METAL MANUAL"

1.2 MATERIALS

SHEET METALS:

SECTION 076200 - SHEET METAL FLASHING AND TRIM

SHEET METAL STANDARD FOR FLASHING AND TRIM: NRCA'S "THE

NRCA ROOFING MANUAL" AND SMACNA'S "ARCHITECTURAL SHEET

1.1 PERFORMANCE REQUIREMENTS

FINISHES:

4. FINISH: MILL-FINISH ALUMINUM. 5. ACCESSORIES: SAFETY RAILING SYSTEM.

1. HEIGHT: MINIMUM 12 INCHES.

MATERIAL: ALUMINUM.

2. HATCH LID: OPAQUE, SINGLE LEAF.

ROOF-EDGE DRAINAGE SYSTEMS:

GUTTERS: FORMED ALUMINUM.

DOWNSPOUTS: FORMED ALUMINUM.

CONDUCTOR HEADS: FORMED ALUMINUM.

DUCT SUPPORTS: EXTRUDED ALUMINUM, URETHANE INSULATED. PIPE PORTALS: FLASHING TYPE, FORMED ALUMINUM WITH EPDM

ROOF HATCHES: INSULATED WITH SINGLE-WALLED CURBS

PREFORMED FLASHING SLEEVES: EXHAUST VENT FLASHING AND VENT STACK FLASHING FABRICATED FROM ALUMINUM SHEET

## SECTION 078413 - PENETRATION FIRESTOPPING

1.1 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: FM GLOBAL APPROVED OR UL QUALIFIED.

1.2 PENETRATION FIRESTOPPING

PENETRATIONS IN FIRE-RESISTANCE-RATED WALLS: F-RATINGS PER ASTM E 814 OR UL 1479.

B. PENETRATIONS IN HORIZONTAL ASSEMBLIES: F-, T-, AND W-RATINGS PER ASTM E 814 OR UL 1479.

1.3 INSTALLATION

IDENTIFICATION: WALLS AND PENETRATIONS.

SECTION 078443 - JOINT FIRESTOPPING

1.1 QUALITY ASSURANCE

A. INSTALLER QUALIFICATIONS: FM GLOBAL APPROVED OR UL QUALIFIED.

1.2 FIRE-RESISTIVE JOINT SYSTEMS

A. JOINTS IN OR BETWEEN FIRE-RESISTANCE-RATED CONSTRUCTION: ASTM E 1966 OR UL 2079.

B. JOINTS AT EXTERIOR CURTAIN-WALL/FLOOR INTERSECTIONS: ASTM E 119 OR ASTM E 2307.

SECTION 079200 - JOINT SEALANTS

1.1 WARRANTY

A. INSTALLER WARRANTY: TWO YEARS.

1.2 JOINT SEALANTS

A. VOC CONTENT OF INTERIOR SEALANTS:

ARCHITECTURAL SEALANTS: 250 G/L.

2. SEALANT PRIMERS FOR NONPOROUS SUBSTRATES: 250 G/L.

NONSTAINING SILICONE JOINT SEALANTS.

URETHANE JOINT SEALANTS.

MILDEW-RESISTANT JOINT SEALANTS.

**BUTYL JOINT SEALANTS** 

LATEX JOINT SEALANTS. JOINT-SEALANT BACKING **DIVISION 08 - OPENINGS** 

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

1.1 EXTERIOR DOORS AND FRAMES

A. SDI HEAVY DUTY: SDI A250.8, LEVEL 2. METALLIC-COATED, COLD-ROLLED STEEL SHEET.

1. EDGE CONSTRUCTION: MODEL 1, FULL FLUSH.

2. CORE: MANUFACTURER'S STANDARD INSULATED CORE.

3. FRAMES FULL PROFILE WELDED

4. EXPOSED FINISH: FACTORY.

ACCESSORIES: 1. MULLIONS AND TRANSOM BARS

1.2 INSTALLATION

A. WOOD STUD PARTITIONS: FRAMES FILLED WITH INSULATION.

SECTION 081213 - HOLLOW METAL FRAMES

1.1 INTERIOR FRAMES A. SDI STANDARD DUTY: ANSI/SDI A250.8, LEVEL 1. UNCOATED, STEEL SHEET.

CONSTRUCTION: FULL PROFILE WELDED.

2. EXPOSED FINISH: PRIME.

SECTION 081416 - FLUSH WOOD DOORS

1.1 QUALITY ASSURANCE

A. MANUFACTURER AND VENDOR: FSC CERTIFIED FOR CHAIN OF CUSTODY.

1.2 DOOR CONSTRUCTION, GENERAL

A. QUALITY STANDARD: ARCHITECTURAL WOODWORK STANDARDS

1. CLEAR FINISH MAPLE

B. WDMA I.S.1-A PERFORMANCE GRADE:

1. HEAVY DUTY UNLESS OTHERWISE INDICATED.

1.3 LIGHT FRAMES AND LOUVERS

A. LIGHT-OPENING FRAMES: METAL FOR FIRE DOORS.

1.5 PRIMING/FINISHING

A. FACTORY FINISHING: ALL DOORS.

SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

1.1 WARRANTY

A. MATERIALS AND WORKMANSHIP: 10 YEARS

B. FINISH: 10 YEARS.

1.2 SYSTEM COMPONENTS

A. FRAMING MEMBERS:

CONSTRUCTION: THERMALLY BROKEN

GLAZING: SECTION 088000 "GLAZING."

C. ENTRANCE DOORS:

1. DOOR CONSTRUCTION: 1-3/4-INCH OVERALL THICKNESS.

2. DOOR DESIGN: MEDIUM STILE.

3. GLAZING STOPS AND GASKETS.

D. ENTRANCE DOOR HARDWARE: AS SCHEDULED.

1.3 ALUMINUM FINISHES

A. ALUMINUM FINISHES: CLASS I, PVDF RESIN.

SECTION 085313 - VINYL WINDOWS

1.1 WARRANTY

A. WINDOWS: 10 YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

1.2 WINDOW PERFORMANCE REQUIREMENTS

A. PRODUCT STANDARD: AAMA/WDMA/CSA 101/I.S.2/A440.

MINIMUM PERFORMANCE CLASS: CW.

MINIMUM PERFORMANCE GRADE: 30.

B. THERMAL TRANSMITTANCE: 0.35 BTU/SQ. FT. X H X DEG F MAXIMUM.

C. SOLAR HEAT-GAIN COEFFICIENT: 0.40 MAXIMUM

SOUND TRANSMISSION CLASS: 26 MINIMUM.

OUTSIDE-INSIDE TRANSMISSION CLASS: 22 MINIMUM.

WINDBORNE-DEBRIS RESISTANCE: PASSING ASTM E 1886 AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

1.3 VINYL WINDOWS

A. BASIS OF DESIGN MANUFACTURER: KOHLTECH WINDOWS; 15311 128 AVE NW #1, EDMONTON, AB T5V 1A5, CANADA; 1-780-468-5722; WWW.KOHLTECH.COM.

B. FINISH: MATCH FINISH OF ALUMINUM STOREFRONT AND ENTRY SYSTEM.

C. GLASS: CLEAR. INSULATING. ARGON FILLED. WITH LOW-E COATING.

 INSECT SCREENS: AT EACH OPERABLE EXTERIOR SASH, WITH ALUMINUM FRAMES AND WITHOUT WICKETS.

SECTION 088000 - GLAZING

1.1 SUMMARY

A. GLASS FOR WINDOWS, DOORS, AND STOREFRONT FRAMING.

1.2 WARRANTY

A. LAMINATED GLASS: 10 YEARS.

INSULATING GLASS: 10 YEARS.

1.3 MATERIALS

 A. SILICONE GLAZING SEALANTS: NEUTRAL CURING, CLASS 100/50. SEALANTS: LOW VOC.

B. GLAZING TAPES: EXPANDED-CELLULAR TYPE.

1.4 LAMINATED GLASS SCHEDULE

GLASS TYPE: CLEAR LAMINATED GLASS; FULLY TEMPERED FLOAT

GLASS TYPE: LOW-E-COATED. LAMINATED VISION GLASS: CLEAR FULLY TEMPERED FLOAT GLASS.

1.5 INSULATING-LAMINATED-GLASS TYPES

GLASS TYPE: LOW-E-COATED, CLEAR INSULATING LAMINATED GLASS.

1. OUTDOOR LITE: FULLY TEMPERED FLOAT GLASS.

2. INDOOR LITE: CLEAR LAMINATED GLASS WITH TWO PLIES OF FULLY TEMPERED FLOAT GLASS.

SECTION 088813 - FIRE-RESISTANT GLAZING

1.1 WARRANTY

A. LAMINATED GLASS: NOT LESS THAN 10 YEARS.

1.2 MATERIALS

SILICONE GLAZING SEALANTS: NEUTRAL CURING, CLASS 50. 1. SEALANTS: LOW VOC.

GLAZING TAPES: EXPANDED-CELLULAR TYPE.

1.3 FIRE-PROTECTION-RATED GLAZING SCHEDULE

GLASS TYPE: 20-MINUTE FIRE-PROTECTION-RATED GLAZING WITH HOSE-STREAM TEST; LAMINATED CERAMIC GLAZING, LAMINATED GLASS WITH INTUMESCENT INTERLAYERS, OR DOUBLE GLAZING UNITS WITH CLEAR GEL FILL

GLASS TYPE: 45-MINUTE FIRE-PROTECTION-RATED GLAZING; LAMINATED CERAMIC GLAZING, LAMINATED GLASS WITH INTUMESCENT INTERLAYERS, OR DOUBLE GLAZING UNITS WITH CLEAR GEL FILL

C. GLASS TYPE: 60-MINUTE FIRE-PROTECTION-RATED GLAZING WITH 450 DEG F TEMPERATURE-RISE LIMITATION: LAMINATED GLASS WITH INTUMESCENT INTERLAYERS OR DOUBLE GLAZING UNITS WITH CLEAR GEL FILL.

## **DIVISION 09 - FINISHES**

SECTION 092900 - GYPSUM BOARD

1.1 MATERIALS

A. INTERIOR GYPSUM BOARD:

1. GYPSUM WALLBOARD.

2. GYPSUM BOARD, TYPE X.

3. GYPSUM CEILING BOARD.

4. IMPACT-RESISTANT GYPSUM BOARD.

5. MOLD-RESISTANT GYPSUM BOARD.

TRIM ACCESSORIES INTERIOR.

SECTION 095123 - ACOUSTICAL TILE CEILINGS

1.1 SUMMARY

ACOUSTICAL TILES AND SUSPENSION SYSTEMS.

1.2 PRODUCTS ACOUSTICAL CEILING TILES: ASTM E 1264.

1. TYPE, FORM, AND PATTERN: SQUARE LAY-IN TEGULAR TILE.

2. THICKNESS: 5/8 INCH 3. MODULAR SIZE: 24 BY 24 INCHES.

METAL SUSPENSION SYSTEMS: ASTM C 635.

1. WIRE HANGERS, BRACES, AND TIES. 1.3 INSTALLATION

A. INSTALLATION: ASTM C 636.

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

1.1 PRODUCTS

A. RESILIENT BASE: THERMOSET RUBBER

1. STYLE AND LOCATION:

a. STRAIGHT: IN AREAS WITH CARPET b. COVE: IN AREAS WITH RESILIENT FLOORING.

MINIMUM THICKNESS: 0.125 INCH.

3. HEIGHT: 4 INCHES.

4. OUTSIDE CORNERS: JOB FORMED OR PREFORMED. 5. INSIDE CORNERS: JOB FORMED OR PREFORMED.

RESILIENT STAIR ACCESSORIES:

1. STAIR TREADS: RUBBER, VULCANIZED THERMOSET a. SURFACE: PATTERN; EMBOSSED, GROOVED, OR RIBBED.

TROWELABLE LEVELING AND PATCHING COMPOUNDS.

b. FEATURES: EMBEDDED ABRASIVE STRIPS. c. NOSING STYLE: SQUARE, ADJUSTABLE TO COVER ANGLES

BETWEEN 60 AND 90 DEGREES.

d. NOSING HEIGHT: 1-1/2 INCHES

STRINGERS.

2. RISERS: INTEGRAL

4. LANDING TILE.

C. RESILIENT ACCESSORIES: RUBBER.

1. STAIR-TREAD NOSING 2. TRANSITION STRIPS.

**INSTALLATION MATERIALS:** 

3. STAIR-TREAD-NOSE FILLER. 4. FLOOR POLISH.

2. ADHESIVES: LOW VOC.

SECTION 096519 - RESILIENT TILE FLOORING

1.1 PRODUCTS

A. VINYL COMPOSITION FLOOR TILE: THROUGH-PATTERN TILE

WEARING SURFACE: SMOOTH.

THICKNESS: 0.125 INCH.

SIZE: 12 BY 12 INCHES.

B. INSTALLATION MATERIALS: TROWELABLE LEVELING AND PATCHING COMPOUNDS.

2. FLOOR POLISH.

SECTION 096816 - SHEET CARPETING

 MATERIALS AND WORKMANSHIP FOR CARPET FAILURE: 10 YEARS. B. MATERIALS AND WORKMANSHIP FOR CARPET CUSHION FAILURE:

10 YEARS. 1.2 PRODUCTS

1.1 WARRANTY

A. WOVEN CARPET:

FIBER CONTENT: PREMIUM NYLON

2. PILE CHARACTERISTIC: LEVEL-LOOP PILE.

3. PILE THICKNESS: 0.187 INCHES.

4. PILE WEIGHT: 38.0 OZ./SQ. YD.

5. APPLIED TREATMENTS: SOIL-RESISTANCE TREATMENT.

B. CARPET CUSHION:

1. TRAFFIC CLASSIFICATION: HEAVY TRAFFIC.

MATERIAL: FIBER. 3. THICKNESS: .375 INCHES.

1.3 EXECUTION

A. INSTALLATION: STRETCH IN.

SECTION 099113 - EXTERIOR PAINTING

1.1 PAINT, GENERAL A. MPI-LISTED PRODUCTS

1.2 EXTERIOR PAINTING SCHEDULE CEMENT BOARD SUBSTRATES:

1. LATEX SYSTEM.

STEEL AND IRON SUBSTRATES: WATER-BASED LIGHT INDUSTRIAL COATING SYSTEM.

GALVANIZED-METAL SUBSTRATES:

1. LATEX SYSTEM.

D. ALUMINUM SUBSTRATES: LATEX SYSTEM.

E. STAINLESS-STEEL SUBSTRATES:

1. LATEX SYSTEM.

SECTION 099123 - INTERIOR PAINTING

1.1 PAINT, GENERAL A. MPI-LISTED PRODUCTS

1.2 INTERIOR PAINTING SCHEDULE A. STEEL SUBSTRATES:

 LATEX SYSTEM, ALKYD PRIMER. B. GYPSUM BOARD SUBSTRATES:

LATEX OVER LATEX SEALER SYSTEM.

**DIVISION 10 - SPECIALTIES** 

SECTION 101423 - PANEL SIGNAGE

1.1 SIGNS

A. ROOM-IDENTIFICATION SIGN: 1. LAMINATED-SHEET SIGN: PHOTOPOLYMER SHEET WITH RAISED

MOUNTING: SURFACE MOUNTED WITH CONCEALED ANCHORS. ADHESIVE, OR TWO-FACE TAPE.

3. TEXT AND TYPEFACE: ACCESSIBLE RAISED CHARACTERS AND

**BRAILLE** 1.2 MATERIALS AND ACCESSORIES

GRAPHICS.

A. ADHESIVES: VOC CONTENT OF 70 G/L OR LESS. SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

TOILET TISSUE (ROLL) DISPENSER.

A. PUBLIC-USE WASHROOM ACCESSORIES:

2. LIQUID-SOAP DISPENSER. GRAB BAR.

1.1 PRODUCTS

MIRROR UNIT.

B. WARM-AIR DRYERS: WARM-AIR DRYER.

SECTION 104416 - FIRE EXTINGUISHERS 1.1 WARRANTY

1.2 PERFORMANCE REQUIREMENTS

FIRE EXTINGUISHERS: COMPLYING WITH NFPA.

1.3 PRODUCTS

PORTABLE HAND-CARRIED FIRE EXTINGUISHERS:

REGULAR DRY-CHEMICAL TYPE.

MATERIALS AND WORKMANSHIP: **SIX** YEARS.

B. MOUNTING BRACKETS.

**DIVISION 12 - FURNISHINGS** 

SECTION 123530 - RESIDENTIAL CASEWORK

1.1 CABINETS

QUALITY STANDARD: KCMA A161.1

FSC-CERTIFIED WOOD.

FACE STYLE: FLUSH OVERLAY.

CABINET STYLE: FACE FRAME. DOOR AND DRAWER FRONTS: SOLID-WOOD STILES AND RAILS

WITH WOOD PANELS. F. FACE FRAMES: SOLID WOOD

EXPOSED CABINET END FINISH: WOOD VENEER

CABINET INTERIORS: WOOD.

1.2 MATERIALS COMPOSITE WOOD PRODUCTS AND ADHESIVES DO NOT CONTAIN

UREA FORMALDEHYDE. B. EXPOSED WOOD SPECIES: MANUFACTURER'S STANDARD DOMESTIC HARDWOOD SPECIES.

C. HARDWARE:

HINGES: CONCEALED BUTT HINGES.

2. PULLS: BACK-MOUNTED DECORATIVE PULLS.

1.1 PLASTIC-LAMINATE COUNTERTOPS

GRADE: PREMIUM.

FSC-CERTIFIED WOOD PRODUCTS. HIGH-PRESSURE DECORATIVE LAMINATE: GENERAL-PURPOSE

SECTION 123623.13 - PLASTIC-LAMINATE-CLAD COUNTERTOPS

TYPE. CORE MATERIAL AT SINKS: PARTICLEBOARD MADE WITH EXTERIOR GLUE, MEDIUM-DENSITY FIBERBOARD MADE WITH EXTERIOR GLUE, OR

CORE THICKNESS: 1-1/8 INCH.

**DIVISION 22 - PLUMBING** 

1.2 MATERIALS

EXTERIOR-GRADE PLYWOOD.

SECTION 224213.13 - COMMERCIAL WATER CLOSETS

ADHESIVES: UREA FORMALDEHYDE FREE

1.1 FLOOR-MOUNTED, BACK-OUTLET WATER CLOSETS WATER CLOSETS: FLOOR MOUNTED, BACK OUTLET, TOP SPUD.

2. TYPE: SIPHON JET.

1. STYLE: EXPOSED.

STYLE: FLUSHOMETER VALVE.

1.2 FLUSHOMETER VALVES

SUPPORT: WASTE-FITTING ASSEMBLY.

A. LEVER-HANDLE, DIAPHRAGM FLUSHOMETER VALVES:

MATERIAL: VITREOUS CHINA.

2. CONSUMPTION: 1.6 GAL. PER FLUSH 1.3 TOILET SEATS

A. TOILET SEATS:

 TYPE: COMMERCIAL (STANDARD) SHAPE: ELONGATED RIM. OPEN FRONT.

3. HINGE: CHECK.

4. SEAT COVER: NOT REQUIRED.

SECTION 224216.13 - COMMERCIAL LAVATORIES 1.1 VITREOUS-CHINA, COUNTER-MOUNTED LAVATORIES

LAVATORY: OVAL, SELF RIMMING, VITREOUS CHINA, COUNTER MOUNTED.

1. TYPE: SELF-RIMMING FOR ABOVE-COUNTER MOUNTING.

3. FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS.

LAVATORY: WHEELCHAIR, VITREOUS CHINA, WALL MOUNTED.

LAVATORY FAUCETS: MANUAL-TYPE, TWO-HANDLE MIXING,

2. NOMINAL SIZE: OVAL, 19 BY 17 INCHES.

4. FAUCET-HOLE LOCATION: TOP. 1.2 VITREOUS-CHINA, WALL-MOUNTED LAVATORIES

 TYPE: SLAB OR WHEELCHAIR. 2. NOMINAL SIZE: RECTANGULAR, 20-1/2 BY 18-1/4 INCHES.

3. FAUCET-HOLE PUNCHING: THREE HOLES, 4-INCH CENTERS. 4. FAUCET-HOLE LOCATION: TOP. 1.3 SOLID-BRASS, MANUALLY OPERATED FAUCETS

BODY TYPE: CENTERSET.

COMMERCIAL, SOLID-BRASS VALVE.

FINISH: POLISHED CHROME PLATE. 4. MAXIMUM FLOW RATE: 1.2 GPM.

2. BODY MATERIAL: COMMERCIAL, SOLID BRASS

MOUNTING TYPE: DECK, EXPOSED. 6. VALVE HANDLE(S): WRIST BLADE, 4 INCHES.

7. SPOUT: RIGID TYPE.





2.2.18 EVAN A. CARROLL No. 3687

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[A] 2/2, 2/2, SHEET