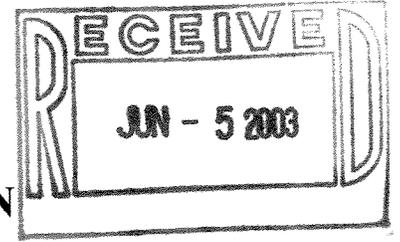




BOS  
Age Report

6/23/03 (2)



## INTERDEPARTMENTAL COMMUNICATION

Acton Board of Health - Telephone 978-264-9634 - Fax 978-264-9630

June 5, 2003

TO: Don Johnson, Town Manager

FROM: Doug Halley, Health Director

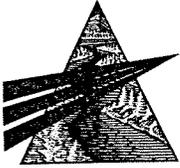
SUBJECT: Pumping Station Communication & SCADA Integration

Attached please find a proposal from Woodard & Curran regarding connecting the pump stations and treatment facility to the Town's existing fiber network. Woodard & Curran has delineated these costs between a sewer component (\$7,940) and an I-Net component (\$12,180). Taken together the capital cost for communication integration would be \$20,120.

The proposal that we originally received from Verizon identified the capital cost to connect through their services as \$4,050. Based on that quote it is clear that the capital costs for the I-Net connection are much greater than Verizon's costs. However, the concern with Verizon was not the capital but the monthly charge. Based on their quote the Town would be charged \$615.94 per month to operate their system for a total of \$7,391.28 per year.

I have reviewed this with Mark Hald and he indicates that there would be no monthly charge with the I-Net connection. Therefore in nearly a two year period the savings in O&M charges would offset the cost of the I-Net connection. Based on this information I would recommend that we proceed forward with the I-Net connection. It should also be noted that \$20,000 has been set aside within the snapshot for the sewer project for the cost of the I-Net connection.

CC: John Murray  
Mark Hald



**WOODARD & CURRAN**  
Engineering • Science • Operations

*Don*  
CORPORATE OFFICES: Maine, Massachusetts,  
New Hampshire, Connecticut, Illinois, Florida  
Operational offices throughout the U.S.

April 25, 2003

Mr. Doug Halley, Director of Health  
Board of Health  
Town of Acton  
472 Main Street  
Acton, MA 01720

*DOUG -  
HOW DOES THIS COMPARE  
WITH THE PHONE SERVICE COSTS?*

APR 30 2003

*CC: J. MURRAY*



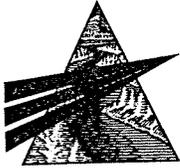
RE: Pumping Station Communication & SCADA Integration  
Middle Fort Pond Brook Sewer Project, Acton

Dear Mr. Halley:

As discussed at the meeting on February 27<sup>th</sup> 2003, the Town of Acton (the Town) will be establishing a fiber network between all of the pump stations and the main treatment plant. This type of network will allow the wastewater treatment plant (WWTP) Supervisory Control and Data Acquisition (SCADA) system to monitor the remote pump stations in near real time. W&C's controls group can provide the additional engineering, programming and startup services necessary to allow for monitoring and alarming of the eight (8) of the pump stations.

### Cost Estimate

Based upon our discussions with the Town and our understanding of the current proposed agreement by Comcast Communications, the following cost estimate details all labor and materials to allow for eight (8) remote sewer pump stations to be connected to the SCADA system at the WWTP. This cost estimate includes the engineering time to create and test new SCADA Human Machine Interface (HMI) screens to allow the Plant operations staff to monitor the sewer stations in near real time. Additional time is included for setup and testing of three (3) alarm points from each station to be setup through the Plant SCADA System alarm dialer. As requested, we have also separated the costs into those attributable to the sewer collection system (cost that were scheduled to be incurred as part of the required alarm interconnection between the pumping stations and WWTP) and costs attributed to the Town new I-Net system (changes/upgrades in hardware and additional effort dealing with fiber connections versus model dial outs). This information may be utilized in appropriately managing costs between the various appropriations and funds.

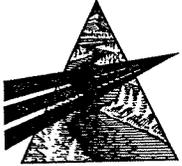


Mr. Doug Halley, Director of Health  
April 25, 2003  
Page 2

**Fiber Network**

TASK	TOTAL FEE	SEWER PORTION	I-NET PORTION
1. Allen Bradley equipment: \$580 per site x 8 sites Note: This includes labor and materials to purchase and installation of RS232 to Ethernet converter for the Allen Bradley PLC's at Pump Stations 1 thru 8	\$4,640	\$0	\$4,640
2. Install and connect Fiber/Copper switch: \$ 360 per site x 9 sites Note: These switches will be provided by the Town of Acton	\$3,240	\$0	\$3,240
3. Install fiber to control panels: \$350 per site x 8 sites Note: Fiber will be brought into buildings by Comcast Communications and final fiber terminations by Town of Acton, cost is labor and materials to run fiber from entry point in pump station to the control panel	\$2,800	\$0	\$2,800
4. HMI screens	\$3,720	\$2,220	\$1,500
5. Remote sites PLC configuration & communications test	\$2,232	\$2,232	\$0
6. Set up & test new alarms	\$1,488	\$1,488	\$0
7. Additional engineering Note: The additional engineering will cover the labor necessary to make modifications to main plant PLC program database to communicate to the remote pump station PLC databases	\$2,000	\$2,000	\$0
<b>TOTALS</b>	<b>\$20,120</b>	<b>\$7,940</b>	<b>\$12,180</b>

We have categorized these costs to the best of our ability. In some cases it is a judgment decision on the separation of costs, for example the original sewer project SCADA proposal included HMI screens for alarms, however the I-Net allows the SCADA system to more efficiently monitor pumping station status (level, etc.) including alarms, therefore a portion of the increase in the HMI screen tasks has been attributed to the I-Net effort..



**WOODARD & CURRAN**  
Engineering · Science · Operations

Mr. Doug Halley, Director of Health

April 25, 2003

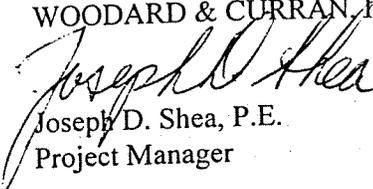
Page 3

Please note that we strongly recommend that the standard telephone lines for the two 'can type' pumping stations, Station #9 on Clover Hill Road and Station #10 on Robert Road, have the telephone lines installed as soon as possible. These stations do not require fiber connections therefore there should be no impediments to the Town procuring these telephone lines. Given the smaller capacity of the 'can type' stations, we recommend the Town make this a priority to avoid the potential for an alarm condition not being called out.

If the Town wishes to pursue this proposal, we can prepare an agreement for services and begin work upon execution of the agreement. If you have any questions, we are available to further discuss the status of this project at the October 31, 2002 management meeting. If you have any comments, prior to the meeting, please feel free to call me at 781-251-0200.

Very truly yours,

WOODARD & CURRAN, INC.

  
Joseph D. Shea, P.E.  
Project Manager

JDS/l  
Project #97451.08

cc: Mr. Don Johnson, Town Manager, Acton  
Mr. Mark Hald, IT Director, Acton  
Ms. Helen Priola, Vice President, W&C  
Mr. Leroy Kendricks, SVP, W&C  
Mr. Mark Shaye, Project Manager, W&C  
Mr. James Gagliard, W&C  
Mr. William Luksha, Area Manager, W&C



**Enterprise Solutions Center**  
**Phone: 1-800-873-6185**  
**Fax: 1-800-873-7905**

To: ~~Don Oueltette~~ Doug Halley

From: Ted Oren

Subject DDS II Circuits See Attached: Your 20 Adams Loc. is served from Maynard hence the additional charges.

Number of Pages (including cover sheet): 2



**APPLICATION FOR SERVICE**  
(Massachusetts State Tariff)

Customer Name: Town of Acton	Main Billing Tel. No:
Address: 472 Main St. Acton, MA	

Customer applies for and agrees to purchase from the undersigned Verizon operating telephone company the services identified below and as further described in Verizon's applicable tariffs (the "Services"), for a minimum period of twelve (12) consecutive months (the "Service Period"). The Services will be provided subject to the terms and conditions of Verizon's applicable tariffs in effect during the Service Period (the "Tariffs"), which are incorporated by this reference.

The Service Period will be scheduled to commence on or about ( ) days after signature by both parties below, subject to Verizon's completion of any work or installation of facilities needed to provide the Services. If Customer terminates this Application or any Services prior to expiration of the Service Period, Customer will promptly pay Verizon any termination and cancellation charges specified in the Tariffs. The rates for the Services shall be as set forth in the Tariffs, which rates are summarized below. Customer shall also pay all applicable charges, taxes and tariff surcharges, including federal End User Common Line Charges, that may be required under applicable law, regulations or tariffs.

Quantity	Service	Monthly Unit Rate	Non-recurring Charges
2	19.2 Kbps. DDS-II Circuits	\$36.58 Ea.	\$450.00 Ea.
7	19.2 Kbps. DDS-II Circuits	\$77.54	\$450.00 Ea.

7316  
54278  
61594

The Services will be provided at the following Customer locations:

20 Adames St., Acton, MA (Host Circuit to be Bridged)

133 River St. - (Pumping Station No. 1), 110 Main St. - (Pumping Station No. 2), 135 Prospect St., (Pumping Station No. 3), 386 Massachusetts Ave. - (Pumping Station No. 4), 27 Charter Road - (Pumping Station No. 5), 6 Railroad St. - Pumping station No. 6), 16 Adams St. - Pumping Station No. 7), Hillcrest Dr. - (Pumping Station No. 8)

Verizon may assign or transfer part or all of this Application to any of its affiliates. Provided that Customer provides Verizon with reasonable prior written notice, Customer may assign or transfer this Application to any company that is the successor to substantially all of its assets. All other attempted assignments shall be void without the prior written consent of the other party.

Upon signature below by both parties, this Application and the Tariffs constitute the entire agreement between Customer and Verizon regarding the Services, and supersede all prior oral or written quotations, communications, understandings or agreements. In the event of a conflict between the Tariffs and this Application, the Tariffs shall control. Each party represents that its execution of this Application is based solely on its independent assessment of the rights and obligations set forth herein and not on any other oral or written quotations, communications, understandings or agreements. This Application may not be modified or rescinded except by a writing signed by an authorized representative of each party.

AGREED AND ACCEPTED:

Town of Acton (Customer)  
By \_\_\_\_\_

Name/title

Date

Gen-State (080100)

VERIZON - Mass.

By \_\_\_\_\_

Name/title Ted Oren /AE

Date