SECTION 01 73 29
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes procedural requirements for cutting, fitting, patching, repairing, and restoring existing construction as required to complete the Work.

B. Work applies primarily to selective bathroom renovations and adjacent areas within occupied residential apartments.

C. Cutting and patching includes, but is not limited to, gypsum board, minor non-load-bearing partitions, floor finishes and substrates, wall finishes, plumbing penetrations as related to trench drain, electrical penetrations, door and frame openings, and miscellaneous existing construction affected by the Work.

D. Existing ceilings are to remain unless specifically moisture or humidity damage is found. Replace all damaged areas. Extent of cutting or patching of ceilings to be reviewed with Architect / Owner as required.

E. Related demolition requirements are specified in Section 02 41 00 - Demolition.

1.2 RELATED SECTIONS

A. Section 02 41 00 - Demolition.

B. Division 06 - Wood, Plastics, and Composites.

D. Division 07 - Thermal and Moisture Protection.

E. Division 08 - Openings.

F. Division 09 - Finishes.

G. Division 22 - Plumbing.

H. Division 23 - Heating, Ventilating, and Air Conditioning.

I. Division 26 - Electrical.

1.3 DEFINITIONS

A. Cutting: Removal of portions of existing construction by sawing, drilling, coring, or other controlled means to permit installation, alteration, or connection of new Work.

B. Patching: Repair, replacement, filling, finishing, and restoration of existing construction after cutting or removal so that the completed surface is sound, secure, and visually compatible with adjacent construction.

C. Matching: Providing new or repaired materials, finishes, textures, profiles, and colors that are visually consistent with adjacent existing construction to the greatest extent practicable.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Coordinate cutting and patching with Owner, Architect, and affected trades before beginning Work.

B. Schedule work within occupied apartments in accordance with Owner-approved resident access and construction sequencing as outlined in Contract.

C. Do not cut or alter structural members, load-bearing construction, fire-rated assemblies, waterproofing systems, building envelope components, or active life-safety systems without prior written approval.

D. Coordinate work to minimize disruption of utilities and services to occupied apartments and common areas.

E. Where cutting and patching affects work of more than one trade, assign responsibility to the trade best qualified to perform the work and achieve a complete finished result.

1.5 SUBMITTALS

A. Cutting and Patching Plan for trench drains.

B. Photograph existing conditions before cutting where adjacent finishes, resident property, or concealed conditions may be affected.

1.6 QUALITY ASSURANCE

A. Use workers experienced in the type of construction being cut and patched.

B. Match existing workmanship and finish quality.

C. Perform work so repaired areas are durable, smooth, secure, and suitable for subsequent finishes.

D. Where existing finishes cannot be matched exactly, extend patching or replacement to the nearest logical termination, corner, joint, change in plane, or other natural break as directed by Architect.

1.7 EXISTING CONDITIONS

A. Verify existing conditions and locations of concealed utilities before cutting.

B. Use available record documents, visual investigation, non-destructive locating methods, and field verification as appropriate.

C. If concealed conditions differ materially from Contract Documents, stop work in the affected area and notify Architect before proceeding.

D. If suspected hazardous materials are encountered, comply with applicable regulatory requirements.

1.8 PROTECTION

A. Protect residents, adjacent construction, furnishings, finishes, and building systems from dust, debris, water, vibration, and impact.

B. Provide temporary barriers and floor protection before cutting.

C. Maintain accessible routes, exits, corridors, and life-safety systems.

D. Prevent damage to ceilings designated to remain.

E. Repair damage resulting from cutting and patching operations at no additional cost to Owner.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use patching materials identical to existing materials where practical and available.

B. Where identical materials are unavailable or impractical, provide materials compatible with existing construction and suitable for intended service conditions.

C. Materials used for permanent repairs shall comply with applicable specification sections for new Work.

D. Do not use temporary patching materials as permanent repairs.

2.2 GYPSUM BOARD PATCHING MATERIALS

A. Provide gypsum board of thickness and type matching existing construction or as required by the applicable wall assembly. See SECTION 09 21 16 – GYPSUM BOARD ASSEMBLIES.

B. Provide corrosion-resistant fasteners, joint tape, joint compound, corner reinforcement, trim, and accessories compatible with existing and new construction. See SECTION 09 21 16 – GYPSUM BOARD ASSEMBLIES.

C. Provide backing or framing sufficient to support patch edges and new fixtures, accessories, grab bars, or finishes where required. See SECTION 09 21 16 – GYPSUM BOARD ASSEMBLIES.

D. Where moisture-resistant board is required by new Work, provide specified material at affected locations. See SECTION 09 21 16 – GYPSUM BOARD ASSEMBLIES.

2.3 FLOOR AND WALL PATCHING MATERIALS

A. Provide underlayment, patching compounds, setting materials, adhesives, sealants, and finish materials compatible with existing substrates and new finish systems – including flash patch for slope to drain conditions in all showers.

B. Use moisture-resistant materials in bathroom wet areas and at locations subject to water exposure. SEE FINISH SCHEDULE AND FINISH LEGEND.

C. Provide sealants suitable for sanitary, wet-area, and movement-joint applications as applicable.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and conditions before cutting or patching.

B. Verify locations of utilities, piping, wiring, framing, and other concealed components.

C. Confirm limits of removal and restoration before beginning work.

D. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Provide temporary protection and dust containment before cutting.

B. Relocate, protect, shut down, isolate, or disconnect utilities as required and approved.

C. Provide temporary support where existing construction could be weakened by cutting.

D. Remove furniture, resident belongings, and movable items from the immediate work area or protect them as coordinated with Owner.

E. Use HEPA-filtered dust collection with cutting and sanding equipment where feasible within occupied residential areas.

3.3 CUTTING - GENERAL

A. Perform cutting by methods that avoid unnecessary damage and provide clean, straight, stable edges suitable for patching.

B. Cut only the minimum area required to perform new Work.

C. Use sawing, drilling, coring, or other controlled methods. Do not use impact methods where they could damage adjacent construction.

D. Do not overcut corners of gypsum board, wall finishes, flooring, or other surfaces.

E. Make openings neatly sized for sleeves, escutcheons, access panels, fixtures, piping, conduit, and equipment.

F. Do not cut structural framing or load-bearing construction without written authorization.

G. Do not cut existing ceilings without prior approval of Architect and/or Owner.

H. Where cutting exposes concealed deterioration, water damage, mold-like conditions, damaged framing, unsafe wiring, leaking piping, or other suspect conditions, stop work and notify Architect and Owner.

3.4 GYPSUM BOARD CUTTING AND PATCHING

A. Cut gypsum board to straight, square, plumb, and level lines where practical.

B. Locate patch edges over existing framing or provide new backing sufficient to support the repair.

C. Remove loose, damaged, wet, delaminated, or unsound gypsum board beyond the immediate cut area as required to obtain sound patch edges.

D. Install replacement board flush with adjacent surfaces.

E. Tape, finish, sand, and prepare patched areas to match adjacent surface quality and to receive specified paint or wall finish. See SECTION 09 21 16 – GYPSUM BOARD ASSEMBLIES.

F. Feather joint compound sufficiently beyond patch edges to minimize visible transitions. See SECTION 09 21 16 – GYPSUM BOARD ASSEMBLIES.

G. At locations receiving new grab bars, accessories, shower components, fixtures, or wall-mounted equipment, coordinate installation of blocking or reinforcement before closing walls.

3.5 FLOOR CUTTING AND PATCHING

A. Remove floor finishes and underlayment only to limits required for new Work.

B. Cut flooring in straight lines at logical termination points unless otherwise indicated.

C. Repair depressions, holes, penetrations, and damaged substrates with materials compatible with existing floor construction and new finish materials.

D. Provide smooth, level, securely bonded substrates suitable for new flooring.

E. Where new accessible shower construction requires floor modifications, coordinate patching with plumbing, waterproofing, slope, threshold, and finish requirements, including installation of collapsible dam at front edge of shower.

F. Do not reduce structural capacity of floor assemblies.

3.6 WALL FINISH PATCHING

A. Patch wall finishes affected by removal of bathtubs, lavatories, water closets, accessories, partitions, doors, piping, electrical devices, and related work.

B. Remove loose or damaged finish material before patching.

C. Blend texture and finish with adjacent surfaces.

D. Where an exact visual match cannot reasonably be achieved, extend finish replacement to a natural break or other limit approved by Architect.

E. Provide moisture-resistant and cleanable finishes in bathroom locations as specified for new Work.

3.7 DOOR AND FRAME OPENINGS

A. Patch walls, flooring, base, and adjacent finishes affected by removal, relocation, or replacement of doors and hollow metal frames that match existing.

B. Provide straight, plumb, and properly reinforced openings for new frames.

C. Repair adjacent gypsum board and finishes so completed work is flush and free from visible cracking or damage.

D. Coordinate patching with accessibility clearances and maneuvering requirements indicated on Drawings.

3.8 PLUMBING AND MEP PENETRATIONS

A. Coordinate cutting for piping, conduit, wiring, ductwork, devices, and equipment with applicable trades.

B. Size openings as small as practicable while allowing installation and required clearances.

C. Seal openings around penetrations after installation.

D. At wet locations, provide watertight and sanitary seals around penetrations as applicable.

E. Restore fire-resistance-rated construction using tested firestopping systems where existing rated assemblies are penetrated.

3.9 PATCHING - GENERAL

A. Patch construction to restore structural integrity, fire resistance, moisture resistance, acoustical performance, durability, appearance, and function of existing assemblies as applicable.
B. Fit patches tightly and securely to existing construction.
C. Finish patched surfaces to match adjacent construction in plane, texture, profile, and appearance to the greatest extent practicable.
D. Provide transitions that do not create abrupt edges, trip hazards, sharp projections, or other unsafe conditions.
E. Prepare patched surfaces for subsequent painting, flooring, wall panels, wall finish, or other specified finish.
F. Where patching occurs within an occupied apartment, complete the work promptly and do not leave unnecessary openings exposed overnight.

3.10 EXISTING CEILINGS TO REMAIN

A. Protect existing ceilings throughout cutting and patching operations. If damaged by moisture or humidity, sections of ceiling(s) to be replaced.

B. Do not use ceilings to support temporary protection, tools, materials, or construction loads unless specifically approved.

C. If an approved ceiling opening is required for access, make the opening as small as practical and restore the ceiling to match adjacent construction.

D. Replace ceiling materials damaged by Contractor operations at no additional cost to Owner.

3.11 PAINTING AND FINISH RESTORATION

A. Prepare patched surfaces in accordance with applicable finish specifications.

B. Spot painting alone is not acceptable where it results in visible color or sheen variation.

C. Where required to provide a uniform appearance, extend painting to the nearest corner, change in plane, or logical termination.

D. Match existing adjacent color and sheen where existing finishes are intended to remain.

3.12 CLEANING

A. Remove debris generated by cutting and patching daily.

B. Vacuum dust using HEPA-filtered equipment where appropriate.

C. Clean adjacent finished surfaces affected by the Work.

D. Do not use cleaning methods or products that damage existing or new finishes.

E. At completion of work in each apartment, leave the area clean, safe, secure, and ready for resident use or subsequent construction.

3.13 FIELD QUALITY CONTROL

A. Architect and Owner may inspect patched areas before concealment or final finishing.

B. Remove and replace patching that is loose, cracked, uneven, incompatible, improperly finished, or visibly unacceptable.

C. Correct damage to existing construction resulting from cutting and patching operations at Contractor's expense.

END OF SECTION 01 73 29