ADDENDUM NO. 1

TO

REQUEST FOR QUALIFICATIONS FOR

DESIGN SERVICES RELATED TO RESERVOIR AVE AND OLD TOWN PUMP STATIONS COMPREHENSIVE UPGRADES

RFQ#6313

PREPARED BY:
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Middletown, CT 06457
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Fax: 860-343-9504

Addendum No. 1 to the
Request for Qualifications for
Design Services related to Reservoir Ave and Old Town Pump Stations
Comprehensive Upgrades
RFQ#6313

Due October 2, 2018 at 2:00 pm

The following changes and additional information are hereby made part of the Request for Qualifications.

This Addendum consists of 34 pages and consists of the following:

ATTACHMENTS

Attachment A – Reservoir Pump Station Information

- Plan and Sections for Reservoir Avenue Pump Station by Whitman & Howard Inc. Dated July 1970, Sheet 8 of 8
- Plan & Profile for Reservoir Avenue Pump Station by Whitman & Howard Inc. Dated Dec 1969, Sheets 3, 4, and 7 of 8
- Updated Site Plan Sketch
- SSES Phase I, Reservoir Avenue Pump Station Evaluation for the Town of Trumbull, CT; March 2015

  Note: Sections taken from the above noted report provides information regarding the existing conditions of the Reservoir Avenue Pump Station at the time the report was drafted. Conditions have changed since then. Prospective Bidders may not rely upon or make any claim against Owner or Owners Project Representative (Wright-Pierce), or any of their officers, directors, members, partners, employees, agents, or consultants, with respect to:
  - the completeness of such reports and drawings for Engineer's purposes, including, but not limited to, other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  - any Engineer's interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

Attachment B – Old Town Pump Station Information

- Plan and Profile of Sewer Old Town Road by Whitman & Howard Inc. Dated Dec 1967, Sheet 2, 3, 4, 5, 6 of 9
- Plan and Profile of Sewer for Old Farm Road & Cross Country to Pumping Station by Whitman & Howard Inc. Dated July 1971, Sheet 17 of 19
- Pump Station Evaluations for the Trumbull, CT Water Pollution Control Authority (WPCA); November 2015

  Note: Sections taken from the above noted report provides information regarding the existing conditions of the Old Town Pump Station at the time the report was drafted. Conditions have changed since then. Prospective Bidders may not rely upon or make any claim against Owner or Owners Project Representative (Wright-Pierce), or any of their officers, directors, members, partners, employees, agents, or consultants, with respect to:

- the completeness of such reports and drawings for Engineer's purposes, including, but not limited to, other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- any Engineer's interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

Site Visits were performed on Thursday September 20, 2018 at 11am. Sign-In Sheet from the site visits have been enclosed.

QUESTION AND ANSWERS

Q1. Will the Facilities Plan/Evaluation prepared by the OPR be made available for reference?

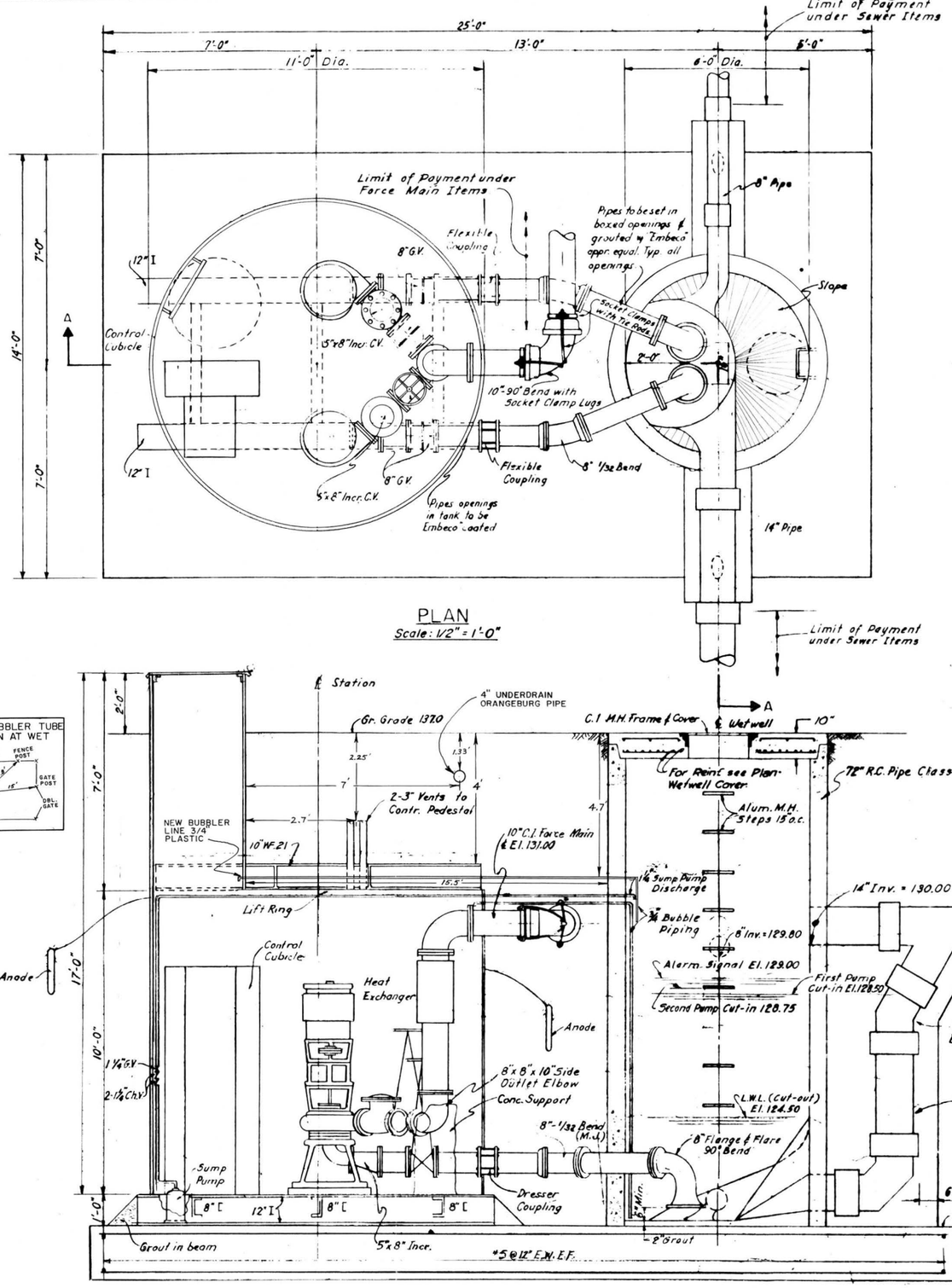
A1: Information previously noted have been included for reference in Addendum No. 1.

CLARIFICATIONS

Clarification 1: Evaluations of existing and proposed flows will be assessed by the selected consultant to determine sizing requirements for the pump station upgrades. Consultant will work with the Town to review proposed developments looking to connect to both Reservoir Ave and Old Town Pump Stations and determine upgrades needed to make connections.

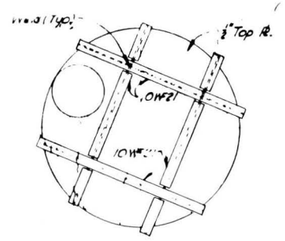
Attachment A

Reservoir Avenue Pump Station Information



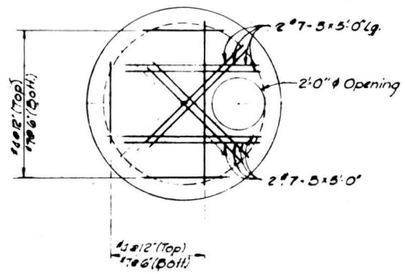
PLAN

Scale: 1/2" = 1'-0"



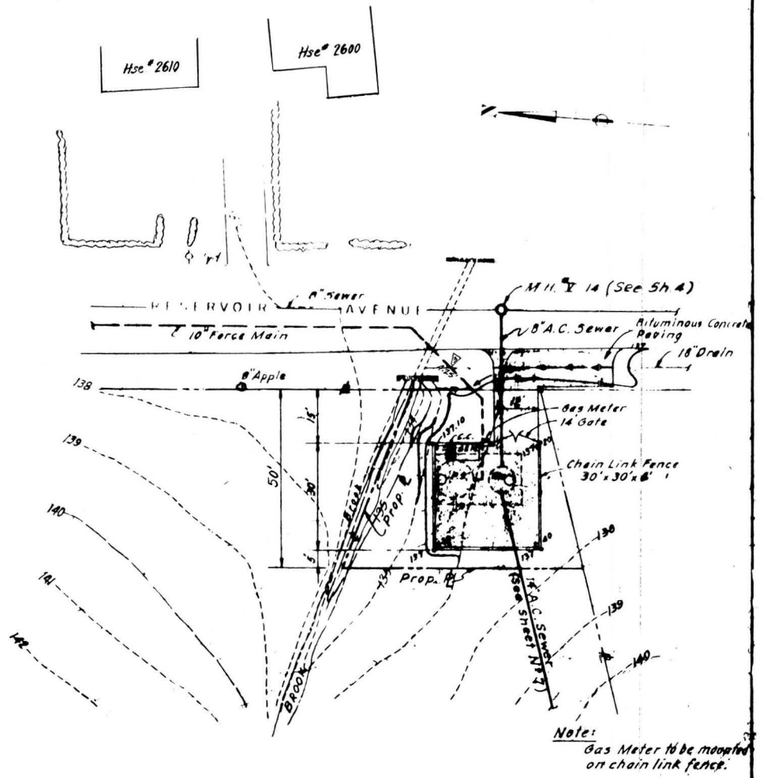
ROOF SUPPORT DETAIL

Scale: 1/8" = 1'-0"



PLAN - WETWELL COVER

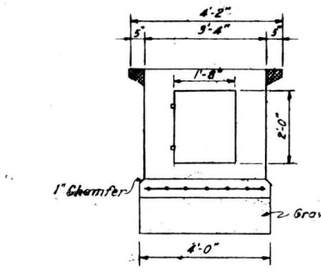
Scale: 3/8" = 1'-0"

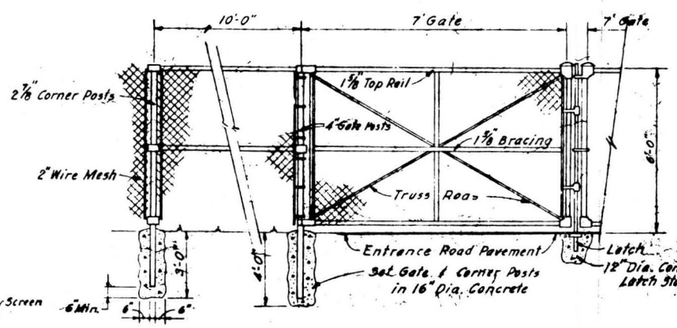


Note:
Gas Meter to be mounted on chain link fence.

SITE PLAN

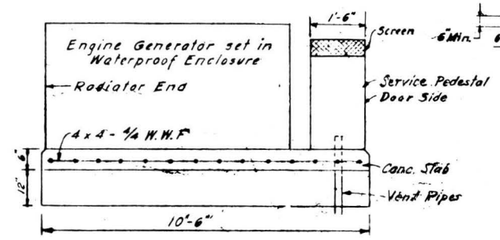
Scale: 1" = 20'





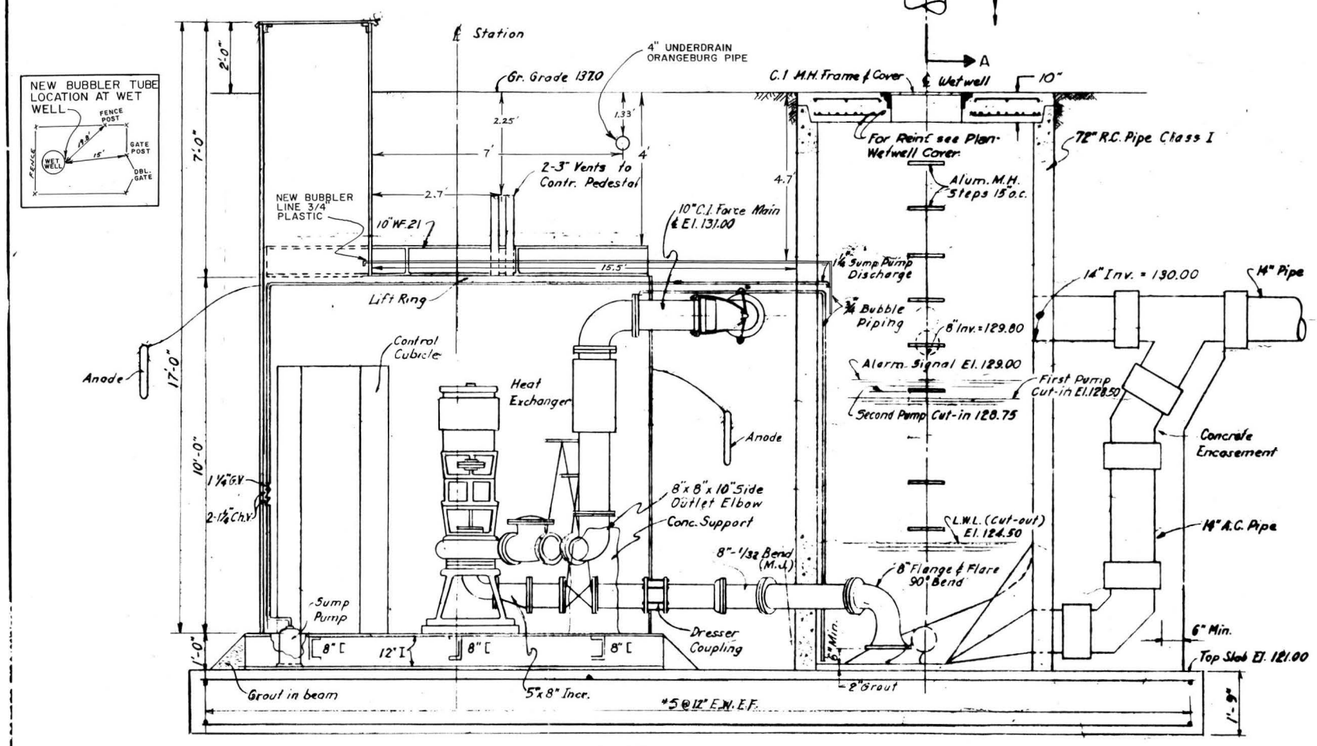
FENCE AND GATE DETAIL

Not to Scale



SERVICE PEDESTAL & GENERATOR DETAIL

Not to Scale



SECTION A-A

PUMPING STATION DETAIL

Scale 1/2" = 1'-0"

Reservoir Avenue P.S.

RECORD PLAN

NO.	DESCRIPTION	DATE
	REVISIONS	
1	Added Fence Detail	7/7/70
2	Moved 14" Sewer	11/27/71
3	Repair to 10" C.I. F.M.	2/30/81
4	ADDED NEW BUBBLER PIPE DETAIL	6/4/92

PUMPING STATION
RESERVOIR AVENUE

PLAN & SECTIONS

TRUMBULL, CONN.

WHITMAN & HOWARD, INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS

DESIGNED BY P.J.G.	SCALE AS SHOWN	DATE [illegible]
DRAWN BY A.B. JR.	APPROVED [signature]	
CHECKED BY G.T.C.	JOB NO. 8-11	SHEET 8 OF 8

PLAN
SCALE 1" = 40'

PROFILE
SCALE HOR. 1" = 40'
VERT. 1" = 4'

NO.	DESCRIPTION	DATE

RESERVOIR AVENUE

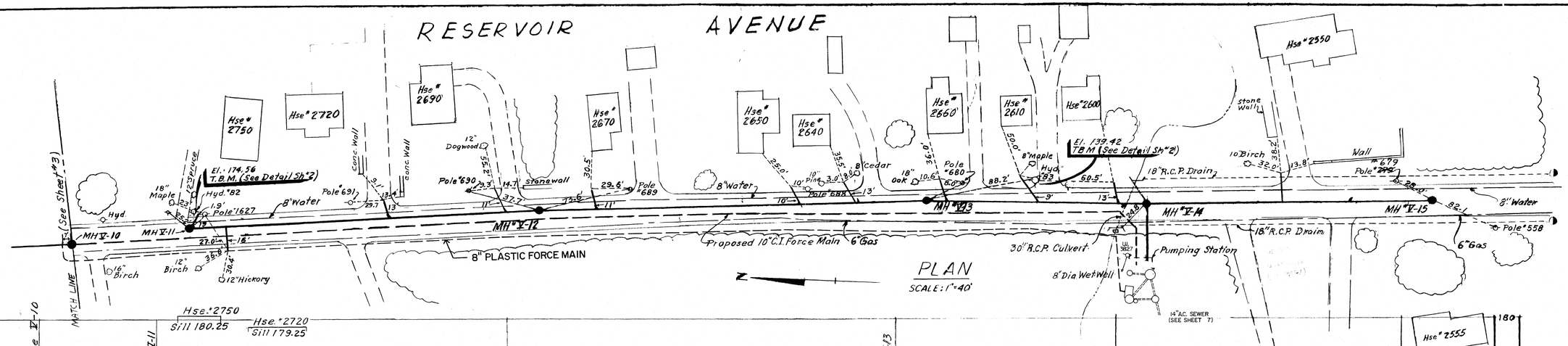
PLAN & PROFILE OF SEWER

TRUMBULL, CONN.

WHITMAN & HOWARD INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS.

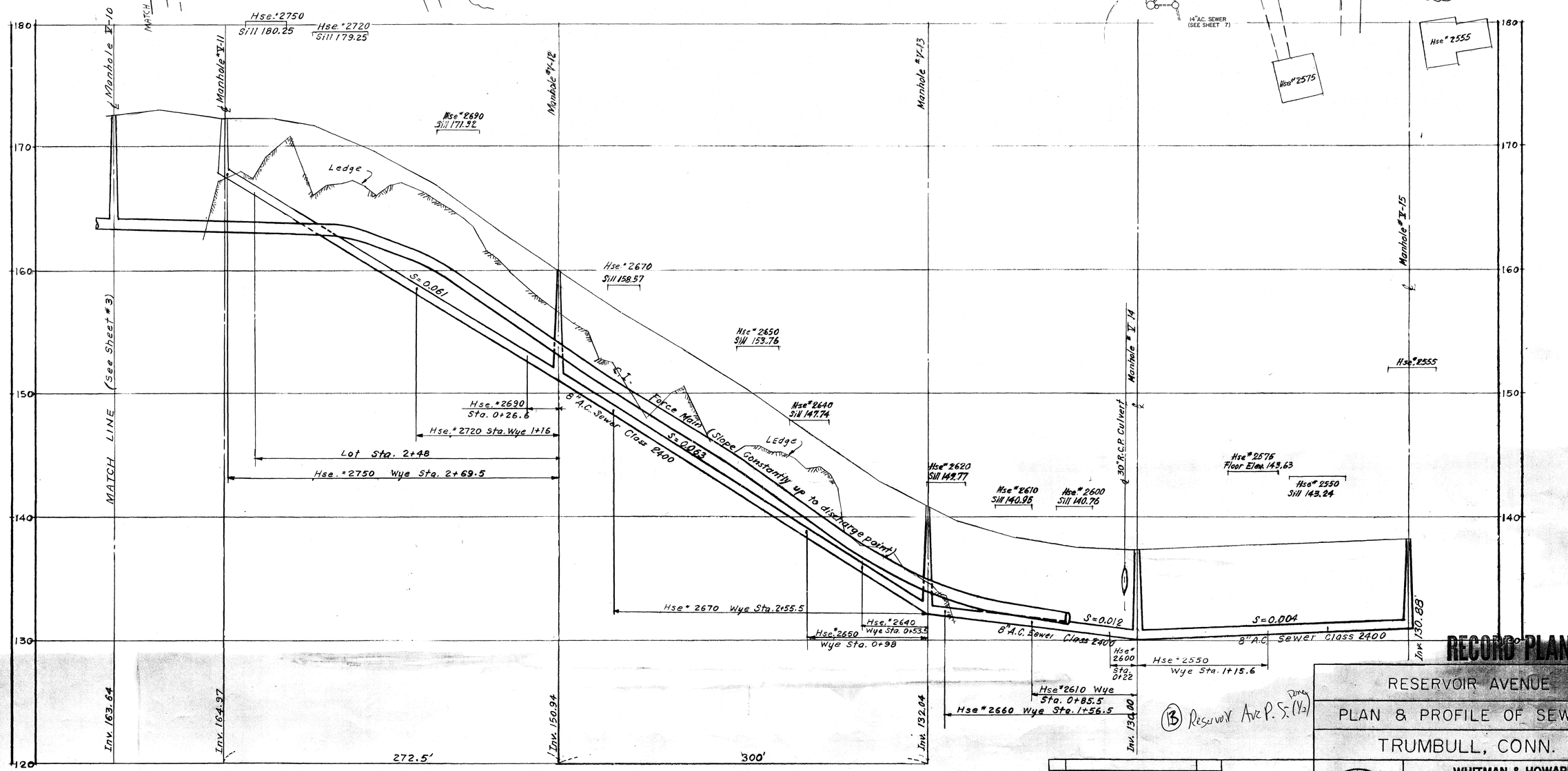
DESIGNED BY	SCALE	DATE
P.J.G.	AS SHOWN	DEC. 1969
DRAWN BY	APPROVED	
A.B.J.R.		

RESERVOIR AVENUE



PLAN

SCALE: 1" = 40'



PROFILE

SCALE: Horiz. 1" = 40'
Vert. 1" = 4'

NO.	DESCRIPTION	DATE
	REVISIONS	

RECORD PLAN

(B) Reservoir Ave P.S. Dwg (Y-2)

RESERVOIR AVENUE

PLAN & PROFILE OF SEWER

TRUMBULL, CONN.

WHITMAN & HOWARD INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS.

DESIGNED BY P.J.G.	SCALE AS SHOWN	DATE DEC. 1968
DRAWN BY A.B.JR.	APPROVED James T. McDonough	
CHECKED BY G.T.C.	JOB NO. 8-11	SHEET 4 OF 8 SHEETS

16

STATE OF CONNECTICUT

8"Water
18"R.C.P. Drain
Hse. No. 2575
M.H. # V-14
18"R.C.P. Drain
8"A.C. Sewer (See Sheet 4)
8"A.C. Sewer
8"Dia. Wet Well
14"A.C. Sewer
Pumping Station
30"R.C.P. Culvert
Hse. No. 2600
Hyd. #83
8"A.C. Sewer (See Sheet 4)
T.B.M. #2 See Detail Sh. #2 Elev. 139.42
Hse. No. 610
6"Gas
Hse. No. 2620
10"Force Main (See Sheet 4)
Brook
Reservoir
Manhole # V-21
Manhole # V-22
Manhole # V-23
Manhole # V-24
Manhole # V-25
14"A.C. Sewer
15'
10'
6"Gas
10"Gas
12"HICKORY

PLAN
SCALE: 1"=40'

Manhole # V-14
Reservoir Ave.
18"R.C.P. Drain
Wet Well
Pumping Station
Manhole # V-21
Manhole # V-22
Manhole # V-23
Manhole # V-24
Manhole # V-25
Existing Grade
Ledge
8"A.C. Sewer Class 2400
S=0.004
103.5' Wye Hse. #2575
14"A.C. Sewer Class 2400
Slope=.0671
Slope=.03672
Slope=0.04266
Slope=.002
14"Plugged Stub
Inv. 130.00
Inv. 129.80
Inv. 140.00
Inv. 151.00
Inv. 158.85
Inv. 159.35
Inv. 159.95
58'
149'
299'
191'
249'
303'
170
160
150
140
130
120
180

PROFILE
SCALE: Horiz 1"=40'
Vert. 1"=4'

RECORD PLAN

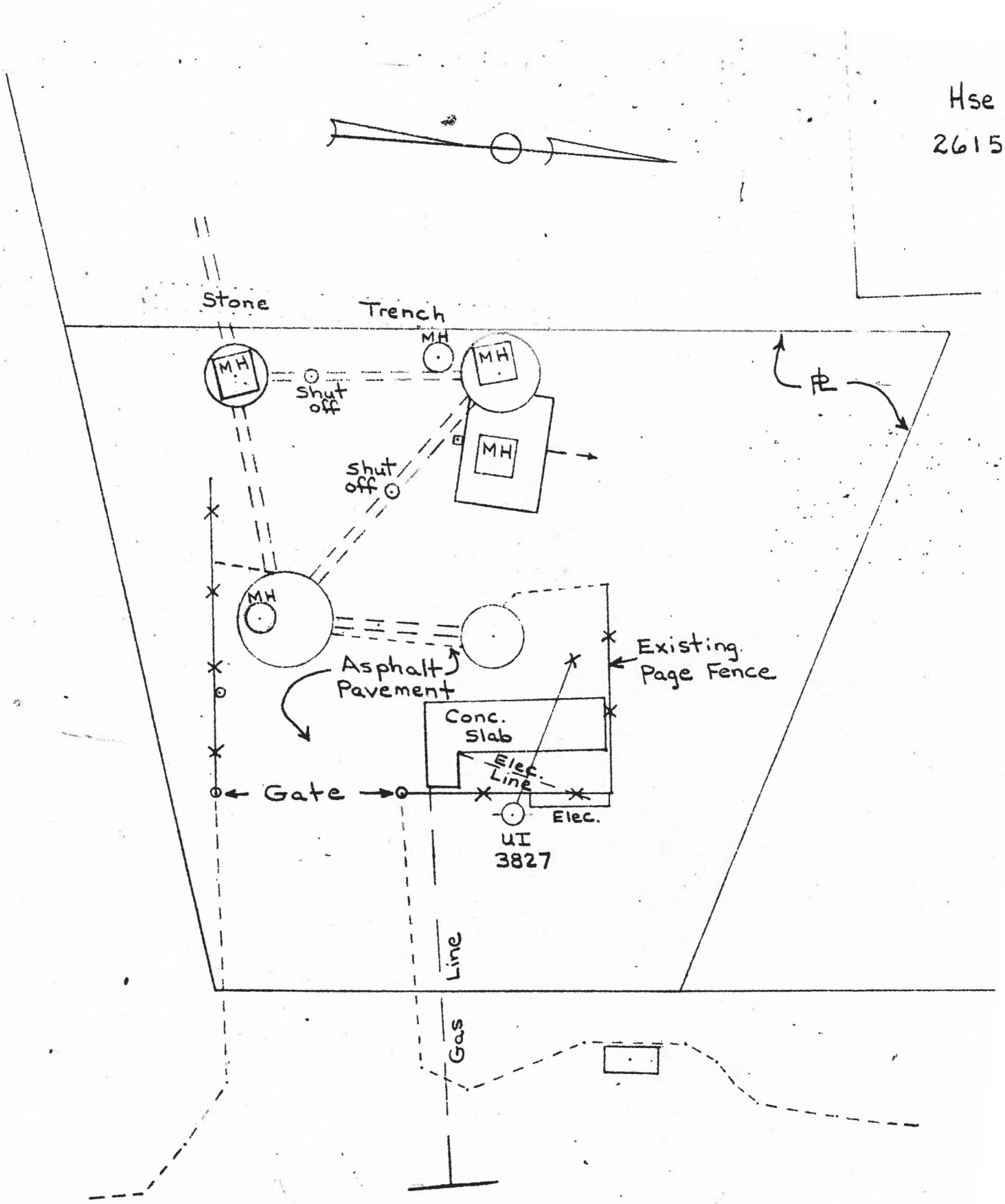
CROSS COUNTRY
(Reservoir Avenue to Sunnycrest Road)
PLAN & PROFILE OF SEWER
TRUMBULL, CONN

NO.	DESCRIPTION	DATE
1	Relocated Sewer Between Wet Well & MH # V-25	4-27-71
	REVISIONS	

WHITMAN & HOWARD INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS.

DESIGNED BY P.J.G.	SCALE AS SHOWN	DATE DEC. 1969
DRAWN BY R.W.H.	APPROVED James T. McDonough	
CHECKED BY G.T.C.	JOB NO. 6-11	SHEET 7 OF 8 SHEETS

JAMES T. McDONOUGH No. 4710 REGISTERED PROFESSIONAL ENGINEER



RESERVOIR AVE.

PUMPING STATION PLAN

Scale 1" = 10' 7/8/96

SECTION 4

RESERVOIR AVENUE PUMP STATION EVALUATION AND RECOMMENDATIONS

4.1 INTRODUCTION

As outlined in the 1967 Whitman & Howard Sewerage System Study for the Town of Trumbull, the Reservoir Avenue Pump Station sewer shed was the first area of the Town of Trumbull to have sewers constructed. Construction of this sewer project was completed in the early 1970's; the collection system and original pump station infrastructure is over 40 years old.

The Reservoir Avenue Pump Station was originally constructed as a dry-pit / wet- pit style station in the early 1970's with two pumps each rated at nearly 1,300 gpm (1.9 mgd). While current average maximum flows for the station are 3,750 gpm (5.4 mgd), current average flows are only 475 gpm (0.68 mgd). Therefore, the station was expanded in the mid 1990's to include a second wet well with a submersible 'jockey' pump to handle average daily flows and the original dry-pit/wet-pit station was maintained to handle peak flows. **Figure 4-1** provides a graphica; representation of the pump station components located at this site.

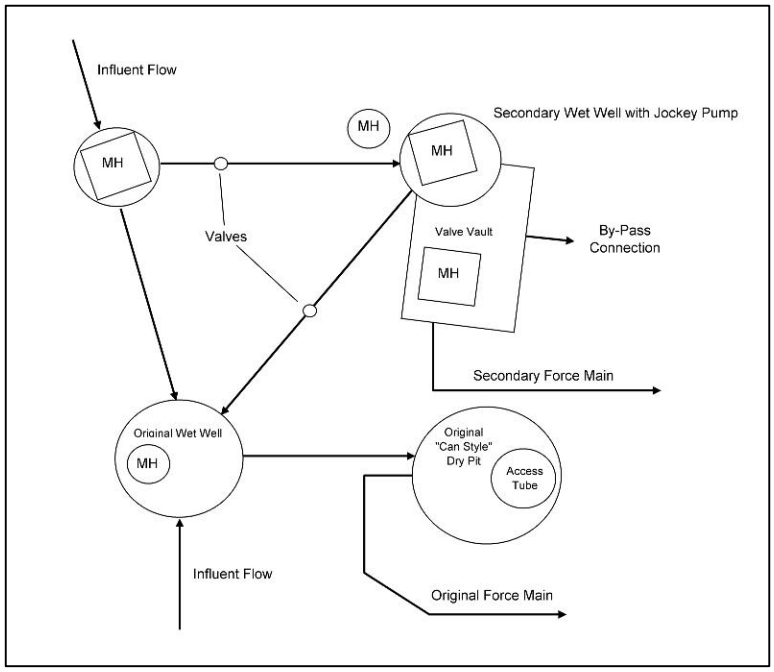


Figure 4-1: Reservoir Avenue Pump Station Flow Schematic

To accomplish the addition of the second station, the invert of the manhole conveying flow from the 14-inch pipe entering the station from the west was re-configured to allow flow to be directed to either the original wet well or the new wet well. In order to help keep debris out of the wet wells, WPCA staff installed a simple bar rack type screening structure at each of the inverts leaving the manhole. Also, diversion plates are utilized to direct most of the flow that enters from the west to the submersible pump station.

A metal "can style" dry-pit contains the pumps, valves, panels and controls, etc. constructed with the original wet well. The newer 'jockey pump' is a submersible style pump located within the second wet well. The two separate wet wells operate on individual level controls but are interconnected with a high level overflow pipe to allow wastewater to be conveyed between the stations should there be a failure of the pump(s).

Each pump configuration discharges into a dedicated force main which conveys wastewater to the high point of Reservoir Road to the north of the station.

4.2 DESIGN AND OPERATION OVERVIEW

The Reservoir Avenue Pump Station is essentially two pump stations co-existing on one site. Influent enters the site from both the east and the west. Each pump station wet well has a dedicated control system. If the wastewater levels in the submersible station wet well increase rapidly and the submersible pump can not manage the flow, the wastewater overflows to the original wet well. The pumps in the dry pit then operate based on the wet well elevations in the original wet well. The opposite of this is also true; if the dry-pit pumps cannot maintain the wet well elevation, the wastewater elevation will rise and overflow to the submersible wet well and the submersible pump will attempt to manage the excess flow. In essence, the original dry-pit/wet-pit style station acts as a back-up to the newer single submersible style station and vice versa.

The dry-pit pumps are not reliable. Operators report that when dry-pit pumps are not working, they suspect they may have been inoperable for several days. The wastewater flow is conveyed

by the overflow pipe to the submersible pumps during this time. However, note that the submersible station is not sized for the peak flow events and does not have a second pump for redundancy. The Guide for the Design of Wastewater Treatment Works (TR-16) provides minimum design standards for a pump station. Each station should be designed with a minimum of two pumps and the station should be able to handle the peak flow with the largest pump out of service. Thus, if one considers that the dry-pit pumps are not reliable and as such not even considered part of the design, the single submersible pump is not adequately sized to handle the design flows for this area; the station does not have the required pumping redundancy. In addition, the wet well for the submersible station is installed at a shallow depth and provides limited additional operating depth. The wet well is not adequately sized to handle either the current or future peak flow design condition and does not have adequate space for the installation of additional pumps.

Floor in Dry-Pit 'Can'

Furthermore, the integrity of the original below grade "can style" dry-pit is not sound and continues to deteriorate. The floor is rusting and there is evidence of the structure leaking groundwater. It is typical of these below grade "can style" dry-pits to have a sacrificial anode placed below grade to attract and take the corrosion from the moisture in the ground so that the degradation of the structure can be minimized. For this style station, the sacrificial anode must be replaced periodically to continue to act as the sacrificial component in lieu of the dry pit 'can'. It is our understanding that the anode for this station has not been replaced since its original installation of 1970.

Also, the electrical and control panels for the dry-pit/wet-pit station are all located below grade in the dry-pit. Access to the below grade dry-pit requires confined space protocols for entry. Thus, anytime the pumps require work, or the electrical and control panels need to be accessed, two personnel must be onsite. A common practice for upgrading this style station is to relocate all of the electrical and control cabinets above grade.

The observations outlined above were utilized to develop options for upgrading the station, as outlined in remainder of this section.

4.3 PROCESS AND RELATED STRUCTURES

4.3.1 Pumping Equipment

The existing pump station is equipped with two dry-pit submersible Flygt sewage pumps believed to be rated for 1290 gpm at 79' TDH each. The flow and TDH information was obtained from the pump nameplate data. The current dry-pit pumps were installed in 1996 to replace the original pumps installed in 1970. The Flygt pumps have been intermittently reliable over their 15 year service life. It is assumed that these pumps will become subject to increasing repair needs as they continue to age. The dry-pit pumps were designed for the original peak design flow condition, the capacity of the pumps was much larger than the design average daily flow requirements. Thus, the large motors for the original pumps were being powered during average daily flow conditions, which occurs a majority of the time.

Pump No. 1 (as seen from above)

As an energy saving measure, the WPCA evaluated the potential to install a 'jockey pump' for use during average flow conditions. The biggest advantage of installing a 'jockey pump' is the decreased power requirement for the smaller motor as compared to that required to operate the large motor inefficiently. For this reason, the Town and WPCA decided to install a 'jockey pump' arrangement at the Reservoir Pump Station site. However, because the existing configuration of the dry-pit / wet- pit arrangement, the new 'jockey' pump could not be installed in the existing infrastructure.


Submersible jockey pump

Valve Vault with Emergency By-Pass

(By-Pass Connection Shown Below)

A new second wet well was installed for the purposed of installing the new 20 hp Flygt submersible style 'jockey pump.'

During our site visit, the operators noted that the "new" wet well does not add as much additional capacity as was intended; the wet well was installed at a shallow elevation. As a result, the jockey pump runs fairly often in a narrow range of water elevations. Because flow enters the original wet well continuously, the dry-pit pumps run periodically. However, the dry-pit pumps run when the 'jockey' pump is unable to keep up, such as during sustained heavy rainfall events.

The pump station does not have a flow meter installed at the station. The estimated average daily flow is calculated by multiplying the individual pump run time by the pump design capacity. This method of flow measurement is acceptable for estimating the approximate total volume of daily flows, but it cannot be utilized to measure instantaneous peak flows at the station. Also as pumps age, the impellers and volute become worn, reducing the overall efficiency of the pumping capacity of the pumps. Therefore, actual flows may be less than calculated using run times due to reduced pumping capacity. Wright-Pierce was unable to conduct drawdown tests, as the wet well configuration is not conducive to such testing. However, it can be assumed that the pump impellers and/or volute are somewhat worn, resulting in slightly lower capacity and more inefficient operation of the pumps.

Flow to the station site is conveyed by gravity through both a 14-inch asbestos concrete sanitary sewer pipe from west side of the site and an 8-inch asbestos concrete pipe from the east side of the site. The original dry-pit pumps are equipped with 8-inch isolation gate valves installed on the pump's suction and discharge piping. In addition, 8-inch spring loaded check valves are

located on the existing 8-inch pump discharge piping within the valve vault. Although the valves and check valves are operating properly, the dry-pit equipment is over 40 years old and at the end of its useful life. Both dry-pit pump discharges combine into a single 10-inch force main inside the dry-pit 'can' before leaving the site to east. The force main is located in Reservoir Avenue; the terminus is located approximately 2,840 feet downstream from the pump station on Reservoir Road at Lynwood Drive and discharges to a manhole on an existing 10-inch gravity pipe.

All discharge valves for the submersible pump are located in the below grade valve vault. An emergency by-pass is also connected to the submersible pump discharge force main within the valve vault. Depending on the proposed upgrade project construction sequence, this emergency by-pass connection may be useful during the replacement of the existing pumps and piping systems. The second, newer, force main was reportedly installed along side the road and also terminates in the same general location as the 10-inch force main. Based on our discussions with the Town, both force mains are in good working condition.

In summary, the following pumping/process equipment is recommended to be removed and replaced:

- Smith & Loveless Pump No.1 and Pump No.2, including pump motors
- Flygt submersible "jockey" pump
- Alls suction and discharge valves

In addition, a magnetic flow meter should be installed at the station to more accurately track flows to the station.

4.3.2 Pump Room (Drywell)

The existing dry-pit submersible pumps, pump controls, bubbler level monitoring system, space heater, and dehumidifier are located in a small steel drywell approximately 25 feet below grade. The below-ground pump room is accessed through a 4-foot diameter steel tube through a hinged entrance hatch. The tube has a surface mounted metal ladder; access from the at grade opening

to the ladder is difficult. The steel drywell is classified as a Confined Space. The pump room is very small and any work on the pumps, piping, electrical or control cabinets requires significant effort by the Trumbull Water Pollution Control Authority staff.

Access Tube to Drywell

Based on visual observations during site visits, the 4-foot diameter access tube and the below ground pump room (steel "can") are in poor condition. There are visible signs of corrosion on the floor and at the time of our site visit a significant amount of groundwater had seeped in to cover the floor. The steel "can" access tube shows some signs of surface corrosion; it was difficult to determine the extent of the damage based solely on a visual inspection.

It is recommended that the entire dry pit be abandoned and replaced.

4.3.3 Wet Wells

The original pump station wet well was constructed in 1970 from 72-inch diameter reinforced concrete pipe sections. The wet well is approximately 16 feet deep, and it is supported by a 21-inch thick reinforced concrete foundation mat. The wet well can be accessed through a manhole with a 24-inch opening and descending down 15 feet via a set of aluminum manhole rungs.

Wetwell Access Manhole

A second pre-cast wet well was constructed in 1996. According to discussions with the WPCA staff, this wet well only added 3 feet of effective capacity in addition to the original wet well. The wet well can be accessed

through a 24-inch manhole cover and descending 15 feet via a set of aluminum manhole rungs.

Original 72-inch RC Pipe (Wetwell)

At the time of our first site visit, there was very little grease accumulation on either of the wet wells' wastewater surfaces. Reportedly, the wet wells are cleaned 2 times a year, which seems sufficient to mitigate the grease buildup that can potentially contribute to odor generation and corrosion within the wet well.

The upper section of the wet wells (located above the wastewater level) was visually inspected for any cracks or any signs of concrete corrosion or exposed rebar. At the time of the site visit, no corrosion or cracks were observed in the wet well.

As discussed earlier, the size of each wet well is not sufficient for the anticipated upgrades at this station. It is recommended that neither wet well be re-used as part of the upgrade, but rather that a new one wet well, which has been appropriately sized for future capacity and to fit recommended submersible pumps, be designed.

4.4 CIVIL SITE

The Reservoir Avenue Pump Station is located within a residential neighborhood and is located very close to the home on the adjacent parcel. While utilities companies typically try to be cognizant of the appearance of their infrastructure when located in a residential area, sufficient security measures should be provided to protect the pump station and equipment from vandalism. A security chain link fence surrounds the pump station, which is in full view of the road and the nearby residence. The WPCA staff has not reported any problems with site security or vandalism.

Reservoir Pump Station Site

The existing designated parking consists of a pull-off in the shoulder of the road with limited space for one to two vehicles. Convenient and safe parking area should be provided for the staff for parking during visits to the station. Based on our observations of the site, the current driveway access and parking is just adequate for one vehicle to be parked at the station. The paved surface is cracked and in very poor condition.

There is an existing potable water yard hydrant at the generator building, but it was reportedly inoperable at the time of our site visit. Potable water sources at wastewater pumping station sites require the installation of backflow preventer.

The pump station's proximity to the 100-year flood plain was evaluated based on the most recent FEMA maps, and it was determined that the station is not located with the 100-year flood plain.

The process evaluation recommends that the entire pump station site (i.e. both stations) be replaced with one single station. Assuming that the new pump station will be constructed partially within, or adjacent to, the existing parcel it is likely that the entire site will need to be reconstructed.

4.6 HEATING AND VENTILATION

The existing drywell is located 25 feet below ground level and is classified as a Confined Space. As such, it must be continuously ventilated while occupied. The ventilation for the drywell consists of an exhaust fan ducted through the ladder system and to the outdoors along with an inlet duct from outdoors to a vent at the top of the access riser. Drywell ventilation is activated when the access hatch is opened, typical of Smith & Loveless pump station system. However, at the time of the site visit, the ventilation was not functioning, which is a code violation. The drywell is also outfitted with a sump pump, which has reportedly fails from time to time.

4.7 INSTRUMENTATION

4.7.1 Existing Monitoring and Controls Systems

There are two separate, but connected, wet wells. One wet well contains a submersible jockey pump with dedicated float switches for automatic pump on/off control. The two original pumps, located in a dry pit, draw suction from the original wet well. Float switches and a submersible level transmitter are used for automatic pump control.

The submersible pump and dry-pit pumps can be operated in either manual or automatic control modes; when automatic control is selected, logic for starting and stopping the pumps resides in a

Flygt Corporation control panel and a Backup System control panel. Float switches in the wet wells provide input to Multitrode level control device in the Flygt control panel; a submersible level transducer in the wet well that the main pumps draw from provides an input to a PLC Direct PLC analog input module in the Backup System panel. The backup system panel also has a PLC Direct OptiMate series model OP-620 operator terminal that provides monitoring and control information (such as pump start/stop levels, alarms, etc.). Using the analog signal from the submersible level transducer, the PLC energizes control relays to close contacts in the Flygt control panel that are used for automatic control of the main pumps and submersible pump when "Backup" mode is selected. If "Multitrode" mode is selected, then float switch inputs to the Multitrode device in the Flygt panel are used for automatic control of the main pumps and the submersible pump. The Flygt panel also contains hard-wired logic to start the submersible pump if a failure of one of the main pumps is detected. Further details of the monitoring and control functions at the pump station are found in the drawings and materials in the operations and maintenance manual.

Station alarms are connected to a leased-line telephone telemetry alarm system contained in a separate control panel. The alarm system utilizes an Autocon transmitter and Autocon telephone interface to communicate a common pump station alarm condition. Town staff must visit the station to determine the nature of the alarm(s) that triggered the common alarm. There are indicating lights on the alarm panel to aid operators in determining the nature of the alarm.

There is not currently a SCADA system that encompasses the Reservoir Avenue pump station. Instead, a common alarm at each of the individual stations is dialed out through an alarm service. Operators must report to the particular station to determine the nature of the alarm(s), and to record pump run times, flows, etc. are desired. See Section 2 for a more detailed discussion of the options for implementing a Town-wide SCADA System.

4.8 ELECTRICAL

Due to the age of the existing electrical equipment, any upgrade to the station should include removal of all existing electrical equipment including but not limited to the existing electrical service, main disconnect switch, lighting, generator, fuel tank, existing pump controls, wires and conduits. A summary of the state of the existing electrical systems and recommended improvements are outlined below.

4.8.1 Site Power

The existing United Illuminators (UI) service is 400 amps at 230VAC, 60 Hz. 3 phase. The Service comes in from transformers located at pole #4135 across the street from the facility. The service lines then connect to a 400 amp main service disconnect. Power is then routed to an outdoor 400 amp automatic transfer switch (ATS) and pump control panel located in the below grade dry well. The Pump Control Panel provides power for two 40 Hp submersible pumps, and one 20 hp jockey pump. It also provides power for a small transformer and local distribution panel for ventilation, lighting, instrumentation, and dry well sump pump.

4.8.2 Emergency Power

An on site Diesel Generator rated at 125 kw provides back-up power to the facility. The ATS transfers back-up power to the pump control panel upon a power loss. Once Normal Power is restored the ATS transfers the load back to the utility power source. A diesel tank is located adjacent the generator on the site. The generator and transfer switch were installed in the mid 1980's and appear to be in good condition. Operators report no mechanical trouble with the unit.

Attachment B

Old Town Pump Station Information

Note: 10-23-74 Force Main Repaired
An 8.17 foot section of 6" C.I. pipe was replaced commencing at a point 27.75' west of M.H #10 and proceeding easterly. An Adams Clamp was used for the repair.

OLD TOWN ROAD

FOREST VIEW AVENUE

HORSESHOE DR.

FODOL LA
ORVIEW LANE

8" A.C. (See Sht. No 3)

10" Water

10" Gas

Hse. No 1605

Hse. No 1631

Hse. No 1645

Hse. No 1655

Hse. No 1665

Hse. No 1685

Hse. No 1705

Hse. No 1715

Hse. No 1725

Hse. No 1770

8" Hickory

12" M

12" Oak

14" Tree

12" Tree

Twin Tree

Pine Tree

Pole #682

Manhole No 8

Manhole No 9

Manhole No 10

Manhole No 11

Manhole No 12

45° Bend

8" A.C. SEWER

6" C.I Force Main

Mechanical Joints

Vacant Lot

SNET Pole #1972

12" A.C. SEWER

10" Water

6" Water

8" Water

Fdn.

W.G.

117.5'

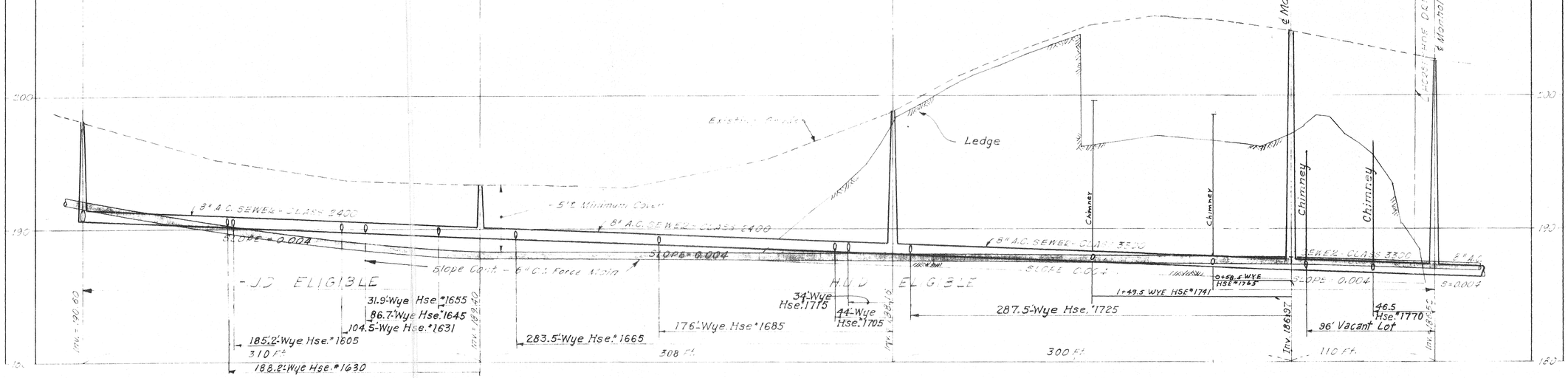
89.7'

160.6

House No 1790
(Elev. ±26')
Contract #11

House No 1780
Elev. ±21.0'
Contract #11

PLAN
SCALE: 1" = 40'



PROFILE
SCALE: HOR. 1" = 40'
VERT. 1" = 4'

RECORD PLAN

For Sheet Index See Sheet No. 1

NO.	DESCRIPTION	DATE
1	Record Plan as Built	2/73
	REVISIONS	

OLD TOWN ROAD

PLAN AND PROFILE OF SEWER

TRUMBULL, CONN.

STATE OF CONNECTICUT — JAMES T. McDONOUGH — No. 8720 — REGISTERED PROFESSIONAL ENGINEER

WHITMAN & HOWARD INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS.

DESIGNED BY	SCALE	DATE
G.T.C.	AS SHOWN	DEC. 1967
DRAWN BY	APPROVED James T. McDonough	
B.J.S.		
CHECKED BY	JOB NO. 7-145	SHEET 4 OF 9 SHEETS
G.T.C.		

HUD PROJECT

PLAN

SCALE: 1"=40'

Pumping Sta.

Hse No 1395

Hse. No 1425

OLD TOWN ROAD

Manhole No 4

Manhole No 5

Manhole No 6

Manhole No 7

MATCH LINE (See Sht. No 2)

8" A.C. SEWER

6" C.I. Force Main

10" Gas

16" Gas

8" Water

12" Water

Pole

Hydt.

Meter

Prepane Gas

10" Oak

24" Oak

Bend

45° Bend

W.G.

W.M.S.

Last Small Evergreen

Hse No 1503

Hse. No 1515

Hse. No 1535

Hse No 1555

12/15/89 12" CLAMP REPAIR 6" C.I. 5' DEEP

PROFILE

Manhole No 4

Manhole No 5

Manhole No 6

Manhole No 7

Ledge

8" A.C.

5" A.C. Sewer Class 240

S = 0.017

5' ± Min. Cover

6" C.I. Force Main

Slope Cons.

Existing Grade

Ledge

296' Wye Pump. Sta.

148.5' Wye Hse.* 1395

282.5' Wye Hse.* 1425

INV. 235.86

294.3' Wye Hse* 1503

108' wye #6 Cambridge Dr.

190' Wye Hse.* 1515

84 Wye Hse.* 1535

154' Wye Hse* 1555

160 Ft.

S = 0.020

S = 0.040

S = 0.027

INV = 190.00

MATCH LINE (See Sht. No 2)

250

240

230

220

210

200

190

180

170

700 Ft.

INV = 225.34

INV = 238.34

H.U.D. ELIGIBLE

RECORD PLAN

For General Notes See Sht. No 1

NO.	DESCRIPTION	DATE
1	Lowered Sewer between M.H.* 3 & 5	5/19/70
2	Relocated Gas Trans. Mains	6/18/70
3	Record Plan as Built	8/73

REVISIONS

OLD TOWN ROAD

PLAN AND PROFILE OF SEWER

TEUMEULLE, CONN.

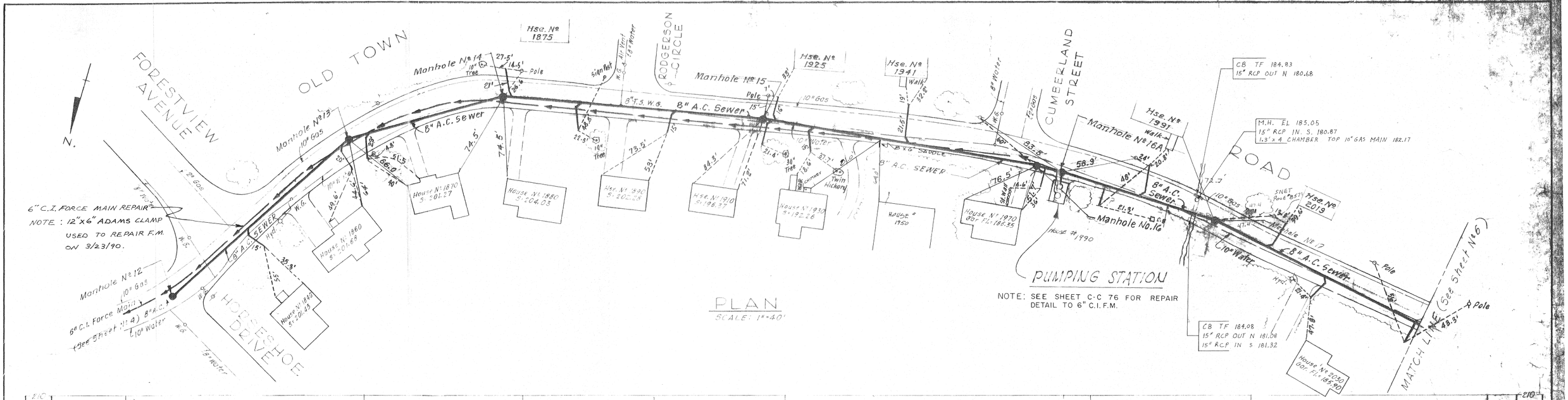
WHITMAN & HOWARD INC.

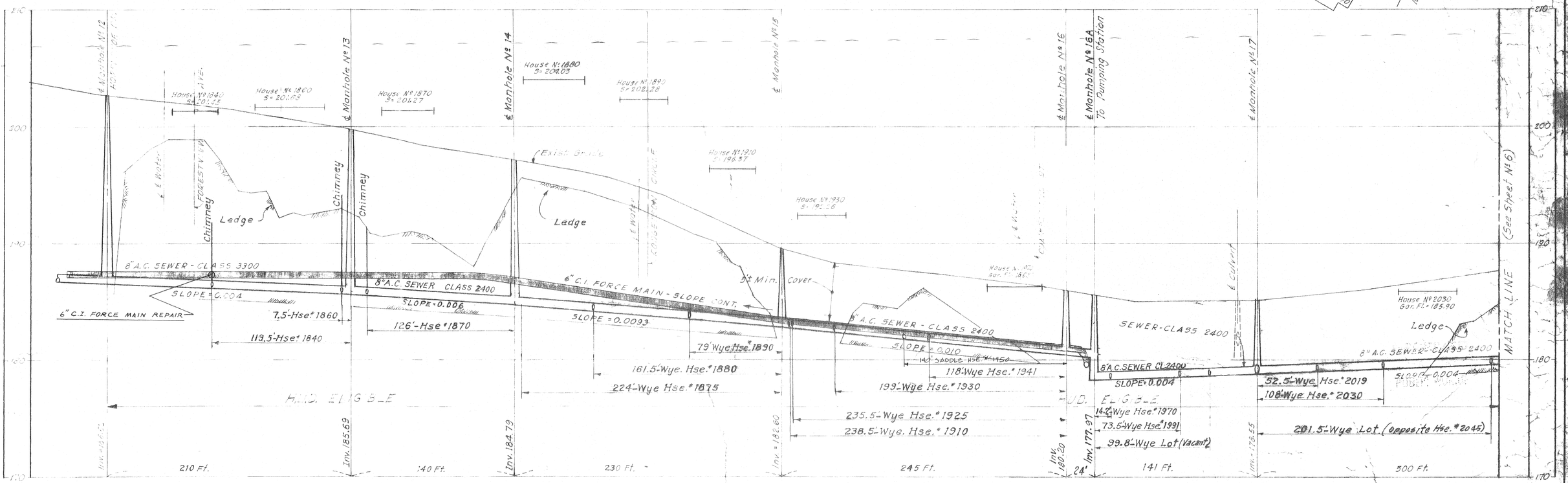
ENGINEERS AND ARCHITECTS

89 BROAD ST. BOSTON, MASS.

DESIGNED BY G.T.C.	SCALE AS SHOWN	DATE DEC. 1967
DRAWN BY E.H.S.	APPROVED	
CHECKED BY G.T.C.	JOB NO. 7-145	SHEET 3 OF 13 SHEETS

H.U.D. PROJECT NO. [illegible]-07-108 CONTRACT 13





RECORD PLAN

For Revised Notes See Sheet No 1

NO.	DESCRIPTION	DATE
1	Relocated Sewer From M.H. 12 to M.H. 13	6/27/70
2	Record Plan as Built	2/79

REVISIONS

OLD TOWN ROAD

PLAN AND PROFILE OF SEWER

TRUMBULL, CONN.

STATE OF CONNECTICUT — JAMES T. McDONOUGH — No. 6778 — REGISTERED PROFESSIONAL ENGINEER

WHITMAN & HOWARD INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS.

DESIGNED BY G.T.C.	SCALE AS SHOWN	DATE Feb. 1970
DRAWN BY B.J.S.	APPROVED James T. McDonough	
CHECKED BY G.T.C.	JOB NO. 17-1785	SHEET 5 OF 16

16

PLAN

SCALE 1" = 40'

PROFILE

SCALE: Horiz. 1" = 40'
Vert. 1" = 4'

OLD TOWN ROAD

RED OAK ROAD

RESERVOIR AVE.

MATCH LINE (See Sheet No 3)

Existing Bridgeport Manhole

Manhole No A-1

Manhole No. 2

Manhole No 3

Hse. No 1183

Hse No 1201

Hse No 1245

Hse No 1257

Hse. No 1275

Hse No 1295

Hse No 1305

Hse. No 1315

Hse No 1320

Hse No 1300
S = 240.63

Hse. No 1280
S = 240.84

Hse No 1260
S = 239.15

Hse No 1250
S = 239.68

Hse No 1240
S = 236.19

Hse No 1230
S = 234.52

Garage

Lot "R"

Conc. Wall

Ledge

Existing Brook

8" Water

8" A.C. SEWER

12" L. Propane Gas

8" Tenn. Gas Trans. Main

Pole #3110

Pole #882

Pole #566

Pole #305

Inv. 197.02

Inv. 197.19

Inv. 197.50

34 Ft.

129.0' Wye Hse "1210

146.8'-Wye Hse "1183

211.0' Wye Hse "1220

215'-Wye Hse "1201

271'-Wye Hse "1230

H.U.D. ELIGIBLE

S=0.005

8" A.C. SEWER - CLASS 2400

SLOPE = 0.020

122.8'-Wye Hse "1240

126.1'-Wye Hse "1245

38.7'-Wye Hse "1250

114'-Wye Hse "1260

117.3'-Wye Hse "1257

159'-Wye Hse "1275

162.4'-Wye Hse "1280

229.7'-Wye Hse "1295

271.5'-Wye Hse "1300

SLOPE = 0.011

12"-Wye Hse "1305

67.2'-Wye Lot R

70.5'-Wye Hse 1315

158.2'-Wye Hse "1320

Inv. = 230.54

300 Ft.

185 Ft.

For General Notes see Plan No 1

NO.	DESCRIPTION	DATE
1	Lowered Sewer between M.H. #3 & #5	5/19/72
2	Relocated Gas Trans. Maine	6/10/70
3	Record Plan As Built	2/73

REVISIONS

OLD TOWN ROAD

PLAN AND PROFILE OF SEWER

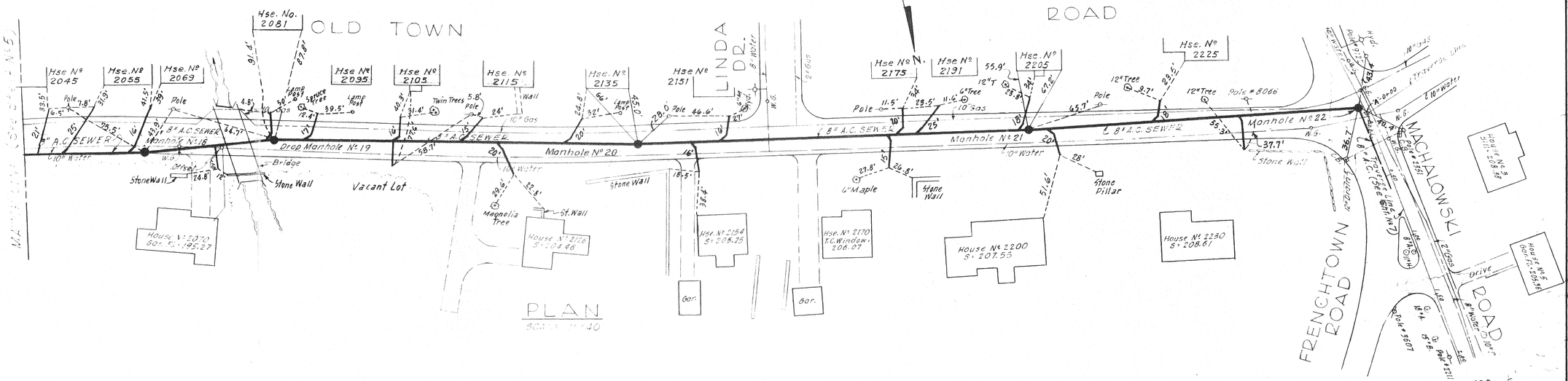
TRUMBULL, CONN.

WHITMAN & HOWARD INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS.

DESIGNED BY J.T.C.	SCALE As Shown	DATE DEC. 1967
DRAWN BY B.M.S.	APPROVED	
CHECKED BY J.G.T.C.	JOB NO. 7-145	SHEET 2 OF 4 SHTS.

H.U.D. PROJECT No WS(1)-07-0108 CONTRACT

12



RECORD PLAN

For Original Notes See Sheet No 1

NO.	DESCRIPTION	DATE
2	Record Plan as Built	2/73
1	Relocated Sewer from M.H. 12 to M.H. 19	6/27/70
	REVISIONS	

OLD TOWN ROAD

PLAN AND PROFILE OF SEWER

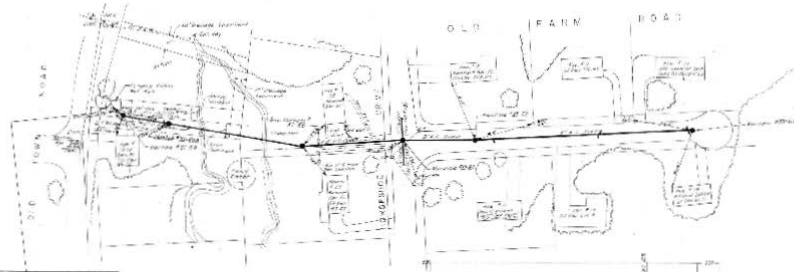
TRUMBULL, CONN.

WHITMAN & HOWARD INC.
ENGINEERS AND ARCHITECTS
89 BROAD ST. BOSTON, MASS.

DESIGNED BY J.T.C.	SCALE AS SHOWN	DATE DEC. 1967
DRAWN BY B.J.S.	APPROVED James T. McKinnon	
CHECKED BY G.T.C.	JOB NO. T-145	SHEET 6 OF 17 SHEETS

STATE OF CONNECTICUT — JAMES T. McKINNON — No. 6776 — REGISTERED PROFESSIONAL ENGINEER

D. PROJECT No. W.S. 0108 CONTRACT



RECORD PLAN

OLD FARM ROAD & CROSS COUNTRY
TO MUNRO STATION
PLAN & PROFILE OF SEWER
TRUMBULL CONN.

WHITMAN & HOWARD INC.

C-76

2.7 OLD TOWN ROAD PUMP STATION

The Old Town Road Pump Station is a Dry Pit/Wet Pit 'Can-Style" pump station located at 1980 Old Town Road. The service area is largely comprised of residential neighborhoods and is located on the South end of town bordering Bridgeport. The station includes a paved site that is surrounded by a chain link fence and overgrown arborvitaes. The pump station has the ability to overflow from the wet well to the Bridgeport collection system during an emergency situation.

FIGURE 2-6
OLD TOWN ROAD PUMP STATION

The existing pump station has two constant speed dry pit submersible pumps designed to operate in a lead/lag arrangement. The pumps were originally constructed by Allis Chambers but recently rebuilt in 2014 by Flygt which included new motors and N-series impellers. The design capacity of the pumps is included in **Table 2-6** below. The pump TDH could not be determined from any record documents and there were no pressure gages installed at the station.

TABLE 2-6

OLD TOWN ROAD PUMP STATION

PUMP CAPACITY INFORMATION

	Each Pump
Existing Design Capacity (gpm)	514
Existing Design TDH (ft.)	Unknown

The Old Town Road Pump Station includes the following specific components:

Process:

- Two, 514 gpm constant speed dry pit submersible Flygt pumps, with 20 hp motors.
- A 6-inch force main.
- A seven (7) feet diameter precast concrete wet well.
- Steel "Can-Style" dry pit which houses the pumps and shut-off valves.

Electrical:

- The existing electrical service from the immediately adjacent utility pole to the cabinet is underground. The electrical service is rated 208V, 3 phase, 4 wire provided by United Illuminating. The existing service rating is 200A.
- The generator is a 120/240V, 3 phase, 60 Hz Onan natural gas generator and respective transfer switch. The generator does not currently operate and has been decommissioned.
- It appears the devices located in the wet well and dry well area are not rated for hazardous areas.

Instrumentation:

- NEMA 1 Control Panel.
- Flygt Multitrode hydro-magnetic level transducer with multimode controller (primary level control).
- Submersible pressure transducer with a PLC (secondary level control).
- Doppler flow meter (not in operation).
- There is no telephone line or alarm system with remote capabilities at this station.

Mechanical:

- The dry pit includes a forced air ventilation fan (Dayton), a dehumidifier and a 1/3 hp sump pump (Zoller).

6313 Sign-In

Name	Company	Email
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Adriana Restrepo	D&B	ARestrepo-e@db-eng.com
Tia Tuate	D&B	ttuate@db-eng.com
Bill Murphy	Environmental Partners	wgm@envpartners.com
Bob Tedeschi	Weston & Sampson	Tedeschi.R@wseinc.com
Dan Murphy	CDM Smith	murphydr@cdmsmith.com
Robert Gallo	AJ Engineers	rgallo@ajengineers.com