



**TOWN OF NEWBURGH  
PLANNING BOARD  
TECHNICAL REVIEW COMMENTS**

**PROJECT NAME:** GARDNER RIDGE  
**PROJECT NO.:** 2002-29  
**PROJECT LOCATION:** GARDNERTOWN ROAD NEAR GIDNEY AVENUE  
SECTION 75, BLOCK 1, LOT 4.12  
**REVIEW DATE:** 9 SEPTEMBER 2022  
**MEETING DATE:** 15 SEPTEMBER 2022  
**PROJECT REPRESENTATIVE:** THOMAS B. OLLEY, P.E., P.L.L.C.

1. Highway Superintendent's comments on revised plans should be received. The applicant's representative have identified that the plans have been revised to address his comments. Plans should be sent to the Highway Superintendent for review.
2. A revised SWPPP has been received and is under review by this office.
3. A revised Rock Removal Plan has been submitted dated June 2022. This plan has identified a significant reduction (3 acres to 1.6 acre) in the amount of area proposed for rock removal.
4. The applicants representative are requested to provide a narrative of the hydraulic loading calculations to the sanitary sewer collection system. This narrative will be submitted under a cover letter through the City of Newburgh for the required Flow Acceptance Letter.
5. Health Department approval for the proposed potable water system is required as the project will be considered a water main extension with hydrants.
6. The Town of Newburgh Town Board approval for the senior density bonus must be updated.
7. Highway Superintendent and Town Board approval for re-alignment of Creek Run Road should be addressed.
8. The applicants are requested to discuss provisions for emergency back-up generators for the senior apartment use.
9. A proposed bioretention area is located between the existing Creek Run Road and proposed Creek Run Road in the Town right of way. Operation and maintenance of this should be identified. The responsibility for the operation and maintenance should be identified.
10. Outlets from proposed bioretention areas should be depicted on plans. Bioretention areas are depicted in detail as having under drains.

**NEW YORK OFFICE**

33 Airport Center Drive, Suite 202, New Windsor, NY 12553  
845-567-3100 | F: 845-567-3232 | mheny@mhepc.com

**PENNSYLVANIA OFFICE**

111 Wheatfield Drive, Suite 1, Milford, PA 18337  
570-296-2765 | F: 570-296-2767 | mhepa@mhepc.com

11. Mechanism to limit the depth within bioretention areas to the maximum 6inch depth should be addressed.
12. An access road detail is depicted for operation and maintenance of the Stormwater Management Facilities. Location of these access roads should be depicted on the plans.
13. All Stormwater Facilities which contain standing water must be fenced in accordance with Town Code. Fencing should be depicted in plan in detail.
14. The applicants should discuss the status of the SEQRA review and determinations for this project. A revised EAF dated 5 June 2022 has been submitted. It is noted the revised EAF is not signed.

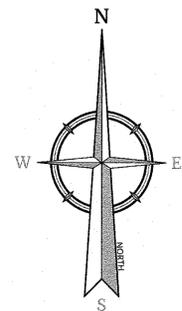
Respectfully submitted,

**MHE Engineering, D.P.C.**



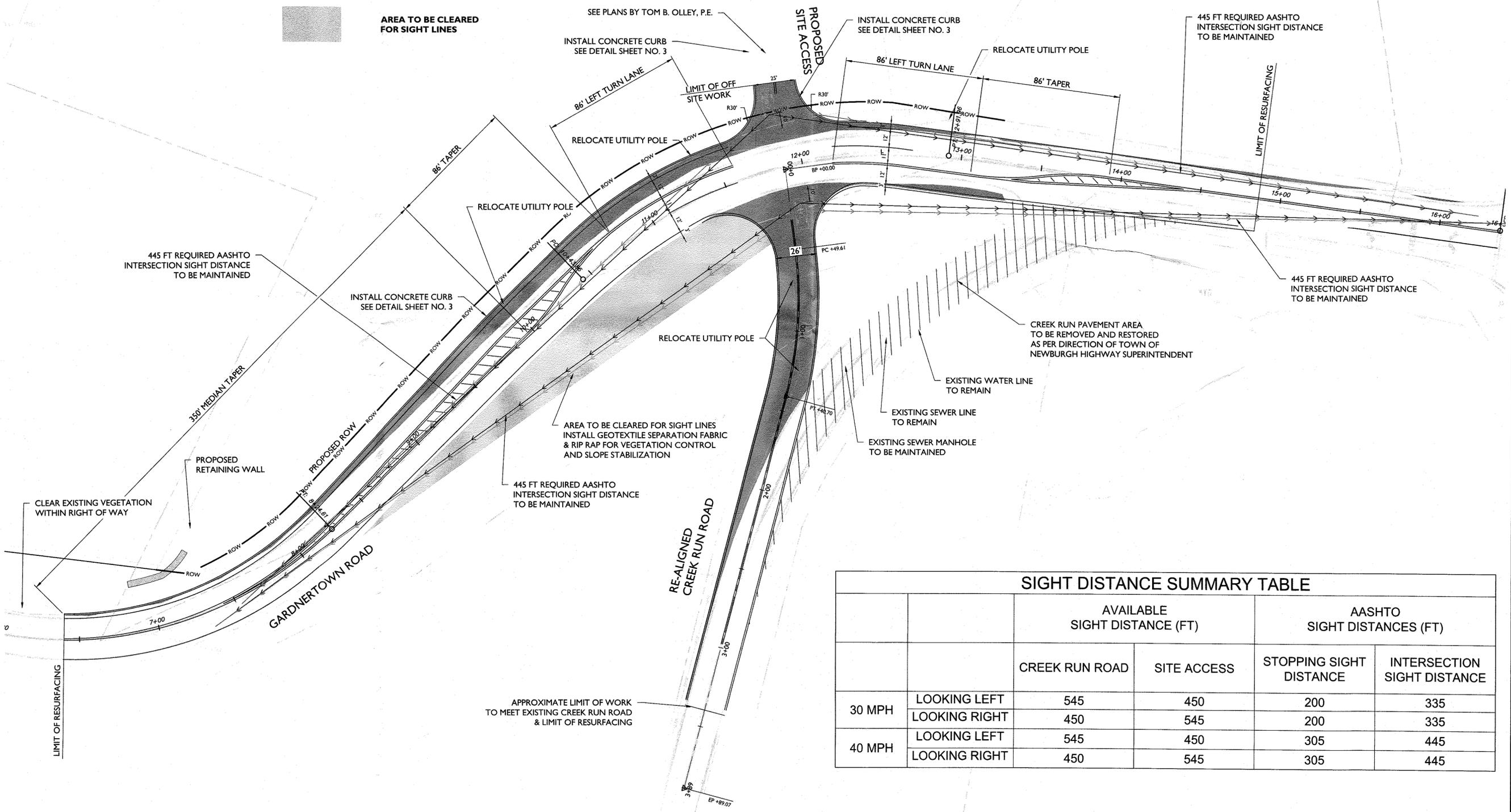
Patrick J. Hines  
Principal

PJH/kbw

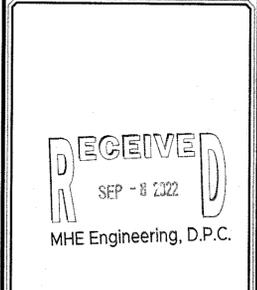


**LEGEND:**

- NEW FULL DEPTH PAVEMENT**
- AREA TO BE CLEARED FOR SIGHT LINES**



REV	DATE	DESCRIPTION
1	6/9/22	ISSUED PER TOWN COMMENTS.
2	7/17/21	REVISED PER FREIGHTMAN COMMENT LETTER DATED 6/10/22.
3	8/23/22	ADDED TURNING TRAILS & RIP RAP TO END SECTIONS.
4	9/17/22	MODIFIED PER TOWN CONSULTANTS COMMENTS.



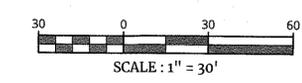
CONCEPTUAL IMPROVEMENT PLAN  
FOR  
**GARDNER RIDGE ASSOCIATES, LLC**  
GARDNERTOWN ROAD & CREEK RUN ROAD  
TOWN OF NEWBURGH  
ORANGE COUNTY  
NEW YORK

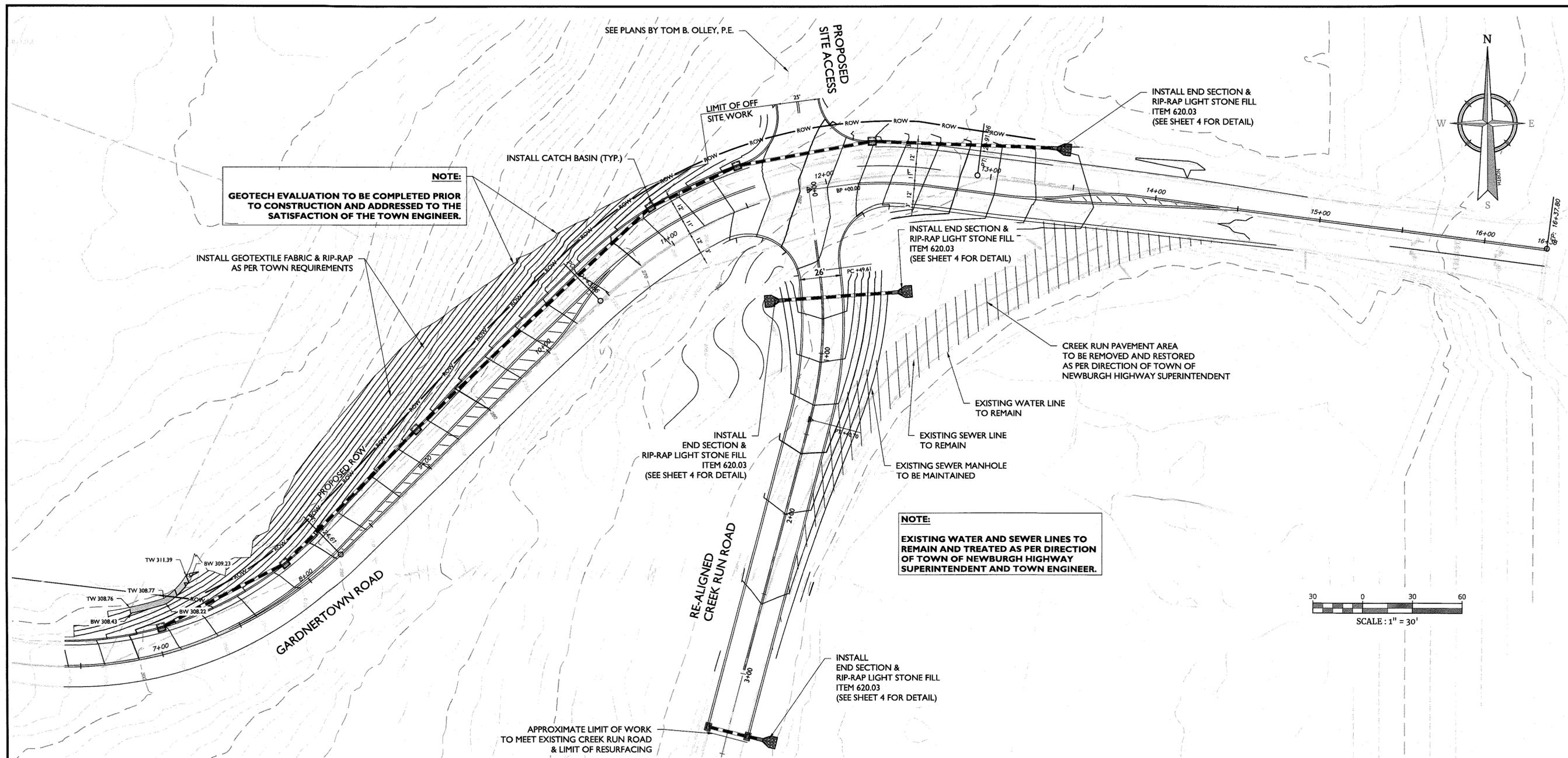
**Colliers** WESTCHESTER  
400 Columbus Avenue,  
Suite 180E  
Valhalla, NY 10595  
Engineering & Design  
Phone: 914.347.7500  
DOIING BUSINESS AS MASER CONSULTANTS  
ENGINEERING & LAND SURVEYING

SCALE: AS SHOWN	DATE: 8/27/21	DRAWN BY: M.J.A.	CHECKED BY: P.J.G./A.P.R.
PROJECT NUMBER: 14000375R	DRAWING NAME: R.P.01-EXBT		

SHEET TITLE:  
**CONCEPT PLAN (LAYOUT)**  
SHEET NUMBER:  
**1 of 7**

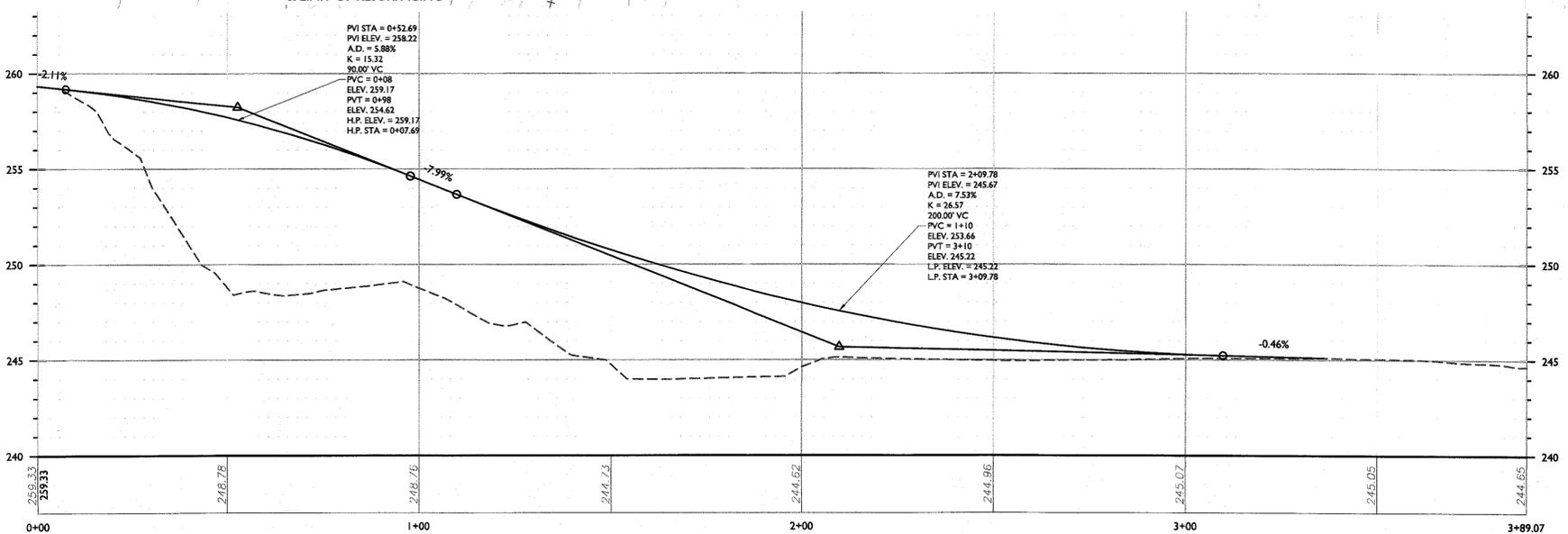
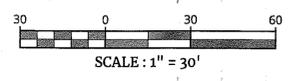
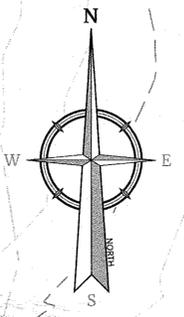
		AVAILABLE SIGHT DISTANCE (FT)		AASHTO SIGHT DISTANCES (FT)	
		CREEK RUN ROAD	SITE ACCESS	STOPPING SIGHT DISTANCE	INTERSECTION SIGHT DISTANCE
30 MPH	LOOKING LEFT	545	450	200	335
	LOOKING RIGHT	450	545	200	335
40 MPH	LOOKING LEFT	545	450	305	445
	LOOKING RIGHT	450	545	305	445





**NOTE:**  
**GEOTECH EVALUATION TO BE COMPLETED PRIOR TO CONSTRUCTION AND ADDRESSED TO THE SATISFACTION OF THE TOWN ENGINEER.**

**NOTE:**  
**EXISTING WATER AND SEWER LINES TO REMAIN AND TREATED AS PER DIRECTION OF TOWN OF NEWBURGH HIGHWAY SUPERINTENDENT AND TOWN ENGINEER.**



**PROFILE OF REALIGNED CREEK RUN ROAD - NEW**  
**HORIZONTAL: 1" = 20'**  
**VERTICAL: 1" = 4'**

**Colliers**

Engineering & Design

www.colliersengineering.com

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 Know what's below.  
 Call before you dig.  
 FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
1	6/9/22	M.J.A.	REVISED PER TOWN COMMENTS.
2	7/1/22	M.J.A.	REVISED PER CREIGHTON MANNING COMMENT LETTER DATED 6/10/22.
3	8/2/22	M.J.A.	ADDED TURNING TRACES & RIP-RAP TO END SECTIONS.
4	8/1/22	M.J.A.	MODIFIED PER TOWN CONSULTANTS COMMENTS.

**CONCEPTUAL IMPROVEMENT PLAN FOR GARDNER RIDGE ASSOCIATES, LLC**

**GARDNERTOWN ROAD & CREEK RUN ROAD**  
**TOWN OF NEWBURGH ORANGE COUNTY NEW YORK**

**Colliers** WESTCHESTER  
 400 Columbus Avenue, Suite 180E  
 Valhalla, NY 10595  
 Phone: 914.347.7500  
 COLLIERS ENGINEERING & DESIGN CT, P.C.  
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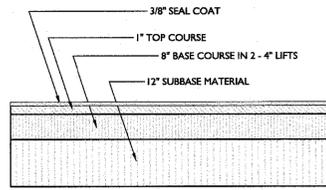
SCALE: AS SHOWN DATE: 8/2/22 DRAWN BY: M.J.A. CHECKED BY: P.J.G./A.P.R.  
 PROJECT NUMBER: 140003758 DRAWING NAME: R-PL01-EXBT

**CONCEPT PLAN (GRADING)**

SHEET NUMBER: 2 of 7

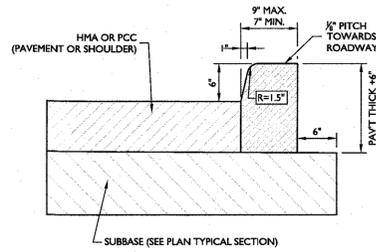
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.





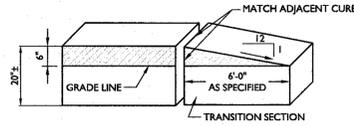
**TOWN OF NEWBURGH  
FULL DEPTH PAVEMENT DETAIL**

NOT TO SCALE GNRL-DTLS-STND-GRID XX/XX/XX



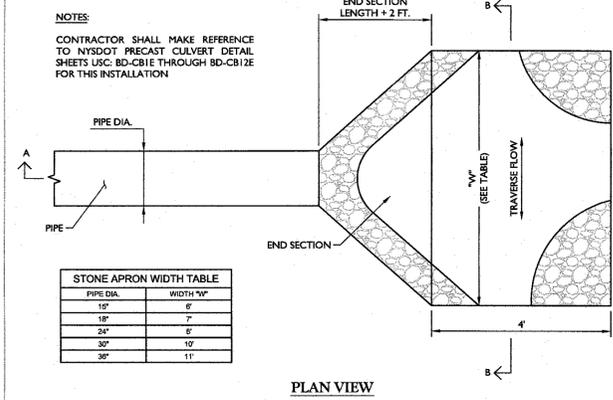
**TYPE VF6 CURB**

NOT TO SCALE NYDT-CURB-1000 08/04/21



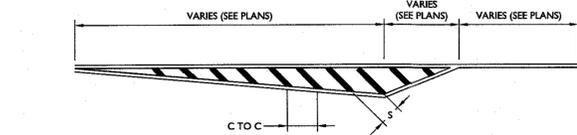
**CURB TRANSITION**

NOT TO SCALE NYDT-CURB-1200 01/09/14



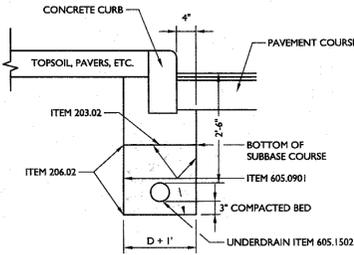
**STONE LINED APRON**

NOT TO SCALE NYDT-STRM-1100 11/01/17



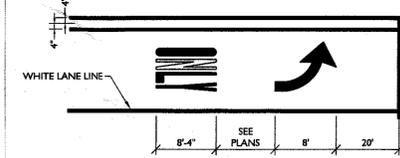
**HATCHED ISLAND DETAIL**

NOT TO SCALE NYDT-MRKG-1101 05/02/13



**UNDERDRAIN WITH CURB**

NOT TO SCALE NYDT-CURB-1400 11/01/17



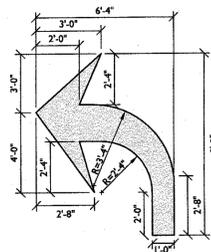
**TYPICAL LEFT TURN LANE STRIPING**

NOT TO SCALE NYDT-MRKG-1100 05/02/13



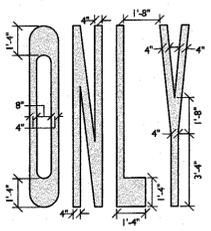
**STOP SIGN**

NOT TO SCALE NYDT-SIGN-1000 05/02/13



**TURNING ARROW**

NOT TO SCALE NYDT-MRKG-1200 05/02/13



**"ONLY" LETTERS**

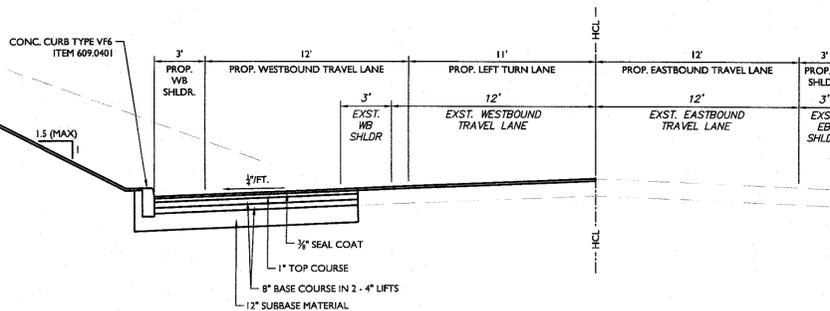
NOT TO SCALE NYDT-MRKG-1201 05/02/13

**TYPICAL SECTION NOTES:**

- STRAIGHT TACK COAT SHALL BE APPLIED BETWEEN EACH ASPHALT COURSE/LIFT.
- WHERE CONCRETE PAVEMENT IS LOCATED UNDER ASPHALT OVERLAY AND IS LOCATED WITHIN 3 FT. OF THE PROPOSED WIDENING SECTION, THE WIDENING SHALL EXTEND TO LIMIT OF CONCRETE PAVEMENT.
- WHERE POSSIBLE SUBBASE MATERIAL SHALL BE DAYLIGHTED TO EMBANKMENT SIDE SLOPES.
- AS PER SECTION 610.2.10, IN THE ABSENCE OF 1 INCH OF RAINFALL WITHIN 5 CONSECUTIVE CALENDAR DAYS THE CONTRACTOR SHALL WATER ALL TURF, WILDFLOWERS, SOD AND PLANTING BEDS ONCE A WEEK TO A DEPTH OF 1 INCH UNDER ITEM 610.19. IN ADDITION AS PER SECTION 610.3.12, THE CONTRACTOR SHALL MOW ALL TURF ESTABLISHMENT AREAS TO A HEIGHT OF 5 INCHES WHEREVER GROWTH REACHES 8 INCHES FOR THE DURATION OF THE CONTRACT UNDER ITEM 619.21. CLIPPINGS SHALL BE LEFT IN PLACE.
- TRILING AND LEVELING COURSE MAY BE REQUIRED TO ACHIEVE UNIFORM CROSS SLOPE. CONTRACTOR SHALL VERIFY IF SUCH NEED IS REQUIRED AND CONFER WITH E.I.C. PRIOR TO COMMENCEMENT OF PAVING OPERATIONS.
- ASPHALT PAVEMENT JOINT ADHESIVE SHALL BE USED BETWEEN VERTICAL FACES FOR ALL JOINTS ON SURFACE COURSE SUCH AS LONGITUDINAL, TRANSVERSE, CURBS OR OTHER JOINTS.

ITEM	DESCRIPTION
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL EMBANKMENT IN PLACE
203.03	CAST-IN-PLACE CONCRETE CURB TYPE VF6
609.0401	TURF ESTABLISHMENT (ROADSIDE)
610.1601	PLACING TOPSOIL - ROADSIDE
610.1402	

DESCRIPTION
UNCLASSIFIED EXCAVATION AND DISPOSAL EMBANKMENT IN PLACE
CAST-IN-PLACE CONCRETE CURB TYPE VF6
TURF ESTABLISHMENT (ROADSIDE)
PLACING TOPSOIL - ROADSIDE



**GARDNERTOWN ROAD - TYPICAL SECTION**

REV	DATE	DESCRIPTION	BY	DATE	DESCRIPTION
1	6/9/22	M.J.A.	M.J.A.		
2	7/17/22	M.J.A.	M.J.A.		
3	8/22/22	M.J.A.	M.J.A.		
4	8/31/22	M.J.A.	M.J.A.		

CONCEPTUAL IMPROVEMENT PLAN FOR GARDNER RIDGE ASSOCIATES, LLC

GARDNERTOWN ROAD & CREEK RUN ROAD TOWN OF NEWBURGH ORANGE COUNTY NEW YORK

WESTCHESTER 400 Columbus Avenue, Suite 180E Valhalla, NY 10595 Phone: 914.347.7500

SCALE: AS SHOWN DATE: 8/27/21 DRAWN BY: M.J.A. CHECKED BY: P.J.G./A.P.R. PROJECT NUMBER: 140003758 DRAWING NAME: R-PL01-EX07

SHEET TITLE: DETAILS

SHEET NUMBER: 4 of 7

REV	DATE	DESCRIPTION	DRAWN BY	DATE	DESCRIPTION
1	6/2/12	REVISED PER TOWN COMMENTS.	M.J.A.		
2	7/17/12	REVISED PER CIRCULATION MARKING COMMENT LETTER DATED 6/10/12.	M.J.A.		
3	8/29/12	ADDED TURNING TRUCKS & RIP RAP TO END SECTIONS.	M.J.A.		
4	8/31/12	MODIFIED PER TOWN CONSULTANTS COMMENTS.	M.J.A.		

REV	DATE	DESCRIPTION	DRAWN BY	DATE	DESCRIPTION

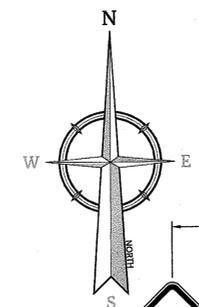
CONCEPTUAL IMPROVEMENT PLAN  
 FOR  
 GARDNER RIDGE ASSOCIATES, LLC  
 GARDNERTOWN ROAD & CREEK RUN ROAD  
 TOWN OF NEWBURGH ORANGE COUNTY NEW YORK

WESTCHESTER  
 400 Columbus Avenue,  
 Suite 1606  
 Valhalla, NY 10595  
 Phone: 914.347.7500  
 COLLIERS ENGINEERING & DESIGN, P.C.  
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SCALE: AS SHOWN	DATE: 8/27/12	DRAWN BY: M.J.A.	CHECKED BY: P.J.G./A.P.R.
PROJECT NUMBER: 14000375B	DRAWING NAME: R-PL02-EXBT-WZTC		

SHEET TITLE: WORK ZONE TRAFFIC CONTROL GARDNERTOWN RD WB SHOULDER CLOSURE

SHEET NUMBER: 5 of 7



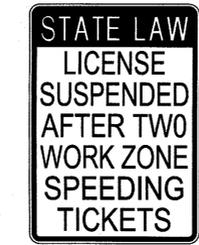
W8-23  
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W20-1  
(36"x36")



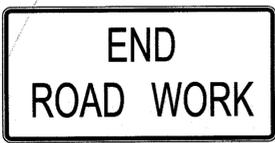
NYR9-11  
(24"x36")



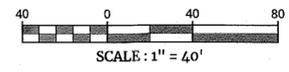
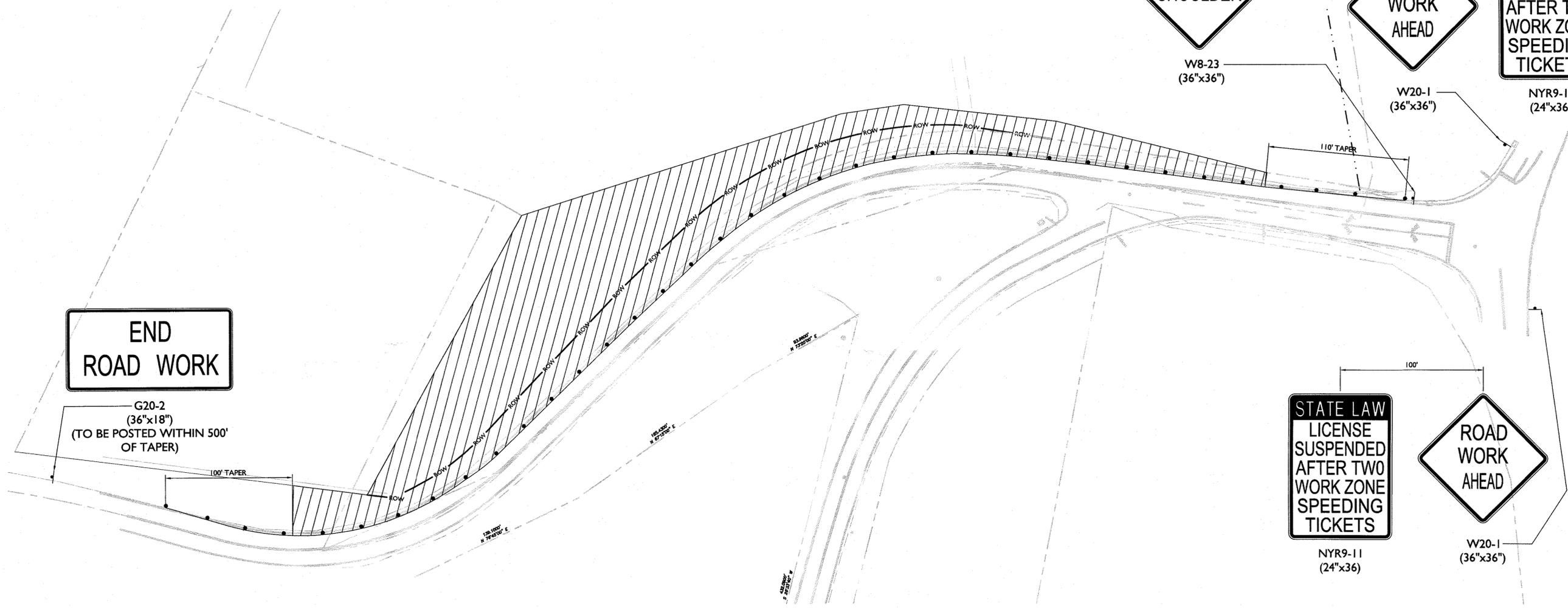
NYR9-11  
(24"x36")



W20-1  
(36"x36")

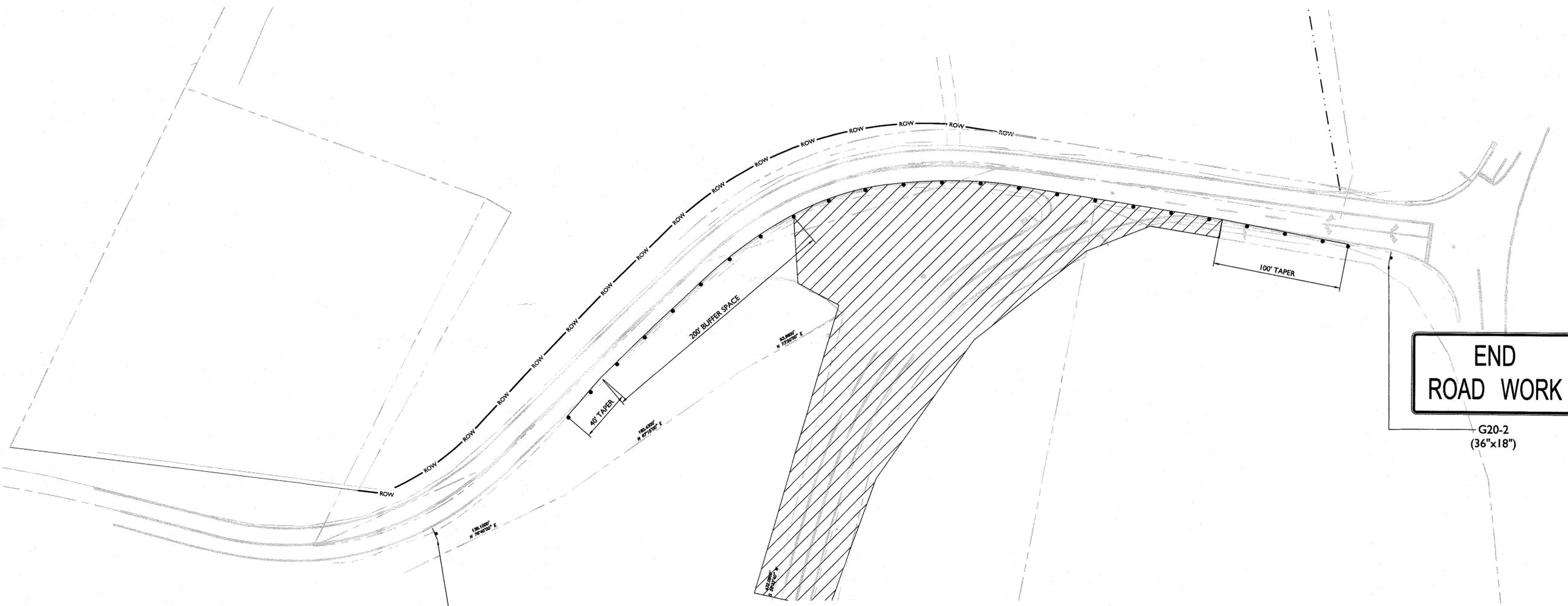
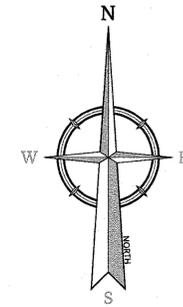


G20-2  
(36"x18")  
(TO BE POSTED WITHIN 500'  
OF TAPER)





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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM



**END ROAD WORK**

G20-2  
(36"x18")

REV	DATE	DRAWN BY	DESCRIPTION
1	6/9/22	M.J.A.	REVISED PER TOWN COMMENTS.
2	7/17/21	M.J.A.	REVISED PER CREIGHTON MANNING COMMENT LETTER DATED 6/10/22.
3	8/23/22	M.J.A.	ADDED TURNING TRACES & RIP RAB TO END SECTIONS.
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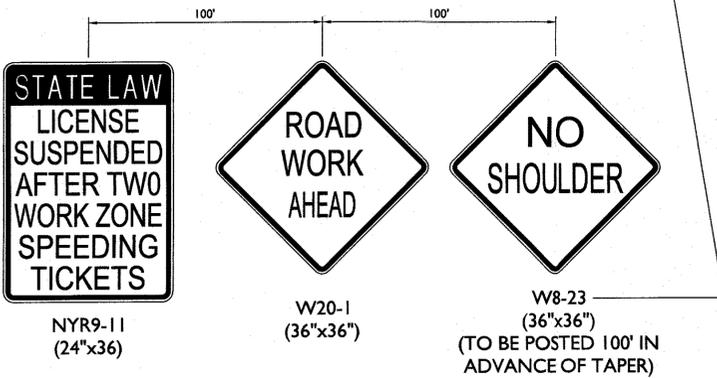
CONCEPTUAL IMPROVEMENT PLAN  
FOR  
GARDNER RIDGE ASSOCIATES, LLC

GARDNERTOWN ROAD & CREEK RUN ROAD  
TOWN OF NEWBURGH  
ORANGE COUNTY  
NEW YORK

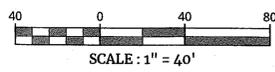
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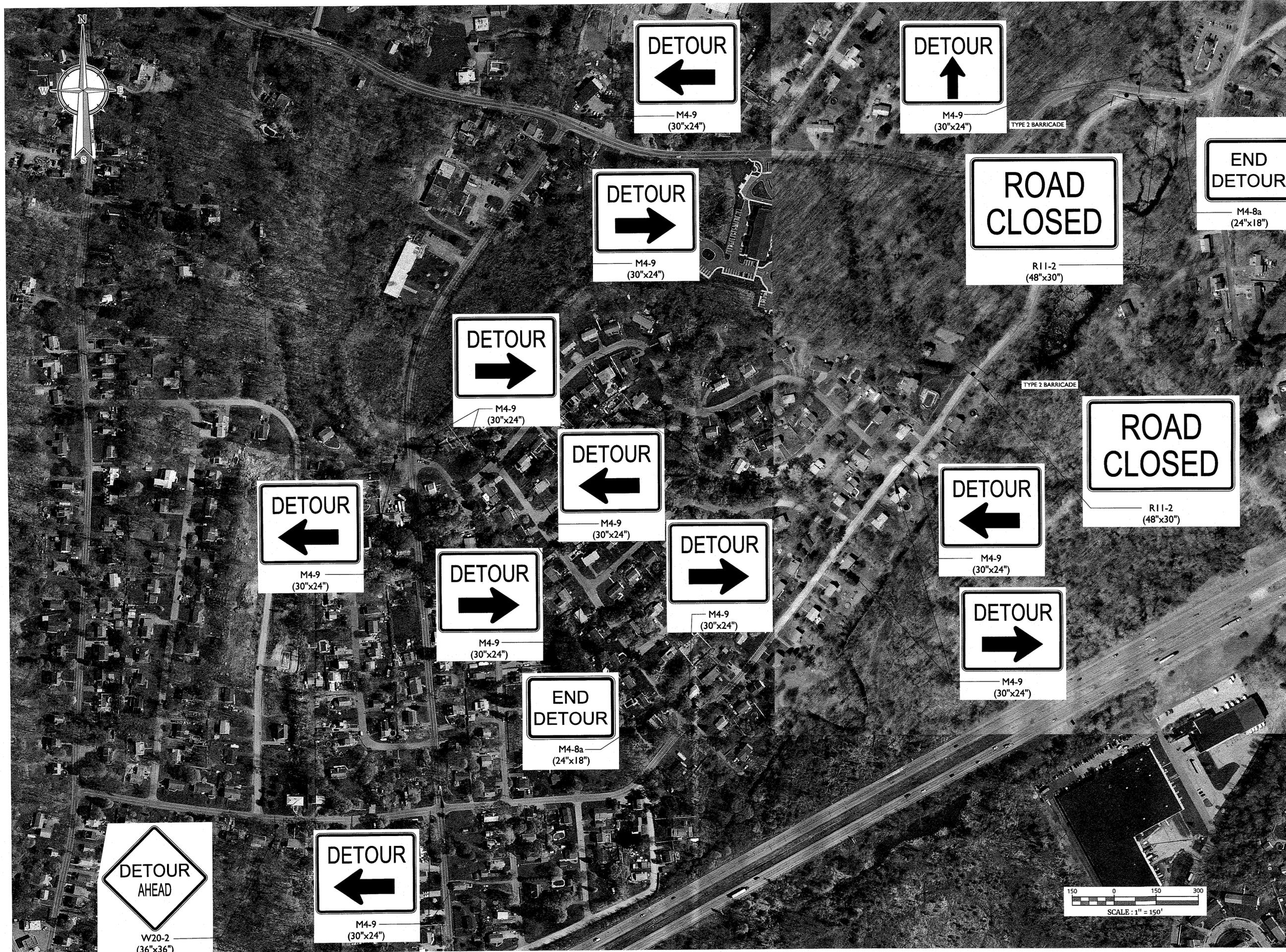
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	8/27/21	M.J.A.	P.J.G./A.P.R.
PROJECT NUMBER:	DRAWING NAME:		
14000375B	R-PL02-EX01-WZTC		

WORK ZONE TRAFFIC CONTROL GARDNERTOWN RD EB SHOULDER CLOSURE



**NOTE:**  
SEE SHEET 7 OR 7 FOR DETOUR PLAN DURING CLOSURE OF CREEK RUN ROAD





REV	DATE	DESCRIPTION
1	6/9/22	REVISED PER TOWN COMMENTS
2	7/10/21	REVISED PER CREIGHTON MANNING COMMENT LETTER DATED 6/10/22
3	8/23/22	ADDED TURNING TRUCKS & TRIP MAP TO END SECTION
4	8/31/22	MODIFIED PER TOWN CONSULTANTS COMMENTS

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1	6/9/22	REVISED PER TOWN COMMENTS
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CONCEPTUAL IMPROVEMENT PLAN  
FOR  
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GARDNERTOWN ROAD & CREEK RUN ROAD  
TOWN OF NEWBURGH  
ORANGE COUNTY  
NEW YORK

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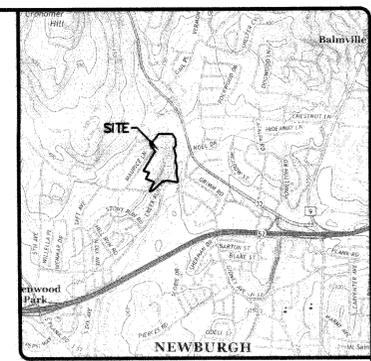
SCALE: AS SHOWN	DATE: 8/27/21	DRAWN BY: M.J.A.	CHECKED BY: P.J.G./A.P.R.
PROJECT NUMBER: 140003758	DRAWING NAME: R-PL02-EXBT-WZTC		

SHEET TITLE:  
WORK ZONE TRAFFIC CONTROL  
CREEK RUN ROAD SHORT TERM  
CLOSURE DETOUR PLAN

# SITE PLAN GARDNER RIDGE APARTMENTS

GARDNERTOWN ROAD  
TOWN OF NEWBURGH, ORANGE COUNTY, NY

JANUARY 28, 2016  
REVISED SEPTEMBER 2022



LOCATION MAP  
NEWBURGH QUADRANGLE  
SCALE: 1"=2000'

**DENSITY CALCULATIONS:**

TOTAL PARCEL AREA = 23.4± AC.  
LESS: WETLANDS, EASEMENTS/R.O.W.s = 7.4± AC.  
100'-OR FLOODPLAINS AND SLOPES 25% OR GREATER =  
USEABLE AREA = 16.0± AC.  
MULTIPLE FAMILY DWELLINGS MAXIMUM ALLOWABLE DENSITY= 6 DU/ACR.  
ALLOWABLE NUMBER OF UNITS= 96 DWELLING UNITS

DENSITY BONUS FOR PROJECTS CONSISTING OF SENIOR CITIZEN  
MULTIPLE DWELLING UNITS AND NON-SENIOR- CITIZEN MULTIPLE DWELLING UNITS:

MAXIMUM DENSITY= 9 DU/ACRE  
MAXIMUM ALLOWABLE UNITS= 144 UNITS  
BONUS UNITS = 144 UNITS - 96 UNITS = 48 UNITS  
SENIOR HOUSING UNITS REQUIRED = 48 UNITS/3 = 16 UNITS

TOTAL UNITS PROPOSED = 144 UNITS  
BONUS UNITS PROPOSED = 144 UNITS - 96 UNITS = 48 UNITS  
SENIOR HOUSING UNITS REQUIRED = 48 BONUS UNITS/3 = 16 UNITS  
NON-SENIOR APARTMENTS PROPOSED = 108 UNITS  
SENIOR HOUSING PROPOSED = 36 UNITS

**PARKING CALCULATIONS:**

108 NON-SENIOR APARTMENTS  
SPACES REQUIRED (2 SPACES/DU REQ.)= 216 SPACES

SPACES PROVIDED:  
GARAGES = 80 SPACES  
DRIVEWAY = 60 SPACES  
PARKING LOT SPACES = 101 SPACES

NON-SENIOR APARTMENTS: SPACES PROPOSED = 221 SPACES

36 SENIOR HOUSING APARTMENTS  
SPACES REQUIRED (2 SPACES/DU REQ.)= 72 SPACES

SPACES PROVIDED:  
PARKING LOT SPACES = 72 SPACES

CLUBHOUSE  
SPACES PROVIDED = 9 SPACES

TOTAL PARKING PROVIDED: 307 SPACES

ACCESSIBLE PARKING SPACES (NYS BUILDING CODE SECTION 1106):  
SPACES REQUIRED 301 - 400 SPACES = 8 SPACES

SPACES PROVIDED: 16 SPACES

PROVISIONS SHALL BE PLACED IN EACH LEASE AGREEMENT THAT REQUIRES EACH  
TENANT WITH A GARAGE TO MAINTAIN THAT GARAGE FOR THE PURPOSE OF PARKING  
A VEHICLE.

**SHEET INDEX**

SHEET NO.	DESCRIPTION
1	EXISTING CONDITIONS
2	OVERALL SITE PLAN
3	LAYOUT & DIMENSION PLAN
4	GRADING PLAN
5	ROCK REMOVAL PLAN
6	UTILITY PLAN
7	EROSION & SEDIMENT CONTROL PLAN
8	ROAD PROFILES
9	ROAD PROFILES
10	SANITARY SEWER PROFILES
11	SITE DETAILS
12	WATER DETAILS
13	SEWER DETAILS
14	DRAINAGE DETAILS
15	EROSION CONTROL DETAILS

**RECORD OWNER**

GARDNER RIDGE ASSOCIATES  
134 FAIRMW ROAD  
ROCKAWAY, NJ 07866

**CONSULTING ENGINEER**

THOMAS B. OLLEY, PE, PLLC  
152 ORANGE AVENUE  
WALDEN, NY 12586  
CONTACT: THOMAS B. OLLEY, PE  
(845) 778-5638

**SURVEYOR:**

MARTIN F. ANTHONISEN JR., PLS  
1422 LONG MEADOW ROAD,  
TUXEDO, NY

**NOTES:**

- SENIOR CITIZEN UNITS ARE LIMITED TO 1000 S.F. MAXIMUM IN ACCORDANCE WITH TOWN OF NEWBURGH ZONING CODE SECTION 185-46 (4).
- SENIOR CITIZEN UNITS SHALL BE DESIGNED AND CONSTRUCTED FOR THE NEEDS OF SENIORS AND IS SUBJECT TO THE MANAGEMENT OR OTHER LEGAL RESTRICTIONS THAT REQUIRE ALL UNITS DESIGNATED AS SENIOR CITIZEN HOUSING UNITS TO BE OCCUPIED BY PERSONS 55 YEARS OF AGE OR OLDER. NOTWITHSTANDING THE FOREGOING, ADULTS UNDER 55 YEARS OF AGE AND CHILDREN MAY RESIDE IN THE UNITS WHERE:
  - THE ADULT IS THE SPOUSE OF A PERSON 55 YEARS OF AGE OR OLDER.
  - THE ADULT'S PRESENCE IS ESSENTIAL FOR THE PHYSICAL CARE OF A PERSON 55 YEARS OF AGE OR OLDER.
  - THE MINOR CHILDREN ARE RESIDING WITH THEIR PARENT, PARENTS OR LEGAL GUARDIANS WHERE THEIR PARENT, PARENTS OR LEGAL GUARDIANS ARE 55 YEARS OF AGE OR OLDER, AND THE MINOR CHILDREN RESIDING THEREIN ARE UNDER A PHYSICAL OR OTHER DISABILITY AND CANNOT CARE FOR THEMSELVES.

REV.	DATE	BY	DESCRIPTION
5	9/9/22	TBO	CONSULTANT COMMENTS
4	6/21/21	TBO	CONSULTANT COMMENTS
3	6/21/21	MS	ENGINEERS COMMENTS
2	5/20/21	MS	ENGINEERS COMMENTS
1	3/15/16	MS	ENGINEERS COMMENTS



**THOMAS B. OLLEY, PE, PLLC.**  
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152 ORANGE AVENUE  
WALDEN, NY 12586  
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EXISTING CONDITIONS  
**GARDNER RIDGE  
GARDNERTOWN ROAD**  
TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO.  
**CS**  
DATE: JANUARY 28, 2016  
FILE NO.

**LEGEND**

- EXISTING CONTOURS
- EXISTING SITE BOUNDARY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING STONE WALL
- EXISTING TREE LINE
- EXISTING TREES AND/OR BUSHES
- EXISTING STREAM
- EXISTING BUILDINGS
- EXISTING UTILITY POLE
- EXISTING STREET SIGN
- EXISTING WATER MAIN
- EXISTING HYDRANT
- EXISTING WATER VALVE
- EXISTING CLEANOUT
- EXISTING CURB STOP
- EXISTING SEWER MAIN AND MANHOLE
- EXISTING PAVED ROAD/DRIVEWAY
- EXISTING GRAVEL ROAD/DRIVEWAY
- SOILS BOUNDARY
- EXISTING FEDERAL WETLANDS BOUNDARY
- 100 YR FLOODPLAIN BOUNDARY

**RECORD OWNER**  
 GARDNER RIDGE ASSOCIATES, LLC  
 134 FAIRVIEW RD  
 ROCKAWAY NJ, 08766

**ZONING INFORMATION:**  
 TAX LOT DATA: 75-1-4.12

TOTAL ACREAGE: 23.4 ACRES ±  
 ZONING DISTRICT: R-3

**NOTES:**

1. BOUNDARY SURVEY SHOWN HEREON IS FROM AN ACTUAL FIELD SURVEY PREPARED BY MARTIN F ANTHONSEN JR. ON DECEMBER 24, 2015.
2. THE TOPOGRAPHIC SURVEY SHOWN HEREON IS THE RESULT OF AN ACTUAL FIELD SURVEY PREPARED BY VINCENT DOCE ENGINEERING & SURVEYING IN APRIL 2003 AND SUPPLEMENTED WITH USGS 1 METER LIDAR (2014).
3. THE PROJECT SITE IS LOCATED WITHIN THE FOLLOWING DISTRICTS:  
 A. NEWBURGH SCHOOL DISTRICT.  
 B. CROMBIE FIRE DISTRICT.  
 C. CONSOLIDATED LIGHTING.  
 D. CONSOLIDATED WATER DISTRICT 1.  
 E. CONSOLIDATED WATER DISTRICT 2.
4. TOWN OF NEWBURGH SEWER AND WATER SERVICES ARE PROVIDED FOR THIS PROPERTY.

NO.	DATE	BY	DESCRIPTION
1	3/15/16	ENGINEERS	ENGINEERS COMMENTS
2	5/20/17	ENGINEERS	ENGINEERS COMMENTS
3	6/9/22	LAYOUT	LAYOUT REVISION
4	6/9/22	TBD	TBD



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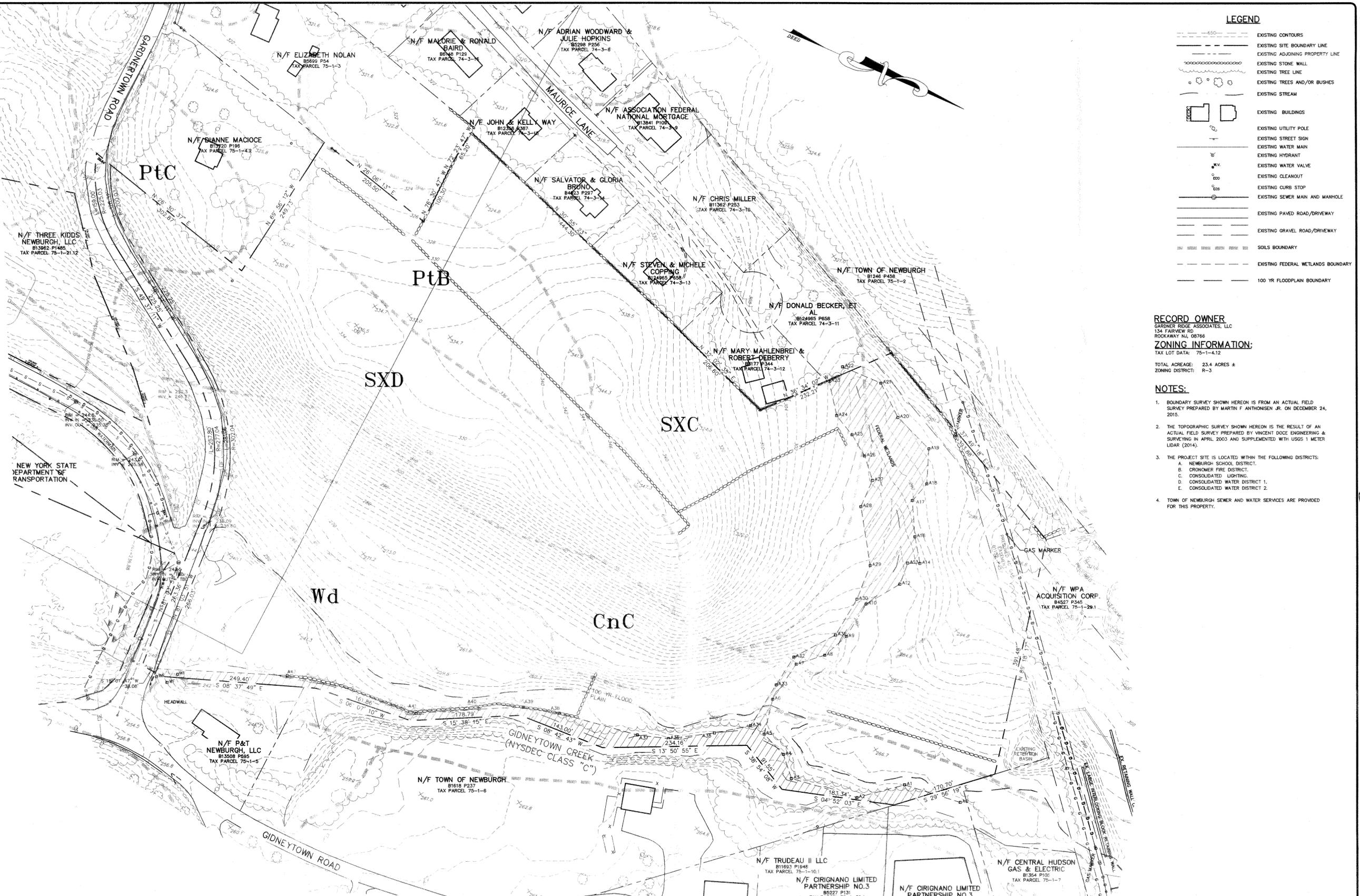
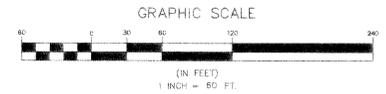
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EXISTING CONDITIONS  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**  
 TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO.  
**1 OF 15**  
 DATE: JANUARY 28, 2016  
 FILE NO.

**SOILS LEGEND**

SYMBOL	SOIL NAME	HYDROLOGIC GROUP
CnC	- CHENANGO GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES	A
ESB	- ERIE EXTREMELY STONY SOILS, GENTLY SLOPING	D
PtB	- PITTSFIELD GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES	B
PtC	- PITTSFIELD GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES	B
SxC	- SWARTSWOOD AND MARDIN SOILS, SLOPING, VERY STONY	C
SxD	- SWARTSWOOD AND MARDIN SOILS, MODERATELY STEEP, VERY STONY	C
Wd	- WATLAND SOILS COMPLEX, NONCALCAREOUS SUBSTRATUM, 0 TO 3 PERCENT SLOPES, FREQUENTLY FLOODED	C



**LEGEND**

- EXISTING SITE BOUNDARY LINE
- EXISTING ADJOINING PROPERTY LINE
- EXISTING STONE WALL
- EXISTING TREE LINE
- EXISTING TREES AND/OR BUSHES
- EXISTING STREAM
- EXISTING BUILDINGS
- EXISTING UTILITY POLE
- EXISTING STREET SIGN
- EXISTING WATER MAIN
- EXISTING HYDRANT
- EXISTING WATER VALVE
- EXISTING CLEANOUT
- EXISTING CURB STOP
- EXISTING SEWER MAIN AND MANHOLE
- EXISTING PAVED ROAD/DRIVEWAY
- PROPOSED FENCE
- PROPOSED GUIDE RAIL

**ZONING INFORMATION:**

TAX LOT DATA: SECTION 75, BLOCK 1, LOT 412  
 TOTAL ACREAGE: 23.3 ACRES  
 ZONING DISTRICT: R-3

**TABLE OF DIMENSIONAL REQUIREMENTS:**  
 R-3 - ZONE

	REQUIRED	PROVIDED
LOT SIZE	10.0 AC	24.3 AC
LOT WIDTH	300 FT.	550 FT.
FRONT YARD	50 FT.	185 FT.
REAR YARD	50 FT.	63 FT.
SIDE YARD (ONE SIDE)	60 FT.	63 FT.
BOTH SIDE YARDS	80 FT.	>100 FT.
MAX. LOT COVERAGE	60%	<50%
MAX. BUILDING HEIGHT	35 FT.	35 FT.

NO.	DATE	DESCRIPTION	BY
5	9/6/22	CONSULTANT COMMENTS	MS
4	6/6/22	LAYOUT REVISION	MS
3	6/7/17	ENGINEERS COMMENTS	MS
2	3/2/16	ENGINEERS COMMENTS	MS
1	3/2/16	ENGINEERS COMMENTS	MS

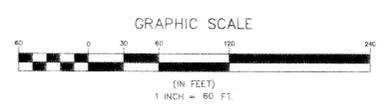
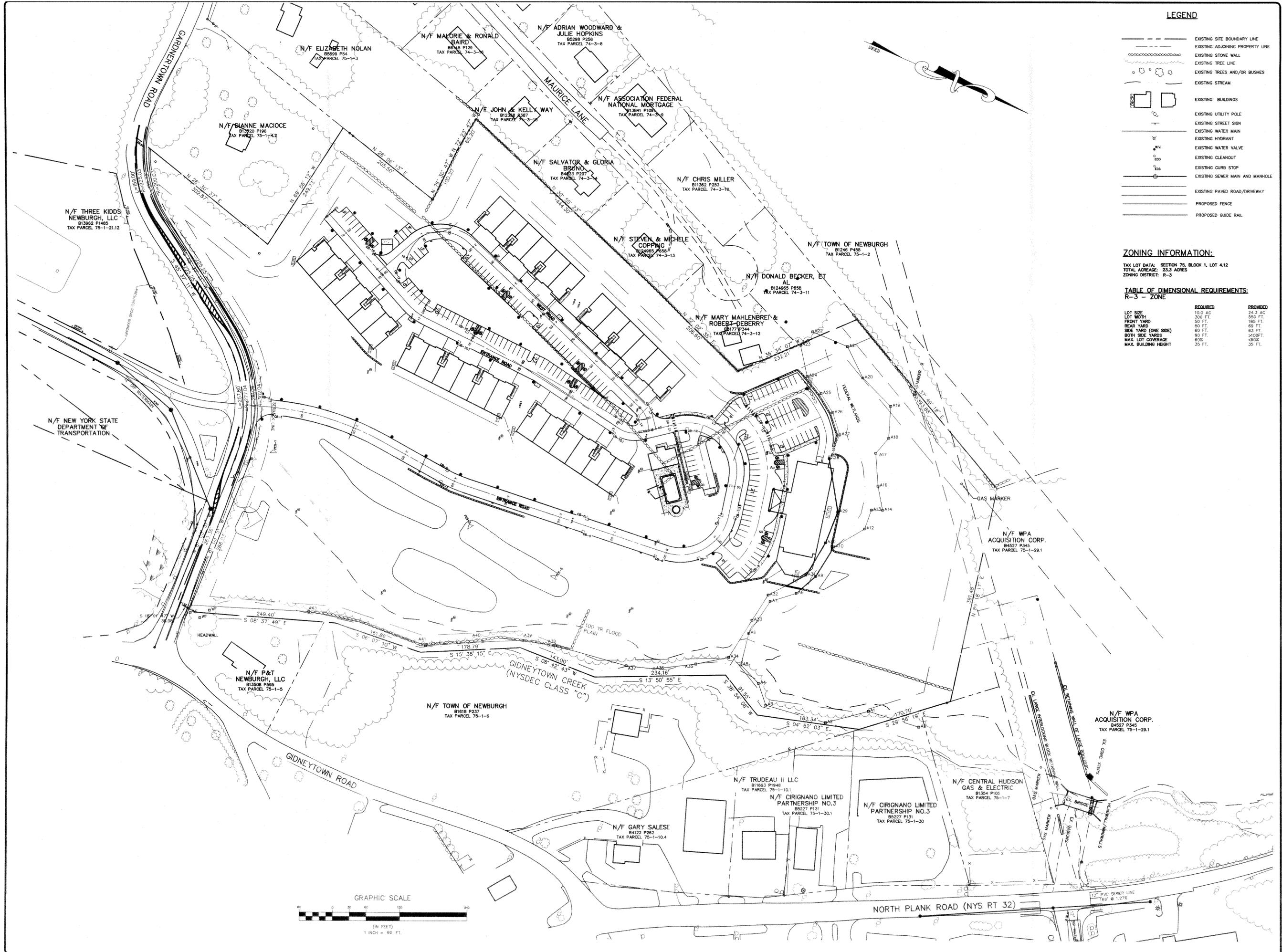


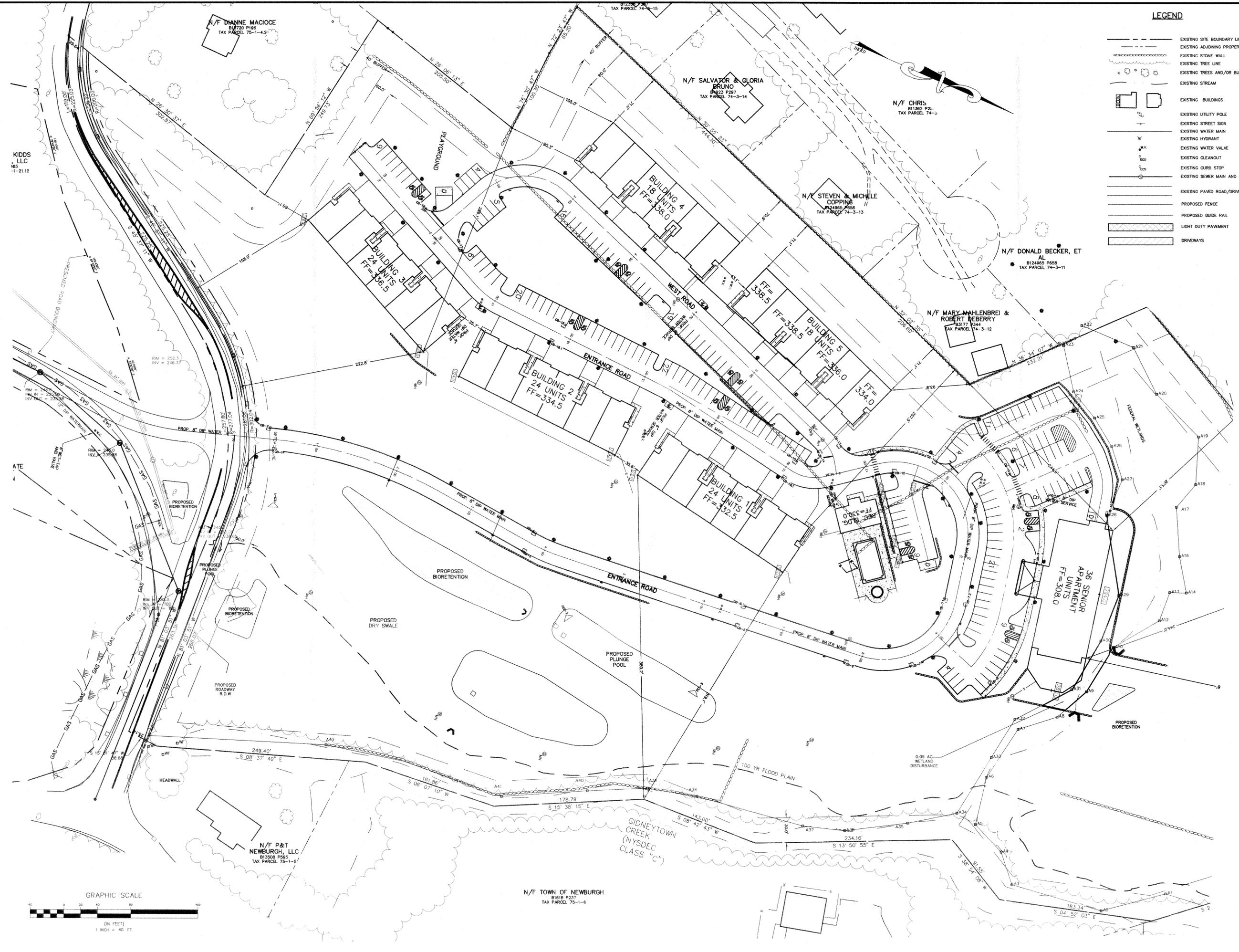
**THOMAS B. OLLEY, P.E., PLLC.**  
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OVERALL SITE PLAN  
**GARDNER RIDGE**  
 GARDNERTOWN ROAD  
 TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO.  
**2 OF 15**  
 DATE: JANUARY 28, 2016  
 FILE NO.





**LEGEND**

- EXISTING SITE BOUNDARY LINE
- - - EXISTING ADJOINING PROPERTY LINE
- EXISTING STONE WALL
- EXISTING TREE LINE
- EXISTING TREES AND/OR BUSHES
- EXISTING STREAM
- EXISTING BUILDINGS
- EXISTING UTILITY POLE
- EXISTING STREET SIGN
- EXISTING WATER MAIN
- EXISTING HYDRANT
- EXISTING WATER VALVE
- EXISTING CLEANOUT
- EXISTING CURB STOP
- EXISTING SEWER MAIN AND MANHOLE
- EXISTING PAVED ROAD/DRIVEWAY
- PROPOSED FENCE
- PROPOSED GUIDE RAIL
- LIGHT DUTY PAVEMENT
- DRIVEWAYS

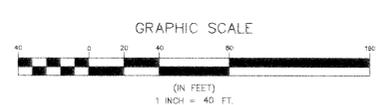
REV	DATE	DESCRIPTION
1	3/15/16	ENGINEERS COMMENTS
2	5/31/17	ENGINEERS COMMENTS
3	6/21/17	ENGINEERS COMMENTS
5	9/8/23	CONSULTANT COMMENTS
6	10/10/23	REVISIONS

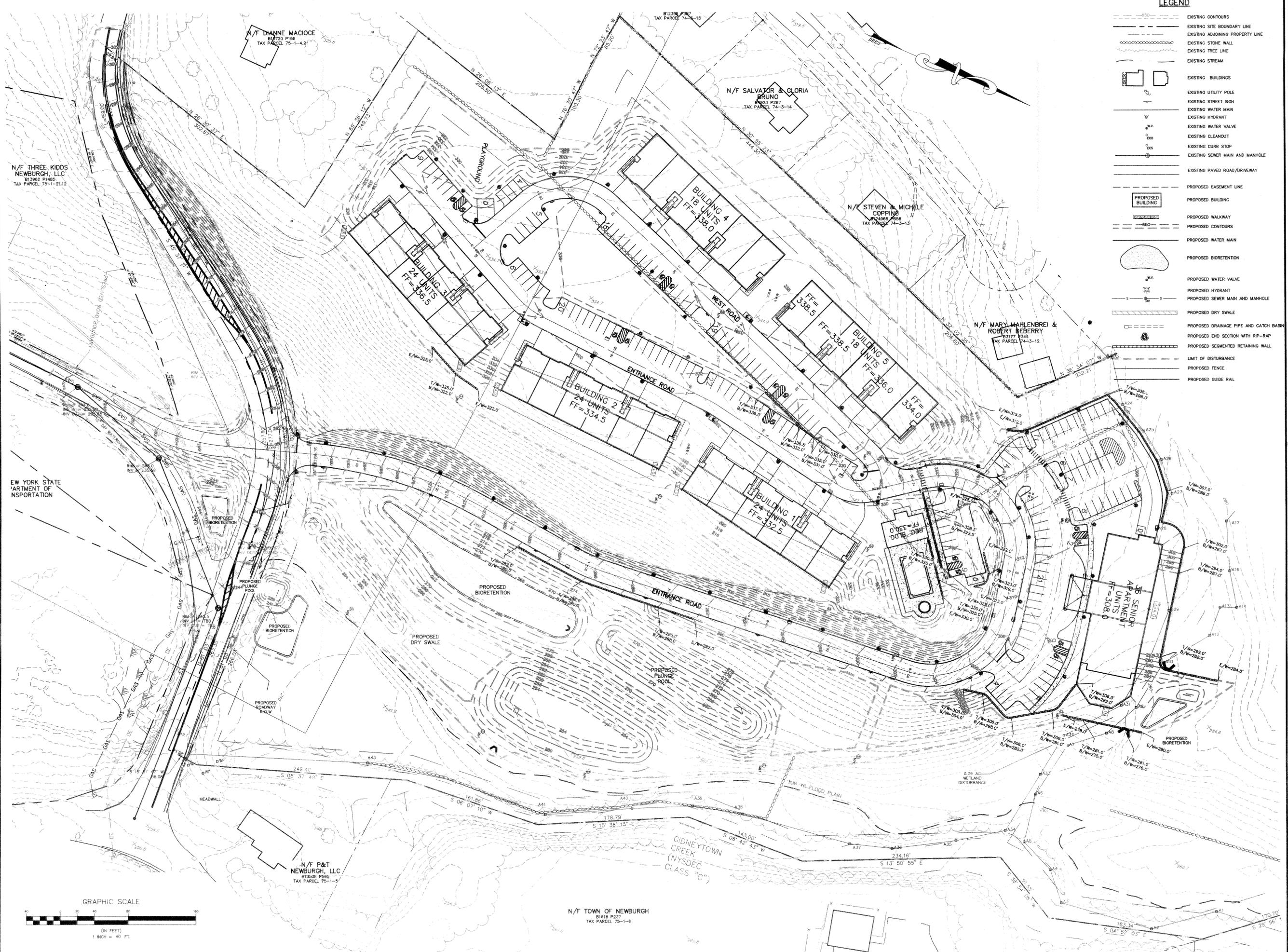


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LAYOUT & DIMENSION  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**  
 TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO.  
**3 OF 15**  
 DATE: JANUARY 28, 2016  
 FILE NO.





**LEGEND**

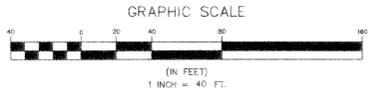
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- EXISTING PAVED ROAD/DRIVEWAY
- PROPOSED EASEMENT LINE
- PROPOSED BUILDING
- PROPOSED WALKWAY
- PROPOSED CONTOURS
- PROPOSED WATER MAIN
- PROPOSED BIORETENTION
- PROPOSED WATER VALVE
- PROPOSED HYDRANT
- PROPOSED SEWER MAIN AND MANHOLE
- PROPOSED DRY SWALE
- PROPOSED DRAINAGE PIPE AND CATCH BASIN
- PROPOSED END SECTION WITH RIP-RAP
- PROPOSED SEGMENTED RETAINING WALL
- LIMIT OF DISTURBANCE
- PROPOSED FENCE
- PROPOSED GUIDE RAIL

REV.	DATE	DESCRIPTION
1	3/15/16	ENGINEERS COMMENTS
2	3/15/16	ENGINEERS COMMENTS
3	5/21/17	ENGINEERS COMMENTS
4	6/6/22	LAYOUT REVISION
5	9/6/22	CONSULTANT COMMENTS



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GRADING PLAN  
**GARDNER RIDGE**  
 GARDNERTOWN ROAD  
 TOWN OF NEWBURGH, ORANGE COUNTY, NY



N/F TOWN OF NEWBURGH  
 B1618 P237  
 TAX PARCEL 75-1-6

N/F THREE KIDS  
 NEWBURGH, LLC  
 B13962 P1485  
 TAX PARCEL 75-1-2112

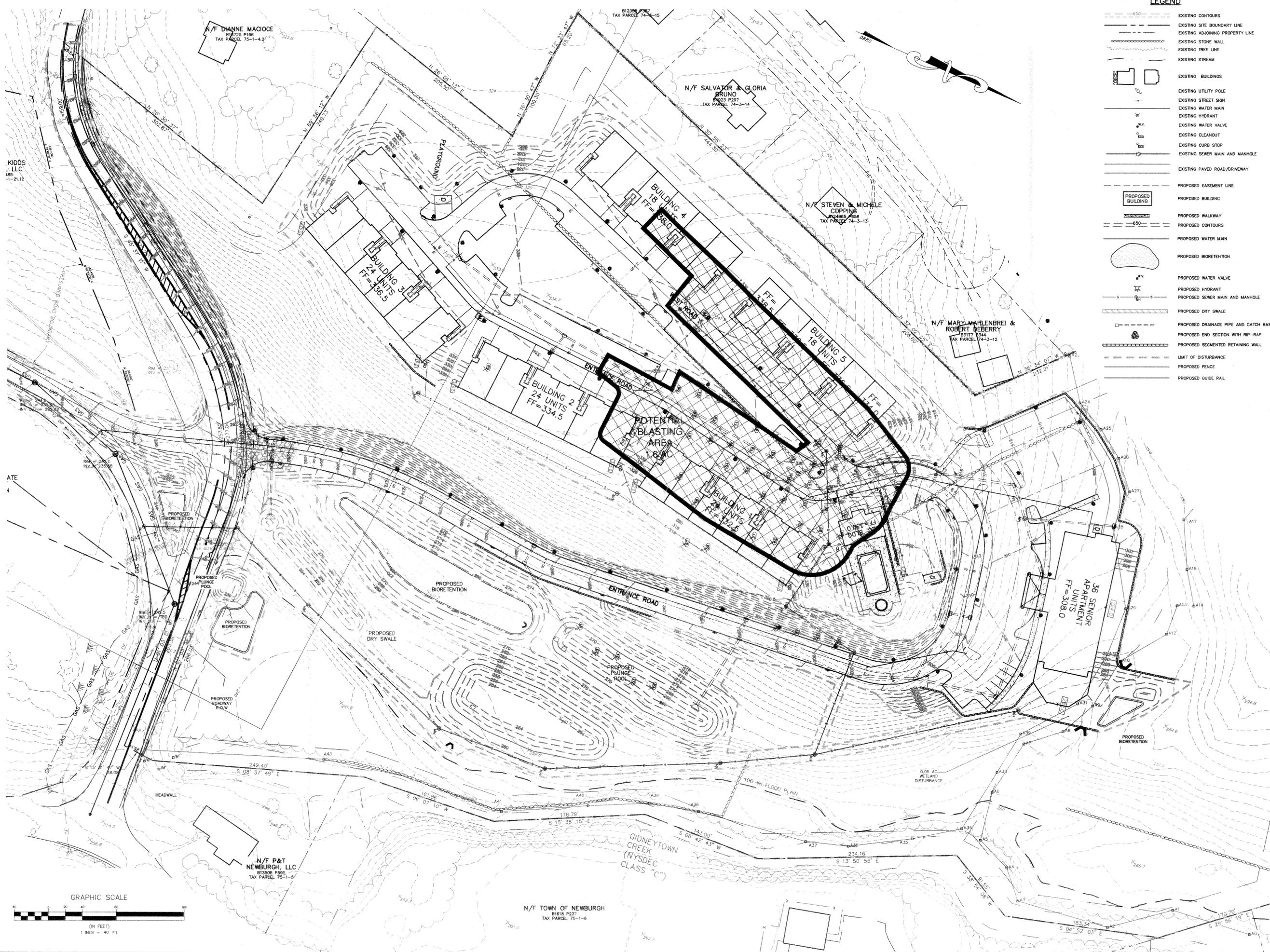
N/F DIANNE MACIOCE  
 B18720 P196  
 TAX PARCEL 75-1-42

N/F SALVATOR & GLORIA  
 BRUNO  
 B0223 P287  
 TAX PARCEL 74-3-14

N/F STEVEN & MICHELE  
 COPPING  
 P2485 P258  
 TAX PARCEL 74-3-13

N/F MARY MAHLENBREI &  
 ROBERT DEBERRY  
 B3177 P344  
 TAX PARCEL 74-3-12

N/F P&T  
 NEWBURGH, LLC  
 B13508 P595  
 TAX PARCEL 75-1-8



**LEGEND**

- EXISTING CONTOURS
- EXISTING SITE BOUNDARY LINE
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- PROPOSED DRY SWALE
- PROPOSED DRAINAGE PIPE AND CATCH BASIN
- PROPOSED END SECTION WITH RIP-RAP
- PROPOSED SEGMENTED RETAINING WALL
- LIMIT OF DISTURBANCE
- PROPOSED FENCE
- PROPOSED GUIDE RAIL

NO.	DATE	DESCRIPTION
1	9/15/22	CONSULTANT COMMENTS
2	9/15/22	LAYOUT REVISION
3	9/15/22	ENGINEERS COMMENTS
4	9/15/22	ENGINEERS COMMENTS
5	9/15/22	ENGINEERS COMMENTS

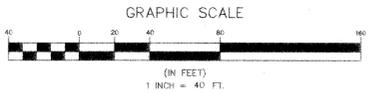


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ROCK REMOVAL PLAN  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**  
 TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO:  
**5 OF 15**  
 DATE: JANUARY 28, 2016  
 FILE NO.



N/F P&T  
 NEWBURGH, LLC  
 81306 P195  
 TAX PARCEL 75-1-8

N/F TOWN OF NEWBURGH  
 81818 P237  
 TAX PARCEL 75-1-6

0.09 AC  
 WETLAND  
 DISTURBANCE

GIDNEYTOWN  
 CREEK  
 (NYSDEC  
 CLASS "C")

106-YR FLOOD PLAIN

HEADWALL

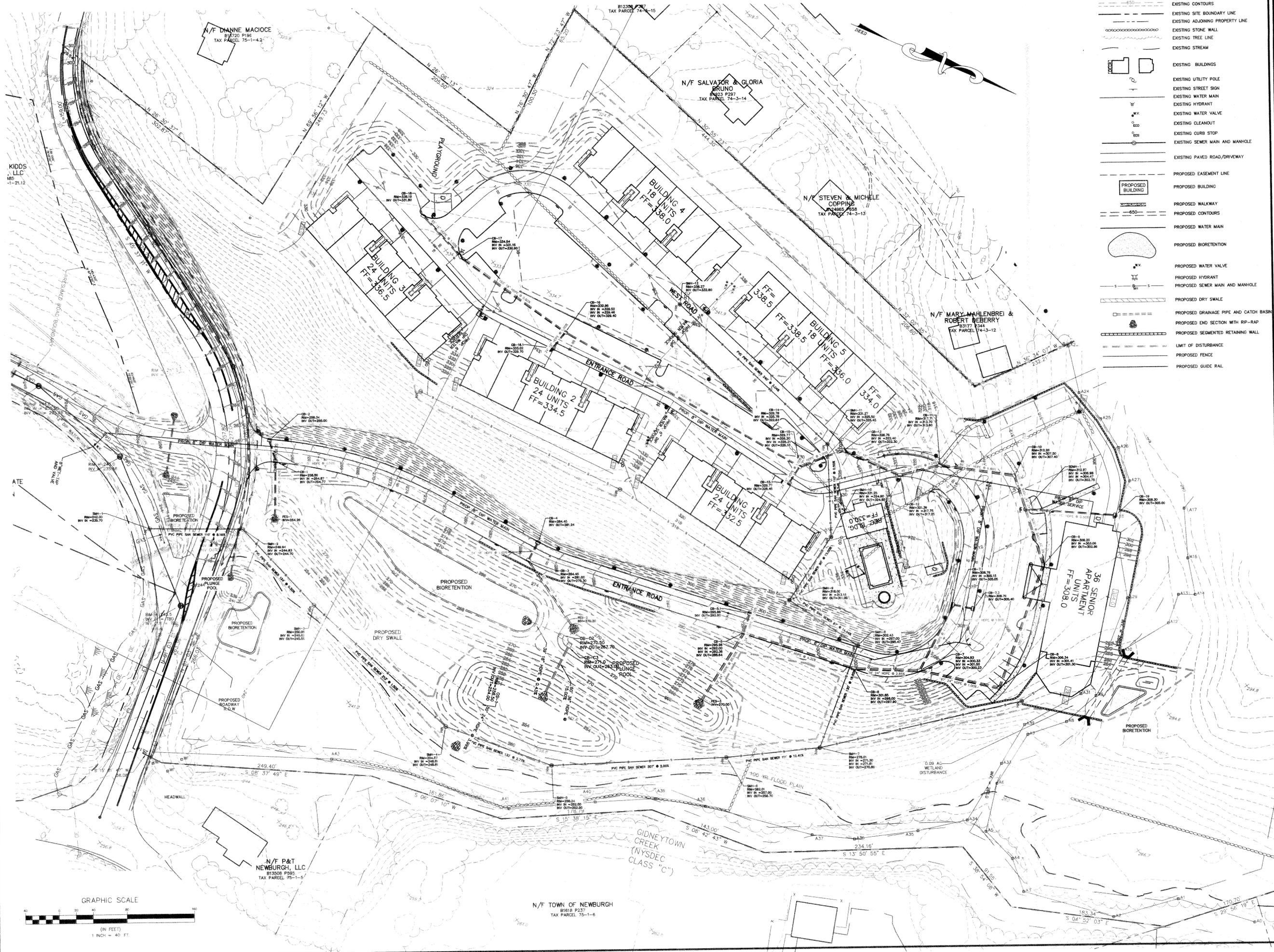
KIDDS  
 LLC  
 185  
 11-21-12

N/F DHANNE MACIOCE  
 81220 P196  
 TAX PARCEL 75-1-4,2

N/F SALVATOR & GLORIA  
 BRUNO  
 81923 P297  
 TAX PARCEL 74-3-14

N/F STEVEN & MICHELE  
 COPPING  
 81485 P698  
 TAX PARCEL 74-3-13

N/F MARY MAHLENBRI &  
 ROBERT DEBERRY  
 81317 P344  
 TAX PARCEL 74-3-12



**LEGEND**

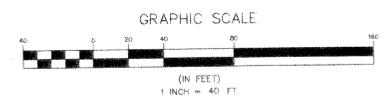
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- PROPOSED DRAINAGE PIPE AND CATCH BASIN
- PROPOSED END SECTION WITH RIP-RAP
- PROPOSED SEGMENTED RETAINING WALL
- LIMIT OF DISTURBANCE
- PROPOSED FENCE
- PROPOSED GUIDE RAIL

NO.	DATE	BY	DESCRIPTION
1	5/1/12	THB	CONCEPT PLAN
2	6/1/12	THB	LAYOUT REVISION
3	6/27/12	THB	ENGINEERS COMMENTS
4	7/2/12	THB	ENGINEERS COMMENTS
5	7/2/12	THB	ENGINEERS COMMENTS

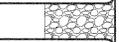


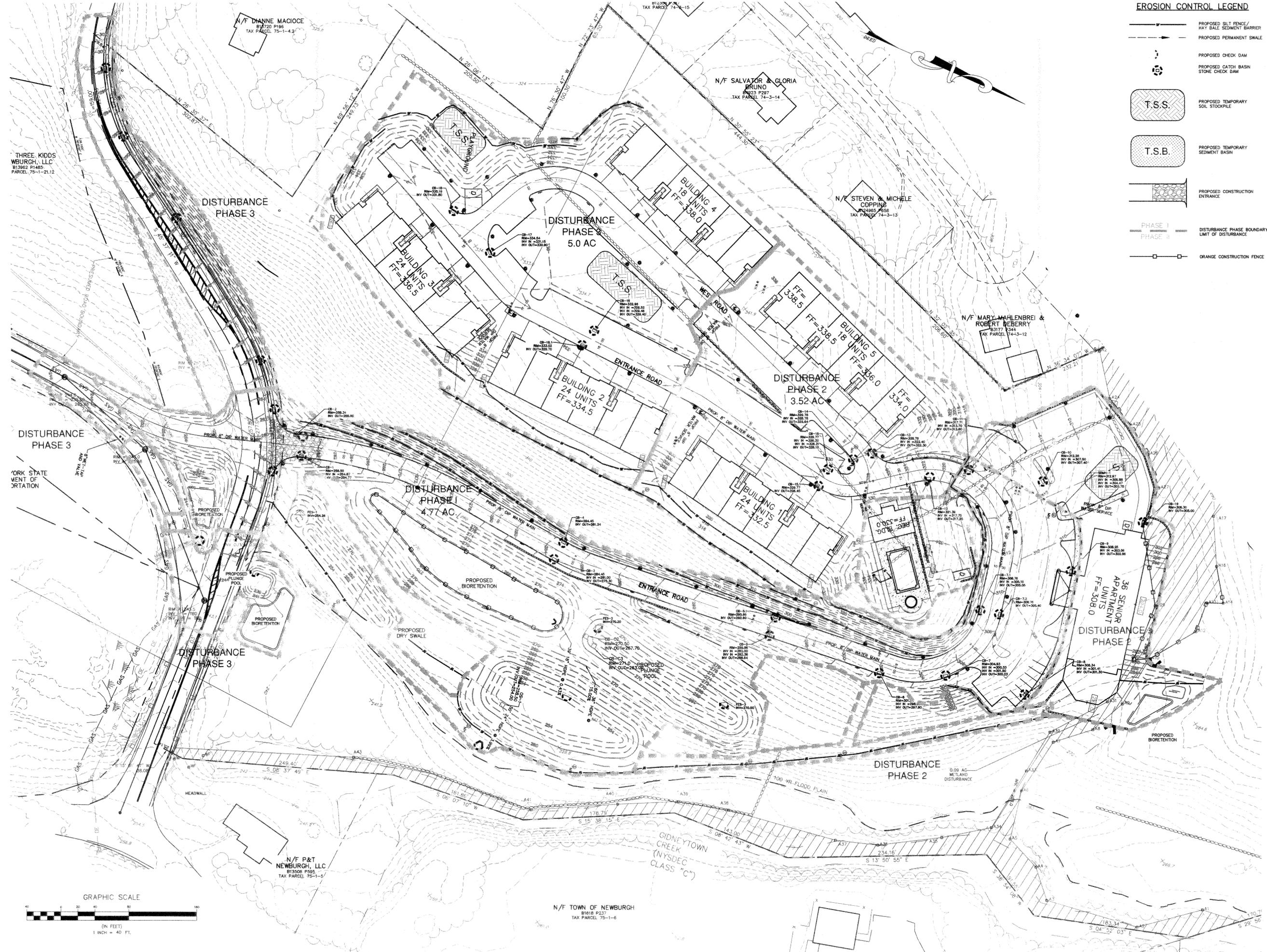
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UTILITY PLAN  
**GARDNER RIDGE  
 GARDNERTOWN ROAD**  
 TOWN OF NEWBURGH, ORANGE COUNTY, NY



**EROSION CONTROL LEGEND**

-  PROPOSED SILT FENCE/  
HAY BALE SEDIMENT BARRIER
-  PROPOSED PERMANENT SWALE
-  PROPOSED CHECK DAM
-  PROPOSED CATCH BASIN  
STONE CHECK DAM
-  PROPOSED TEMPORARY  
SOIL STOCKPILE
-  PROPOSED TEMPORARY  
SEDIMENT BASIN
-  PROPOSED CONSTRUCTION  
ENTRANCE
-  PHASE I  
PHASE II DISTURBANCE PHASE BOUNDARY/  
LIMIT OF DISTURBANCE
-  ORANGE CONSTRUCTION FENCE



NO.	DATE	BY	DESCRIPTION
1	9/6/22	CONSULTANT COMMENTS	
2	9/6/22	LAYOUT REVISION	
3	6/21/17	ENGINEERS COMMENTS	
4	5/15/16	ENGINEERS COMMENTS	
5	5/15/16	ENGINEERS COMMENTS	

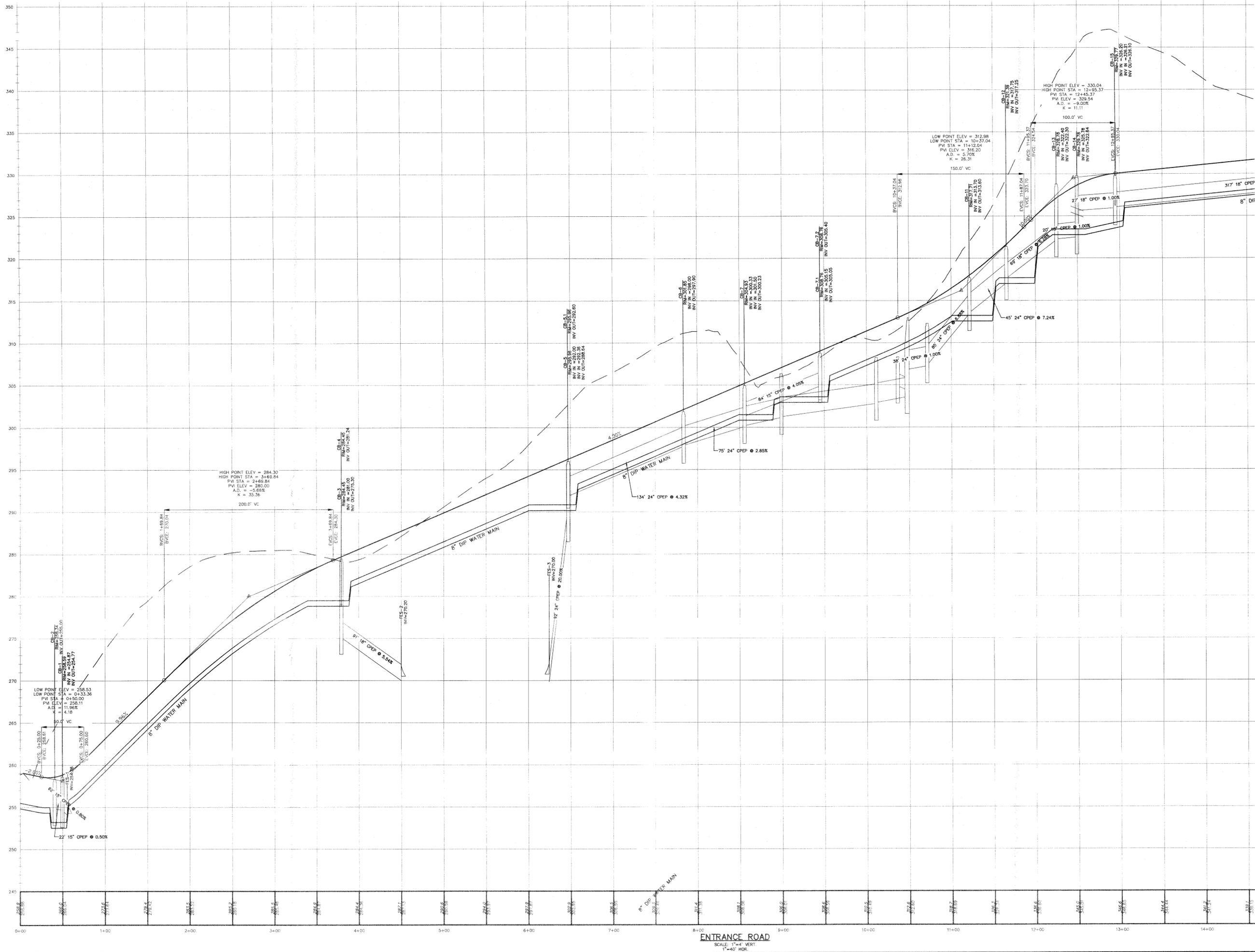


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VALHALLA, NY 10988  
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EROSION & SEDIMENT CONTROL PLAN  
**GARDNER RIDGE**  
GARDNERTOWN ROAD  
TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO.  
**7 OF 15**  
DATE: JANUARY 28, 2016  
FILE NO.



ENTRANCE ROAD  
SCALE: 1" = 40' HORIZ.

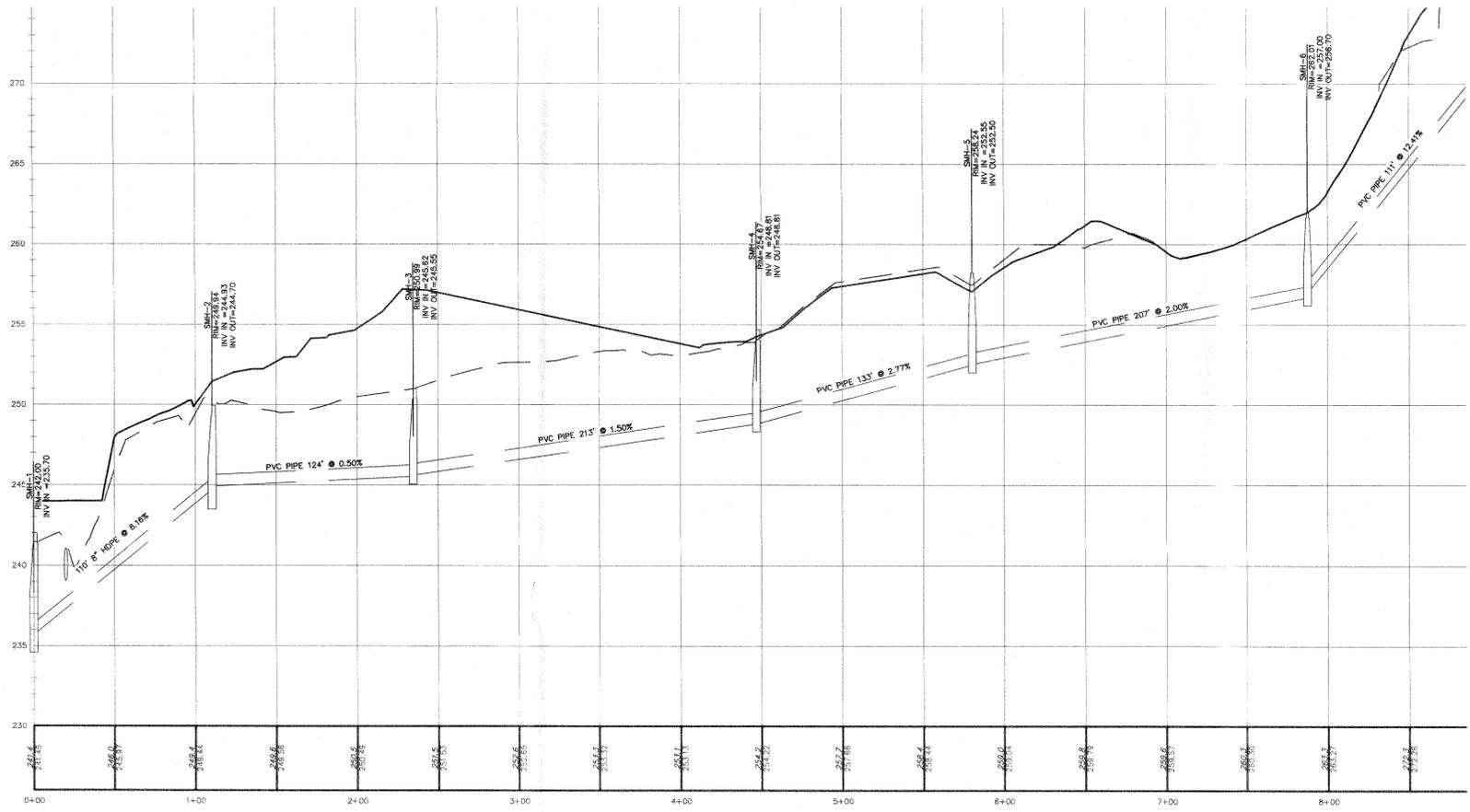
REV.	DATE	DESCRIPTION
1	3/15/16	ENGINEERS COMMENTS
2		
3	6/21/17	ENGINEERS COMMENTS
4	6/6/22	LAYOUT REVISION
5	9/6/22	CONSULTANT COMMENTS



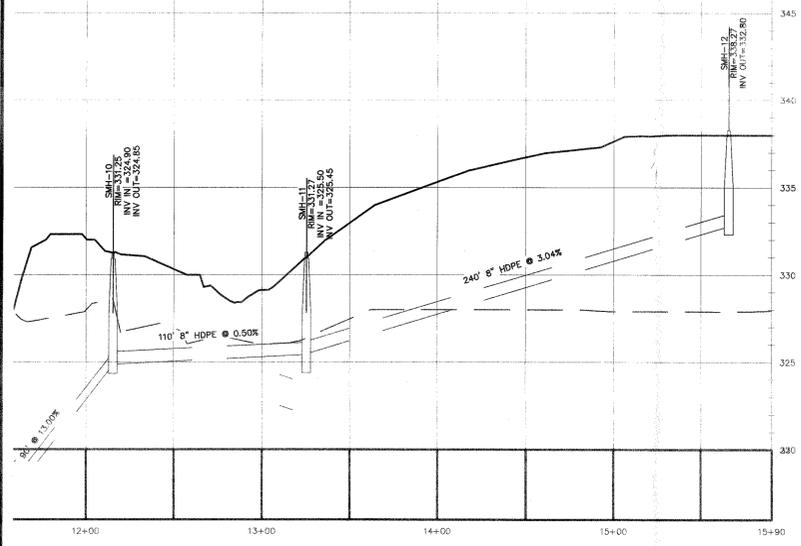
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ENGINEERS AND PLANNERS  
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WALDEN, NY 12586  
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ROAD PROFILES  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**  
TOWN OF NEWBURGH, ORANGE COUNTY, NY

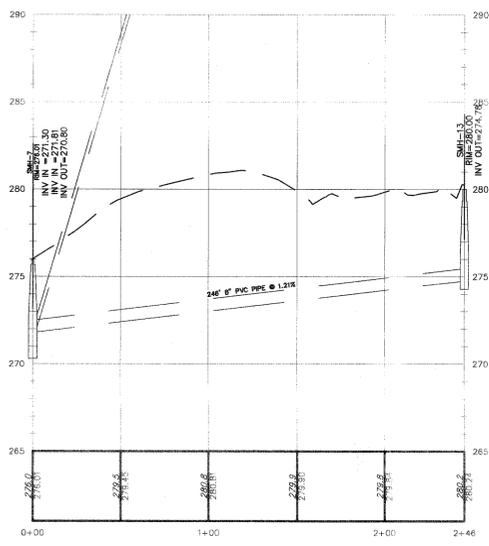




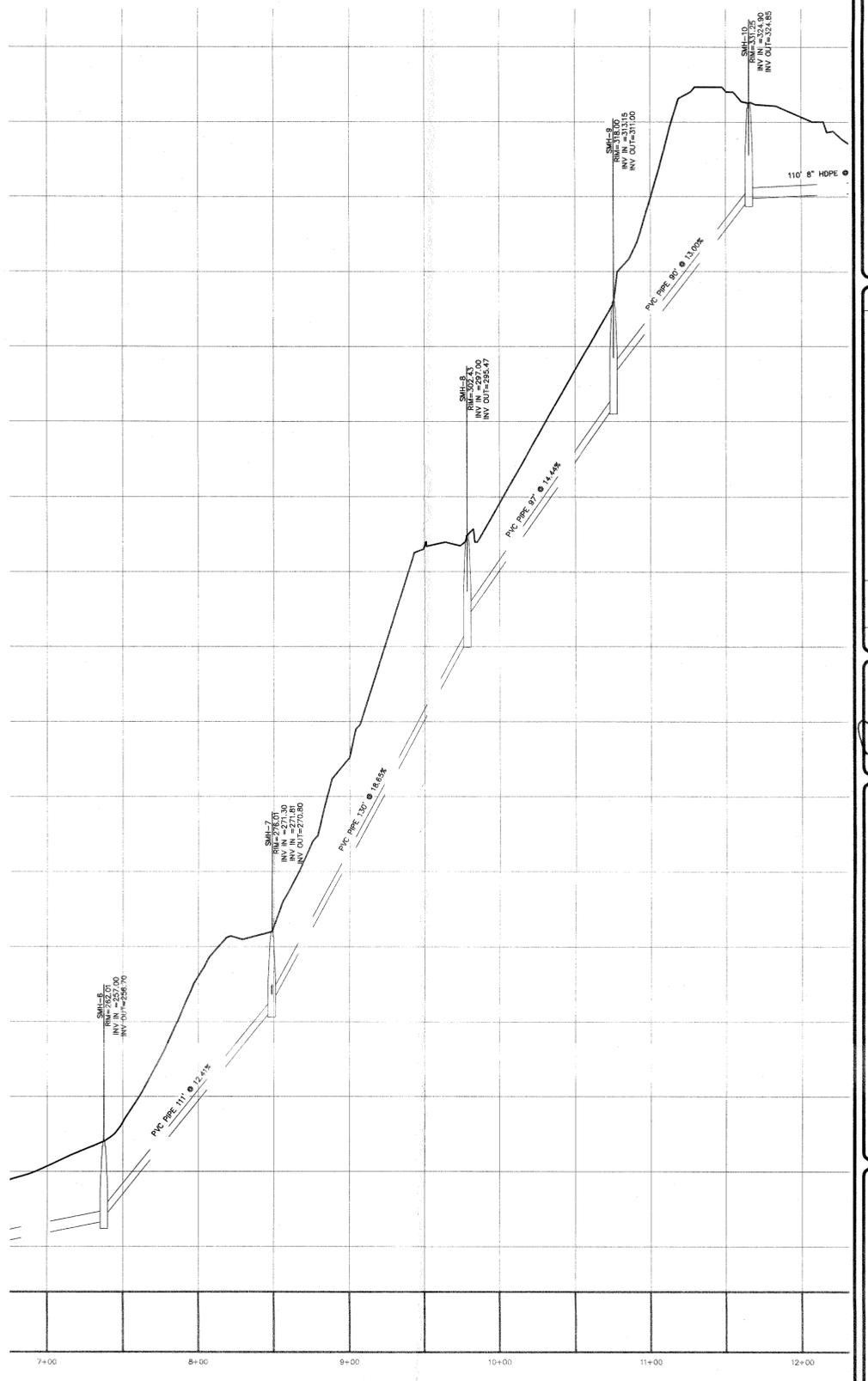
**SANITARY SEWER PROFILE**  
SCALE: 1"=4' VERT.  
1"=40' HOR.



**SANITARY SEWER PROFILE**  
SCALE: 1"=4' VERT.  
1"=40' HOR.



**SANITARY SEWER PROFILE**  
SCALE: 1"=4' VERT.  
1"=40' HOR.



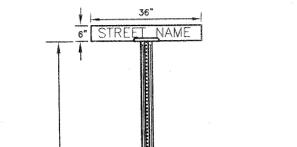
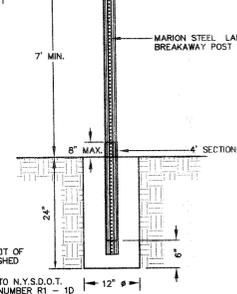
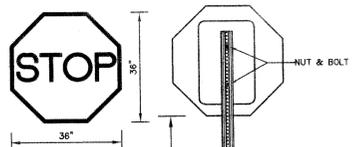
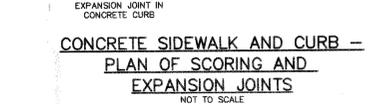
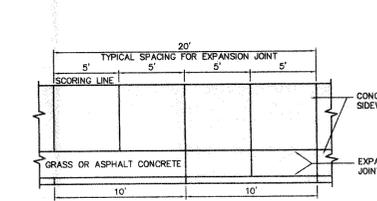
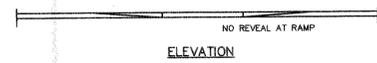
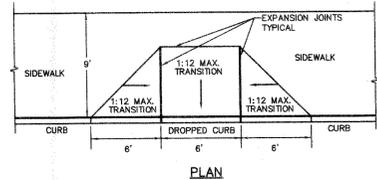
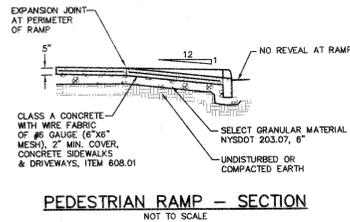
**SANITARY SEWER PROFILE**  
SCALE: 1"=4' VERT.  
1"=40' HOR.

REV.	DATE	ENGINEERS COMMENTS	BY
5	6/6/22	CONSULTANT COMMENTS	TBO
4	6/6/22	LAYOUT REVISION	TBO
3	6/21/17	ENGINEERS COMMENTS	MS
2	5/30/17	ENGINEERS COMMENTS	MS
1	5/30/17	ENGINEERS COMMENTS	MS



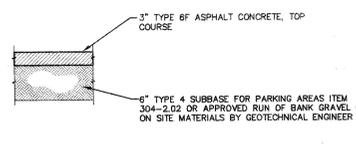
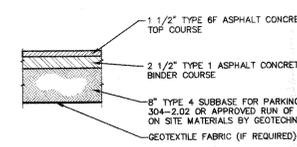
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ROAD PROFILES  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**  
TOWN OF NEWBURGH, ORANGE COUNTY, NY



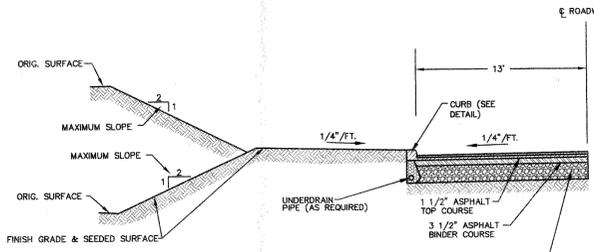
**STREET SIGN INSTALLATION DETAIL**  
NOT TO SCALE

**STREET SIGN INSTALLATION DETAIL**  
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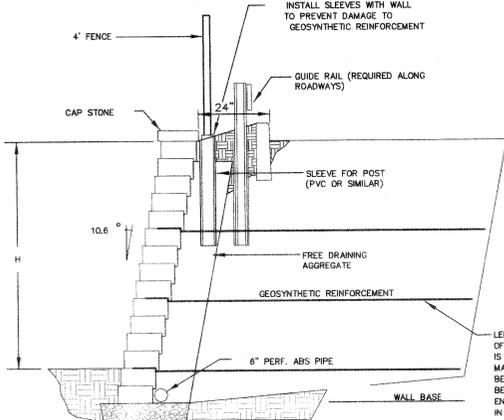


**LIGHT DUTY PAVEMENT**  
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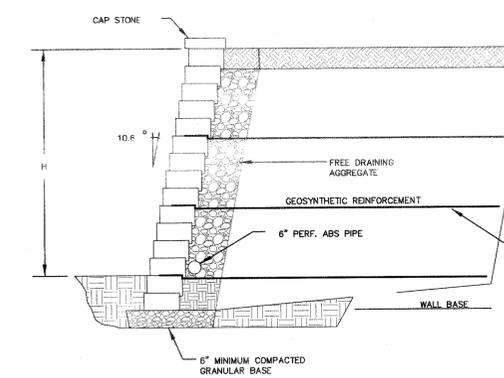
**DRIVEWAY PAVEMENT**  
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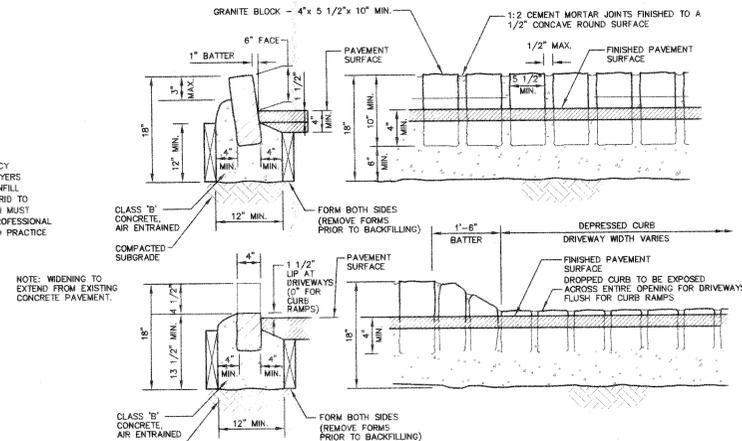
**TYPICAL ROAD CROSS SECTION**  
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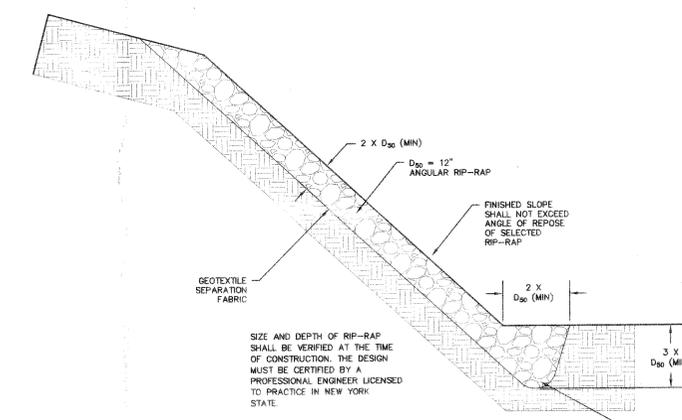
**SEGMENTAL RETAINING WALL WITH GUIDE RAIL & FENCE**  
NOT TO SCALE



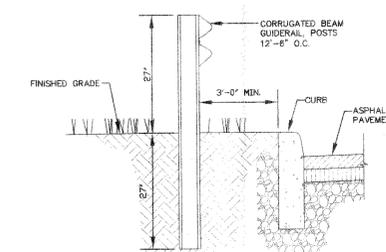
**SEGMENTAL RETAINING WALL**  
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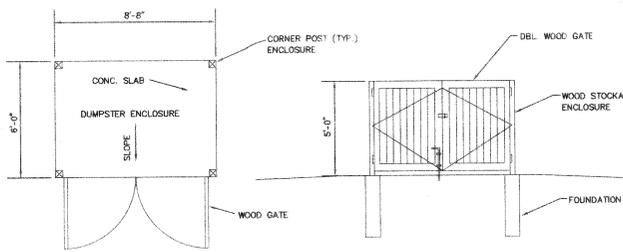
**BELGIUM BLOCK CURB**  
NOT TO SCALE



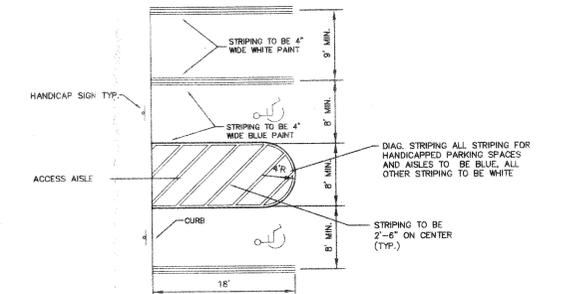
**RIP-RAP STABILIZED SLOPE**  
NOT TO SCALE



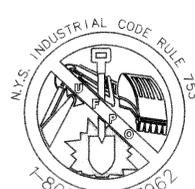
**GUIDE RAIL**  
NOT TO SCALE



**DETAIL OF DUMPSTER ENCLOSURE**  
NOT TO SCALE



**PARKING SPACE MARKING DETAIL**  
SCALE=NONE



CALL BEFORE YOU DIG, DRILL OR BLAST  
NO LESS THAN TWO WORKING DAYS NOTICE  
**IT'S THE LAW!**

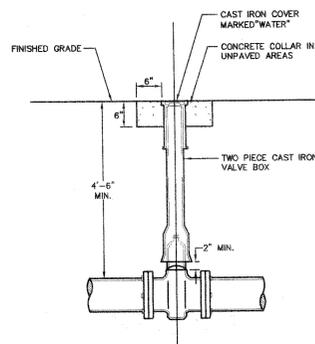
REV.	DATE	DESCRIPTION
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2	5/20/17	ENGINEERS COMMENTS
3	5/20/17	ENGINEERS COMMENTS
4	5/9/22	LAYOUT REVISION
5	9/9/22	CONSULTANT COMMENTS



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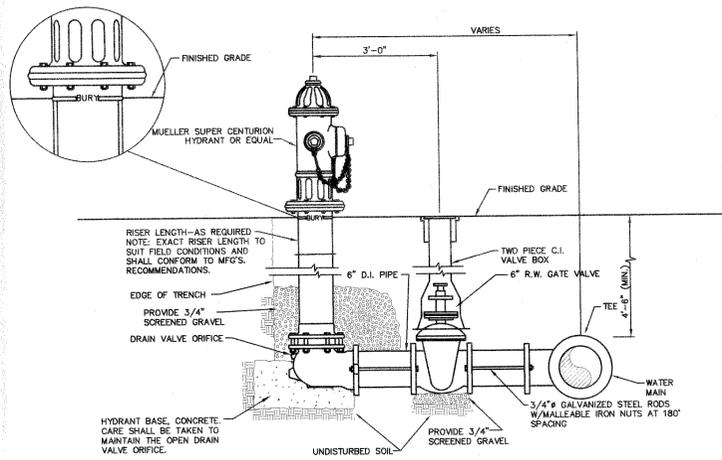
STATE OF NEW YORK  
I, THOMAS B. OLLEY, PE, No. 0644, do hereby certify that I am a duly Licensed Professional Engineer in the State of New York, and that I am the author of the design and drawings herein.

SITE DETAILS  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**  
TOWN OF NEWBURGH, ORANGE COUNTY, NY

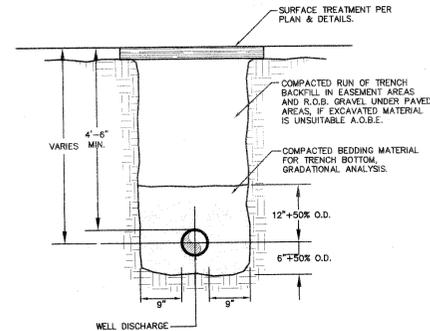


- NOTES:**
- NON-RISING STEM RESILIENT WEDGE GATE VALVE, OPERATING DIRECTION AND MODEL TO CONFORM WITH WATER DEPARTMENT STANDARDS.
  - IF VALVE IS TO BE RODDED, PROVIDE VALVE WITH RODDING FLANGES OR EYEBOLTS. (2) 3/4" GALVANIZED STEEL RODS WITH MALLEABLE IRON NUTS AT 180" SPACING SHALL BE USED FOR RODDING VALVES.

**GATE VALVE DETAIL**  
NOT TO SCALE

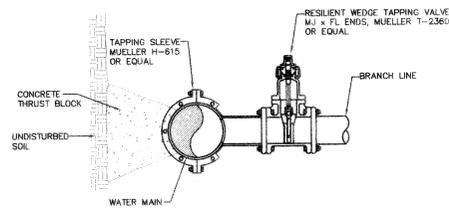


**HYDRANT DETAIL**  
NOT TO SCALE

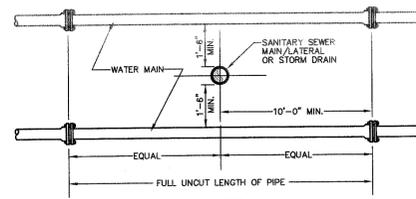


- NOTES:**
- PIPE BEDDING SHALL BE A NATURAL RUN-OF-BANK (R.O.B.) SAND GRADED FROM FINE TO COARSE PARTICLES, OR A GRADED MIXTURE OF CRUSHED STONE OR CRUSHED GRAVEL, BEDDING MATERIAL OR STONE GRADATIONS USED SHALL BE APPROVED BY THE ENGINEER.
  - INSTALL CONTINUOUS DETECTABLE MARKING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND WATER SERVICE PIPING. LOCATE TAPE 12" BELOW FINISHED GRADE, DIRECTLY OVER PIPING.
  - THE PROPOSED WATERMAINS SHALL BE INSTALLED WITH A MINIMUM COVER OF 4.5 FEET AND SHALL BE CEMENT LINED DUCTILE IRON, CLASS 52.
  - SHEETING SHALL BE IMPLEMENTED IN ACCORDANCE WITH O.S.H.A. STANDARDS.

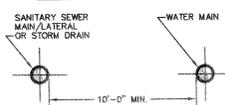
**WATER PIPE TRENCH DETAIL**  
NOT TO SCALE



**WET TAP DETAIL**  
NOT TO SCALE



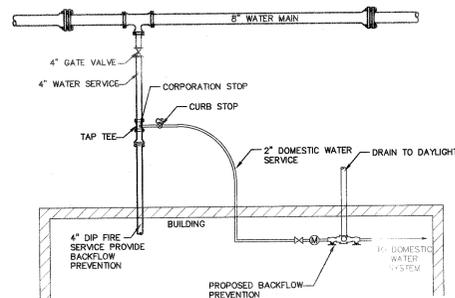
**VERTICAL SEPARATION**



**HORIZONTAL SEPARATION**

- NOTE:**
- NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DEPARTMENT OF HEALTH.

**SANITARY/STORM SEWER-WATER MAIN SEPARATION DETAIL**  
NOT TO SCALE



**NOTE:**

- SERVICE LINE SHALL HAVE NO JOINTS BETWEEN THE WATER MAIN AND BUILDING.
- CORPORATION STOP SHALL BE MANUFACTURED BY MUELLER CO. OF EQUAL.
- BACKFLOW PREVENTION IS NEEDED ON WATER SERVICES CONNECTIONS AND SHOULD BE APPROVED WITH THE ORANGE COUNTY DEPARTMENT OF HEALTH AND THE TOWN OF NEWBURGH WATER DEPARTMENT.

**WATER SERVICE CONNECTION DETAIL**  
NOT TO SCALE

**SCHEDULE OF JOINT RESTRAINT**  
DUCTILE IRON PIPE (DIP)  
(NO. OF PIPE LENGTHS = 18' LENGTH)

PIPE SIZE (INCHES)	FITTING				
	90°	45°	22 1/2°	TEE	INLINE VALVE (SEE NOTE 3)
12"	2	1	1	4	4
10"	2	1	1	4	4
8"	2	1	1	3	3
6"	1	1	1	2	2

**NOTE:**

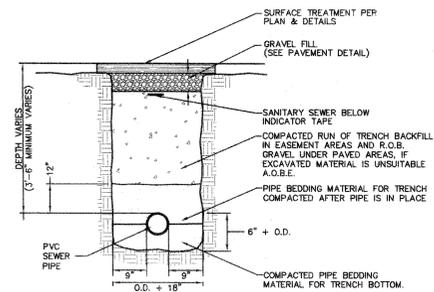
- LENGTH OF PIPE TO BE RESTRAINED IS LENGTH FOR EACH SIDE OF THE FITTING, I.E. FOR A 6" PIPE A 90° BEND SHALL BE RESTRAINED 2 LENGTHS ON EACH SIDE OF THE BEND.
- JOINTS ARE TO BE RESTRAINED TYPE USING RESTRAINED GLANDS OR THE RODS, IN ACCORDANCE WITH THE LENGTHS SHOWN IN THE TABLE ABOVE.
- DEAD ENDS MUST BE FULLY BACKFILLED BEFORE PRESSURE TESTING AND MUST HAVE BLOCKING (CONCRETE BLOCK) TO UNDISTURBED TRENCH WALL.
- THIS TABLE IS FOR COMPACTED R.O.B. GRAVEL PIPE BEDDING BELOW THE PIPE TO ONE FOOT ABOVE THE PIPE (AWWA TYPE 4 OR 5 LAYING CONDITIONS).

**TOWN OF NEWBURGH WATER SYSTEM NOTES**

- "CONSTRUCTION OF POTABLE WATER UTILITIES AND CONNECTION TO THE TOWN OF NEWBURGH WATER SYSTEM REQUIRES A PERMIT FROM THE TOWN OF NEWBURGH WATER DEPARTMENT. ALL REQUIREMENTS SHALL CONFORM TO THE REQUIREMENTS OF THE HYDRO AND THE TOWN OF NEWBURGH."
- ALL WATER SERVICE LINES FOUR (4) INCHES AND LARGER IN DIAMETER SHALL BE CEMENT CLASS 52 DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51-91 FOR DUCTILE IRON PIPE. JOINTS SHALL BE EITHER PUSH-ON OR MECHANICAL JOINT AS REQUIRED.
- THRUST RESTRAINT OF THE PIPE SHALL BE THROUGH THE USE OF JOINT RESTRAINT. THRUST BLOCKS ARE NOT ACCEPTABLE. JOINT RESTRAINT SHALL BE THROUGH THE USE OF MECHANICAL JOINT PIPE WITH RETAINER GLANDS. ALL FITTINGS AND VALVES SHALL ALSO BE INSTALLED WITH RETAINER GLANDS FOR JOINT RESTRAINT. RETAINER GLANDS SHALL BE EBBA IRON MEGALUG SERIES 1100 OR APPROVED EQUAL. THE USE OF A MANUFACTURED RESTRAINED JOINT PIPE IS ACCEPTABLE WITH PRIOR APPROVAL OF THE WATER DEPARTMENT.
- ALL FITTINGS SHALL BE CAST IRON OR DUCTILE IRON, MECHANICAL JOINT, CLASS 250 AND CONFORM TO ANSI/AWWA C110/A21.10-87 FOR DUCTILE AND GRAY IRON FITTINGS OR ANSI/AWWA C153/A21.53-94 FOR DUCTILE IRON COMPACT FITTINGS.
- ALL VALVES 4 TO 12 INCHES SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO ANSI/AWWA C509 SUCH AS MUELLER MODEL A-2360-23 OR APPROVED EQUAL. ALL GATE VALVES SHALL OPEN LEFT (COUNTERCLOCKWISE).
- TAPPING SLEEVES SHALL BE MECHANICAL JOINT SUCH AS MUELLER H-615 OR EQUAL. TAPPING VALVES 4 TO 12 INCHES SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO ANSI/AWWA C509 SUCH AS MUELLER MODEL T-2360-16 OR APPROVED EQUAL. ALL TAPPING SLEEVES AND VALVES SHALL BE TESTED TO 150 PSI MINIMUM. TESTING OF THE TAPPING SLEEVE AND VALVE MUST BE WITNESSED AND ACCEPTED BY THE TOWN OF NEWBURGH WATER DEPARTMENT PRIOR TO CUTTING PIPE.
- ALL WATER SERVICE LINES TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING. CORPORATION STOPS SHALL BE MUELLER H-15020 FOR 3/4 AND 1 INCH, MUELLER H-15000 OR B-25000 FOR 1 1/2 AND 2 INCH SIZES. CURB VALVES SHALL BE MUELLER H-1501-2 FOR 3/4 AND 1 INCH AND MUELLER B-25204 FOR 1 1/2 AND 2 INCH SIZES. CURB BOXES SHALL BE MUELLER H-10312 FOR 3/4 AND 1 INCH AND MUELLER H-10310 FOR 1 1/2 AND 2 INCH SIZES.
- HYDRANTS SHALL BE GLOW-EDDY F 2640 MEETING THE FOLLOWING REQUIREMENTS:  
A.) ONE 4-1/2 INCH FLUMPER NOZZLES;  
B.) TWO 2-1/2 INCH HOSE NOZZLES;  
C.) NOZZLE THREADS SHALL BE NPT;  
D.) OPEN LEFT (COUNTER-CLOCKWISE);  
E.) 6 INCH INLET WITH 5-1/4 INCH MAIN VALVE;  
F.) PAINTED EQUIPMENT YELLOW AND  
G.) 1-1/2 INCH PENTAGON OPERATING NUTS.
- ALL PIPE INSTALLATION SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF NEWBURGH WATER DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AS REQUIRED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT.
- THE WATER MAIN SHALL BE TESTED, DISINFECTED AND FLUSHED IN ACCORDANCE WITH THE TOWN OF NEWBURGH REQUIREMENTS. ALL TESTING, DISINFECTING AND FLUSHING SHALL BE COORDINATED WITH THE TOWN OF NEWBURGH WATER DEPARTMENT. PRIOR TO PUTTING THE WATER MAIN IN SERVICE, SATISFACTORY SANITARY RESULTS FROM A CERTIFIED LAB MUST BE SUBMITTED TO THE TOWN OF NEWBURGH WATER DEPARTMENT. THE TEST SAMPLES MUST BE COLLECTED BY A REPRESENTATIVE OF THE TESTING LABORATORY AND WITNESSED BY THE TOWN OF NEWBURGH WATER DEPARTMENT.

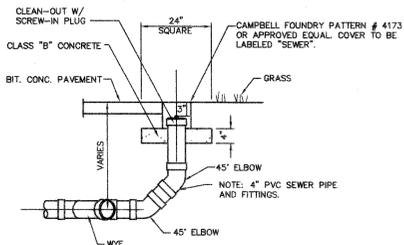
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FAX: (909) 778-8337

**WATER DETAILS**  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**

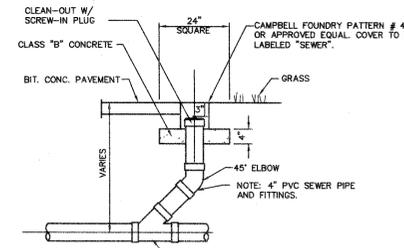


- NOTES:**
- PIPE BEDDING MATERIAL SHALL BE COMPOSED OF CRUSHED STONE OR GRAVEL FREE OF SOFT NONDURABLE PARTICLES, ORGANIC MATERIALS AND THIN OR ELONGATED PARTICLES WITH THE FOLLOWING GRADATION REQUIREMENTS:
- | SIET DESIGNATION | % PASSING |
|------------------|-----------|
| 2"               | 100       |
| 1"               | 95 - 100  |
| 1/4"             | 0 - 15    |
| No. 40           | 0 - 5     |
- BEDDING MATERIAL SHALL BE STOCKPILED.
  - INSTALL CONTINUOUS PLASTIC UNDERGROUND WARNING TAPE DURING BACKFILLING OF TRENCH FOR UNDERGROUND SANITARY SERVICE PIPING. LOCATE 12 INCHES BELOW FINISHED GRADE, DIRECTLY OVER PIPING. IN PAVEMENT AREAS PLACE TAPE UNDER FOUNDATION COURSE.

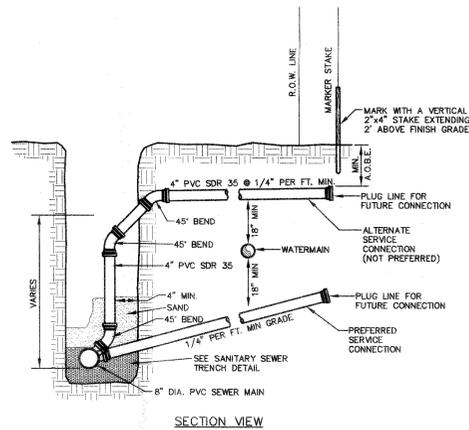
**SEWER PIPE TRENCH DETAIL**  
NOT TO SCALE



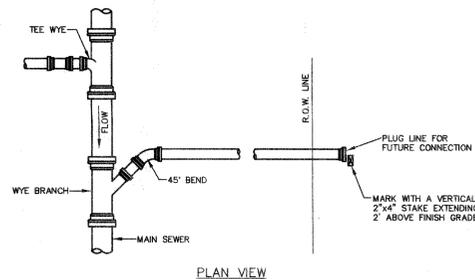
**SANITARY SEWER CLEANOUT AT BEND**  
NOT TO SCALE



**SANITARY SEWER CLEANOUT INLINE**  
NOT TO SCALE



**SECTION VIEW**



**PLAN VIEW**

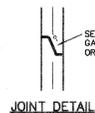
**SEWER LATERAL CONNECTION DETAIL**  
NOT TO SCALE

**SANITARY SEWER NOTES:**

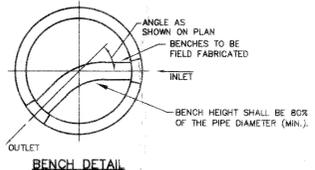
- ALL SANITARY GRAVITY PIPE SHALL BE SDR 35 PVC UNLESS OTHERWISE NOTED. ALL SANITARY SEWER MAINS AND SERVICE LATERALS SHALL BE SEPARATED FROM THE WATER MAINS AND WATER SERVICE CONNECTIONS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY OR 18 INCHES VERTICALLY IF HORIZONTAL SEPARATION IS NOT POSSIBLE.
- ALL NEW SANITARY SEWER LINES SHALL PASS A LOW PRESSURE AIR TEST AND ALL NEW SANITARY SEWER MANHOLES SHALL PASS HYDROSTATIC TESTS OR VACUUM TESTING.
- ALL NEW SANITARY SEWER MANHOLES COVERS SHALL BE 24" DIAMETER CAST IRON AND SHALL READ "SANITARY SEWER".
- ALL SANITARY SEWER CONSTRUCTION SHALL BE SUBJECT TO INSPECTION BY THE MUNICIPAL SEWER SUPERINTENDENT PRIOR TO BACKFILLING.
- THE DESIGN, CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND GENERALLY ACCEPTED STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION WHICH INCLUDE:
  - "NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION AND ULSTER COUNTY DEPARTMENT OF HEALTH POLICES, PROCEDURES AND STANDARDS."
  - "ORANGE COUNTY DEPARTMENT OF HEALTH SANITARY CODE."
  - "RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES, 2014", QUAMR.
  - "DESIGN STANDARDS FOR WASTEWATER TREATMENT WORKS, 2014", NYSDC.
- ALL WELLS AND SUBSURFACE SEWAGE DISPOSAL SYSTEMS EXISTING OR APPROVED WITHIN 200' OF THE PROPOSED WATER AND SEWAGE UTILITIES ARE SHOWN ON THIS PLAN ALONG WITH ANY OTHER KNOWN ENVIRONMENTAL HAZARDS IN THE AREA THAT MAY AFFECT THE DESIGN AND FUNCTIONAL ABILITY OF THE WATER AND SEWAGE UTILITIES.
- NO CELLAR, ROOF OR FOOTING DRAINS SHALL BE DISCHARGED INTO THE SEWAGE SYSTEM.

**TOWN OF NEWBURGH SANITARY SEWER SYSTEM NOTES**

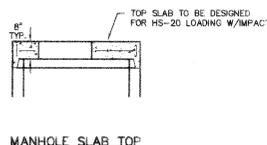
- CONSTRUCTION OF SANITARY SEWER FACILITIES AND CONNECTION TO THE TOWN OF NEWBURGH SANITARY SEWER SYSTEM REQUIRES A PERMIT FROM THE TOWN OF NEWBURGH SEWER DEPARTMENT. ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE NYSDC AND THE TOWN OF NEWBURGH.
- ALL SEWER PIPE INSTALLATION SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF NEWBURGH SEWER DEPARTMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AS REQUIRED WITH THE TOWN OF NEWBURGH SEWER DEPARTMENT.
- ALL GRAVITY SANITARY SEWER SERVICE LINES SHALL BE 4 INCHES IN DIAMETER OR LARGER AND SHALL BE SDR-35 PVC PIPE CONFORMING TO ASTM D-3034-89. JOINTS SHALL BE PUSH-ON WITH ELASTOMERIC RING GASKET CONFORMING TO ASTM C-3012. FITTINGS SHALL BE AS MANUFACTURED BY THE PIPE SUPPLIER OR EQUAL AND SHALL HAVE A BELL AND SPIGOT CONFIGURATION COMPATIBLE WITH THE PIPE.
- THE SEWER MAIN SHALL BE TESTED IN ACCORDANCE WITH TOWN OF NEWBURGH REQUIREMENTS. ALL TESTING SHALL BE COORDINATED WITH THE TOWN OF NEWBURGH SEWER DEPARTMENT.
- THE FINAL LAYOUT OF THE PROPOSED WATER AND/OR SEWER CONNECTION, INCLUDING ALL MATERIALS, SIZE AND LOCATION OF SERVICE AND ALL APPURTENANCES, IS SUBJECT TO THE REVIEW AND APPROVAL OF THE TOWN OF NEWBURGH WATER AND/OR SEWER DEPARTMENT. NO PERMITS SHALL BE ISSUED FOR A WATER AND/OR SEWER CONNECTION UNTIL A FINAL LAYOUT IS APPROVED BY THE RESPECTIVE DEPARTMENT.



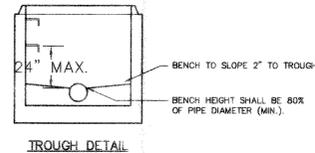
**JOINT DETAIL**



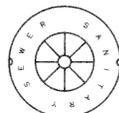
**BENCH DETAIL**



**MANHOLE SLAB TOP**



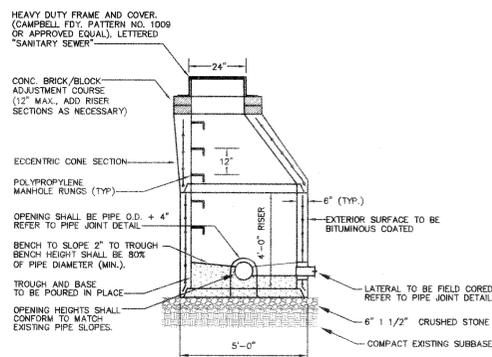
**TROUGH DETAIL**



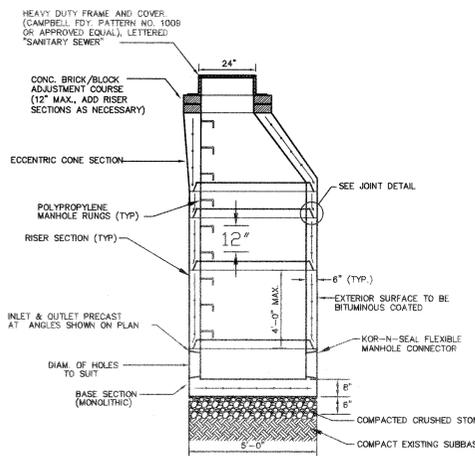
**SANITARY MANHOLE LID DETAIL**  
NOT TO SCALE

**NOTES:**

- INVERTS SHALL BE POURED IN PLACE.
- REINFORCEMENT FOR ALL COMPONENTS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN NEW YORK STATE. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION. STRUCTURE SHALL BE DESIGNED FOR HS-20 VEHICULAR LOADING WITH 25% IMPACT LOADS.
- COMPRESSION STRENGTH OF CONCRETE SHALL BE 4000 P.S.I. AT 28 DAYS IN CONFORMANCE WITH A.S.T.M. C-478-66.
- THE TROUGH (BENCH) SHALL PROVIDE A SMOOTH SLOPE BETWEEN INLET AND OUTLET. A HALF PIPE MAY BE USED FOR STRAIGHT RUNS ONLY.
- THE MANHOLE EXTERIOR SHALL RECEIVE TWO COATS OF BITUMINOUS.
- FRAME AND COVER SHALL BE DESIGNED FOR HS-20 VEHICLE LOADING AND 25% IMPACT LOAD. FRAMES AND COVERS TO BE INSTALLED WITHIN A FLOOD PLAIN SHALL BE WATERTIGHT (CAMPBELL; FDY. NO. 1502 OR EQUAL).
- REFER TO PLANS FOR ELEVATIONS AND ANGLES OF PIPES AND FOR RISE ELEVATIONS.
- MANHOLE FRAMES ARE TO BE SET AT THE SAME GRADE AS THE ADJOINING PAVEMENT OR GROUND SURFACE.

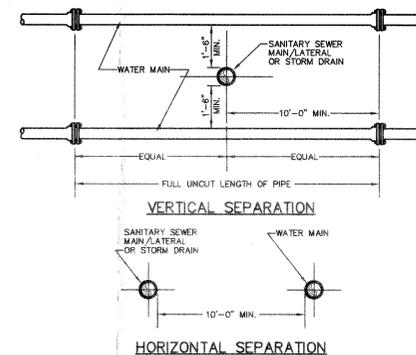


**DOGHOUSE MANHOLE DETAIL**  
NOT TO SCALE



**PRECAST MANHOLE**

**PRECAST MANHOLE DETAILS**  
NOT TO SCALE



**NOTE:**  
1. NO DEVIATION IN THE SEPARATION REQUIREMENTS WILL BE PERMITTED WITHOUT THE EXPRESS APPROVAL OF THE DEPARTMENT OF HEALTH.

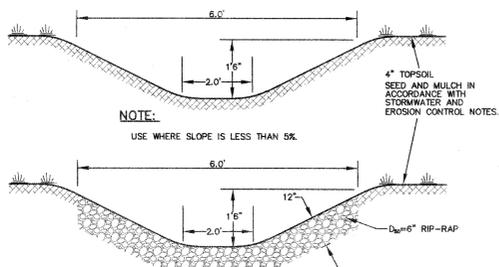
**SANITARY/STORM SEWER-WATER MAIN SEPARATION DETAIL**  
NOT TO SCALE

NO.	DATE	REVISION	BY	CHKD.
1	5/6/21	CONSULTANT COMMENTS		
2	6/6/22	LAYOUT REVISION		
3	6/7/17	ENGINEERS COMMENTS		
4	5/29/17	ENGINEERS COMMENTS		
5	3/15/18	ENGINEERS COMMENTS		

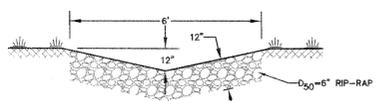


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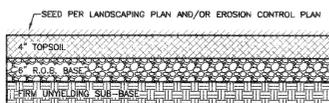
**SANITARY SEWER DETAILS**  
**GARDNER RIDGE**  
**GARDNERTOWN ROAD**  
TOWN OF NEWBURGH, ORANGE COUNTY, NY



**OPEN DITCH SECTION**  
NOT TO SCALE

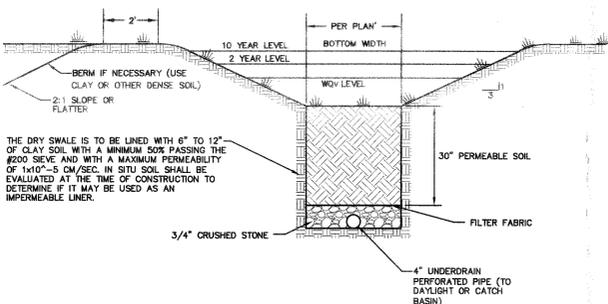


**RIP-RAP SWALE DETAIL**  
NOT TO SCALE

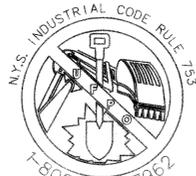


- NOTES:**
- SCARIFY SOIL TO DEPTH OF 4" TO 6" IF COMPACTED.
  - REMOVE LARGE STONES, STUMPS, ROOTS & DEBRIS.
  - LIME AS REQUIRED TO ACHIEVE A PH OF 6.0.
  - FERTILIZE AT 800#/ACRE OF 5-10-10 FERTILIZER, IF NEEDED.
  - RAKE TOP 4" OF SOIL, SEED AND MULCH.

**STORMWATER MANAGEMENT BASIN ACCESS DRIVE DETAIL**  
NOT TO SCALE

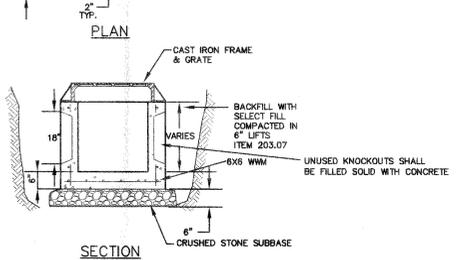


**DRY SWALE DETAIL**  
NOT TO SCALE

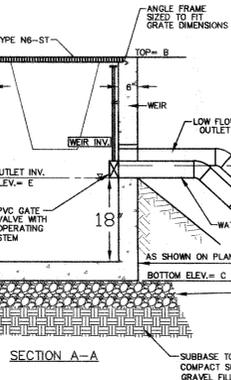
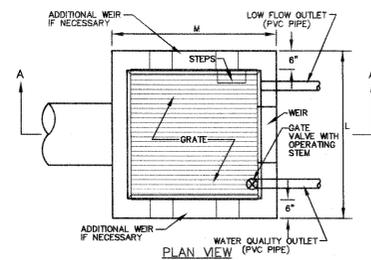


CALL BEFORE YOU DIG, DRILL OR BLAST  
NO LESS THAN TWO WORKING DAYS NOTICE  
**IT'S THE LAW!**

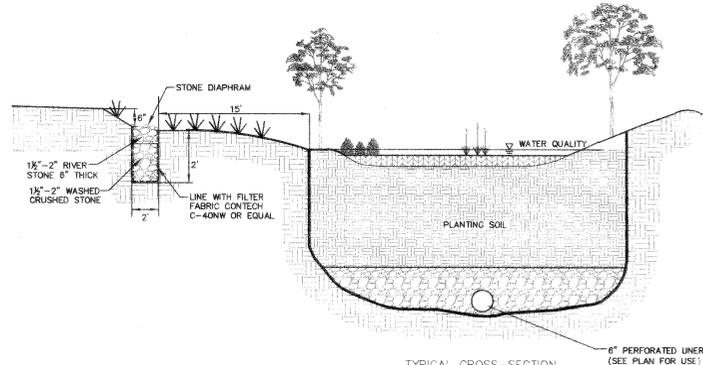
- NOTES:**
- YARD INLET BASINS SHALL BE PRECAST CONCRETE.
  - YARD INLET BASINS HAVING A DEPTH GREATER THAN 48" FROM FINISHED SURFACE TO THE TOP OF THE CONCRETE BASE, SHALL BE PROVIDED WITH STEPS. STEPS SHALL BE STEEL REINFORCED POLYPROPYLENE PLASTIC.
  - FRAME & GRATE SHALL BE CAMPBELL FOUNDRY PATTERN No. 3163 FOR LIGHT DUTY (LAWN AREAS) OR CAMPBELL FOUNDRY PATTERN No. 3450 FOR HEAVY DUTY AREAS.



**YARD INLET BASIN**  
NOT TO SCALE



**STORMWATER MANAGEMENT BASIN OUTLET STRUCTURE**  
NOT TO SCALE



**BIORETENTION SYSTEM DETAIL**  
NOT TO SCALE

- NOTES:**
- THE PLANTING SOIL SHOULD BE A SANDY LOAM, LOAMY SAND, LOAM (USDA), OR A LOAM/SAND MIX (SHOULD CONTAIN A MINIMUM 35 TO 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 25% BY VOLUME.
  - SOILS SHOULD FALL WITHIN THE SM OR ML CLASSIFICATIONS OF THE UNITED SOIL CLASSIFICATION SYSTEM (USCS).
  - A PERMEABILITY OF AT LEAST 1.0 FT PER DAY (0.5"/HR) IS REQUIRED.
  - THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER.
  - THE SOILS SHOULD BE FREE OF BRUSH OR SEEDS FROM NOXIOUS WEEDS.
  - PLACEMENT OF THE PLANTING SOILS SHOULD BE IN LIFTS OF 12" TO 18", LOOSELY COMPACTED (TAMPED LIGHTLY WITH A DOZER OR BACKHOE BUCKET).
  - TYPICAL PLANT LIST FOR 200 S.F. INFILTRATION BIORETENTION BASIN

**PLANTING SOIL SPECIFICATIONS**

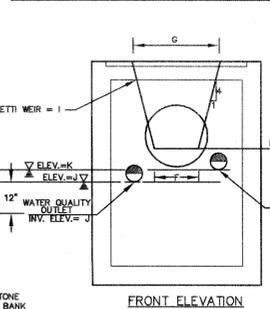
PARAMETER	VALUE
PH RANGE	5.2 TO 7.00
ORGANIC MATTER	1.5 TO 4.0%
MAGNESIUM	35 LBS. PER ACRES, MINIMUM
PHOSPHORUS (#205)	75 LBS. PER ACRES, MINIMUM
POTASSIUM (K20)	85 LBS. PER ACRES, MINIMUM
SOLUBLE SALTS	<500 PPM
CLAY	10 TO 25%
SILT	30 TO 55%
SAND	35 TO 60%

- SHRUBS** (18 SHRUBS PLANTED 5' ± ON CENTER, 2'-3" HT.)
- ARROWWOOD
  - WINTER BERRY
  - RED OSIER DOGWOOD
- HERBACEOUS PLANTS (HP)** (51 PLANTS PLANTED 2.5' ± ON CENTER, 1 QUART CONT.)
- CUTLEAF CONE FLOWER
  - WOOL GRASS
  - NEW ENGLAND ASTER
  - SPOTTED JOE PYE WEED
  - PICKEREL WEED
  - CARDINAL FLOWER
  - COMMON RUSH
- TREES** (2 TREES PLANTED 10' ± ON CENTER, 1.5" CAL.)
- ACER RUBRUM 'OCTOBER GLORY'™
  - CERIS CANADENSIS
  - GLEDITSIA TRACANTHOS INERMIS
  - PLATANUS OCCIDENTALIS
  - TILIA CORDATA 'GREENSPIRE'

8. ADJUST NUMBER OF PLANTS AND DIMENSIONS AS REQUIRED FOR VARYING IMPERVIOUS AREAS.

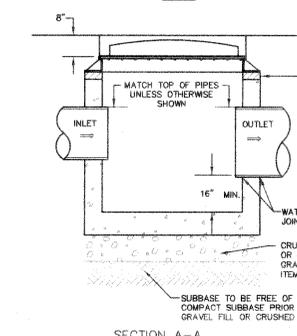
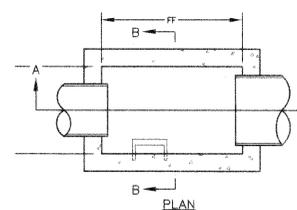
**OUTLET STRUCTURE TABLE**

OUTLET STRUCTURE DIMENSIONS	OUTLET
A. STRUCTURE HEIGHT (ITEM B - ITEM C)	5.0'
B. TOP GRATE ELEVATION	256.5
C. STRUCTURE BOTTOM ELEVATION	253.5
D. OUTLET PIPE DIAMETER (IN)	24"
E. OUTLET PIPE INVERT ELEVATION	254.0
F. WEIR CREST WIDTH (FT.)	2.0'
G. WEIR TOP WIDTH (FT.)	2.8'
H. WEIR CREST INVERT ELEVATION	256.9'
I. NUMBER OF WEIRS	1
J. WATER QUALITY OUTLET INVERT ELEVATION	N/A
K. WATER QUALITY OUTLET DIAMETER (IN)	N/A
L. LOW FLOW OUTLET INVERT ELEVATION	254.0
M. STRUCTURE LENGTH	5'
N. STRUCTURE WIDTH	5'
POND BOTTOM ELEVATION	254.0
TOP OF BERM	280.0



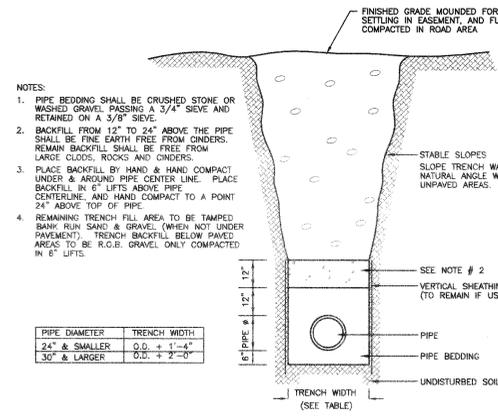
**FRONT ELEVATION**

- NOTES:**
- ALL OUTLET PIPES ARE CORRUGATED POLYETHYLENE SMOOTH FLOW PIPE.
  - LOW FLOW & WATER QUALITY OUTLET PIPE SHALL BE SOLVENT WELD PVC-SCH 40



**STANDARD CATCH BASIN DETAILS**  
NOT TO SCALE

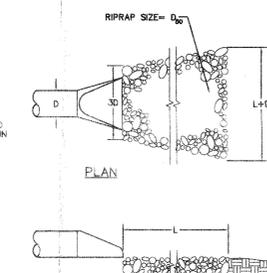
- NOTES:**
- CATCH BASIN SHALL BE PRECAST CONCRETE, DESIGNED FOR H-20 VEHICULAR LOADING AND 20K IMPACT.
  - FRAME AND COVER SHALL BE DESIGNED FOR H-20 VEHICULAR LOADING AND 20K IMPACT.
  - CONCRETE CATCH BASIN CASTING CLEAR OPENING DIMENSION MUST MATCH FRAME AND GRATE CLEAR OPENING DIMENSION (F&G) FOR H-20 VEHICULAR LOADING.
  - CATCH BASINS HAVING A DEPTH GREATER THAN 48" FROM FINISHED SURFACE TO THE TOP OF THE CONCRETE BASE SHALL BE PROVIDED WITH STEPS.
  - BACKFILL USING SELECT MATERIAL, COMPACTED IN 6" LIFTS.
  - SUMP SHALL BE 16".



**STORM SEWER TRENCH DETAIL**  
NOT TO SCALE

- NOTES:**
- PIPE BEDDING SHALL BE CRUSHED STONE OR WASHED GRAVEL PASSING A 3/4" SIEVE AND RETAINED ON A 3/8" SIEVE.
  - BACKFILL FROM 12" TO 24" ABOVE THE PIPE SHALL BE FINE EARTH FREE FROM CLINDERS. REMAIN BACKFILL SHALL BE FREE FROM LARGE CLOUDS, ROCKS AND CLINDERS.
  - PLACE BACKFILL BY HAND & HAND COMPACT UNDER & AROUND PIPE CENTER LINE. PLACE BACKFILL IN 6" LIFTS ABOVE PIPE CENTERLINE AND HAND COMPACT TO A POINT 24" ABOVE TOP OF PIPE.
  - REMAINING TRENCH FILL AREA TO BE TAMPED BANK RUN SAND & GRAVEL (WHEN NOT UNDER PAVEMENT). TRENCH BACKFILL BELOW PAVED AREAS TO BE R.O.B. GRAVEL ONLY COMPACTED, IN 6" LIFTS.

PIPE DIAMETER	TRENCH WIDTH
24" & SMALLER	O.D. + 1'-4"
30" & LARGER	O.D. + 2'-0"



**PIPE OUTLET PROTECTION DETAIL**  
NOT TO SCALE

**OUTLET PROTECTION TABLE**

D (IN)	D <sub>90</sub> (IN)	L (FT) ±
12	4	8
15	4	10
18	6	10
24	6	12
30	8	18
36	8	18
42	10	27
48	12	33

\* FOR LOW TAIL WATER CONDITIONS (I.E. NO PLUNGE POOL OR OTHER DEEP TAIL WATER)

- NOTES:**
- RIP RAP DEPTH SHALL BE 2 TIMES D<sub>90</sub>.
  - RIP RAP APRON LENGTH AND WIDTH PER CHART UNLESS OTHERWISE SHOWN ON PLAN.

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STATE OF NEW YORK  
PROFESSIONAL ENGINEER  
No. 06645  
EXPIRES 12/31/2016

STORM DRAINAGE DETAILS  
**GARDNER RIDGE  
GARDNERTOWN ROAD**  
TOWN OF NEWBURGH, ORANGE COUNTY, NY

SHEET NO.  
**14 OF 15**  
DATE: JANUARY 26, 2016  
FILE NO.

