

85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885 603.772.4746 - JonesandBeach.com

November 23, 2021

Rochester Planning Board Attn. Nel Sylvain, Chair 31 Wakefield Street Rochester, NH 03867

RE: Site Plan Application for Residential Townhouses

19 Old Gonic Road, Rochester, NH

Tax Map 131, Lot 1 JBE Project No. 21090

Dear Mr. Sylvain and Board Members,



Jones & Beach Engineers, Inc., respectfully submits a Site Plan Application for the above-referenced parcel on behalf of our client, Green & Company. The intent of this application is to propose a 174-unit townhouse development on this parcel. Currently there is a single-family home with a garage and barn on the property. The land, 31+ acres is a mix of lawn, field and woods. There are trails through the property and access to the existing house is at the end of Old Gonic Road.

The proposal is that these units will be rental townhouses with 2 car garages and space for 2 cars in front of each unit. Therefore, we each unit has the ability to park 4 vehicles and then we also have overflow parking fields spread out around the site. We have three mailbox locations provided as well. The road network is designed to have one main loop road that will connect the end of Old Gonic Road to the end of Emerson Street. Then we have a couple of different loop roads off this main road which will allow the units to be constructed while other units are occupied.

The roadways will have curbing and catch basins to direct stormwater to detention and treatment ponds located on the low side of the property. The stormwater will need to be treated to NHDES Alteration of Terrain Standards. The property will have city water & sewer. We have designed the sewer so it can flow via gravity to the sewer manhole at the intersection of State Street and Old Gonic Road. The sewer has been reviewed by Weston & Sampson and a report is included regarding the pump station offsite. The water lines are proposed to be looped from Emerson to Old Gonic Road. The units will have sprinklers and sprinkler rooms are included on each building.

Four (4) copies of the following are provided in support of this application with the following items:

- 1. Site Plan Application with Checklist.
- 2. Waiver Request Letter.
- 3. Current Deed.
- 4. Signed Authorization.
- 5. Test Pits.
- 6. Sewer Letter from Weston & Sampson.
- 7. Site Specific Soil Report.
- 8. NHB Data Check.
- 9. Abutters List with Three (3) Sets of Mailing Labels.
- 10. Two (2) Drainage Analysis.
- 11. Three (3) Full Size Plan Sets.
- 12. Four (4) Architectural Plan Sets.
- 13. Two (2) 11x17 Plan Sets (Folded).
- 14. Fee Check.

If you have any questions or need any additional information, please feel free to contact our office. Thank you very much for your time.

Very truly yours,

JONES & BEACH ENGINEERS, INC.

Joseph Coronati Vice President

Green & Company (application & plans via email)

John O'Neill (application & plans via email)

Jim Gove, Gove Environmental Services (application & plans via email)





RESIDENTIAL SITE PLAN APPLICATION (tournouses apts. etc.)

City of Rochester, New Hampshire



Date: 11/23/21	Is a conditional use needed		
	(If so, we encourage you to su	ubmit an application as	soon as possible.)
Property information			
Tax map #: 131 ; Lot	#('s): 1; Zoning	g district: Residential -2	
Property address/location:	19 Old Gonic Road, Rochester, NH		
Name of project (if applicable	e): Old Gonic Road Townhouses		
Size of site: 30.07 acres;	overlay zoning district(s)?	None	
Property owner			
Name (include name of indi	vidual):		
Mailing address: 208 Oliver Cre	ek Road, Ellijay, GA 30536		
Telephone #:	Ema	nil:	<u></u>
Applicant/developer (if Name (include name of indiv		ompany	
Mailing address: 11 Lafayette F	oad, North Hampton 03862		
Telephone #: 603-964-7572	Ema	mgreen@greenandcompa	any.com
Engineer/designer			
Name (include name of indiv	ridual):	ach Engineers, Inc.	
Mailing address: PO Box 219, Str	atham, NH 03885		
Telephone #: 603-772-4746	Fax	#:	
Email address: jcoronati@jonesa	ndbeach.com Pro	fessional license #:	
Proposed use			
(You are not bound by information	on bedrooms and type of owners	ship unless that is a condi	tion of approval.)
Total number of proposed d	velling units: <u>174</u> ; num	ber of existing dwellin	ng units: 1
Proposed bedrooms/unit: 3	; total nu	mber of proposed be	drooms: 525

New building(s)? 27 addition(s)/modifications	s to existing building(s	s)? No
Townhouses/rowhouses: <u>×</u> flats: duplex	es: freestanding	detached units:
Proposed ownership - leasehold: $\underline{\times}$ fee simple		
Utility information		
City water? yes \times no; How far is City wa	ater from the site? On	road next to site
City sewer? yes \times no; How far is City se		
lf City water, what are the estimated total daily nee	eds? _ ^{78,300} gall	ons per day
Where will stormwater be discharged? Gravel Wetland	s on site to outlet to Axe Handle	Brook
Other information		
# parking spaces: existing: 0 total proposed: 73	; Are there pertine	ent covenants?
Describe existing conditions/use (vacant land?): _1		
with a mix offields & woods.		
Check any that are proposed: variance; sp	ecial exception ;	conditional use
Check any that are proposed: variance; spontering wetlands: Is any fill proposed? No; area to be		
	filled:; k	ouffer impact? No
<u>Wetlands</u> : Is any fill proposed? <u>No</u> ; area to be	filled:; k	ouffer impact? No
<u>Wetlands</u> : Is any fill proposed? <u>No</u> ; area to be	tion of site (should to	ouffer impact? No
Wetlands: Is any fill proposed? No ; area to be Proposed post-development disposition	tion of site (should to	otal 100%) % overall site
Wetlands: Is any fill proposed? No ; area to be Proposed post-development disposing Building footprint(s) – give for each building	tion of site (should to	otal 100%) **Noverall site* 9.6%
Wetlands: Is any fill proposed? No ; area to be Proposed post-development disposition Building footprint(s) – give for each building Parking and vehicle circulation	tion of site (should to Square footage 125,280 202,175	otal 100%) **Noverall site* 9.6% 15.4%
Proposed post-development disposi Building footprint(s) – give for each building Parking and vehicle circulation Planted/landscaped areas (excluding drainage)	tion of site (should to Square footage 125,280 202,175 521,467	otal 100%) **Noverall site* 9.6% 15.4% 39.8%
Proposed post-development disposi Building footprint(s) – give for each building Parking and vehicle circulation Planted/landscaped areas (excluding drainage) Natural/undisturbed areas (excluding wetlands)	tion of site (should to Square footage 125,280 202,175 521,467 366,714	otal 100%) **Noverall site* 9.6% 15.4% 39.8% 28.0%
Proposed post-development disposis Building footprint(s) – give for each building Parking and vehicle circulation Planted/landscaped areas (excluding drainage) Natural/undisturbed areas (excluding wetlands) Wetlands Other – drainage structures, outside storage, etc.	tion of site (should to Square footage 125,280 202,175 521,467 366,714 58,294	otal 100%) **Noverall site* 9.6% 15.4% 39.8% 28.0% 4.5%
Proposed post-development disposing Building footprint(s) – give for each building Parking and vehicle circulation Planted/landscaped areas (excluding drainage) Natural/undisturbed areas (excluding wetlands) Wetlands Other – drainage structures, outside storage, etc.	filled:	otal 100%) **Noverall site* 9.6% 15.4% 39.8% 28.0% 4.5% 2.7%
Proposed post-development disposis Building footprint(s) – give for each building Parking and vehicle circulation Planted/landscaped areas (excluding drainage) Natural/undisturbed areas (excluding wetlands) Wetlands Other – drainage structures, outside storage, etc.	filled:	otal 100%) **Noverall site* 9.6% 15.4% 39.8% 28.0% 4.5% 2.7%

Submission of application

This application must be signed by the property owner, applicant/developer (if different from property owner), *and/or* the agent.

I(we) hereby submit this Site Plan application to the City of Rochester Planning Board pursuant to the <u>City of Rochester Site Plan Regulations</u> and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant/developer (if different from property owner)/as agent, I attest that I am duly authorized to act in this capacity.

Signature of property owner:

Date: 11/22/21
Date: ///22/2/
Date: ///22/21

Authorization to enter subject property

I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.

Signature of property owner:		
	Date:	

Site Plan Checklist (residential and nonresidential)

*<u>To be filled out by applicant/agent</u> (with notes to be inserted by staff)

See regulations for other specific requirements

City of Rochester Planning & Development Department

Project Name: Old Gonic Road Townhouses	_ Map: <u></u>		Lot:_1	Date: 11/23/21		
Applicant/agent: Green and Company	_ Signature:					
(Staff review by:		_ Date): _,			
General items	V.	A.	N//A	Waiver		
4 sets completed application	Yes	No	N/A	□ '	Comments	
Total application fee	х					
4 copies of narrative	X					
3 sets of full-size plans	X					
2 sets of 11 X 17 reductions	x					
Completed abutters list	х					
Copy of existing covenants, easements, deed restrictions						
Plan Information Basic information including: Title sheet Name of Project Date North arrow Scale Legend Revision block Vicinity sketch -not less than 1" = 1,000	x					
Name and address of developer/applicant	x					
Name, stamp, and NH license # of and survey, engineer, and/or architect	x					
City tax map & lot #'s	X				·	
Notation on plans: "For more information	x					

General Items Continued				Waive		
Approval block (for signature by staff attesting to Planning Board approval)	Yes	No	N/A	Reque	ested 	Comments
References to neighboring plans and subdivisions	x					
Surveyed property lines including: existing and proposed bearings existing and proposed distances pins, stakes, bounds monuments benchmarks 	X					
Include error of closure statement	X				,	
Information on abutting properties: owner name owner address tax map and lot # square footage of lots approximate building footprints use	x					
Zoning Zoning designations of subject tract and in vicinity of tract	X					
Zoning requirements for district: frontagelot dimensions/densityall setbackslot coverage	x					
Zoning overlay districts	х					
Existing Topographic Features: Contour lines a (not to exceed two-foot Intervals, except on steep slopes) and spot elevations	x					
Soil types and boundaries	x					
Soil test pit locations, profiles, and	X					
Depth to water table and ledge Percolation test locations and results	x					

Existing Topographic Features Co				Waiver			
Water features (ponds, streams)	Yes	No	N/A	Requ	ested	Comments	
Wetlands including name of certified Wetlands scientist who delineated	x						
Statement whether located in flood area, And if so, 100 year flood elevation	X						
Delineation of trees and open areas	X				-		
Overview of types of trees and vegetation	X						
Stone walls and archaeological features	x						
Locations of trails and paths	X						
Other natural/cultural resources (productive farmland, habitats, scenic views, historic structures, etc)	X						
Building Information Existing buildings/structures including square footage and use	X				Transition of the Control of the Con		
Proposed building/structures including square footagefirst floor elevationuse# bedrooms per unit if residential	x						
Elevation drawing of proposed buildings and structures as follows: Showing all four sides Drawn to scale with dimensions Showing exterior materials Showing exterior colors	x						
Circulation and Parking Plans Existing and proposed driveways and access points including: Width of opening Turning radii Cross section of driveway	X						
Curbing & edge treatment	X						
Traffic control devices, if appropriate:	X						

Circulation and Parking Plans Co.	Waive	r			
Number of parking spaces required by ordinance	Yes	No	N/A	Reque	ested Comments
• proposed					
Parking layout and dimensions of spaces	X				
Handicap spaces	x				
Loading area			X		
Pedestrian circulation plan (including existing sidewalks in vicinity, if any)	X				
Bicycle rack, if appropriate	X				
Buffers, landscaping & screening	Х				
Snow storage areas/plan	X				
<u>Utilities</u> Show all pertinent existing and proposed p	_	elevat	ions, m	aterials,	, sizes, and details
Water lines/well (with protective radius)	x				, o.e.oo, and dotailo
•					
Sewer lines/septic and leaching areas	X				
Pump stations			х		
Stormwater management system: pipes, culverts,, catch basins detention/ retention basins, swales, rip rap, etc.	X				
Fire hydrant location(s) and details	X				
Electric, telephone, cable TV (underground or overhead)	X				
Gas lines	x				
Fire alarm connections	Х				
Treatment of solid waste (dumpsters?)	x				
Handing of oil, grease, chemicals hazardous materials/waste			x		

<u>Landscaping Plan</u>	Yes	No	NI/A	Waive	
Demarcation of limits of construction, clear delineation of vegetation to be saved and strategy for protecting vegetation	X	No	N/A	Reque	ested Comments
Proposed ground cover, shrubbery, and trees including: • botanical and common names • locations and spacing • total number of each species • size at installation	x				
Planting plan (size of holes, depth of planting, soil amendments, etc.)	X				
Irrigation: system? soaker hose? Manual? undergrou	x und, etc	 c.			
Protection of landscaping from vehicles (Curb stops, berm, railroad ties, etc)	X				
Specification all finished ground surfaces and edges (greenspace, mulch, asphalt, concrete, etc.)	x				
Fencing/screening	X				
Signage Location and type of signs: Attached to building Freestanding Directional, if appropriate			X		
Dimensions of signs: Height Area Setback			x		
Elevation drawings with colors & materials			X		
Type of Illumination, if proposed			х		

Outdoor Lighting Locations	Yes	No	N/A	Waiver Requested	Comments
Height of fixtures	х				
Wattage	X				
Type of light (high pressure sodium, etc)	x				
Design/cut sheets of fixtures	X				
Illumination study, if appropriate	Х				
Other Elements Traffic study, if appropriate	x				
Drainage study with calculations, storm Waimpact analysis, and mitigation plan	ter				
Grading plan (including finish grades)	X				
Earth being removed from site(in cubic yards) 🗌				
Erosion and sedimentation plan	X			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Proposed covenants, easements, And deed restrictions, if any					
Fiscal impact study, if requested					
Additional Comments:					
			-		



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November 23, 2021

Rochester Planning Board Attn. Nel Sylvain, Chair 31 Wakefield Street Rochester, NH 03867

RE: Waiver Request

19 Old Gonic Road, Rochester, NH

Tax Map 131, Lot 1 JBE Project No. 21090

Dear Mr. Sylvain and Board Members,

On behalf of our client, Green & Company, Jones & Beach Engineers, Inc. respectfully requests a waiver from the Rochester Subdivision Regulations for the following:

Subdivision Regulations – Section 5.3.9, Table 5-2 Street Alignment Design Standards

Jones & Beach Engineers request a waiver from this section as we have 4 areas that are less than the 200' radius requirement. Road 3 has a radius of 80'. Road 4 has 2 radii of 50'. The entry from Old Gonic has a short radii of 68'. We feel that the smaller radii will help control speed through the residential side streets.

We look forward to discussing these waiver requests at the Planning Board Hearing. Thank you very much for your time.

Very truly yours

ONES & BEACH ENGINEERS, INC.

Joseph Coronati Vice President

Letter of Authorization

I/We, William B. Lacouture of 208 Oliver Creek Road, Ellijay, GA 30536, as owner of certain real property situated Rochester, New Hampshire further described as 19 Old Gonic Road, consisting of approximately 35 +/- Acres of land, with a house and other improvements, as shown on Tax Assessors Map 131, Lot 10, and further defined by legal description found at the Strafford County Registry of Deeds Book 4093, Page 0148, dated January 22, 2013 and recorded on January 28. 2013, and all interests in the discontinued portion of Old Gonic Road between the end of Old Gonic Road and the Spaulding Turnpike. Meaning and intending to convey all interests in property located between Old Gonic Road, State Street, Emerson Road, the Ball Fields, the Roman Catholic Church Property and the Spaulding Turnpike (all 4 sides of subject property) do hereby authorize Green & Company Building and Development Corp. and its Affiliates, Agents, Assigns and Engineers to act on my/our behalf and to appear before the zoning board of adjustment and/or the planning board of said city/town and/or any of its boards or commissions, in my/our behalf for the purpose of seeking any regulatory relief that may be requested by the person I/we have above authorized, including variances, special exceptions, dimensional waivers, site plan approval, lot line adjustment approval and subdivision approval, hereby ratifying any actions taken by him/her/them to obtain any such relief. I/We authorize Green & Company Building and Development Corp. and its Affiliates, Agents. Assigns and Engineers to act in my/our behalf in all matters concerning the development and approval process, without limitation, for the above stated property, to include any required signatures.

I/We shall cooperate fully with Green & Company Building and Development Corp. and its Affiliates, Agents, Assigns and Engineers in seeking timely public approvals and for the completion of the sale contemplated herein. I/We agree to use my/our good faith efforts to provide any assistance I/we reasonably can to Green & Company Building and Development Corp. and its Affiliates, Agents, Assigns and Engineers throughout the development process, including but not limited to signing permit applications as needed.

Witness	Owner: William B. Lacouture	
Witness	Owner:	Date

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E-Doc # 210016074

08/09/2021 12:51:20 PM

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Book 4940 Page 24

CATHERINE A. BERUBE er of Deeds, Strafford County

Register of Deeds, Strafford County LCHIP STA183923 25.00

OUITCLAIM DEED

KNOW ALL MENT BY THESE PRESENTS THAT I, WILLIAM B. LaCOUTURE, Successor Trustee of the LEO P. LaCOUTURE REVOCABLE TRUST OF 1994, u/d/d January 6, 1994, of 208 Oliver Creek Road, Ellijay, Gilmer County, Georgia, 30536, for consideration paid, hereby grants to WILLIAM B. LaCOUTURE, married, of 208 Oliver Creek Road, Ellijay, Gilmer County, Georgia, 30536, with quitclaim covenants, all my right, title and interest in and to:

A certain parcel of real estate with the buildings and improvements thereon located in Rochester Heights, Rochester, County of Strafford, State of New Hampshire, more particularly described as follows:

Beginning at a wooden stake driven in the ground at the northwesterly corner of lot numbered 158, as shown on the plan of the so-called Rochester Heights, recorded in the Strafford County Records, Book 393, Page 501, thence running in a southwesterly direction by land of William H. Felker, to the Hussey Brook at high water mark: thence by said brook at high water mark southerly to a stone post set in the ground on the bank of said brook and near the dam erected by the late Warren Wadleigh, deceased, across the brook aforesaid; Thence southerly to a stone post set in the ground on the northerly bank of the canal leading from said dam to the axehandle mill, erected by the said deceased: Thence easterly by the northerly bank of said Canal to the road leading from the so-called French Street to Dwelling house of Jonathan E. Kimball; Thence by said Road to a wooden stake driven in the ground on the southwesterly corner of lot numbered 122 situated in the said Rochester Heights; Thence in a northerly direction by said Rochester Heights ten hundred and thirty (1030) feet, more or less, to a wooden stake driven in the ground; thence in a westerly direction by the said Rochester Heights two hundred (200) feet. more or less, to a wooden stake; Thence in a northerly direction four hundred forty-eight (448) feet, more or less, by the said Rochester Heights, to the point of beginning, together with the right at all times to enter upon the land of the grantors of the conveyance of this land to George H. Tebbetts southerly of the boundary line aforesaid along the said canal for the purpose of

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maintaining and keeping in repair the necessary piping and a water ram where one is now located and taking water from said canal, whenever water may be found therein, and forcing it by means of said ram through subterranean pipes to the buildings on said described premises in sufficient quantities to supply the same with water for domestic and drinking purposes but not intending hereby to convey any land beneath the water of said canal or southerly of its northerly bank. The gate of said dam shall not at any time be so tightly closed as not to allow sufficient water to pass into the canal to supply the ram aforesaid; and the live stock kept on said premises shall at all times have access to the water of the said brook.

Excepting herefrom all sawable soft lumber, with the right to set mill and stick the timber on said farm, the said lumber to be removed within two years from July 15th, 1920, as granted to George H. Springfield, by deed of July 15th, 1920.

Meaning and intending to describe and convey the same premise conveyed to Leo P. LaCouture as Trustee of the Leo P. LaCouture Revocable Trust of 1994 by Quitclaim Deed of Leo P. LaCouture, dated January 6, 1994, and recorded at the Strafford County Registry of Deeds in book 1725, Page 538.

THIS TRANSFER IS EXEMPT FROM TRANSFER TAX PURSUANT TO NEW HAMPSHIRE RSA 78-B:2 XXI.

Executed this 6 day of august, 2021.

Leo P. LaCouture Revocable Trust of 1994

William B. LaCouture, Successor Trustee

STATE OF COUNTY O

, 2021, personally appeared William B. LaCouture in his capacity as Successor Trustee of the Leo P. LaCouture Revocable Trust of 1994, known to me, or satisfactorily proven, to be the person(s) described in the foregoing instrument, and acknowledged that he executed the same in the capacity therein stated and for the purposes therein contained.

Notary Public Justice of the Peace

My commission expires:

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Certification of Trustee

William B. LaCouture, Successor Trustee of the Leo P. LaCouture Revocable Trust of 1994, releases to the Grantee all rights of homestead and other interests therein.

The undersigned Trustee, as Trustee under the Leo P. LaCouture Revocable Trust of 1994, created under trust agreement dated January 6, 1994, and thereto has full and absolute power in said trust agreement to convey any interest in real estate and improvements thereon held in said Trust and no purchaser or third party shall be bound to inquire whether the Trustee has said power or is properly exercising said power or to see the application of any trust asset paid to the Trustee for a conveyance thereof.

Leo P. LaCouture Revocable Trust of 1994

08/06

2021

By:

William B. LaCouture, Successor Trustee

STATE OF NEW HAMPSHIRE COUNTY OF STRAFFORD

Justice of the Peace Notary Public

My Commission Expires:



TEST PIT DATA

Project 19 Old Gonic Road, Rochester, NH

Client Green and Company

GES Project No. 2021113

MM/DD/YY Staff 07-12-2021 JP Gove, Certified Soil Scientist # 004

Test Pit No. D2 BOXFORD

ESHWT: 13"
Termination @ 85"
Refusal: No
Obs. Water: 13"

Depth	Color	Texture	Structure	Consistence	REDOX	HORIZON
0-10"	2.5Y3/2	SIL	GR	FR	N	Ap
10-13"	2.5Y5/6	SIL	GR	FR	N	$\hat{\mathrm{Bw}}$
13-85"	2.5Y5/2	SICL	BLK	FI	P	C

GR (TEXTURE) = GRAVELLYGR = GRANULARFR = FRIABLELS = LOAMY SANDOM = MASSIVEFI = FIRMS = SANDPL = PLATYC = COMMONFSL = FINE SANDY LOAM BLK = BLOCKYP = PROMINENTSL = SANDY LOAMD = DISTINCTSIL = SILT LOAMN = NONE

SICL = SILTY CLAY VF (TEXTURE) = VERY FINE F (TEXTURE) = FINE

CB (TEXTURE) = COBBLY V (ROCK FRAGMENT)(TEXTURE) = VERY

CN (TEXTURE) = CHANNERY

Test Pit No. D3 ELDRIDGE ESHWT: 26"

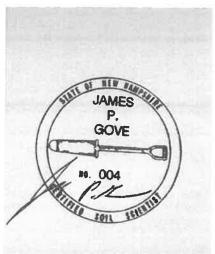
Termination @ 84"
Refusal: No
Obs. Water: 34"

Depth	Color	Texture	Structure	Consistence	REDOX	HORIZON
0-12"	10YR3/2	LS	GR	FR	N	Ap
12-26"	2.5Y5/4	LS	GR	FR	N	Bw1
26-34"	2.5Y5/4	LS	GR	FR	D	Bw2
34-84"	2,5Y5/2	SICL	BLK	FI	P	C

Test Pit No ESHWT: Termination Refusal: Obs. Water	n @	D4 22" 86" No 26"	ELI	DRIDGE		
Depth 0-8" 8-22" 22-26" 26-86"	Color 10YR3/2 10YR5/6 2.5Y5/4 2,5Y5/2	Texture LS LS LS SICL	Structure GR GR OM BLK	Consistence FR FR FR FR FI	REDOX N N D P	HORIZON Ap Bw1 Bw2 C
Test Pit No ESHWT: Termination Refusal: Obs. Water	n @	D5 23" 72" No NONE	SCI	TUATE		
Depth 0-10" 10-23" 23-72"	Color 10YR3/2 10YR5/6 2.5Y5/4	Texture CB FSL CB FSL CB LS	Structure GR GR PL	Consistence FR FR FI	REDOX N N D	HORIZON Ap Bw Cd
Test Pit No ESHWT: Termination Refusal: Obs. Water:	n @	D6 20" 71" No NONE	SCI	TUATE		
Depth 0-8" 8-20" 20-71"	Color 10YR3/2 10YR5/6 2.5Y5/4	Texture CB FSL CB FSL CB LS	Structure GR GR PL	Consistence FR FR FI	REDOX N N D	HORIZON Ap Bw Cd
Test Pit No ESHWT: Termination Refusal: Obs. Water:	ı @	D7 25" 57" 57" NONE	SCI	TUATE		
Depth 0-10" 10-25"	Color 10YR3/2 10YR5/6	Texture CB FSL	Structure GR	Consistence FR	REDOX N	HORIZON Ap

Test Pit No. ESHWT: Termination @ Refusal: Obs. Water:		D12 26" 56" 56" NONE	SCI	TUATE		
Depth 0-8" 8-26" 26-56"	Color 10YR3/2 10YR5/6 2.5Y5/4	Texture CB FSL CB FSL CB LS	Structure GR GR PL	Consistence FR FR FI	REDOX N N D	HORIZON Ap Bw Cd
Test Pit No ESHWT: Termination Refusal: Obs. Water:	ı @	D13 29" 57" NONE	SCI	TUATE		
Depth 0-9" 9-29" 29-57"	Color 10YR3/2 10YR5/6 2.5Y5/4	Texture CB FSL CB FSL CB LS	Structure GR GR PL	Consistence FR FR FI	REDOX N N D	HORIZON Ap Bw Cd
Test Pit No ESHWT: Termination Refusal: Obs. Water:	ı @	D14 21" 52" No 21"	ELI	DRIDGE		
ESHWT: Termination Refusal:	ı @	21" 52" No	ELI Structure GR GR BLK	ORIDGE Consistence FR FR FR FI	REDOX N N P	HORIZON Ap Bw C
ESHWT: Termination Refusal: Obs. Water: Depth 0-9" 9-21"	Color 10YR3/2 10YR5/6 2.5Y5/2	21" 52" No 21" Texture LS LS	Structure GR GR BLK	Consistence FR FR	N N	Ap Bw

Test Pit No. ESHWT: Termination @ Refusal: Obs. Water:		D16 15" 72" No 27"	ELDRIDGE			
Depth 0-7" 7-15" 15-27" 27-72"	Color 10YR3/2 10YR5/6 7.5YR5/6 2,5Y5/3	Texture LS LS LS SIL	Structure GR GR OM BLK	Consistence FR FR FR FI	REDOX N N D	HORIZON Ap Bw1 Bw2 C
Test Pit No ESHWT: Termination Refusal: Obs. Water:	ı @	D18 20" 60" No 39"	ELD	PRIDGE		
Depth 0-8" 8-20" 20-39" 39-60"	Color 10YR3/2 10YR5/6 7.5YR5/6 2,5Y5/3	Texture LS LS LS SIL	Structure GR GR OM BLK	Consistence FR FR FR FI	REDOX N N D P	HORIZON Ap Bw1 Bw2 C
Test Pit No ESHWT: Termination Refusal: Obs. Water:	ı @	D20 NONE 6" 6" NONE	HOL	LIS		
Depth 0-6"	Color 10YR3/2	Texture FSL	Structure GR	Consistence FR	REDOX N	HORIZON A



7-13-2021

For 19 Old Gonic Road, Rochester, NH

By

Gove Environmental Services, Inc.

1. MAPPING STANDARDS

Site-Specific Soil Mapping Standards for New Hampshire and Vermont. SSSNNE Special Publication No. 3, current version. This map product is within the technical standards of the National Cooperative Soil Survey. It is a special product, intended for the submission to NH DES Alteration of Terrain. It was produced by a professional soil scientist and is not a product of the USDA Natural Resource Conservation Service.

OVERVIEW:

The area has two separate land forms. At the lower, flatter elevations, the soils are dominated by sand over clay or silts. In some areas, the silts are at the surface, but, for the most part a mantle of sand overlays the silts and clays. These soils extend down to Axe Handle Brook.

The upper land form is a large hill that is dominated by bedrock and a sandy hard pan. One side of the hill (south slope) there is exposed bedrock and very shallow soils. On the majority of the hill, the soils are deep (greater than 40 inches), but the sandy hard pan is within the 40 inch control section and thus is both a mineral restrictive layer and the estimated seasonal high water table.

On the southwestern corner of the area is a rock dam in the Axe Handle Brook and manmade fill area to the south of the dam. Rock and loam were dumped into this area.

This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, intended for infiltration requirements by the NH DES Alteration of Terrain Bureau. It was produced by a professional soil scientist, and is not a product of the USDA Natural Resources Conservation Service. There is a report that accompanies this map.

The site specific soil survey (SSSS) was produced July 21, 2021, and was prepared by James P. Gove, CSS # 004, Gove Environmental Services, Inc. The survey area is located at 19 Old Gonic Road, Rochester, NH.

Soils were identified with the New Hampshire State-wide Numerical Soils Legend, USDA NRCS, Durham, NH. Issue # 10, January 2011. The numeric legend was amended to identify the correct soil components of the complex.

Hydrologic Soil Group from Ksat Values for New Hampshire Soils, Society of Soil Scientists of New England, Special Publication No. 5, September, 2009.

SSSS SYM.	SSSS MAP N	IAME		HISS SYM.	HYDRO. SOIL GRP.
953	Boxford (son	newhat poorly	drained)	453	C
38	Eldridge loan	ny sand	•	343	C
141	Hollis-Rock	Outcrop-Chatfi	eld	228	D
448	Scituate fine	sandy loam		323	C
500	Udorthents, le	oamy		762	N/A
538	Squamscott lo	oamy sand		543	C
SLOPE PHA	SE:				
0-8%	В	8-15%	C	15-25%	D
25%+	E				

Scale of soil map:

Approximately 1" equals 100'

Contours:

Intervals of 2 feet

2. DATE SOIL MAP PRODUCED

Date(s) of on-site field work:

June and July of 2021

Date(s) of test pits:

07-12-2021

Test pits recorded by:

J.P. Gove

3. GEOGRAPHIC LOCATION AND SIZE OF SITE

City or town where soil mapping was conducted: Rochester

Location: North of Old Gonic Road, Tax map 131, lot 1

Size of area: approximately 32 acres

Was the map for the entire lots? yes

If no, where was the mapping conducted on the parcel: n/a

4. PURPOSE OF THE SOIL MAP

Was the map prepared to meet the requirement of Alteration of Terrain? Yes

If no, what was the purpose of the map? N/A

Who was the map prepared for? Green and Company

SOIL MAP UNIT DESCRIPTIONS – SOIL DESCRIPTIONS - PHOTOS

SSSS SYM. SSSS MAP NAME HISS SYM. HYDRO. SOIL GRP.

953 Boxford (somewhat poorly drained) 453 C

Boxford silt loam is a marine silt/clay that is somewhat poorly drained, with water tables of less than 15 inches, but not hydric. This is a minor soil area for the site and limited to the southern portion. This soil wets up quickly and drains slowly.

38 Eldridge loamy sand 343 C

Eldridge loamy sand has a topsoil subsoil of sand/loamy sand over a substratum of silt and clay. The water tables range from 15 to 30 inches. This map unit dominates the northern and western portion of the site, in the flat areas away from the major hill that covers the middle and southern portion of the site. While the silt/clay substratum retains water, the sands above allow the water to move away toward the brook.

141

Hollis-Rock Outcrop-Chatfield

228

D

This bedrock controlled map unit is a small area that is on the southern steep slopes of the hill. Bedrock is virtually at the surface or covered with a thin mantle of loam. This map unit is mostly Hollis and Rock Outcrop, with Chatfield being a very minor component.

448

Scituate fine sandy loam

323

 \mathbf{C}

Scituate fine sandy loam is a moderately well drained soil with a sandy dense hard pan in the substratum. The water tables are 20 to 30 inches. What is more interesting about these soil map units are the fact they are deep (greater than 40 inches) but not very deep (greater than 60 to 80 inches). Bedrock was found in the majority of the soil profiles between 40 and 60 inches. These soil map units are over the hill and side slopes of the hill landform in the middle and southern portion of the site.

500

Udorthents, loamy

762

N/A

This map unit represents the old rock dam and fill/boulders/rock that was placed behind the dam and downstream of the structure. There was no attempt made to characterize this man-made area. No slopes were assigned to this broken landscape.

538

Squamscott loamy sand

543

C

These map units represent the wetlands on the site. The water tables are at or near the surface. The soils are either sand over silts or mostly silts (which would be an inclusion).

Detail soil descriptions are in the test pit report for the site. This is a separate document from this report.

6. RESPONSIBLE SOIL SCIENTIST

Name:

James P. Gove

Certified Soil Scientist Number:

004

7. OTHER DISTINGUISHING FEATURES OF SITE

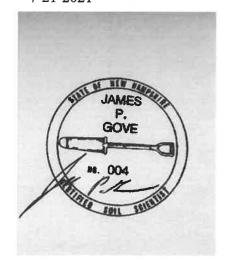
Is the site in a natural condition?

For the majority of the site.

If no, what is the nature of the disturbance? Area at the dam and south of the dam.

Stamp of CSS

7-21-2021



New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

To: Andrew Butler, Jones & Beach Engineers

PO Box 219

Stratham, NH 03885

From: NH Natural Heritage Bureau

Date: 11/4/2021 (valid until 11/4/2022)

Re: Review by NH Natural Heritage Bureau of request submitted 10/28/2021

Permits: NHDES - Alteration of Terrain Permit, USEPA - Stormwater Pollution Prevention

NHB ID: NHB21-3386 Applicant: Andrew Butler

Location: Rochester

19 Old Gonic Road

Project

Description: The intent is to construct a 175-unit townhouse development on the

existing parcel with an estimated lot coverage of 322,500 sf.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 10/28/2021 2:35:21 PM, and cannot be used for any other project.

New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: NHB21-3386





100 International Drive, Suite 152, Portsmouth, NH 03801 Tel: 603.431.3937

MEMORANDUM

TO:

Joseph Coronati, Jones & Beach Engineers, Inc.

FROM:

John Sykora, Senior Team Leader, Weston & Sampson Engineers

Griffin Parodi, EIT, Staff Engineer, Weston & Sampson Engineers

DATE:

November 10, 2021

SUBJECT:

Rochester, NH, Old Gonic Road Sewer Capacity Evaluation

This memorandum presents the results of Weston and Sampson Engineer's (WSE) evaluation of Rochester's (the City) sewer collection system and its ability to accommodate wastewater flows from the proposed 175-unit townhouse development on the south end of Old Gonic Road.

It is understood that the Developer intends to provide residential use development to include an estimated 175 units along Old Gonic Road. The wastewater will be conveyed to the existing Old Gonic Road 8-inch gravity sewer system and subsequent Old Route 125 Pump Station which conveys flow through the City's gravity system via a siphon under Route 16 and ultimately to the WWTF. The City of Rochester has required an evaluation of the existing sewer collection system, including associated pump station to determine the impact of the proposed development.

Weston & Sampson Engineers reviewed relevant wastewater flow information provided by the Client and City to develop the estimated design flows for the proposed development that will impact available capacity of existing sewer infrastructure. WSE developed a desktop hydraulic analysis of the downstream system to identify pipe capacity limitations of critical sewer reaches along the connection route to the WWTF. Record drawings provided by the city were used to create the desktop model. No dynamic modeling was performed. An assessment of the Old Route 125 pump station capacity, operation, and efficiency was also performed.

Evaluation of Wastewater Flows

Data Sources

Multiple sources of flow data were used in this evaluation. At the time of this memorandum, WSE has been conducting a city-wide flow metering study to measure wastewater flows and detect sewer sheds that contribute high volumes of infiltration and inflow after rain events. As part of this study, a flow meter was installed at the first manhole upstream of the Old Route 125 pump station wetwell, which receives all flow that contributes to the station. Data from this flow meter from April through July of 2021 was used to evaluate the capacity of the pump station. This data was used in conjunction with City supplied pump station flow data, which originates from the station's discharge flow meter. Figure 1 on the following page shows the locations of the flow meters in relation to the proposed development, pump station, and siphons.

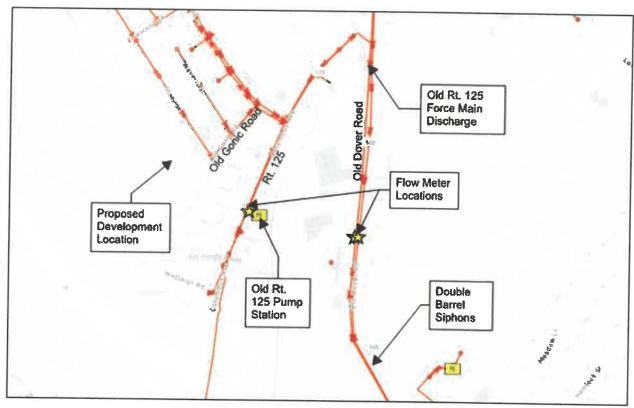


Figure 1 - Rochester, NH Sewer System GIS Map

Flow data from two City-owned flow meters, installed a short distance upstream of the siphons, was used to help evaluate the capacity of the double barrel siphon. Additionally, the City provided WSE with the 2015 *Draft Basis of Design Report Siphon 16B, Pump Station and Forcemain*, by Brown and Caldwell. This detailed report evaluated the capacity of the siphons and proposed alternatives for expanding the capacity and preventing backups during extreme rain events.

Record drawings for Old Gonic Road, Columbus Ave (Route 125), Old Dover Road, and the siphon were reviewed to gather pipe lengths, invert elevations (for calculating pipe slopes), pipe material, and pipe size data. Record drawings and O&M information for the Old Route 125 pump station was also reviewed to evaluate the capacity of the station.

Projected Flows from Development

Table 1. Future Flows from Proposed Development						
Number of Units	Flow per Unit (GPD)	Average Daily Flow (GPD)	Peak Hourly Flow (GPM) ¹			
175	200	35,000	146			

¹Peaking factor of 6 applied to average daily flow to calculate peak hourly flow. Peaking factor selection based on NHDES and TR16 sewer design standards.

The peak hourly flow of 146 gallons per minute (210,000 gallons per day) was used for the purpose of sewer capacity calculations.



Old Route 125 Pump Station Flows

All flows from the proposed development will enter the gravity sewer system on Old Gonic Road, which is routed to the Old Route 125 Pump Station. To ensure the pump station has the capacity to accommodate the additional 146 gpm peak flow, the existing pump station flows and pumping capacity were evaluated. Table 2 below summarizes the flow data from both the flow meter upstream of the station and the discharge flow meter.

Table 2. Old Route 125 Pump Station Flows						
Data Source	Existing Average Daily Flow (GPD)	Existing Peak Hourly Flow (GPM)	Future Peak Hourly flow ¹ (GPM)			
Pump Station Mag Meter (Data from 2016 – 2020)	81,700	312 ²	486			
Influent Manhole Flow Meter ³ (Data from April- July 2021)	101,000	1814	327			

¹Future peak hourly flow equals the sum of the existing peak hourly flow from the indicated data source and the projected peak hourly flow from the proposed development (146 gpm).

Both flow data sources were considered when evaluating pump station capacity. The influent flow meter recorded higher flows on average than the historic data from the effluent flow meter. However, the sample size for this meter (4 months) is much smaller than that of the effluent meter (5+ years). Additionally, during the four-month sample period for the gravity flow meter there was above average rainfall. The largest peak hourly flow recorded by the flow meter over the four-month period was 181 GPM, which occurred on April 25, 2021.

During the 4-month monitoring period, the highest intensity storm (measured by a local rain gauge) was observed on July 9, 2021. On that day, 2.76 inches of total rainfall was measured and the storm had a peak intensity 1.08 inches per hour. During this storm event, the highest flow over the four-month period was recorded by the influent flow meter. The meter, which records flows in one-minute increments, recorded a maximum flow of 288 GPM. The peak hourly flow recorded by the meter during this storm event was 167 GPM.

Siphon Flows

Flow metering data from two City-owned flow meters (located shortly upstream of the siphon) was reviewed. Table 3 below indicates the average daily flows and maximum flows recorded by the meters from April – August, 2021. Both of these interceptors merge prior to flowing through the siphon, and therefore the sum of these flows was considered when conducting the siphon capacity analysis. This combined flow is included in the bottom row of Table 3.

This table also includes flow data from the two meters that was used in the 2015 Brown and Caldwell siphon capacity analysis. The maximum flows that were recorded during the 2014-2015 study period



²Peaking factor of 5.5 applied to average daily flow to calculate peak hourly flow. Peaking factor selection based on TR16 sewer design standards.

³Flow meter installed by Flow Assessment Services, a subconsultant for Weston & Sampson Engineers, during City-wide flow metering program.

⁴Peak hourly flow measured by the influent flow meter over the four-month period. No peaking factor was applied.

occurred during a storm with very similar intensity and total rainfall to that observed in July 2021, which caused the maximum recorded flows seen during the 2021 monitoring period.

Table 3. Siphon Flows							
Data Source	Average Daily Flow (April 2021 – August 2021) (GPD)	Maximum Recorded Flow ¹ (April 2021 – August 2021) (GPM)	Average Daily Flow (May 2014 – April 2015) (GPD)	Maximum Recorded Flow ¹ (May 2014 – April 2015) (GPM)			
West Flow Meter (Downstream of Old Gonic Road and PS)	474,000	1,680	330,000	1,910			
East Flow Meter	2,879,000	3,819	2,490,000	3,771			
Combined (Total Siphon Flow)	3,353,000	5,499	2,820,000	5,681			

¹Maximum flow over a 5-minute increment.

Sewer Capacity Analysis

Old Gonic Road to Old Route 125 Pump Station

A static desktop model was conducted to calculate the capacity of each pipe segment from the proposed development location to the Old Route 125 Pump Station. The model indicated that each gravity segment has sufficient capacity to accommodate peak flows. The model also showed that at no point would any segment be beyond 80% capacity even during peak flow conditions.

Old Route 125 Pump Station and Force Main

The flow data in Table 2 was used as the starting point for the pump station capacity analysis. The peak flow calculated using the peaking factor is significantly higher than the actual observed peak flow during the 2021 monitoring period. The peaking factor, calculated from *Figure 2-1 Ratio of Extreme Flow to Average Daily Flow* from TR16, is a meant to conservatively project the peak flow that can be expected during a maximum flow day. While the peak hourly flow calculated with this method is significantly higher than the actual observed peak flow, it is important to consider that the actual maximum flows that the station may experience did not occur during the monitoring period. For the purpose of this capacity analysis, the more conservative peak flow estimate of 312 GPM was used. The projected future peak flow with the flows from the development is therefore 486 GPM.

The Old Route 125 Pump Station consists of a duplex Gorman Rupp T6A pump skid with 25 horsepower motors. The belt-driven pumps have a top speed of 1,240 RPM. The station was designed to pump 500 GPM at 65 feet of total dynamic head (TDH). As part of the capacity analysis, WSE reviewed record drawings and previous correspondence to gain an understanding of the pump system components including static head, force main length, force main size, and station piping minor losses. A theoretical system TDH curve was calculated based on these factors. This system curve was then compared to the T6A pump curve and the original design point of 500 GPM at 65-feet TDH.

The system curve calculated by WSE indicated that at a speed of 1,240 RPM, the T6A pump should actually be pumping approximately 650 GPM. It is possible that the original designers of the pump station used an extremely conservative friction coefficient, or other variables, when calculating the TDH. It should be noted that the Gorman Rupp pump vendor also completed a system curve calculation in 2015 to evaluate the theoretical capacity of the station. They came to a similar conclusion, observing that the pumps are likely operating at a much higher flow rate than what the station was designed for. Pump station data, including system curve calculations compared to the pump performance curve, are attached to this memorandum.

In summary, the T6A pumps are more than capable of handling the projected peak flow of 486 GPM. Based on WSE's calculations, the pump station has the capacity to pump a peak hourly flow of 650 GPM. However, according to the original design criteria, the station has a 500 GPM capacity, which is still larger than the projected peak hourly flow. No modifications to the pump station are required to accommodate the flows from the proposed development. Furthermore, it is recommended that the City confirm the actual full-speed flow of the pumps by performing a drawdown test.

Force Main Discharge to Siphons

The stretch of gravity sewer from the Old Route 125 Pump Station force main discharge manhole up to the siphons was evaluated for capacity. The same desktop model was used for these segments as the one that was used on Old Gonic Road. Limited record information was available for this portion of sewer so a minimum slope of 0.002 for all segments was assumed. The model indicated that the sum of the proposed peak flows and the historical max flows from the west flow meter would not push the 24-inch pipe past 75% capacity.

Siphons

The 2015 Brown and Caldwell study, *Basis of Design Report Siphon 16B, Pump Station and Forcemain*, concluded that each 18-inch siphon has a capacity of 5 MGD (3,472 GPM), or a total capacity of 10 MGD (6,944 GPM). As shown in Table 3, the maximum combined flow measured from the flow meters before the siphons was 5,681 GPM. With the additional projected flow of 146, the peak flow would still be significantly less than 6,944 GPM. It is important to note that the maximum flows included in Table 3 were recorded during relatively small monitoring periods, and do not contain data from extreme storm events exceeding a 10-year storm.

It is understood that on multiple occasions the City had experienced surcharging and overflows at the upstream end of the siphon during extreme wet weather events. The most recent event occurred during a storm in March of 2009, when the wastewater treatment facility recorded an average daily flow of 10.7 MGD and the influent pump station/remote headworks facility (downstream of the siphon) was at full capacity (16 MGD) for a portion of the day. It was reported that this surcharging was contributed to debris deposited in one or both of the 18-inch siphons. Since this event, the City has continued to proactively jet/clean the siphon annually to ensure it can operate at full capacity. No further surcharging has occurred to date.

According to the Brown and Caldwell report, the most extreme storm that occurred from January 1, 2009 through April 16, 2015 actually took place 5 months after the March 2009 surcharge event. On August 11, 2009, the City experienced an 8.6-year, 1-hour storm, and no surcharging occurred. According to



the City, the highest flow recorded by the influent pump station/remote headworks facility since the 2009 surcharging event was 9 MGD, and no surcharging occurred anywhere in the collection system.

In summary, flows from the proposed development would not overload the siphons during normal peak flow conditions. The additional flow of 24 to 146 GPM (average through peak) that the development is projected to contribute to the siphon is considered to be negligible when compared to the siphon's full capacity.

Interceptor

Following the siphon, flow travels through a 22-inch x 28.5-inch brick interceptor sewer. The capacity of this sewer was not modeled, as this interceptor collects the majority of the City's wastewater and it was assumed that the additional flow from the proposed development would be negligible.

Conclusion

The proposed development, when fully occupied, is expected to contribute an average daily flow of 35,000 GPD and may contribute peak hourly flow of up to 146 GPM to the collection system on Old Gonic Road. The gravity sewers on Old Gonic Road, Brock Street, and Columbus Ave (Route 125) are more than capable of accommodating this additional flow. The Old Route 125 Pump Station can also accommodate the additional flow, and may likely have additional capacity to accommodate other future developments. It is recommended that the City conduct pressure tests and drawdown tests to confirm the actual pump flow and TDH, which would provide more insight on the available capacity of the station. All sewer downstream of the force main discharge manhole is capable of accommodating the additional flow during regular peak flow conditions with wet weather. However, flow metering data was not available for storms exceeding a 10-year storm, so extreme wet weather capacity could not be confirmed. In conclusion, Weston and Sampson finds it acceptable for the developers to tie the proposed development into the existing gravity sewer on Old Gonic Road without conducting sewer improvements.

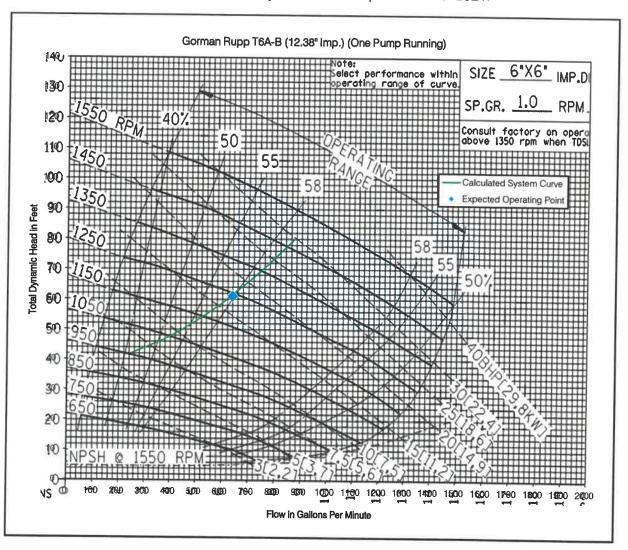
There remains a need to reduce excessive infiltration and inflow into the sewer system during wet weather events, but it is understood that this is outside of the scope of both Jones & Beach Engineers and the developers. Weston & Sampson Engineers will continue to investigate sources of excessive I/I in order to perform collection system repairs and reduce the strain on the siphon and interceptor during extreme wet weather events with their ongoing work with the City.

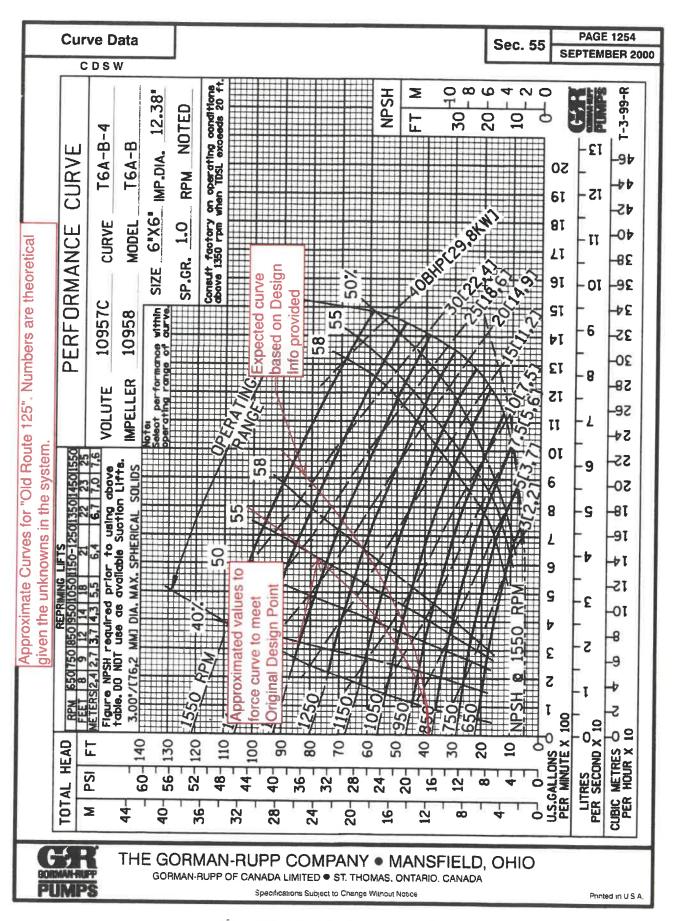
Attachments

Old Route 125 Pump Station Performance Curve and Equipment Information

\\wse03.local\\WSE\\Projects\\Private\\Jones & Beach Engineers\\ENG21-0841 Rochester Old Gonic Road\\Deliverables\\Final Deliverable\\Old Gonic Road\\Deliverables\\Old Gonic Road\\Old Gonic Road\\Deliverables\\Old Gonic Road\\Deliverables\\Old Gonic Road\\Deliverables\\Old Gonic Road\\Old Gonic Road\\Deliverables\\Old Gonic Road\\Old Goni







GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

STATION DESCRIPTION	. INDIVIDUAL BASE MOUNTED PUMPS AND E
STATION LOCATION	ROCHESTER, NH ROUTE 125 RETROFIT PUMP STATION
	ROUTE 123 RETROFTI PUMP STATION
ENGINEER.	HOYLE TANNER & ASSOCIATES
	MANCHESTER, NH
OWNER	CITY OF ROCHESTER
	ROCHESTER, NH
<u>CONTRACTOR</u>	WATER INDUSTRIES INC
	P.O. BOX 218
	ALTON, NH 03809
GORMAN RUPP REPRESENTATIVE	WATER INDUSTRIES INC
	P.O. BOX 218
	ALTON, NH 03809

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GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

STATION DATA

EQUIPMENT OUTLINE DWG. NO.: B-11555A

The base mounted station consists of two (2) pumps, each assembled on individual, right hand, horizontal v-belt bases, with v-belt drive and motors.

The unit bases will comprise a base plate, perimeter flange, and reinforcements. Base plates will be fabricated of steel not less than 1/40 thick, and will incorporate openings for access to all internal cavities to permit complete grouting of the unit base after installation. Perimeter flange and reinforcements will be designed to prevent flexing or warping under operating conditions. Base plates and/or flanges will be drilled for hardware used to secure unit base to concrete pad. Unit bases will contain provisions for lifting the complete pump units during shipping and handling.

FOR UNIT MODIFICATIONS & OPTIONS, REFER TO SECTION TITLED: MODIFICATIONS & OPTIONS

GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

PUMP DATA

PUMP PERFORMANCE APPLIES TO EACH PUMP EXCEPT WHERE NOTED:

Design Characteristics (G.P.M. @ T.D.H.):	500 @ 65'
Priming Lift;	Flooded
Total Dynamic Suction Lift:	0.03
N.F.S.FI. Required:	F (1)
Excess N.P.S.H. Available, With 3.0' Safety Factor:	74.7'
rump Model No.:	T6 A 2 D /W/W/
Impeller Diameter:	12_2/2"
Impeller Speed:	1240 DDM
	······································

MOTOR NAME PLATE DATA

PUMP MOTOR DATA APPLIES TO EACH PUMP MOTOR EXCEPT WHERE NOTED:

Horsepower:	35
Motor Wired: Phase/Hertz/Volts:	3/60/460
Service Factor:	1 15
Locked Rotor Code:	1.13
Frame Size:	70AT
Enclosure Type:	ODB
Insulation Class:	UDP
Manufacturer:	TOSLIDA
Ambient Rating:	IOSHIBA
	40EC

Note: A supplement sheet will be provided in the O&M Manual with the following data:

Pump S/N's Motor S/N's Motor Full Load R.P.M.

Motor Full Load Amps Motor Overload Heater Elements Engine S/N (When Applicable)

FOR PUMP/MOTOR MODIFICATIONS & OPTIONS, REFER TO SECTION TITLED: MODIFICATIONS & OPTIONS

GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

V - BELT DRIVE DATA

V-BELT DRIVE DATA APPLIES TO EACH PUMP MOTOR EXCEPT WHERE NOTED:

PUMP SHEAVE DATA: Motor Speed @ 61% Load: 1780 RPM Section: 5V Theoretical H.P Per Belt: 25.48 Bushing No.: 3020 Arc Correction Factor:91 Bore: 1 ½" Corrected H.P. Per Belt: 23.18 MOTOR SHEAVE DATA: Section:.....5V Pump Brake H.P. Required: 15.48 Diameter: 8.00" Safety Factor: 2.99 Center Line Distance:24.80" Pump V-Belts:.....5VX800 Bore:..... 1 7/8" Drive Manufacturer:......DODGE

Corrected H.P. Per Belt = Theoretical H.P. Per Belt x Arc Correction Factor Total H.P. Developed = Corrected H.P. Per Belt x Number of Belts Safety Factor = Total H.P. Developed) Pump Brake H.P. Required Safety Factor to be 1.5 or Larger.

Pump Brake H.P. = Flow x T.D.H. x S.G. 3960 x Pump Eff.

GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

ELECTRICAL DATA & EQUIPMENT SCHEDULE

ELECTRICAL SCHEMATIC DWG. No.: D4-08409 REV.:

Service Available:	1/60/120 2 Wind
1/60/120 Voltage Available At Job Site?:	Vac
Power Transformer:	NT/A
Power & Level Control Electrical Enclosure:	NEMA 1 Steel, 16" High x 14" Wide x 6" Deer
Control Panel Mounting Method	

BRANCH CIRCUIT PROTECTION APPLIES TO EACH PUMP MOTOR, EXCEPT WHERE NOTED:

BRANCH CIRCUIT PROTECTION						
CIRCUIT	PH/VOLTS	TYPE	TRIP	RMS INTER. CAP	MFG.	MFG. No.
Control	1/60/120	Fuse	2.8	10,000	Buss	FNM-2.8

FOR ELECTRICAL MODIFICATIONS & OPTIONS, REFER TO SECTION TITLED: MODIFICATIONS & OPTIONS

GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

LIQUID LEVEL CONTROL SYSTEM

TYPE:

Air Bubbler - EPS 2000

CONTROLLER:

Electronic Pressure Switch with EPS 2000 will include integral components to all pressure sensing, signal conditioning, EMI & RFI suppression, DC power supply and 108 - 132/60/1 AC, in an ambient temperature range of -18EC (0EF) through +55EC (131EF), Control range will be 0 - 20 ft. of water with an overall repeat accuracy of +/- 0.1 ft. of water.

RELATED EQUIPMENT:

Two (2) instrument air pumps with manual selector switch, one (1) on/off selector switch, one (1) inline air flow indicator, and one (1) 3O PVC air bell for wet well mounting.

	LIQUID LE	VEL CONTROL SET POIN	TS & OPERATION	
INPUT	SET POINT	CONTROL FUNCTION	RISING LEVEL	FALLING LEVE
	A On	Field Assigned	As Required	
EPS Intput A	A Off	Field Assigned		As Required
	B On	Field Assigned	As Required	
EPS Input B	B Off	Field Assigned		As Required
	C On	Field Assigned	As Required	
EPS Input C	C Off	Field Assigned		As Required
	D On	Field Assigned	As Required	
EPS Input D	D Off	Field Assigned		As Required
	E On	Not Used	B0044B44B4	
EPS Input E	E Off	Not Used		
	F On	Not Used		
EPS Input F	F Off	Not Used		4
	G On	Not Used		
EPS Input G	G Off	Not Used		
	H On	Not Used		
EPS Input H	H Off	Not Used		

Notes:

- 1) Minimum recommend on/off differential, 0.5 ft. WC.
- 2) Radio frequency interference (RFI) and electro-magnetic (EMI) protection to be supplied by others.
- The control will be equipped with 4 interface relays to facilitate connection to the customer's equipment. Contacts are rated NEMA B300 pilot duty 10 amp general use resistive, 1/4 HP at 120 VAC, 1/3 HP at 240 VAC.

FOR LEVEL CONTROL MODIFICATIONS & OPTIONS, REFER TO SECTION TITLED: MODIFICATIONS & OPTIONS

GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

STANDARD FEATURES

4-20mA OUTPUT SIGNAL: Controller supplied with a 4-20 mA signal. Scaling for the Output is as follows:

4 mA = 0 ft WC

20 mA = 8 ft WC

<u>PUMP START DELAY:</u> Controller equipped with pump start delay(s) preset at a fixed delay time of five (5) seconds.

GORMAN-RUPP ENGINEERED SYSTEMS EQUIPMENT

MODIFICATIONS & OPTIONS

SUCTION AND DISCHARGE GAUGES: Consists of a resilient mounted panel with a 4" diameter glycerin filled "no shock" pressure gauge graduated 0-140' WC and a 4" diameter glycerin filled "no shock" compound gauge graduated -34'-34' WC for each pump, with shut off valves and fittings.

SPARE PARTS KIT: One cover plate O-Ring

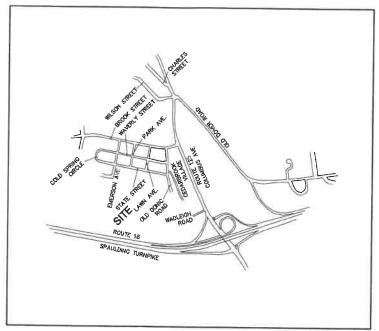
One mechanical seal

One rotating assembly O-Ring One set rotating assembly shims

<u>AIR RELEASE VALVE ASSEMBLY:</u> Automatic air release installed on each pump. Valve is open during priming or repriming cycle. Closes automatically to eliminate recirculation of liquid to wet well after pump is delivering full capacity.

GENERAL LEGEND 2000 D ACCIPAC PROJECTION LINE FLOOD PLAIN LINE ZONDHE MADR CONTOUR MINOR CONTOUR MINOR CONTOUR MORE CONTOUR SOME CONTOUR CONTOUR CONTOUR CONTOUR MADRIC CURB SEVER FORCE MAIN GAS LINE SWERF FORCE MAIN GAS LINE WATER SERWE WATER SERWE WATER SERWE WATER SERWE WATER SERWE COVENHEAD ELECTRIC UNDERGROUND ELECTRIC GUADDRAIL MORE REPORTED TO LINE THRUST BLOCK THOMPORTOUR THRUST BLOCK THOMPORTOUR THRUST BLOCK THOMPORTOUR THRUST BLOCK THRUST BLOCK THOMPORTOUR THRUST BLOCK THOMPORTOUR THRUST BLOCK THRUST THR WETLAND IMPACT XXXXX VEGETATED FILTER STREET 4 + 4 FRESHWATER WETLANDS *** STABILIZED CONSTRUCTION ENTRANCE CONCRETE

PROPOSED SITE PLAN "OLD GONIC ROAD TOWNHOUSES" **TAX MAP 131, LOT 1** 19 OLD GONIC ROAD, ROCHESTER, NH



LOCUS MAP SCALE 1" = 2000'

CIVIL ENGINEER / SURVEYOR JONES & BEACH ENGINEERS, INC. 85 PORTSMOUTH AVENUE PO BOX 219 STRATHAM, NH 03885 (603) 772-4746 CONTACT: JOSEPH CORONATI EMAIL: JCORONATI@JONESANDBEACH.COM

TRAFFIC ENGINEER STEPHEN G. PERNAW & COMPANY, INC. P.O. BOX 1821 CONCORD, NH 03302 (603) 731-8500 CONTACT: STEPHEN G. PERNAW EMAIL: SGP@PERNAW.COM

WETLAND CONSULTANT GOVE ENVIRONMENTAL SERVICES, INC. 8 CONTINENTAL DR., BUILDING 2, UNIT H EXETER, NH 03833-7526 (603) 778-0644 **CONTACT: JAMES GOVE** EMAIL: JGOVE@GESINC.BIZ

LANDSCAPE DESIGNER LM LAND DESIGN, LLC

11 SOUTH ROAD BRENTWOOD, NH 03833 (603) 770-7728 CONTACT: LISE McNAUGHTON LMLANDDESIGN@GMAIL.COM

WATER AND SEWER ROCHESTER DEPARTMENT OF PUBLIC WORKS 45 OLD DOVER ROAD ROCHESTER, NH 03867 (603) 332-4096 CONTACT: MICHAEL BEZANSON, P.E.

ELECTRIC EVERSOURCE ENERGY 74 OLD DOVER ROAD ROCHESTER, NH 03867 (603) 555-5334 CONTACT: MARK BOUCHER **TELEPHONE** CONSOLIDATED COMMUNICATIONS 1575 GREENLAND ROAD GREENLAND, NH 03840 (603) 427-5525 CONTACT: JOE CONSIDINE

CABLE TV COMCAST COMMUNICATION CORPORATION 334-B CALEF HIGHWAY EPPING, NH 03042-2325 (603) 679-5695

NATURAL GAS UNITIL SERVICE CORP. 325 WEST ROAD PORTSMOUTH, NH 03801 (603) 294-5261 MACLEAND@UNITIL.COM

SHEET INDEX

EXISTING CONDITINS OVERVIEW PLAN EXISTING CONDITIONS PLAN

DEMOLITION PLAN

OVERVIEW SITE PLAN

COVER SHEET

C5-C8 SITE PLANS

OVERVIEW GRADING PLAN

GRADING AND DRAINAGE PLAN

OVERVIEW UTILITY PLAN

U1-U2 UTILITY PLAN

LANDSCAPE PLAN

LIGHTING PLAN **ROAD PLAN AND PROFILE**

SEWER PROFILE

DETAIL SHEETS

EROSION AND SEDIMENT CONTROL DETAIL



PROJECT PARCEL CITY OF ROCHESTER TAX MAP 131, LOT 1

11 LAFAYETTE ROAD

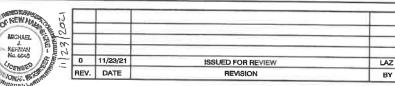
1,309,695 SQ. FT. ± 30.07 ACRES +

APPROVED - ROCHESTER, NH PLANNING BOARD

DATE:

Design: JAC | Draft: LAZ Checked: JAC Scale: AS NOTED Project No.: 21090 Drawing Name: 21090-PLAN.dwg THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE

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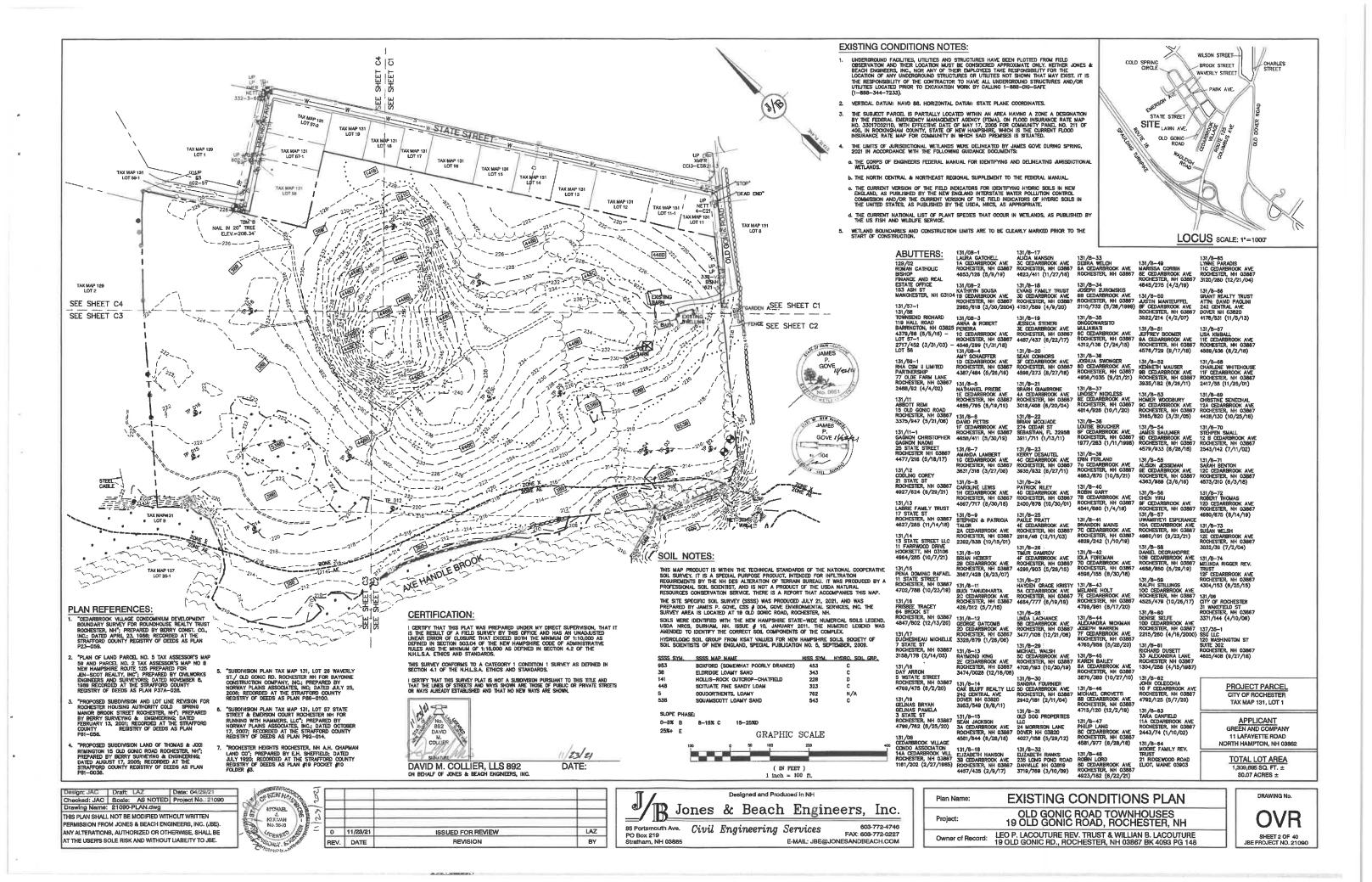
Jones & Beach Engineers, Inc.

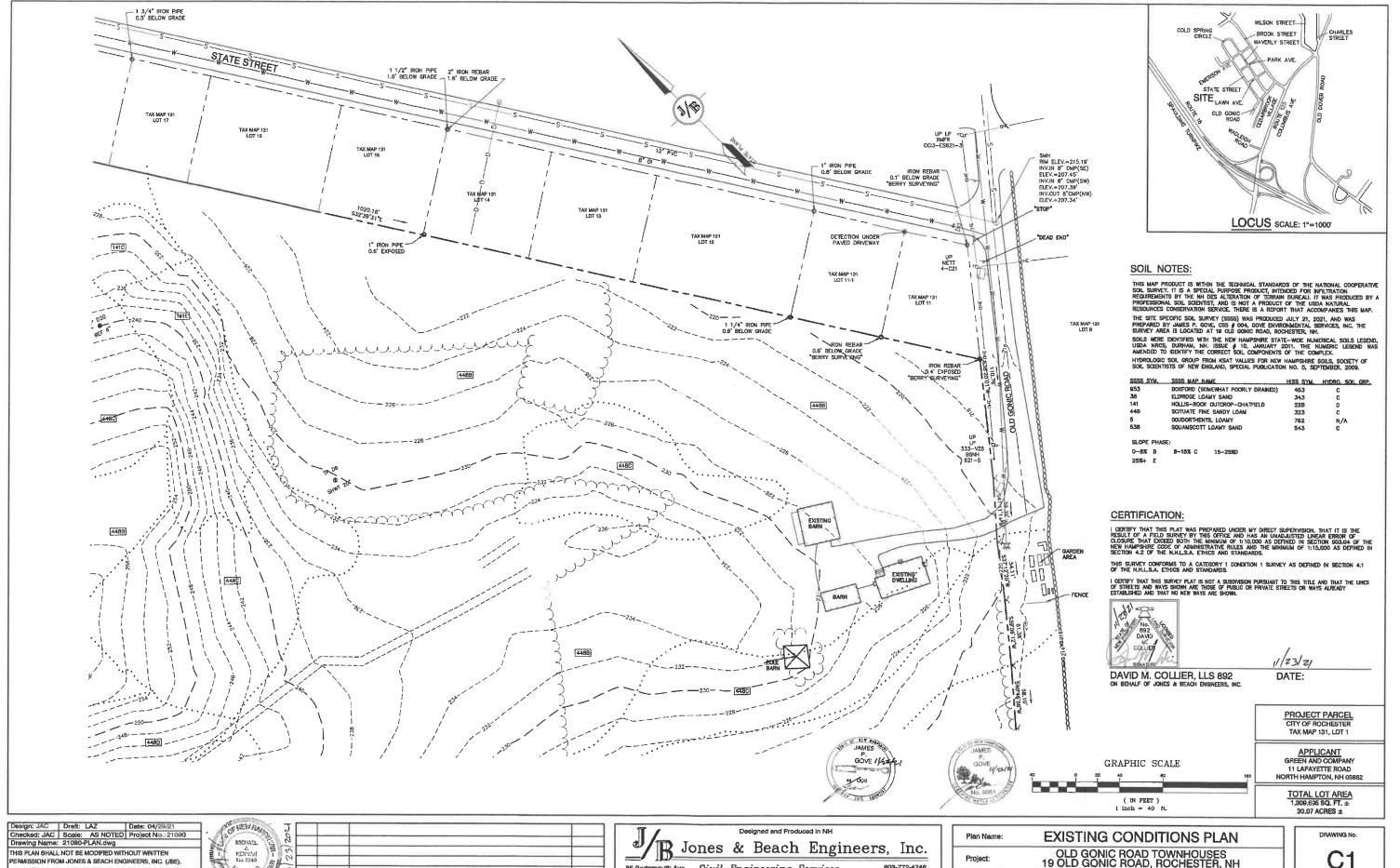
85 Portsmouth Ave. Civil Engineering Services FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

COVER SHEET

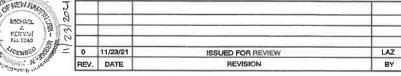
OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH Owner of Record: LEO P, LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

CS SHEET 1 OF 40 JBE PROJECT NO. 21090



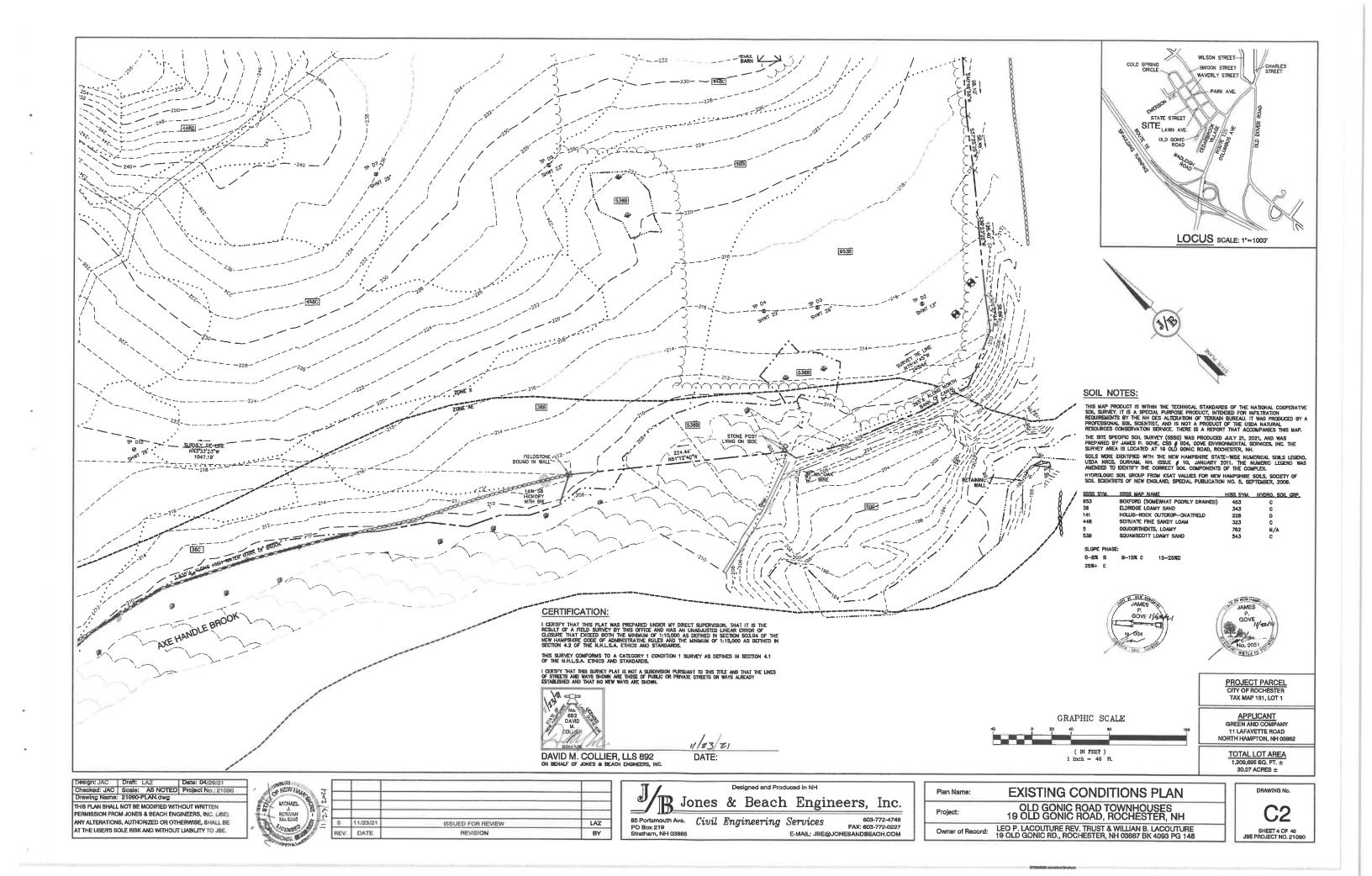


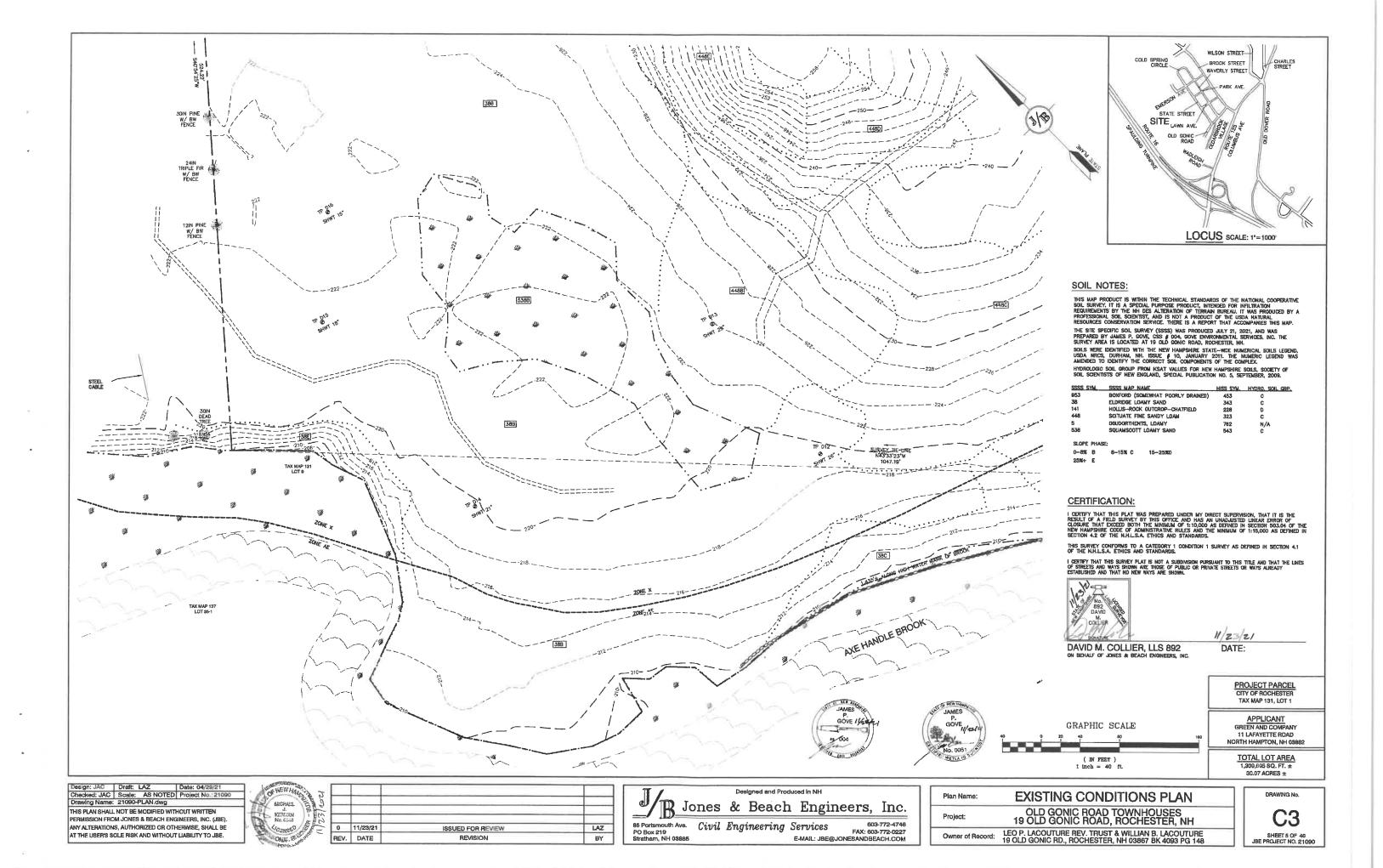
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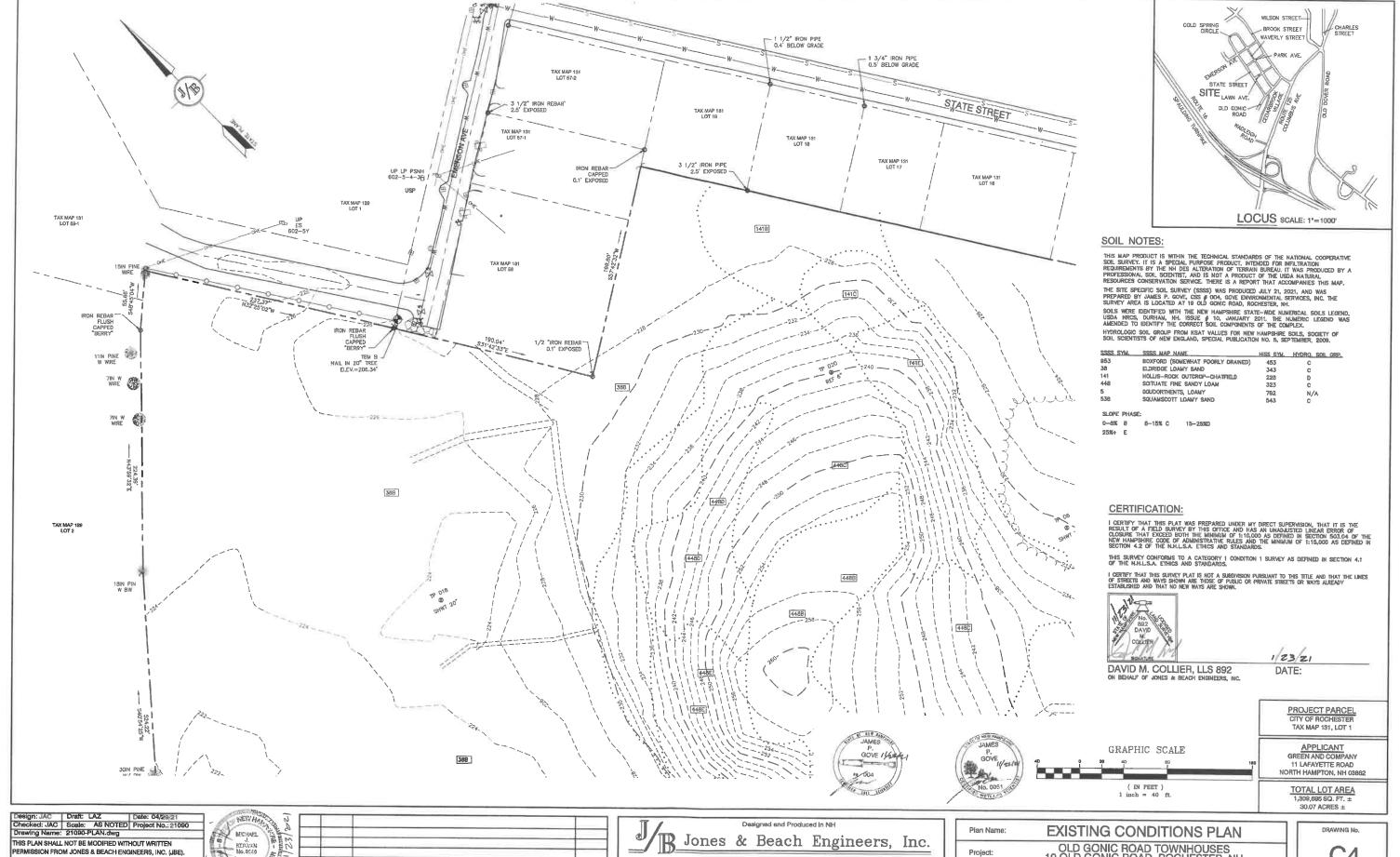


85 Portsmouth Ave. Civil Engineering Services PO Box 219 Stratham, NH 03685 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

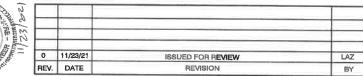
OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148 SHEET 3 OF 40 JBE PROJECT NO. 21090







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Jones & Beach Engineers, Inc.

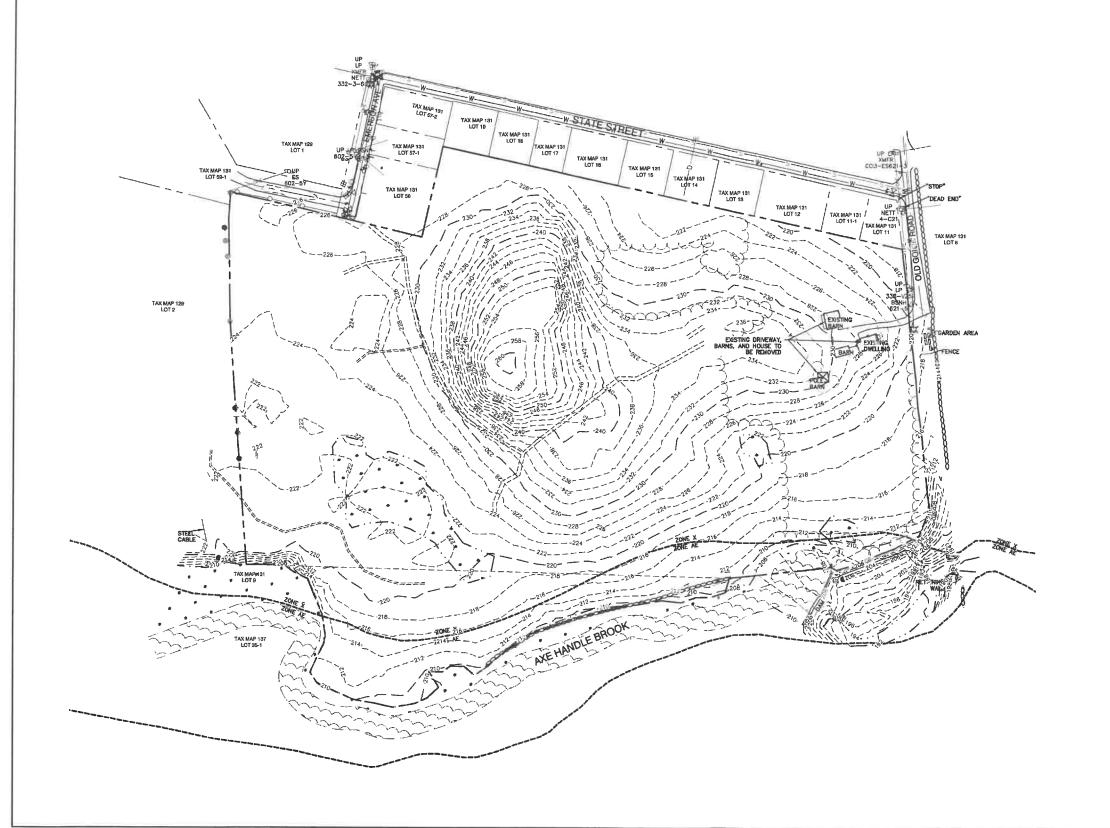
86 Portsmouth Ave. Civil Engineering Services

PO Box 219 Stratham, NH 03885

Owner of Record: E-MAIL: JBE@JONESANDBEACH.COM

OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148 C4

SHEET 6 OF 40 JBE PROJECT NO. 21090



DEMOLITION NOTES:

- A TEMPORARY CULVERT AND ROADBED SHALL BE IN PLACE PRIOR TO ANY USE OF A WETLAND CROSSING.

- ALL EXISTING PAVED SURFACES WITHIN THE LIMITS OF WORK THAT ARE TO REMAIN SHALL BE RECLAIMED TO MINIMUM DEPTH OF 12" AND REGRADED AS SHOWN ON THE GRADING AND DRAINAGE PLAN. RECLAIMED ASPHALT SHALL CONFORM TO STATE SPECIFICATIONS. PRIOR TO REMOVAL, PAVEMENT SHALL BE SAWCUT AT ALL ENTRANCES AND LIMITS OF REMOVAL.
- ALL EGISTING GRANITE CURBING TO BE REMOVED SHALL BE STOCKPILED IN AN AREA TO BE DESIGNATED BY THE OWNER OR OWNER'S REPRESENTATIVE. THE OWNER SHALL INSPECT GRANITE CURBING TO BE RESET AND APPROVE LOCATION OF RESET CURBING. THE CONTRACTOR SHALL NOT INSTALL USED CURBING AT ANY ENTRANCE LOCATIONS.

- 10. EXISTING GAS SERVICE LINES ARE TO BE REMOVED ON-SITE UP TO EXISTING GASMAIN LINES OR VALVES.

- 13. SEE LANDSCAPE PLAN FOR "TREES TO BE SAVED" AND DETAILS ASSOCIATED WITH LANDSCAPED AREAS.
- THE CONTRACTOR SHALL OBTAIN TREE CLEARING PERMIT FROM LOCAL AND STATE AUTHORITIES PRIOR TO START OF CONSTRUCTION (IF REQUIRED).

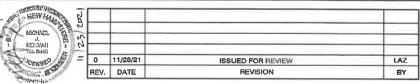
- 17. EXISTING SANITARY SEWER LINE AND STRUCTURES LOCATED WITHIN THE EXISTING SEWER EASEMENTS SHALL BE MAINTAINED OR MODIFIED AS NOTED ON PLANS, SEWER LINES SHALL BE DISCONNECTED IN ACCORDANCE WITH LOCAL STRANDARDS AND REQULATIONS.
- EXCAVATED MATERIALS WILL BE PLACED WITHIN LIPLAND AREAS AS FILL MATERIAL OR HAULED DFF-SITE FOR DISPOSAL IN AN APPROPRIATE LIPLAND LOCATION.

PROJECT PARCEL TAX MAP 131, LOT 1

APPLICANT GREEN AND COMPANY 11 LAFAYETTE ROAD NORTH HAMPTON, NH 0388

Design: JAC | Draft: LAZ Date: 04/29/21 Checked: JAC Scale: AS NOTED Project No.: 21090
Drawing Name: 21090-PLAN.dwg

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Designed and Produced In NH Jones & Beach Engineers, Inc.

85 Portsmouth Ave. Civil Engineering Services PO Box 219

FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM Plan Name:

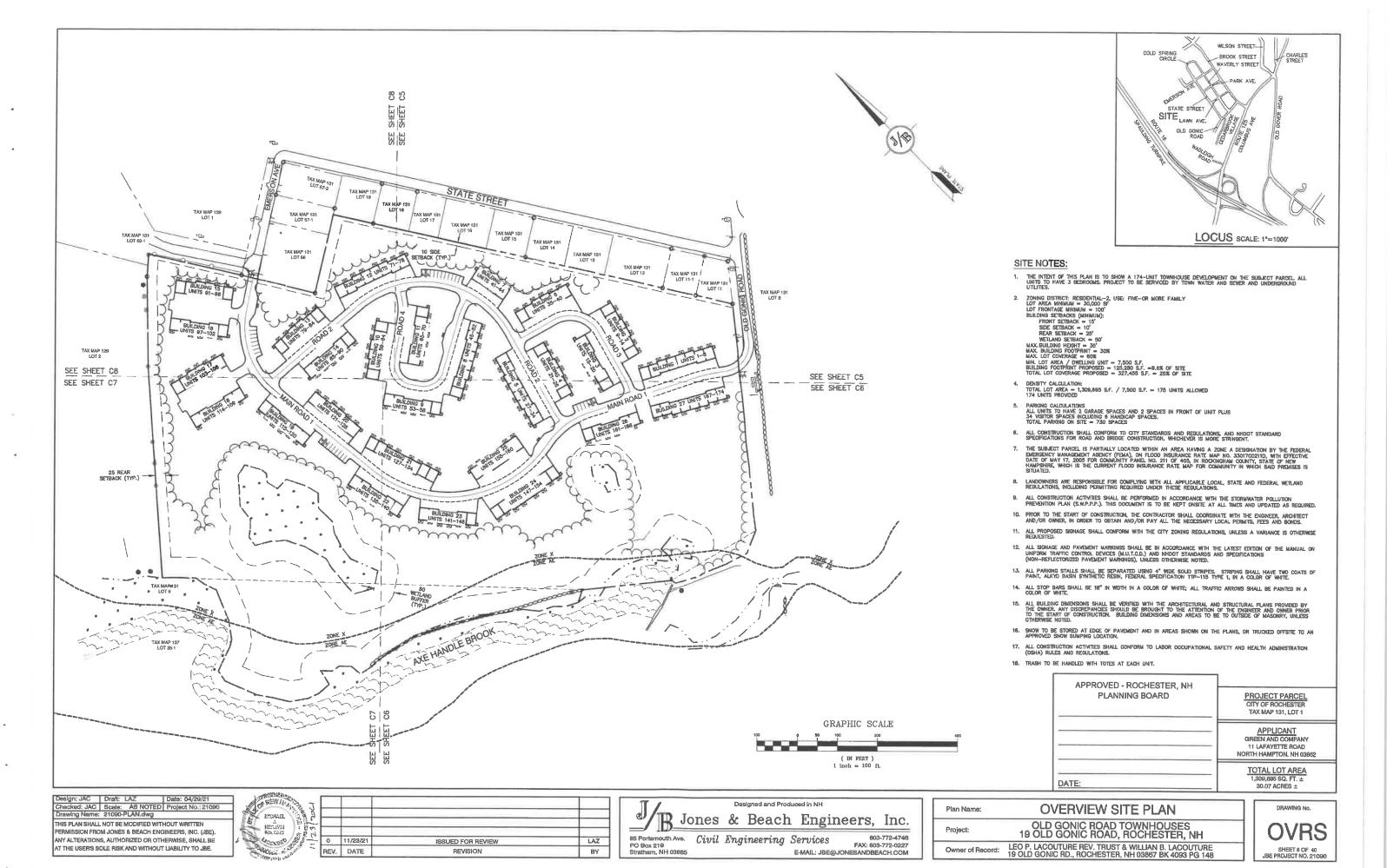
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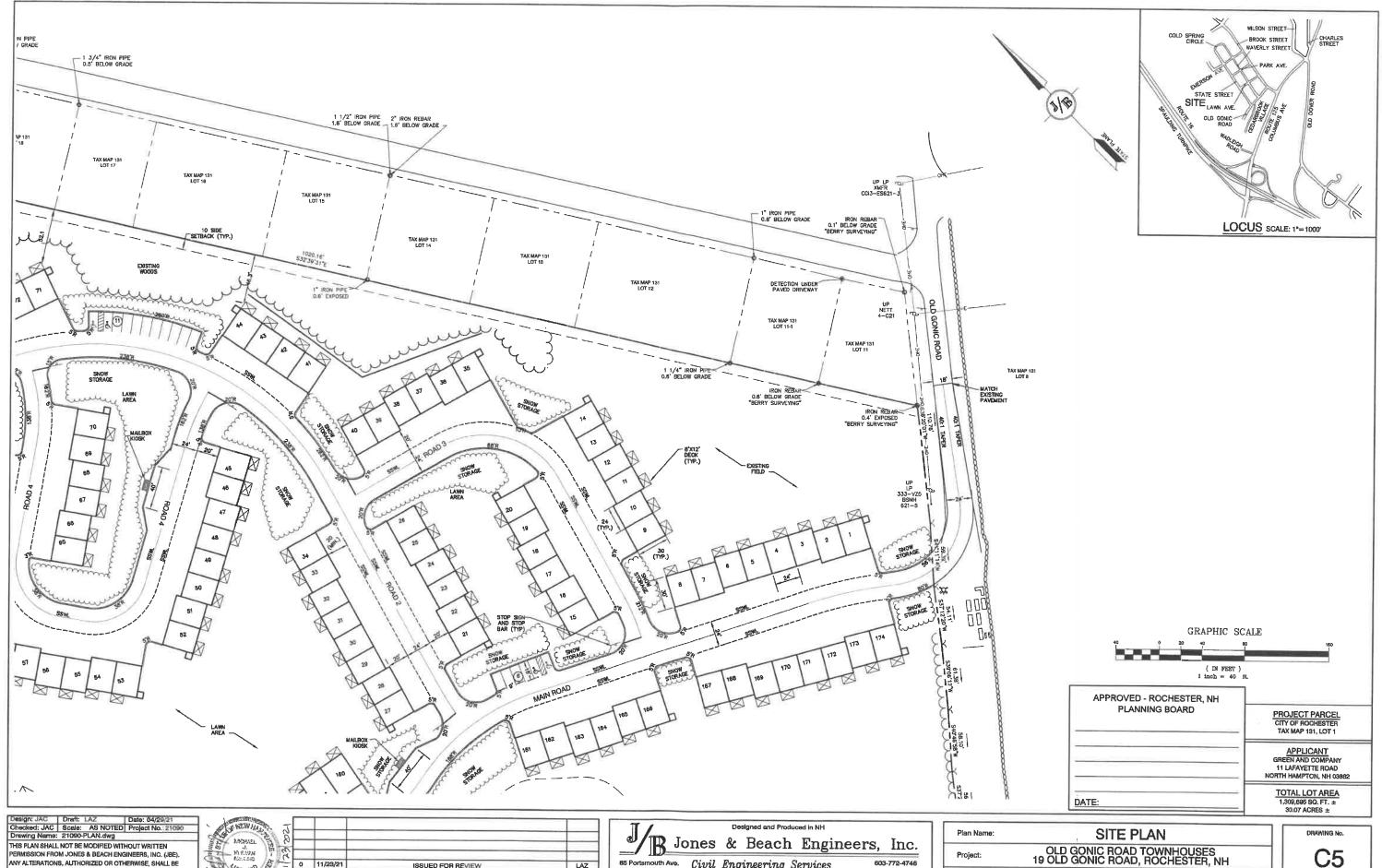
DEMOLITION PLAN

OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH

LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

DM-1 SHEET 7 OF 40 JBE PROJECT NO. 21090





AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

MONAEL J. MENAN No. 2848 ISSUED FOR REVIEW LAZ REV. DATE REVISION BY

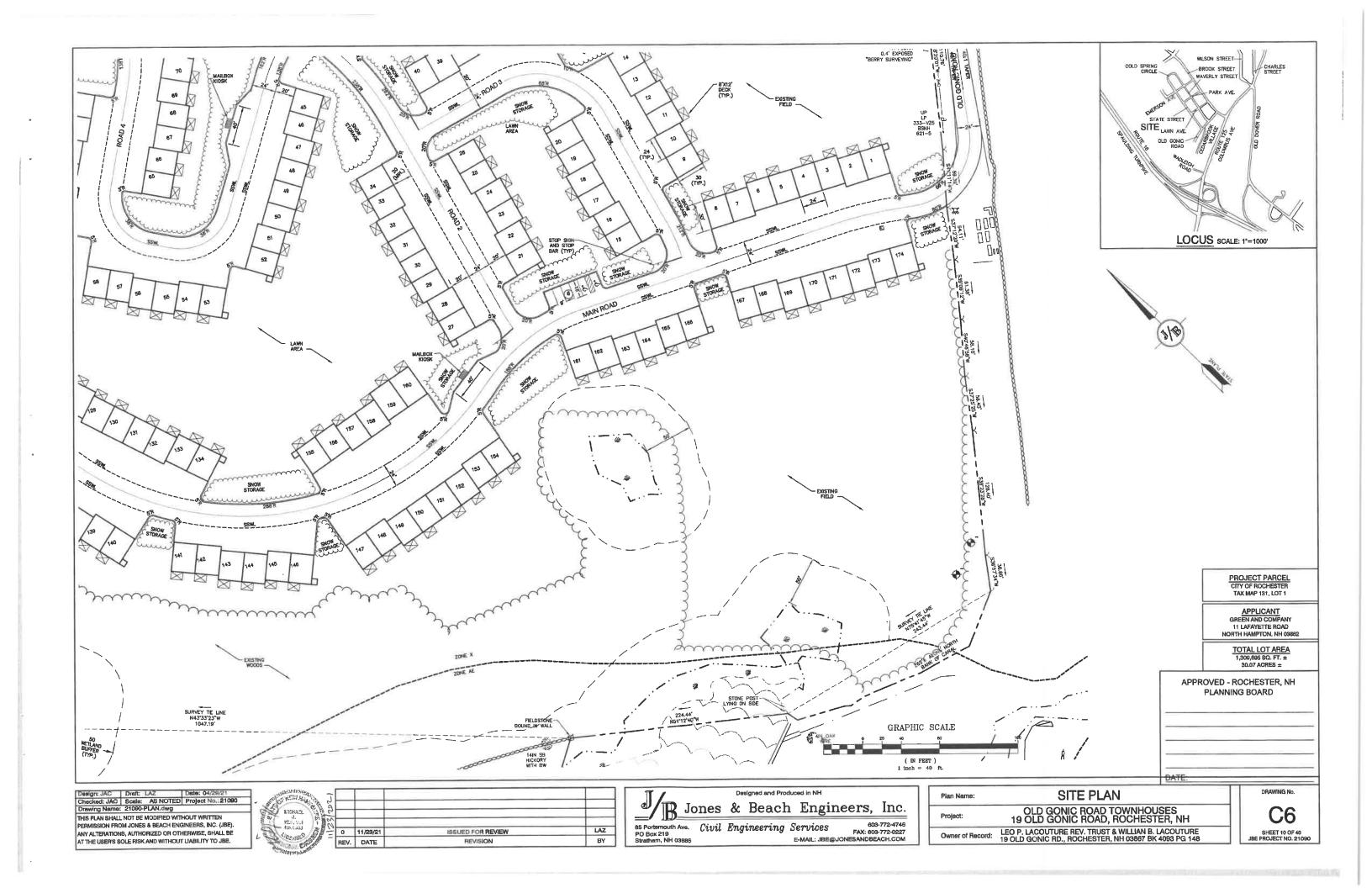
85 Portsmouth Ave. Civil Engineering Services
PO Box 219
Stratham, NH 03885

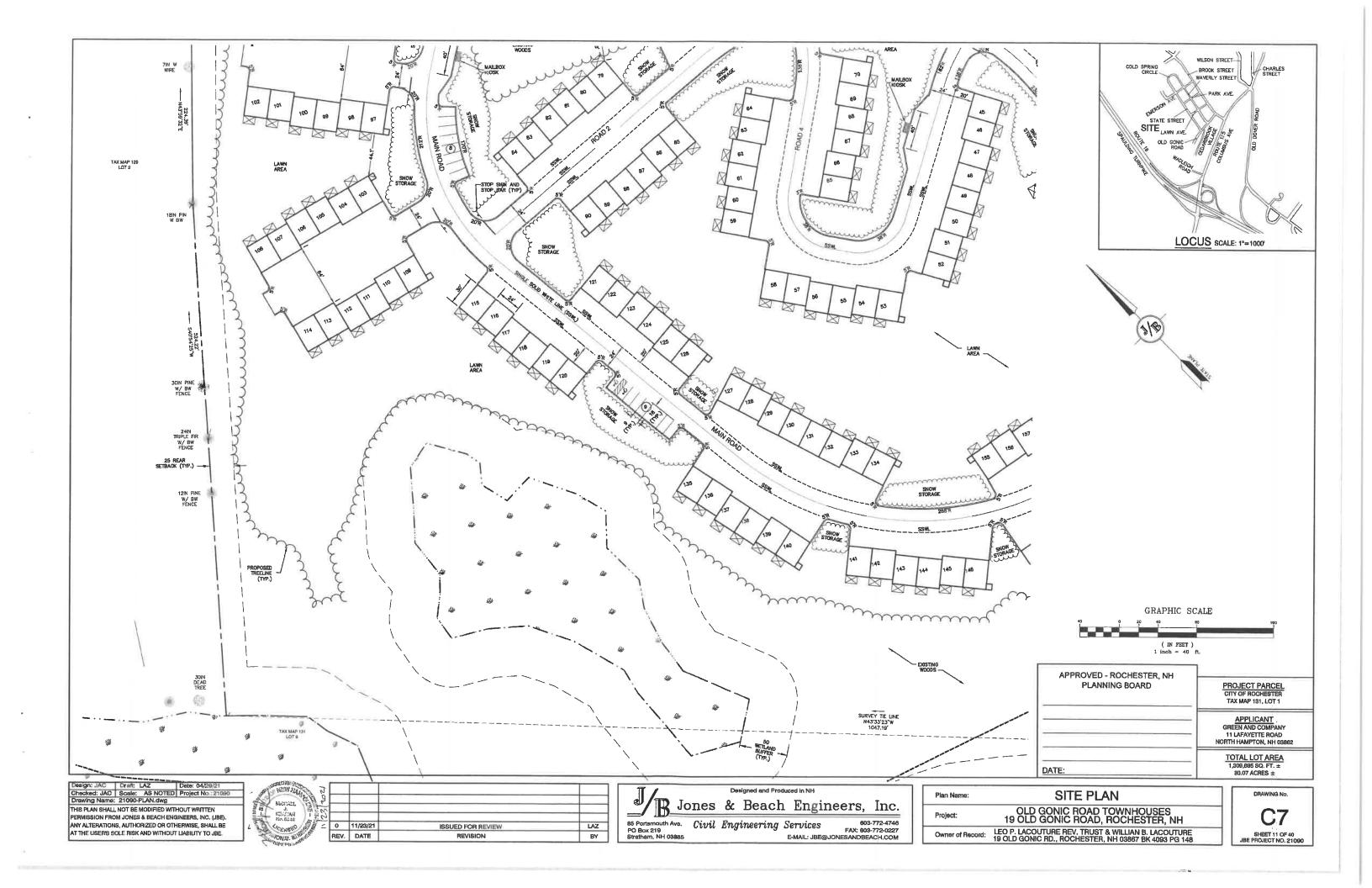
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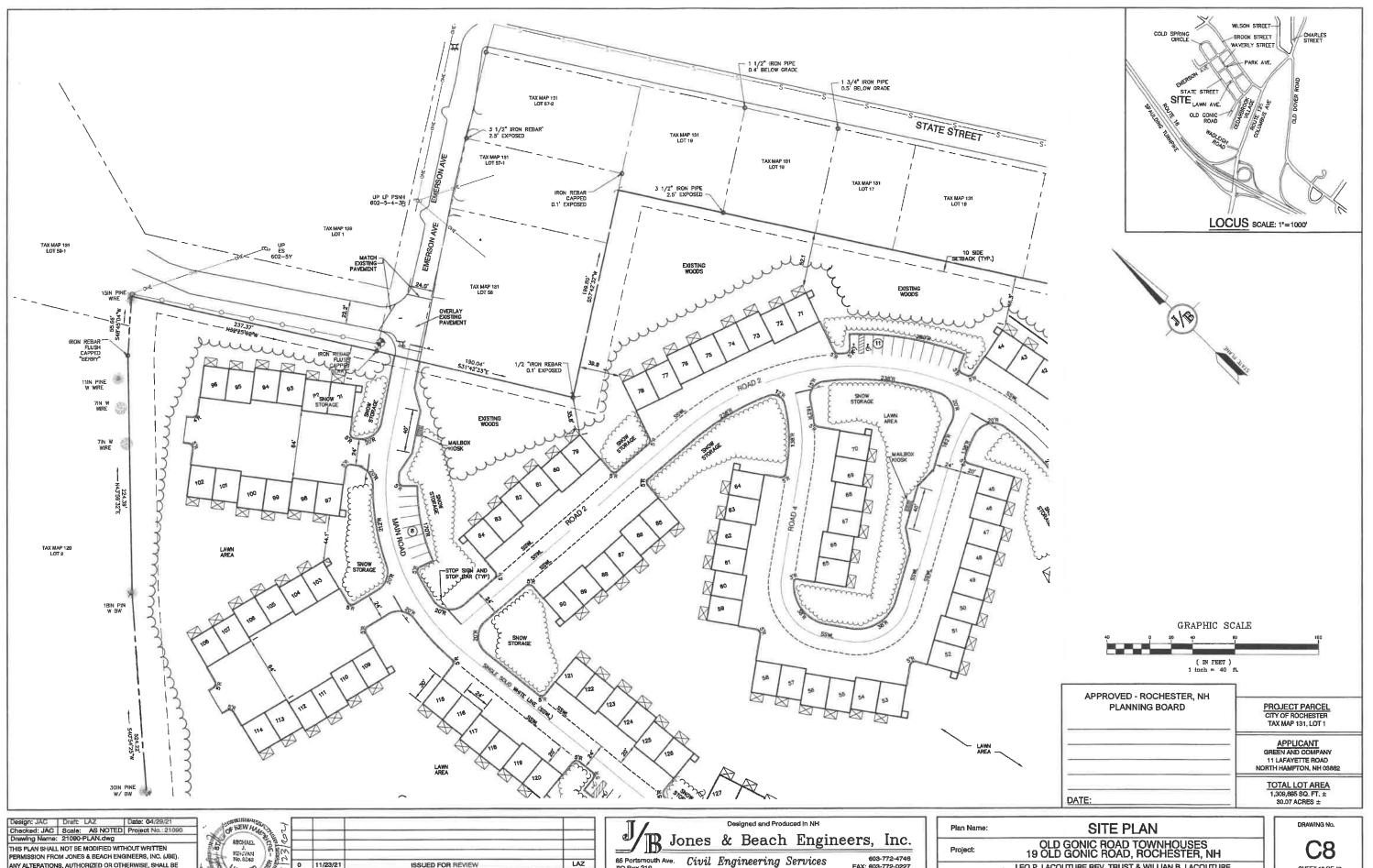
OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4083 PG 148

Owner of Record:

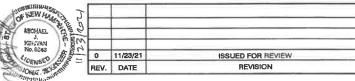
C5 SHEET 9 OF 40 JBE PROJECT NO. 21090







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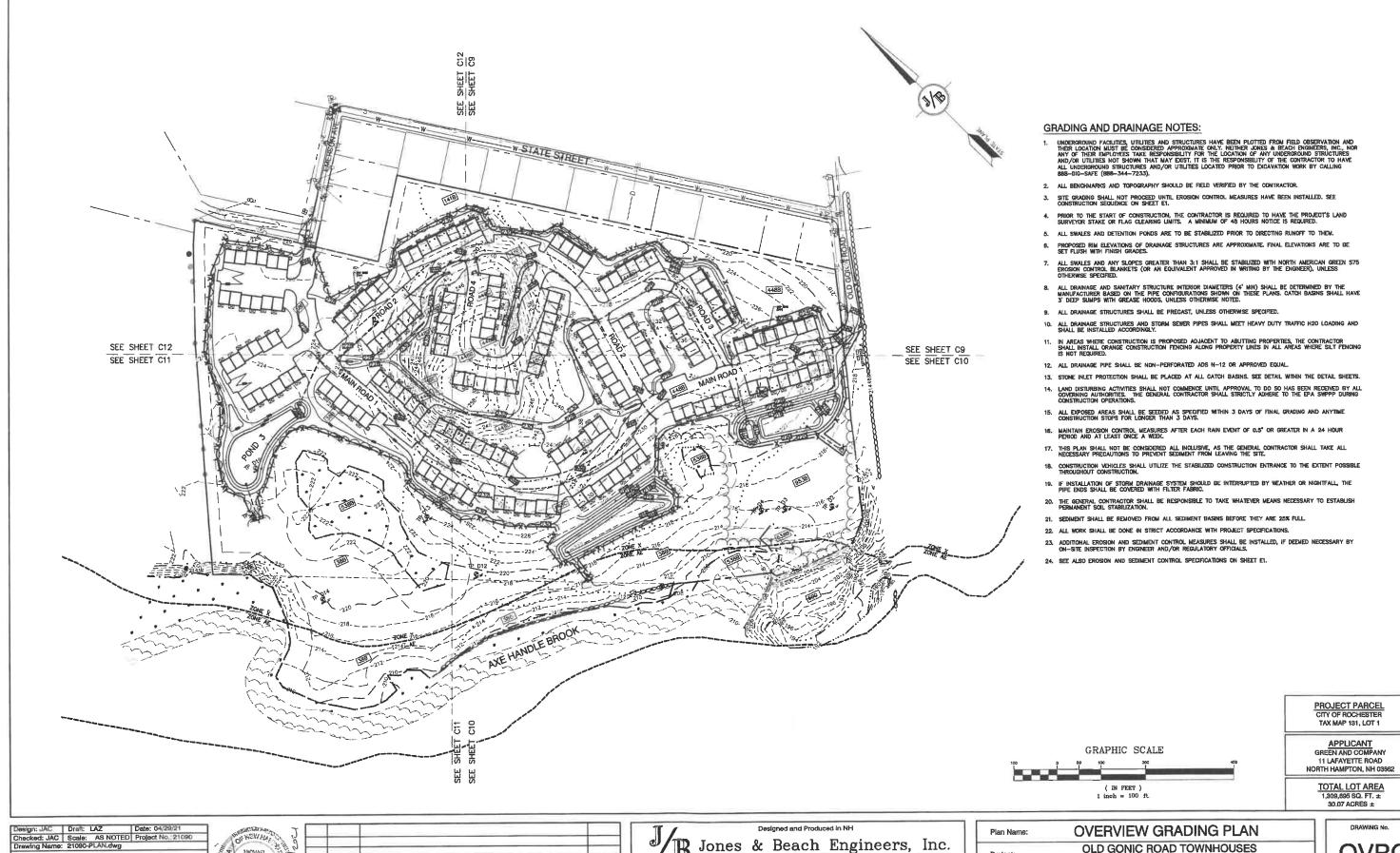
Services 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM 85 Portsmouth Ave. PO Box 219
Stratham, NH 03885

E-MAIL: JBE@

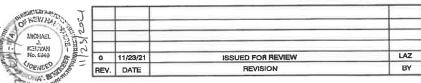
BY

	Plan Name:	SITE PLAN
	Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
	Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE

SHEET 12 OF 40 JBE PROJECT NO. 21090



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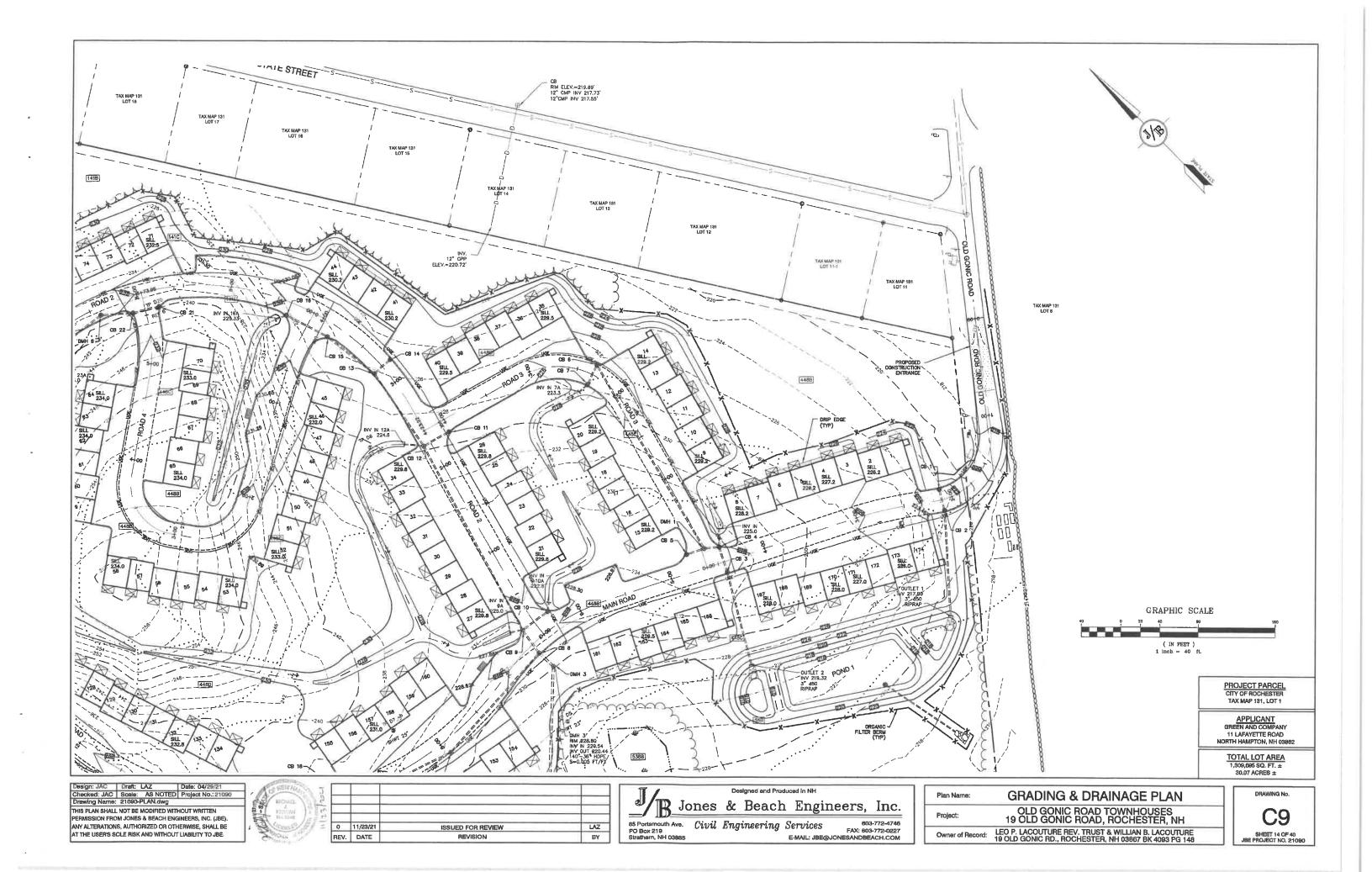


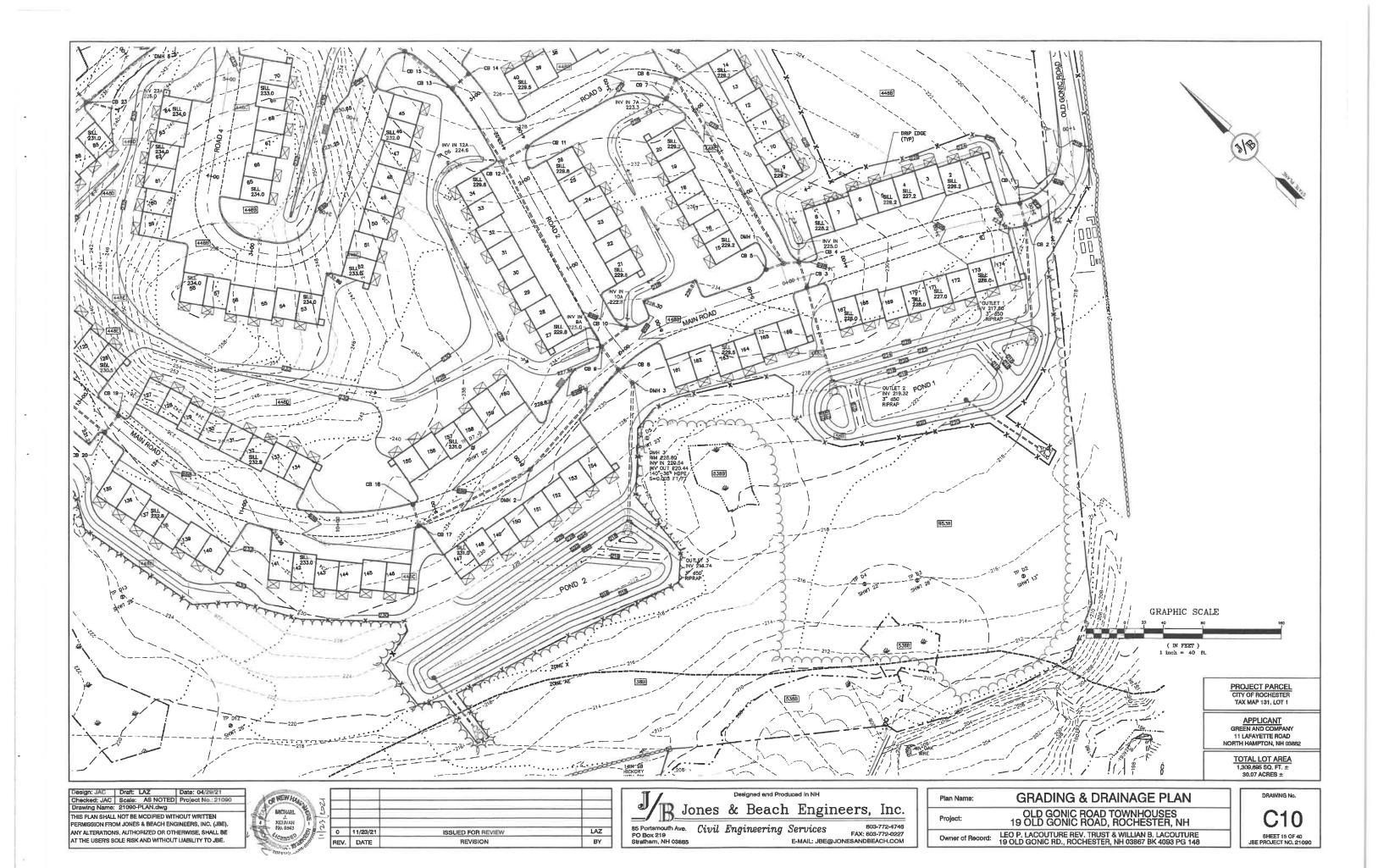
Jones & Beach Engineers, Inc. Services 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

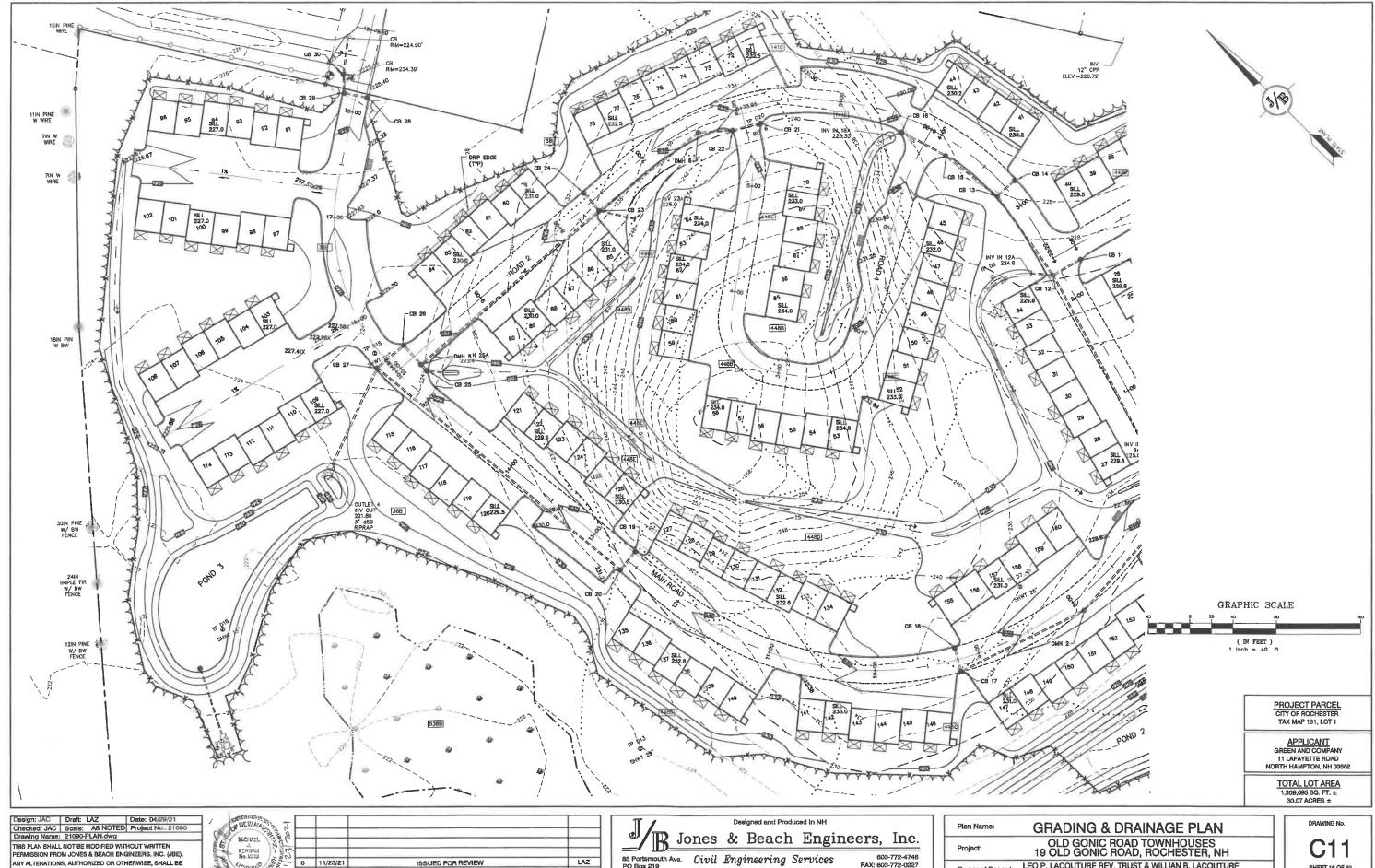
85 Portsmouth Ave. Civil Engineering Services PO Box 219 Stratham, NH 03885

OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148 Owner of Record:

OVRG







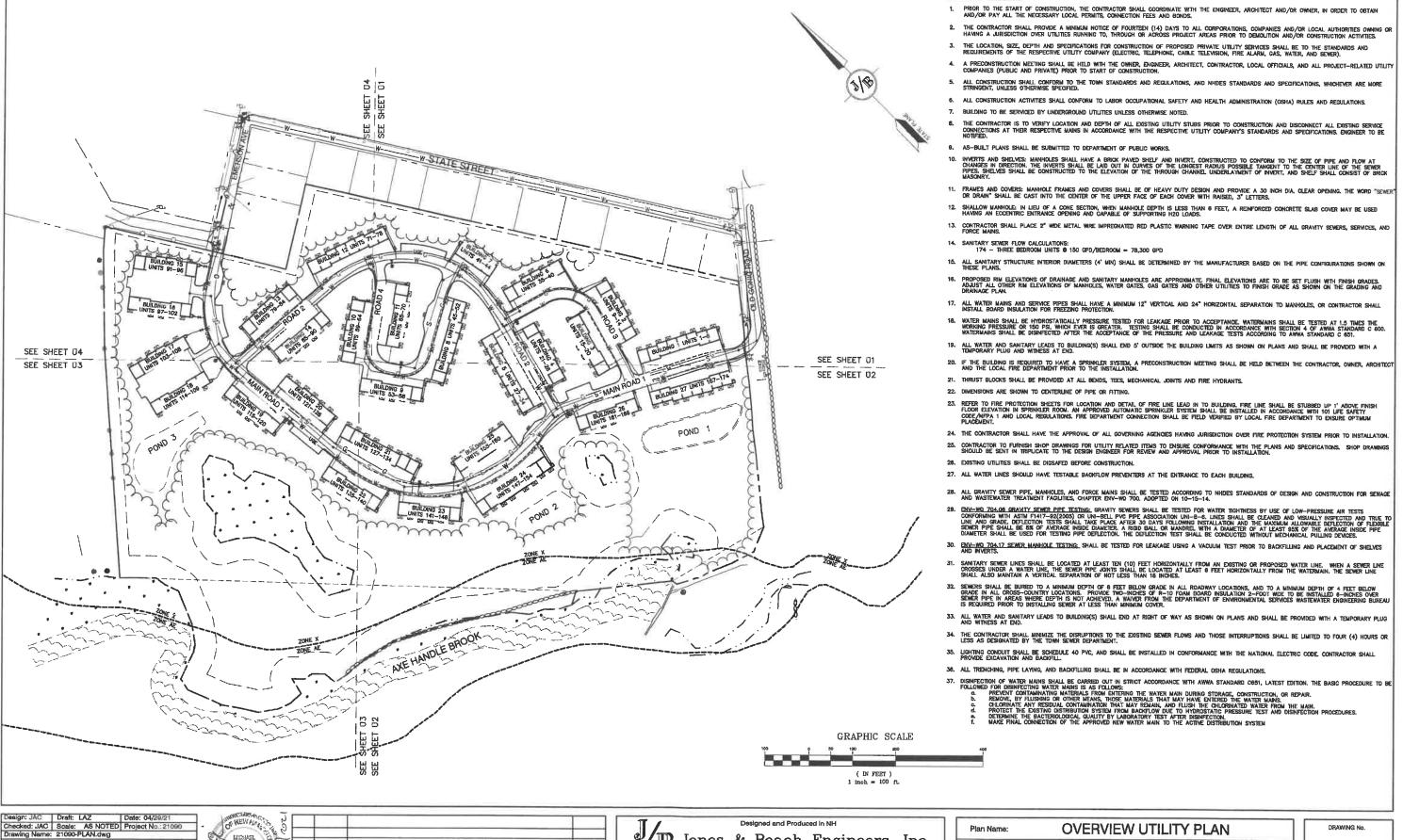
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LAZ 0 11/23/21 ISSUED FOR REVIEW BY REV. DATE REVISION

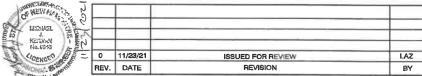
Services 603-772-4748 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM 85 Portsmouth Ave. Civil Engineering Services
PO Box 219
Stratham, NH 03885
E-MAIL: JBE©

OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH

Owner of Record: LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148 SHEET 16 OF 40 JBE PROJECT NO. 21090



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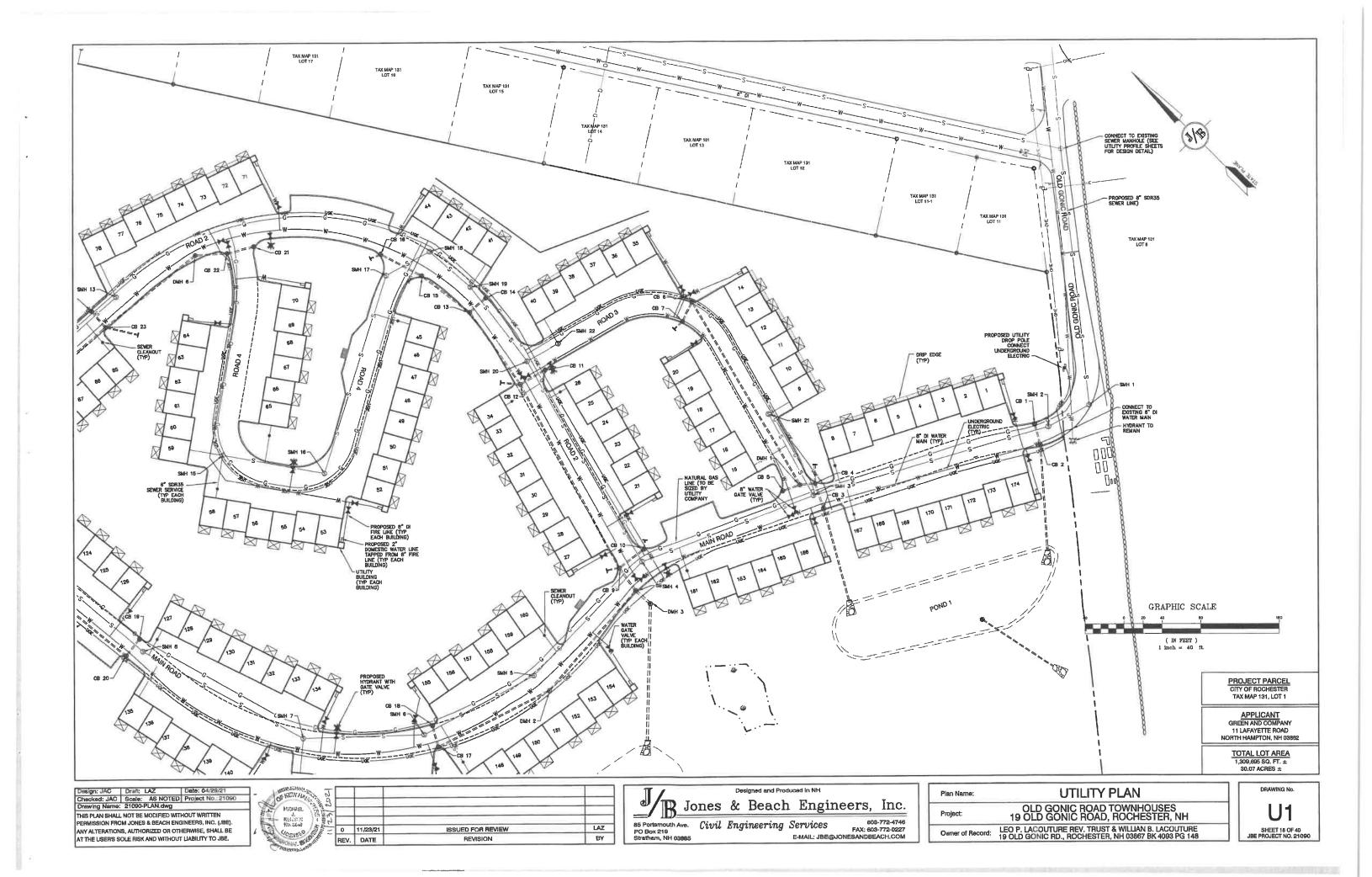
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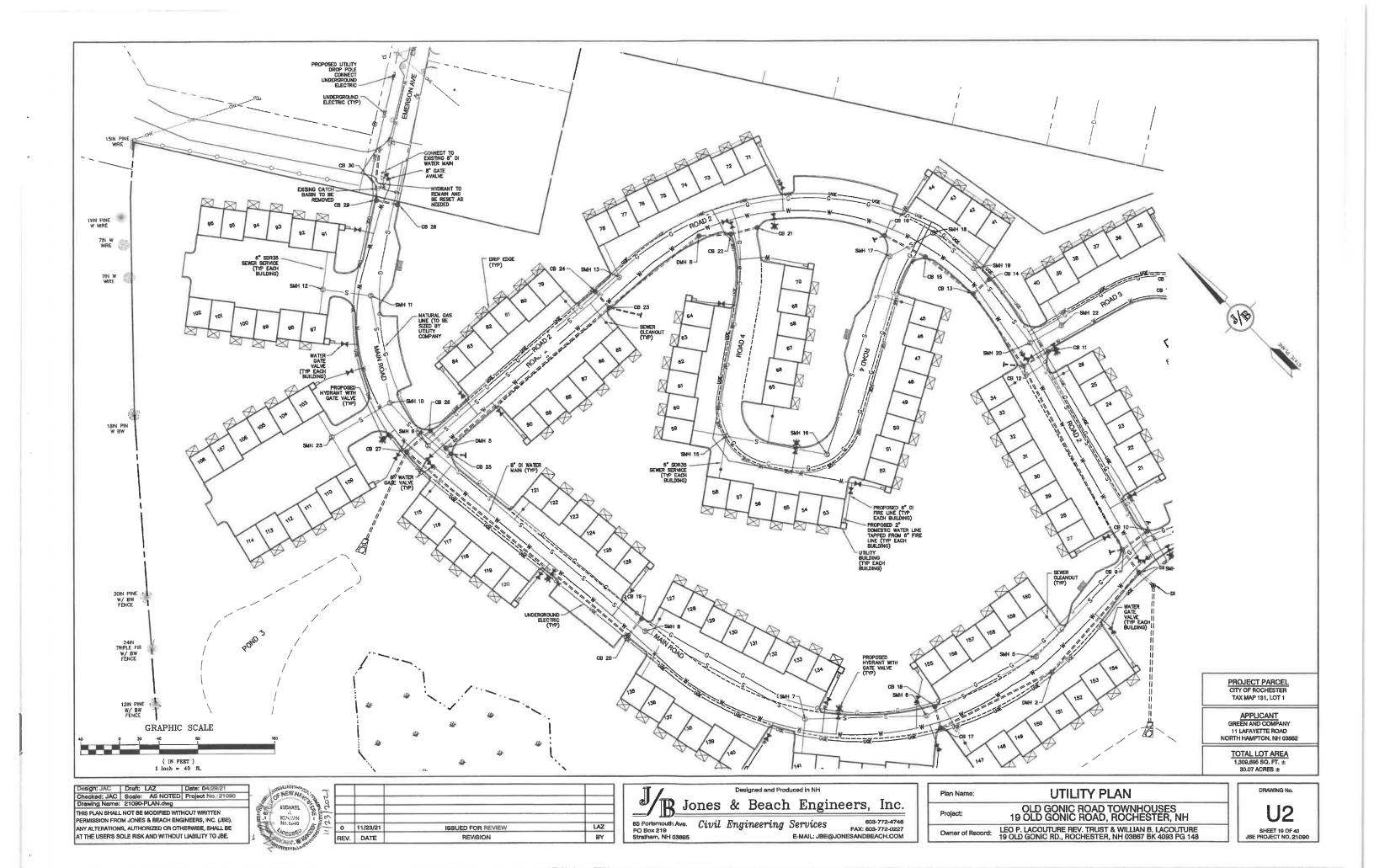
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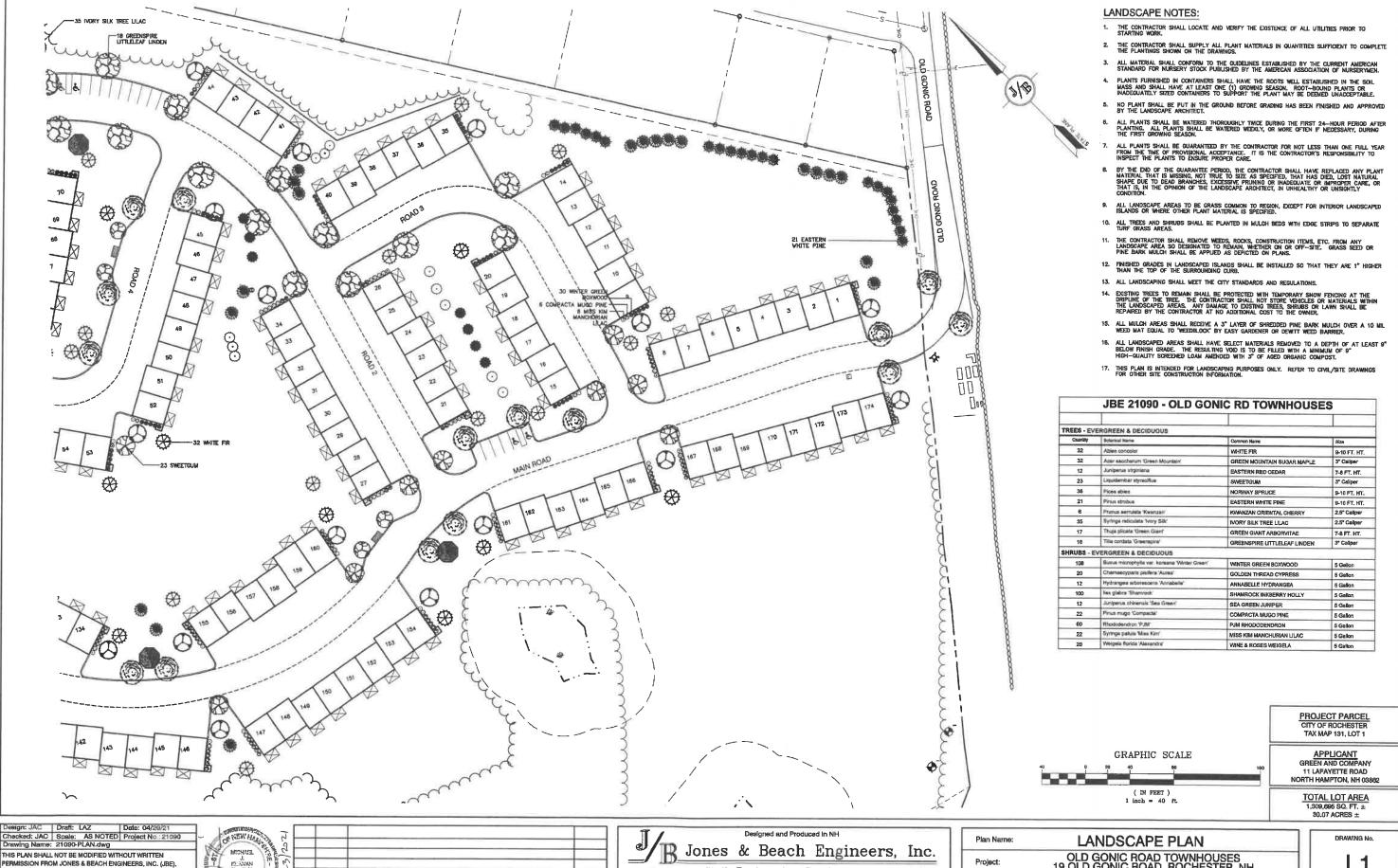
OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH

LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148 Owner of Record:









0 11/23/21

REV. DATE

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E-MAIL: JBE@JONESANDBEACH.COM

85 Portsmouth Ave. Civil Engineering Services PO Box 219

OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH

LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

SHEET 20 OF 40 JBE PROJECT NO. 21090

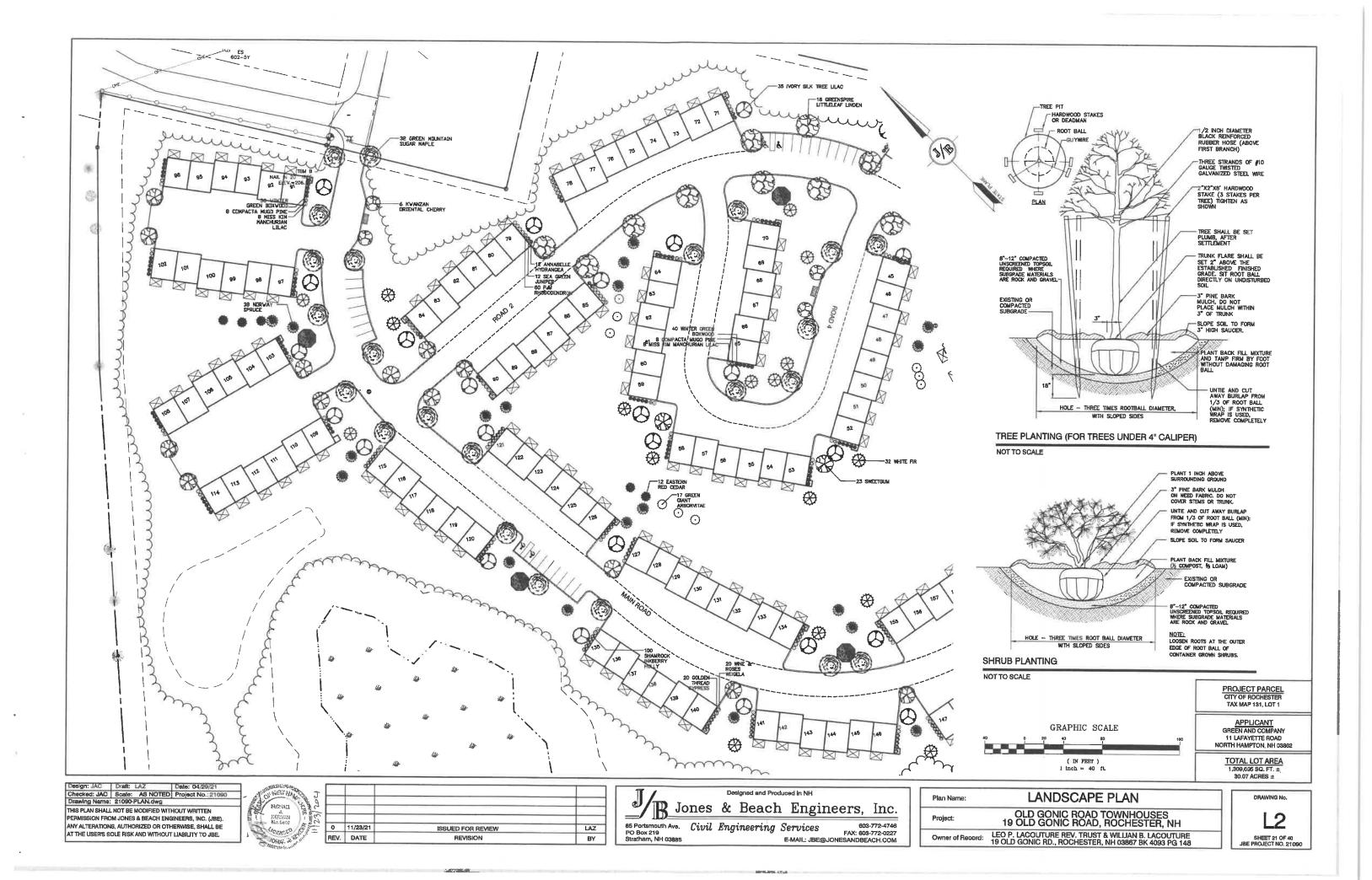
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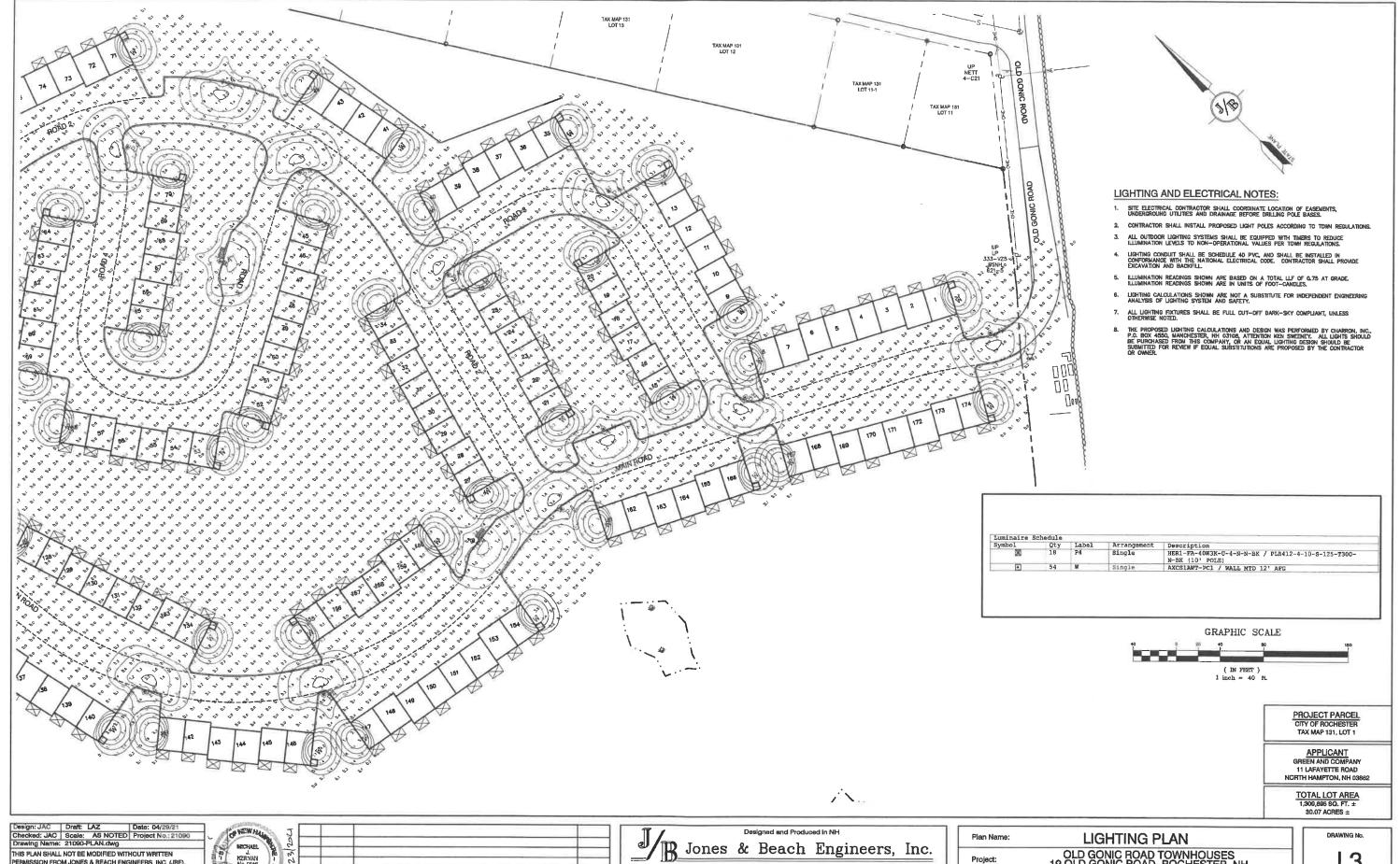
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REVISION

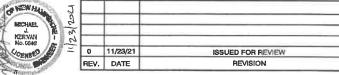
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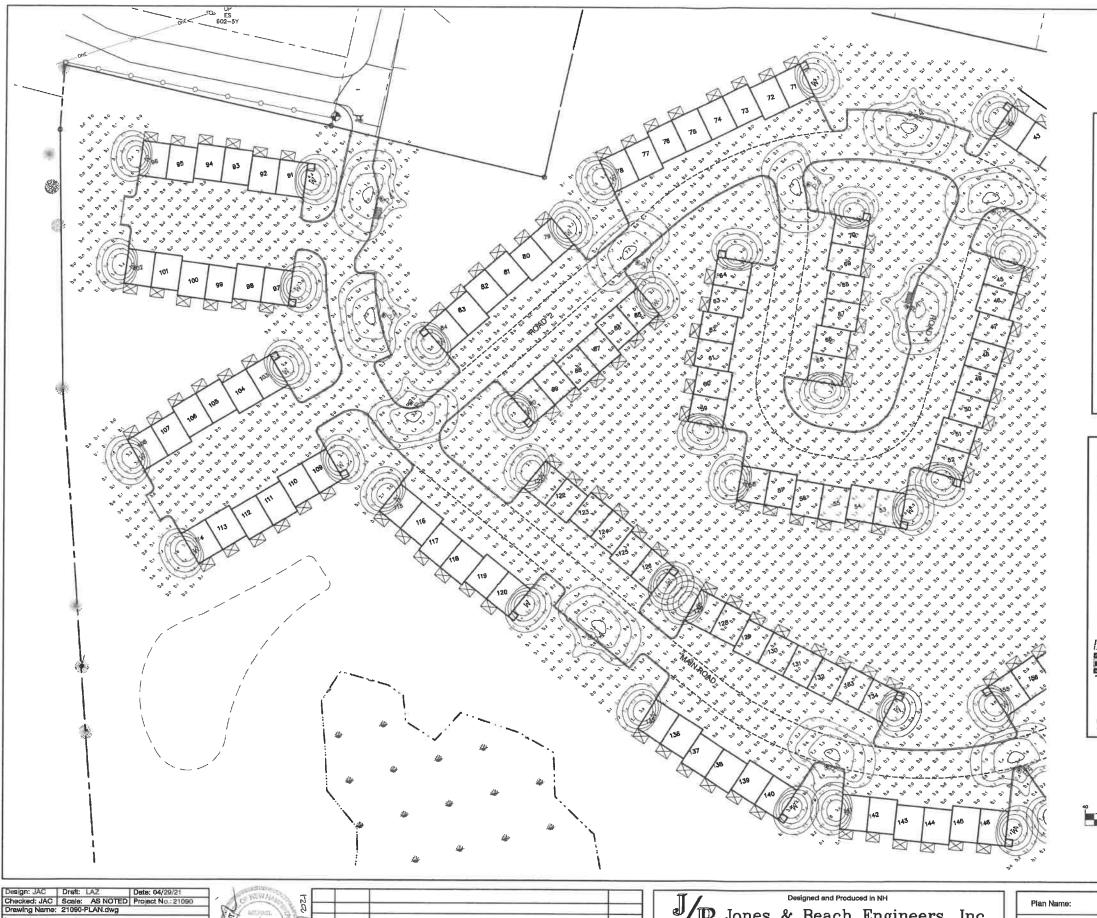
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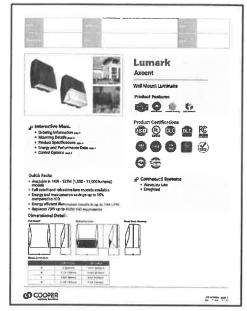
BY

Services 603-772-4748 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM 85 Portsmouth Ave. Civil Engineering Services
PO Box 219
Stratham, NH 03885 E-MAIL: JBE@

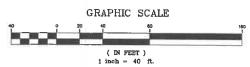
OLD GONIC ROAD TOWNHOUSES
19 OLD GONIC ROAD, ROCHESTER, NH
LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE
19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

SHEET 22 OF 40 JBE PROJECT NO. 21090









APPLICANT GREEN AND COMPANY 11 LAFAYETTE ROAD NORTH HAMPTON, NH 03862

TOTAL LOT AREA 1,309,695 SQ, FT. ± 30.07 ACRES ±

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B Jones & Beach Engineers, Inc.

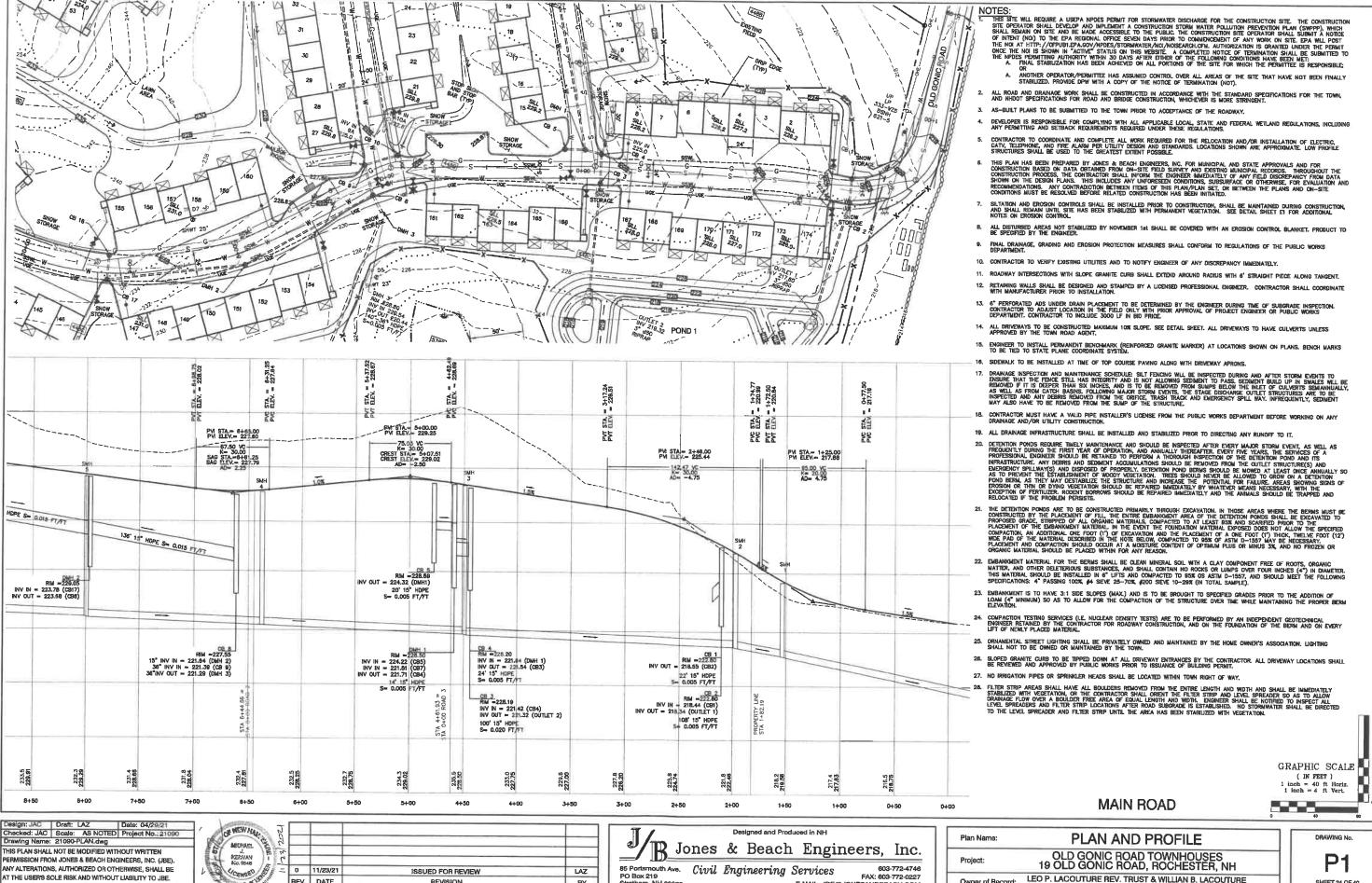
B5 Portsmouth Ave. Civil Engineering Services
PO Box 219
Stratham, NH 03885
E-MAIL: JBE@ Services 603-772-4748 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	LIGHTING PLAN

Project: OLD GONIC ROAD TOWNHOUSES
19 OLD GONIC ROAD, ROCHESTER, NH

Owner of Record: LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE
19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4083 PG 148

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REV. DATE

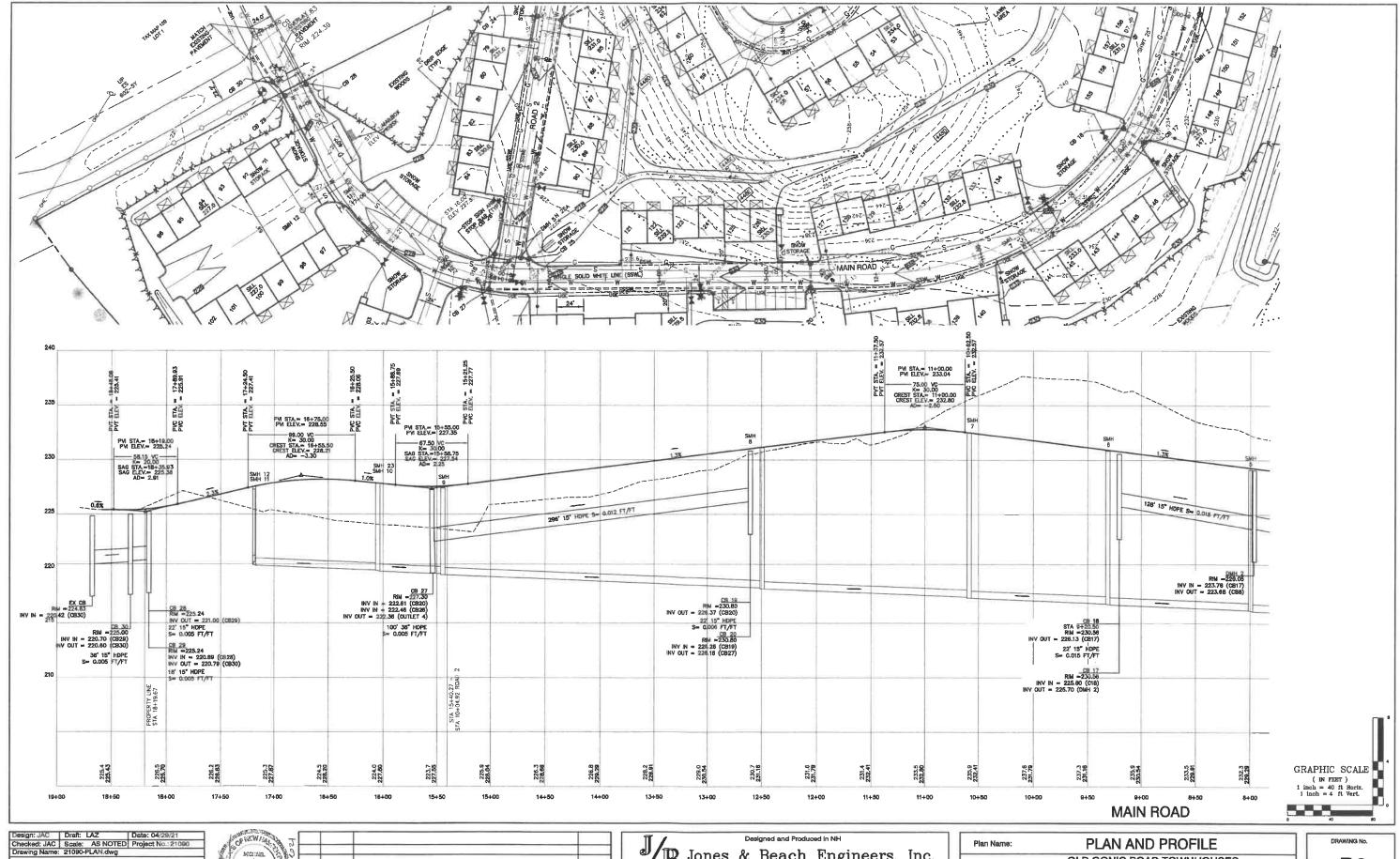
REVISION

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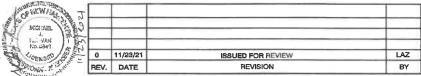
SHEET 24 OF 40 JBE PROJECT NO. 21090

Owner of Record:

E-MAIL: JBE@JONESANDBEACH.COM



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Services 603-772-4746 FAX: 803-772-0227 E-MAIL: JBE@JONESANDBEACH.COM 85 Portsmouth Ave. Civil Engineering Services
PO Box 219
Stratham, NH 03885 E-MAIL: JBE@

Plan Name:	PLAN AND PROFILE
Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

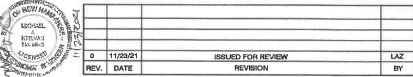
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 Design: JAC
 Draft: LAZ
 Date: 04/29/21

 Checked: JAC
 Scale: AS NOTED
 Project No.: 21090

 Drawing Name: 21090-PLAN.dwg
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Jones & Beach Engineers, Inc. 85 Port PO Box Strathe

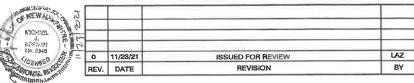
ntsmouth Ave.	Civil	Engineering	Services	603-772-4748
ox 219	00000	Ding tracer trug	DC1 0 1000	FAX: 603-772-0227
nam, NH 03885			E-MAIL: JBE@J	IONESANDBEACH.COM

1	Plan Name:	PLAN AND PROFILE	_
	Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH	_
l	Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE	_

SHEET 26 OF 40 JBE PROJECT NO. 21090



Design: JAC Draft: LAZ Date: 04/29/21
Checked: JAC Scale: AS NOTED Project No.: 21090
Drawing Name: 21090-PLAI.dwg
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Jones & Beach Engineers, Inc.

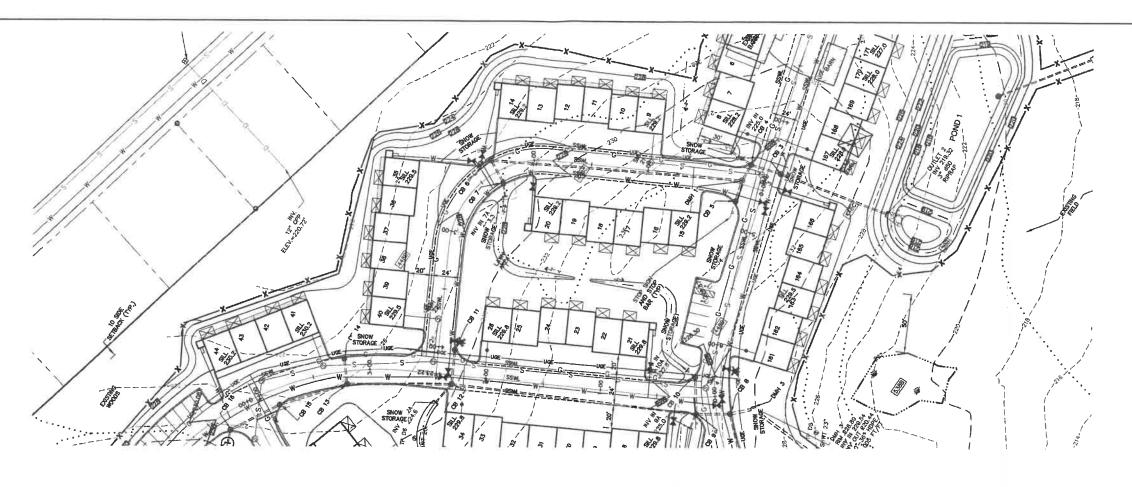
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Stratham, NH 03885

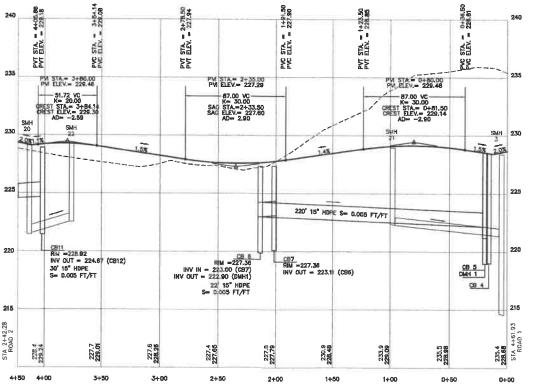
Designed and Produced in NH

Engineering Services
FAX: 603-772-4748
FAX: 603-772-0227
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	PLAN AND PROFILE
Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

P4
SHEET 27 OF 40





GRAPHIC SCALE
(IN FEET)
I inch = 40 ft Horiz.
1 inch = 4 ft Vert.

ROAD 3

Design: JAC	Draft: LAZ	Date: 04/29/21
Checked: JAC	Scale: AS NOTE	D Project No.:21090
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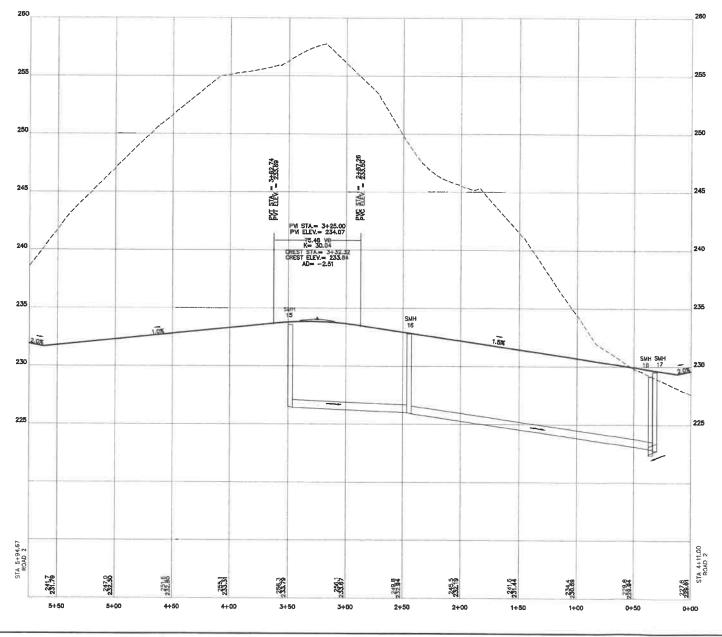
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REV.	DATE	REVISION	BY

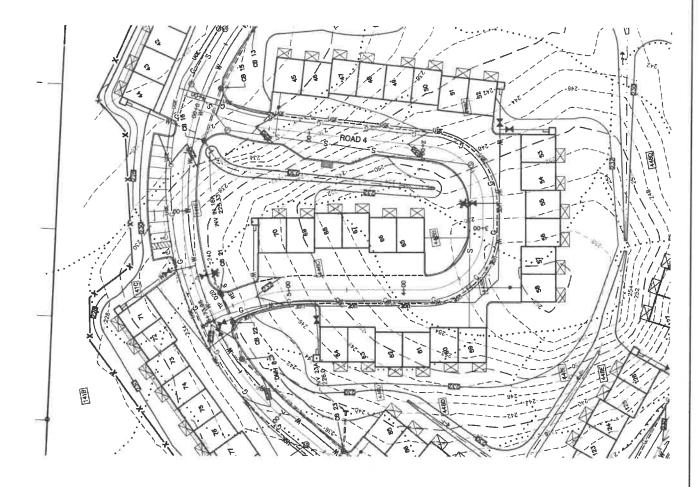
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e R	Jones	&	Beach	Engineers,	Inc.
11.7		_			

B5 Portsmouth Ave. Civil Engineering Services 603-772-4748 PO Box 219 E-MAIL: JBE@JONESANDBEACH.COM

	Plan Name:	PLAN AND PROFILE
	Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
	Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

P5 SHEET 28 0F 40 JBE PROJECT NO.21090





GRAPHIC SCALE (IN FEET)

1 inch = 40 ft Horiz.
1 inch = 4 ft Vert.

ROAD 4

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REV.	DATE	REVISION	BY

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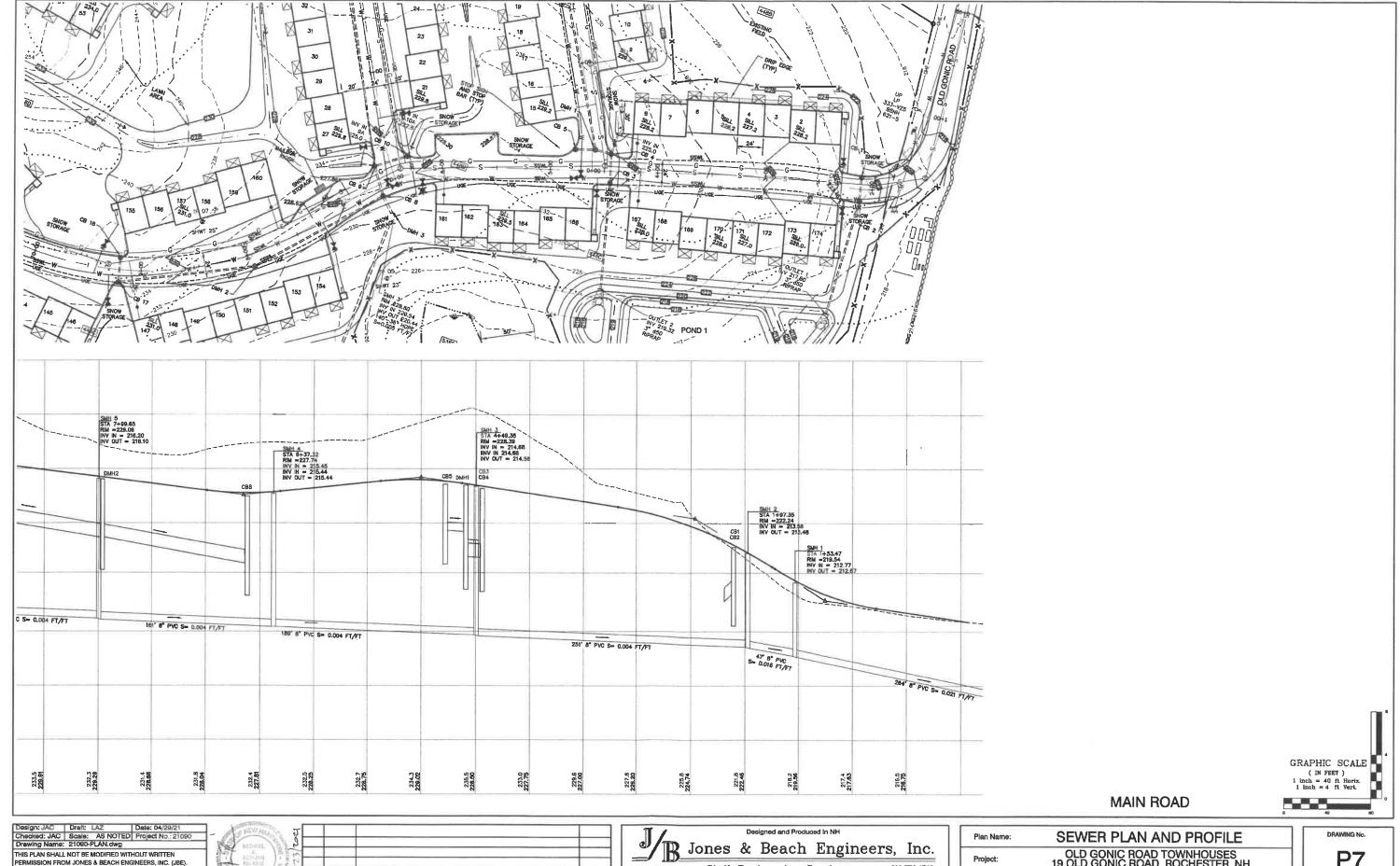
85 Portsmouth Ave. Civil Engineering Services
PO Box 219
Strathsm, NH 03885

Civil Engineering Services
E-MAIL: JBE@JONESANDBEACH.COM

85 Portsmouth Ave. Civil Engineering Services
PO Box 219
Stratham, NH 03885
E-MAIL: JBE@

	Plan Name:	PLAN AND PROFILE		
	Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH		
	Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148		

P6 SHEET 29 OF 40 JBE PROJECT NO.21090



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0 11/23/21

REV. DATE

ISSUED FOR REVIEW

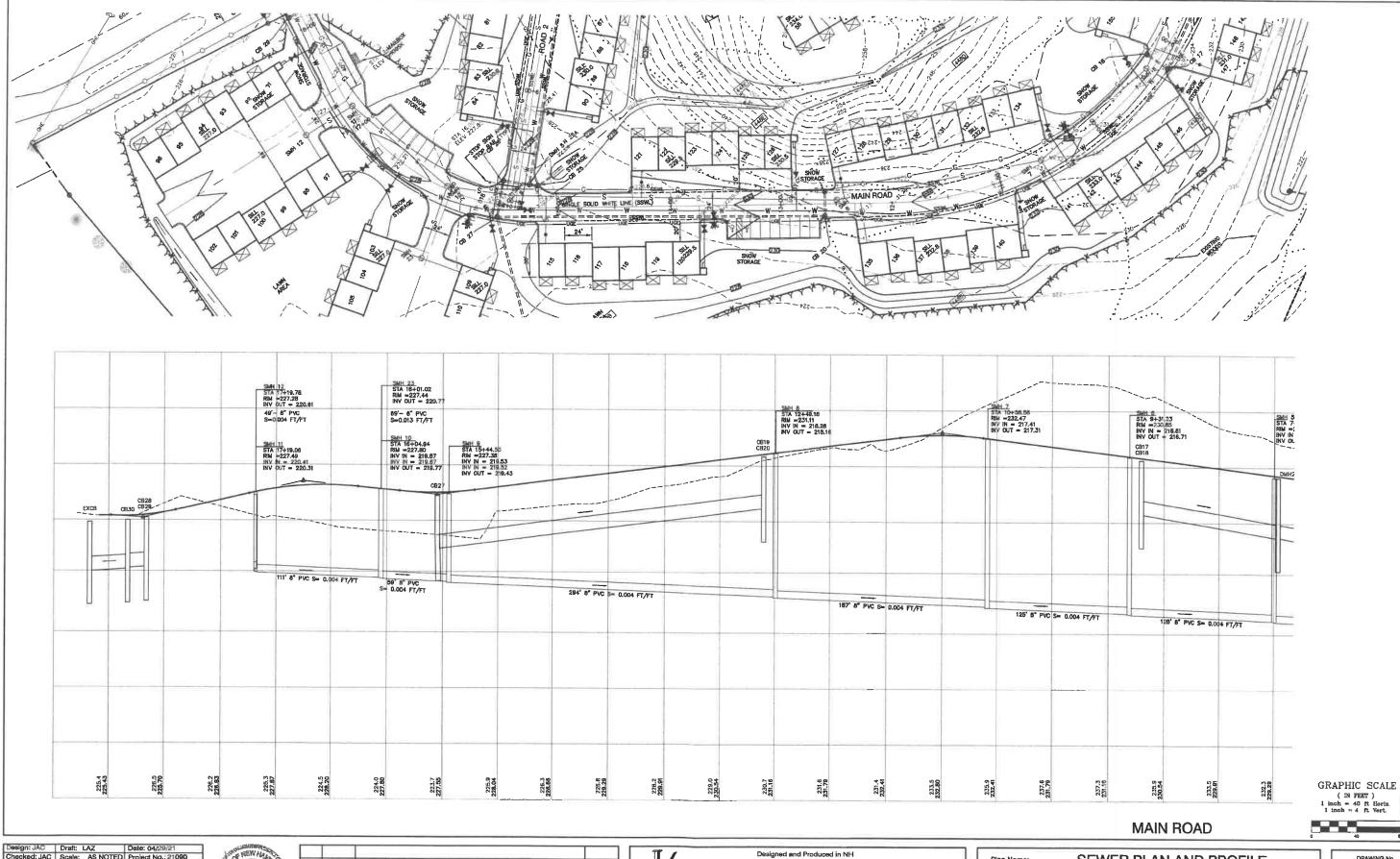
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BY

Project:
OLD GONIC ROAD TOWNHOUSES
19 OLD GONIC ROAD, ROCHESTER, NH

Owner of Record:
LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE
19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

P7
SHEET SO 0F 40
JBE PROJECT NO.21080



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PO Box 219
Stratham, NH 03865
E-MAIL: JBE@

Plan Name:

Project:

SEWER PLAN AND PROFILE

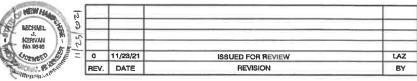
OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH

LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148 Owner of Record:

DRAWING No. SHEET 31 OF 40 JBE PROJECT NO. 21090



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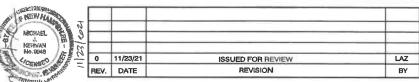
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PO Box 219
Stratham, NH 03885
E-MAIL: JBE®

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	Plan Name:	SEWER PLAN AND PROFILE
	Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
	Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

DRAWING No. **P9**



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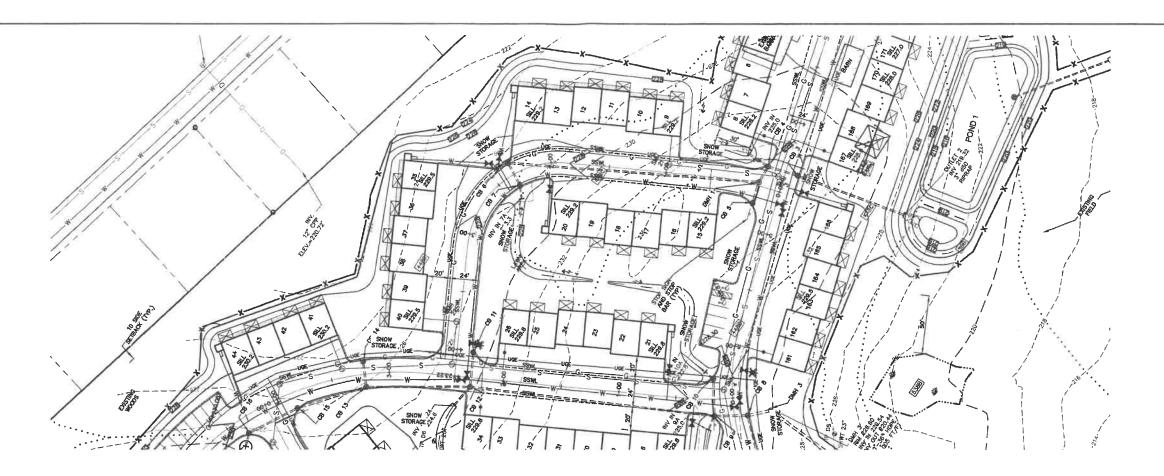
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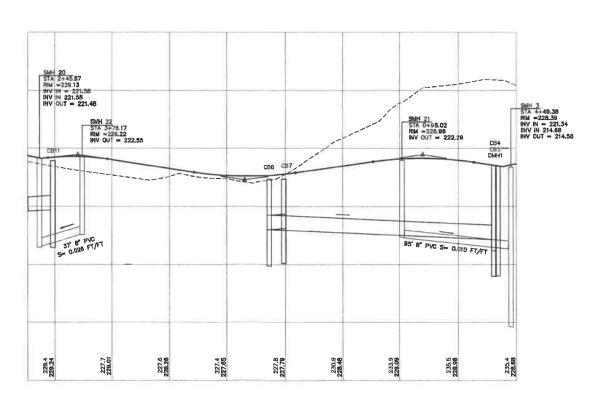
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603-772-4748
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	Plan Name:	PLAN AND PROFILE
	Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
	Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

P10
SHEET 33 OF 40
JBE PROJECT NO. 21090





GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft Horiz.
1 inch = 4 ft Verl.

ROAD 3

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			IT LIABILITY TO JBE.				



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PO Box 219
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Civil Engineering Services 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

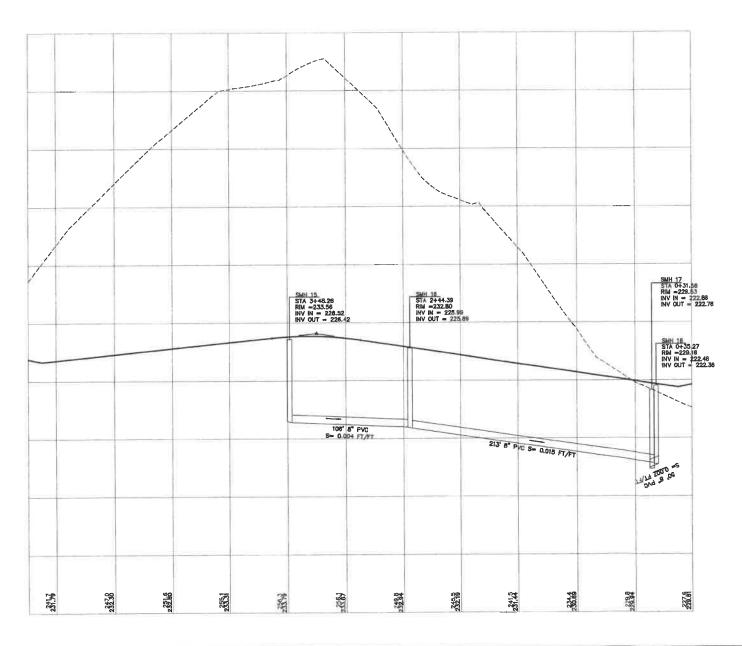
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	Plan Name:	SEWER PLAN AND PROFILE	

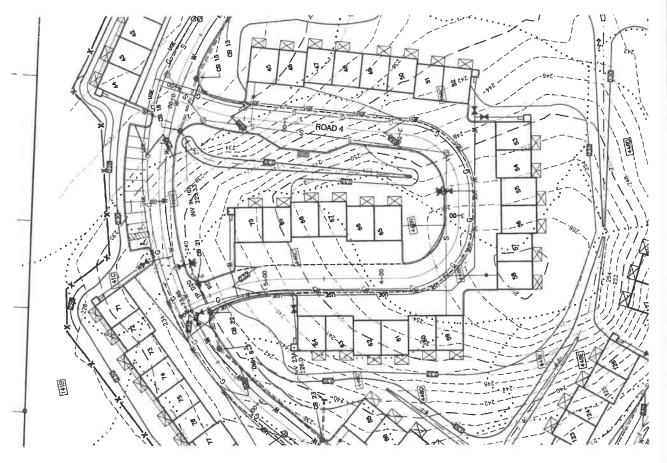
Project: OLD GONIC ROAD TOWNHOUSES
19 OLD GONIC ROAD, ROCHESTER, NH

Owner of Record: LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE
19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

P11
SHEET 34 OF 40
JBE PROJECT NO. 21080

DRAWING No.





GRAPHIC SCALE

(IN FEET)

1 inch = 40 ft. Horiz.
1 inch = 4 ft. Vert.

ROAD 4

Design: JAC	Draft: LAZ	Date: 04/29/21
Checked: JAC	Scale: AS NOTED	Project No.: 21090
Drawing Name:	21090-PLAN.dwg	
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Anna Good A.				
Committee	$ \sqrt{i}$			
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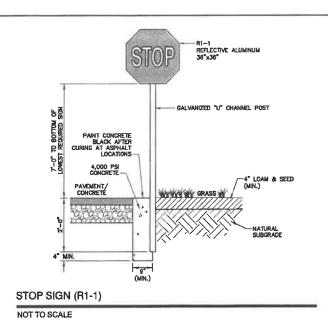
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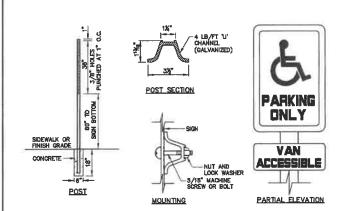
Reach Engineers, Inc.

603-772-4748
FAX: 603-772-0227
E-MAIL: JBE@JONESANDEBACH.COM

1	Plan Name:	SEWER PLAN AND PROFILE
	Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
	Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

P12
SHEET 35 OF 40
JBE PROJECT NO.21090

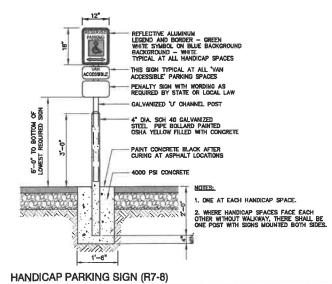


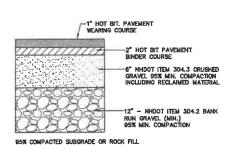


HANDICAP SIGN DETAILS



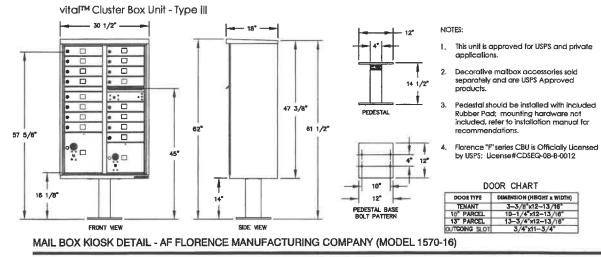
NOT TO SCALE

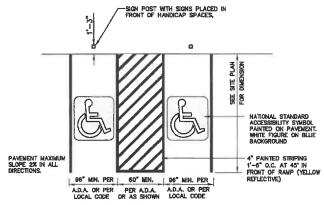




TYPICAL BITUMINOUS PAVEMENT

NOT TO SCALE



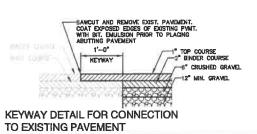


HANDICAP PARKING LAYOUT

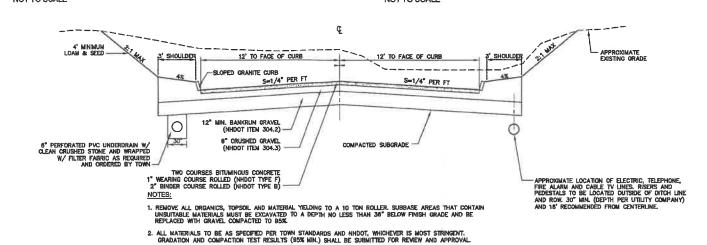
TYPICAL ROADWAY SECTION W/CURBING

NOT TO SCALE

NOT TO SCALE

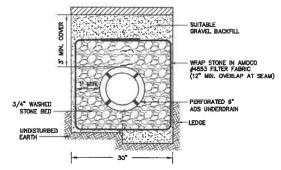


NOT TO SCALE



3. TOWN MAY REQUIRE UNDERDRAIN, ADDITIONAL GRAVEL AND/OR ADDITIONAL DRAINAGE IF SOIL CONDITIONS WAR

4. WOVEN GEOTEXTILE FABRIC SHALL BE PLACED ABOVE SUBGRADE AT ALL WETLAND CROSSINGS

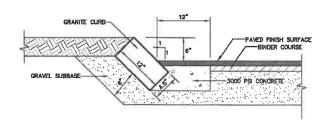


NOTES:

- 1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
- 2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO PROJECT AND TOWN SPECIFICATIONS.
- 3. SLOPE UNDERDRAIN PIPE TO DAYLIGHT.

ROADWAY UNDERDRAIN TRENCH

NOT TO SCALE



- CURB TO BE PLACED PRIOR TO PLACING TOP SURFACE COURSE.
 JOINTS BETWEEN STONES SHALL BE MORTARED.

SLOPED GRANITE CURB

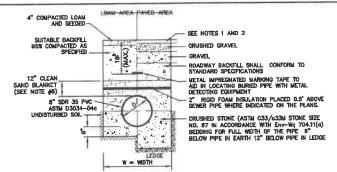
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Design: JAC Draft: LAZ Date: 04/29/21 Checked: JAC Scale: AS NOTED Project No.: 21090	- NOW HEW HALLS J				
Drawing Name: 21090-PLAN.dwg	MICHAEL &				
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE).	NO. 6848	\vdash			
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Plan Name:	DETAIL SHEET
Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH
Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

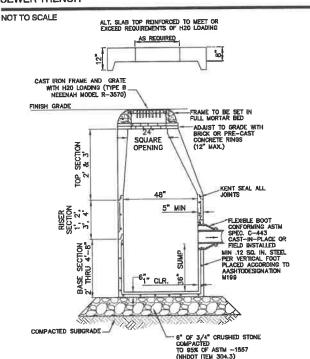
DRAWING No. SHEET 36 OF 40 JBE PROJECT NO. 21090



1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO PAVEMENT DETAILS.

- 2 NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECIFICATIONS.
- 4. W= MAZUMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12" INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, WIDTH SHALL BE NO MORE THAN 36"; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER. WIDTH SHALL BE 24 INCHES PLUS PIPE QD. WIDTH SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR GREETED EXCAVATION BELOW GRADE.
- RIGID FOAM INSULATION TO BE PROVIDED WHERE COVER IN THE ROADWAY IS LESS THAN 6' AND CROSS COUNTRY IS LESS THAN 4', PURSUANT TO DES WAIVER BEING ISSUED.
- PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND, FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 10 PASSES A 1/2 "SIEVE AND A MAXIMUM OF 15% PASSES A 4/200 SIEVE IN ACCORDANCE WITH ENV-WQ 704.11(b).
- JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL AND CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM D3212 STANDARD IN EFFECT WHEN THE JOINT SEALS WERE MANUFACTURED, AND SHALL BE PUSH-ON, BELL-AND-SPIGOT TYPE PER Env-Wq 704.05 (e).

SEWER TRENCH

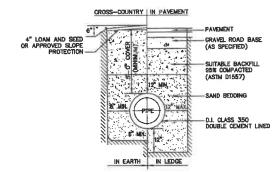


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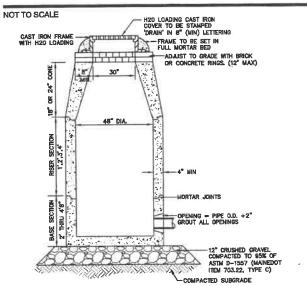
- 1. BASE SECTION SHALL BE MONOLITHIC WITH 48" INSIDE DIAMETER.
- 3. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE II CEMENT.
- 4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR H20 LOADING
- PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2" MAX, CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS SO AS TO BE WATERTIGHT.
- 6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER
- ALL CATCH BASIN FRAMES AND GRATES SHALL BE NHDOT CATCH BASIN TYPE ALTERNATE 1 OR NEENAH R-3570 OR APPROVED EQUAL (24"):24" TYPICAL).
- 8. STANDARO CATCH BASIN FRAME AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM, BUT NO MORE THAN 12"), OR PRECAST CONCRETE "DONUTS".

CATCH BASIN

NOT TO SCALE



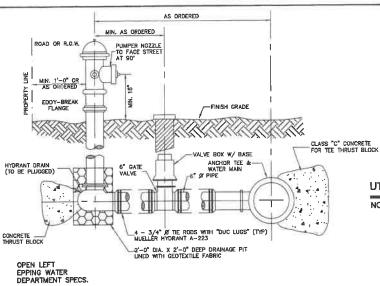
WATER SYSTEM TRENCH



- 1, BASE SECTION SHALL BE MONOLITHIC WITH 48" INSIDE DIAMETER
- 2. ALL SECTIONS SHALL BE DESIGNED FOR H20 LOADING
- 4. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR H20 LOADING.
- 5. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 2° Max. Glearance to outside of PIPE. Mortar all PIPE connections so as to be watertight.
- 6. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
- 7. ALL DRAIN MANHOLE FRAMES AND GRATES SHALL BE NEENAH R-1798 OR APPROVED EQUAL (30° DIA. TYPICAL).
- 8. STANDARD FRAME(S) AND GRATE(S) SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM, BUT NO MORE THAN 12"), OR PRECAST CONCRETE DONUTS.

DRAIN MANHOLE (4' DIAM.)

NOT TO SCALE



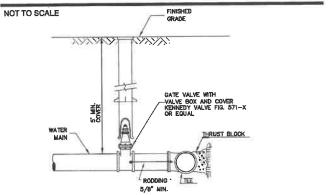
NOTES
1. ALL PIPE FITTINGS TO BE D.I. PRESSURE CLASS 350, THICKNESS CLASS 52.
2. HYDRANT TO BE PANNED RED WITH WHITE "REFLECTION" PAINT ON BONNET.
3. MECHANICAL JOINTS SHALL HAVE MEGALUG RETAINING GLANDS AS MADE BY EBBA OR

APPROVED EQUAL.

4. STEAMER NOZZLE TO BE "STORCH" TYPE.

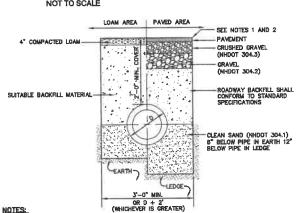
5. NATIONAL STANDARD THREAD.

HYDRANT INSTALLATION



BURIED GATE VALVE DETAIL

NOT TO SCALE



1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.

- 2. NEW ROADWAY CONSTRUCTION SHALL CONFORM WITH PROJECT AND TOWN SPECIFICATIONS.

DRAINAGE TRENCH

NOT TO SCALE

Plan Name

Owner of Record:

DETAIL SHEET

OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH Project: LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

SEWER MANHOLE

NOT TO SCALE

(12° MIN.)

NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.

30" DIA. CLEAR OPENING

48" DIAMETER MIN.

MIN. BEDDING IN LEDGE (ASTM C33-03 NO. 67 STONE)

OTES: (33-03 NO. 67 STONE)

PER NHDES ENV-WQ 704-13(C), MORTAR USED IN MANHOLE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING:

G. MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRAYED LIME ADDITION

B. PROPORTIONS II MORTAR OF PARTS BY VOLUMES SHALL BE PER TABLE 704-4:

(1) 4.5 PARTS SAND, POR PARTS BY VOLUMES SHALL BE PER TABLE 704-4:

(2) 4.5 PARTS SAND, POR PARTS CHEENT OF SAND SHAPE TO SHAPE THE SHAPE TO SHAPE THE SHAP

HTTP://www.nh.gov/dot/org/projectdevelopment/highwaydesign/specifications/index.htm

SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL IN ACCORDANCE WITH ENV-WQ 704.12 (K).

3. ALL MANHOLES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH ENV-WQ 704.17 (a) THROUGH (b).

ALL PRECAST SECTIONS SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP—PROOFING COATING IN ACCORDANCE WITH ENV—WQ 704.12 (J).

ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL PER

7. BRICK MASONRY SHALL CONFORM TO ASTM C32 (ENV-WQ 704.12(a)(9))

sewer manhole covers shall conform to astm A48/48M with a casting equal to class 30 in accordance with env-wq 704.13 (a) (a).

-FULL MORTAR BED (PORTLAND TYPE II CEMENT)

ADJUST TO GRADE WITH HARD BRICK GRADE SS (MIN. 2 COURSES, MAX. 5 COURSES OR 12" MAX. ADJUSTMENT)

PRECAST CONCRETE UNITS SHALL CONFORM TO ASTM C-478

-CLASS "AA" CONCRETE 4000 P.S.I.

5" MIN. REINFORCED

(ELASTOMERIC SEALING RIN CAST IN THE MANHOLE OR EQUIL. ENV-WQ 704.12 (g)

FIRST JOINT

- WATERTIGHT JOINT (TONGUE & GROOVE W/ A DOUBLE RING OF MASTIC SEALANT)

PLASTIC MARKER TAPE ABOVE CABLES

UTILITY TRENCH

NOT TO SCALE

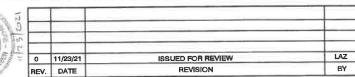
SHEET 87 OF 40

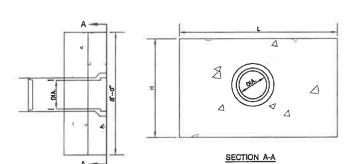
DRAWING No.

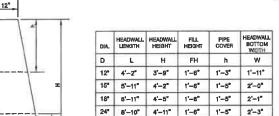
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85 Portsmouth Ave. Civil Engineering Services FAX: 603-772-0227 PO Box 219 E-MAIL: JBE@JONESANDBEACH.COM

Checked: JAC Scala: AS NOTED Project No.: 21090
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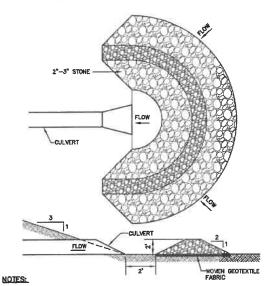


- ALL DIMENSIONS GIVEN IN FEET & INCHES.
 PROVIDE BELL END AT NILET HEADWALL, AND SPIGOT END AT OUTLET END HEADWALL
 CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS, CEMENT TO BE TYPE III PER ASTM
 C-150, REINFORCING TO MEET OR EXCEED ASTM A-615 GRADE 60 DEFORMED BARS.
 17 THERADED INSERTIS PROVED FOR FINAL ATTACHMENT IN FIELD BY OTHERS.

PRECAST CONCRETE HEADWALL

LONGITUDINAL SECTION

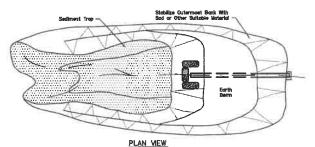
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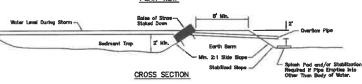


- 1. TEMPORARY CULVERT INLET PROTECTION CHECK DAMS SHALL BE CONSTRUCTED OF $2\!-\!3''$ STONE OVER WOVEN GEOTEXTILE FABRIC.
- INLET PROTECTION MEASURES SHALL BE INSTALLED AT THE OPENINGS OF ALL EXISTING AND PROPOSED CULTERTS LOCATED BELOW (DOWNSTREAM) FROM AND WITHIN 100" OF THE PROLECT STE.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURE WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE.
- STRUCTURES SHALL BE REMOVED WHEN THE SITE IS STABILIZED WITH VEGETATION AND THE CHANNEL SHALL BE SMOOTHED AND REVEGETATED.

TEMPORARY CULVERT INLET PROTECTION CHECK DAM

NOT TO SCALE





TEMPORARY SEDIMENT BASIN

NOT TO SCALE EXISTING PAVEMENT EXISTING GROUND **PROFILE** 75253527 50' MINIMUN CAYAYAS PLAN VIEW NOTES:

- 1. STONE FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.

 2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH MOULD APPLY.

 3. THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 16 FLOWL WOTH OF THE ENTRANCE WHERE NIGHESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.

 5. GEOLOTELINE FILTER FARRIC SHALL BE PLACED OVER THAN THE FLUIL WOTH OF THE ENTRANCE WHERE NIGHESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.

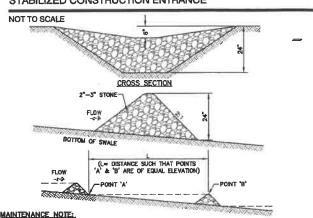
 6. GEOLOTELINE FILTER FARRIC SHALL BE PLACED OVER THE ENTRE AREA PRIOR TO PLACING THE STONE.

 FILTER FABRIC IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.

 6. ALL SURFACE WAITER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE IF PIPING IS IMPRACTICAL, A STONE BERN WITH 5:1 SLOPES THAT CAN BE CROSSED BY WENICLES MAY BE SUBSTITUTED FOR THE PIPE.

 7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT—OF—WAY. THIS MAY REQUIRE PERFONCT TOP DRESSING WITH ADDITIONAL STONE AS CONSTRONT SPILLED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT—OF—WAY MUST BE REMOVED PROMPTLY.

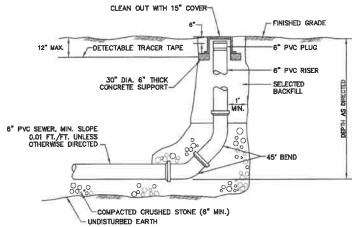
STABILIZED CONSTRUCTION ENTRANCE



1. STONE CHECK DAMS SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND REPOSON AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE DOSTING CHANNEL GRADE AND THE AREAS PREPARED. SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARLY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

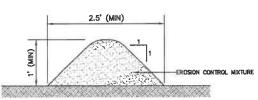
STONE CHECK DAM

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SEWER CLEAN OUT

NOT TO SCALE



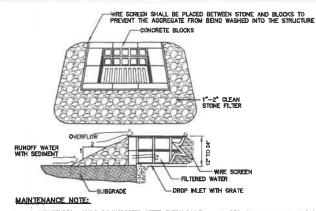
NOTES:

- 1. ORGANIC FILTER BERMS MAY BE UTILIZED IN LIEU OF SILT FENCE, UNLESS OTHERWISE SPECIFIED.
- THE EROSION CONTROL MIX USED IN THE FILTER BERMS SHALL BE A WELL-GRADED MIXTURE OF PARTICLE SIZES, MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS, AND SHALL BE FREE OF REPUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH, AND SHALL MEET THE FOLLOWING STANDARDS.
- THE ORGANIC CONTENT SHALL BE 80-100% OF DRY WEIGHT.
 PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 8" SCREEN, AND 70-85% PASSING A 0.75" SCREEN.
- THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.

 LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE
- SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
 THE pH SHALL BE BETWEEN 5.0 AND 8.0.
- ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUIT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
- ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES STEEPER THAN 3:1, UP TO 20' LONG, THE BERN SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE), AND A MINIMUM OF 36" WIDE. ON LONGER OR STEEPER SLOPES, THE BERN SHALL BE WIDER TO ACCOMMUDICATE THE POTENTIAL ADDITIONAL RUNOFF,
- 5. FROZEN GROUND, OUTGROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BETNIS. OTHER BIEN'S SHOULD BE USED AT LOW POINTS OF CONCENTRATE RUNOFF, BELOW CULVERT OUTLET AFRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE.
- 7. STRUCTURES MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED.

ORGANIC FILTER BERM

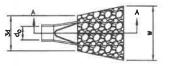
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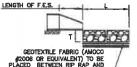
1. ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAINFALL AND REPAIRS MADE AS NECESSARY, SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISSOSED IN A SLITABLE UPLAND AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

TEMPORARY CATCH BASIN INLET PROTECTION (Block and Gravel Drop Inlet Sediment Filter)

NOT TO SCALE









SECTION A-A PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

SECTION A-A PIPE OUTLET TO WELL-DEFINED

				GINGINE
TABLE 7-24	RECOMMENDED	RIP RAP GRA	DATIO	N RANGES
THICKNESS OF	RIP RAP = 1.	5 FEET		
d50 SIZE=	0.50	FEET	6	INCHE\$
% OF WEIGHT S THAN THE GIVE		SIZE OF FROM	STON	E (INCHES) TO
100%		9		12
85%		8		11
50%		6		9
15%		2		3

- THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
- 2. THE RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION
- 3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMOM OF 12 INCHES.
- 4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZE.
- 5. OUTLETS TO A DEFINED CHANNEL SHALL HAVE 21 OR FLATTER SIDE SLOPES AND SHOULD BEGIN AT THE TOP OF THE CULVERT AND TAPER DOWN TO THE CHANNEL BOTTOM THROUGH THE LENGTH OF THE APRON.
- 6. MAINTENANCE: THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPILACED, UNDERWINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE QUILLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TRESS, DEBMS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES, REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO OUTLET PROTECTION.

RIP RAP OUTLET PROTECTION APRON

LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

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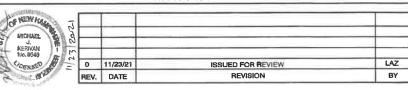
Owner of Record:

Plan Name:	DETAIL SHEET
Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH

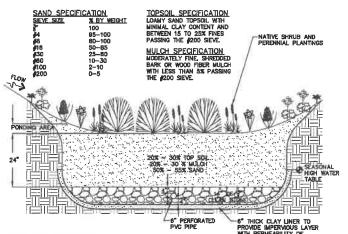
SHEET 38 OF 40 JBE PROJECT NO. 21090

DRAWING No

Checked: JAC Scale: AS NOTED Project No.: 21090
Drawing Name: 21090-PLAN.dwg
THIS PLAN SHALL NOT RE MODIFICATION MICHAEL J. NERIVAN 110, 9649 PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.



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DESIGN CONSIDERATIONS

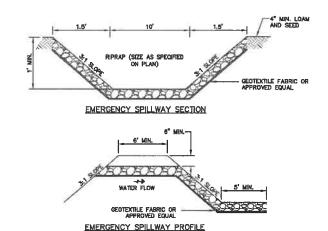
- DO NOT PLACE BIORETENTION SYSTEMS INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- 2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUN-OFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
- DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

MAINTENANCE REQUIREMENTS:

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- 3. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
- 4. AT LEAST CNCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLIDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.
- 6. CLAY LINER MATERIAL SHALL BE CLEAN SILTY-CLAY BORROW FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETERIOUS SUBSTANCES, AND SHALL CONTAIN NO ROCKS OR LUMPS OVER THREE INCHES (3") IN DIAMETER. THIS MATERIAL SHALL BE INSTALLED IN 6" LIFTS COMPACTED 10 92% OF ASTM 0-1557, AND SHALL MEET THE FOLLOWING SPECIFICATIONS: 6" PASSING TOOK, \$4" SIEVE 95-100%, \$400 SIEVE 80-90%, \$100 SIEVE 40-80%, \$200 SIEVE 25-45% (OF THE FRACTION PASSING THE \$4" SIEVE). THE CLAY COMPONENT SHALL HAVE A PLASTICITY INDEX OF AT LEAST 8 AND A HYDRAULIC CONDUCTIVITY OF 10 TO THE -8 CM/SEC.
- COMPACTION AND MATERIALS TESTING SERVICES SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

BIORETENTION SYSTEM (with clay bottom and pipe)

NOT TO SCALE



EMERGENCY SPILLWAY

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Drawing Name: 21090-PLAN.dwg

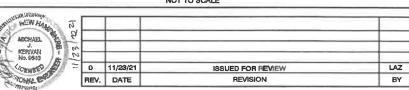
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Design: JAC | Draft: LAZ



ANGLE IRON

ANGLE IRON

ANGLE IRON

ANGLE IRON

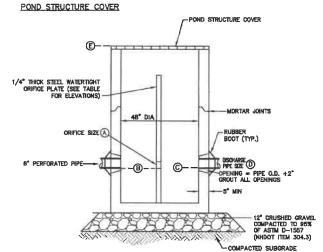
ANGLE IRON

ANGLE IRON

POND 1 3.5" 213.25 213.25 12" 219.00

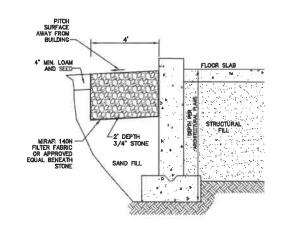
POND 2 3.5" 213.25 213.25 12" 219.00

POND 3 5.0" 217.25 217.25 12" 223.00



CATCH BASIN CONTROL STRUCTURE (CBCS)

NOT TO SCALE



DRIP EDGE DETAIL

NOT TO SCALE

3,14	PROPEX GEOTEX WS-200ST GEOTEXTILE FABRIC OR APPROVED EQUAL 5" THICK IMPERMOUS CLAY LINER
-RIP RAP	6' MIN. WATER FLOW POND AREA
SEDIMENT FOREBAY	PROPEX GEOTEX USE FARRIC
LILL AL SOLDWANDER SOL SOLS SOLS SOLS SOLS SOLS SOLS SOLS	OR APPROVED EQUAL —6" THICK IMPERMOUS CLAY LINER SPILLWAY PROFILE
NOTES:	
 A 8" THICK IMPERVIOUS CLAY LINER IS TO AROUND THE SIDES OF THE ENTIRE BIORE 	D BE PLACED UNDER ENTIRE SEDIMENT FOREBAY AND SPILLWAY AND ONLY TENTION AREA.
 SEDIMENT SHALL BE REMOVED FROM BEHI ORIGINAL HEIGHT OF THE STRUCTURE. 	ND THE STRUCTURE WHEN IT HAS ACCUMULATED TO ONE HALF THE
3. EMBANKMENT MATERIAL SHALL BE CLEAN DEFETERIOUS SUBSTANCES IT SHALL CON	MINERAL SOIL FREE OF ROOTS, ORGANIC MATTER, AND OTHER TAIN NO ROCKS OF LIMPS OVER FOUR INCHES (4") IN CHARGE THE

- 3. EMBANIMENT MATERIAL SHALL BE CLEAM MINERAL SOIL FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETEROUS SUBSTANCES. IT SHALL CONTAIN NO ROCKS OR LUMPS OVER FOUR INCHES (4") IN DIAMETER. THIS MATERIAL SHALL BE INSTALLED IN 6" LIFTS COMPACTED TO 92% OF ASTM 0-1857, AND SHALL MEET THE POLLOWING SPECIFICATIONS 8" PASSING 100%, §4 SIEVE 40-90%, \$40 SIEVE 50-80%, \$100 SIEVE 25-40%, \$200 SIEVE 15-30% (OF THE TOTAL SAMPLE).
- 4. 6" THICK IMPERVIOUS CLAY LINER MATERIAL SHALL BE CLEAN SILTY-CLAY BORROW FREE OF ROOTS, ORGANIC MATTER, AND OTHER DELETERIOUS SUBSTANCES, AND SHALL CONTAIN NO ROCKS OR LUMPS OVER THEE INCHES (3") IN DIAMETER. THIS MATERIAL SHALL BE IN STALLED IN 6" IFTS COMPACTED TO 922 OF CSTM D-1557, AND SHALL MEET THE FOLLOWING SPECIFICATIONS: 6" PASSING 100%, \$4' SIEVE 95-100%, \$4' OS SIEVE 56-90%, \$100 SIEVE 25-45% (0F THE FRACTION PASSING THE \$4' SIEVE. THE CLAY ORDEROMENT SHALL HAVE A PLASTICITY INDEX OF AT LEAST 8 AND A HYDRAULIC CONDUCTIVITY OF 10 TO THE -8 CM/SEC.
- COMPACTION AND MATERIALS TESTING SERVICES SHALL BE PERFORMED BY AN INDEPENDENT GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

SEDIMENT FOREBAY SPILLWAY

NOT TO SCALE

Designed and Produced in NH

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E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	DETAIL SHEET	
Project:	OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH	
Owner of Record:	LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148	

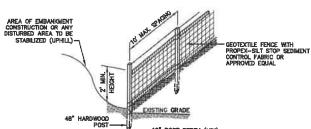
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SHEET 39 OF 40

-RIP RAP

TEMPORARY EROSION CONTROL NOTES

- THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. AT NO TIME SHALL AN AREA IN EXCESS OF S ACRES BE EXPOSED AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
- 2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
- ALL DISTURBED AREAS (INCLIDING POND AREAS BELOW THE PROPOSED WATERLINE) SHALL BE RETURNED TO PROPOSED GRADES
 AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH
 SEED MIXTURE 'C" AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).
- SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5° OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
- 5. AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
- AREAS MUST BE SEEDED AND MULCHED ON OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF MITTAL DISTURBANCE.
- 7. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF B5 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15. SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN CREEN 575 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVAD IN WRITING BY THE PROMINERS) EXCIPCTS GREATER THAN 3-1, AND SEEDING AND PLACING 3-TO 4 TONS OF MULCH APP ACKE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH APID NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- AFTER OCTOBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MININUM OF 3" OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
- 10. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRE
 - a. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - b. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED:
 - c. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - d. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED
- FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
- PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER SHALL BE SUBMITTED TO DES VIA EMAIL (SEE BELOW).
- 13. PRIOR TO CONSTRUCTION, A PHASING PLAN THAT DELINEATES EACH PHASE OF THE PROJECT SHALL BE SUBMITTED, ALL TEMPORARY SEDIMENT BASINS THAT WILL BE NEEDED FOR DEWATERING WORK AREAS SHALL BE LOCATED AND IDENTIFIED ON THIS PLAN
- 14. IN ORDER TO ENSURE THE STABILITY OF THE SITE AND EFFECTIVE IMPLEMENTATION OF THE SEDIMENT AND EROSION CONTROL MEASURES SPECIFIED IN THE PLANS FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL BE IN STRICT COMPLIANCE WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS IN ADDITION TO THOSE CALLED FOR IN THE SWPPP.
 - a. A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL QR A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE ("MONITOR") SHALL BE EMPLOYED TO INSPECT THE SITE FROM THE STRAT OF ALTERATION OF TERRAIN ACTIVITES UNITL THE SITE IS IN FULL COMPILANCE WITH THE SITE SPECIFIC PERMIT ("PERMIT").
 - b. DURING THIS PERIOD, THE MONITOR SHALL INSPECT THE SUBJECT SITE AT LEAST ONCE A WEEK, AND IF POSSIBLE, DURING ANY 1/2 INCH OR GREATER RAIN EVENT (I.E. 1/2 INCH OF PREOPITATION OR MORE WITHIN A 24 HOUR PERIOD). IF UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THIS EVENT.
 - c. THE MONITOR SHALL PROVIDE TECHNICAL ASSISTANCE AND RECOMMENDATIONS TO THE CONTRACTOR ON THE APPROPRIATE EEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROLS REQUIRED TO MEET THE REQUIREMENTS OF RSA 485 A17 AND ALL APPLICABLE DES PERMIT CONDITIONS.
 - d. WITHIN 24 HOURS OF EACH INSPECTION, THE MONITOR SHALL SUBMIT A REPORT TO DES VIA EMAIL (RIDGELY MAUCK AT: RIDGELY.MAUCK&DES.NH.GOV).
 - e. THE MONITOR SHALL MEET WITH DES TO DECIDE UPON A REPORT FORMAT. THE REPORT FORMAT SHALL BE REVIEWED AND APPROVED BY DES PRIOR TO THE START OF CONSTRUCTION.



- I. Woven fabric fence to be fastened securely to fence posts with wire ties or staples. Filter Cloth shall be fastened to woven wire every 24" at top, wid and bottom and Embedded in the ground a minimum of 8" and then covered with soil.
- THE FENCE POSTS SHALL 8E A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED 8", FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY—PASSING.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED AND PROPERLY DISPOSED OF WHEN IT IS 6" DEEP OR VISIBLE 'BULGES' DEVELOP IN THE SILT FENCE,
- 5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE
- 6. SILT FENCE SHALL REMAIN IN PLACE FOR 24 MONTHS.

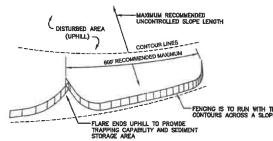
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THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN

SILT FENCE

NOT TO SCALE

Design: JAC | Draft: LAZ



SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND REVEGETATED.

- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RANFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE DONE IMMEDIATELY.
- IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
- 4. SEDIMENT DEPOSITS THAT ARE REMOVED, OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED, SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

LAZ

BY

SEEDING SPECIFICATIONS

GRADING AND SHAPING
 A. SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED).
 B. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.

SEEDBED PREPARATION
 A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
 B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND PUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LINE MIXED INTO THE SOIL THE SEEDBED SHOULD BE LIFST IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

3. <u>Establishing a Stand</u>

A. Lime and Fertilizer should be applied prior to or at the time of seeding and incorporated into the soil types and amounts of lime and Fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be

SAUL LEGIS. WHEN I SENSE TO SEE ACRE OR 100 LBS. PER 1,000 SQ.FT.

ADRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT.

NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.

PHOSPHATE(P205), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.

POTASH(X20), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.

(NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10.)

ACRE OF 5-10-10.)
SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS
INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING, WHERE BROADCASTING IS USED, COVER SEED WITH
25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING. REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED

INITURES AND RATES OF SEEDING ALL LEGIMES (CROWNVETCH, BIRDSFOOT, RIBFOLL AND FLATPEA)
MUST BE INCOLLATED WITH THEIR SPECIFIC INCOLLANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
WHEN SEEDED AREAS ARE NUTHILCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY COTIBER.
WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 201
OR FORM AUGUST 10th AV SEEDITAINED LAP

4. MULCH
A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT P
FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.

- 5. <u>MAINTENANCE TO ESTABLISH A STAND</u>

 A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED
- B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHMENT.
- C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNFORM FLOW CONDITIONS ARE ANTICIPATED. ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A B C	FAIR POOR POOR	G000 G000 G000	GOOD FAIR EXCELLENT	FAIR FAIR GOOD
	D	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	Ĉ	GOOD GOOD	G000 EXCELLENT	GOOD EXCELLENT	FAIR FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A B C	GOOD GOOD	GOOD GOOD EXCELLENT	GOOD FAIR EXCELLENT	FAIR POOR FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E F	FAIR FAIR	EXCELLENT	EXCELLENT	2/ 2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ refer to seeding mixtures and rates in table below, 2/ poorly drained soils are not desirable for use as playing area and athletic fields. NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURE SHALL BE WINTER RYE OR DATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT SECTION OF THE PERMANENT SEEDING NOT

SEEDING GUIDE

POUNDS	POUNDS PER
PER ACRE	1.000 Sq. FI
20	0.45
20	0.45
2	0.05
42	0.85
15	0.35
10	0.25
15	0.35
30	0.75
40 OR 55	0.95 OR 1.35
20	0.45
20	0.45
8	<u>0.20</u>
48	1.10
20	0.45
30	0.75
50	1.20
50	1.15
50	1.15
100	2.30
150	3.60
	20 20 2 42 45 15 10 15 30 40 08 55 20 8 8 48 20 50 50 50 100 100 100 100 100 100 100 1

SEEDING RATES

CONSTRUCTION SEQUENCE

- PRIOR TO THE START OF ANY ACTIVITY, IT IS THE RESPONSIBILITY OF THE SITE'S SITE DEVELOPER (OR OWNER) TO FILE A NOTICE OF INTENT (NO) FORM WITH THE ENVIRONMENTAL PROTECTION ACENCY (SPA) IN ORDER TO GAIN COVERAGE UNDER THE INPIDES GENERAL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. A PRE CONSTRUCTION MEETING IS TO BE HELD WITH ALL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION.
- 2. WETLAND BOUNDARIES ARE TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION
- 3. CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED
- INSTALL SILT FENCING, HAY BALES AND CONSTRUCTION ENTRANCES PRIOR TO THE START OF CONSTRUCTION, THESE ARE TO BE MAINTAINED UNTIL THE FINAL PAYEMENT SURFACING AND LANDSCAPING AREAS ARE ESTABLISHED.
- 5. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
- CONSTRUCT AND/OR INSTALL TEMPORARY OR PERMANENT SEDIMENT AND/OR DETENTION BASIN(S) AS REQUIRED. THESE FACILITIES
 SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING RUN-OFF TO THEM.
- STRIP LOAM AND PAVEMENT, OR RECLAIM EXISTING PAVEMENT WITHIN LIMITS OF WORK PER THE RECOMMENDATIONS OF THE PROJECT ENGINEER AND STOCKPILE EXCESS MATERIAL STABILIZE STOCKPILE AS NECESSARY.
- 8. PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS, INCLUDING THE CONSTRUCTION OF ANY RETAINING WALLS.
- 9. PREPARE BUILDING PAD(S) TO ENABLE BUILDING CONSTRUCTION TO BEGIN,
- 10. INSTALL THE SEWER AND DRAINAGE SYSTEMS FIRST, THEN ANY OTHER UTILITIES IN ACCORDANCE WITH THE PLAN AND DETAILS. ANY CONFLICTS BETWEEN UTILITIES ARE TO BE RESOLVED WITH THE INVOLVEMENT AND APPROVAL OF THE ENGINEER.
- 11. INSTALL INLET PROTECTION AT ALL CATCH BASINS AS THEY ARE CONSTRUCTED IN ACCORDANCE WITH DETAILS.
- 12. ALL SWALES AND DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
- 13. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE DITCHES, CHECK DAMS, SEDIMENT TRAPS, ETC., TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUITING WATERS AND/OR PROPERTY.
- 14. PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF "SELECT" SUBGRADE MATERIALS.
- 15. PAVE ALL PARKING LOTS AND ROADWAYS WITH INITIAL BASE COURSE.
- 16. PERFORM ALL REMAINING SITE CONSTRUCTION (i.e. BUILDING, CURBING, UTILITY CONNECTIONS, ETC.).
- LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (I.e. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
- 18. FINISH PAVING ALL ROADWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
- 19. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 20. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 21. COMPLETE PERMANENT SEEDING AND LANDSCAPING
- 22. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE BEEN 75%-85% ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
- 23. CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRI
- 24. INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
- 25. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
- 28. UPON COMPLETION OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ANY RELEVANT PERMITTING AGENCIES THAT THE CONSTRUCTION HAS BEEN FINISHED IN A SATISFACTORY MANNER.

Designed and Produced in NH 🔃 Jones & Beach Engineers, Inc.

Plan Name: EROSION AND SEDIMENT CONTROL DETAILS

Owner of Record:

OLD GONIC ROAD TOWNHOUSES 19 OLD GONIC ROAD, ROCHESTER, NH LEO P. LACOUTURE REV. TRUST & WILLIAN B. LACOUTURE 19 OLD GONIC RD., ROCHESTER, NH 03867 BK 4093 PG 148

SHEET 40 OF 40 JBE PROJECT NO. 21090

DRAWING No

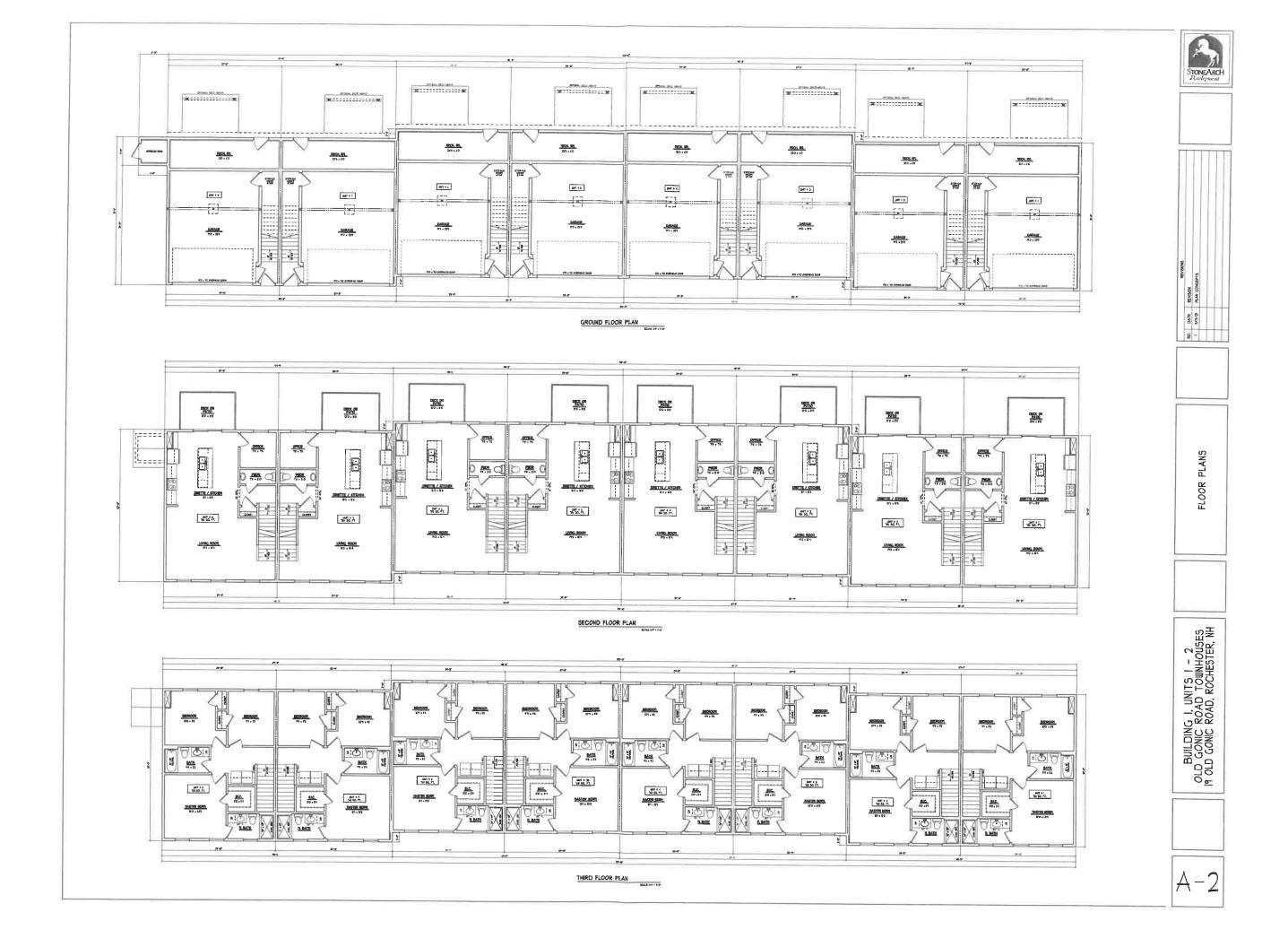
J. Netivan No. 9846 RMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE 0 11/23/21 ISSUED FOR REVIEW AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE. REV. DATE REVISION

AUCHAEL.

85 Portsmouth Ave. Civil Engineering Services PO Box 219 E-MAIL: JBE@JONESANDBEACH.COM









FRONT ELEVATION

(BUILDING "C" - UNITS 7-12)

APPROX. GROSS FLOOR AREA 14,548 SQ. FT. SCALE: 3/16" = 1"-0"



BUILDING "A" UNITS 1-3 ; RESIDENTIAL

BUILDING "B" UNITS 4-6 ; RESIDENTIAL

BUILDING "B" UNITS 4-6 ; RESIDENTIAL

BUILDING "C" UNITS 7-12 ; RESIDENTIAL

BUILDING "C" UNITS 7-12 ; RESIDENTIAL

BUILDING "C" UNITS 13-18 ; RESIDENTIAL

BUILDING "D" UNITS 13-18 ; RESIDENTIAL

BUILDING "D" UNITS 13-18 ; RESIDENTIAL

BUILDING "B" UNITS 13-18 ; RESIDENTIAL

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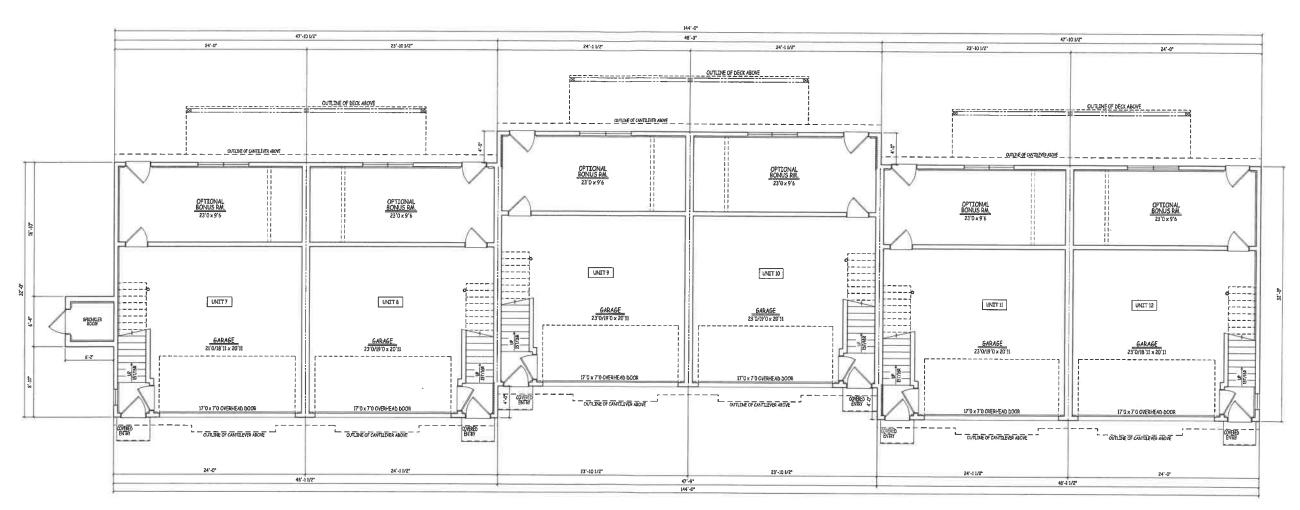
BUILDING "C" UNITS 13-18 ; RESIDENTIAL USE

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(BUILDING "C" - UNITS 7-12)

SCALE: 3/16" = 1'-0"

6-UNIT CONCEPT OLD GONIC ROAD TOWNHOUSES 19 OLD GONIS ROAD, ROCHESTER, NH

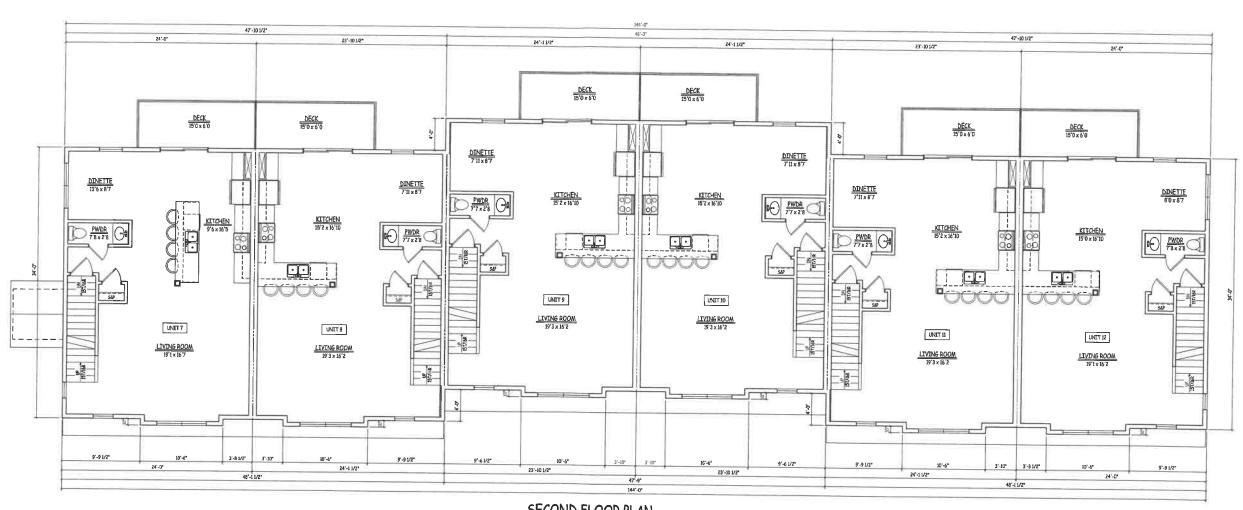


GROUND FLOOR PLAN APPROX. GROSS FLOOR AREA 4,646 SQ. FT.

SCALE: 37/6" = 1"-0"

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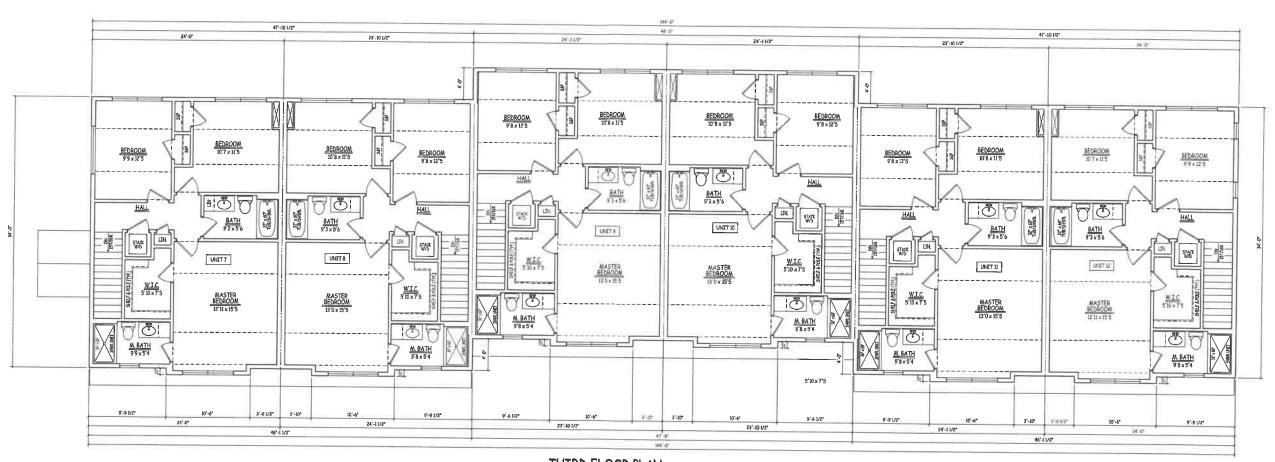


SECOND FLOOR PLAN APPROX GROSS FLOOR AREA 4,961 SQ. FT.

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THIRD FLOOR PLAN AFFROX GROSS FLOOR AREA 4,951 SQ. FT.

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