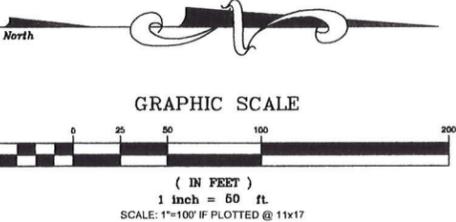


Storage Management Plan
 Approved as shown and/or noted
JAMES R. GILLS, P.E.
 County Drainage Engineer
 By [Signature] Date 7/2/15

Lake County General Health District
 Reviewed and Accepted by:
[Signature]
 Date 7-1-15



House Grading Summary
 Elevations Used To Establish House Floor Grades:
 - Grd. Flr. +1'4" = Fin. Flr.
 - Fin. Flr. -1'0" = Top/Wall
 - Top/Wall -8'8" (8.67') = Top/Ftr.
 - Top/Ftr. +4" (0.33') = Bsm1. Flr. (13 COURSE BSM1 WALL)



BOUNDARY AND TOPOGRAPHIC CERTIFICATION:
 This plat represents a survey which meets the minimum standards for a boundary survey in the State of Ohio as specified in the Ohio Administrative Code Chapter 4733-37. Surveyed on June 5th, 2014 by David Leinweber under the supervision of Richard A. Thompson Jr., P.S. #7388. All iron pins shown hereon were either found or set as noted.

I, the undersigned, hereby certify that this topography, indicated by 1' contours, and elevations shown hereon, represent an actual field survey made by me on the 5th day of June, 2014, and that the elevations were taken at appropriate intervals and that as of that date they existed as indicated hereon. Vertical datum is based on NAVD88.

Richard A. Thompson Jr.
 RICHARD A. THOMPSON, JR., P.S. #7388

Erosion and Sediment Control Schedule
 General
 Any sediment-laden groundwater encountered during construction shall be treated prior to discharge.

Ingress-Egress
 A stone access drive complete with under lying geo-textile fabric (14 feet wide and 30 feet long x 10 inch thick) for ingress and egress at the site shall be installed if there is not already an existing access drive. This drive shall be the only entrance and exit to the site.

Silt Fence & Inlet Protection
 All silt fence shall be installed prior to any earthwork activities at the site in the locations shown on the site plan as well as along the front of any lot that slopes towards the street. Place inlet protection on all existing or proposed locations indicated on plan.

Temporary Seeding
 Disturbed areas of the site that are to remain idle for more than fourteen (14) days shall be properly seeded and straw mulched within seven (7) days of completion of initial grading. Temporary seeding and mulching of a thirty (30) foot strip of the entire front of the lot shall be maintained on the site once initial grading is complete.

Stabilization of critical areas within fifty (50) feet of any stream or wetland shall be complete within two (2) days of the disturbance if the site is to remain inactive for longer than fourteen (14) days.

Mulching
 Straw-mulch shall be applied at a rate of 1 bale per every ten (10) feet of curb, at a width of thirty (30) feet of the entire length of the lot. Wood chips may also be used but must be spread at a minimum depth of four inches over the thirty-foot width and must be accompanied by a properly installed silt fence.

Maintenance
 Erosion and sediment controls shall be inspected every seven (7) days or within 24 hours of a 0.5" or greater rainfall event. Necessary repairs shall be made at this time.

Note:
 All erosion and sediment control specifications, applications, and timetables are based on the descriptions and standards of The Ohio Department of Natural Resources Rainwater and Land Development Manual.

The specified erosion and sediment control standards are the general guidelines and shall not limit the right of the county to impose, at any time, additional, more stringent requirements. Nor shall the standards limit the right of the county to waive, in writing, individual requirements.

TEMPORARY SEEDING SPECIFICATIONS

SEEDING DATES	SPECIES	LB / 1000SQFT	PER ACRE
MARCH 1 TO AUGUST 15	DATE TALL FESCUE	3	4 BUSHEL
	ANNUAL RYEGRASS	1	40 LB
	PERENNIAL RYEGRASS	1	40 LB
	TALL FESCUE	1	40 LB
AUGUST 16 TO NOVEMBER 1	RYE	1	2 BUSHEL
	TALL FESCUE	1	40 LB
	ANNUAL RYEGRASS	1	40 LB
	WHEAT	1	40 LB
NOVEMBER 1 TO SPRING SEEDING USE MULCH ONLY. SODDING PRACTICES OR DORMANT SEEDING. NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.	TALL FESCUE	1	40 LB
	ANNUAL RYEGRASS	1	40 LB
	PERENNIAL RYEGRASS	1	40 LB
	TALL FESCUE	1	40 LB

PERMANENT SEEDING SPECIFICATIONS

Seed Mix	lb./ac.	lb. / 1000sqft	Notes
General Use			
Creeping Red Fescue	20-40	1/2-1	
Domestic Ryegrass	10-20	1/4-1/2	
Kentucky Bluegrass	10-20	1/4-1/2	
Tall Fescue	40	1	
Dwarf Fescue	40	1	
Steep Banks or Cur. Slopes			
Tall Fescue	40	1	
Crown Vetch	10	1/4	Do not seed later than August
Tall Fescue	20	1/2	
Flat Pea	20	1/2	Do not seed later than August
Tall Fescue	20	1/2	
Road Ditches and Swales			
Tall Fescue	40	1	
Dwarf Fescue	80	2 1/4	
Kentucky Bluegrass	5		
Lawns			
Kentucky Bluegrass	60	1 1/2	
Perennial Ryegrass	60	1 1/2	
Kentucky Bluegrass	60	1 1/2	For Shaded areas
Creeping Red Fescue	60	1 1/2	

Note: other approved seed species may be substituted

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	CHORD	BEARING	ANGLE
C1	35.72	536.60	142°29'30"	135.36	N65°19'47"W	6.6 2.2'
C2	35.96	653.53	115°44'45"	135.72	N85°02'24"W	6.6 2.3'
C3	64.53	566.60	87°32'53"	24.45	N09°18'03"W	4.2 3.4'
C4	56.70	566.60	57°36'37"	56.70	N02°03'21"W	2.9 4.2'
C5	129.72	623.93	115°44'45"	129.49	N05°02'24"W	6.5 1.0'
C6	62.80	536.60	85°02'27"	62.72	N09°09'19"W	4. 4.0'
C7	52.92	536.60	57°39'03"	52.90	N01°54'34"W	2.6 4.8'

SETBACK INFORMATION* (R-2B)**

	(IN FEET)
1. FRONT R.O.W.	80
CL	100
2. SIDE	20
3. REAR	80

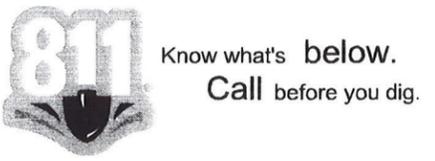
*PER NRI/LAND COVERED ORDINANCE, CH 126897
 **PER KIRTLAND ZONING MAP

SYMBOL LEGEND

Ex. Clean Out	Ex. Sanitary Manhole	Ex. Water Valve	Ex. Electrical Box	Ex. Tree	Ex. Monument Box
Ex. Catch Basin	Prop. Sanitary Manhole	Ex. Water Meter	Ex. Guy Wire	Ex. Pine Tree	Power Transformer
Prop. Catch Basin	Prop. Curb Inlet	Ex. Fire Hydrant	Ex. Power Pole	Ex. Bush	Sprinkler Control Box
Ex. Yard Drain	Ex. Curb Inlet	Prop. Hydrant	Ex. Light Power Pole	Ex. Mailbox	Sprinkler Head
Ex. Manhole	Ex. Gas Marker	Prop. W/V Valve	Ex. Light Pole	Ex. Sign	Traffic Signal Pole
Ex. Storm Manhole	Ex. Gas Meter	Well	Prop. Light Pole	Ex. Telephone Box	Traffic Signal Box
Prop. Storm Manhole	Ex. Gas Valve	Test Bore		Guard Post	

SWP3 LEGEND

Proposed Contour	Silt Fence	Stone Construction Entrance	Rip Rap Over Non-Woven Filter Fabric
Existing Contour	Diversion Swale	Areas Requiring Stabilization Measures (Temporary/Permanent)	Rock Check Dam
Disturbance Limits	B.M.P. Drainage Areas	Miscellaneous Bmps/Staging Areas (Waste Disposal/Dumpster/Conc. Washout/Fuel Tanks)	Erosion Control Matting
Clearing Limits	I.P. Inlet Protection		
Soil Delineation Line			



2 WORKING DAYS BEFORE YOU DIG CALL 8-1-1 OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECT

O.U.P.S. REFERENCE #

EXISTING UNDERGROUND UTILITIES NOTE:
 THE SIZE AND LOCATION, BOTH HORIZONTAL AND VERTICAL OF THE UNDERGROUND UTILITIES SHOWN HEREON, HAVE BEEN OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED HEREON. VERIFICATION BY FIELD OBSERVATION HAS BEEN CONDUCTED. WHERE PRACTICAL, HOWEVER, POLARIS ENGINEERING & SURVEYING, INC. DOES NOT GUARANTEE THE COMPLETENESS NOR ACCURACY THEREOF.

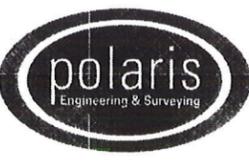
NOTE: THIS SURVEY SUBJECT TO CHANGE UPON RECEIPT OF ANY ADDITIONAL AVAILABLE UNDERGROUND UTILITY INFORMATION.

REV. NO.	DATE	BY	CHK'D

DATE: 08/01/15
 SCALE: HOR. 1"=50'
 VERT. 1"=0'
 FOLDER: DWG/Site Plan
 FILENAME: West Lot Septic Site Plan
 TAB: Lot Split Plan
 DRAWN: JCK



AYERS RESIDENCE
 8509 EAGLE RD.
 CITY OF KIRTLAND - LAKE COUNTY - OHIO



POLARIS ENGINEERING & SURVEYING, INC.
 34600 CHARDON ROAD - SUITE D
 WILLOUGHBY HILLS, OHIO 44094
 (440) 944-4433 (440) 944-3722 (Fax)
 www.polaris-es.com

SEPTIC SITE PLAN

CONTRACT No.
 15089

SHEET	OF
1	2

SEPTIC MOUND CONSTRUCTION NOTES:

MOUND SHALL BE INSTALLED ALONG CONTOURS.

INSTALLER SHALL CONTACT DESIGN ENGINEER IN THE EVENT THAT ANY PORTION OF THE SYSTEM IS CHANGED DUE TO SITE CONDITIONS. DESIGN ENGINEER SHALL APPROVE OF ANY CHANGES.

THE INSTALLER SHALL SCHEDULE A SYSTEM STARTUP WHERE THE INSTALLER, EQUIPMENT SUPPLIER, LOCAL HEALTH DEPARTMENT, AND DESIGN ENGINEER ARE ALL PRESENT. THE TANKS SHALL BE FULL OF WATER SO THAT PUMP TESTS CAN BE PERFORMED. THE START UP SHALL INCLUDE DRAW DOWN TESTS, PUMP CYCLING TESTS, AND MOUND PRESSURE TESTS. THE INSTALLER SHALL PROVIDE 5 FT. LONG CLEAR PLASTIC PIPE THAT CAN BE SCREWED INTO THE FLUSH VALVES. THE WATER LEVEL SHALL BE CHECKED IN EACH TUBE AND SHALL BE EQUAL. IN THE EVENT THAT THE WATER LEVEL IS NOT EQUAL, ADJUSTMENTS SHALL BE MADE IN THE LATERALS, VALVES AND/OR PIPING SO THAT THE PRESSURE WITHIN THE LATERALS IS EQUAL THROUGHOUT.

THE LOCATION OF THE MOUND IS TO BE STAKED BY CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.

DETERMINE WHERE THE PIPE FROM THE PUMPING CHAMBER CONNECTS TO THE DISTRIBUTION SYSTEM IN THE MOUND.

TRENCH AND LAY THE EFFLUENT PIPE FROM THE PUMPING CHAMBER TO THE MOUND. CUT AND CAP THE PIPE ONE FOOT BENEATH THE GROUND SURFACE. LAY THE PIPE BELOW THE FROST LINE. SLOPE THE PIPE UNIFORMLY BACK TO THE PUMPING CHAMBER SO THAT THE LINE DRAINS AFTER DOSING. BACKFILL AND COMPACT THE SOIL AROUND THE PIPE TO PREVENT BACK SEEPAGE OF EFFLUENT ALONG THE PIPE.

CHECK THE MOISTURE CONTENT OF THE SOIL AT 7 TO 8 INCHES DEEP. IF IT IS TOO WET, SMEARING AND COMPACTION WILL RESULT. SOIL MOISTURE CAN BE DETERMINED BY ROLLING A SOIL SAMPLE BETWEEN THE HANDS. IF IT ROLLS INTO A RIBBON, THE SITE IS TO WET TO PREPARE. IF THE SOIL CRUMBLES, SOIL PREPARATION CAN PROCEED.

CUT THE TREES TO GROUND LEVEL. REMOVE EXCESS VEGETATION BY MOWING. PREPARE THE SITE USING A MOLDBOARD OR CHISEL PLOW BY PLOWING ALONG THE CONTOUR. ROTOTILLING THE SITE IS NOT PERMITTED. CONSTRUCTION OF THE MOUND SHALL BEGIN AS SOON AS THE BASE AREA HAS BEEN FLOWED. THE CONTRACTOR SHALL AVOID RUTTING OF THE PLOWED AREA WITH VEHICULAR TRAFFIC.

EXTEND THE EFFLUENT PIPE TO SEVERAL FEET ABOVE THE GROUND SURFACE.

PLACE THE SAND FILL MATERIAL WHICH HAS BEEN PROPERLY SELECTED AROUND THE EDGE OF THE PLOWED AREA. KEEP THE WHEELS OF THE TRUCKS OFF PLOWED AREAS. MINIMIZE TRAFFIC ON THE DOWN SLOPE SIDE OF THE MOUND. WORK FROM THE END AND UPSLOPE SIDE.

SAND FILL MATERIAL SHALL BE CLEAN CONCRETE SAND (C-33) WITH EFFECTIVE SIZE WITHIN 0.15-0.30MM AND UNIFORMITY COEFFICIENT WITHIN 4-6.

PLACE THE SAND FILL MATERIAL TO THE REQUIRED DEPTH WHICH IS THE TOP OF THE TRENCHES. SHAPE SIDES TO THE DESIRED SLOPE.

FORM THE TRENCHES. HAND LEVEL THE BOTTOM OF THE TRENCHES. THE BOTTOMS SHALL BE AT THE SAME ELEVATION AND LEVEL.

PLACE THE COARSE AGGREGATE IN THE TRENCHES (9" TOTAL WITH 6" MINIMUM BENEATH DISTRIBUTION PIPE AND AT LEAST 1" OVER DISTRIBUTION PIPE). AGGREGATE SHALL BE #57 WASHED GRAVEL.

PLACE THE DISTRIBUTION SYSTEM ON THE AGGREGATE. CONNECT THE MANIFOLD TO THE PIPE FROM THE PUMPING CHAMBER. SLOPE THE MANIFOLD TO THE EFFLUENT PIPE. LAY LATERALS LEVEL, REMOVING DIPS AND RISES.

PLACE 2 INCHES OF AGGREGATE OVER THE DISTRIBUTION PIPES (TOTAL OF 8" AGGREGATE MINIMUM).

INSPECTION TO BE CONDUCTED BY THE AT THE FOLLOWING PHASES OF CONSTRUCTION THE CUYAHOGA COUNTY HEALTH DEPARTMENT.

- AFTER PREPARATION OF THE BASAL AREA.
- AFTER PLACEMENT OF THE MOUND FILL MATERIAL AND MOUND DISTRIBUTION LATERALS.
- AFTER PLACEMENT OF REMAINING FILL, TOPSOIL AND SEEDING.

PLACE 4 TO 5 INCHES OF NON-COMPACTED STRAW OR GEOTEXTILE FABRIC OR OTHER EQUIVALENT PRODUCT OVER THE AGGREGATE.

PLACE TOPSOIL ON TOP OF THE TRENCHES TO A DEPTH OF 8 INCHES IN THE CENTER AND 6 INCHES AT THE OUTER EDGE OF THE TRENCHES.

LANDSCAPE THE MOUND BY SEEDING AND MULCHING. A MIXTURE OF 80% BIRDSFOOT TREEFOIL AND 10% TIMOTHY MAY BE USED IF THE MOUND WILL NOT BE MANICURED. IF MANICURING IS DESIRED, A COMBINATION OF 60% BLUEGRASS, 30% CREEPING RED FESCUE AND 10% ANNUAL RYE GRASS MAY BE USED. SHRUBS CAN BE PLANTED AROUND THE BASE AND UP THE SIDE SLOPES. THEY SHOULD BE SOMEWHAT MOISTURE TOLERANT SINCE THE TOW OF THE MOUND MAY BE SOMEWHAT MOIST DURING VARIOUS TIMES OF THE YEAR. ALL LAWS AND RULES OF THE LAKE COUNTY GENERAL HEALTH DISTRICT AND THE OHIO DEPARTMENT OF HEALTH PERTAINING TO INDIVIDUAL SEWAGE DISPOSAL AND WATER SUPPLY SYSTEMS SHALL BE FOLLOWED.

RESIDENCE MUST UTILIZE WATER SAVING TOILETS, SHOWERHEADS AND FAUCETS.

DRAINAGE IMPROVEMENTS OR CHANGES FROM THE EXISTING GRADE NOTED ON THE APPROVED PLAN SHALL BE INSTALLED PRIOR TO SEWAGE DISPOSAL SYSTEM CONSTRUCTION.

NO OPEN BURNING WILL OCCUR DURING CONSTRUCTION.

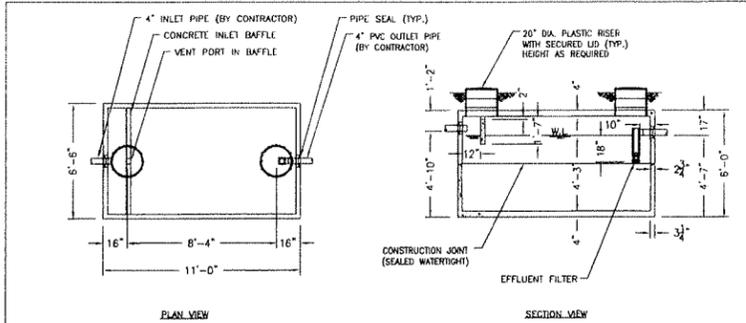
SURFACE WATER SHALL BE DIVERTED AWAY FROM THE MOUND AREA BY THE USE OF SWALES AND INTERCEPTOR DRAIN.

SEWAGE LIFT PUMP SHALL CONFORM WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE.

ALL ELECTRICAL CONDUIT SHALL BE PVC.

MECHANICAL COMPONENTS SHALL BE INSTALLED IN A PROPERLY VENTED LOCATION AND ALL VENTS, AIR INTAKES AND AIR HOSES SHALL BE PROTECTED FROM SNOW, ICE OR WATER VAPOR ACCUMULATIONS. INSTALLATION SHALL BE MADE TO MINIMIZE RELEASE OF ODORS OR AEROSOLS.

MECHANICAL COMPONENTS INSTALLED IN OR AT THE SEWAGE TANK SHALL BE PROTECTED AGAINST DAMAGE OR IMPAIRMENT OR EFFICIENCY BY FLOODING, FOAMING OR SURCHARGING. PUMPS MUST BE READILY REMOVABLE FROM THE MANHOLE IN CASE OF PUMP FAILURE.



2000 GALLON SEPTIC TANK

STATE APPROVAL PENDING

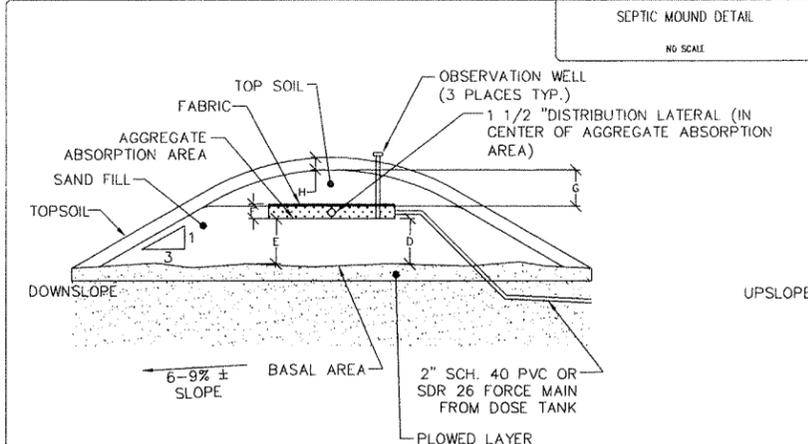
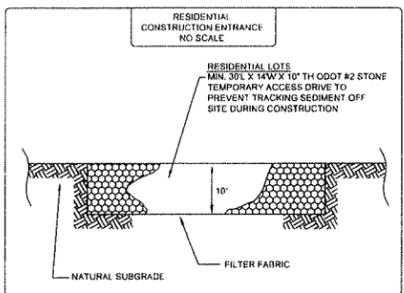
DRAWN BY: DMH SCALE: 1/4"=1'-0" DRAWING NO.: 2000 SEPTIC

DATE: 3-10-07 REV. 1: 4/12/07 DMH

REV. 1: O.D.H. 2007 COMPLIANCE, O.A.C. RULE 3701-29-11

MACK INDUSTRIES, INC.
201 COLUMBIA ROAD, VALLEY CITY, OHIO 44280 (216)403-3111

NOTES:
1. REINFORCED PRECAST CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 5000 PSI @ 28 DAYS.
2. PRECAST CONCRETE TANK SHALL MEET OR EXCEED SPECIFICATIONS AS SET BY O.A.C. RULE 3701-29-11.
3. CONCRETE JOINT SEALANT CONFORMS TO ASTM C-880.
4. INLET AND DISCHARGE PIPE SEALS CONFORM TO ASTM C-823.
5. EFFLUENT FILTER RETAINS SOLIDS GREATER THAN 1/16" AND CONFORMS TO ASTM C-1227.
6. LABEL TOP OF TANK AS FOLLOWS:
MACK INDUSTRIES LOGO
2000 GAL. TANK CAPACITY
DATE OF MANUFACTURE
MAXIMUM BURIAL DEPTH OF 2'-0"



MOUND DIMENSIONS

A	3'-0"
B	16'0"
D	10"
E	12"
F	9"
G	6"
H	8"
I	5'-7"
J	7'-8"
K	7'-0"
L	174'-0"
W	18'-3"

SYSTEM NOTES

DISTRIBUTION LATERAL TO BE CENTER FEED (25% EACH WAY FROM CENTER).

DISTRIBUTION LATERAL TO BE 1 1/2" DIAMETER WITH 1/8" PERFORATIONS AT 2'-0" CENTERS.

19 PERFORATIONS PER LATERAL (76 PERFORATIONS TOTAL IN 4 LATERALS).

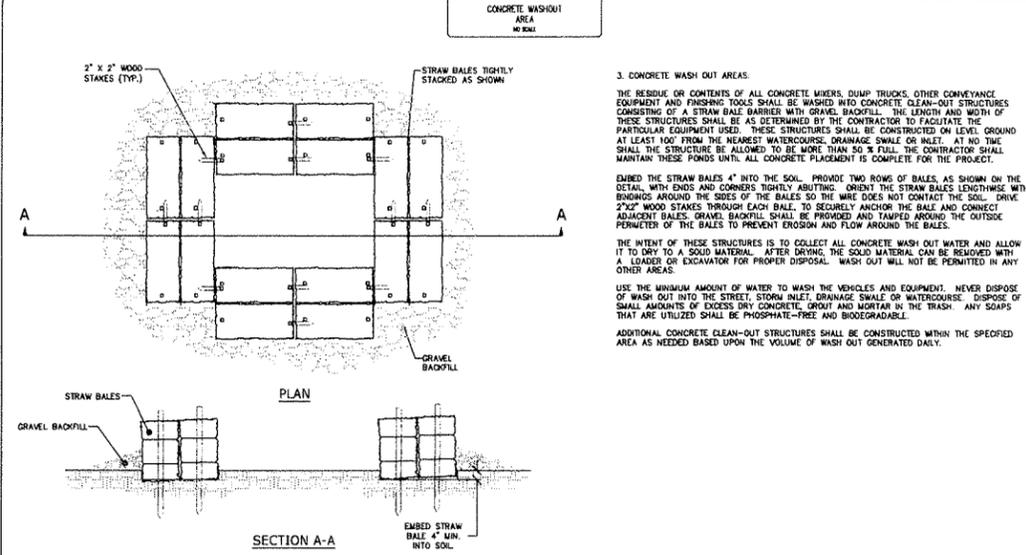
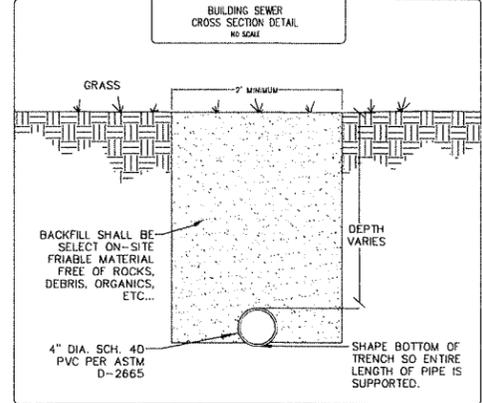
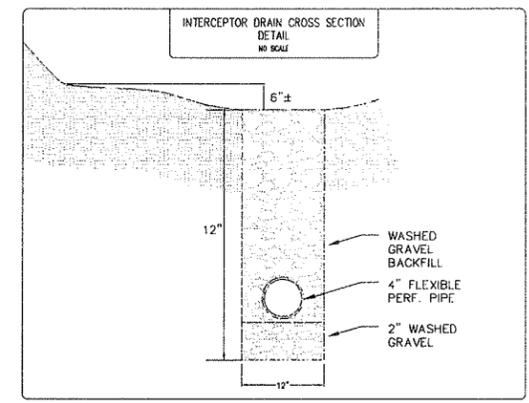
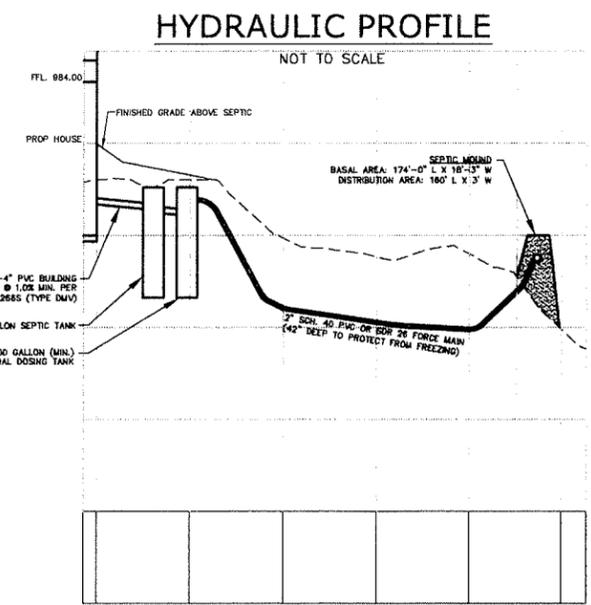
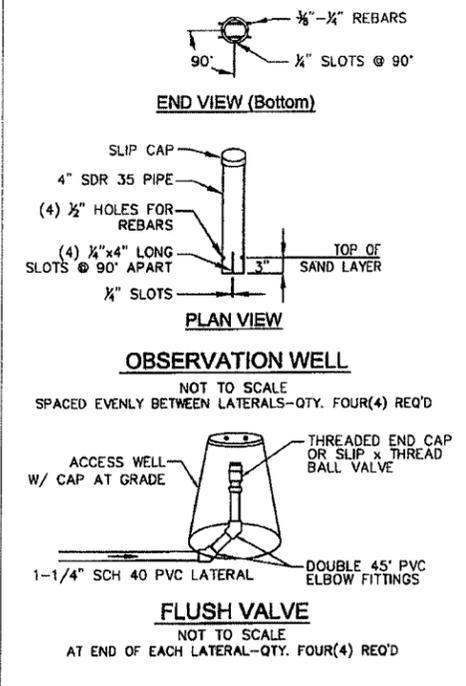
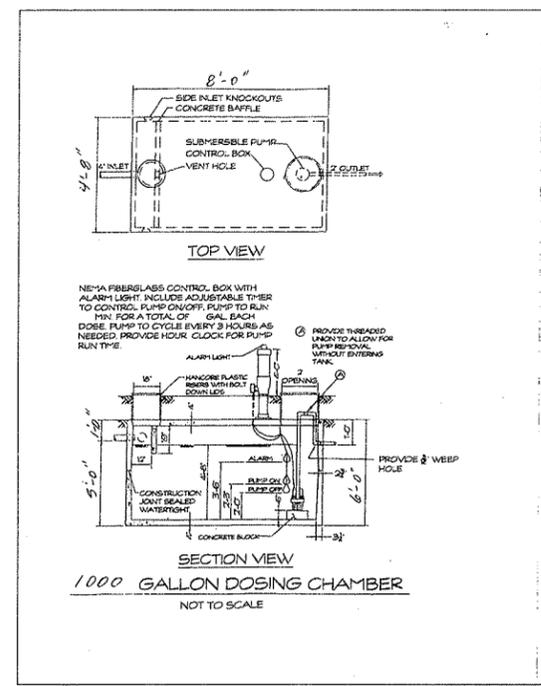
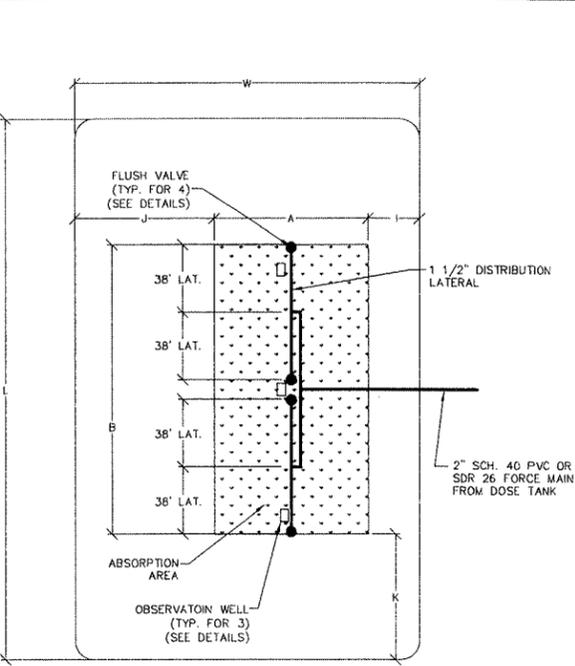
DISTAL HEAD PRESSURE REQUIRED AT EACH END SHALL BE 5.0 FT.

PUMP SHALL PROVIDE 35 GPM (MIN.) @ 20 FT. TDH (MIN.).

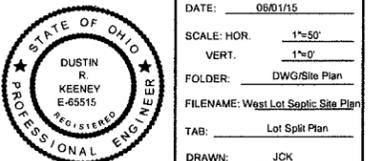
ORIFICE SHIELDS SHALL BE PLACED ON THE DISTRIBUTION LATERAL OR DISTRIBUTION LATERAL SHALL BE PLACED IN A 4" DIA. PERFORATED PVC PIPE.

DOSE VOLUME = 46 GAL. PER DOSE (2'-6" BETWEEN 'PUMP ON' AND 'PUMP OFF' FL0AT)

SEE MOUND CALCULATIONS FOR ADDITIONAL INFO.



REV. No.	DATE	BY	CHK'D



DATE: 06/01/15
SCALE: HOR. 1"=50'
VERT. 1"=10'
FOLDER: DWG/Site Plan
FILENAME: West Lot Septic Site Plan
TAB: Lot Split Plan
DRAWN: JCK

AYERS RESIDENCE
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CITY OF KIRTLAND - LAKE COUNTY - OHIO



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CONTRACT No. 15089

SHEET		OF	
2			2

DETAILS