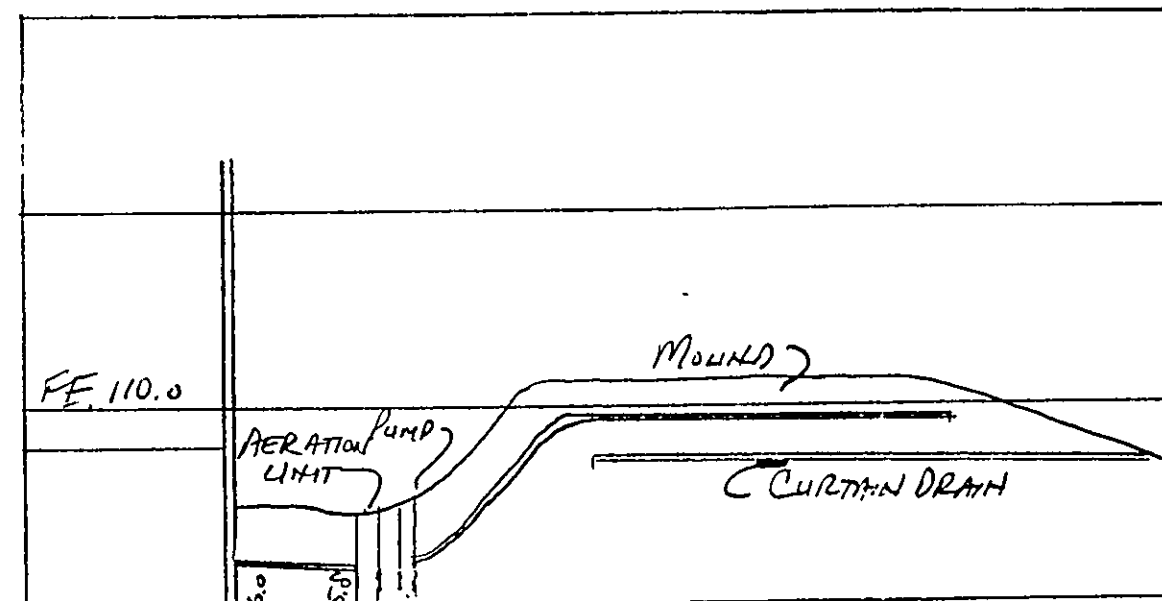
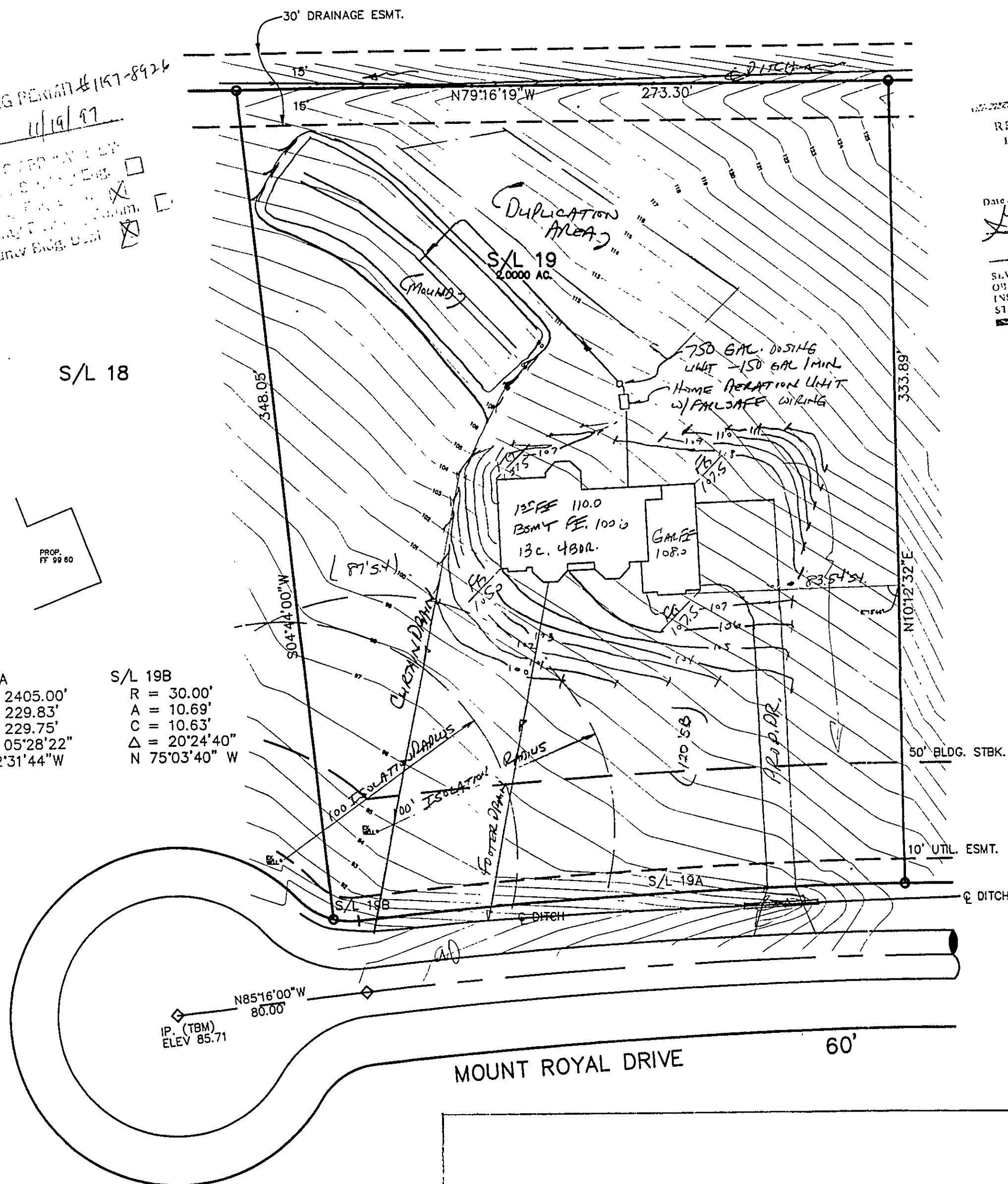


S/L 19A	S/L 19B
R = 2405.00'	R = 30.00'
A = 229.83'	A = 10.69'
C = 229.75'	C = 10.63'
Δ = 05°28'22"	Δ = 20°24'40"
N 82°31'44"W	N 75°03'40" W

"I, the undersigned hereby certify that this topography indicated by 6", 1' or 2" contours, and elevations shown hereon represent an actual field survey made by me on the 14th day of Oct, 1957 and that the elevations were taken at appropriate intervals and that as of that date they existed as indicated hereon."

Name Harry Jones #6343 Reg. No.

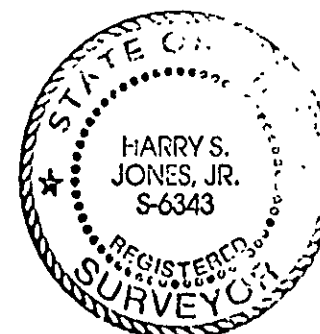
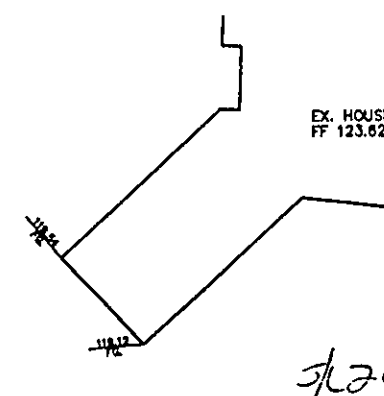


HYDRAULIC PROFILE HORIZ 1" = 40' VERT 1" = 5'

RECEIVED AND ACCEPTED
LAKE COUNTY & NEURAL
HEALTH DISTRICT

Date 11-18-97 BY Gerald B. Norris

SEWAGE DISPOSAL PERMIT MUST BE
OBTAINED BY A LAKE COUNTY LICENSED
INSTALLER BEFORE INSTALLATION IS
STARTED



TBM-TOP IRON PIN
CENTER OF CUL-DE-SAC
ELEV = 85.71

Grading Plan Approved
as shown and/or noted
by **THOMAS P. GILLES, P.E.**
Lake County Engineer

By 6/17 Date 11.20.97

11/27 12" Drive Culvert

105

CONCORD TWP., LAKE COUNTY, OHIO





for: KERN BUILDING



CLIENT _____ OWNER _____

ADDRESS	STREET	CITY	ZIP
---------	--------	------	-----

<u>MOUNT ROYAL SUBDIVISION</u>			
SUBDIVISION	<u>18-18</u>	NAME	LOT
	<u>VOL - PG.</u>		
<u>19</u>	<u>MOUNT ROYAL</u>		
SUBLOT NO.	STREET	VOLUME	PAGE
		PERM. PARCEL NO.	STREET

LEGEND

SANITARY MANHOLE	----		EXIST. ELEV. $\rightarrow 100.0$	\leftarrow PROP. ELEV.
STORM MANHOLE	----			
INLET OR CATCH BASIN	----			
HYDRANT	----			
EXISTING CONTOURS	-----			
PROPOSED CONTOURS	-----			

	AS BUILT ELEVATION	
	INDICATES	
	DIRECTION OF	
	SURFACE DRAINAGE	

REMARKS

ALL BOUNDARY DATA SHOWN WAS OBTAINED FROM (DEEDS, RECORDED
SUBDIVISION PLAT OR OTHER PUBLIC RECORDS)

LOCATIONS AS SHOWN OF ADJACENT WELLS AND SEPTIC TANKS OBTAINED FROM
LAKE COUNTY HEALTH DEPARTMENT

DESIGN CERTIFICATION

THIS PLAT WAS PREPARED BY ME, AND IS CORRECT
TO THE BEST OF MY KNOWLEDGE AND BELIEF.

TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Henry G. [Signature] #6343

NAME _____ SURVEYOR _____ REGISTRATION NO. _____

✓ CHECK LIST

NO. OF BEDROOMS	WATER MAIN SIZE, LOCATION
DIMENSIONS	SAN. SEWER SIZE % GR. LOC.
BEARINGS	SAN. MH. CAST. ELEV. INV. ELEV.
TIE TO NEAREST STREET	SAN. CONN. SIZE, LOC. DEPTH
SUBLOT NO. PARCEL NO.	STORM SEWER SIZE % GR. LOC.
SURROUNDING OWNERS	STORM MH. CAST. ELEV. INV. ELEV.
BLDG. DIMENSIONS FIN GR.	PAV'T TYPE GRADE CURBS
BLDG. TIES FL'R. GRADES	GAS LINE LOC. SIZE PRESSURE
APRON TYPE WIDTH THICKNESS	SEPTIC TANK LOCATION & DUPLICATION AREA
SIDEWALK TYPE WIDTH THICKNESS	WELL LOCATION
CULVERT TYPE DIA., LENGTH	ISOLATION RADIUS FROM WELL
ROCK OUTCROPPINGS	

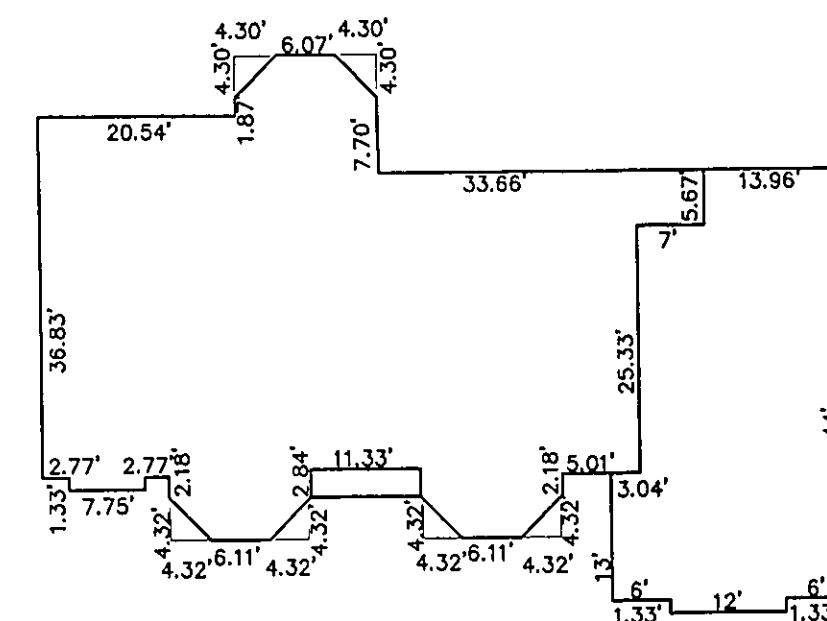
REVISIONS			PLAN PREPARED BY:		
NO.	DATE	BY	Bj BABCOCK · JONES & ASSOCIATES, INC.		
1	11/13/97	HJ	PAINESVILLE, OHIO		
2			DRAWN BY	SCALE	PHONE NO.
3			M.S. & T.R.	1" = 40'	216-357-1811
4			CHK'D. H.J.	DATE 8/19/97	DRAWING NO.
5			CREW CHIEF K.J.	APP'D H.J.	93-163-19

"AS BUILT" CERTIFICATION

I, HEREBY CERTIFY THAT THE CIRCLED GRADES ARE EXISTING
FINISH GRADES CHECKED IN THE FIELD ON _____, 19____
AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED SURVEYOR

REG. NO.



SCALE: 1":20'

CONSTRUCTION NOTES

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

MEASURE THE AVERAGE GROUND ELEVATION ALONG THE UPSLOPE EDGE OF THE UPPER TRENCH. BOTTOM ELEVATION OF THE TRENCHES TO BE A MINIMUM OF 18" ABOVE THIS ELEVATION AS SHOWN ON THE DETAIL.

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 FT. BENEATH THE GROUND SURFACE. LAY PIPE BELOW FROST LINE, SLOPING UNIFORMLY BACK TO THE PUMPING CHAMBER SO THAT THE LINE DRAINS AFTER DOSING. BACKFILL AND COMPACT SOL AROUND PIPE TO PREVENT BACK SEEPAGE OF EFFLUENT ALONG THE PIPE.

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

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

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

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

MOVE THE FILL MATERIAL INTO PLACE USING A SMALL TRACK TYPE TRACTOR WITH A BLADE. ALWAYS KEEP A MINIMUM OF 6" OF SAND BENEATH TRACKS TO PREVENT COMPACTION OF THE NATURAL SOL.

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

WITH THE BLADE OF THE TRACTOR, 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. AGGREGATE SHALL BE 1/2-2 IN. NON-DETERIORATING AGGREGATE.

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

PLACE 2 IN. OF AGGREGATE OVER THE DISTRIBUTION PIPES.

PLACE 4-5 IN. OF UNCOMPACTED STRAW OR MARSH HAY, UNTREATED BUILDING PAPER OR A SYNTHETIC FABRIC, SUCH AS TYFAR, MIRAFI OR THE EQUIVALENT OVER AGGREGATE.

PLACE SOL ON TOP OF THE TRENCHES TO A DEPTH OF 1 FT. IN THE CENTER AND 6 IN. AT THE OUTER EDGE OF THE TRENCHES. THIS MAY BE A SUBSOL OR TOPSOL.

PLACE 6 IN. OF GOOD QUALITY TOPSOL OVER THE ENTIRE MOUND SURFACE. IT WILL RAISE THE ELEVATION AT THE CENTER OF THE MOUND TO A MINIMUM OF 15 FT. AND THE OUTSIDE EDGES OF THE TRENCHES TO 1 FT.

LANDSCAPE THE MOUND BY SEEDING AND MULCHING. A MIXTURE OF 90% BROSFOOT TREFOIL 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 PEGUE AND 10% ANNUAL RYE GRASS MAY BE USED. 8-RUBS CAN BE PLANTED AROUND THE BASE AND UP THE SIDESLOPES. THEY SHOULD BE SOMEWHAT MOISTURE TOLERANT SINCE THE TOP OF THE MOUND MAY BE SOMEWHAT MOST 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.

BUILDING CONSTRUCTION SHALL COMPLY TO ALL APPLICABLE REGULATIONS OF THE LAKE COUNTY BUILDING DEPARTMENT. RESIDENCE MUST UTILIZE WATER SAVING TOILETS, SHOWERHEADS, AND FAUCETS.

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

NO OPEN BURNING WILL OCCUR DURING CONSTRUCTION.

DOWNSPOUTS AND FOOTER DRAINS SHALL BE CONNECTED TO THE MOUND SYSTEM CURTAIN DRAIN AS SHOWN ON THE PLANS.

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

SEWAGE LIFT PUMP SHALL BE CAPABLE OF LIFTING RESIDENTIAL SEWAGE EFFLUENT AT A RATE OF 44 GPM AT 10' H.P. OF HEAD. THE PUMPING CHAMBER SHALL HAVE A MINIMUM CAPACITY OF 500 GALLONS. THE FLOAT LEVELS SHALL BE ADJUSTED TO PROVIDE FOR A 100 GALLON DOSING VOLUME TO THE MOUND.

ELECTRICAL WIRE & EQUIPMENT SHALL CONFORM WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE.

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 AND AEROSOLS.

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

SITE PLAN

CONCORD TOWNSHIP, LAKE COUNTY, OHIO

for: **KERN BUILDING**

CLIENT OWNER

ADDRESS STREET CITY ZIP

Mount Royal Sub

SUBDIVISION 18-18 NAME

19 VOL. 7 PG. Mount Royal Dr

SUBLOT NO. STREET

LOT TRACT

VOLUME PAGE

PERM. PARCEL NO. STREET

LEGEND

SANITARY MANHOLE	-----●-----	WATER VALVE (GAS)	-----*
STORM MANHOLE	-----○-----	WATER METER (GAS)	-----
INLET OR CATCH BASIN	-----■-----	AS BUILT ELEVATION	100.0
HYDRANT	-----◇-----	INDICATES	
EXISTING CONTOURS	-----○-----	DIRECTION OF	
PROPOSED CONTOURS	-----○-----	SURFACE DRAINAGE	
EXIST. ELEV.	100.0		
	100.0		
	PROP. ELEV.		

REMARKS

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LOCATIONS AS SHOWN OF ADJACENT WELLS AND SEPTIC TANKS OBTAINED FROM LAKE COUNTY HEALTH DEPARTMENT

DESIGN CERTIFICATION

THIS PLAT WAS PREPARED BY ME, AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NAME **Holly Jones #6343** SURVEYOR REGISTRATION NO.

CHECK LIST

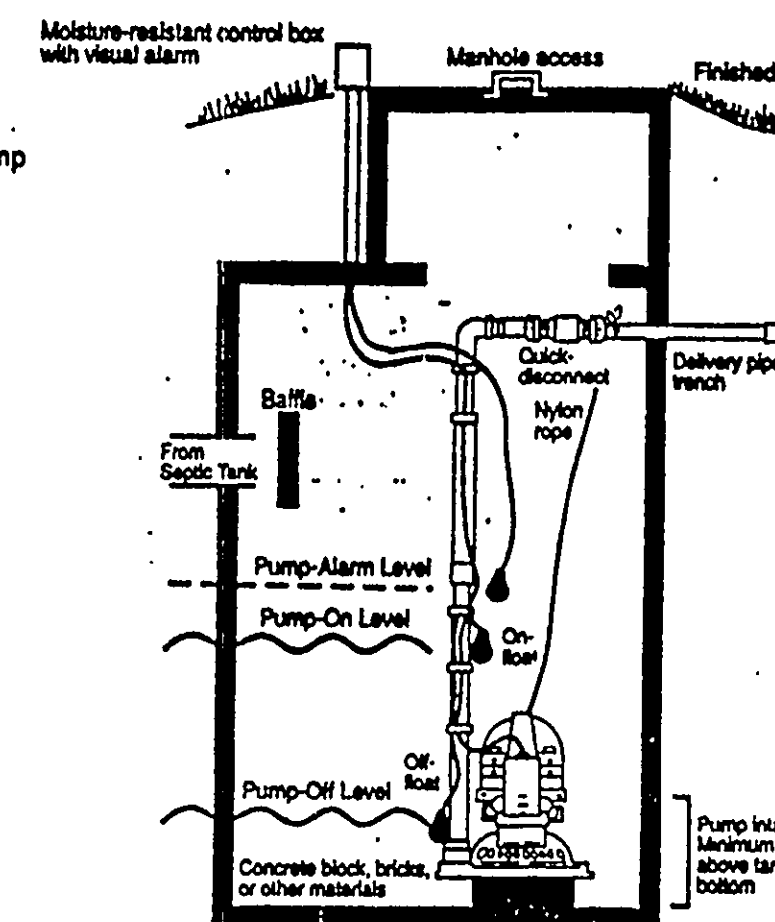
NO. OF BEDROOMS	WATER MAIN SIZE, LOCATION
DIMENSIONS	SAN. SEWER SIZE % GR. LOC.
BEARINGS	SAN. MH. CAST. ELEV. INV. ELEV.
TIE TO NEAREST STREET	SAN. CONN. SIZE, LOC. DEPTH
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BLDG. TIES FL'R. GRADES	GAS LINE LOC. SIZE PRESSURE
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SIDEWALK TYPE WIDTH THICKNESS	WELL LOCATION
CULVERT TYPE DIA. LENGTH	ISOLATION RADIUS FROM WELL
ROCK OUTCROPPINGS	

REVISIONS			PLAN PREPARED BY:		
NO.	DATE	BY	BABCOCK • JONES & ASSOCIATES, INC.		
1			PAINESVILLE, OHIO		
2			DRAWN BY HT	SCALE 1" =	PHONE NO. 357-1811
3			CHK'D. HT	DATE 11/13/97	DRAWING NO. 93-163-19
			CREW CHIEF HT	APP'D. HT	

TYPICAL CROSS SECTION

DOSE CHAMBER W/ PUMP & CONTROL UNIT

DOSE CHAMBER SIZE: 500 GALLONS
DOSE VOLUME: 100 GALLONS



"AS BUILT" CERTIFICATION

CERTIFY THAT THE CIRCLED GRADES ARE EXISTING. YES CHECKED IN THE FIELD ON 11/13/97. CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SURVEYOR REG NO.

Inspections to be conducted by design engineer at the following phases of construction:

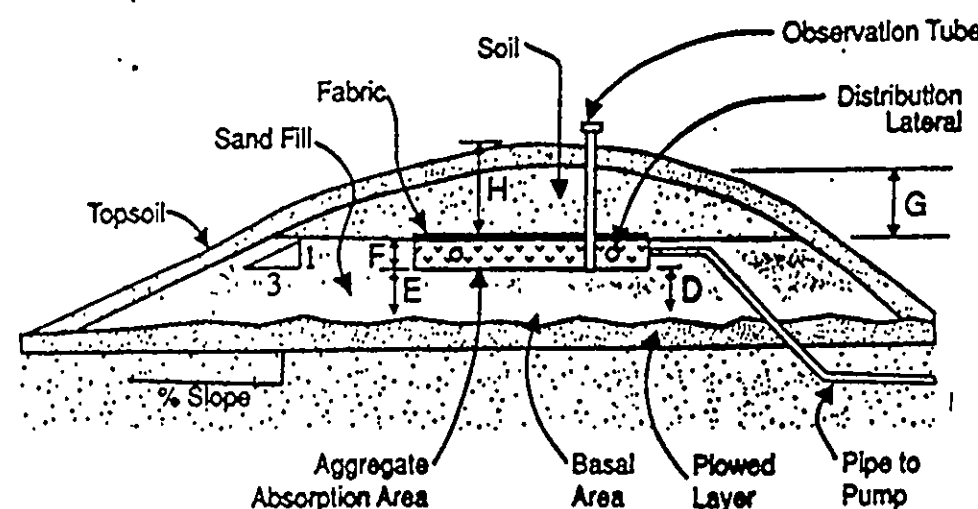
1. After preparation of basal area
2. After placement of the mound fill material and mound distribution laterals
3. After placement of remaining fill, topsoil & seeding

MOUND DIMENSIONS (FT.)

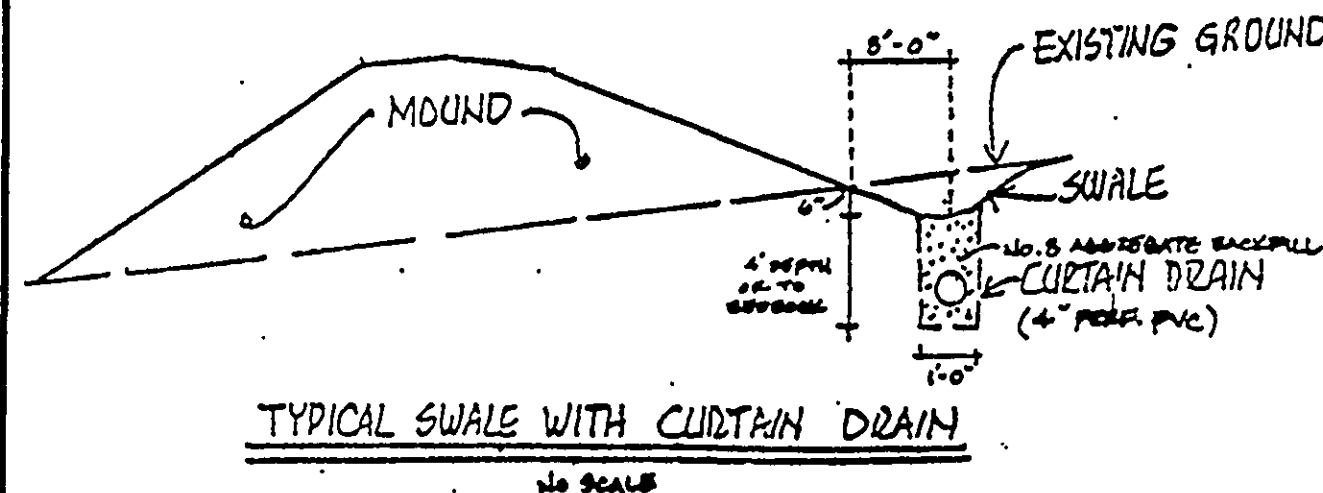
A	4.0	F	0.67	J	15.25
B	100.0	G	1.0	K	12.68
D	2.0	H	1.5	L	125.0
E	2.2	I	11.3	W	30.75

USE MERCURY CONTROL FLOATS & QUALITY ALARM W/ A MERCURY CONTROL FLOAT.

CROSS SECTION - MOUND

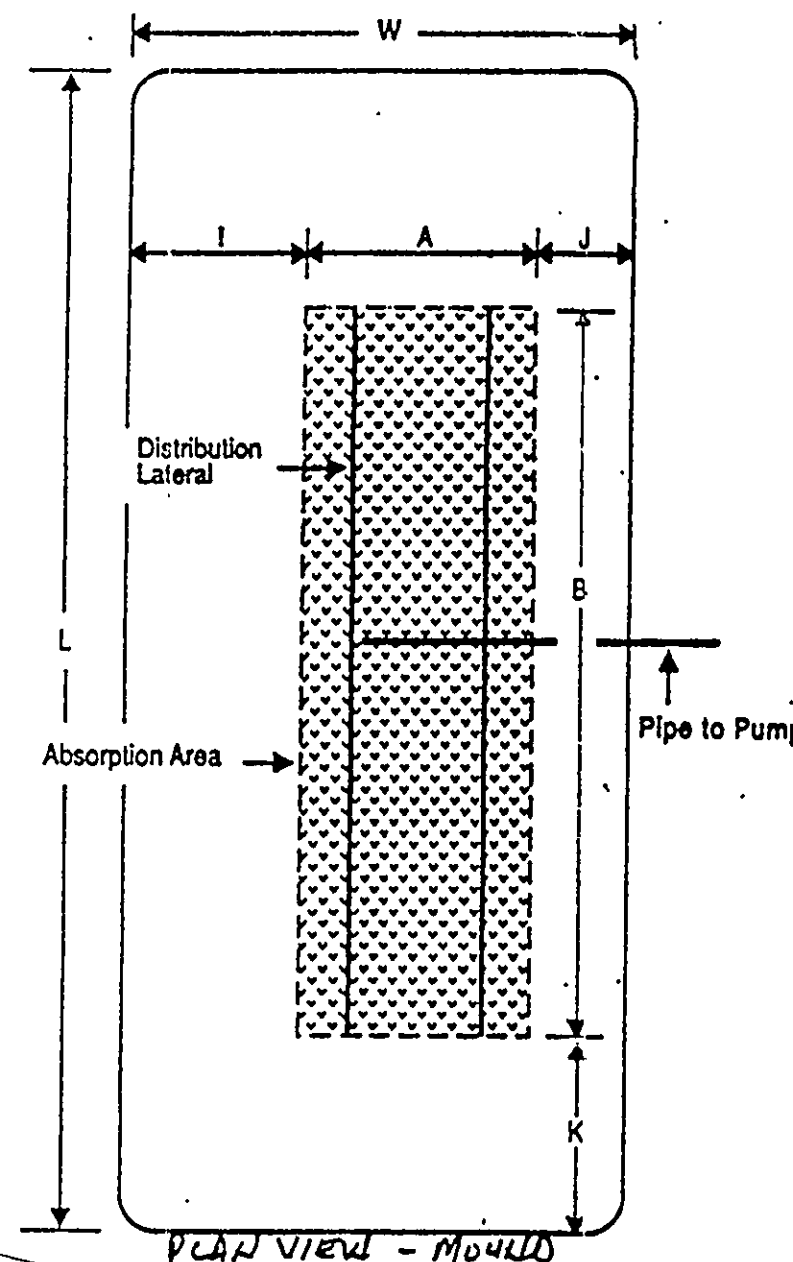


EXISTING GROUND



TYPICAL SWALE WITH CURTAIN DRAIN

NO SCALE



PLAN VIEW - MOUND