

**Hooksett Sewer Commission
April 30, 2018
Workshop Meeting Minutes**

This workshop was called to order at 10:05am, present were Chairman Sidney Baines, Dave Scarpetti, Bruce Kudrick, Matt Barrett, Alden Beauchemin, Don Winterton, Dan Tatem, Rene LaBranche, Jeff Larrabee and John Clark. There were no decisions made and there was no quorum.

This workshop was for Santec to present to the commission their consulting estimate for 3A. The estimate came in at \$2,250,000 (see attached). They presented their findings and estimated cost of what it would be to connect 3A to sewer.

Date: 4/30/18

PLEASE SIGN IN
Please Print!

Name

Title

✓ DAVIN SCARPETTI

EDC

✓ Bruce Kudrnick

superintendent HWWP

✓ Matt Barrett

EDC

✓ ALDEN BEAUCHEMIN

KEYLAND PROPERTIES / EDC

✓ DON WINTERMAN

TOWN COUNCIL DIST. 5

✓ Dan Tatem

Stantec Consulting

✓ Ed Barnes

Comm

✓ Revel Branchette

STANTEC

Jeff Lambert

MH King Hotel Group

✓ John Clark

HWWP

Route 3A Pump Station Presentation Notes

April 30, 2018

INITIAL	COMMENTS
B K/L	

General Summary

1. Estimated WW flows for Exit 10 & 11 – See Attachment A
 - a. Confirmed and revised MWW flow numbers
 - b. Counted existing residential units
 - c. Estimated existing businesses not on MWW list
 - d. Met with Town, Planner, and TFM to discuss potential build-out of undeveloped land, and requested copies of the Exit 11 design plans

2. Proposed pump station and HDD river crossing locations – See Attachment B
 - a. Increased distance from river
 - b. Environmental permitting
 - c. Better HDD approach angle
 - d. Increased separation to Ice Rink

3. Force main tie-in to interceptor
 - a. 5' dia. Manhole with two FM's into one 15" dia. main
 - b. RR tracks and sleeve vs. two separate pipes in separate HDD borings

4. Soil exploration program
 - a. Land and river borings - \$55K which includes insurance and flagger to cross RR Tracks - \$8K

5. Environmental Permitting
 - a. No wetland permit anticipated
 - b. No AoT permit anticipated because total disturbance is under 50,000 sq ft
 - c. Shoreland permit is required due to work within 250ft of river
 - d. No trigger for endangered species studies (i.e. bald eagles)

Route 3A Pump Station Presentation Notes

6. Design Assumptions

Civil

- a. Paved parking and access to PS
- b. HDD crossing of the Merrimack River
- c. One common drill hole with both lines across the river
- d. 2 Two separate HDD FMs under the RR tracks
- e. 2 - 8 in. dia. FM
- f. 12" SDR 35 PVC Sewer from Rte 3A to the PS

Structure

- a. 24ft x 24ft PS
- b. Cast in place concrete lower level and wetwell assumed 24" base slab and 15" th ext walls
- c. 12" split face block walls
- d. Precast concrete plank roof with adhered membrane and rigid insulation
- e. (1) FRP Double door and (1) garage type door
- f. Steel pan stairs to lower level
- g. Epoxy painted walls ceiling
- h. High end epoxy liner in wetwell and influent grinder channel

Equipment

- a. (3) – Dry-pit submersible pumps w/ VFDs
- b. Mag meter
- c. Small carbon filter unit
- d. Sump Pump
- e. Channel Monster
- f. Overhead hoist
- g. Hatches over each pump

Route 3A Pump Station Presentation Notes

Electrical

- a. 480 volt electrical
- b. Emergency generator
- c. Pump VFDs
- d. Lightning protection

Instrumentation

- a. RTU at PS
- b. Radio or Internet communication to WWTF
- c. Remote control and monitoring of the new PS via SCADA system

- 7. Preliminary Engineering Cost Estimate – See Attachment C
 - a. 2.9 Labor multiplier
 - b. Sub cost no markup
 - c. Civil/Sewer/Site/PS Design: \$124,035
 - d. Soil Exploration Program: \$64,389
 - e. HDD Design:\$32,380

- 8. Preliminary Engineers Opinion of Probable Cost – See Attachment D
 - a. ACI Divisions
 - b. Includes 20% Contingency
 - c. 26% Engineering – higher than standard(22% - 25%) due to soils exploration program

- 9. Potential cost savings
 - a. Smaller building/structure
 - b. Different style pumps
 - c. Pump system and piping phasing
 - d. One FM, rather than two

ATTACHMENT A

ATTACHMENT B

Hooksett Sewer Commission - Route 3A Proposed Pump Station
Preliminary Projected Daily Flows - 20 year Planning Period

Location	Area (Acres)	Water Use Gallons Per Day	
1 Existing Commerical Development at Exit 10		63,749	
2 Existing Residential Developments		88,425	
3 Proposed Development at Richie Property	54	69,619	
4 Proposed Development at Alden	45	58,016	
5 Proposed Development 1	60	77,355	
6 Proposed Development 2	65	83,801	
7 Proposed Development - MDR	16	20,628	
8 Proposed Residential	65	52,500	
Totals		514,092	Gallons
		0.514	MGD

4/30/2018

EXISTING BUSINESS GALLONAGE AND SDF AT EXIT 10

Location		Yearly Gallage	GPD
Bass - Pro * (original 12,618,760)		688,160	1,885
Wal - Mart * (original 1,279,080)		1,653,080	4,529
Great State Beverage * (Original 1,176,111)		299,200	820
N.H Hockey * (original 2,169,200)		1,899,920	5,205
Target * (original 1,346,400)		2,086,920	5,718
Kohl's		246,840	1,676
Twin Coast		533,324	1,461
Koffler		261,800	717
204 Quality	KGI	103,224	283
103 Quality	KGI	71,808	1,000
111 Quality	KGI	37,400	1,000
Circle K		255,068	699
Dunkin Donut		557,260	1,527
Regal Cinema		590,920	1,619
N.H Oncology		272,272	746
Crop		531,080	1,455
BJ		448,800	1,230
Home Dept		568,480	1,557
Riverview Park		374,000	1,025
Market Basket * (original 5,617,480)		4,660,040	12,767
Irving Oil		317,900	1,800
Irving Oil		65,824	1,800
United Heathcare * (original 2,757,520)		4,099,040	11,230
Tombs Doors		365,000	1,000
Pinard Waste		365,000	1,000
TOTAL		21,352,360	63,749

* Actual metered flow data provided by the Manchester Water Works
for gallons metered in 2017

Data in blue is estimated

Richie Property		Total area ~ 55 Acres				4/30/2018	
Building	Square footage	Capacity	Primary Water Usage*	Secondary Water Usage*	Estimated Employees	Estimated Daily Usage (Gallons)	Estimated Yearly Usage (Gallons)
1 Restaurant 1	8000	300 Seats	40 GPD / Seat	20 GPD / Employee	20	12,400	4,526,000
2 Restaurant 2	8000	250 Seats	40 GPD / Seat	20 GPD / Employee	15	10,300	3,759,500
3 Fast Food Restaurant 1	4490	100 Seats	40 GPD / Seat	20 GPD / Employee	12	4,240	1,547,600
4 Fast Food Restaurant 2	2368	70 Seats	40 GPD / Seat	20 GPD / Employee	8	2,960	1,080,400
5 4-Story hotel	48000	124 Rooms	150 GPD / Room	10 GPD / Employee	45	19,050	6,953,250
6 Winery	8000					5,700	2,080,500
7 2-Story Office 1	30000		5 GPD / 100 SF			1,500	547,500
8 2-Story Office 2	60000		5 GPD / 100 SF			3,000	1,095,000
9 3-Story Office	45000		5 GPD / 100 SF			2,250	821,250
10 Event Center	86400					8,219	3,000,000
Totals						69,619	25,411,000
Estimated use per acre:		1,266	Gallons / Acre / Day				
		462,018	Gallons / Acre / Year				

* Source: NHDES Env-Wq 1002.28

Manchester WW

Company	Address	Meter Reading		Yearly Consumption		
		Date	Usage (100 cu ft)	Cu ft	Gallons	GPD
Bass Pro Shops	2 Commerce Drive	1/30/18	19000	92000	688,160	1,885
		10/31/17	25000			
		8/2/17	28000			
		5/2/17	20000			
		1/27/17	21000			
Great State Beverages	1000 Quality Drive	1/30/18	8000	40000	299,200	820
		10/31/17	28000			
		8/2/17	2000			
		5/2/17	2000			
		1/27/17	3000			
United Healthcare	14 Central Park Dr. West	2/23/18	9000	548000	4,099,040	11,230
		1/26/18	9000			
		12/27/17	10000			
		11/24/17	46000			
		10/24/17	68000			
		9/25/17	83000			
		8/24/17	72000			
		7/24/17	86000			
		6/23/17	76000			
		5/26/17	53000			
		4/24/17	14000			
		3/27/17	11000			
2/24/17	11000					
1/23/17	13000					
Market Basket	30 Market Dr.	2/23/18	117000	623000	4,660,040	12,767
		10/31/17	206000			
		8/2/17	206000			
		5/2/17	94000			
		1/27/17	91000			
Target	100 Quality Drive	1/30/18	16000	279000	2,086,920	5,718
		10/31/17	107000			
		8/2/17	129000			
		5/2/17	27000			
		1/27/17	16000			
NH Hockey	600 Quality Drive	1/30/18	67000	254000	1,899,920	5,205
		10/31/17	74000			
		8/2/17	63000			
		5/2/17	50000			
		1/27/17	50000			
WalMart	3 Commerce Drive	1/30/18	44000	221000	1,653,080	4,529
		10/31/17	43000			
		8/2/17	51000			
		5/2/17	31000			
		2/24/17	52000			
		10/28/16	42000			

ATTACHMENT C

TASK-LABOR HOUR SCHEDULE
 HOOKSET SEWER COMMISSION
 RTE 3A SEWER PUMP STATION, FORCE MAIN/RIVER CROSSING
 April 25, 2018

TASK	PIC/ QA/QC	Project Manager	Project Technical Expert	Geotech/Project Engineer/Senior Env. Scientist	Senior C.A.D. Technician	Staff Engineer	Senior Structural/Mech/Plumbing	M/P Engineers	Labor Total	Labor Cost	Direct Expense	Subcontractor and Subconsultants	Total Cost
	\$223.00	\$132.44	\$174.00	\$132.44	\$116.00	\$100.00	\$140.00	\$120.00					
A PRELIMINARY ENGINEERING PHASE	2	19	12	70	8	80	6	12	191	\$ 25,529	\$ 1,185	\$ 62,800	\$89,214
1 Survey		4							4		\$ 20	\$ 7,500	
2 Soil Borings		4		6		80			90		\$ 65	\$ 55,000	
3 Basis of Design Report	1	4	12	16	8		6	12	41		\$ -		
4 Geotechnical Report	1	5		40					46		\$ -		
5 Environmental Assessment Memorandum		2		8					10		\$ 550		
6 Pan AM Coord.		12							12		\$ 350		
B PRELIMINARY DESIGN	5	24	50	114	112	99	48	24	476	\$ 60,584	\$ 85	\$ 7,500	\$40,669
1 Project Initiation meeting		5	3	3					11		\$ 60		
2 Pump Station Design		2	8	20	40				70				
3 HVAC Design		2					16	24	42				
4 Electrical		4	5						5		\$ 3,500		
5 Structural					24		32		56				
6 Civil Sewer Main				8	16				24				
7 HDD Design		6	16	40		75			137				
8 Instrumentation			4						4			\$ 2,500	
9 Develop 60% Plans				20	32	24			76				
10 Develop 60% Specifications			8	12					20				
11 QC	4		6						10				
12 NHDES Submission	1	2		6					9		\$ 25		
13 Client Meeting		3		3					6		\$ -		
14 Permitting - Shoreland		4		2					6			\$ 1,500	
C FINAL DESIGN	6	20	69	135	144	100	42	28	544	\$ 69,816	\$ 1,105	\$ 8,000	\$70,921
1 Pump Station Design		2	12	16	40				70		\$ 1,045		
2 HVAC Design	1			2			16	24	43				
3 Electrical			4						4			\$ 5,500	
4 Civil		2		4	24				30				
5 Structural				6	32		24		62				
6 HDD Design		4	24	40		60			128				
7 Instrumentation			4						4				
8 Develop 90% Plans			8	16	24	24			72				
9 Develop 90% Specifications			8	20			2	4	34				
10 NHDES Submission	1	4							5				
11 Client Meeting		4	3	3					10		\$ 60		
12 Bid Plans				16	24	16			56				
13 Bid Specifications		4		12					16				
14 QC	4		6						10				
Totals	13	63	131	319	264	279	96	64	1211	\$155,929	\$2,375	\$78,000	\$220,804

ATTACHMENT D

**HOOKSETT, NH
RTE 3A SEWER PS AND FM
PRELIMINARY ENGINEERS OPINION
OF PROBABLE COST**

**DATE: 4-25-18
BY: RL
REV'D: DT
2nd REV: BR**

ITEM	ESTIMATED COST
Division 0	
Bonds, Insurance, Mobilization and General Conditions	\$60,000
Division 1	
Field Engineering, Permits, Submittals, Temporary	\$80,000
Division 2	
Sitework	\$699,384
Division 3	
Concrete	\$79,462
Division 4	
Masonry	\$16,072
Division 5	
Metals	\$25,000
Division 6	
Wood and Plastics	\$1,350
Division 7	
Thermal and Moisture Protection	\$9,240
Division 8	
Doors and Windows	\$20,500
Division 9	
Finishes	\$31,568
Division 11	
Equipment	\$192,040
Division 13	
Special Construction	\$45,000
Division 15	
Mechanical	\$53,500
Division 16	
Electrical	\$131,000
Subtotal	\$1,444,116
GC Markup (10%)	\$144,412
20% Contngency	\$288,823
Construction Total	\$1,877,351
Engineering 26%	\$375,470
Project Total	\$2,252,821

SITE WORK						
ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
Div. 2	Site Work					
1	Common Excavation PS Building	3856	CY	\$10.00	\$38,560.00	
2	Rock Excavation	25	CY	\$115.00	\$2,875.00	
3	Common Fill	2877	CY	\$12.00	\$34,524.00	
4	Crushed Stone (under slab)	35	CY	\$45.00	\$1,575.00	
5	Dewatering	1	LS	\$15,000.00	\$15,000.00	
6	HDD	1	LS	\$400,000.00	\$400,000.00	
7	2" Water Service	50	LF	\$50.00	\$2,500.00	
8	5' Dia. SMH	2	EA	\$4,500.00	\$9,000.00	
9	12" PVC SDR 35 Gravity Sewer	440	LF	\$150.00	\$66,000.00	
10	Tie-in MHs	2	EA	\$10,000.00	\$20,000.00	
11	8" FM	240	LF	\$125.00	\$30,000.00	
12	BR Gravel	125	CY	\$28.00	\$3,500.00	
13	Crushed Gravel	75	CY	\$28.00	\$2,100.00	
14	Hot Bit. Pave, Machine Method	55	Ton	\$100.00	\$5,500.00	
15	Permanent Trench Patch	1100	LF	\$35.00	\$38,500.00	
16	Silt Fence	400	LF	\$4.00	\$1,600.00	
17	Restoration of Growth	1500	SY	\$5.00	\$7,500.00	
18	Bollards	6	EA	\$400.00	\$2,400.00	
19		20	5	CY	\$450.00	\$2,250.00
20	Site Electrical and Control Condiut	400	LF	\$40.00	\$16,000.00	
	TOTAL				\$699,384.00	

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 0	Contractual Requirements				
1	Bonds, Insurance	1	LS	\$25,000.00	\$35,000.00
2	Mobilize, General Conditions	1	LS	\$25,000.00	\$25,000.00
	TOTAL				\$60,000.00

Div. 1	General Requirements				
ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	Field Engineering, Permits, Schedule, Supervision	1	LS	\$40,000.00	\$40,000.00
2	Shop Drawings, Temporary Facilities	1	LS	\$40,000.00	\$40,000.00
	TOTAL				\$80,000.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 3	Concrete				
1	24" Base Mat	50	CY	\$350.00	\$17,500.00
2	Exterior Fnd Wall (15" thick)	72.5	CY	\$600.00	\$43,500.00
3	12" Wet/Dry Side Separation Wall	13	CY	\$600.00	\$7,800.00
4	Precast Concrete Plank	576	SF	\$12.00	\$6,912.00
5	Wet Well Concrete Fill	5	CY	\$750.00	\$3,750.00
	TOTAL				\$79,462.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 4	Masonry				
1	Exterior CMU Wall	720	SF	\$20.00	\$14,400.00
2	Bond Beam	76	LF	\$22.00	\$1,672.00
	TOTAL				\$16,072.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 5	Metals				
1	Steel Pan Stairs and Acc.	1	EA	\$10,000.00	\$10,000.00
2	Monorail w/ Crane	1	EA	\$10,000.00	\$10,000.00
3	Misc. Metals	1	EA	\$5,000.00	\$5,000.00
	TOTAL				\$25,000.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 6	Wood and Plastic				
1	FRP Grating	27	SF	\$50.00	\$1,350.00
	TOTAL				\$1,350.00

Div. 7	Thermal and Moisture Protection				
ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	Roofing (Adhered Membrane & Insulation)	336	SF	\$15.00	\$5,040.00
2	Foundation Dampproofing	800	SF	\$3.00	\$2,400.00
3	Masonry Cavity Wall Insulation	720	SF	\$2.50	\$1,800.00
	TOTAL				\$9,240.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 8	Doors and Windows				
1	Floor Hatches	3	EA	\$3,000.00	\$9,000.00
2	FRP Door, Frame and Hardware	1	EA	\$6,500.00	\$6,500.00
3	Rollup Door	1	EA	\$5,000.00	\$5,000.00
	TOTAL				\$20,500.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 9	Finishes				
1	Exterior Masonry (Sealer)	720	SF	\$2.00	\$1,440.00
2	Interior CMU (block fill +2 coats)	720	SF	\$6.50	\$4,680.00
3	Interior Conc. Floor, Ceiling (Epoxy Paint)	576	SF	\$5.50	\$3,168.00
4	Tanks & Chan.(ep. Fill. + 2 coats 125 & 25 mil)	1152	SF	\$15.00	\$17,280.00
5	Misc.	1	LS	\$5,000.00	\$5,000.00
	TOTAL				\$31,568.00

PROCES EQUIPMENT

ITEM	DESCRIPTION	EQUIPMENT COST	INSTALLATION COST	UNIT	QUANTITY	ESTIMATED COST
DIV. 11	EQUIPMENT					
1	Odor Control	\$5,000.00	\$ 2,500.00	EA	1.0	\$ 7,500
2	Influent Pumps	\$114,600.00	\$ 45,840.00	LS	1.0	\$ 160,440
3	Stop Gate	\$1,500.00	\$ 600.00	EA	1.0	\$ 2,100
4	Channel Monster	\$15,000.00	\$ 6,000.00	EA	1.0	\$ 21,000
5	Sump Pump	\$500.00	\$ 500.00	EA	1.0	\$ 1,000
	TOTAL					\$ 192,040

Div. 13	Special Constructuion				
ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	RTU	1	LS	\$15,000.00	\$15,000.00
2	SCADA CHANGES	1	LS	\$6,000.00	\$6,000.00
3	Ultrasonic Level Indicator	1	EA	\$5,000.00	\$5,000.00
4	High Level Float	1	EA	\$1,500.00	\$1,500.00
7	Main PS Flow Meter	1	LS	\$10,000.00	\$10,000.00
8	Instrumentation Wiring	1	LS	\$7,500.00	\$7,500.00
	TOTAL				\$45,000.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 15	Equipment				
1	Electric Unit Heaters	2	LS	\$3,000	\$6,000.00
2	Exhaust Fans and duct work	1	LS	\$5,000	\$5,000.00
3	Misc. Louvers/ Dampers	1	LS	\$5,000	\$5,000.00
4	HVAC Controls	1	LS	\$2,500	\$2,500.00
5	Process Piping/Valves/Supports	1	LS	\$35,000	\$35,000.00
	TOTAL				\$53,500.00

ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
Div. 16	Electrical				
1	Conduit, Boxes, Wire	1	LS	10,000.00	\$10,000.00
2	Main Disconnect, Distribution Panels	1	LS	10,000.00	\$10,000.00
3	Transformer and Panel	1	LS	2,500.00	\$2,500.00
4	VFD's	3	EA	15,000.00	\$45,000.00
5	MCC('s) and ATS	1	LS	22,000.00	\$22,000.00
6	Lighting	1	LS	4,000.00	\$4,000.00
7	Lightning Protection System	1	LS	2,500.00	\$2,500.00
8	Emergency Generator	1	LS	35,000.00	\$35,000.00
	TOTAL				\$131,000.00