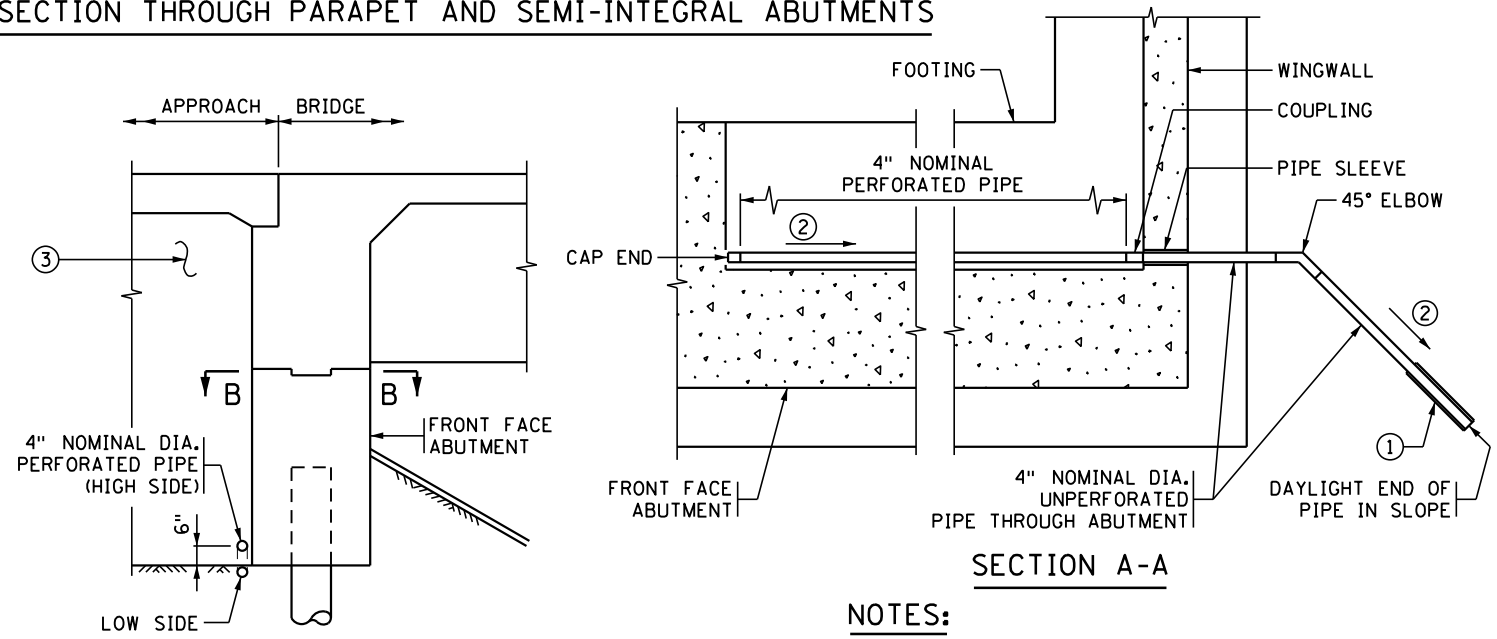
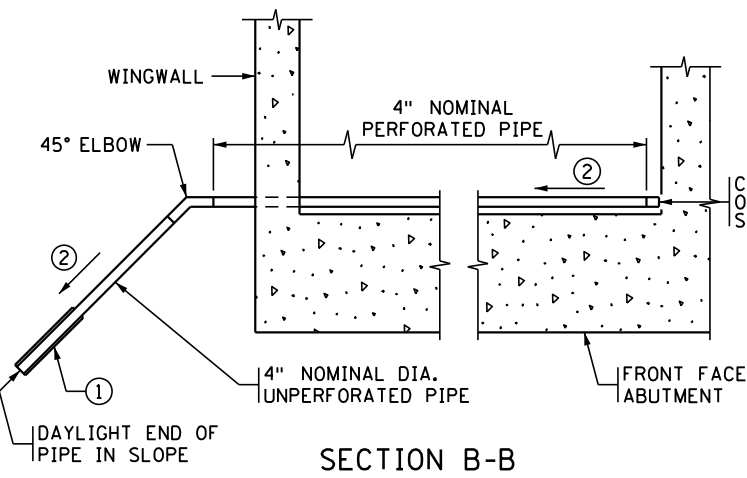


**SECTION THROUGH PARAPET AND SEMI-INTEGRAL ABUTMENTS**



**SECTION A-A**

**SECTION THROUGH INTEGRAL ABUTMENT**



**SECTION B-B**

**NOTES:**

PAYMENT WILL BE INCLUDED IN THE SINGLE LUMP SUM PRICE FOR "DRAINAGE SYSTEM TYPE (B910)", INCLUDES BUT IS NOT LIMITED TO 4" DIAMETER PERFORATED AND UNPERFORATED PIPE, ELBOWS, END CAPS, COUPLINGS, SLEEVES AND PRECAST CONCRETE HEADWALLS.

ALL PIPE TO COMPLY WITH SPEC. 3245.2(5).

SLEEVE PERFORATED PIPE WITH GEOTEXTILE KNIT SOCK IN ACCORDANCE WITH SPEC. 3733, TYPE 1. ATTACH TO PIPE IN ACCORDANCE WITH SPEC. 2502.3B.

① USE PRECAST CONCRETE HEADWALL WITH RODENT SCREEN. SEE STANDARD PLATE 3131 FOR DETAILS. AT CONTRACTOR'S OPTION, TIE APPROACH PANEL DRAINAGE SYSTEM AND ABUTMENT DRAINAGE SYSTEM INTO A SINGLE PRECAST CONCRETE HEADWALL OR INTO A CATCH BASIN AS LONG AS A MINIMUM OF 2% POSITIVE SLOPE CAN BE MAINTAINED.

② 1/8" PER FT. MINIMUM SLOPE.

③ REFER TO GRADING PLANS FOR ABUTMENT BACKFILL REQUIREMENTS.

APPROVED: JANUARY 13, 2015  
*Nancy Subenberger*  
 STATE BRIDGE ENGINEER

STATE OF MINNESOTA  
 DEPARTMENT OF TRANSPORTATION

**DRAINAGE SYSTEM**

REVISION  
 12-02-2015  
 02-22-2018  
 11-08-2018  
 12-21-2022

DETAIL NO.

**B910**