GRENTWO-LOT

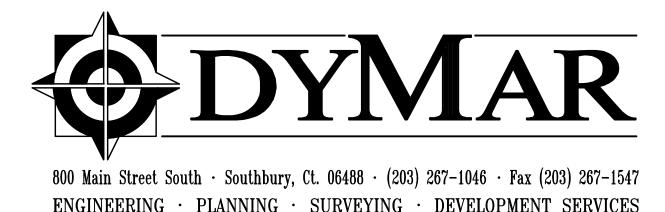
SUBDIVISION

19 LITTLE PITCH ROAD LITCHFIELD, CONNECTICUT

APPLICANT / DEVELOPED BY:

Gregory M. & Robin P. Green 19 Little Pitch Road Litchfield, CT 06759

CIVIL ENGINEER/SURVEYOR:



SOIL SCIENTIST:

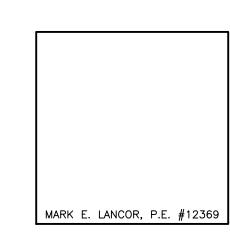
William Kenny Associates, LLC 195 Tunxis Hill Road Suite 204 Fairfield, CT 06825

DRAWING PACKAGE:

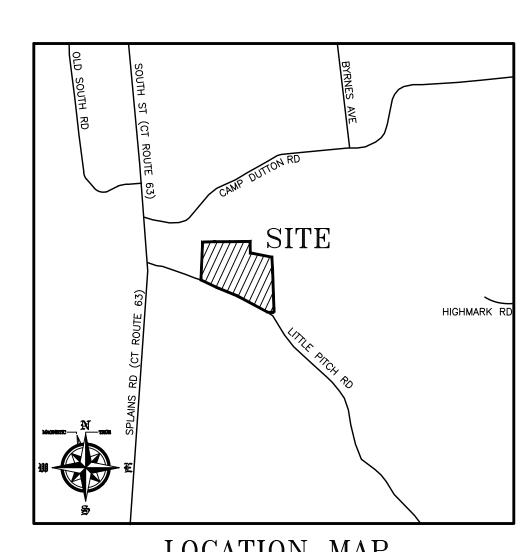
CIVIL ENGINEERING DRAWINGS

A-2 SOLVEI	RECORD SUDDIVISION FLAN
C-1	GENERAL LEGEND, ABBREVIATIONS & NOTES
C-2	SITE LAYOUT PLAN
C-3	LOT #2 SITE DEVELOPMENT & WETLANDS IMPACT PLAN
C-4	LOT #2 SEPTIC PLAN & SPECIFICATIONS
C-5A	EROSION & SEDIMENT CONTROL NARRATIVE
C-5B	EROSION & SEDIMENT CONTROL CONSTRUCTION STANDARDS
C-5C	EROSION & SEDIMENT CONTROL DETAILS
C_6	SITE DETAILS

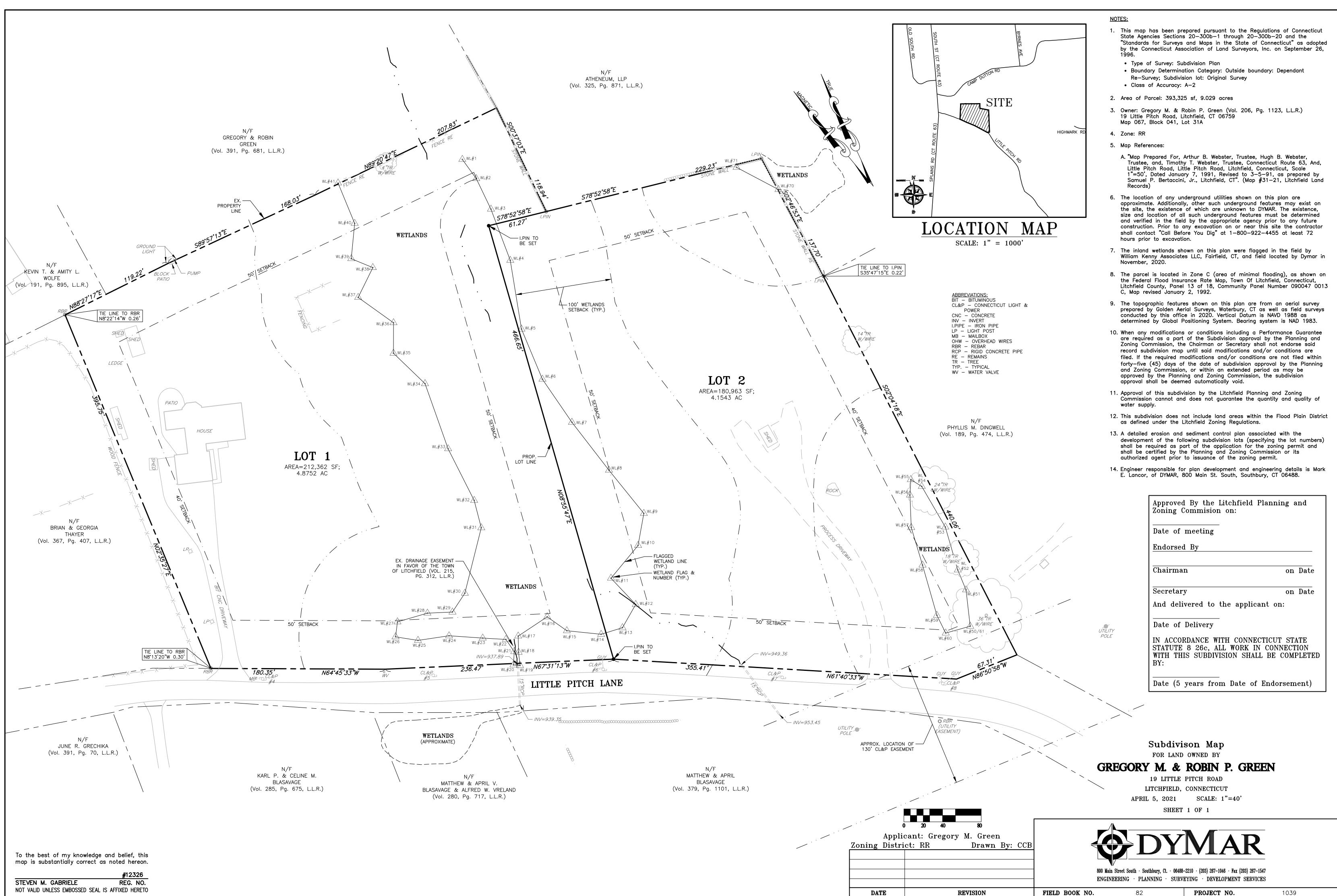
CONSTRUCTION SPECIFICATIONS & STANDARDS



04-08-20	2.1	
J 4 -06-20	21	-
04-08-20	21	-
)	4-08-20	4-08-2021



 $\frac{\text{LOCATION MAP}}{\text{SCALE: 1" = 1000'}}$



ENDADOR I HE DITA C'INDICATION | Hospital Survey A Survey A Survey Control of the Survey A 17/2024 0-46-47

82 PROJECT

UNDER DRAIN

CONSTRUCTION

RENDERED.

JURISDICTION.

APPROVAL.

AND APPROVING AUTHORITY

REFER TO DETAILS FOR TYPE.

ITEMS OF WORK UNDER THE CONTRACT.

OTHERWISE INDICATED ON THE DRAWING.

THE CONTRACTOR'S OWN EXPENSE.

ELSEWHERE IN THE DRAWINGS.

PRIOR TO ANY EXCAVATION.

COMPLETION.

1. NOTES ARE NOT INTENDED TO REPLACE SPECIFICATIONS. REFER TO PROJECT

WHERE LAWS AND REGULATIONS OF PUBLIC AUTHORITY PRESCRIBE A

DEGREE SO PRESCRIBED SHALL GOVERN.

PRIOR TO COMMENCEMENT OF THE WORK.

CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.

SPECIFICATION AND STANDARD NOTES IN ADDITION TO GENERAL NOTES.

HIGHER DEGREE OF PROTECTION THAN SPECIFIED HEREIN, THEN THE HIGHER

UNLESS OTHERWISE INDICATED, DETAILS SHOWN ON ANY DRAWINGS ARE TO BE

THE WORD "CERTIFY" IS TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY

THE ENGINEER, BY WHICH IS BASED ON HIS\HER BEST KNOWLEDGE, INFORMA-

CHANGES MADE TO THESE PLANS AND RELATED CONTRACT DOCUMENTS SINCE

COMPLETED BY DYMAR MAY BE DETERMINED BY COMPARISON WITH RECORD

INFORMATION MADE AVAILABLE AT THE TIME OF THE DESIGN SERVICES WERE

LOCATIONS OF EXISTING UTILITIES HAVE BEEN TAKEN FROM UTILITY MAPS OR

BY OTHER MEANS. ACTUAL FIELD LOCATIONS AND ELEVATIONS ARE TO BE VER-

AFFECTED BY THE WORK ON OR NEAR THE PROJECT AREA SHALL BE CONTACTED

IFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ALL UTILITY COMPANIES

ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD, AND

SHALL HAVE FINAL SAY AS TO THE ACTUAL DIMENSIONS BY WHICH TO

ACTUAL MEASUREMENTS AND THOSE SHOWN ON THE DRAWINGS.

DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER

CONSTRUCT. NO ALLOWANCES SHALL BE MADE FOR DIFFERENCES BETWEEN

THE CONTRACTOR SHALL PROCURE ALL NECESSARY PERMITS AND LICENSES RE-

QUIRED BY FEDERAL, STATE OR LOCAL AUTHORITIES TO PERFORM THE WORK,

SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION 29 USC SECTION 1926

AND THE OCCUPATIONAL HEALTH AND SAFETY ACT IN ORDER TO SAFELY AND

ADEQUATELY PROTECT ALL EMPLOYEES AND PROPERTY DURING CONSTRUCTION.

IBLES KEPT TO AN ABSOLUTE MINIMUM AT ALL TIMES. ALL RUBBISH AND COM-

FACILITIES FOR ADEQUATE FIRE PROTECTION MUST BE PROVIDED TO KEEP PACE

WITH THE PROGRESS OF WORK REQUIRING THE USE OF COMBUSTIBLE MATERI-

BUSTIBLE DEBRIS MUST BE CONTINUOUSLY REMOVED FROM THE PROPERTY.

PAY ALL FEES IN CONNECTION THEREWITH, AND ABIDE BY ALL REGULATIONS,

ORDINANCES, CODES AND OTHER RULES OF SUCH AUTHORITIES HAVING

9. THE CONTRACTOR SHALL STRICTLY COMPLY WITH THE NATIONAL FIRE CODES,

10. THE CONSTRUCTION SITE MUST BE KEPT CLEAN AND ORDERLY, AND COMBUST-

ALS. ALL CONTAINERS OF FLAMMABLE LIQUIDS MUST BE PROVIDED WITH

ACCESS TO FIRE EQUIPMENT MUST BE KEPT UNOBSTRUCTED AT ALL TIMES.

ANY FIRE, EXPLOSION, LEAKAGE OR SPILLAGE OF FLAMMABLE LIQUIDS, RE-

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE LAYOUT OF ALL

REQUIRED TO HAVE A REGISTERED ENGINEER OR LAND SURVEYOR LAYOUT

CONSTRUCTION LIMIT LINES, EASEMENTS AND PROPERTY LINES WHERE REQUIRED,

ALL ROADS, STORM DRAINAGE, AND SIDEWALKS. AS BUILTS SHALL BE PREPARED

AND FURNISHED TO THE CONTROLING AUTHORITY FOR ALL ROADS, DRIVEWAYS,

14. SLOPES AND INVERTS OF ALL STORM DRAINAGE AND SANITARY SEWER PIPES ARE

15. HORIZONTAL LOCATIONS OF PROPOSED STORM SEWERS MAY BE VARIED SLIGHTLY

16. MAINTAIN TEN FOOT (10") MINIMUM HORIZONTAL SEPARATION AND EIGHTEEN

INCH (18") MINIMUM VERTICAL SEPARATION BETWEEN WATER MAINS AND

17. THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT LEAST 72 HOURS

18. ALL EXISTING UTILITIES TO BE RELOCATED, RESET AND/OR RECONNECTED, IF IN

DIRECT PAYMENT TO THE CONTRACTOR BUT SHALL BE INCLUDED IN VARIOUS

OTHERS, SUCH WORK SHALL BE AT THE CONTRACTOR'S EXPENSE UNLESS OTHER-

WISE SPECIFIED BY THE OWNER OR INDICATED ELSEWHERE. THE RELOCATION

OF SAME OR REMOVAL THEREOF MAY NOT COINCIDE WITH THE CONTRACTOR'S

WORK SCHEDULE AND, THEREFORE, THE CONTRACTOR SHOULD ANTICIPATE IN

HIS BID THE COST OF SUCH WORK WITHIN THE PROJECTS LIMITS TO PROJECT

ATTENTION OF THE PERTINENT UTILITY COMPANY IMMEDIATELY. COST OF WORK

REQUIRED) LINES NOTED TO BE ABANDONED ARE TO BE EITHER REMOVED OR

SAND FILLED AND PLUGGED AS BY DIRECTED BY THE ENGINEER AT NO ADDITIONAL

EXPENSE TO THE OWNER. REUSE OF EXISTING PIPE AND STRUCTURES MUST BE APPROVED BY THE DESIGN ENGINEER AND TOWN'S CONTROLLING AUTHORITY.

DISPOSAL OF UNAPPROVED MATERIAL SHALL BE AT THE CONTRACTOR'S EXPENSE.

THE STANDARD PRACTICES OF THE STATE, COUNTY OR LOCAL AGENCY HAVING JURISDICTION OVER THE MINIMUM REQUIREMENTS OF THE PROJECT, UNLESS

SHALL BE SELECT GRANULAR MATERIAL PLACED IN TWELVE INCH (12") LIFTS AND

TO PREVENT DISPLACEMENT OR SETTLEMENT. ANY DAMAGES BORNE BY THE CON-TRACTOR SHALL BE BROUGHT TO THE OWNERS ATTENTION AND REPAIRED AT

CONFLICT WITH THE PROPOSED WORK ACTIVITIES, SHALL BE MADE AT NO

19. WHERE EXISTING UTILITY POLES NEED TO BE RELOCATED OR REMOVED BY

20. ALL UTILITY LINES DAMAGED BY CONSTRUCTION SHALL BE BROUGHT TO THE

21. ALL EXISTING WATER, STORM OR SANITARY SEWER (PRIOR WPCA APPROVAL

22. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH

23. ALL FILL REQUIRED UNDER UTILITY LINES FOR BELOW GRADE EXCAVATIONS,

24. PROVIDE WELL-BRACED SHORING AT EXCAVATIONS NEAR EXISTING STRUCTURES

25. BELOW GRADE PRECAST STRUCTURES ARE TO BE CONSTRUCTED TO RESIST HY-

UNTIL SATISFACTORY COMPLETION OF REQUIRED CONSTRUCTION.

26. PROVIDE SIX INCH (6") MINIMUM OF CRUSHED STONE OR PIPE BEDDING IN

DROSTATIC UPLIFT BASED ON TOTAL COMPLETION OF THESE STRUCTURES IN-CLUDING PLACEMENT OF ALL BACKFILL. THE CONTRACTOR SHALL BE RESPONSI-

AND RETAINING WALLS, UNLESS DIRECTED BY THE ENGINEER OR AS DETAILED

PROPERLY COMPACTED TO 95% OF OPTIMUM DRY DENSITY.

TO REPAIR THE UTILITY SHALL BE BORNE BY THE CONTRACTOR, UNLESS OTHERWISE ACCEPTED UNDER OTHER TERMS BY THE UTILITY IN AGREEMENT

SANITARY SEWERS OR STORM DRAINS. WHERE VERTICAL SEPARATION CAN NOT

BE MAINTAINED A CONCRETE ENCASEMENT OR CRADLE SHALL BE CONSTRUCTED.

AND CONTINUING THE CONSTRUCTION ACTIVITIES WITHIN THESE LIMITS. HE IS ALSO

SANITARY SEWERS, PARKING AREAS, STORMWATER SYSTEMS, AND SIDEWALKS. NO

CRITICAL AND MUST BE CONSTRUCTED AS SHOWN. NO CHANGES WITHOUT PRIOR

IN THE FIELD TO FIT EXISTING CONDITIONS WHERE APPROVED BY THE ENGINEER

CHANGES TO BE MADE IN SANITARY SEWER LAYOUT WITHOUT PRIOR WPCA APPROVAL.

12. THE LOCAL FIRE AND POLICE DEPARTMENT SHALL BE PROMPTLY NOTIFIED OF

GARDLESS OF HOW SMALL IT MAY HAVE BEEN.

APPROPRIATE WARNING LABELS AND DESCRIPTION OF THEIR CONTENTS.

11. AISLES, PASSAGEWAYS, ALLEYWAYS, DRIVEWAYS, ENTRANCES OR EXITS AND

BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK. THE ENGINEER

THE INFORMATION SHOWN ON THE FOLLOWING SHEETS IS LIMITED TO THE

PLANS AND RELATED DOCUMENTS FILED AT THE OFFICE OF DYMAR.

TION AND BELIEF; AS SUCH IT CONSTITUTES NEITHER A GUARANTEE OR

FINISHED GRADES. GRASSED AREAS DISTURBED BY CONSTRUCTION SHALL BE LOAMED, FERTILIZED AND SEEDED OR SODDED, AS IT APPLIES.

29. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR UNDERTAKING ALL MEASURES NECESSARY TO PREVENT EROSION AND SILTATION, REGARDLESS OF THE METHOD USED IN ACCORDANCE WITH THE APPLICABLE LOCAL, COUNTY, AND STATE GUIDELINES. AT A MINIMUM, INSPECTIONS OF THE SITE BY A QUALIFIED INDIVIDUAL SHALL BE DONE WEEKLY AND WITHIN 24 HOURS OF ANY STORM EVENT GREATER THAN 1/2 INCH OF RAIN. PROPER ADJUSTMENTS AND MEASURES SHALL BE MADE AND REPORTS PREPARED AND KEPT ON SITE WITH A SOIL AND EROSION CONTROL PLAN PREPARED BY A REGISTERED VATED SEDIMENT THROUGHOUT THE PROJECT. ALL AFFECTED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. PENALTIES IMPOSED BY AGENCIES

30. THE CONTRACTOR SHALL TAKE SPECIAL CAUTION TO PRESERVE AND PROTECT FROM INJURY ALL TREES AND VEGETATION LOCATED WITHIN WETLANDS AND AS INDICATED TO REMAIN. NO UNNECESSARY CUTTING OR TRIMMING OF TREES WILL BE PERMITTED, UNLESS AUTHORIZED BY THE OWNER.

31. THE CONTRACTOR IS FURTHER RESTRICTED FROM CAUSING ANY UNNECESSARY EXCAVATIONS WITHIN THE DESIGNATED WETLAND AREA AND UNDER NO CIRCUM-STANCES SHALL THE WETLAND SOILS BE REMOVED FROM THE SITE UNLESS OTHERWISE PERMITTED OR DIRECTED BY THE OWNER OR IT'S AUTHORIZED

AND UTILITIES AS LAST AMENDED AND WHERE THE MUNICIPALITY'S REGULATION IS SILENT, THE FOLLOWING REFERENCE MANUALS SHALL GOVERN AS THE "STANDARD" SPECIFICATION FOR THE PROJECT, LATEST REVISED EDITION:

B.) STATE OF CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL

C.) CONNECTICUT DEPARTMENT OF TRANSPORTATION DRAINAGE MANUAL - 2000, AS AMENDED TO DATE.

D.) A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, AASHTO - 1984, AS F.F. AMENDED TO DATE.

F.) CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION CONNECTICUT

PROJECT RELATED

- THE PARCEL IS LOCATED IN ZONE C (AREA OF MINIMAL FLOODING), AS SHOWN ON THE FEDERAL FLOOD INSURANCE RATE MAP, TOWN OF LITCHFIELD, CONNECTICUT, LITCHFIELD COUNTY, PANEL 13 OF 18, COMMUNITY PANEL NUMBER 090047 0013 C, MAP REVISED JANUARY 2, 1992.
- 4. THE CONTOURS SHOWN ON THESE PLANS ARE FROM AN AERIAL SURVEY PREPARED BY GOLDEN AERIAL SURVEYS, WATERBURY, CT. ADDITIONAL FALL OF 2020 AND CONFORM TO TOPOGRAPHIC ACCURACY CLASS T-1.
- 5. ALL PROPOSED UTILITIES ON-SITE SHALL BE INSTALLED UNDERGROUND.
- TO THE TOWN OF LITCHIFIELD ZONING REGULATIONS.
- 8. THE INLAND WETLANDS SHOWN WERE FLAGGED IN THE FIELD BY WILLIAM KENNY ASSOCIATES, LLC, FAIRFIELD, CT AND FIELD LOCATED BY ACCURATE SURVEY DURING 2020 BY DYMAR.

ACQ"D.

ARCH.

ACCMP.

B.M.

B.B.

BDRY.

C.I.P.

C.B.

CTR.

CH.B.

CONC.

C.P.P.

CULV.

ESMT.

G.P.D.

G.G.

G.S.C.

G.P.S.

GRD.

H.B.

H.W.

HGT.

HEM.

HICK.

HWY.

HORZ.

H0.

H.R.

HYD.

I.F.O.C.

L.V.C.

LIM.

MAC.

M.B.

M.H.

MPL.

MAX.

M.J.

MIN.

MISC.

M.B.R.

M.H.W.

MANHOLE

MAXIMUM

MINIMUM

MEAN HIGH WATER

MECHANICAL JOINT

METAL BEAM RAIL

MISCELLANEOUS

L.F.

HWY. MON.

CONST.

CTR. LN.

B.C.L.C.

APPROX.

28. ALL DRIVEWAYS, ROADS, SIDEWALK AND YARD AREAS DISTURBED BY CON-STRUCTION IN OR OUTSIDE THE PROJECT AREA SHALL BE RETURNED TO THEIR ORIGINAL CONDITION OR BETTER, AND SHALL BE GRADED TO MEET PROPOSED

ENGINEER. WETLAND AND WATER COURSE ELEVATIONS SHALL BE RESTORED AND CHANNELS CLEANED AND CLEARED OF CONSTRUCTION DEBRIS AND EXCESS EXCA-HAVING JURISDICTION SHALL BE BORNE BY THE CONTRACTOR.

32. ALL CONSTRUCTION MATERIALS, PRACTICES AND PROCEDURES SHALL CONFORM TO THE MUNICIPALITY'S CONSTRUCTION STANDARDS FOR STREETS, HIGHWAYS, DRIVEWAYS

A.) STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS E.O.W. FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION - FORM 816, AS AMENDED TO DATE.

2002, AS AMENDED TO DATE.

E.) CONNECTICUT DEPARTMENT OF TRANSPORTATION HIGHWAY DESIGN MANUAL - 2003, AS AMENDED TO DATE.

STORMWATER QUALITY MANUAL - 2004, AS AMENDED TO DATE.

- 1. SITE AREA = 766,828 SF, 9.029 AC
- 2. THE PROPERTY IS LOCATED IN ZONE RR

CONTOURS ARE FROM A FIELD SURVEY PERFORMED BY DYMAR DURING THE VERTICAL CONTROL WAS DETERMINED BY GLOBAL POSITIONING SYSTEM, AND IS ON THE NAVD 1988 DATUM.

- 6. ALL CONSTRUCTION MATERIALS. PRACTICES AND PROCEDURES SHALL CONFORM
- 7. TOWN OF LITCHFIELD MAP-067; BLOCK-041; LOT-31A

ABBREVIATIONS

ACQUIRED	MON.
APPROXIMATE ARCHITECT	N. N.B.
ASPHALT COATED CORRUGATED METAL PIPE	NO., # O.T.
BASE LINE BENCH MARK	OHW P
BITUMINOUS BITUMINOUS CONCRETE LIP	P.E. P.C.C.
CURBING	P.C.
BORING BOTTOM OF BANK	P.I. P.T.
BOUNDARY CAST IRON PIPE	P.R.C. P.V.C.C.
CATCH BASIN CENTER	P.V.C.
CENTER TO CENTER	P.V.I.
CENTER LINE CHORD	P.V.R.C.
CHORD BEARING CONCRETE	P.V.T. P.O.C.
CONSTRUCT CONTOUR LINE	P.O.T. P.V.C.
CONTRACT	PD
CORRUGATED METAL PIPE CORRUGATED PLASTIC PIPE	PROJ. PL
CULVERT	PROP. PUB. UT
DELTA DEPARTMENT OF TRANSPORTATION	P.B. P.S.
DIAMETER DISTRIBUTION BOX	R. R.R.
DOWELED CONCRETE PARK CURBING DRAIN MANHOLE	REINF.
DRILL HOLE	R.C.P. RELOC.
DRIVE OR DRIVEWAY DROP INLET	REQ'D. RET.
DUCTILE IRON PIPE EASEMENT	R.W. RT/
EAST BOUND	R.O.W. RD.
EDGE OF ROAD EDGE OF WATER	RWY. R.D.
ELECTRIC ELEVATION	SAN.
END WALL	S.M.H. SECT.
END SECTION ENGINEER	S.T. SHLD.
EVERGREEN EXISTING	S.W. S.F.
FIRE BOX FLARED END	S. S.B.
FLOOR FOOT OR FEET	SPEC. SPK.
FOUNDATION	SP. ELE
FRAME GALLEY	STK. STA.
GALLONS PER DAY GALVANIZED IRON	ST. W. S.S.
GARAGE GAS GATE	STY. ST.
GRAVEL GRANITE SLOPE CURBING	S.L.J. SYC.
GRANITE SLOPE CURBING GRANITE STONE CURBING GROSS PARTICLE SEPARATOR	TAN. TEL.
GROUND GUIDE RAIL	TEMP. T.E.
HAY BALE	T.H.
HEADWALL HEIGHT	T.C.G.R. TMBR.
HEMLOCK HICKORY	T.S. T.B.
HIGHWAY HIGHWAY MONUMENT	T.F. T.G.
HORIZONTAL	TRANS.
HOUSE HANDICAP RAMP	T.P. TW.
HYDRANT INCH OR INCHES	TW. C.G. U.D.
INSIDE FACE OF CURB IRON PIPE	UG VERT.
INVERT LEFT	V.C. V.C.P.
LENGTH LENGTH OF VERTICAL CURVE	W.BK.
LIMIT	W.G. W.M.
LINEAR FEET MACADAM	W.S.E. W.
MAIL BOX	W D

W.B.

W.W.

W.R.R.

W/0

YARD DRAIN

W.I.

Y.D.

PERCOLATION TEST PERMANENT EASEMENT POINT OF COMPOUND CURVATURE POINT OF CURVATURE POINT OF INTERSECTION POINT OF TANGENCY POINT OF REVERSE CURVATURE POINT OF VERTICAL COMPOUND CURVATURE POINT OF VERTICAL CURVATURE POINT OF VERTICAL INTERSECTION POINT OF VERTICAL REVERSE CURVATURE POINT OF VERTICAL TANGENCY POINT ON CURVATURE POINT ON TANGENT POLYVINYL CHLORIDE PIPE PROJECT PROPERTY LINE PROPOSED PUBLIC UTILITY PULL BOX PUMP STATION RADIUS RAILROAD REINFORCED REINFORCED CONCRETE PIPE RELOCATED OR RELOCATION REQUIRED RETAINING RETAINING WALL RIGHT OF WAY ROADWAY ROOF DRAIN SANITARY SANITARY MANHOLE SECTION SEPTIC TANK SHOULDER SIDEWALK SILT FENCE SOUTH OR SLOPE SOUTH BOUND SPECIFICATION SPOT ELEVATION Sta**nda**rd STONE WALL STORM DRAIN OR SEWER STORY SUPER LOCK JOINT SYCAMORE TANGENT **TELEPHONE** TEMPORARY TEMPORARY EASEMENT TEST HOLE THREE CABLE GUIDE RAILING TOE OF SLOPE TOP OF BANK TOP OF FRAME TOP OF GRATE TRANSITION TRAVERSE POINT TWO CABLE GUIDE RAILING UNDER DRAIN UNDERGROUND GAS VERTICAL VERTICAL CURVE VITRIFIED CLAY PIPE WATER BREAK WATER GATE WATER MAIN WATER SURFACE ELEVATION WEST WEST BOUND WETLAND WINGWALL WIRE ROPE RAILING WITHOUT WOOD WROUGHT IRON

MONUMENT

NORTH BOUND

OVER HEAD WIRE(S)

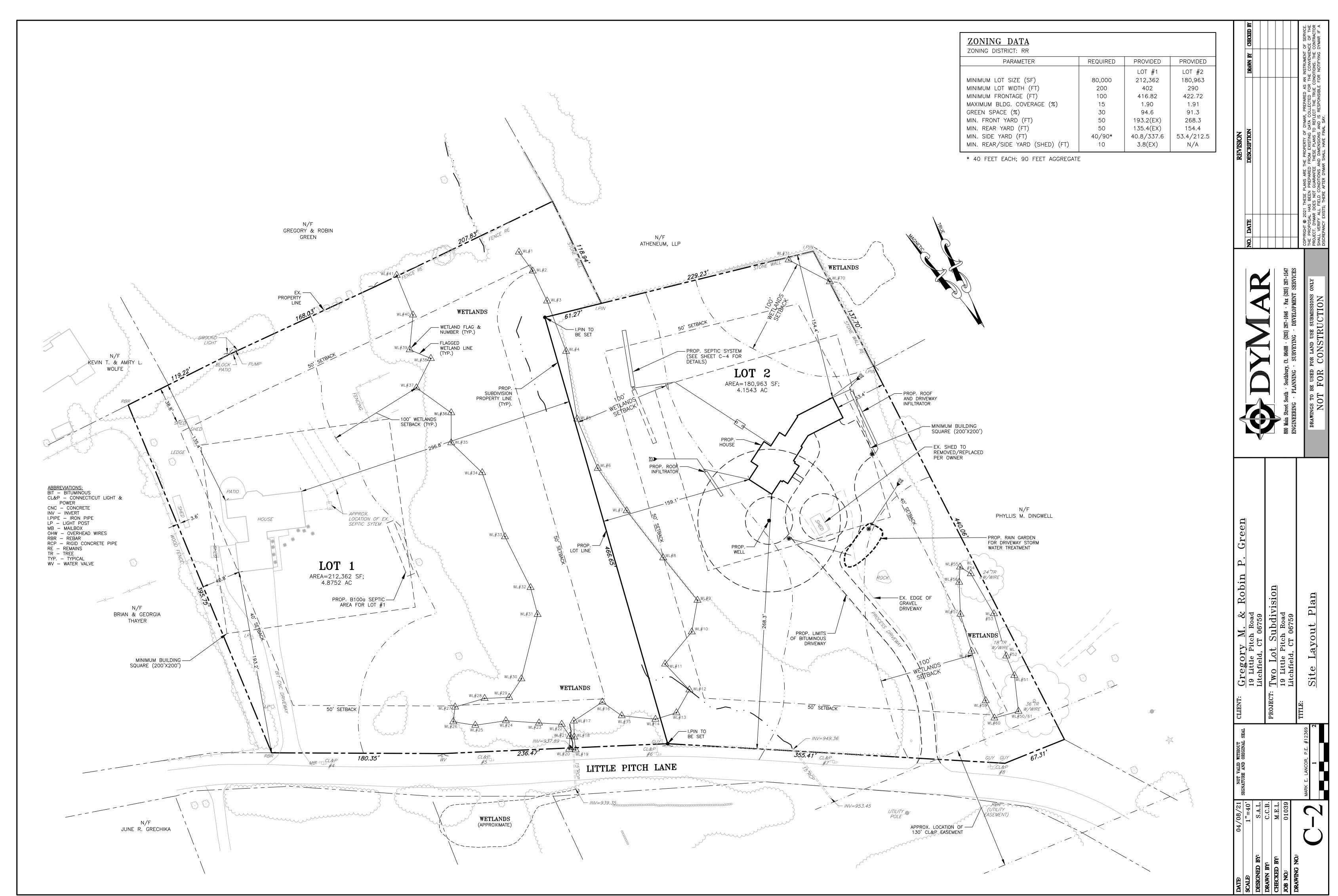
NORTH

NUMBER

OIL TRAP

		NICHT ACTIVITY		
	Ö.	NO. DATE DESCRIPTION	TON	DRAWN
ax (203) 267–1547				
IENT SERVICES				
	COPY	COPYRIGHT @ 2021 THESE PLANS ARE THE PROPERTY OF DYMAR, PREPARED AS AN INSTRUM	Y OF DYMAR, PREPARED AS AN	INSTRUM

BLE TO MAINTAIN GROUNDWATER LEVELS BELOW LOWEST REQUIRED EXCAVATION EARTH UNDER ALL STRUCTURES, INCLUDING MANHOLES, DRAINAGE STRUCTURES



F:\01039 - Little Pitch Subdivision-Litchfield\Civi\\Dwg\Design Permitting\CAD\002.dwg, 2, 4



- 2. CONTOURS FOR THE SITE PLAN ARE FROM AN AERIAL SURVEY PREPARED BY GOLDEN AERIAL SURVEYS, WATERBURY, CT. ADDITIONAL CONTOURS ARE FROM A FIELD SURVEY PERFORMED BY DYMAR DURING THE FALL OF 2020.
- 3. ELEVATIONS ARE BASED ON 1988 NORTH AMERICAN VERTICAL DATUM.
- 4. LOT AREA = 4.15 ACRES
- 5. ALL CONSTRUCTION OF THE SEWAGE DISPOSAL SYSTEM IS TO BE DONE IN ACCORDANCE WITH THE STANDARDS OF THE TORRINGTON AREA HEALTH DISTRICT.
- 6. BEFORE ANY CONSTRUCTION BEGINS ON SITE, THE DISPOSAL AREA MUST BE MARKED OFF AND ISOLATED SO AS TO EFFECTIVELY PROTECT THE AREA AGAINST DAMAGE BY EROSION, STORAGE OF EARTH AND MATERIALS, OR COMPACTION BY MACHINES OR EQUIPMENT. DAMAGE TO ANY PORTION OF THE SYSTEM, DUE TO ANY CAUSE, SHALL BE REPAIRED.
- PROPOSED BUILDING AND SEPTIC SYSTEM ARE TO BE STAKED OUT BY A REGISTERED LAND SURVEYOR. SURVEYOR TO TRANSFER STABLE BENCHMARK TO DISPOSAL AREA FOR USE BY CONTRACTOR IF REQUIRED.
- 8. ALL PIPING FROM THE FOUNDATION WALL TO THE SEPTIC TANK SHALL BE FOUR INCH (4") DIAMETER, OR THREE INCH (3") DIAMETER. MATERIALS MAY BE CAST IRON HUBLESS ASTM A-888, CAST IRON BELL AND SPIGOT ASTM A-74, DUCTILE IRON ANSI A-21.51, PVC SCHEDULE 40 OR 80 ASTM D-1785 OR ASTM D-2665 AND PVC SCHEDULE 40 ASTM F-1760. FOR PRESSURE WATER PIPE, ALLOWABLE MATERIALS: PVC AWWA C-900-PC 100 PSI MIN PRESSURE WATER PIPE, OR APPROVED EQUAL AND LAID AT A MINIMUM GRADE OF ONE-QUARTER INCH (1/4") PER FOOT.
- 9. FOR THE SEPTIC TANK USE A "ST-1250 SEPTIC TANK", WITH H-10 LOADING AS MANUFACTURED BY CONNECTICUT PRECAST CORP., MONROE CONN. (203-268-8688), OR APPROVED EQUAL. THE TANK SHALL BE EQUIPPED WITH MANHOLE COVERS WHICH HAVE BEEN PLACARDED WITH NOTIFICATION OF ITS TWO COMPARTMENT CONSTRUCTION AND THE DANGER OF ENTERING THE TANK DUE TO NOXIOUS GASES. THE TANK SHALL ALSO BE EQUIPPED WITH INLET AND OUTLET BAFFLES AND AN OUTLET NON-BY-PASS EFFLUENT FILTER.
- 10. SEPTIC TANK SHALL BE INSTALLED SUCH THAT THE ACCESS COVERS ARE ACCESSIBLE WITHIN SIX INCHES (6") + OF THE FINISHED GRADE, IF THE DESIGN WARRANTS ACCESS MANHOLES BE CONSTRUCTED DUE TO THE DEPTH OF THE TANK, THEY SHALL BE PLACED OVER BOTH INLET AND OUTLET AND EXTEND TO WITHIN SIX INCHES (6") OF FINISHED GRADE.
- 11. ALL PIPING BETWEEN SEPTIC TANK AND LEACHING FIELDS TO BE TIGHT JOINTED FOUR INCH (4") DIAMETER PVC ASTM D-3034 SDR-35 AND SHALL BE PLACED ON A COMPACTED SURFACE.
- 12. ALL PIPING WITHIN TWENTY FIVE FEET (25') OF A CURTAIN OR FOOTING DRAIN SHALL BE PVC ASTM D-2241, SDR 21 EQUIPPED WITH RUBBER COMPRESSION GASKET COUPLINGS. CAST IRON (HUB LESS OR BELL AND SPIGOT) ASTM A-74, DUCTILE IRON ANSI 21.51, OR APPROVED EQUAL.
- 13. FOR DISTRIBUTION BOXES USE A "DB-3" DISTRIBUTION BOX AS MANUFACTURED BY CONNECTICUT PRECAST CORP., MONROE CONN. (203-268-8688), OR APPROVED EQUAL. ALL OUTLETS TO BE EQUIPPED WITH SPEED LEVELERS AS BY TUF-TITE, INC. OR APPROVED EQUAL. SPEED LEVELERS SHALL BE ADJUSTED TO THE INVERTS AS INDICATED IN THE PROPOSED TABLE.
- 14. ALL STRUCTURES SHALL BE INSTALLED ON A SIX INCH (6") MINIMUM GRAVEL FOUNDATION. ALL PIPES SHALL BE INSTALLED ON A FOUR INCH (4") MINIMUM GRAVEL FOUNDATION AND THE BEDDING SHALL EXTEND TO THE TOP OF THE
- 15. REFER TO DESIGN NOTES FOR TYPE AND SIZE OF LEACHING FIELD. IF ANOTHER TYPE OF LEACHING SYSTEM IS PROPOSED CONTACT THE DESIGN ENGINEER FOR POSSIBLE CHANGES TO THE SIZE OF THE LEACHING AREA. ALL CHANGES MUST BE APPROVED BY THE DESIGN ENGINEER AND LOCAL HEALTH DEPARTMENT.
- 16. ABSORPTION AREAS MUST BE BACKFILLED, CAREFULLY LOAMED, GRADED, AND SEEDED IMMEDIATELY FOLLOWING CONSTRUCTION. BACKFILL SHALL BE CLEAN EARTH ONLY AND SHALL NOT BE TAMPED, ROLLED OR PUDDLED OTHER THAN WITH THE USE OF A HAND ROLLER FOR LAWN MAKING.
- 17. ALL OTHER AREAS DISTURBED, DUE TO CONSTRUCTION, SHALL BE LOAMED SEEDED, AND HAY MULCHED AS PER STATE EROSION CONTROL GUIDELINES.
- 18. LEACHING AREAS SHALL BE PROTECTED AT ALL TIMES FROM SURFACE WATER RUNOFF BY APPROPRIATE BERMING AND SWALES. AT NO TIME SHALL SURFACE WATER RUNOFF BE PERMITTED TO ENTER ANY LEACHING SYSTEM COMPONENTS.
- 19. THE RESERVE AREA NEED NOT BE PREPARED AT THIS TIME, BUT WILL REQUIRE A DESIGN SYSTEM AS PREPARED BY A PROFESSIONAL ENGINEER.
- 20. ALL STONE WALLS WITHIN 25' OF THE SEPTIC LEACHING FIELDS ARE TO BE REMOVED UNLESS IT'S FOUNDATION IS WITHIN 12" OF EXISTING GROUND, AND APPROVED BY THE ENGINEER.
- 21. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE PLANS AND CONTACTING THE ENGINEER FOR ANY CLARIFICATION OR INTERPRETATION OF THE SCOPE IN ADVANCE OF COMPLETING ANY PORTION OF THE WORK. THE CONTRACTOR IS FURTHER RESPONSIBLE TO VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER WHO SHALL HAVE FINAL SAY AS TO ACTUAL DIMENSIONS, ELEVATIONS OR INTERPRETATION OF THE SCOPE BY WHICH
- 22. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH STATE OF THE ART DESIGN TECHNIQUES BUT DOES NOT GUARANTEE AGAINST FAILURE DUE TO MISUSE, LACK OF MAINTENANCE OR INCREASED FLOWS.
- 23. THE OWNER IS RESPONSIBLE FOR SELECTING A CONTRACTOR TO INSTALL THE SYSTEM. THE OWNER SHALL BE RESPONSIBLE FOR RETAINING A PROFESSIONAL LICENSED ENGINEER TO INSPECT THE CONSTRUCTION OF THE SYSTEM. THE ENGINEER IS NOT RESPONSIBLE FOR METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED BY THE CONTRACTOR IN COMPLETING OR FAILURE OF THE CONTRACTOR TO PERFORM THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GIVING THE ENGINEER 48 HOURS NOTICE FOR ALL REQUIRED INSPECTIONS. THE OWNER IS FURTHER ADVISED TO HAVE THE CONTRACTOR NOTIFY THEM AND THE ENGINEER OF THE PROCEDURES AND SCHEDULE TO INSTALL THE SYSTEM PRIOR TO THE COMMENCEMENT OF WORK.
- 24. THE DEEP TEST HOLE AND PERCOLATION TESTS THAT WERE PERFORMED ON THE SITE ARE SPECIFIC TO THE TESTED LOCATION ONLY. THESE RESULTS DO NOT WARRANT THAT THESE CONDITIONS WILL PREVAIL WITHIN THE ENTIRE DISPOSAL AREA. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE OWNER SHOULD CONDITIONS DIFFER FROM THE ORIGINAL TEST DATA. THE OWNER SHALL BE RESPONSIBLE FOR NOTIFYING THE DESIGN ENGINEER.
- 25. CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455 NO LESS THAN 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

INSPECTIONS:

- 1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE TORRINGTON AREA HEALTH DISTRICT FOR ALL OF THEIR REQUIRED INSPECTIONS.
- 2. THE CONTRACTOR IS ALSO RESPONSIBLE FOR COORDINATING WITH THE DESIGN ENGINEER OR HIS AUTHORIZED AGENT, INSPECTIONS OF THE SYSTEM AT THE FOLLOWING MINIMUM STAGES OF CONSTRUCTION:
- A. AFTER DISPOSAL AREA HAS BEEN STRIPPED AND SCARIFIED.
- B. AFTER THE SELECT FILL HAS BEEN PLACED BUT PRIOR TO ANY PORTION ON THE DISPOSAL SYSTEM TRENCHING BEING INSTALLED.
- AFTER THE SEPTIC TANK, PIPE, AND LEACHING SYSTEMS HAVE BEEN PLACED, BUT PRIOR TO TOTAL BACKFILLING. CONTRACTOR MAY BACKFILL OVER A PORTION OF THE TRENCHES LEAVING THE SEPTIC TANK, ALL DISTRIBUTION BOXES, AND THE ENDS AND ANGLE POINTS OF ALL TRENCHES OPEN FOR INSPECTION.

DESIGN DATA

- 1. SYSTEM IS DESIGNED FOR A SINGLE FAMILY RESIDENCE WITH 4 BEDROOMS.
- 2. MINIMUM SIZE SEPTIC TANK REQUIRED BY THE TORRINGTON AREA HEALTH DISTRICT IS 1.250 GALLON.
- 3. SIZE OF PROPOSED SEPTIC TANK IS 1,250 GALLONS.
- 4. SYSTEM IS DESIGNED BASED ON A PERCOLATION RATE OF 1" IN 1 TO 10.1 MINUTES.
- 5. MINIMUM SIZE OF LEACHING SYSTEM REQUIRED BY THE STATE HEALTH CODE IS 660 SQUARE FEET OF EFFECTIVE AREA.
- 6. SIZE OF SYSTEM PROVIDED IS 60 LINEAR FEET OF 18" HIGH MANTIS 536-8 UNITS WITH AN APPLICATION RATE OF 11 SFT/LF, SFT PROVIDED = (60 LF) \times (11 SFT/LF) = 660 SFT.
- 7. MINIMUM LEACHING SPREAD NOT REQUIRED AS RESTRICTIVE LAYER MORE THAN 60" BELOW FINISHED GRADE.
- 8. SYSTEM "WAS NOT" DESIGNED FOR GARBAGE GRINDER USE.
- 9. SYSTEM "WAS NOT" DESIGNED FOR A BATH TUB WITH A CAPACITY GREATER THAN 100 GALLONS. IF ANYMORE ARE TO BE INSTALLED CONTACT THE DESIGN ENGINEER FOR REQUIRED INCREASE TO THE SEPTIC TANK AND/OR LEACHING AREAS. ALL CHANGES MUST BE APPROVED BY THE DESIGN ENGINEER AND LOCAL HEALTH DEPARTMENT OFFICIALS.
- 10. LOT IS SERVED BY PRIVATE WELL.

AS-BUILT PLANS

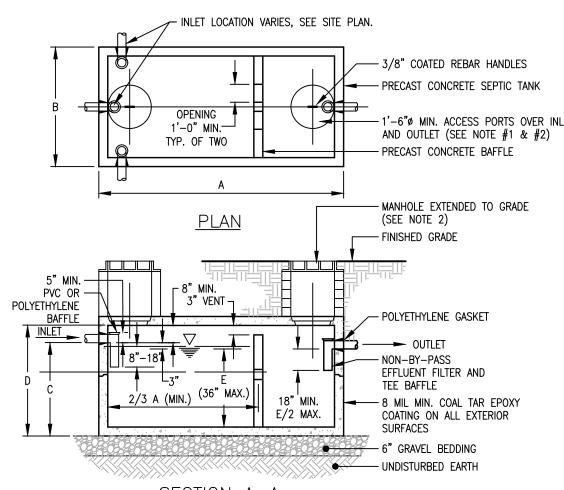
- 1. A CERTIFIED AS-BUILT PLAN MUST BE PREPARED BY A REGISTERED LAND SURVEYOR. THE PLAN MUST THEN BE FURNISHED TO THE TORRINGTON AREA HEALTH DISTRICT ALONG WITH A CERTIFICATION OF COMPLIANCE FROM THE INSPECTING ENGINEER.
- 2. JUST PRIOR TO PERMANENT LAND RESTORATION THE CONTRACTOR IS RESPONSIBLE FOR HAVING REASONABLY AVAILABLE ACCESS TO ALL SYSTEM STRUCTURES AND THE ENDS OF ALL TRENCHES FOR THE PREPARATION OF THE AS-BUILT PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER REGARDING THE SCHEDULING OF THE FIELD WORK TO PREPARE THE AS-BUILT PLANS.

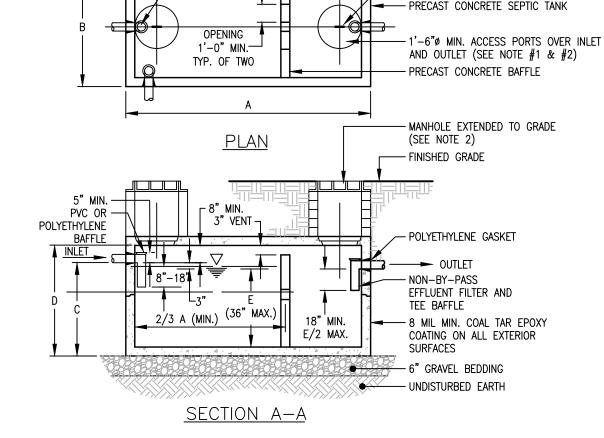
SEPTIC			TANK DIMENSION SCHEDULE				.E
	LIQUID CAPACITY	A LENGTH	B WIDTH	C INVERT	D HEIGHT	E LIQUID LEVEL	UNIT(S) SPECIFIED
	1000 GAL. 1250 GAL. 1500 GAL. 2000 GAL. 2500 GAL.	8'-0" 10'-0" 10'-0" 11'-3" 11'-3"	4'-4" 5'-2" 5'-2" 5'-10" 5'-10"	4'-3" 3'-5" 4'-3" 4'-2" 5'-2"	4'-9" 3'-11" 4'-9" 5'-0" 6'-0"	4'-0" 3'-2" 4'-0" 3'-11" 4'-11"	0 1 0 0

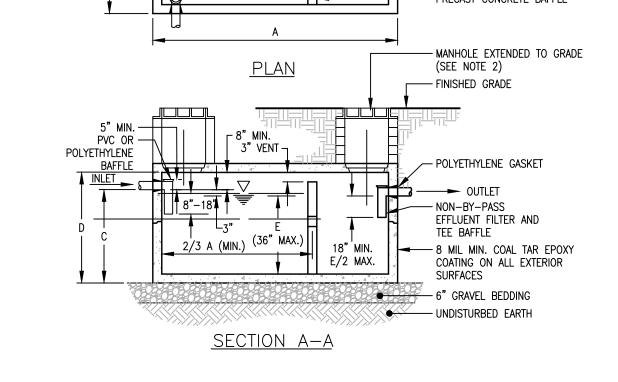
DIMENSIONS MAY VARY DEPENDING ON MANUFACTURER. CONTRACTOR TO VERIFY SUITABILITY OF OTHER TANK DIMENSIONS PRIOR TO INSTALLATION.

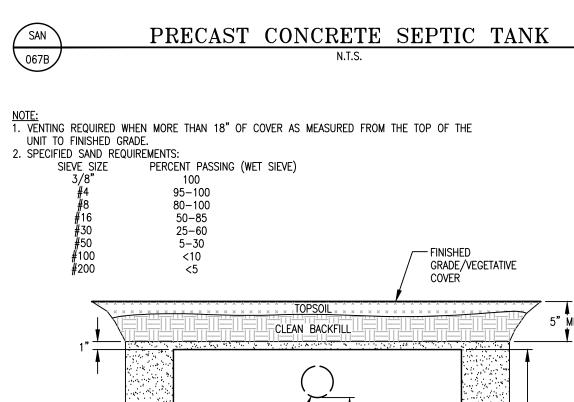
. MANHOLE COVERS SHALL BE LABELED WITH NOTIFICATION OF ITS TWO COMPARTMENT CONSTRUCTION AND WARNING TO EVERYONE THAT "ENTRANCE INTO TANK COULD BE FATAL". 2. ACCESS MANHOLES ARE REQUIRED IN ALL PAVED AREAS, AND IN ALL UNPAVED AREAS WHERE HEIGHT TO TOP OF TANK EXCEEDS 1'-O". INSPECTION COVERS OVER BAFFLES SHALL BE NO GREATER THAN 12 INCHES BELOW FINISHED GRADE.

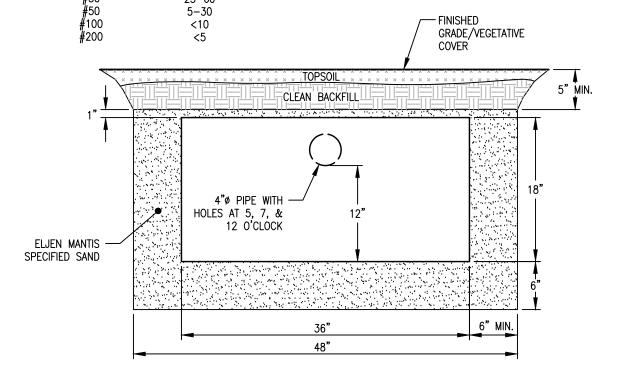
3. ALL TANK INFORMATION AND TANK LIQUID CAPACITY SHALL BE MARKED ON THE TOP OF THE TANK. BETWEEN THE OUTLET ACCESS HOLE AND OUTLET WALL, OR ON THE VERTICAL OUTLET WALL BETWEEN THE TOP OF THE TANK AND THE TOP OF THE OUTLET OPENING. 4. SPECIFICATIONS: CONCRETE MINIMUM STRENGTH - 4,000 PSI @ 28 DAYS WITH A 4% TO 7% AIR ENTRAINMENT. STEEL REINFORCEMENT - ASTM A615, GRADE 60, 1" MINIMUM COVER. CONSTRUCTION JOINTS TO BE SEALED WITH 1" BUTYL RUBBER OR EQUAL AND PARGED WITH A WATERPLUG GROUT. TOTAL SYSTEM TO BE WATERTIGHT. DESIGN LOADING - AASHTO H-20 FOR ALL TRAVELED AREAS, LIGHT DUTY SERVICE FOR ALL NON-TRAVELED AREAS. TANK TO BE ASTM C1227 COMPLIANT.

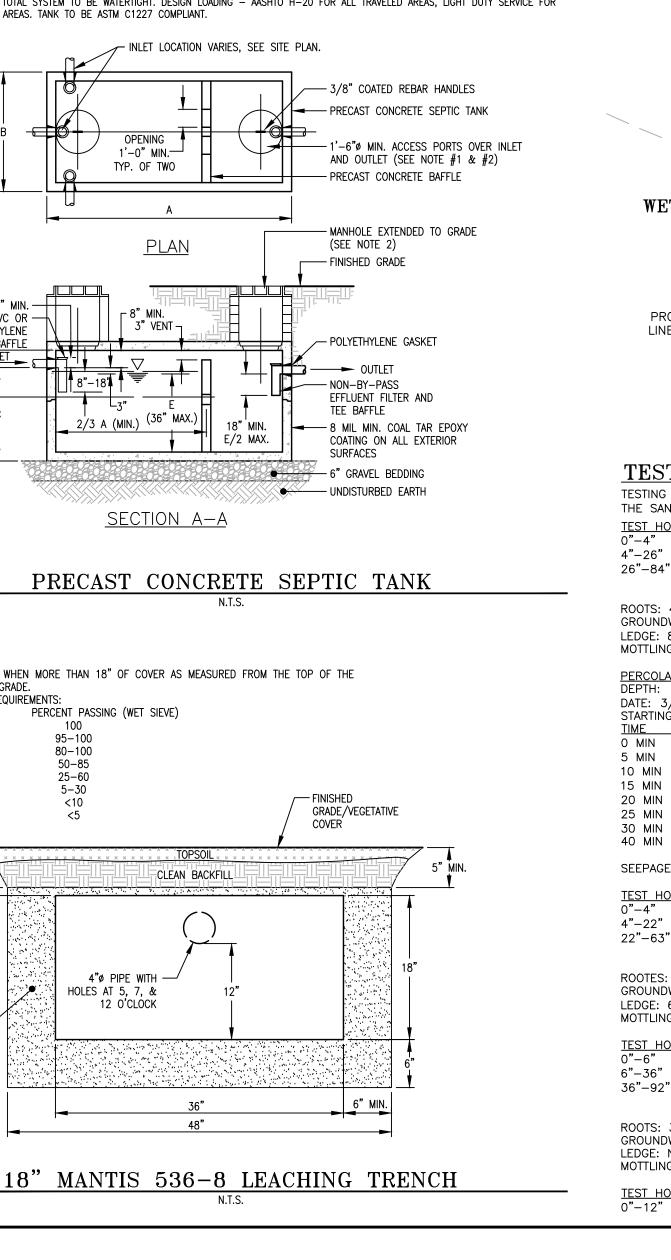


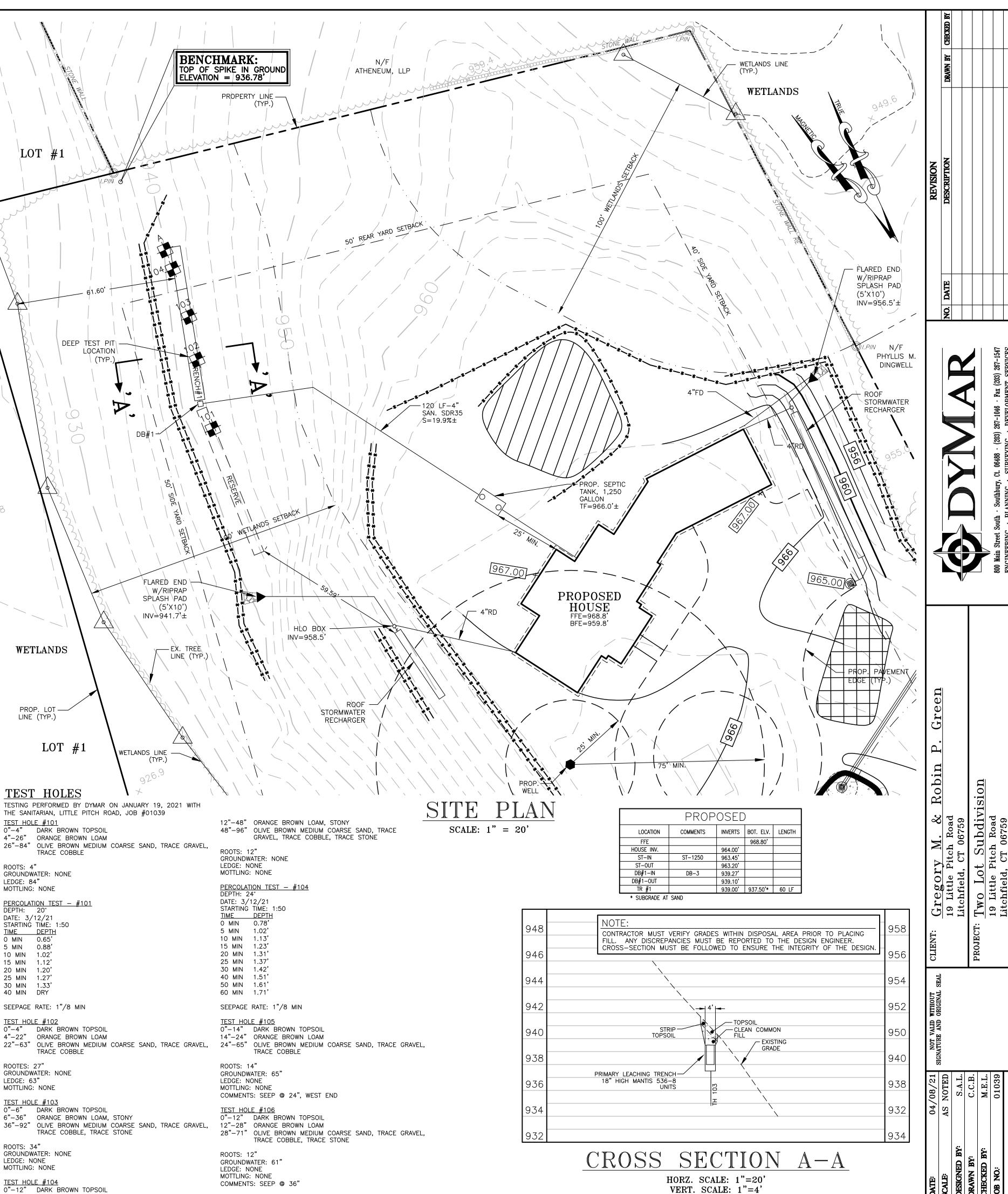












Specificati

- 2. The infrastructure improvements includes bituminous paved driveway, underground utilities and a private septic system and private water supply well.
- 3. Regulated wetland activities There are 1.86± Ac of wetlands on—site, that were mapped by William Kenny Associates, LLC, Refer to Sheet C-3.
- 4. Total Estimated Site Disturbance is 0.91± Ac.
- 5. Sequence of Construction Phasing Schedule Refer to Section 'D' of this sheet for General Terms and practices for Erosion and Sediment Control measures.
- 6. Reference is made to Sheet C-6B for the use of temporary Erosion and Sediment Control devices, their design criteria, and maintenance thereof.
- 7. The OWNER OF RECORD is:
 Gregory M. & Robin P. Green
 19 Little Pitch Road
 Litchfield. CT 06759
- 8. The commencement of construction is tentatively set for April, 2021. It is anticipated the the Construction process will take approximately four (4) months to complete. Based on this time period the construction completion date is estimated to be August, 2021.

B. PRINCIPLES:

- The following general principles shall be maintained as an effective means of minimizing erosion and sedimentation during the development process.
- 1. Stripping away of vegetation, regrading or other development shall be done in such a way as to minimize erosion.
- 2. Grading and development plans shall preserve salient natural features, keep cut and fill operations to a minimum, and insure conformity with topography so as to create the least erosion potential and adequately handle the volume and velocity of surface water runoff.
- 3. Whenever feasible, natural vegetation shall be retained, protected and supplemented wherever indicated on the site development plan and/or the landscaping plan. Trees which are shown to remain shall be protected throughout the construction period and any damages caused by the CONTRACTOR shall be repaired immediately. Whenever trees are cut beyond the contract limit lines or if a tree cannot be saved due to the CONTRACTOR'S actions, due compensation shall be granted to the OWNER OF RECORD equal to or exceeding the value of the loss. No work shall proceed after damages have occurred until the OWNER OF RECORD has agreed to a remediation plan.
- 4. The disturbed area and the duration of exposure shall be kept to a practical minimum.
- 5. Disturbed soils shall be stabilized as quickly as possible.
- 6. Temporary vegetation and/or mulching shall be used to protect exposed critical areas and stockpiles during development when expected to be exposed in excess of fifteen (15) days.
- 7. The permanent (final) vegetation and mechanical erosion control measures shall be installed as soon as practical during construction.
- 8. Sediment in the runoff water shall be trapped until the disturbed areas are stabilized by the use of debris basins, sediment basins, silt traps or similar measures.
- 9. All lots, tracts or developments shall be graded to provide proper drainage away from buildings, without ponding unless the area is designed as a storm water recharge system. All drainage runoff shall be routed to storm water collector systems.
- 10. Where drainage swales are used to divert surface waters away from buildings, they shall be sodded or planted or rocklined. Type shall be planted or sodded unless indicated else wise on design plans.
- 11. Concentration of surface runoff shall be only permitted by piping and through drainage swales reinforced with structural protective measures or natural watercourses.

12. Excavation and Fills:

- a. Slopes created by cuts or fills shall not be steeper than 2:1 unless existing soil conditions are inspected by the ENGINEER, stabilized and reestablished by temporary or permanent seeding measures, as required during the development process and approved by the Local Authorities having Jurisdiction.
- b. Adequate provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surfaces of
- c. Cut and fills shall not endanger adjoining property.
- d. All fills shall be compacted to provide stability of material and to prevent undesirable settlement. The fill shall be spread in a series of layers each not exceeding loose lifts of twelve (12) inches in thickness and shall be compacted by a sheeps foot roller or other approved method after each layer is spread.
- e. Fills shall not encroach on natural watercourses, constructed channels or regulated flood plain areas, unless permitted by license or permit from authority having jurisdiction.
- f. Fills placed adjacent to natural watercourses, constructed channels or flood plains shall have suitable protection against erosion during periods of flooding.
- g. Grading shall not be done in such a way as to divert water onto the property of another landowner without their expressed written consent.
- h. During grading operations, necessary measures for dust control shall be exercised. Use of chemicals shall be prohibited.

13. Sedimentation and erosion control shall be implemented in accordance with the guidelines for Soil Erosion and Sediment Control, prepared by the State of Connecticut through the counsel on Soil and Water Conservation, latest revised edition. In addition to defining specific measures and locations for sediment and erosion controls to be used, the plan shall be considered flexible to allow additional controls to be implemented as site conditions change and localized drainage patterns are altered. It is the responsibility of the CONTRACTOR to contact the OWNER OF RECORD for remedial action when site conditions warrant additional protective measures.

C. RESPONSIBILITY FOR THE PLAN:

- 1. The responsibility for implementing and maintaining the Sedimentation and Erosion Control Plan rests with the OWNER OF RECORD where any development of the parcel gives cause to erosion and sedimentation. It is also to be said that the OWNER OF RECORD shall be held responsible for informing all concerned regarding responsibility of the plan and seeing that the plan becomes a part of the deed in the event the title of the property is transferred. The costs of all drainage erosion and sedimentation control measures will therefore rest with the OWNER OF RECORD.
- 2. Whenever sedimentation is caused by stripping vegetation and/or grading, it shall be the responsibility of the person, corporation or other entity having responsibility to remove sedimentation from all lower properties, drainage systems and watercourses and to repair any damage at their expense as quickly as possible.
- 3. Maintenance of all drainage facilities and watercourses within any subdivision or land development shall be the responsibility of the OWNER OF RECORD, until they are accepted by the Municipalities. All control measures will be maintained in an effective condition throughout the construction period. Surface inlets shall be kept open and free of sediment and debris. The system shall be checked after every major storm and sediment shall be disposed of at an approved location consistent with the plan.
- 4. Maintenance of drainage facilities or watercourses originating and completely on private property shall be the responsibility of the OWNER OF RECORD to their point of open discharge at the property line or at a communal watercourse within the property.
- 5. No person, corporation or other entity shall block, impede the flow of, alter, construct any structure or deposit any material or thing or commit any act which affects normal or flood flow in any communal stream or watercourse without having obtained prior approval from the Naugatuck Inland Wetland and Watercourse Agency.
- An adequate right—of—way and/or easement shall be provided for all drainage facilities and watercourses which are proposed either for acceptance by the Municipalities or provided by other property owners for the convenience of the OWNER OF RECORD.

D. SEQUENCE OF CONSTRUCTION

The tentative sequence of construction events are as follows and activities noted by a "(Capital Letter)" may occur concurrently.

- Conduct a preconstruction meeting with the OWNER OF RECORD, Contractor, and Local and State agencies having jurisdiction over the project.
- 2. Field stakeout the limits of all activities and install, at a minimum, a snow fence along construction limit lines along environmentally sensitive and tree protection areas. Silt fencing may be substituted where it coincides with this line, but only as approved by the OWNER OF RECORD. (A)
- Install silt fence along all sides contiguous to wetlands, watercourses and property owned by others affected by the work. Refer to Sedimentation and Erosion Control Plans for locations. (A)
- 4. After each rain storm monitor the sedimentation and erosion control structures, which may include riprap channels, sediment basins, plunge pools, etc.. Routinely remove sediment during construction to an approved site location when controls exceed one half (1/2) their capacity. (A)
- 5. Clear vegetation within project limits, except trees designated to remain or in question, as shown on the plans. The decision of how questionable trees are to be treated shall rest with the OWNER OF RECORD and coordinated through the local agency having jurisdiction as construction progresses. All trees and shrubs less than 6" in diameter, and not to remain, shall be chipped and stored on site for mulch. (A)
- 6. Install temporary drainage dewatering devices and dirt bags as necessary to capture and minimize sediment migration during trench operations. (A)
- 7. Remove stumps and dispose of at a bulky waste site approved by the ENGINEER and local official having jurisdiction. Disposal of stumps within burial pits on—site shall be prohibited. (B)
- 8. Install traffic controls and barriers per CTDOT At the end of each working day or as required, accumulated soil is to be swept from existing streets. (B)
- 9. Install septic disposal system, backfill trenches, and provide other temporary structural controls as necessary to capture and minimize sediment migration. (C)
- 10. If blasting is required for any cuts, all proposed work is to be coordinated with all local officials having jurisdiction. The contractor is required to secure all permits for blasting operations in accordance with local and state regulations and conduct a pre—blast survey of surrounding properties. Rock spoil is to be disposed of in an appropriate manner as the site plan may show or as locally permitted. (C)
- 11. Install a six inch (6") deep crushed stone anti—tracking pad as detailed and dimensioned on the drawings. At the end of each working day or as required, accumulated soil is to be swept from existing streets. (B)
- 12. Strip topsoil and subsoil materials as required and stockpile them on site in an area that will not effect the building construction and not adversely impact any down gradient wetlands. Stockpiles may be relocated to meet job conditions but shall not adversely impact any down gradient wetlands. Locations are subject to the ENGINEER'S approval. Provide temporary erosion controls on the downside slopes of all stockpiles. (B)
- 13. Install silt sack sediment barriers, retention basins, sediment traps, riprap swales, and other structural controls as necessary to capture and minimize sediment migration. (C)
- 14. Excavate unsuitable materials within limits of proposed utilities. Proof roll to 95% compaction. Refill with select material per details and install temporary pavement. (C)
- 15. Conduct all rough cuts and fills for driveways, utilities, and landscaped areas, making sure that all fill material is free of brush, rubbish, large boulders, logs, stumps and other objectionable materials. (C)
- 16. Provide temporary seeding measures on all exposed soil which were damaged due to construction activities, are outside of construction traffic zones, and are not to be permanently restored or for a period in excess of thirty (30) days. Seeding and seedbed preparation are as specified herein or as indicated on the landscape plan. (C)
- 17. Excavate and complete remaining drainage if required. Install silt sack sediment barriers at any catch basins installed. (D)
- 18. Upon completion of cuts and fills to subgrade, buildings, electric, telephone, cable, gas and water systems can be installed (D).
- 19. Bring proposed driveway to pavement subgrade with processed aggregate base. Refer to details (D).
- 20. Complete final subgrading for all grassed and landscaped areas. Prepare subgrades for placing a minimum of six inches of topsoil. Place topsoil only when permanent seeding and landscaping can follow within a reasonable time frame
- 21. Exercise final landscaping plan and permanent seeding to provide long—term stabilization (E).
- 22. Complete final paving of driveway with top course and paint surfaces with pavement markings suitable for traffic control (E).
- 23. Clean and remove all silt from within any drainage structures installed and dispose of materials at an approved site (F).
- 24. Remove temporary measures once permanent measures have matured as approved by the Municipality's enforcement officer (F).
- 25. Conduct final inspection with MUNICIPALITY and applicable state agencies to identify deficiencies and establish punch list; complete same to the satisfaction of the MUNICIPALITY.

E. SEEDING AND PLANTING REQUIREMENTS:

- Seedbed Preparation: Fine grade and rake surface to remove stones larger than 2" in diameter. Install needed erosion control devices such as surface water diversions. Grade stabilization structures, sediment basins or drainage channels to maintain grassed areas. Apply limestone at a rate of 90 lbs / 1000 sft unless otherwise required according to soil test results. Apply 10-10-10 fertilizer at a rate of 7.5 lbs / 1000 sft. Work lime and fertilizer into soil uniformly before
- 2. Seed Application: Apply grass mixtures at rates specified by hand, cyclone seeder or hydroseeder. Increase seed mixture by 10% if hydroseeder is used. Lightly drag or roll the seeded surface to cover seed. Seeding for selected fine grasses should be done between April 1 and June 1 or between August 15 and October 15. If seeding cannot be done during these times, repeat mulching procedure below until seeding can take place or seed with a quick germinating seed mixture to stabilize slopes. A quick germinating seed mixture (Domestic Rye) can be applied between June 15 and August 15 as approved by the LANDSCAPE ARCHITECT or ENGINEER.
- 3. Mulching: Immediately following seeding, mulch the seeded surface with straw, hay or wood fiber at a rate of 1.5 to 2 tons / Ac. except as otherwise specified elsewhere. Mulches should be free of weeds and coarse matter. Temporary mulches shall be anchored down on slopes in excess of 3% and within channels of concentrated flows.

4. Grass Seed Mixtures:

<u>Temporary Covers</u>

<u>Permanent Covers</u>

Perennial Rye Grass . 20 lbs / Ac. Creeping Red Fescue .20 lbs / Ac. Annual Rye Grass . . 20 lbs / Ac. Canada Bluegrass . . .20 lbs / Ac.

Substitutions equal to or better than that specified may be permitted based on the local availability of seed mixtures and seasonal conditions when approved by the LANDSCAPE ARCHITECT or ENGINEER.

5. Planting Notes:

- a. All materials shall be inspected, approved and site located by the LANDSCAPE ARCHITECT or ENVIRONMENTAL SUPERVISOR.

 All plant materials are to be inspected for defects or damage before planting. Substandard materials shall be returned to and replaced by the CONTRACTOR. Acceptable plants are to be planted per the specifications of the landscaping plan. It is the responsibility of the GENERAL CONTRACTOR to provide for the safekeeping and maintenance of plants and vegetation cover for the duration of site construction activity. Once planted, all machinery shall avoid planted areas which should be demarcated clearly by flagged field stakes. Provisions for regular watering and inspections shall be made by the NURSERY CONTRACTOR for the duration of the plant's first year in the ground and all plants which do not survive shall be replaced at the CONTRACTOR'S expense.
- b. All plant material placement is subject to field adjustment in response to other site conditions. These adjustments shall be at the discretion of the ARCHITECT, LANDSCAPE ARCHITECT, SITE SUPERVISOR or ENVIRONMENTALIST.
- c. All plant materials are subject to replacement by suitable alternatives per agreement between OWNER OF RECORD, LANDSCAPE ARCHITECT or ENGINEER, NURSERY CONTRACTOR and appropriate agencies.

F. REGULATORY COMPLIANCE

- 1. The OWNER OF RECORD or its agent shall be responsible for registering the project with the CTDEEP for "Discharge of Stormwater and Dewatering Wastewaters" per Section 22a-430b of the Connecticut General Statutes whenever five acres or more of accumulated disturbance will occur with the parcel's boundaries.
- 2. The OWNER OF RECORD shall be responsible for retaining a licensed Professional Engineer or Certified Soil Erosion & Sediment Control Specialist to inspect the site periodically in accordance with CTDEEP guidelines. Monitoring reports shall be prepared and filed with the OWNER OF RECORD, contractor, the City Planning Office, and Inland—Wetland office of the Municipalities.
- 3. The Applicant shall be responsible for obtaining all local permits and approvals required from the Planning Commission, including Wetlands and Watercourses' Commission and any necessary agencies and departments to satisfy the regulations of the Municipalities.

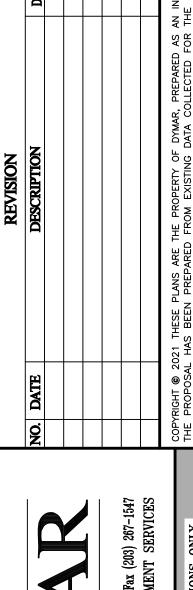
G. LONG TERM MAINTENANCE SCHEDULE

A Best Management Practices (BMP's) program, for post—development condition on the Project has been developed to manage both the on—site stormwater quality and quantity. The recommendations are proposed to protect the watersheds downstream as well as the associated on—site wetland system.

The success of BMP controls requires professional and regulatory input, and monitoring through the implementations of a long—term maintenance program. The proposed program schedule recommended for the side includes the following as they apply to the project:

- Catch Basins & Yard Drains all basin sumps to be cleaned out and hooded outlets to be inspected for structural and integrity. These procedures should be conducted yearly anytime after May 1 and before September 15.
- 2. Detention/Water Quality Basins this system should be inspected bi—yearly in the spring and fall for the first three years of operation, to insure the functionability of the planted vegetation, the sediment forebay and the microtopography, and removal of invasive plant material. Subsequent inspections shall be performed on a yearly basis observing the above mentioned components as well as the removal of trash, debris and invasive plant species.
- 3. <u>Energy Dissipaters</u> these devices should be inspected annually to verify undermining of the system and downstream erosion is not occurring. If such occurs, the device should be repaired immediately.

This program shall be implemented and monitored under the direct supervision of a licensed engineer in conjunction with a wetlands scientist. Inspection reports shall be prepared and copied to the Town I/W office. The Town is encouraged to monitor site controls by providing a representative to participate in these inspections.



800 Main Street South · Southbury, Ct. 06488 · (203) 267-1046 · Fax (203) 267-154
ENGINEERING · PLANNING · SURVEYING · DEVELOPMENT SERVICE

sion

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Two Lot Subdivisior
19 Little Pitch Road
Litchfield, CT 06759

Erosion & Sedime

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AS NOTED

R. S.A.L.

C.C.B.

M.E.L.

01039

WING NO:

\ Subdivision-Litchfield\Civi\Dwg\Design Permitting\CAD\005A.dwg, 5A, 4/7/20

B. OBJECTIVES AND PRINCIPLES

The objectives of the Soil Erosion and Sediment Control Plan are to manage both runoff and the earthwork operations by utilizing a collective approach to managing their impacts before critical areas are affected. These objectives are as follows:

- 1. Control erosion at its source with temporary control structures, minimize the runoff from areas of disturbance, and deconcentrate and distribute stormwater runoff through natural vegetation before discharge to critical zones such as streams or wetlands.
- 2. Keep land disturbances to a minimum The building sites have been located with consideration given to the natural topography and the soil type. This design approach minimizes the required earthwork, thereby lowering the erosion potential.
- 3. Time grading and construction to minimize soil exposure The development will be phased to minimize the extent of cleared soil at any particular time. Within the scheduled phasing, only areas under active construction will be exposed. Residential lots, for example, will remain undisturbed until actual construction of the house is to begin.
- 4. Retain existing vegetation wherever feasible Silt fencing will be used to physically define the limit of work. Substantial buffers of existing vegetation will be provided along the existing public ways.
- 5. Stabilize disturbed areas as soon as possible in areas where work will not occur for periods longer than two weeks, soil stabilization by hydroseeding or mulching will be done within 48 hours after the land has been cleared.
- 6. Minimize the length and steepness of slopes The project has engineered the steepness and length of slopes to minimize runoff velocities and to control concentrated flow. Where concentrated (swale) flow from exposed surfaces is expected to be greater than three feet per second, hay bale or stone check dams will be installed in the swale. The check dams will be placed so that unchecked flow lengths will not be greater than 100 feet.
- 7. Maintain low runoff velocities To protect disturbed areas from stormwater runoff, hay bale and/or soil diversion berms will be installed wherever runoff is likely to traverse newly exposed soil. Immediately following the clearing and stripping of topsoil, rough grading for the post—construction swales will take place. The swales will direct runoff so that it can be checked or impounded. Stormwater outlets will be designed to reduce velocities and dissipate energy.
- 8. Trap sediment on—site and prior to reaching critical areas such as wetlands. Silt fences, hay bale check dams, filter strips, sediment traps, and catch basin filters will be used to either impound sediment—laden runoff or to filter the runoff as it flows through an area. Reference is made to the sedimentation and erosion control drawings, sheet C—6A for location of silt fences, hay bales, etc. Silt fencing, augmented by hay bale berms installed on the upgradient side of the silt fencing, will be used wherever land disturbance occurs within 100 feet of wetlands. Stabilized construction entrances will be installed at all construction entrances to prevent construction vehicles from tracking sediment onto off—site roadways. All temporary erosion control devices will be installed prior to the commencement of construction.
- 9. Establish a thorough maintenance and repair program Erosion control measures will be inspected weekly during the spring months, monthly during the dry summer months and/or following rainfall storms of greater than 1/2 inch, and repaired as needed to ensure that they function properly.
- 10. Assign responsibility for the maintenance program The responsibility for the maintenance program will be assigned to the contractor who shall designate one of its supervisory personnel to be the liaison to the Owner's representative. The Owner will retain the services of a licensed professional who shall inspect and monitor the contractor's methods and have the authority to require modifications to the E&S controls. The Town will be copied on all inspection reports prepared on behalf of the project.

C. <u>TEMPORARY E&S CONTROL DEVICES</u>, <u>DESIGN</u> CRITERIA, AND MAINTENANCE

The devices provided below are typical controls which may or may not be required for the site. However, when site conditions arise which the Engineer, Site Monitor or Town warrant are necessary, the Contractor is to follow the guidelines specified as follows.

1. Silt Fences — Silt fences consist of wire—bound woodroll snow fence covered with a filter fabric. The fence will be four feet high and made of 3/8—inch by 1 1/2—inch wide pickets, approximately two inches apart, bound together by 13—gauge galvanized steel wire. Fences will be secured in place by galvanized steel posts set a maximum of five feet on—center. The filter fabric will be stapled to the upgradient face of each fence. Twine will be used to secure the fence on the uphill side to prevent overturning. The purpose of silt fences is to intercept and detain sediment contained in overland runoff from disturbed areas of limited extent. In addition, the silt fencing will physically delineate the limit of work. (Envirofence by Mirafi, Inc., is an acceptable alternative to the above described system).

Installation and Maintenance:

- a. Silt fences will be installed where the disturbed land is located 200 feet or less from critical areas (streams and wetlands).
- b. Silt fences will be installed on downslope of work areas as close to the disturbed areas as possible.
- c. At the base of drainageways or where the disturbance will remove natural vegetation within 100 feet of critical areas, the silt fencing will be augmented by a single row of staked haybales.

- d. Filter fabric will be Trevira 1127.
- e. Sediment will be removed from behind siltation fences when sediment has accumulated to 25% of original height of the fence.
- 2. Hay Bale Diversion Berm Hay bale diversion berms will be utilized to intercept sediment and reduce runoff velocities around stockpiled earth materials and divert runoff away from disturbed areas of limited extent. This device will be used both upgradient/downgradient of grading operations.

Installation and Maintenance:

- a. The contributory drainage area will be one acre or less; the area may be larger if inaccessible to construction equipment and to preserve existing trees and vegetation.
- b. The bales will be tightly bound, pin anchored, and imbedded four inches below grade, with ends tightly abutting each other.
- c. The hay bale berms shall be inspected periodically and deteriorated bales replaced until such time as construction is completed and exposed slopes have been stabilized.
- 3. Hydroseeding Hydroseeding will be the primary means of stabilizing areas of disturbed earth. Hydroseeding will not be permitted, however, within cut areas or steep slopes. The seed mix, fertilizer, water, and mulch will be applied as a mixture utilizing power equipment. Fertilizer will not be included in the mix for disturbance within the regulated area adjacent to wetlands. The mix will be applied in two equal applications. Dyes will be used to determine the extent of coverage upon application. After grass has appeared, those areas which fail to show a uniform stand of grass will be reseeded. This process will be repeated until all areas are covered with satisfactory growth. Hydroseeding will be completed within 48 hours following completion of rough grading. Seed mixtures appropriate to the soils, slopes and uses will be selected in accordance with the Westchester County Soil and Water Conservation District
- 4. Erosion Control Blankets Blankets will be utilized for slopes > 4:1 to stabilize areas of disturbed earth. The type of blanket shall be as manufactured by North American Green or approved equal in accordance with the following schedule:
- a. For slopes from 4:1 to 3:1 and low flow swales use S75 Straw Blankets.
- b. For slopes from 3:1 to 2:1 and moderate flow swales use S150 Straw Blankets.
- c. For slopes from 2:1 to 1:1 and discharge grass channels use SC150 Coconut Fiber and Straw Blankets.
- d. For slopes steeper than 1:1 and engineered channels use use C125 Coconut Fiber Blankets.

Install all blankets in accordance with all the manufactures recommendations.

- 5. Dust Control Water will be applied by sprinkler or water truck as necessary during grading operations to minimize sediment transport and maintain acceptable air quality conditions. Repetitive treatments will be done as needed until grades are paved.
- 6. Stabilized Construction Entrance A ramp of crushed stone extending a minimum distance of 100 feet will be installed at each point of ingress and egress to the site. The purpose of the device is to minimize the potential of tracking mud from the site onto public rights—of—way.

Installation and Maintenance:

- a. Minimum length will be 100 feet
- b. Stone size will be 1.5 to 2.5 inches
- c. Stone will be placed upon the full width of the entrance roads
- d. Thickness of stone will be six inches or greater
- e. Additions of stone will be done periodically to maintain the entrancef. All sediment spilled, dropped, washed, or tracked onto public
- rights-of-way will be removed immediately.

 7. Roadway Interceptor Swales This temporary device consists of a
- crushed stone—filled swale constructed across proposed roadways. The purpose of this device is to direct runoff away from the road surface and minimize sediment from entering the drainage system. This shortens the length of disturbed slope by intercepting runoff and diverting it away from the roadway catch basins.

Installation:

- a. Swales will be placed across roads, which are to be constructed
- i. every 200 feet on slopes of five to ten percent, and
- ii. every 300 feet on slopes less than five percent.
- b. Contributory drainage area less than five acres.
- c. Swales drain to sediment traps or sedimentation basins.
- 8. Hay Bale Check Dams Hay bale check dams consist of tightly bound, steel pin anchored hay bales embedded four inches below grade in drainage swales adjacent to roadways or against diversion berms at the toe of an exposed slope. The purpose of a hay bale check dam is to reduce runoff velocity and promote deposition and filtering of sediment from runoff.

Installation and Maintenance:

- a. Check dams will be placed in drainage swales or against diversion berms at the toe of an exposed slope:
- i. every 100 feet on slopes greater than ten percent,
- ii. every 200 feet on slopes of five to ten percent, and
- iii. every 300 feet on slopes less than five percent.
- 9. Sediment Traps At appropriate intervals, runoff collected in roadway interceptor swales or other swales will be directed, via a small dike or ditch, to a sediment trap. The trap consists of a small excavation and/or embankment. The purpose of the trap is to collect runoff, promote settling of sediment and deconcentrate and distribute clean runoff overland through

b. Sediment shall be removed from hay bale check dams when

sediment has accumulated to 50 percent of the original height.

Installation and Maintenance:

a. Contributory drainage areas less than or equal to five acres.

vegetation before entering watercourses and wetlands.

- b. Utilized as part of swales prior to discharge to natural slopes.
- c. Traps will be placed such that runoff discharging from the trap will flow at least 30 feet overland through natural vegetation before entering stream channels or wetlands.
- d. Traps will be designed for a minimum of 1.9 cubic feet of storage/acre of drainage area received by the trap.
- e. Maximum depth of trap will be five feet.
- f. Trap embankments shall not exceed five feet in height. Top width shall be four feet and sides shall have a 2:1 or flatter
- g. Trap sides shall be compacted during construction.
- h. The trap outlet shall have crushed stone rip—rap hand placed over the trap.
- i. Traps will be cleaned when sediment has accumulated to 50 percent of design volume and removed sediment deposited so it will not erode.
- 10. Diversion/Interceptor Both grassed swales and rock—lined swales will be utilized (depending on grade) to convey runoff during construction. Swales generally will be located adjacent to roads. At frequent intervals, runoff in the roadway swales will pass through hay bale check dams and sediment traps to reduce velocities and remove sediment. As often as possible, runoff in the swales will be directed overland and allowed to filter through natural vegetation.

Installation:

- a. Grassed swales on slopes less than five percent.
- b. Rock—lined swales on slopes greater than five percent.
- c. Swales will be temporary.
- 11. Catch Basin Filters Temporary catch basin filters will be utilized to prevent the deposition of sediment into the storm sewer system prior to the stabilization of exposed areas with vegetation and/or pavement. These filters will consist of tightly bound, pin—anchored hay bales embedded four inches below grade, surrounding each catch basin inlet.

Installation and Maintenance:

- a. Placed around each catch basin inlet prior to paving or stabilization with vegetation.
- b. Sediment shall be removed from the filters when it has accumulated to 50 percent of the filter's original height.
- 12. Diversion Berm (Soil) This is a temporary raised berm of compacted soil, placed across a disturbed slope, that intercepts runoff from disturbed areas and directs it to an appropriate outlet. This device will be used mostly on steep slopes above deep excavations.

Installation:

- a. Diversion berms may be placed on cut and fill slopes exceeding
- b. Contributory drainage area should not be greater than one acre.
- c. Runoff will be diverted overland by the berms to sediment traps, sedimentation basins, swales, or check dams.
- d. On slopes over five percent, additional stabilization is required in the form of stone rip—rap eight inches vertically along the upslope side of the berm and seven feet upslope from the upslope toe of the berm.
- e. Top width of berm will be two feet. Side slopes will be 2:1 or flatter.
- f. All berms shall be machine compacted.
- 13. Rock Check Dams Temporary rock check dams are small dikes (approximately three feet high) constructed at frequent intervals in drainage ways where silt fences and hay bale check dams are impractical due to high flow velocities. The primary function of these devices is to promote deposition of sediment and provide some filtering of runoff water. Check dams will be constructed with a 1.5 to 2.0 inch crushed stone core and a layer of peastone on the upstream face.

Installation:

- a. Check dams will be placed in drainage ways:
- b. downstream of stream crossing where high flow velocities make other sediment filtering devices impractical.
- c. Sediment shall be removed from rock check dams when sediment has accumulated to 50 percent of original height.
- d. Peat or other wetlands material will be excavated and stockpiled prior to rock check dam installation and replaced once construction is complete.
- 14. Sediment Basins This is a temporary embakment/impoundment area, excavated pit or used as part of a permanent detention device with a controlled outlet(s), that is a combination of wet and dry storage areas are created. The purpose is to intercept and retain sediment during construction, reduce or abate undesirable deposition of sediment to the waters of the state and downstream properties.

Installation and Maintenance:

- a. Contributory drainage area less than 100 acres.
- b. Effective height of the basin is 15 feet or less.
- c. The product of the storage times the effective height should be less than 3,000.
- d. A minimum residence storage time of 10 hours for a 10 year frequency, 24 hour, Type III storm.
- e. Flood Routing by TR-55.
- f. Sediment storage volume shall be calculated by the Universal Soil Loss equation with an 80% trap efficiency for a predicted one year load.
- g. Minimum capacity volumes shall be 134 cubic yards of water storage per acre drained of disturbed area contributing to the basin.
- h. Sediment basins shall be cleaned when sediment accumulates to 50% of the net storage capacity. Dewater basin through pumping means prior to removing sediment. Material shall be removed and left to dry to an approved location.

15. Energy Dissipaters — Outlet Protection Level Spreaders — This is a permanent device used to reduce depth and velocity of concentrated runoff and release it uniformly into a stable area. Except as otherwise noted, they shall be constructed of rip—rap stone.

Installation and Maintenance:

- a. Design flows for 10 year storms or less than 20 cfs.
- b. Length, width, and detail is as shown on the site plans and detail sheets.
- c. To be constructed on undisturbed earth.
- d. Inspect annually and repair immediately where erosion occurs.

16. Hydrograss And Floc Log Specifications:

- a. Pre-Construction:
- Send a soil sample directly to Applied Polymer Systems, Inc., 519 Industrial Drive, Woodstock, GA 30189, Attn: Steve Iwinski (678-494-5998) to determine the log, liquid, and crystal types most appropriate for the site soil type.
- b. Construction Phase Applications:
- (1) Swales and Sedimentation Basins
- Two Floc Logs shall be placed at each check dam throughout the swale system.
- ii. Logs should be applied via 3 FT wood stakes and placed in
- running water areas of the swale.

 iii. 25 LBS/150 LF of Clarifying Crystal shall be applied to swales

in a one time only application to jump start the logs. (2) Disturbed Soil Areas

- i. Apply wood fiber slurry to all disturbed areas.
 Slurry shall consist of 1,500 LBS of real wood fiber per acre,
 2.5 gallons of Silt Stop Liquid Emulsion per acre, and
 100 LBS of Guar Gum per acre.
- ii. An alternative to wood fiber slurry is to apply hay or straw mulch and cover with 25 LBS/AC of Silt Stop Clarifying Crystals with a mulch spreader.
- c. Check Dam Construction:
- (1) Dams should consist of 1−3 inch stone formed in a U or V shape towards the sedimentation basin.
- (2) Three layers of Coconut Jute Matting should be applied to the inside of the check dam and secured with staples.
- Maintenance:
- (1) Floc Logs shall be inspected after each major storm event.
- (2) Sediment buildup around Floc Logs shall be removed and the log reset when 50% of the log is no longer exposed.
- (3) Logs shall be replaced when the log is no longer performing as intended as specified by the manufacture's technical representative.

D. CONTROL PLAN IMPLEMENTATION

In addition to the devices and schedules outlined in this soil erosion and sediment control plan, the following procedures will be followed by the earthwork contractor:

- 1. The contractor shall inspect the effectiveness and condition of erosion control devices during storm events, after each rainfall of one—half inch magnitude or greater, prior to weekends, and prior to forecasted storm events.
- The contractor shall repair or replace damaged erosion control devices immediately, and in no case, more than four hours after observing such deficiencies.
- The contractor shall be prepared to implement interim drainage controls and erosion control measures as may be necessary during the course of construction.
- 4. The contractor shall make available on—site all equipment, materials and labor necessary to effect emergency erosion control and drainage improvement within four hours of any impending emergency situation.
- 5. The contractor shall make a final inspection, clean all cross culverts and sweep off roadways before the road is dedicated to
- 6. The contractor shall have on call at all times a responsible representative who, when authorized, will mobilize the necessary personnel, materials and equipment and otherwise provide the required action when notified of any impending emergency
- 7. The contractor shall supply a telephone number to the MUNICIPAL Engineer and IW enforcement officer so that the contractor may be contacted during the evenings and on weekends, if necessary.
- 8. The contractor is to maintain on—site 10% additional linear feet of silt fence and straw bales/waddles during construction for use as site conditions warrant.

E. PERMANENT CONTROL DEVICES

Following construction, erosion will be prevented by established vegetation cover and by permanent devices which include catch basins with sediment traps, grassed swales, natural filter traps, and outlet protection.

Through the strict implementation of this proposed soil erosion and sediment control plan, erosion of soils on the site will be minimized and contained to prevent sedimentation of site wetlands and adjacent and downstream properties and watercourses.

800 Main Street South · Southbury, Ct. 06488 · (203) 267-1046 · Fax (203) 267-1547 ENGINEERING · PLANNING · SURVEYING · DEVELOPMENT SERVICES

PROJECT: Two Lot Subdivision

19 Little Pitch Road

PROJECT: Two Lot Subdivision

19 Little Pitch Road

19 Little Pitch Road

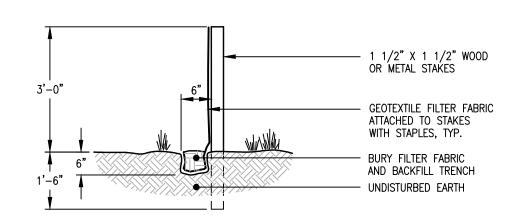
Litchfield, CT 06759

TITLE: Erosion & Sediment Control

S.A. M.E.

TENT SERVICES

COPYRIGHT © 2021 THESE PLANS ARE THE PROPERTY OF DYMAR, PREPARED AS AN INSTRUMENT THE PROPOSAL HAS BEEN PREPARED FROM EXISTING DATA COLLECTED FOR THE CONVENIED PROJECT. DYMAR DOES NOT GUARANTEE THESE PLANS TO REFLECT THE TRUE CONDITIONS. THE SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS AND IS RESPONSIBLE FOR NOTIFYING DISCREPANCY EXISTS; THERE AFTER DYMAR SHALL HAVE FINAL SAY.

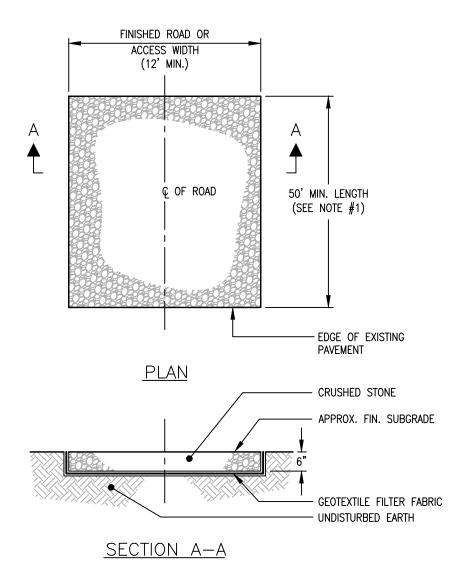


FILTER FABRIC FENCE DETAIL

NOTES:

1. LENGTH EQUAL TO 50' MINIMUM WHERE SOILS ARE SAND AND GRAVEL: PROVIDE 100' WHERE SOILS ARE PREDOMINANTLY CLAYS OR SILTS.

2. SPECIFICATIONS: CRUSHED STONE — ASTM C—33, GRADE NO. 2; GEOTEXTILE FILTER FABRIC — MIRAFI 500X OR



ANTI-TRACKING PAVEMENT DETAIL

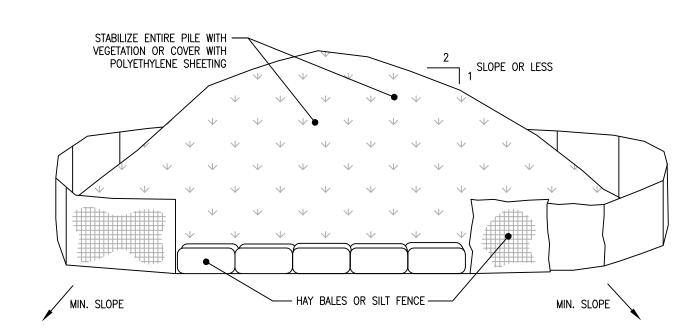
NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.

2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1. 3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED WITH POLYETHYLENE SHEETING.

N.T.S.

- 4. TO BE USED WHERE TOPSOIL IS NECESSARY FOR REGRADING AND VEGETATING DISTURBED AREAS. TOPSOIL IS APPLIED TO SUBSOILS THAT ARE DRAUGHTY (HAVING LOW AVAILABLE MOISTURE FOR PLANTS), STONEY, SALTY, HAVE LOW PERMEABILITY, OR ARE EXTREMELY ACID. IT IS ALSO USED TO BACKFILL AROUND SHRUB AND TREE TRANSPLANTS. PRESERVATION OF EXISTING TOPSOIL IS BENEFICIAL FOR ALL TYPES OF LAWN OR ORNAMENTAL PLANTINGS.
- 5. TEMPORARY STOCKPILE STABILIZATION MEASURES INCLUDE VEGETATIVE COVER, MULCH, NONVEGETATIVE COVER, AND PERIPHERAL SEDIMENT TRAPPING BARRIERS. THE STABILIZATION MEASURE(S) SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE
- CONDITIONS, AND REQUIRED PERIOD OF USE. 6. SEE EROSION AND SEDIMENT CONTROL PLAN FOR LOCATIONS.



SOIL STOCKPILE DETAIL

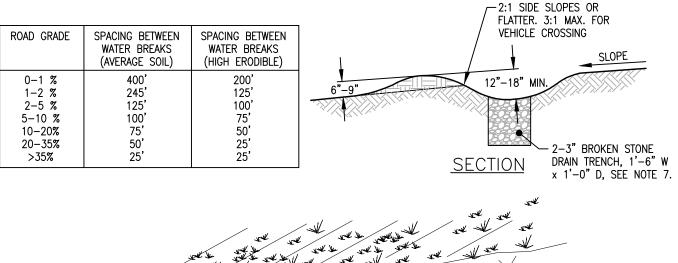
NOTES:

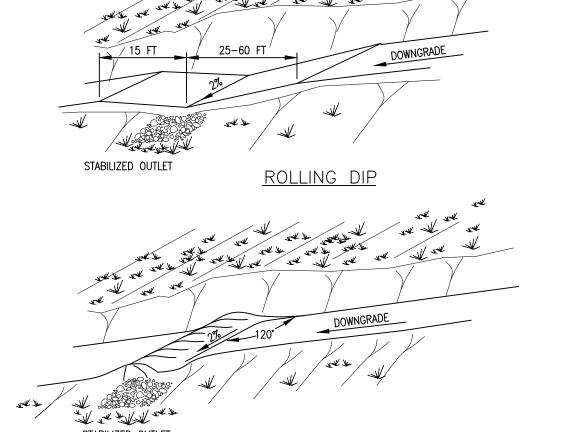
1. INSTALL WATER BREAKS / ROLLING DIPS (DIVERSIONS) AS SOON AS THE RIGHT-OF-WAY HAS BEEN CLEARED AND GRADED.

2. ROLLING DIPS ARE TO BE INSTALLED IF THE ROAD IS INTENDED FOR WINTER USE OR USE BY VEHICLES WITH LOW CLEARANCE. THE SETTIED RIDGE SHALL BE 12"-18" AND THE SIDE SLOPES OF THE RIDGE SHALL HEIGHT FROM CHANNEL BOTTOM TO THE TOP OF THE SETTLED RIDGE SHALL BE 12"-18" AND THE SIDE SLOPES OF THE RIDGE SHALL BE

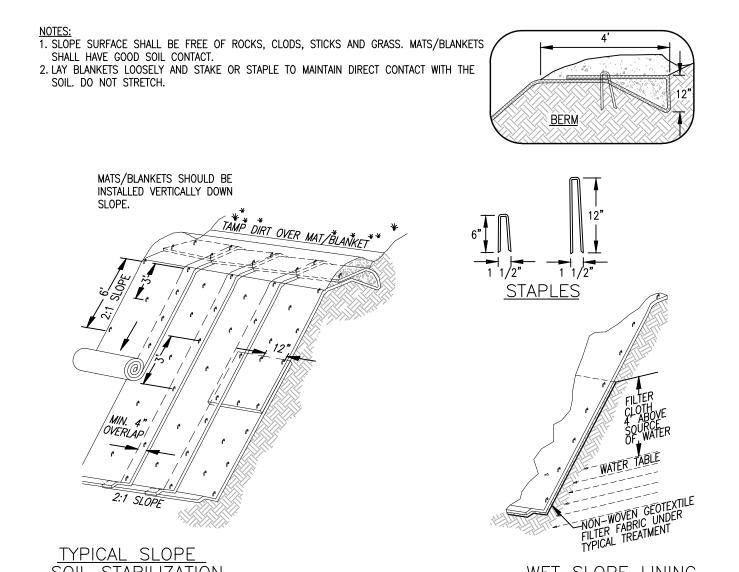
3. THE OVERFLOW END OF THE DIVERSIONS SHALL HAVE A NATURAL OR CONSTRUCTED STABLE OUTLET TO CLEAN THE SEDIMENT OUT OF THE WATER AND PREVENT EROSION. NEVER END OUTLET DIVERSIONS ONTO UNPROTECTED FILL SLOPES. 4. SPACING BETWEEN DIVERSIONS MAY NEED TO BE ADJUSTED TO FIELD CONDITIONS SO AS TO USE THE MOST SUITABLE AREAS FOR WATER DISPOSAL. THESE CHANGES SHALL BE APPROVED PRIOR TO THEIR INSTALLATION BY THE DESIGN ENGINEER.

5. USE GRAVEL TO STABILIZE THE DIVERSIONS WHERE SIGNIFICANT VEHICULAR TRAFFIC IS ANTICIPATED. 6. DIVERSIONS SHALL BE INSPECTED PERIODICALLY AND AFTER EVERY HEAVY RAIN STORM FOR EROSION DAMAGE. REMOVE SEDIMENT IMMEDIATELY FROM THE FLOW AREA AND MAKE TIMELY REPAIRS AS NEEDED. 7. DRAIN TRENCH TO BE INSTALLED FOR PERMANENT GRAVEL SURFACES.





STABILIZED OUTLET <u>WATERBREAK</u> WATER BREAK/ROLLING DIP DETAIL

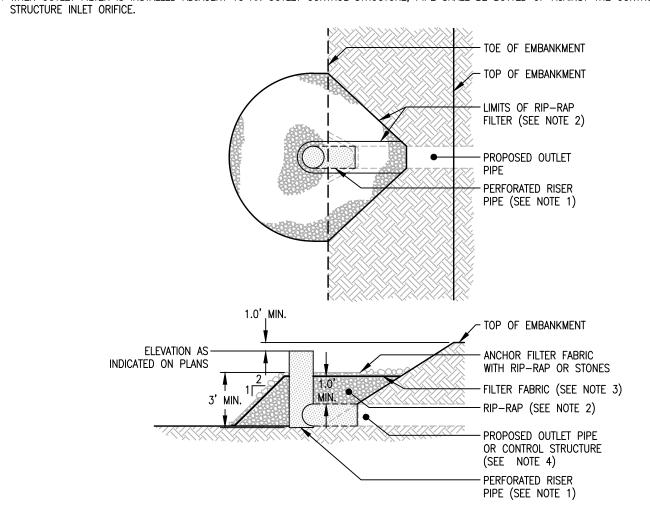


EROSION BLANKET & REINFORCEMENT MAT SLOPE INSTALLATION

NOTES:

1. THE RISER PIPE DIAMETER TO BE THE SAME AS THE OUTLET PIPE DIAMETER. 2. USE MODIFIED RIP-RAP UNLESS AS SPECIFIED ELSEWHERE ON PLANS.

3. USE MARIFI 100X WOVEN FILTER FABRIC LINER AS MANUFACTURED BY MARIFI INC. (800-438-1855), OR APPROVED EQUAL. SILT TO BE REMOVED PERIODICALLY FROM LINER TO PREVENT CLOGGING AS DIRECTED BY ENGINEER. 4. WHEN OUTLET FILTER IS INSTALLED ADJACENT TO AN OUTLET CONTROL STRUCTURE, PIPE SHALL BE BUTTED UP AGAINST THE CONTROL



SEC TEMPORARY SEDIMENT TRAP OUTLET FILTER DETAIL

196

- FINISH GRADE RC CULVERT SECTION B-B SEE NOTE 1 LENGTH CULVERT END WIDTH SHOWN ON PLANS SEE NOTE #2 SEE NOTE #2 CULVERT ----FLARED END RIPRAP SPLASHPAD DETAIL

<u>INSTALLATION</u> EXIST. OR PROPOSED CHANNEL WIDTH AS SPREADER PAD INSTALLATION

NOTES:

1. TAPER TRANSITION FOR CHANNEL INSTALLATIONS AS REQUIRED TO MATCH CHANNEL WIDTH, OR AS INDICATED

3. FILTER FABRIC SHALL BE A WOVEN MONOFILAMENT FABRIC AS MANUFACTURED BY MIRAFI FABRIC 600X OR

SECTION A-A

- RC CULVERT

- EXISTING OR

PROPOSED GRADE

FILTER FABRIC

329B

SEE NOTE 1

2. ALL TOTAL WIDTHS AND LENGTHS FOR SPREADER PAD INSTALLATIONS ARE AS INDICATED ON PLANS.

ON THE PLANS.

D = MODIFIED 15"

= INTERMEDIATE 27'

= STANDARD 45"

AMOCO FABRICS CO PROPEX 1325.

RIPRAP AS SPECIFIED ELSEWHERE ON

THE DRAWINGS. DEPTH SHALL BE:

TYPICAL RAIN GARDEN PLANTING DETAIL

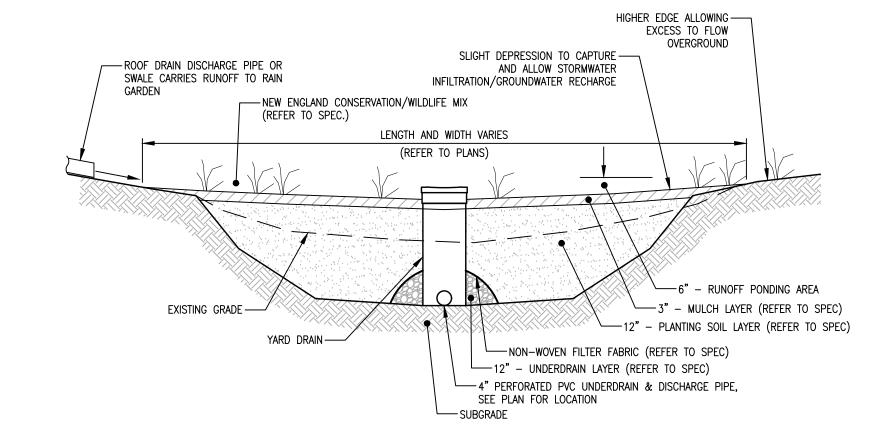
NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION/INSTALLATION OF RAIN GARDEN MATERIALS. 2. GRADE SURFACE OF INSTALLATION AREA SO THAT EARTH IS CLEAN OF ALL ROOTS AND ÓBSTRUCTIONS. SCARIFY SUBSOIL PRIOR TO INSTALLATION OF RAIN GARDEN MATERIALS. 3. ALL RAIN GARDEN MATERIALS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION AND SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS: MULCH LAYER — SHALL BE A SHREDDED HARDWOOD ONLY.

PLANTING SOIL LAYER — SHALL BE A SCREENED TOPSOIL MIXED WITH CLEAN SAND. SAND SHALL MEET ASTM C-33 WITH GRAIN SIZE OF 0.02-0.04". NON-WOVEN FILTER FABRIC - SHALL BE 160N WITH A MINIMUM PUNCTURE STRENGTH OF 95 LBS. AS MANUFACTURED BY MIRAFI INC. OR APPROVED EQUAL.

UNDERDRAIN LAYER - SHALL BE 1-1/4" - 1-1/2" WASHED STONE.

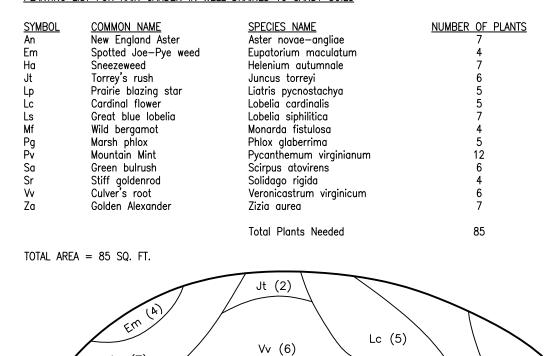
4. SURFACE PLANTING SEED MIXTURE SHALL BE BE NEW ENGLAND CONSERVATION/WILDLIFE MIX. BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL. APPLICATION RATE: 1

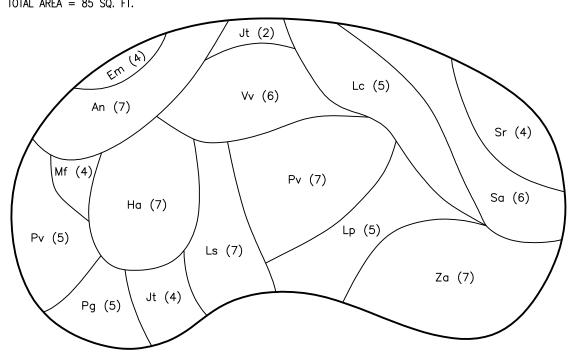


TYPE 'A' RAIN GARDEN DETAIL IN A SUMP CONDITION

NOTES:

1. PATTERN AND SHAPE CAN VARY TO SUIT SITE CONDITIONS AND PLANT AVAILABILITY.

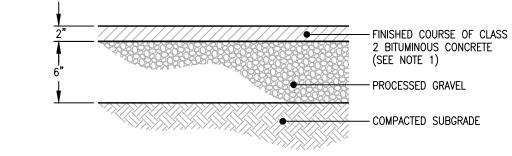




UTILITY LINE TRENCHING DETAIL

NOTES:

1. BITUMINOUS PAVEMENT AT OWNERS OPTION UNLESS OTHERWISE SPECIFIED ON THE PLANS.



TYPICAL DRIVEWAY PAVEMENT DETAIL N.T.S.

1. FOR UNSHEETED TRENCH WHERE PIPE O.D. IS 6" OR LESS THAN, WIDTH (W) 2'-6"; WHERE PIPE O.D. IS GREATER THAN 6" BUT LESS THAN OR EQUAL TO 36" THEN, W = O.D. + 2'-0"; WHERE PIPE O.D. IS GREATER THAN 36" THEN, W = O.D. + 3'-0". PAYMENT FOR THE TRENCHING, BEDDING, FILTER FABRIC AND BACKFILL TO BE INCLUDED IN THE COST PER LINEAR FOOT OF THE PIPE. 2. IF SUITABLE GRANULAR PIPE BEDDING MATERIAL IS AVAILABLE FROM ON SITE EXCAVATIONS, IT CAN BE UTILIZED PROVIDED IT CONFORMS WITH THE "STANDARD SPECIFICATIONS", AND IS APPROVED BY THE TOWN ENGINEER.

3 TYPICAL FOR ALL FLEXIBLE PIPE MATERIALS I.E. C.P.P., P.V.C., POLYETHYLENE, F.R.P., AND A.B.S. TRUSS.
4. SHEETING OR SHORING OF TRENCH WALLS, WHERE UNSUITABLE CONDITIONS EXIST, IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. 5. FOR ROCK REMOVAL DEPTHS GREATER THAN 10', INCREASE WIDTH (W) BY 6".

— FINISHED GRADE $L=W + (H/3) \mid L=W$ (SEE NOTE 5) - COMPACTED SUITABLE BACKFILL - MARKER TAPE (DEPTH - SAND OR FINE GRAVEL BEDDING VARIES) NON-WOVEN FILTER FABRIC UNDISTURBED --3/4" CRUSHED STONE BEDDING (SEE NOTE 2 — FLEXIBLE PIPE EARTH ROCK (SEE NOTE 1)

THE MARKER TAPE SHALL RUN DIRECTLY ABOVE THE ENTIRE LENGTH OF EACH CONDUIT SECTION AND SHALL HAVE MINIMUM VERTICAL SEPARATION OF 12".

6. A MINIMUM SEPARATION OF 30" SHALL BE MAINTAINED BETWEEN ELECTRICAL CONDUIT AND WATER SERVICE LINES. SEPARATION BETWEEN ELECTRICAL CONDUIT AND WATER MAIN SHALL BE 36".

7. A MINIMUM SEPARATION OF 30" SHALL BE MAINTAINED BETWEEN ELECTRICAL CONDUIT AND GAS SERVICE LINES. JOINT TRENCHING IS NOT PERMITTED FOR MAIN GAS LINES. -FINISHED GRADE

1. MINIMUM 9" OF COVER TO MEET H-10 LOADING, AND 18" OF COVER TO MEET H-20 LOADING.

12" INVERT

SEE NOTE 1

18.5"

2. PROVIDE A MINIMUM ONE CLEANOUT MANHOLE PER TRENCH IN ALL PAVED AREAS (SEE DETAIL); A MANHOLE

EXTENSION IS REQUIRED IN GRASSED AREAS WHEN FINISHED GRADE IS GREATER THAN 2'-0" FROM TOP OF

- 4" INSPECTION PORT

- 85% COMPACTED FILL

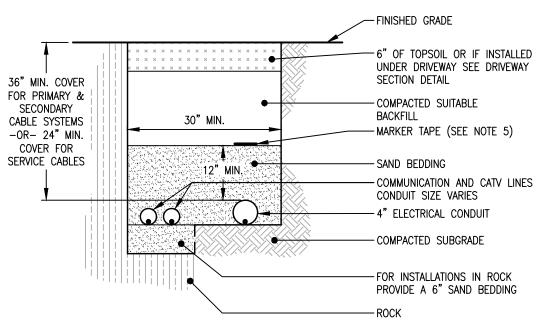
NON-WOVEN FILTER FABRIC

(CULTEC NO. 410 FILTER FABRIC OR APPROVED EQUAL)

- CULTEC RECHARGER 180HD

-1-1/2" - 2" CRUSHED

GRADE



SLOPE TO DRAIN COMPACTED BACKFILL 24" PERFORATED -CORRUGATED PLASTIC PIPE N-12 OR HI-Q, WITH FILTER FABRIC ALL ROUND 'D' VARIES (SEE NOTE 2) (SEE NOTE 1) - NON-WOVEN BROKEN WASHED FILTER FABRIC - Undisturbed

2. FOR 'D' LESS THAN OR EQUAL TO 8", PROVIDE A CLEAN CUT HOLE.

CAMPBELL FOUNDRY #1376

24" CAST IRON GRATE -

TYPICAL DRY WELL YARD DRAIN DETAIL N.T.S.

Two Lot Subdivis
19 Little Pitch Road
Litchfield, CT 06759
Site Details

- CHANNEL FLOOR RECHARGER 150 CULTEC ROOF CLASS 'B' TRENCH DETAIL PLANTING LIST FOR RAIN GARDEN IN WELL DRAINED TO SANDY SOILS DRAIN RECHARGE SYSTEM DETAIL NOTES:

1. CALL "BEFORE YOU DIG" (1-800-922-4455).

2. PROVIDE P.V.C. CONDUIT WITH NYLON PULL CORD AS REQUIRED FOR EACH INDIVIDUAL UTILITY LINE. CONTRACTOR TO COORDINATE WITH INDIVIDUAL UTILITY COMPANIES THE DIAMETER OF CONDUIT REQUIRED. 3. CONTRACTOR TO COORDINATE WITH EACH INDIVIDUAL UTILITY COMPANY AND THE DESIGN ENGINEER, ALL REQUIRED 4. MACHINE DIGGING SHALL STOP NOT LESS THAN 18" FROM VAULTS, FOUNDATIONS, EQUIPMENT, CABLES AND POLES. TRENCHING SHALL BE COMPLETED BY HAND THEREAFTER. 5. ALL ELEC. BURIED CONDUITS SHALL BE IDENTIFIED BY A RED PLASTIC FILM MARKER TAPE, AS SPEC. BY THE UTIL. CO. 1. WHERE CALLED FOR ON THE PLANS "NO SUMP", PROVIDE 4"-6" CONCRETE APRON

CONSTRUCTION SPECIFICATIONS & STANDARDS

- A. MANHOLES, CATCH BASINS AND STRUCTURES:
- 1. Catch basins and manholes shall be constructed of class "A" concrete, prefabricated of precast sections in accordance with ASTM C-148, latest revised edition. The minimum compressive strength shall be 4,000 psi. Structures can be constructed in the field at the contractor's option if built in accordance with the standard specifications and drawings. Leveling courses may be constructed to insure that the frame meets the proposed grade at the design gradient, to a maximum of twelve inches (12"). A maximum two inch (2") thick layer of mortar may also be used to adjust the top slab. The cost of the welded wire fabric and bar reinforcement shall be included in the price bid for manhole(s) and catch basins.
- 2. All catch basins shall be CONNECTICUT STATE HIGHWAY DEPARTMENT STANDARD TYPE "C" concrete curbed unless otherwise specified.
- 3. All proposed catch basins shall have a minimum of two foot (2') sumps below the invert of the outlet pipe to trap silt and sand from roads or parking areas, except as otherwise specified on the drawings.
- 4. Manholes shall have concrete aprons and inverts constructed to one—half the diameter of the outlet pipe with aprons sloped to drain.
- 5. Manhole steps will be required in all manholes deeper than four feet (4'). Spacing will be twelve inches (12") center to center with the top rung within a minimum of two feet (2') to the top of frame and cover and lower rung within eighteen inches (18") of the apron. The steps shall be ALCOA #6005—T5, drop front design, or a copolymer polypropylene conforming to ASTM 2146, type II, grade 43758 with a grade 60, half inch (1/2") steel rod or an approved equal.
- 6. Provide a minimum of six inches (6") of gravel bedding under all catch basins, manholes and outlet structures in earth and twelve inches (12") for rock excavations.
- 7. Knockout panels, stubs and/or manhole drops and accommodating invert channels shall be constructed to meet line and grade of future construction, as required. Main line and lateral future connections shall be suitably capped or plugged for water tightness. Contractor to provide a 1/2 inch metal rod with a two inch square plate top placed four inches below grade at the end of all capped utilities.
- 8. The contractor may elect to interchange rectangular manholes for circular manholes with the engineer's approval. The size substituted thereof shall be determined by the engineer. The cost of the new structure shall be the same cost bid per vertical lineal foot as the original structure. Shop drawings shall be submitted to the engineer for review.
- Frames and grates for yard drains shall be Campbell Foundry pattern #4127. Sanitary manhole frame and grates shall be per local WPCA standards.
- 10. All head walls shall be Wing Type Endwalls as detailed by The Connecticut D.O.T. Standard Specifications and drawings, and as manufactured by Connecticut Precast Corp. Monroe CT or approved equal.

B. STORM SEWER PIPES:

- 1. All R.C.P. Storm Sewer Drainage Pipe specified shall be Reinforced Concrete Pipe ASTM C76. Joints shall be rubber compression gasketed ASTM C443. Classifications shall be, CLASS IV in streets and CLASS III in unimproved areas, except fifteen inch (15") catch basin laterals shall be CLASS V, or approved equal.
- 2. All C.P.P. specified (3"-60") shall be 'N-12' smooth wall interior Corrugated High Density Polyethylene Pipe as manufactured by Advanced Drainage Systems (ADS), Inc., or approved equal. Reference is made to Product Note 3.115 as prepared by ADS for manufactures installation recommendations. The pipe shall meet or exceed the requirements as follows:
 - a. AASHTO M 252 = Standard specifications for corrugated polyethylene drainage tubing 3"-10" dia.
 - b. AAŚHTÓ M 294 = Standard specifications for corrugated polyethylene pipe 12"-48" dia.
 - c. AASHTO MP 7-97 = Standard specifications for corrugated
 - polyethylene pipe 54" and 60" dia. d. AASHTO Section 30 = Construction standards, Thermoplastic pipe.
 - e. AASHTO Section 50 = Construction standards, mermoplastic pipe.

 e. AASHTO D 2321 = Standard practice for underground installation of Thermoplastic pipe for sewers and other gravity flow
 - f. ASTM D 3212 = Standard specification for joints for drain and sewer plastic pipe using flexible elastomeric joints.
 - g. ASTM F 1417 = Standard test method for installation acceptance of plastic gravity sewer lines using low—pressure air.
 - h. ASTM F 477 = Elastomeric seals (gaskets) for joining plastic
 - i. ASTM F 677 = Standard specification for large diameter corrugated polyethylene pipe and fittings.
- 3. All 'Tight Pipe' specified shall be 'N-12 WT IB' smooth wall interior Corrugated High Density Polyethylene Pipe with a ceramic composite joint as manufactured by ADS, or approved equal. The joints shall have a bell and spigot or bell-bell design and incorporate an ASTM F 477 elastomeric rubber gasket. The joints shall meet or exceed the requirements of ASTM 3212 lab pressure test of 10.8 psi, and ASTM 1417 watertight field test. After the pipe is installed it shall be air tested in conformance with ASTM F 1417.
- 4. All curtain and footing drain outlet pipes shall be 6" PVC ASTM 3034, SDR 35 pipe, or approved equal. Joints shall be rubber compression gaskets, or solvent welded couplings using proper two step PVC solvent solution procedure. Joints must meet ASTM D 3212 specifications.
- 5. All curtain drain pipe shall be six inch (6") perforated corrugated polyethylene tubing conforming to AASHTO M36 Class 'I' heavy duty type, minimum slots 1/4" clear opening, except as otherwise shown on the plans, and shall exit to a gravel lined drainage swale or drainage structure. All aggregate for underdrain shall be washed, size as specified.
- 6. Pipe lengths for the storm drainage system are measured from centerline of structure to centerline of structure with the exception of flared ends which are measured from the outer most edge.
- 7. Pipe inverts for storm drainage structures are measured at their centerline, while inverts for flared ends measured at their outer most
- 8. All piping shall be founded on a stone bedding in CLASS "B" and "C" trench installations for either earth or rock excavations, unless otherwise directed by the engineer. Refer to details.
- g. All pipe backfill shall be placed in compacted twelve inch (12") max. lifts to an AASHTO T—99 density of 95% to proposed subgrade.

- 10. Pipes shall be cut flush to the inside walls of all structures. Openings at knockouts shall be mortared tight with a non—shrink grout. Concrete inverts and aprons shall be constructed to one—half the diameter of the existing pipe within manholes. Aprons shall slope to drain. Smaller pipe sizes entering structures shall, at a minimum, match the crown of the outgoing pipe, except as otherwise specified for critical elevations for upstream structures or in the case of significant grade changes.
- 11. All footing drain discharge piping located in excess of twenty five (25) feet from any sewage disposal system shall be constructed of solid pipe. Any footing drain discharge piping located within twenty five (25) of any sewage disposal system shall be tight pipe and conform to the standards of Table 2—C of the State of CT Health code.
- 12. All roof drains shall discharge to collector pipe, to be conveyed to recharger basins. Size as shown on C5

