

Record & Return to:

Roland A. Baroni, Jr.
ABRAMS FENSTERMAN, LLP
81 Main Street, Suite 400
White Plains, NY 10601

At a meeting of the Town Board of the Town of Somers at Town Hall located at 335 Route 202, Somers, Westchester County, New York on the 10th day of December, 2025, at 7:00 P.M.

RESOLUTION TO EXTEND THE SOMERS SEWER DISTRICT #1

WHEREAS, a Petition, Map, Plan and Report have been prepared by NORTH EDGE REALTY CORP. dated October 30, 2024, for the extension of the Somers Sewer District #1 of the Town of Somers, New York, and duly presented to this Town Board; and

WHEREAS, an Order was duly adopted by the Town Board on April 10, 2025, reciting the filing of said petition, the improvements proposed, the boundaries of the proposed extension, and the estimated expenses thereof and specifying May 8, 2025, at 7:00 p.m. as the time and the Town Hall in said Town as the place where the said Board would meet to consider the petition and to hear all persons interested in the subject thereof, concerning the same; and

WHEREAS, such Order was duly posted, published and served as required by law; and

WHEREAS, a hearing in the matter was duly held by the Board on the 8th day of May, 2025, commencing at 7:00 p.m. o'clock at the Town Hall in said Town and considerable discussion upon the matter having been had, and all persons desiring to be heard having been duly heard and thereupon the hearing being duly closed; and

WHEREAS, the Town Board as Lead Agency under SEQRA adopted a Negative Declaration on December 10, 2025, having conducted a complete environmental review under SEQRA; and

WHEREAS, the Town Board has reviewed the submissions for the Proposed Action and, in particular, the Map, Plan and Report dated October 30, 2024 pertaining to the proposed extension of the Somers Sewer District #1; and

WHEREAS, based upon its review of the submitted petition and the environmental record for the Proposed Action, the Town Board makes the following environmental findings pursuant to SEQRA:

Roll Call:

Hon. Robert Scorrano
Councilman Anthony Ciriaco
Councilman William Faulkner
Councilman Richard G. Clinchy
Councilwoman Gina Arena

Vote:

Aye
Aye
Aye
Aye
Aye

STATE OF NEW YORK
COUNTY OF WESTCHESTER
TOWN OF SOMERS

I, PATRICIA KALBA, Town Clerk of the Town of Somers, do hereby certify that I have compared the preceding Resolution with the original thereof filed in my office at Town Hall, 335 Route 202, Somers, Westchester County, New York, that the same is a true and correct copy of said original and the whole thereof.

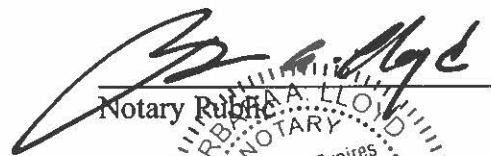
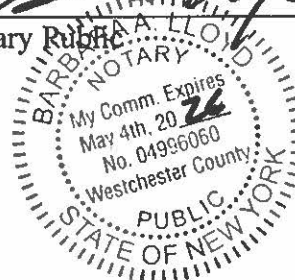
I further certify that all members of the Town Board had due notice of the meeting at which said resolution was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Town this 10th day of December, 2025.


PATRICIA KALBA
Town Clerk

STATE OF NEW YORK)
) ss.:
COUNTY OF WESTCHESTER)

On the 10th day of December in the year 2025 before me, the undersigned personally appeared PATRICIA KALBA, Town Clerk of the Town of Somers, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her capacity, and that by her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.


Notary Public


SCHEDULE A

Tax Parcels

1. 4.19-2-2, 45 Route 6
2. 4.19-2-3, 39 Route 6
3. 4.19-2-4, 43 Route 6

TEL :914-277-3323
FAX: 914-277-3960

TOWNCLERK'S OFFICE

Town of Somers

WESTCHESTER COUNTY, N.Y.

Town House
335 Route 202
Somers, N.Y. 10589

PATRICIA KALBA
TOWN CLERK



RESOLUTION

RESOLVED, that the Town Board does hereby authorize the Supervisor to execute the petition to extend the County sewer district to include the subject property.

I hereby certify that the foregoing copy of the resolution was unanimously adopted by the Town Board of the Town of Somers at a Regular Meeting held on December 10, 2025.

Dated: December 12, 2025

Patricia Kalba

Town Clerk

Ec: Supervisor
Director of Finance
Town Attorney
North Edge Realty
Westchester County

TOWN OF SOMERS
COUNTY OF WESTCHESTER: STATE OF NEW YORK
-----X

In the Matter of the Application of

THE TOWN OF SOMERS

PETITION

For the Extension of the Peekskill Hollow Sewer District
to Include the Boundaries of the North Edge Realty Corp.
Extension Area of Somers Sewer District No. 1
-----X

TO: THE BOARD OF LEGISLATORS OF THE COUNTY OF WESTCHESTER

The Petition of Robert Scorrano, as Supervisor of the Town of Somers, respectfully shows and demonstrates to the Board of Legislators of the County of Westchester:

1. That the Town of Somers is a municipal corporation duly organized and existing under the laws of the State of New York and is located in the County of Westchester, State of New York.
2. That the Town of Somers currently operates Sewer District No. 1 in the Town of Somers.
3. That a Petition, Map and Plan have been prepared by North Edge Realty Corp. (North Edge) dated October 30, 2024, for the extension of the Somers Sewer District No. 1 of the Town of Somers and duly presented to this Town Board: and a duly conducted public hearing on said extension was held on May 8, 2025, at which time the public hearing was closed.
4. Petitioner is a corporation formed and existing under the laws of the State of New York and is in good standing. Petitioner is the owner of three existing parcels of land comprising in the aggregate 15.62 acres. The parcels are shown and designated on the Town of Somers Tax Map as tax parcels 4.19-2-2, 4.19-2-3 and 4.19-2-4. Where the context requires, the three tax parcels shall hereinafter be collectively referred to as the "Property." Petitioner proposes to construct a 77 unit townhouse community with associated asphalt road and parking, utility infrastructure, stormwater management areas, landscaping and lighting. The Subject Property is currently designated on the Town of Somers Zoning Map ("Zoning Map") as located in the R-40 and R-80 Zoning Districts.
5. North Edge seeks to amend the Zoning Map pursuant to § 170-13 of the Somers Town Code (Multifamily Residence MFR Districts). North Edge seeks this amendment for the purpose of placing the Subject Property within a Multifamily Residence Baldwin Place MFR-BP Zoning District, as specifically codified and authorized.
6. The purpose of the MFR-BP District is:

. . . to provide suitable opportunities within the Town for the development of housing designed to satisfy the needs of households maintained by the young, the elderly and families earning less than 80% of the county's median income, and to permit a broad array of housing types, dwelling unit sizes and forms of ownership/occupancy. These districts are intended to provide for the construction of multifamily housing on sites determined to be appropriate based upon criteria established in the Town Development Plan and in conformance with the standards recommended therein, which standards are designed to promote the public health, safety and general welfare and to require the development of housing which is responsive to the variety of special size, design, locational and affordability needs of present and future residents of the Town. To help assure the achievement of this goal with proper protection for existing and future neighboring development and infrastructure, all multifamily residence districts shall be established subject to approval by the Town Board and in accordance with an approved preliminary development concept plan. (Town of Somers Code, Chapter 170 §170-13)

7. Upon designation of the Subject Property as MFR-BP, North Edge plans to develop seventy-three (73) housing units consistent with the housing types envisioned within §170-13 of the Somers Town Code, including 10% of the permitted basic density will be affordable dwelling units. Recreation amenities (including a Recreation Building and adjoining Recreation Area) also are components of the site plan.

8. The proposed units will be developed in an integrated fashion and provide residential stock that aligns with housing types suitable within the MFR-BP District. The proposed development will be an attractive feature of the area served by NYS Route 6 and Mahopac Avenue and specifically satisfy all requirements codified in §170-13 of the Somers Town Code.

9. That the Town Board of the Town of Somers as Lead Agency under SEQRA adopted a Negative Declaration on December 10, 2025, having conducted a complete environmental review under SEQRA. The County of Westchester was an Involved Agency in this coordinated environmental review.

10. That the Town of Somers, therefore, deems it in the public interest that the North Edge extension area be connected to and serviced by the Peekskill Hollow Sewer District owned and operated by the County of Westchester.

11. That appropriate maps, property descriptions and plans have been prepared and submitted to the Town of Somers in connection with the petition of North Edge, all of which are attached hereto as **Exhibit A** and incorporated herein.

12. The resolution of the Town Board of the Town of Somers to extend the Somers Sewer District No. 1 to include the North Edge Extension Area dated December 10, 2025, is attached as **Exhibit B** hereto.

13. That the extension and enlargement of the Peekskill Hollow Sewer District, as proposed, is co-terminus with the boundaries of the North Edge Extension Area of Somers Sewer District No. 1.

14. That the establishment of the North Edge Extension Area of Somers Sewer District No. 1 will not result in any costs or expenses to the Town of Somers since it is proposed that all improvements to be designed, installed and constructed to service said extension area will be privately funded.

15. That a feasibility analysis has been performed which indicates that there is adequate capacity contained in the Peekskill Hollow Sewer District to service the North Edge Extension Area as currently proposed for development.

16. That on December 10, 2025, the Town Board of the Town of Somers adopted a resolution to petition the Board of Legislators of the County of Westchester to consider the extension and enlargement of the Peekskill Hollow Sewer District as set forth above pursuant to Article 5-A of the County Law. That resolution is included in **Exhibit B** above.

WHEREFORE, the Town Board of the Town of Somers hereby petitions the County of Westchester for the enlargement and extension of the Peekskill Hollow Sewer District to encompass and include the North Edge Extension Area of Somers Sewer District No. 1 as established by the Town Board of the Town of Somers.

Dated: Somers, New York
December 10, 2025

TOWN OF SOMERS

By: 

Robert Scorrano
Supervisor

STATE OF NEW YORK)
) SS.:
COUNTY OF WESTCHESTER)

On the 12 day of December in the year 2025, before me, the undersigned personally appeared ROBERT SCORRANO, Supervisor of the Town of Somers, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her capacity, and that by her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.


Notary Public

PATRICIA KALBA NOTARY PUBLIC, STATE OF NEW YORK Registration No. 01KA6080158 Qualified in Westchester County Commission Expires SEPTEMBER 09, 20__
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EXHIBIT "A"

TEL : 914-277-3323
FAX: 914-277-3960

TOWNCLERK'S OFFICE

Town of Somers

WESTCHESTER COUNTY, N.Y.

Town House
335 Route 202
Somers, N.Y. 10589

PATRICIA KALBA
TOWN CLERK



RESOLUTION

RESOLVED, that the Town Board does hereby authorize the Supervisor to execute the petition to extend the County sewer district to include the subject property.

I hereby certify that the foregoing copy of the resolution was unanimously adopted by the Town Board of the Town of Somers at a Regular Meeting held on December 10, 2025.

Dated: December 12, 2025

Patricia Kalba

Town Clerk

Ec: Supervisor
Director of Finance
CSEA

TOWN BOARD OF THE TOWN OF SOMERS
COUNTY OF WESTCHESTER: STATE OF NEW YORK
----- x

In the Matter of the Petition of

NORTH EDGE REALTY CORP.

For an Extension of Somers Sewer District #1,
and for the Town Board to Petition the
Westchester County Board of Legislators for a
Corresponding Extension of the Westchester
County Peekskill Sanitary Sewer District.

PETITION FOR THE
EXTENSION OF SOMERS
SEWER DISTRICT #1

----- x

NORTH EDGE REALTY CORP. (hereinafter "North Edge Realty"), by its
attorneys Keane & Beane, P.C., respectfully petitions the Town Board of the Town of Somers
(the "Town Board") as follows:

1. North Edge Realty is the owner of approximately 15.62 acres of certain real
property located at 39, 43, and 45 New York State Route 6, situated within the Town of
Somers (the "Town"), County of Westchester, State of New York. The parcels are known and
designated on the Westchester County Tax Maps for the Town of Somers as: (i) Section 4.19,
Block 2, Lot 2 (45 Route 6); (ii) Section 4.19, Block 2, Lot 3 (39 Route 6); and (iii) Section
4.19, Block 2, Lot 4 (43 Route 6) (collectively, the "Property").

2. By this Petition, North Edge Realty seeks an extension of Somers Sewer District
#1 ("SSD1") pursuant to New York Town Law § 190, to enable the Property to be serviced
with municipal sewer service (the "Proposed Extension"). There are no resident owners of
any taxable real property in the Property. The Property is situated wholly within the Town,
and is outside of any city or incorporated village, and outside of any sewer district or extension
thereof.

3. North Edge Realty proposes to develop the Property with seventy-seven (77) housing units, consistent with the housing types envisioned within Town Code § 170-13, including 15% of the permitted basic density to be affordable dwelling units. Recreation amenities (including a recreation building and adjoining recreation area) are also components of the proposed site plan. The proposed units will be developed in an integrated fashion and provide residential stock that aligns with housing types suitable in the MFR-BP Zoning District. The proposed development will be an attractive feature of the area served by NYS Route 6 and Mahopac Avenue, and will specifically satisfy all requirements codified in Town Code § 170-13.

4. Accompanying this Petition and submitted herewith as **Exhibit “A”** is a map titled “Town of Somers Sewer District No. 1 and Westchester County Peekskill Sewer District Extension Map – North Edge Realty,” dated October 30, 2024 and prepared by Bibbo Associates, LLP (“Bibbo”), consulting civil engineers, duly licensed by the State of New York and hired by North Edge Realty, showing the boundaries of the Proposed Extension. Also accompanying this Petition and submitted herewith as **Exhibit “B”** is an engineer’s report titled “Preliminary Engineer’s Report, Wastewater & Water Supply Facilities, for North Edge Realty Corporation,” dated October 30, 2024 and prepared by Bibbo.

5. Pursuant to the provisions of New York Town Law § 202(5), North Edge Realty requests that the expense of the extension of SSD1 shall be borne by local assessment upon the several lots and parcels of lands which the Town Board shall determine and specify to be especially benefitted by the improvement, and the Town Board shall apportion and assess upon and collect from the several lots and parcels of land so deemed benefitted, so much

upon and from each as shall be in just proportion to the amount of benefit which the improvement shall confer upon the same. North Edge Realty further requests that the proposed benefit formula for all charges related to the extension of SSD1 be in conformance with a standard that is acceptable to all parties, including the Town and North Edge Realty.

6. There will be no public monies expended in connection with the extension of SSD1. As is customary in sewer district extension, all costs in connection with the extension of SSD1 will be borne by North Edge Realty, in a manner contemplated in the accompanying map and report submitted herewith, and agreed to by the parties, which may include yearly capital assessments, sewer rents, or other agreed-upon methods.

7. Because the sewage from SSD1 discharges to the Peekskill Wastewater Treatment Plant, SSD1 is part of the Westchester County Peekskill Sanitary Sewer District. Accordingly, extension of SSD1 as requested by this Petition also requires extension of the Westchester County Peekskill Sanitary Sewer District. Thus, this Petition also seeks to extend the Westchester County Peekskill Sanitary Sewer District to include the entirety of the Property. Extension of the Westchester County Peekskill Sanitary Sewer District is required to be authorized by the Westchester County Board of Legislators upon a petition being made by the municipal agency having jurisdiction over SSD1—in this case, the Town Board of the Town of Somers. As extension of the Westchester County Peekskill Sanitary Sewer District is a condition precedent to extension of SSD1, North Edge Realty respectfully requests that this Town Board petitions the Westchester County Board of Legislators for a corresponding extension of the Westchester County Peekskill Sanitary Sewer District to the same extent requested by this Petition (i.e., to include the Property).

8. North Edge Realty agrees to comply with the rules and regulations of SSD1 as presently existing or as may be amended in the future, including all rates and fee schedules.

9. This Petition is signed and acknowledged in the same manner as a deed to be recorded, as set forth on the pages attached hereto and submitted herewith.

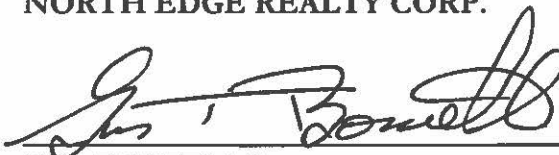
WHEREFORE, North Edge Realty respectfully submits this Petition for further consideration in accordance with applicable law, and respectfully requests that (i) the Town Board extends the SSD1 as proposed and described above, and (ii) the Town Board petitions the Westchester County Board of Legislators for a corresponding extension of the Westchester County Peekskill Sanitary Sewer District.

Dated: White Plains, New York
October 30, 2024

Respectfully submitted,

NORTH EDGE REALTY CORP.

By:

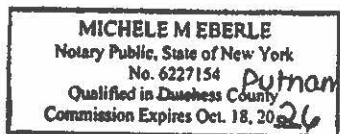

GUS BONIELLO

STATE OF New York)
)ss:
COUNTY OF Westchester)

On the 30 day of October in the year 2024, before me, the undersigned, personally appeared Gus T. Boniello, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Sworn to before me this
30 day of October, 2024

Michele M. Eberle
Notary Public



NORTH EDGE REALTY CORP.

**PETITION FOR THE EXTENSION
OF SOMERS SEWER DISTRICT #1**

EXHIBIT A

**Town of Somers Sewer District No. 1 and Westchester County
Peekskill Sewer District Extension Map – North Edge Realty**

October 30, 2024

Prepared by: Bibbo Associates, LLP

NORTH EDGE REALTY CORP.

**PETITION FOR THE EXTENSION
OF SOMERS SEWER DISTRICT #1**

EXHIBIT B

**Preliminary Engineer's Report, Wastewater & Water Supply
Facilities, for North Edge Realty Corporation**

October 30, 2024

Prepared by: Bibbo Associates, LLP



Timothy S. Allen, P.E.
Nicholas Gaboury, P.E.
Matthew J. Gironda, P.E.

PRELIMINARY ENGINEER'S REPORT WASTEWATER & WATER SUPPLY FACILITIES

for

North Edge Realty Corporation
Town of Somers, New York
Westchester County

Prepared by:



Timothy S. Allen, P.E.
NYS License No. #073434
Bibbo Associates, LLP
Mill Pond Offices
293 Route 100, Suite 203
Somers, New York 10589

Date: October 30, 2024

Site Design ♦ Environmental

Mill Pond Offices • 293 Route 100 • Suite 203 • Somers, New York 10589
Phone: 914.277.5805 • Fax: 914.277.8210
Website: www.bibboassociates.com • E-mail: bibbo@bibboassociates.com

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Appendices

- Appendix A - Hydrant Test Results
- Appendix B - Force main Head loss calculations
- Appendix C - 10 State Standards Sewage Peak Factor Chart
- Appendix D - 8" DR18 AWWA C900 PVC Friction Loss Chart
- Appendix E - Town of Somers Water and Sewer Rates

Project Description

North Edge Realty Corporation is proposing a multifamily development consisting of a 77-unit townhouse development. The proposed project is located on the northern side of Route 6 approximately 200' west of Mahopac Avenue in the Town of Somers. The total project area is 15.62 acres which is comprised of tax lots Sec. 4.19, Block 2, Lots 2,3 & 4. Access to the site will be via two proposed private roads, an entrance will be from Mahopac Avenue through an easement granted over the lands of Yorktown Assembly of God Church and a second from US Route 6. The Route 6 entrance will be restricted to right turns only entering and exiting the site. The project proposal also includes the construction of associated parking infrastructure, closed piping drainage conveyance systems and stormwater treatment facilities as well as other utilities. The proposed townhouses will be served by water distribution and sewer collection systems which will be connected to the Town of Somers Consolidated Water District No. 1 and the Town of Somers Sewer District #1.

Wastewater Supply

Sewer System Design Flows

The project's sewer collection demand will be accommodated by a connection to the Town of Somers Sewer District No.1.

Sewage demands are based on the N.Y.S.D.E.C publication entitled "New York State Design Standards for Intermediate Sized Wastewater Treatment Systems" dated March 5, 2014.

North Edge Realty Corporation-

41 units of 2 bedrooms and 36 units of 3 bedrooms

2-bedroom Townhouses @ 220 gpd/unit

3-bedroom Townhouses @ 330 gpd/unit as per N.Y.S.D.E.C March 5, 2014 Edition

Average Daily Sewer Flow (ADF) = (41 units x 220 gpd/unit) + (36 units x 330 gpd/unit) = **20,900 gpd** =
 $20,900 / (24 \times 60) = 14.513 \text{ gpm}$

Recreation Center- Approximately **250 gpd** = $250 / (24 \times 60) = 0.174 \text{ gpm}$

Population – It is estimated that the North Edge population will be 235 people (based on Somers Crossing DEIS)

Capacity of Existing Somers Sewer District No. 1 & The Westchester County Peekskill Sewer District

Somers Sewer District No. 1 was permitted to enter the Westchester County Peekskill Sanitary Sewer District in September 1997 to include two subdivisions proposed at that time, The capacity of the Peekskill Sanitary Sewer District was noted as having a design flow of 10 MGD.

Data obtained from the Town of Somers at the time the Hidden Meadow at Somers Project was permitted into the Town of Somers / Peekskill Sewer District indicates that the total anticipated system wide flow to the Peekskill Sewer District would be approximately 6.71 MGD after the Hidden Meadows development was completed. The Town of Somers has stated that the average annual system wide sewer flow is 40 mg or 0.11 MGD for 2023.

Somers Sewer District No. 1 – Total Estimated Current Usage	= 110,000 gpd *
* At Town Line	
The North Edge – ADF	= 20,900 gpd
Recreation Center – ADF	= 250 gpd
TOTAL ADF	= 131,150 gpd
131,240 / (24 x 60)	= 91.14 gpm

The North Edge Project would create an additional 0.02 MGD. Therefore, there is sufficient capacity in the Peekskill Wastewater Treatment Plan to accommodate the proposed project.

Existing Sewer Force Main Capacity

Existing 6-inch and 8-inch ductile iron force mains run along the southern side of route 6. The force mains begin to the southeast of the project in the Preserves on NYS Route 118 and as noted run past the project site ultimately terminating in the Town of Yorktown and then continuing by gravity to the Westchester County Peekskill Sanitary Sewer District. Expansion of both the Town of Somers Sanitary Sewer District No 1 and the Westchester County Peekskill Sanitary Sewer Districts will be necessary to facilitate the development. As has been the case with previous projects, it is proposed that the North Edge project will connect to both the 6" and 8" force mains.

Proposed Sewage Collection

A gravity sanitary sewage collection system is proposed within the project site consisting of 8" SDR35 PVC sewer main and series of precast 4' diameter sewer manholes. The proposed collection system will flow by gravity to a proposed sewage lift station located at the Route 6 entrance to the site. A duplex pump station is proposed to be installed which will connect to the existing 6 and 8-inch sewer force mains.

Sewage Peak Flow to the North Edge proposed Lift Station

Total Average Daily Sewage Flow to the sewage pump station = $20,900 + 250 = 21,150 \text{ gpd}$ = $21,150 / (24 \times 60) = 14.69 \text{ gpm}$

$14.69 \text{ gpm} (24 \times 60) / 1,000,000 = 0.021 \text{ MGD}$

Population – It is estimated that the development will serve 235 people

10 State Standards Peak Factor = $(18 + \sqrt{P/1000}) / (4 + \sqrt{P/1000}) = (18 + \sqrt{0.235}) / (4 + \sqrt{0.235}) = 18.48 / 4.48 = 4.13$

Peak Flow (PF) to lift station = $4.13 \times 14.69 = 60.67 \text{ gpm}$

A sewer lift station will be provided with duplex Submersible Sewage pumps capable of pumping the potential peak hourly flow rate of 60.67gpm. The lift station will have a wet well volume to meet the New York State Department of Environmental Conservation Standards average required detention time of 15 minutes. The lift station will be equipped with an auxiliary power generator and Alarm / Emergency Notification System. Pumping station alarm systems shall transmit and identify alarm conditions to the Town of Somers Sewer District No. 1 operator who is available 24 hours a day.

The proposed submersible pump will be capable of overcoming a Total Dynamic Head of 104.3 ft from the proposed onsite pump station to the high point of the existing force main located approximately 2,100 ft west of the proposed project. Head loss calculations have been provided in Appendix B of this report, the 6" force main has been used for more conservative calculation.

All sewer mains and manholes will be tested in accordance with applicable standards.

Proposed 8" dia. Sewer Main Capacity Evaluation

Proposed sewer mains are 8" PVC with a minimum slope of 0.80%.

The total sewer peak flow will be applied to the pipe connecting SMH #1 to the sewage pump station.

77 townhouses and recreation center average daily flow = $14.51 + 0.17 = 14.68$ gpm

Peak Flow (PF) to lift station = $4.13 \times 14.69 = 60.67$ gpm

$60.67 \text{ gpm} / (7.48 \times 60) = 0.1352$ cfs

Manning's Equation – $V = (1.486/n)S^{0.5}R^{2/3}$

8" PVC pipe – $A = 0.349$ sf $W = 2.094$ lf $R = A/W = 0.349/2.094 = 0.166$ $R^{2/3} = 0.3029$
 $S = 0.0080$ $S^{0.5} = 0.0894$ $n = 0.013$ for PVC

$$V = 1.486/0.013 \times 0.0894 \times 0.3029 = 3.10 \text{ fps}$$

Full Flow – $Q = VA = 3.10 \times 0.349 = 1.08$ cfs = 485.08 gpm > 60.67 gpm peak flow

Depth of flow will be approximately 1.5" in the 8" dia. pipe with 60.67 gpm flow.

Note: The anticipated flow for the project is significantly lower, the maximum daily design flow was used as a conservative rate for system design.

Auxiliary Standby Power

Two (2) submersible sewage pumps and wet well lights will be supplemented with a standby power unit to be located outside adjacent to the vault. The sizing requirements will be determined upon design of the sewage lift station.

The pump controls will be provided with on-delay timers to stagger the start-up of all motors when power is transferred to the generator set. The auxiliary power generator sizing will provide power for the sewer

collection system components only. North Edge Realty Corporation may revise and upgrade the generator set size based on the development's additional needs in the proximity of the area to provide power to various buildings/demands.

Water Supply

Determination of Water Supply Demands:

The project's water supply demand will be accommodated by a connection to the Somers Consolidated Water District No. 1 Water System. Water supply demands are based on the N.Y.S.D.E.C publication entitled "New York State Design Standards for Intermediate Sized Wastewater Treatment Systems" dated March 5, 2014.

The North Edge-

Average Daily Water Flow (ADF) = (41 units x 220 gpd/unit) + (36 units x 330 gpd/unit) = **20,900 gpd** =
 $20,900 / (24 \times 60) = 14.51 \text{ gpm}$

Recreation Center- Approximately **250 gpd** = $250 / (24 \times 60) = 0.17 \text{ gpm}$

Total Average Daily Water Flow = $20,900 + 250 = 21,150 \text{ gpd} = 21,150 / (24 \times 60) = 14.69 \text{ gpm}$

Irrigation Demand

Irrigation demand based on Golf Course Rates is 1 inch/SF/week = 0.083 CF/SF/week = 0.623 gallon/SF/week = 0.089 gallon/SF/day

Total Lawn Area of the Development = 5.875 AC = 255,915 SF approximately

It is assumed that the irrigation will be applied in three (3) zones which will be irrigated sequentially during the day.

Zone Area = $255,915 \text{ SF} / 3 \text{ zones} = 85,305 \text{ SF/Zone}$

Irrigation Demand = $0.089 \text{ gallon/SF/day} \times 85,305 \text{ SF/Zone} = 7,592 \text{ gpd/zone}$ which will be applied approximately within an hour time period.

$7,592 \text{ gpd /zone} / 60 = 126.5 \text{ gpm}$

Total Daily Irrigation Demand = $255,915 \text{ SF} \times 0.089 \text{ gallon/SF/day} = 22,776 \text{ gpd}$

Fire Demand

Fire Flow will be calculated based on ISO Standards 06-2014 Edition. Since the closest distance between buildings is between 11-20 feet the needed fire flow is **1,000 gpm**. As per the same standards, the same flow rate should be sustained at least 2 hours. Therefore, 120,000 gallons of available water supply is required.

Peak Hour Demand (combined)

Domestic water demands will be subject to a peak factor which is approximately 4.13 for a water system this size.

Total domestic demands = 14.69 gpm

Peak Hour Demand for Domestic Water = $5.0 \times 14.69 \text{ gpm} = 73.5 \text{ gpm}$

Fire Flow = 1,000 gpm

Total Peak Flow = $(73.5 \text{ gpm} + 1,000 \text{ gpm} + 126.5 \text{ gpm}) = 1,200 \text{ gpm}$

Somers Consolidated Water District No. 1 and The North Edge Water System Evaluation

The Somers Consolidated Water District water system extends past the project site with 10" diameter distribution piping located on the northern side of US Route 6, the same side as the proposed project. Toward the western project boundary, the distribution piping becomes 12" diameter. The operator of the water system reports that existing the existing pressure at the hydrant located at the intersection of Mahopac Avenue has a static pressure of 70 psi measured (August 20, 2024).

Based on Information obtained from the Town of Somers, the Town of Somers Consolidated Water District No. 1 has an approved capacity from Northern Westchester Joint Water Works "NWJWW" of 930,00 gpd and additionally pumps approximately 30,000 gpd from system well wells. The average daily system consumption is 280,000 gpd. Total system capacity information is not currently known however the system storage tank has a capacity of approximately 1.48 MG. in 2023 the water district purchased and/or produced 104 MG and sold 92 MG to consumers.

The water supply system has excess capacity to accommodate the project's additional demand.

The water connection pipe between the North Edge Development and the Town of Somers system shall be designed for delivery of 1,200 gpm.

Hydrant Test Results (performed on August 20, 2024) (See Appendix A)

Hydrant #1 (upstream hydrant @ project site) Static Pressure (H_s) = 100 psi

Hydrant #1 Residual Pressure (H_R) = 60 psi

Hydrant #2 (downstream @ Mahopac Ave.) Static Pressure (H_s) = 70 psi

Hydrant #2 pitot reading = 24 psi

Flow = 823 gpm (as provided by Town of Somers)

Hydrant #1 Predicted Flow @ 20 psi = 1,196 gpm, say 1,200 gpm

(Calculated using the formula for determining rated capacity of the hydrant $Q_R = Q_F \times (H_R - 20 / H_R - H_s)^{0.54}$)

$Q_R = 823 \times (100 - 20 / 100 - 60)^{0.54}$

Based on the ISO standards in order to ensure adequate water supply, a minimum residual water pressure of 20 psi is required to support the 1,000-gpm fire flow plus the domestic water demand.

As per the hydrant test results, this demand can be supplied by the Town of Somers Consolidated Water District No. 1 water system at this time.

Available pressures to the various points within the project

(Based on 100 psi static pressure at existing Hydrant IFO project):

Existing hydrant approximate nozzle elevation = 533.0

Existing hydrant approximate existing grade at Route 6 connection = 531.0

Existing hydrant piping elevation = 527.0

8" diameter proposed pipe length to the 8" x 6" reducer (Road A cul-de-sac) = 1,270 LF

8" diameter proposed pipe length to the 8" x 6" reducer (Road B cul-de-sac) = 525 LF

8" diameter proposed pipe length to Tee (Road B intersection) = 210 LF

Static head change = (Hydrant nozzle elevation – fitting/ apparatus elevation) / 2.31 ft. /psi.

Static pressure at fitting/ apparatus = Static hydrant pressure + Static pressure change

Calculated Static Pressure at Tee (proposed main connection):

Proposed Tee piping elevation = 539.6

Static head change = $(533.0' - 539.6') / 2.31 \text{ ft. /psi.} = -6.6' / 2.31 \text{ ft. /psi.} = -2.9 \text{ psi}$

Static pressure at tee = 100 psi + (-2.9 psi) = 97.1 psi

Calculated Dynamic Pressures at Tee within the North Edge (using peak flow):

Friction Losses (Hf) to 8" tee intersection-

$H_{f1} = 2.02' / 100 \quad 8" \text{ PVC DR18 @ 1,200 gpm peak flow, } C=150$

$H_{f1} = 210' (2.02' / 100) = 4.2' = 1.8 \text{ psi}$

Dynamic pressure at the tee = Static pressure – friction loss = 97.1 - 1.8 = 95.3 psi

Calculated Static Pressure at highest hydrant in North Edge:

Highest hydrant in North Edge proposed grade = 557.0 Nozzle elevation = 555.0

Static head change = $(533.0' - 555.0') / 2.31 \text{ ft. /psi.} = -22' / 2.31 \text{ ft. /psi.} = -9.5 \text{ psi}$

Static pressure at highest hydrant = 100 psi + (-9.5 psi) = 90.5 psi

Calculated Dynamic Pressures at highest hydrant in North Edge (using peak flow):

Friction Losses (Hf) to highest hydrant-

$H_{f2} = 0.65' / 100 \quad 8" \text{ PVC DR18 @ 650 gpm peak flow (flow splits @ tee), } C=150$

$H_{f2} = 525' (0.65' / 100) = 3.41' = 1.5 \text{ psi}$

Dynamic pressure at highest hydrant = Static pressure – friction loss = 90.5 - 1.5 = 89.0 psi

Calculated Static Pressure at lowest hydrant in North Edge:

Lowest hydrant in The North Edge PG = 543.4 Nozzle elevation = 541.4

Static head change = $(533.0' - 541.4') / 2.31 \text{ ft. /psi.} = -8.4' / 2.31 \text{ ft. /psi.} = -3.6 \text{ psi}$

Static pressure at lowest hydrant = 100 psi + (-3.6 psi) = 96.4 psi

Calculated Dynamic Pressures at lowest hydrant in North Edge (using peak flow):

Friction Losses (Hf) to lowest hydrant-

$Hf_3 = 1.73'/100 \quad 8" \text{ PVC DR18 @ 1,150 gpm peak flow (flow splits @ tee), } C=150$

$Hf_3 = 1,270' (1.73'/100) = 22.0' = 9.5 \text{ psi}$

Dynamic pressure at the lowest hydrant = Static pressure – friction loss = $96.4 - 9.5 = 86.9 \text{ psi}$

Calculated Static Pressure at the highest building in North Edge:

Highest Building (Bldg. 58) 2nd floor fixture elevation = 580.8

Static head change = $(533.0' - 580.8') / 2.31 \text{ ft. /psi.} = -47.8' / 2.31 \text{ ft. /psi.} = -20.7 \text{ psi}$

Static pressure at highest building 2nd floor fixture = $100 \text{ psi} + (-20.7 \text{ psi}) = 79.3 \text{ psi}$

Calculated Dynamic Pressures at the highest building in North Edge:

Friction Losses (Hf) to Highest Building (Bldg. 58) 2nd floor fixture elevation -

$Hf_4 = 0.65'/100 \quad 8" \text{ PVC DR18 @ 650 gpm peak flow (flow splits @ tee), } C=150$

$Hf_4 = 525' (0.65'/100) = 3.41' = 1.5 \text{ psi}$

Dynamic pressure at the highest building 2nd floor fixture = Static pressure – friction loss = $79.3 - 1.5 = 77.8 \text{ psi}$

Calculated Static Pressure at the lowest building in North Edge:

Lowest Building (Bldg. 1) basement elevation = 533.4

Static head change = $(533.0' - 533.4') / 2.31 \text{ ft. /psi.} = -0.4' / 2.31 \text{ ft. /psi.} = -0.2 \text{ psi}$

Static pressure at lowest building basement = $100 \text{ psi} + (-0.2 \text{ psi}) = 99.8 \text{ psi}$

Calculated Dynamic Pressures at the lowest building in North Edge:

Friction Losses (Hf) to Lowest Building (Bldg. 1) basement elevation -

$Hf_5 = 1.73'/100 \quad 8" \text{ PVC DR18 @ 1,150 gpm peak flow (flow splits @ tee), } C=150$

$Hf_5 = 1,270' (1.73'/100) = 22.0' = 9.5 \text{ psi}$

Dynamic pressure at the lowest building basement = $(749.0 - 22.0') - 533.4 = 193.6' = 83.8 \text{ psi}$

Calculated Static Pressure at the lowest 8" piping elevation in North Edge:

Lowest 8" piping elevation @ site = 535.8

Static head change = $(533.0' - 535.8') / 2.31 \text{ ft. /psi.} = -2.8' / 2.31 \text{ ft. /psi.} = -1.2 \text{ psi}$

Static pressure at lowest piping elevation = $100 \text{ psi} + (-1.2 \text{ psi}) = 98.8 \text{ psi}$

Maximum static pressure = 98.8 psi – 8" PVC DR18 C-900 pipe has a pressure rating of 150 psi.

According to the "Recommended Standards for Water Works-2022", a minimum pressure of 20 psi is required at all points at ground level in the distribution system. In addition, the normal working pressure in the distribution system shall not be less than 35 psi. The calculated dynamic pressures at the highest point of distribution is in excess of these requirements.

Residual pressures under peak flow conditions (1,200 gpm) are in excess of the 20-psi required in accordance with the Recommended Standards for Waterworks (10 States Standards)

It is proposed to connect the project to the Somers Consolidated Water District water distribution system with 8" diameter PVC DR18 piping. An 8" tee will be installed on the existing 10" DIP watermain and extended into the project site. The main will extend along proposed Street "A" for approximately 200' before splitting. A total of approximately 1,270' of watermain will extend along Street "A" and approximately 525' will extend through Street "B". Eight (8) fire hydrants are proposed throughout the development, the hydrants will be manufactured by Mueller. Mega-lug fittings or approved equal will be utilized as restrained joint connecting at all bends and tees.

Upon completion of the main water installation, pressure testing and disinfection will be performed in accordance with applicable standards.

Sewer & Water Costs

Construction Cost Sewer & Water* \$549,750.00

Town of Somers Consolidated Water District No.1 Estimated Usage Rates:
(Based on information obtained from Somers Water and Sewer, included in Appendix E of this report)

1" Meter Charge: \$112.90/quarter
77 units x \$112.90/quarter = \$34,773.20 / year

Usage Fee:

2 Bedroom x 75 gpd/ bedroom = 54,750 gal/ year
54,750 gal/ year x \$8.36/1000 gal. = \$457.71 / year

3 Bedroom x 75 gpd/ bedroom = 82,125 gal/ year
82,125 gal/ year x \$8.36/1000 gal. = \$686.57 / year

Town of Somers Sewer District No.1 Estimated Usage Rates:

2 Bedroom = 54,750 gal/ year x \$5.28/1000 gal. = \$289.08 / year

3 Bedroom = 82,125 gal/ year x \$5.28/1000 gal. = \$433.62 / year

*Based on information provided for Somers Crossing, adjusted for inflation

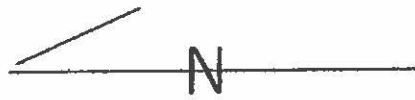
APPENDICES

- Appendix A - Hydrant Test Results
- Appendix B - Force main Head loss calculations
- Appendix C - 10 State Standards Sewage Peak Factor Chart
- Appendix D - 8" DR18 AWWA C900 PVC Friction Loss Chart
- Appendix E - Town of Somers Water and Sewer Rates

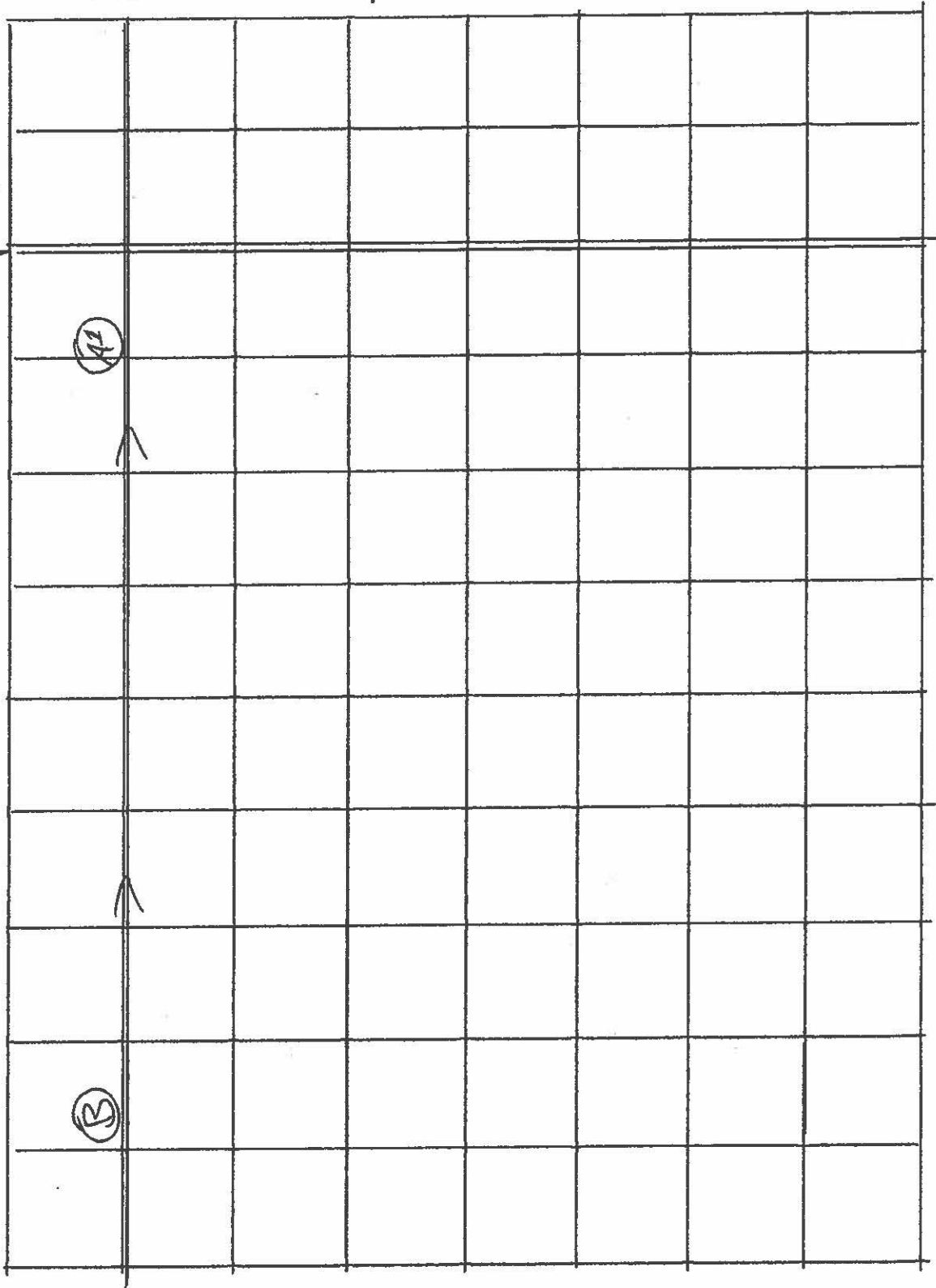
Appendix A

Hydrant Test Results

Flow Test Map



Mahopac Ave.



Rte 6.

Appendix B

Force main Head loss calculations



Project: Boniello Somers
Existing Sewer Forcemain

This worksheet will determine the Headloss is a forcemain

$$Q \text{ (c.f.s.)} = VA$$

$$Q_{\text{peak}}(\text{gpm}) = 60.67$$

Hazen - Williams Equation

$$H_L \text{ (ft)} = \frac{10.44 L Q^{1.85}}{C^{1.85} d^{4.87}}$$

$$L = 2,100$$

$$\text{diameter (in.)} = 6$$

$$L_B \text{ (fittings and bends)} = 50$$

$$C = 120$$

$$Q^{1.85} = 1,988.4$$

$$d^{4.87} = 6,160.2$$

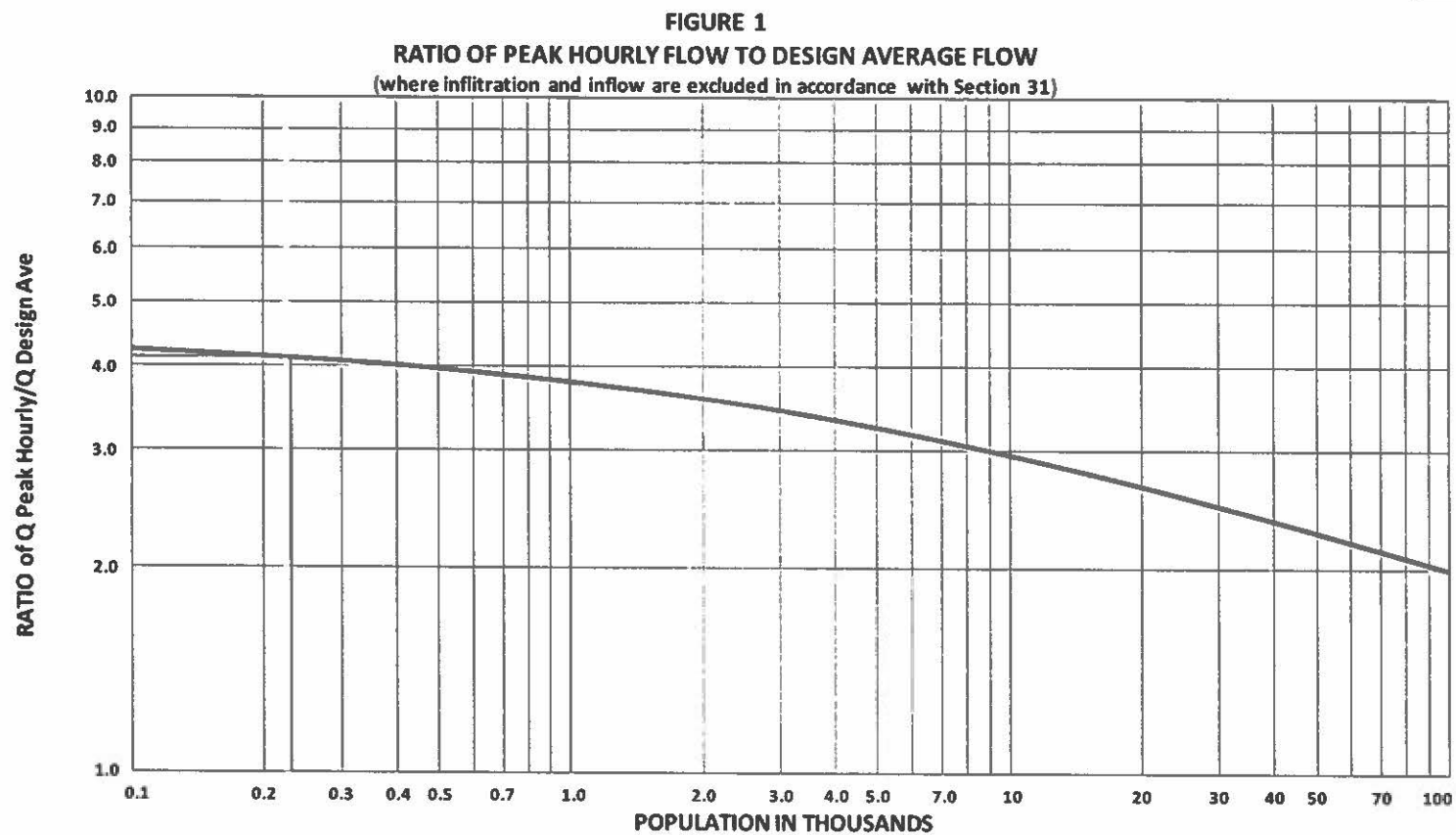
$$C^{1.85} = 7,022.4$$

$$HL = 1.0$$

$$\text{Total Dynamic Head} = 104.3$$

Appendix C

10 State Standards Sewage Peak Factor Chart



Q peak hourly: Maximum Rate of Wastewater Flow (Peak Hourly Flow)

Q design ave: Design Average Daily Wastewater Flow

Source:
$$Q \text{ Peak Hourly} / Q \text{ Design Ave} = \frac{18 + \sqrt{P}}{4 + \sqrt{P}} \quad (P = \text{population in thousands})$$

Fair, G. M. and Geyer, J. C., "Water Supply and Waste-water Disposal"
 1st Ed., John Wiley & Sons, Inc., New York (1954), p. 136

Appendix D

8" DR18 AWWA C900 PVC Friction Loss Chart

Table 9.3 Flow friction loss, AWWA C900 and C905 CIOD PVC pipe (*continued*)

8 in. CIOD (AWWA C900)									
Flow, gpm	DR 25 Pressure class 165 psi			DR 18 Pressure class 235 psi			DR 14 Pressure class 305 psi		
	Velocity, ft/s	Pressure drop		Velocity, ft/s	Pressure drop		Velocity, ft/s	Pressure drop	
		ft H ₂ O/100 ft	psi/100 ft		ft H ₂ O/100 ft	psi/100 ft		ft H ₂ O/100 ft	psi/100 ft
100	0.596	0.0170	0.00738	0.642	0.0204	0.00883	0.693	0.0246	0.0106
125	0.745	0.0257	0.0111	0.803	0.0308	0.0133	0.866	0.0371	0.0161
150	0.895	0.0361	0.0156	0.963	0.0432	0.0187	1.04	0.0520	0.0225
200	1.19	0.0614	0.0266	1.28	0.0735	0.0318	1.39	0.0885	0.0383
250	1.49	0.0928	0.0402	1.61	0.111	0.0481	1.73	0.134	0.0579
300	1.79	0.130	0.0563	1.93	0.156	0.0674	2.08	0.187	0.0812
350	2.09	0.173	0.0749	2.25	0.207	0.0896	2.43	0.249	0.108
400	2.39	0.221	0.0959	2.57	0.265	0.115	2.77	0.319	0.138
450	2.68	0.275	0.119	2.89	0.329	0.143	3.12	0.397	0.172
500	2.98	0.335	0.145	3.21	0.400	0.173	3.47	0.482	0.209
600	3.58	0.469	0.203	3.85	0.561	0.243	4.16	0.676	0.293
700	4.17	0.623	0.270	4.49	0.746	0.323	4.85	0.899	0.389
800	4.77	0.798	0.346	5.14	0.955	0.413	5.55	1.15	0.498
1,000	5.96	1.21	0.522	6.42	1.44	0.625	6.93	1.74	0.753
1,200	7.16	1.69	0.732	7.70	2.02	0.875	8.32	2.44	1.05
1,400	8.35	2.25	0.973	8.99	2.69	1.16	9.70	3.24	1.40
1,600	9.54	2.88	1.25	10.3	3.44	1.49	11.1	4.15	1.80
1,800	10.7	3.58	1.55	11.6	4.28	1.85	12.5	5.16	2.23

Notes:

- Table is based on Equations 9.2 through 9.5, using $C = 150$.
- Friction-loss values are based on average $D_i = D_o - (2 \times 106\% \times t_{\min}) = D_o - (2.12 \times t_{\min})$, where:
 - D_i = pipe inside diameter, in.
 - D_o = pipe outside diameter, in.
 - t_{\min} = minimum wall thickness, in.

Appendix E

Town of Somers Water and Sewer Rates

SOMERS CONSOLIDATED WATER DISTRICT NO. 1

A172 Attachment 1

Town of Somers

**Appendix A
Consolidated Water District Rates**

Quarterly Service Charge (Based on Meter Size)		
Meter Size (Inches)	In District	Out of District (In District Rate Multiplied By 1.25)
5/8	\$56.23	\$70.29
3/4	\$83.02	\$103.78
1	\$112.90	\$141.13
1.5	\$219.17	\$274.63
2	\$352.00	\$440.00
4	\$1069.30	\$1336.63
6	\$1594.00	\$1992.50
8	\$2243.20	\$2804.00

In District:

1 to 25,000 gallons: \$7.40 per 1,000 gallons or portion thereof.

25,001 to 100,000 gallons: \$8.36 per 1,000 gallons or portion thereof.

100,001 gallons and above: \$12.22 per 1,000 gallons or portion thereof.

Out of District (in District rate multiplied by 1.25):

1 to 25,000 gallons: \$9.25 per 1,000 gallons or portion thereof.

25,001 to 100,000 gallons: \$10.45 per 1,000 gallons or portion thereof.

125,001 gallons and above: \$15.28 per 1,000 gallons or portion thereof.

Bulk hauler rate:

All bulk hauler purchasers of water shall pay \$20 per 1,000 gallons inside the District and \$40 per 1,000 gallons outside the District. Minimum bulk hauler purchase shall be deemed to be 1,000 gallons.

SERVICE RATE CODES LISTING

FOR CODES: All

Date : 07/15/2024 Time : 5:02 PM

<u>Srvc Cd</u>	<u>Rate Cd</u>	<u>Description</u>	<u>Min Usage</u>	<u>Min Charge</u>	<u>Bl Zero</u>
SE	SC1	Sewer Dist 1 Commercial	0	0.00	False
	<u>STEP</u>	<u>MIN. USAGE</u>	<u>MAX USAGE</u>	<u>Rate / Thousand</u>	
	1	0	999999999	5.7600	
SE	SD1	SOMERS SEWER DISTRICT	0	0.00	False
	<u>STEP</u>	<u>MIN. USAGE</u>	<u>MAX USAGE</u>	<u>Rate / Thousand</u>	
	1	0	999999999	5.2800	

EXHIBIT "B"