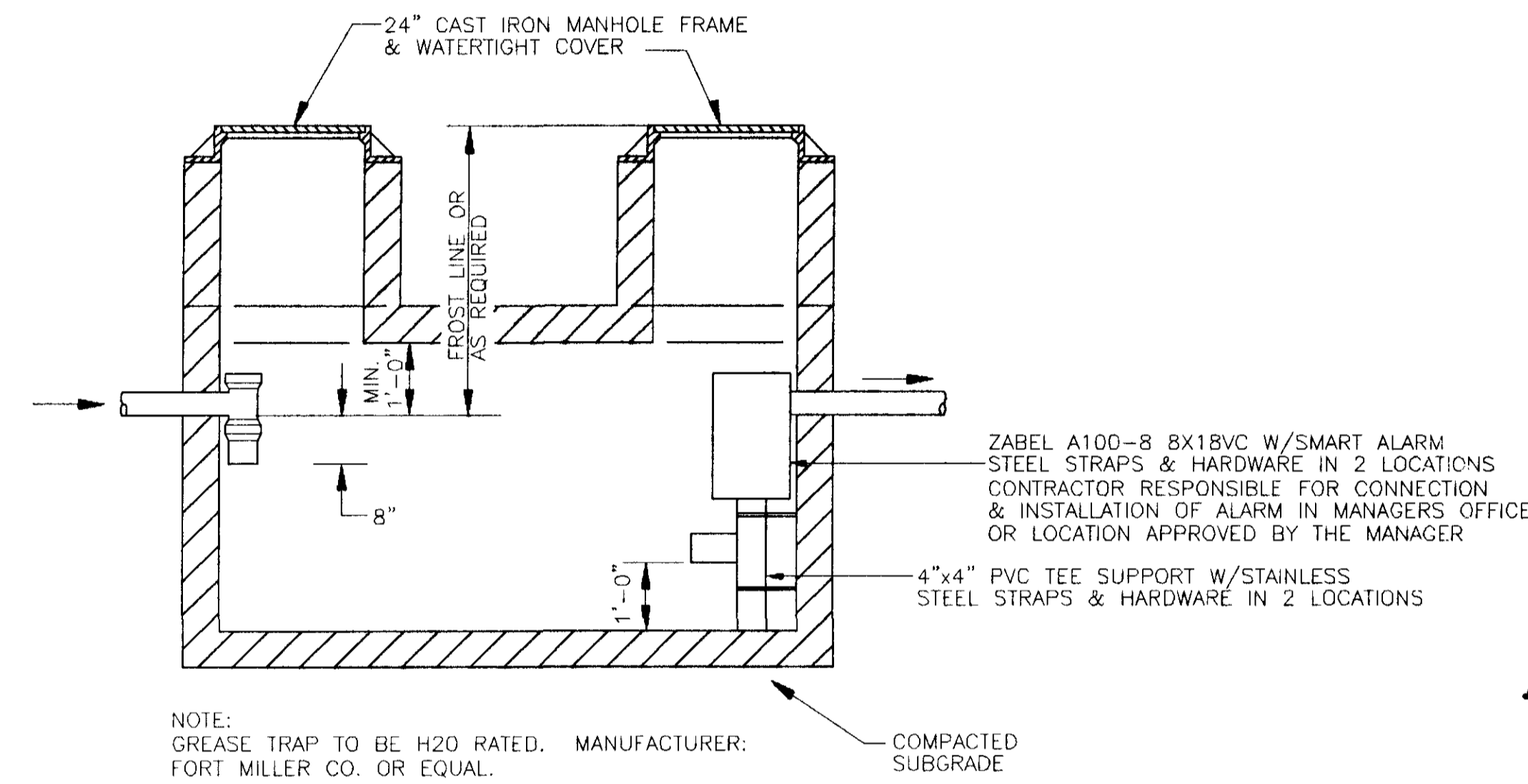


- NOTES:
1. 4" PERFORATED PIPE TO BE PLACED AT A SLOPE OF 1/16" PER FOOT. (MAXIMUM)
 2. MAXIMUM TRENCH DEPTH TO BE 24 INCHES.

LEECH FIELD CROSS SECTION
NOT TO SCALE

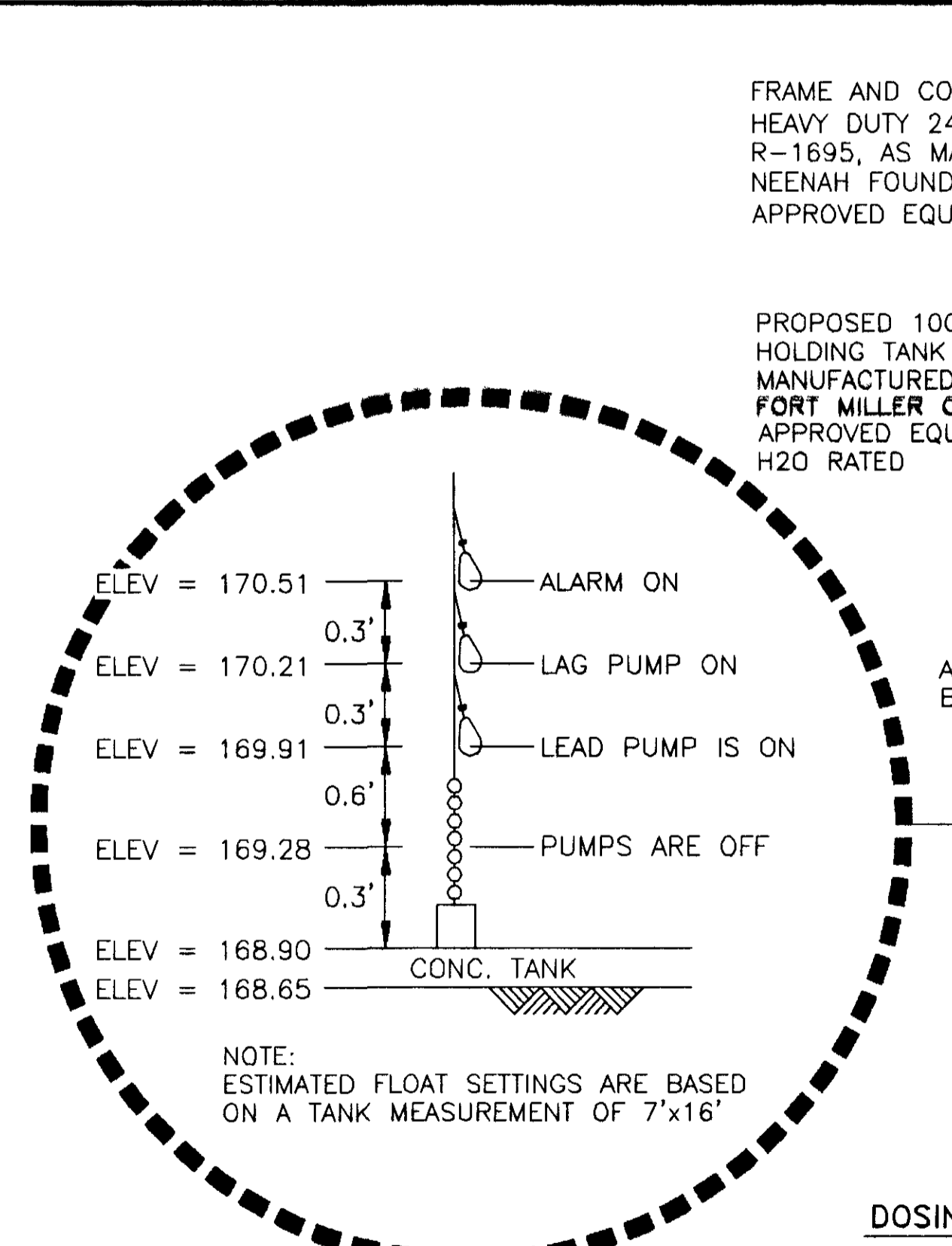


1,000 GALLON EXTERIOR GREASE TRAP
N.T.S.

NOTE:
1) CONTRACTOR RESPONSIBLE FOR CONNECTION & INSTALLATION OF ALARM IN MANAGERS OFFICE OR LOCATION APPROVED BY THE MANAGER

- SEPTIC TANK NOTES:**
- (1) SEPTIC TANK SHALL BE 1000 GALLON HEAVY DUTY WITH INLET KNOCKOUTS PROVIDED ON THREE SIDES AS MANUFACTURED BY THE FORT MILLER COMPANY OR EQUAL.
 - (2) REFER TO PLAN FOR INVERTS AND ELEVATIONS.
 - (3) PROVIDE LOCATION STAKES FOR TANK ACCESS COVERS BELOW GRADE.
 - (4) PROVIDE EXTENSION COLLAR TO GRADE WHEN TANK ACCESS > 12" BELOW GRADE.
 - (5) PROVIDE ASPHALTIC SEAL FOR TANK ACCESS COVERS BELOW GRADE.

- NOTE:**
- 1) ALL SEAMS IN SEPTIC, GREASE, & LIFTSTATION TANKS TO BE ABOVE THE WATER TABLE & SEALED WITH BUTYL, WATERTIGHT.
 - 2) SEPTIC, GREASE, & LIFTSTATION TANKS TO BE HYDROSTATIC TESTED FOR 24 HOURS WITH NO APPRECIABLE LOSS. RESULTS OF THE TEST ARE TO BE PROVIDED IN WRITING TO THE DESIGN ENGINEER. HYDROSTATIC TESTING OF TANKS MUST BE WITNESSED BY CERTIFYING ENGINEER.



APPROXIMATE FLOAT SETTINGS

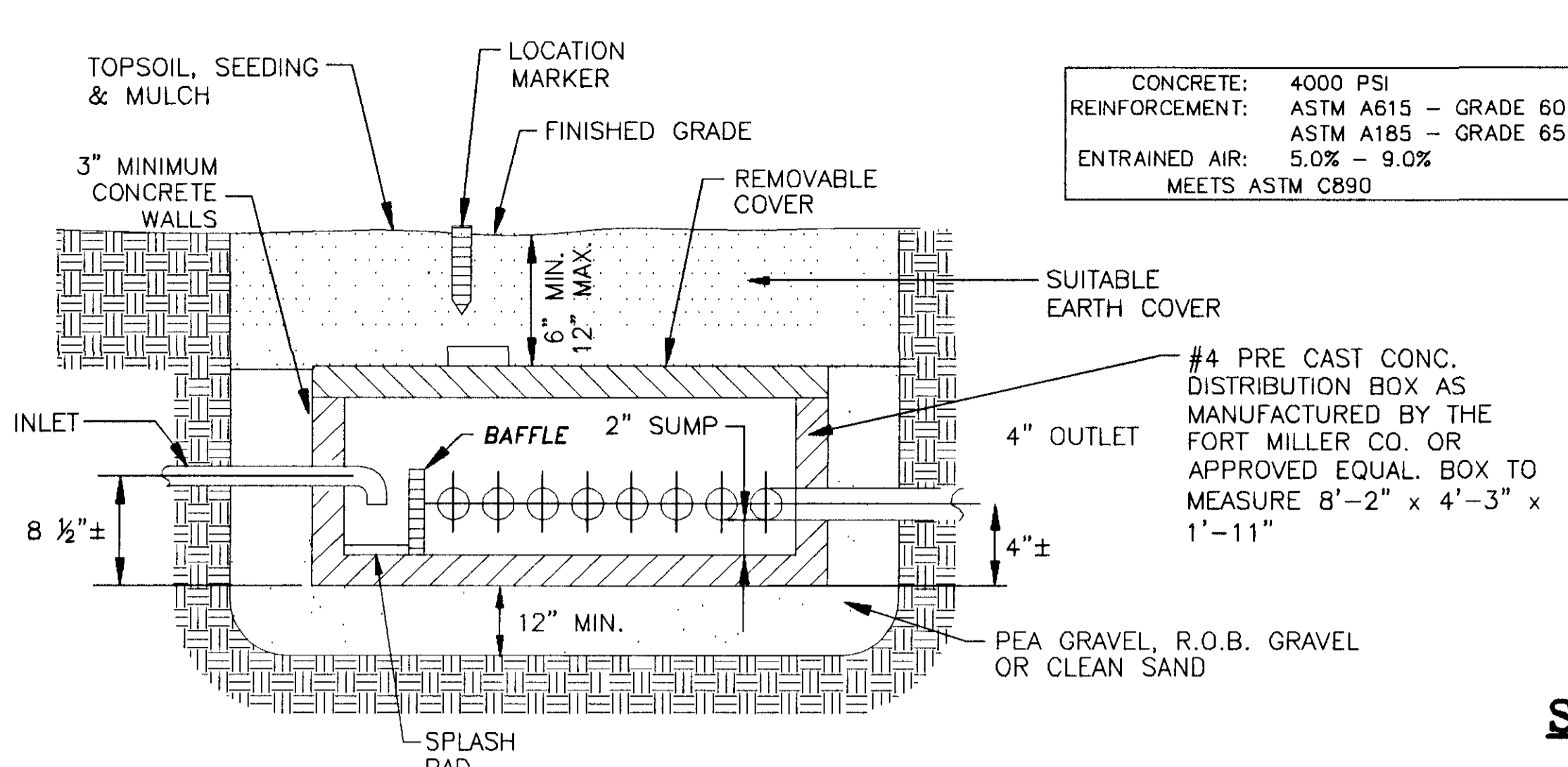
PUMPING CALCULATIONS:
 STATIC HEAD = 5.9' ±
 TOTAL HEAD = 8.0' ±
 PUMP CAPACITY @ 8.0' TOTAL HEAD = 55± GPM
 PUMP RUN TIME = 8± MIN.

DOSING CALCULATIONS:
SYSTEM CAPACITY:
 (5)-4" LATERALS AT 32' = 22.3 C.F.
 7.48 GAL./C.F. = 167 GALLON CAPACITY
 167 (0.75) = 126 GALLON DOSE

TANK ANALYSIS:
 3.6' x 7.5' x 1' = 27.0 CF = 7.48 GAL./CF = 202.0 GAL./FT.
 202.0 GAL./FT / 12 = 16.83 GAL./INCH
 126 GAL. (DOSE) / 16.83 GAL./INCH = 7.50 INCHES/DOSE

PUMP STATION DETAIL
SCALE: NOT TO SCALE

1. ALL ELECTRICAL WORK AND MATERIAL FOR PUMP INSTALLATION SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE.
2. ALL POWER AND CONTROL WIRING SHALL BE MADE DIRECTLY TO THE CONTROL PANEL WITHOUT ANY OUTSIDE SPLICES.
3. THE PUMP CONTROL PANEL, DISCONNECTS AND ALARMS SHALL BE LOCATED INSIDE THE BUILDING.



20 HOLE DISTRIBUTION BOX DETAIL
SCALE: NOT TO SCALE

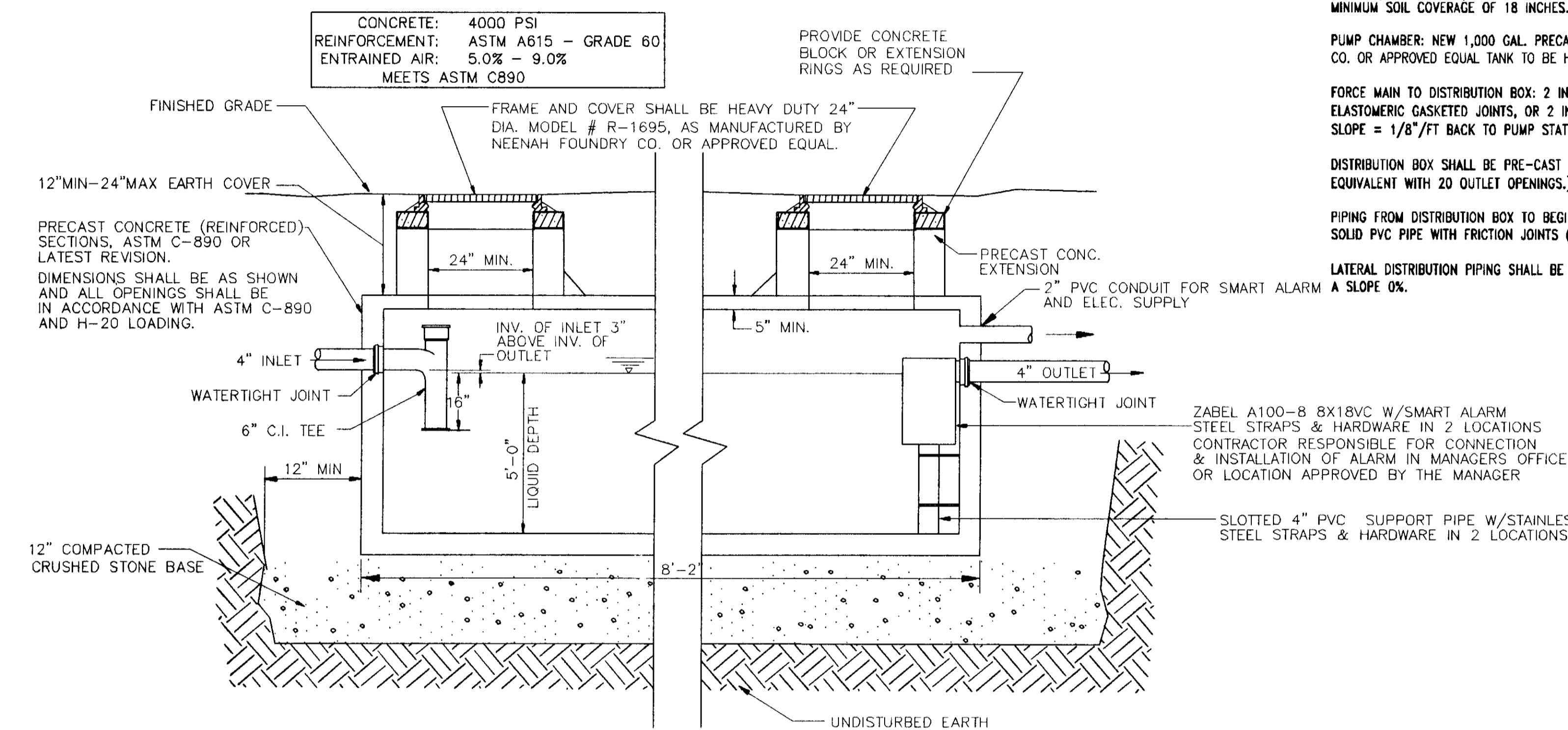
- DISTRIBUTION BOX NOTES:**
- (1) BOX SHALL HAVE 4" DIA. KNOCKOUTS WITH HIGH DENSITY POLYETHYLENE PIPE SEALS.
 - (2) SET LEVEL ON 12 INCHES MINIMUM OF CLEAN SAND, PEA GRAVEL OR 1/2"-1 1/2" AGGREGATE.
 - (3) PROVIDE SPEED LEVELERS FOR ALL OUTLETS.
 - (4) FIRST FIVE FEET OF ALL DISTRIBUTION BOX OUTLET PIPES SHALL BE CONSTRUCTED AT AN EQUAL SLOPE.

SYSTEM SPECIFICATIONS

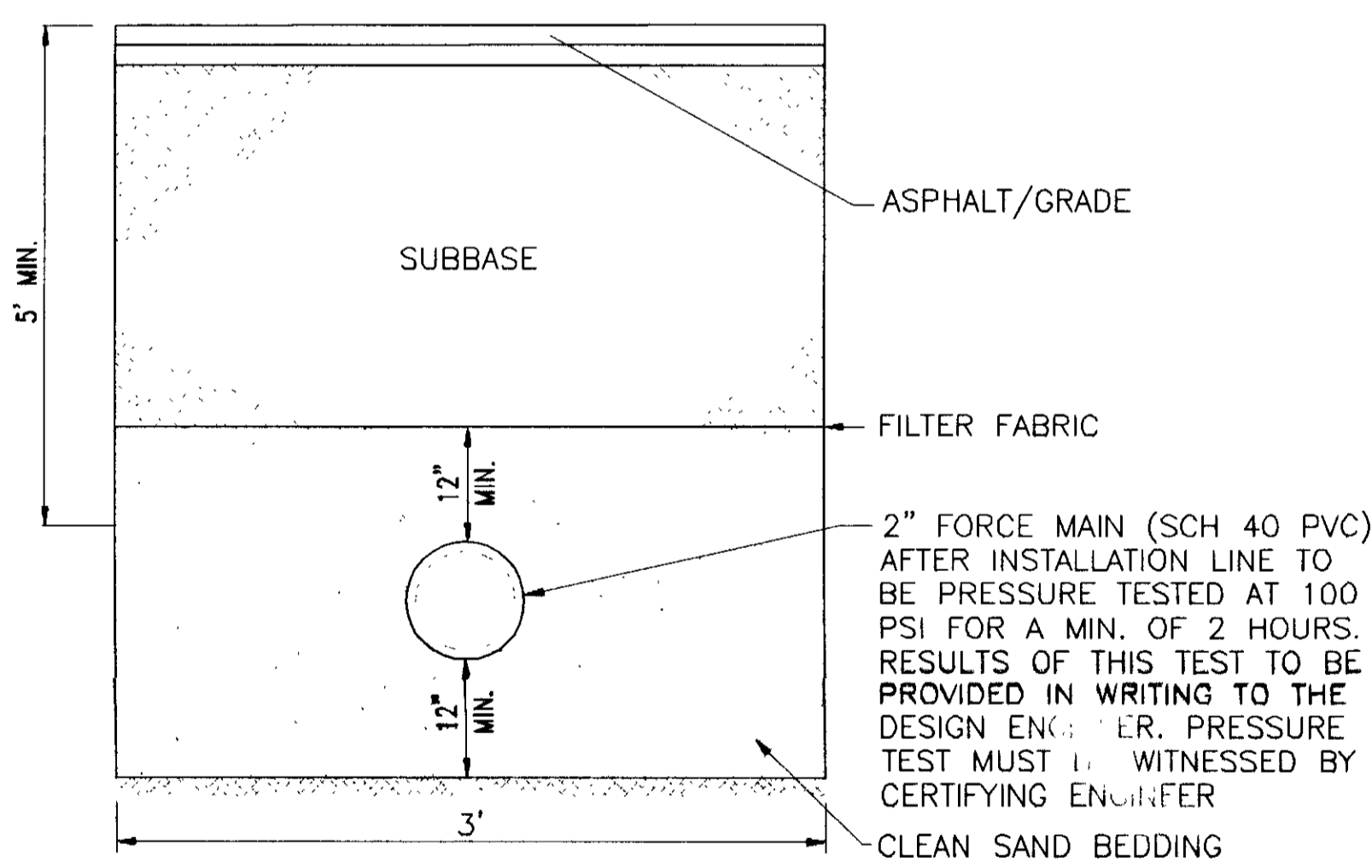
THE BUILDING SEWER, FROM THE BUILDING TO THE SEPTIC TANK, SHALL BE 4 INCH DIAMETER SCH40 SOLID PVC PIPE (ASTM D-1785) WITH TIGHT JOINTS LAID AT A MINIMUM SLOPE OF 1/8" PER FOOT.

SEPTIC TANK SHALL BE THE SAME OR EQUAL TO THE CONCRETE UNITS MANUFACTURED BY THE FORT MILLER COMPANY MEETING THE FOLLOWING SPECIFICATIONS:

- PRECAST REINFORCED CONCRETE
- MINIMUM CAPACITY OF 1,000 GALLONS
- SEPTIC TANK TO PUMP CHAMBER PIPING SHALL BE 4 INCH SCH-35 SOLID PVC PIPE WITH ELASTOMERIC GASKETED JOINTS (ASTM D-5034) LAID AT A MINIMUM SLOPE OF 1/8" PER FOOT.
- FORCE MAIN TO DISTRIBUTION BOX: 2 INCH DIAMETER SDR-21 PVC (200 PSI) FORCE MAIN ASTM D-2241 W/ ELASTOMERIC GASKETED JOINTS, OR 2 INCH SDR-9 POLYETHYLENE (200 PSI) FORCE MAIN ASTM D-2733, MINIMUM SLOPE = 1/8" PER FOOT.
- DISTRIBUTION BOX SHALL BE PRE-CAST REINFORCED CONCRETE WITH BAFFLE (FORT MILLER #4 OR APPROVED EQUIVALENT WITH 30 OUTLET OPENINGS).
- PIPING FROM DISTRIBUTION BOX TO BEGINNING OF LATERAL DISTRIBUTION PIPING SHALL BE 4 INCH DIAMETER SOLID PVC PIPE WITH FRICTION JOINTS (ASTM D-3034), LAID AT A SLOPE OF 1/8" PER FOOT.
- LATERAL DISTRIBUTION PIPING SHALL BE 4" PERFORATED PVC PIPE WITH FRICTION JOINTS (ASTM F-810), LAID AT A SLOPE OF 1/8" PER FOOT.



SEPTIC TANK DETAIL
SCALE: NOT TO SCALE



FORCE MAIN TRENCH DETAIL
SCALE: NOT TO SCALE

PUMP & CONTROL NOTES

EFFLUENT PUMPS

- 1.01 GENERAL
- A. THE SUBMERSIBLE EFFLUENT PUMPS SHALL BE MODEL SHEF40M1AS MANUFACTURED BY HYDRAMATIC PUMPS, ASHLAND, OH. EACH PUMP SHALL BE RATED FOR 55 GPM @ 12' TDH. PUMPS ARE 0.40 HP, 115/1/60, 1550 RPM.

DUPLEX CONTROL PANEL

1.01 GENERAL

- A. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO PROVIDE DUPLEX MOTOR CONTROL PANEL AS SPECIFIED HEREIN. CONTROL PANEL SHALL BE MODEL 1221W114X AS MANUFACTURED BY SJE/RHOMBUS CONTROLS, DETROIT LAKES, MN.
- B. THE MOTOR CONTROL PANEL SHALL BE ASSEMBLED AND TESTED BY A SHOP MEETING ILL. STANDARD 508A FOR INDUSTRIAL CONTROLS. THE MOTOR AND CONTROL PANEL SHALL BE FURNISHED BY THE SAME SUPPLIER SUPPLYING THE PUMP SO AS TO INSURE SUITABILITY AND ASSURANCE OF EXPERIENCE IN MATCHING CONTROLS TO MOTORS AND TO INSURE SINGLE SOURCE RESPONSIBILITY FOR THE EQUIPMENT.
- C. THE CONTROL PANEL SHALL COMPLY WITH THE NEC REGULATIONS AND HAVE A UL LABEL. THE PANEL SHALL CONTAIN ALL COMPONENTS REQUIRED BY THE PUMP MANUFACTURER FOR STARTING AND PROTECTION OF THE MOTOR. ANY FEATURES REQUIRED BY THE PUMP MANUFACTURER FOR WARRANTY OF THE PUMP SHALL BE INCLUDED IN THE CONTROL PANEL.

2.01 CONSTRUCTION

- A. THE CONTROLS FOR THE PUMP SHALL BE CONTAINED IN A FIBERGLASS ENCLOSURE MEETING NEMA 4X REQUIREMENTS WITH A HINGED DOOR AND NEOPRENE GASKET.
- B. THE ENCLOSURE SHALL HAVE PROVISIONS FOR PADLOCKING. A NAMEPLATE SHALL BE PERMANENTLY AFFIXED TO THE PANEL AND INCLUDE THE MODEL NUMBER, VOLTAGE, PHASE, HERTZ, AMPERE RATING AND HORSEPOWER RATING. A WARNING LABEL AGAINST ELECTRIC SHOCK SHALL BE PERMANENTLY AFFIXED TO THE OUTER DOOR.
- C. THE INCOMING POWER SHALL BE 115 VOLTS, 1 PHASE, 60-HERTZ SERVICE. TERMINAL BLOCKS WITH BOX TYPE LUGS SHALL BE SUPPLIED TO TERMINATE ALL WIRING FOR FLOATS AND HEAT AND SEAL SENSORS FOR THE PUMP. THE PUMP LEADS SHALL BE TERMINATED AT THE OVERLOAD RELAY OR AT BOX TYPE TERMINAL BLOCKS. TERMINAL BLOCKS FOR THE FLOAT CONNECTIONS SHALL BE INCLUDED.
- D. A CIRCUIT BREAKER SHALL BE USED TO PROTECT FROM LINE FAULTS AND TO DISCONNECT THE PUMP FROM THE INCOMING POWER. CIRCUIT BREAKER SHALL BE THERMAL MAGNETIC AND SIZED TO MEET NEC REQUIREMENTS FOR MOTOR CONTROL.
- E. THE MAGNETIC STARTERS SHALL INCLUDE A CONTRACTOR WITH A MINIMUM MECHANICAL LIFE OF 3,000,000 OPERATIONS AND A MINIMUM CONTACT LIFE OF 1,000,000 OPERATIONS. A DEFINITE PURPOSE CONTRACTOR SHALL NOT BE ACCEPTABLE. OVERLOAD PROTECTION IS NOT REQUIRED AS THIS IS BUILT INTO PUMP MOTOR.
- F. CONTROL VOLTAGE SHALL BE 120 VAC AND MAY BE ACCOMPLISHED BY THE MEANS OF A TRANSFORMER OR AVAILABLE LINE VOLTAGE. A CONTROL FUSE AND ON/OFF SWITCH SHALL PROTECT AND ISOLATE THE CONTROL VOLTAGE FROM THE LINE.
- G. ALL GROUND CONNECTIONS SHALL BE MADE WITH RING TONGUE TERMINALS AND STAR WASHERS TO ASSURE PROPER GROUND.
- H. A DUPLEX CIRCUIT BOARD SHALL BE INCLUDED. CIRCUIT BOARD SHALL HAVE L. E. D. INDICATORS FOR PUMP RUN, POWER ON, AND FLOAT STATUS. A CONTROL ON/OFF SWITCH SHALL ALSO BE INCLUDED.

3.01 OPTIONS

- A. PANEL SHALL BE EQUIPPED WITH THE FOLLOWING ADDITIONAL FEATURES:
- HIGH-LEVEL ALARM LIGHT (FLASHING)
 - HIGH-LEVEL ALARM HORN WITH PUSH TO SILENCE SWITCH.
 - DRY CONTACTS FOR TELEMETRY OF ALARM CONDITIONS
 - LEAD PUMP SELECTOR SWITCH
 - (3) MERCURY FLOATS WITH 20' CORDS AND EXTERNAL WEIGHTS SHALL BE INCLUDED

GUIDE RAIL SYSTEM:

1.01 GENERAL

- A. GUIDE RAIL SYSTEM SHALL INCLUDE THE FOLLOWING ITEMS FOR EACH PUMP:
- STAINLESS STEEL GUIDE PIPES
 - BUILT-IN CHECK VALVE
 - 2" BRONZE GATE VALVE WITH STAINLESS STEEL EXTENSION HANDLE
 - STAINLESS STEEL LIFT CABLE
 - 2" SCH 80 PVC PIPE AND FITTINGS

DISTRIBUTOR:

1. PUMP & CONTROL DISTRIBUTOR:
 EMMONS PUMP & CONTROL, INC.
 14 ARCH STREET, WATERVLIET, NY 12189
 PHONE: 518-271-2380

STANDARD NOTES FOR NON RESIDENTIAL SEWAGE

THE DESIGN, CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THIS PLAN AND GENERALLY ACCEPTED STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION WHICH INCLUDE:

- "APPENDIX 75A, WASTE TREATMENT INDIVIDUAL HOUSEHOLD SYSTEMS HYCS SANITARY CODE"
- "STANDARDS FOR WASTEWATER TREATMENT WORKS, INSTITUTIONAL AND COMMERCIAL SEWERAGE FACILITIES" (RECOMMENDED STANDARDS FOR SEWAGE TREATMENT WORKS, TEN STATES)
- "NEW YORK STATE DEPARTMENT OF HEALTH AND ALBANY COUNTY DEPARTMENT OF HEALTH POLICIES, PROCEDURES AND STANDARDS"
- "ALBANY COUNTY DEPARTMENT OF HEALTH CERTIFICATE OF APPROVAL LETTER."

"THIS PLAN IS APPROVED AS MEETING THE APPROPRIATE AND APPLIED TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES FOR ARRANGEMENT OF SEWER DISPOSAL AND TREATMENT AND WATER SUPPLY FACILITIES."

"UPON COMPLETION OF THE FACILITIES, THE FINISHED WORKS SHALL BE INSPECTED, TESTED AND CERTIFIED COMPLETE TO THE ALBANY COUNTY HEALTH DEPARTMENT BY THE NEW YORK STATE LICENSED PROFESSIONAL ENGINEER SUPERVISING CONSTRUCTION. NO PART OF THE FACILITIES SHALL BE PLACED INTO SERVICE UNTIL ACCEPTED BY THE ALBANY COUNTY HEALTH DEPARTMENT."

"APPROVAL OF ANY PLANS) OR AMENDMENT THERETO SHALL BE VALID FOR A PERIOD OF FIVE (5) YEARS FROM THE DATE OF APPROVAL. FOLLOWING THE EXPIRATION OF SAID APPROVAL, THE PLAN(S) SHALL BE RE-SUBMITTED TO THE COMMISSIONER OF HEALTH. IF CONSIDERATION FOR RE-APPROVAL, RE-SUBMISSION OR REVISED SUBMISSION OF PLANS AND/OR ASSOCIATED DOCUMENTS SHALL BE SUBJECT TO COMPLIANCE WITH THE TECHNICAL STANDARDS, GUIDELINES, POLICIES AND PROCEDURES IN EFFECT AT THE TIME OF THE RE-SUBMISSION."

ALL WELLS AND SDS EXISTING OR APPROVED WITHIN 200 FEET OF THE PROPOSED WATER SUPPLY AND SDS ARE SHOWN ON THIS PLAN ALONG WITH ANY OTHER ENVIRONMENTAL HAZARDS IN THE AREA THAT MAY AFFECT THE DESIGN AND FUNCTIONAL ABILITY OF THE SDS AND WATER SUPPLY.

- * NO FOOTING FLOOR OR ROOF DRAINS SHALL BE DISCHARGED INTO THE SEWAGE TREATMENT SYSTEM.
- * THE ACHD SHALL BE NOTIFIED PRIOR TO THE BACKFILLING OF ANY COMPLETED SDS SO THAT A FINAL INSPECTION MAY BE PERFORMED.
- * THE ACHD SHALL BE NOTIFIED SIXTY DAYS PRIOR TO ANY CHANGE IN USE. USE CHANGES MAY REQUIRE REAPPROVAL BY THE ACHD.
- * APPLICANTS MUST OBTAIN A NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION SPDES PRIOR TO START OF WORK AND OF WHICH SHALL BE MADE AN INTEGRAL PART OF THE CERTIFICATION OF CONSTRUCTION COMPLIANCE TO THE HEALTH DEPARTMENT.

REV.	DATE	DESCRIPTION
11	11/6/07	REVISED PER TOWN COMMENTS
10	10/29/07	REVISED PER TOWN COMMENTS
9	10/17/07	RESIDENTIAL LANDSCAPE BUFFER INCREASED
8	7/20/07	REVISED PER TOWN COMMENTS
7	6/20/07	BLOCK CANOPY REDUCED / SITE REDESIGNED
6	4/27/07	TRUCK DELIVERY / MAPLE AVE ACCESS
5	4/18/07	REVISED PER DOT COMMENTS
4	3/28/07	REVISED PER TOWN COMMENTS
3	12/12/06	REVISED PER CLIENT COMMENTS
2	11/21/06	FINAL LAYOUT REVISED - SITE SUBMITTAL
1	10/24/06	BLOCK FOOTPRINT REVISED
0		ISSUE FOR SUBMITTAL

BOHLER ENGINEERING, P.C.
 CIVIL & CONSULTING ENGINEERS ■ PROJECT MANAGERS ■ ENVIRONMENTAL & SITE PLANNERS ■ MUNICIPAL ENGINEERS

Other Office Locations:
 ■ Chalfont, PA ■ Ronkonkoma, NY ■ Sterling, VA ■ Warrington, VA ■ Warren, NJ ■ Towson, MD ■ Purchase, NY ■ Southborough, MA

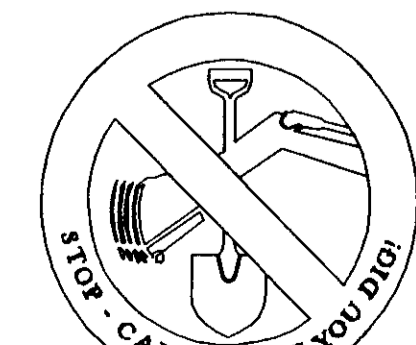
PROJECT: CUMBERLAND FARMS, INC.
 PROP. CONVENIENCE STORE & GAS STATION
 LOTS 7, 8 & 12, BLOCK 1, SECTION 121.04
 NEW YORK STATE HIGHWAY ROUTE 9W
 TOWN OF BETHLEHEM, ALBANY COUNTY, NEW YORK

L.H. BOHLER W.D. GOEBEL

PROFESSIONAL ENGINEER
 NEW YORK LICENSE No. 63409
 NEW JERSEY LICENSE No. 27410
 PENNSYLVANIA LICENSE No. 31784
 CONNECTICUT LICENSE No. 21854
 MASSACHUSETTS LICENSE No. 17518
 MASSACHUSETTS LICENSE No. 37025

PROFESSIONAL ENGINEER
 NEW YORK LICENSE No. 071284
 RHODE ISLAND LICENSE No. 7288
 CONNECTICUT LICENSE No. 21854
 MASSACHUSETTS LICENSE No. 42644
 VERMONT LICENSE No. 7735

SCALE: (H) AS SHOWN (V) NONE DATE: 09/14/06 SHEET No: 8
 DRAWN BY: SAG PROJECT No: B050649
 CHECKED BY: JRG CAD ID: B050649S16
 CONSTRUCTION CHECK DATE



TOWN OF BETHLEHEM APPROVAL AREA

ANY PERSON IS PROHIBITED FROM ALTERING ANYTHING ON THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATIONS, UNLESS IT IS UNDER THE WRITTEN DIRECTION OF A LICENSED PROFESSIONAL ENGINEER OF THE FIRM. IN THE EVENT SUCH ALTERATIONS ARE MADE, THE PROFESSIONAL ENGINEER OF THE FIRM MUST SIGN, SEAL, DATE, AND DESCRIBE THE FULL EXTENT OF THE ALTERATION ON THE DRAWINGS AND/OR IN THE SPECIFICATIONS. (NYS EDUCATION LAW SECTION 2202-2)