1. Section 051200   
   Structural Steel Framing
   1. PART 1  GENERAL
      1. SECTION INCLUDES
         1. Structural steel framing members.
         2. Structural steel support members and struts.
         3. Grouting under base plates.
      2. REFERENCE STANDARDS
         1. AISC (MAN) - Steel Construction Manual; 2023, with Errata (2024).
         2. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2022.
         3. RCSC (HSBOLT) - Specification for Structural Joints Using High-Strength Bolts; Research Council on Structural Connections; 2020.
      3. SUBMITTALS
         1. See Section 013000 - Administrative Requirements, for submittal procedures.
         2. Shop Drawings:
            1. Indicate profiles, sizes, spacing, locations of structural members, openings, attachments, and fasteners.
            2. Connections not detailed.
         3. Manufacturer's Mill Certificate:  Certify that products meet or exceed specified requirements.
      4. QUALITY ASSURANCE
         1. Fabricate structural steel members in accordance with AISC (MAN) "Steel Construction Manual."
         2. Maintain one copy of each document on site.
         3. Design connections not detailed on drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in Colorado.
   2. PART 2  PRODUCTS
      1. MATERIALS
         1. Refer to Structural Drawings.
         2. Grout:  ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
            1. Minimum Compressive Strength at 48 Hours:  2,000 pounds per square inch.
            2. Minimum Compressive Strength at 28 Days:  7,000 pounds per square inch.
      2. FABRICATION
         1. Shop fabricate to greatest extent possible.
         2. Fabricate connections for bolt, nut, and washer connectors.
         3. Develop required camber for members.
      3. FINISH
         1. Shop prime structural steel members.  Do not prime surfaces that will be fireproofed, field welded, in contact with concrete, or high strength bolted.
   3. PART 3  EXECUTION
      1. ERECTION
         1. Erect structural steel in compliance with AISC 303.
         2. Allow for erection loads and provide sufficient temporary bracing to maintain structure in safe condition, plumb, and in true alignment until completion of erection and installation of permanent bracing.
         3. Field weld components and shear studs indicated on shop drawings.
         4. Use carbon steel bolts only for temporary bracing during construction, unless otherwise specifically permitted on drawings.  Install high-strength bolts in accordance with RCSC (HSBOLT) "Specification for Structural Joints Using High-Strength Bolts".
         5. Do not field cut or alter structural members without approval of Architect.
         6. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.
         7. Grout solidly between column plates and bearing surfaces, complying with manufacturer's instructions for nonshrink grout.  Trowel grouted surfaces smooth, splaying neatly to 45 degrees.
      2. TOLERANCES
         1. Maximum Variation From Plumb:  1/4 inch per story, non-cumulative.
         2. Maximum Offset From True Alignment:  1/4 inch.
2. END OF SECTION