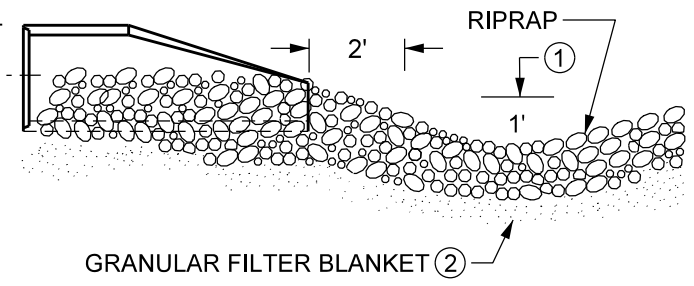


NOTES:
 PIPE SIZES LARGER THAN THOSE SHOWN
 REQUIRE A SPECIAL DESIGN.

REQUIREMENTS FOR RIPRAP SIZE,
 THICKNESS AND FILTER BLANKET
 WILL BE DESIGNATED IN THE PLANS.

- ① FOR PIPES GREATER THAN OR EQUAL TO 30"
 USE 1.5'.
- ② GEOTEXTILE FABRIC MAY BE SUBSTITUTED
 FOR GRANULAR FILTER UNLESS OTHERWISE
 SPECIFIED. FABRIC SHALL COVER THE AREA
 OF RIPRAP AND EXTEND UNDER THE CULVERT
 APRON 3 FT. FABRIC SHALL MEET MNDOT
 SPEC. 3733.

PLAN VIEW



SECTION A-A

| TABLE OF QUANTITIES - RIPRAP AT RCP OUTLETS | | | | | | | |
|---|---------|----------------------------------|------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|-------------------------------------|
| SPAN OF ARCH PIPE (IN.) | L (FT.) | CLASS II d ₅₀ = 6" | | CLASS III d ₅₀ = 9" | | CLASS IV d ₅₀ = 12" | |
| | | 12" DEPTH RIPRAP (CU.YDS.) | 6" DEPTH GRANULAR FILTER (CU.YDS.) | 18" DEPTH RIPRAP (CU.YDS.) | 9" DEPTH GRANULAR FILTER (CU.YDS.) | 24" DEPTH RIPRAP (CU.YDS.) | 12" DEPTH GRANULAR FILTER (CU.YDS.) |
| 22 | 10 | 3.9 | 2.0 | 5.9 | 3.0 | 7.8 | 3.9 |
| 28 | 12 | 5.5 | 2.8 | 8.2 | 4.1 | 10.9 | 5.5 |
| 36 | 14 | 7.2 | 3.6 | 10.8 | 5.4 | 14.3 | 7.2 |
| 43 | 16 | 9.2 | 4.6 | 13.7 | 6.9 | 18.3 | 9.2 |
| 51 | 18 | 10.9 | 5.5 | 16.3 | 8.2 | 21.7 | 10.9 |
| 58 | 20 | 12.7 | 6.4 | 19.0 | 9.5 | 25.4 | 12.7 |

MNDOT SPEC. REF. 3601, 3733
 MNDOT 3133C
 NOT TO SCALE

| | | | | |
|--|----------|-------------|--------------------------------|------------------------------|
| | DRW: CXD | DATE: 4/03 | RIPRAP AT RC PIPE-ARCH OUTLETS | STANDARD PLATE NO. SEWR-3006 |
| | APP: HRS | DATE: 12/06 | | |