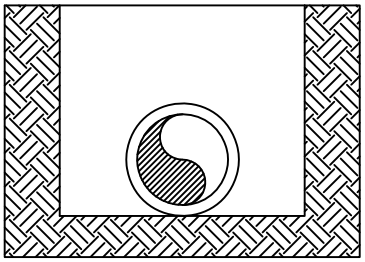
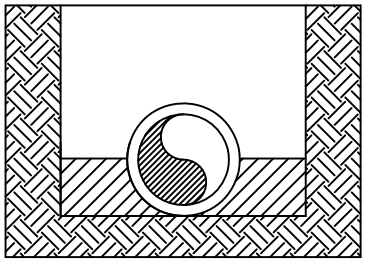


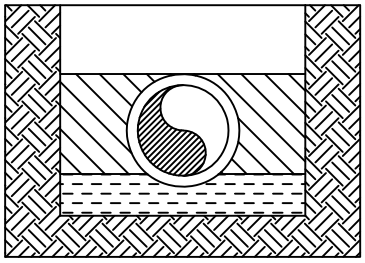
TYPE 1

FLAT–BOTTOM* TRENCH, LOOSE EMBEDMENT
E = 50 psi (340 kPa). K = 0.110



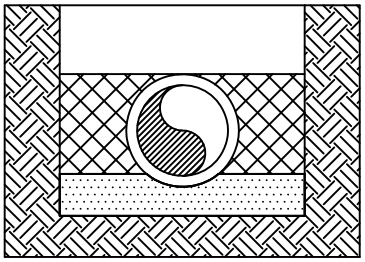
TYPE 2

FLAT–BOTTOM* TRENCH, EMBEDMENT LIGHTLY CONSOLIDATED TO CENTERLINE OF PIPE.
E = 200 psi (1,380 kPa). K = 0.110



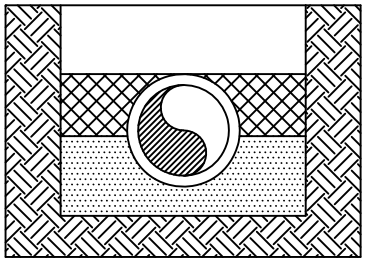
TYPE 3

PIPE BEDDED ON 4" (100 mm) MINIMUM OF LOOSE SOIL.** EMBEDMENT LIGHTLY CONSOLIDATED TO TOP OF PIPE.
E = 400 psi (2,760 kPa). K = 0.102



TYPE 4

PIPE BEDDED ON SAND, GRAVEL OR CRUSHED STONE TO DEPTH OF 1/8 PIPE DIAMETER, 4" (100 mm) MINIMUM. EMBEDMENT COMPACTED TO TOP OF PIPE.(APPROXIMATELY 80% STANDARD PROCTOR. AASHTO T–99 OR ASTM D 698)
E = 1,000 psi (6,900 kPa). K = 0.096



TYPE 5

PIPE ENBEDDED IN COMPACTED GRANULAR MATERIAL TO CENTERLINE OF PIPE. COMPACTED GRANULAR OR SELECT MATERIAL TO TOP OF PIPE. (APPROXIMATELY 90% STANDARD PROCTOR. AASHTO T–99 OR ASTM D 698)
E = 2,000 psi (13,800 kPa). K = 0.083

NOTE: REQUIRED EMBEDMENT TYPE WILL DEPEND ON THE PIPE'S DIMENSION RATIO, INTERNAL OPERATIING PRESSURE, AND EXTERNAL LOAD, AND SHALL BE SPECIFIED BY THE PURCHASER.(SEE SEC. 5.3)

* "FLAT–BOTTOM" IS DEFINED AS UNDISTURBED EARTH.
** "LOOSE SOIL" OR "SELECT MATERIAL" IS DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS FOREIGN MATERIAL, AND FROZEN EARTH. A SOFT "LOOSE SOIL" BEDDING WILL CONTOUR TO THE PIPE BOTTOM. CAUTION MUST BE EXERCISED TO ENSURE PROPER PLACEMENT OF EMBEDMENT MATERIAL UNDER THE HAUNCHES OF THE PIPE.

From AWWA C.605
UNDERGROUND INSTALLATION OF PVC PIPE

EMERALD COAST UTILITIES AUTHORITY

SCALE:	N.T.S.
DATE:	12/18/14

PIPE ENVELOPE REQUIREMENTS

DETAIL

D-60