

4. SPECIFICATIONS

1. **Riprap:** The Contractor shall furnish all labor, materials, equipment, and incidentals necessary to provide and place class II riprap as shown on the plans or as directed by the Engineer. Riprap shall be hard, durable, angular stone meeting UPRR/AREMA requirements. Riprap shall be well-graded and placed to form a dense, stable, interlocked mass. Toe and crest trenches shall be excavated and the stone properly keyed in to prevent sliding or undermining. Placement shall avoid segregation, damage to the filter layer, and contamination by fines. The Contractor shall inspect and maintain the riprap throughout construction, including realignment or replacement of displaced stones and removal of debris, to ensure continued stability. Upon completion, riprap shall be left in a clean, stable condition, and all adjacent disturbed areas shall be restored to equal or better than existing.
2. **Rock Ditch Checks:** The Contractor shall furnish all labor, materials, equipment, and incidentals necessary to construct rock ditch checks as shown on the plans or as directed by the Engineer. Rock ditch checks shall be constructed of durable 12" stones otherwise noted. Stones shall be angular, stable, and resistant to weathering and displacement. Prior to installation, the Contractor shall prepare the ditch subgrade to the required lines and grades and place the specified filter layer or geotextile to prevent soil migration. The rock shall be placed to form a dense, interlocked structure, keyed into the ditch toe and flanks to prevent bypassing, undermining, or movement. The crest of the check shall be constructed lower in the center to allow controlled overtopping and reduce erosion. The Contractor shall inspect and maintain the ditch checks throughout construction, including replacing displaced stones, repairing erosion at the toe or flanks, and removing accumulated sediment or debris as necessary to ensure proper function. Upon completion of the work and stabilization of contributing drainage areas, the ditch checks shall be left in a stable, clean condition, and any disturbed areas shall be restored to a condition equal to or better than existing.
3. **Earthwork Activities:** Follow Union Specific Railroad's general specifications division 31 00 00 Earthwork for compaction controls and testing activities
4. **Seeding:** The Contractor shall furnish all labor, materials, equipment, seed, fertilizer, mulch, water, and incidentals necessary to perform seeding work as shown on the Contract Drawings and specified herein. Seeding shall be performed in accordance with the Contract Documents and applicable local and agency requirements. Payment for seeding shall be limited to the disturbed areas shown on the Contract Drawings. No additional payment will be made for seeding of areas disturbed outside the limits of grading or construction as shown on the plans, including areas disturbed by the Contractor's operations, access, staging, haul routes, or means and methods. No additional payment will be made for seeding of borrow areas, stockpile areas, equipment staging areas, or other off-site or on-site areas not specifically identified for seeding in the Contract Drawings. The Contractor shall be responsible for restoration of such areas at their own expense. Seeding shall be completed after final grading and shall be maintained by the Contractor until acceptance, including re-seeding of areas that fail to establish adequate vegetative cover, at no additional cost to the Owner.