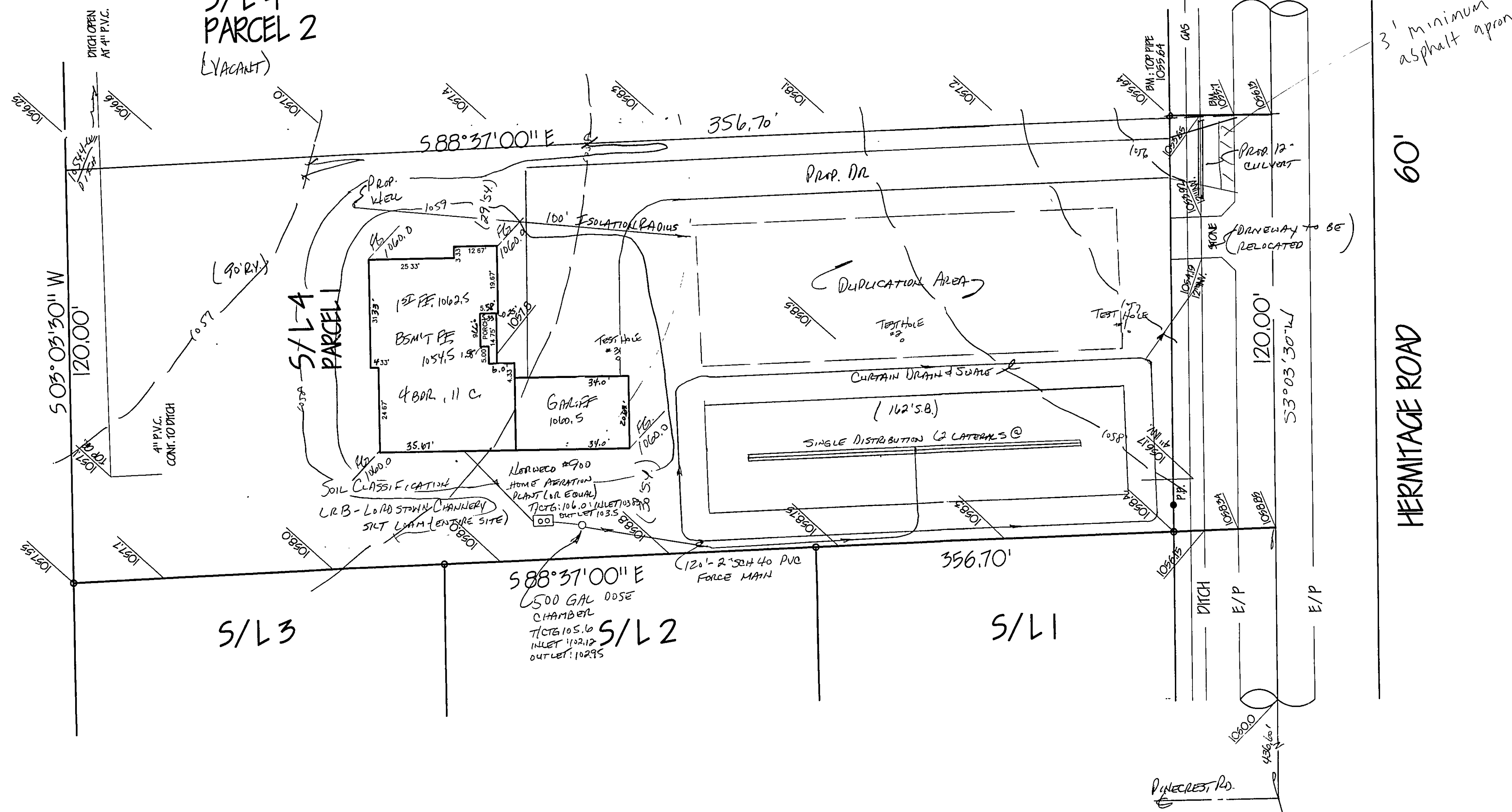


S/L 4
PARCEL 2
(VACANT)



REVIEWED AND ACCEPTED
LAKE COUNTY GENERAL
HEALTH DISTRICT
10-1-97
THOMAS P. GILLES, P.E.
Lake County Engineer

Grading Plan Approved
as shown and/or noted
THOMAS P. GILLES, P.E.
Lake County Engineer
By LSH Date 10.6.97

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

TEST HOLES WITH DEPTH TO BED ROCK (FEET)

*1	1.5
*2	3.0
*3	2.0

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. SLOPE UNIFORMLY BACK TO THE PUMPING CHAMBER SO THAT THE LINE DRAINS AFTER DOSING. BACKFILL AND COMPACT SOIL AROUND PIPE TO PREVENT BACK SEEPAGE OF EFFLUENT ALONG THE PIPE.

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

PLACE THE FILL MATERIAL TO THE REQUIRED DEPTH WHICH IS THE TOP OF THE TRENCHES. SHAPE SLOES 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 TYFAX, MARFAT 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. THIS 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% BIRDSFOOT 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 FESCUE AND 10% ANNUAL RYE GRASS MAY BE USED. SEEDS CAN BE PLANTED AROUND THE BASE AND UP THE SLOPES. 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, SHOWER-HEADS, 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 40 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 WORK & 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 EXHAUSTS SHALL BE PROTECTED FROM SNOW, ICE OR WATER VAPOR ACCUMULATIONS. INSTALLATION SHALL BE MADE TO MINIMIZE RELEASE OF ODORS AND AREOSOLS.

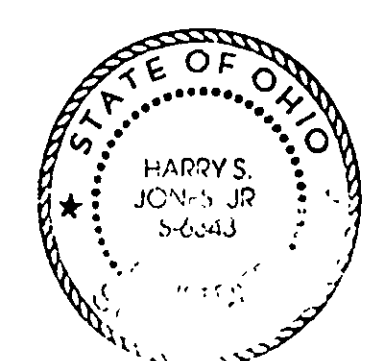
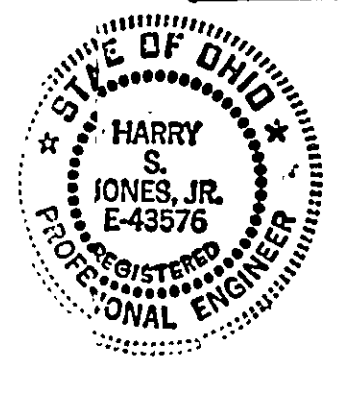
MECHANICAL COMPONENTS INSTALLED IN OR AT THE SEWAGE TANK SHALL BE PROTECTED AGAINST DAMAGE OR IMPAIRMENT OF EFFICIENCY BY FLOODING, FOAMING OR SURCHARGING. PUMPS MUST BE READILY REMOVABLE FROM THE MAN-HOLE IN CASE OF PUMP FAILURE.

"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 22nd day of May, 1997, and that the elevations were taken at appropriate intervals and that as of that date they existed as indicated hereon."

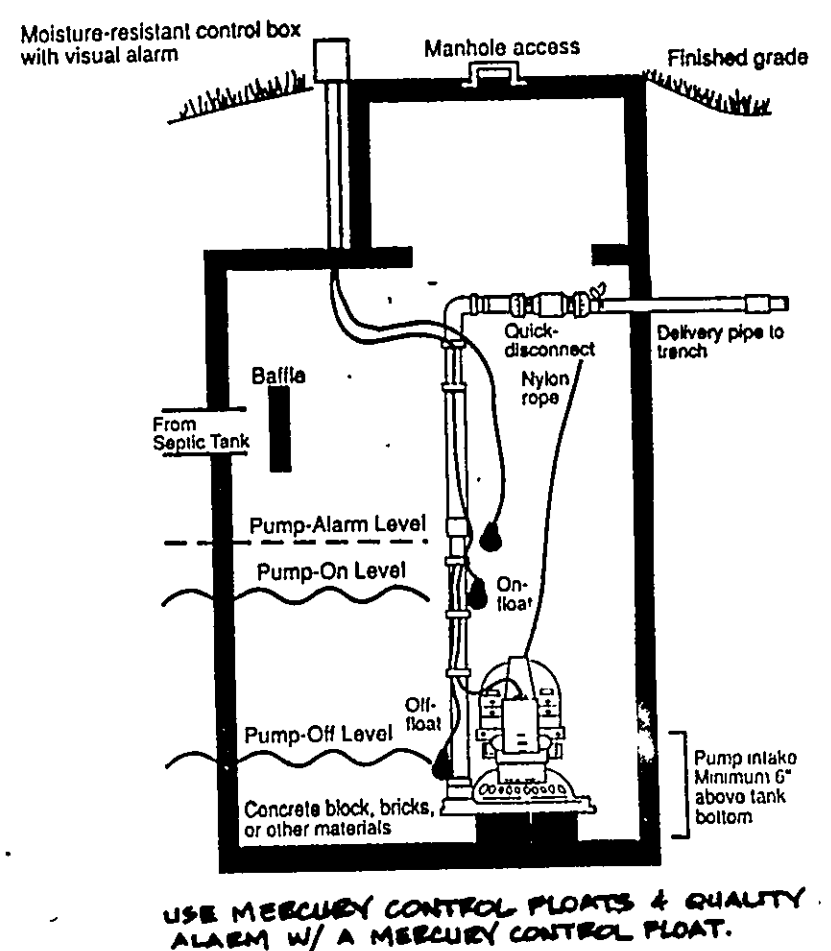
Harry Jones, Jr. Reg. No. RE-43576

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	2.12	I	1.3	W	30.75

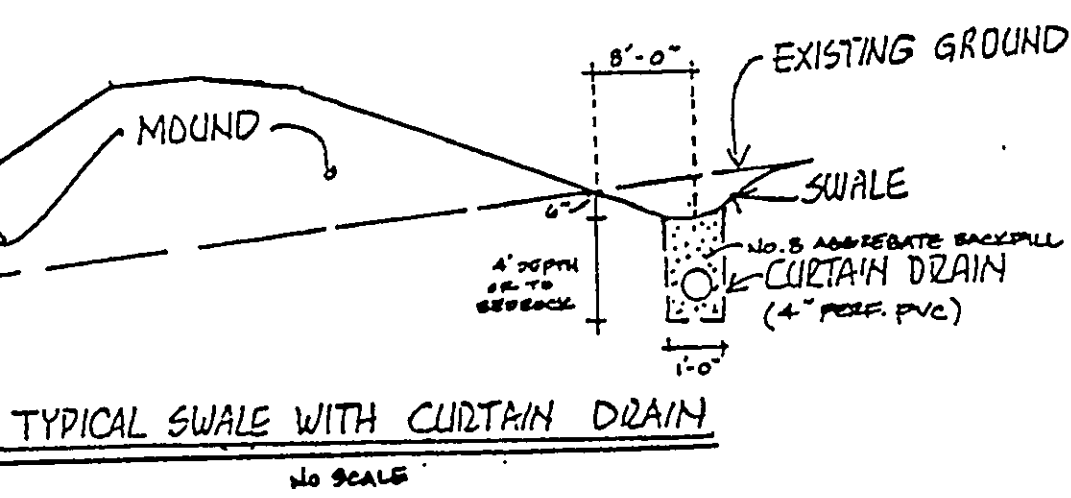
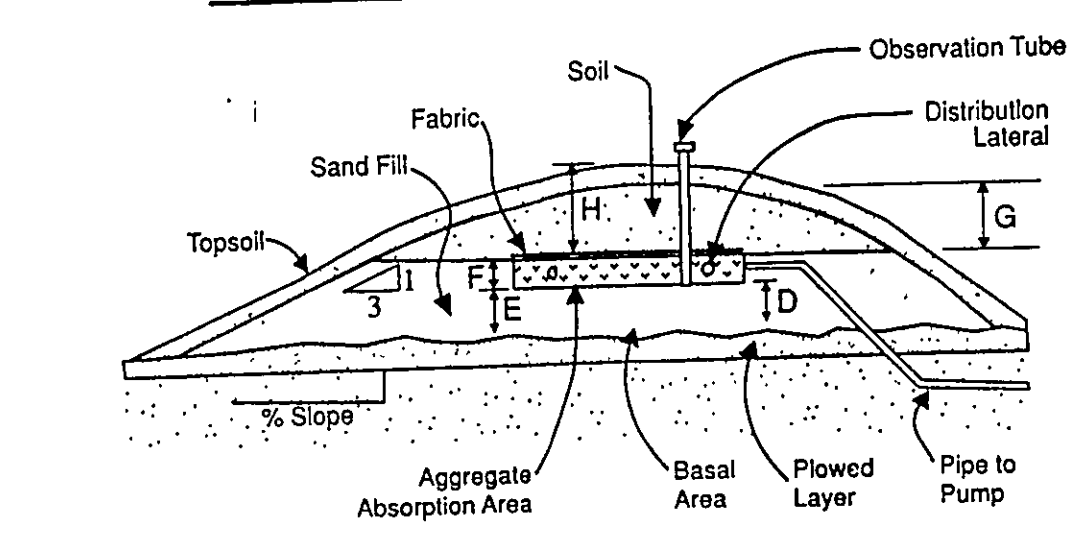


TYPICAL CROSS SECTION
DOSE CHAMBER W/ PUMP & CONTROL UNIT

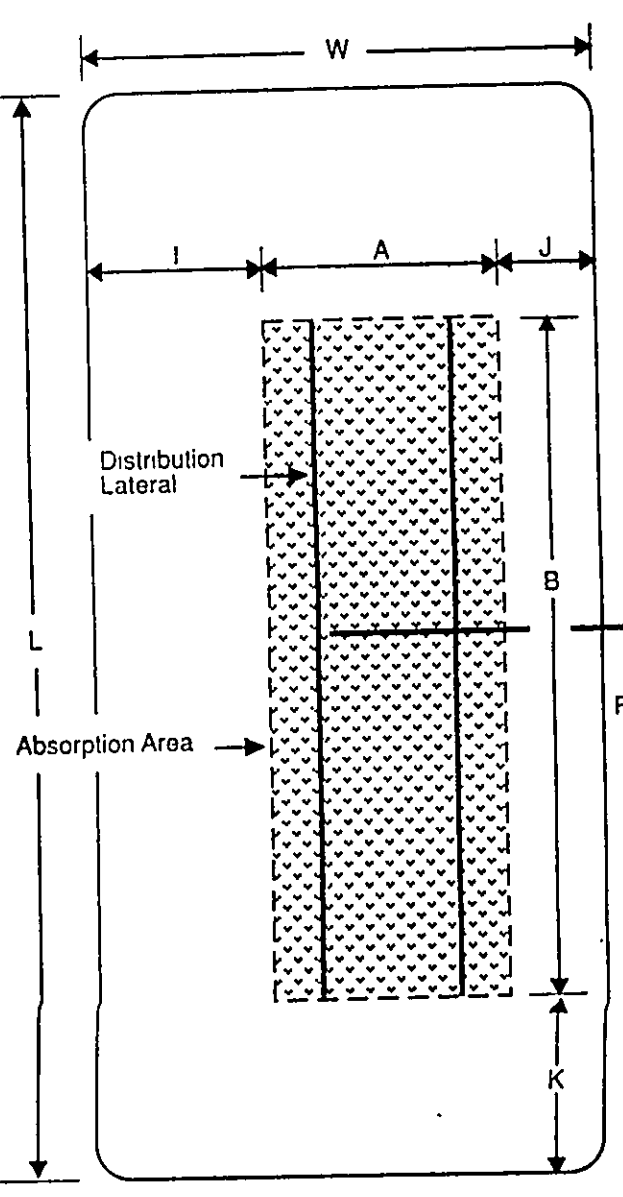


USE MERCURY CONTROL FLOATS & QUALITY ALARM W/ A MERCURY CONTROL FLOAT.

CROSS SECTION - MOUND



PLAN VIEW - MOUND



REV. NO.	DESCRIPTION	DATE	BY	CHK'D

babcock, jones and associates, inc
CIVIL ENGINEERS - SURVEYORS - LAND PLANNERS
PAINESVILLE OHIO 44077

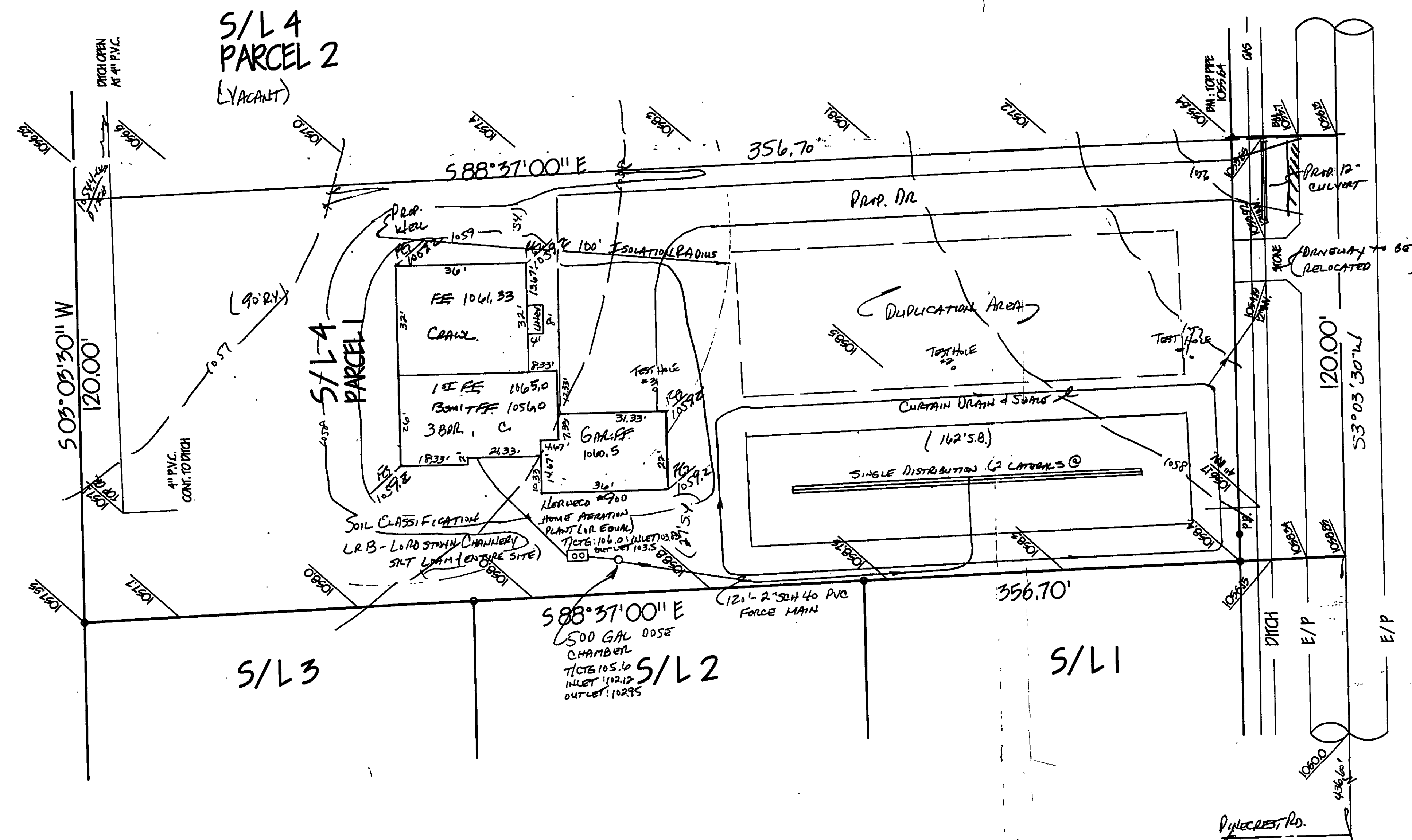
DATE 9/19/97
DESIGN BY HJ
DRAWN BY M.S. & T.R.
APPROVED BY HJ

SITE PLAN
FOR
DAVE CARREL, INC.
DR. SUBLIT No. 4 - HERMITAGE CREST EST. SWS
CONCORD TOWNSHIP LAKE COUNTY Ohio

SCALE 1" = 20'
JOB NO. 97-196-04
SHEET 1 OF 1

* GET INSERT FOR INSTALLER!

S/L 4
PARCEL 2
(VACANT)



REVIEWED AND ACCEPTED
LAKE COUNTY GENERAL
HEALTH DISTRICT
DATE 7.15.98
BY *[Signature]*
SEWAGE DISPOSAL PERMIT MUST BE
OBTAINED BY A LAKE COUNTY LICENSED
INSTALLER BEFORE INSTALLATION

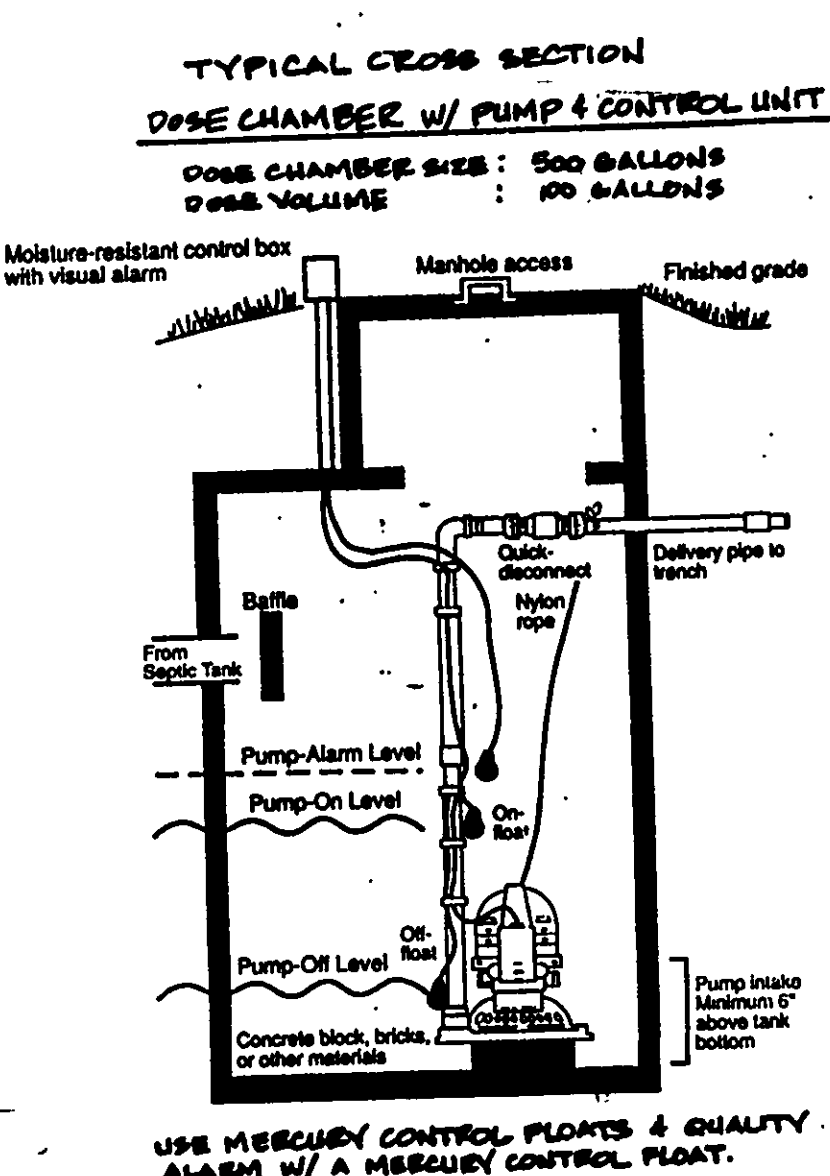
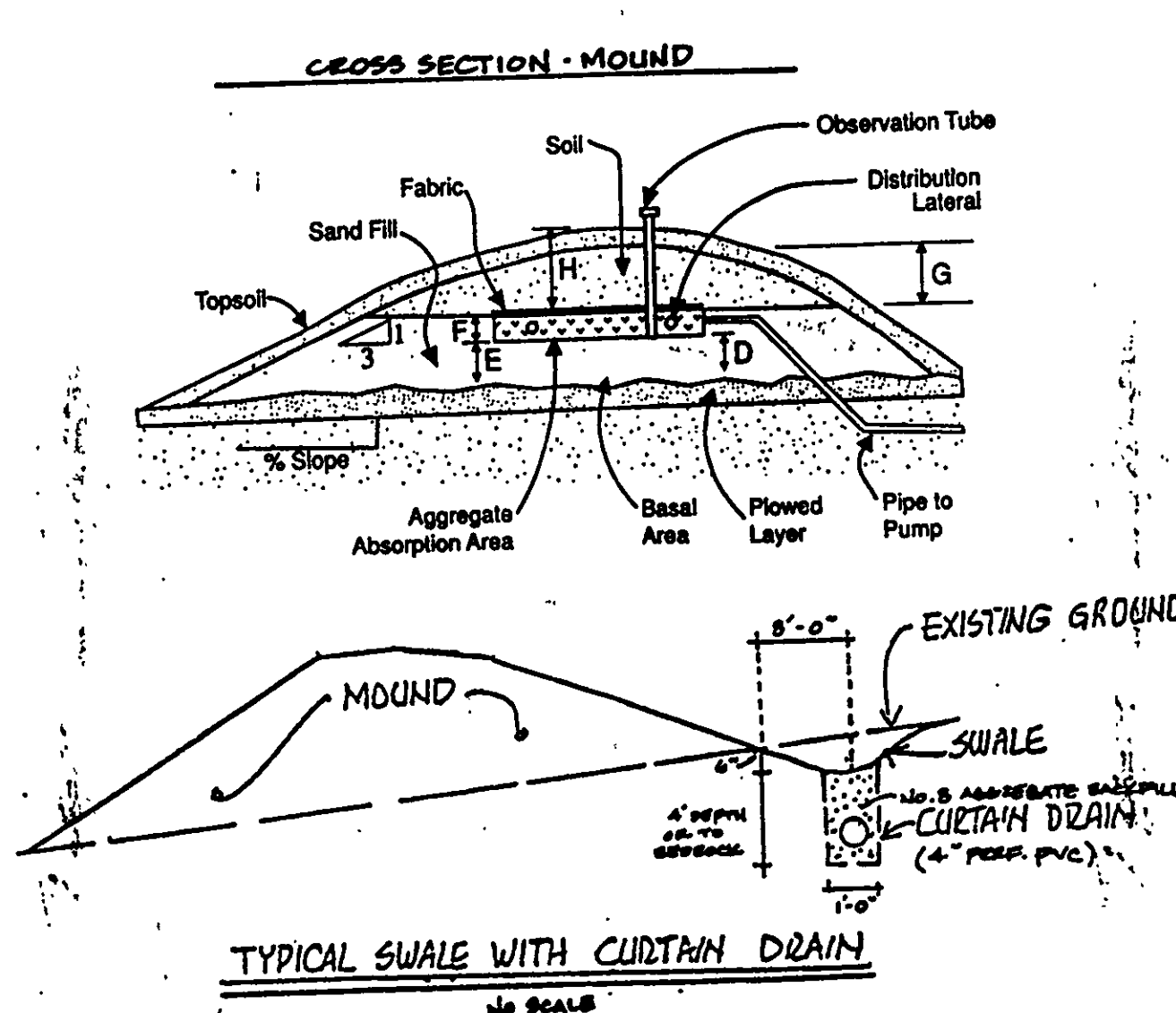
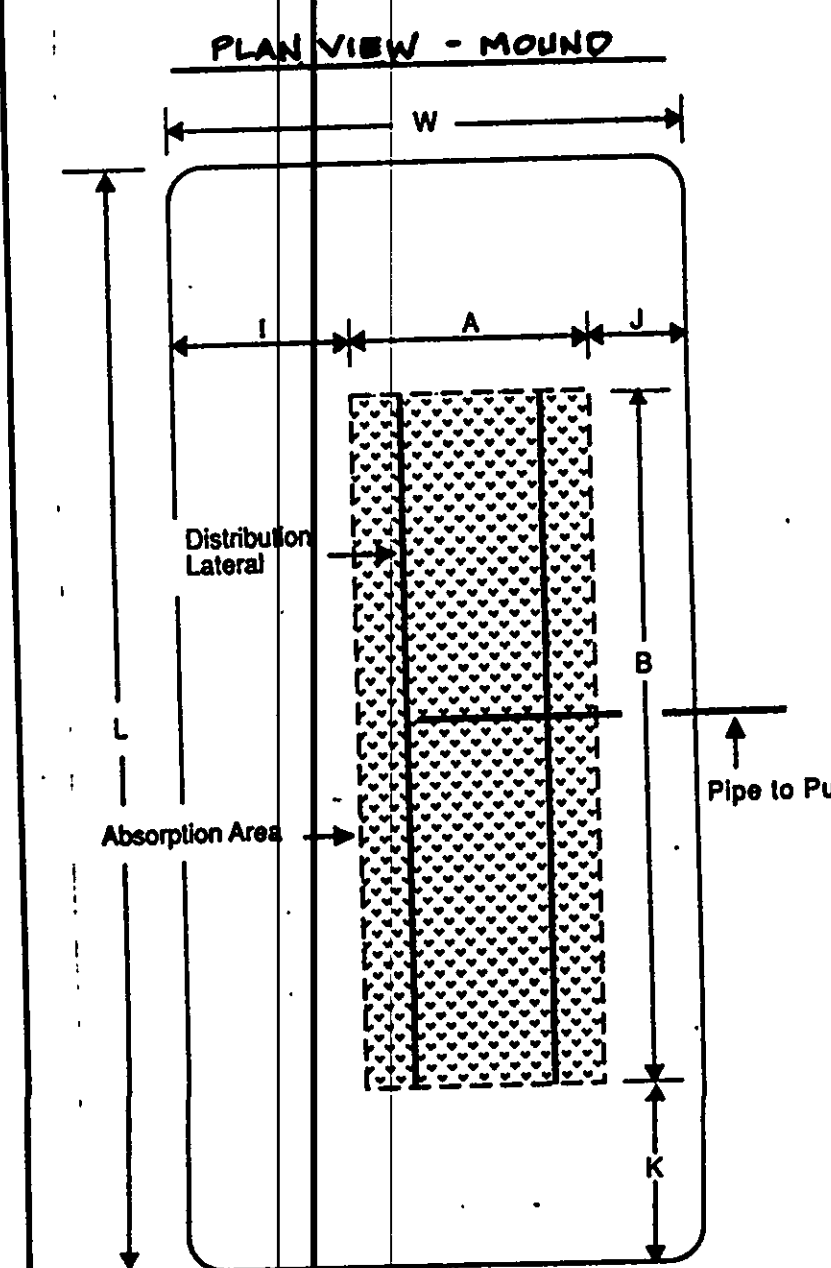
Grading Plan Approved
7.15.98
3' minimum asphalt drive
apron

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

TEST HOLES WITH DEPTH
TO BED ROCK (FEET)

#1	1.5
#2	3.0
#3	2.0

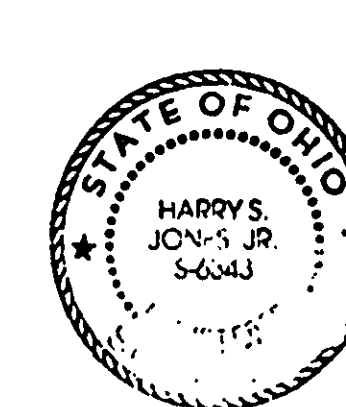
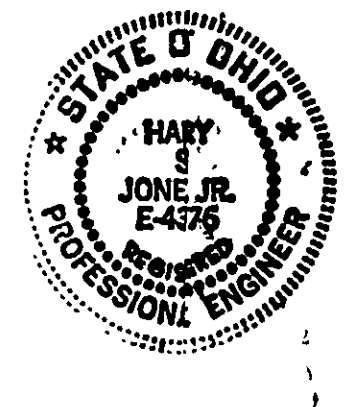


"I, the undersigned, hereby certify that this topography indicated by 6", 1' or 2' contours, and elevations shown hereon represent an actual field survey made by me on the 7th day of May, 1998, and that the elevations were taken at appropriate intervals and that as of that date they existed as indicated hereon."

[Signature]
Name *[Signature]* Reg. No. RE#49576

MOUND DIMENSIONS (FT.)

A	4.0	F	0.67	J	15.25
B	100.0	G	1.0	K	12.67
D	2.0	H	1.5	L	125.0
E	2.12	I	11.5	W	30.75



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 1' 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 PROST LINE, SLOPING UNIFORMLY BACK TO THE PUMPING CHAMBER SO THAT THE LINE DRAINS AFTER DOSING. BACKFILL AND COMPACT SOIL AROUND PIPE TO PREVENT BACK SEEPAGE OF EFFLUENT ALONG THE PIPE.

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

CUT TREES TO GROUND LEVEL. REMOVE EXCESS VEGETATION BY MOWING. PREPARE THE SITE USING A MOLDBOARD OR CHisel. FLOW BY FLOWING PERPENDICULAR TO THE SLOPE. 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 CUTTING OF FLOWED 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 FLOWED AREA. KEEP WHEELS OF TRUCK OFF FLOWED AREA. 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 SOIL.

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 RISERS 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 TYNAP, WRAP 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 TOPSOIL.

PLACE 6 IN. OF GOOD QUALITY TOPSOIL OVER THE ENTIRE MOUND SURFACE. THIS 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.

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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, SHOWER-HEADS, 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' HPT. OF HEAD. THE PUMPING CHAMBER SHALL HAVE A MINIMUM CAPACITY OF 600 GALLONS. THE FLOAT LEVELS SHALL BE ADJUSTED TO PROVIDE FOR A 1/2 GALLON DOSING VOLUME TO THE MOUND.

ELECTRICAL WORK & 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 AREOSOLS.

MECHANICAL COMPONENTS INSTALLED IN OR AT THE SEWAGE TANK SHALL BE PROTECTED AGAINST DAMAGE OR IMPAIRMENT OF EFFICIENCY BY FLOODING, FOAMING OR SURGE-LOADS. PUMPS MUST BE READILY REMOVABLE FROM THE MAN-HOLE IN CASE OF PUMP FAILURES.

REV NO.	DESCRIPTION	DATE	BY	CHK'D

babcock, jones and associates, inc
CIVIL ENGINEERS - SURVEYORS - LAND PLANNERS
PAINESVILLE OHIO 44077

DATE 9/19/97
DESIGN BY HT
DRAWN BY M.S. & T.R.
APPROVED BY HT

SITE PLAN
FILE
DAVE CARREL, INC.
SUBMIT No. 4 - HERMITAGE CREST EST. S.I.B.
CONCORD TOWNSHIP LAKE COUNTY OHIO

SCALE 1" = 20'
JOB NO 97-196-04
SHEET 1 OF 1