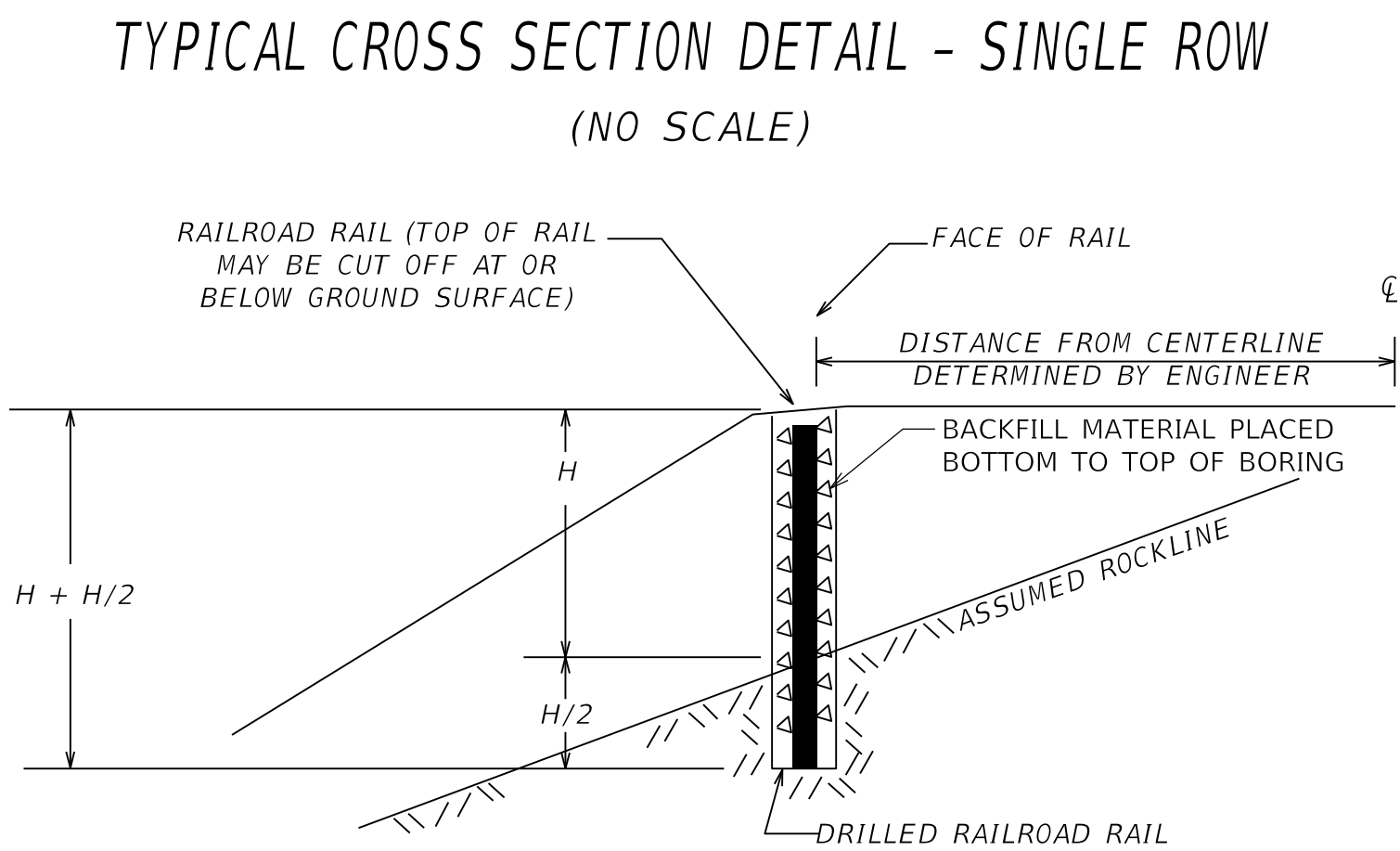
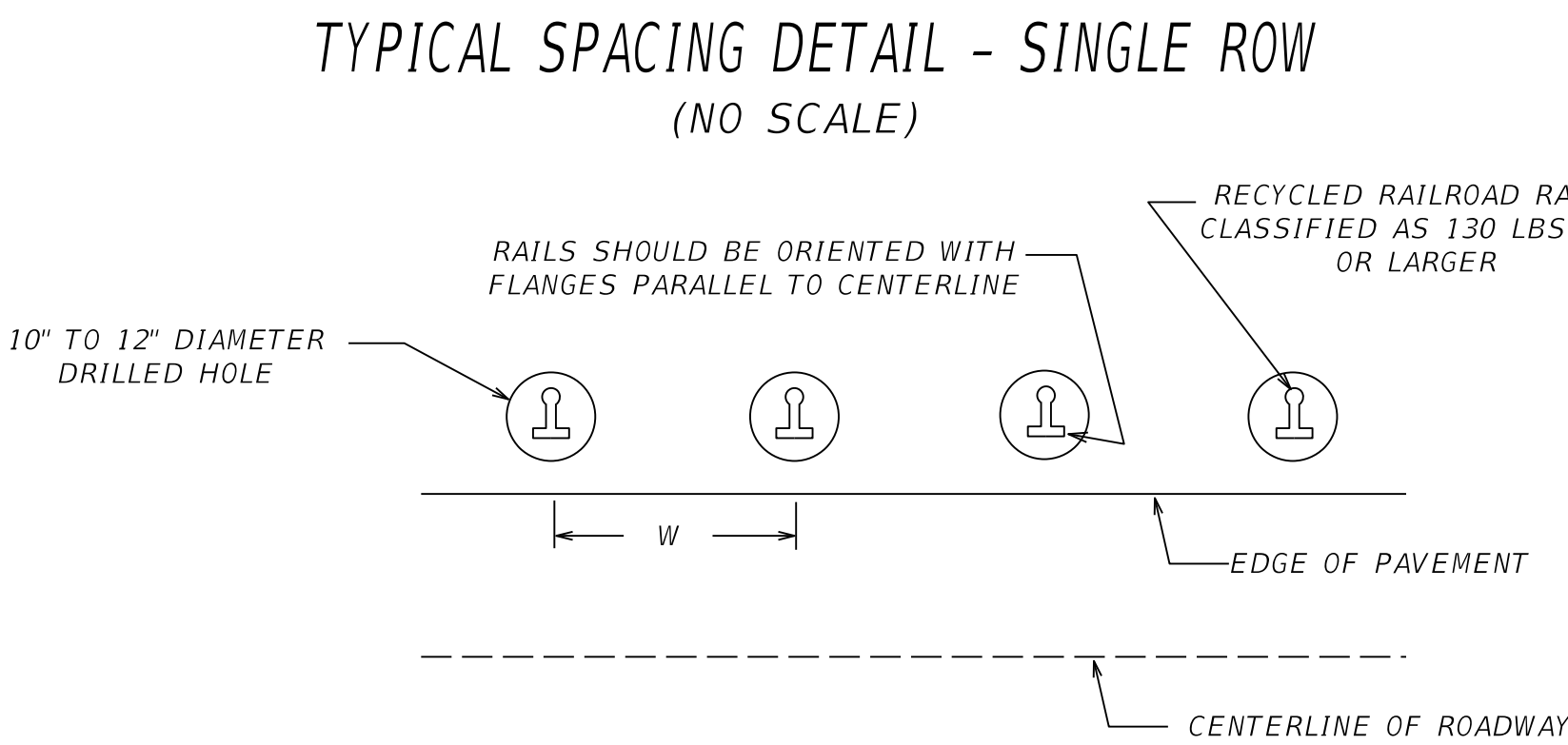
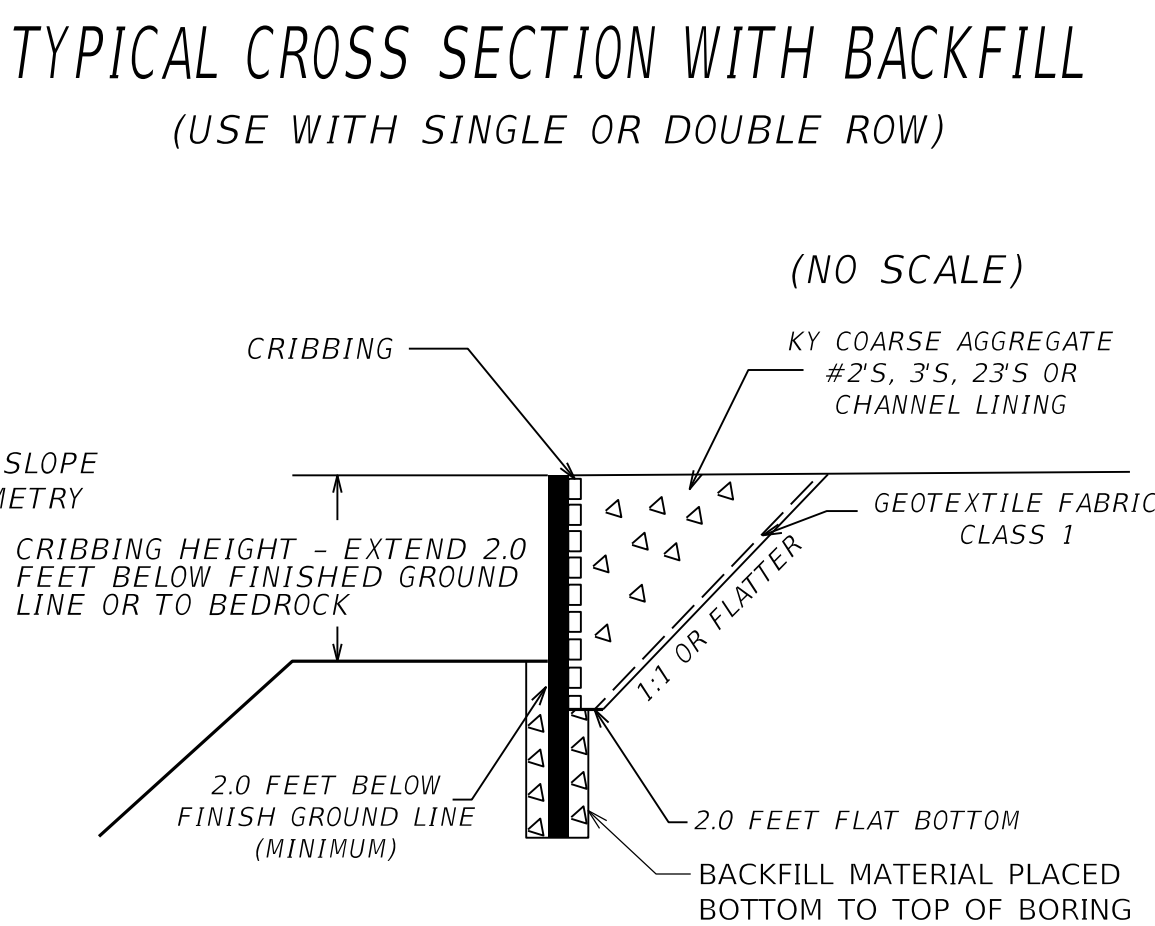
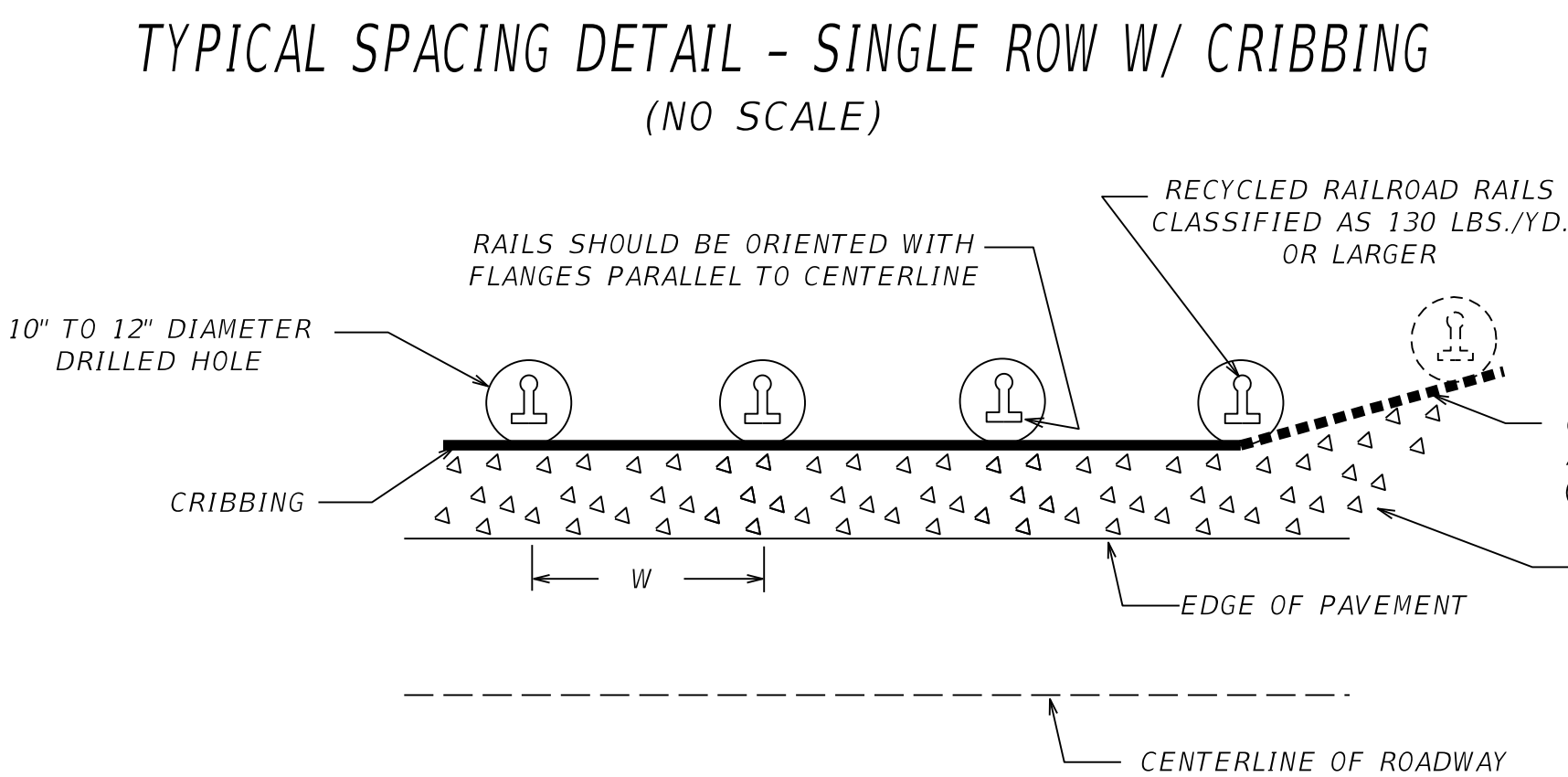
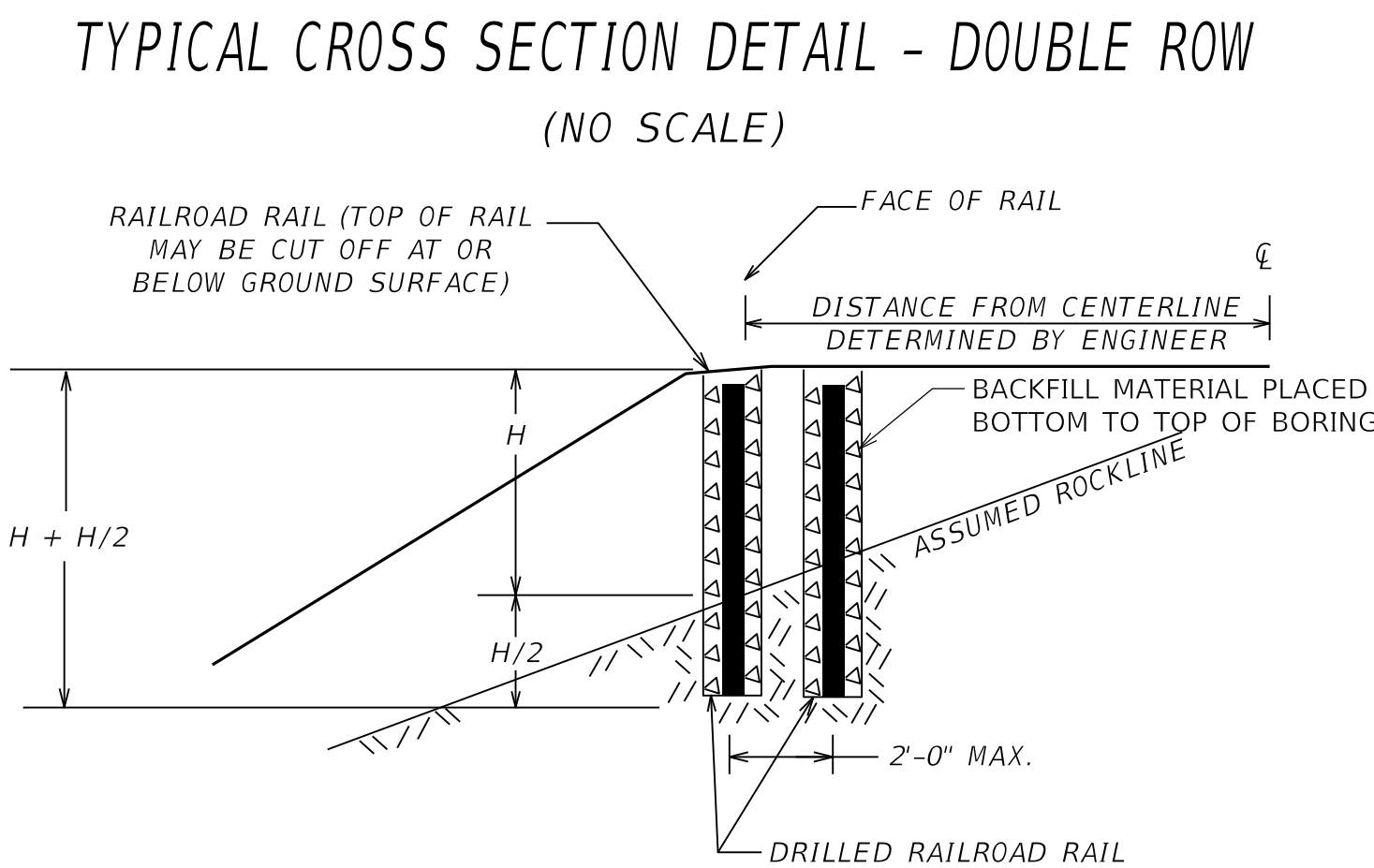
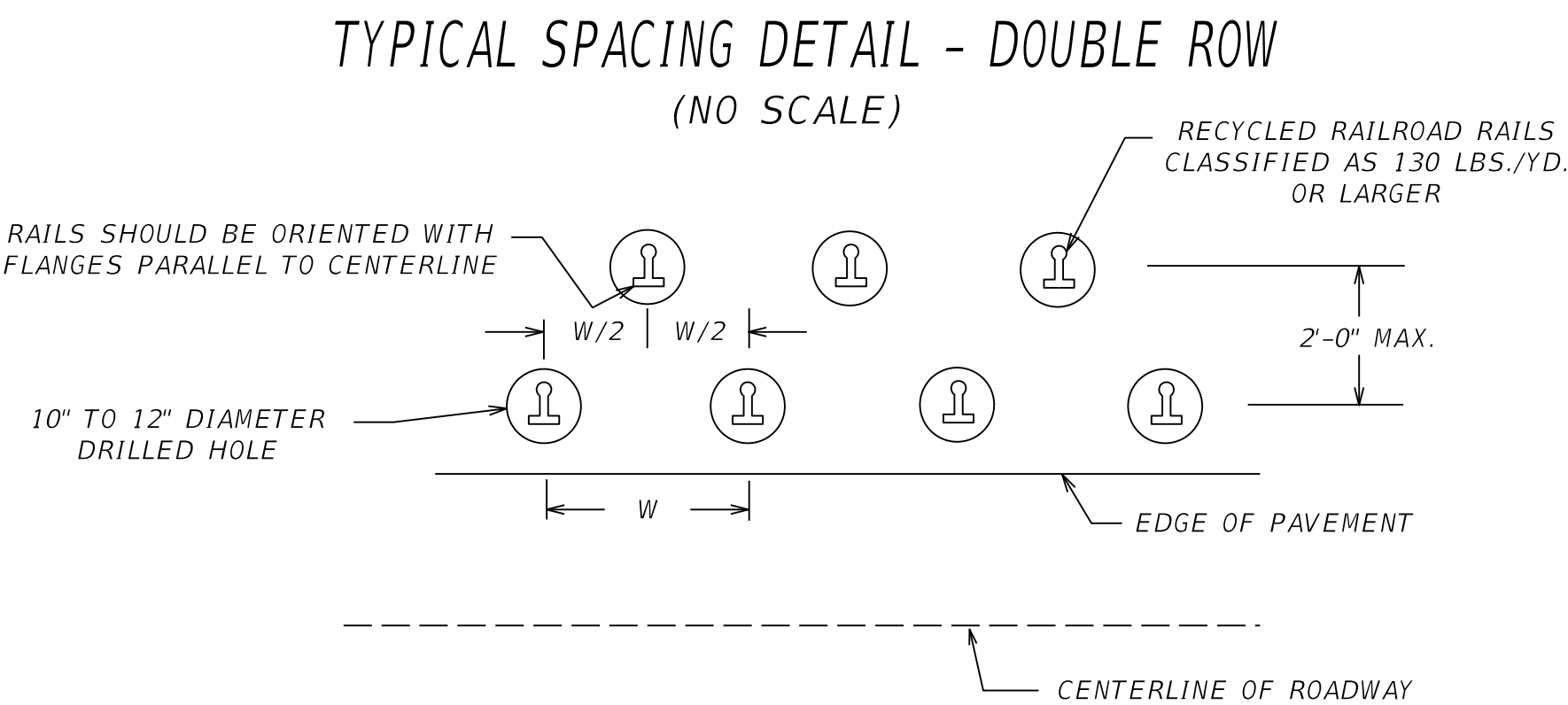




DEPTH TO ROCKLINE (H)	RAIL SPACING (W)	
	SINGLE ROW	DOUBLE ROW
<8 FT	4 FT	NA
8 - 12 FT	3 FT	NA
12 - 15 FT	2-3 FT*	3 FT
15 - 21 FT	NA	2-3 FT*
>21 FT	SPECIAL DESIGN REQUIREMENTS	
* 2 FEET SPACING PREFERRED - CAN EXTEND UP TO 3 FEET PROVIDED DEEPER RAILS (UP TO 40 FEET LONG) ARE USED		



- (1) H IS THE HEIGHT OF MATERIAL FROM ROCKLINE TO ROADWAY GRADE
- (2) MINIMUM EMBEDMENT INTO BEDROCK IS H/2 OR 1/3 OF TOTAL LENGTH OF THE INSTALLED RAIL. THESE LENGTHS MAY BE EXCEEDED AT THE FIELD ENGINEER'S DISCRETION DUE TO FIELD OR MATERIAL CONSIDERATIONS BUT SHALL NOT BE REDUCED.
- (3) BACKFILL IS TO BE PEAGRAVEL, NO. 8 OR 9 CRUSHED STONE, CONCRETE, FLOWABLE FILL, OR GROUT. BACKFILL OF BORINGS SHALL NOT BE OMITTED BY CONTRACTOR/ENGINEER AND SHALL NOT BE SOIL CUTTINGS FROM THE BORING.
- (4) BACKFILL SHALL BE PLACED FROM THE BOTTOM TO THE TOP OF THE BORING
- (5) BACKFILL (GRAVEL OR CRUSHED STONE) IS TO BE SHOVELED INTO BORE HOLE TO THE TOP OF THE BORING TO PREVENT VOIDS
- (6) RAIL IS TO BE INSTALLED PERPENDICULAR TO THE ROADWAY WITH WIDE FLANGE FACING ROADWAY
- (7) SPACING BETWEEN ROWS IS TO BE 2.0 FEET
- (8) CRIBBING SHALL BE MINIMUM 2.0 FEET BELOW FINISHED GROUND LINE OR TO BEDROCK BASED ON LOCAL CONDITIONS
- (9) BACKFILL BEHIND THE WALL IS TO BE 2'S, 23'S, 3'S, OR CHANNEL LINING
- (10) ALL RAILS SHALL BE MINIMUM OF 130 LB/YD UNIT WEIGHT
- (11) CRIBBING SHALL CONSIST OF USED W BEAM GUARDRAIL SECTIONS, CONCRETE PANELS, OR OTHER MATERIALS SPECIFIED BY THE ENGINEER
- (12) RAILS 40.0 FEET IN LENGTH MAY BE REQUIRED WHEN LOCAL CONDITIONS WARRANT SUCH AS WHEN SPACING BETWEEN RAILS HAS TO BE WIDENED MORE THAN RECOMMENDED OR WHEN LOCALIZED, SMALL SECTIONS OF THE REPAIR EXCEED 21.0 FEET DEPTH TO BEDROCK.
- (13) OPTIONAL: TIE CRIBBING INTO EMBANKMENT SLOPE OR HILLSIDE AS PERMITTED BY FIELD GEOMETRY (BOTH SIDES)

