

### LEGEND

**EXISTING**

- PROJECT SITE
- ADJACENT PROPERTY LINES
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE

**PROPOSED**

- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- SILT FENCE
- LIMIT OF DISTURBANCE
- RESERVE TRENCHES
- PROPOSED WELL
- PROPOSED WELL ON ADJACENT PROPERTIES
- PERCOLATION TESTS
- DEEP TESTS
- OVERLAND FLOW ARROWS

### NOTES:

- SURVEY TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY FOR JOHN DEMARCO" PREPARED BY COLLIER ENGINEERING & DESIGN, DATED 10/21/21.
- ARCHITECTURAL PLANS FOR DEMARCO RESIDENCE PROVIDED BY DEGRAU & DEHAAN ARCHITECTS VIA EMAIL ON SEPT. 20, 2022.
- AMENDED TWO LOT SUBDIVISION FOR HUDSON LANDINGS CORP. SECTION 121 BLOCK 1 LOTS 16 & 17 BY MASER CONSULTING P.A. DATED 10/8/08 & SIGNED BY THE TOWN OF NEWBURGH PLANNING BOARD ON 2/2/09.

### SEPTIC NOTES:

- LOW FLOW PLUMBING FIXTURES MUST BE USED IN THE HOME.
- SEPTIC TANK TO HAVE MAXIMUM EARTH COVER OF 12". ANY COVERS AT GRADE MUST BE LOCKABLE AND WATER TIGHT.
- HEAVY EQUIPMENT MUST BE KEPT OFF THE AREA OF THE ABSORPTION FIELD EXCEPT FOR THE ACTUAL CONSTRUCTION OF THE FIELD. THERE SHALL BE NO UNNECESSARY MOVEMENT OF CONSTRUCTION EQUIPMENT IN THE AREA OF THE PROPOSED FIELD BEFORE, DURING, OR AFTER CONSTRUCTION. EXTREME CARE MUST BE TAKEN DURING THE ACTUAL CONSTRUCTION AS TO AVOID ANY UNDUCE COMPACTION THAT COULD RESULT IN A CHANGE OF THE ABSORPTION CAPACITY OF THE SOIL ON WHICH THE DESIGN WAS BASED.
- THE ABSORPTION FIELD AREA MUST BE STAKED OUT AND PROTECTED WITH ORANGE CONSTRUCTION FENCE THROUGHOUT THE DEVELOPMENT OF THE LOT.
- TRENCHES MUST NOT BE CONSTRUCTED IN WET SOIL.
- TRENCH BOTTOMS MUST BE DUG LEVEL IN THE LONGITUDINAL AND TRANSVERSE DIRECTIONS.
- SIDES AND BOTTOM OF TRENCHES MUST BE RAKED IMMEDIATELY PRIOR TO PLACING GRAVEL.
- INFILTRATOR UNITS MUST HAVE END CAPS.
- THE FIRST LENGTH OF SOLID PIPE LEAVING THE D-BOX MUST BE AT THE SAME SLOPE (0.25% MIN.) FOR ALL OUTLETS FOR A MINIMUM OF 30' TOWARDS LATERALS. DISTRIBUTION PIPE SHALL BE PVC SDR 35.
- 90 DEGREE BENDS ARE PROHIBITED IN THE EFFLUENT LINE LEADING TO THE D-BOX.
- NO ROOF, CELLAR, OR FOOTING DRAINS TO BE DISCHARGED TO SEWAGE DISPOSAL SYSTEM.
- NO BASEMENT FIXTURES ARE PERMITTED WITHOUT SPECIFIC SEWAGE SYSTEM DESIGN.
- A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER (OR OTHER DESIGN PROFESSIONALS AS ALLOWED BY THE NYS EDUCATION DEPT.) SHALL INSPECT THE SANITARY & SEWAGE DISPOSAL FACILITIES AT THE TIME OF CONSTRUCTION, PRIOR TO THE OCCUPANCY OF THE DWELLING. THE ENGINEER SHALL CERTIFY TO THE ORANGE COUNTY DEPARTMENT OF HEALTH AND THE LOCAL CODE ENFORCEMENT OFFICER THAT THE FACILITIES HAVE BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND THAT ANY SEPTIC TANK JOINTS HAVE BEEN SEALED AND TESTED FOR WATER TIGHTNESS.
- RESULTS INDICATED FOR SEPTIC DESIGN (PERCOLATION AND DEEP TESTS) ARE RESULTS FROM ACTUAL FIELD TESTING PERFORMED ON 10/21/21 & 04/10/07 AND JOINT TESTING WITH THE ORANGE COUNTY DEPARTMENT OF HEALTH ON 6/2/22.
- THIS SYSTEM WAS NOT DESIGNED TO ACCOMMODATE GARBAGE GRINDERS, JACUZZI TYPE SPA TUBS OVER 100 GALLONS. AS SUCH, THESE ITEMS SHALL NOT BE INSTALLED UNLESS THE SYSTEM IS REDESIGNED TO ACCOUNT FOR THEM AND RE-APPROVED BY THE ORANGE COUNTY HEALTH DEPARTMENT.
- SURFACE WATER DIVERSION SWALES MUST BE INSTALLED AS REQUIRED TO DIRECT OVERLAND SHEET FLOW AWAY FROM THE ABSORPTION FIELD.
- THE DESIGN AND LOCATION OF SANITARY FACILITIES (WATER AND SEWER SYSTEMS) SHALL NOT BE CHANGED WITHOUT REVIEW AND APPROVAL OF THE ORANGE COUNTY DEPARTMENT OF HEALTH.
- THERE SHALL BE NO RE-GRADING IN THE AREA OF THE ABSORPTION FIELD AND EXPANSION AREA.
- NO SWIMMING POOLS, DRIVEWAYS, OR STRUCTURES THAT MAY COMPACT THE SOIL SHALL BE LOCATED OVER ANY PORTION OF THE ABSORPTION FIELD OR EXPANSION AREA.
- THERE MUST BE UNINTERRUPTED POSITIVE SLOPE FROM THE SEPTIC TANK TO THE BUILDING, ALLOWING SEPTIC GASES TO DISCHARGE THROUGH THE VENT STACK.
- SEPTIC TANKS SHOULD BE INSPECTED PERIODICALLY AND PUMPED EVERY 3-5 YEARS.
- DISTRIBUTION BOXES SHOULD BE INSPECTED ANNUALLY TO ASSURE THEY ARE LEVEL AND OPERATING PROPERLY.
- UNAUTHORIZED REPRODUCTION OR ALTERATION TO THIS DRAWING IS PROHIBITED.
- DIG SAFELY NEW YORK MUST BE CONTACTED PRIOR TO ANY EXCAVATION OF DEMOLITION (DIAL 811 OR WWW.DIGSAFELYNEWYORK.COM)

### SEPTIC SYSTEM DESIGN TABLE

STABILIZED PERC RATE (MIN/INCH)	DESIGN PERC RATE (MIN/INCH)	DEEP TEST INFORMATION	TRENCH LENGTH REQUIRED (FEET)	DESIGN TRENCH LENGTH (FEET)	DESIGN 50% RESERVE LENGTH (FEET)
		TP-1 (DATE: 4/10/07) 0'-3" TOPSOIL 3'-72" SANDY LOAM NO RESTRICTIVE FEATURE, WATER, OR MOTTLING	5 BEDROOMS = 550 GPD BACKWASH VOL= 64 GPD DESIGN FLOW= 614 GPD DESIGN RATE = 21-30 MIN/IN APP. RATE = 0.6 GPD/SF REQ. AREA = 614/.6 = 1,023 SF	7 LATS @ 60' EA. = 420 LF	REQUIRED RESERVE LENGTH: 384' * 0.5 = 192'
		TP-2 (DATE: 4/10/07) 0'-3" TOPSOIL 3'-36" SANDY LOAM 36'-72" SANDY SILTY LOAM NO RESTRICTIVE FEATURE, WATER, OR MOTTLING	REQUIRED TRENCH LENGTH = (2' WIDE TRENCHES) 1023 = 512 FEET		
		TP-3 (DATE: 8/15/07) 0'-44" SILT LOAM WITH FINE SAND 44'-66" ORGANIC TOP SOIL WITH DECOMPOSING DEBRIS 66'-108" FINE SAND NO RESTRICTIVE FEATURE, WATER, OR MOTTLING	GRAVELLESS REDUCTION = 0.25% TRENCH LENGTH REDUCTION		
		TP-4 (DATE: 6/2/22) 0'-12" TOP SOIL 12'-26" GRAVELLY SILTY LOAM 26'-30" LT BROWN CLAYEY SILT 30'-48" GRAY SILTY CLAY NO RESTRICTIVE FEATURE, WATER, OR MOTTLING	REDUCED TRENCH LENGTH = 0.75 * 512 = 384 FEET		

\* JOINT TESTING PERFORMED ON JUNE 02, 2022 AND WITNESSED BY MICHAEL CACCIO OF THE ORANGE COUNTY DEPARTMENT OF HEALTH.

### MINIMUM HORIZONTAL SEPARATION DISTANCE (in FEET)

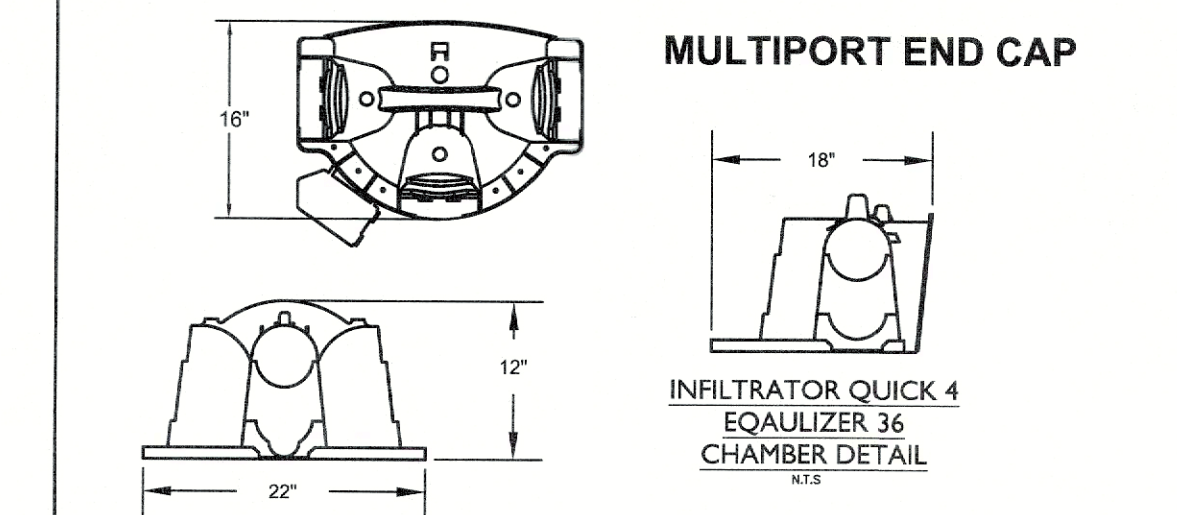
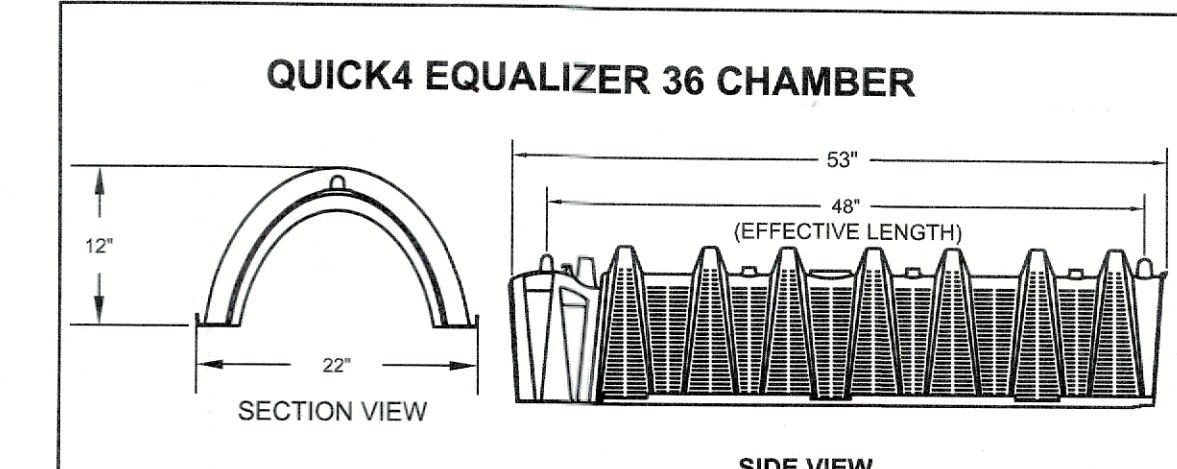
EXISTING FEATURES	WATERTIGHT SEPTIC TANK	SEWER LINE	ABSORPTION FIELD OR UNLINED SAND FILTER (INCLUDING REPLACEMENT AREA)	PROPOSED
DRILLED WELL - PUBLIC WATER SYSTEM	100	50	200	>100, >50
WATER LINE (PRESSURE)	10	10	10	>10
<b>RECOMMENDED MINIMUM HORIZONTAL SEPARATION DISTANCES</b>				
SURFACE WATER	50	25	100	>100
INTERCEPTOR DRAIN / OPEN DRAINAGE DIVERSION TO GROUNDWATER	25	25	50	>25, >25, >50
STORMWATER MANAGEMENT PRACTICE DISCHARGING TO SURFACE WATER	50	25	100	>50, >25, >100
CULVERT (TIGHT PIPE)	25	10	35	>25, >10, >35
CULVERT OPENING	25	25	50	>25, >25, >50
CATCH BASIN	25	N/A	50	>25, >50
FOUNDATION	10	N/A	20	10, >25
PROPERTY LINE	10	10	10	>10
WETLAND (NYSDEC)	100	100	100	>100

- WHEN WASTEWATER TREATMENT SYSTEMS ARE LOCATED UPGRADE AND IN THE DIRECT PATH OF SURFACE WATER DRAINAGE TO A WELL, THE CLOSEST PART OF THE TREATMENT SYSTEM SHALL BE AT LEAST 200 FEET AWAY FROM THE WELL.
- SEPARATION DISTANCES SHALL ALSO BE MEASURED FROM THE EDGE OF THE DESIGNATED ADDITIONAL USABLE AREA (RESERVE AREA), WHEN AVAILABLE.

EXISTING FEATURES	WATERTIGHT SEPTIC TANK	SEWER LINE	ABSORPTION FIELD OR UNLINED SAND FILTER (INCLUDING REPLACEMENT AREA)	SWALE, STREAM, OR WATER COURSE	CEMETERY PROPERTY LINE	SUBDIVISION BOUNDARY
DRILLED WELL - PRIVATE WATER SYSTEM	50	50	100	25	100	50'

\* ADJOINING LOT OWNED BY TOWN OF NEWBURGH FOR RAIL UTILITY & IS NOT SUB-DIVIDABLE, THEREFORE THIS SEPARATION HAS NOT BEEN APPLIED

EXISTING FEATURES	HIGH WATER LINE OF A WET POND	INTERMITTENT STREAM, DRY WELL, CULVERT OR STORM SEWER	CULVERT OR STORM SEWER (GASKET TIGHT PIPED)	CURTAIN DRAIN	EXPANSION AREA TO TOP OF EMBANKMENT OR SLOPE > 1 ON 3	SOLID CURTAIN DRAIN ROOF OR FOOTING PIPES, SNOW STORAGE EASEMENT
ABSORPTION FIELD	100	50	35	15	25	10



### DOSE DRAW

(SI-PHON CHAMBER & DOSE DRAW CALCULATIONS ARE TO BE USED IF FUTURE UTILIZATION OF THE EXPANSION AREA IS REQUIRED)

**CALCULATION FOR THIS DESIGN**

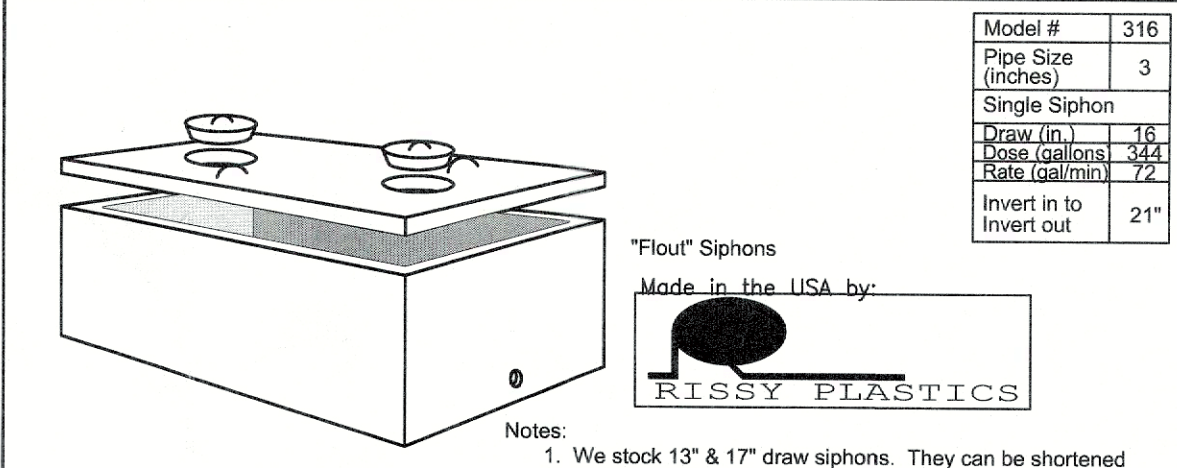
(7) 4-INCH LATERALS 60 FEET IN LENGTH (PRIMARY) + (3) 4-INCH LATERALS 65 FEET IN LENGTH (RESERVE)

4 INCH PIPE AREA = 0.25\*(PI)\*(4)^2 = 0.00727 SF.

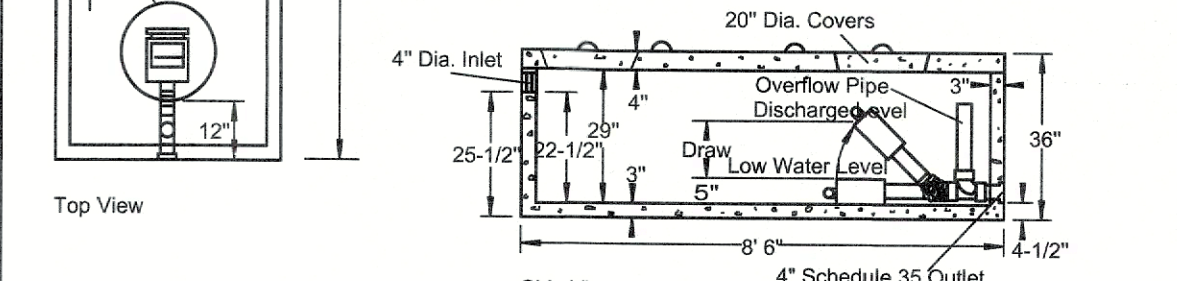
CONVERSION: 1 CF = 7.48 GAL.

FIELD VOLUME = (7\*60 + 3\*65)\*(0.00727) = 53.7 CF (402 GAL.)

DOSE TARGET = 85% FIELD VOLUME = (0.85)(402) = 341 GAL.

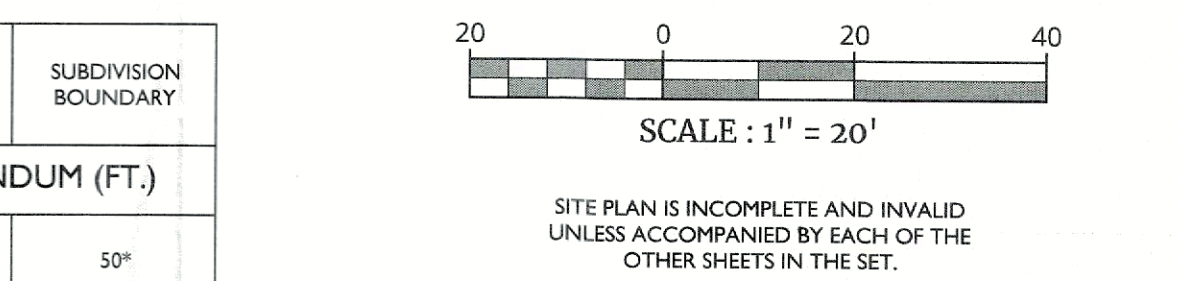


- Notes:
- We stock 13" & 17" draw siphons. They can be shortened down to 8" allowing a dose range of 175 to 367 gallons. Let us know your dose and we will let it up for you. For smaller doses, see our SC-4x3 chamber.
  - Dual alternating siphons are available with two weeks advance notice. They are set up as needed with a 15" minimum draw.
  - Other dose volumes available on a special order basis.
  - A minimum 2" bedding of sand, pea gravel, or trench aggregate is required.
  - Earth cover shall be 12" maximum.
  - Dosing chamber must be installed downstream of septic tank, if future utilization of the expansion area is required.



SPECIFICATIONS	PRECAST SIPHON CHAMBER MODEL SC-SXB
Concrete Min. Strength: 4,000 psi at 28 days	Woodard's Concrete Products, Inc.
Reinforcement: #4 Rebar, 6x6x10ga. WWM	629 Lybolt Road, Bullville, NY 10815
Air Entrainment: 5%	(845) 361-3471 / Fax 361-1050
Construction Joint: Butyl Rubber Sealant	Page 2C 7/11/03
Pipe Connection: Polylok Seal & SDR 35 Coupler	
Weight: 5,700 lbs	
Load Rating: 300 psf	

### PRECAST SIPHON CHAMBER N.T.S



### ORANGE COUNTY DEPARTMENT OF HEALTH

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	12/07/2021	MAS	CDR
PROJECT NUMBER:	060010071	DRAWING NAME:	C-GRAD

### GRADING, DRAINAGE, UTILITY, & EROSION CONTROL PLAN

2 of 3

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

REV	DATE	DESCRIPTION
1	03/10/22	REVISED PER SEPTIC DESIGN FOR OCOOH SUBMISSION
2	06/08/22	MAS REVISED PER OCOOH COMMENTS
3	09/07/22	MAS REVISED PER OCOOH COMMENTS
4	10/06/22	CDR REVISED FOR 5 BEDROOM SEPTIC DESIGN AND PER UPDATED BUILDING DECK FOOTPRINT

UNAUTHORIZED ALTERATION OR ADDITION TO A PLAN BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER IS A VIOLATION OF ARTICLE 145, SECTION 7209, SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

Digitally signed by Cory D. Robinson  
Cory Daniel Robinson  
NEW YORK LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: 103788  
COLLIERS ENGINEERING & DESIGN CT, P.C.  
N.Y. C.O.A.#: 0017609

**PLOT PLAN**  
FOR  
**JOHN DEMARCO ANCHORAGE LOT 17**  
SECTION 121  
BLOCK 1  
LOT 17  
TOWN OF NEWBURGH  
ORANGE COUNTY  
NEW YORK STATE

**Colliers** Engineering & Design  
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COLLIERS ENGINEERING & DESIGN CT, P.C. DOING BUSINESS AS MASER CONSULTING ENGINEERING & LAND SURVEYING

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION