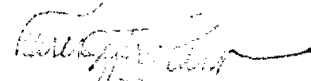


2018 JUN 21 P 1:22


JOAN CLERK

Town of Stafford
Water Pollution Control Authority
Regular Meeting
Monday, June 18, 2018
5:30 P.M. - Veteran's Meeting Room

Members Present: Chairman Allen Warren; Scott Bonett; Paul Burns; Mandy Fisher; Roger Thomas; David Walsh

Also present: Superintendent Richard Hartenstein, Jr.; Jane LaMorte, Business Manager; Chris Joseph

Index:

1. Call To Order
2. Minutes of May 21, 2018
3. Chairman's Comments – Board Members Comments
4. DEEP Update- Weston & Sampson – I&I SSES Phase II Update
5. Old Business- Weston & Sampson – RT 190 – West St. Sewer Line Replacement; Filter Rehab; Rt 190 Pump Station Rebuilding; Payment for Repair of Pretreatment Screen
6. Staff Reports (Superintendent)- Other
7. Collector of Revenue Report- Review of Department Finances; Transfers FY 2017-2018; List of Delinquent Users
8. Legal- Foreclosures
9. Adjournment

1. Call To Order

The meeting was called to order at 5:30 p.m. A quorum was established.

2. Minutes of May 21, 2018

Mr. Thomas moved to accept the minutes of May 21, 2018, as read. Ms. Fisher seconded the motion. Motion carried with a 4-0-2 vote, with Mr. Burns and Mr. Warren abstaining.

3. Chairman's Comments

- Board Members Comments

Chairman Warren stated this is a new item and asked that the Board members think how to use and what to discuss in this item for next meeting.

Chairman Warren welcomed back previous Board member Paul Burns.

4. DEEP Update

- Weston & Sampson - I/I SSES Phase II Update

Superintendent Hartenstein reported that over the past couple weeks the SSES camera work has been performed. Investigation has proved broken pipes, big roots growing in the pipes, and spots that need immediate attention. Smoke and dye testing and inspections to be completed next.

5. Old Business

- Weston & Sampson – RT 190 – West St. Sewer Line Replacement

The Memorandum, by Weston & Sampson, regarding the West Street System Evaluation – Middle River Bridge Crossing (See Attached) was discussed. The Memorandum consists of two (2) alternatives for pipe replacement: Alt 1 Middle River Crossing, reroute flow to MH 01153 through 12-inch diameter sewer. Route requires a new above grade crossing of the

Middle River adjacent to the existing bridge; Alt. 2 Replace in Existing Location, replace existing 8-inch VCP with 12-inch PVC from MH 1008 to MH 1011. Route requires cleaning of a wooded embankment and work in an easement through private property. The estimated cost for each is the same at \$200,000.

Mr. Walsh made a motion to approve Alt 1, Middle River Crossing as the best option. Ms. Fisher seconded the motion. Motion carries with a 5-0-1 vote, with Mr. Warren abstaining.

- Filter Rehab

The project is at a standstill until the remaining parts are in. The underdrains have been replaced and filters are back together.

- RT 190 Pump Station Rebuilding

Nothing new to report.

- Payment for Repair of Pretreatment Screen

Superintendent Hartenstein reminded the Board that at the last meeting this screen repair was approved to be paid out of the 18-19 FY budget. It was determined that it would be more prudent to transfer the money from the Capital Reserve Passbook into this year's budget and do the project now.

Mr. Burns made a motion to transfer \$32,000 from the Sewer Reserve for Capital and Non-Reoccurring Expenses Passbook to Sewer Fund Line Item 25-340-7241 Capital Maintenance. Mr. Bonett seconded the motion. Motion carries with a 5-0-1 vote, with Mr. Warren abstaining.

6. Staff Reports

- Other

Superintendent Hartenstein stated that he received the quote for SCADA maintenance in the amount of \$9,500.

Mr. Joseph questioned the capacity at the treatment facility and what plan the Board had for economic growth. He felt that an increase in capacity would make the Town more marketable and would attract more industries, factories and housing.

The Board stated that a Capacity Analysis was completed to show the allotment used and what was available for flow growth.

7. Collector of Revenue Report

- Review of Department Finances

Total collections for the month of May were \$22,345, and total expenses were \$96,583. The balance of the sewer reserve is \$544,758 and the balance of the sewer fund is \$1,096,138.

- Transfers FY 2017-2018

Mr. Walsh made a motion, seconded by Ms. Fisher to transfer the following:

<u>From</u>	<u>To</u>	<u>Amount</u>
SEWER FUND	SEWER FUND	
25-340-1180 (Sal: Operational)	25-340-2025 (Unemployment Compensation)	\$ 2,956
25-340-1183 (Sal: OT Call-Ins)	25-340-1182 (Sal: OT)	\$ 7,500
25-340-3208 (Engineering Consultant)	25-340-3200 (Legal Services)	\$ 800
25-340-1505 (Fees: Recording Secretary)	25-340-3805 (Continuing Education)	\$ 100
25-340-2125 (Commercial Lines Fee)	25-340-4500 (Telephone)	\$ 2,230
25-340-1180 (Sal: Operational)	25-340-4500 (Telephone)	\$ 300
25-340-6110 (Sewer System Maint)	25-340-5102 (Chemicals/Chlorine)	\$ 1,100
25-340-6110 (Sewer System Maint)	25-340-5320 (Vehicle- Gas/Oil)	\$ 1,100
25-340-1181 (Sal: Operational)	25-340-7241 (Cap – Line Maint)	\$ 24,800

25-340-1181 (Sal: Operational)	25-340-7242 (Cap – Equipment)	\$ 20,000
25-340-4103 (Utilities: Heat)	25-340-7242 (Cap – Equipment)	\$ 7,790
25-340-2030 (Group Health & Life)	25-340-7242 (Cap – Equipment)	\$ 34,000
25-340-2035 (Employee Retirement Plan)	25-340-7242 (Cap – Equipment)	\$ 13,685
25-340-3320 (Repair Maint: Vehicles)	25-340-7242 (Cap – Equipment)	\$ 28,000
25-340-2015 (Fica/Medicare)	25-340-7242 (Capital - Equipment)	\$ 5,000
25-340-6500 (Pump Stations)	25-340-7242 (Capital - Equipment)	\$ 4,800
25-340-7025 (State Inspections/Permit Fees)	25-340-7242 (Capital - Equipment)	\$ 2,500
25-340-6110 (Sewer System Maint)	25-340-4100 (Utilities: Electricity)	\$ 3,000

Motion carries with a 5-0-1 vote, with Mr. Warren abstaining.

- List of Delinquent Users

Collection rates are normal for this time of year. Ms. LaMorte presented the list of delinquent users to the board.

8. Legal


- Foreclosures

Nothing new to report.

9. Adjournment

Mr. Walsh moved to adjourn the meeting at 6:22 p.m. and Mr. Burns seconded the motion. Motion carried with a 5-0-1 vote, with Mr. Warren abstaining.

Respectfully Submitted,



Jane LaMorte
Recording Secretary

MEMORANDUM

TO: Rick Hartenstein, Superintendent, Town of Stafford Water Pollution Control Facility (WPCF)

FROM: Weston & Sampson Engineers, Inc.

DATE: June 8, 2018

SUBJECT: West Street Sewer System Evaluation – Middle River Bridge Crossing

General

The Stafford Water Pollution Control Authority (WPCA) has identified a sanitary sewer capacity issue in the West Street area. Under existing conditions, sanitary flows from Subarea 4 and the northern portion of Subarea 1 flow to manhole 01008 on West Street. Downstream of manhole 01008 the sewer leaves the public right-of-way and follows along the east side of Middle River in a steep wooded bank behind existing residential developments. The existing sanitary sewer is 8-inch diameter and has experienced capacity issues and is difficult to access for maintenance purposes. The 8-inch sewer from West Street discharges to a 15-inch diameter sewer that runs parallel to the existing railroad right-of-way. The 15-inch diameter interceptor continues along the west side of Middle River to a former factory building. Based on the hydraulic modeling results completed previously, the sanitary sewer on West Street should be increased to 12-inch diameter in order to meet existing and projected flows.

The purpose of this memorandum is to summarize Weston & Sampson's review and analysis of the potential routing for the proposed 12-inch sewer. As mentioned above, the existing sewer is located in a difficult to access area immediately adjacent to the Middle River, therefore replacing the sewer in its existing location is not the most desirable option.

Alternatives Considered

A discussion of the alternatives that were considered can be found below. **Figure 1** presents the location of the two alternatives. **Table 1** summarizes the scenarios.

Table 1 –Scenarios

Alternative	Description	Summary
Alt. 1 Middle River Crossing	Reroute flow to MH 01153 through 12-inch diameter sewer	Route requires a new above grade crossing of the Middle River adjacent to the existing bridge.
Alt. 2 Replace in Existing Location	Replace existing 8-inch VCP with 12-inch PVC from MH 1008 to MH 1011	Route requires clearing of a wooded embankment and work in an easement through private property.

Alternative 1– Middle River Bridge Crossing: Connect to MH 1153

The Project Area flows from MH 1008 to the existing downstream connection at MH 1011. This connection has limited access to service and construction equipment. Any maintenance or repairs that are required in the current downstream system would be difficult due to access restrictions. As an alternative to the existing downstream connection, Weston & Sampson reviewed the possibility of redirecting flow from the Project Area to MH 01153 and determined that the existing 15-inch diameter sanitary sewer pipe downstream of MH 01153 has adequate capacity for the diverted flow from the project area.



West Street Bridge

To divert the West Street flows across Middle River a new manhole would be installed north of the bridge to receive flow from manhole 01008. A new 12-inch diameter sewer would be installed through the new manhole across Middle River. The crossing would be supported on concrete piers behind each of the wingwalls with steel W-beams and pipe hangers. It is likely that the existing power lines would need to be temporarily relocated, insulated, or be temporarily deenergized to facilitate the construction of the pipe support structure. The sewer would be installed above the low chord elevation of the bridge girders, and therefore be protected from high river flows by the bridge structure. Figures 2 and 3 include a conceptual plan and profile of the proposed bridge crossing.

The preliminary opinion of probable construction cost (OPCC) for Alternative 1 is \$200,000. Additional information including quantities and unit prices are included in Figure 4.

The preliminary opinion of probable construction cost (OPCC) for Alternative 1 is \$200,000. Additional information including quantities and unit prices are included in Figure 4.

Alternative 2– Replacement: 12-inch PVC

Alternative 2 includes replacing the existing 8-inch diameter vitrified clay (VC) sewer with a 12-inch diameter PVC sewer from MH 1008 to MH 1011 along its existing alignment to the existing 15-inch diameter sewer. Other flow conditions, including number of manholes, pipe lengths, and slopes were presumed to be the same as existing. The plan and profile of the proposed sanitary sewer replacement are presented on Figures 5 and 6. Construction of Alternative 2 would include clearing and grubbing of the existing easement and bypass pumping of the existing flows around the work area.

The preliminary OPCC for Alternative 2 is \$200,000. Additional information including quantities and unit prices are included in Figure 7.

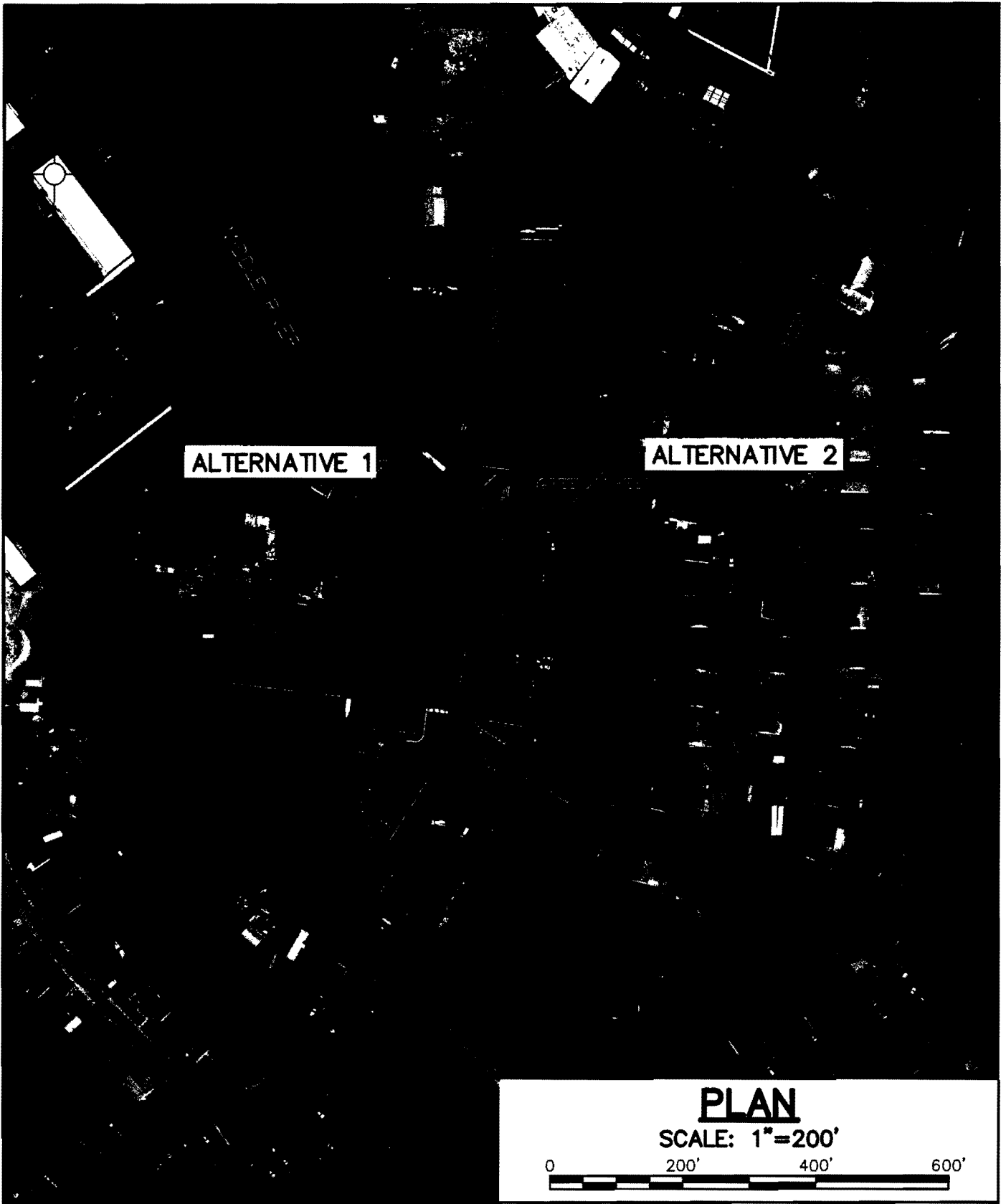
Recommendation

Although the opinions of probably construction costs for each project are equal; Alternative 1 is the recommended option because it requires less disruption and construction activity within an easement behind existing developed properties immediately adjacent to the river.

The bridge crossing would be located above the elevation of the bottom chord of the bridge to protect it from potential flood waters. The pipe support system will be constructed so that the sewer hangs a minimum of 12 inches above the bottom of the bridge structure and invert of the pipe. Therefore, the flood carrying capacity of the channel will not be reduced by the pipe and support structure.

Based on the inverts of manhole 01008 and manhole 01153 and distances field surveyed by Weston and Sampson, it has been deemed feasible to install a 12-inch insulated ductile iron pipe to the east of the existing bridge. The location of proposed manholes to the north and south of the bridge will be determined during the

design phase based upon the existing grades and depth requirements. It should be noted that the bridge crossing will require the acquisition of an easement from the property owners north and south of Middle River (28 West Street and 30 West Street) because of the width of the existing right-of-way.



ALTERNATIVE 1

ALTERNATIVE 2

PLAN

SCALE: 1"=200'



ALTERNATIVES LOCATION MAP

WEST STREET SEWER EVALUATION
TOWN OF STAFFORD, CONNECTICUT

Weston & Sampson

273 Dividend Road, Rocky Hill, CT 06067
(860) 513-1473 (800) SAMPSON
www.westonandsampson.com

FIG-1

EXISTING SMH 1008

±100 LF 12" PVC

±10 LF 12" DIP

MIDDLE RIVER BRIDGE

West St

COORDINATION WITH EVERSOURCE REQUIRED

±70 LF AERIAL CROSSING

±45 LF 12" DIP

EASEMENT REQUIRED

EXISTING SMH 1053

PLAN

SCALE: 1"=30'



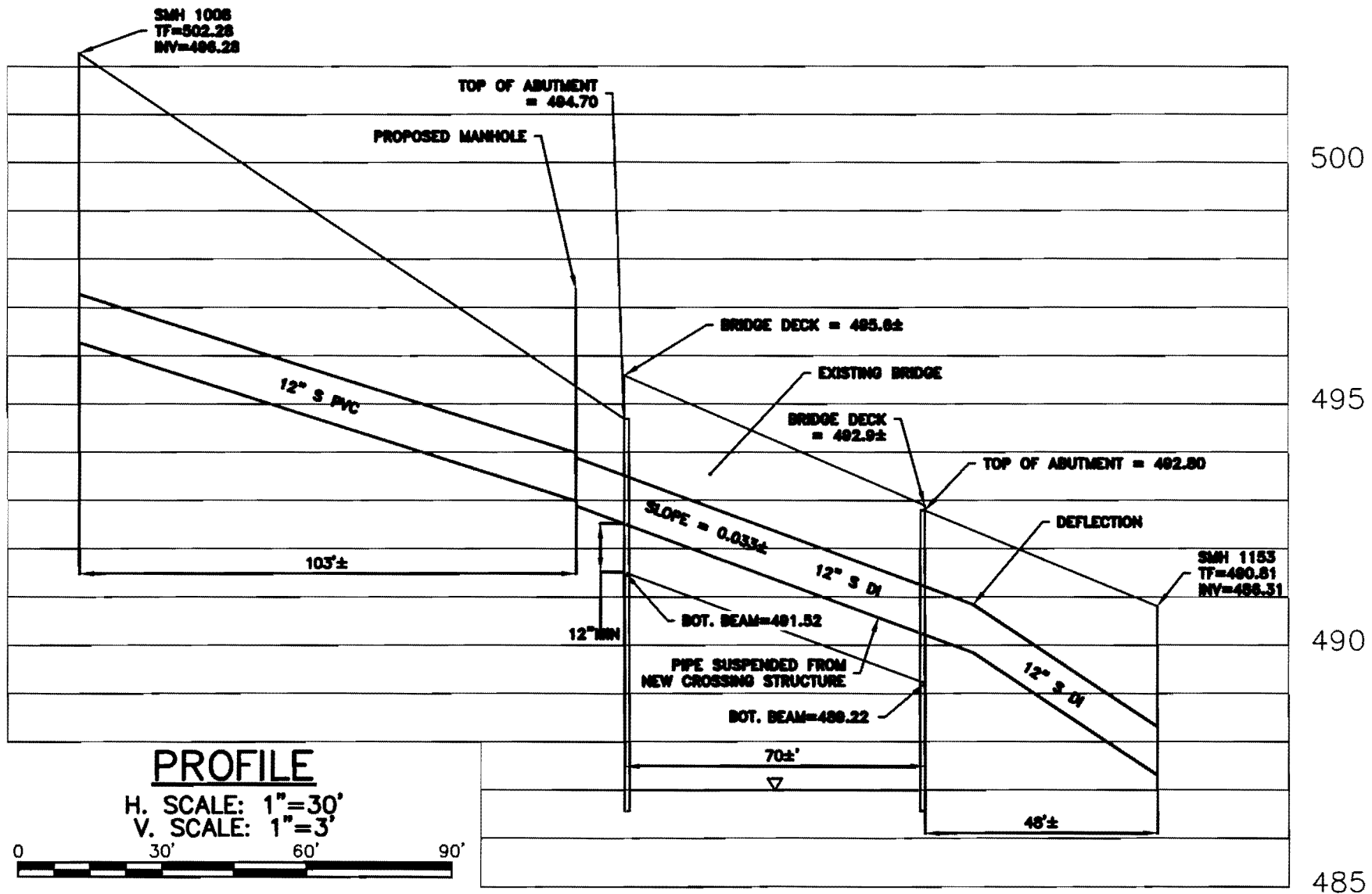
ALTERNATIVE 1 - MIDDLE RIVER BRIDGE CROSSING - PLAN

WEST STREET SEWER EVALUATION TOWN OF STAFFORD, CONNECTICUT

Weston & Sampson

273 Dividend Road, Rocky Hill, CT 06067 (860) 513-1473 (800) SAMPSON www.westonandsampson.com

FIG-2



ALTERNATIVE 1-MIDDLE RIVER BRIDGE CROSSING
 PROFILE

WEST STREET SEWER EVALUATION
 TOWN OF STAFFORD, CONNECTICUT

Weston & Sampson

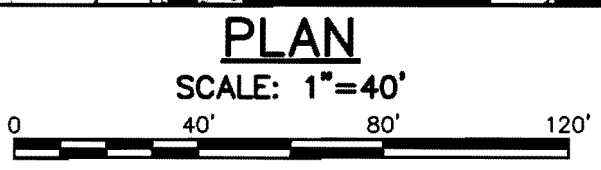
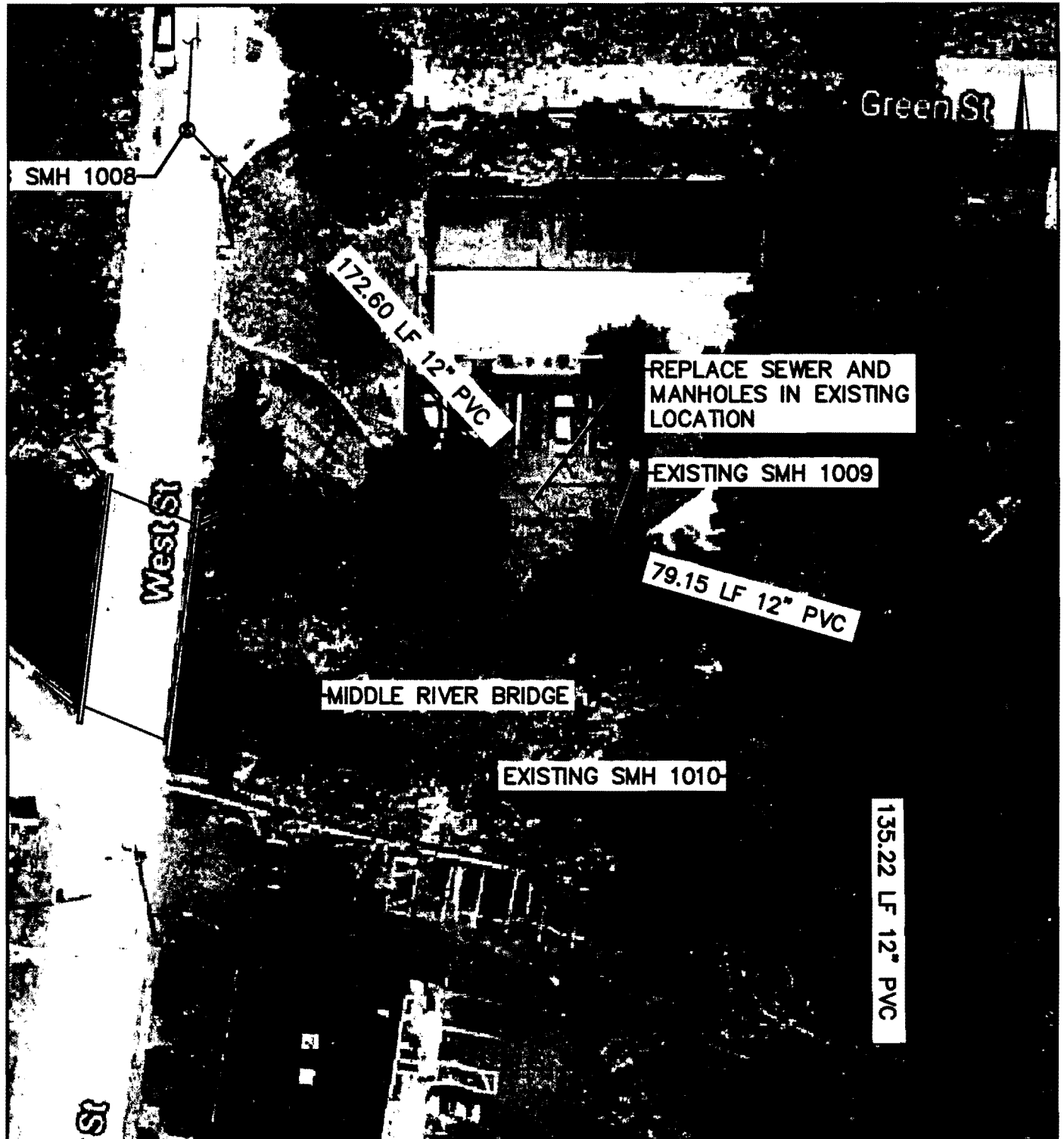
273 Dividend Road, Rocky Hill, CT 06067
 (860) 513-1473 (800) SAMPSON
 www.westonandsampson.com

FIG-3

Figure 4
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COSTS
Alternative 1 - Middle River Crossing
Stafford Springs, Connecticut

ITEM NO.	DESCRIPTION UNIT COSTS	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
GRAVITY SEWER AND APPURTENANCES					
1a	12-inch DIP sewers	LF	55	\$ 125.00	\$ 6,875.00
1b	12-inch PVC sewers	LF	100	\$ 120.00	\$ 12,000.00
1c	12"x6" wye or tee	EA	1	\$ 150.00	\$ 150.00
1d	6-inch PVC building connection	LF	140	\$ 60.00	\$ 8,400.00
MANHOLES, CATCH BASINS AND APPURTENANCES					
2a	4' Diameter Precast concrete manhole - sanitary sewer	EA	1	\$ 7,000.00	\$ 7,000.00
ROCK EXCAVATION AND DISPOSAL					
3a	Rock excavation and disposal	CY	15	\$ 150.00	\$ 2,250.00
MISCELLANEOUS EARTHWORK					
4a	Changes in earthwork	CY	15	\$ 25.00	\$ 375.00
4b	Unsuitable material	CY	15	\$ 25.00	\$ 375.00
4c	Test pits	CY	10	\$ 100.00	\$ 1,000.00
4d	Additional crushed stone	CY	15	\$ 25.00	\$ 375.00
PAVEMENT REPLACEMENT					
5a	Temporary Pavement Local Roads and Driveways	LF	150	\$ 15.00	\$ 2,250.00
5b	Permanent Pavement Local Roads and Driveways	LF	150	\$ 30.00	\$ 4,500.00
OVERHEAD UTILITY PROTECTION					
6a	Overhead Utility Protection	EA	1	\$ 5,000.00	\$ 5,000.00
BRIDGE CROSSING					
7a	Middle River Bridge Crossing	EA	1	\$ 110,000.00	\$ 110,000.00
TRAFFIC CONTROL					
8a	Uniformed police officers for traffic control	HR	120	\$ 65.00	\$ 7,800.00
MOBILIZATION					
9a	Mobilization (not to exceed 5%)	LS	1	\$ 8,000.00	\$ 8,000.00

SUBTOTAL	\$ 180,000.00
CONTINGENCY (10%)	\$ 18,000.00
CONSTRUCTION TOTAL	\$ 198,000.00



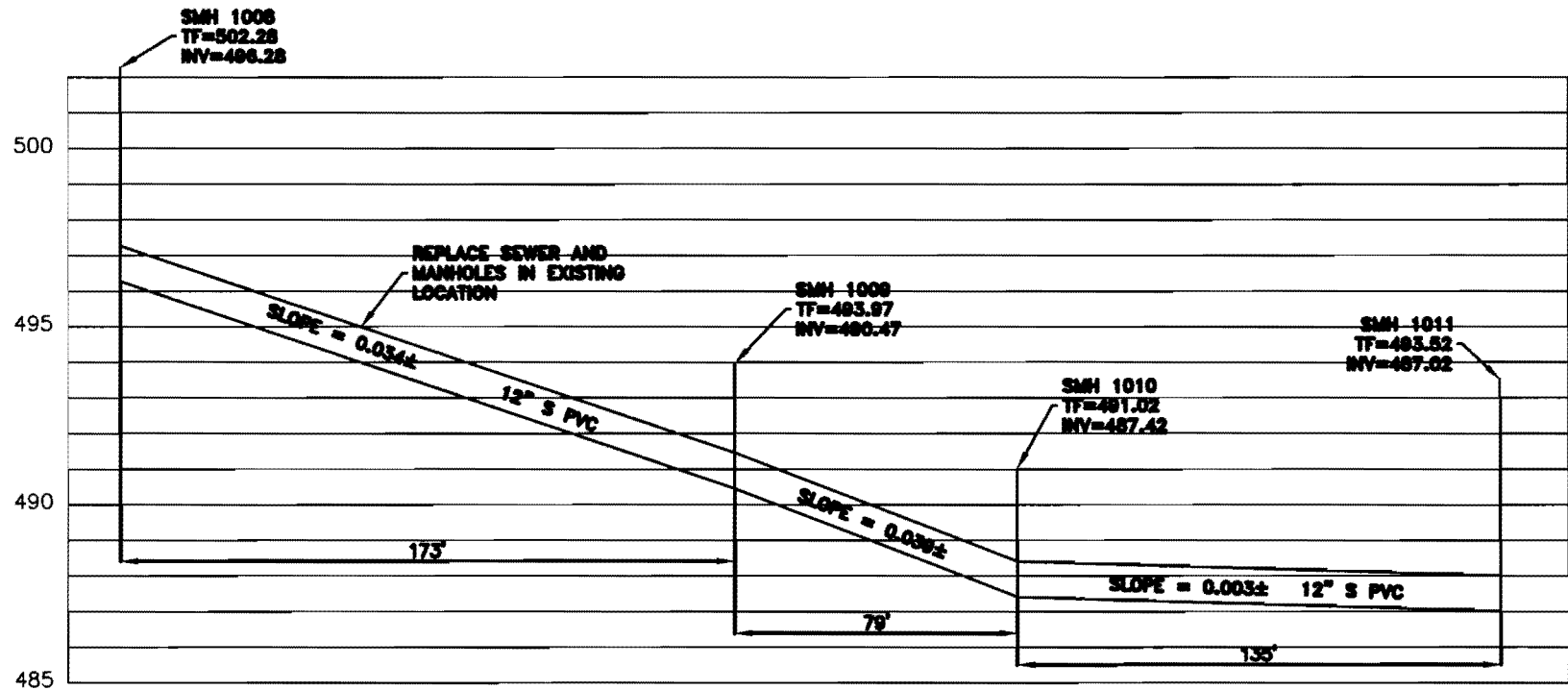
EXISTING SMH 101+

ALTERNATIVE 2 – EXISTING SEWER REPLACEMENT – PLAN

Weston & Sampson
 273 Dividend Road, Rocky Hill, CT 06067
 (860) 513-1473 (800) SAMPSON
 www.westonandsampson.com

FIG-5

WEST STREET SEWER EVALUATION
 TOWN OF STAFFORD, CONNECTICUT



PROFILE

H. SCALE: 1"=50'
 V. SCALE: 1"=5'



ALTERNATIVE 2-EXISTING SEWER REPLACEMENT
 PROFILE

WEST STREET SEWER EVALUATION
 TOWN OF STAFFORD, CONNECTICUT

Weston & Sampson

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FIG-6

Figure 7
PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COSTS
Alternative 2 - Existing Sewer Replacement
Stafford Springs, Connecticut

ITEM NO.	DESCRIPTION UNIT COSTS	UNIT	ESTIMATED QUANTITY	UNIT COST	TOTAL COST
GRAVITY SEWER AND APPURTENANCES					
1a	12-inch PVC sewers	LF	390	\$ 120.00	\$ 46,800.00
1b	12"x6" wye or tee	EA	2	\$ 150.00	\$ 300.00
1c	6-inch PVC building connection	LF	50	\$ 60.00	\$ 3,000.00
MANHOLES, CATCH BASINS AND APPURTENANCES					
2a	4' Diameter Precast concrete manhole - sanitary sewer	EA	4	\$ 7,000.00	\$ 28,000.00
ROCK EXCAVATION AND DISPOSAL					
3a	Rock excavation and disposal	CY	25	\$ 150.00	\$ 3,750.00
MISCELLANEOUS EARTHWORK					
4a	Changes in earthwork	CY	25	\$ 25.00	\$ 625.00
4b	Unsuitable material	CY	25	\$ 25.00	\$ 625.00
4c	Test pits	CY	10	\$ 100.00	\$ 1,000.00
4d	Additional crushed stone	CY	25	\$ 25.00	\$ 625.00
PAVEMENT REPLACEMENT					
5a	Temporary Pavement Local Roads	LF	25	\$ 15.00	\$ 375.00
5b	Permanent Pavement Local Roads	LF	25	\$ 30.00	\$ 750.00
DEWATERING					
6a	Dewatering	LS	1	\$ 25,000.00	\$ 25,000.00
BYPASS PUMPING					
7a	Bypass Pumping	LS	1	\$ 10,000.00	\$ 10,000.00
SURFACE RESTORATION					
8a	Cross Country Restoration	LF	400	\$ 30.00	\$ 12,000.00
ENVIROMENTAL PROTECTION					
9a	Temporary Silt Fence	LF	400	\$ 5.00	\$ 2,000.00
VEGETATION REMOVAL					
10a	Clearing and Grubbing	EA	1	\$ 30,000.00	\$ 30,000.00
TRAFFIC CONTROL					
11a	Uniformed police officers for traffic control	HR	40	\$ 65.00	\$ 2,600.00
MOBILIZATION					
12a	Mobilization (not to exceed 5%)	LS	1	\$ 8,000.00	\$ 8,000.00

SUBTOTAL \$ 180,000.00
CONTINGENCY (10%) \$ 18,000.00
CONSTRUCTION TOTAL \$ 198,000.00