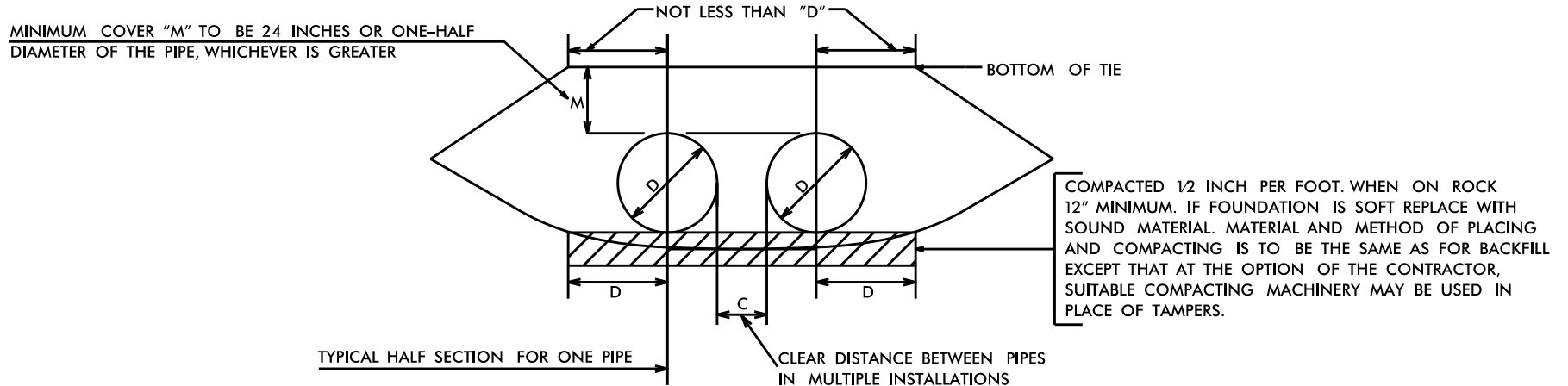


PLACE MATERIAL (6" LAYERS ONLY) EVENLY ON EACH SIDE OF PIPE. STONES LARGER THAN 2" SHALL NOT BE USED



DETAILS FOR BEDDING AND BACKFILLING PIPE

INSTALLATION INSTRUCTIONS FOR CORRUGATED METAL DRAINAGE STRUCTURES

PROTECTION: A REASONABLE AMOUNT OF CARE MUST BE TAKEN IN HANDLING CORRUGATED METAL DRAINAGE PRODUCTS TO PROTECT AGAINST CRACKING OR BREAKING THE PIPE OR DAMAGING THE GALVANIZED AND/OR OTHER COATING. HEAVY CONSTRUCTION EQUIPMENT MUST NOT BE RUN DIRECTLY OVER STRUCTURE UNTIL IT HAS BEEN BACKFILLED AND EMBANKMENT PLACED TO THE MAXIMUM HEIGHT ABOVE TOP OF PIPE AS SHOWN ON THIS DRAWING.

STRUTTING: PIPES SHOWN TO BE SHOP STRUTTED WILL HAVE TWISTED WIRE OR ROD STRUTS. STRUTS SHALL BE HORIZONTAL WHEN PIPE IS PLACED.

CAMBER: UNDER HIGH FILLS, WHERE THE FOUNDATION IS SUBJECT TO SUBSIDENCE, THE GRADE LINE WILL BE CAMBERED TO PRODUCE A STRAIGHT GRADE AFTER SUBSIDENCE.

HAND TAMPED: WHEN APPROVED BY THE ENGINEER, A HAND TAMPER SHALL WEIGH NOT LESS THAN TWENTY (20) POUNDS AND HAVE A TAMPING FACE NOT LESS THAN 6" X 6".

ASSEMBLY OF STRUCTURE: RIVETED CORRUGATED METAL PIPES MUST BE PLACED WITH INSIDE CIRCUMFERENTIAL LAPS POINTING DOWNSTREAM. THE LONGITUDINAL LAPS SHOULD BE AT THE SIDES OR QUARTER POINTS BUT NOT IN THE BOTTOM. STRUCTURAL PLATE PIPES WILL BE ASSEMBLED FROM DETAILED ERECTION INSTRUCTIONS WHICH ACCOMPANY EACH PIPE WHEN SHIPPED.

BEDDING AND BACKFILLING: BEDDING AND BACKFILL MATERIAL SHALL BE DENSE GRADED CRUSHED STONE MAXIMUM SIZE 2 INCHES TO DUST. BACKFILL IS TO BE PLACED IN LAYERS NOT LESS THAN 4" OR MORE THAN 6" AND COMPACTED WITH MECHANICAL TAMPERS TO 100% STANDARD PROCTOR. HEAVY EARTH COMPACTING EQUIPMENT SHALL NOT BE USED OVER THE PIPE UNTIL BACKFILL HAS BEEN COMPLETED AS SHOWN AND SPECIFIED ON THE PLAN. CARE MUST BE TAKEN NOT TO STRIKE THE PIPE WITH THE TAMPER.

MULTIPLE LINES OF PIPE:

PIPE DIAMETERS	MINIMUM	CLEARANCE "C"
UP TO 72"		ONE HALF DIAMETER OF THE PIPE
72" TO 180"		36"

NORFOLK SOUTHERN RAILWAYS

INSTALLATION INSTRUCTIONS
CORRUGATED METAL PIPE CULVERTS
REVISED 3-11-93