BERGER ENGINEERING AND SURVEYING
100 Fulton Avenue
Poughkeepsie, New York 12603
Engineering Services: (845) 471-7383
GIS Services: (845) 392-7180
www.BergerEngr.com

SITE UTILITY DESIGN

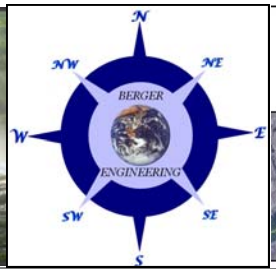
Berger Engineering and Surveying has been providing utility design for new and existing sites for the past 20 years. We can evaluate your existing site and determine if any improvements are needed or we can design new facilities for your project.

- WATER SYSTEM EVALUATION USING WATERCAD We can evaluate your water system by performing flow test and, measuring existing flows using flow meters. The evaluation can then determine if the existing lines are blocked and just determining due to time and need replacement or repair. We can also use the evaluation to determine if addition fire hydrants or valves are needed and or if addition new lines can be installed to improve your water flow and or fire flow needs.

- SANITARY SEWER SYSTEM DESIGN We can design a new sewer plant or evaluate your existing facility. On new projects we can provide the entire sanitary sewer evaluation and design including sewer pump stations, forcemains, gravity sewers etc.. On exiting facilities we can evaluate the exist site, perform television inspection of the lines and infiltration and inflow studies to identify flow that can be removed from your system that may be making your existing plant work more then it needs to. During construction we can provide the required field engineering, surveying and inspection as well as certification of all work completed.

- STORM SEWER DESIGN We can perform all stormwater evaluation and design and develop the required Storm water pollution prevention plans and well as generate all construction documents necessary for the project. We always offer and try to use a green approach first allowing for green echoingly to treat and detain stormwater. We have found that this is not only better for the environment is often less expensive then the traditional methods of storm water design.


Kendall
Stormwater
Services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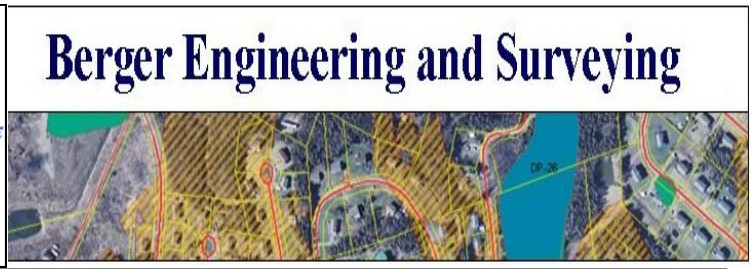
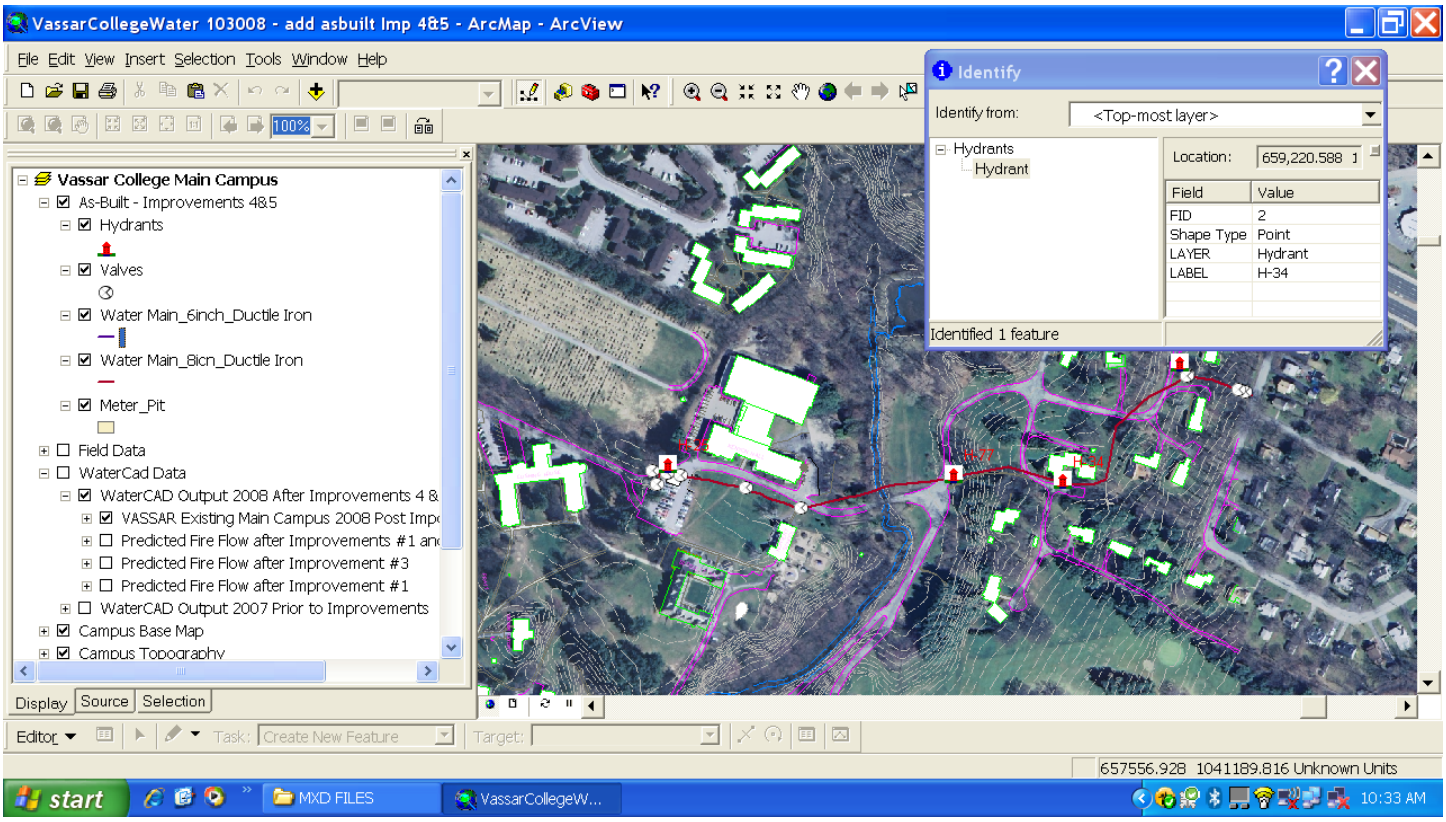

Berger Engineering and Surveying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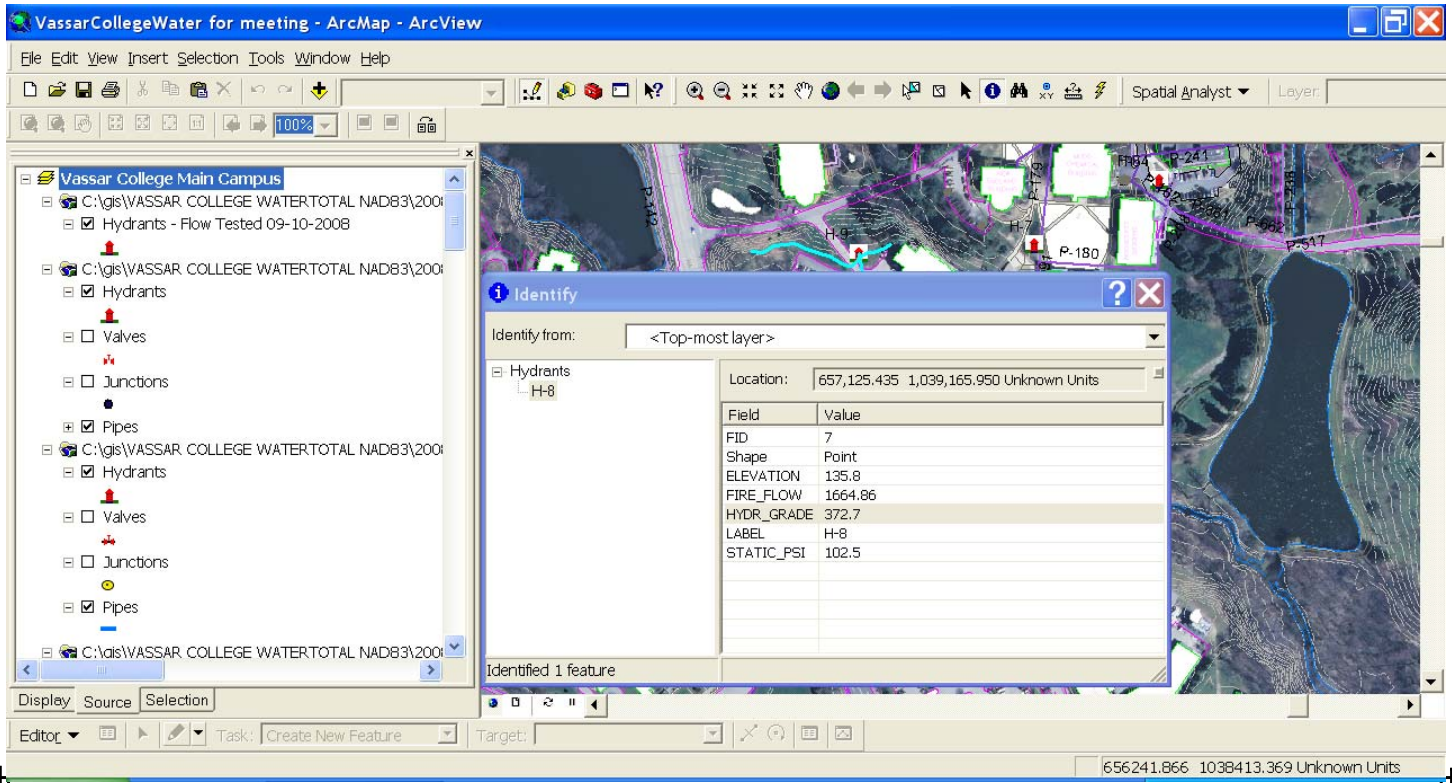
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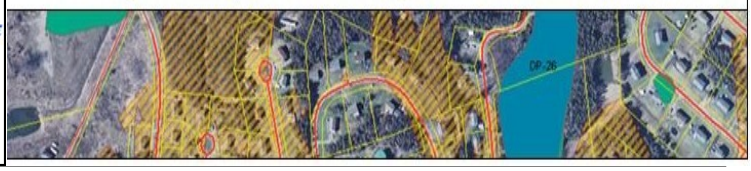
Kendall Stormwater Services

Berger Engineering and Surveying



Fire Flow Testing
Using Telog Hydrant Pressure Recorders

This document describes how to use the Telog Hydrant Pressure Recorders for fire flow testing. These instructions are based on the guidelines in the NFPA 14 and the AWWA M17 manuals and assume that you are familiar with these manuals.

Using this method, it is possible for one person to do conduct the entire test. Previously you needed a person at each hydrant to read a pitot gauge and simultaneously record the data. Since the HPR is always recording and automatically time stamps the data it eliminates the need for additional personnel at the test site.

1 Fire Flow Test Procedure

Note: Prior to testing, program your HPRs for 1 second sampling and 1 second intervals.

1. **START TEST**. Attach an HPR to the residual hydrant and open the hydrant valve. Use your Telog Palm DTU to see the static pressure.
2. Remove the cap from the flow hydrant noting the type of shoulder (see fig. 2 below) and then flush the hydrant until the water is free of debris and running clear.
3. Close the flow hydrant. Attach the HPR with diffuser to the flow hydrant.
4. Completely open the flow hydrant valve. Use your Telog Palm DTU to see the flow in GPM.
5. Check the pressure on the residual hydrant using your Telog Palm DTU. If the desired pressure drop has not been achieved then use steps 2, 3 & 4 to flow additional hydrants to reach the desired residual pressure.
6. **TEST COMPLETE**. The test data is stored in the HPRs and can be copied into your Telog Palm DTU or downloaded into your computer for further analysis.

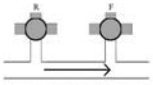


Fig. 1, Residual & Flow Hydrant

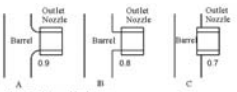
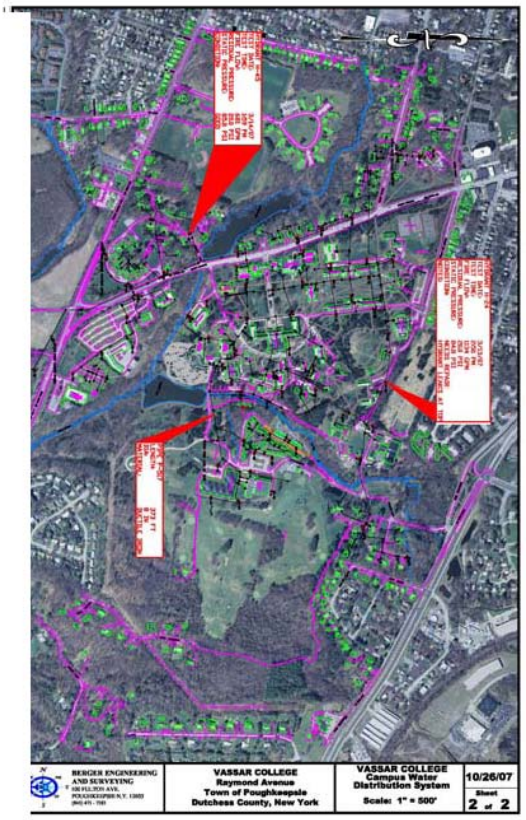


Fig. 2, Flow Hydrant

Static and residual pressures are recorded at the residual hydrant. Flow data is recorded at the flow hydrant. **Note: Always close hydrants slowly to avoid causing water hammer events.**

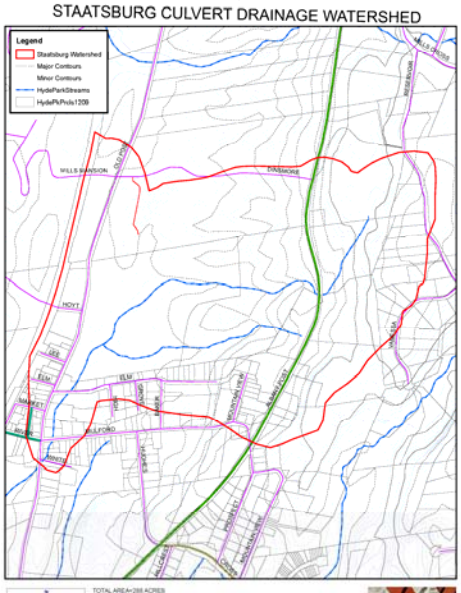
The shoulder is inside the hydrant, where the nozzle attaches to barrel. The shape of thread connection changes the "coefficient of discharge" for flow calculation. This number 0.9, 0.8 or 0.7 is entered into your Palm DTU and your Telogers software for their flow calculations.

telog



Town of Hyde Park

STAATSBURG CULVERT DRAINAGE WATERSHED



TOWN OF UNIONVALE

2008 PROPOSED FEMA FLOODPLAIN BOUNDARY