

REQUEST FOR PROPOSAL – US6 BRIDGES DESIGN BUILD PROJECT
BR 0061-083, SUB ACCOUNT 18838 (CN)
BOOK 2 – TECHNICAL REQUIREMENTS
SECTION 15 – STRUCTURES

~~Note: In conjunction with replacement of this box culvert, all other Wier Gulch drainage facilities (e.g. culverts) will be replaced as part of the Work too. Limits of Work will be within available CDOT Right-of-Way with connections made to those existing facilities to remain outside of CDOT Right-of-Way.~~

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15.2.4.2 Design

New box culverts, replacements, extensions, strengthening of existing box culverts, headwalls, and wingwalls shall meet all requirements of the Project. CDOT's M-Standards shall be used. Box culverts not covered in the CDOT M-Standards shall be designed in accordance with AASHTO LRFD Bridge Design Specifications (Sixth Edition, 2012), CDOT's Bridge Design Manual, and CDOT's Drainage Design Manual. All box culverts, new and reuse of existing, shall be load rated, documented and submitted to CDOT.

15.2.4.3 Maintenance Plan

The Contractor shall provide to CDOT, for review with the final plans and specifications submittal, a maintenance plan for each box culvert structure type used. This plan shall describe routine maintenance and items specific to each component of the specific structure type. It shall also include a detailed list of all maintenance and rehabilitation work and the number of times each procedure is anticipated to be performed over the 75-year structure life, itemized by the year performed.

15.2.5 Retaining Walls

The following criteria shall apply to permanent wall Structures. Walls that support traffic for interim phases of traffic which are left in place and become part of the final Structure shall be considered permanent walls and designed and constructed as such. The first and second phases of two-phase walls shall be considered part of a permanent wall and shall be designed and constructed as such. The Contractor shall have sole responsibility for the type, material, performance and safety of temporary retaining wall Structures.

15.2.5.1 Geometry

The retaining wall layout shall address slope maintenance above and below the wall and provide returns into the retained fill or cut at retaining wall ends. Final tolerances shall be 1 to 200 for level and plumb. Any residual wall batter shall be into the fill. Where 12 feet (minimum) of generally level terrain is not available between the wall and the ROW line for maintenance access, the wall shall be located a minimum of 10 feet inside the ROW line.

Design and construction shall consider surface and subsurface drainage. Walls which support soil and loads from outside ROW, and are built with MSE soil reinforcements, shall require an appropriate setback from ROW line for the construction of the wall or a temporary construction easement shall be required in accordance with requirements in Section 8, Right-of-Way. A system shall be provided to intercept or prevent surface water from entering behind walls. Lengths of wall without relief joints shall be limited to lengths which control the differential settlement. A fence or pedestrian railing shall be provided at the top of walls over 30 inches high, and otherwise meet current OSHA and building code safety requirements for all retaining wall installations.

15.2.5.2 Type