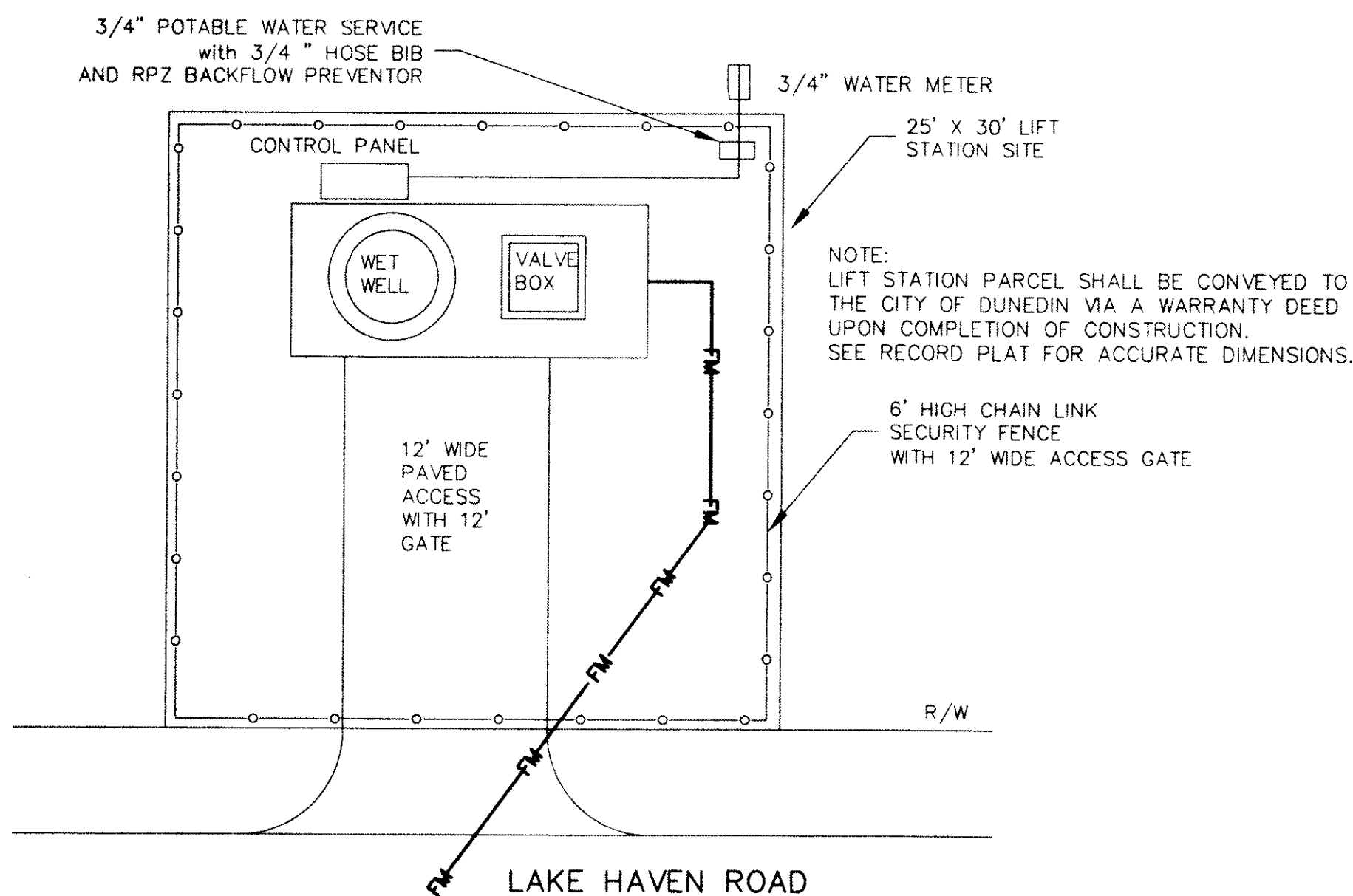
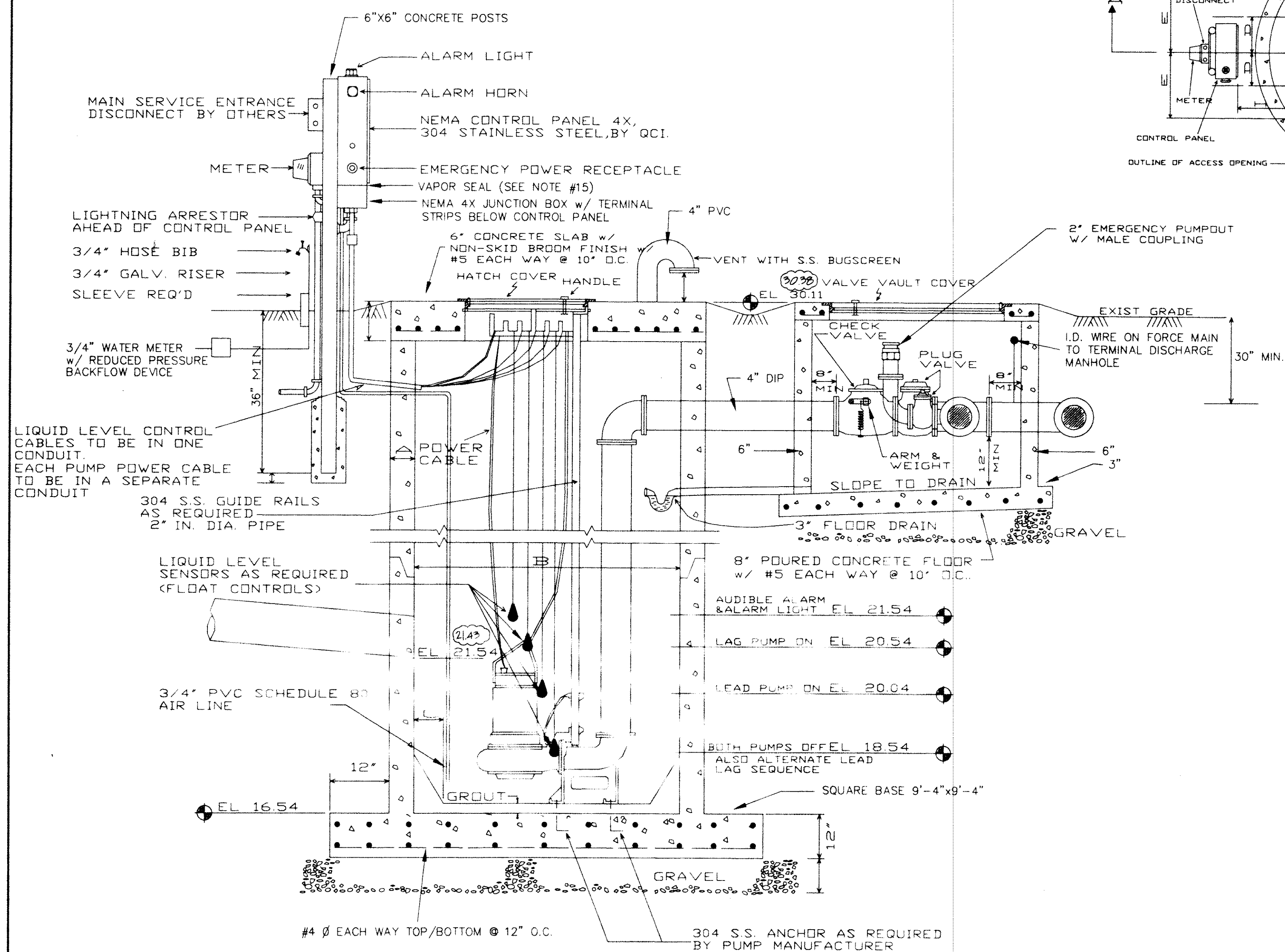


Section 26, Township 28 South, Range 15 East
City of Dunedin, Florida



LIFT STATION PLAN VIEW
N.T.S.

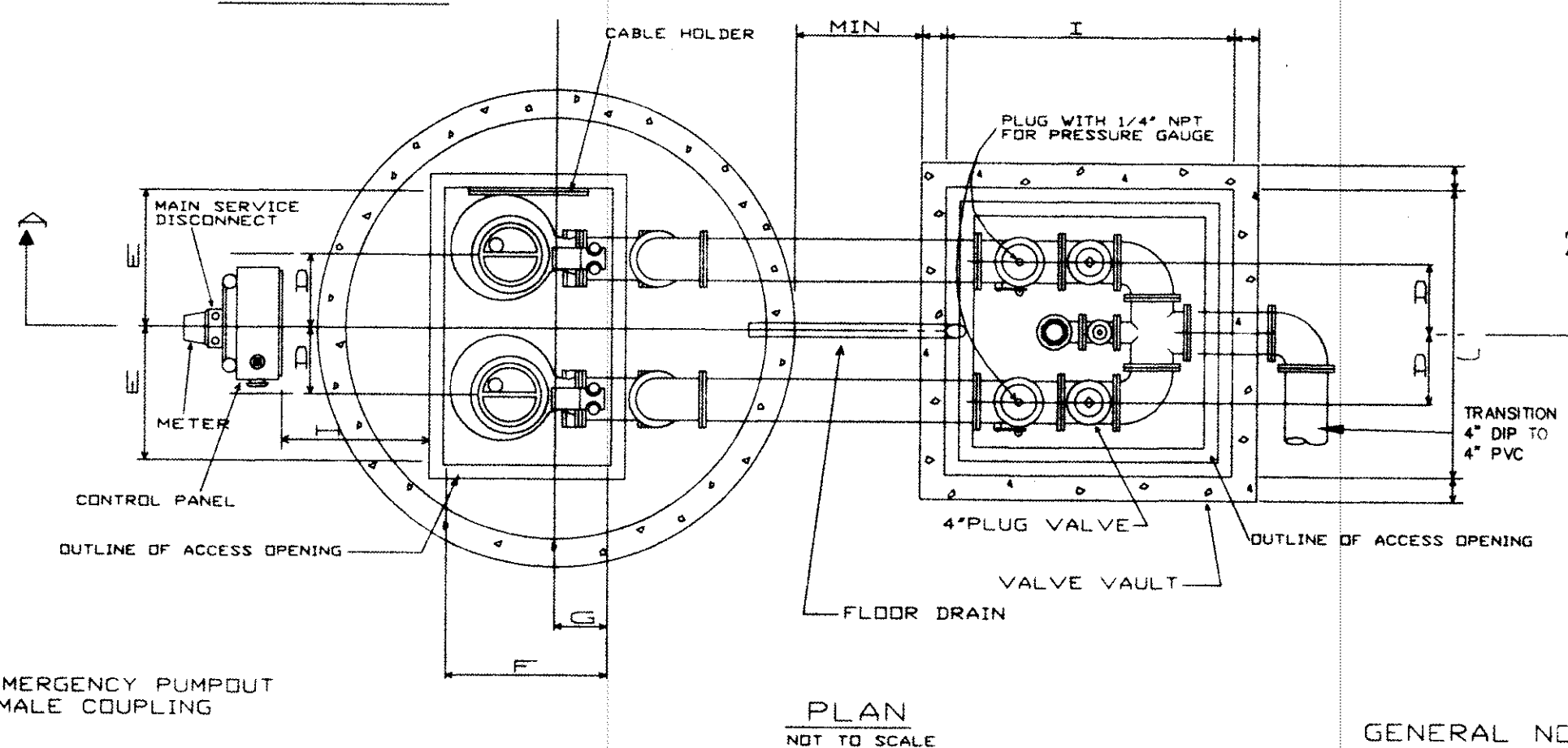


SECTION A-A
NOT TO SCALE

NOTES:

1. ALL DIMENSIONS ARE IN FEET EXCEPT AS NOTED.
2. DRAWING IS NOT TO SCALE.
3. ALL DIMENSIONS AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.
4. PAINT EXPOSED FRP AS REQUIRED BY OWNER/ENGINEER.
5. F.R.P. INDICATES FIBERGLASS REINFORCED POLYESTER.
6. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
- *7. ELECTRICIAN TO RUN TWO (2 HP PUMPS) / THREE (3 HP & LARGER PUMPS) SEPARATE 2" CONDUITS (ONE EACH FOR HIGH & LOW VOLTAGES) PER ELECTRICAL CODE BETWEEN CONTROL PANEL AND WETWELL.
- *8. ALUMINUM WIRE SHALL NOT BE USED BETWEEN MAIN METER AND CONTROL PANEL.
- *9. ELECTRICIAN SHALL SEAL OFF CONDUIT RUNS INSIDE WETWELL AND INSIDE OF CONTROL PANEL.
- *10. ELECTRICIAN TO MOUNT LIGHTNING ARRESTOR AT SWITCH DISCONNECT (AHEAD OF THE PUMP CONTROL PANEL).
11. BOTH WETWELL AND VALVE BOX SHALL BE PROVIDED WITH A MEANS FOR LOCKING.
12. CONTRACTOR SHALL FIELD INSTALL INLET FITTING AT PROPER ELEVATION.
13. ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL.
14. CONTRACTOR SHALL VERIFY POWER SOURCE PRIOR TO ORDERING EQUIPMENT.
- *15. NEUTRAL REQUIRED ON ALL ELECTRICAL SERVICE TO CONTROL PANEL.
16. CONTROL PANEL TO MEET FDEP MINIMUM SPECS.
17. PUMPS TO BE ABLE TO PASS 3" SOLID.
18. EQUIPMENT CONTROL PANEL TO BE EQUIPPED WITH A SEAL FAILURE MODULE. AND AUDIBLE AND VISUAL ALARMS.
19. THE WETWELL, VALVE BOX AND CONTROL PANEL TO BE ABOVE THE 100 YR FLOOD ELEVATION.
20. PUMPS TO AUTOMATICALLY ALTERNATE "START UPS".
21. NO HAZARDOUS WASTE TO BE INTRODUCED INTO LIFT STATION OR SANITARY SEWER SYSTEM.

* ELECTRICIAN NOTE



BOUYANCY CALCULATION

TOTAL VOLUME OF WET WELL 383.488 CU. FT.
UPLIFT FROM BOUYANCY 62.4 LBS. PER CU. FT.
TOTAL UPLIFT 40,810 LBS.
STATIC WEIGHT OF CONCRETE 150 LBS. PER CU. FT.
TOTAL VOLUME OF CONCRETE REQUIRED TO CONSTRUCT WETWELL 191 CU. FT.
TOTAL STATIC WEIGHT OF WET WELL 28650 LBS.
VOLUME OF BASE 87 CU. FT.
STATIC WEIGHT OF BASE 13,057 LBS.
STATIC WEIGHT OF EARTH 100 LBS./CU. FT.
VOLUME OF EARTH ON BASE 61,065 LBS.
TOTAL DOWNWARD FORCE 102,772 LBS. > 40810 LBS = OK

CYCLE TIME CALCULATION

$T = \frac{V}{Q-S}$
 $T = \frac{V}{Q-S}$
 $T = \text{TIME FOR 1 CYCLE IN MINUTES}$
 $V = \text{EFFECTIVE VOLUME OF WET WELL} = 317.2 \text{ gal.}$
 $Q = \text{PUMP RATE (GPM)} = 80 \text{ gpm}$
 $S = \text{FLOW INTO WET WELL (gpm)} = 69.3 \text{ gpm}$
 $T = \frac{317.2}{80-69.3} = \frac{317.2}{69.3}$
 $T = 29.64 + 4.58$
 $T = 34.2 \text{ min.}$

LIFT STATION DATA

PUMPING STATIONS	DIMENSIONS	ELEV AT CONST
DM A	8"	
DM B	6.0	
DM C	12"	
DM D	13"	
DM E	24"	
DM F	30"	
DM G	3"	
DM I	40" MIN.	
DM J	30" MIN.	
ELEV T	13.75	
ELEV U	15.75	
ELEV V	17.25	
ELEV W	17.75	
ELEV X	18.75	
ELEV Y	29.50	
ELEV Z	18.75	
SINGLE PHASE PUMP CAPACITY 90 GPM @ 19 FT.		
3 PHASE PUMP CAPACITY 100 GPM @ 20 FT.		
DESIGN CONDITIONS 80 GPM @ 17.2 FT		

- * 3 PHASE POWER IS AVAILABLE AS CONFIRMED BY FLORIDA POWER.

GENERAL NOTES:

1. CONTROL PANEL TO MEET FDEP AND THE CITY OF DUNEDIN MINIMUM SPECIFICATIONS.
2. PUMPS SHALL BE FLYGT C-3085 W/ 438 IMPELLER, 2.0 HP, 3 PHASE, 220 VOLTS
3. WET WELL AND VALVE VAULT SHALL BE COATED INSIDE AND OUTSIDE WITH THANE COAT FE-100.
4. BASE AND FIRST RISER UNIT TO BE CAST MONOLITHIC.
5. VALVE VAULT SHALL BE SIZED TO PERMIT EASY REMOVAL OF CHECK VALVE TO WET WELL.
6. VALVE VAULT SHALL HAVE SEALED FLOOR SLOPED TO DRAIN TO 3" FLOOR DRAIN.
7. ALL LOCATIONS WHERE PIPES ENTER OR LEAVE THE WET WELL OR VALVE VAULT SHALL BE MADE WATERTIGHT WITH WALL SLEEVE OR NON-SHRINK GROUT.
8. PUMP LIFTING DEVICE SHALL BE GRIP-EYE, 304 SS CHAIN, OR 304 SS LIFTING CABLE.
9. THERE SHALL BE NO ELECTRICAL JUNCTION BOXES IN WET WELL.
10. CHECK VALVES SHALL BE KENNEDY WITH EXTERNAL ARM & WEIGHT.
11. WET WELL & VALVE VAULT COVERS SHALL BE ALUMINUM WITH 304SS HARDWARE AS SUPPLIED AND REQUIRED BY PUMP MANUFACTURER (LOADING 300 PSF).
12. CONTROL PANEL SHALL HAVE SQUARE D BREAKERS, FULL SIZE STARTERS, HSQ TELEMETRY SYSTEM, R.T.U. ANTENNA AND POLE AS REQUIRED BY THE CITY OF DUNEDIN.
13. LIQUID LEVEL SENSORS SHALL BE AS MANUFACTURED BY ANCHOR SCIENTIFIC WITH D-152 MAIN CONTROL.
14. NEMA 4 X JUNCTION BOX WITH TERMINAL STRIPS REQUIRED BELOW CONTROL PANEL.
15. VAPOR SEAL REQUIRED BETWEEN JUNCTION BOX AND CONTROL PANEL.
16. 3/4 inch SCHD. 80 PVC AIR LINE REQUIRED FROM CONTROL PANEL TO BOTTOM OF LIFT STATION. METERED CONNECTION TO BE EQUIPPED WITH A REDUCED PRESSURE BACKFLOW DEVICE.
17. PRECAST REINFORCED CONCRETE WET WELL SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-47 AND ASTM C-76 SQUARE BASE REQUIRED FOR WET WELL.

LIFT STATION DETAILS 14

VIRGINA CROSSING

HIGHMARK DEVELOPMENT GROUP, Inc.

1403 VIRGINIA STREET
DUNEDIN, FLORIDA 34698 Ph. (813) 735-6100

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SHEET

OF 17