

GENERAL NOTES:

- THIS PLAN WAS COMPILED USING THE FOLLOWING REFERENCE INFORMATION:
 A) A CLASS A-2 SURVEY MAP ENTITLED "PROPERTY SURVEY AND TOPOGRAPHY OF LAND TO BE CONVEYED TO BERTIE DEMING HEINER, MACK LANE, ESSEX, CONNECTICUT", SCALE: 1"=20', DATED: SEPTEMBER 16, 2020, PREPARED BY RICHARD W. GATES, L.S.
 B) A CLASS A-2 SURVEY MAP ENTITLED "PROPERTY SURVEY OF LAND OF RAQUEL RIVERA & THOMAS C. HUTTON, MACK LANE, ESSEX, CONNECTICUT", SCALE: 1"=20', DATED: FEBRUARY 21, 2020, PREPARED BY RICHARD W. GATES, L.S.
 C) A PLAN ENTITLED "BACKYARD LANDSCAPE PLAN, 17 MACK LANE, ESSEX, CT, HEINER RESIDENCE", SCALE: 1"=20', DATED: DECEMBER 12, 2020, PREPARED BY ELIZABETH HALLEY LANDSCAPE DESIGN.
- THE PROPERTY OWNER AND APPLICANT IS BERTIE DEMING HEINER OF 601 OLD BALLARD ROAD, CHARLOTTESVILLE, VA 22901.
- THE SUBJECT PARCEL IS IDENTIFIED AS LOT 14-1 ON TAX ASSESSOR'S MAP 50. THE DEED REFERENCE OF THE PROPERTY IS VOLUME 337 PAGE 68. THE AREA OF THE PARCEL IS 32,130 S.F. OR 0.74± ACRES.
- THE SUBJECT PROPERTY IS LOCATED WITHIN THE VILLAGE RESIDENCE 'VR' ZONING DISTRICT. THIS PROPERTY IS LOCATED WITHIN THE COASTAL AREA MANAGEMENT ZONE AND THE GATEWAY CONSERVATION ZONE. THE PARCEL LIES PARTIALLY WITHIN FEMA FLOOD HAZARD ZONE AE (EL. 10) AND THE ESSEX FLOOD ORDINANCE ADDS ONE FOOT TO ELEVATION 11 (NAVD--88).
- THE APPLICANT IS PROPOSING TO CONSTRUCT A 6-BEDROOM, 2 1/2 STORY YEAR-ROUND DWELLING WITH AN ATTACHED GARAGE AND REAR OPEN COVERED PORCH. A REAR PATIO AND INGROUND POOL, INSTALL A PERVIOUS DRIVEWAY, LANDSCAPING AND A 100% CONNECTICUT PUBLIC HEALTH CODE-COMPLIANT SEPTIC SYSTEM AND OTHER ASSOCIATED IMPROVEMENTS. THE PROPOSED DWELLING WILL BE LOCATED ENTIRELY OUTSIDE OF FEMA FLOOD HAZARD ZONE AE (EL. 10).
- THE PURPOSE OF THIS PLAN IS FOR REVIEW BY THE ESSEX ZONING BOARD OF APPEALS TO SEEK NECESSARY VARIANCES, THE ESSEX PLANNING & ZONING COMMISSION FOR A SPECIAL EXCEPTION AND THE ESSEX HEALTH DEPARTMENT FOR COMPLIANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE.
- THIS PROPERTY WILL SERVED BY PUBLIC WATER AND A SUBSURFACE SEWAGE DISPOSAL SYSTEM. THERE ARE NO KNOWN WELLS OR ANY OTHER KNOWN DESIGN CONFLICTS WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM. THE EXISTING DRILLED WELL SHALL BE PROPERLY FILLED AND ABANDONED BY A LICENSED WELL DRILLER.
- ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD--88 DATUM PER REF. MAP A.
- THE COASTAL JURISDICTION LINE AND TIDAL WETLANDS BOUNDARY ARE ALONG THE FACE OF THE EXISTING BULKHEAD (PER REF. MAP A).
- ALL PROPOSED LANDSCAPE ELEMENTS ARE PER REF. PLAN C AND INFORMATION PROVIDED BY THE PROJECT LANDSCAPE ARCHITECT.

CONSTRUCTION NOTES:

- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND INFORMATION PROVIDED BY OTHERS. THEIR ACTUAL LOCATION MAY VARY FROM THOSE INDICATED AND ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 800-922-4455 TO MARK OUT ALL UNDERGROUND UTILITIES A MINIMUM OF 5 BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE TOWN OF ESSEX STANDARDS AND REGULATIONS.
- ALL UTILITIES SHALL BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF ESSEX AND THE CUSTODIAL UTILITY COMPANIES. ALL UTILITY TRENCHES SHALL BE NO LESS THAN 5 FEET FROM THE EXISTING SEPTIC SYSTEM AND NOT BACKFILLED WITH FREE DRAINING MATERIAL. ALL WATER LINES SHALL BE A MINIMUM OF 10 FEET FROM ANY PART OF THE PROPOSED SEPTIC SYSTEM.
- ALL PROPERTY LINES SHALL BE VERIFIED IN THE FIELD. NO PRIVATE PROPERTY SHALL BE DISTURBED UNLESS PROPER RIGHTS ARE OBTAINED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONFIRM AND ABIDE BY ANY APPLICABLE "NO HAMMER" TIME PERIODS OF THE COMMUNITY.
- THE CONTRACTOR SHALL OBTAIN, REVIEW AND ADHERE TO ALL REQUIREMENTS AND ANY CONDITIONS OF APPROVAL OF THE TOWN OF ESSEX.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ADJACENT PROPERTIES AND MIDDLE COVE FROM ANY EROSION AND/OR SEDIMENTATION. SILT FENCE SHALL BE INSTALLED AS INDICATED AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
- THE PROPOSED DWELLING WILL HAVE A FULL BASEMENT WITH FOOTING DRAINS. THE PROPOSED WEST WING OF THE HOUSE (INCLUDING THE ATTACHED GARAGE) WILL BE SLAB ON GRADE AND WILL NOT HAVE FOOTING DRAINS. THERE ARE NO KNOWN DOWNGRADIENT SEPTIC SYSTEM COMPONENTS WITHIN 25 FEET OF ANY UPGRADE GROUNDWATER DRAINS OR ANY UPGRADE SEPTIC SYSTEM COMPONENTS WITHIN 50 FEET OF ANY DOWNGRADIENT GROUNDWATER DRAINS.
- ALL EXISTING DRAINAGE PATTERNS SHALL BE MAINTAINED. THE CONTRACTOR SHALL GRADE THE PROPERTY IN SUCH A MANNER TO MAINTAIN EXISTING LOCAL DRAINAGE PATTERNS AND TO PREVENT EXCESS RUNOFF AND/OR PONDING ON ADJACENT PROPERTIES BOTH DURING AND AFTER CONSTRUCTION.
- THE APPROXIMATE LOCATION OF THE EXISTING SEPTIC SYSTEMS ARE SHOWN HEREON. ALL EXISTING SEPTIC SYSTEM COMPONENTS SHALL BE LOCATED IN THE FIELD AND SHALL BE PUMPED DRY AS NECESSARY AND REMOVED IN ACCORDANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE AND ALL APPLICABLE LOCAL REGULATIONS (IF NECESSARY).
- ALL PROPOSED UTILITIES (I.E., POOL EQUIPMENT, A/C UNITS, UNDERGROUND PROPANE TANK, ETC.) SHALL BE INSTALLED IN STRICT CONFORMANCE WITH ALL APPLICABLE CODES AND SPECIFICATIONS AND REQUIRED SEPARATION DISTANCES.
- GENERAL LOT GRADING AND THE FINISHED FLOOR ELEVATION AND SLAB ELEVATION OF THE PROPOSED DWELLING ARE BASED ON AVAILABLE INFORMATION. THESE ELEVATIONS SHALL NOT BE ADJUSTED BY THE CONTRACTOR WITHOUT PRIOR REVIEW AND APPROVAL BY THE DESIGN ENGINEER.
- THE PROPOSED BUILDING AND IMPROVEMENTS SHALL BE STAKED OUT BY A LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING THE BUILDING AND IMPROVEMENTS IN THE EXACT LOCATION SHOWN AND SHALL BE CONSTRUCTED TO THE EXACT DIMENSIONS SHOWN ON THE LATEST SITE AND ARCHITECTURAL PLANS IN ACCORDANCE WITH THE APPROVED PLANS. ALL DIMENSIONS SHALL ACCOUNT FOR ANY SIDING OR CLADDING.
- POOL PERIMETER FENCE SHOWN HEREON SHALL BE PROVIDED PER APPLICABLE BUILDING CODE REQUIREMENTS. ANY REQUIRED FALL PROTECTION FENCING SHALL BE PROVIDED AS APPLICABLE.
- THERE SHALL BE NO ON-SITE STOCKPILING OF DEMOLITION DEBRIS. ANY DEMOLITION DEBRIS/MATERIAL, INCLUSIVE OF THE REMOVED SEPTIC SYSTEM SHALL BE LOADED DIRECTLY INTO TRUCKS OR DUMPSTERS FOR REMOVAL FROM THE SITE WITHIN 48 HOURS. NO DEMOLITION MATERIAL SHALL BE BURIED ON-SITE.
- THE PROPOSED DWELLING WILL HAVE GUTTERS, DOWNSPOUTS AND ROOF LEADERS. A PORTION OF THE ROOF RUNOFF WILL BE DIRECTED TO THE PROPOSED STORMWATER INFILTRATION SYSTEM.
- CONTRACTOR SHALL ENSURE THAT THE LOWEST VISIBLE GRADE AT THE BUILDING IS ELEVATION 14.0 OR HIGHER AND THAT THE MAXIMUM ROOF RIDGE DOES NOT EXCEED ELEVATION 49.0 (35 FEET).
- THE CONTRACTOR SHALL COORDINATE WITH GEOMATRIX, LLC - 860-510-0730 REGARDING THE DOSE VOLUME OF THE HYAIR VESSEL. THE DOSED VOLUME SHALL NOT EXCEED 149 GALLONS (20% OF THE TOTAL STORAGE VOLUME OF THE LEACHING SYSTEM) AS RECOMMENDED BY THE CONNECTICUT PUBLIC HEALTH CODE. THIS IS ACHIEVED WITH A 'HA71' HYAIR VESSEL SINCE THE MAXIMUM VOLUME PER DOSE IS 71 GALLONS.
- THE CONTRACTOR SHALL MAINTAIN THE EXISTING DRIVEWAY AND ROADWAY IN A SAFE AND PASSABLE CONDITION AT ALL TIMES.

| ZONING DATA TABLE | | | |
|--|---------------------|---|--|
| ESSEX VILLAGE RESIDENCE 'VR' ZONING DISTRICT | | | |
| ITEM | REQUIRED | PRE-EXISTING | PROPOSED |
| MIN. LOT AREA | 60,000 S.F. | 32,130 S.F. (1)(2) | 32,130 S.F. (1)(2) |
| MIN. LOT WIDTH | 120 FT. | 57± FT. (1)(2) | 57± FT. (NO CHANGE) (1)(2) |
| FRONT YARD SETBACK (WESTERN BOUNDARY) | 30 FT. | 80.9± FT. (EX. HOUSE) | 115.7± FT. (+34.8 FT.) (PR. HOUSE/GARAGE) |
| SIDE YARD SETBACK (NORTHERN BOUNDARY) | 25 FT. | 22.6 FT. (EX. HOUSE) (2) | 9.3± FT. (PR. POOL EQUIPMENT) 25.8± FT. (+3.2 FT.) (PR. HOUSE) (5) 35.5± FT. (PR. POOL (COPING)) |
| SIDE YARD SETBACK (SOUTHERN BOUNDARY) | 25 FT. | 24.1± FT. (EX. HOUSE) (2) | 26.1± FT. (+2.0 FT.) (PR. HOUSE/GARAGE) 30.4± FT. (PR. POOL (COPING)) |
| REAR YARD SETBACK (NORTHERN BOUNDARY) | 30 FT. | 128.2± FT. (EX. DECK) 138.0± FT. (EX. HOUSE) | 10.1± FT. (PR. CIRCULAR PATIO) 68.9± FT. (PR. POOL (COPING)) 83.3± FT. (PR. POOL EQUIPMENT) 122.6± FT. (PR. OPEN PORCH) 130.4± FT. (PR. HOUSE) |
| MAX. # OF STORIES | 2 STORY + ATTIC | UNKNOWN | 2 STORY + ATTIC |
| MAX. BUILDING HEIGHT | 35 FT. | UNKNOWN | 35.0± FT. (PR. HOUSE) (3) |
| MAX. BUILDING COVERAGE | 10% (3,213 S.F.) | 8.1% (2,600± S.F.) (4) | 9.6% (3,110.7± S.F.) (+15.0% (+510.7 S.F.)) (4) |
| MAX. LOT COVERAGE | 35% (11,246.2 S.F.) | 8.1% (2,600± S.F.) (4) | 27.2% (8,728± S.F.) (+19.1% (+6,128 S.F.)) (4) |
| 50' VEGETATED BUFFER (SECTION 101F) | 50 FT. | --- | 10.1± FT. (PR. CIRCULAR PATIO) (5) 68.9± FT. (PR. POOL (COPING)) (5) 84.8± FT. (PR. POOL EQUIPMENT) (5) |
| 100' GATEWAY BUFFER | 100 FT. | --- | 10.1± FT. (PR. CIRCULAR PATIO) (5) 68.9± FT. (PR. POOL (COPING)) (5) 84.8± FT. (PR. POOL EQUIPMENT) (5) |

- SUBJECT PARCEL IS A PRE-EXISTING NON-COMFORMING LOT OF RECORD.
- PRE-EXISTING NON-COMFORMITY: (FORMER HOUSE DEMOLISHED IN 2020)
- PROPERTY IS LOCATED WITHIN THE GATEWAY CONSERVATION ZONE. THE PROPOSED MAX. BUILDING HEIGHT WAS MEASURED FROM THE LOWEST POINT OF THE BUILDING/STRUCTURE VISIBLE ABOVE FINISHED GRADE UP TO THE HIGHEST ROOF RIDGE AND WAS ESTIMATED PER ARCHITECTURAL DRAWINGS.
- PROPOSED MAX. BUILDING HEIGHT = ELEV. 49.0± (MAX. ROOF RIDGE) - ELEV. 14.0± (LOWEST GRADE) = 35.0±
- EXISTING MAX. BUILDING HEIGHT INCLUDES THE FORMER HOUSE FOOTPRINT. PROPOSED MAX. BUILDING COVERAGE INCLUDES PROPOSED BUILDING FOOTPRINT, REAR OPEN COVERED PORCH AND ROOF OVERHANGS > 2'.
- VARIENCE (REQUESTED) - SHOWN IN BOLD IN TABLE FOR CLARITY.

STORMWATER CALCULATIONS

PRE-EXISTING IMPERVIOUS SURFACE AREA:
2,812± S.F. (FORMER BUILDING FOOTPRINT & RETAINING WALL)

PROPOSED IMPERVIOUS SURFACE AREA:
5,006± S.F. (INCLUDES PR. BLDG. FOOTPRINT, PORCH, BLUESTONE PATIOS & POOL EQUIP.)

NET INCREASE IN IMPERVIOUS AREA:
5,006± S.F. - 2,812 S.F. = 2,194± S.F.

FIRST INCH OF RAINFALL FROM NET INCREASE IN IMPERVIOUS SURFACE AREA:
2,194 S.F. x (1"/12") x (7.48 GAL./C.F.) = 1,367.6± GALLONS

LEACHING CHAMBER STORAGE CAPACITY (UNITED CONCRETE OR EQUAL):
FOUR 4'x4'x4' CONC. LEACHING CHAMBERS = 4 x 330 GAL./CHAMBER = 1,320 GALLONS
12" (MIN.) CRUSHED STONE PERIM. (ASSUME 40% VOIDS) = 69± GAL.
TOTAL STORAGE CAPACITY = 1,389± GALLONS

LEACHING CHAMBER RAINFALL CAPACITY:
1,389 GALLONS / 1,367.6 GALLONS = 1.02± OF RAINFALL

1,389± GALLONS OF STORAGE VOLUME PROVIDED IS GREATER THAN THE 1,367.6± GALLONS OF STORMWATER RUNOFF PRODUCED FROM THE FIRST 1" OF RAINFALL FROM THE NET INCREASE IN IMPERVIOUS SURFACE COVERAGE. AT LEAST 2,194 S.F. OF THE ROOF AREA SHALL BE COLLECTED VIA GUTTERS AND DIRECTED TO THE PROPOSED INFILTRATION SYSTEM WITH ROOF DRAINS.

SEPTIC SYSTEM KEY

- 32.3± L.F. 4" SCH. 40 PVC ASTM D1785 BUILDING SEWER PIPE @ 1/4" PER FT. MIN. SLOPE AND 12" MIN. COVER.
- 1,500-GALLON CONCRETE WATER TIGHT SEPTIC TANK BY UNITED CONCRETE (OR EQUAL) (SEE DETAIL).*
- 4" SCH. 40 PVC ASTM D1785 SOLID PIPE TO CONNECT TO HYAIR PUMP VESSEL.
- GEOMATRIX HYAIR "HA71" VESSEL AND PUMP SYSTEM WITH VALVE BOX TO WITHIN 12" OF FINISHED GRADE AND DUAL ALTERNATING PUMPS AND JUNCTION BOX WITHIN VALVE BOX (SEE SPECIFICATION ON SHEET 3 OF 4) - HYAIR VESSEL SHALL HAVE HOLD DOWN KIT INSTALLED ((4) 80 LB BAGS OF QUIKRETE CONCRETE PER GEOMATRIX SPECIFICATIONS).*
- 2" SCH. 40 PVC ASTM D1785 DISTRIBUTION PIPE TO CONNECT TO D-BOX.
- SEALED GEOMATRIX DISTRIBUTION BOX.*
- 4" SCH. 40 PVC ASTM D1785 SOLID PIPES (TYP. x3).
- 4" SCH. 40 PVC ASTM D1785 DISTRIBUTION TEE TO CONNECT TO PROPOSED LEACHING SYSTEM PER MANUFACTURER'S REQUIREMENTS (TYP. x3).
- 54.0 L.F. (TWENTY-SEVEN 2' UNITS) OF GEOMATRIX GST8218 LEACHING SYSTEM (WITH H-20 PROVISIONS) (SEE DETAILS).
- 4" SCH. 40 PVC ASTM D1785 INSPECTION PORTS - GEOMATRIX PART NO.: IPG5T15 (SEE DETAIL).*

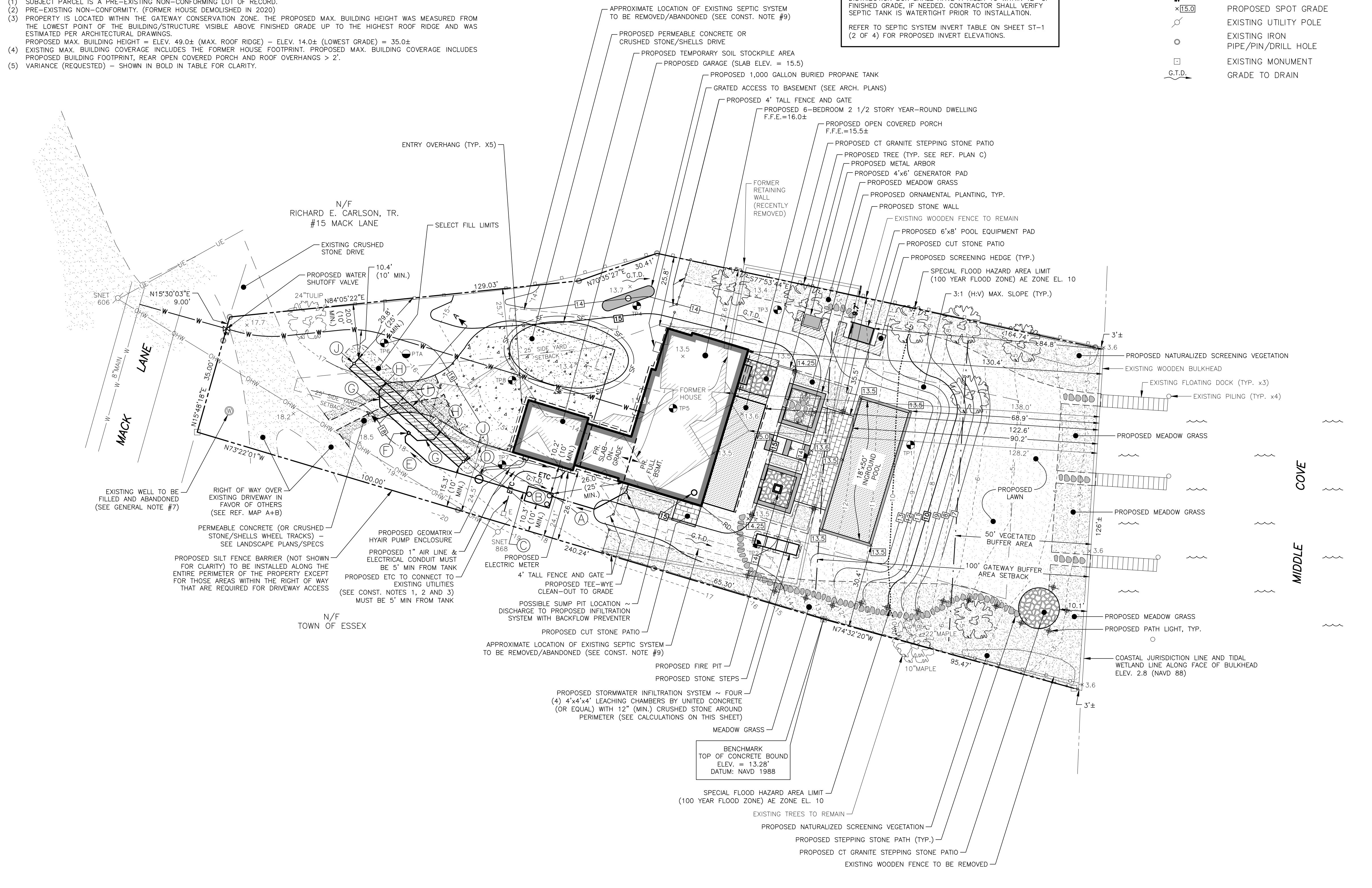
*SEPTIC TANK SHALL HAVE WATER TIGHT RISERS TO WITHIN 12" OF FINISHED GRADE. HYAIR VESSEL SHALL HAVE A RISER & VALVE BOX TO WITHIN 12" OF FINISHED GRADE. DISTRIBUTION BOX SHALL HAVE A RISER TO WITHIN 12" OF FINISHED GRADE, IF NEEDED. CONTRACTOR SHALL VERIFY SEPTIC TANK IS WATER TIGHT PRIOR TO INSTALLATION.

REFER TO SEPTIC SYSTEM INVERT TABLE ON SHEET ST-1 (2 OF 4) FOR PROPOSED INVERT ELEVATIONS.

SCALE IN FEET

LEGEND

- EXISTING PROPERTY/STREET LINE
- BUILDING SETBACK LINE
- FLOOD ZONE LINE
- FORMER/PRE-EXISTING BUILDING (PREVIOUSLY REMOVED)
- PROPOSED BUILDING
- EXISTING OVERHEAD WIRES
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED GAS LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SILT FENCE
- 50' VEGETATED BUFFER AREA
- 100' GATEWAY BUFFER AREA SETBACK
- PERCOLATION TEST LOCATION
- TEST PIT LOCATION
- EXISTING TEMPORARY ELECTRIC POST
- PROPOSED WATER VALVE
- PROPOSED SPOT GRADE
- EXISTING UTILITY POLE
- EXISTING IRON PIPE/PIN/DRILL HOLE
- EXISTING MONUMENT
- GRADE TO DRAIN



PLAN PREPARED BY:
INDIGO LAND DESIGN, LLC
JOSEPH WREN, P.E.
CIVIL ENGINEER
REG. NO. 21090
OLD SAYBROOK, CT 06475
PHONE: (860) 388-9343
FAX: (860) 391-9854

THE EMBOSSED SEAL OF THE REGISTERED PROFESSIONAL ENGINEER MUST BE AFFIXED HERE FOR THIS MAP TO BE VALID

| # | DATE | DESCRIPTION | BY |
|---|------|-------------|----|
| | | | |
| | | | |

COASTAL SITE PLAN
BERTIE DEMING HEINER
17 MACK LANE -- MAP 50 LOT 14-1
ESSEX, CONNECTICUT

DATE: DECEMBER 18, 2020
SCALE: 1"=20'
DRAWN BY: RG
CHECKED BY: JW
DWG. NO.: CSP-1
SHEET NO.: 1 of 4
JOB NO.: 2020-629

DEEP TEST PIT DATA

DATE: 10/9/2020
 WITNESSED BY: JOE WREN, P.E. (INDIGO)
 DON MITCHELL, R.S. (HEALTH)
 EXCAVATED BY: DUNCAN DOWNIE
 RECORDED BY: ROBERT RUSSO, C.P.S.S. (CLA)

TP #1
 EXISTING GRADE = ELEV. 9.2±
 0-15" FILL (BROWN SANDY LOAM, TOPSOIL)
 15"-51" DREDGE SPOIL
 51"-62" FILL (BROWN LOAMY SAND W/ GRAVEL & STONE)
 62"-98" FILL (MIXED DREDGE SPOIL W/ MUCK, CERAMIC)
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS

TP #2
 EXISTING GRADE = ELEV. 14.0±
 0-16" FILL (BROWN SANDY LOAM W/ GRAVEL & STONE)
 16"-53" LIGHT BROWN MEDIUM SAND W/ STRATA OF BROWN COARSE SAND
 53"-91" RED-BROWN SILT
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS
 RESTRICTIVE @ 53" (ELEV. 9.6±)

TP #3
 EXISTING GRADE = ELEV. 13.4±
 MIXED DREDGE SPOIL AND FILL FOR THE ENTIRE DEPTH, MUCH IS BLACK SILT, DAMP TOWARD BOTTOM. TOTAL DEPTH = 100".
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS
 RESTRICTIVE @ 91" (ELEV. 6.1±)

TP #4
 EXISTING GRADE = ELEV. 13.7±
 0-66" MIXED FILL (SAND & GRAVEL, DREDGE SPOIL, STUMP)
 66"-91" GRAY FINE TO COARSE SAND (STRATIFIED)
 91"-103" RED-BROWN SILT
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS
 RESTRICTIVE @ 91" (ELEV. 6.1±)

TP #5
 EXISTING GRADE = ELEV. 13.5±
 DISTURBED SOIL FOR ENTIRE DEPTH. HIT OLD FOUNDATION. TOTAL DEPTH = 92".
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS

TP #6
 EXISTING GRADE = ELEV. 16.2±
 0-14" FILL (BROWN SANDY LOAM, TOPSOIL)
 14"-25" DARK BROWN LOAMY SAND W/ GRAVEL, ORIGINAL TOPSOIL
 25"-69" GRAY & BROWN STRATIFIED SAND & GRAVEL
 69"-100" RED-BROWN SILT
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS
 RESTRICTIVE @ 69" (ELEV. 10.5±)

TP #7
 EXISTING GRADE = ELEV. 16.4±
 0-8" TOPSOIL (BROWN SANDY LOAM)
 8"-28" YELLOW-BROWN LOAMY SAND & GRAVEL
 28"-77" GRAY & BROWN STRATIFIED SAND & GRAVEL
 77"-107" RED-BROWN SILT
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS
 RESTRICTIVE @ 77" (ELEV. 10.0±)

TP #8
 EXISTING GRADE = ELEV. 14.1±
 0-30" FILL (DARK BROWN SANDY LOAM W/ GRAVEL)
 30"-59" LIGHT BROWN FINE SANDS WEAKLY STRATIFIED
 59"-115" RED-BROWN SILT
 NO APPARENT MOTTILING
 NO GROUNDWATER
 NO LEDGE
 NO ROOTS
 RESTRICTIVE @ 59" (ELEV. 9.2±)

PERCOLATION TEST DATA

CONDUCTED BY: ROSS GLADSTONE, E.I.T. (INDIGO)

| PT A | | | |
|---------------------------------|----------------|---------------|----------------------|
| DATE: 12/17/2020 | | | |
| DEPTH: 38"± | | | |
| TIME (MINUTE) | DEPTH (INCHES) | DROP (INCHES) | PERC RATE (MIN./IN.) |
| 0 | 0 | 26 | |
| 1 | 0 | 30 | 4 0.3 |
| 2 | 31 | 1/2 | 1 1/2 0.7 |
| 3 | 32 | 1/2 | 1 1.0 |
| 4 | 33 | 1/4 | 3/4 1.3 |
| 5 | 34 | 3/4 | 3/4 1.3 |
| 6 | 34 | 3/4 | 3/4 1.3 |
| 7 | 35 | 1/4 | 1/2 2.0 |
| 8 | 35 | 3/4 | 1/2 2.0 |
| 9 | 36 | 1/4 | 1/2 2.0 |
| 10 | 36 | 3/4 | 1/2 2.0 |
| 11 | 37 | 1/4 | 1/2 2.0 |
| 12 | 37 | 3/4 | 1/2 2.0 |
| 13 | 38 | 1/4 | 1/2 2.0 |
| (DRY/SILTIED) | | | |
| PERCOLATION RATE: 2.0 MIN./INCH | | | |

GENERAL NOTES (SEPTIC SYSTEM):

1. THE APPLICANT IS PROPOSING TO CONSTRUCT A 6-BEDROOM, 2 1/2 STORY YEAR-ROUND DWELLING WITH AN ATTACHED GARAGE AND REAR OPEN COVERED PORCH, A REAR PATIO AND INGROUND POOL. INSTALL A PERVIOUS DRIVEWAY, LANDSCAPING AND A 100% CONNECTICUT PUBLIC HEALTH CODE-COMPLIANT SEPTIC SYSTEM AND OTHER ASSOCIATED IMPROVEMENTS. THE PROPOSED DWELLING WILL BE LOCATED ENTIRELY OUTSIDE OF FEMA FLOOD HAZARD ZONE AE (EL. 10).
2. THIS PROPERTY WILL SERVED BY PUBLIC WATER AND A SUBSURFACE SEWAGE DISPOSAL SYSTEM. THERE ARE NO KNOWN WELLS OR ANY OTHER KNOWN DESIGN CONFLICTS WITHIN 75 FEET OF THE PROPOSED SEPTIC SYSTEM. THE EXISTING DRILLED WELL SHALL BE PROPERLY FILLED AND ABANDONED BY A LICENSED WELL DRILLER.
3. THE USE OF A GARBAGE DISPOSAL IS NOT RECOMMENDED. IF A GARBAGE DISPOSAL OR A TUB OVER 100 GALLONS IS INSTALLED, THE PROPOSED SEPTIC TANK SIZE SHALL BE INCREASED IN CONFORMANCE WITH THE PUBLIC HEALTH CODE. ANY WATER SOFTENER SHALL NOT DISCHARGE TO THE SEPTIC SYSTEM. FOR THIS PROJECT, THE SEPTIC TANK WAS UPSIZED TO ACCOMMODATE A 100 TO 200 GALLON TUB AND A GARBAGE DISPOSAL.
4. THE PROPOSED DWELLING WILL HAVE A FULL BASEMENT WITH FOOTING DRAINS. THE PROPOSED WEST WING OF THE HOUSE (INCLUDING THE ATTACHED GARAGE) WILL BE SLAB ON GRADE AND WILL NOT HAVE FOOTING DRAINS. THERE ARE NO KNOWN DOWNGRADIENT SEPTIC SYSTEM COMPONENTS WITHIN 25 FEET OF ANY UPGRADE IN-GRADE OR DRAINS OR ANY UPGRADE IN-GRADE SEPTIC SYSTEM COMPONENTS WITHIN 50 FEET OF ANY DOWNGRADIENT GROUNDWATER DRAINS.
5. ALL UTILITIES SHALL BE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE TOWN OF ESSEX AND THE CUSTODIAL UTILITY COMPANIES. ALL UTILITY TRENCHES SHALL BE NO LESS THAN 5 FEET FROM THE EXISTING SEPTIC SYSTEM AND NOT BACKFILLED WITH FREE DRAINING MATERIAL. ALL WATER LINES SHALL BE A MINIMUM OF 10 FEET FROM ANY PART OF THE PROPOSED SEPTIC SYSTEM.
6. SINCE THE DWELLING WILL BE SERVED BY A PUMP SYSTEM FOR SEWAGE DISPOSAL, THE PROPERTY OWNER SHOULD BE AWARE THAT THE PUMP SYSTEM IS RUN ON ELECTRICITY AND IN THE CASE OF A POWER OUTAGE, WILL NOT OPERATE UNLESS A BACKUP POWER SUPPLY IS PROVIDED.

GENERAL CONSTRUCTION NOTES (SEPTIC SYSTEM):

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT CONNECTICUT PUBLIC HEALTH CODE, AS AMENDED.
2. A LICENSED SURVEYOR SHALL FIELD STAKE THE PROPOSED SEPTIC SYSTEM PRIOR TO CONSTRUCTION.
3. NO WORK SHALL COMMENCE IN THE SYSTEM AREA UNTIL A SEPTIC PERMIT HAS BEEN TAKEN OUT BY THE LICENSED INSTALLER.
4. THE LICENSED INSTALLER SHALL PERFORM SITE PREPARATION AND SHOULD CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 TO VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION.
5. THE LICENSED INSTALLER SHALL BE ON SITE DURING SYSTEM CONSTRUCTION. THE SYSTEM SHALL BE INSTALLED IN CONFORMANCE TO THESE PLANS, ANY REQUESTED MODIFICATIONS SHALL BE DISCUSSED WITH THE ENGINEER PRIOR TO CONSTRUCTION. ALL MODIFICATIONS MUST BE APPROVED BY THE ENGINEER AND TOWN SANITARIAN PRIOR TO CONSTRUCTION.
6. A MINIMUM OF 24 HOURS NOTICE SHALL BE GIVEN BY THE LICENSED INSTALLER TO THE ENGINEER AND TOWN SANITARIAN BEFORE ANY STRIPPING IS DONE FOR THE SYSTEM. STRIP INSPECTIONS WILL BE PERFORMED BY THE ENGINEER AND SANITARIAN.
7. THE LICENSED INSTALLER SHALL BE RESPONSIBLE FOR PREPARING THE LEACHING AREA IN A WORKMANLIKE MANNER. ALL NECESSARY STEPS SHALL BE TAKEN TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOILS FROM OVER COMPACTION AND SILTATION ONCE EXPOSED.
8. THE INSTALLER NOTIFY THE ENGINEER AND SANITARIAN AT LEAST 24 HOURS IN ADVANCE OF BEING READY FOR A FINAL INSPECTION. THE ENGINEER AND SANITARIAN SHALL CONDUCT THE FINAL INSPECTION TOGETHER WITH THE LICENSED INSTALLER. NO DEVIATION FROM THE PLAN APPROVED BY THE SANITARIAN SHALL BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE SANITARIAN. THE SYSTEM SHALL NOT BE BACKFILLED WITHOUT THE APPROVAL OF THE SANITARIAN.
9. A LICENSED ENGINEER OR SURVEYOR SHALL PREPARE A SEPTIC SYSTEM AS-BUILT DRAWING CERTIFYING THE SYSTEM IS CODE-COMPLIANT. THIS PLAN SHALL INCLUDE ALL ESSENTIAL ACCESS POINTS INCLUDING TANK MANHOLES, HYAIR VESSEL, DISTRIBUTION BOX AND LEACHING SYSTEM ENDS. THE AS-BUILT PLAN SHALL BE COMPLETED IN A TIMELY MANNER.
10. THE LEACHING SYSTEM SHALL BE PROPERLY COVERED BY THE LICENSED SYSTEM INSTALLER WITHIN TWO (2) WORKING DAYS FOLLOWING THE LOCAL HEALTH DEPARTMENT'S FINAL INSPECTION AND APPROVAL.
11. NO HEAVY EQUIPMENT SHALL BE DRIVEN OVER THE INSTALLED LEACHING SYSTEM AREA.
12. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IF HE WISHES TO CHANGE THE LOCATION OR ELEVATION OF ANY PROPOSED SEPTIC SYSTEM COMPONENT PRIOR TO CONSTRUCTION.
13. THE LICENSED INSTALLER IS RESPONSIBLE TO INSTALL THE SUBSURFACE SEWAGE DISPOSAL SYSTEM IN ACCORDANCE WITH THE APPROVED PLAN.
14. SEPTIC TANK SHALL HAVE RISERS TO WITHIN 12" OF FINISHED GRADE. HYAIR VESSEL SHALL HAVE A RISER & VALVE BOX TO WITHIN 12" OF FINISHED GRADE. DISTRIBUTION BOX SHALL HAVE A RISER TO WITHIN 12" OF FINISHED GRADE, IF NEEDED. CONTRACTOR SHALL VERIFY SEPTIC TANK IS WATERTIGHT PRIOR TO INSTALLATION.
15. THE PROPOSED LEACHING SYSTEM, GEOMATRIX GST6218 WITH H-20 PROVISIONS, SHALL BE INSTALLED IN CONFORMANCE WITH ALL MANUFACTURER'S SPECIFICATIONS. A GEOMATRIX SYSTEMS REPRESENTATIVE WILL DELIVER THE GEOMATRIX GST FORMS TO THE SITE AND WILL BE ON SITE DURING INSTALLATION OF THE SYSTEM TO ENSURE PROPER INSTALLATION. THE INSTALLER SHALL OBTAIN, REVIEW AND STRICTLY ADHERE TO THE ALL INSTALLATION INSTRUCTIONS AND MATERIAL SPECIFICATIONS. MORE INFORMATION CAN BE OBTAINED FROM THE MANUFACTURER, GEOMATRIX SYSTEMS, LLC - 114 MILL ROCK ROAD EAST, OLD SAYBROOK, CT - 860-510-0730 OR AT WWW.GEOMATRIXSYSTEMS.COM.
16. A TWO-PART CONCRETE SEPTIC TANK SHALL BE USED BUT MUST BE MADE 100% WATERTIGHT BY GASKETING AND MORTARING ALL JOINTS. IF A TWO-PART TANK IS USED, IT SHALL BE FILLED WITH WATER ABOVE THE JOINT AND INSPECTED BY THE ENGINEER AND/OR THE TOWN SANITARIAN WITHIN 24 HOURS. THE CONTRACTOR SHALL MONITOR THE WATER LEVEL IN THE TANK DURING THIS PERIOD AND SHALL PERMANENTLY REPAIR ANY LEAKS TO THE SATISFACTION OF THE ENGINEER AND THE TOWN SANITARIAN.
17. THE LICENSED INSTALLER SHALL CONFIRM THAT NO LEDGE IS PRESENT WITHIN 48 INCHES BELOW THE BOTTOM OF THE PROPOSED LEACHING SYSTEM.
18. THE CONTRACTOR SHALL GRADE THE AREA IN THE VICINITY OF THE LEACHING FIELD IN SUCH A MANNER THAT ALL SURFACE RUNOFF IS SUFFICIENTLY DIRECTED AWAY FROM THE LEACHING FIELD AREA AND NOT RESULT IN PONDING ON THE SUBJECT PROPERTY OR AN ADJACENT PROPERTY OR ROADWAY.
19. THE LICENSED INSTALLER SHALL INCLUDE ALL ADEQUATE PROVISIONS FOR FREEZE PROTECTION FOR ALL PIPING AND JUNCTIONS.
20. LICENSED INSTALLER SHALL PROVIDE SIEVE ANALYSES FOR C-33 SAND AND SELECT FILL PRIOR TO CONSTRUCTION.
21. THE APPROXIMATE LOCATION OF THE EXISTING SEPTIC SYSTEMS ARE SHOWN ON THE SITE PLAN (SHEET 1 OF 4). ALL EXISTING SEPTIC SYSTEM COMPONENTS SHALL BE LOCATED IN THE FIELD AND SHALL BE PUMPED DRY AS NECESSARY AND REMOVED IN ACCORDANCE WITH THE CONNECTICUT PUBLIC HEALTH CODE AND ALL APPLICABLE LOCAL REGULATIONS (IF NECESSARY).
22. THE CONTRACTOR SHALL COORDINATE WITH GEOMATRIX, LLC - 860-510-0730 REGARDING THE DOSE VOLUME OF THE HYAIR VESSEL. THE DOSED VOLUME SHALL NOT EXCEED 149 GALLONS (20% OF THE TOTAL STORAGE VOLUME OF THE LEACHING SYSTEM) AS RECOMMENDED BY THE CONNECTICUT PUBLIC HEALTH CODE. THIS IS ACHIEVED WITH A "HAY71" HYAIR VESSEL SINCE THE MAXIMUM VOLUME PER DOSE IS 71 GALLONS.

SANITARY SYSTEM DESIGN CRITERIA

| DESIGN PERC RATE | # OF BEDROOMS | REQUIRED LEACHING AREA | LEACHING SYSTEM TYPE | EFF. LEACHING AREA | LEACHING AREA PROVIDED | REQ'D TANK CAPACITY | TANK CAPACITY PROVIDED |
|---------------------------|---------------|------------------------|---|--------------------|---|---------------------|------------------------|
| LESS THAN 10.1 MINS./INCH | 6 BEDROOM | 742.5 S.F. (1) | 54.0 L.F. (27 2' UNITS) OF GEOMATRIX GST6218 LEACHING SYSTEM (W/ H-20 PROVISIONS) | 14.0 S.F./L.F. | 756.0 S.F. (14.0 S.F./L.F. x 54.0 L.F.) | 1,375 GALLONS (2) | 1,500 GALLONS (2) |

- (1) E.L.A. REQUIRED = 495 S.F. (FIRST THREE BEDROOMS) + 82.5 S.F. x 3 (THREE REMAINING BEDROOMS) = 742.5 S.F. (TOTAL)
 (2) TANK CAPACITY REQUIRED = 1,000 GALLONS (FIRST THREE BEDROOMS) + 125 GALLONS x 3 (THREE REMAINING BEDROOMS) = 1,375 GALLONS -- USE A 1,500 GALLON SEPTIC TANK

MLSS COMPUTATIONS

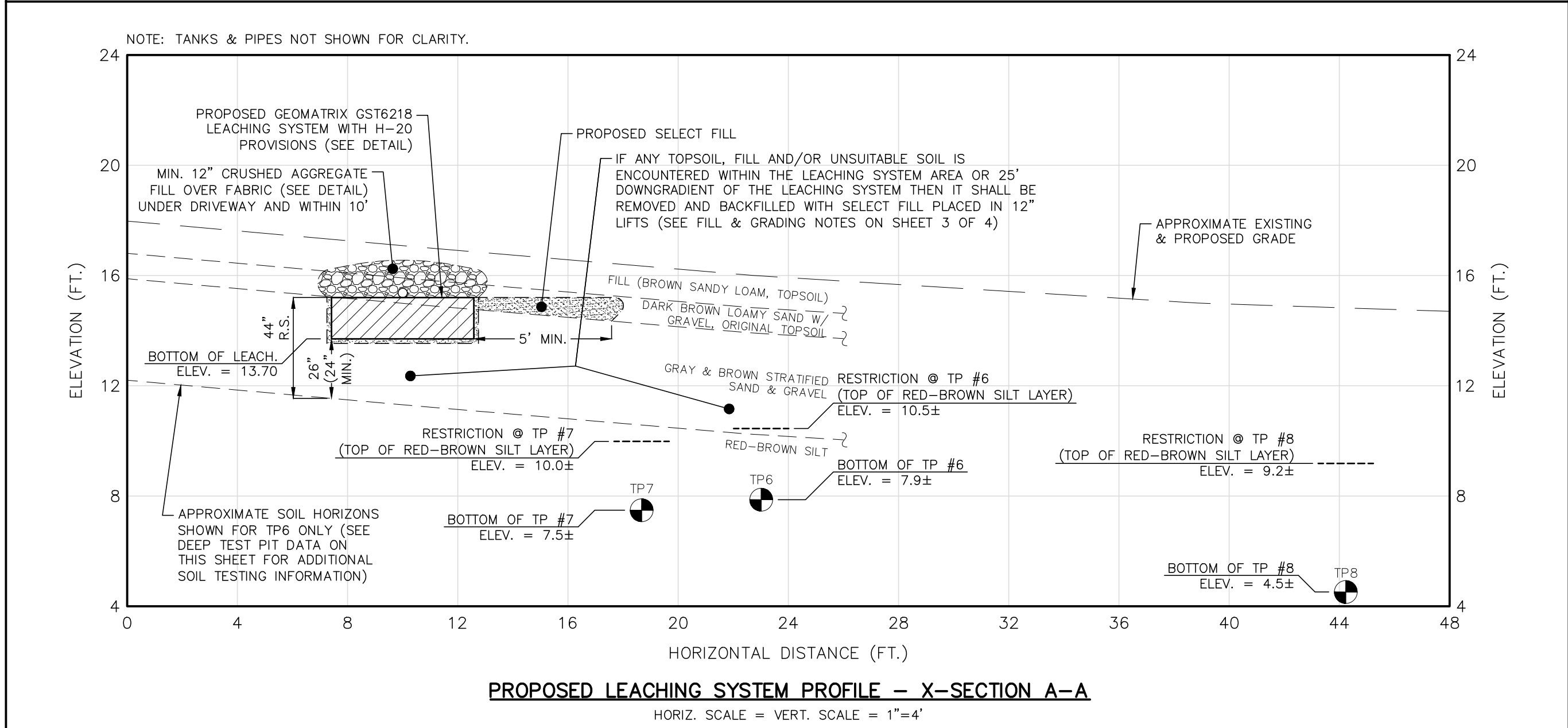
| RECEIVING SOIL DEPTH | # OF BEDROOMS | DESIGN PERC RATE | HYDRAULIC GRADIENT | HYDRAULIC FACTOR (HF) | FLOW FACTOR (FF) | PERCOLATION FACTOR (PF) | MLSS REQUIRED (HFxFFxPF) | MLSS PROVIDED |
|----------------------|---------------|-----------------------|--------------------|-----------------------|------------------|-------------------------|--------------------------|---------------|
| 42.1-48.0 INCHES (1) | 6 BEDROOM | UP TO 10.0 MINS./INCH | 4.1-6.0% (2) | 24 | 2.25 | 1.0 | 54.0 FT. | 54.0 FT. |

- (1) THE TOP OF THE PROPOSED LEACHING SYSTEM IS MORE THAN 12" BELOW NATURAL GRADE AND THEREFORE, PER THE CT PUBLIC HEALTH CODE, RECEIVING SOIL SHALL BE MEASURED FROM THE TOP OF THE LEACHING SYSTEM DOWN TO THE RESTRICTIVE LAYER. SEE X-SECTION BELOW. TEST PITS #6 AND #7 ARE IN THE LEACHING SYSTEM AREA AND TP#6 HAS A SHALLOWER RESTRICTIVE DEPTH (RESTRICTIVE LAYER IS 69" BELOW GROUND SURFACE).
 MAX. RESTRICTIVE ELEVATION = ELEV. 17.3± (MAX. GROUND ELEV. ON UPGRADE EDGE OF LEACH. NEAR TP #6) - 69" (TP#6 RESTRICTIVE DEPTH) = ELEV. 11.55±
 RECEIVING SOIL DEPTH = ELEV. 15.20 (TOP OF LEACH.) - ELEV. 11.55± (MAX. RESTRICTIVE ELEVATION) = 44"± -- USE 42.1-48.0"
 (2) PER THE CT PUBLIC HEALTH CODE, THE HYDRAULIC GRADIENT MAY BE CALCULATED USING THE PERCENT SLOPE OF THE NATURALLY OCCURRING GRADE. CONSERVATIVELY, USE THE PERCENT SLOPE ON THE NORTHERN END OF THE LEACHING SYSTEM SINCE IT HAS THE GENTLEST SLOPE.
 (3) BOTTOM OF LEACHING SYSTEM SHALL BE SET LEVEL AND AT ELEVATION 13.70'.
 (4) DISTRIBUTION PIPES SHALL BE SET LEVEL FOR THE FIRST 10 FT. OUT OF THE D-BOX TO PROMOTE EQUAL DISTRIBUTION.
 HYDRAULIC GRADIENT = [ELEV. 17.0± (UPGRADIENT EDGE OF LEACH.) - ELEV. 15.7± (25' DOWNGRADIENT FROM LEACH.)] / 30.2± = 4.3% -- USE 4.1-6.0%

SANITARY SYSTEM PIPE INVERT TABLE

| STRUCTURE | PIPE VERTICAL TO SEPTIC TANK | SEPTIC TANK | HYAIR VESSEL | DISTRIBUTION BOX | LEACHING ROW |
|----------------|------------------------------|-------------|--------------|------------------|--------------|
| INV. IN (FT.) | --- | 13.75 (1) | 13.50 | 15.70 | 15.20 |
| INV. OUT (FT.) | 14.50 (1) | 13.50 | 13.50 | 15.60 (4) | --- |

- (1) PROPOSED 32.3± L.F. OF 4" SCH. 40 PVC ASTM D1785 BUILDING SEWER PIPE. PERCENT SLOPE = (14.50' - 13.75') x 100% / 32.3± = 2.32% ± > 2.08% (MIN.).
 (2) FOR ALL PIPE, A MIN. OF 12" OF COVER IS RECOMMENDED.
 (3) BOTTOM OF LEACHING SYSTEM SHALL BE SET LEVEL AND AT ELEVATION 13.70'.
 (4) DISTRIBUTION PIPES SHALL BE SET LEVEL FOR THE FIRST 10 FT. OUT OF THE D-BOX TO PROMOTE EQUAL DISTRIBUTION.



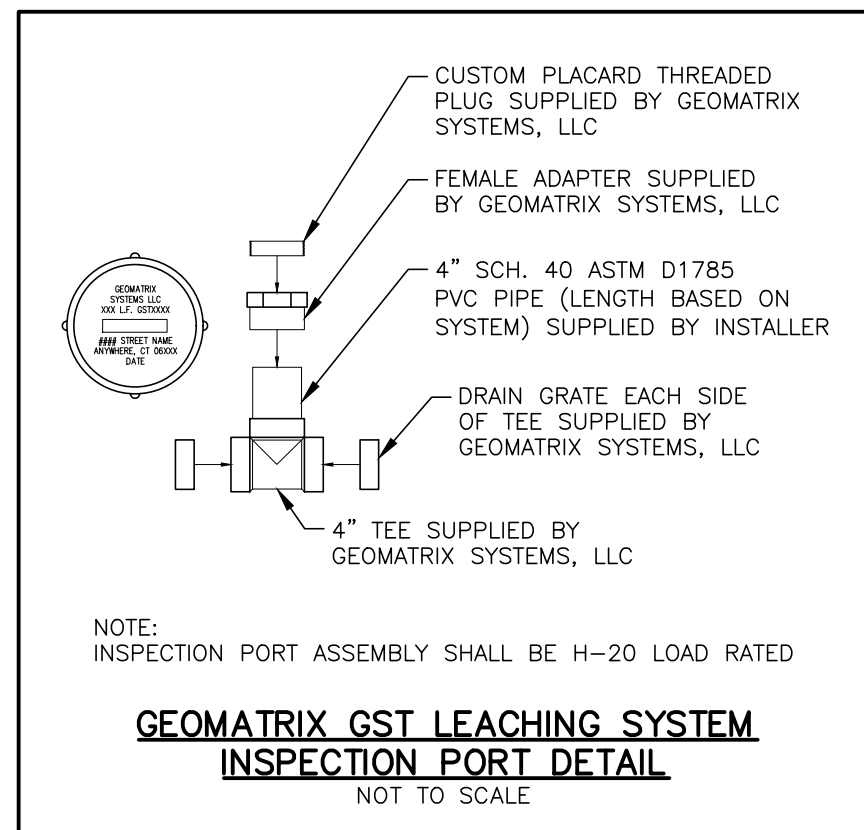
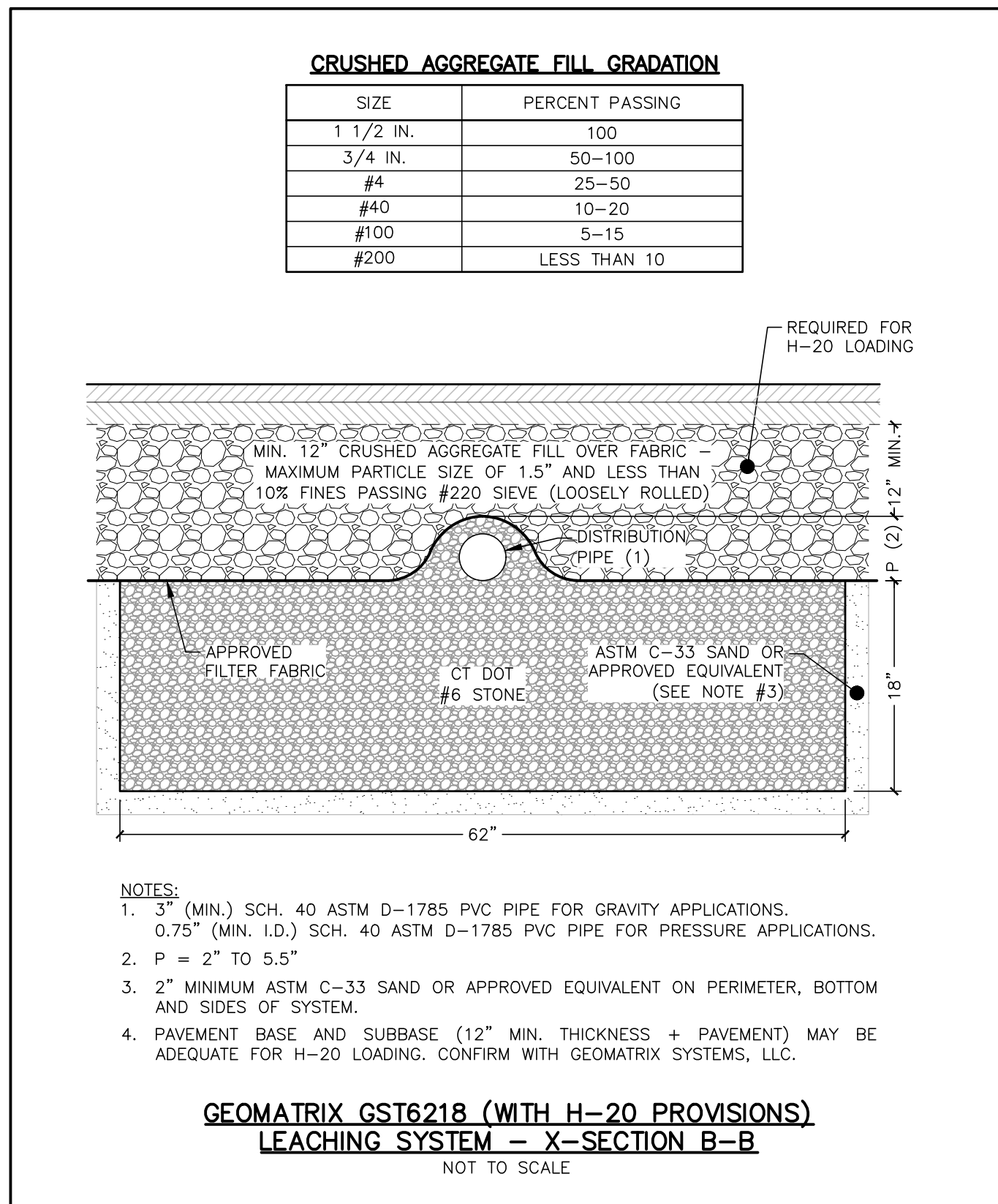
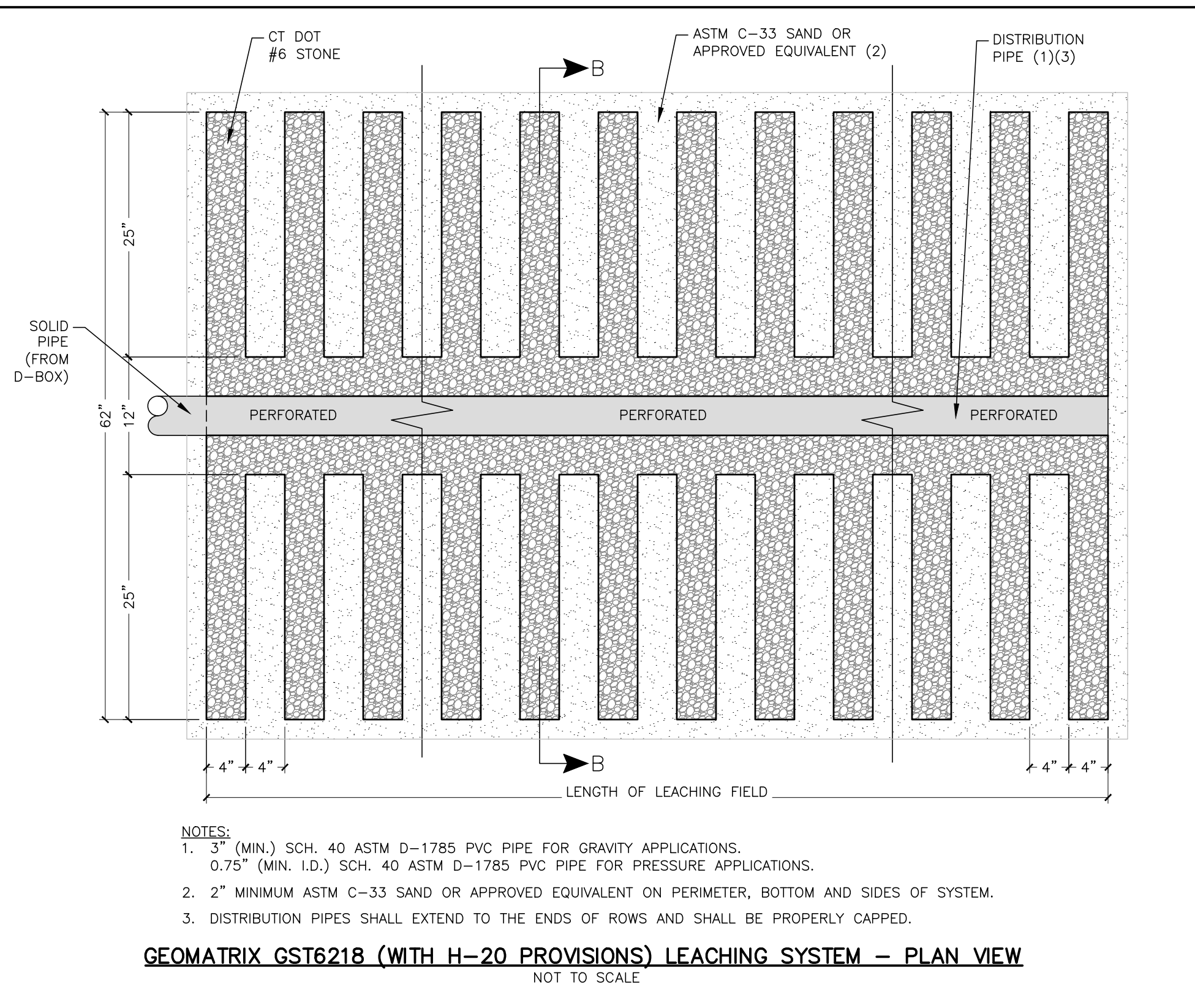
PLAN PREPARED BY:
 INDIGO LAND DESIGN, LLC
 JOSEPH WREN, P.E.
 CT REG. NO. 21090
 105 OLD SAYBROOK CT 06475
 PHONE: (860) 388-9343
 FAX: (860) 391-9854

THE EMBOSSED SEAL OF THE REGISTERED PROFESSIONAL ENGINEER MUST BE AFFIXED HERE FOR THIS MAP TO BE VALID

| # | DATE | DESCRIPTION | BY |
|---|------|-------------|----|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

SOIL TESTING DATA & SEPTIC DESIGN CRITERIA
 BERTIE DEMING HEINER
 17 MACK LANE -- MAP 50 LOT 14-1
 ESSEX, CONNECTICUT

DATE: DECEMBER 18, 2020
 SCALE: AS NOTED
 DRAWN BY: RG
 CHECKED BY: JW
 DWG. NO.: ST-1
 SHEET NO.: 2 of 4
 JOB NO.: 2020-629



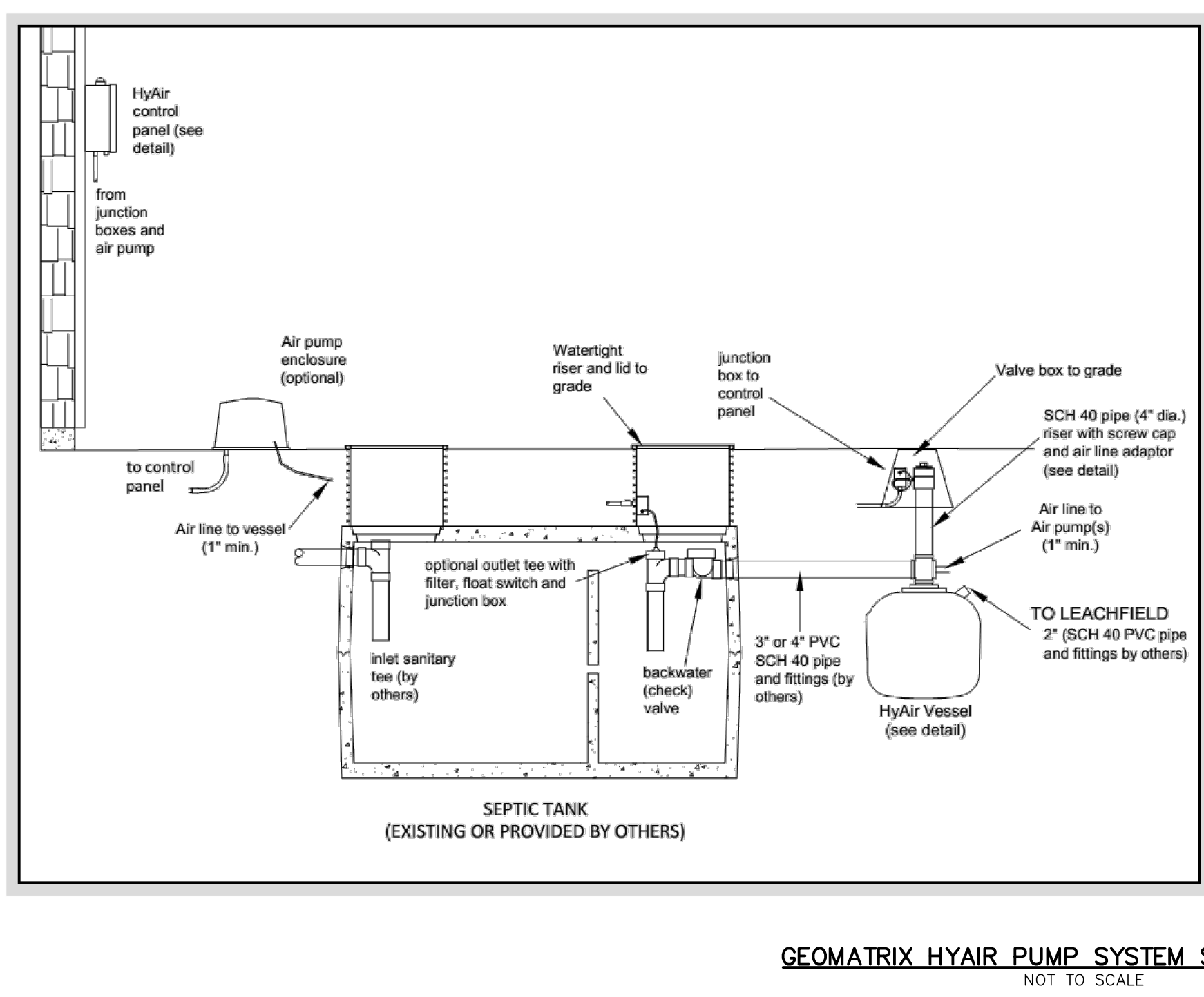
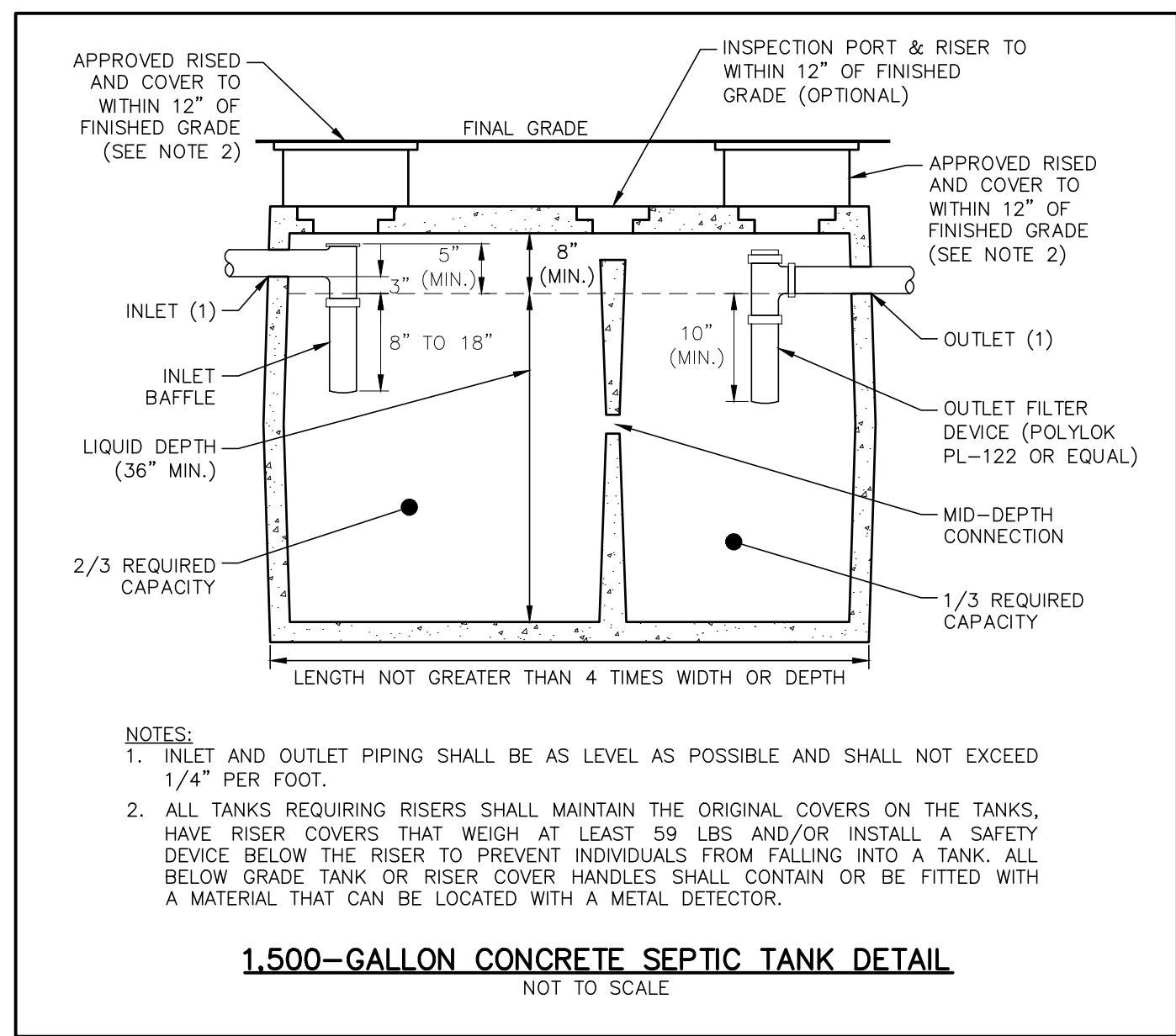
FILL AND GRADING NOTES (SEPTIC SYSTEM):

- REMOVE ALL TOPSOIL, FILL AND/OR UNSUITABLE SOIL WITHIN THE SYSTEM AREA AND SCARIFY THE SURFACE IN THE PROPOSED LEACHING SYSTEM AREA PRIOR TO PLACING ANY SELECT FILL MATERIAL. AVOID COMPACTING THE SCARIFIED AREA. FILL SHALL NOT BE PLACED OVER SNOW OR FROZEN GROUND. DISCONTINUE FILL PLACEMENT DURING HEAVY RAINFALL AND A MINIMUM OF 24 HOURS THEREAFTER. THE SELECT FILL MATERIAL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 90% DENSITY.
- SELECT FILL MATERIAL SHALL CONSIST OF CLEAN SAND AND GRAVEL, FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. THE SELECT FILL MATERIAL SHALL MEET THE REQUIREMENTS OF THE PUBLIC HEALTH CODE PROVIDED IN THE TABLE ON THIS SHEET.
- THE LICENSED INSTALLER SHALL BE RESPONSIBLE FOR PREPARING THE LEACHING AREA UTILIZING THE SELECT FILL MATERIAL.
- ALL NECESSARY STEPS SHALL BE TAKEN TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOILS FROM OVER COMPACTED AND SITUATION ONCE EXPOSED.
- THE CONTRACTOR SHALL PROVIDE GRADATION SPECIFICATIONS OF THE SELECT FILL MATERIAL TO BE USED FOR THE PROPOSED SEPTIC SYSTEM TO THE DESIGN ENGINEER AND TOWN SANITARIAN PRIOR TO ORDERING AND INSTALLATION.

SELECT FILL GRADATION TABLE

| SIEVE SIZE | PERCENT PASSING | |
|------------|-----------------|-----------|
| | WET SIEVE | DRY SIEVE |
| #4 | 100 | 100 |
| #10 | 70-100 | 70-100 |
| #40 | 10-50* | 10-75 |
| #100 | 0-20 | 0-5 |
| #200 | 0-5 | 0-2.5 |

* PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.
** A SIEVE ANALYSIS FOR THE SELECT FILL MATERIAL SHALL BE PROVIDED TO THE DESIGN ENGINEER. ONLY THE DESIGN ENGINEER MAY APPROVE SELECT FILL MATERIAL NOT IN COMPLIANCE WITH THE GRADATION TABLE IF THE MATERIAL PASSING THE #200 SIEVE DOES NOT EXCEED 6% BASED ON WET SIEVE.



| Model | Weight | Electrical | Sound Level |
|-------|--------|----------------------------|----------------|
| A8600 | 24 lbs | 110-120V, 60Hz, 5.0A, 600W | ≤ 52 dbA @ 10' |

X 2 for CT installations

PUMP SPECIFICATIONS

PANEL SPECIFICATIONS

| Model | Diameter (inches) | Volume (gallons) | Height (inches) | Weight (lbs) |
|--------|-------------------|------------------|-----------------|--------------|
| HA47 | 28 | 47 | 28.5 | 43.5 |
| HA71** | 32 | 71 | 35 | 70 |
| HA128 | 40 | 128 | 40 | 91.5* |
| HA239 | 48 | 239 | 48 | 140* |

** NOTES:
(1) USE GEOMATRIX HYAIR "HA71" MODEL VESSEL WITH A HOLD DOWN KIT. SEE SEPTIC SYSTEM KEY ON SHEET 1 OF 4 FOR MORE INFORMATION.
(2) THE AIR PUMP ENCLOSURE SHALL BE INSTALLED ON THE EXTERIOR OF THE BUILDING OR SHALL BE PROPERLY VENTED.

TANK SPECIFICATIONS

NEMA 4x fiberglass 110Vac single phase
Air pump circuit breaker(s)
Separate internal 10A control/alarm circuit breaker
Cycle counters
80 db audio alarm with mute
Alarm light

PLAN PREPARED BY:
INDIGO LAND DESIGN, LLC
JOSEPH WREN, P.E.
CT REG. NO. 21090
2000 FLORENCE
OLD SAYBROOK, CT 06475
PHONE: (860) 388-9343
FAX: (860) 391-8854

THE EMBOSSED SEAL OF
INDIGO LAND DESIGN, LLC
ATTYED HERE FOR THIS
MAP TO BE VALID

| # | DATE | DESCRIPTION | BY |
|---|------|-------------|----|
| | | | |
| | | | |
| | | | |
| | | | |

SEPTIC SYSTEM DETAILS
BERTIE DEMING HEINER
17 MACK LANE -- MAP 50 LOT 14-1
ESSEX, CONNECTICUT

DATE:
DECEMBER 18, 2020
SCALE:
NOT TO SCALE
DRAWN BY:
RG
CHECKED BY:
JW
DWG. NO.:
SSD-1
SHEET NO.:
3 of 4
JOB NO.:
2020-629

SOIL EROSION & SEDIMENTATION CONTROL PLAN NARRATIVE

THE SITE CONTRACTOR MUST FOLLOW ALL GUIDELINES SET FORTH IN THE MANUAL ENTITLED "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" PUBLISHED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION. THIS MANUAL IS ALSO KNOWN AS DEP BULLETIN 34.

PROJECT DESCRIPTION

THE APPLICANT IS PROPOSING TO CONSTRUCT A 6-BEDROOM, 2 1/2 STORY YEAR-ROUND DWELLING WITH AN ATTACHED GARAGE AND REAR OPEN COVERED PORCH, A REAR PATIO AND INGROUND POOL, INSTALL A PERVIOUS DRIVEWAY, LANDSCAPING AND A 100% CONNECTICUT PUBLIC HEALTH CODE-COMPLIANT SEPTIC SYSTEM AND OTHER ASSOCIATED IMPROVEMENTS. THE PROPOSED DWELLING WILL BE LOCATED ENTIRELY OUTSIDE OF FEMA FLOOD HAZARD ZONE AE (EL. 10).

CONSTRUCTION IS ANTICIPATED TO COMMENCE IN WINTER/SPRING 2021. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO CONSTRUCTION ACTIVITIES. E & S CONTROLS SHALL BE MAINTAINED AND REPAIRED OR REPLACED AS NEEDED THROUGHOUT THE CONSTRUCTION DURATION. ALL E & S CONTROLS SHALL BE REMOVED AND PROPERLY DISPOSED OF AS SOON AS THE SITE IS COMPLETELY STABILIZED.

CONSTRUCTION SEQUENCE

- CONTACT "CALL BEFORE YOU DIG" TO MARK OUT ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- ENSURE ALL LAND USE PERMITS HAVE BEEN SECURED. OBTAIN ALL NECESSARY PERMITS.
- INSTALL ALL EROSION AND SEDIMENT CONTROLS.
- PROPERLY REMOVE AND/OR ABANDON EXISTING SEPTIC SYSTEMS (IF NECESSARY).
- LAND SURVEYOR TO STAKE OUT PROPOSED IMPROVEMENTS.
- STRIP AND STOCKPILE TOPSOIL AND OTHER EXCAVATED SOILS IN AREA(S) SHOWN ON PLAN. APPLY TEMPORARY SEED MIXTURE TO PILES IF THEY WILL NOT BE DISTURBED FOR MORE THAN 30 DAYS.
- ROUGH GRADE DRIVEWAY AND LOT.
- CONSTRUCT THE FOUNDATION FOR THE PROPOSED DWELLING.
- FRAME AND CONSTRUCT THE PROPOSED DWELLINGS.
- INSTALL PROPOSED SEPTIC SYSTEM AND UNDERGROUND PROPANE TANK AND POOL EQUIPMENT.
- CONNECT ALL UTILITIES FROM WITHIN THE BUILDINGS.
- CONSTRUCT POOL.
- FINISH GRADE DRIVEWAY AND INSTALL PER PLAN.
- FINISH GRADE, SEED AND MULCH ALL DISTURBED AREAS AS REQUIRED.
- REMOVE ALL EROSION AND SEDIMENT CONTROLS ONCE SITE IS COMPLETELY STABILIZED. DISPOSE OF PROPERLY.

LAND DISTURBANCE

- ALL EXISTING VEGETATION OUTSIDE OF THE CLEARING LIMITS SHALL BE PROTECTED. EXISTING VEGETATION SHALL BE REMOVED ONLY IN AREAS NECESSARY FOR SITE CONSTRUCTION ACTIVITIES. ANY ADDITIONAL CLEARING OUTSIDE OF THE PROPOSED CLEARING LIMITS SHALL BE APPROVED BY TOWN STAFF PRIOR TO CLEARING.
- ALL AREAS SHALL REMAIN UNDISTURBED UNTIL IMMEDIATELY PRIOR TO SITE DEVELOPMENT.
- ALL CONSTRUCTION EQUIPMENT, MATERIALS AND STOCKPILES SHALL NOT BE PLACED OUTSIDE OF THE DISTURBED AREAS.
- ALL TREES, BRUSH, STUMPS, WOOD CHIPS OR OTHER ORGANIC MATTER SHALL BE DISPOSED OF PROPERLY OFF-SITE. WOOD CHIPS MAY BE USED AS A SILTATION BARRIER DURING CONSTRUCTION AND SPREAD AFTER SITE IS STABILIZED. NO ORGANIC MATTER INCLUDING TREES, BRUSH AND STUMPS SHALL BE BURIED ON-SITE.

STRIPPING AND STOCKPILING

ALL STOCKPILES THAT CONSIST OF ERODIBLE MATERIALS SHALL BE LOCATED WITHIN AREAS AS SHOWN ON THE SITE PLAN AND SURROUNDED BY A SILTATION BARRIER. ANY STOCKPILE THAT WILL REMAIN UNDISTURBED FOR A PERIOD LONGER THAN 30 DAYS SHALL BE SEEDED WITH A TEMPORARY GRASS SEED MIXTURE TO PREVENT EXCESSIVE EROSION AND SEDIMENTATION.

TRENCH EXCAVATION AND BACKFILL

THE CONTRACTOR SHALL PROPERLY MAINTAIN ALL BACKFILLED EXCAVATIONS. ANY DEPRESSIONS DUE TO SETTLING IN THESE AREAS SHALL BE FILLED AND RESEDED AS NECESSARY.

THE WIDTH OF ALL EXCAVATED TRENCHES SHALL BE KEPT AS NARROW AS PRACTICABLE TO ACCOMMODATE THE WORK. ALL MATERIALS EXCAVATED FROM TRENCHES SHALL BE STOCKPILED AND USED AS TRENCH BACKFILL MATERIAL UNLESS IT IS DETERMINED TO BE UNSUITABLE BY THE ENGINEER. EXCESS MATERIALS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.

SOIL EROSION AND SEDIMENT CONTROLS

ALL ADJACENT PROPERTIES AND RECEIVING WATERCOURSES AND / OR WETLAND AREAS SHALL BE ADEQUATELY PROTECTED FROM SOIL EROSION AND SEDIMENTATION BOTH DURING AND AFTER CONSTRUCTION.

ADDITIONAL EROSION AND SEDIMENT CONTROLS MAY BE REQUIRED BY THE TOWN AND SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROLS BEFORE, DURING AND AFTER CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE PROPER REMOVAL AND DISPOSAL OF ALL EROSION AND SEDIMENT CONTROLS ONCE THE SITE IS COMPLETELY STABILIZED.

ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER ALL RAINFALL EVENTS. E & S CONTROLS SHALL BE REPAIRED OR REPLACED AS NECESSARY WITHIN 24 HOURS THROUGHOUT THE CONSTRUCTION DURATION.

IF NECESSARY, A TEMPORARY FILTER FABRIC SILT BARRIER SHALL BE PLACED BENEATH THE GRATE OF THE PROPOSED CATCH BASIN TO PREVENT ANY SILTATION OF THE DRAINAGE SYSTEM. THE FILTER FABRIC SHALL BE REMOVED IMMEDIATELY AFTER THE SURROUNDING AREAS ARE ADEQUATELY STABILIZED.

ALL ACCUMULATED SEDIMENTS AT ALL EROSION AND SEDIMENT CONTROLS SHALL BE PERIODICALLY REMOVED AND SPREAD IN AREAS THAT ARE NOT SUBJECT TO EROSION.

THE CONTRACTOR SHALL EMPLOY BEST MANAGEMENT PRACTICES TO CONTROL STORMWATER DISCHARGES AND TO PREVENT EROSION AND SEDIMENTATION AND TO OTHERWISE PREVENT POLLUTION OF WETLANDS OR WATERCOURSES OR PRIVATE PROPERTY. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE TOWN OF ANY PROBLEMS INVOLVING EROSION AND/OR SEDIMENTATION THAT HAVE DEVELOPED IN THE COURSE OF, OR THAT ARE CAUSED BY, THE AUTHORIZED WORK.

THE RESPONSIBLE CONTACT PERSON FOR THE INSTALLATION AND MAINTENANCE OR EROSION AND SEDIMENTATION CONTROLS ON THIS PROJECT WILL BE THE SITE CONTRACTOR AND / OR THE GENERAL CONTRACTOR. ONCE THE GENERAL CONTRACTOR IS SELECTED, CONTACT INFORMATION WILL BE PROVIDED TO THE TOWN.

VEGETATIVE TURF ESTABLISHMENT PROCEDURE

SCARIFY ALL AREAS TO BE TOPSOILED AND SEED. APPLY A MINIMUM OF 4 INCHES OF TOPSOIL ON ALL AREAS TO BE SEED. APPLY GRASS SEED, LIME, FERTILIZER AND MULCH ACCORDING TO THE FOLLOWING SCHEDULE:

PERMANENT SEED MIXTURE:

| | |
|---------------------|-----------------------------|
| CREeping RED FESCUE | 0.45 LBS. PER 1,000 SQ. FT. |
| REDDTOP | 0.05 |
| TALL FESCUE | 0.45 |
| TOTAL | 0.95 |

FERTILIZER:
10-10-10 APPLY AT 7.5 LBS. PER 1,000 SQ. FT.

LIMESTONE:
APPLY AT 150 LBS. PER 1,000 SQ. FT.

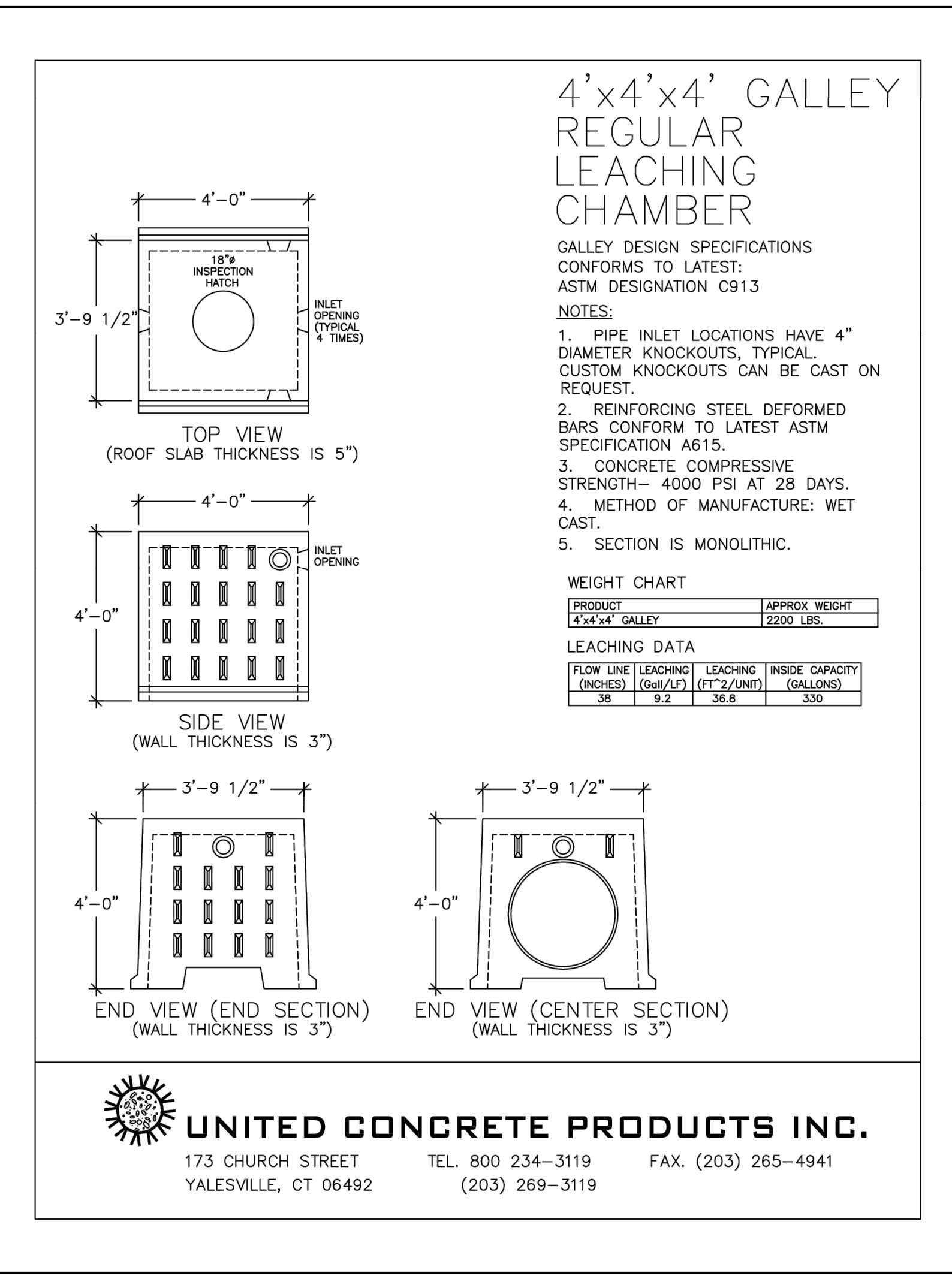
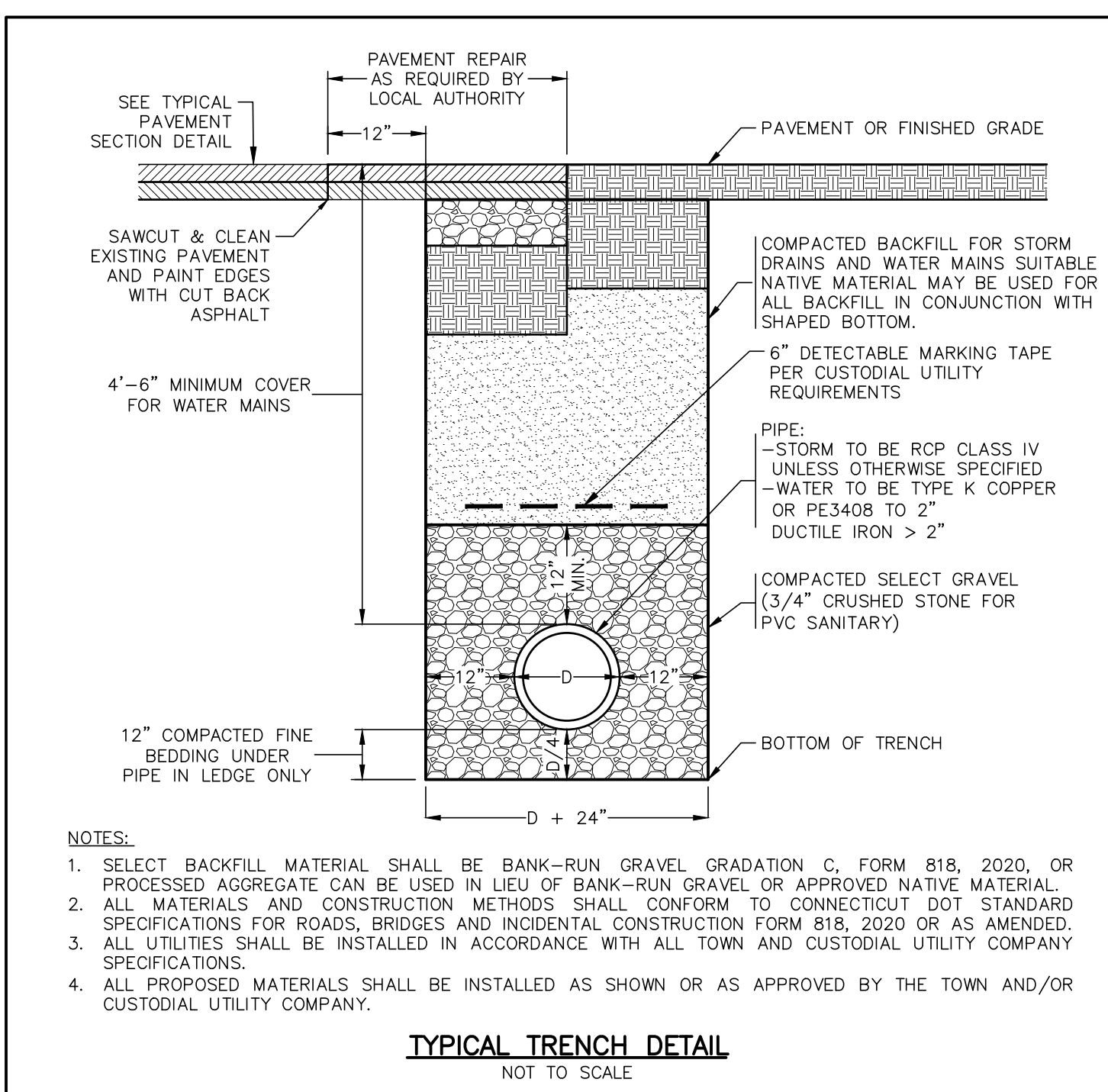
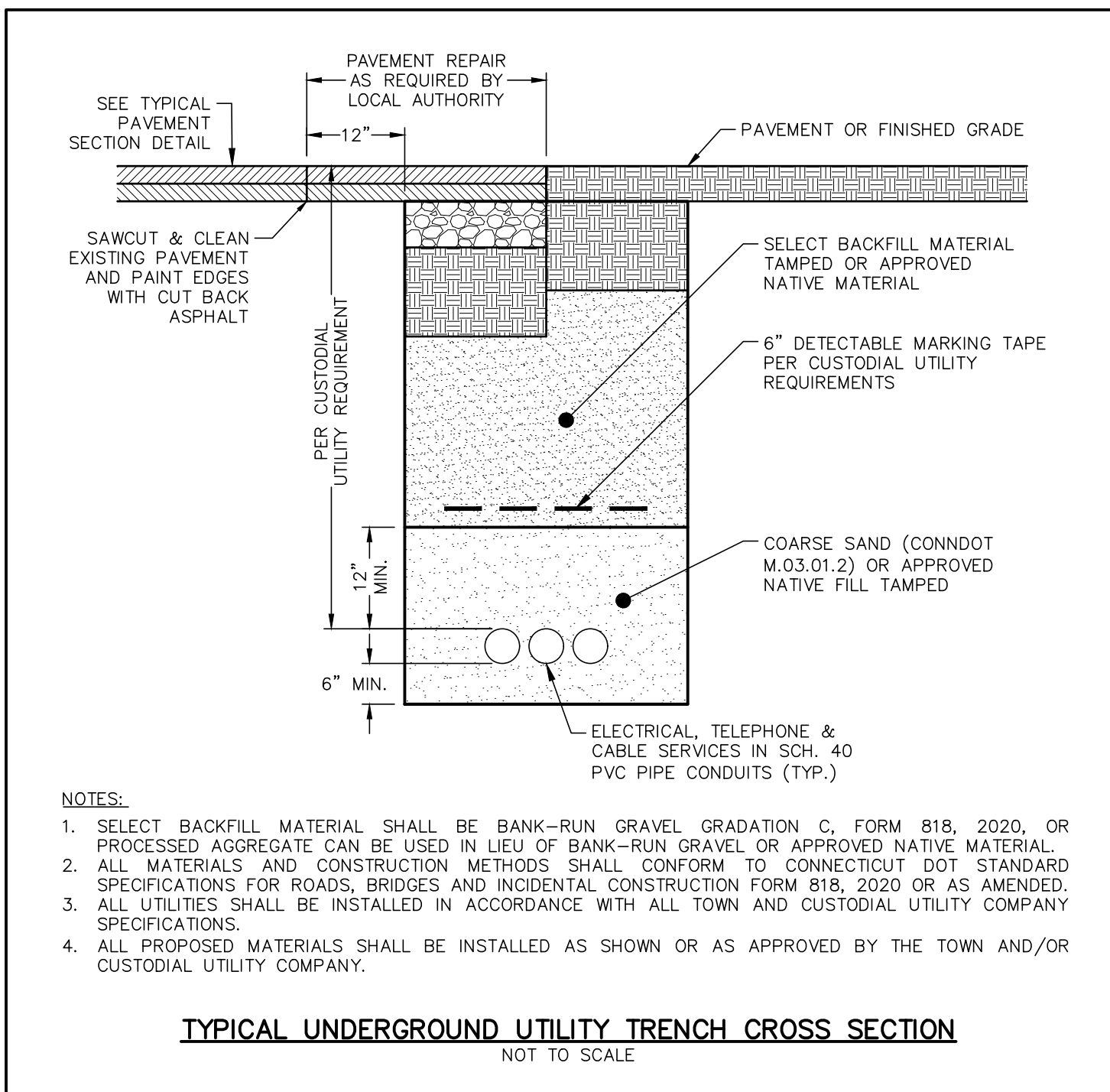
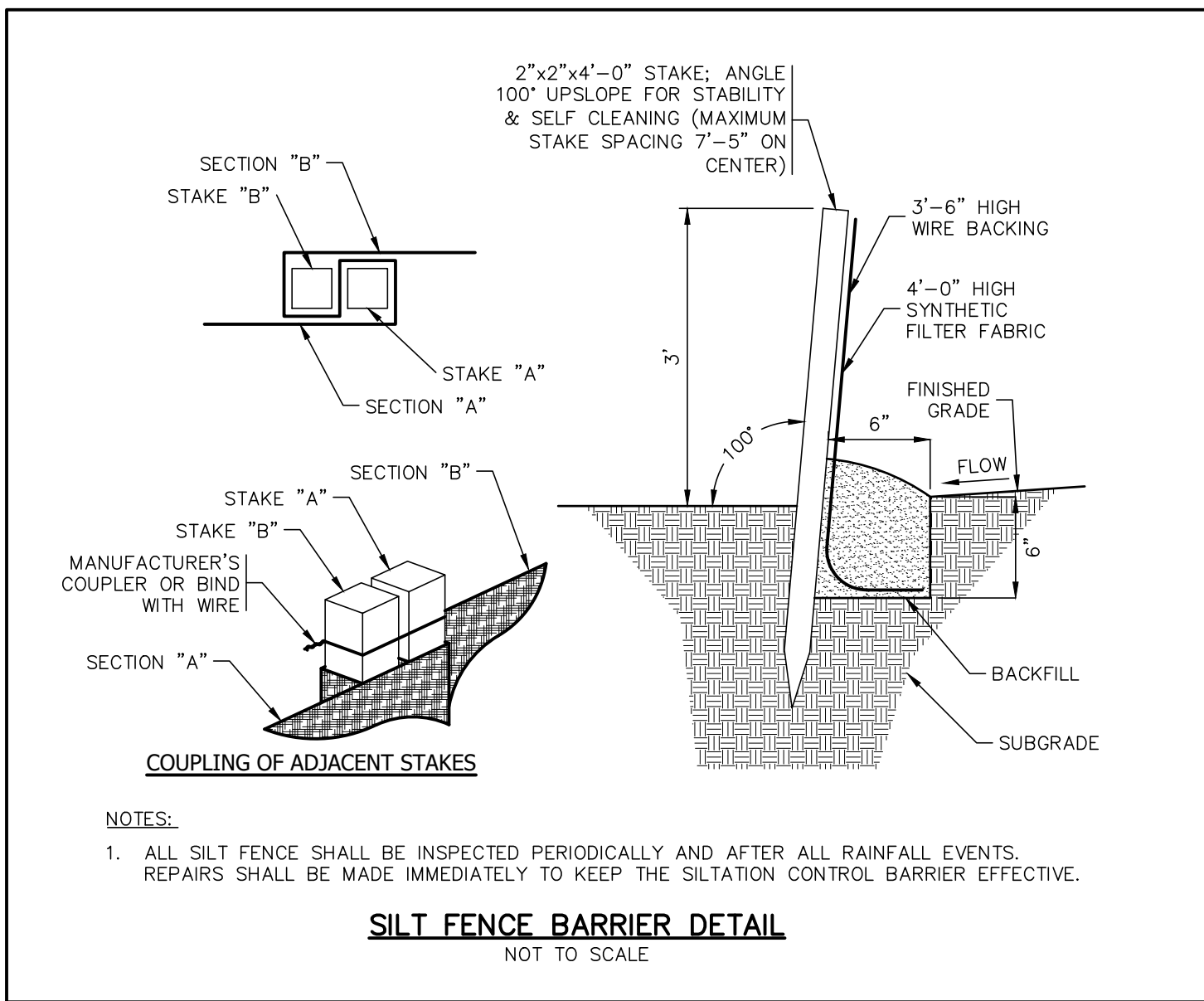
MULCHING:
SPREAD HAY OR STRAW OVER ALL AREAS AFTER SEEDING. USE 1 1/2 TO 2 BALES PER 1,000 SQ. FT. TARGET FOR 100% COVERAGE. ANCHOR BY USING NETTING OR TRACKING AS NECESSARY.

TEMPORARY EROSION CONTROL BLANKETS:

USE TEMPORARY EROSION CONTROL BLANKETS ON ALL SEEDED SLOPES STEEPER THAN 3 (H) TO 1 (V) AND/OR AS DIRECTED BY THE DESIGN ENGINEER.

SEEDING DATES:

SEEDING DATES IN CONNECTICUT ARE NORMALLY APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH OCTOBER 1. SEED GERMINATION NORMALLY CANNOT BE EXPECTED FROM NOVEMBER THROUGH FEBRUARY. IF ADEQUATE SEED GERMINATION IS NOT POSSIBLE DUE TO TIME OF YEAR CONSTRAINTS, MULCHING SHALL BE ADEQUATELY PROVIDED TO PROTECT THE SEED FROM WIND AND SURFACE EROSION UNTIL THE WEATHER IMPROVES AND THE SEEDING BECOMES WELL ESTABLISHED.



PLAN PREPARED BY:
INDIGO LAND DESIGN, LLC
JOSEPH WREN, P.E.
CT REG. NO. 21090
100 WINDY HILL ROAD
OLD SAYBROOK, CT 06475
PHONE: (860) 388-9343
FAX: (860) 391-8854

THE EMBOSSED SEAL OF THE CONTRACTOR SHALL BE AFFIXED HERE FOR THIS MAP TO BE VALID

| # | DATE | DESCRIPTION | BY |
|---|------|-------------|----|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

E&S NARRATIVE & CONSTRUCTION DETAILS
BERTIE DEMING HEINER
17 MACK LANE -- MAP 50 LOT 14-1
ESSEX, CONNECTICUT

DATE: DECEMBER 18, 2020
SCALE: NOT TO SCALE
DRAWN BY: RG
CHECKED BY: JW
DWG. NO.: ES-1
SHEET NO.: 4 of 4
JOB NO.: 2020-629