

Project Manual

PHASE 1 RENOVATION FOR:
219 SOUTH 2ND STREET
MILWAUKEE, WISCONSIN 53204

Project Number 1621

Issued: October 20th, 2016

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DIVISION 01 – GENERAL REQUIREMENTS

1. **Work-** Each Contractor will furnish all labor and materials to execute the work as shown on the drawings. Work shall be done under a general contract between Owner and General contractor.
2. **Code Compliance-** All work shall be in compliance with state and local codes that govern for the location of the building site.
3. **Permits-** Each Contractor will provide all building permits and include the price of the permits in his or her proposal.
4. **Subcontractors-** Each Contractor may use subcontractors to perform portions of work with the approval of the Owner. All coordination of subcontractors is the responsibility of the General Contractor. Subcontractors are to get all direction and communication through the General Contractor and not directly from the Owner.
5. **Workmanship-** Workmanship shall be of the best quality. Each Subcontractors will provide workmanship that is neat and secure, with the best possible appearance and utility. The Architect will be the judge of the installed work and may reject work that does not meet the standards set in these specifications. Such work will be repaired or replaced to the satisfaction of the Architect at no cost to the Owner.
6. **Refuse-** Each Contractor and Subcontractors are responsible for the removal of their own refuse from the premises. No burning of refuse on site is permitted.
7. **Modification Procedures-** If or when the Architect issues changes, modifications or clarifications to these drawings each the Contractor is responsible to contact the General Contractor within 10 working days to inform them of any change in cost or schedule. The General Contractor will then submit total costs and schedule changes to the Architect for review with the Owner. Submit all costs in written form with a breakdown of material quantities, labor, tax, delivery and mark-up.

No work is to proceed on modifications that result in changes in cost or schedule without written direction from the Architect or Owner.

8. **Shop Drawings-** Provide shop drawings or samples for the following items before proceeding with fabrication or installation:
 - Membrane waterproofing (Shop drawings)
 - Windows (Shop drawings)
 - Doors (Shop drawings)
 - Wood trim profiles (Shop drawings or samples)
 - Any other items that are indicated in the specifications

DIVISION 2 – SITE WORK & DEMOLITION

1. **General-** Notify Digger's Hotline for stakeout of existing utilities before beginning any digging.
2. **General Demolition-** Remove completely, all items indicated on the drawings to be demolished including all utilities, anchors, and finishes. Remove from site and legally dispose of all items except those indicated to be reused, reinstalled or salvaged. Demolished materials will become the Contractor's property.
3. **Demolished Items-** Storage or sale of any demolished items on-site is not permitted.
4. **Existing Construction-** Protect existing construction scheduled to remain against damage during selective demolition.
5. **Asbestos and Lead Removal-** Asbestos or lead removal is not part of this work. If any materials suspected of containing asbestos or lead are encountered, do not disturb the materials. Immediately notify General contractor and owner.
6. **Coordination-** Coordinate demolition work with other activities as much as possible.
7. **Utilities-** Verify that all utilities have been disconnected and capped before proceeding with demolition.

8. **Means and Methods-** The contractor will survey the existing conditions and compare with the requirements indicated on the drawings to determine the extent of demolition required. Verify the condition of the building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during demolition. The Contractor shall determine the means and methods for shoring existing construction during selective demolition.
9. **Damaged Surfaces-** Patch and repair existing wall, ceiling, roof and floor surfaces scheduled to remain that are damaged from the removal of adjacent selective demolition. Provide a flush even surface that eliminates evidence of the demolished element. Level floors where walls are demolished.
10. **Cleaning-** Sweep the building, or portion of the building, broom clean on completion of selective demolition operations.

DIVISION 03 – CONCRETE

1. **General-** The latest issue of the American Concrete Institute and the American Society for Testing Materials Specifications, Test Methods and Recommended Practices will govern cast-in-place concrete.
2. **Forms-** Concrete forms are to be designed with sufficient stability to withstand pressure of placed concrete without bow or deflection including the impact of placement, vibrating, rodding and moving of materials and equipment.
3. **Reinforcing Bars-** Concrete reinforcing bars: ASTM A 615, Grade 60, unless otherwise indicated.
4. **Reinforcing Fabric-** Concrete reinforcing welded wire fabric: ASTM A 185, 6"x6"-W1.4xW1.4 WWF for concrete slabs on grade and over metal deck.
5. **Ready-Mix Concrete-** ASTM C 94 .
 - A. 4,000 psi for floor slabs.
 - B. 3,000 psi for footings and other miscellaneous concrete work.
 - C. 4,000 psi for all walls and exterior concrete work exposed to weather.
 - D. 4 inch maximum slump.
 - E. Water to cement ratio to not exceed 0.48.
 - F. 6 percent air entrainment. (+- 1%)
 - G. Water to be potable.
6. **Vapor Barrier-** Provide a 6 Mil., rot-resistant, reinforced, polyethylene film vapor barrier under all interior concrete slabs.
7. **Control Joints-** Install control joints in concrete slabs as indicated on drawings. If not indicated, space joints not more than 20 feet apart for interior slabs in heated spaces and 10 feet apart for exterior slabs or slabs in unheated spaces. Saw-cut joints are permitted if done within 24 hours of the pour.
8. **Protection-** Protect concrete from physical damage or reduced strength due to weather extremes during mixing, placement and curing. In cold weather comply with ACI 306. In hot weather comply with ACI 305.
9. **Aggregate Stone Drainage Fill-** Provide clean, compacted bank-run #2 stone.

DIVISION 04 – MASONRY

1. **General-** Comply with the recommendations of the Brick Institute of America (BIA), and the National Concrete Masonry Association. (NCMA)
2. **Concrete Block (Alternate Foundation Wall)-** ASTM C 90, nominal 8" high, normal weight.

3. **Mortar-** Type M below grade and type N for all above grade applications. Mix shall be of reputable vendor with ASTM C 144 sand and potable water. Add mortar color to match sample selected by Owner.
4. **Masonry Wall Reinforcing-** electrically welded side and cross rods of ladder or truss type. 22 gage, galvanized ties placed horizontally at 16" o/c unless noted otherwise.
 - Block-Lok, AA Wire Products Company.
 - Dur-O-Wall, Dur-O-Wall Inc.
5. **Masonry Reinforcing Bars-** ASTM A615, Grade 60, unless noted otherwise.

DIVISION 05 – METALS

1. **General-** As far as possible, all work is to be fitted and shop assembled, ready for erection. All ferrous metal work is to receive one coat of rust inhibiting metal primer. Metals are to be free from defects impairing strength, durability or appearance. All metal shall be made of new material. All work is to be made and erected square, plumb, straight and true, accurately fitted with tight joints and intersections adequately reinforced and anchored in place. All steel work shall conform to the American Institute of Steel Construction, Code of Standard Practice.
2. **Metal stud framing-** Provide metal stud exterior wall framing as indicated on drawings. Stud framing is to be a minimum of 25 gauge with a corrosion resistant finish. Include runners, sill runners, jambs, kickers, and cripple studs sized as recommended by manufacturer.
3. **Adjustable Steel Column-** Provide 3 ½" O.D., 11 gauge prefabricated adjustable steel tube columns with standard end plates. Shop prime. Akron #305, Akron Products Company or preapproved equal.
4. **Metal deck-** Provide 1.5VL20 non-composite metal deck.
5. **Steel-**
 - A. Wide flange beam structural steel: ASTM A992
 - B. Channels, angles, bars, plates and rods: ASTM A36.
 - C. Steel pipe columns: ASTM A53 grade B.
 - D. Bolts and nuts: ASTM A 307 or ASTM A 325.

DIVISION 06 – WOOD AND PLASTICS

1. **Rough Lumber-** All wood blocking, nailers, furring and studs of Standard Grade SPF, Douglas Fir, Southern Pine or Hem-Fir, No. 2 or better.

All structural joist, rafters, headers, wood beams and stair stringers will be of Douglas Fir No. 2 or better.

 - A. Fb: 1,250 psi. for single members.
 - B. Fb: 1,450 psi. for repetitive members.
 - C. E: 1,700,00 psi.
2. **Micro-Lam Beams (LVL)-** Microllam, Trus Joist MacMillan or preapproved equal.
 - A. Max. deflection: L/360.
 - B. Fb: 2,600 psi.
 - C. Fc': 750 psi.
 - D. Fc'': 2,510 psi.
 - E. Fv: 285 psi.

F. E: 1,900,000 psi.

G. G: 118,750 psi

3. **Wall Sheathing-** See Division 7.
4. **Floor Sheathing-** ¾" nominal, T&G APA –rated floor sheathing, 23/32" actual thickness, or preapproved equal. Glue and nail to floor framing with 8d common nails at 6" spacing at supported edges and 12" spacing at interior supports. Stagger panel edges.
5. **Pressure Treated Lumber-** All rough lumber in contact with masonry or moisture will be pressure treated with water-borne preservatives.
6. **Fire-Retardant-Treated Lumber-** All wood products indicated to be fire retardant treated wood are to meet 2009 IBC 2303.2 requirements as follows: Wood products which when impregnated with chemicals through a manufacturing process to have, when tested in accordance with ASTM E 84 or UL 723, a flame spread index of 25 or less and show no evidence of significant progressive combustion when the test is continued for an additional 20-minute period. Additionally, the flame front shall not progress more than 10 ½ feet beyond the centerline of the burners at any time during the test. All wood products are to be clearly labeled with approved agency, manufacturer, treatment type, wood species, flame spread index, and method of drying. For fire retardant wood exposed to weather, damp, or wet locations include the words "No increase in listed classification when subjected to Standard Rain Test."
7. **T&G Wood Soffit-** Tongue and groove soffit paneling cut from clear pine 1x4 with a single "V" groove cut at the joint. "V" groove and joints are to be approximately 3" on center.
8. **Interior Wood Trim-** All interior wood trim is to be solid clear vertical grain birch or poplar. Use full lengths where ever possible with no finger jointing.
9. **Exterior Wood Trim-** All exterior wood trim exposed to weather is to be Western Red Cedar, clear vertical grain, smooth exposed finish. Use full lengths where ever possible with no finger jointing.
10. **Exterior Brackets -** Western Red Cedar, SFS, Tight knots of grade C or better. Smooth exposed finish.
11. **Poly-Ash Base Trim –** Provide a composite poly-ash trim product for the base trim along the base of the building. 2x8 nominal thicknesses with beveled edge and smooth finish. Boral TruExterior Trim.
12. **Composite Cement Fiberboard (General)-** Provide cement fiber board products of portland cement, ground sand, cellulose fiber and water. Patterns and profile indicated below are from James Hardie Building Products. Alternate products are acceptable with approval. All products are to be pre-colored in a standard ColorPlus finish as selected by the owner.
13. **Cement Fiberboard Panels-** Provide 0.312" (1/4" nominal) Smooth HardiePanel Vertical Siding. Field Paint.
14. **Concealed Fasteners and Connectors-** Miscellaneous fasteners and rough carpentry hardware, where not called out on the drawings, will be of a size and spacing which will develop the strength of the members being fastened. All fasteners will have a hot-dipped galvanized finish, except fasteners and connectors in contact with treated lumber are to be stainless steel. Simpson Strong-Tie Connectors.
15. **Curing-** All lumber will be kiln dried and well seasoned where the maximum moisture content is less than 19%.
16. **Installation-** Finish work will be erected plumb, true, square and in accordance with the drawings.

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

1. **Weather Resistive Barrier (Building Wrap)-** Provide an air infiltration barrier and bulk moisture penetration barrier over all exterior walls as follows: Spun bonded polyolefin, non-woven, non-perforated sheet with related assembly components. Provide a surface texture for enhanced water drainage under siding and trim. "Tyvek Drainwrap" Du Pont Company, or similar. Include 2" minimum seam tape, sealants, adhesives, primers, and flexible self-adhering membrane flashings. Fasten to the exterior wall sheathing as recommended by the manufacturer. Tape all seams, corners, and transitions. Provide a minimum of 6" laps at all horizontal seams with upper layer shingling over the lower layer. Flash around windows, doors and any penetrations in the sheathing as recommended by the manufacturer.

2. **Wall sheathing-** Provide a 5/8" sheathing board with a moisture resistant gypsum core laminated with a coated fiberglass mat on each side. DensGlass Fireguard Sheathing, Georgia Pacific Gypsum, or preapproved equal.
3. **Rigid Below Floor Slab Insulation Board -** Provide 1 1/2" of XPS rigid high density extruded polystyrene insulation board of 25 lbs/ft² compressive strength.
4. **Batt Insulation-** Wall insulation will be standard fiberglass friction fit, unfaced batt insulation of R-values indicated on drawings. Apply batt insulation to fit snugly between framing members, mechanical piping, etc., to provide a complete insulation system.
5. **Waterproofing Membrane-** Provide a two component, hand-applied liquid waterproof membrane. Waterproofing to be a two component 80 mil. elastomeric membrane over a two component epoxy primer. System components to include Silcor 900HA membrane, Silcor Primer EPF, Dry Quartz Silica Sand, with Bituthene Liquid Membrane and Preprufe Tape for detailing. Grace Construction Products. Install as recommended by the manufacturer.
6. **Rubberized Wall Flashing-** Provide a self-adhesive, rubberized asphalt/polyethylene flashing. A 40 mil. self-adhesive tape consisting of 32 mil. rubberized asphalt integrally bonded to an 8 mil. high density, cross laminated polyethylene film. Perm-A-Barrier, Grace Construction Products. Install as recommended by the manufacturer.
7. **Metal Flashing and Sheet Metal-** Flashing and sheet metal will be a manufacturer's standard coil-coated sheet steel with a fluoropolymer 2-coat coating system with 70% minimum polyvinylidene fluoride resin. All installation and workmanship is to be in accordance with SMACNA standards. Provide the following thickness:
 - Flashing and counterflashing - 24 Ga.
 - Drip edges - . 24 Ga.
8. **Sealants-**
 - Seal all exterior joints of dissimilar materials, expansion joints, around window and doorframes, mechanical outlets and as indicated on the drawings. Use a multi-component polyurethane sealant.
 - Seal around all interior plumbing fixtures and other non-porous surfaces with a one-part silicone sealant.
 - Seal around porous surfaces with a single component polyurethane sealant.
 - All sealants must be prepared and installed in compliance with manufacturer's instructions.

DIVISION 08 – DOORS AND WINDOWS

1. **Exterior glazing-** Glazing to be installed in wood framing system. Provide tempered glass where recommended by the manufacturer, or required by state or local building code. 1" insulated glass units. 1/4" thick clear float glass outer unit, 1/2" air space with argon gas filling and 1/4" clear float glass inner unit with low-E coating on third surface. Include all accessories for installing in a wood frame system including setting blocks, glazing tape, and glazing sealants. Glazing to have a maximum U-value of 0.35 and a SHGC of 0.40.
2. **Architectural Windows -** All architectural windows are to be pre-manufactured, high energy performance units in a frame style as indicated in the window schedule and on the drawings. Provide prefinished exterior cladding in one of the manufacturer's standard colors. Glass shall be insulated glass with "Low E" coating and argon filled gas air space. Window interiors are to be prefinished. Exterior cladding in to be a standard color as selected by the owner. Include screens and weather stripping for all operable units. Factory installed sill, jamb and head extensions are not required. Include manufacturer's standard clad "Brick Mould Casing" around the perimeter of each window. Sizes given on drawings are approximate sizes to be used for pricing. The general contractor is to field verify all existing window openings prior to fabrication. Marvin Windows and Doors, Clad Ultimate Series. Windows to have a maximum U-value of 0.35 and a SHGC of 0.40.
3. **Doors-General-**
 - All wood doors will comply with the American Woodwork Institute (AWI) Quality Standards for "Premium" doors.
 - The door installer is responsible to see that the wood doors are sealed and finished (including tops, bottoms and edges) within 4 days after delivery to the site.

4. **Exterior Wood Stile and Rail Doors-** Exterior doors will be 1 ¾" thick, clear vertical grain Hemlock, wood stile and rail doors with flat panels. Glazing to be ¾" clear insulated tempered glass. See drawings for layout. Doors to have a maximum U-value of 0.35.
5. **Hollow Metal Doors-** Doors will be 1 ¾" thick, 18 gauge metal clad skin with 14 gauge hinge, lock and reinforcement channels, Exterior doors to have core filled with polystyrene insulation with a 4.00 minimum overall R-value.
6. **Hollow Metal Frames-** Hollow metal door frames to be 14 gauge for exterior doors and 16 gauge for interior doors, shop fabricated with welded corners, and shop primed for field painting. Provide a labeled fire rated frame with UL labels attached for all fire rated doors indicated in the door schedule.
7. **Door Hardware, General-** Install hardware in accordance with manufacturer's instructions. Include all hardware to completely equip building. Provide all anchors and accessories required for proper installation of hardware. Unless otherwise requested by the Owner, exterior locksets are to be mortise type. Interior locksets are to be cylinder type.
8. **Hardware Provided by the Owner-** Locksets, push, pulls, and dead bolts for hardware groups HG3 and HG4 will be provided by the owner and installed by the contractor.
9. **Hardware Finishes and Material-** Hardware finishes shall be US26D satin chrome and US32D satin stainless steel. Materials shall be the following. Provide with the finish designated in parenthesis ().
10. **Locks and Deadlocks-** Dorma C800 and CL700 LGC, Sargent 10 Series, or Schlage D series at all doors. Design to match Dorma LGC. Backset shall be 2-3/4" for all locks, latches and dead locks. Strikes shall be box type with wide enough lip projection to protect door frame but not to exceed 3/16" beyond face of frame. All cylinders shall have not less than six (6) pins. Lock function legend (unless otherwise specified)
11. **Butt Hinges-** Shall be PBB, McKinney or Bommer ball bearing, non-rising loose pin, flat button tip, unless otherwise specified. Provide 1-1/2 pair butts per door for doors up to 7'-6" in height. Doors over 7'-6" in height shall have two (2) pairs of butts. Interior doors up to 37" wide 4-1/2 x 4-1/2-BB81. Interior doors over 37" wide 5 x 4-1/2-4B81. Exterior doors 4B51 - NRP. Furnish UL approved butts on labeled doors.
12. **Door Closers-** Closers shall be of cast aluminum or cast iron, of full rack and pinion construction, including two speed closing adjustment, adjustable hydraulic back-check and fully adjustable spring power plus reversible shoe feature, of type listed in schedule. Closer fluid shall be "all weather" type not subject to normal temperature changes. Shall be Dorma, Norton, or LCN of proper size as described in manufacturer's schedule of sizes. Where parallel arm or weather strip is specified, closers shall be one size larger than manufacturer's recommendations. Closers shall have key adjusting device. Mount to provide maximum opening permitted by building construction or equipment, and note on this schedule this maximum swing per location for other trades involved in reinforcement or installation. Door closers at labeled fire doors shall bear UL approval. Provide thru-bolts for mineral core doors.
13. **Kickplates-** All plates shall be 16 gauge (.050) with beveled sides and countersunk screw holes at intervals of not over 6" on all four sides. Screws shall be stainless steel oval head, finish to match plates. Size of kick, armor and mop plates as noted in Schedule. Shall be as manufactured by DonJo, Hiawatha Industries, Inc. or Rockwood Mfg.
14. **Weatherstripping-** National Guard, Reese or Zero as listed. National Guard 675.
15. **Threshold-** National Guard, Reese or Zero as listed. National Guard 525.
16. **Butt Hinges-** include 1 ½ pairs of butts per door.
17. **Hardware Schedule –**

HG1
LOCKSET
BUTTS
STOP

HG2
LOCKSET
CLOSER
BUTTS
STOP
8" KICK PLATE

HG3

LOCKSET
CLOSER
BALL BEARING BUTTS
DEAD BOLT
THRESHOLD
WEATHERSTRIPPING
8" KICK PLATE

HG4

PUSH
PULL
CLOSER
BALL BEARING BUTTS
DEAD BOLT
THRESHOLD
WEATHERSTRIPPING
8" KICK PLATE

HG5

LOCKSET
BUTTS
DEAD BOLT
TOP AND BOTTOM FLUSH BOLTS
THRESHOLD
WEATHERSTRIPPING
8" KICK PLATE

DIVISION 09 – FINISHES

1. **Gypsum Board-** Gypsum board will be 5/8" fire code (type X) or 5/8" fire code (type C) in 4'-0" x lengths as required. Fasteners are to be power driven, type "S" bugle head, 1" long. Provide metal accessories necessary for an installation that meets the manufacturer's specifications. Provide 5/8" Type WR/MR board on all walls scheduled to receive wall tile. Apply joint treatment at all joints and fasteners as recommended by manufacturer. Use a three-coat system with sanding between each coat. Provide a spray-on orange-peel textured finish.
2. **Metal Studs-** See Division 5.
3. **Painting-** All exposed exterior surfaces will be painted; or stained and varnished except masonry or prefinished materials. Paint or stain both sides of exterior doors and frames. No other interior painting is included. The products listed below are primarily provided by Hallman Lindsay Paints. Provide the products listed below for each condition. Any substitutions must be submitted to the architect for approval.
 - Hollow metal doors and frames- Duraguard Alkyd (Semi-gloss)
 - Cement fiberboard siding and trim- Prime with 112 Exterior Latex Primer, top coat with Weatherguard Exterior Latex (low sheen)
 - Wood trim- Prime with Primer III, top coat with Weatherguard Exterior Latex (low sheen)

DIVISION 10 - SPECIALTIES

1. None.

DIVISION 15A – PLUMBING

1. None.

DIVISION 15B – HEATING, VENTILATING AND AIR CONDITIONING

1. None.

DIVISION 16 – ELECTRICAL

1. None.

END OF OUTLINE SPECIFICATION

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