

HTE# 08-5-19495

# Harnett County Department of Public Health

24702

## Improvement Permit

A building permit cannot be issued with only an Improvement Permit

ISSUED TO: AGAPE KURE BEACH MINISTRIES PROPERTY LOCATION: TYLER DENVER RD SUBDIVISION \_\_\_\_\_ LOT # \_\_\_\_\_

NEW  REPAIR  EXPANSION

Type of Structure: CABIN w/ MEETING ROOM

Proposed Wastewater System Type: LPP

Projected Daily Flow: 1200 GPD

Number of bedrooms: \_\_\_\_\_ Number of Occupants: 20 max

Basement  Yes  No

Pump Required:  Yes  No  May be required based on final location and elevations of facilities APPLICANT IS ATTACHED

Type of Water Supply:  Community  Public  Well Distance from well 100 feet

Permit conditions: \_\_\_\_\_ Permit valid for:  Five years  No expiration

Site Improvements required prior to Construction Authorization Issuance:  
ON SITE CONFERENCE BETWEEN HCHD, SOIL SCIENTIST,  
SYSTEM DESIGNER, AND INSTALLER NEEDED PRIOR  
TO CA BEING ISSUED. SYSTEM PROPOSAL FROM

Authorized State Agent: [Signature] Date: 3/27/09 SEE ATTACHED SITE SKETCH

The issuance of this permit by the Health Department in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. This site is subject to revocation if the site plan, plat, or the intended use changes. The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to conditions of this permit.

**CAMP AGAPE**  
**1369 TYLER DEWAR LANE**  
**FUQUAY VARINA, HARNETT COUNTY, NC**

**ON-SITE WASTEWATER SYSTEM**

*(LPP Disposal on Sloping Site)*

**March 11, 2008**

**Cabin Area - Cabin No. 1 Only**

**CLIENT INFORMATION**

CONTACT: RANDY YOUNGQUIST  
ADDRESS: CAMP AGAPE  
1369 TYLER DEWAR LANE  
FUQUAY VARINA, NORTH CAROLINA 27526  
TELEPHONE NO.: (919) 552-9421  
FAX NO.: (919) 552-0720

**SOIL SCIENTIST**

COMPANY: LAND MANAGEMENT GROUP, INC.  
ADDRESS: P. O. BOX 2522  
WILMINGTON, NC 28402  
TELEPHONE NO.: (910) 452-0001  
FAX NO.: (910) 452-0060  
CONTACT: JOHN P. WILLIAMS  
LICENSE NO.: 1113



**HAGGETT ENGINEERING ASSOCIATES, INC.**

5307 SOUTH COLLEGE ROAD  
WILMINGTON, NORTH CAROLINA 28412  
PHONE: (910) 397-0808  
FAX: (910) 397-0812

**SCHEDULE OF DRAWINGS**

- C.1.2 ON-SITE WASTEWATER SYSTEM - SITE PLAN
- C.2.1 ON-SITE WASTEWATER SYSTEM - SEPTIC TANK
- C.3.1 ON-SITE WASTEWATER SYSTEM - SEPTIC TANK
- C.4.1 ON-SITE WASTEWATER SYSTEM - LPP DOSE TANK
- C.5.1 ON-SITE WASTEWATER SYSTEM - LPP DETAILS
- C.5.2 ON-SITE WASTEWATER SYSTEM - LPP DETAILS
- C.5.3 ON-SITE WASTEWATER SYSTEM - LPP DETAILS
- C.6.1 ON-SITE WASTEWATER SYSTEM - SITE DETAILS







LPP DESIGN TABLES

Field No. 1, Sub-Fields 1 through 4

Lateral Data			Orifice Data			Flow per Lateral
No.	Length (feet)	Elev. (feet)	Press. Head (feet)	Flow (gpm)	Quantity	(gpm)
1	50	289.0	2.0	0.407	10	4.07
2	50	289.5	2.5	0.455	9	4.10
3	50	290.1	2.9	0.490	9	4.41
4	50	287.6	3.4	0.531	8	4.25
Split						
5	50	287.2	2.0	0.407	10	4.07
6	50	286.7	2.5	0.455	9	4.10
7	50	286.3	2.9	0.490	9	4.41
8	50	285.8	3.4	0.531	8	4.25
Split						
9	50	285.4	2.0	0.407	10	4.07
10	50	284.9	2.5	0.455	9	4.10
11	50	284.4	3.0	0.499	8	3.99
12	50	283.9	3.5	0.539	8	4.31
Split						
13	50	283.5	2.0	0.407	10	4.07
14	50	283.0	2.5	0.455	9	4.10
15	50	282.5	3.0	0.499	8	3.99
16	50	282.0	3.5	0.539	8	4.31
Total = 800						Flow to Field = 86.6
						Minimum Lateral Flow = 3.99
						Maximum Lateral Flow = 4.41
						Average Lateral Flow = 4.16
						Variation (%) = 10.17

Maximum LPP Surface Elevation = 289.0

Field No. 2, Sub-Fields 1 through 4

Lateral Data			Orifice Data			Flow per Lateral
No.	Length (feet)	Elev. (feet)	Press. Head (feet)	Flow (gpm)	Quantity	(gpm)
1	50	288.0	2.0	0.407	10	4.07
2	50	288.3	2.7	0.473	9	4.25
3	50	287.6	3.4	0.531	8	4.25
4	50	286.9	4.1	0.583	7	4.08
Split						
5	50	286.2	2.0	0.407	10	4.07
6	50	285.1	3.1	0.507	8	4.06
7	50	284.5	3.7	0.554	8	4.43
8	50	283.9	4.3	0.597	7	4.18
Split						
9	50	283.0	2.0	0.407	10	4.07
10	50	282.3	2.7	0.473	9	4.26
11	50	281.6	3.4	0.531	8	4.35
12	50	280.9	4.1	0.583	7	4.08
Split						
13	50	280.1	2.0	0.407	10	4.07
14	50	279.4	2.7	0.473	9	4.26
15	50	278.7	3.4	0.531	8	4.25
16	50	278.0	4.1	0.583	7	4.08
Total = 800						Flow to Field = 66.7
						Minimum Lateral Flow = 4.06
						Maximum Lateral Flow = 4.43
						Average Lateral Flow = 4.17
						Variation (%) = 9.60

Maximum LPP Surface Elevation = 289.0

NO.	REVISION	DATE

HAGGETT ENGINEERING ASSOCIATES, INC.  
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 WILMINGTON, NORTH CAROLINA 28412  
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DRAWING: **C.5.3**

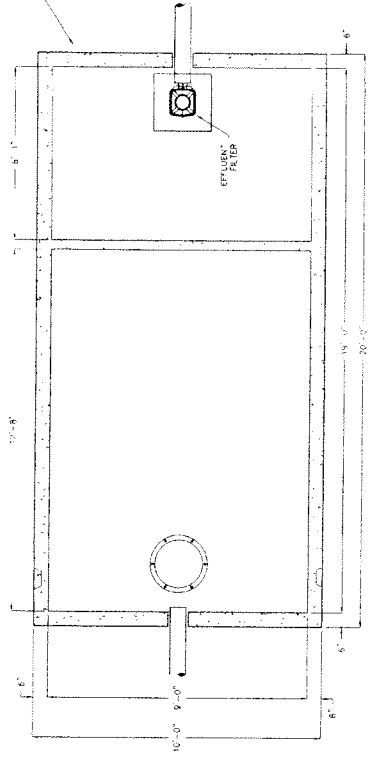
DESIGN: DOUG HAGGETT CHECKED BY: DATE: 11/18/08 SCALE: AS SHOWN

CAMP AGAPE  
 1369 TYLER DEWAR LANE  
 FUGAY-VARINA, NORTH CAROLINA  
 ON-SITE WASTEWATER SYSTEM - LPP DETAILS

PROJECT NO. 08-1029

**STB-433 SEPTIC TANK**  
4,000 GALLONS

Manufactured By:  
Blackwelder Tank Service, Inc.  
24 Station, 7th St.  
P.O. Box 919  
P.O. Box 919  
P.O. Box 919  
P.O. Box 919  
P.O. Box 919

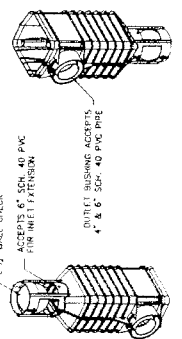


**PLAN VIEW**

THE CONTRACTOR SHALL VERIFY BUILDING SUBMITTAL ELEVATION WITH THE BUILDING CONTRACTOR PRIOR TO ORDERING THE TANKS COORDINATE WORK ON THESE PLANS WITH WORK SHOWN ON THE BUILDING PLANS.

**SERIES HW ACCESS DOOR**

- STANDARD FEATURES**
- AUTO LOCK 1 1/2" STAINLESS STEEL
  - 1 1/2" STAINLESS STEEL HANDS
  - 1 1/2" STAINLESS STEEL SLAM LOCK WITH
  - 1 1/2" STAINLESS STEEL SLAM LOCK WITH
  - STAINLESS STEEL COMPRESSION SPRING ASSY
  - 100 LBS. LOAD RATING (SEE NOTES)
  - 45° OPENING (SEE NOTES)
  - 45° OPENING (SEE NOTES)
  - LIFETIME WARRANTY



6" X BALL CHECK  
ACCEPTS 4" SCH. 40 PVC  
FOR PIPE EXTENSION

PLUGS FILTER HOUSING  
PART NO. - 3042-235

SECRET ACCEPTS  
BALL TIGHT SEAL

PLUGS FILTER CARTRIDGE  
PART NO. - 3041-525

EFFLUENT FILTER DETAIL  
(SEE 115)

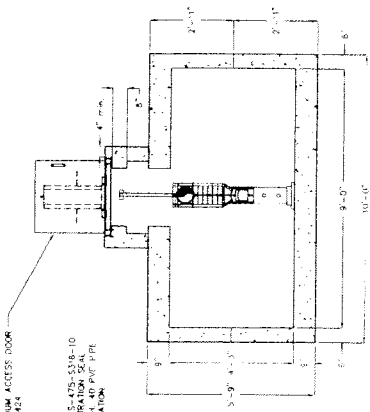


**SEPTIC TANK ELEVATION TABLE**

LABEL	LOCATION	FINISHED GRADE (vert. W.B.)	INVERT (vert. W.B.)	INVERT ELEVATION (vert. W.B.)	DATE
57-1	CABIN AREA	210.5	208.25	208.00	2023.17

**NOTES**

- CONTRACTOR SHALL INSPECT TANKS AND VERIFY INVERT ELEVATIONS PRIOR TO INSTALLATION OF TANKS.
- LOCATION OF CONTROL PANEL MAY VARY BASED ON ROUTING OF POWER SUPPLY. LOCATION TO BE APPROVED BY CARRIER COUNTY OPERATIONS DEPARTMENT.
- ALL TANKS AND FITTINGS SHALL BE DEMONSTRATED TO BE WATER-TIGHT BY A 24-HOUR HYDROSTATIC LEAKAGE TEST CONDUCTED BY THE CONTRACTOR. LEAKAGE SHALL NOT EXCEED 10 GALLONS PER TANK (1/2" HIGH OPEN IN WATER LEVEL). EXCESSIVE LEAKAGE SHALL BE CAUSE FOR FAILURE OF THE WATER-TIGHTNESS TEST.
- SEAL RISES SCOTCHING AT EACH JOINT USING ELASTOMERIC JOINT SEALER.
- SEAL CAST IRON RING TO RISE USING ELASTOMERIC JOINT SEALER AND BOLTS.
- ALL EXPOSED NUTS, BOLTS AND FASTENERS SHALL BE 300 SERIES STAINLESS STEEL.
- CONTRACTOR SHALL PROVIDE "H" HANDLE FILTER SERVICE EXTRACTOR FOR LABEL FILTERS.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF 6-INCHES OF NO. 57 STONE BENEATH EACH TANK.
- PLACE BACKFILL AROUND TANKS IN LOTS NOT EXCEEDING 12-INCHES.
- CONTRACTOR SHALL PROVIDE A VIBRATORY COMPACTOR.
- CONTRACTOR SHALL PROVIDE A VIBRATORY COMPACTOR.
- CONTRACTOR SHALL GRADE AREAS PROXIMAL TO TANK RISERS, VALVE BOXES AND METER VALVES TO PROVIDE POSITIVE DRAINAGE AWAY FROM THESE POTENTIAL ENTRY POINTS.
- CONTRACTOR SHALL PROVIDE 100% PROTECTION OF ALL STAINLESS STEEL PIPE CLAMPS.
- CONFORM TO REQUIREMENTS OF ASTM C-923.



**ELEVATION VIEW**

THE CONTRACTOR SHALL USE EPOXY COATED DUCTILE IRON PIPE WHEN 36 INCHES OF COVER CANNOT BE PROVIDED OVER THE PIPE.



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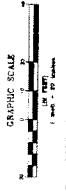


PROJECT NO: 05-1029	DESIGN: DOUG HAGGETT	CHECKED BY: DATE: 11/14/08	SCALE: AS SHOWN
CAMP AGAPE 1369 TYLER DEWAR LANE FUGUAY VARINA, NORTH CAROLINA ON-SITE WASTEWATER SYSTEM - LPP DETAILS			
NO.	REVISION	DATE	

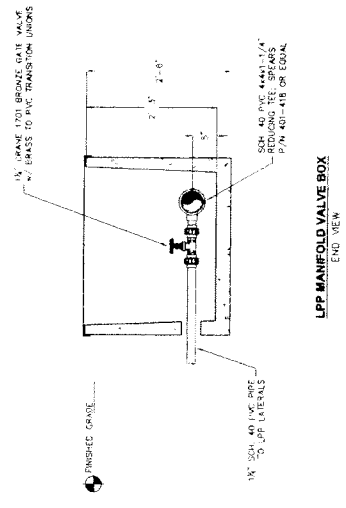
HAGGETT ENGINEERING ASSOCIATES, INC.  
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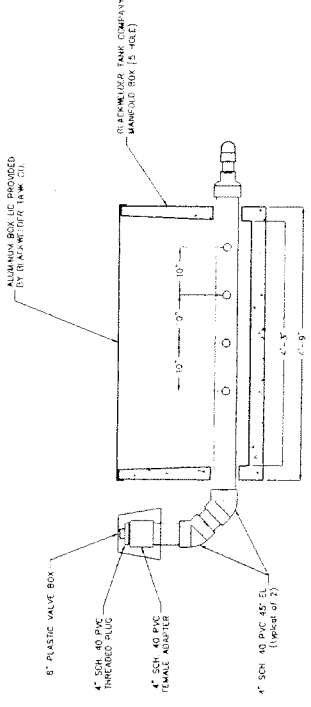
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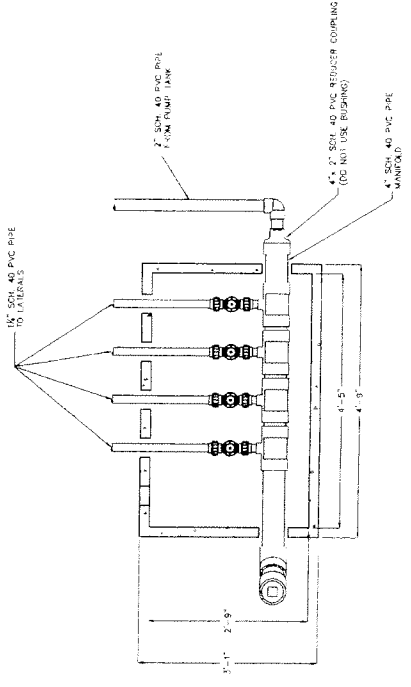
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LPP MANIFOLD VALVE BOX  
 END VIEW



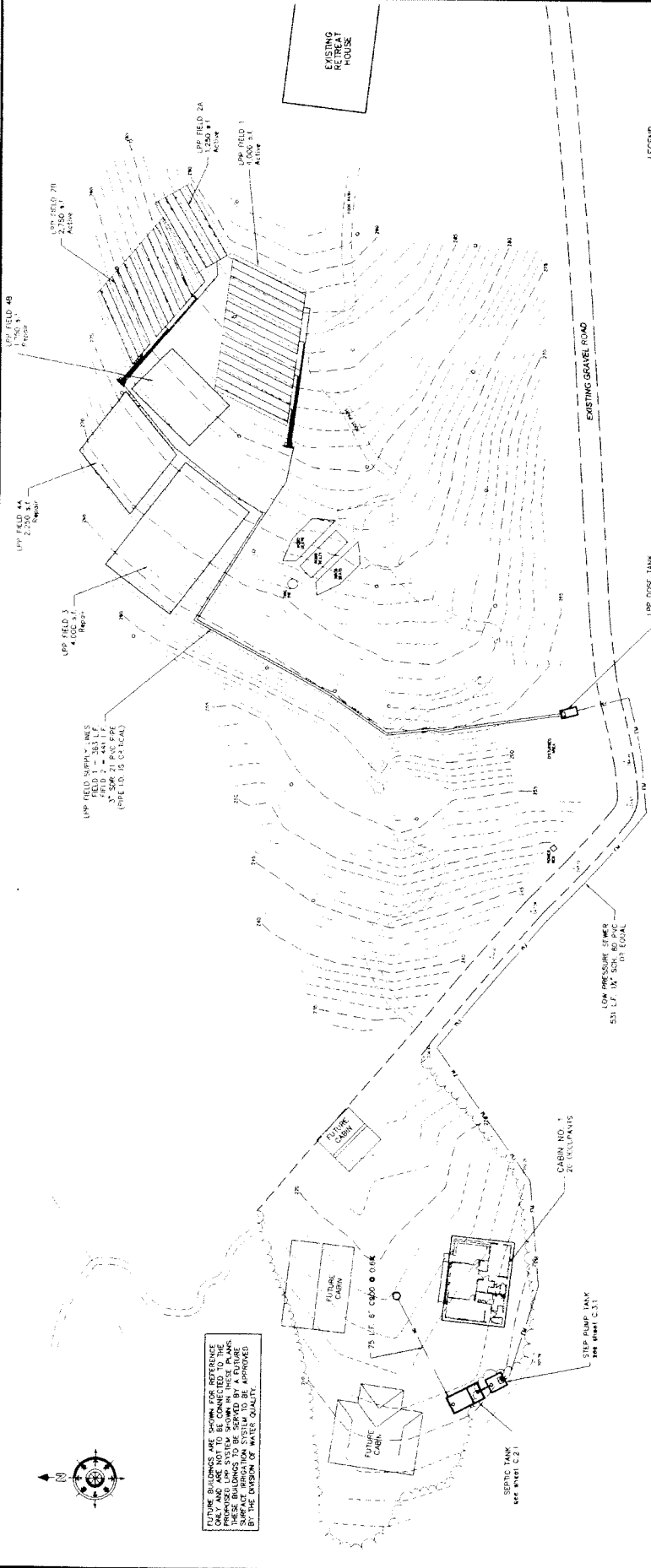
LPP MANIFOLD VALVE BOX  
 ELEVATION VIEW



LPP MANIFOLD VALVE BOX  
 PLAN VIEW

- NOTES:
- MANIFOLD BOX AND PIPE SHALL BE INSTALLED 11" MIN.
  - BASE FOR PROVISION OF MANHOLE PIPE SHALL BE PROVIDED WITH PIPE BODIES.
  - PIPE SELECTIONS FOR 1/2" PIPE SHALL BE PROVIDED WITH ELASTOMERIC SEALS OR GROUETS.
  - TOP OF MANIFOLD BOX SHALL EXTEND A MINIMUM OF 2-INCHES ABOVE THE GROUND SURFACE.
  - PROVIDE A 2 INCH DRAIN THROUGH THE TOP OF THE BOX.





- LEGEND:**
- PROPERTY LINE
  - POWER POLE
  - GUY WIRE
  - OVERHEAD ELECTRIC
  - UNDERGROUND ELECTRIC
  - FOOD RISK P/N
  - SEWER
  - SURFACE WATER
  - PIR HYDRANT
  - MAN HOLE
  - CLEAN OUT
  - LOW PRESSURE SEWER
  - WATER LINE
  - SANITARY SLUR (GRAVITY)
  - EXISTING CONTOURS
  - CHECK VALVE
  - AIR RELEASE/VACUUM BREAK VALVE

**Krause Surveying Associates, Inc.**  
 6633 Hwy 42 West  
 Box 944, Unit 6  
 Garner, N.C. 27529  
 (919) 851-4999  
 HORIZONTAL - NAD 83 (1983)  
 VERTICAL - NAVD 83



**LPP LATERAL SUMMARY**

1. TOTAL LPP LATERAL LENGTH = 1,600 LF
2. LATERAL SPACING = 5 FEET O.C.
3. NUMBER OF LATERALS = 32 @ 50 LF EACH
4. LATERALS W/6" RISK IN MANHOLE = 1
5. DRINK SINK = 5/12 R.O.P.
6. DRINK SPACING = VARIES BY LATERAL SEE TABLE
7. LATERAL MATERIAL = 1.25 INCH SCH. 40 PVC PIPE
8. LINK FOR LPP FIELD = 0.15 CPD/50 FT
9. TOTAL DESIGN FLOW = 1,000 OPD
10. WETTED AREA = 8,000 SQ. FT.

**DRAINFIELD PREPARATION**

1. FIELD VERIFY ALL LOCATIONS PRIOR TO STARTING WORK.
2. REMOVE VEGETATION AND ROOT MAT FROM LPP LATERAL AREA.
3. DO NOT WORK IN THE DRAINFIELD WHEN EXCESSIVE WETNESS IS APPARENT
4. DO NOT OPERATE HEAVY MACHINERY WITHIN THE DRAINFIELD AREA
5. INSTALL THE NEW MANHOLE AND LPP BREEZ AS SHOWN ON THE PLAN
6. COVER THE DRAINFIELD WITH 6-INCHES OF TOPSOIL AND GRADE TO DRAIN
7. SEED AND MULCH THE DRAINFIELD IN ACCORDANCE WITH THE SEEDING SPECIFICATION

**SIGNAL NOTES**

1. INSTALL OVERFLOW BEAM ABOVE DISPOSAL FIELD TO PREVENT THE FLOW OF STORMWATER ONTO THE FIELD.

**INSTALLATION NOTES**

1. CONDUCT ON-SITE PRECONSTRUCTION CONFERENCE TO BE ATTENDED BY DESIGNER, HARNETT COUNTY HEALTH DEPARTMENT, SOIL SCIENTIST AND INSTALLER.
2. 5' WIDE LIMITS OF DISPOSAL FIELD AND LOCATION OF TANKS.
3. INSPECT TANKS AND VERIFY INVERT ELEVATIONS PRIOR TO INSTALLING TANKS.
4. INSTALL EFFLUENT FILTER IN SEPTIC TANK.
5. ALL TANKS INCLUDING RISERS, SHALL BE DEMONSTRATED TO BE WATER-TIGHT BY 4-24-HOUR HYDROSTATIC LEAKAGE TEST CONDUCTED PRIOR TO SYSTEM START-UP.
6. LEAKAGE FOR THE EXISTING TANKS TO BE REISED SHALL NOT EXCEED 15 GALLONS PER TANK (MAXIMUM OF 1/2-INCH DROP IN WATER LEVEL).
7. LEAKAGE FOR THE NEW TANKS TO BE INSTALLED SHALL NOT EXCEED 20 GALLONS PER TANK (MAXIMUM OF 1/2-INCH DROP IN WATER LEVEL).
8. SEAL ALL JOINTS WITH ELASTOMERIC JOINT SEALANT.
9. SEAL MANHOLE RISERS TO RISERS WITH 1" ASTM TYPE JOINT SEALANT AND (6) 1/2" IS.
10. ALL EXPOSED NUTS, BOLTS AND FASTENERS SHALL BE 300 SERIES STAINLESS STEEL.
11. PROVIDE A MINIMUM OF 6-INCHES OF NO. 57 STONE BENEATH EACH TANK.
12. PLACE BACKFILL AROUND TANKS IN LOTS NOT EXCEEDING 12-INCHES.
13. COMPACT BACKFILL TO SIX STANDARD PROCTOR USING A VIBRATORY COMPACTOR.
14. PROTECT TANK DURING COMPACTING. FILL WITH WATER TO EQUALIZE LOADING.
15. DRAIN AREAS PROXIMAL TO TANK RISERS AND VALVE BOXES TO PROVIDE POSITIVE DRAINAGE AWAY FROM THESE POTENTIAL ENTRY POINTS.

FUTURE BUILDINGS ARE SHOWN FOR INFORMATION ONLY AND ARE NOT TO BE CONNECTED TO THE PREVIOUS LPP SYSTEM SHOWN IN THESE PLANS. SURFACE IRRIGATION SYSTEMS TO BE APPROVED BY THE DIVISION OF WATER QUALITY.



