ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

For Wings Parallel to Abutment

- (A3 abutment without structural Approach)
- (A3 abutment with abutment anchorage)

Typical section thru abutment at MSE Wall

- MSE backfill w/ Type A backfill structure
- Pavement, roadway, and approach slab
- Structural underdrain

Underdrain (Show detail on plans)

Suitable drainage. Attach rodent shield at ends of pipe.

Pipe underdrain wrapped 6-inch. Slope 0.5% min.

The rodent shield, pipe coupling and screws shall be considered incidental to the bid.

The rodent shield shall be a PVC grate similar to the detail.

The grate is sized to fit into a pipe coupling of the same size as the grate.

The grate shall be fastened to the pipe coupling using a stainless steel sheet metal screw.

Dimensions are approximate. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING OF THE SAME SIZE AS THE GRATE.

The rodent shield, pipe coupling and screws shall be considered incidental to the bid.

The rodent shield shall be a PVC grate similar to the detail.

The grate is sized to fit into a pipe coupling of the same size as the grate.

The grate shall be fastened to the pipe coupling using a stainless steel sheet metal screw.

STAINLESS STEEL SHEET METAL SCREWS.

FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE ATTACHED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID.

THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING OF THE SAME SIZE AS THE GRATE.

The rodent shield shall be a PVC grate similar to the detail.

The grate is sized to fit into a pipe coupling of the same size as the grate.

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STAINLESS STEEL SHEET METAL SCREWS.

FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.
**NOTES (BOX CULVERTS)**

The upper limits of excavation for structures culverts shall be the existing groundline.

Excavation quantities are based on the pay limits shown on the plans and may not reflect actual placed quantities. Typical structure type B is required for all box culverts and behind apron wings for 3 feet. Backfill placed beyond pay limits or exceeding plan quantities shall be removed to excavation pay limits.

Note and dimension not required unless not required per geotechnical engineer or when constructed on fill.

Undercut excavation for undercuts to be included in excavation for structures. Place "geotextile type C" and backfill with "sandfill structure type B".

In lieu of using breaker for the box construction platform, the contractor may elect to substitute #1 or #2 coarse crushed material. When used, other granular material shall be approved by the geotechnical engineer or when constructed on fills.

ALL PRECAST BOX SECTIONS SHALL BE PLACED ON A BEDDING FOUNDATION. (Choose applicable note, engineer determined by geotechnical engineer or when constructed on fills)

**LIMITS AND NOTES 2**

The designer should provide all necessary backfill pay limits and notes in order to prepare quantities as listed on the plans and may not reflect actual placed quantities. Table 6.4.2 and 9.10 for additional information.

**DESIGNER NOTES**

The backfill quantities are based on the pay limits shown on the plans and may not reflect actual placed quantities. Typical structure type B is required for the entire wall length. Excavation noted on plans. Pay limits or exceeding plan quantities shall be removed to excavation pay limits.

Sandfill structure type B may be used. The contractor is responsible for base stability with any other granular material as approved by the geotechnical engineer or when constructed on fills.

**LEGEND**

Use geotextile. Undercut X'-X". Excavation for undercuts to be included in excavation for structures. Place "geotextile type C" and backfill with "sandfill structure type B".

Suitable drainage, return flow shield at ends of pipe. Underdrain wrapped before slope cut, as required. Junction shield at ends of pipe.
### WING FILL SECTIONS AT WING TIPS

#### STANDARD WING

**WINGS PARALLEL TO ROADWAY**

- **STANDARD WING**
  - Top of Parapet
  - Top of Wing

**WITH STRUCTURAL APPROACH SLAB**

- Top of Structural Approach Slab
- Transition fill to top of curb, if present
- Place heavy riprap even with top of structural approach slab
- Place aggregate, drain, or footing end of abutment wing

**WITH RAILING OR FENCE ONLY**

- Top of Railing or Fence
- Place heavy riprap even with top of structural approach slab
- Place aggregate, drain, or footing end of abutment wing

**STANDARD WING**

**WINGS PARALLEL TO ABUTMENT**

- **STANDARD WING**
  - Top of Parapet
  - Top of Wing

**WITH STRUCTURAL APPROACH SLAB**

- Top of Structural Approach Slab
- Transition fill to top of curb, if present
- Place heavy riprap even with top of structural approach slab
- Place aggregate, drain, or footing end of abutment wing

**WITH RAILING OR FENCE ONLY**

- Top of Railing or Fence
- Place heavy riprap even with top of structural approach slab
- Place aggregate, drain, or footing end of abutment wing

**STANDARD WING**