

Engineers Report on Sewer District Extension for

Pheasant Hollow

2670 Phillips Road
Town of East Greenbush
Rensselaer County, New York

June 5, 2019
Revised: October 10, 2019
Revised: May 21, 2020



Prepared for:

Hartland Associates, Inc and 1560 Skyline Drive, LLC
5 Tyler Drive
East Greenbush, New York 12061
(518) 365 6572

Prepared by:

Hart Engineering,
1969 Ferndale Rd
Castleton NY, 12033
(518) 474-4014

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1.0 INTRODUCTIONS

1.1 Contacts

Sewer Department:
Town of East Greenbush
Dan Fiacco, Commissioner of Public Works
69 Gilligan Road
East Greenbush, NY 12061
Email: dfiacco@eastgreenbush.org
Phone: (518) 477-6103
Fax: (518) 477-5021

1.2 Background Information

Hart Engineering, Consulting Engineers, 1969 Ferndale Rd, Castleton NY 12033, (518) 479-4014 were retained for the proposed Pheasant Hollow Sewer Extension, as consultants.

1.3 Existing Site Description

The subject parcel is 106.78 acres in size and is located in the Towns of East Greenbush and Schodack. The proposed Sewer District Extension only includes lands situated in the Town of East Greenbush. This parcel is identified as Tax map SBL: 177.00-5-22 and is approximately 44 acres in size. The parcel is located on Hays Road and Phillips Road.

The subject parcel is located entirely within the Residential Buffer (R-B) District Zone. A site location Map is included (See Appendix 1).

1.4 Project Description

The applicant proposes the following

- Develop the parcel into ten (10) lots, total; nine (9) will be single-family residential and one (1) lot will service the Pheasant Hollow golf course.
- Provide service to land owners/residences along the path of the proposed sewer line on southerly side of Hays Road. This includes four (4) existing homes and one vacant lot. Total acreage of these lots (5) is 15 acres+/-.
- Install approximately 2,300 lf of 2" & 3" LPS and related appurtenances.

- The Public sanitary force main will be dedicated to the Town of East Greenbush once completed, inspected and accepted.

1.5 Existing Town Sewer District Population and Usage

Current population within the service area of the existing Town-wide Sewer District is approximately 16,500 the 2018 production records are summarized below

AVERAGE DAILY FLOW	1.7 MGD
MAXIMUM DAILY FLOW	3.4 MGD

The present capacity of the East Greenbush Sewer Treatment Plant is shown below.

Destination	Minimum Capacity (MGD)	Maximum Capacity (MGD)
East Greenbush Sewer	0.0	4.4

1.6 Extension Population and Sewer Usage

The present population within the study area is approximately 15 (4 existing homes). Pheasant Hollow Golf Course currently has no homes. The tables below provide information with respect to present population within the study area. These population estimates are based on the statistical average of 3.5 persons per unit. The ultimate population projections uses the proposed subdivision plan in conjunction with zoning restriction to estimate the full build out potential of these parcels to estimate the highest possible water demand. This is the worst case scenario for the purpose of sizing the water and sewer system components.

Present Residence	10-yr Residences	Ultimate Residences
4	15*	15*

*1-unit golf pro shop bathroom.

Present Population	10-yr Population	Ultimate Population
15	50	50

PROJECTED CONSUMPTION

	Present Demand	10-yr Demand	Ultimate Demand
Average*	0	5,000 gpd	5,000 gpd
Peak Day**	0	10,000 gpd	10,000 gpd

*Based on 100 gallons/capita/day

**Peak Day = average day x 2.0

The proposed sewer district extension will result in an increase in the average sewage treatment of less than 0.27%. The existing district is presently operating at 39% of its capacity for the average daily demands.

1.7 Proposed Facilities

Presently, an 8 inch PVC sewer runs in Hays Rd starting at the intersection of Kriss Crossing and Hays Rd and runs southerly into the Kriss Crossing development. The sewer main is within the Town of East Greenbush General Sewer District and is serviced by the town of East Greenbush Department of Public Works. The proposed sewer district sewer service will be a low pressure force main which ultimately connects into the sanitary manhole at the above noted intersection. This line then gravity feeds into a sewer pump station in Kriss Crossing. The extension of the sewer system will include 2,300 lineal feet of 2" & 3" low pressure sewer

Materials and construction will be in conformance to all applicable town standards as well as be designed and installed in accordance with the latest standards and specifications of:

- The Town of East Greenbush, Department of Public Works.
- The Rensselaer County Department of Health
- Ten State Standards.
- NYSDEC Design Standards for intermediate sized wastewater treatment systems (NYSDEC 2014).

Sewer lines will be installed at an accessible location within the Town right-of-way and/or utility easement. Service connections would be installed for each property of all existing and proposed home sites within the sewer district boundary and would consist of 1-1/4" pvc with tee to a curb stop located within 3 feet of the proposed low

pressure sewer. Connection to the curb stop and installation of the individual services and grinder pumps would be the responsibility of the respective home owners.

1.8 Project Financing & Cost of Operations

Capital Costs – The capital cost of installation including sanitary low pressure sewers, tees and curb stops will be the responsibility of the applicant. The low pressure pumping stations and service laterals will be the responsibility of the individual lot/home owners. For proposed new users, who are not part of the sponsor property, there will be a one-time charge of \$1000 which will cover the cost for their respective tee, curb stop, and engineering costs. There will be no charges or assessments to existing users in the General Sewer district for the planned capital improvements.

Maintenance and Repair Costs- The Town will charge the residents within the General Sewer District Extension on a per lineal foot frontage basis at a rate of \$1.55 per front foot. For example a lot with 100 feet of frontage will pay \$155 per year.

Sewer use charges for residential customers are based on the current 2020 rates of \$21.13 for a minimum use of 10,500 gals and \$2.40 per 1000 gals above the minimum charge. For the proposed sewer district extension users it is projected that based on a daily use of 110 gals per bedroom (3.5 bedrooms) the annual sewer use cost would be about \$384.

Debt service fees – there are no debt service fees that would affect this project.

Anticipated cost for an individual property owner would consist of the construction cost noted above of \$1000, the Town's maintenance cost as noted above, town related hook up fees, and a construction cost of approximately \$5000 which would cover the grinder pump, service lateral and related appurtenances.

1.9 Estimate of Project Cost

Item	Quantity	Unit	Unit Cost	Total Cost
48" Diameter Manholes (Termination)	3	EA	\$4,500.00	\$13,500.00
2" & 3" Dia SDR 11	1,000	LFT	\$30.00	\$30,000.00
1-1/4" isolation valve	19	EA	\$400.00	\$7,600.00
Tie into Exist MH	1	EA	\$500.00	\$500.00
Grinder Pump (E-One)	0	EA	\$3,000	\$ 0
Directional Drill	1,300	LF	\$40.00	\$52,000.00

Subtotal	\$103,600.00
Contingencies (10%)	\$ 10,360.00
Subtotal	\$113,960.00
Technical Servicing (10%)	\$ 11,396.00
Recording Fess	\$150.00
Minimum Legal Fees	\$3,000.00
Total Project Cost	\$128,506.00

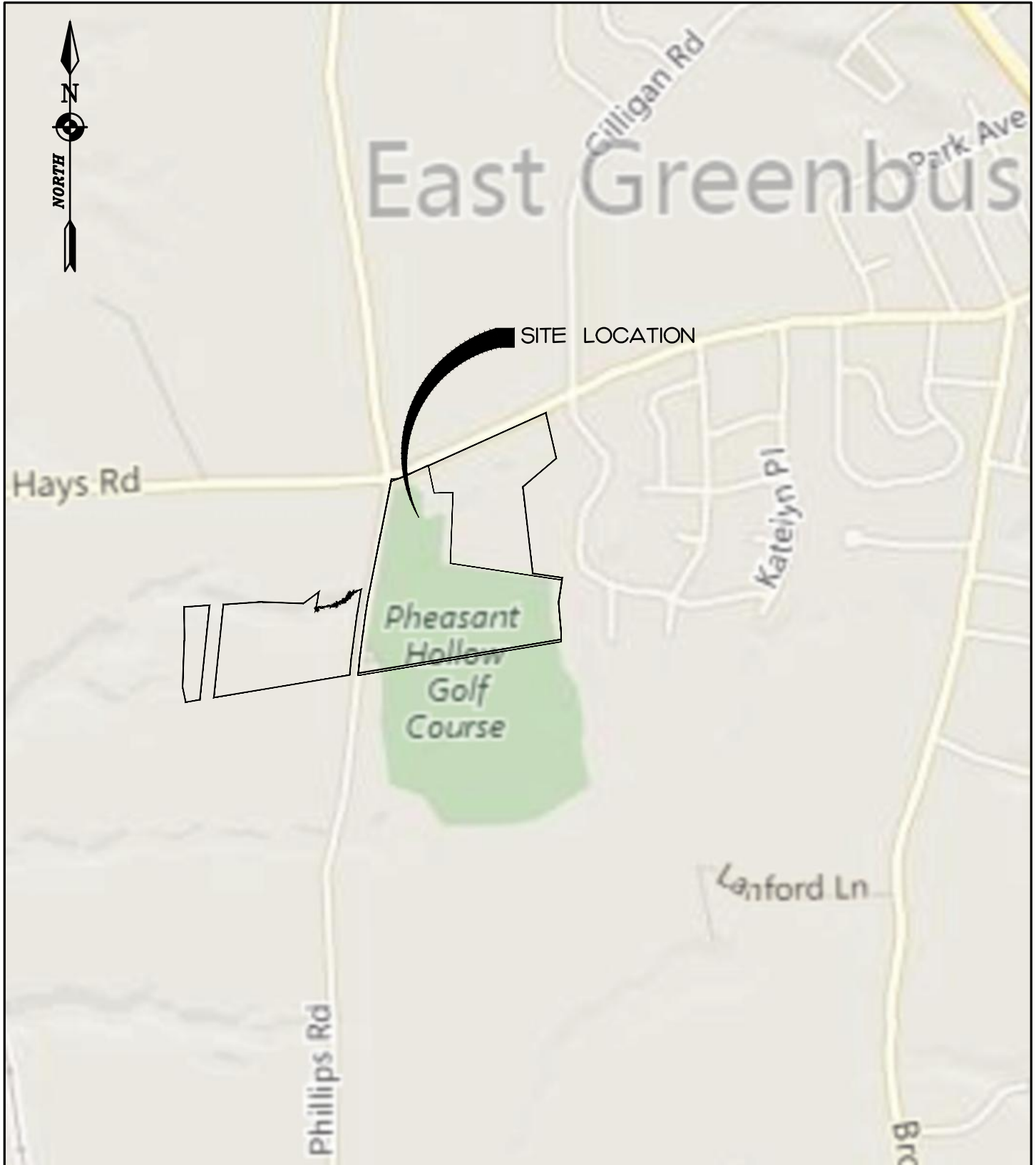
1.10 Project Schedule

This sewer district extension is developer funded for development of the above referenced project. This project has an anticipated start date of the Fall of 2020 with a completion date by Dec of 2020.

APPENDIX 1
Site Location Map
Aerial Map
USGS Map



DRAWN BY: CHRISTIAN BERTRAM PE	CHECKED BY: STEVE HART PE	DATE ISSUED: DEC 2019	SCALE: 1" = 1000'	DRAWING NUMBER: APPENDIX I
PROJECT NAME: PHEASANT HOLLOW SEWER DISTRICT EXTENSION		DRAWING TITLE: SITE LOCATION MAP		FILE NAME: SITE LOCATION MAP.DWG



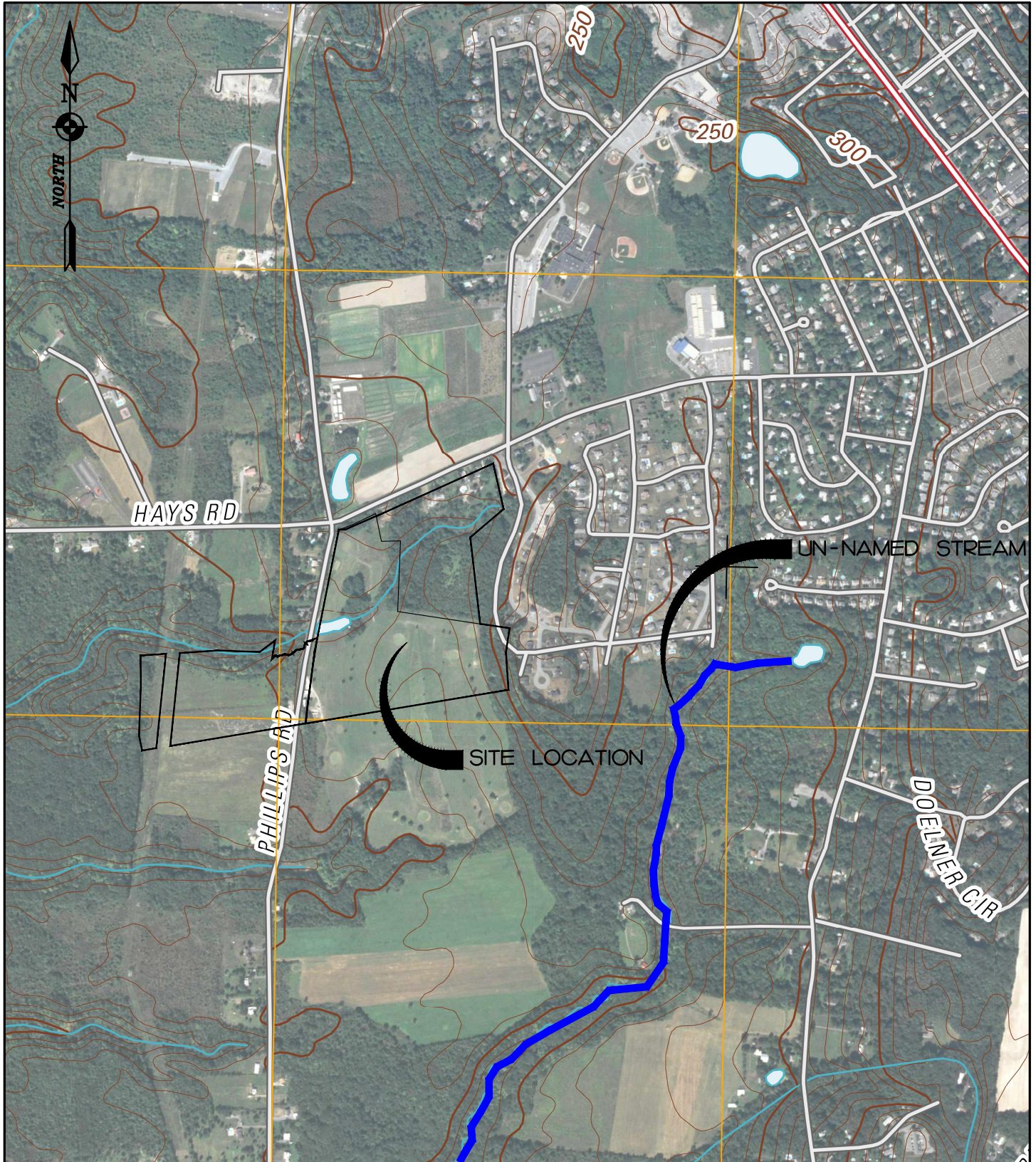


DRAWN BY: CHRISTIAN BERTRAM PE	CHECKED BY: STEVE HART PE	DATE ISSUED: MAY 2019	SCALE: 1" = 500'	DRAWING NUMBER: APPENDIX I
PROJECT NAME: PHEASANT HOLLOW SEWER DISTRICT EXTENSION		DRAWING TITLE: AERIAL MAP	FILE NAME: AERIAL MAP.DWG	





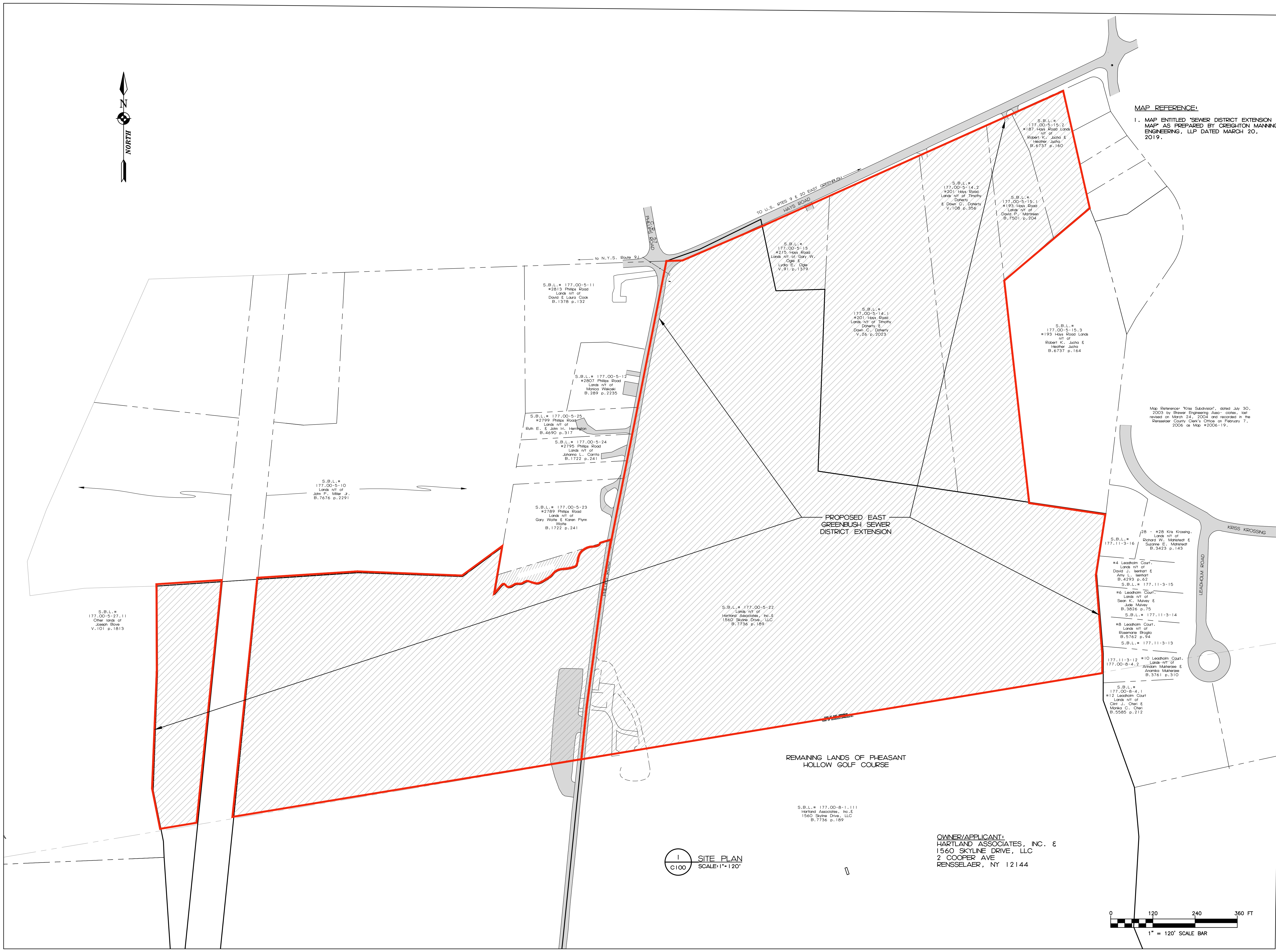
DRAWN BY: CHRISTIAN BERTRAM PE	CHECKED BY: STEVE HART PE	DATE ISSUED: MAY 2019	SCALE: 1" = 1000'	DRAWING NUMBER: APPENDIX I
PROJECT NAME: PHEASANT HOLLOW SEWER DISTRICT EXTENSION		DRAWING TITLE: USGS MAP	FILE NAME: USGS MAP.DWG	



APPENDIX 2

Sewer District Extension Map

Z:\Projects\Drawings\2019\010 - Pheasant Hollow Sewer District Extension\Xref\Xref-Base-Map-sewer distric extension.dwg / HART / Thursday, May 21, 2020 11:21:34 AM / PREVIOUS PAPER SIZE (36.00 X 24.00 INCHES) / 11



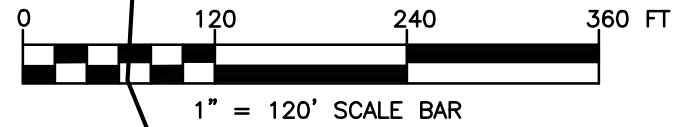
MAP REFERENCE:

1. MAP ENTITLED "SEWER DISTRICT EXTENSION MAP" AS PREPARED BY CREIGHTON MANNING ENGINEERING, LLP DATED MARCH 20, 2019.

Map Reference "Kris Subdivision", dated July 30, 2003 by Shaver Engineering Assoc. dated, last revised on March 24, 2004 and recorded in the Rensselaer County Clerk's Office on February 7, 2006 as Map #2006-19.

OWNER/APPLICANT:
HARTLAND ASSOCIATES, INC. &
1560 SKYLINE DRIVE, LLC
2 COOPER AVE
RENSSELAER, NY 12144

1 SITE PLAN
C100 SCALE: 1" = 120'



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NOTICE: Unlicensed alteration or addition to the map is prohibited. This drawing is the property of HART Engineering, LLC and is to be used only for the project and location specified herein. Any other use without the written consent of HART Engineering, LLC is prohibited. Only copies from the original and the enclosed seal of the original signature in red ink, and the enclosed seal of the original signature in red ink, are considered to be true and valid copies.

HART ENGINEERING
1969 FERRISDALE ROAD
CASTLETON, NY 12033
Phone: (518) 479-4014
Fax: (518) 477-6371

STEVEN P. HART, P.E. #060099

NO.	DATE	DESCRIPTION	REV'D.	OK'D.
1	5/21/20	ISSUED FOR REVIEW	CMB	CMB

SEWER DISTRICT
EXTENSION
PHEASANT HOLLOW
2670 PHILLIPS ROAD
TOWN OF EAST GREENBUSH, COUNTY OF RENSSELAER, STATE OF NEW YORK

ENGINEER:
STEVEN P. HART, P.E.
DRAWN BY:
DAH
DATE ISSUED:
05-01-19
SCALE:
1" = 120'
DRAWING NUMBER:
C100
1 OF 1

APPENDIX 3

Sewer District Extension

Land Description

LEGAL DESCRIPTION

Town of East Greenbush

Sewer District Extension

(Prepared 05/20/20)

All that piece or parcel of land situate, lying and being in the Town of East Greenbush, County of Rensselaer and State of New York, said parcel being bounded and described as follows:

Beginning at a point at the intersection of the centerline of Phillips Road with the centerline of Hays Road and running thence along said centerline of Hays Road the following two (2) courses and distances: 1) N 86° 11' 23" E, 100.50 feet to a point; and 2) N 79° 30' 45" E, 193.24 feet to a point at the northwest corner of lands now or formerly of Gary W. Ogle and Lydia E. Ogle; running thence along the bounds of said lands now or formerly of Ogle the following three courses: 1) S 03° 39' 58" W 28.38 feet to a point marked by an iron pipe; 2) S 03° 39' 58" W, 179.22 feet to a point marked by an iron pipe; and 3) S 76° 06' 55" E, 139.27 feet to a point marked by an iron pipe in a wire fence line on the westerly boundary of lands now or formerly of Timothy Doherty and Dawn C. Doherty; running thence along said westerly boundary of lands now or formerly of Doherty and generally along said wire fence S 17° 45' 14" W, 517.48 feet to a point marked by a capped iron pin at a wire fence corner; running thence along the south bounds of said lands now or formerly of Doherty and also the south boundary of lands now or formerly of Robert K. Jucha and Heather Jucha and generally along said wire fence S 65° 34' 10" E, 826.43 feet to a point marked by a capped iron pin in a wire fence line on the westerly boundary of the "Kriss Subdivision"; running thence along said westerly boundary of the "Kriss Subdivision" and generally along a wire fence the following three (3) courses and distances: 1) S 22° 36' 07" W, 191.40 feet to a point, 2) S 10° 11' 07" W, 165.66 feet to a point, and 3) S 17° 06' 06" W, 99+/- feet to the boundary line between the Town of East Greenbush on the north and the Town of Schodack on the south; Thence in a westerly direction along the last mentioned town line and through the lands now or formerly of Hartland Associates Inc. and 1560 Skyline Drive LLC, (Tax Map number 177.00-5-22) 1505 +/- feet to the centerline of Phillips Road; thence continuing westerly along the aforementioned town line and through a portion of land now or formerly of National Grid (Tax Map parcel 166.00-7-15.1) to a point on the division line between Tax Map parcel 177.00-5-27.11 on the west and the herein described parcel (Tax Map parcel 177.00-5-22) on the east; thence in a northerly direction along the last mentioned division line the following (3) courses and distances, 1) N 04° 18' 34" E, 117+/- feet to a point, 2) N 17° 43' 34" E, 333.30 feet to a point and 3) N 15° 18' 34" E, 247.50 feet to a point in the division line between Tax map parcel number 177.00-5-10 on the North and the herein described parcel on the south; thence in a easterly direction along the last mentioned division line and through a portion of land now or formerly of National Grid (Tax Map parcel 166.00-7-15.1) the following 3 courses and distances along the last mentioned division line; 1) S 78° 11' 05" E, 572.89 feet, 2) S 72° 16' 39" E, 297.00 feet and 3) S 69° 13' 21" E, 142.00 feet to a point in the division line between lands on the east now or formerly of Gary Wolfe and Karen Flynn Wolfe and lands on the west of the herein described parcel; Thence in a southwesterly direction S 25° 13' 33" W along the last mentioned division line 135 +/- feet to the centerline of a stream; Thence in a general easterly direction 383+/- feet along the centerline of the stream which runs between lands on the north now or formerly of Gary Wolfe and Karen Flynn Wolfe and lands on the south of the herein described parcel to the point in the centerline of Phillips Road. Thence northeasterly N 26° 46' 28" E along the centerline of Phillips Road 808.80 feet to the point of beginning.

Being part of the parcel shown on a subdivision map entitled "Survey Map Showing Proposed Subdivision of Lands of Joseph Bove at 2670 Phillips Road, Castleton, NY 12033", dated November 24, 2015 by Santo Associates Land Surveying and Engineering, P.C., last revised on December 11, 2015 and recorded in the Rensselaer County Clerk's Office as Map number 2016, Map 11.

Together with the following Tax Map parcels to be added to the Sewer District Extension:
177.00-5-13, 177.00-5-14.1, 177.00-5-14.2, 177.00-5-15.1, 177.00-5-15.2.

Excepted from the above described Sewer District Extension is all that property being within Tax Map parcel 166.00-7-15.1 (Lands now or formerly of Niagara Mohawk).

APPENDIX 4

Contact Information for Sewer District Extension Land Owners

Pheasant Hollow Sewer District Extension Land Owners

- | | |
|---|--|
| 1. TM# 177.00-5-13
Gary W. & Lydia E. Olge
215 Hays Road
Castleton, NY 12033 | 3. TM# 177.00-5-14.2
Timothy & Dawn C. Doherty
201 Hays Road
Castleton, NY 12033 |
| 2. TM# 177.00-5-14.1
Timothy & Dawn C. Doherty
201 Hays Road
Castleton, NY 12033 | 4. TM# 177.00-5-15.1
David P. Martinsen
193 Hays Road
Castleton, NY 12033 |
| | 5. TM# 177.00-5-15.2
Robert K. & Heather Jucha
22 Kriss Crossing
East Greenbush, NY 12061 |