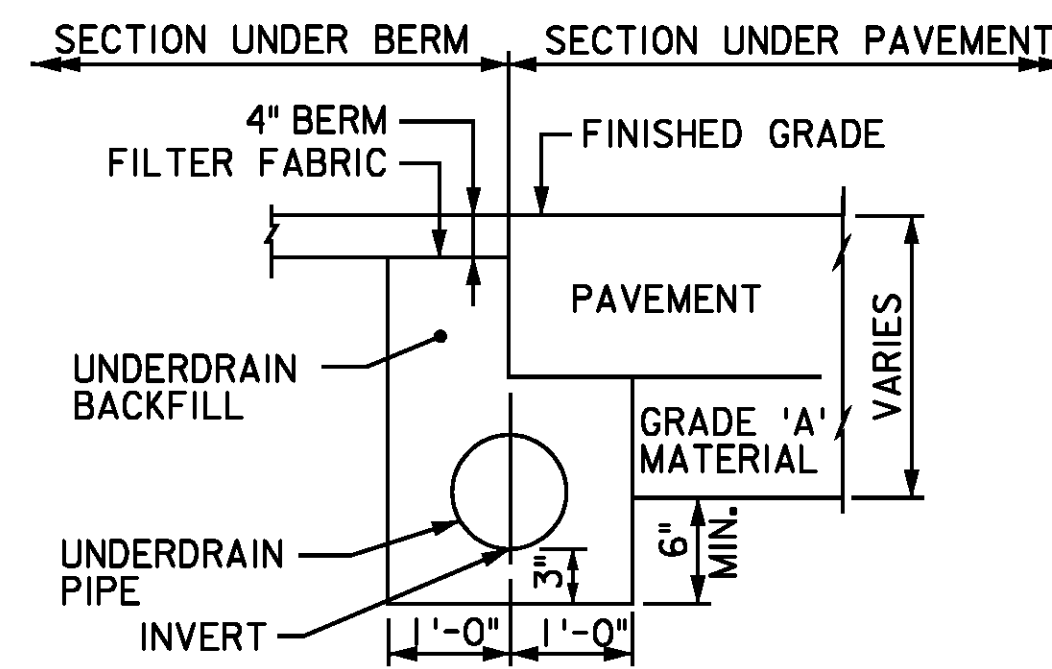
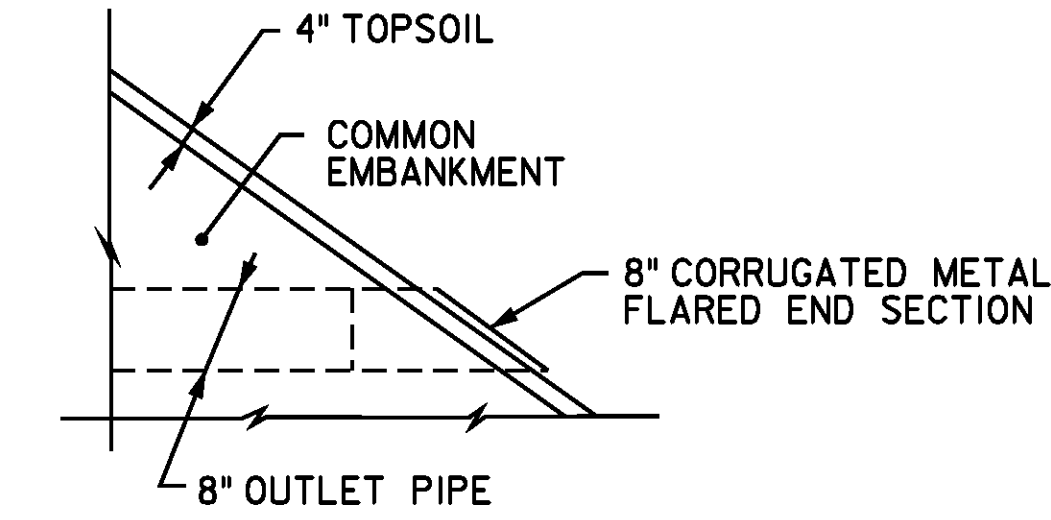
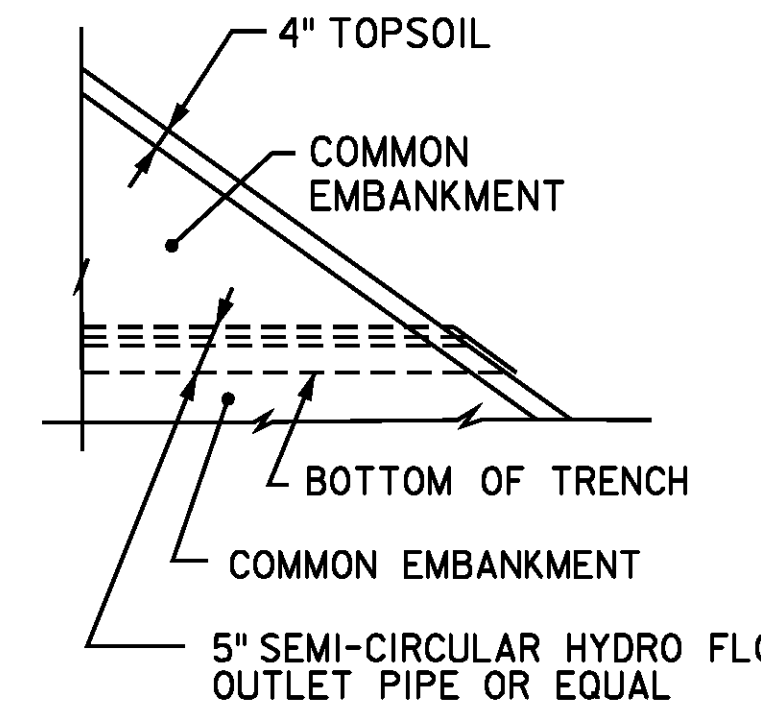


NOTE:
 DETAILS AND DIMENSIONS NOT SHOWN ARE THE SAME AS 8" UNDERDRAIN.

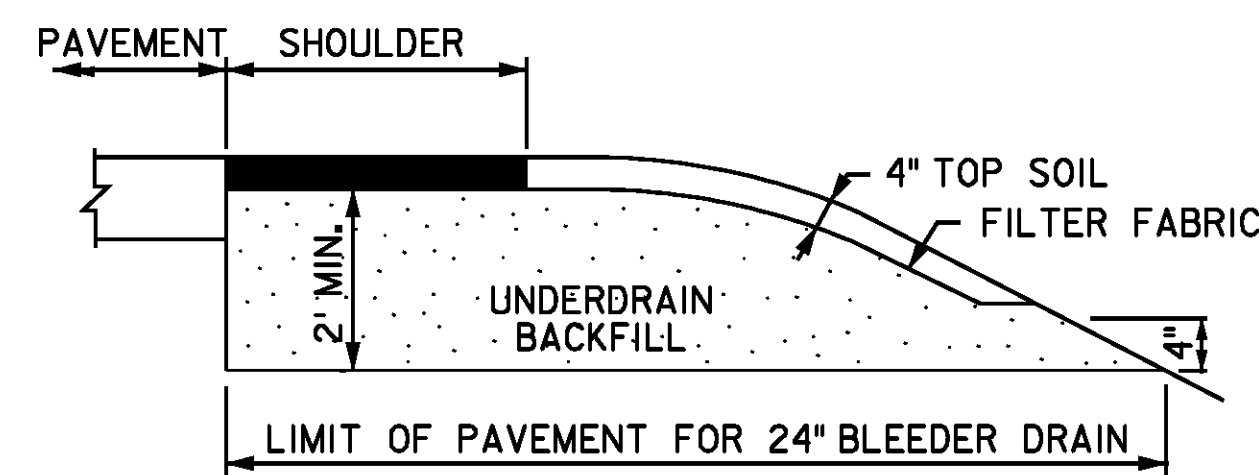
SEMI-CIRCULAR UNDERDRAIN



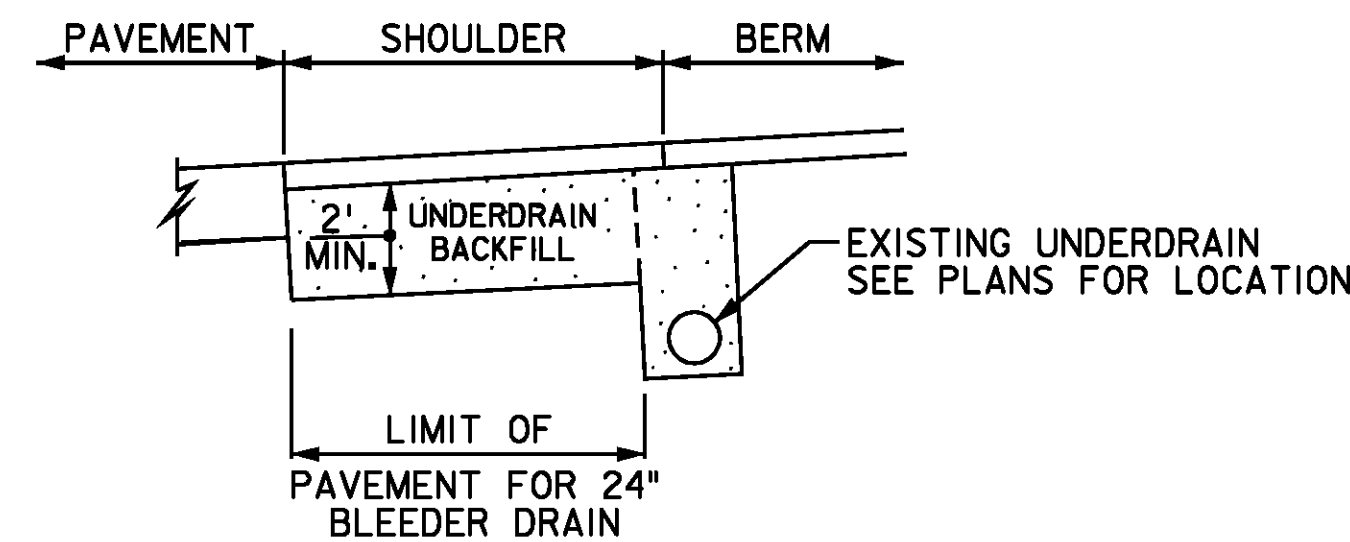
PIPE UNDERDRAIN
 (8" PIPE UNLESS OTHERWISE NOTED)



UNDERDRAIN OUTLETS
 WHEN INLETS ARE NOT AVAILABLE

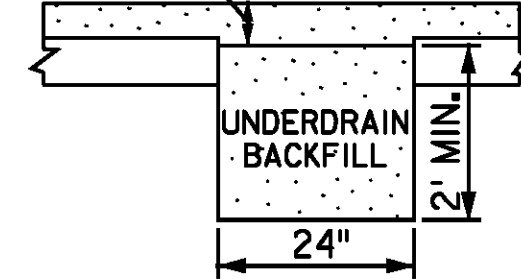


SECTION B-B

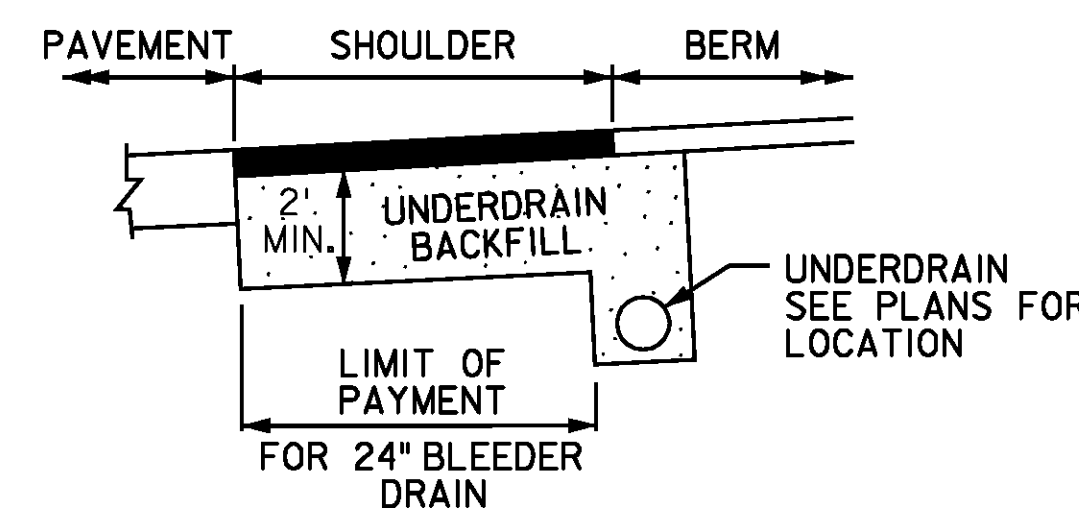


SECTION D-D

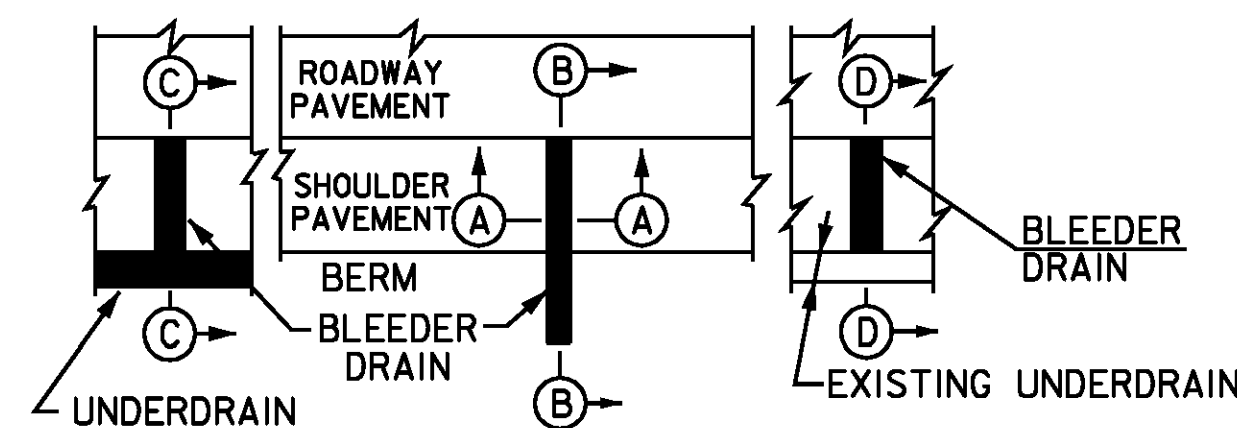
FOR SHOULDERS- 4" ASPHALT CONCRETE BASE COURSE. FOR EXISTING SHOULDERS 4" MIN. ASPHALT CONCRETE PAVEMENT SURFACE TREATED IF NECESSARY TO MATCH EXISTING.



SECTION A-A



SECTION C-C

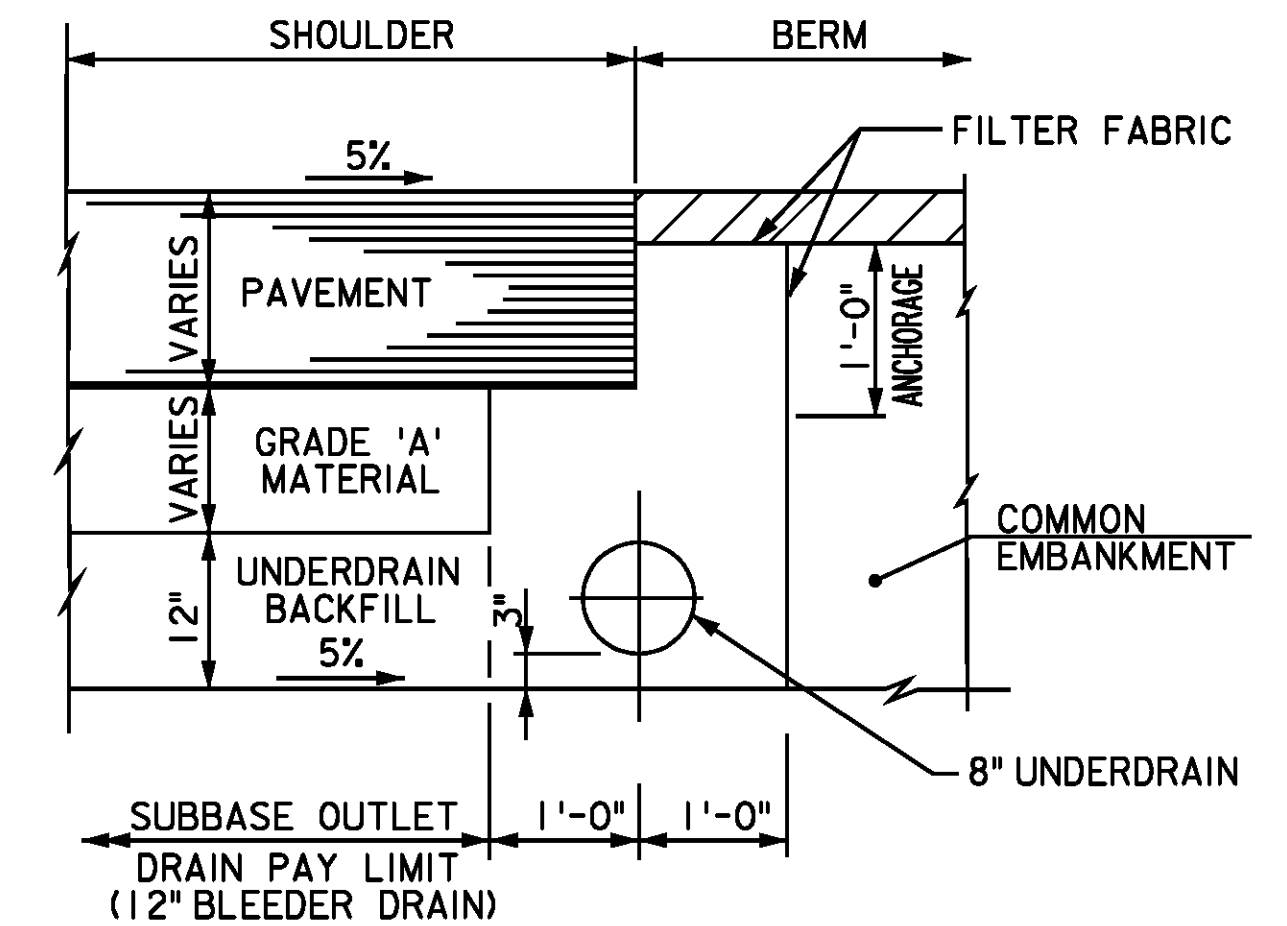


PLAN
24" BLEEDER DRAIN

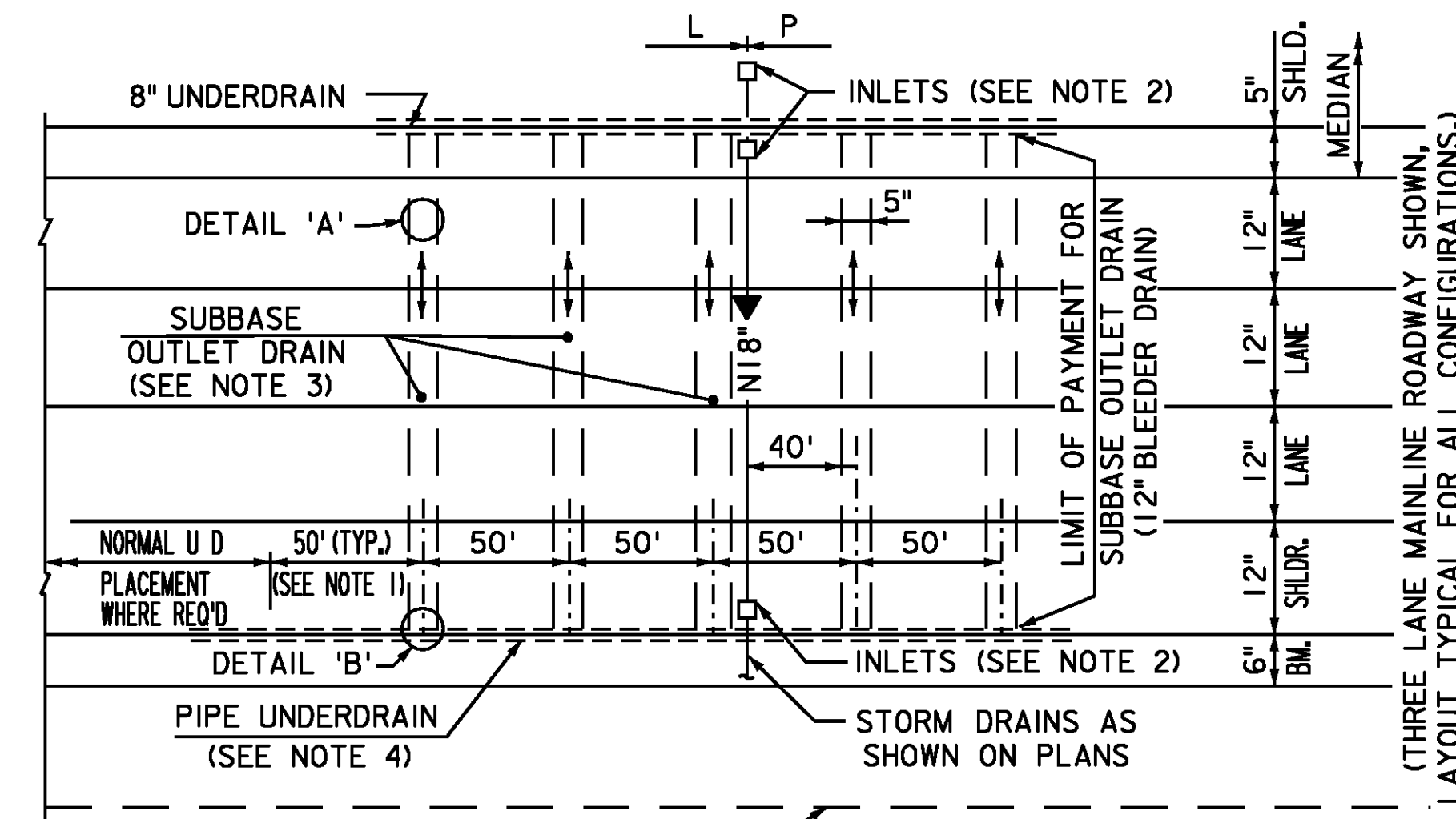
NOTE:
 BLEEDER DRAINS ARE TYPICALLY SPACED AT 100 FT O.C.

FILTER FABRIC NOTES:

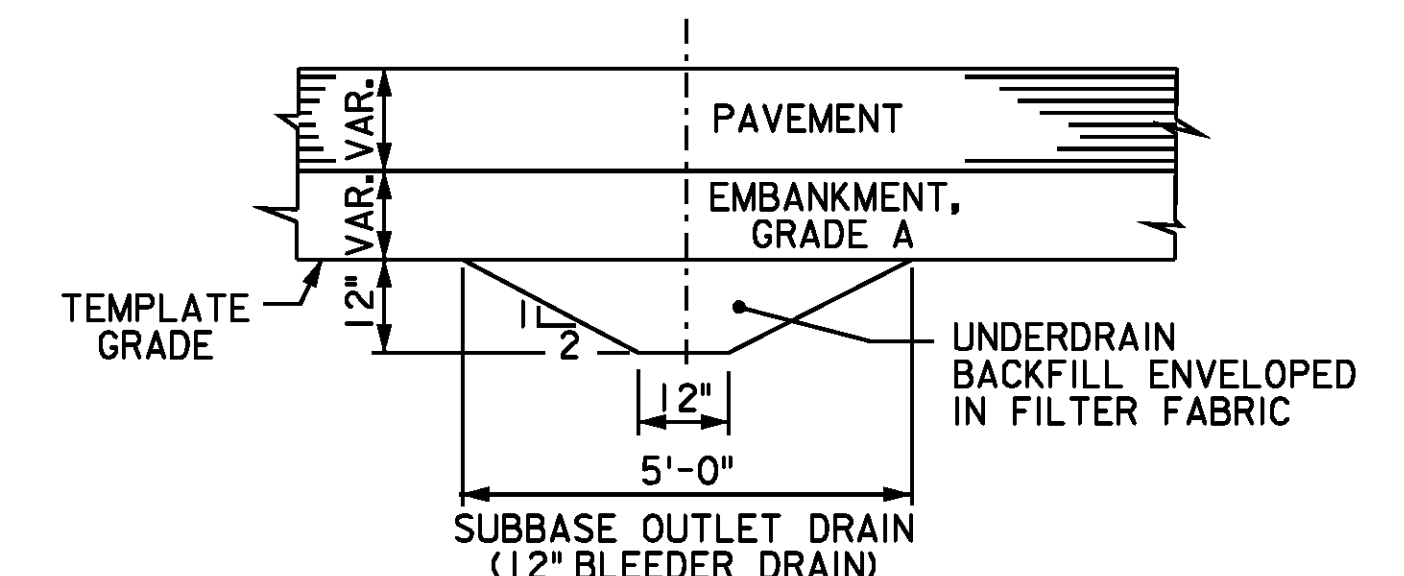
1. FILTER FABRIC SHALL BE PLACED ATOP UNDERDRAIN BACKFILL IN ALL AREAS WHICH WILL BE COVERED WITH TOPSOIL OR COMMON EMBANKMENT. THE FABRIC SHALL BE ANCHORED BY PLACING 1'± DOWN THE SIDE OF THE TRENCH PRIOR TO PLACING THE LAST TWO LIFTS OF UNDERDRAIN BACKFILL. THIS ANCHORAGE SHALL BE ALONG THE COMMON EMBANKMENT SIDE OF THE TRENCH FOR LONGITUDINAL DRAINS, AND ON THE UPGRADE SIDE FOR TRANSVERSE DRAINS.
2. FILTER FABRIC UNDERDRAIN AND COMBINATION UNDERDRAIN SHALL CONFORM IN CROSS SECTION TO 24" BLEEDER DRAIN AND PIPE UNDERDRAIN, RESPECTIVELY, EXCEPT THAT THEY WILL BE ENVELOPED IN FILTER FABRIC IN ACCORDANCE WITH SUBSECTION 501.03 OF THE STANDARD SPECIFICATIONS.



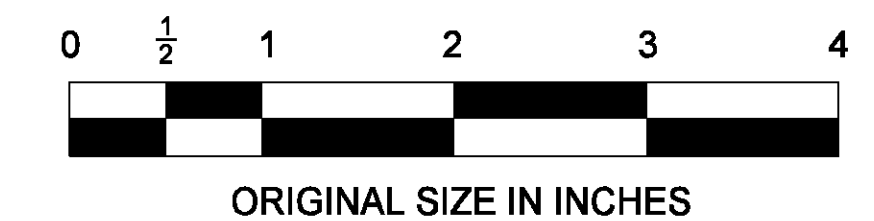
DETAIL 'B'



PLAN
SUBBASE OUTLET DRAIN AT ROADWAY LOW POINT



DETAIL 'A'



- NOTES:**
1. VERTICAL TRANSITION-BOTTOM OF UNDERDRAIN TRENCH TO DROP FROM 6" TO 12" BELOW TEMPLATE GRADE.
 2. FOR INLET TYPE AND LOCATION SEE PLANS.
 3. GRADIENT TO MATCH PAVEMENT CROSS-SLOPE. SUBBASE OUTLET DRAIN IS PAID FOR UNDER THE ITEM "12" BLEEDER DRAIN."
 4. OUTLET 8" UNDERDRAIN TO INLET AS PER SECTION G-G ON STD. DWG DR-1.

App.	No.	DATE	REVISION
		04/09	ORIGINAL DRAWING

NEW JERSEY TURNPIKE AUTHORITY

BLEEDER DRAINS, UNDERDRAINS, AND SUBBASE OUTLET DRAIN

OFFICE OF THE CHIEF ENGINEER 2009 STANDARD DRAWING

CONTRACT NO. SHEET NO. OF

DR-9