PILE DESIGN SPECIFICATIONS:

1. PILE DESIGN LOADS (FACTORED LOADS):

   – SEE CCMC REPORT 13691–R FOR PILE TYPE SP1

   – MAXIMUM ALLOWABLE LOAD
   COMPRESSION = 111.0 kN (25.0 kips)
   TENSION = 84.5 kN (19.0 kips)

2. DESIGN CRITERIA:
a) SOIL ASSUMED TO BE GENERALLY AS FOLLOWS:
SOIL LAYER
   • STIFF CLAY OR DENSE SAND

3. PILE INSTALLER TO USE CALIBRATED EQUIPMENT AND CREATE PILE INSTALLATION REPORT (INCLUDING TORQUE AND DEPTH READINGS) AND SUBMIT TO ENGINEER UPON COMPLETION.

   MAXIMUM INSTALL TORQUE - 6.8 kN-m (5.0 ft-kip)

4. IF MINIMUM TORQUE IS NOT ACHIEVED EXTENSIONS SHOULD BE ADDED TO ACHIEVE GREATER EMBEDMENT AND/OR GREATER TORQUE.

5. MINIMUM PILE EMBEDMENT HELIX MUST BE SITUATED BELOW MAXIMUM FROST PENETRATION DEPTH.

6. TOLERANCES:
   • PILE TOP TO BE LOCATED WITHIN 40mm (1.5 in) OF CENTER OF APPLIED LOAD.
   • PILE TO BE INSTALLED WITHIN 1.5 DEGREES OF VERTICAL.

7. STRUCTURAL STEEL MEMBERS SHALL CONFORM TO:
CSA S16.1–01 (LIMIT STATE DESIGN).
PIPE SHAFT – MINIMUM ASTM A252 GRADE 3 STEEL PIPE, STANDARD SPECIFICATION FOR WELDED OR SEAMLESS STEEL PIPE PILES.
HELIX PLATE – ASTM A36 OR CSA G40.21 44W HOT ROLLED STRUCTURAL STEEL PLATE.
(NEW MATERIAL ONLY)

8. WELDING TO CONFORM TO:
CSA W59 AND CSA W47.1
WELD TENSILE STRENGTH = 480 MPa (69.6 ksi)
ALL WELDS TO BE 5/16" (7.9) FILLET WELDS UNLESS NOTED OTHERWISE.

9. CORROSION CRITERIA (ASSUMED):
CORROSION RATE = 0.03 mm/year
DESIGN LIFE = 50 years (BARE), 100 years (HDG)
WALL THICKNESS LOSS OUTSIDE = 1.5 mm

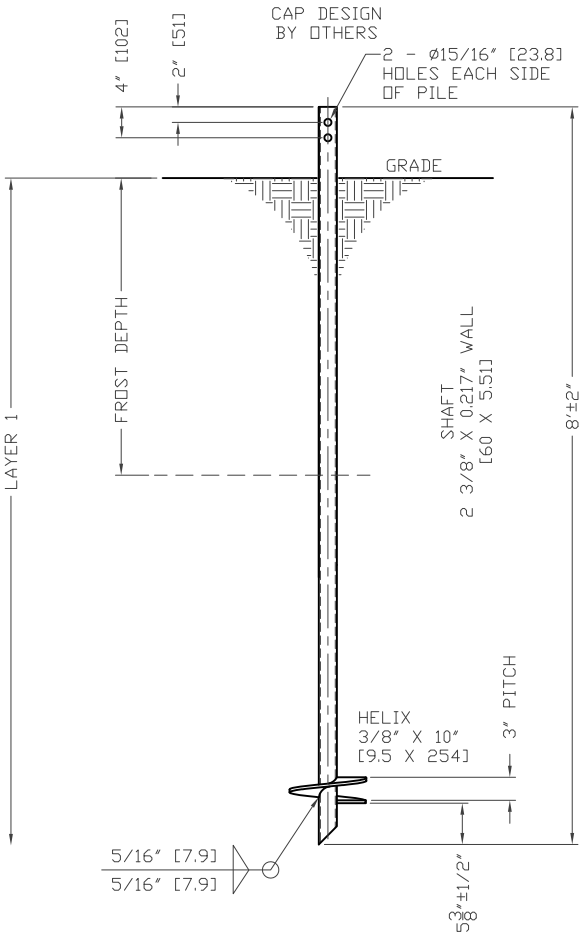
10. PILES TO BE GALVANIZED. GALVANIZING TO CONFORM ASTM A123 "STANDARD SPECIFICATION FOR ZINC COATINGS ON IRON AND STEEL PRODUCTS".
GALVANIZING OF STEEL SHALL BE DONE AS FOLLOWS:
   – SURFACE PREPARATION AND FABRICATION FOR MATERIALS TO BE GALVANIZED SHALL BE COMPLY WITH ASTM A385.
   – RECOMMENDED PRACTICE FOR PROVIDING HIGH QUALITY ZINC COATINGS (HOT DIP) AND REFERENCE ASTM A123.

11. FABRICATION SHALL BE CARRIED OUT IN ACCORDANCE WITH STANDARD PRACTICES AND ALL APPLICABLE CODES.

12. ABOVE DESIGN AND COMPONENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE, N.B.C. AND APPLICABLE BUILDING CODES.

13. ALL PILES TO BE INSPECTED PRIOR TO INSTALLATION. STRUCTURALLY DAMAGED PILES SHOULD NOT BE INSTALLED.

NOTE:
   – THIS DESIGN AND INFORMATION IS SPECIAL TO ALMITA'S PRODUCT AND IS NON–TRANSFERABLE TO OTHER MANUFACTURERS.



SP1 PILE DETAIL
PIL-0238-217-08-G-001

LICENSED PROFESSIONAL ENGINEER
R. A. SCHMIDT
100168159
Apr 1, 2022
PROVINCE OF ONTARIO

THIS DRAWING IS VALID ONLY UNTIL MARCH 01, 2023.

Disclaimer

Almita's screw piles are designed for use only under certain conditions. Only a certified engineer is qualified to determine the safe and proper use of these screw piles based on project design requirements, site and soil specifications and other data relevant to their use. This generic drawing is intended to outline general engineering information and product quality specifications only. Almita has not been provided any information about the site or project for which the piles are to be utilized, and therefore, shall not be held liable for any losses, damages, or claims of any kind arising from the use of the piles, including but not limited to the installation of the piles or any errors, omissions, conflicts or discrepancies in the information the customer uses or provides to any third party for the purpose of particular site or project. Almita is under no obligation to verify or check the completeness or accuracy of the work done relative to the use and/or installation of the piles.

Piles are provided on an "as is" basis. The customer acknowledges that it has been given the opportunity to inspect the piles before agreeing to their purchase and before taking delivery. Almita provides no warranty for any pile installation that has not been provided by Almita or under Almita's direct supervision.

Almita PILING
115, 625 PARSONS ROAD SW
Edmonton, AB T6X 0W9
1-800-363-4868
www.almita.com

REV.	DATE–D.M.Y	DESCRIPTION
0	29.03.22	ISSUED FOR CONSTRUCTION

CLIENT		DRAWING NUMBER		REV.
VARIOUS		PRJ–2022–IN1003–14		0
PROJECT		DRAWN BY	REVIEWED BY	SCALE
RESIDENTIAL FOUNDATIONS (LIGHTLY LOADED DECKS)		HI	RS	NTS
SHEET TITLE		ISSUED FOR		
SCREW PILE TYPE SP1 X 8' LG		CONSTRUCTION		
LOCATION	ORIGINAL ISSUE DATE	PROJECT NUMBER		
VARIOUS – ON.	MAR. 29, 2022	PRJ–2022–IN1003	SHEET 1 OF 1	