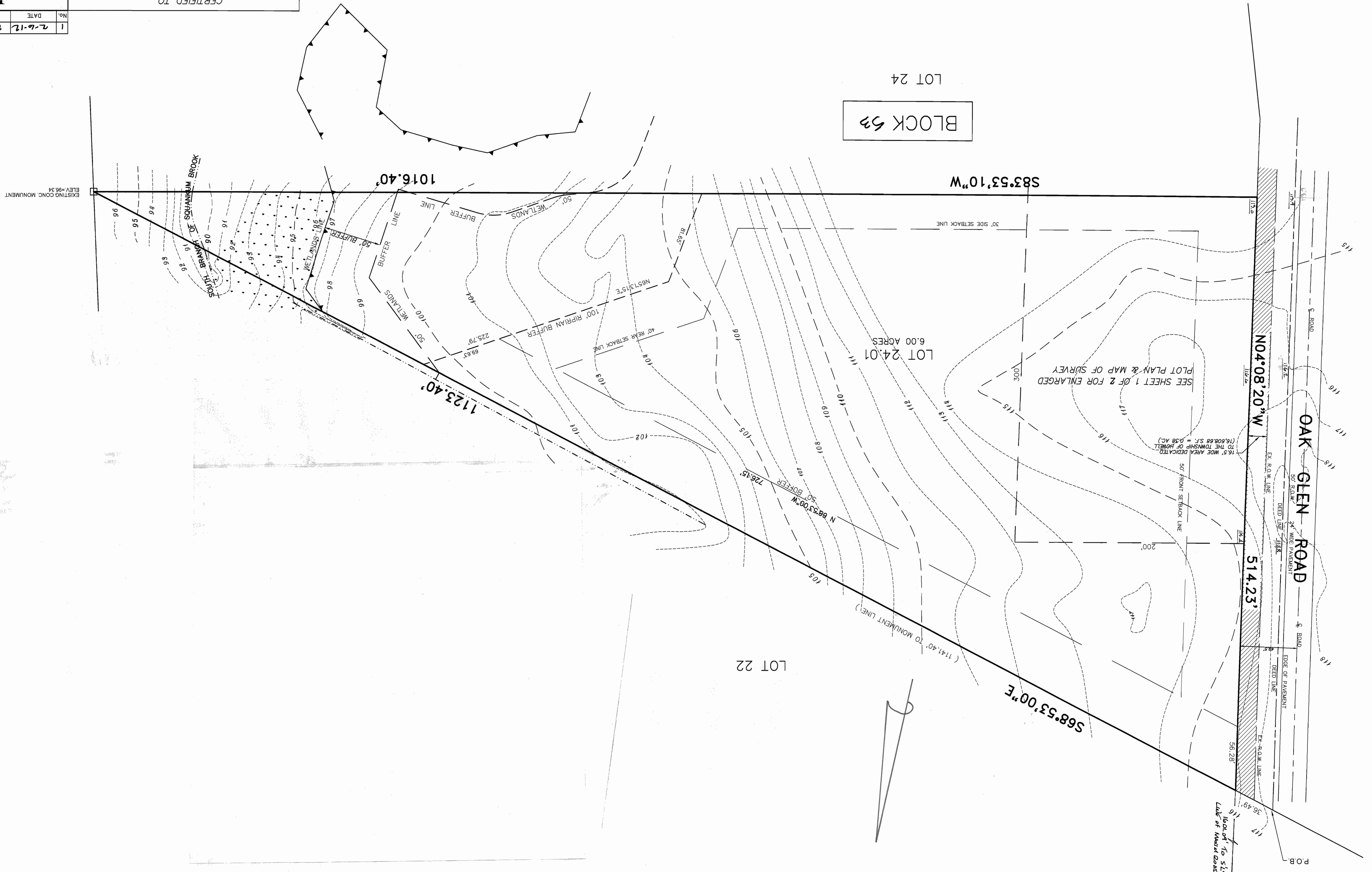


SHEET 2 OF 2	DATE		N.J. LIC. NO. 21904
	CHARLES B. RUSH P.E. & P.L.S.		
DWG NO. 4010007	DATE		N.J.P.E. & P.L.S. 21904
SCALE: 1" = 40'	DATE		1-26-12
DATE: JANUARY 2012	DATE		732-240-1200
	DATE		ONE HADLEY AVENUE TOMS RIVER, N.J. 08753
	DATE		CONSULTING ENGINEERS LAND SURVEYORS PLANNERS
CHARLES B. RUSH, P.E. & L.S.			
MAP OF SURVEY LOT 24.01 BLOCK 53 TOWNSHIP OF HOWELL MONMOUTH TOWNSHIP, NEW JERSEY			
No.	DATE	REVISIONS	
1	2-6-12	Block #	

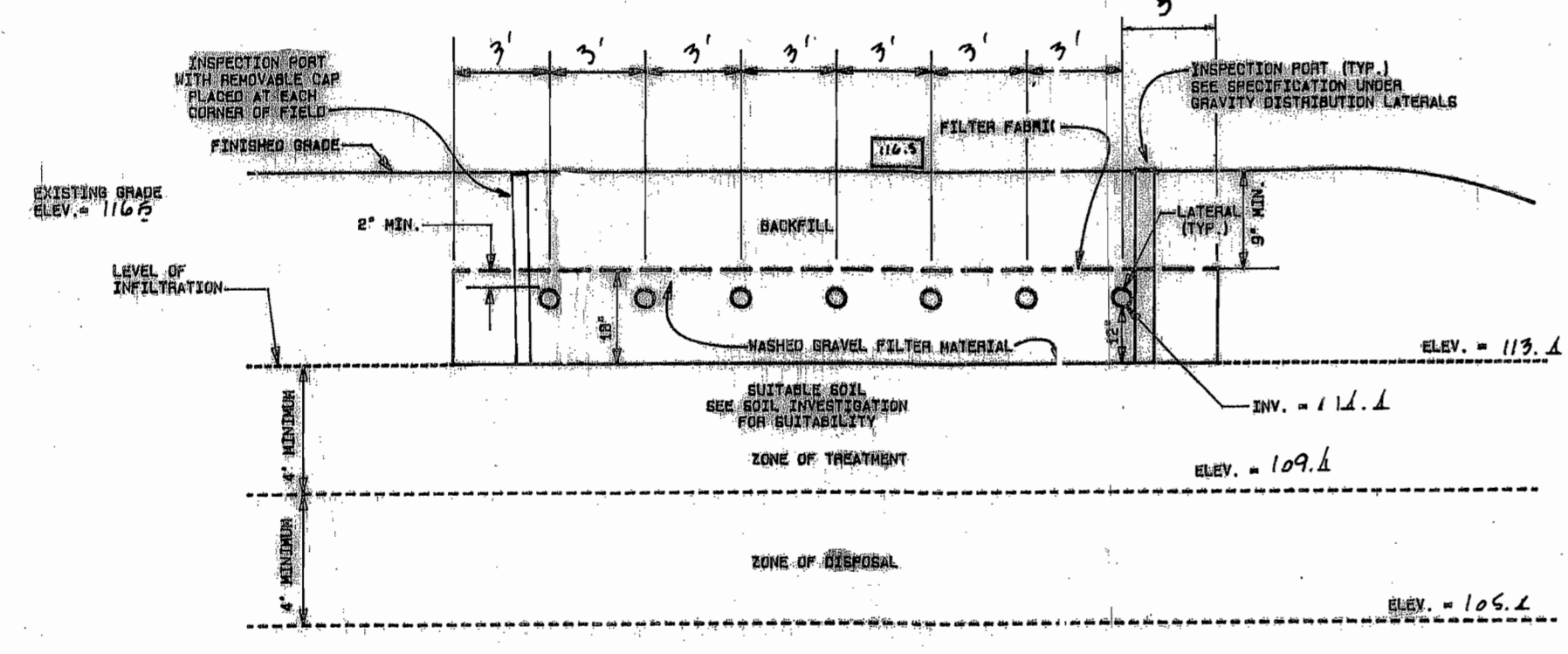
IN CONSIDERATION OF THE FEE PAID FOR MAKING THIS SURVEY, I HEREBY CERTIFY
 AND GUARANTEE THE ACCURACY (EXCEPT AS TO EASEMENTS, IF ANY, THAT MAY BE LOCATED
 BELOW THE SURFACE OF THE LANDS OR ON THE SURFACE OF LANDS AND NOT VISIBLE AS
 AN INCIDENT FOR ANY INSUROR OF TITLE TO INSURE THE TITLE TO THE LANDS AND
 PRECESS SHOW HEREON.
 THIS CERTIFICATION IS MADE ONLY TO ABOVE NAMED PARTIES FOR PURCHASE AND/OR
 MORTGAGE OF MORTGAGE INTEREST BY ABOVE NAMED PARTIES FOR PURCHASE OR
 RESPONSIBILITY OR LIABILITY IS ASSUMED BY THE SURVEYOR FOR USE OF THIS SURVEY FOR ANY
 PURPOSE INCLUDING, BUT NOT LIMITED TO, SURVEY FOR SURVEY AFFIDAVIT, RESALE OF
 PROPERTY TO ANY OTHER PERSON MENTIONED IN DESCRIPTION, EITHER DIRECTLY OR INDIRECTLY.

CERTIFIED TO
 MSC CONSULTING, LLC

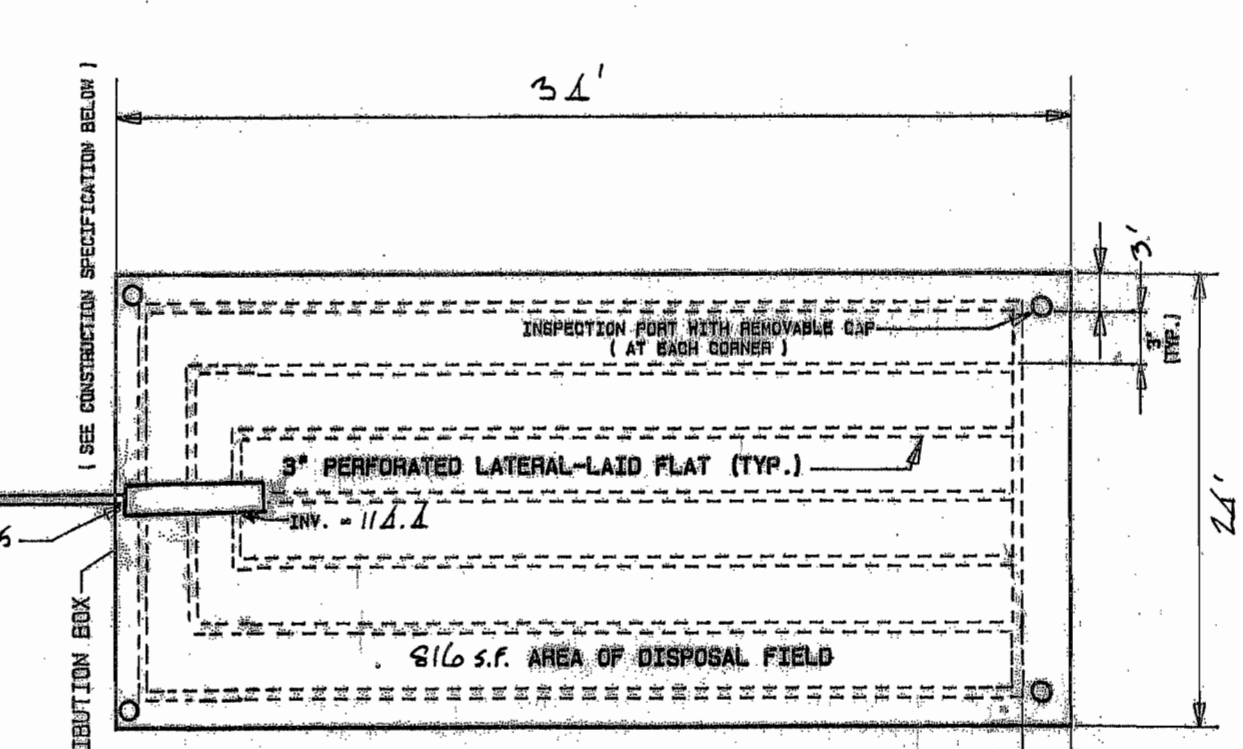


GRAVITY DISTRIBUTION LATERALS SPECIFICATIONS

- DISTRIBUTION LATERALS SHALL BE A MINIMUM OF THREE INCHES IN DIAMETER.
- DISTRIBUTION LATERALS SHALL CONSIST OF LENGTHS OF RIGID PERFORATED PIPE CONNECTED WITH TIGHT JOINTS.
- BRACING AND APPROPRIATE SUPPORTS OF DISTRIBUTION LATERALS SHALL CONFORM TO N.J.A.C. 7:18-4.2(d).
- PERFORATIONS SHALL BE EQUALLY SPACED ALONG TWO RINGS REMOVING THE LENGTH OF THE PIPE IN EACH SIDE. RIGIDITY BETWEEN THE COVER AND THE CENTRAL LINE WHICH SEPARATES THE UPPER AND LOWER HALVES OF THE PIPE, PERFORATIONS SHALL BE NO GREATER THAN THREE-TENTHS (0.75) OF THE INSIDE DIAMETER OF THE PIPE.
- EACH INDIVIDUAL DISTRIBUTION LINE SHALL BE APPROXIMATELY 100 FEET LONG AND SHALL BE LAYED OUT AT THE END OF EACH LATERAL. LATERALS ARE CONNECTED TO EACH OTHER BY LINES. IN NO CASE SHALL THE LENGTH OF THE DISTRIBUTION LINES BE GREATER THAN TWO HUNDRED (200) FEET.
- AN INSPECTION PORT SHALL BE PROVIDED NEAR THE END OF EACH LATERAL OR NEAR CORNER OF THE DISTRIBUTION NETWORK WHERE THE LATERALS ARE JOINED IN A LOOP. INSPECTION PORTS SHALL CONSIST OF A PERFORATED PIPE WITH A REMOVABLE CAP, EXTENDING FROM THE LEVEL OF FILTRATION TO FINISHED GRADE.
- THE FOLLOWING MATERIALS ARE ACCEPTABLE FOR DISTRIBUTION LATERALS:
 - CLAY PIPE, STANDARD AND EXTRA STRENGTH PERFORATED (ASTM D-2838);
 - PLASTIC;
 - ADVERTISED/ULTRA-HIGH-STRENGTH (ABS) (ASTM D-2838);
 - POLYETHYLENE TEREPHTHALATE (PET) (ASTM D-2838);
 - OTHERS AS APPROVED BY THE ENGINEER.



CONVENTIONAL DISPOSAL FIELD INSTALLATION



PLAN VIEW DISPOSAL FIELD

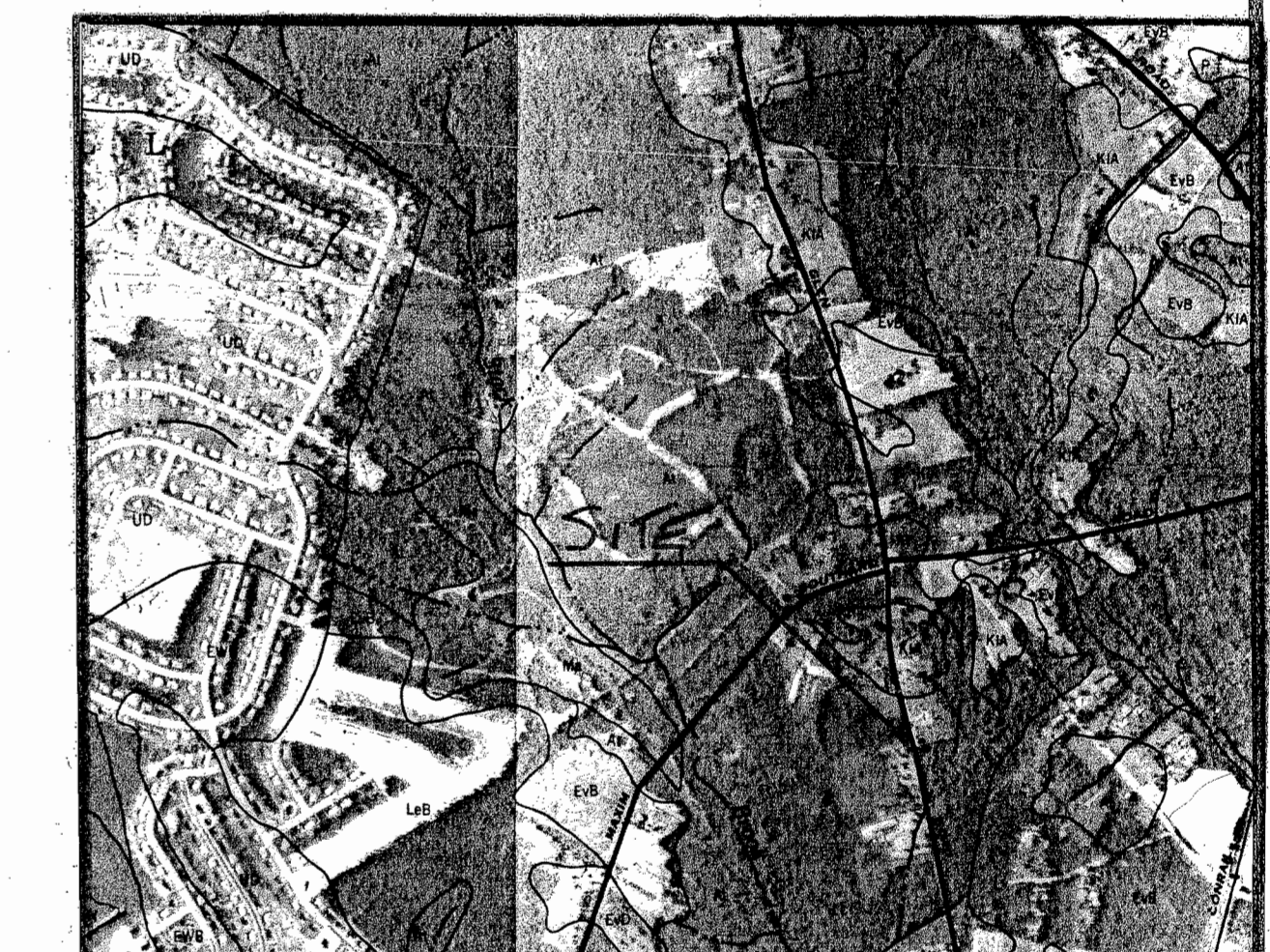
DISPOSAL FIELD SPECIFICATIONS

DISPOSAL FIELD CLASS	CONVENTIONAL
TYPE OF DISPOSAL FIELD	GRAVITY
VALUE OF EXISTING SEWAGE	500 GPD
PERMEABILITY RATE	1.4
AREA	500 x 1.61
PERMITTED SQUARE FOOTAGE OF FIELD	805 sq. ft.

- THIS INSTALLATION SHALL BE MADE BY PLACING THE DISPOSAL BED IN AN EXCAVATION MADE SUFFICIENTLY DEEP TO ACCOMMODATE THE DISPOSAL FIELD.
- EXCAVATION FOR THE DISPOSAL FIELD SHALL BE IN ACCORDANCE WITH THE FOLLOWING PROCEDURES:
- APPROPRIATE MEASURES SHALL BE USED TO INSURE THAT THE BOTTOM OF THE DISPOSAL BED IS LEVEL.
- IN SOIL TEXTURES OTHER THAN SAND OR LOAMY SANDS, EXCAVATION WHICH EXPOSES THE IMPERMEABLE SURFACE OF THE DISPOSAL FIELD SHALL NOT BE CARRIED OUT UNTIL THE SOIL MOISTURE CONTENT IS ABOVE THE LOWER PLASTIC LIMIT. THIS MEANS THAT WHEN A SMALL LUMP OF SOIL, TAKEN FROM THE BOTTOM OF THE EXCAVATION, CAN BE MOULDED INTO A BALL WITH THE FINGER, IT IS NOT NECESSARY TO WALK ON THE DISPOSAL FIELD WITH THE SHOES OF THE OPERATOR. THE SOIL IS TO BE MOULDED WITH THE EXCAVATION.
- EXCAVATION SHALL BE CARRIED OUT IN A MANNER THAT WILL AVOID UNNECESSARY COMPACTION OF THE DISPOSAL FIELD MATERIALS. HEAVY EQUIPMENT SUCH AS BULLDOZERS OR FRONT END LOADERS SHALL NOT BE DRIVEN OVER THE EXPOSED IMPERMEABLE SURFACE OF THE DISPOSAL FIELD. EXCAVATION OPERATIONS SHALL BE CARRIED OUT WITH A BACKHOE OPERATOR FROM BETWEEN DISPOSAL TRENCHES OR FROM OUTSIDE THE PERIMETER OF PROPOSED EXCAVATED PORTIONS OF THE DISPOSAL BED. IF IT BECOMES NECESSARY TO WALK ON THE DISPOSAL FIELD BOTTOM, A SUITABLE BOARD SHALL BE LAID OVER THE SOIL TO PREVENT TRAMPLING.
- ANY SMOODEN OR COMPACTED SOIL SURFACES WHICH HAVE BEEN PRODUCED ON THE BOTTOM OR SIDEWALLS OF THE EXCAVATION SHALL BE BROKEN TO COVER A FRESH SOIL SURFACE WHICH IS MOIST AND UNSEEN.
- WORK SHOULD BE SCHEDULED SO THAT THE BOTTOM AND SIDEWALLS OF THE EXCAVATION WILL NOT BE EXPOSED TO UNPROTECTED SUNLIGHT. CULTURE BETWEEN THE TIME OF EXCAVATION AND THE TIME OF FINAL INSPECTION AND BACKFILLING. ANY LOOSE SOIL OR DEBRIS SHOULD BE MOVED INTO OR OTHERS EXPOSED MATERIALS. THE EXCAVATION AS A RESULT OF THE EXCAVATION OPERATIONS OPEN TO THE ELEMENTS SHALL BE CAREFULLY PROTECTED BY A FENCE.
- FILTER MATERIAL SHALL COVER THE DISTRIBUTION LINES AND EXTEND THE FULL WIDTH OF THE BED. SHALL EXTEND BETWEEN 6" AND 18" DEEP BETWEEN DISTRIBUTION LINES AND SHALL EXTEND AT LEAST 2" ABOVE THE TOP OF THE LINES.
- THE FILTER MATERIAL SHALL BE WASHED GRAVEL OR CRUSHED STONE, FREE OF LINES, CLAY, SILT, OR OTHERS. REFER TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR GRAVEL AS DESCRIBED IN SECTION 709 OF THE MANUAL OF PRACTICES. THE FILTER MATERIAL SHALL CONFORM IN SIZE AND GRADATION TO SIZE NUMBER 24, SIZE NUMBER THREE OR SIZE NUMBER FOUR.
- THE FILTER MATERIAL SHALL BE COVERED WITH FILTER FABRIC. THE LAYOUT OF THE DISTRIBUTION LINES PROCEEDS. WHEN FILTER FABRIC IS USED, THE FOLLOWING REQUIREMENTS SHALL BE MET:
 - SIZE OF JOINTS OR SHEETS SHALL BE OVERLAPPED BY A MINIMUM OF SIX INCHES.
 - FILTER FABRIC SHALL HAVE SUFFICIENT TENSILE STRENGTH TO PREVENT RIPPING DURING INSTALLATION AND BACKFILLING. ADEQUATE PERMEABILITY TO ALLOW FREE PASSAGE OF GASES, ADEQUATE PARTICLE CONFINEMENT OF SOLID PARTICLES INTO THE FILTER MATERIAL.
 - THE FILTER MATERIAL MAY BE LAYED INTO THE EXCAVATION USING A BACKHOE. PROTECTIVE LASHES OR ROPES SHOULD BE USED TO PREVENT THE OPERATION FROM BEING CARRIED OUT FROM THE SIDES OF THE EXCAVATION. THAT BY DIVISIONS ON THE EXPOSED DISPOSAL FIELD WHICH ARE NOT NECESSARY. IN THE CASE OF LARGE BINS, TRACKED EQUIPMENT MAY BE OPERATED WITHIN THE DISPOSAL BED PROVIDED THAT THE EQUIPMENT DOES NOT EXERT A PRESSURE IN EXCESS OF EIGHT POUNDS PER SQUARE INCH AND PROVIDED THAT THE FILTER MATERIAL IS PULVERED UP IN FRONT OF THE VEHICLE WHILE MAINTAINING A MINIMUM THICKNESS OF ONE FOOT BELOW THE VEHICLE TRACKS AT ALL TIMES.
 - BACKFILL AND FINAL GRADING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
 - A MINIMUM OF 6" SHOULD BE OVERLAPPED BY A MINIMUM OF SIX INCHES.
 - BACKFILL SHALL BE OF EARTH SIMILAR TO THAT FOUND AT THE SITE AND FREE OF LARGE STONES, TREE STUMPS, BROKEN MASONRY OR OTHER WASTE CONSTRUCTION MATERIAL.
 - IN NO CASE SHALL THE BACKFILL BE MORE PERMEABLE THAN THE SURROUNDING SOIL.
 - BACKFILL SHALL COMPLETELY COVER THE ENTIRE DISPOSAL BED AND SHALL BE GRADUALLY SLOPED INTO THE SURROUNDING TOPOGRAPHY ON ALL SIDES.
 - THE FOLLOWING PRACTICES SHALL BE FOLLOWED:
 - HEAVY MACHINERY, RUBBER-TIRED VEHICLES OR OTHER VEHICLES EXERCISING A PRESSURE IN EXCESS OF EIGHT POUNDS PER SQUARE INCH SHALL NOT BE PERMITTED TO PASS OVER THE DISPOSAL FIELD WITHIN THE FILTER MATERIAL AND DISTRIBUTION NETWORK HAVE BEEN INSTALLED.
 - TRACKED EQUIPMENT MAY BE USED FOR THE PURPOSE OF BACKFILLING AND FINAL GRADING PROVIDED THAT THE TRACKS DO NOT EXERT PRESSURE ON THE UNDERLYING SOIL IN EXCESS OF EIGHT POUNDS PER SQUARE INCH.
 - FINAL GRADING SHALL BE COMPLETED IN ACCORDANCE WITH THE APPROVED ENGINEERING DESIGN AND SHALL BE SUCH A MANNER THAT SURFACE WATER WILL NOT COLLECT OVER THE DISPOSAL FIELD.
 - AFTER COMPLETION OF BACKFILLING AND FINAL GRADING THE BACKFILLED AREA OVER THE DISPOSAL FIELD SHALL BE SLOPED OR GRADUALLY ESTABLISHED TO A SUFFICIENT GRADE OR OTHERS STABILIZED AGAINST EROSION IN A MANNER ACCEPTABLE TO THE ADMINISTRATIVE AUTHORITY.



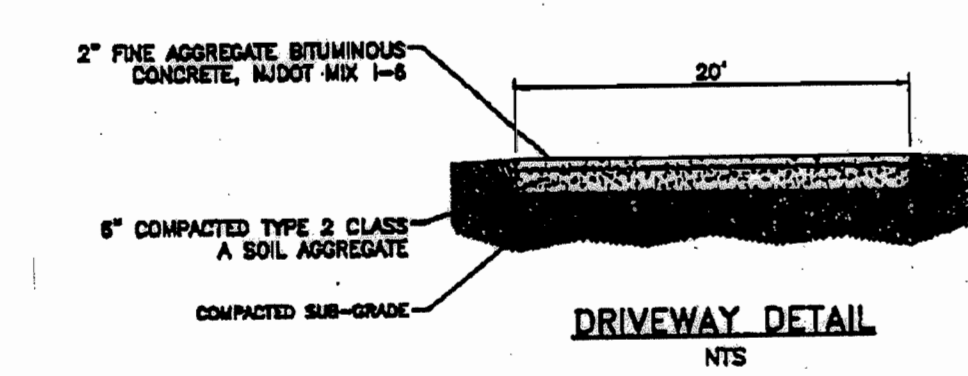
KEY MAP



SOILS MAP

SEPTIC TANK SPECIFICATIONS

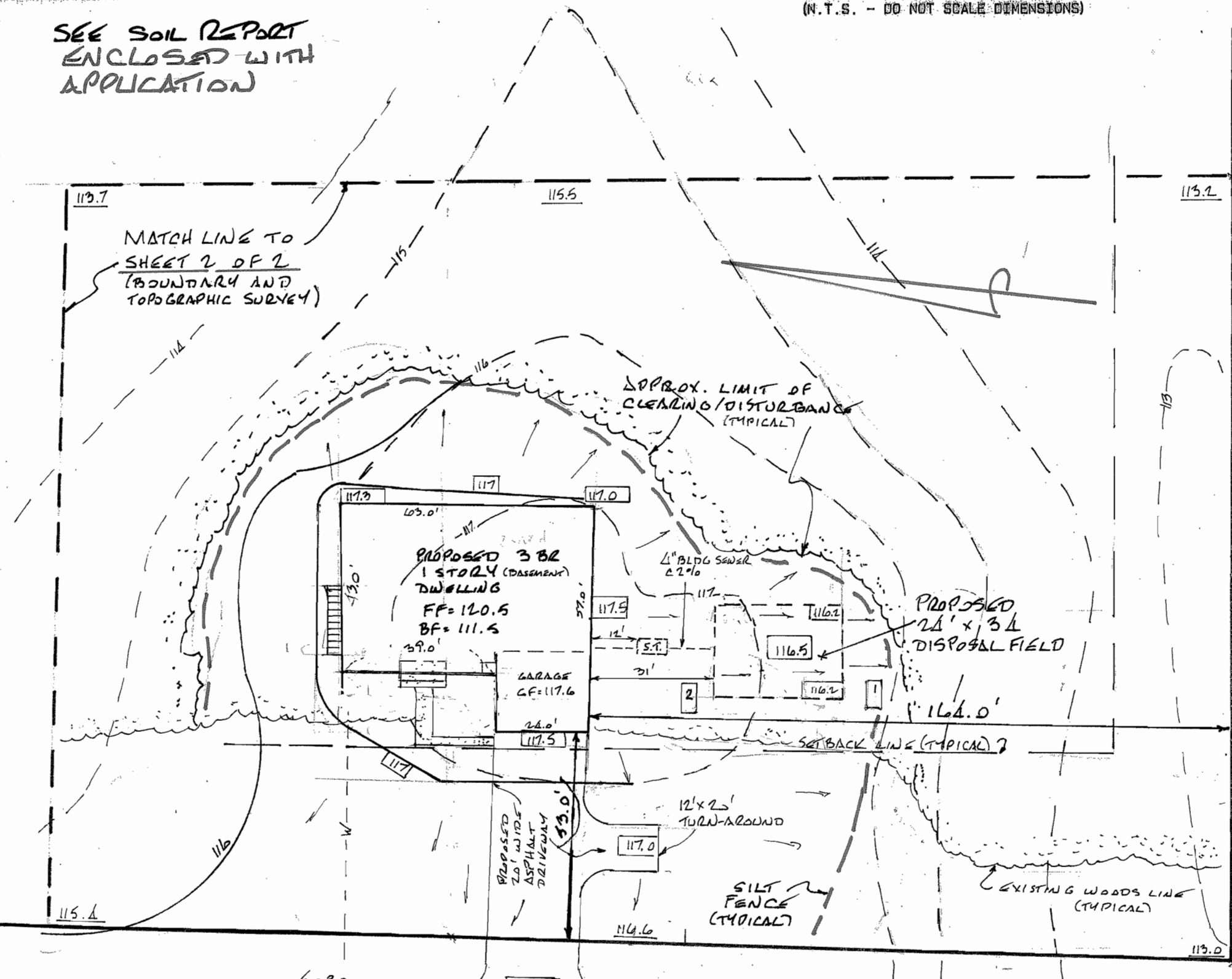
- PROPOSED NUMBER OF SEPTIC TANKS: 3
- PROPOSED SIZE OF TANK: 1000 GALLON
- THIS TANK IS NOT DESIGNED FOR USE WITH BARBARIE BRINDER UNITS.
- SEPTIC TANK SHALL BE WATER-TIGHT AND CONSTRUCTED OF SOUND AND DURABLE MATERIAL WHICH IS RESISTANT TO CORROSION, DECAY, FROST DAMAGE OR TO SHRINKING OR SWELLING DUE TO SETTLEMENT OR BACKFILLING. ALL JOINTS BELOW THE LEVEL OF THE TANK OR BELOW THE SEASONAL WATER TABLE SHALL BE PROVIDED WITH A PERMANENT WATER-TIGHT SEAL.
- PRECAST SLABS USED AS COVER SHALL BE WATER-TIGHT, A MINIMUM OF THREE INCHES IN THICKNESS, AND SHALL BE ADEQUATELY REINFORCED.
- THE SIDES AND BOTTOM OF THIS PRECAST CONCRETE TANK SHALL BE A MINIMUM OF THREE INCHES IN THICKNESS AND SHALL BE ADEQUATELY REINFORCED.
- CONCRETE USED IN THE CONSTRUCTION OF SEPTIC TANKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE (ACI) STANDARD FOR FRESH RESISTANCE (ACI 308-40-4.1, 4.2) AND WATER-TIGHTNESS (ACI 308-40-4.1, 4.2). CERTIFICATION SHALL BE PROVIDED BY THE MANUFACTURER AND THE CERTIFICATION DISPLAYED ON THE TANK.
- ALL JOINTS OF PRECAST CONCRETE SHALL BE SEALED WITH TWO COATINGS OF AN ASPHALT EMULSION TO MINIMIZE CORROSION. COATINGS OF PRE-CAST TANKS SHALL BE APPLIED BY THE MANUFACTURER PRIOR TO DELIVERY TO THE JOB SITE.
- SEPTIC TANKS SHALL BE PLACED ON A FIRM AND STABLE FOUNDATION SO THAT THE POTENTIAL FOR UNEVEN SETTLEMENT OR CRACKING IS MINIMIZED. TANKS SHALL BE INSTALLED DIRECTLY ON UNDISTURBED NATURAL SOIL. IF THE EXCAVATION IS DEEP TO 24" OR MORE, IT SHALL BE BACKFILLED TO THE PROPER ELEVATION WITH SAND. WHEN THE TANK MUST BE CONSTRUCTED OR INSTALLED ON A LAYER OF FILL MATERIAL, GREATER THAN ONE FOOT IN THICKNESS, THE FILL SHALL BE PROPERLY EXHAUSTED AND COMPACTED AS PRESCRIBED IN N.J.A.C. 7:18-4.2(d).
- INLET AND OUTLET CONNECTIONS OF TANKS SHALL BE APPROVED BY AND TO INSURE PROTECTIVE METHODS OF COVER AND BARRIERS AND SHALL BE FASTENED WITH AND CONSTRUCTED OF, OR COATED WITH MATERIALS WHICH ARE RESISTANT TO CORROSION BY SULFURIC ACID. WHERE THE TANK IS USED, THE TANK SHALL BE BARRIERS TEST AS SHOWN IN THE TEST PROCEDURE. IN ANY CASE, THE FOLLOWING REQUIREMENTS SHALL BE MET:
 - ADDRESS OPENINGS MUST BE ACCURATE IN SIZE AND LOCATED TO FACILITATE REMOVAL OF ACCUMULATED SOLIDS AND INSPECTION OF THE TANK AND ALL OUTLETS.
 - ALL ADDRESS OPENINGS SHALL BE EXTENDED TO WITHIN 18" TO 24" INCHES OF THE FINISHED GRADE SURFACE.
 - ADDRESS OPENINGS SHALL BE CONSTRUCTED IN SUCH A MANNER AS TO PREVENT THE ENTRANCE OF SURFACE WATER.
- BACKFILL AROUND SEPTIC TANK SHALL BE FREE OF LARGE STONES, ROOTS OR FOREIGN OBJECTS. SHALL BE PLACED IN THIN LAYERS, NOT TO EXCEED THREE INCHES, AND SHALL BE THOROUGHLY TAMPED IN A MANNER THAT WILL NOT PRODUCE UNIFORM STRESS ON THE TANK.



DRIVEWAY DETAIL

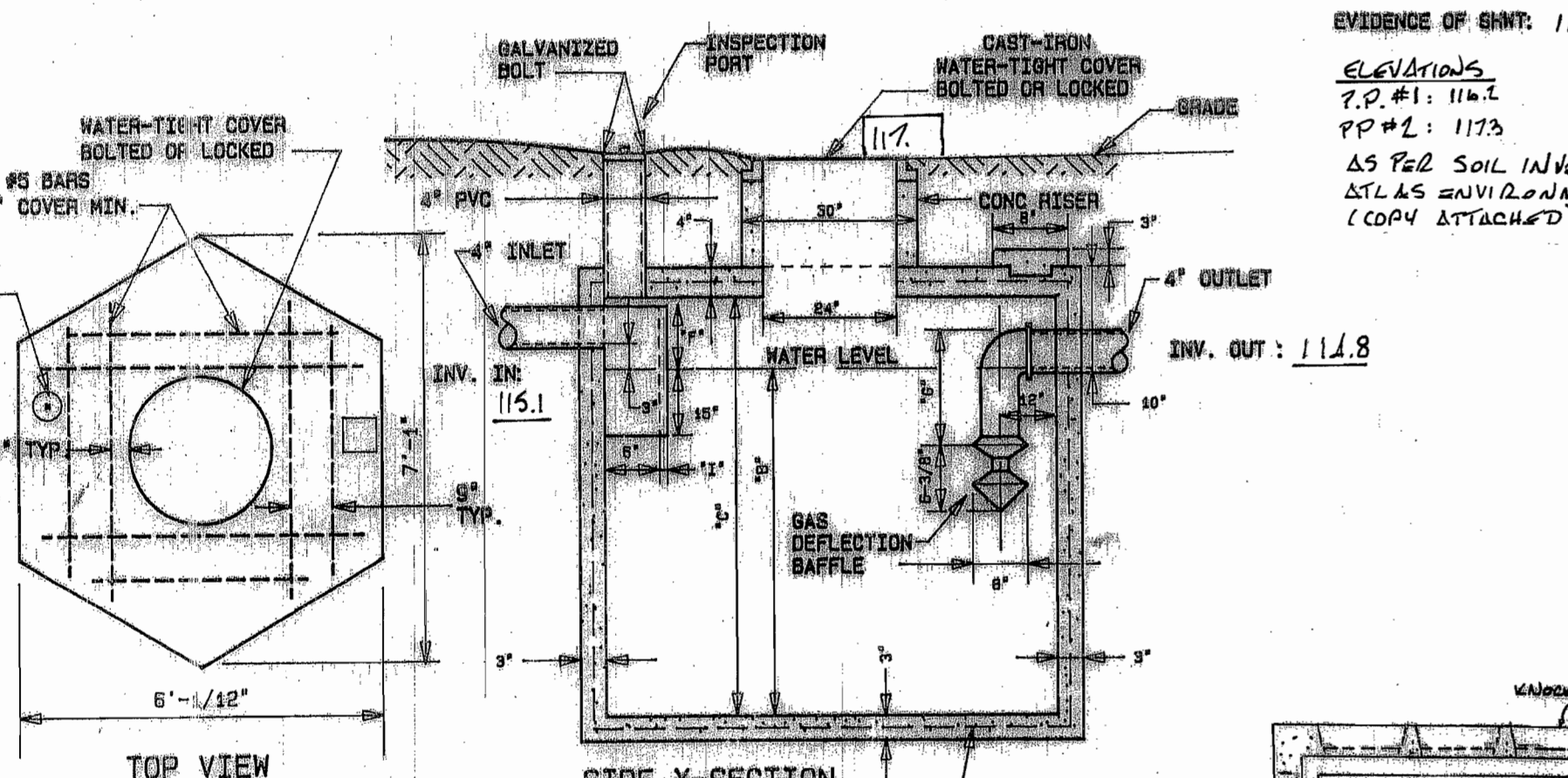
DISTRIBUTION BOX SPECIFICATIONS

- DISTRIBUTION BOX SHALL BE WATER-TIGHT AND CONSTRUCTED OF SOUND AND DURABLE MATERIALS WHICH WILL RESIST DECAY OR CORROSION BY ACID, FROST DAMAGE, CRACKING OR BACKFILLING DUE TO BACKFILLING FILLING OR OTHER ANTICIPATED STRESSES.
- THE DISTRIBUTION BOX SHALL BE SET PERFECTLY LEVEL, AND SHALL BE INSTALLED CORRECTLY ON THE FILTER MATERIAL WITHIN THE BED.
- A SEPARATE OUTLET SHALL BE PROVIDED FOR EACH DISTRIBUTION LATERAL. THE INVERT OF ALL OUTLETS SHALL BE IDENTICAL, SET AT THE SAME LEVEL WHICH SHALL BE A MINIMUM OF TWO INCHES ABOVE THE BOTTOM OF THE BOX. WHEN INSTALLATION IS COMPLETE THE DISTRIBUTION BOX SHALL BE FILLED WITH WATER AT WHICH TIME THE INSTALLATION SHALL BE CHECKED TO MAKE SURE THAT ALL OUTLETS ARE PERMANENTLY AND SECURELY SEALED AT EXACTLY THE SAME ELEVATION FROM THE BACKFILL.
- THE INVERT OF THE INLET SHALL BE AT LEAST ONE INCH ABOVE THE INVERT OF THE OUTLET.
- THE DISTRIBUTION BOX SHALL BE PROVIDED WITH A MEANS OF ACCESS WHICH MAY BE A RECESSED AREA OF SHALLOW BOXES, ACCESS TO LARGER BOXES MAY BE PROVIDED BY MEANS OF HANDLES AND INSPECTION PORTS TEST AS SHOWN IN THE TEST PROCEDURE. IN ANY CASE, THE FOLLOWING REQUIREMENTS SHALL BE MET:
 - ADDRESS OPENINGS MUST BE ACCURATE IN SIZE AND LOCATED TO FACILITATE REMOVAL OF ACCUMULATED SOLIDS AND INSPECTION OF THE TANK AND ALL OUTLETS.
 - ALL ADDRESS OPENINGS SHALL BE EXTENDED TO WITHIN 18" TO 24" INCHES OF THE FINISHED GRADE SURFACE.
 - ADDRESS OPENINGS SHALL BE CONSTRUCTED IN SUCH A MANNER AS TO PREVENT THE ENTRANCE OF SURFACE WATER.



PLOT PLAN AND MAP OF SURVEY

TAX LOT(S) 21.01 BLOCK 53
 HOWELL TOWNSHIP
 MOUNTAIN COUNTY NEW JERSEY
 (SHEET 1 OF 2) NEW SOIL INVESTIGATION & SEPTIC SYSTEM DESIGN 2-9-12

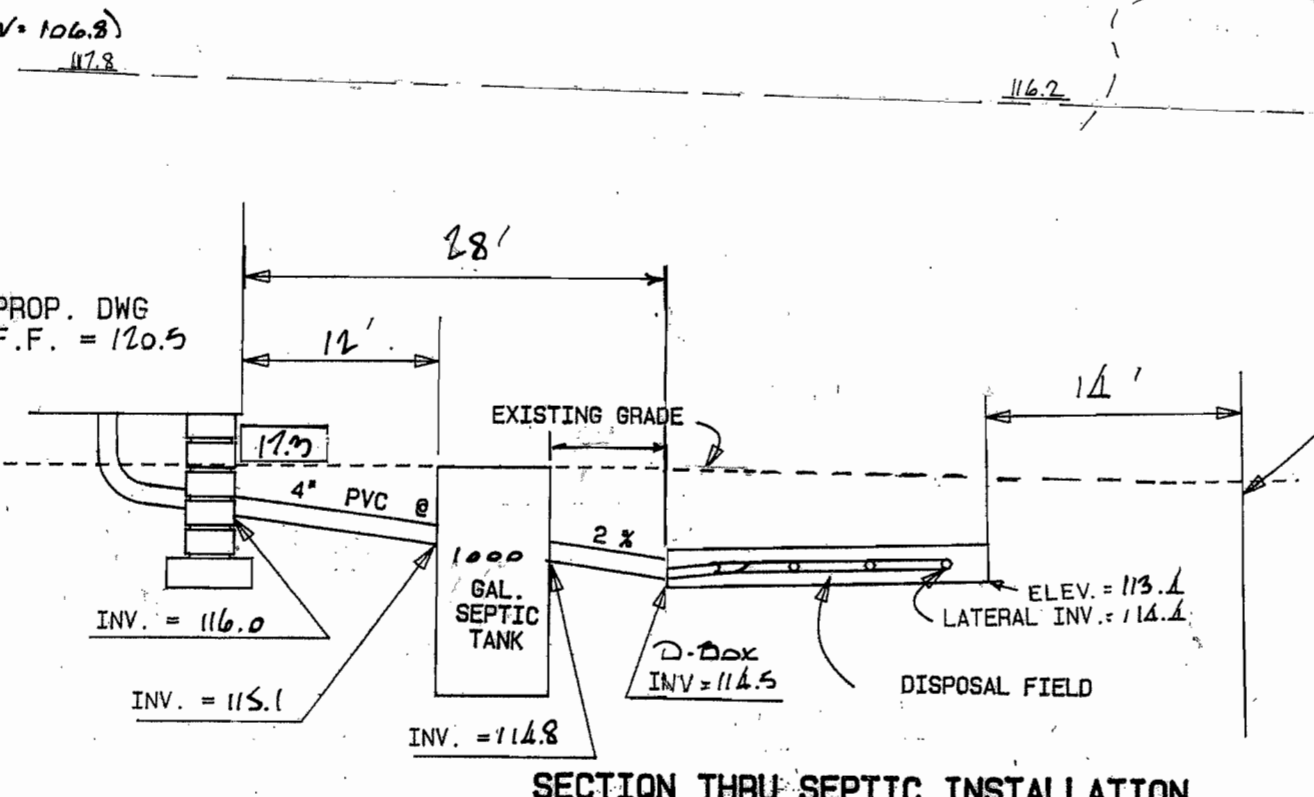


SEPTIC TANKS

(N.T.S. - DO NOT SCALE DIMENSIONS)
 (6 SIDED TANK)

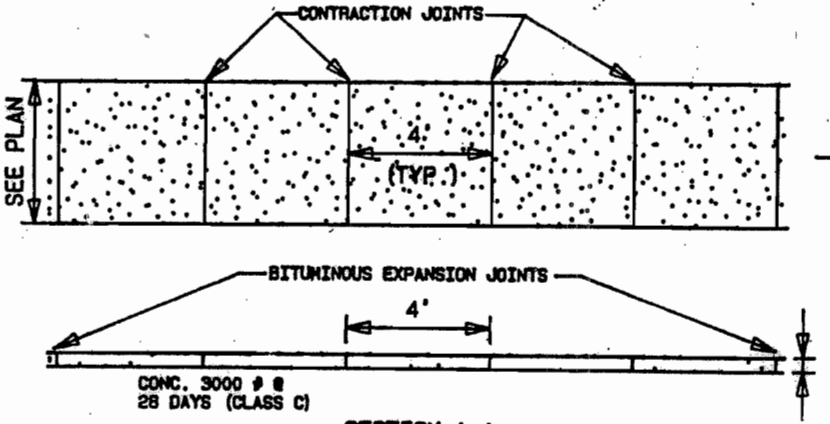
- NOTES:
- 4000' CONCRETE - 28 DAYS
 - REINFORCING BAR - #8 MESH
 - INLET & OUTLET PIPES BY OTHERS
 - ALL DISTRIBUTION BOXES SHALL BE SEALED WITH 2 COATS OF COPPER-BLACK NO. 760
 - CONCRETE CERTIFIED TO COMPLY WITH ACI 308-40-4.1 & 4.2
 - ALL SECTIONAL JOINTS TO BE SEALED WITH BUTYL GASKET AND MORTAR

MODEL #	GALLONS	8"	10"	12"	14"	MIN. DEPTH
#1	800	4'-0"	4'-0"	4'-0"	8"	MIN. DEPTH
#2	900	4'-0 1/2"	4'-0 1/2"	4'-0 1/2"	8"	MIN. DEPTH
#3	1000	4'-11"	4'-11"	4'-11"	9"	MIN. DEPTH
#4	1250	6'-1"	6'-10"	6'-10"	10 1/2"	MIN. DEPTH



SECTION THRU SEPTIC INSTALLATION

- NOTES:
- Box on the construction of a large tank.
 - Box on the construction of a small tank.
 - Box on the construction of a small tank.
 - Box on the construction of a small tank.
 - Box on the construction of a small tank.
 - Box on the construction of a small tank.
 - Box on the construction of a small tank.
 - Box on the construction of a small tank.



SECTION A-A

CERTIFIED TO:

MSK ENTERPRISES, LLC

IN CONSIDERATION OF THE FEE PAID FOR MAKING THIS SURVEY, I HEREBY CERTIFY AND GUARANTEE ITS ACCURACY (EXCEPT AS TO EASEMENTS, IF ANY, THAT MAY BE LOCATED BELOW THE SURFACE OF THE LANDS OR ON THE SURFACE OF THE LANDS) AS AN INSTRUMENT FOR ANY PURPOSE INSURED OF TITLE TO INSURE THE TITLE TO THE LANDS AND PREMISES SHOWN THEREON.

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1-26-12

CHARLES B. RUSH
 N.J. REG. P.E. & L.S. 21844

REVISIONS: BLOCK # 2-6-12

FILED MAP REFERENCE

TITLE

FILE NO.

LOT

FILE DATE

BLOCK

SHEET 1 OF 2

CHARLES B. RUSH, P.E. & L.S.

CONSULTING ENGINEERS LAND SURVEYORS

ONE HADLEY AVENUE TOMS RIVER, NJ 08753

732.240.1200

FIELD BK. 46 PG. SCALE 1" = 30' JOB NO. 2012-007