



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

PROJECT NAME: CHADWICK WOODS – 5 LOT SUBDIVISION
PROJECT NO.: 19-02
PROJECT LOCATION: 174 ROUTE 300
SECTION 14, BLOCK 1, LOT 51
REVIEW DATE: 28 APRIL 2023
MEETING DATE: 4 MAY 2023
PROJECT REPRESENTATIVE: ENGINEERING & SURVEYING PROPERTIES

1. The project is subject to the Town’s Tree Clearing Ordinance. The applicant has responded that once the proposed Tree Clearing Ordinance revisions are adopted the plan will be prepared. While the Town Board is considering modifications to the Tree Clearing Ordinance, no Town Board agenda date has been set to begin that process. It is unclear if a condition of approval could defer submission of the Tree Clearing Plan.
2. NYS DOT has granted conceptual approval via an email from the DOT representative regarding the two driveway access points.
3. Hydrant testing is proposed to be performed on 1 May 2023. Previous comments requested an analysis to ensure adequate pressure is available to the rear lots utilizing the sizing of the laterals currently proposed at 1 inch.
4. Common driveway Access and Maintenance Agreements are required.
5. NYS DEC Construction Stormwater Permit for residential projects disturbing between 1 and 5 acres is required. The SWPPP for the project consists of the Erosion and Sediment Control Plan with no required inspection by the municipality.

Respectfully submitted,

MHE Engineering, D.P.C.

A handwritten signature in blue ink, appearing to read 'Patrick J. Hines'.

Patrick J. Hines
Principal

PJH/kbw

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www.EngineeringPropertiesPC.com

March 23, 2023

Town of Newburgh Planning Board
308 Gardnertown Road
Newburgh, NY 12550

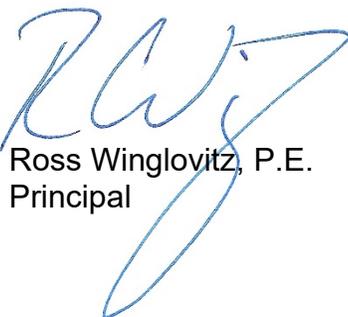
**RE: CHADWICK WOODS SUBDIVISION
PROJECT NO. 19-02
NYS ROUTE 300
TOWN OF NEWBURGH
PROJECT DESCRIPTION**

Dear Planning Board:

Please find the attached Subdivision Plan for the Chadwick Woods project. Since the last appearance before the board, the project has received approval from the Town Board for 3-lots on a shared common driveway. Following approval the driveway profiles, grading and erosion control plans have been updated accordingly to the new driveway layout. In addition, the project has eliminated the proposed private on-site wells for the three (3) rear lots. Each lot proposes individual water service connections across NYS Route 300.

If you need any additional information, please do not hesitate to contact this office.

Sincerely,
Engineering & Surveying Properties, PC



Ross Winglovitz, P.E.
Principal



Michael Puzio
Project Engineer

PERCOLATION TEST RESULTS

LOT #	PERC HOLE #	PERC HOLE DEPTH	PERC HOLE DIA	TIME	PERCOLATION TEST RUNS - STOPWATCH USED FOR ALL TESTS (TIME FOR 1" DROP IN WATER LEVEL)	STABILIZED RATE
1	06/30/22 PT-3	24"	8"	FINISH		6 MIN
				START	STOPWATCH USED FOR TIMED INTERVALS	
	06/15/17 *PT-2B	24"	8"	FINISH	00:01:22 00:02:11 00:04:15 00:05:18 00:05:33	54 MIN
				START	12:52 01:11 01:48 02:35 03:30	
2	06/15/17 PT-5	24"	8"	FINISH		5 MIN
				START	STOPWATCH USED FOR TIMED INTERVALS	
	07/01/19 *PT-19	24"	8"	FINISH	00:03:27 00:04:44 00:04:59	14 MIN
				START	03:02 03:17 03:32	
3	06/30/22 PT-2	24"	8"	FINISH		9 MIN
				START	STOPWATCH USED FOR TIMED INTERVALS	
	06/16/18 *PT-6	24"	8"	FINISH	12:40 01:30 02:18	47 MIN
				START	12:20 12:43 01:31	
4	06/30/22 PT-1	24"	8"	FINISH		15 MIN
				START	STOPWATCH USED FOR TIMED INTERVALS	
	12/20/18 *PT-41	24"	8"	FINISH	00:06:25 00:11:04 00:14:42 00:15:37	57 MIN
				START	01:31 02:29 03:27	
5	06/30/22 PT-4	24"	8"	FINISH		22 MIN
				START	STOPWATCH USED FOR TIMED INTERVALS	
	07/20/17 *PT-9	24"	8"	FINISH	12:05 12:57 01:48 02:39	50 MIN
				START	11:30 12:11 12:48 01:49	
				TIME	00:35 00:46 00:50 00:50	

* TESTING PERFORMED BY TALCOTT ENGINEERING DESIGN, PLLC

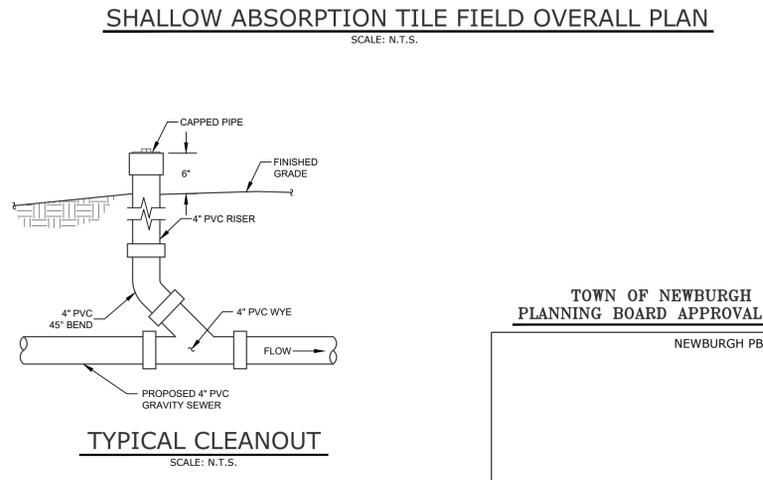
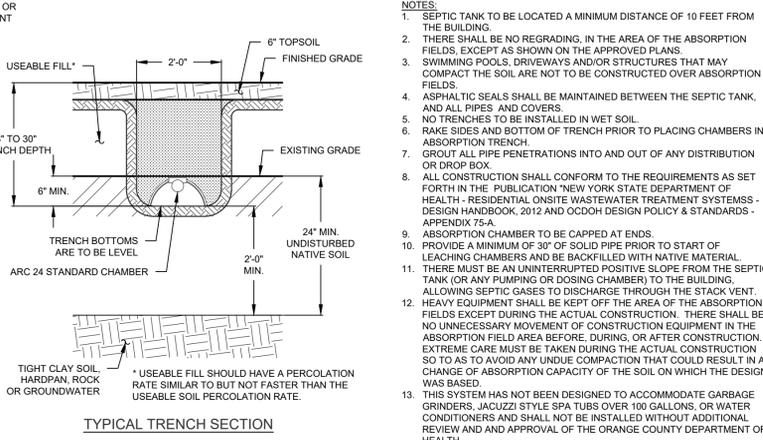
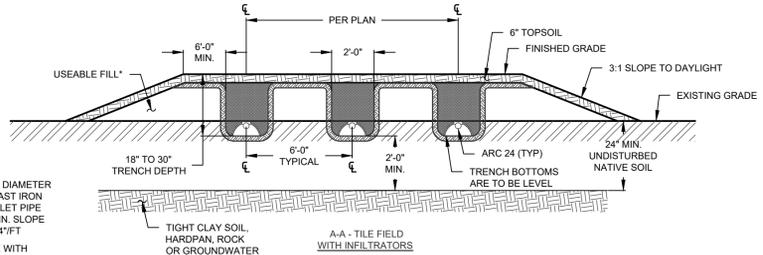
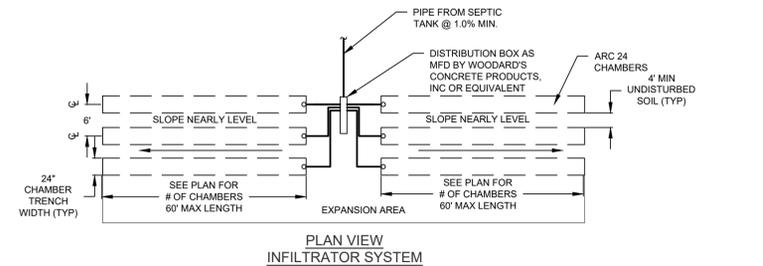
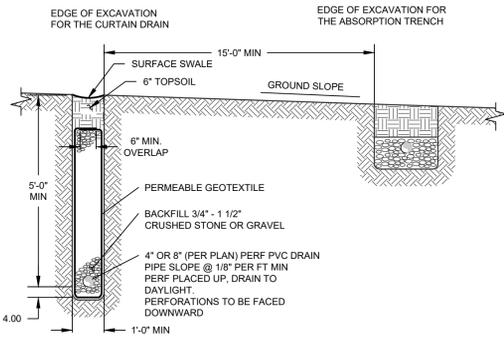
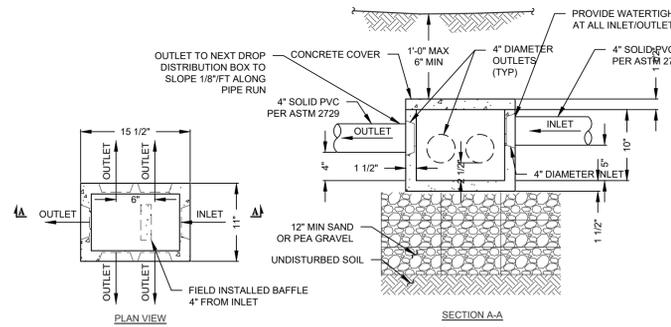
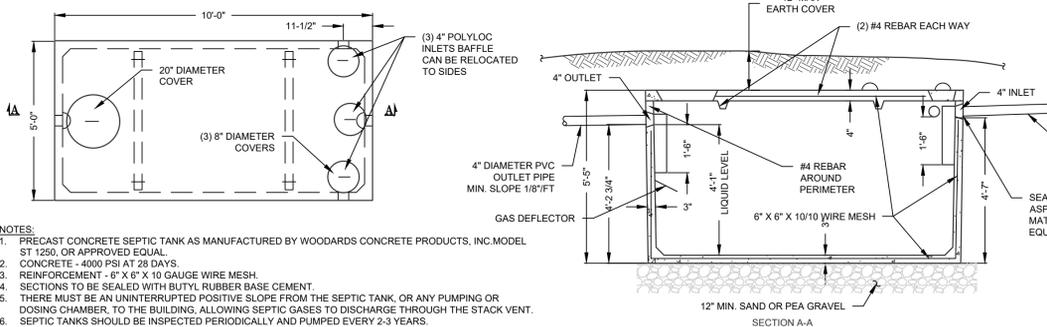
DEEP TEST HOLE RESULTS

LOT #	TEST HOLE #	DATE	DEPTH	DESCRIPTION
1	TP-3	06/30/22	0' - 12' 12' - 8'	TOPSOIL W/ COBBLES BROWN SILTY LOAM W/ COBBLES NO ROCK, NO WATER, NO MOTTLING
	*TP-2	04/24/17	0' - 6" 6' - 32" 32' - 78"	TOPSOIL CLAY LOAM WET CLAY LOAM "DAMP" NO ROCK, NO WATER, NO MOTTLING
2	TP-5	06/30/22	0' - 6" 6' - 4" 4' - 8'	TOPSOIL TAN SILTY CLAY LOAM BROWN SILTY CLAY SANDY GRAVELLY LOAM NO ROCK, NO WATER, NO MOTTLING
	*TP-13	07/01/19	0' - 6" 6' - 30"	TOPSOIL CLAY LOAM NO ROCK, NO WATER, NO MOTTLING
3	TP-2	06/30/22	0' - 6" 6' - 4" 4' - 8'	TOPSOIL TAN SILTY CLAY LOAM BROWN SILTY CLAY SANDY GRAVELLY LOAM NO ROCK, NO WATER, NO MOTTLING
	*TP-6	04/24/17	0' - 6" 6' - 40" 40' - 60"	TOPSOIL CLAY LOAM WET CLAY LOAM W/ GRAVEL NO ROCK, WATER @ 40', MOTTLING @ 40'
4	TP-1	06/30/22	0' - 10" 10' - 27" 27' - 7" 7' - 8'	TOPSOIL W/ COBBLES TAN SILTY CLAY LOAM W/ COBBLES TAN SILTY CLAY SANDY LOAM W/ COBBLES TAN SILTY SANDY LOAM NO ROCK, WATER @ 90', NO MOTTLING
	*TP-41	04/24/17	0' - 6" 6' - 24" 24' - 72"	TOPSOIL CLAY LOAM W/ GRAVEL CLAY LOAM NO ROCK, WATER @ 30', NO MOTTLING
5	TP-4	06/30/22	0' - 6" 6' - 36" 36' - 8'	TOPSOIL W/ COBBLES TAN SILTY CLAY LOAM BROWN SILTY SANDY GRAVELLY LOAM NO ROCK, WATER @ 6', MOTTLING @ 55"
	*TP-9	04/24/17	0' - 6" 6' - 60"	TOPSOIL CLAY LOAM W/ STONES NO ROCK, NO MOTTLING

* TESTING PERFORMED BY TALCOTT ENGINEERING DESIGN, PLLC

SEPTIC SYSTEM DESIGN SCHEDULE

LOT #	NUMBER OF BEDROOMS	DESIGN PERC RATE (min)	FLOW RATE (GPD)	APPLICATION RATE (GPD/Sq. ft.)	REQUIRED AREA (Sq. ft.)	REQUIRED ABSORPTION FIELD LENGTH (ft) (BASED UPON 2' WIDE TRENCH)	REQUIRED FIELD LENGTH BASED USING GRAVELESS CHAMBERS (25% REDUCTION)	PROPOSED ABSORPTION FIELD LENGTH (ft)
1	4	54	440	0.45	978	489	367	7 LATERALS @ 55' 77 CHAMBERS (385' TOTAL)
2	4	14	440	0.80	550	275	207	5 LATERALS @ 55' 55 CHAMBERS (275' TOTAL)
3	4	47	440	0.45	978	489	367	7 LATERALS @ 55' 77 CHAMBERS (385' TOTAL)
4	4	57	440	0.45	978	489	367	7 LATERALS @ 55' 77 CHAMBERS (385' TOTAL)
5	4	50	440	0.45	978	489	367	7 LATERALS @ 55' 77 CHAMBERS (385' TOTAL)



TOWN OF NEWBURGH PLANNING BOARD APPROVAL BOX

NEWBURGH PB #2019-02

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Design

MONTGOMERY OFFICE
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Ph: (845) 457-7727
WWW.EP-PC.COM

DETAILS	
CHADWICK WOODS ROUTE 300 TOWN OF NEWBURGH ORANGE COUNTY, NEW YORK	
JOB #:	1325.05
DATE:	08/01/2022
REVISION:	3 - 03/23/23
DRAWN BY:	MP
SCALE:	AS NOTED
TAX LOT:	14-1-51
C-301	

NO.	DATE	DESCRIPTION
1	10/05/22	REVISED PER PB COMMENTS
2	10/31/22	REVISED LOT LAYOUT
3	03/23/23	REVISED GRADING FOR DRIVEWAY LAYOUT

DRAWING STATUS		ISSUE DATE:
THIS SHEET IS PART OF THE PLAN SET ISSUED FOR		03/23/2023
<input type="checkbox"/> CONCEPT APPROVAL	N/A	OF N/A
<input checked="" type="checkbox"/> PLANNING BOARD APPROVAL	5	OF 8
<input type="checkbox"/> OGDH REALTY SUBDIVISION APPROVAL	N/A	OF N/A
<input type="checkbox"/> OGDH WATERMAIN EXTENSION APPROVAL	N/A	OF N/A
<input type="checkbox"/> NYSDOT APPROVAL	N/A	OF N/A
<input type="checkbox"/> NYSDOT APPROVAL	N/A	OF N/A
<input type="checkbox"/> OTHER	N/A	OF N/A
<input type="checkbox"/> FOR BID	N/A	OF N/A
<input type="checkbox"/> FOR CONSTRUCTION	N/A	OF N/A

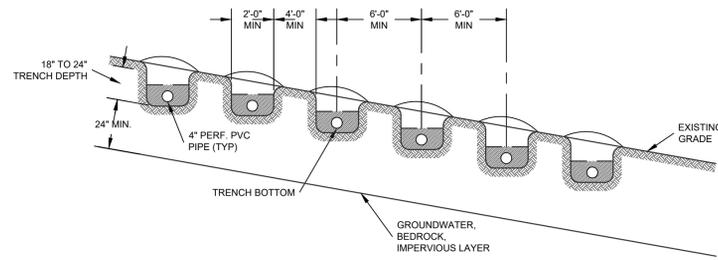
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THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS OF THE DENOTED PLAN SET(S).

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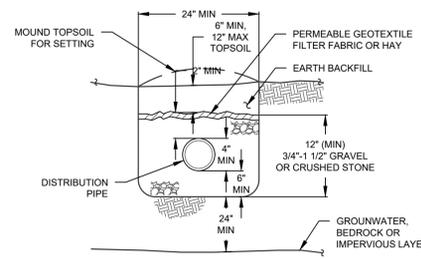
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ROSS WINGLOVITZ, P.E.
NEW YORK LICENSE # 071701

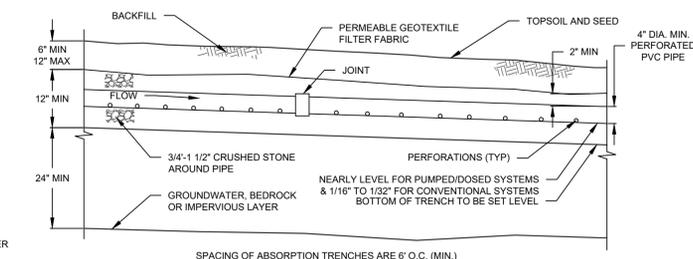
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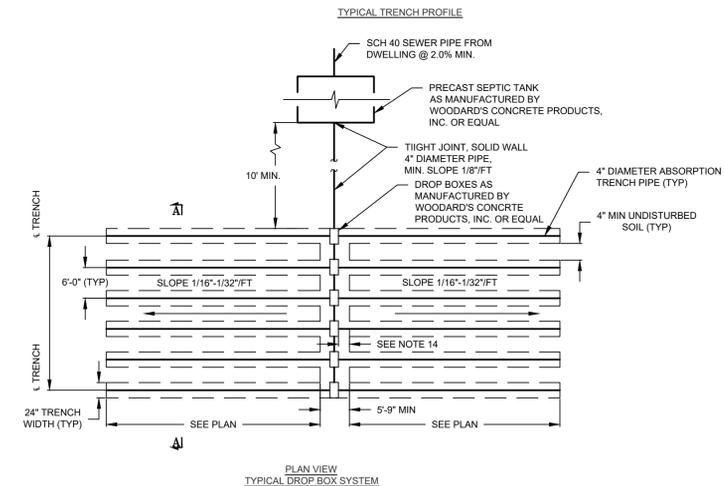
A-A TYPICAL SECTION THROUGH FIELD



TYPICAL TRENCH SECTION



TYPICAL TRENCH PROFILE



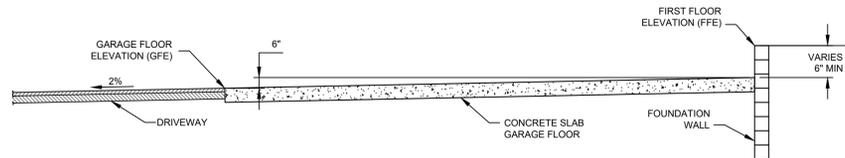
PLAN VIEW TYPICAL DROP BOX SYSTEM

- NOTES:**
- SEPTIC TANK TO BE LOCATED A MINIMUM DISTANCE OF 10 FEET FROM THE HOUSE.
 - THERE SHALL BE NO REGRADING, EXCEPT AS SHOWN ON THE APPROVED PLANS, IN THE AREA OF THE ABSORPTION FIELDS.
 - GARBAGE GRINDERS AND JACUZZI TYPE SPA TUBS OVER 100 GALLONS ARE NOT PERMITTED WITHOUT THE SYSTEM BEING REDESIGNED AND REAPPROVED BY THE TOWN OF MAMAKATING.
 - CELLAR DRAINS, ROOF DRAINS OR FOOTING DRAINS SHALL NOT BE DISCHARGED IN THE VICINITY OF THE TILE FIELDS OR WELLS.
 - SWIMMING POOLS, DRIVEWAYS AND/OR STRUCTURES THAT MAY COMPACT THE SOIL ARE NOT TO BE CONSTRUCTED OVER TILE FIELDS.
 - ASPHALTIC SEALS SHALL BE MAINTAINED BETWEEN THE SEPTIC TANK, AND ALL PIPES AND COVERS.
 - NO TRENCHES TO BE INSTALLED IN WET SOIL.
 - RAKE SIDES AND BOTTOM OF TRENCH PRIOR TO PLACING GRAVEL IN ABSORPTION TRENCH.
 - GROUT ALL PIPE PENETRATIONS INTO AND OUT OF ANY DISTRIBUTION OR DROP BOX.
 - ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AS SET FORTH IN THE PUBLICATION, "INDIVIDUAL RESIDENTIAL WASTEWATER TREATMENT SYSTEMS, DESIGN HANDBOOK", LATEST EDITION, AND APPENDIX 75-A OF THE NEW YORK STATE DEPARTMENT OF HEALTH.
 - ABSORPTION TRENCH PIPE TO BE CAPPED AT END.
 - ABSORPTION SYSTEM TO BE LOCATED A MINIMUM 10' AWAY FROM ANY DWELLING UNIT.
 - SEPTIC TANK JOINTS MUST BE SEALED AND TESTED FOR WATERTIGHTNESS.
 - PROVIDE 30' OF SOLID PIPE PRIOR TO START OF PERFORATED ABSORPTION PIPE AND BE BACKFILLED WITH NATIVE MATERIAL.
 - THERE MUST BE AN UNINTERRUPTED POSITIVE SLOPE FROM THE SEPTIC TANK (OR ANY PUMPING OR DOSING CHAMBER) TO THE DWELLING, ALLOWING SEPTIC GASES TO DISCHARGE THROUGH THE STACK VENT.
 - DROP BOXES SHOULD BE INSPECTED PERIODICALLY TO ASSURE THAT THEY ARE LEVEL AND OPERATING.
 - HEAVY EQUIPMENT SHALL BE KEPT OFF THE AREA OF THE ABSORPTION FIELDS EXCEPT DURING THE ACTUAL CONSTRUCTION. THERE SHALL BE NO UNNECESSARY MOVEMENT OF CONSTRUCTION EQUIPMENT IN THE ABSORPTION FIELD AREA BEFORE, DURING, OR AFTER CONSTRUCTION. EXTREME CARE MUST BE TAKEN DURING THE ACTUAL CONSTRUCTION SO TO AS TO AVOID ANY UNDUE COMPACTION THAT COULD RESULT IN A CHANGE OF ABSORPTION CAPACITY OF THE SOIL ON WHICH THE DESIGN WAS BASED.

- INSTALLATION:**
- ABSORPTION TRENCH BOTTOMS TO BE SET LEVEL.
 - THE PERFORATED DISTRIBUTION PIPE SHALL BE SLOPED AT 1/32" TO 1/16".
 - PERFORATIONS ON DISTRIBUTION PIPE SHALL BE INSTALLED WITH THE PERFORATIONS FACING DOWN.

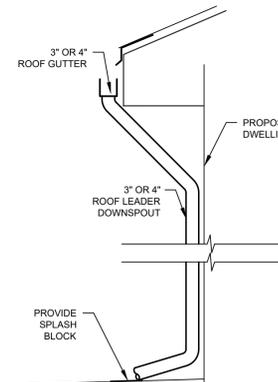
ABSORPTION TILE FIELD DROP BOX

SCALE: N.T.S.



TYPICAL GARAGE ELEVATION SECTION

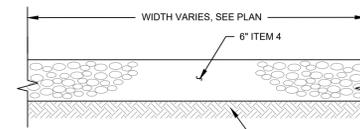
SCALE: N.T.S.



- NOTES:**
- IN ACCORDANCE WITH NYSDEC STORMWATER GREEN INFRASTRUCTURE REQUIREMENTS, ALL ROOF LEADER DOWNSPOUTS SHALL DISCHARGE EFFLUENT ALONG THE SURFACE FOR INFILTRATION.
 - CONNECTION OF ROOF LEADERS TO CLOSED SYSTEMS IS PROHIBITED.
 - HOMEOWNERS SHALL MAINTAIN SPLASH BLOCK LAWN AREA AS SHOWN ON THE PLANS TO PROVIDE INFILTRATION OF STORMWATER ROOF RUNOFF.

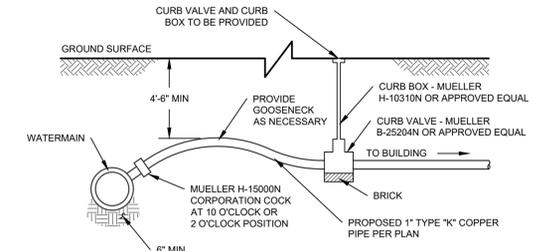
ROOF LEADER AND SPLASH PAD

SCALE N.T.S.



GRAVEL ACCESS ROAD

SCALE: N.T.S.



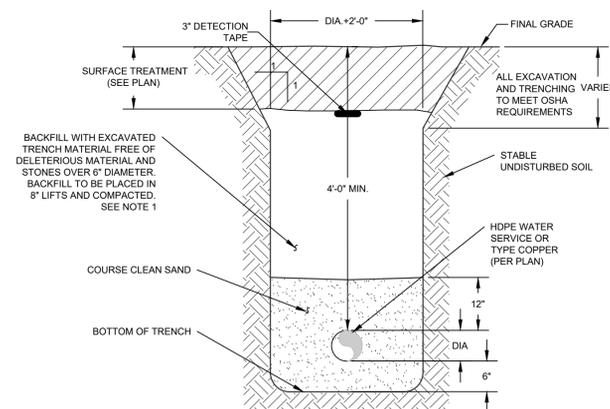
- NOTE:**
- ALL CONNECTIONS SHALL BE COMPRESSION FITTING ONLY.

WATER SERVICE CONNECTION

SCALE: N.T.S.

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 WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE NYSDOH AND THE TOWN OF NEWBURGH.
- ALL WATER SERVICE LINES FOUR (4) INCHES AND LARGER IN DIAMETER SHALL BE CEMENT LINED CLASS 52 DUCTILE IRON PIPE CONFORMING TO ANSIAWWA C151A21.51 FOR DUCTILE IRON PIPE, LATEST REVISION. 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 ANSIAWWA C10A21.10 FOR DUCTILE AND GRAY IRON FITTINGS OR ANSIAWWA C153A21.53 FOR DUCTILE IRON COMPACT FITTINGS, LATEST REVISION.
- ALL VALVES 4 TO 12 INCHES SHALL BE RESILIENT WEDGE GATE VALVES CONFORMING TO ANSIAWWA C509 SUCH AS MUELLER MODEL A-2360-23 OR APPROVED EQUAL. ALL GATE VALVES SHALL OPEN LEFT (COUNTERCLOCKWISE).
- TAPPING SLEEVE 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 ANSIAWWA C509 SUCH AS MUELLER MODEL T-2360-19 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 INTO THE PIPE.
- ALL HYDRANTS SHALL BE LOW-EDDY F-2640 CONFORMING TO AWWA STANDARD C-502, LATEST REVISION. ALL HYDRANTS SHALL INCLUDE A 5/8 INCH MAIN VALVE OPENING, TWO 2 1/2 INCH DIAMETER NPT HOSE NOZZLES, ONE 4 INCH NPT STEAMER NOZZLE, A 6 INCH DIAMETER INLET CONNECTION AND A 1 1/2 INCH PENTAGON OPERATING NUT. ALL HYDRANTS SHALL OPEN LEFT (COUNTERCLOCKWISE). HYDRANTS ON MAINS TO BE DEDICATED TO THE TOWN SHALL BE EQUIPMENT YELLOW. HYDRANTS LOCATED ON PRIVATE PROPERTY SHALL BE RED.
- ALL WATER SERVICE LINES TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING. CORPORATION STOPS SHALL BE MUELLER H-1502N FOR 1/2 AND 1 INCH, MUELLER H-1500N OR B-25000N FOR 1 1/2 AND 2 INCH SIZES. CURB VALVES SHALL BE MUELLER H-1502-2N FOR 1/2 AND 1 INCH AND MUELLER B-25204N FOR 1 1/2 AND 2 INCH SIZES. CURB BOXES SHALL BE MUELLER H-10314N FOR 1/2 AND 1 INCH AND MUELLER H-10310N FOR 1 1/2 AND 2 INCH SIZES.
- 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, DISINFECTION 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 WATER 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.
- CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING WATER AND SEWER UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR TO CALL UNDERGROUND MARK-OUT AT LEAST 2 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION AT 1-800-962-7962 FOR COMPLETE UTILITIES MARKOUT.
- CONTRACTOR TO CONTACT TOWN OF NEWBURGH WATER DEPARTMENT AT (845) 564-7813 AT LEAST 2 DAYS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO NOTIFY ENGINEER IMMEDIATELY OF ANY DEVIATION FROM HORIZONTAL OR VERTICAL ALIGNMENTS WITH REGARDS TO EXISTING UTILITIES BEFORE PROCEEDING.
- A CERTIFIED AS BUILT MAP OF THE WATER SYSTEM IMPROVEMENTS SHALL BE PROVIDED TO THE TOWN OF NEWBURGH WATER DEPARTMENT BY A LICENSED DESIGN PROFESSIONAL.
- ALL APARTMENT UNITS AND THE CLUBHOUSE ARE TO BE INDIVIDUALLY METERED IN ACCORDANCE WITH THE TOWN OF NEWBURGH REQUIREMENTS.
- ALL PIPE, FIXTURES AND FITTINGS MUST COMPLY WITH THE FEDERAL "SAFE DRINKING WATER ACT", SECTION 1417 WHICH REQUIRES ALL SURFACES IN CONTACT WITH POTABLE WATER CONTAIN NO MORE THAN 0.25% LEAD BY WEIGHT.
- THE TOWN OF NEWBURGH COMMISSIONER OF PUBLIC WORKS OR HIS DESIGNATED REPRESENTATIVE MUST BE INFORMED OF ANY HYDROSTATIC OR BACTERIOLOGICAL TESTING TO PERMIT THE TESTING TO BE WITNESSED.
- THE TOWN OF NEWBURGH COMMISSIONER OR PUBLIC WORKS OR HIS DESIGNATED REPRESENTATIVE MUST ACCEPT HYDROSTATIC AND BACTERIOLOGICAL TEST RESULTS AS ADEQUATE.



- NOTE:**
- ALL FILL BELOW BUILDINGS, PAVEMENT AREAS, SIDEWALKS, CURBS, ETC. SHALL BE WITH R.O.B. GRAVEL (NYS DOT SPEC) FOR THE FULL DEPTH OF THE EXCAVATION. BACKFILL SHALL BE PLACED IN 8" MAXIMUM LIFTS AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR TEST.

WATER PIPE TRENCH

SCALE: N.T.S.

No.	DATE	DESCRIPTION
1	10/05/22	REVISED PER PB COMMENTS
2	10/31/22	REVISED LOT LAYOUT
3	03/23/23	REVISED GRADING FOR DRIVEWAY LAYOUT

DRAWING STATUS	ISSUE DATE:
THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	03/23/2023
SHEET NUMBER	
<input type="checkbox"/> CONCEPT APPROVAL	N/A OF N/A
<input checked="" type="checkbox"/> PLANNING BOARD APPROVAL	6 OF 8
<input type="checkbox"/> OCDOH REALTY SUBDIVISION APPROVAL	N/A OF N/A
<input type="checkbox"/> OCDOH WATERMAIN EXTENSION APPROVAL	N/A OF N/A
<input type="checkbox"/> NYSDEC APPROVAL	N/A OF N/A
<input type="checkbox"/> NYS DOT APPROVAL	N/A OF N/A
<input type="checkbox"/> OTHER	N/A OF N/A
<input type="checkbox"/> FOR BID	N/A OF N/A
<input type="checkbox"/> FOR CONSTRUCTION	N/A OF N/A

THIS PLAN SET HAS BEEN ISSUED SPECIFICALLY FOR THE APPROVAL OR ACTION NOTED ABOVE AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. THIS SHEET SHALL BE CONSIDERED INVALID UNLESS ACCOMPANIED BY ALL SHEETS OF THE DENOTED PLAN SET(S).

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[Signature]

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ROSS WINGLOVITZ, P.E.
NEW YORK LICENSE # 071701

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ORIGINAL SCALE IN INCHES

ENGINEERING & SURVEYING PROPERTIES
Achieving Successful Results with Innovative Designs

MONTGOMERY OFFICE
71 CLINTON STREET
MONTGOMERY, NY 12549
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DETAILS

CHADWICK WOODS
ROUTE 300
TOWN OF NEWBURGH
ORANGE COUNTY, NEW YORK

JOB #: 1325.05 DRAWN BY: MP
DATE: 08/01/2022 SCALE: AS NOTED
REVISION: 3 - 03/23/23 TAX LOT: 14-1-51

C-302

ROAD TYPE	DISTANCE BETWEEN SIGNS	
	A (FT.)	B (FT.)
URBAN (≤ 30 MPH*)	100	100
URBAN (35-40 MPH*)	200	200
URBAN (≥ 45 MPH*)	350	350
RURAL	500	500

* PRECONSTRUCTION POSTED SPEED LIMIT

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	LONGITUDINAL BUFFER SPACE DISTANCE (FT.) / # OF SKIP LANES	TAPER LENGTH: L (FT.) / # OF SKIP LANES / # OF CHANNELIZING DEVICES			SHOULDER TAPER LENGTH: L / 3 (FT.) / # OF SKIP LANES / # OF CHANNELIZING DEVICES		
		FOR LANE WIDTH IN FT. (LATERAL SHIFT OF TRAFFIC FLOW PATH)			FOR SHOULDER WIDTH		
		10	11	12	≤ 4 FT.	5-7 FT.	≥ 8 FT.
25	155 / 4	120 / 3 / 4	120 / 3 / 4	120 / 3 / 4	40 / 1 / 2	40 / 1 / 2	40 / 1 / 2
30	200 / 5	160 / 4 / 5	160 / 4 / 5	200 / 5 / 6	40 / 1 / 2	40 / 1 / 2	40 / 1 / 2
35	250 / 6	200 / 5 / 6	240 / 6 / 7	240 / 6 / 7	40 / 1 / 2	40 / 1 / 2	80 / 2 / 3
40	305 / 8	280 / 7 / 8	320 / 8 / 9	320 / 8 / 9	40 / 1 / 2	80 / 2 / 3	80 / 2 / 3
45	360 / 9	440 / 11 / 12	520 / 13 / 14	560 / 14 / 15	80 / 2 / 3	80 / 2 / 3	120 / 3 / 4
50	425 / 11	520 / 13 / 14	560 / 14 / 15	600 / 15 / 16	80 / 2 / 3	120 / 3 / 4	160 / 4 / 5
55	495 / 13	560 / 14 / 15	600 / 15 / 16	680 / 17 / 18	80 / 2 / 3	120 / 3 / 4	160 / 4 / 5

CLOSURE TYPE	ROAD TYPE & SPEED	NON-FREEWAY		
		≥ 45 MPH	35 - 40 MPH	≤ 30 MPH
LANE CLOSURE OR ENCROACHMENT	EXPOSURE CONDITIONS ¹	P, T.M.I.A.	P, T.M.I.A.	SEE NOTE 2
	WORKERS ON FOOT OR VEHICLE EXPOSED TO TRAFFIC	P, T.M.I.A.	SEE NOTE 2	SEE NOTE 2
SHOULDER CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR VEHICLE EXPOSED TO TRAFFIC	P, T.M.I.A.	SEE NOTE 2	SEE NOTE 2
	OTHER HAZARDS NO WORKERS EXPOSED	SEE NOTE 2	SEE NOTE 2	SEE NOTE 2

LEGEND
P: PROTECTIVE VEHICLE REQUIRED FOR EACH CLOSED LANE & EACH CLOSED PAVED SHOULDER 8' OR WIDER. IF THE WORK SPACE MOVES WITHIN THE STATIONARY CLOSURE, THE PROTECTIVE VEHICLE SHALL BE REPOSITIONED ACCORDINGLY.
T.M.I.A: T.M.I.A. REQUIRED

- NOTES:
1. THE EXPOSURE CONDITIONS ASSUMES THERE IS NO POSITIVE PROTECTION PRESENT
2. EITHER A PROTECTIVE VEHICLE OR THE STANDARD BUFFER SPACE SHALL BE PROVIDED

PRE CONSTRUCTION POSTED SPEED LIMIT (MPH)	ROLL AHEAD DISTANCE (FT.) / # OF SKIP LINES FOR VEHICLES	
	MIN	MAX
≥ 55	120 / 3	200 / 5
45 - 50	80 / 2	160 / 4
≤ 40	40 / 1	120 / 3

WORK ZONE PROVISIONS	MAXIMUM DEVICE SPACING (CENTER TO CENTER)	MUTCD COMPLIANT CHANNELIZING DEVICE								
		DRUMS	STANDARD CONES	TALL CONES	EXTRA TALL CONES	TEMPORARY TUBULAR MARKERS	INTERIM TUBULAR MARKERS	VERTICAL PANELS	OVERSIZED VERTICAL PANELS	TYPE III BARRICADES
INTERMEDIATE-TERM STATIONARY WORK ZONES INVOLVE WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR										
SHOULDER / MERGING / SHIFTING TAPERS	20 FT. / 40 FT.	X						X		
MARKING FOR TRANSVERSE BUMPS ¹	N/A	X ²			X ²			X ²		
TRANSVERSE DEVICE WITHIN CLOSED TRAFFIC LANE AND / OR SHOULDER	800 FT.	X		X	X			X	X	0
REMOVAL OF EXISTING GUIDE RAIL	80 FT. / 40 FT.	X		X	X	X		X	X	0

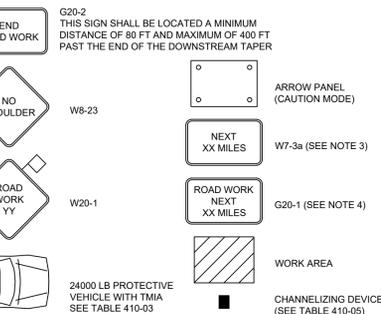
- NOTES: X = ALLOWED, BLANK = NOT ALLOWED, 0 = OPTIONAL * SEE NOTE 5
1. A TYPE I OBJECT MARKER MAY BE USED IN LIEU OF CHANNELIZING DEVICE
2. CHANNELIZING DEVICES SHALL BE EQUIPPED WITH A FLASHING WARNING LIGHT

SIGN	NON-FREEWAY	FREEWAY
G20-2	36 x 18	48 x 24
W20-1	36 x 36	48 x 48
W21-5	36 x 36	48 x 48
W7-3a	24 x 18	36 x 30
G20-1	36 x 18	48 x 24
WARNING FLAG	18 x 18	18 x 18

* FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST

TWO-LANE TWO-WAY ROADWAY SHOULDER CLOSURE INTERMEDIATE TERM OPERATION

SCALE: N.T.S.



REQUIRED TREATMENT FOR PAVEMENT EDGE DROP-OFFS

DROP-OFF HEIGHT	EDGE LINE PAVEMENT MARKINGS	SHOULDER CLOSURE	MINIMUM DRUM SPACING	MINIMUM VERTICAL PANEL SPACING	MINIMUM TUBULAR MARKERS SPACING	MINIMUM TALL CONES SPACING	SIGNS
DROP-OFF AT OR WITHIN SHOULDER							
WITHIN 4 FT. FROM TRAVEL LANE							
2 - 6 IN.	YES	YES	100 FT.	100 FT.	NO	NO	NO SHOULDER
	NO	YES	40 FT.	40 FT.	NO	NO	NO SHOULDER
6 - 24 IN.	YES	YES	40 FT.	40 FT.	NO	NO	NO SHOULDER
	NO	YES	20 FT.	20 FT.	NO	NO	NO SHOULDER
WITHIN 4 FT. FROM TRAVEL LANE							
2 - 6 IN.	YES	YES	200 FT.	200 FT.	100 FT.	100 FT.	NO SHOULDER
	NO	YES	100 FT.	100 FT.	40 FT.	40 FT.	NO SHOULDER
6 - 24 IN.	YES	YES	40 FT.	40 FT.	NO	NO	NO SHOULDER
	NO	YES	40 FT.	40 FT.	NO	NO	NO SHOULDER
DROP-OFF OUTSIDE SHOULDER EDGE							
SHOULDER WIDTH < 4 FT.							
2 - 6 IN.	YES	NO	100 FT.	100 FT.	NO	NO	LOW SHOULDER
	NO	YES	100 FT.	100 FT.	NO	NO	NO SHOULDER
6 - 24 IN.	YES	NO	40 FT.	40 FT.	NO	NO	LOW SHOULDER
	NO	YES	40 FT.	40 FT.	NO	NO	NO SHOULDER
SHOULDER WIDTH ≥ 4 FT.							
2 - 6 IN.	YES	NO	200 FT.	200 FT.	100 FT.	100 FT.	LOW SHOULDER
	NO	YES	100 FT.	100 FT.	40 FT.	40 FT.	NO SHOULDER
6 - 24 IN.	YES	NO	100 FT.	100 FT.	40 FT.	40 FT.	LOW SHOULDER
	NO	YES	40 FT.	40 FT.	NO	NO	NO SHOULDER

- NOTES:
1. THE TABLE SHOWS SPACING FOR DRUMS OF TYPE II BARRICADES. THE SPACING SHALL BE HALVED IF OTHER CHANNELIZING DEVICES ARE USED. TYPE III BARRICADES MAY BE USED INSTEAD OF DRUMS, IF SPACE PERMITS BUT NO SEPARATE PAYMENT WILL BE MADE UNLESS OTHERWISE SHOWN ON THE PLAN.
2. FOR DROP-OFF LENGTHS SHORTER THAN THE MAXIMUM DEVICE SPACING SHOWN IN TABLE 1, OR FOR DROP-OFFS AT INTERSECTIONS, THE DEVICE SPACING SHALL BE SHORTENED TO PROVIDE ADEQUATE CHANNELIZATION AS DIRECTED BY THE ENGINEER.
3. TWO FLASHING WARNING LIGHTS SHALL BE USED AT THE BEGINNING OF EACH WORK ZONE DROP-OFF.
4. THE RAMP FROM THE PAVEMENT SURFACE TO THE EXCAVATED AREA SHALL NOT EXCEED THE SLOPE SHOWN IN THE TABLE. FOR CASES WHERE NO SLOPE IS SHOWN, NO SLOPE RAMP IS REQUIRED.
5. WHENEVER, IN THE OPINION OF THE ENGINEER IT IS NOT PRACTICABLE TO ACHIEVE THE DESIRED RAMP SLOPE SHOWN IN THE TABLE, THE FLATTEST PRACTICABLE RAMP SHALL BE CONSTRUCTED AND THE DEVICE SPACING SHALL MATCH THE <7 DAY SPACING, EXCEPT POSITIVE BARRIERS SHALL BE REQUIRED FOR DROP-OFFS EXCEEDING 24 INCHES ON ROADWAYS WITH TRAFFIC VOLUMES EXCEEDING 7500 VEHICLES PER DAY.
6. AT THE CONTRACTOR'S OPTION, REQUIRED 1:2 RAMP SPACING MAY BE FLATTENED TO 1:4 AND DEVICE SPACING INCREASE TO 200 FEET.
7. FOR DROP-OFFS LOCATED MORE THAN 10 FEET FROM THE EDGE OF THE TRAVEL LANE, RAMPING SHALL NOT BE REQUIRED AND THE REQUIRED SPACING FOR DRUMS AND TYPE III BARRICADES SHOULD BE 100 FEET (50 FEET FOR ALTERNATE DEVICES) DRUMS OR TYPE III BARRICADES SPACED 100 FEET OR OTHER APPROVED DEVICES. SPACED AT 50 FEET MAY BE SUBSTITUTED FOR POSITIVE BARRIER. SIGNS AND FLASHING WARNING LIGHTS SHALL BE PROVIDED AS REQUIRED FOR DROP-OFFS GREATER THAN 6 INCHES.
8. FOR WINTER SHUTDOWN PERIODS, THE CONTRACTOR SHALL RESTORE THE ROADWAY TO THE NORMAL OPERATING CONDITION.
9. FOR DROP-OFFS EXCEEDING 24 INCHES IN DEPTH FOR EXPOSURE TIME OF 7 DAYS OR LESS AND WHEN AN OFFSET OF AT LEAST TWO FEET CANNOT BE PROVIDED FROM THE EDGE OF THE TRAVELED LANE TO THE DROP-OFF, ALTERNATE TRAFFIC CONTROL PLANS MAY BE REQUIRED BY THE ENGINEER.

No.	DATE	DESCRIPTION
1	10/05/22	REVISED PER PB COMMENTS
2	10/31/22	REVISED LOT LAYOUT
3	03/23/23	REVISED GRADING FOR DRIVEWAY LAYOUT

DRAWING STATUS	ISSUE DATE:
THIS SHEET IS PART OF THE PLAN SET ISSUED FOR	03/23/2023
<input type="checkbox"/> CONCEPT APPROVAL	N/A OF N/A
<input checked="" type="checkbox"/> PLANNING BOARD APPROVAL	8 OF 8
<input type="checkbox"/> OGDH REALTY SUBDIVISION APPROVAL	N/A OF N/A
<input type="checkbox"/> OGDH WATERMAIN EXTENSION APPROVAL	N/A OF N/A
<input type="checkbox"/> NYSDEC APPROVAL	N/A OF N/A
<input type="checkbox"/> NYSDOT APPROVAL	N/A OF N/A
<input type="checkbox"/> OTHER	N/A OF N/A
<input type="checkbox"/> FOR BID	N/A OF N/A
<input type="checkbox"/> FOR CONSTRUCTION	N/A OF N/A

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