**SECTION 01 72 29**

**CUTTING AND PATCHING**

**PART 1 GENERAL**

1. SECTION INCLUDES
   1. The requirements and limitations for the cutting and patching of work
2. SUBMITTALS
   1. Submit written request in advance of cutting or alteration, which affects:
      1. The structural integrity of any element of project
      2. The integrity of weather exposed or moisture resistant element
      3. The efficiency, maintenance, or safety of any operational element
      4. Visual qualities of sight exposed elements
      5. Work of Owner or separate contractor
   2. Include in request:
      1. The identification of project
      2. The location and description of affected work
      3. The necessity for cutting or alteration
      4. A description of proposed work, and products
      5. Any possible alternatives to cutting and patching
      6. Any effect on work of Owner or separate contractor
      7. Written permission from affected separate contractor(s)
      8. Proposed date and time the work starts

**PART 2 PRODUCTS**

1. MATERIALS
   1. Primary Products: Those required for original installation.
   2. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 60 00.

**PART 3 EXECUTION**

1. EXAMINATION
   1. Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching.
   2. After uncovering existing work, assess conditions affecting performance of work.
   3. The contractor beginning of cutting or patching means acceptance of existing conditions.
2. PREPARATION
   1. Provide engineered drawings and/or calculations for temporary supports to ensure structural integrity of the work.
      1. Provide devices and methods to protect other portions of project from damage.
   2. Provide protection from elements for areas, which may be exposed by uncovering work.
   3. Maintain excavations free of water.
3. CUTTING
   1. Execute cutting and fitting including excavation and fill to complete work.
   2. Uncover work to install improperly sequenced work.
   3. Remove and replace defective or nonconforming work.
   4. Remove samples of installed work for testing when requested.
   5. Provide openings in the work for penetration of mechanical and electrical work.
   6. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight-exposed surfaces.
4. PATCHING
   1. Execute patching to complement adjacent work.
   2. When patching holes or trench lines cut into existing concrete floors:
      1. Dowel rebars into existing concrete on all sides of the trench or hole.
         1. Rebar dowels shall extend at least six inches into the existing concrete and be secured with construction epoxy.
         2. Rebar dowels shall be placed at 12” interval along the entire repair perimeter.
         3. Epoxy shall fully cure before placing concrete used to fill the hole or trench.
         4. Bridging rebar may be required based upon the size of the trench or hole.
      2. All earth placed in the hole or trench shall be fully compacted per earthwork specifications prior to placing concrete.
      3. At the contractor’s discretion, 200 psi flowable fill may be used in lieu of compacted earth.
   3. Properly fit products together to integrate with other work.
   4. Execute work by methods to avoid damage to other work and which, provide appropriate surfaces to receive patching and finishing.
   5. Employ original installer to perform cutting and patching for weather exposed and moisture resistant elements, and sight-exposed surfaces.
   6. Restore work with new products in accordance with requirements of Contract Documents.
   7. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
   8. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material, to full thickness of the penetrated element.
   9. Refinish surfaces to match adjacent finish.
      1. For continuous surfaces, refinish to nearest intersection or natural break.
      2. For an assembly, refinish entire unit.

END OF SECTION