SECTION PERPENDICULAR TO ABUTMENT

Pay limits for Structural Backfill (Class 1)
and Mechanical Reinforcement of Soil

1'-0" Max

6" Typ

1'-0" Typ

Filter Material (Class B)

1'-0" Min

4'-0"

1'-0"

Structure Backfill (Class 1)

Undisturbed existing ground or compacted roadway embankment

Geotextile Reinforcment

Bottom of wing

4'-0" Min

6"Ø Perforated Pipe at 2% grade, minimum. After clearing the lowest wing, continue the run to daylight with Non-Perforated pipe. For limits of geotextile, see Detail.
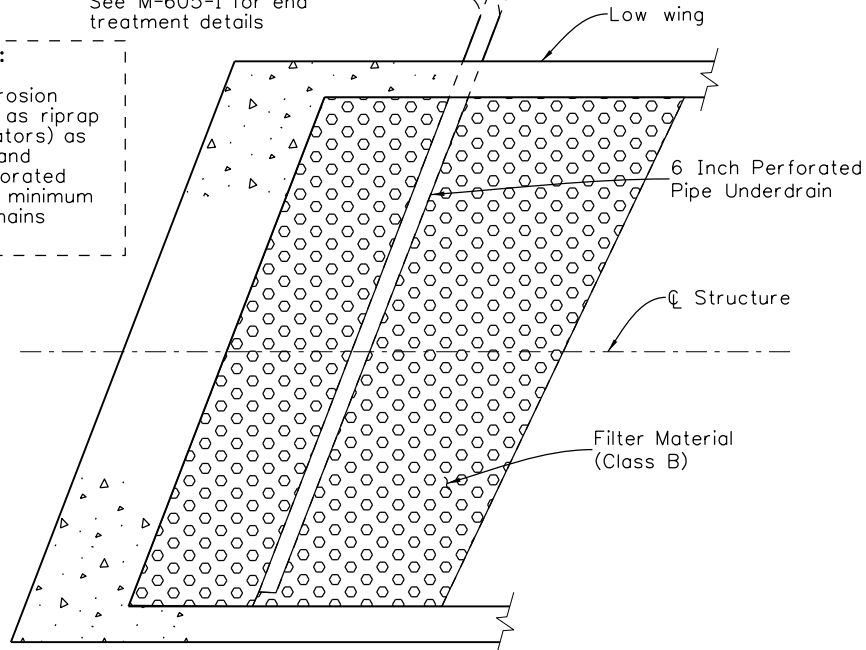
For steel structures longer than 300' without expansion devices between abutments and for abutments greater than 12' high, provide gap between the abutment and backfill. The gap width shall be at least 0.5% of the abutment height, 1" minimum. See Gap Detail 1 and 2. Do not provide this gap at bottom 2 nor the top 2 layers of Reinforced Soil.
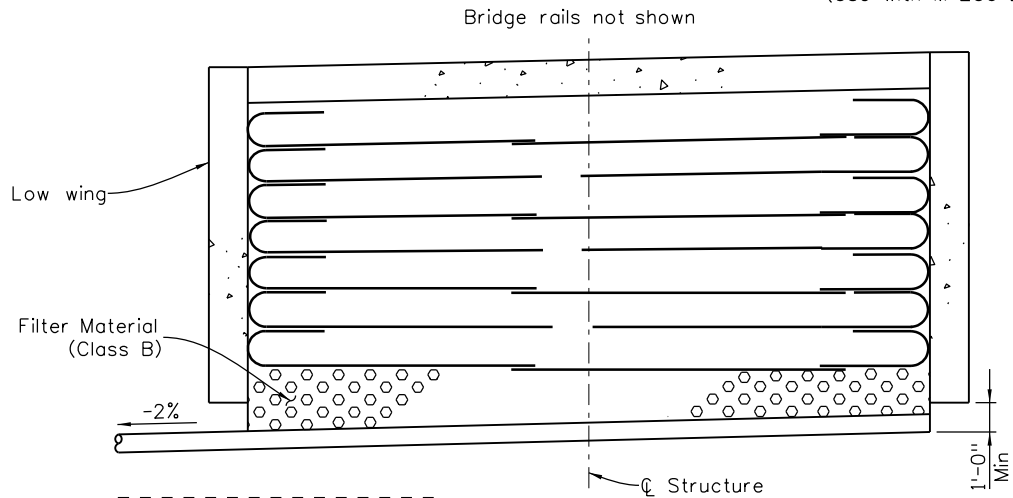
6"Ø Non-perforated pipe
(Subsurface drain outlet)
Max bend in pipe = 45°
See M-605-1 for end treatment details
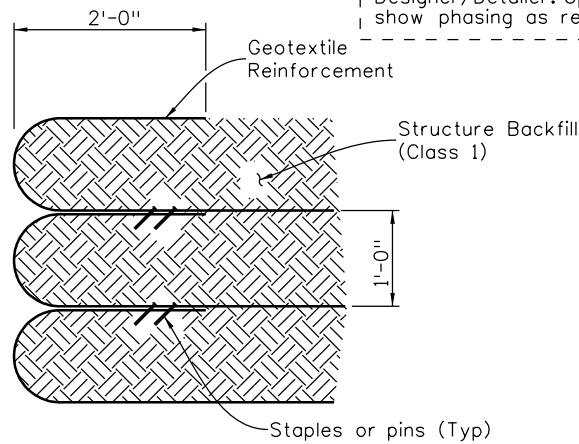
Designer/Detailer:
Discharge into erosion protection (such as riprap or energy dissipators) as needed. Extend and support non-perforated pipe such that a minimum 6" clearance remains below flowline.
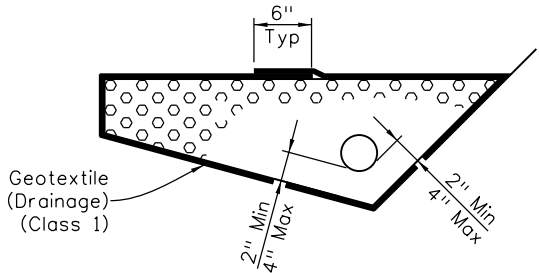
Low wing

6 Inch Perforated Pipe Underdrain

₵ Structure

Filter Material (Class B)

SECTION B

WRAP DETAIL

2'-0"

Geotextile Reinforcement

Structure Backfill (Class 1)

1'-0"

Staples or pins (Typ)

GAP DETAIL STEP 1

Geotextile Reinforcement

Temporary tack to support Geotextile Reinforcement

Timber spacer

Compacted Soil

1'-0" Compacted lift

BF of abutment

GAP DETAIL STEP 2

0.5% of Abutment height, 1" Min

Geotextile Reinforcement

When required, the Geotextile Reinforcement wrap at Back Face of Abutment shall be temporarily hung with a spacer board and tack strip. After reaching a total of 1'-0" compacted lift, the tack strip shall be removed and textile Reinforcement shall be pulled back slack free with its end anchored to soil underneath with staple or pins before the spacer board is pulled. Any alternate method to maintain the minimum gap between abutment concrete and Reinforced Soil may be proposed to the Engineer for approval.

Bridge rails not shown

Low wing

Filter Material (Class B)

-2%

₵ Structure

1'-0" Min

Designer/Detailer: Update to show phasing as required.

SECTION A

6"
Typ

Geotextile (Drainage) (Class 1)
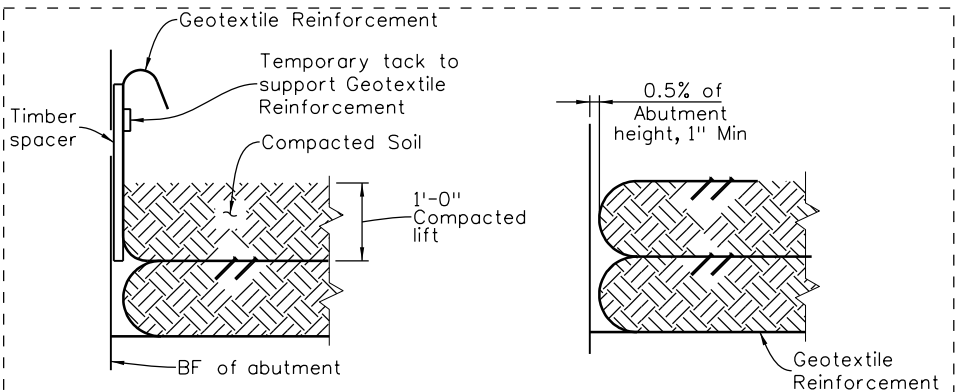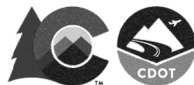
2" Min
4" Max

2" Min
4" Max

6 INCH PERFORATED PIPE UNDERDRAIN

6 Inch Perforated Pipe Underdrain includes all Filter Material (Class B) and Geotextile (Drainage) (Class 1) surrounding the Filter Material (Class B).

NOTES:

1. Geotextile Reinforcement shall be woven fabric with a Minimum Average Roll Value of 4800 lb/ft for installations with a gap and 2400 lb/ft for installations without a gap based on ASTM D4595.

2. Geotextile Reinforcement shall be placed by alternating Machine Direction (MD) with Cross Machine Direction (XD) from layer to layer.

3. The Geotextile Reinforcement wrap at Back Face of Abutment shall be pulled back slack free with its end anchored to soil underneath with staples or pins.

4. Minimum splice of all Geofabric shall consist of 6" of overlap.

5. Payment for all work items shown will be made under Item 206 Mechanical Reinforcement of Soil (CY) and Item 206 Structure Backfill (Class 1) (CY) and Shall include the cost for 6 inch Ø Perforated Pipe underdrain and Subsurface Drain Outlet (6 inch Ø Non-Perforated Pipe).

6. Installation of Pipe Underdrain and Subsurface Drain Outlet will conform to the Construction requirements of Section 605.03 and 605.06, respectively.

Revision Dates: 9/24 3/23 10/13 7/10 3/07 9/02 4/02 5/01