

FOUNDATION NOTES:

1. FOUNDATIONS ARE DESIGNED FOR A 500,000 GAL. x 55'-6" DIA. x 102'-6" H.W.L. PEDESHERE PER THE FOLLOWING DESIGN CRITERIA:

CODES: AWWA D100-11, ACI 318-08, PROJECT SPECIFICATIONS, AND PLANS.

WIND: AWWA D100-11:
BASIC WIND SPEED: 90 MPH, I = 1.15

SEISMIC: AWWA D100-11:
 $S_s = 0.24g$, $S_1 = 0.076g$
USE GROUP: III, $I_e = 1.50$
SITE CLASS: D
RESPONSE MODIFICATION FACTOR = 3.0

SNOW: 25 PSF

2. TANK FOUNDATION HAS BEEN DESIGNED PER THE GEOTECHNICAL REPORT BY: GEOTECHNICS, INC., ROANOKE, VIRGINIA, DATED: 08/26/2019.
COMMISSION NUMBER: 5163

3. TANK STRUCTURE IS TO BE SUPPORTED ON A SHALLOW FOUNDATION WITH A NET ALLOWABLE BEARING OF 4,000 PSF. BEARING VALUES CAN BE INCREASED FOR SEISMIC LOADS BY 33.3% PER AWWA D100-11. BEARING VALUES INCLUDE A FACTOR OF SAFETY PER AWWA D100-11.

4. FOUNDATION MUST BE BUILT IN COMPLETE ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND PLANS, THE GEOTECHNICAL REPORT, ACI 318-08, AND ACI 301-05. THE TOP OF THE RINGWALL IS TO BE LEVEL WITHIN 1/8" ± IN 30 FEET WITH A MAXIMUM DIFFERENTIAL OF 1/4" ± BETWEEN ANY TWO POINTS ALONG THE CIRCUMFERENCE. OTHER DIMENSIONS HAVE A TOLERANCE OF 1/4" ± EXCEPT FOR THE ANCHOR BOLTS.

5. THE 28 DAY MINIMUM COMPRESSIVE STRENGTH OF CONCRETE FOR THE FOUNDATION SHALL BE 4,000 PSI. CONCRETE MIXING, TESTING, CURING, AND QUALITY CONTROL SHALL BE PER ACI 318-08, ACI 301-05, AND THE PROJECT SPECIFICATIONS.

6. CONTRACTOR SHALL PROVIDE SIX TEST CYLINDERS PER POUR. CYLINDERS ARE TO BE TESTED BY THE FOLLOWING SCHEDULE: ONE AT SEVEN DAYS, ONE AT FOURTEEN DAYS, AND TWO AT TWENTY EIGHT DAYS. THE REMAINING TWO SHALL BE HELD IN RESERVE. BREAK REPORTS, INCLUDING LOCATION OF POUR, ARE TO BE FURNISHED TO CALDWELL TANKS, INC.

7. CONSTRUCTION JOINTS ARE TO BE ROUGHENED ACROSS ENTIRE FACE WITH 1/4" MINIMUM INDENTATIONS. AN APPROVED BONDING AGENT SHALL BE USED ON CONSTRUCTION JOINTS THAT ARE MORE THAN SEVEN DAYS OLD. CONTACT CALDWELL TANKS FOR FURTHER DIRECTION IF REQUIRED.

8. ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60 DEFORMED BARS. SPLICES AND HOOKS ARE TO MEET REQUIREMENTS SET FORTH IN ACI 318-08 SECTION 12 FOR TENSION. SPLICES IN ADJACENT BARS SHALL BE SPACED A MINIMUM OF THREE FEET. MINIMUM CONCRETE COVER REQUIREMENTS ARE IN ACCORDANCE WITH ACI 318-08 SECTION 7.7 AS LISTED BELOW:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
CONCRETE EXPOSED TO EARTH OR WEATHER: (#6 BAR AND LARGER) 2"

(OTHERWISE) 1 1/2"

9. ANCHOR BOLTS WILL BE SUPPLIED BY CALDWELL TANKS, INC., AND INSTALLED BY THE FOUNDATION SUBCONTRACTOR. THEY SHALL BE PLACED AS EXACTLY SHOWN ON THE DRAWINGS. SEE DRAWING AB1 FOR INFORMATION ON THE ANCHOR BOLTS.

10. PIPES, FITTINGS AND ACCESSORIES LOCATED ABOVE 12" BASE ELBOW AT FLOOR LEVEL WILL BE SUPPLIED AND INSTALLED BY CALDWELL TANKS, INC., (SEE DWG. F3 FOR ILLUSTRATION). FOUNDATION PIPE SLEEVES WILL BE SUPPLIED BY CALDWELL TANKS, INC., & INSTALLED BY FOUNDATION SUBCONTRACTOR. ALL OTHER FLOOR AND FOUNDATION PIPING AND FOUNDATION ACCESSORY ITEMS WITHIN THE PROJECT LIMITS ARE THE RESPONSIBILITY OF THE FOUNDATION SUBCONTRACTOR.

11. FOUNDATION IS TO BE POURED ON FIRM RESIDUM AS DEFINED IN THE GEOTECHNICAL REPORT. PRIOR TO CONCRETE PLACEMENT THE BEARING SURFACE SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEERING REPRESENTATIVE TO THE DEGREE REQUIRED BY THE PROJECT GEOTECHNICAL ENGINEER. IF EXPECTED SOIL CONDITIONS ARE NOT FOUND AT THE ANTICIPATED LEVEL, THEN EXCAVATION MUST BE STOPPED AND CALDWELL TANKS, INC., MUST BE NOTIFIED IMMEDIATELY FOR FURTHER DIRECTION. (502-964-3361)

12. IF THE WATER TABLE IS ENCOUNTERED DURING EXCAVATION AND PREVIOUS STEPS FOR DEWATERING HAVE NOT BEEN TAKEN, EXCAVATION MUST BE STOPPED AND CALDWELL TANKS, INC., MUST BE NOTIFIED IMMEDIATELY (515-669-7774). GROUNDWATER WAS NOT ENCOUNTERED AT THE TIME OF SOIL EXPLORATION. FOUNDATION SUB CONTRACTOR SHALL REMOVE ALL PERCHED WATER AND RAIN WATER THAT ENTERS THE FOUNDATION EXCAVATION. SEE THE GEOTECHNICAL REPORT FOR MORE INFORMATION.

13. IF RAINFALL IS IMMINENT OR IF EXCAVATION MUST REMAIN OPEN OVERNIGHT, A 4"-6" "MUD-MAT" OF MINIMUM 2000 PSI STRENGTH CONCRETE SHALL BE POURED OVER BEARING SOILS WITH THE TOP OF THE CONCRETE BEING AT BEARING GRADE. IF WATER DOES ENTER EXCAVATION OR IF UNSUITABLE SOILS ARE ENCOUNTERED, SOFTENED SOILS SHALL BE COMPLETELY REMOVED AND EXCAVATION BROUGHT BACK TO GRADE WITH A "MUD-MAT".

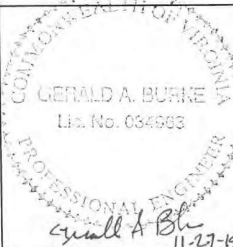

14. SOFT OR LOOSE SOIL ZONES ENCOUNTERED AT THE BOTTOM OF THE FOOTING EXCAVATIONS SHOULD BE REMOVED TO THE LEVEL OF SUITABLE SOILS, AND REPLACED WITH ADEQUATELY COMPACTED STRUCTURAL FILL. ANY SOIL MATERIAL IMPORTED AS STRUCTURAL FILL SHOULD MEET THE CRITERIA AS DEFINED IN THE GEOTECHNICAL REPORT. BACKFILL IS TO BE PLACED IN 8" LOOSE LIFTS AND THEN COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698). MOISTURE CONTENT AT THE TIME OF COMPACTION SHALL BE 3% (±) OF THE OPTIMUM MOISTURE CONTENT.

FOUNDATION QUANTITIES:

RING FOUNDATION w/ FOOTING
CONCRETE ---- 115 CU. YDS.
REINFORCEMENT --- 18,300 LBS

FLOOR
CONCRETE ---- 7 CU. YDS.
REINFORCEMENT --- 200 LBS.

AS-BUILT

			
REV.	BY:	DATE	REMARKS
			
FRANKLIN COUNTY, VIRGINIA 500,000 GALLON PEDESHERE			
BY: TSY/ao	TITLE: FOUNDATION NOTES		
DATE: 11/15/19	DRAWING NO.: E-8884		F1 OF 4