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# TOWN OF NEWBURGH PLANNING BOARD TECHNICAL REVIEW COMMENTS

PROJECT: ROCK CUT ESTATES

PROJECT NO.: 19-19

PROJECT LOCATION: SECTION 47, BLOCK 2, LOT 11, 12, 13.2, 14.2, 15.2

REVIEW DATE: 26 NOVEMBER 2019
MEETING DATE: 5 DECEMBER 2019

PROJECT REPRESENTATIVE: ARDEN CONSULTING ENGINEERS

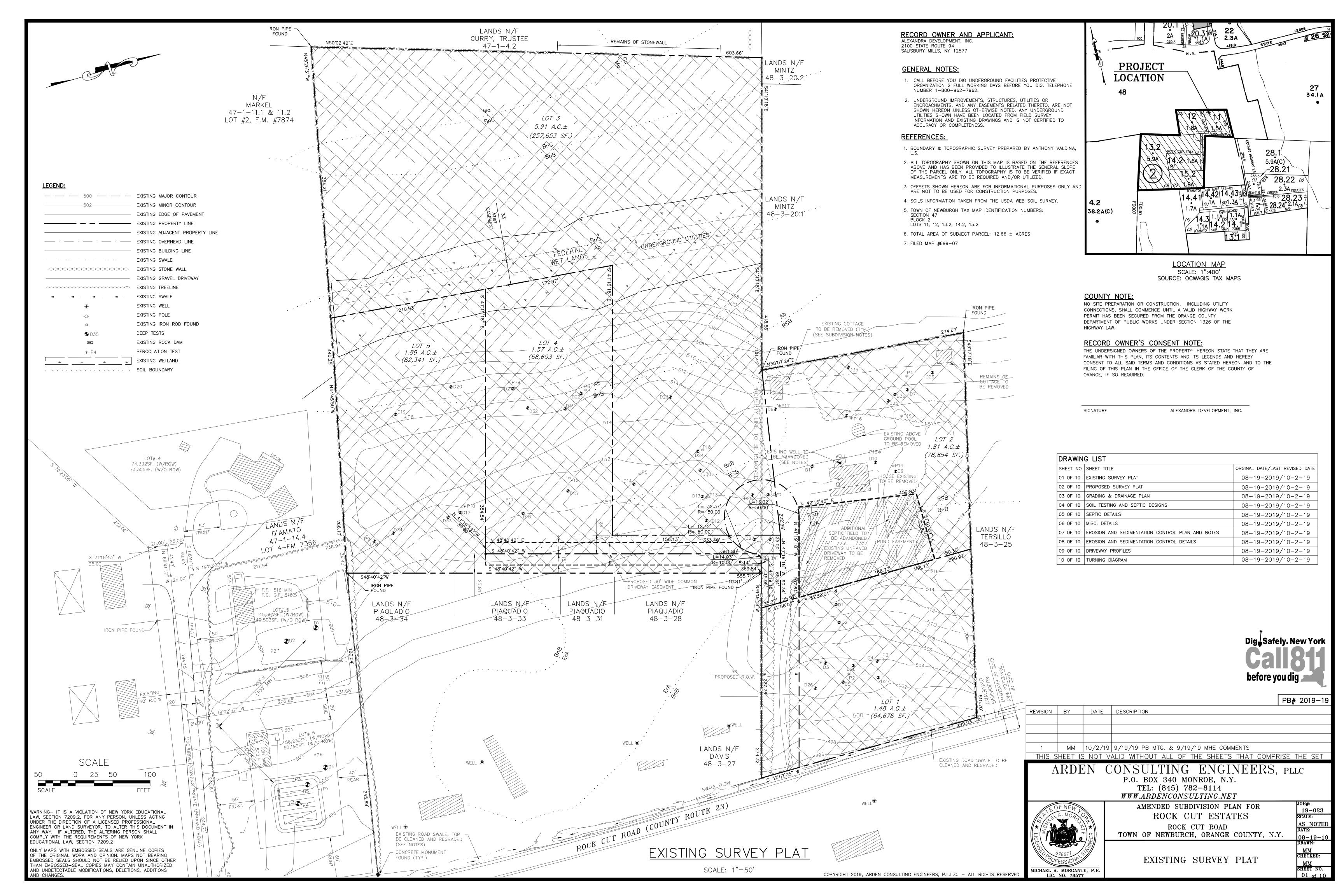
- 1. Status of the Town's Board approval for three (3) lots on a common driveway should be addressed.
- 2. Status of Orange County DPW approval of revised access should be received.
- **3.** The project previously paid recreation fees for the five (5) lot subdivision. No additional recreation fees are required.
- **4.** A soil erosion sediment control plan has been provided which serves as the SWPPP for the residential subdivision greater than 1 acre less than 5 acre disturbance. A municipal authorization form will be executed upon request.
- 5. Demolition permits continue to be necessary to remove any structures from the project site.
- **6.** Plans depicting the revised grading which previously encroaches an adjoining lot should be submitted.
- **7.** Access and maintenance agreements for the common driveway should be reviewed by the Planning Board Attorney as a condition of approval.

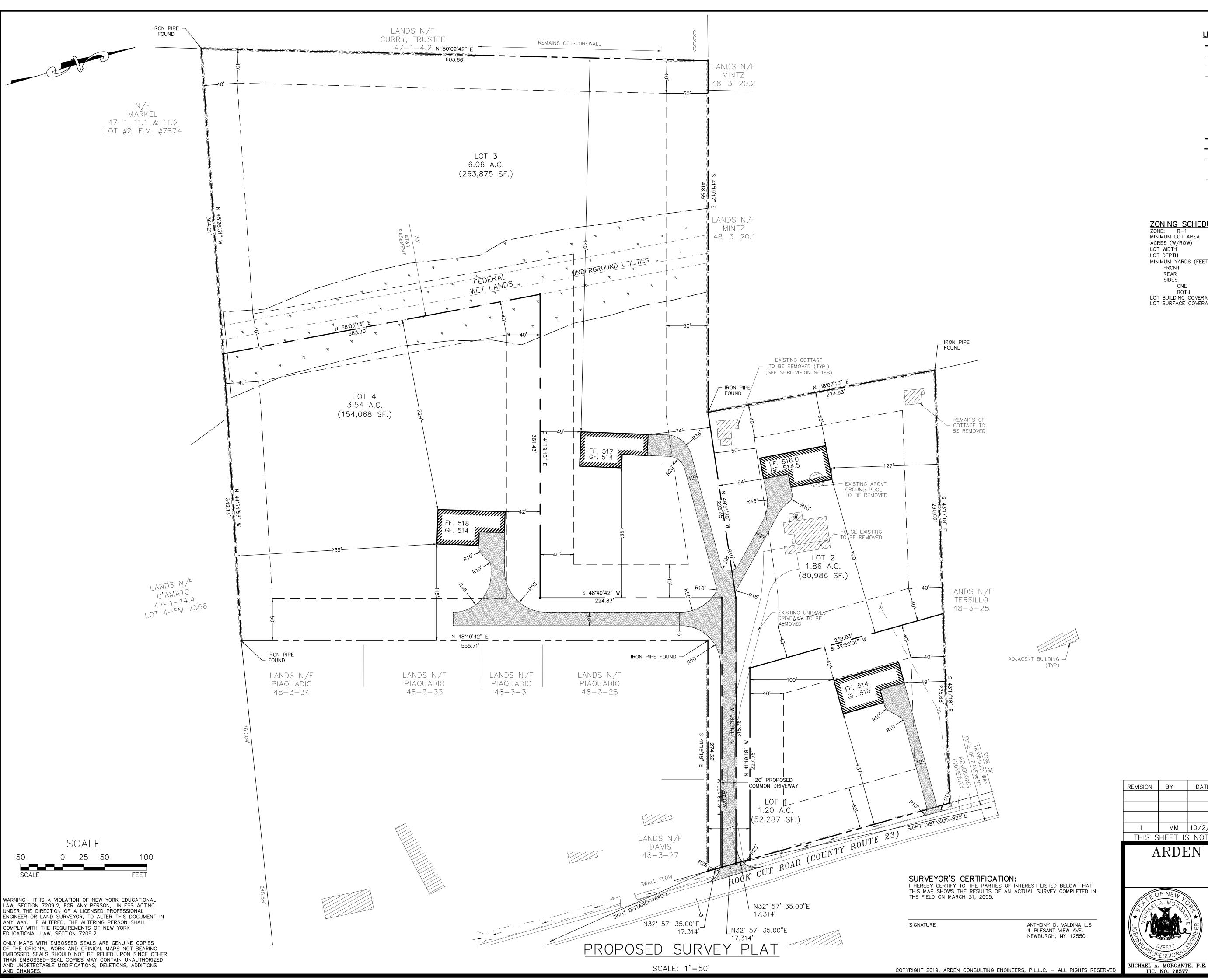
Respectfully submitted,

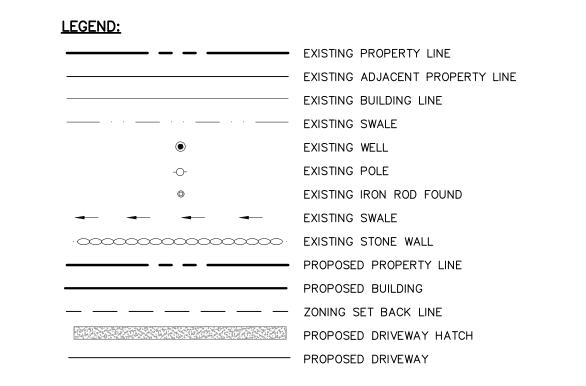
McGoey, Hauser and Edsall Consulting Engineers, D.P.C.

Patrick J. Hines Principal

PJH/jlc







| ZONING SCHEDULE       |           |                |                |             |                |
|-----------------------|-----------|----------------|----------------|-------------|----------------|
| ZONE: R-1             | REQUIRED  | LOT #1         | LOT #2         | LOT #3      | LOT #4         |
| MINIMUM LOT AREA      |           | "              | "              | "           | "              |
| ACRES (W/ROW)         | 40,000SF. | 52,287 SF.     | 80,986 SF.     | 263,875 SF. | 154,068 SF     |
| LOT WIDTH             | 150'      | 247 <b>'</b> ± | 307'±          | 643'±       | 359'±          |
| LOT DEPTH             | 150'      | 226'±          | 259'±          | 592'±       | 372 <b>'</b> ± |
| MINIMUM YARDS (FEET)  |           |                |                |             |                |
| FRONT                 | 50'       | 137'           | 54'            | 74'         | 115'           |
| REAR                  | 40'       | 42'            | 127'           | 49'         | 229'           |
| SIDES                 |           |                |                |             |                |
| ONE                   | 30'       | 49'            | 65'            | 155'        | 42'            |
| вотн                  | 80'       | 149'           | 255'           | 600'        | 281'           |
| LOT BUILDING COVERAGE | 10%       | 10% MAX        | 10% MAX        | 10% MAX     | 10% MAX        |
| LOT SURFACE COVERAGE  | 20%       | 20% MAX        | 20% MAX        | 20% MAX     | 20% MAX        |
|                       | *REQ      | UIRED FRONT YA | ARD FOR COUNTY | AND STATE R | ROADWAYS       |



| PB# | 201 | 9-1 | 19 |
|-----|-----|-----|----|

JOB#: 19-023 SCALE: AS NOTED DATE:

|          |         |         |   | · - // · |     |
|----------|---------|---------|---|----------|-----|
| REVISION | BY      | DATE    | DESCRIPTION                               |          |     |
|          |         |         |   |          |     |
|          |         |         |   |          |     |
|          |         |         |   |          |     |
| 1        | ММ      | 10/2/19 | 9/19/19 PB MTG. & 9/19/19 MHE COMMENTS    |          |     |
| THIS S   | HEET IS | NOT V   | ALID WITHOUT ALL OF THE SHEETS THAT COMPR | ISE THE  | SET |

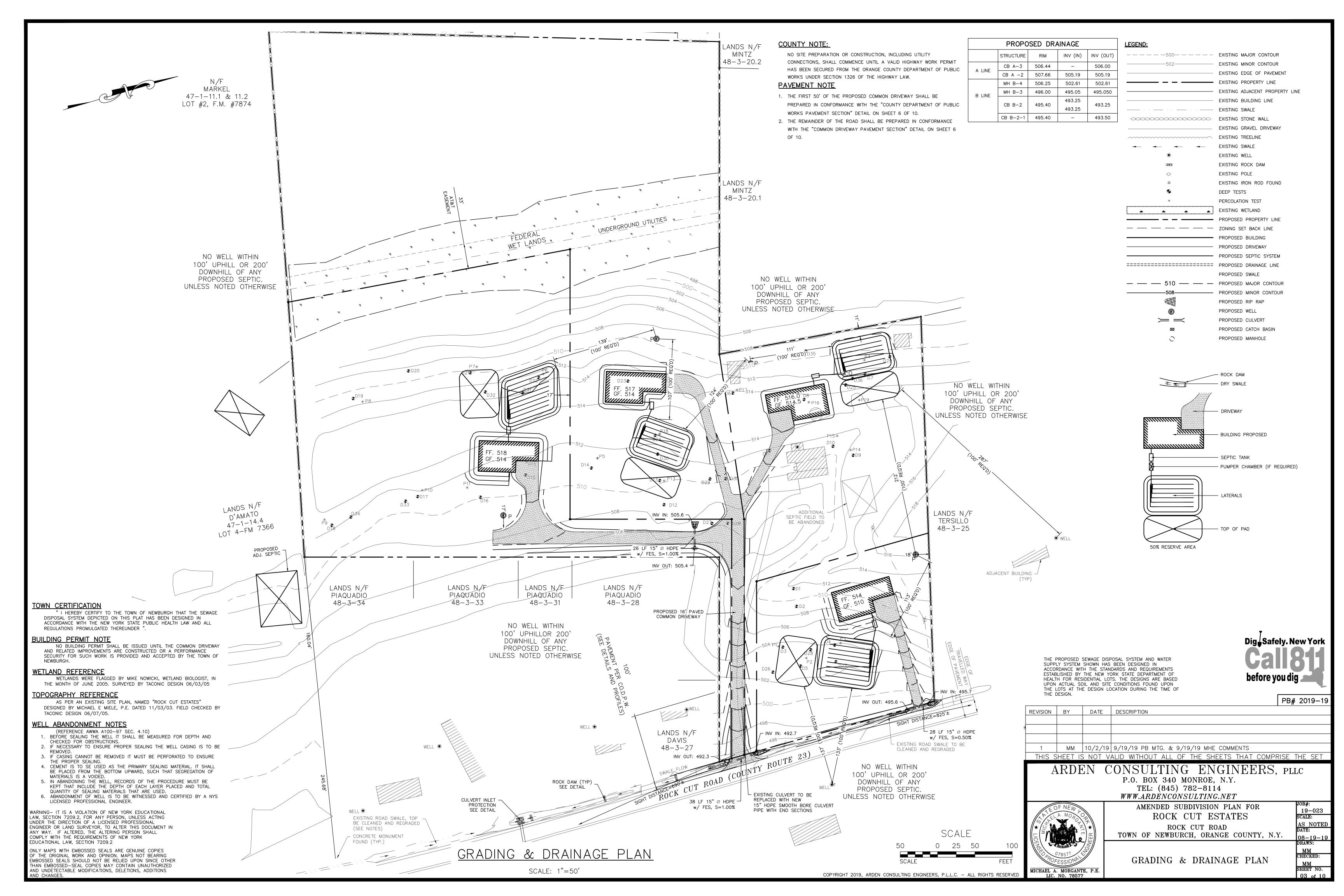
# ARDEN CONSULTING ENGINEERS, PLLC P.O. BOX 340 MONROE, N.Y. TEL: (845) 782-8114 WWW.ARDENCONSULTING.NET



| AMENDED SUBDIVISION PLAN FOR          |
|---------------------------------------|
| ROCK CUT ESTATES                      |
| ROCK CUT ROAD                         |
| TOWN OF NEWBURCH, ORANGE COUNTY, N.Y. |

PROPOSED SURVEY PLAT

MM CHECKED: MM SHEET NO. 02 of 10



| LOT 1 1.20 A.C.  | LOT 2<br>1.86 A.C.  | LOT 3<br>6.06 A.C.  | LOT 4<br>3.54 A.C.  |
|--|---|---|---|
| Name   |   |   |   |
|  |   |   |   |
|  |   | 1 2 3 4 5<br>FINISH 1:57 1:59 2:02 2:05 2:08<br>STAR 1:56 1:58 2:00 2:03 2:06   |   |
|  |   |   |   |
|  | ▼P16   18" DEEP 5/19/05     1   2   3   4   5   6     FINISH   11:44   11:53   12:07   12:24   12:41   12:58     STAR   11:40   11:45   11:54   12:08   12:25   12:42     TIME   :04   :08   :13   :16   :16     STABILIZED PERCOLATION RATE: 20 MINUTES/INCH |   |   |
|  |   |   |   |
| ☑ USED FOR DESIGN  | ☑ USED FOR DESIGN   | ☑ USED FOR DESIGN   | ☑ USED FOR DESIGN   |
| D       * D1       1'-6" DEEP       4/19/05         H       18"       SHALE         D       * D2       1'-6" DEEP       4/19/05         H       18"       SHALE  | * D6       1'-6" DEEP       4/19/05         0-2'       SHALE         ⊠ * D7       1'-6" DEEP       4/19/05         0-6"       SHALE   | * D12 1'-6" DEEP 4/19/05<br>0-6" TOPSOIL<br>6"-1'6" SILTY LOAM<br>ROCK @ 1'6"   | ⊠ * D21       3'-0" DEEP       4/19/05       ⊠ * D17       3'-6" DEEP       4/19/05         0-6"       TOPSOIL       0-6" TOPSOIL       TOPSOIL       6"-3'6" SILTY LOAM       SILTY LOAM       ROCK @ 3'6"   |
| SHALE  | 6"-2'6" LOAM  ROCK @ 2'6"  D8 2'-0" DEEP 4/19/05  0-6" TOPSOIL  6"-2'0" SILTY LOAM  ROCK @ 2'0"   | <pre></pre>   | □ ★ D22       3'-0" DEEP       4/19/05       □ ★ D18       4'-6" DEEP       4/19/05         0-6"       TOPSOIL       0-6" TOPSOIL       6"-4'6" SILTY LOAM       6"-4'6" SILTY LOAM       ROCK @ 4'6"   |
| WATER @ 4'  □ ★ D4   | * D9 2'-0" DEEP 4/19/05<br>0-6" TOPSOIL<br>6"-2'0" SILTY LOAM<br>ROCK @ 4'  | * D23 1'-0" DEEP 4/19/05<br>0-6" TOPSOIL<br>6"-1'0" SILTY LOAM<br>ROCK @ 1'   | * D15 3'-0" DEEP 4/19/05 * D19 2'-6" DEEP 4/19/05 O-6" TOPSOIL O-6" TOPSOIL 6"-3'0" SILTY LOAM ROCK @ 3' ROCK @ 4'  |
| ROCK @ 4' WATER @ 4'  S D5 O-6"  TOPSOIL  ROCK @ 4'  A/19/05   | ❖ D10       2'-0" DEEP       4/19/05         0-6"       TOPSOIL         6"-2'0"       SILTY LOAM         ROCK ◎ 2'0"       2'-0" DEEP       4/19/05   | * D14 2'-0" DEEP 4/19/05<br>0-6" TOPSOIL<br>6"-2'0" SILTY LOAM<br>ROCK @ 2'<br>⊠  | * D16       3'-6" DEEP       4/19/05       * D20       2'-6" DEEP       4/19/05         0-6"       TOPSOIL       0-6"       TOPSOIL         6"-3'6"       SILTY LOAM       6"-1'6"       SILTY LOAM         ROCK @ 3'6"       ROCK @ 2'6"   |
| 6"-3'6" SILTY LOAM  ROCK @ 3'6"  ** D26 3'-4" DEEP 8/16/06  0-6" TOPSOIL  6"-40" RIPPABLE SHALE  ROCK @ 40"  | 0-6" TOPSOIL 6"-2'6" SILTY LOAM 2'6"-3'6" CLAY LOAM ROCK @ 3'6"   |   | ** D31 3'-6" DEEP 8/16/06   |
| NO WATER NO MOTLING   ★ D27 5'-2" DEEP 8/16/06 0-8" TOPSOIL 8"-40" SILTY LOAM 40"-62" CLAY ROCK @ 62"  | 6"-2'10" RIPPABLE SHALE  ROCK @ 2'10"  ** D29 4'-2" DEEP 8/16/06  0-6" TOPSOIL  6"-44" SILTY LOAM  ROCK @ 48"  NO WATER   | ROCK @ 38" NO WATER NO MOTLING  | ** D32  |
| NO WATER NO MOTTLING   ★ D27   | NO MOTTLING  ** D35   |   | ** D27 4'-0" DEEP 8/16/06  0-6" TOPSOIL  6"-28" SILTY LOAM  28"-48" CLAY  ROCK @ 48"  NO WATER  NO MOTTLING   |
| ROCK @ 48" NO WATER NO MOTTLING  | NO MOTTLING  ** D36 4'-0" DEEP 8/16/06 0-4" TOPSOIL 4"-31" SILTY LOAM ROCK @ 41" NO WATER NO MOTTLING   |   |   |
| ☑ USED FOR DESIGN  | ★ DENOTES DEEP H  ☑ USED FOR DESIGN   | OLE SOIL TESTING WITNESSED BY A REPRESENTATIVE OF McGEY,  Solution USED FOR DESIGN  | HAUSER AND EDSALL CONSULTING ENGINEERS    USED FOR DESIGN   |
| SEPTIC DESIGN CRITERIA  1. NO. OF BEDROOM— 4MAX  2. SEPTIC TANK DESIGN— 1250  3. STABILIZED PERCOLATION RATE— 20 MINS/INCH  5. DESIGN LENGTHS  4. FLOW RATE (GALS /DAY,)— 520  (a) USED PERCOLATION RATE— 30 MINS/INCH FOR DESIGN  6. FILL REQUIRED:  4BR/8 @ 55 FT = 440LF (433LF REQ'D)  3BR/6 @ 55 FT = 330LF (325LF REQ'D)  SHALLOW TRENCH SYSTEM  (SEE DETAILS SHEET 5 OF 10)  SEPTIC DESIGN CRITERIA  1. NO. OF BEDROOM— 4MAX  2. SEPTIC TANK DESIGN— 1250  3. STABILIZED PERCOLATION RATE— 9 MINS/INCH  (a) DESIGN PERCOLATION RATE— 11 TO 15 MINS/INCH  4. FLOW RATE (GALS /DAY)  5. DESIGN LENGTHS  3BR/ 5 @ 55FT = 275LF (244LF REQ'D)  4BR/8 @ 55 FT = 330LF (325LF REQ'D)  5. FILL REQUIRED:  SHALLOW TRENCH SYSTEM  (SEE DETAILS SHEET 6 OF 11)  7. DOSING REQUIRED  (SEE PUMP CHAMBER DETAILS SHEET 5 OF 10) |   | SEPTIC DESIGN CRITERIA  1. NO. OF BEDROOM— 4MAX  2. SEPTIC TANK DESIGN— 1250  3. STABILIZED PERCOLATION RATE— 9 MINS/INCH  (a) USED PERCOLATION RATE— 15 MINS/INCH FOR DESIGN  4. FLOW RATE (GALS /DAY) — 520  5. DESIGN LENGTHS  3BR/ 5 @ 55FT = 275LF (244LF REQ'D)  4BR/ 6 @ 55FT = 330LF (325LF REQ'D)  6. FILL REQUIRED:  SHALLOW TRENCH SYSTEM  (SEE DETAILS SHEET 5 OF 10) | SEPTIC DESIGN CRITERIA  1. NO. OF BEDROOM— 4MAX  2. SEPTIC TANK DESIGN— 1250  3. STABILIZED PERCOLATION RATE— 19 MINS/INCH  (a) USED PERCOLATION RATE— 30 MINS/INCH FOR DESIGN  4. FLOW RATE (GALS /DAY)— 520  5. DESIGN LENGTHS  3BR/ 6 @ 55FT = 330LF (325LF REQ'D)  4BR/ 8 @ 55FT = 440LF (433LF REQ'D)  6. FILL REQUIRED:  SHALLOW TRENCH SYSTEM  (SEE DETAILS SHEET 5 OF 10) |

WARNING- IT IS A VIOLATION OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2

ONLY MAPS WITH EMBOSSED SEALS ARE GENUINE COPIES OF THE ORIGINAL WORK AND OPINION. MAPS NOT BEARING EMBOSSED SEALS SHOULD NOT BE RELIED UPON SINCE OTHER THAN EMBOSSED-SEAL COPIES MAY CONTAIN UNAUTHORIZED AND UNDETECTABLE MODIFICATIONS, DELETIONS, ADDITIONS

THE PROPOSED SEWAGE DISPOSAL SYSTEM AND WATER SUPPLY SYSTEM SHOWN HAS BEEN DESIGNED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS ESTABLISHED BY THE NEW YORK STATE DEPARTMENT OF HEALTH FOR RESIDENTIAL LOTS. THE DESIGNS ARE BASED UPON ACTUAL SOIL AND SITE CONDITIONS FOUND UPON THE LOTS AT THE DESIGN LOCATION DURING THE TIME OF THE DESIGN.

STANDARD NOTES:

STANDARD NOTES: THE DESIGN, CONSTRUCT/ON AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND GENERALLY ACCEPTED STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION WHICH INCLUDE:

"APPENDIX 75-A, WASTE TREATMENT - INDIVIDUAL HOUSEHOLD SYSTEMS, NEW YORK STATE SANITARY CODE." 'WASTE TREATMENT HANDBOOK, INDIVIDUAL HOUSEHOLD SYSTEMS, NEW YORK STATE DEPARTMENT OF HEALTH" "RURAL WATER SUPPLY, NEW YORK STATE DEPARTMENT OF HEALTH"

"PLANNING THE SUBDIVISION AS PART OF THE TOTAL ENVIRONMENT, NEW YORK STATE DEPARTMENT OF HEALTH."

"THIS PLAN IS APPROVED AS MEETING THE APPROPRIATE AND APPLIED TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES FOR ARRANGEMENT OF SEWAGE DISPOSAL AND TREATMENT AND WATER SUPPLY FACILITIES.

ALL WELLS AND S.D.S. EXISTING OR APPROVED WITHIN 200' OF THE PROPOSED WELLS AND S.D.S. ARE SHOWN ON THIS PLAN ALONG WITH ANY OTHER ENVIRONMENTAL HAZARDS IN THE AREA THAT MAY AFFECT THE DESIGN AND FUNCTIONAL ABILITY OF THE S.D.S. AND WELL.

IT SHALL BE DEMONSTRATED BY THE CONTRACTOR TO THE CERTIFYING ENGINEER THAT THE SEPTIC TANK IS SEALED, WATER TIGHT AND ACCEPTABLE FOR USE. THIS SHALL REQUIRE, AS A MINIMUM, THE FILLING OF THE TANK WITH WATER TO OBSERVE IF IT IS IN FACT SEALED, WATERTIGHT AND ACCEPTABLE FOR USE. ALL PROPOSED WELLS AND SERVICE LINES ON THIS PLAN ARE ACCESSIBLE FOR INSTALLATION AND PLACEMENT.

INDIVIDUAL WELLS AND SEWAGE DISPOSAL SYSTEMS SHALL NO LONGER BE CONSTRUCTED OR USED FOR HOUSEHOLD PURPOSES WHEN PUBLIC FACILITIES BECOME AVAILABLE. CONNECTION TO THE PUBLIC SEWER SYSTEM IS REQUIRED WITHIN 1 YEAR OF AVAILABILITY.

A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER SHALL INSPECT THE SANITARY FACILITIES (WATER SUPPLY AND SEWAGE DISPOSAL FACILITY) AT THE TIME OF CONSTRUCTION. PRIOR TO OCCUPANCY OF THE HOUSE, THE ENGINEER SHALL CERTIFY TO THE TOWN OF NEWBURGH AND THE LOCAL CODE ENFORCEMENT OFFICER THAT THE FACILITIES ARE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND THAT ANY SEPTIC TANK JOINTS ARE SEALED AND TESTED FOR WATER TIGHTNESS.

#### SEPTIC SYSTEM GENERAL NOTES:

- 1. ALL PORTIONS OF THE SEPTIC FIELD WILL BE A MINIMUM DISTANCE OF 200 FEET UP SLOPE AND 100 FEET DOWN SLOPE FROM ANY WELL.
- 2. SEPTIC TANK TO BE LOCATED A MINIMUM DISTANCE OF 10 FEET FROM ANY BUILDING OR PROPERTY LINE. 3. CELLAR DRAINS, ROOF DRAINS OR FOOTING DRAINS SHALL NOT BE DISCHARGED IN THE VICINITY OF ABSORPTION
- 4. SWIMMING POOLS, DRIVEWAYS, OR STRUCTURES THAT MAY COMPACT THE SOIL SHALL NOT BE CONSTRUCTED OVER ANY PORTION OF THE ABSORPTION FIELD.
- 5. NO TRENCHES TO BE INSTALLED IN WET SOIL.
- 6. RAKE SIDES AND BOTTOM OF TRENCH PRIOR TO PLACING GRAVEL IN ABSORPTION TRENCH. 7. GROUT ALL PIPE PENETRATIONS TO CONC. SEPTIC TANK & DISTRIBUTION BOX.
- 8. DISTRIBUTION LINES ARE TO BE CAPPED.
- 9. THE PERIMETER OF THE ABSORPTION FIELD SHOULD BE GRADED TO DIVERT SURFACE WATER.
- 10. ALL NEWLY DISTURBED AREAS SHALL BE IMMEDIATELY STABILIZED UPON CONSTRUCTION COMPLETION USING GRASS
- 11. NO SEWAGE SYSTEM SHALL BE PLACED WITHIN 35' OF ANY WATER COURSE DRAINAGE DITCH.
- 12. ALL LAUNDRY AND KITCHEN WASTES SHALL BE DISCHARGED INTO SEWAGE SYSTEM. 13. BENDS SHALL BE USED WHEN ENTRANCE OR EXIT FROM SEPTIC TANK IS NOT APPROXIMATELY STRAIGHT. IF BENDS
- ARE USED AT POINTS OTHER THAN ENTRANCE OR EXIT POINTS, THEN A CLEANOUT IS REQUIRED. 14. THE DESIGN AND LOCATION OF THE SANITARY FACILITIES SHALL NOT BE CHANGED WITHOUT RESUBMISSION FOR
- 15. 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. 16. THIS SYSTEM WAS NOT DESIGNED TO ACCOMMODATE GARBAGE GRINDERS, JACUZZI TYPE SPA TUBS OVER 100 GALLONS, OR WATER CONDITIONERS. AS SUCH, THESE ITEMS SHALL NOT BE INSTALLED UNLESS THE SYSTEM IS
- REDESIGNED TO ACCOUNT FOR THESE. 17. THERE MUST BE AN UNINTERRUPTED POSITIVE SLOPE FROM THE SEPTIC TANK (OR ANY PUMPING OR DOSING
- CHAMBER) TO THE HOUSE, ALLOWING SEPTIC GASES TO DISCHARGE THROUGH THE STACK VENT. 18. THE PURCHASER OF THIS LOT SHALL BE PROVIDED WITH A COPY OF THE APPROVED PLANS AND AN ACCURATE AS-BUILT DRAWING OF ANY EXISTING SANITARY FACILITIES.

#### TOWN CERTIFICATION

"I HEREBY CERTIFY TO THE TOWN OF NEWBURGH THAT THE SEWAGE DISPOSAL SYSTEM DEPICTED ON THIS PLAT HAS BEEN DESIGNED IN ACCORDANCE WITH THE NEW YORK STATE PUBLIC HEALTH LAW AND ALL REGULATIONS PROMULGATED THEREUNDER".

# INSTALLATION NOTE

ALL CORNERS OF SEWAGE DISPOSAL SYSTEMS MUST BE STAKED OUT BY A SURVEYOR PRIOR TO CONSTRUCTION.

## **CONSTRUCTION NOTE:**

AN AS-BUILT SEPTIC PLAN CERTIFIED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER MUST BE SUBMITTED TO TOWN OF NEWBURGH, PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY (CO.) FOR THE NEW RESIDENCE, WHEN CONSTRUCTED.

### **COUNTY NOTE:**

NO SITE PREPARATION OR CONSTRUCTION, INCLUDING UTILITY CONNECTIONS, SHALL COMMENCE UNTIL A VALID HIGHWAY WORK PERMIT HAS BEEN SECURED FROM THE ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS UNDER SECTION 1326 OF THE HIGHWAY LAW.

### REFERENCES:

THE SOIL TESTING DEPICTED ON THIS SHEET WERE PERFORMED BY TALCOTT ENGINEERING.



19-023

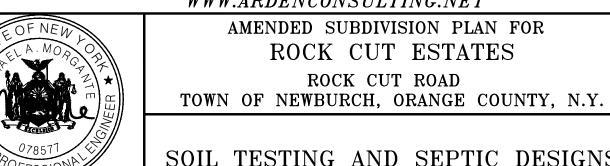
AS NOTEI

SHEET NO.

SCALE:

PB# 2019-19 REVISION BY DATE DESCRIPTION MM | 10/2/19 | 9/19/19 PB MTG. & 9/19/19 MHE COMMENTS THIS SHEET IS NOT VALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SET

CONSULTING ENGINEERS, PLLC P.O. BOX 340 MONROE, N.Y. TEL: (845) 782-8114 WWW.ARDENCONSULTING.NET

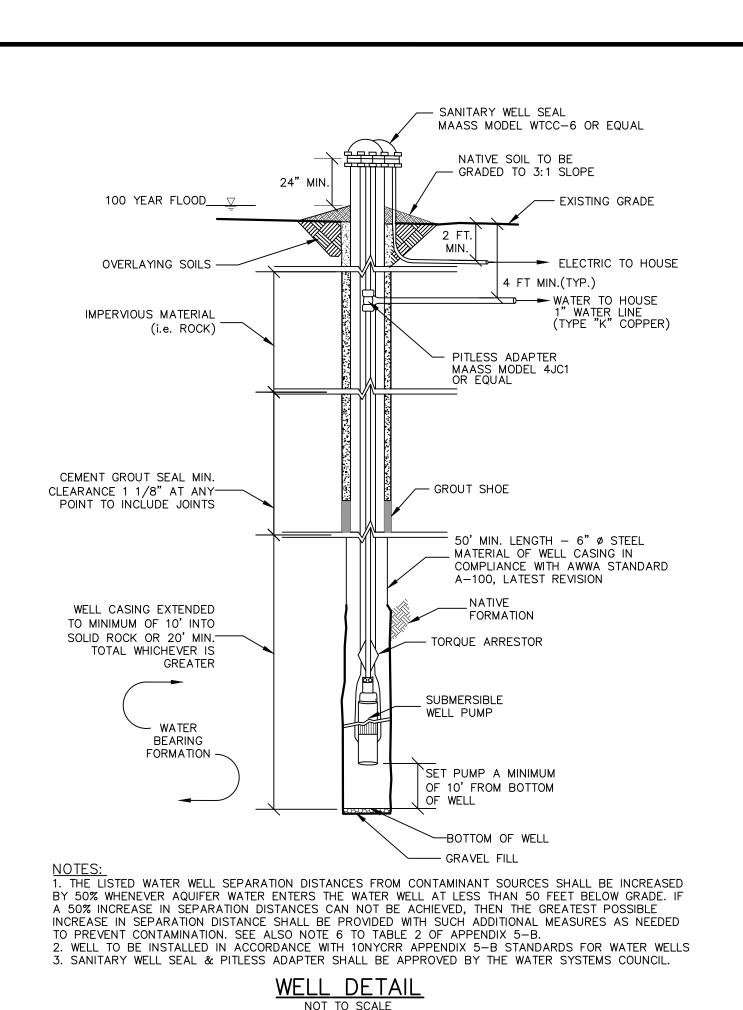


MICHAEL A. MORGANTE, P.E.

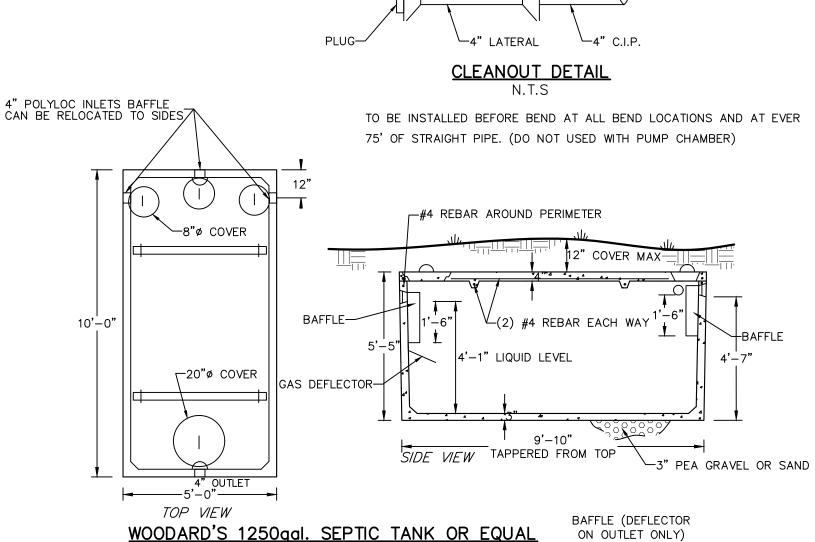
AMENDED SUBDIVISION PLAN FOR ROCK CUT ESTATES ROCK CUT ROAD

SOIL TESTING AND SEPTIC DESIGNS

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# FINISHED GRADE--CRUSHED STONE FLUSH MOUNTED CAP 4" CONNECTING PIECE ─4" 45° BEND —JOIN AS REQUIRED —CRUSHED STONE EL. VARIES



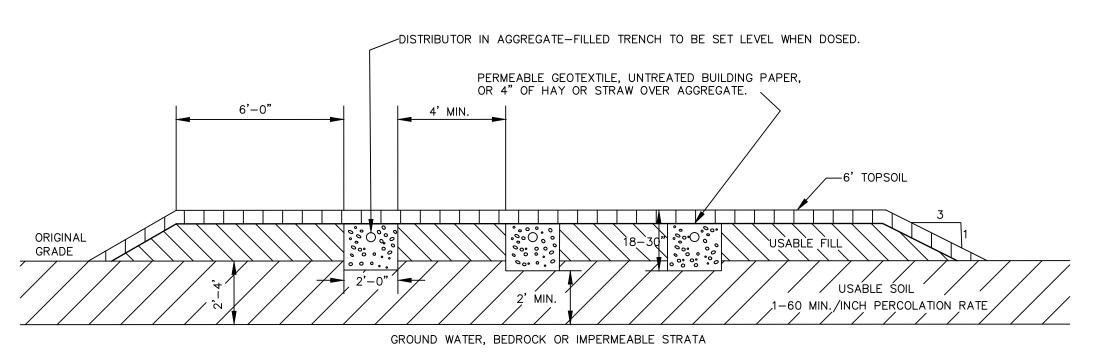
**SPECIFICATIONS:** CONCRETE MINIMUM STRENGTH- 4,000 PSI AT 28 DAYS REINFORCEMENT-6'X6"10GA. WWF, #4 REBAR AIR ENTRAPMENT- 5%. CONSTRUCTION JOINT- BUTYL RUBBER - BASE CEMENT PIPE CONNECTION- POLYLOC SEAL (PATENTED) LOAD RATING- 300PSF WEIGHT = 9,500LBS

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**COUNTY NOTE:** 

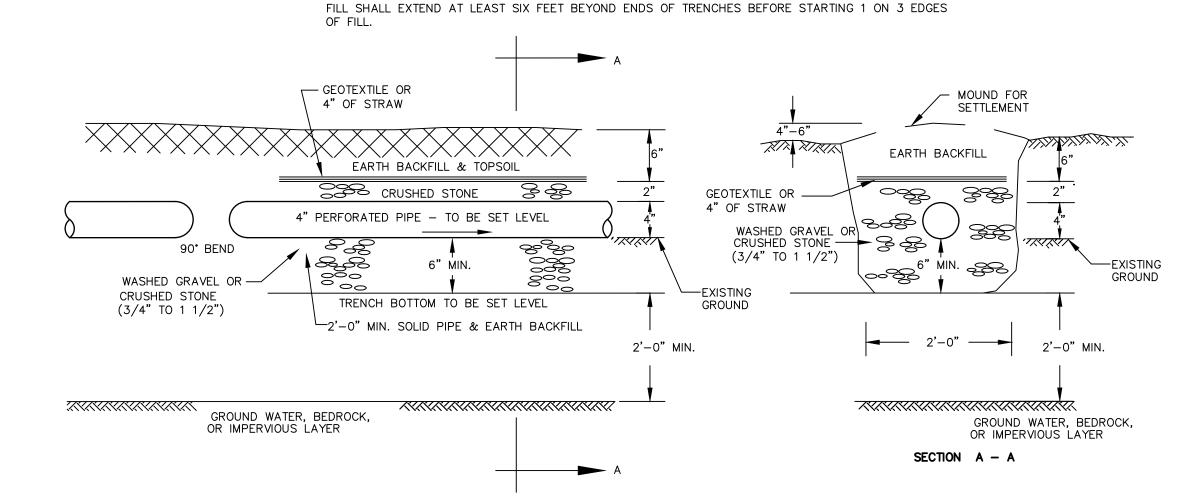
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## SHALLOW ABSORPTION TRENCH SYSTEM

NOT TO SCALE

- BOTTOM OF ALL TRENCHES SHALL NOT BE ABOVE ORIGINAL USABLE SOIL AND TRENCH BOTTOM SHALL BE AT 6" BELOW ORIGINAL GRADE.
- USABLE FILL SHOULD HAVE A PERCOLATION RATE SIMILAR TO BUT NOT FASTER THAN THE USABLE SOIL PERCOLATION RATE.
- MAXIMUM DEPTH OF USABLE FILL PLUS SIX INCHES OF TOPSOIL SHALL NOT EXCEED 30 INCHES. TRENCH BOTTOMS SHALL BE LEVEL. TRENCHES SHALL BE PARALLEL TO GROUND CONTOURS. ON SLOPED SITES, A DIVERSION DITCH SHALL BE CONSTRUCTED UPHILL FROM THE FILL TO PREVENT SURFACE RUNOFF FROM ENTERING THE FILL.



#### SHALLOW ABSORPTION TRENCH DETAIL NOT TO SCALE LOCKABLE FRAME & COVER (CAMPBELL 1108A OR EQUAL) (H20) GATE VALVE -LENGTH X WIDTH X HEIGHT 8'-0" X 4'-4" X 4'-10" (INSIDE DIM) FINISHED GRADE 1. INSERT LEVELER IN THE END OF ALL OUTLET PIPES IN THE DISTRIBUTION BOX. ALL LATERALS IN USE SHALL BE EQUIPPED WITH A SPEED LEVELER. ROTATE UNTIL EFFLUENT ENTERS ALL OUTLETS EQUALLY 2. SPEED LEVELERS SHALL NOT COMPENSATE FOR MORE THAN 1 1/4" 'UNION DIFFERENCE IN LATERAL INVERT ELEVATIONS. THE DISTRIBUTION BOX

MERCURY FLOAT SWITCH

PUMP CHAMBER DATA:

STORAGE DEPTH: 2'-9 "

1'-1" | 1'-4"

STORAGE CALC.: 21.61 GALS/IN

STORAGE OTY: 713.13 GALS.

MAX. ELEV. DIFFERENTIAL: 20'

DOSE QTY.

151.27 GALS.

172.88 GALS.

CHAIN SOLID -1/4° WEEP HOLE 2"ø SDR-26 PRESSURE LINE TO DISTRIBUTION BOX SEPTIC -- HIGH WATER ALARM

6" PUMP

**PUMP CHAMBER** 

N.T.S.

1. CONTRACTOR SHALL DETERMINE LENGTHS OF REQUIRED ELECTRICAL CABLE AND AVAILABLE VOLTAGE PRIOR TO

3. THE POWER AND CONTROL WIRING SHALL BE MADE DIRECTLY TO THE CONTROL PANEL WITHOUT AND OUTSIDE

SPLICES. CONTROL PANEL TO BE LOCATED INSIDE BASEMENT OF HOUSE AUDIBLE ALARMS AND FLASHING LIGHT.

TOTAL

146.09 GALS.

146.09 GALS.

VOL. FORCE MAIN

11.41 GALS.

11.41 GALS.

ALL WIRING SHALL CONFORM TO NATIONAL ELECTRICAL CODE & LOCAL CODE REQUIREMENTS.

4. A N.Y.S. PROFESSIONAL ENGINEER MUST CERTIFY TO THE CONSTRUCTION OF THE SYSTEM.

5. QUANTITY DOSED IS BASED UPON 75% OF 4"Ø PIPE AND 100% OF FORCE MAIN.

'PEA GRAVEL OR SAND

DOWN

7"

.→ CHECK

VALVE \

4"ø SCREENED VENT

RFINE PRECAST ·

AURORA/HYDROMATIC PUMP

HYDROMATIC PUMP OR EQUAL

BEDROOMS

**PUMP CHAMBER NOTES:** 

ORDERING EQUIPMENT.

-GAS DEFLECTOR

COMPANY MODEL: SP40 -

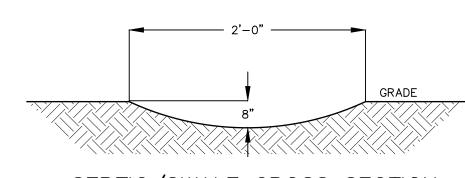
75% VOL. LATS.

134.68 GALS.

161.62 GALS.

6. QUANTITY STORED IS BASED UPON (1) DAYS FLOW MINIMUM.

7. AS-BUILT MUST SHOW FORCE MAIN LOCATION.



# SEPTIC/SWALE CROSS SECTION

SHALL BE RE-LEVELED AND THE SPEED LEVELERS READJUSTED.

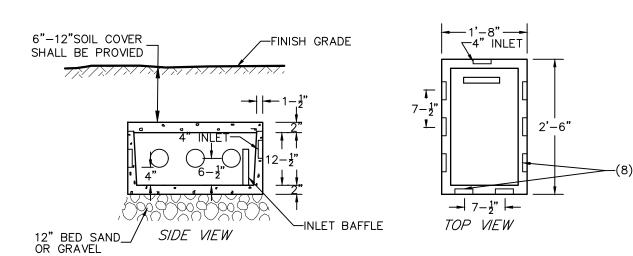
INSTALLATION AND THE SPEED LEVELERS SHALL BE READJUSTED

3. THE DISTRIBUTION BOX SHALL BE CHECKED 6-12 MONTHS AFTER

SPEED LEVELER

NOT TO SCALE

4. FITS ALL 4" SMOOTH WALL AND CORRUGATED PIPES.



## WOODARD'S PRECAST 8 OUTLET DISTRIBUTION BOX

**SPECIFICATIONS:** 

CONCRETE MINIMUM STRENGTH- 4,000 PSI AT 28 DAYS REINFORCEMENT-FIBER AIR ENTRAPMENT- 5%

ESTABLISHED BY THE NEW YORK STATE DEPARTMENT OF HEALTH FOR RESIDENTIAL LOTS. THE DESIGNS ARE BASED UPON ACTUAL SOIL AND SITE CONDITIONS FOUND UPON THE LOTS AT THE DESIGN LOCATION DURING THE TIME OF THE DESIGN.

| TABLE 2   |                                 |   |          |               |                                       |  |  |  |
|---|---------------------------------|---|----------|---------------|---------------------------------------|--|--|--|
| REQUIRED SEPARATION DISTANCES FROM WASTEWATER SYSTEM COMPONENTS |                                 |   |          |               |                                       |  |  |  |
| (FEET)  |                                 |   |          |               |                                       |  |  |  |
| SYSTEM COMPONENTS   | WELL OR SUCTION LINE<br>(e) (g) | STREAM, LAKE, WATERCOURSE (b), or WETLAND | DWELLING | PROPERTY LINE | DRAINAGE DITCH or<br>RAIN GARDENS (h) |  |  |  |
| HOUSE SEWER DRAIN (WATERTIGHT JOINTS)                           | 25 IF CAST IRON<br>50 OTHERWISE | 25  | 3        | 10            | 10                                    |  |  |  |
| SEPTIC TANK, DOSING TANK & WATERTIGHT ETU                       | 50                              | 50  | 10       | 10            | 10                                    |  |  |  |
| EFFLUENT LINE TO DISTRIBUTION BOX/DROP BOX                      | 50                              | 50  | 10       | 10            | 10                                    |  |  |  |
| DISTRIBUTION BOX/DROP BOX                                       | 100                             | 100                                       | 20       | 10            | 50                                    |  |  |  |
| ABSORPTION FIELD (c) (d)  | 100 (a)                         | 100                                       | 20       | 10            | 50                                    |  |  |  |
| SEEPAGE PIT (d)   | 150 (a)                         | 100                                       | 20       | 10            | 50                                    |  |  |  |
| RAISED SYSTEM or MOUND (c) (d)                                  | 100 (a)                         | 100                                       | 20       | 10            | 50                                    |  |  |  |
| INTERMITTENT SAND FILTER (d)                                    | 100 (a) (f)                     | 100 (f)                                   | 20       | 10            | 50                                    |  |  |  |
| NON WATERBORNE SYSTEMS WITH OFFSITE RESIDUAL DISPOSAL           | 50                              | 50  | 20       | 10            | 50                                    |  |  |  |
| NON WATERBORNE SYSTEMS WITH ONSITE DISCHARGE                    | 100                             | 50  | 20       | 10            | 50                                    |  |  |  |

- A) WHEN WASTEWATER TREATMENTS 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.
- B) MEAN HIGH WATER MARK. WETLAND OR WATERCOURSE DETERMINATIONS SHOULD BE ADDRESSED WITH THE LHD OR OTHER AGENCY HAVING JURISDICTION AND
- THE APPLICABLE NYSDEC REGIONAL OFFICE. C) FOR ALL SYSTEMS INVOLVING THE PLACEMENT OF FILL MATERIAL, SEPARATION DISTANCES ARE MEASURED FROM THE TOE OF SLOPE OF THE FILL, EXCEPT FOR
- D) SEPARATION DISTANCES SHALL ALSO BE MEASURED FROM THE EDGE OF THE DESIGNATED ADDITIONAL USEABLE AREA (i.e. RESERVE AREA), WHEN AVAILABLE.
- E) THE CLOSEST PART OF THE WASTEWATER TREATMENT SYSTEM SHALL BE LOCATED AT LEAST TEN (10) FEET FROM ANY WATER SERVICE LINE (e.g., PUBLIC
- WATER SUPPLY MAIN, PUBLIC WATER SERVICE LINE OR RESIDENTIAL WELL WATER SERVICE LINE).
- G) THE LISTED WATER WELL SEPARATION DISTANCES FROM CONTAMINANT SOURCES SHALL BE INCREASED BY 50% WHENEVER AQUIFER WATER ENTERS THE WATER WELL AT LESS THAN 50-FEET BELOW GRADE. IF A 50% INCREASE CANNOT BE ACHIEVED, THEN THE GREATEST POSSIBLE INCREASE IN SEPARATION DISTANCE SHALL BE PROVIDED WITH SUCH ADDITIONAL MEASURES AS NEEDED TO PREVENT CONTAMINATION.

F) WHEN INTERMITTENT SAND FILTERS ARE DESIGNED TO BE WATERTIGHT AND COLLECT ALL EFFLUENT, THE SEPARATION DISTANCE CAN BE REDUCED TO 50 FEET

H) RECOMMENDED; USE SITE EVALUATION TO AVOID OWTS SHORT-CIRCUITING TO THE SURFACE OR GROUNDWATER AND TO MINIMIZE IMPACTS ON OWTS

EMBANKMENT OR VERY STEEP SLOPE: IT IS RECOMMENDED THAT SYSTEM COMPONENTS BE LOCATED A MINIMUM OF 25 FEET AND THE ABSORPTION FIELD BE LOCATED A MINIMUM OF 50 FEET FROM AN EMBANKMENT OR VERY STEEP SLOPE. MAXIMIZE SEPARATION DISTANCES AND USE SITE EVALUATION TO AVOID SHORT-CIRCUITING TO SURFACE (BREAKOUT OR SEEPAGE).

SWIMMING POOLS (ABOVE OR BELOW GROUND): IT IS RECOMMENDED THAT SYSTEM COMPONENTS BE LOCATED A MINIMUM OF 20 FEET AND THE ABSORPTION FIELD BE LOCATE A MINIMUM OF 35 FEET FROM SWIMMING POOLS. MAXIMIZE SEPARATION DISTANCES AND USE SITE EVALUATION TO MINIMIZE IMPACTS ON OWTS ACCESSIBILITY AND FUNCTIONALITY.

#### ACCEPTED AS ORANGE COUNTY HEALTH DEPARTMENT POLICY & STANDARD WITH THE FOLLOWING ADDITIONS

SEPARATION: WELL TO SWALE, STREAM OR WATERCOURSE - 25 2. SEPARATION: ABSORPTION FIELD TO THE HIGH WATER LINE OF A WET POND - 100'.

SOME SHALLOW ABSORPTION TRENCH SYSTEMS AS DESCRIBED IN 9.12.2 OF THIS HANDBOOK.

- 3. SEPARATION: ABSORPTION FIELD TO INTERMITTENT STREAM, DRY WELL, CULVERT OR STORM SEWER (NON-
- GASKETED PIPE), OR CATCH BASIN 50'. 4. SEPARATION: ABSORPTION FIELD TO CULVERT OR STORM SEWER (GASKETED, TIGHT PIPE) - 35'.
- 5. SEPARATION: ABSORPTION FIELD TO CURTAIN DRAIN 15'.
- 6. SEPARATION: ABSORPTION FIELD, PITS, EXPANSION AREA, TO TOP OF EMBANKMENT OR STEEP (1 ON 3)
- 7. SEPARATION: ABSORPTION FIELD TO SOLID CURTAIN DRAIN, ROOF OR FOOTING PIPES, SNOW STORAGE
- 8. DRAINAGE PIPES WITHIN 25'OF ANY WELL MUST BE WATERTIGHT. 9. SEPARATION: WELL TO CEMETERY PROPERTY LINE - 100'.

FUNCTIONALITY.

- 10. SEPARATION: WELL TO SUBDIVISION BOUNDARY 50'.
- 11. SEPARATION: EVAPOTRANSPIRATION-ABSORPTION SYSTEM TO DRAINAGE DITCH 50'. 12. SEPARATION: DRY WELL (ROOF AND FOOTING) TO DRAINAGE DITCH - 50'.

## REQUIRED SEPTIC SYSTEM INSPECTIONS

- THE SYSTEM MUST BE INSTALLED IN ACCORDANCE WITH THE APPROVED DRAWINGS. THE ENGINEER MUST INSPECT THE SITE AT EACH OF THE FOLLOWING POINTS DURING THE SYSTEM INSTALLATION
- AND GRANT APPROVAL PRIOR TO CONTINUING WITH THE NEXT STAGE OF WORK NYS SHALLOW ABSORPTION AND RAISED SYSTEMS ARE ENGINEERED SYSTEMS THAT REQUIRE INSPECTION, VERIFICATION AND A LETTER OF COMPLETION BY A LICENSED ENGINEER.
- 1. SITE MEETING WITH CONTRACTOR 1. LOCATE AND PLACE CORNER STAKES FOR FIELD. 2. TREES IN FIELD AREA TO BE CUT. GROUND TO REMAIN UNDISTURBED. STUMPS TO BE CUT FLUSH TO THE GROUND. FIELD AREA TO BE PLOWED PARALLEL TO DIRECTION OF LATERAL LINES. 3. CONTRACTOR SHALL OBTAIN A PERC. RATE TEST OF ACCEPTABLE RANGE
- FROM THE SOURCE PIT OF THE INTENDED FILL MATERIAL PRIOR TO EXCAVATION AT THE PIT AND DELIVERY TO THE SITE. 4. FILL MATERIAL TO BE PLACED ON SEPTIC FIELD SITE ACCORDING TO
- GUIDELINES PER THIS DESIGN AND DETAILS.
- . INSPECTION OF THE FILL IN PLACE.
  PERC TEST TO BE DONE BY
  ENGINEER PRIOR TO TRENCH
  INSTALLATION AT THE ENGINEER'S
- 5. TRENCHES TO BE CUT INTO FILL MATERIAL. SEE PLAN FOR DEPTH. BASE AGGREGATE TO BE PLACED IN TRENCHES. SEE PLAN FOR DEPTH.
- 7. LATERAL DISTRIBUTION PIPES AND DISTRIBUTION BOX TO BE INSTALLED AND LEFT EXPOSED. INSPECTION BY ENGINEER AND ULSTER

INSPECTION BY ENGINEER AND ULSTER

- COUNTY DEPT. OF HEALTH 8. AGGREGATE COVER LAYER AND PERMEABLE GEOTEXTILE COVER TO BE INSTALLED OVER INSPECTIONS 3 and 4 MAY BE LATERALS IN TRENCHES. SEE PLAN FOR DEPTH OF AGGREGATE COVER LAYER.
- COMBINED IF TANKS AND LINES SEPTIC TANK TO BE SET IN HOLE AND LEFT EXPOSED. ARE ALL IN PLACE. 10. INLET AND OULET LINES TO TANK TO BE INSTALLED AND LEFT EXPOSED.
- COUNTY DEPT. OF HEALTH 11. COVER TANKS, LINES AND SEPTIC FIELD WITH FINISH COVER MATERIAL. 12. FINISH DIVERSION SWALES, FINE GRADING AND SEEDING.
- 5. INSPECTION BY ENGINEER OF FINISHED SYSTEM.

Dig **J**Safely. New York

19-023

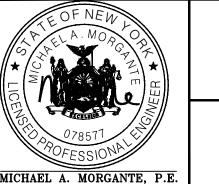
AS NOTE

SCALE:

|          |          |         | PB# 2019-19  |
|----------|----------|---------|--|
| REVISION | BY       | DATE    | DESCRIPTION  |
|          |          |         |  |
|          |          |         |  |
|          |          |         |  |
| 1        | ММ       | 10/2/19 | 9/19/19 PB MTG. & 9/19/19 MHE COMMENTS               |
| THIC     | THEFT IS | NOT V   | ALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SET |

# THIS SHEET IS NOT VALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SE CONSULTING ENGINEERS, PLLC

### P.O. BOX 340 MONROE, N.Y. TEL: (845) 782-8114 WWW.ARDENCONSULTING.NET



AMENDED SUBDIVISION PLAN FOR ROCK CUT ESTATES ROCK CUT ROAD TOWN OF NEWBURCH, ORANGE COUNTY, N.Y.

SEPTIC DETAILS CHECKED: SHEET NO.

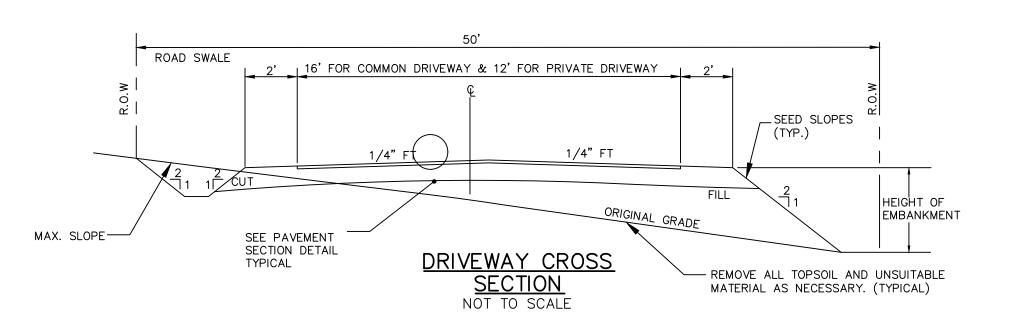
THE PROPOSED SEWAGE DISPOSAL SYSTEM AND WATER

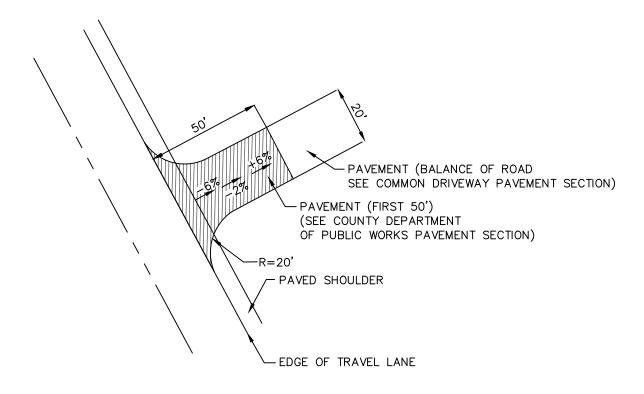
ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS

SUPPLY SYSTEM SHOWN HAS BEEN DESIGNED IN

PIPE CONNECTION: POLYLOC SEAL (PATENTED) LOAD RATING- 300 PSF WEIGHT= 290 lbs

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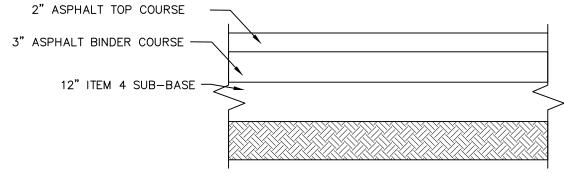
COMMON DRIVEWAY

ENTRANCE

NOT TO SCALE

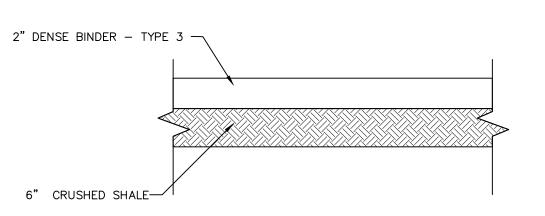
#### **COUNTY NOTE:**

NO SITE PREPARATION OR CONSTRUCTION, INCLUDING UTILITY CONNECTIONS, SHALL COMMENCE UNTIL A VALID HIGHWAY WORK PERMIT HAS BEEN SECURED FROM THE ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS UNDER SECTION 1326 OF THE HIGHWAY LAW.



COUNTY DEPARTMENT OF PUBLIC WORKS PAVEMENT SECTION

(FIRST 50') NOT TO SCALE



COMMON DRIVEWAY
PAVEMENT SECTION

(BALANCE OF ROAD)
NOT TO SCALE

SCALE:

AS NOTED DATE:

CHECKED:

SHEET NO.

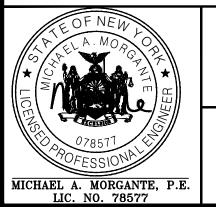
REVISION BY DATE DESCRIPTION

1 MM 10/2/19 9/19/19 PB MTG. & 9/19/19 MHE COMMENTS
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ARDEN CONSULTING ENGINEERS, PLLC
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AMENDED SUBDIVISION PLAN FOR

JOB#:
19-023



ROCK CUT ESTATES

ROCK CUT ROAD

TOWN OF NEWBURCH, ORANGE COUNTY, N.Y.

MISC. DETAILS

EDUCATIONAL LAW, SECTION 7209.2

ONLY MAPS WITH EMBOSSED SEALS ARE GENUINE COPIES
OF THE ORIGINAL WORK AND OPINION. MAPS NOT BEARING
EMBOSSED SEALS SHOULD NOT BE RELIED UPON SINCE OTHER
THAN EMBOSSED—SEAL COPIES MAY CONTAIN UNAUTHORIZED

AND UNDETECTABLE MODIFICATIONS, DELETIONS, ADDITIONS

WARNING- IT IS A VIOLATION OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2, FOR ANY PERSON, UNLESS ACTING

ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN

UNDER THE DIRECTION OF A LICENSED PROFESSIONAL

ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK



SCALE: 1"=60'

WARNING- IT IS A VIOLATION OF NEW YORK EDUCATIONAL LAW, SECTION 7209.2, FOR ANY PERSON. UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR, TO ALTER THIS DOCUMENT IN ANY WAY. IF ALTERED, THE ALTERING PERSON SHALL COMPLY WITH THE REQUIREMENTS OF NEW YORK

EDUCATIONAL LAW, SECTION 7209.2 ONLY MAPS WITH EMBOSSED SEALS ARE GENUINE COPIES OF THE ORIGINAL WORK AND OPINION. MAPS NOT BEARING EMBOSSED SEALS SHOULD NOT BE RELIED UPON SINCE OTHER THAN FMBOSSED—SEAL COPIES MAY CONTAIN UNAUTHORIZED. AND UNDETECTABLE MODIFICATIONS, DELETIONS, ADDITIONS

THIS EROSION CONTROL PLAN SHALL BE USED FOR EROSION CONTROL METHODS AND LOCATIONS ONLY. DO NOT USE THIS PLAN FOR BUILDING, PAVED AREA, UTILITY LOCATIONS, etc.

THE OWNER IS ASSIGNED THE RESPONSIBILITY FOR THE CONSTRUCTION & MAINTENANCE OF THE MEASURES AS DETAILED ON THIS PLAN INCLUDING THE TECHNICAL SPECIFICATIONS ON THIS PLAN

- STAKEOUT DRIVEWAY CENTERLINE, CATCH BASINS AND PIPING SWALES.
- 4. INSTALL TEMPORARY EROSION CONTROL DEVICES AND STABILIZED CONSTRUCTION ENTRANCE.
- 5. CLEAR DRIVEWAY AREA AND STOCKPILE SOIL BUILD SWALES AND DRAINAGE STRUCTURES.
- PERFORM ROUGH GRADING FOR DRIVEWAY. 8. FINE GRADE SITE, PLACE DRIVEWAY SUBBASE, AND SEED UNPAVED AREAS.
- COMPLETE CONSTRUCTION 10. REMOVE TEMPORARY EROSION CONTROL DEVICES.
- ROLL OFF DUMPSTERS AND TRASH RECEPTACLES ARE TO REMAIN ON SITE FOR THE DURATION OF THE PROJECT FOR THE PROPER COLLECTION AND DISPOSAL OF ALL CONSTRUCTION DEBRIS AND ADDITIONAL LITTER PRODUCED BY WORKERS

#### ADDITIONAL TREE PROTECTION NOTES

- 1. LIMITS OF DISTURBANCE SHALL BE STAKED OUT FOR CONSTRUCTION OF THE COMMON DRIVEWAY AND STORMWATER MANAGEMENT POND AND IDENTIFIED WITH TREE PROTECTION FENCIING PRIOR TO ISSUANCE OF A BUILDING PERMIT FROM
- THE TOWN OF NEWBURGH BUILDING DEPARTMENT 2. PROTECTION FENCING SHALL INCLUDE THE IMMEDIATE LIMITS OF DISTURBANCE ALONG WITH TREES WITHIN 50' OF THE ROAD AND STORMWATER MANAGEMENT
- 3. TREE PROTECTION FENCING SHALL BE INSTALLED ALONG THE LIMITS OF DISTURBANCE ON THE INDIVIDUAL LOTS AS THEY ARE DEVELOPED.

LIMITS OF DISTURBANCE IS 3.27 ACRES.

FOR ALL CONSTRUCTION SPECIFICATIONS REFER TO "NY GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL"

LEGEND:

---- EXISTING MAJOR CONTOUR ——502———— EXISTING MINOR CONTOUR EXISTING EDGE OF PAVEMENT EXISTING PROPERTY LINE EXISTING ADJACENT PROPERTY LINE EXISTING BUILDING LINE —— · · · — · · · — EXISTING SWALE EXISTING STONE WALL EXISTING GRAVEL DRIVEWAY EXISTING TREELINE EXISTING SWALE EXISTING ROCK DAM EXISTING WELL EXISTING POLE EXISTING IRON ROD FOUND DEEP TESTS PERCOLATION TEST EXISTING WETLAND PROPOSED PROPERTY LINE PROPOSED BUILDING — PROPOSED DRIVEWAY PROPOSED SEPTIC SYSTEM → PROPOSED SWALE -600----- PROPOSED MAJOR CONTOUR ---- PROPOSED MINOR CONTOUR WALLEY OF DISTURBANCE — sf — sf — sf — sf — SILT FENCE PROPOSED RIP RAP

PROPOSED DRIVEWAY HATCH STABILIZED CONSTRUCTION ENTRANCE PROPOSED CULVERT =PROPOSED WELL

PROPOSED CATCH BASIN

PROPOSED MANHOLE

## BEST MANAGEMENT PRACTICES FOR SITE FACILITY MAINTENANCE

THE OWNER WILL BE RESPONSIBLE FOR THE MAINTENANCE AND OPERATION OF ALL SITE RELATED FACILITIES, INCLUDING THE STORM WATER SEDIMENT AND DETENTION BASINS AND THE FOLLOWING MEASURES AND/OR STRUCTURES, AS APPLICABLE AND SHOWN ON THE PLANS:

## WATER QUALITY INLETS

1. WATER QUALITY INLETS SHALL BE CLEANED OUT AT LEAST TWICE A YEAR TO REMOVE POLLUTANTS. REMOVED MATERIAL SHOULD BE TAKEN TO A TREATMENT PLANT OR APPROVED LANDFILL FOR DISPOSAL. 2. STORM WATER INLETS THROUGHOUT THE SITE SHALL BE INSPECTED ANNUALLY FOR ACCUMULATED SEDIMENT OR OTHER PROBLEMS AND REPAIRED AS NECESSARY.

#### PARKING AND ROADWAY PAVEMENTS

1. PARKING AREA AND ROADWAY PAVEMENTS SHALL BE SWEPT ON A REGULAR BASIS TO REMOVE ACCUMULATED SEDIMENT. COLLECTED SEDIMENT SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE WHICH WILL NOT ALLOW THE RE-ENTRANCE OF SILT

#### INTO THE STORM WATER DRAINAGE SYSTEM.

1. ALL VEGETATIVE PLANTING ON AREAS WHICH HAVE BEEN DISTURBED AND ARE FINISH GRADED SHALL BE INSPECTED AFTER EACH RAIN EVENT. PLANTING (OR SEEDING) SHALL BE MAINTAINED IN A VIABLE CONDITION TO STABILIZE THE SOIL AND TO PREVENT SOIL EROSION. RESTORE ALL SITE PLANTING AND/OR SEEDING WHICH HAS BEEN DAMAGED TO A VIABLE CONDITION. 2. IF VEGETATIVE STABILIZATION HAS BEEN DAMAGED FROM STORM WATER EROSION, CORRECT UPSTREAM CONDITIONS WHICH CAUSED THE EROSION. CHECK DAMS MAY BE REQUIRED IN DRAINAGE WAYS, AND STONE OUTFALL APRONS MAY BE REQUIRED

#### CONSTRUCTION ACTIVITY

TO BE REPAIRED AT STORM WATER OUTLETS.

1. CONSTRUCTION ACTIVITIES WILL OCCUR DURING WEEKDAYS COMMENCING AT 7:00 AM AND TERMINATING AT 6:00 PM

#### **EROSION AND SILTATION CONTROL NOTES:**

1. GRADED AREAS - UPPER ELEVATIONS: PROVIDE TEMPORARY DRAINAGE SWALES, 1% GRADE MIN., TO DIRECT RUNOFF AWAY FROM CONSTRUCTION SITES. DISCHARGE AREAS AND ENERGY DISPERSION REQUIREMENTS TO BE ACCEPTABLE TO OWNER. 2. GRADED AREAS - LOWER ELEVATIONS: PROVIDE DRAINAGE SWALES, 1% MIN. GRADES, WITH STAKED AND SECURED HAY BALE BERMS TO PREVENT DOWN STREAM AND DOWN GRADIENT SILTATION.

#### SEDIMENT & EROSION CONTROL NOTES & CONSTRUCTION SEQUENCING

I. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES FOR ALL ROAD AND DRIVE ENTRANCES. STREETS SHALL BE CLEANED

2. INSTALL SEDIMENT BARRIERS/SWALES/DITCHES/DIKES AT DOWN SLOPE AREAS FROM ALL PROPOSED GRADING OPERATIONS AND INSTALL OTHER SEDIMENTATION AND EROSION CONTROL STRUCTURES OR MEASURES AS SHOWN ON THE DRAWINGS. 3. LAND DISTURBANCE SHALL BE LIMITED TO ONLY THAT AREA NECESSARY FOR DEVELOPMENT. NO MORE THAN FIVE (5) ACRES OF UNPROTECTED SOIL SHALL BE DISTURBED AT ONE TIME. PREVIOUS EARTHWORK SHALL BE STABILIZED AS SPECIFIED

BEFORE ADDITIONAL AREA IS EXPOSED 4. CLEAR EXISTING TREES AND VEGETATION FROM AREAS TO BE EXCAVATED OR FILLED, THEN STRIP AND STOCKPILE TOPSOIL FROM ALL AREAS TO BE DISTURBED. SEED STOCKPILED TOPSOIL WITH TEMPORARY RYEGRASS COVER AS SPECIFIED BELOW (SEE NOTE 8), AND ERECT A SILT FENCE AROUND THE STOCKPILE.

- 5. PROTECT ALL TREES WHICH ARE TO REMAIN AND WHICH ARE IN OR NEAR CONSTRUCTION AREAS.
- . PERFORM NECESSARY EXCAVATION OR FILL OPERATIONS TO BRING SITE TO DESIRED SUBGRADE. 7. INSTALL SEDIMENT BARRIERS AROUND ALL STORM DRAIN INLETS, OR MODIFY SEDIMENT CONTROL MEASURES INSTALLED IN #2 ABOVE AND MAINTAIN UNTIL ALL DISTURBED AREAS ARE STABILIZED WITH VEGETATION AND ALL PAVEMENTS ARE PAVED WITH
- 8. TEMPORARILY SEED ALL DISTURBED AREAS WHICH WILL REMAIN UNDISTURBED FOR A PERIOD OF 15 DAYS OR MORE AND WHICH WILL NOT BE UNDER CONSTRUCTION WITHIN 30 DAYS IN ACCORDANCE WITH SPECIFICATION FOR VEGETATIVE ESTABLISHMENT.
- 9. IF CONSTRUCTION IS SUSPENDED OR COMPLETED, ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED IMMEDIATELY. ALL SLOPES STEEPER THAN ONE ON THREE (V/H) AND PERIMETER TRENCHES AND TRAP EMBANKMENTS SHALL, ON COMPLETION, BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING. 10. AFTER COMPLETION OF SITE CONSTRUCTION, FINE GRADE AND SPREAD TOPSOIL ON ALL LAWN AREAS AND SEED WITH
- PERMANENT LAWN MIX AS DISCUSSED ON THE SPECIFICATIONS FOR FOR VEGETATIVE ESTABLISHMENT ON THIS SHEET. 11. DURING THE PROGRESS OF CONSTRUCTION, MAINTAIN ALL SEDIMENT TRAPS, BARRIERS, AND FILTERS AS NECESSARY TO PREVENT THEIR BEING CLOGGED UP WITH SEDIMENT. 12. AFTER PAVEMENTS ARE INSTALLED AND PERMANENT VEGETATIVE COVER AND PLANTINGS ARE ESTABLISHED, REMOVE
- SEDIMENT BARRIERS AND SEED THOSE DISTURBED AREAS. 13. MAINTAIN ALL SEEDED AND PLANTED AREAS TO INSURE A VIABLE STABILIZED VEGETATIVE COVER. 14. STRUCTURAL MEASURES MUST BE MAINTAINED TO BE EFFECTIVE. IN GENERAL, THESE MEASURES MUST BE PERIODICALLY
- INSPECTED TO INSURE STRUCTURAL INTEGRITY, TO DETECT VANDALISM DAMAGE, AND FOR CLEANING AND REPAIR WHENEVER
- 15. DURING CONSTRUCTION, ALL STRUCTURES SHOULD BE INSPECTED WEEKLY AND AFTER EVERY RAIN. REMOVE ACCUMULATED SEDIMENT AND STOCKPILE AND STABILIZE IN AN AREA NOT SUBJECT TO FURTHER EROSION. 16. AFTER CONSTRUCTION IS COMPLETED, PERMANENT SEDIMENT OR EROSION CONTROL STRUCTURES SHOULD BE INSPECTED AT

#### <u>SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT:</u>

A. SEEDBED PREPARATION: AREA TO BE SEEDED SHALL BE LOOSE AND FRIABLE TO A DEPTH OF AT LEAST 3 INCHES. THE TOP LAYER SHALL BE LOOSENED BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS OF DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-20-20 FERTILIZER PER 1,000 SF. HARROW OR DISK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3 INCHES ON SLOPES FLATTER THAN 3: B. SEEDING: APPLY 5-6 POUNDS PER 1,000 SF OF SEED MIX BETWEEN FEBRUARY 1 AND MAY 15 OR BETWEEN AUGUST 15 AND OCTOBER 31. APPLY SEED UNIFORMLY ON A MOIST FIRM SEEDBED WITH A CYCLONE SEEDED DRILL

CULTIPACKR SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER, RECOMMENDED ON STEEP SLOPES ONLY). MAXIMUM SEED DEPTH SHOULD BE 1/4 INCH IN CLAYEY SOILS AND 1/2 INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE IF SOIL MOISTURE IS DÉFICIENT TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. SELECT SEED MIXTURES FRÓM SECTION 3, NYS GUIDELINES FOR URBAN EROSION & SEDIMENT CONTROL C. MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED, MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING. MULCH

SHALL BE UNROTTED, UNCHOPPED, SMALL GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 POUNDS PER 1,000 SQUARE FEET (2 BALES). IF A MULCH ANCHORING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MULCH

LEAST SEMI-ANNUALLY AND AFTER EVERY RAIN.

MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY, OR BY HAND TO A DEPTH OF 1-2 INCHES. D. SECURING STRAW MULCH: STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATIONS TO MIMIMIZE MOVEMENT OF WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED: I. USE A MULCH ANCHORING TOOL WHICH IS DESIGNED TO PUNCH AND ANCHOR FABRIC TYPE MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH, HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREAS WHERE EQUIPMENT CAN OPERATE SAFELY. ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 50 POUNDS OF WOOD CELLULOSE FIBER PER

100 GALLONS OF WATER. iii. LIQUID BINDERS MAY BE USED AND APPLIED HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. iv. LIGHTWEIGHT NETTING, MAY BE USED TO SECURE MULCH. THE NETTING WILL BE STAPLED TO THE GROUND ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.

2. TEMPORARY SEEDING: LIME: 100 POUNDS OF DOLOMITIC LIMESTONE PER 1,000 SF FERTILIZER: 15 POUNDS OF 10-10-10 PER 1,000 SF

SEED: PERENNIAL RYE-0.92 POUNDS PER 1,000 SF

NO FILLS MAY BE PLACED ON FROZEN GROUND. ALL FILL TO BE PLACED IN APPROXIMATELY HORIZONTAL LAYERS, EACH LAYER HAVING A LOOSE THICKNESS OF NOT MORE THAN 8 INCHES. ALL FILL IN ROADWAYS AND PARKING AREAS IS TO BE CLASSIFIED TYPE 2 COMPACTED TO 90% DENSITY; COMPACTION TO BE DETERMINED BY ASTM D-1557-66T (MODIFIED PROCTOR). ANY FILL WITHIN THE BUILDING AREA IS TO BE COMPACTED TO A MINIMUM OF OF 95% AS DETERMINED BY METHODS PREVIOUSLY MENTIONED. FILLS FOR POND EMBANKMENTS SHALL BE COMPACTED AS PER THE PROJECT ENGINEER'S SPECIFICATIONS. ALL OTHER FILLS SHALL BE COMPACTED SUFFICIENTLY SO AS TO BE STABLE AND PREVENT EROSION AND SLIPPAGE.

4. PERMANENT SOD: INSTALLATION OF SOD SHOULD FOLLOW THE PERMANENT SEEDING DATES. PERMANENT SOD IS TO BE STATE APPROVED SOD; LIME AND FERTILIZER PER PERMANENT SEEDING SPECIFICATIONS AND LIGHTLY IRRIGATE SOIL PRIOR TO LAYING SOD. SOD IS TO BE LAID ON THE CONTOUR WITH ALL ENDS TIGHTLY ABUTTING, JOINTS ARE TO BE STAGGERED BETWEEN ROWS. WATER AND ROLL OR TAMP SOD TO INSURE POSITIVE ROOT CONTACT WITH THE SOIL. ALL SLOPES STEEPER THAN 3:1, AS SHOWN, ARE TO BE PERMANENTLY SODDED OR PROTECTED WITH APPROVED EROSION CONTROL NETTING. ADDITIONAL WATERING FOR ESTABLISHMENT MAY BE REQUIRED. SOD IS NOT TO BE APPLIED ON FROZEN GROUND. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (DRY OR WET) AND/OR EXTREME TEMPERATURE MAY ADVERSELY AFFECT ITS SURVIVAL. IN THE ABSENCE OF ADEQUATE RAINFALL, IRRIGATION SHOULD BE PERFORMED TO INSURE ESTABLISHED SOD.

#### SLOPE STABLIZATION, SEEDING METHOD & MULCHING

SLOPES OR 4:1 OR GREATER (HORIZONTAL : VERTICAL)

SLOPES SHALL BE HYDROSEEDED WITH THE MIXTURES AND RATES INDICATED IN THE PERMANENT SEEDING MIXTURE SCHEDULE. STRAW OR HAY MULCH SHALL BE APPLIED AT A RATE OF 2,000 LBS./ACRE. STRAW OR HAY MULCH SHALL BE ANCHORED WITH BioD-Mesh60 NETTING AS MANUFACTURED BY ROLANKA INTERNATIONAL OR APPROVED EQUIVALENT. NETTING TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.

#### GENTLE SLOPE AND FLAT AREAS

AREA SHALL BE SEEDED BY HYDROSEEDING OR BRODCASTING WITH THE MIXTURES AND RATES INDICATED ON THE PERMANENT SEEDING MIXTURE SCHEDULE. HYDROSEEDED AREAS SHALL BE MULCHED WITH A WOOD FIBER MULCH APPLIED AT A RATE OF 500 LBS./ACRE. BROADCAST AREAS SHAL BE MULCHED WITH HAY OR STRAW AT A RATE OF 2,000 LBS. /ACRE. AREAS SEEDED BY BROADCASTING SHALL BE LIGHTLY RAKED AND PACED PRIOR TO PLACING

AREAS REMAINING DISTURBED FOR 20 DAYS OR MORE SHALL BE STABLIZED AS FOLLOWS: SCARIFY SOILS IF COMPACTED, LIME TO pH OF 6.0 IF REQUIRED, FERTILIZE WITH 600 LBS./ACRE. 5-10-10 FERTILIZER IF REQUIRED. SEED WITH SPECIES AND RATE SHOWN BELOW. MULCH WITH HAY OR STRAW AT A RATE OF 2,000 LBS./ACRE. ANCHOR MULCH WITH NETTING OF WOOD FIBER OR JUTE IF STEEP SLOPE OR HIGH POTENTIAL FOR EROSION.

RYEGRASS (ANNUAL OR PERENNIAL) (USE WINTER RYE IF SEEDING IN OCT./NOV.)

**APPLICATION RATE** 30 LBS./ACRE (0.7 LBS./1,000 SF)

## STANDARD COUNTY NOTE:

1. NO SITE PREPARATION ION OR CONSTRUCTION, INCLUDING UTILITY CONNECTIONS, SHALL COMMENCE UNTIL A VALID HIGHWAY WORK PERMIT HAS BEEN SECURED FROM THE ORANGE COUNTY DEPARTMENT OF PUBLIC WORKS UNDER SECTION 136 OF THE HIGHWAY LAW

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BY DATE DESCRIPTION MM | 10/2/19 | 9/19/19 PB MTG. & 9/19/19 MHE COMMENTS THIS SHEET IS NOT VALID WITHOUT ALL OF THE SHEETS THAT COMPRISE THE SET

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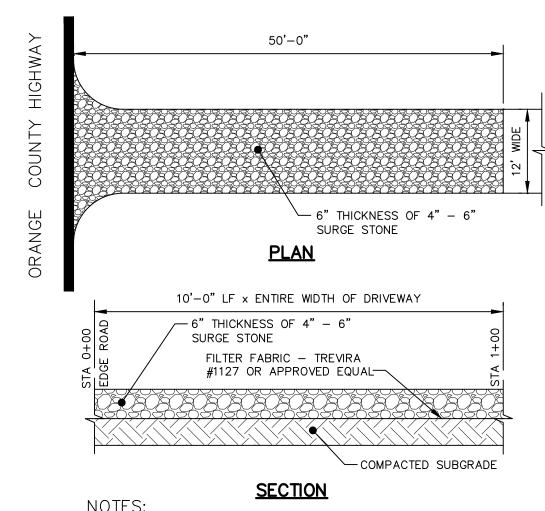
AMENDED SUBDIVISION PLAN FOR ROCK CUT ESTATES ROCK CUT ROAD TOWN OF NEWBURCH, ORANGE COUNTY, N.Y.

EROSION AND SEDIMENTATION CONTROL PLAN AND NOTES

AS NOTED

19-023

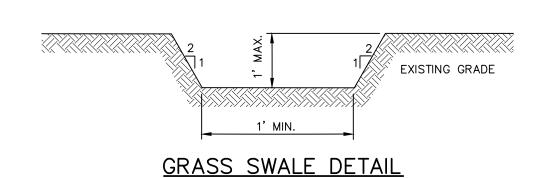
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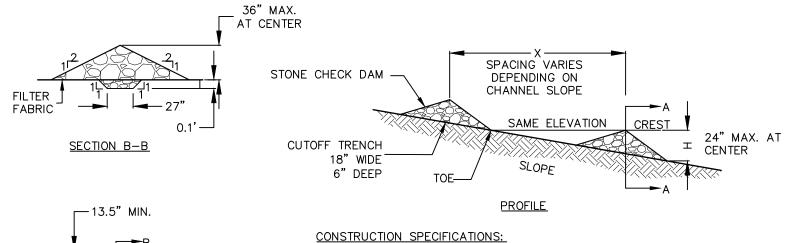
- 1. ENTRANCE SHALL BE MAINTAINED AS CONDITIONS DEMAND TO PREVENT TRACKING OF SEDIMENT INTO PUBLIC RIGHTS OF WAY.
- 2. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS.
- 3. A CRUSHED STONE, VEHICLE WHEEL CLEANING BLANKET WILL BE INSTALLED WHENEVER A CONSTRUCTION ACCESS ROAD INTERSECTS ANY PAVED ROADWAY. SAID BLANKET WILL BE COMPOSED OF 6" DEPTH OF 4"-6" SURGE STONE, WILL BE AT LEAST 45' X 100' AND SHOULD BE PLACED ON COMPACTED SUBGRADE.
- 4. ALL DRIVEWAYS MUST BE STABILIZED WITH 1"-1 1/2" CRUSHED STONE OR SUBBASE DURING CONSTRUCTION.
- 5. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- 6. ALL CATCH BASIN INLETS WILL BE PROTECTED WITH CRUSHED STONE OR HAYBALE FILTER.
- 7. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED, BEFORE DISCHARGE POINTS BECOME OPERATIONAL.

# STABILIZED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



NOT TO SCALE

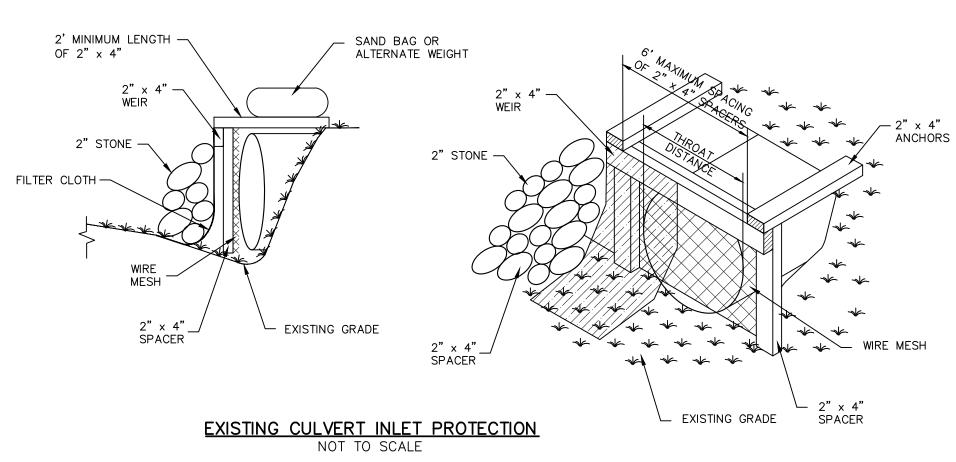


TRENCH SECTION A-A

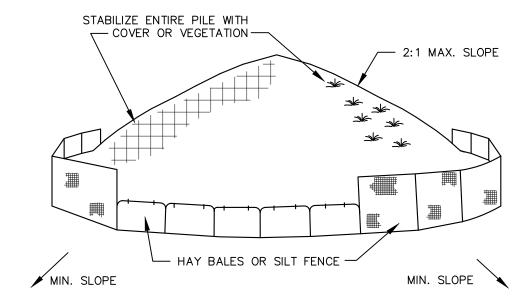
#### 1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.

2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATION OF THE CREST OF THE DOWN STREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM. 3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM. 4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE. 5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES. 6. MAXIMUM DRAINAGE AREA IS 2 ACRES ABOVE THE CHECK DAM.

# CHECK DAM DETAILS



- 1. FILTER FABRIC SHALL HAVE AN ADS OF 40-85.
- 2. WOODEN FRAME SHALL BE CONSTRUCTED OF 2" x 4" CONSTRUCTION GRADE LUMBER.
- 3. WIRE. MESH ACROSS THROAT SHALL BE A CONTINUOUS PIECE 30 INCH MINIMUM WIDTH WITH A LENGTH 4 FEET LONGER THAN THE THROAT IT SHALL BE SHAPED AND SECURELY NAILED TO A 2" x 4" WEIR.
- 4. THE WEIR SHALL BE SECURELY NAILED TO THE 2" x 4" SPACERS 9 INCHES LONG SPACED NO MORE THAN 6 FEET APART
- 5. THE ASSEMBLY SHALL BE PLACED AGAINST THE INLET AND SECURED BY 2" x 4" ANCHORS 2 FEET LONG EXTENDING ACROSS THE TOP OF THE INLET AND HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHTS.



- 1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE
- 2. MAXIMUM SLOPE OF STOCKPILES SHALL BE 2:1.
- 3. UPON COMPLETION OF SOIL STOCKPILING EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR HAY BALES, THEN STABILIZED WITH VEGETATION OR COVERED.
- 4. SEE SPECIFICATIONS FOR INSTALLATION OF SILT FENCE.

# SOIL STOCKPILE DETAIL

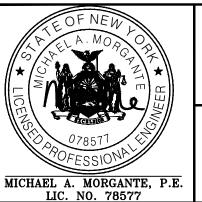
#### GRASSED SWALE CONSTRUCTION SPECIFICATIONS

- 1. ALL FREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE
- 2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OR BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
- 3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE
- WATERWAY. 4. ALL EARTH REMOVED AND NOT NEEDED TO IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
- 5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR THE VEGETATIVE PRACTICES. A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER SEC. SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE WATERWAY DURING THE
- ESTABLISHMENT OF THE VEGETATION. B. FOR DESIGN VELOCITIES OF MORE THEN 3.5 FT. PER SEC., THE WATERWAY SHALL BE ESTABLISHED WITH SOD, WITH SEEDING PROTECTED BY JUTE OR EXCELSIOR MATTING OR WITH SEEDING AND MULCHING, INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.
- C. STRUCTURAL VEGETATIVE PROTECTION (1) SUBSURFACE DRAIN FOR BASE FLOW SHALL BE CONSTRUCTED AS SHOWN ON THE STANDARD DRAWING AND AS SPECIFIED IN THE STANDARD AND SPECIFICATIONS FOR SUBSURFACE DRAIN.



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AMENDED SUBDIVISION PLAN FOR ROCK CUT ESTATES ROCK CUT ROAD

TOWN OF NEWBURCH, ORANGE COUNTY, N.Y.

EROSION AND SEDIMENTATION CONTROL DETAILS

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