ADDENDUM NO. 1

Project No. 11-13 Nettleton Avenue Neighborhood Storm Drain Improvements Phase 1 Borough of Naugatuck, CT

April 18, 2011

Department of Public Works 246 Rubber Ave. Naugatuck, CT 06770

Receipt of this addendum must be acknowledged on in Section B Proposal. Please recognize the following changes and Clarifications regarding the above contract bid:

- A1.1 Change all references to 54" High Density Polyethylene Pipe or 54" HDPE drainage pipe within the Project Manual and Bid Documents to read 54" Class IV Reinforced Concrete Pipe (RCP) or 54" 14 Gauge Aluminized Steel Corrugated Metal Pipe.
- A1.2 Replace Section B dated 3/21/11 with the attached Section B dated April 18, 2011 (revised). Note that this new bid proposal form provides for alternate bidding to construct either 54" Reinforced Concrete or 54" Corrugated Aluminized Steel Pipe where 54" HDPE had previously been required. All contractors are to provide pricing for both types of pipe so that the Owner can choose to use either.
- A1.3 Add technical section 02611 Reinforced Concrete Pipe
- A1.4 Add technical section 02620 Aluminized Corrugated Steel Pipe
- A1.5 Replace Detail 3 Typical Drainage Ditch Detail on plan sheet C-601 with attached Detail 3 Typical Drainage Ditch Detail dated 4/18/11.
- A1.6 A Soil Management Decision Tree is provided as additional information for bidder.
- A1.7 Replace the words "Non-Contaminated" with the word "Contaminated" in the first sentence of Method of Measurement in Item 19 in Section 01270 Measurement and Payment.
- A1.8 Change all references to 33% Bid Bond or Bid Security throughout the Project Manual and Bid Documents to read 5% Bid Bond or Bid Security.
- A1.9 Change all references to Contract Time and Liquidated Damages throughout the Project Manual and Bid Documents to agree with the following: Ninety (90) Consecutive calendar days (from the Notice to proceed) will be allowed for the substantial completion of the project and liquidated damages charge to apply will be Five Hundred Dollars (\$500.00) per calendar day. An additional fourteen (14) consecutive calendar days will be allowed for completion of all work.
- A1.10 The Soil Boring logs form the site are provided as additional information for bidder.

James R. Stewart, P.E. Borough Engineer

SECTION B

PROPOSAL

SECTION B

PROPOSAL

Borough of Naugatuck

Nettleton Avenue Neighborhood Storm Drain Improvements Phase I

The undersigned, as Bidder, declares that no person or persons, other than those named herein, are interested in this Proposal; that this Proposal is made without collusion with any person, firm or corporation; that he has carefully examined the location of the proposed work, the proposed Form of Contract, and the Contract Drawings therein referred to; that no person or persons acting in any official capacity for the Owner is directly or indirectly interested therein or in any portion of the profit thereof; and that he proposes and agrees, if this Proposal is accepted, to execute the Form of Contract with the Owner; to provide all necessary equipment, tools, and other means of construction, and to do all work and furnish all materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Borough of Naugatuck as therein set forth, and that he will take in full payment therefore, the following unit prices and lump sums, to wit:

The Bidder acknowledges receipt of the following addenda:

Addendum No	Dated:
Addendum No	Dated:

The undersigned agrees that he shall execute the Contract within the ten (10) days after the date of award, and shall commence work within the ten (10) days after date of the Notice to Proceed and shall progress therewith to its entire completion within the time stipulated in the Contract.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) days after the scheduled closing time for receiving bids.

If this Proposal shall be accepted by the Owner and the undersigned shall fail to contract as aforesaid, and to give bonds in a sum equal to one hundred percent (100%) of the Contract price, as determined by the canvass of bids, and with surety or sureties satisfactory to the Owner within ten (10) days from the date of the award, then the Owner may, at its option, determine that

April 18, 2011 (revised)

the Bidder has abandoned the Contract: thereupon, the Proposal and acceptance shall be null and void, and the bid security, for not less than five percent (5%) of the amount of the bid, accompanying this Proposal, shall become the property of the said Owner as liquidated damages for the delay and additional expense to the Owner caused thereby if said Proposal shall be rejected, or if said Proposal shall be accepted and the Bidder shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Proposal) and shall furnish a Bond for his faithful performance of said Contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Proposal, the accompanying bid security shall be returned to the undersigned making bid.

Seal	Firm or Corporation			
(if bid is by a Corporation)	By:(Duly Authorized)			
	Street Address			
	City	State	Zip	
	Telephone			
Date	Fax			

Small, Minority, Women-Owned Business Concern Representation

The bidder represents and certifies as part of its bid/ offer that it -

(a) \square is, \square is not a small business concern. "Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding, and qualified as a small business under the criteria and size standards in 13 CFR 121.

(b) \square is, \square is not a women-owned business. "Women-owned business enterprise," as used in this provision, means a business that is at least 51 percent owned by a woman or women who are U.S. citizens and who also control and operate the business.

(c) \Box is, \Box is not a minority business enterprise. "Minority business enterprise," as used in this provision, means a business which is at least 51 percent owned or controlled by one or more minority group members or, in the case of a publicly owned business, at least 51 percent of its voting stock is owned by one or more minority group members, and whose management and daily operations are controlled by one or more such individuals. For the purpose of this definition, minority group members are:

(Check the block applicable to you)

Black Americans	Asian Pacific Americans	Hispanic Americans
Asian Indian Americans	Native Americans	Hasidic Jewish Americans

RESPECTFULLY SUBMITTED:

BY:_

(type or print name and title)

(authorized signature of bidder)

List below, the business location, the mailing address, the telephone number and the name of the person of whom any inquiries are to be made.

If bid is submitted by a corporation, its seal must appear.

April 18, 2011 (revised)

PROPOSAL FORMS

Nettleton Avenue Neighborhood Storm Drain Improvements Phase I

PROPOSAL FORM

The undersigned hereby agrees to furnish the Borough of Naugatuck with the Nettleton Avenue Neighborhood Storm Drain Improvements, meeting the specifications and conditions of the Borough of Naugatuck, as stated in the bid documents.

The undersigned is aware that the Borough of Naugatuck may reject any and all bids in whole or in part; that the Borough may waive technical defects, irregularities and omissions; that the award will be based on the combination of items that will best serve the interest of the Borough; that the bid price does not include any taxes for which the Borough is not liable; and that acceptance of the bid will establish no exclusive contract by which the Borough of Naugatuck will be required to purchase from the undersigned.

The undersigned claims without reservation that his/her bid is made without collusion with any other person, individual or corporation.

Bid Item quantities for unit price bid items are not guaranteed. Final payment will be based on actual installed quantities. Items not specifically identified for payment in the Bid Form shall be assumed to be included in the work effort of other bid items and shall not be paid or requested for payment separately.

This bid was determined on the basis of the following unit prices:

	Nettleton A	venue N	eighborhood St For Propose	torm Drain Improvem ed Schedule	ents Pha	se I
ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
1	Mobilization	LS			1	
2	Test Pits	EA			N/A	

	Nettleton A	venue Ne	ighborhood St For Propose	orm Drain Improven d Schedule	nents Pha	se I
ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
3.1	Pavement Subbase - Processed Aggregate	CY			325	
3.2	Pavement Subbase - Gravel	CY			165	
4	Rock Excavation	CY			20	
5.1	Hot Mix Asphalt – Top Course	Ton			270	
5.2	Hot Mix Asphalt – Binder Course	Ton			170	
6	Concrete Sidewalk	SY			830	
7	Remove & Reset Granite Curb	LF			N/A	
8	Painted Traffic Lines	LF			300	
9.1	Manhole – 4' Diameter	VF			25	
9.2	Manhole – 8' Diameter	VF			35	
9.3	Manhole – 10' Diameter	VF			65	
10.1	Catch Basin – Single Grate	VF			90	
10.2	Type C Catch Basin – Type I	VF			20	
10.3	Type C Catch Basin – Type II	VF			45	

	Nettleton A	venue No	eighborhood St For Propose	orm Drain Improven d Schedule	nents Pha	se I
ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
10.4	Type C Catch Basin – Type I Curb Top	EA			6	
10.5	Type C Catch Basin – Type II Curb Top	EA			3	
11.1	HDPE Pipe – 12" Diameter	LF			20	
11.2	HDPE Pipe – 15" Diameter	LF			45	
11.3	HDPE Pipe – 18" Diameter	LF			225	
11.4	HDPE Pipe – 24" Diameter	LF			150	
11.5A	CL IV Reinforced Concrete Pipe - 54" Diameter	LF			610	
11.5B	14 Gauge Aluminized Steel Corrugated Metal Pipe – 54" Diameter	LF			610	
12	Cold Reclaimed Asphalt Pavement	SY			1800	
13.1	Curb - Granite	LF			N/A	
13.2	Curb – Precast Concrete	LF			850	
13.3	Curb – Bituminous Concrete	LF			750	
14	Flow Fill	CY			10	

	Nettleton A	venue N		torm Drain Improven ed Schedule	nents Pha	se I
ITEM No.	ITEM DESCRIPTION	UNIT	UNIT PRICE (FIG'S)	UNIT PRICE (WORDS)	EST Q'TY	TOTAL PRICE (FIG'S)
15	Concrete Collar	EA			6	
16	QA/QC Testing	Allow	N/A	Five thousand dollars	N/A	\$5,000.00
17	Police Detail	Allow	N/A	Ten thousand dollars	N/A	\$10,000.00
18	Removal of Non- Contaminated Stockpiled Soils	СҮ			2500	
19	Removal of Contaminated Stockpiled Soils	Tons			850	

TOTAL FOR NETTLETON AVENUE NEIGHBORHOOD STORM DRAIN IMPROVEMENTS USING ALL ITEMS <u>EXCEPT</u> 11.5B.

IN FIGURES \$_____ IN WORDS_____

TOTAL FOR NETTLETON AVENUE NEIGHBORHOOD STORM DRAIN IMPROVEMENTS USING ALL ITEMS <u>EXCEPT</u> 11.5A.

IN FIGURES \$_____ IN WORDS______

SECTION 02611 REINFORCED CONCRETE PIPE

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes the installation of reinforced concrete piping systems.
- B. All piping, fittings, and appurtenances shall be new, clean and in accordance with material specifications. In no instance shall second-hand or damaged materials be acceptable.

1.2 REFERENCES

- A. "State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction."
- B. "American Concrete Pipe Association."
- C. American Society of Testing and Materials (ASTM).

1.3 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's catalog cuts, specifications and installation instructions.

1.4 QUALITY ASSURANCE

- A. Product Markings: Plainly and permanently mark each pipe length with the following information:
 - 1. Pipe class diameter and specification designation
 - 2. Date of manufacture
 - 3. Name or trademark of manufacturer
 - 4. Identification of plant
- B. Basis of Acceptance: Conform to ASTM C76 for basis of acceptance of pipe supplied under this section. Submit certification that the testing machine has been calibrated in accordance with ASTM E4 at a minimum of once per year.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage:
 - 1. Deliver to and store pipe, fittings, specials, appurtenances and accessories within the work limits shown on the Drawings.
 - 2. Exercise special care during delivery and storage to avoid damage to the products.
 - **3**. Store products in locations where unnecessary handling is avoided and where they will not interfere with the Owner's operations, construction operations or public travel.
- B. Handling:

- 1. Handle pipe, fittings, specials appurtenances and accessories carefully with approved handling devices in strict conformance with the manufacturer's recommendations.
- 2. Do not drop products off trucks, or otherwise drag, roll or skid products.
- C. Products cracked, gouged, chipped, dented or otherwise damaged will not be approved and shall be removed from the site and replaced at the Contractor's expense, unless the product can be repaired in a manner acceptable to the manufacturer and Engineer. All repairs shall be at the Contractor's expense.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Pipe and Fittings:
 - 1. Provide only new reinforced concrete pipe and fittings. In no case will secondhand or damaged material be acceptable.
 - 2. Conform to the requirements of ASTM C76, Class IV, Wall B.
- B. Joints:
 - 1. Provide bell and spigot joints, sealed with an elastomeric gasket conforming to the requirements of ASTM C443. The bell and spigot shall be designed to enclose the gasket on all surfaces when the joint is in its final position.
 - 2. Joints shall be designed so as to permit effective jointing to reduce leakage and infiltration and to permit placement without appreciable irregularities in the flow line.
- C. Flared End Sections:
 - 1. Use standard design flared end sections manufactured of the same material as specified for pipe, by the same manufacturer.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect all pipe and fittings prior to laying in the trench. Remove defective pipe and fittings from the site.
- B. Do not backfill until inspection by the Engineer, unless otherwise approved by the Engineer.
- 3.2 INSTALLATION
 - A. Trenching, backfilling and compaction shall conform to Section 02221 "Trenching, Backfilling, and Compaction."
 - B. Pipe installation shall conform to Section 02610 "Buried Pipe Installation."

END OF SECTION 02611

REINFORCED CONCRETE PIPE

PART 1 - GENERAL

1.1 SUMMARY

- A. The Contractor shall provide all labor, materials, equipment and services necessary for, and incidental to, the installation of aluminized corrugated steel piping systems as shown on the Drawings and specified herein.
- B. All piping, fittings, and appurtenances shall be new, clean and in accordance with material specifications. In no instance shall second-hand or damaged materials be acceptable.

1.2 REFERENCES

- A. "State of Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction."
- B. "Standard Specifications for Highway Materials and Methods of Sampling and Testing, American Association of State Highway and Transportation Officials (AASHTO)"
- C. American Society of Testing and Materials (ASTM).

1.3 SUBMITTALS

- A. Product Data:
 - 1. Submit manufacturer's catalog cuts, specifications and installation instructions for both pipe and coupling system.
 - 2. Submit fabrication and assembly details for all fittings and fabrications.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage:
 - 1. Deliver to and store pipe, fittings, specials, appurtenances and accessories within the work limits shown on the Drawings.
 - 2. Exercise special care during delivery and storage to avoid damage to the products.
 - **3.** Store products in locations where unnecessary handling is avoided and where they will not interfere with the Owner's operations, construction operations or public travel.
- B. Handling:
 - 1. Handle pipe, fittings, specials appurtenances and accessories carefully with approved handling devices in strict conformance with the manufacturer's recommendations.
 - 2. Do not drop products off trucks, or otherwise drag, roll or skid products.
- C. Products cracked, gouged, chipped, dented or otherwise damaged will not be approved and shall be removed from the site and replaced at the Contractor's expense, unless the product can be repaired in a manner acceptable to the manufacturer and Engineer. All repairs shall be at the Contractor's expense.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Pipe:
 - 1. Pipe shall be helically corrugated aluminized steel pipe (ACSP) having a continuous spiral lock seam, conforming to the requirements of AASHTO M-36.
 - 2. All piping shall be annularly rolled at the ends.
 - 3. Pipe shall be formed from sheet conforming to the requirements of AASHTO M-274.
 - 4. Pipe shall be 14 gauge aluminized steel, type 2.
- B. Couplings:
 - 1. Field joints shall be made with steel band couplers of the same alloy as that used for the pipe.
 - 2. Band couplers shall be one gauge lighter than that of the pipe, with the exception of 18 gauge pipe which shall have 18 gauge couplers.
 - **3**. Band couplers shall have corrugations that match the pipe corrugations. One piece or two piece band couplers are acceptable for use in making filed joints. Band couplers shall be of the hugger type.
 - 4. Band width shall have the following minimum widths:

a.	Band Width Pipe Diameter:	7" for 12" through 30" pipe
		12" for 30" through 72" pipe

- 5. Half inch diameter galvanized steel bolts and nuts shall be used on coupling bands for pipe diameters 12" and greater. 3/8" diameter is acceptable for diameters less than 12".
- 6. Any aluminum in contact with concrete shall be thoroughly coated with zinc chromate primer, which shall be permitted to dry prior to concrete placement.

PART 3 - EXECUTION

3.1 INSPECTION

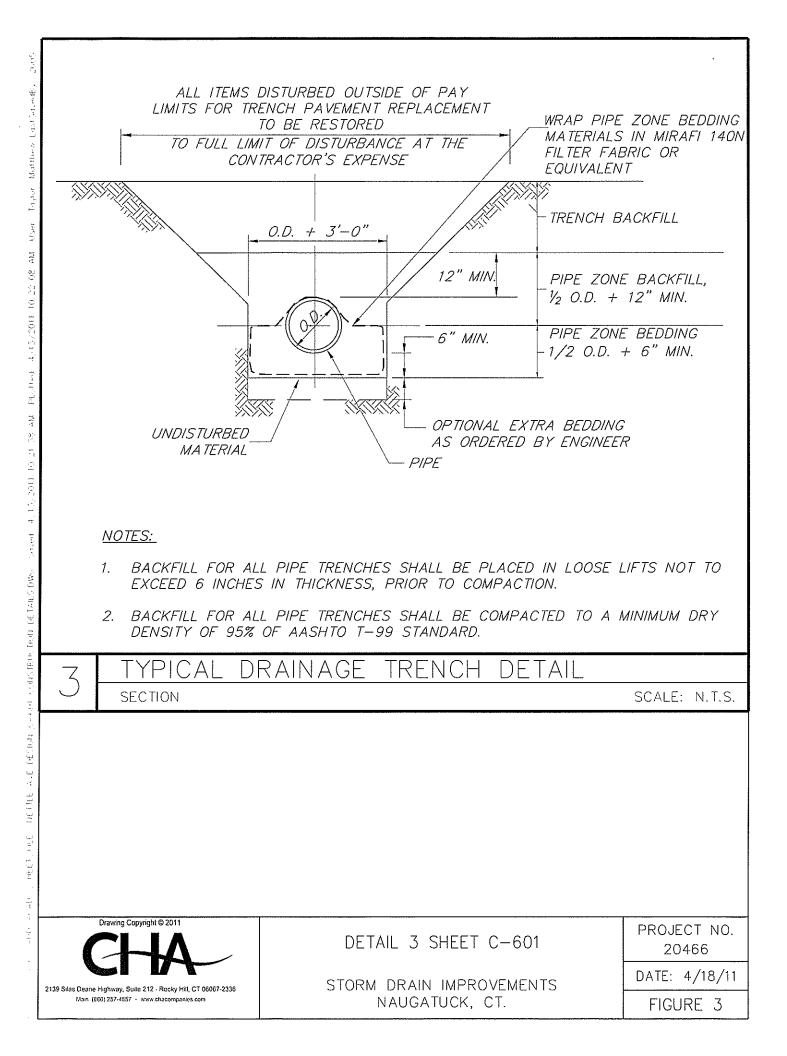
- A. Inspect all pipe and fittings prior to laying in the trench. Remove defective pipe and fittings from the site.
- B. Do not backfill until inspection by the Engineer, unless otherwise approved by the Engineer.

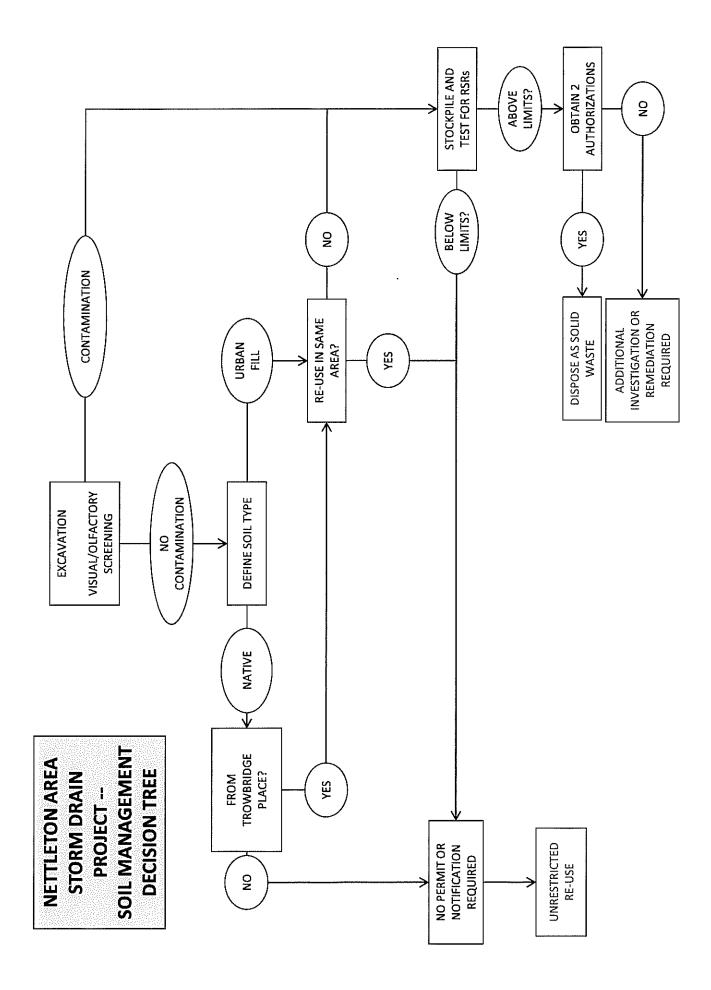
3.2 INSTALLATION

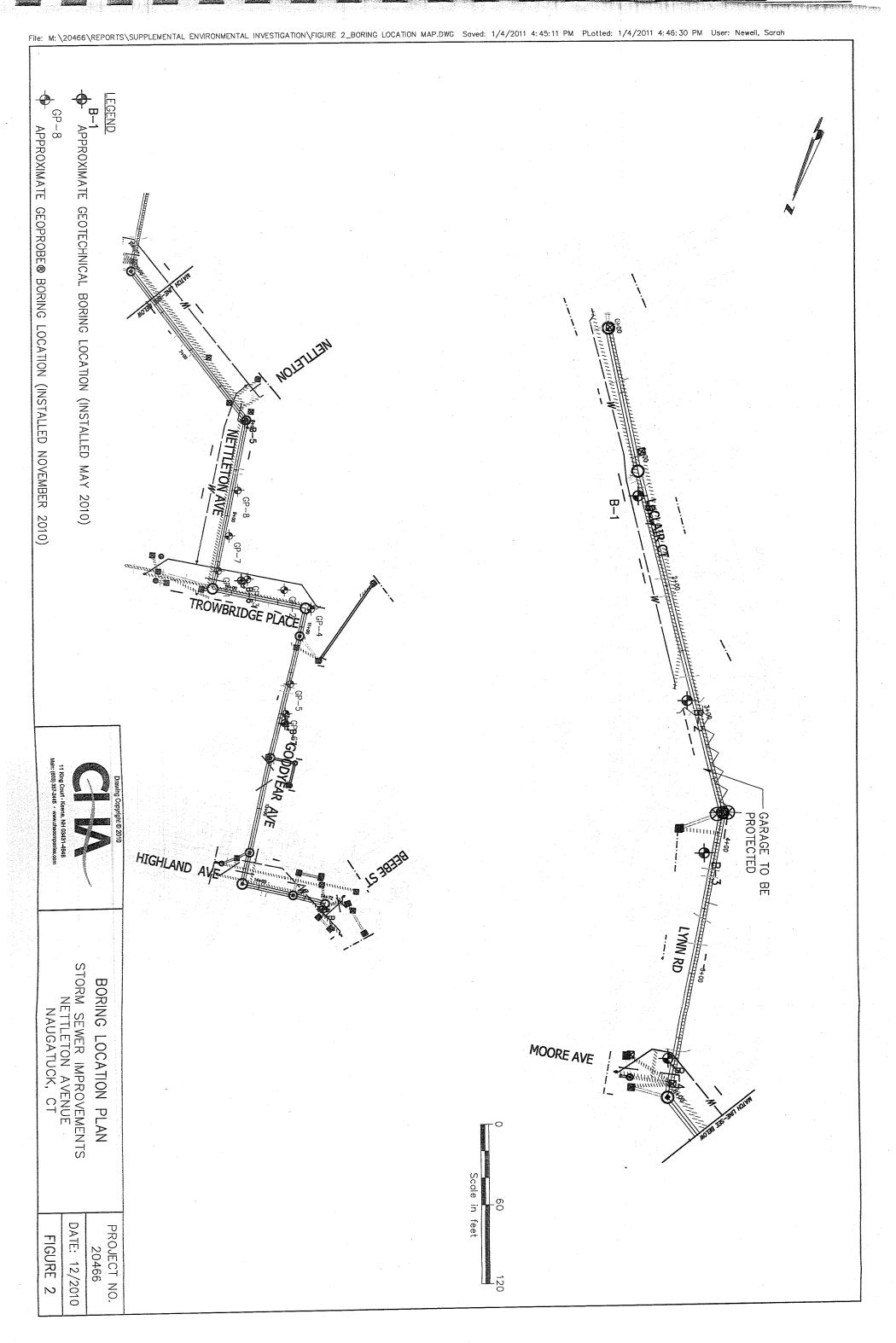
- A. Trenching, backfilling and compaction shall conform to Section 02221 "Trenching, Backfilling, and Compaction."
- B. Pipe installation shall conform to Section 02610 "Buried Pipe Installation."

END OF SECTION 02611

ALUMINIZED CORRUGATED STEEL PIPE







UBSURFACE LOG 204	166_LOGS.GPJ UPDATEDCH	A.GDT 6/3/10			S-5 1.5 0.7 4-3-7	S-4 2 0.5 7-6-13-10	S-3 2 1 4-3-5-8	S-2 2 0.6 16-12-10-10	S-1 2 0.7 8-11-15-18	SAMP./CORE NUMBER SAMP. ADV. (ft) LEN. CORE (ft) RECOVERY (ft) Sapplit Speer 6 "N" Value		DRILLER: J. Leavitt START DATE and TIME: 4/26/20	CLIENT: Borough of Naugatuck CONTRACTOR: New England Boring Contractors		PROJECT NUMBER: 20466.2040.1510
	25 5	20			10 -10	10 	ھ ج	22	26	or RQD% SAMPLE DEPTH (Feet)	10 10:15:00 AM d) снескер ву:	4/26/2010 9:30:00 AM	ick Boring Contr	ecticut	0.1510
				X						GRAPHICS	AM BY: C	M R:	actor		
				End of Boring at 10.5 ft	fm.c. SAND Some f.c. Gravel, trace silt, brown, loose, wet (FILL)	f.c. GRAVEL little f.m.c. sand, trace silt, brown, medium compact, wet (FILL)	f <u>m.c. SAND</u> little f. gravel, trace silt, brown, loose, moist (FILL)	f.m.c. SAND And f.c. Gravel, trace silt, brown, medium compact, moist (FILL)	ASPHALT f.m.c. SAND Some f. Gravel, trace silt, brown, medium compact, moist (FILL)	DESCRIPTION AND CLASSIFICATION	Symmes	Adnams WATER LEVEL 4-26-10 9:45 AM OBSERVATIONS	DATE TIME		Nettleton Ave Storm Sewer SUBSURFACE LOG HOLE NUMBER B-1
-245	- 250	- 255	- 260		- 265			-270		ELEVATION (Feet)		Durin	RE	DRILLIN	/e St XFAC
				Spoon bou depth of 1 terminatec unknown o	about 7'. F	Drilling me to 3.25" H of 7'.				Ren Drillir Ret		During Drilling	READING TYPE	NG METHO	Ave Storm Se URFACE LOG NUMBER B-1
				Spoon bouncing at a depth of 10.5'. Boring terminated upon an unknown obstruction.	a depth of ossible wash.	Drilling method changed to 3.25" HSA at a depth of 7'.				Remarks on Character of Drilling, Water Return, etc.		8 	WATER CAS DEPTH BOT (ft) (f	DRILLING METHOD: 3" SSA/3.25" HSA	
	<u> </u>					Ň				WATER LEVELS AND/OR WELL DATA		9 N/A	CASING HOLE BOTTOM BOTTOM (ft) (ft)	3.25" HSA	

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S-1 1.7 0.7 5-10-5-49/2" 15 1 5	SAMP./CORE NUMBER SAMP. ADV. (ft) LEN. CORE (ft) RECOVERY (ft) SS DIT SS	eavitt INSPECTOR: K. , id TIME: 4/26/2010 10:30:00 AM id TIME: 4/26/2010 10:40:00 AM 00 (ft; Estimated) CHECKED BY: C.	LOCATION: Naugatuck, Connecticut CLIENT: Borough of Naugatuck CONTRACTOR: New England Boring Contractors	PROJECT NUMBER: 20466.2040.1510
<u>ASPHALT</u> <u>f.m.c. SAND</u> Some f.c. Gravel, trace silt, brown, medium compact, moist (FILL) <u>DEBRIS</u> (FILL) End of Boring at 2.7 ft	DESCRIPTION AND CLASSIFICATION	Adnams WATER LEVEL OBSERVATIONS	DRILL FLUID: None	Borough Nettleton A SUBSU HOLE N
 Debris in sample S-1 consisted of cinders, glass, nails, etc. Auger and spoon refusal at a depth of 2.67'. Boring offset 3' south to location B-2A.	ELEVATER (Feet) ELEVATER Character of Drilling, Water Return, etc. WELL DATA	During Drilling None N/A	READING WATER CA TYPE (ft) (ft)	Borough of Naugatuck Nettleton Ave Storm Sewer SUBSURFACE LOG HOLE NUMBER B-2 Page

	S-9 0.5	S-8 2	S-7 2	S-6 2		S-3 1.7	S-2 N		SAMP./CORE NUMBER SAMP. ADV. (ft) LEN. CORE (ft)	SURFA	FINISH	DRILLER:	CONTR	CLIENT:	PROJE	
	0.5	N				7 0.6	0.7		LEN. CORE (ft) RECOVERY		DATE	R.	ACTO	B		
	5 90/6"	11-19-59-37	.5 23-36-41-54) 4-8-6-8 2 12-22-14-32	5 11-23-21-10	.6 14-7-14-54/3"	.7 3-1-0-1		(ft) Blows Per 6" on Split Spoon Sampler	SURFACE 279.00 (ft; Estimated)	START DATE and TIME: 4/26/2010 10:40:00 A		CONTRACTOR: New England Boring Contractors	CLIENT: Borough of Naugatuck	PROJECT NUMBER: 20466.2040.1510	
	ג	78	77	36 ¹ 4	4 4	21		<u> </u>	"N" Value or RQD%	ated)			nd B	Jatuc	2040	
								·····	SAMPLE	<u> </u>		INS	oring		.151	
	-25	-20	- 15		- 10	ů	1		DEPTH (Feet)	CHECKED BY:	4/26/2010 10:40:00 AM	INSPECTOR:	g Con			
									GRAPHICS	BY: C	AM	DR: K	tractor			
End of Boring at 29	f.m.c. SAND wet (SP-TILL) f.m.c. SAND brown, very co	f.m.c. <u>SAND</u> brown, very c f.m.c. <u>SAND</u> brown, very c	<u>frav.</u> gray, compaci <u>f.m.c. SAND</u> , brown, very co	No Recovery	<u>F. SAND</u> , Anu (SC-TILL) <u>f.m.c. SAND</u> brown, compa <u>f. SAND</u> , And, moist (SC-TIL	f.m.c. SAND medium comp SILT, little f.m compact, molt	DEBRIS (FILL <u>f. SAND</u> And (FILL)		DESCRIP	. Symmes		Adnams	S			
at 29 ft	f.m.c. SAND, trace silt, brown, very compact, wet (SP-TILL) f.m.c. SAND, And f.c. Gravel, little silt, brown, very compact, wet (SM-TILL)	f.m.c. SAND Some f.c. Gravel, trace silt, brown, very compact, wet (SP-TILL) f.m.c. SAND Some Silt, Some f.c Gravel, brown, very compact, wet (SM-TILL)	<u>Imr.e. SAND</u> And silty Clay, little f.c. gravel, <u>gray, compact, moist (SC-TILL)</u> <u>f.m.e. SAND</u> , Some Silt, Some f.c. Gravel, brown, very compact, wet (SM-TILL)	SC-TILL) And f.c. Gravel, little s	I. SANU, And slity Clay, gray, compact, moist (SC-TILL) <u>fm.c. SAND</u> Some Silt, Some f.c. Gravel, brown, compact, moist (SC-TILL) <u>f. SAND</u> And, silty Clay, gray, compact, moist (SC-TILL)	tm.c. SAND Some f.c. Gravel, brown, medium compact, moist (FILL) SILT, little f.m.c. sand, black, medium compact, moist (FILL)	DEBRIS (FILL) <u>f. SAND</u> And Silt, gray, very loose, moist (FILL)		DESCRIPTION AND CLASSIFICATION			WATER LEVEL			Non-Automatican and the first to solve being a site and and any subsequences	Z
	compact,	e silt, ravel,	gravel,))	F	act, moist Bravel, act,		moist		TION			10 12:00 PM			SUBSURFACE LOG HOLE NUMBER B-2A	Borough of Naugatuck Nettleton Ave Storm Sewer
250	- 255	260	- 265		- 270		-275		ELEVATION (Feet)			Durit		DRILL		ve S
Auger refusal at a c of 29'. Inferred as t of bedrock.	Very hard	depth of 1	Augers grinding at		Silt layers in sampli are slightly mottled	S-3 sampled for environmental test	Debris in consisted glass, nail	Boring off from locat augers ad depth of 3 sampling.	Re			During Drilling	ТҮРЕ	DRILLING METHOD:	er B-2/	augatu torm Sc
28". usal at a depth erred as the top k.	l drilling at a		inding at a		in sample S-4 y mottled.	led for ental testing.	Debris in sample S-2 consisted of cinders, glass, nails, etc.	Boring offset 3' south from location B-2 and augers advanced to a depth of 3' with out sampling.	Remarks on Character of Drilling, Water Return, etc.			15	1 7	3.2		ck ∍wer
<u>ğ</u> 1					4 							15	(ft) (ft)	HSA	Page 1	
			\bowtie						WATER LEVELS AND/OR WELL DATA			17	BOTTO (ft)	HOL	9 1 of 1	

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			-255							-			000000
			-11					1	-				A02 200 2
	edrock.		1 1			- -		25					
	Auger refusal at a depth				End of Boring at 23.5 ft	End of Bori							
			- 265		ji(SM-TILL)	<u>Similar Sol</u> i (SM-TILL)		20	ת	17-80-100/2"	0.7	1.2	DCHA.GDT 6/3/10 ဟု ထ
ł					becomes wet (SMI-TILL)	becomes we			8 8	51-52-31-20	د. د.	N	S-7
			-270	bist	<u>FINIC: SANG</u> Source Sur, Source I.C. Graven brownish gray, very compact, moist (SM-TILL)	(SM-TILL)		ו ו	84 4	10-63-21-18	<u>د</u> د	N	9-S
				oist	f.m.c. SAND Some clayey Silt, little f.c. gravel, tan, medium compact, moist (SM-TILL)	f.m.c. SAND gravel, tan, (SM-TILL)		10	2	13-8-13-14	1 i>	N	о 5
			-275		(FILL)	<u>Similar Soil</u> (FILL)			8	5-4-4-29	حـ	N	S-4
		S-3:PID=0	1 1	gravel, t (FILL)	f.m.c. SAND, Some Silt, little f.c. gravel, trace cinders, brown, loose, moist (FILL)	<u>f.m.c. SAND</u> trace cinders			7	7-4-3-2	1.2	N	လု မ
			-280		(FILL)	<u>Similar Soil</u> (FILL)		ו ו ו י	20	3-7-13-7	0.7	N	S-2
				ivel, trace loist (FILL)	<u>ASPHALI</u> <u>f.m.c. SAND</u> , little silt, little f.c. gravel, trace brick, brown, medium compact, moist (FILL)	<u>f.m.c. SAND</u> brick, brown,			.20	8-13-7-6		N	<u>^</u>
WATER LEVELS AND/OR WELL DATA	Remarks on Character of Drilling, Water Return, etc.	Rer Cha Drilli Ret	ELEVATION (Feet)	CATION	DESCRIPTION AND CLASSIFICATION	DESCRI	GRAPHICS	DEPTH (Feet)	"N" Value or RQD% SAMPLE	Blows Per 6" on Split Spoon Sampler	RECOVERY (ft)	SAMP. ADV. (ft) LEN. CORE (ft)	SAMP./CORE NUMBER
					n service of the serv	. Symmes	BY: C	CHECKED BY:	I	284.00 (ft; Estimated)	284.0	ELEV:	ELE/
							AM	0:00:00	010 1	FINISH DATE and TIME: 4/27/2010 10:00:00 AM	rE and	HDA	FINIS
1	с С	During Drilling	Buinn	-10 9.15 AM	WATER LEVEL	Adnams	X	INSPECTOR:		J. Leavitt	J. Le	DRILLER:	DRIL
81	H BOTTON		REA	_	DATE		ractors	ng Cont	uck Borir	Borough of Naugatuck CTOR: New England Boring Contractors		CLIENT: BOPO CONTRACTOR:	CONTRA
1	3.25" HSA	DRILLING METHOD:	DRILLIN		DRILL FLUID: None			ut	nectic	LOCATION: Naugatuck, Connecticut	Na	ATION	100
e 1 of 1	Wer	E LOG R B-3	Ve Sig RFACE UMBE	Nettleton Ave storn sewer SUBSURFACE LOG HOLE NUMBER B-3				10	40.15	ER: 20466.2040.1510	4UMB	PROJECT NUMBER:	PRO
	×	ugatuc	of Nau	Borough of Naugatuck	2)			

SUB	·····				හ ති	S S	\$.4	လ မ	S-2	ې 	SAMP./CORE NUMBER SAMP. ADV. (ft)	ELEV:	START	DRILLER: J. LE	CLIENT:	LOCAT))]
					N N	0.1	1.3	2 0.7	2	2 1.3	SAMP. ADV. (ft) LEN. CORE (ft) RECOVERY		DATE		T: Bo		
					21-22-19-30	.9 5-5-19-25	4-6-6-11	6-5-5-6	2 9-10-8-7	8-10-9-8	(ft) Blows Per 6" Sampler	SURFACE 288.00 (ft; Estimated)		J. Leavitt INSPECTOR: K. /	Borough of Naugatuck	LOCATION: Naugatuck Connecticut	A COLORADO
					4 	24	12	10	18	19	"N" Value or RQD%		2010	DI BO	atuck	nnec	<u> </u>
	- <u>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </u>	25	- 20	<u> </u>		- 10		ייין גרט גרט		1999-1999-1999-2009 1	DEPTH (Feet)	stimated) CHECKED BY:	4/26/2010 1:45:00 PM	INSPECTOR:	>	tiont	
											GRAPHICS	DBY: C		OR: K			
					<u>f.m.c. SAND</u> , Some f.c. Gravel, trace silt, brown, compact, moist (SP-TILL) <u>f.m.c. SAND</u> , Some Silt, Some f.c. Gravel, brownish gray, medium compact, moist (SM-TILL) End of Boring at 14 ft	f.m.c. SAND. Some Silt, Some f.c. Gravel, brownish gray, medium compact, moist (SM-TILL)	<u>f.m.c. SAND</u> Some clayey Silt, gray, medium compact, moist (SM-TILL)	f.m.c. SAND Some f.c. Gravel, little silt, brown, loose, moist (SM-TILL)	Similar Soil (FILL)	ASPHALT <u>f.m.c. SAND</u> , little f. gravel, trace silt, brown, medium compact, moist (FILL)	DESCRIPTION AND CLASSIFICATION	Symmes	OBSERVATIONS	S Adnams WATER LEVEL 4-26-10 2:20 PM	ATE TIME	HOLE NUMBER B-4	Nettleton Ave Storm Sewe SUBSURFACE LOG
	- 260	- 265		-270	- 275		-280		-285		ELEVATION (Feet)			Durin			RFAC
											Rer Ref			õ	READING	ER B-4	E LOG
											Remarks on Character of Drilling, Water Return, etc.			(ft) None	WATER O) į	≥wer
											WATER LEVELS AND/OR WELL DATA			10 (ft) 14	WATER CASING HOLE DEPTH BOTTOMBOTTOM	Page 1 of 1	

JRFACE LOG 20466_LOGS.GPJ UPDATEDCHA.GDT 6/3/10							- 10
	Υ Υ Υ Υ Υ	ې ب	SAMP./CORE NUMBER SAMP. ADV. (ft)	URFA)RILLE	LIENT	ROJE
	1 2 1.2 5	N N	SAMP. ADV. (ft) LEN. CORE (ft) RECOVERY	FINISH DATE and TIME: 4/26/2010 3:00:00 PM SURFACE ELEV: 297.00 (ft; Estimated) CHECKED BY	DRILLER: J. Leavitt	CONTRACTOR: New England Boring Contractors	PROJECT NUMBER: 20466.2040.1510
			(ft) 을 <u>뾰</u>	and TI 7.00 (Leav	rough	MBER:
	9-18-14-14 12-15-50/3"	7-8-8-6	Blows Per 6" on Split Spoon Sampler	ME: 4	Ă, ÎŦ	of N W En	2040
	14 0/3"	රා	er poon	/26/20 timate	AISE/2010 2:40:00 PM	augat	06.20
	Я 32 2	16	"N" Value or RQD% SAMPLE			Bori	40.15
	ຸ ເ		DEPTH (Feet)	3:00:00 PM CHECKED BY:	VSPEC		
-25 ² 0 ¹⁵ ¹⁰	122956219296			D PM	TOR:	Intrac	
			GRAPHICS	<u>0</u>	K. Ac	tors	
	<u>f.m.c. SAND</u> Some Silt, Some f.c. Gravel, brown, very compact, moist (SM-TILL) End of Boring at 6.3 ft	ASPHALT CINDERS (FILL)		Symmes	INSPECTOR: K. Adnams		
	SANI f Borin		DESCR	es	0		
	2 Som comp ng at 6		DESCRIPTION AND CLASSIFICATION		WAT	PINE	
	M-TIL act, m	t trac	AND		WATER LEVEL OBSERVATIONS	F	
	L) Some oist (S		CLASS				Non
	M-TIL		IFICAT		4-26-10	DATE	Net
	L)	3	NOL				tleto SUE
					3:00 PM	TIME	
- 285	290	295	ELEVATION (Feet)		Durir	R	Nettleton Ave Storm Sewer SUBSURFACE LOG HOLE NUMBER B-5
70 tī D ti					During Drilling	READING	
	ger refi 1.3' In Irock.	sampl	Ren Drillii Ret		ing		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Auger refusal at a depth of 6.3'. Inferred as top of bedrock.	S-1 sampled for environmental testing.	Remarks on Character of Drilling, Water Return, etc.		none	DEPTE (ft)	νer
	a dept	sting.	਼ ਦੂ ਹੁ ਤ			HRCA	' er 3 25" HSA
	وڑ ے۔		 m≥⊑s		ហ	WATER CASING HOLE DEPTH BOTTOM BOTTOM (ft) (ft) (ft)	Page
			WATER LEVELS AND/OR WELL DATA		6.3	NOTTO (ft)	Page 1 of 1
			Ä	I	و المحمد ا		<u>.</u>

		S.GPJ UPDA					0-0	လို		S-4	လ မ	S-2	လို	SAMP./CORE NUMBER	ELE		DRI	CO	2 5	PR	
							N	N		N	N	N	N	SAMP. ADV. (ft) LEN. CORE (ft)			DRILLER: START D/	NTRAC	ENT:	PROJECT NUMBER:	
· · · · · · · · · · · · · · · · · · ·					 		-1. .57	0		1.7	1.5	0.7	1 .4	RECOVERY (ft)	306.(TEar	J. L	TOR:	Boro	NUN	
					 		19-18-32-100/ 2"	5-10-12-15		15-19-17-15	2-6-15-19	3-4-9-8	16-6-6-4	Blows Per 6" on Split Spoon Sampler	ELEV: 306.00 (ft; Estimated)	FINISH DATE and TIME: 4/27/2	DRILLER: J. Leavitt START DATE and TIME: 4/27/	CONTRACTOR: New England Boring Contractors	CLIENT: Borough of Naugatuck	BER: 20466.2040.1510	
		, <u>_</u>					50	22		မ္တ	21	.	12	"N" Value or RQD%	§	2010	2010	nd Bo	atuck	040.	
1 1	- 25		1 1	-20	 <u>I</u>		1		5		I G			DEPTH (Feet)	CHECKED BY:	4/27/2010 11:15:00 AM	4/27/2010 10:30:00 AM	ring Cor	ticut	1510	
			-		 		<u>HH</u>							GRAPHICS	8	AM	O AM	tracto			
					·	End of Boring at 13.7 ft	f.m.c. SAND, Some Silt, Some f.c. Gravel, brown, compact, moist (SM-TILL)	No Recovery		medium compact, moist (Si becomes compact (SM-TIL	fm.c. SAND And Silt, black, medium	Similar Soil (FILL)	<u>ASPHALT</u> <u>f.m.c. SAND</u> little silt, little f.c. gravel, brown/black, medium compact, moist (FILL)	DESCRIPTION AND CLASSIFICATION	C. Symmes		. Adnams WATER LEVEL OBSERVATIONS	ισ	DRILL FLUID: None	n de la companya de l Companya de la companya de la company	
					 		me f.c. Gravel, - TILL)			M-TILL)	, medium		f.c. gravel, act, moist (FILL)	ASSIFICATION			4-27-10 11:00 AM	DATE TIME		HOLEN	Nettleton Ave Storm Sewer
	-280		-285		 290			- 295	·	, .	-300	, ,	- 305	ELEVATION (Feet)			Durir	2	DRILL		RFA(
										S-4: PID=21.1	S-3: PID=2.4	S-2: PID=44.5 S-2 sampled for environmental test	S-1: PID=1.3	Drill Rer Ret			During Drilling	READING TYPE	DRILLING METHOD:	HOLE NUMBER B-6	SUBSURFACE LOG
									and the second se	21.1	2.4	44.5 ed for Intal testing.	1.3	Remarks on Character of Drilling, Water Return, etc.			12	(ft) (ft)	DD: 3.25"		9Wer
														WATER LEVELS AND/OR WELL DATA			10 13.7	(ft) (ft)	25" HSA	Page 1 of 1	

SUBSURFACE LOG	20466_LOGS.GPJ_UPDATE	DCHA.GDT 6/3/10	15 End of E	S-6 2 1.2 47-52-76 R - 300 Similar	S-5 2 1 26-35-51-56 86 -10	S-4 2 1.5 16-12-20-21 32 -	S-3 2 0.7 6-12-27-29 39 - 5		S-1 1.5 0.7 4.4-9 13	SAMP./CORE NUMBER SAMP. ADV. (ft LEN. CORE (ft) RECOVERY (ft) SAMP. ADV. (ft Constant) SAMP. CORE SAMPLE DEPTH (Feet) GRAPHICS	4/26/2010 3:20:00 PM 4/26/2010 4:00:00 PM Estimated) CHECKED BY:	ring Contractor	CLIENT: Borough of Naugatuck	PROJECT NUMBER: 20466. 2040. 1510
			End of Boring at 14 ft	<u>Similar Soi</u> l (SM-TILL)	becomes very compact (SM-TILL)	<u>f.m.c. SAND</u> Some Silt, little f.c. gravel, brown, compact, moist (SM-TILL)	becomes compact (FILL)	becomes very compact (FILL)	<u>ASPHALT</u> <u>f.m.c. SAND</u> Some Silt, Some f.c. Gravel, brown, medium compact, moist (FILL)	DESCRIPTION AND CLASSIFICATION	OBSERVATIONS		DRILL FLUID: None	Boroug Nettleton SUBSU HOLE
285	290	 ≥ 05		1 1 1	- 305			-310		ELEVATION (Feet)				h of N Ave S JRFA
							S-2/S-3 sampled f environmental tes		S-1: PID=0 Sample S-1 has a slight petroleum odor.	Remarks on Character of Drilling, Water Return, etc.		TYPE (ft)	DRILLING METHOD: 3.2	Borough of Naugatuck Nettleton Ave Storm Sewer SUBSURFACE LOG HOLE NUMBER B-7
							for sting		t slight	of LEVELS ter AND/OR . WELL DATA		(ft) (ft) (ft) (ft)	25" HSA	

13 (* .

	RFACE LOG 2046	6_LOGS.GPJ	UPDATEDCHA	<u>.GDT 6/3/10</u>	1 1 1		S-6 2 1.2 15-41-35-38 76 -	S-5 2 1.6 5-15-43-27 58 - 10 be	S-4 2 1.4 10-5-9-30 14	S-3 2 1.5 7-9-8-10 17		S-1 2 1 5-8-4-6 12 -	SAMPLE DEPTH (Feet) GRAPHICS	SURFACE ELEV: 322.00 (ft; Estimated) CHECKED BY: C. Sy	FINISH DATE and TIME: 4/27/2010 12:30:00 PM	START DATE and TIME: 4/07/2010 11:30:00 AM	CONTRACTOR: New England Boring Contractors	CLIENT: Borough of Naugatuck	PROJECT NUMBER: 20466.2040.1510	
						End of Boring at 14 ft	<u>Similar Soil</u> (SM-TILL)	becomes very compact (SM-TILL)	<u>Similar Soil</u> (SM-TILL)	f.m.c. SAND Some clayey Silt, little f.c. gravel, brown, medium compact, wet (SM-TILL)	<u>Similar Soi</u> l (FILL)	ASPHALT f.c. GRAVEL and c. SAND little silt, dark brown, medium compact, moist (FILL)	DESCRIPTION AND CLASSIFICATION	Symmes		Adnams WATER LEVEL 4-27-10 111:30 AM OBSERVATIONS			STATE OF STREET	Borough of Naugatuck Nettleton Ave Storm Sewer SUBSURFACE LOG
I	- 295		- 300		- 305		-310	t		2	1 1	-320	ELEVATION (Feet)					DRILLIN	UMBE	h of Na Ive Sto RFACI
			-							Occasional c. sand seams in glacial till			Remarks on Character of Drilling, Water Return, etc.			During Drilling		H	R B-8	ugatuck prm Sew E LOG
										cial till.			'ks on ster of Water 1, etc.			<u>د.</u>	EPTH BO	3.25" H		ler
												Ņ	WATER LEVELS AND/OR WELL DATA			N/A 3	(ft) (ft) (ft) (ft)	SA SING HOLE	Page 1 of 1	

<u>نې</u> د د

	လ 	2 4		ې 2 4		SAMP./CORE NUMBER SAMP. ADV. (ft LEN. CORE (ft)		FINISH	START	CONTRACTOR:	LOCATION: CLIENT: B	PROJE	
-	N 3	ຜ ເ>		2.8		LEN. CORE (ft) RECOVERY (ft)		DATE a	DATE a		_Σ Ž		
 - - - - -	0. O	0.0	0.0	0.0	0.0	PID Readings (ppm)		1 1		TOR: Aquifer Drilling and Testing	N: Borough of Naugatuck, Connecticut Borough of Naugatuck	CLOUCH HARBOUR & ABER: 20466	
						"N" Value or RQD%		11/18/2010	11/18/2010	illing a	augati gatuci	UR & ASS	
 10		1 0	4		T	SAMPLE DEPTH (Feet)	CHECKED		0	and Testi	uck, Conr k	ASSOCIATES LLP	P
 						GRAPHICS	BY: S		1		necticu		
End of Boring at 10.3 ft	grades to brown	<u>Em.c. SAND</u> , some <u>Silt</u> , little f.c. gravel, tan/brown, moist (SM)	<u>f.m.c. SAND.</u> little f.c. gravel, trace sit, brown, moist (FILL) <u>f.m. SAND</u> , some Silt, trace organics, black/brown, moist (SM)	grades to little silt, trace f.c. gravel	ASPHALT, (FILL) <u>f.m.c. SAND</u> , little f.c. gravel, trace silt, brown, moist (FILL)	DESCRIPTION AND CLASSIFICATION	. Newell	DRILLING	S. Kosecrans WATER LEVEL OBSERVATIONS DURING		Jt DRILL FLUID:	12/15/2010	Nettleton Ar
						Z ELEVATION (Feet)				DATE TIME		SUBSURFACE LOG HOLE NUMBER GP-1	ea Storm Dra
Refusal at 10.25'			Soil sample cc from 4' to 4.6' 09:50			Remarks on Character of Drilling, Water Return, etc.				DEPTH (ft) BOT	ĕ	ACE LOG BER GP-1	iin Improve
 <u>ດ</u> ັງ			4.6' at			on WATER r of LEVELS ater AND/OR tc. WELL DATA				CASING HOLE BOTTOM (ft) BOTTOM (ft)	Geoprobe	Page 1 of 1	Nettleton Area Storm Drain Improvement Project

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	Refusal at 13.6'			at 13.6 ft	End of Boring at 13.6 ft	E						منبد ہور ا
	monitoring well installed to 13.6'. Groundwater sample collected at 15:45.				<u>de optiende en</u>					1.6	1.6	S-4
	1" temporary PVC groundwater			the state entertained in the			-12		0.0		2	
		<u></u>			<u></u>		- 10			4	4	လ မ
									0.0			UPDATEDCHA.GDT_12/16/10
				· ·	<u></u>		τ <u>ι</u> δ			2.6	4	S-2
	Soil sample collected from 4' to 4.6' at 10:35		own, moist	E , little f.m.c sand, brown, moist <u>D</u> , some Silt, trace organics, wn, moist (SM) ND some Silt, little f.c. gravel,	<u>c. GRAVEL</u> 1 (FILL) <u>f.m. SAND</u> , black/brown f.m.c. SANC tan/brown, r	KXXXXX	4		0.0			
<u></u>			ay, moist	F.m.c sand, gr me Fill (cinders at (FILL) e silt, trace f.c. LL)	<u>c. GRAVEL</u> , little f.m.c sand, gray, moist (FILL) (<u>FILL</u>) (<u>FILL</u>)				0.0	N.5	4	ې 4
	•		gravel, brown/black,	_) e f.c. gravel, br	ASPHALT, (FILL) f.m.c. SAND, little		·		0.0			
WATER LEVELS AND/OR WELL DATA	Remarks on Character of Drilling, Water Return, etc.	ELEVATION (Feet)	FICATION	DESCRIPTION AND CLASSIFICATION	DESCRIPTI	GRAPHICS	DEPTH (Feet)	"N" Value or RQD% SAMPLE	PID Readings (ppm)	RECOVERY (ft)	SAMP. ADV. (ft) LEN. CORE (ft)	SAMP./CORE NUMBER
				na dia panganganganganganganganganganganganganga	. Newell	BY: S	CHECKED	0			SURFACE ELEV:	SUR
				DRILLING				11/18/2010 11/18/2010	START DATE and TIME: 11/18 FINISH DATE and TIME: 11/18	FE and FE and	START DATE	STAF FINIS
				WATER LEVEL OBSERVATIONS	Rosecrans	S.	INSPECTOR:	ing and	1	R. B	DRILLER: R. I	CONTRAC
be HOLE BOTTOM (ft)	DRILLING METHOD: Geoprobe WATER CASING DEPTH (ft) BOTTOM (ft)			DRILL FLUID:				atuck	Borough of Naugatuck	101	1 1 3	CLIENT:
Page I O					0107/61/71	necticu		inatiin	rninh of Nai			
- 	GP-2	JRFA	SUBSURFACE					& ASSOCI	č		1	5
roject			Nettleton Area Storm	Nettiero			E					

COUCH HUBBLER: Nettleton Area (11/15/2010 Borough of Naugatuck, Connecticut Ore: Aquifer Drilling and Testing R: Buley Relieven (NSPECTOR: S: Rosecrans INSPECTOR: S: Newell DRILL Fulls: Diplines 2 and TME: 11/16/2010 CHECKED BY: S: Newell Sisterivanions (pmm) DATE 2 and TME: 11/16/2010 CHECKED BY: S: Newell DATE 2 and TME: 11/16/2010 CHECKED BY: S: Newell Sisterivanions (pmm) 3 0.0 0.0 CHECKED BY: S: SAMPLIE Sisterivanions (FILL) 0.0 0.0 CHECKED BY: S: SAMPLIE Sisterivanions (FILL) 0.0 CHECKED BY: S: SAMPLIE DESCRIPTION AND CLASSIFICATION	Improvement Nettleton Area In of Naugatuck, Connecticut DRLL, FLUD: In of Naugatuck, Connecticut DRLL, FLUD: InterDilling and Testing Watter Level InterDilling and Testing DATE Crecked br: S. Newell InterDilling Crecked br: InterDilling Escorans Descorans Descrans Dissection Date InterDilling Escorans Descorans Descrans Dissection Date InterDilling Escorans Dissection Date InterDilling Escorans Dissection Date InterDilling Escorans Dissection Date Dissection Date InterDilling Escorans Dissection Dissection	Improvementation Nettleton Area Information Nettleton Area Information Nettleton Area Information Internation	Nettleton Area Storm Drai SUBSURFA SUBSURFA SUBSURFA SUBSURFA SUBSURFA Intragatuck, Connecticut it augatuck, Connecticut its FRAP it refer it augatuck, Connecticut its Free it augatuck, Connecticut its Free it augatuck, Connecticut its Free its Fr	۵. ۵. ۶. ۵.				S-2 4				\$ <u>-1</u> 4		SAMP./ NUM SAMP./ LEN.CO	BER ADV. (ft) DRE (ft)	FINISH DA SURFACE ELEV:	START DA	CONTRACTOR: DRILLER: R. E	CLIENT: E	PROJECT	
Nettleton Avsourtsuv Nettleton Area Other Instruction Instruction Inf Naugatuck Instruction Instruction Instruck Instru	Nettleton Ausonation Nettleton Area Other Tariszono Privezona Informagatuck Inspectrore S. Rosecrans Dispectrore Informagatuck Orecceto br: S. Newell Orecceto br: Information Inspectrore S. Newell Dispectrore Information Orecceto br: S. Newell Dispectrore Information Information Dispectrore S. Newell Information Information Dispectrore S. Newell Information Information Information Information Information Informati	Nettleton Ausocursu Nettleton Area (1/18/2010 Ind Regatuck, Connecticut frae Drilling and Testing Insection: Needers Insection: S. Rosecrans Insection: Display of the Connecticut intrace of the Connecticut interace of the Conn	Norther Norther Norther Subscription Norther Subscription Norther Subscription Norther Subscription Norther Nor		2.5			မ. မ.				<u>ى</u>				TE and	TE and		Boro		
Anti- end Testing Nettleton Area rand Testing Inspector. S. Rosecrans OBULL FLUD: DESCRIPTION AND CLASSIFICATION BERTHUNG D D CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION BERTHUNG CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION BERTHUNG CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION BERTHUNG CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION FILL CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION BERTHUNG CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION FILL CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION FILL CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION FILL CHECKED BY: S. Newell FILL FILL FILL Backborown, moist (FILL) Fille Silt, trace f.c. gravel, backborown, moist (SM) Fille Silt, Fille Silt, Trace T. gravel, brown, moist (SM) Fille Silt, Fille	Connecticuit Inspector Nettleton Area Inspector Inspector Inspector CHECKED BY: S. Newell DATE Differentiation DATE DATE Diston	CHECKED BY: Newell Nettleton Area CHECKED BY: S. Newell DRILL FLUD: D D DATE D D DATE D D DATE D D DATE D DATE DATE Inno. SAND. DATE DATE Inno. SAND. Trace f.m. sand, gray, moist Trace organics. D DOWN, moist (FILL) DATE DATE Inno. SAND. Some Sit, trace f.c. gravel, brown/black DATE D DOWN, moist (SM) Some Sit, trace f.c. gravel, moist D DOWN, moist (SM) DATE D D DATE	Nettleton Area Storm Drain Impro SUBSURFACE LOG HOLE NUMBER GP ok. Connectour Desc. Function Nemecricity Desc. Function Desc. Function Desc. Function Desc. Function Desc. Function Desc. Function Newell Desc. Function Desc. Function Desc. Function Desc. Function Desc. Function CEEDED IN: S. Newell Desc. Function Eds. Function CEEDED IN: S. Newell Function Function CEEDED IN: S. Newell Function Function CEEDED IN: Function Function Function Figure Function Function Function Figure Function Function Function Figure Function Fun			0.0			0.0	0.0	0.0		0.0	(ppm)	PID Readinos			Aquifer Dril	vrough of Na ugh of Naug	CLOUCH HARBOLI ER: 20466	3
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		Refusal a	Image: Number of the second solutional sample volume. Remarks on CASING to 3' at 11:40 from 2' to 2.6' at 11:30 Refusal at 10.5' Refusal at 10.5'	End of Boring at 10.5 ft					<u>Fm.c. SAND</u> , some Silt, little f.c. gravel,	<u>f.m. SAND</u> , some Silt, trace organics, black/brown, moist (SM)	<u>c. GRAVEL</u> trace f.m. sand, gray, moist (FILL) <u>f.m.c. SAND</u> , little silt, trace f.c. gravel, brown, moist (FILL)		<u>f.m.c. SAND</u> , little f.c. gravel, brown/black, moist (FILL)	DESCRIPTION AND CLASSIFICATION ASPHALT, (FILL)				WATER LEVEL	DRILL FLUID:	12/15/2010	Nottlaton Area Storn

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	N 5		4		4		SAMP. ADV. (ft) LEN. CORE (ft)	FACE	H R R	DRILLER:	ITRAC	LOCATION:	VECT
	N.5		2.9		2.5		RECOVERY (ft)		TEar	ק	CONTRACTOR:		CLO PROJECT NUMBER:
	0.0	2.1	0.0	0.0	0.0	0.0	PID Readings (ppm)		FINISH DATE and TIME: 11/18/2010	R. Buley	Aquifer Drilling and Testing	LOCATION: Borough of Naugatuck, Connecticut	CLOUGH HARBOUR & BER: 20466
							"N" Value or RQD%	anistronandes	3/201		ling	ugat	R & AS
			1 1 1		7 1	1	SAMPLE	요	00	INS	and	r uck	
	10	œ	<u></u> ත	4	Ń		DEPTH (Feet)	CHECKED I		INSPECTOR:	Testin	Conn	
							GRAPHICS	BY: S		بہ S	9	ecticu	
End of Boring at 10.5 ft	<u>f.m.c. SAND</u> , some Silt, little f.c. gravel, brown, moist (SM)	slight asphalt/petroleum odor	<u>FILL</u> , trace f.m. sand, white, moist // (FILL) <u>fm.c. SAND</u> , some Silt, little f.c. gravel, // brown, moist (SM)	Im. SAND, some Silt, trace organics, brown, moist (FILL) Imoist (FILL) Imo. SAND, little silt, trace f.c. gravel,/ brown. moist (FILL)	grades to little silt, trace f.c. gravel, brown	<u>for the sand</u> , (file) <u>f.m.e. SAND</u> , little f.c. gravel, brown/black, moist (FILL)	DESCRIPTION AND CLASSIFICATION	Newell	DRILLING	Rosecrans WATER LEVEL OBSERVATIONS	DATE TI	t DRILL FLUID:	Nettleton Area
							ELEVATION (Feet)				TIME		
Refusal at 1		Soil sample from 8' to 9.2 12:35				102.972	Ren Ret				WATER DEPTH (ft)	DRILLING METHOD:	Storm Drain Improv SUBSURFACE LOG IOLE NUMBER GP-2
it 10.5'		ble collected 9.2' at					Remarks on Character of Drilling, Water Return, etc.				CASING BOTTOM (ft)): Geoprob	rement 4
				· · · · · · · · · · · · · · · · · · ·		<u> </u>	WATER LEVELS AND/OR WELL DATA				HOLE BOTTOM (ft)		Project

	cto PROJECT NUMBER:	CLOUGH HARBOUR & ASSOCIATES LLP SER: 20466			12/15/2010	Nettleton Area Storm Drain Improvement SUBSURFACE LOG HOLE NUMBER GP-5	Area Sta SUI HOL	a Storm Drain Im SUBSURFACE HOLE NUMBER	Storm Drain Improve SUBSURFACE LOG HOLE NUMBER GP-5	ovement F G '-5	Project
CHILT: Borlug OT The Control OWNER	Ž	prough of Nau	ugatuck, Con	necticu		DRILL FLUID:		DRIL	LING METHOD	Geoproh	año -
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SAME OFF and TWE: 11/18/2010 Understand TWE: Un	DRILLER: R. E	3uley	INSPECT			WATER LEVEL					
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43 1.7 0.0 5.1 3 1.7 0.0 -2 -2 -4 -10 -10 -10 -10 -10 -10 -10 -10	SAMP. ADV. (ft) LEN. CORE (ft) RECOVERY		SAMPLE	GRAPHICS	DESCR	PTION AND CLASSIFI	DATION	ELEVATION (Feet)	Ren Drillir Ret	narks on racter of ng, Water urn, etc.	WATE LEVEL AND/C WELL D
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-2 End of Boning at 3 ft -4 -6 -6 -10	ω	0	1		gravel, brown	moist (FILL)	le f.c.		Soil samp from 1' to	ole collected 1.5' at	
End of Boning at 3 ft Fefusal at 3'	ن ى	0.0	l N		f.m.c. SAND, brown, moist	[FILL)	e sit,	I	13:40. Sa based on 50% reco sample d vary.	ample depth less than very. Actual epth may	
				×	End of Boring	at 3 ft			Refusal a	t 3'	
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RUMBER: 2046 NUMBER: 2046 R. Borough of Naugatuck, Connecticut Borough of Naugatuck, Connecticut R. Buley R. Buley R. Buley R. Buley Insector: S. Rosecrans IF and TME: 11/18/2010 IE and TM	 			**************************************							 SAMP. ADV. (ft LEN. CORE (ft)		SHDA		NTRAC	ENT:	DUECT	
HHNREPORT & ANSOCRATES LIP 12/15/2010 12/15/2010 12/15/2010 11/18/2010 INSPECTOR: S. Rosecrans INSPECTOR: S. Rosecrans INSPECTOR: S. Rosecrans INSPECTOR: S. Newell INSPECTOR: S. Newell INSPECTOR: S. Newell INSPECTOR: S. Newell DESCRIPTION J ILL (ash), some f.m No Recovery (1.75 in INO Recovery (1.75 in Ind of Boring at 7 ft	 ······································								.8		 (ft)		TEand	TE and	5 d	Boro		
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12/15/2010 DR ASPHALT. (FILL) DESCRIPTION / DR DESCRIPTION / DESCRIPTION / DESCRIPTION / DESCRIPTION / DESCRIPTION / DESCRIPTION / DESCRIPTION / DESCRIPTION / DESCRIPTION / OB	 		- <u></u>			Ř			×××			Ś		Ś		cticu		
				7		o Recovery (5' to 7')	m.c. SAND, little f.c. gravel, trace silt,		To Recovery (1.75' to 4')	ELL, (ash), some f.m. Sand, little f.c. gravel, black, moist (FILL) m.c. SAND, little f.c. gravel, trace silt,/ prown, moist (FILL)	 DESCRIPTION AND CLASSIFICATION	Vewell	DRILLING					SUB
			(*************************************	Refusal at 1			Soil sample from 4' to 5		Actual lith vary.	Soil litholo				-	DEPTH (ft)	LING METHO	MBER GF	
OLE NUMBER GP TIME DRILLING METHOD TIME DRILLING METHOD ELEVATION ELEVATION (Feet) Chain Soil litholo to 4' based than 50% I Actual litholo Vary. Noil litholo Soil sample Soil sample	 ·			r			[∋] collected ¹ at 13:55		recovery. dogy may	gy from 0' 1 on less					BOTTOM (ft)	D: Geoprobe	പ്റ	ovement
LEVATION (Feet)											WATER LEVELS AND/OR WELL DATA				BOTTON	De la	Page 1 of	Projec

Construction Description Operation	CLO PROJECT NUMBER:	CLOUGH HARBOUR & MBER: 20466	JR & ASSOCI	ATES LLP	A CONTRACTOR OF	12/15/2010	states and definition of a state state of the state of the state states	HOLE NUMBER GP-	JMB	ER GP	-7	Page 1 of
Contraction: Aquifer Dnilling and Testing Dotumer, R. Bullay Investment Newer START DATE and Title: 11/10/2010 Difference REMEY OFFErend Title: 11/10/2010 CHECKED BY: S. Newell Difference REMEY OFFER CHECKED BY: S. Newell Difference Difference REMEY OFFER CHECKED BY: S. Newell Difference Difference SAMP_PCORE PD Readings CHECKED BY: S. Newell Difference SAMP_VER CHECKED BY: S. Newell Difference Difference SAMP_VER PD Readings CHECKED BY: S. Newell Difference SAMPLE PD Readings CHECKED BY: S. Newell Difference SAMPLE PD Readings CHECKED BY: S. Newell Difference SAMP_VER PD Readings CHECKED BY: S. Newell Difference SAMPLE PD Readings CHECKED BY: S. Ne	LOCATION: E	Borough of Na	augatuc	k, Con	inectic		RILL FLUID:		RILLIN	G METHOD		Geoprol
DEILLER, R. Buley INSPECTOR: S. Rosectans OWNERLEXEL ETRY ETRY CHECKED BY: OBERITY DESCRIPTION AND CLASSIFICATION ETRY ETRY CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION ETRY ETRY CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION ETRY ETRY CHECKED BY: S. Newell DESCRIPTION AND CLASSIFICATION ETRY ETRY CHECKED DESCRIPTION AND CLASSIFICATION SAMP_ADV.EE PD PROBABILIST CHECKED SAMP_ADV.EE PD DEFTH DESCRIPTION AND CLASSIFICATION SAMP_CORE PO SAMPLE DESCRIPTION AND CLASSIFICATION SAMP_CORE PO PO CHECKED SAMP_CORE PO PO PO SAMP_CORE	\mathbf{n}	1.2	lling an	d Test	ina							BOTTOM (ft) BOTTOM (ft)
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COUCH HARDOR ASSOCIATE LIV Nettleton Area Storm Drai SUBSURFA CONTRACTOR: Borough of Naugatuck, Connecticut Nettleton Area Storm Drai SUBSURFA HOLE NUME CONTRACTOR: R. Buley Borough of Naugatuck, Connecticut DRILL FLUD: INSECONTRACTOR: Aquifer Drilling and Testing DRILL FLUD: INSECONTRACTOR: S. Rosecrans DRILL FLUD: DRILL FLUD: INSECONTRACTOR: S. Rosecrans DRILL FLUD: DRILL FLUD: INSECONTRACTOR: S. Rosecrans DRILL FLUD: DRILL FLUD: DRILL FLUD: INSECONTRACTOR DRILL FLUD: DRILL FLUD: DRILL FLUD: DRILL FLUD: DRILL FLUD: DRILL FLUD: DRILLING DATE DRILL FLUD: DRILL FLUD: DRILLING SAMP.CORE ELEV: Intel 11/18/2010 INSECONE S. Rosecrans DRILL FLUD: DRILLING DRILL FLUD: DRILLING DRILL FLUD: DRILLING SAMP.CORE ELEV: 0.0 OHECKED BY: SAMPLE S. Neweil DRILL FLUD: DRILLING DRILL FLUD: DRILLING SAMP.CORE ELEV: 0.0 0.0 DESCRIPTION AND CLASSIFICATION (FPEN) DESCRIPTION AND CLASSIFICATION ELEVATION S.1 4 1.3 0.0 DESCRIPTION AND CLASSIFICATION (FEEL) ELEVATION (FILL)	CAMPLE CARTESLIP 12/15/2010 12/15/2010 12/15/2010 INSPECTOR: S. Newell CHECKED BY: S. Newell DEPTH (Feet) DEPTH (Feet) CHECKED BY: S. Newell CHECKED	CMTESLIP 12/15/2010 Nettleton Area INSPECTOR: S. Rosecrans DRILL FLUID: INSPECTOR: S. Newell DAT CHECKED BY: GRAPHICS DAT GRAPHICS DESCRIPTION AND CLASSIFICATION DAT GRAPHICS GRAPHICS GRAPHICS GRAPHICS GRAPHICS GRAPHICS GRAPHICS GRAPHICS GRAPHICS <tr< th=""></tr<>
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