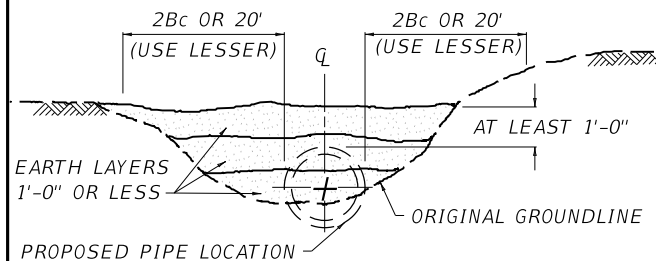
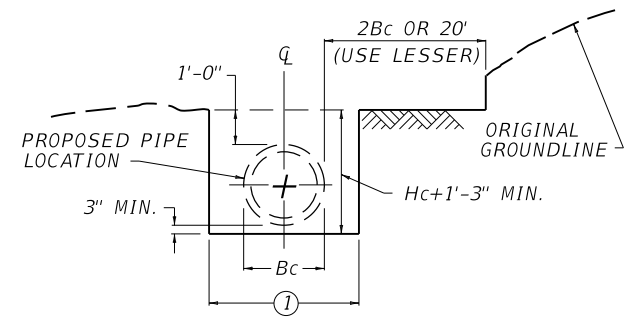


**STEP 1**



- a. IF THE ORIGINAL GROUNDLINE IS AT LEAST 1'-0" ABOVE TOP OF PROPOSED PIPE FOR A WIDTH OF 2Bc OR 20' (WHICHEVER IS LESS) ON EACH SIDE OF THE PIPE GO DIRECTLY TO "STEP 2".
- b. IF ORIGINAL GROUNDLINE IS NOT AT LEAST 1'-0" ABOVE TOP OF PROPOSED PIPE, COMPACT EMBANKMENT IN LAYERS 1'-0" OR LESS TO ELEVATION AND WIDTH SHOWN.  MEET DENSITY REQUIREMENTS FOR PROPOSED EMBANKMENT .

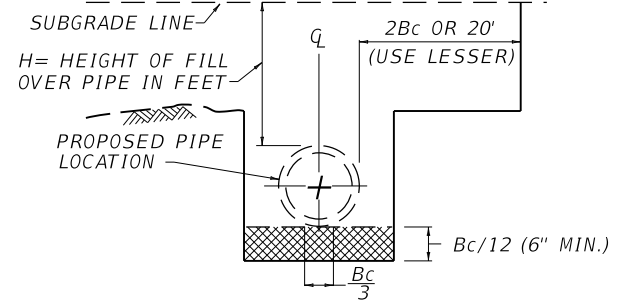
**STEP 2**



- a. EXCAVATE TO WITHIN 1'-0" ABOVE TOP OF PROPOSED PIPE A WIDTH OF 2Bc OR 20' (USE LESSER) ON EACH SIDE OF PIPE.
- b. EXCAVATE TRENCH TO THE WIDTH AND DEPTH SHOWN.
- ① Bc + 24" FOR PIPE 36" DIA. OR LESS.  
Bc + 48" FOR PIPE GREATER THAN 36" DIA.

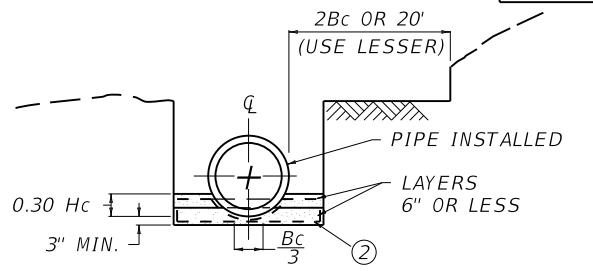
**STEP 3**

**ROCK FOUNDATION DETAILS**



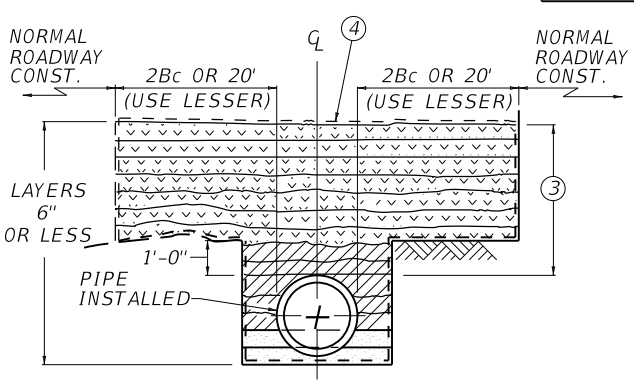
- a. IF ROCK FOUNDATION IS NOT ENCOUNTERED, GO DIRECTLY TO "STEP 4".
- b. IF ROCK FOUNDATION IS ENCOUNTERED, EXCAVATE TRENCH DEPTH USING FORMULA GIVEN. THIS DEPTH SHALL BE A MIN. OF 6" AND SHALL NOT EXCEED 24".
- c. BACKFILL WITH COMPACTED BEDDING MATERIAL IN LAYERS OF 6" OR LESS LEAVING Bc/3 UNCOMPACTED IN THE FINAL LAYER.

**STEP 4**



- a. UNCOMPACTED 4" BEDDING IN SUBTRENCH. FOR TYPE 1 INSTALLATION COMPACT BEDDING IN LAYERS 6" OR LESS TO AN ELEVATION 0.30 Hc.  LEAVE CENTER THIRD OF OUTSIDE PIPE DIA. (Bc/3) BEDDING UNCOMPACTED.
- b. EXCAVATE A GROOVE IN THE COMPACTED BEDDING TO CONFORM TO THE OUTSIDE OF THE PIPE. AFTER EXCAVATION OF THE GROOVE, A MINIMUM 3" OF BEDDING SHOULD REMAIN BELOW THE OUTSIDE INVERT OF THE PIPE. THE CRADLE SHALL BE GAGED FOR SHAPE AND SLOPE BY STRIKING OR DRAWING A TEMPLATE THROUGH THE GROOVE IMMEDIATELY BEFORE PLACING EACH SECTION OF PIPE.
- c. INSTALL PIPE AT CORRECT ALIGNMENT AND ELEVATION. RECOMPACT ANY LOOSE BEDDING DISTURBED DURING INSTALLATION.
- ② WRAP BEDDING MATERIAL IN GEOTEXTILE FABRIC WHEN THE STANDARD SPECIFICATIONS SPECIFIES.

**STEP 5**



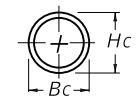
- ③ 4'-0" REQUIRED FOR CONSTRUCTION LOADING.
- a. COMPACT REQUIRED BACKFILL MATERIAL IN LAYERS 6" OR LESS TO 1'-0" ABOVE TOP OF PIPE.
- b. COMPACT REQUIRED BACKFILL MATERIAL TO ELEV. ③ ABOVE TOP OF PIPE IN LAYERS OF 6" OR LESS.
- c. PROCEED WITH NORMAL ROADWAY CONSTRUCTION.
- ④ WRAP BEDDING MATERIAL IN GEOTEXTILE FABRIC WHEN THE STANDARD SPECIFICATIONS SPECIFIES.

MAX. COVER HEIGHT		
CLASS	TYPE 1	TYPE 4
III	25'	9'
IV	38'	15'
V	57'	23'

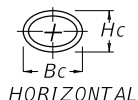
2' OF COVER OR LESS	
CLASS	PIPE DIA.
V	12"-15"-18"
IV	21"-24"
III	27" & LARGER

~ NOTES ~

- 10' MAXIMUM COVER HEIGHT FOR HORIZONTAL ELLIPTICAL CLASS HE III PIPE.
- COVER HEIGHTS EXCEEDING THOSE SHOWN IN TABLES REQUIRE SPECIAL DESIGNS.
- FOR TYPE 4 INSTALLATION PLACE EMBANKMENT MATERIAL ACCORDING TO SECTION 701.03.06A OF THE CURRENT SPEC. BOOK.
- FOR TYPE 1 INSTALLATION, WHEN THE TOP OF PIPE IS NOT WITHIN ONE PIPE DIAMETER OF THE SUBGRADE, INSTALL ACCORDING TO SECTION 701.03.06A OF THE CURRENT SPEC. BOOK.



CIRCULAR



HORIZONTAL ELLIPTICAL

~ PIPE SHAPES ~

FOR TRENCH CONDITIONS

USE WITH CUR. STD. DWG. RDI-026

**KENTUCKY DEPARTMENT OF HIGHWAYS**  
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER REINFORCED CONC. PIPE

STANDARD DRAWING NO. RDI-021-01  
SUBMITTED *[Signature]* 12-01-15  
APPROVED *[Signature]* 12-01-15  
DATE DATE