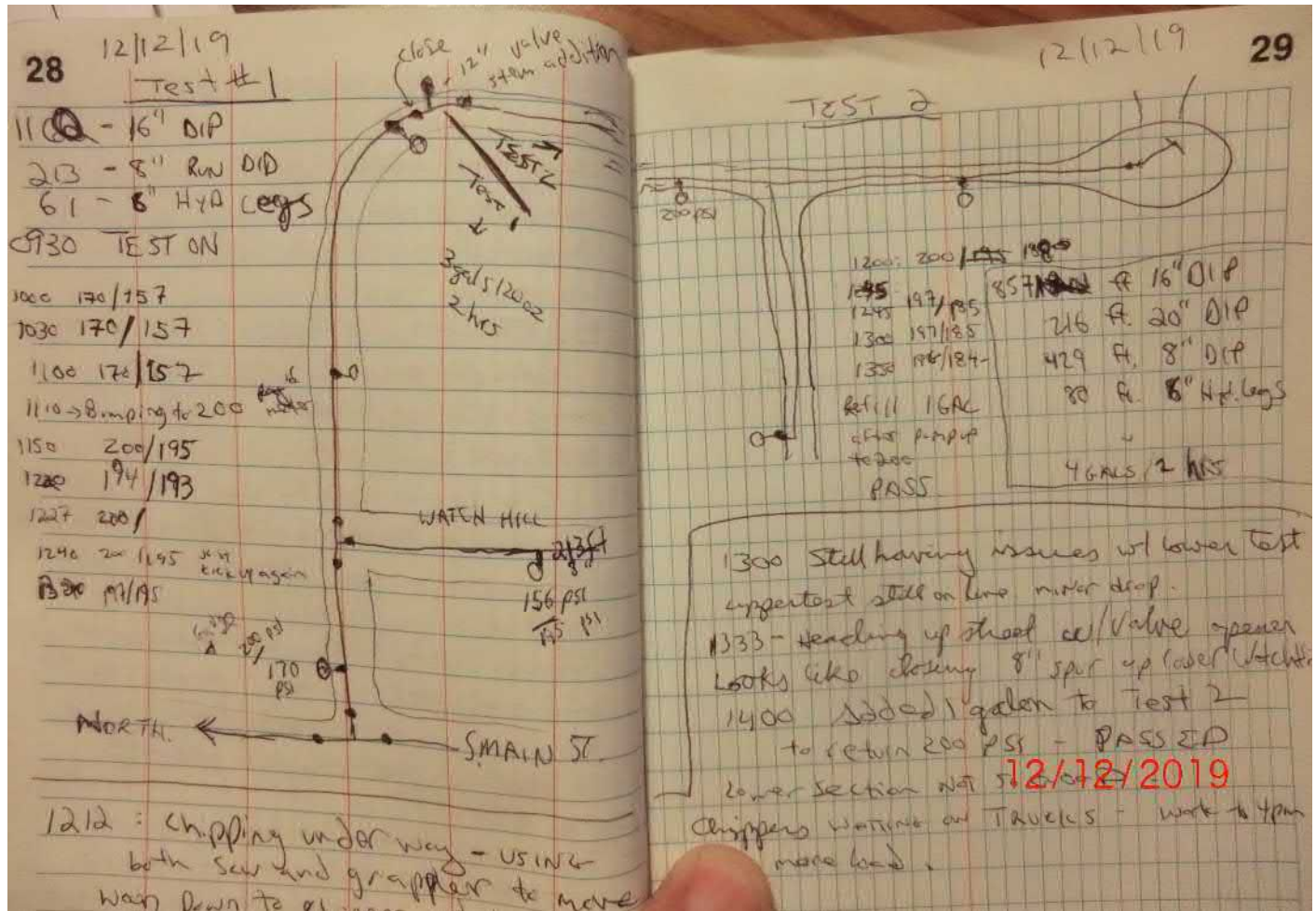


Figure 13 – Test 1 and Test 2 Note that Watch Hill connects all the way through, though it is not shown in this diagram..