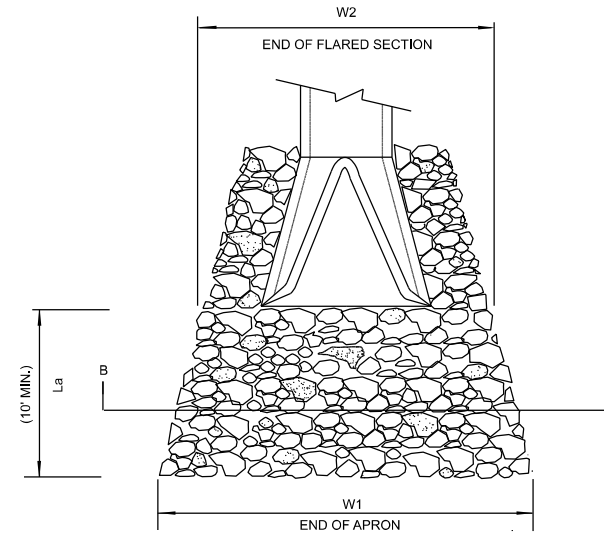


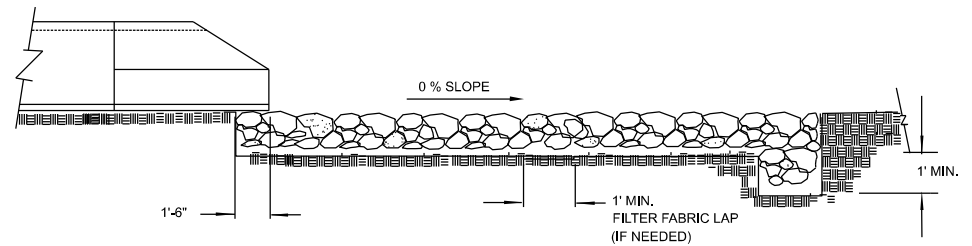
NOTES:

1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. REFER TO THE NC DEQ STORM WATER DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
3. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
4. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
5. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1.
6. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
7. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
8. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
9. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
10. ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL MUST BE STABILIZED.

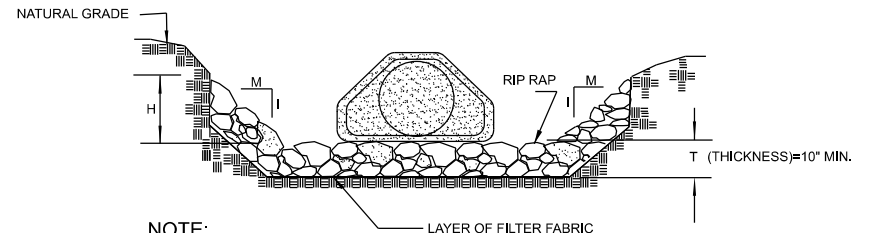
USE USDA NOMOGRAPH FROM NC SEDIMENT AND EROSION CONTROL MANUAL FOR DESIGN DATA.



PLAN



ELEVATION



NOTE:

MINIMUM H=2/3

PIPE DIAMETER

LAYER OF FILTER FABRIC

SECTION B-B



RIPRAP APRON AT PIPE OUTFALLS

TOWN OF GARNER, N.C.

DESIGNED BY:

TOG

REVISED

FEB. 2022

APPROVED BY:

CSJ

STD. NO.

SW-3.02