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SPECIFICATIONS
Section 02200 EARTHWORK
PART 1 - GENERAL
 I.1 Description
    .1 General Requirements: Division 1, General Requirements is a part of this Section and shall apply.
   .2 Work performed by other Sections and which is related to this Section is specified in:
        Section 02510: Fill under paving
                                                                   Section 07160: Bituminous Dampproofing
                                                                   Division 15: Trenching and backfilling for underground mechanical services
        Section 02900: Landscaping
        Section 03300: Cast-In Place Concrete
                                                                  Division 16: Trenching and backfilling for underground electrical services
        Section 07100: Waterproofing Membrane
   2 Submittals
    1 Shop Drawings: Submit shop drawings as may be required by jurisdictional authorities
   .2 Inspection Company Reports: Submit inspection company reports specified under Field Quality Control
1.3 Site Conditions
    .1 Existing Conditions: Immediately repair damage to trees, structures, buried & above-ground services, benchmarks & survey monuments should it occur.
 1.4 Special Protection
    .1 Ensure that locations of existing buried utilities & other services have been established by an investigation conducted together with the Utilities of services concerned.
   .2 When unknown services are encountered during execution of work of this Section: identify, notify appropriate authority and Architect & brace and support them.
    Work of this Section shall include protection measures, consisting of materials, constructions & methods, required by the Occupational Health and Safety Act 1978, and Regulations for
    Construction Projects O. Reg. 659/79 of the Province of Ontario, as otherwise imposed by jurisdictional authorities to save persons & property from harm.
2.1 Fill and Bedding Aggregate
    .1 Fill Type 1: To meet specified requirements of MTC Form 1010 for Granular Type A aggregate, gravel or crushed limestone.
    .2 Fill Type 2: To meet specified requirements of MTC Form 1010 for Granular Type B aggregate.
    .3 Fill Type 3: Site or imported material, containing no organic or foreign matter, which is compactible to a density of 85% standard Proctor.
PART 3 - EXECUTION
 3.1 Excavation
    .1 Examine the site that all possible factors concerning earthwork are investigated
   .2 Do not excavate or grade until locations of services have been verified and protective measures taken.
    .3 Immediately repair damage to buried and above-ground services, bench marks, and survey monuments should it occur.
    .4 Remove topsoil completely from areas of excavation for construction, from under areas to be paved or surfaced, & from regraded areas. Store good topsoil acceptable for reuse, in
     stockpiles as directed. Remove surplus topsoil from site.
    .5 Excavate to extent & depth required for construction and installation both inside and outside of building and grading as indicated on Drawings and as otherwise required.
    .6 Completely remove unstable soil and soil containing humus, sod, roots, and organic debris from under areas which are to receive pavement and slabs.
    .7 Remove trees, logs, shrub, brush, other vegetation, debris and other items which are not incorporated into the Project
 3.2 Backfilling
   .1 Do not proceed with backfilling operations until Consultant has reviewed installations.
   .2 Areas to be backfilled to be free from debris, snow, ice, water and frozen ground.
   .3 Backfilling around installations
         Place bedding and surround material as specified elsewhere.
         Do not backfill around or over cast-in-place concrete within 24 h after placing.
          Place layers simultaneously on both sides of installed work to equalize loading. Brace and shore walls as required when backfilling one side.
         Place material by hand under, around and over installations until 600 mm of cover is provided. Dumping material directly on installations will not be permitted.
     .5 Place backfill material in uniform layers not exceeding 150 mm compacted thickness up to grades indicated. Compact each layer before placing succeeding layer.
 3.3 Fill Types and Compaction
    .1 Backfilling of Walls: Use Type 3 fill to Subgrade level & compact to 98% standard Proctor under sodding & planting 98% standard Proctor under concrete slabs on grade &paving.
  .2 Within building area: Use Type 2 to underside of base course. Compact to 98% standard Proctor.
   .3 Under concrete slabs: Provide 200 mm compacted thickness base course of Type 1 fill to underside of slab Compact base course to 98% standard Proctor.
   .4 Underground services:
     .1 Sanitary & storm sewer pipe & conduit protective cover:Cradle half diameter of pipe or conduit using 100mm depth of Type 1 fill.After pipe or conduit is in place,cover with 300mm
     depth of Type 1 fill.
     .2 Cable & cable duct bedding & immediate protective cover. Cover bottom of trench with 150mm of Type 1 fill. After cables & ducts are in place, side fill ducts with sand up to top. Tamp
     around ducts with hand tampers & cover to level of treated planking with 150mm of same material.
     .3 Fill above protected cover in areas within buildings & where paving & walks occur, fill remainder of trench with Type 1 fill. In other areas, fill to subgrade level using Type 3 fill.
     .4 Compaction: Compact bedding & immediate protective cover to 80% minimum density. In areas within buildings & where paving & walks occur, compact remainders of fill to at least
     95% density. In other areas compact remainder of fill to at least 85% density.
     .5Notify Consultant (2) days prior to backfilling of trenches for electrical services.
   Weepers
    .1 As close to perimeter wall as possible,not <300mm below interior floor level & elsewhere as indicated,provide 100mm weeper drains laid to uniform gradual pitch on a bed of 75mm
     (19mm clear) crushed gravel, minimum pitch 50mm per 10m; connect & discharge drains as shown. Set drain according to manufacturer's recommendations with holes in lower half.
 5.5 Site Grading
    .1 Cut or fill the site area to extent shown on Drawings and to levels below finish elevations which will allow for specified surface treatments.
    .2 Where required, raise subgrade to rough grade level with Fill Type 3, deposited in layers not to exceed 8". Consolidate each layer before placing the next.
    .3 Use native material for backfilling that does not meet specification for Fill Type 3,in approved locations & no closer than 4'-0" to walls or to mechanical & electrical service trenches.
 5.6 Inspection and Testing
       Inspection & testing company selected to inspect & report on compliance with this Section of specifications as directed. Payment for inspection & testing will be by cash allowance.
    .2 Include in inspection and testing:
           Verification that earth bearings for foundation will sustain design loads, that subgrade exposed by removal of existing soil is capable of supporting fill, floor slabs & pavements,
            that subgrade has been compacted to specified density, & that fill has been placed & compacted as specified.
Section 02510
                          PAVING
PART 1 - GENERAL
    .1 General Requirements:Division 1, General Requirements, is a part of this Section and shall apply as if repeated here.
  .2 Work performed by other Sections and which is related to this Section is specified in:
    3 This Section shall include performance of work which is specified in:
                                                                   Section 03300: Cast-In-Place Concrete
        Section 03100: Concrete Formwork
 I.2 System Description
   .1 Allowable Tolerances:
         Grade base courses with surfaces within 1/2" of established elevations and within a tolerance of 1/2" under a 10'-0" long straightedge.
          Finish paving & curbs with surfaces within ½" of established elevations & locations within 1/8" of other surfaces at junctions, within a tolerance of ¼" under 10' long straightedge.
          Grade surfaces of gravel finish paving within a tolerance of ½" under a 10'-0" long straightedge.
          Compact asphaltic concrete paving courses to minimum 90% of laboratory density of mixtures.
1.3 Quality Assurance
     1 Subcontractor Qualifications
         Paving shall be done only by skilled workers, with suitable machinery, supervised by foremen experienced in type of paving specified.
          Paving shall be performed by Subcontractor who has equipment adequate for Project, & skilled tradesmen so that work is performed expeditiously; & is known to have been
            responsible for satisfactory installations similar to that specified during a period of at least five years.
    .2 Requirements of Regulatory Agencies: Extend paving to edge of public paving.Perform pavement placing on public property & make junction with public road in accordance with design
     & material requirements imposed by applicable local authorities, in addition to requirements specified in this Section.
  4 Extended Warranty
    .1 Submit a warranty for all paving specified in this Section covering the period for one year beyond expiration of warranty period specified in General Conditions of the Contract.
1.5 References
    .1 Reference standards quoted in Contract Documents refer to: ASTM D1751-83, Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction
     (Nonextruding and Resilient Bituminous Types).; CGSB Specification 1-GP-74M, Paint, Traffic, Alkyd.; CAN2-16.2-M77, Asphalts, Emulsified, Anionis Type, for Road Purposes.;
     CAN3-A23.1-M77, Concrete Materials and Methods of Concrete Construction.
  .1 Submit copies of weigh bills or delivery slips for all asphalt paving, concrete, gravel surface course & granular base course materials delivered for paving if requested.
1.7 Site Condition
   .1 Environmental Requirements:
          Commence placing and perform compaction of granular base courses only when subgrade temperature is at least 2°C and rising.
          Commence laying of asphalt under courses only when base surfaces are at least 2°C and the temperature is rising.
          Commence laying of asphalt surface courses only when binder course surfaces are completely dry, at least 7°C, and the temperature is rising.
     .4 Place concrete only when base and air temperatures are over 4°C during placing and until concrete has cured.
     .5 Suspend paving operations if temperature drops below specified minimums.
PART 2 - PRODUCTS
     Asphalt and Concrete Mixes
    .1 Binder Course: To meet specified requirements of MTC Form 310 for H.L.8.
    .2 Surface Course: To meet specified requirements of MTC Form 310 for H.L.3.
   .3 Concrete Paving and Curbs:
     .1 Pour slabs of air entrained 25 MPa, 2" slump concrete within wood or metal edge forms.
          Form curbs to profiles indicated on Drawings.
          Concrete surfaces to have Spin Trowel finish on walkways and wood float on curbs.
     .4 Steel trowel 2" borders at edges of slabs and scored panels, and form rounded edge.
2.2 Line Painting
    .1 Apply two coats of line marking paint for traffic direction and parking lines and markings as indicated on Drawing.
 2.3 Field Quality Control
       Inspection & testing company will be selected to verify that compaction of granular base courses conform to specified requirements. Payment for inspection & testing will be made
        from cash allowance by Owner.
 PART 3 - EXECUTION
  1 Paving Schedule
    Asphalt Pavements-Performance Pavement Structure for Truck Traffic Design Throughout.
    Sub-Base Course:
                         Granular "B"
                           Granular "A"
                                                  150 mm
    Base Course
    Finish Courses
                           Asphalt Binder
                                                   60 mm HL8
    Surface Course
                            Surface Course
                                                   50 mm HL3
    Concrete Paving
    Sub-Base Course:
                            Granular "B"
                                                  400 mm
    Base Course
                           Granular "A"
                                                  150 mm
                                                  15m epoxy coated rebar @ 400mm E.W
    Reinforcement
                            25 Mpa
                                                  150 mm
    Concrete
                            Sealer
                                                  2 coats conc. Sealer
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SPECIFICATIONS
Section 02900 LANDSCAPING
SEE LANDSCAPE DRAWINGS PREPARED BY OTHERS
Section 03300 CAST IN PLACE CONCRETE
SEE STRUCTURAL DRAWINGS PREPARED BY OTHERS
Section 04200 UNIT MASONRY
PART 1 - GENERAL
     .1 General requirements: Division 1, General Requirements, is a part of this section and shall apply.
    .2 Work performed by other sections and which is related to this section is specified in:
         Section 03300: Filling and reinforcing of lintel block provided by this section
                                                                                               Section 07950: Fire Stopping & Smoke Seals at top of wall and penetrations.
         Section 05120: Lintel Angles
                                                                                               Section 09900: Painting and Finishing
         Section 07600:
                          Flashing and Sheet Metal
                                                                                               Division 15: Mechanical
         Section 07920: Sealants and Caulking
                                                                                               Division 16: Electrical
     .3 Supply of work which shall be installed by this section is specified in:
         Section 05500: To furnish loose steel lintels, miscellaneous inserts & attachment devices to support the installations of other section, frames & miscellaneous metal work.
    .4 This section shall include performance of work which is specified on:
         Section 04200: Mortars
                                                         Section 07270: Membrane air barriers
         Section 07214: Cavity wall insulation
                                                        Section 09250: Gypsum board closures at steel structure.
 PART 2 - PRODUCTS
     Meet specified requirements of CAN/CSA-A371-M84 for construction and CAN/CSA S304-M84 unless specified otherwise.
 2.2 Non-Shrink Grout: Habeco Pre-mixed Grout as manufactured by The Master Builders Company, or in Pakt as manufactured by C.C. Chemicals Limited, or M-Bed Standard by Sternson Ltd.
2.3 Dampproof Flashing: Bituminous reinforced membrane manufactured by Bakor Inc./ Blueskin TWF or equal.
 2.4 Through Flashing: Blueskin TWF modified bitumen membrane reinforced with non-woven polyester mat by Bakelite, Air-Bloc 21 Adhesive (or to suit substrate).
2.5 Dampproofing Lap Cement: To meet specified requirements of CGSB Specification 37-GP04.
2.6 Concrete Masonry Units: (CSA A165-M85)
     1 Lightweight Units of Slag aggregate: For interior use in partitions.
     .2 Normal Weight: For use in foundation walls. Hollow Units: H / 15 / C / M Solid Units: S / 15 / A / M
    .3 For use in Fire Separation Walls:
         Lightweight Units of Slag Aggregate
         L220S Hollow or 75% Solid Units: H/15/A/M
         Rating: 2.0 Hr. Fire endurance rating for 8" block component in fire separation
         Rating: 1.5 Hr. Fire endurance rating for 6" block component in fire separation
2.7 Clay Face Brick: (CSA A82.1-M87) CSR Size
2.8 Calcium Silicate Brick (BR): TBD
          Arriscraft International, Cambridge, ON (800-265-8123)
           Contemporary Brick- TBD
           Size: 79mm x Random length x 90mm (3.125" x Random length x 3.5")
     .4 Colour: TBD
2.9 Calcium Silicate Renaissance Masonry Units (ST): N/A
           Arriscraft International, Cambridge, ON (800-265-8123)
           Renaissance - REN290
           Size: 290mm x 590 x 90mm (11.635" x 23.625 x 3.5")
           Colour: N/A
          Base Course: N/A
2.10 Mortar Mixes:
           Mix mortars as specified in CSA Standard A179.
          For laying masonry use mortar type:
             "M" in masonry walls in contact with earth.
             "S" unless otherwise specified.
          Colour: Match masonry unit or natural as approved by Architect.
2.11 Facing Unit Anchors: DA 803 Adjustable Loop Anchor by Dur-O-Wall or approved equal, self tapping stainless steel screws to steel studs & pintle tie lengths & legs of anchor to
      accommodate thickness of insulation &/or cavity. DA 701/709 6mm dia. triangular steel anchors at steel columns & beams.
 2.12 Control Joints: Incorporate vertical shrinkage control joints in walls of concrete masonry as indicated and otherwise at walls with no openings at a max. spacing of 6000mm O.C.
2.13 Weep Holes: Install breathers in vertical joints at 800mm O.C. at the top of each cavity & in courses immediately above flashings to provide drainage of the cavity space.
2.14 Lintels: Build in Lintels supplied by Section 05500. All Exterior Lintels to be hot dipped galvanized.
PART 3 - EXECUTION
     .1 Lay masonry to meet specified requirements of CAN3-A370-M84 and CAN3-A371-M84, unless otherwise specified.
     .2 Lay masonry as shown on Drawings, to course on 200 mm modules and to minimize cutting of units.
     .3 Install dampproof flashings under exterior masonry bearing on foundation walls. Install flashings under weep hole courses & as indicated
     .4 Maintain bracing of walls and piers continuously during construction until structure provides support
    .5 Lintels: Build in lintels supplied by Section 05500. Set and level lintels on a bed of mortar.
           Verify that built-in-items specified in other Sections are available for building in before laying of masonry commences. Cooperate in the setting & aligning of built-in items &
            provide for later installation of items which are installed in other Sections to avoid cutting, fitting & patching.
           Build masonry around pressed steel door frames supplied & set as specified in other Sections. Ensure that anchors are well-secured & that frames are true & plumb. Completely
            fill frames with mortar as each course is laid.
     7 Extend walls & partitions at top to deck, slab or structural members, as applicable, except where otherwise noted on Drawings. Incorporate bilateral support & deflection space at
       termination of walls as required by this Section. Where walls terminate at bottoms of steel joists, or rafters, close space at joists to deck or slab with metal lath & plaster on one side of
      joist or with 16 mm thick fire rated, Type X, gypsum board.
      .1 Keep masonry min. of 12.7mm clear of surfaces of structural members or as indicated on Drawings,& fill space with glass fibre board,leaving space for caulking at joints exposed
           Bed anchors solidly in mortar joints.
             Anchor masonry to steel columns & beams with adjustable triangular tie assemblies welded to steel.
     .9 Lateral Support:
          Lateral support clips are specified in Section 05500.
          Coordinate with Section 05500 to ensure that lateral supports are located correctly. Assist in their installation if requested.
   .10 Joint Reinforcement:
          Install joint reinforcement in
             : Solid walls and partitions, constructed of concrete masonry units.
             Single wythes of concrete masonry units in cavity walls.
           Place reinforcement continuously in horizontal joints at 400mm O.C., beginning with course 400mm above bearing unless otherwise specified.
           Place reinforcement additionally to provide spacing of 200mm O.C., in top 600mm of walls laid in stack bond.
           Place reinforcement additionally in courses 200mm,400mm and 810mm above and below openings,& extending reinforcement of lesser width 450mm beyond changes of width.
           Lap reinforcement a minimum of 150mm at splices.
           Do not run reinforcement through control joints.
           Wherever walls & partitions intersect one another or each other continue reinforcement through. Do not carry reinforcement through intersections where lateral support anchors
           are installed or at intersections of walls & partitions with solid piers.
    .11 Deflection Space
           Incorporate deflection space between tops of non-loadbearing walls & partitions & structure to prevent transference of structural loads.
          Fill deflection space with glass fibre board compressed to 50% of original thickness to completely seal space.
   .12 Cavity Walls:
          Install breathers in vertical joints at 800mm O.C. for concrete masonry units at the top of each cavity & in courses immediately above flashings. Ensure that breathers at flashings
           provide drainage of the cavity space.
   .13 Through Wall Flashing:
           Install flashing at locations indicated on Drawings.
           Coat surface in contact with flashing with continuous bed of adhesive which is compatible.
           Lap joints between lengths of flashing a minimum of 100mm and seal with lap cement.
           Fill voids of masonry to within 19mm of structural members, pipes, ducts & conduit that penetrate masonry walls & partitions.
           Pack remainder of annular void surrounding penetrating item with fire separation packing to within 12.7mm of face of masonry to allow for sealant.
   .15 Shrinkage Control Joints
           Incorporate vertical shrinkage control joints in walls of which concrete masonry units are a part.
           Install control joints at junctions of walls & columns, at intersections of unit concrete masonry load bearing walls, & wherever indicated on Drawings, & otherwise in walls with no
             openings, @ max. spacing of 6000mm O.C. Carry joints full height of walls.
           Construct control joints of standard block & fill void between block with 20 MPa concrete grout to form a continuous key full height of joint.
   .16 Fire Separations:
           Construct fire separation walls tightly to construction at perimeter, & without openings or voids.
          Do not reduce the thickness of masonry fire separations to less than the thickness indicated for the required fire separation rating.
Section 05120 STRUCTURAL STEEL
SEE STRUCTURAL DRAWINGS PREPARED BY OTHERS
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SPECIFICATIONS Section 05415 EXTERIOR WALL STUD FRAMING PART 1 - GENERAL 1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. .2 Work performed by other Sections and which is related to this Section is specified in: Section 04200: Unit Masonry Section 05120: Structural Steel Section 06100: Rough Carpentry Section 07240: EIFS Section 07420: Aluminum Composite Walls Section 09250: Gypsum Board 1.2 System Description .1 Structural Requirements: This Section shall be responsible for the structural design of the stud system specified in this Section. Design system to meet specified requirements of CAN3-S 136-M84, limit states design. Perform analysis and structural design calculations by a profession engineer licensed to practice in Ontario. .2 Design Criteria: Wind Load: 1 kPa. Deflection: L/360 Spacing: not less than 400mm O.C. full height and not less than 400mm O.C. above and below window openings. Quality Assurance .1 Meet applicable requirements of CGSB Specification 7-GP-IM and CAN3-S136-latest version for design and fabrication of steel studs. .2 Perform welding only by fabricator & installer fully certified to conditions of CSA Qualification Code W47.1 & perform welding to meet specified requirements of CSA Standard W59. 1 Reference Standards quoted in Contract Documents refer to: ASTM A446M, Specification for Steel Sheet Zinc-Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality.; CAN3-S136, Cold Formed Steel Structural Members.; CSA Standard W 47.1, Certification of Companies for Fusion Welding of Steel Structure; CSA Standard W59-MI984, Welded Steel Construction (Metal Arc Welding). Submittals .1 Submit Shop Drawings & structural design data of stud system with an affixed seal of structural engineer registered to practice in the Province of Ontario. 1 Sheet Steel:To meet specified requirements of ASTM Specification A446M-85. .2 Galvanizing:To meet specified requirements of ASTM Specifications A525,ZF275 Coating Designation,for sheet steel; Al53,Class B.3 Coating,for hardware and bolts; A116, Class 3 Coating, for wire & rods. .1 Roll formed galvanized sheet steel, wind bearing framing studs, by Bailey Metal Products Ltd. Fabricate studs, runner channels and bracing of galvanized cold formed sheet steel (Fy350w) 1.9mm thick. Provide studs 6"x.048" (152mm x1.22mm). .4 Head and Sill Runners: Depth to suit studs. Top track to allow for 1/2"deflection. .4 Exterior wall sheathing: 12.5mm or 15.9mm DensGlass Gold sheathing by G-P Gypsum Corporation .5 Window Opening Framing: Roll formed hot dipped galvanized angle framing, 16 Gauge. Depth to suit cavity or as detailed. PART 3 - EXECUTION Examination Provide for movement at structural members to avoid transference of loads to studs. .2 Make allowances for thermal movement in framing systems. .3 Frame openings on every side, providing clearances for other Work only after verification of requirements in each case. .4 Secure runner channels at sill with washers and nuts to anchor bolts grouted in concrete slab or welded to structural steel at 600mm O.C., as indicated on Drawings. .5 Install runner channels at heads and sills of openings. Allow for 1/2" deflection. .6 Provide bracings as indicated on shop drawings and as required. .7 Provide angle supports at openings and top of wall for sheathing and air barrier. .8 Weld and/or make screw connections as indicated on shop drawings Section 05500 METAL FABRICATIONS PART 1 - GENERAL General Requirements: Division 1, General Requirements, is a part of this Section and shall apply .2 Work performed by other Sections and which is related to this Section is specified in: Section 03300 : Concrete fill in stair treads Section 05120: Structural Steel Section 05120: Loose lintels Section 08110: Steel Doors Section 08332: Overhead Metal Coiling Doors Section 09900: Finish painting .3 Installation of work which shall be supplied by this Section is specified in: To install embedded anchors, bolts and inserts, and built-in components in formwork. To install embedded anchors, bolts, post sleeves, in slabs To install embedded anchors, bolts and inserts in concrete unit masonry. Section 04220 : Section 04220: To install loose lintels. PART 2 - PRODUCTS Unless detailed or specified otherwise, standard products will be acceptable if construction details and installation meet intent of Drawings and Specifications. Include all materials, products, accessories, supplementary parts necessary to complete assembly & installation of metal fabrications specified in this Section. Incorporate only metals free from defects which impair strength or durability, or which are visible. Install only new metals of best quality, & free from rust or waves & buckles, & that are clean, straight,& with sharply defined profiles. Steel, Structural Shapes, Plate, Bars: Hot-rolled, to meet specified requirements of CAN3-G40-M81 Grade 44W. Steel, Hollow Structural Sections: Hot-formed, seamless, to meet specified requirements of CAN3-G40.21-M81 Grade 50W, Class H. Steel, Sheet: Cold rolled, stretcher leveled, fully pickled, to meet specified requirements of ASTM Standard A366 or SAE Specification 1010. .1 Prime Paint on Steel:To meet specified requirements of CGSB Specification 1-GP-40M for oil alkyd type structural steel primer,1-GP-48 for alkyd metal primer & 1-GP-132M for zinc chromate primer as applicable for specified finish treatments. Refer to Section 09900. Zinc Rich Paint: To meet specified requirements of CGSB Specification 1-GP-181M. Galvanizing For pipe, 2 ox./sq. ft. zinc coating to meet specified requirements of ASTM Standard A120; For irregular sections, zinc coating to meet specified requirements of CSA Standard G164, including Appendix A, unless otherwise indicated. 4 Anchors: Where exposed to view; to match metal anchored. .5 Bituminous Paint: Alkali resisting to meet specified requirements of CGSB Specification 1-GP-108M. .6 Metal Grating: Galvanized, welded, rectangular steel, of types & with bars as specified for specific locations, & fabricated as banded panels in easily handled sizes; by Borden Metal Products Ltd. (Canada) PART 3 - EXECUTION
3.1 Fabrications Fabricate metal fabrications specified in this Section with machinery & tools specifically designed for the intended manufacturing processes and by skilled tradesmen. Fit and assemble metal fabrications in shop. When this is not possible make a trial shop assembly. Incorporate anchors at 2'-0" O.C. for metal fabrications located in cast-in-place concrete. .4 Incorporate means for fastening of other installations secured to metal fabrications. .2 Construction: .1 Fabricate metal fabrications with materials, component sizes, metal gauges, reinforcing, anchors & fasteners of adequate strength to withstand intended use, & within allowable design factors imposed by jurisdictional authorities Ensure that metal fabrications will remain free of warping, buckling, opening of joints and seams, distortion, permanent deformation. .3 Galvanized Steel: All fabrications .1 Hot dip galvanize assemblies following their fabrication except where impossible Provide anchor bolts, washers, nuts, lag screws, straps, brackets, clips & other items necessary for secure installation of metal fabrications. Schedule of Metal Fabrications Post Guards (Bollards): Provide Allowance for 10 Bollards:Steel pipe,Schedule 40,6" dia. or 6.25"O.D. x.2800" hollow structural section,prime painted,filled with concrete. .2 Stair Guards and Railings for Precast Stair: Construct at discretion of fabricator to support specified load, and to ensure minimum clearances as required by jurisdictional authorities. Guards: 1.66" OD HSS top rail with 1.25" OD HSS posts welded to stringers at max. 4'-0" O.C. with 5/8" solid pickets at max. 4.5" O.C. Join by flush type fittings & welding, or by fully notching intersecting members to pipe contour & welding. Install flanges where rails attach to walls. .3 Hand Rail & Wall Rail: Stainless steel 1.66" OD hollow section attached by stainless steel stock brackets at 4'-0" ± O.C. to posts or as detailed. .4 Finish: Prime paint except stainless steel for handrails. .3 Vertical Ladder: .1 Rails: 2" x 3/8" steel, spaced 16" apart, on brackets 6" clear of and securely anchored to wall. Extend rails at top to loop over, forming guard and handrail, only where they occur at roofs. Rungs: 3/4" dia. steel, spaced at 12" o.c., welded to rails. Finish: Galvanized at exterior. Prime paint at interior .5 Location: Elevator pits .4 Door Frame @ Overhead Sectional Door Jambs and Head: Channel formed of 1/4" thick steel plate, with 2" flanges, or as detailed and to suit wall thickness. Anchors: 1-1/2" x 1/4" x 8" strap anchors with 2" hooks, welded to jambs at 24" o.c. Jamb-Clips: Concealed 3" x 3" angles welded to bottom of each jamb and anchored to structure. Extend jambs on interior face to receive and support door hardware. Cope head to jambs, attach by continuous welds, and grind smooth. Finish: prime paint. Structural steel sections of sizes shown on Lintel Schedule. Supply lintels to mason for installation. Provide concealed 101.6mmx203.2mmx11.1mm angle clips welded to lintels and anchored with two 12.7mm dia. bolts at each clip where lintels frame into concrete faces. .4 Finish: Hot dip galvanized. .6 Lateral Support Install deflection space & lateral support for non-loading-bearing masonry walls & partitions in accordance with specified requirements of CAN3-A371-M81 & CAN3-S304-M84. 3"x2"x¼" angles 8" long on both sides of walls at 6'-0" o.c. Anchor to structure above wall. 3 Finish: prime paint .7 Elevator Shaft: .1 Door sill support at elevator openings: 4"x4"x3/8" steel angle. Hot dipped galvanized. Typical for (14) openings. .2 Elevator Hoist Beams-W200x36 (Verify) .8 Miscellaneous Members & Brackets:Provide miscellaneous steel angles, channels, plates, etc., of sizes noted on drawings &/or required. Weld on strap anchors 24" O.C. where items cast into concrete. Provide all necessary anchor bolts; provide other framing, etc., to units as required including lateral support brackets to masonry partitions. Adequately size members to fulfill function to be performed; finish & type of metal as indicated or noted. Miscellaneous steel members not shown on Structural Drawings but required for the work or other trades to be supplied by this SHEET TITLE:



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KIYA DEVELOPMENT

SPECIFICATIONS

A.R.C. rawing No.: esign: M.G rawn: A.R.C. Checked: roject No.: 0 MAR 30/20 ISSUED FOR SPA / PERMIT Description Date rinted: MAR 30/20 Revisions

513 DUNDAS STREET EAST WHITBY, ON

PROJECT:

SPECIFICATIONS SPECIFICATIONS SPECIFICATIONS Section 06100 ROUGH CARPENTRY Section 07210 PERIMETER INSULATION **PART 1 - GENERAL** PART 1 - GENERAL Install insulation board in accordance with manufacturer's recommendations .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. Fit insulation to ensure continuity of insulation between cavity and interior of building. .2 Work performed by other Sections and which is related to this Section is specified in: .2 Work performed by other Sections and which is related to this Section is specified in: Install boards in longest panel sizes possible in order to cover areas by full length panels to minimize number of joints, and in widths to fit between masonry ties without cutting. Section 06200: Finish Carpentry Section 01500: Construction Facilities & Temporary Controls Section 03100: Concrete Formwork Section 02200: Earthwork, for excavation and backfilling Section 04200: Unit Masonry Stagger cross joints between panels. .3 Installation of work which shall be supplied by this Section is specified in: Cast-In-Place Concrete Section 07100: Waterproofing Membrane Section 03300: Ensure that the integrity of the air barrier system is maintained. 1.2 References Section 04200: To install embedded bolts, inserts, etc. Buttboards with moderate contact, and cut and fit them tightly around other construction elements. 1.2 References .1 Reference standard quoted in Contract Documents refers to: CGSB Specification 51-10-92, Thermal Insulation, Mineral Fibre Board Ensure that support and anchorage of boards are adequate to prevent movement. 1 Reference Standards: Delivery, storage and handling 1 Materials shall be stored in a dry place, stacked off the ground, out of sunlight, protected from the weather & any possible surface contamination or other damage. .1 Grade lumber in accordance with rules and regulations of the National Lumber Grades Authority. Prime surfaces before application of adhesive only when and as recommended by adhesive manufacturer. Dimensions of lumber shall conform to dressed size specified in CSA STANDARD 0141. .2 Ensure insulation board & adhesives are stored at a min. temp. of 4°C for 12 hours before installation, & that freezable adhesives are stored only at temperatures >0°C at all times. Imbed insulation boards into Air Barrier type adhesive applied as specified. .3 Reference standards quoted in Contract Documents refer to:CSA Standard Bill-1974, Wire Nails, Spikes and Staple; CSA Standard 080-M1983, Wood Preservation; CSA Position and press boards into full contact with adhesive. Standard 0121-M1978, Douglas Fir Plywood; CSA Standard 0141-1970, Softwood Lumber 3.2 Adjustment and Cleaning: Remove adhesive from finish surfaces exposed to view before it sets and clean them. Do not mar surfaces while removing and cleaning. .1 Insulation Board: Closed-cell, cellular,foamed,smooth skin,extruded polystyrene to meet specified requirements of CGSB Specification 51-GP-20M, Type 4: Styrofoam SM by Dow 1 Environmental Conditions: When it is required that wood maintain dimensional stability& tolerances to ensure accurate installation of later work, store & install only in dry areas, & where Chemical Canada Inc., R Value: R5 per 1" Thickness, Thickness as per drawings. Section 07263 SPRAY INSULATION .2 Adhesive: Only as approved by board supplier & that can be handled at temperature of 4°C & over, have adequate early & permanent bond & tensile strength for application, & have a no further installation of moist materials is contemplated. PART 1 - GENERAL service temperature between high & low temperatures to which they will be subjected. PART 2 - PRODUCTS 1 General Requirement .1 Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. Spruce-Pine-Fir Species Group Designation, framing lumber, with no more than 15% of next lesser of specified grade included. .2 System Description .1 Before commencing installation of insulation, ensure all surfaces to which insulation board is applied are clean, reasonably smooth with no abrupt changes in plane, free of grease & with .2 For structural light framing: No. 1 Grade. Materials of section shall provide continuity of thermal insulation of building envelope in conjunction with system components, thermal materials, air/vapour barriers specified in: 3 For studs: Stud Grade. protruding fins of mortar or concrete removed, & that the surfaces are otherwise acceptable for insulation application as specified. Section 07270: Membrane Air Barriers Section 08920: Glazed Aluminum Curtain Walls .4 For Light Framing: Construction Grade, treated pine. Section 07550: Modified Bituminous Membrane Roofing Section 09250: Gypsum Board 2.2 Plywood: .1 General: Section 07920: Sealants and Caulking Douglas Fir, in conformance with CSA Standard 0121. Install insulation board in accordance with manufacturer's specifications. .2 Protect spray polyurethane foam from interior occupancy space by an approved thermal barrier meeting the requirements of local Ontario Building Code. .2 For exterior wall sheathing: Unsanded Sheathing grade. Install boards in largest panel sizes possible in order to cover areas by full length panels and to minimize cutting and number of joints. **Quality Assurance** For roof sheathing: Unsanded Select Sheathing grade. Stagger cross joints between panels. 1 Contractor performing work under this section must be licensed under SPF Quality Assurance Program(QAP) used by CUFCA(Canadian Urethane Foam Contractors Association). .4 For utility use: Unsanded Sheathing Grade. Butt boards in moderate contact. Contractor shall,under QAP Licensing Agreement & as required by CAN/ULC S705.2-05,only purchase & install,for this project,only material that conforms to requirements of CAN/ULC 5 Exposed use: Sanded waterproof plywood: Corsan. .2 Adhesive Installation on Foundation Walls: S705.1-01 Material standard. .6 For Subflooring: T & G Unsanded Select Sheathing Grade. Secure insulation by adhesive if backfilling is not immediately placed to retain panels in place. .2 Licensed Installer shall conduct on-site daily testing as required by CAN/ULC S705.2-05 Installation Standard.Licensed Installer shall complete Daily Work Report as required by 2.3 Building PaperWater repellent, wood fibre, breathing type: TP CAN/CGSB-51.32-M77. Prime surfaces before application of adhesive only where and as recommended by adhesive manufacturer. CAN/ULC S705.2-05 Installation Standard. Licensed Contractor shall forward to owner copies of the Daily Work Record upon request. Licensed Contractor shall submit copies of the 2.4 Nails, Spikes & Staples: In conformance with CSA Standard Bill; galvanized at exterior locations, at interior high humidity locations & for treated lumber; plain finish elsewhere. Use spiral Apply 50mm diameter pads of adhesive to faces of panels as required to hold board in place on walls. Daily Work Records or monthly summary sheet to the CUFCA office on a monthly basis as required by the SPF Quality Assurance Program used by CUFCA. Position and press boards into full contact with adhesive. & temporarily hold them in place until adhesive has set. shank nails generally. Sequencing and Scheduling Ensure that backfilling is completed within 24 hours and that it does not dislodge or damage insulation. PART 3 - EXECUTION .1 Co-ordinate this work with the work of all sections referencing this work. Blocking, Nailers, Sleepers, Grounds & Miscellaneous Rough Framing: Do not regard nailers,blocking, such other fastening provisions as shown of Drawings as exact or complete .6 Tape all joints in interior application to maintain vapour barrier. .2 All foam insulation closures & substrates shall be completed & secure before the work of this section commences. Install required provisions for fastening, located & secured to suit site conditions, and adequate for intended support. 3.3 Protection: Do not expose insulation board to sunlight after installation. Protect it with opaque polyethylene or tarpaulin cover as recommended by manufacturer if backfilling is no PART 2 - PRODUCTS completed within 24 hours; & as soon as practicable, backfill & pour concrete slab. 2 Supply anchors, bolts & inserts, required for installations of this Section, to those performing the Work of other Sections and who are responsible for their installation. 3.3 Dampproofing:Install dampproof membrane between wood members, concrete & masonry in contact with earth or on grade: CAN/CGSB-51.33-M80, Type 1, .15mm thick Polyethylene. Sprayed polyurethane foam material,when tested,shall meet the requirements of CAN/ULC S705.1-01 Standard for Thermal Insulation-Spray Applied Rigid Polyurethane Foam,Medium Section 07211 BATT INSULATION 3.4 Wood Preservative: Apply one coat of wood preservative to wood items of rough carpentry installed exterior to the building, incorporated with roofing systems, & installed in contact with concrete or masonry on the interior. Treat all surfaces, including freshly cut ends. PART 1 - GENERAL .2 A copy of an Evaluation Report (such as the CCMC Evaluation Report) or copies of test reports from an SCC(Standards Council of Canada) accredited testing laboratory, for each 5.5 Roof Cants, Curbs, Bases, Supports, & Blocking:Install wood at roofs,as indicated on Drawings,secured permanently to structure,trimmed & leveled to accommodate cambers,falls & 1.1 Description physical property, indicating that the product meets requirements of ULC S705.1-01 shall be made available upon request. A copy of either the evaluation report or the test reports shall insulation. & to receive flashings & applied roofing. 1 General Requirements: Division 1, General Requirements is a part of this Section and shall apply as if repeated here. be on file at SPF Quality Assurance Program office. 3.6 Construct wood roof curbs for ventilation ducts,fan bases,& other equipment specified in Division 15. Build curbs nominal 38mm thick with nominal 89mmx89mm cants.Install nominal .2 Work performed by other Sections and which is related to this Section is specified in .3 Material containers shall be labeled with the Evaluation Report number of the evaluation agency. 38mm thick decking on curbs to support fan units. Construct suitable and approved pads to receive duct supports .4 Design RSI value as indicated in test report; minimum RSI/25 mm; 1.05 (R6/inch). Section 06100: Rough Carpentry Section 09250: Gypsum Board. 3.7 Framing Schedule: 1.2 Quality assurance .5 Thickness: As indicated on drawings 1 Framing and sheathing of, walls, roofs including fasteners, nails, anchors, etc. .6 Products that meet the preceding requirements: BASF Walltite; Demilec / Cornell Heatlok 0240 / Airmetic 0223; PFSI Polar Foam 7300 1 Requirements of Regulatory Agencies: Setting all exterior doors and windows. 2.2 Equipment Install only insulation with an inherent fire hazard classification in all its parts that is within limits established by jurisdictional authorities. .3 All Blocking for built in items, mirrors, grab bars, cabinets, etc. as required. Validate fire hazard classification only by testing laboratories acceptable to jurisdictional authorities. 1 The equipment used to spray polyurethane foam material shall be in accordance with ULC S705.2-05 & equipment manufacturer's recommendations for type of application. .4 All Construction of roof curbs and parapet blocking Attach Underwriters' Laboratories labels to packages of fire rated materials. .2 Equipment settings are to be recorded on the Daily Work Record as required by the CAN/ULC S705.2-05 Installation standard. 3.8 Adjustment: Ensure that bolted fasteners are drawn up tightly. PART 2 - PRODUCTS .3 Each proportioner unit to supply only one spray gun. 2.3 Accessories Section 06200 FINISH CARPENTRY 1 Mineral Wool Batts: CSA Standard A 101, and R value as indicated on Drawings: Roxul Plus by Rockwool Inc. .1 Prime substrate when required by spray polyurethane manufacturer [or the membrane manufacturer]. Type of primer & installation of primer shall follow requirements of manufacturer for PART 1 - GENERAL .2 Vapour Barrier Membrane surface conditions. Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. PART 3 - EXECUTION .1 6 mil thick polyethylene film to meet specified requirements of CAN2-5-.34-M86. Ensure that integrity of the vapour barrier perm rating & air barrier is maintained. Ensure that barriers are sealed where elements penetrate them, that they extend across & are 1.1 Supply of work which shall be installed by this Section is specified in: Section 08710: To furnish finish hardware, other than cabinet hardware. sealed at junctions between other parts of the barrier system. Installers of spray polyurethane foam shall be trained by CUFCA/NECA(National Energy Conservation Association) in accordance with CAN/ULC S705.2-05 & certified by (PSDI) Section 08110: To furnish hollow metal doors .3 Joint Tape: Dead soft aluminum foil, 2 mil thickness and 3" wide, pressure sensitive, by Morgan Adhesives of Canada Ltd. Professional Skills Development Institute. Section 08210: To furnish wood doors PART 2 - PRODUCTS .3 Acoustical Sealant: Tremco or equal 3.2 Thermal Barrier Application PART 3 - EXECUTION 3.1 Examination: Before commencing installation of insulation, ensure that framing is installed to suit dimensions of insulation and to ensure proper support. Softwood lumber: to CSA 0141-1970 & national Lumber Grades Authority requirements, with max. moisture content of 9% yard lumber selected for (paint) finish white pine species, to 1 The spray polyurethane foam shall be covered with an appropriate thermal barrier meeting local building codes when installed on the interior of the building. 3.2 Installation .2 Spray apply fire retardant overcoat to spray applied polyurethane foam surfaces in sufficient thickness to provide thermal barrier meeting requirements of the Ontario Building Code & 2.2 Hardwood lumber: to National Hardwood Lumber Association (NHLA) requirements moisture content of maximum 9%, white birch species, to AWMAC premium grade. authorities having jurisdiction. .1 Do not install insulation in areas of the building unprotected from water, freezing or similar damaging environmental conditions. 2.3 Hardwood plywood: to CSA 0115-1967 of thickness indicated rotary cut face white birch species veneer of good one side, sound one side grade exposed faces. Use veneer particleboard .2 Fit insulation snugly & without compression into every void to ensure full thickness for full length of construction, & to prevent air movement on both sides of insulation. core with Type I bond. Select veneers to provide random match. 3.3 Field Quality Control: .3 Install insulation tightly against interior finish construction, except when pipes & ducts occur within wall construction, install it between exterior finish construction & pipes or ducts. 2.4 Canadian softwood plywood: to CSA 0151-M1978 solid two sides, select-tight face grade. .1 Licensed Installer shall conduct daily visual inspection, adhesion/cohesion testing & density measurements as outlined by the CAN/ULC S705.2-05 Installation standard. .4 Cut & fit insulation tightly around pipes, conduits, outlet boxes & other similar components. 2.5 Douglas fir plywood: to CSA 0121-M1978, good two sides select-tight face, grade. 6 Mat-formed wood particleboard: to CAN3-0188.1-<78 grade sanded faces, for thickness indicated for plastic laminate finish. .5 Install insulation in one piece for full length of voids. Where this is impossible joint lengths with ends fitted snugly or overlapped. .6 Wall Insulation:Ensure that insulation is supported to prevent settlement.Install friction fit batts snugly between framing members. 2.7 Hardboard: to CGSB 11-GP-3M Type tempered, 6 mm thick. Section 07270 MEMBRANE AIR BARRIER 2.8 Nails and staples: to CSA Bill-1964; galvanized for exterior work, plain finish elsewhere. .7 Vapour Retarder:Ensure that integrity of the vapour retarder perm rating is maintained. Ensure that retarder membranes are sealed where elements penetrate them, & that they extend PART 1 - GENERAL 2.9 Laminated plastic for flatwork: to CAN3-A172-M79, Grade regular, 1.5 mm thick; based on solid colour range with furniture finish. across & are sealed at junctions between other parts of vapour retarder against water vapour. Secure retarder membrane to framing members. 2.10 Laminated plastic for postforming work: to CAN3-A172-M79, Grade PF, based on solid colour range with furniture. PART 3 - EXECUTION Section 07213 CURTAIN WALL INSULATION .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. Finish Carpentry Schedule PART 1 - GENERAL .2 Work performed by other Sections and which is related to this Section is specified in: .1 General: This schedule does not necessarily incorporate listing of all finished carpentry items to be included, but only those items which required specific description. Ensure that all Drawings & Specifications Sections, including those for architectural, mechanical & electrical work, are consulted to establish the limits of finish carpentry included in this Section. Section 04200: Unit Masonry Section 06200: Rough Carpentry Section 05415: Exterior Wall Framing 1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. .2 Work performed by other Sections and which is related to this Section is specified in: Section 07213: Curtain Wall Insulation Section 07263: Spray Insulation Section 07240: EIFS 1 Set frames in place for building into masonry, anchor frames to floor as provided for by anchor clips, brace frames in place to prevent displacement until anchored into masonry, & remove Section 07270: Membrane Air Barrier-Transition membrane. Section 07420: Aluminum Composite Panels-Transition membrane at interface Section 07920: Sealants and Caulking Section 08410: Aluminum Entrances & Screens Section 08920: Glazed Aluminum Curtain Wall spreaders at floor after frames are anchored. Section 08920: Glazed Aluminum Curtain Walls-to provide insulated spandrel panels. Section 09250: Gypsum Board 3.3 Installation of Doors: 1.2 Quality Assurance .1 Supply of Hollow Metal Doors - Section 08112. System Description 2 Install doors after finishing of walls. Fit within 3mm clearance at jambs & head, & undercut to approval to allow for air circulation & clearance for intended floor coverings. Install only insulation with an inherent fire hazard classification in all its parts that is within limits established by jurisdictional authorities. .1 Air Barrier System: Validate fire hazard classification only by testing laboratories acceptable to jurisdictional authorities. .1 Air barrier element in the construction system shall provide an air barrier on exterior face of the sheathing, inside face of the glazed aluminum curtain wall system, connections of .1 Install finishing hardware supply by Section 08710 and other hardware required for installation and function of work of this Section. Adjust to function as intended Attach Underwriters' Laboratories labels to packages of fire rated materials. 3.5 Back Panels for Mechanical, Electrical and Telephone Equipment: 3/4" Douglas Fir G1S Plywood. Fire Rated. walls to roof air barrier, connections of walls to foundations, & openings & penetrations of window, door frames & curtain walls. Absolute continuity of the air barrier is essential. Completely isolate cavity wall insulation from the interior of the building by noncombustible materials. .2 Verify with Consultant, installation procedures of building products incorporated into air barrier elements, as well as continuity with other systems and installation. Section 07100 WATER PROOFING MEMBRANE 1 Data:Submit data from manufacturer to certify specified materials meet with his & the specified requirements, & that he approves of their use for each proposed location, if requested. .2 Air Barrier Retention Requirements: **PART 1 - GENERAL** 1.4 Delivery, Storage and Handling .1 Provide air barrier to ensure that air is prevented from exfiltration & infiltration between the interior & exterior of the building through exterior wall constructions. Description 1 Package insulation materials & label them to designate manufacturer, type, density & insulation value, & reference standard specification number if applicable. .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. .2 Store insulation materials in a dry place, stacked off the ground, out of sunlight, protected from the weather & any possible surface contamination or other damage. .2 Prevent exfiltration & infiltration under all conditions of air pressure differentials. .3 Store & install insulation materials subject to damage by water, freezing, sunlight or similar adverse environmental conditions with adequate protection against damage. .2 Work performed by other Sections and which his related to this Section is specified in: .3 Interface with Adjacent Systems: Coordination between all installers of components of the air barrier system is essential to ensure continuity of the barrier & that junctions between the Section 03300: Cast-In-Place Concrete-Surface Preparation Section 07210: Perimeter Insulation various components are effectively sealed. Contractor or Construction manager is solely responsible to make it clear to Subcontractors the extent of their Work. 2.1 Materials .3 Scope of Work: Apply to all wall surfaces enclosing occupied spaces below grade. .1 General: .3 Quality Assurance .1 Ensure that all materials of an insulation system, & the construction with which it is in contact are compatible. Materials 1 Subcontractor Qualifications:Install membrane air barrier & insulation specified in this Section only by Subcontractor who has adequate plant, equipment & skilled tradesmen to perform Ensure that insulation units are provided in widths to fit between bond ties for cavity walls or curtain walls or metal siding. .1 Primer: Blueskin Primer by Bakor or Sealtight Mel-Prime primer. it expeditiously, & is known to have been responsible for satisfactory applications similar to that specified. .2 Mastic: Elastoseal LM/570-05 Polybitume by Bakor or Sealtight Pointing Mastic .2 Mineral wool fibre insulation board: CAN/CGSB 51.10-92, ASTM C612, Type 2, Class 4, Curtain Rock, by Rockwool Inc. R-Value: 14, Density:4lbs/ft. .4 Submittals .3 Adhesive: Only as approved by insulation board supplier and that is compatible with flashing membrane and air barrier, or metal back pan air/vapour barrier. .3 Detail Strips: Elastoseal 2000 Membrane by Bakor or Sealtight Detail Strip 9" wide. .4 Waterproofing Membrane: Elastoseal 2000 Membrane or Sealtight Mel-Rol Polymeric waterproofing membrane, 56 mil on 4 mil poly carrier film. .4 Mechanical Fasteners: Galvanized plastic cap screws as approved by insulation board supplier .1 Samples: Submit samples of air barrier materials if requested. .5 Protection Board: 1/4" MB Protection or 1/4" Vibraflex Waterproofing No.150 Protection Board. Note: Protection board not required when covered with compatible insulation board. .5 Dimensions: 24" x 48"x 3.5". .5 Site Conditions PART 3 - EXECUTION .1 Apply membrane only when air and surface temperature is >-12°C,has been so for at least 48 hours & are not likely to go below -12°C until membrane application is completed. 3.1 Installation .1 Ensure that walls, and top surfaces of footings and other horizontal surfaces are clean and free from dirt, scale or other deposits before commencing application of waterproofing. .1 General: PART 2 - PRODUCTS Install insulation board in accordance with manufacturer's recommendations. .2 Protection: Prevent staining of adjacent property construction & surfaces by coating materials. Replace porous materials from which soil from coating materials cannot be removed. Fit insulation to ensure continuity of insulation between cavity and interior of building. 3.2 Application .1 Air Barrier Membrane System: Self-adhering membrane for all window jambs,headers,door openings: .1 Provide and install Waterproofing System to below grade concrete surfaces around first floor & basement foundation walls. Install boards in longest panel sizes possible in order to cover areas by full length panels to minimize number of joints, & in widths to fit between masonry ties without cutting. .2 System shall include 56 mil waterproofing membrane on 4 mil poly carrier film and minimum (1/4") thick Protection Board. Stagger cross joints between panels .1 Dörken Products Inc., Delta®-Vent SA, or Follow manufacturer's detailed installation instructions (Data Sheet 7100-502). Ensure that the integrity of the air barrier system is maintained. .2 Blueskin VP c/w window & door flashing self-adhering reinforced modified polyolefin tri-laminate sheet air barrier membrane. Pre-cut. Manufacturer: Henry Inc. Butt boards with moderate contact, & cut and fit them tightly around other construction elements. .4 Vertical Applications: Apply membrane vertically from top down totally waterproofing affected membrane structure. Overlap all seams at least 2-1/2". Apply a bead of Mastic or Liquid .2 Flashings: Self-adhering, butyl-rubber based; Dörken Products Inc., Delta®-Flashing. Ensure that support and anchorage of boards are adequate to prevent movement. Membrane, at least 1/8" thick and 1" wide, to all vertical & horizontal terminations. 5 Hand-Rub & Roll-Press:Once positioned,membrane should immediately be firmly hand-rubbed onto the surface,followed by a pressure-applied roll-pressing of the complete surface to .3 Penetration Flashings: Stretchable butyl-rubber Delta®-Flexx Band. 1 Prime surfaces before application of adhesive only when & as recommended by adhesive manufacturer. Imbed insulation boards into Air Barrier type adhesive applied as assure positive adhesion .4 Sealants and Adhesives: Elastomeric sealant and adhesive compatible with adjacent materials; Dörken Products Inc., Delta®-THAN-Dow Corning® 758. .6 Inspect & Repair:Thorough inspection should be made before covering & all necessary repairs made immediately. Tears & inadequate overlaps should be covered with membrane, slit specified. Position & press boards into full contact with adhesive. .5 Window Corner: Prefabricated rubber-compound window corner; Dörken Products Inc., Delta®-Fas Corner. fish-mouths & patch. Seal edges of all patches. 3.2 Adjustment and Cleaning: Remove adhesive from finish surfaces exposed to view before it sets and clean them. Do not mar surfaces while removing & cleaning. .7 Install 1/4" thick, Protection Board on the waterproofing membrane. Install on horizontal and vertical surfaces. Install on manufacturer's instructions. .6 Primers: In accordance barrier manufacturer's written recommendations; Dörken Products Inc., Delta®-LVC Primer. Section 07214 CAVITY WALL INSULATION PART 3 - EXECUTION BITUMINOUS DAMPPROOFING PART 1 - GENERAL 3.1 Examination **PART 1 - GENERAL** References .1 Ensure all surfaces to which membrane will be applied are clean, free from dirt, scale or other deposits, & that construction is acceptable for performance of air barrier as specified, before 1 General Requirements .1 Reference Standards:Reference standards quoted in Contract Documents refer to:CGSB Specification 37-GP-2M, Asphalt, Emulsified, Mineral Colloid Type, Unfilled for Dampproofing Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. commencing application of membrane. and Waterproofing, and for Roof Coatings. CGSB Specification 37-GP-6Ma, Asphalt, Cutback, Unfilled for Dampproofing. CGSB Specification 37-GP-9Ma, Primer Asphalt, Unfilled, for .2 Work performed by other Sections and which is related to this Section is specified in: 3.2 Installation Section 04200: Unit Masonry Section 07192: Membrane Air Barrier Section 07420: Aluminum Composite Panels Section 08920: Glazed Aluminum Curtain Walls Asphalt Roofing, Dampproofing and Waterproofing CGSB Specification 37-GP-29M, Sealing Compound, Rubber-Asphalt. .1 Install air seal barriers continuously at exterior walls as indicated on Drawings to ensure: Adherence with membrane manufacturer's specifications & recommendations & that continuity 1.2 Quality Assurance PART 2 - PRODUCTS of the air seal barrier system is maintained in the exterior walls enclosing the building. .1 Requirements of Regulatory Agencies: 2.1 Materials Install only insulation with an inherent fire hazard classification in all its parts that is within limits established by jurisdictional authorities. .2 That air seal is maintained intact at junctions of partitions, stack locations, door & window frames, & other components with wall & roof construction, penetrations of the barrier by other Validate fire hazard classification only by testing laboratories acceptable to jurisdictional authorities. .2 Primer:For Use >4°C: Emulsified asphalt, to meet specified requirements.For Use <4°C: Asphalt primer, to meet specified requirements of CGSB Specification 37-GP-9Ma. construction components. Attach Underwriters' Laboratories labels to packages of fire rated materials. .3 Coating:For Use >4°C: Emulsified asphalt, to meet specified requirements of CGSB Specification 37-GP-2M, undiluted. For Use <4°C: Asphalt cutback,to meet specified requirements 4 Completely isolate cavity wall insulation from the interior of the building by noncombustible materials. .3 Prepare all surfaces to receive membrane as recommended by membrane manufacturer. of CGSB requirements of CGSB Specification 37-GP-6Ma, undiluted. PART 2 - PRODUCTS 2.1 Materials .4 Ensure complete coverage of (and adhesion to) all the substrates to receive the membrane air barrier, including all wall protrusions. Co-operate with other trades to ensure continuity of .4 Caulking:Rubber asphalt caulking and sealing compound, to meet specified requirements of CGSB Specification 37-GP-29M. PART 3 - EXECUTION the membrane, particularly at junctions of differing constructions. .1 General: .5 Ensure compatibility of membrane materials with which they are in contact. Ensure that all materials of an insulation system, & the construction with which it is in contact are compatible. .1 Ensure that walls, top surfaces of footings and other horizontal surfaces are clean & free from dirt, scale, or other deposits before commencing application of dampproofing. Ensure that insulation units are provided in widths to fit between bond ties for cavity walls. .6 At cracks & junctions of differing substrates & at terminating edges of trowel applied/self adhesive applied barrier, install adhesive applied membrane extending 75mm on each side. 3.2 Preparation .1 Protection: Prevent staining of adjacent property,construction & surfaces by coating materials. Replace porous materials from which soil from coating materials cannot be removed. .7 Seal junction between windows & other opening frames, & trowel or self adhesive applied barrier, with adhesive applied membrane strips. Mineral Wool Fibre, Roxul CavityRock 70kg/m3. 3.3 Application Thickness: as indicated on drawings. 3.3 Adjustment .1 Apply primer to completely cover dampproofed surfaces, by spray or brush, at the rate of 1 gallon/100SF .3 Adhesive:Only as approved by insulation board supplier & that is compatible with flashing membrane & air barrier. .1 Examine completed air seal barrier system & repair & seal all breaks, punctures, rips & tears in the system with pieces of membrane heat fused over damaged membrane to ensure .2 After prime coat has cured, apply coating to completely cover dampproofed surfaces, by spray or brush, at the rate of 2 gallons/100SF .4 Mechanical Fasteners:Galvanized plastic cap screws as approved by insulation board supplier. maintenance of its integrity. .3 Do not backfill until dampproofing is cured and approved .5 Dimensions:16" x 48" or 24" x 48" as required. .4 Caulk around pipes or other elements that pass through dampproofing. Caulk and prime in accordance with caulking manufacturer's specifications. l Cleaning .1 Remove all debris and soil from other areas and surfaces that was caused from dampproofing operations. PROIECT: SHEET TITLE: rawing No.:

WHITBY, ON

SPECIFICATIONS SPECIFICATIONS SPECIFICATIONS 1.3 Design and Performance Requirements Section 07240 EXTERIOR INSULATION & FINISHING SYSTEM .2 Quality assurance .1 Design, fabricate and erect a pressure equalized wall panel system to meet the following requirements: .1 Subcontractor Qualifications **PART 1 - GENERAL** .1 Install bituminous membrane roofing specified in this Section only by a Subcontractor who has adequate plant, equipment & skilled tradesmen to perform it expeditiously, & is .1 Rain penetration:Prevent rain penetration through wall system. Design system based on "Rain Screen Principle" per the National Research Council. Incorporate means of draining 1.1 Description known to have been responsible for satisfactory installations similar to that specified during a period of at least the immediate five years. .1 General Requirements: Division 1 General Instructions is part of this Section. .2 Ensure that the roofing Subcontractor's suppliers and subcontractors have the same qualifications. Wind load:Design wall system to resist wind loads,positive and negative,expected in this geographical region (OBC climatic data,100 year probability)without causing .2 Work performed by other Sections and which is related to this section is specified: .2 Requirements of Regulatory Agencies: rattling, vibration or excessive deflection of panels, overstressing of fasteners, clips and other detrimental effects on system. Section 05415: Exterior Wall Stud Framing Section 06100: Rough Carpentry Section 04200: Masonry .1 Ensure that materials, including adhesives, & roof anchorage meet requirements of jurisdictional authorities. Structural & thermal movement: Accommodate movement of supporting structural framing and movement caused by thermal expansion and contraction of system component Section 07270: Membrane Air Barrier Section 07600: Flashing & Sheet Metal parts without causing bowing, buckling delamination, oil canning, failure of joint seals, excessive stress on fasteners or any other detrimental effects. .2 Ensure that roofing materials, including adhesives & roof anchorage, are listed by Factory Mutual as approved roofing components; & that details of roofing anchorage conform to 1.2 Qualifications .4 Air/vapour barrier shall be continuous & sealed at all joints, laps, terminations & penetrations to prevent air infiltration & exfiltration, & to effectively retard moisture vapour migration .1 System shall be installed only by a recognized, established contractor having proven satisfactory experience in the past 5 years. .3 Install roofing,insulation & vapour retarder membrane,which forms a part of a required fire rated system,exactly as specified in underwriter's laboratory test design specification 1.3 Storage that validates specified rating. .2 Panel flatness tolerance: Fabricate panels not exceeding the following tolerances: .1 Materials shall be stored in a dry place, stacked off the ground, out of sunlight, protected from the weather & any possible surface contamination or other damage. Liquid materials shall be .3 References .1 Rises and falls across the panel, (local bumps and depressions) will not be accepted. stored at a temperature >5°C in winter & <40°C in summer. Keep all materials from freezing. Reference standards quoted in Contract Documents refer to: CSA A123.4 (M1979) Bitumen for use in Construction of Built-Up Roof Coverings and Damp proofing and Waterproofing .2 1.5 mm in a concave/convex direction, measured perpendicular to the normal plane. 1.4 Environmental Conditions systems.; CAN/CSA-A247-(M86) Insulating Fibreboard.; CSA 0121-(M1978) Douglas Fir Plywood.; CGSB 37-GP-9Ma-(83) Primer, Asphalt, Unfilled for Asphalt Roofing, Dampproofing and Waterproofing.; CAN/CGSB-37.29-(M89) Rubber-Asphalt Sealing Compound.; CGSB 37-GP-56M-(80) Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing .3 Panel removal: System/procedure to allow removal of individual panels within wall system. .1 Do not apply material to a frozen base or base containing frost. ;CGSB-51.26M Polyisocyanurate Insulation. .2 Do not apply wet material in ambient (air) temperatures <5°C or >35°C. .4 Maximum deviation from vertical and horizontal alignment of erected panels: 6mm in 6 m. .3 If application is required to be done in temps <7°C, provide temporary enclosure & heat to maintain ambient temp >5°C during the application & for a min. of 24 hours thereafter. .5 Testing:Provide wall assembly that has been tested and certified to conform to the following criteria: .1 Inspection Company Reports:Submit roof inspection reports as roofing installation progresses. Upon completion of roofing installation, submit duplicate certificates of acceptance issued .4 Protect all newly applied surfaces from wind above 25km/hr, rain, hail, snow etc. until material have fully set and cured. .1 Air Leakage: Not more than 0.06 (cfm)/sf of wall area (.003 (L/s) m², when tested at 1.57psf (0.75 kPa) in accordance with ASTM E283. .5 Protect coatings from too rapid evaporation during dry and warm weather. .2 Water Penetration: No water infiltration under static pressure when tested in accordance with ASTM E331 at a differential of 10% of inward acting design load, 6.24psf(.299 kPa) .2 Materials List:Submit a list of all roofing materials intended for use on Project before they are ordered. Attach to the list data stating that materials & components meet specified .6 All capping and flashing shall be installed immediately after completion of the finish coat, unless temporary protection is provided. minimum.after 15 minutes requirements,& that they are compatible for the deck on which they will be used,to each other & to adjacent related materials. 1.5 Sample/Submittal: .1 Water penetration is defined as the appearance of uncontrolled water in the wall. .5 Delivery, storage and handling .1 Following the application instructions, prepare a 3mx3m sample of the system for approval prior to proceeding with the work. Sample shall remain on site as a standard for judging .2 Wall design shall feature provisions to drain to the exterior face of the wall any leakage of water at joints and any condensation that may occur within the construction. .1 Do not store fibre cants, insulation or roofing felts on roof. Store them under cover while roofing installation is not in progress. completed work. .2 Package roofing materials and identify on attached labels the manufacturer, brand, contents, weight as applicable, & product & specification numbers. Structural: Provide systems that have been tested in accordance with ASTM E330 at a design pressure of 25psf and have been certified to be without permanent deformation or 1.6 Quality Assurance failures of structural members. .3 Protect edges of roll goods from damage during handling, & store rolls on end to prevent flattening. .1 The manufacturer shall be a member in good standing of the EIFS Council of Canada. 1.4 Samples .4 Store roofing felts at a min. temperature of 21°C for at least 24 hours before use. Expose to lower temperatures for as short a time as possible before installation. .2 The System specified shall have current listing in the CCMC Evaluation Guide for EIFS. .5 Do not store gravel on roof, but deposit in small piles for spreading as required. .1 Submit samples in accordance with Division 1 .3 The System specified shall meet the requirements of the Ontario Association of Architects (OAA) Rain Penetration Control Guide. .6 Site Conditions .2 Submit duplicate, minimum 130 x 180 mm samples of each colour selected. .4 Periodic inspections shall be performed by a qualified third party. .1 Environmental requirements: 1.5 Shop Drawings .7 Shop Drawings .1 Do not apply any part of the roofing system over damp materials, nor during a period of damp weather. .1 Submit shop drawings in accordance with Division 1. .1 Submit shop drawings in accordance with requirements specified in Division 1. .2 Apply roofing only when air & surface temperatures are >4°C,have been so for at least 48 hours,and are not likely to go <4°C until roofing installation is completed. .2 Indicate elevations, profiles, dimensions and thickness of panels and joint details. .2 Clearly indicate dimensions, tolerances & materials in large-scale details for terminations, drainage/venting, description of related & abutting components & elevations of units with .3 Proceed with roofing installation when temperatures are <4°C only with the mutual documented agreement of Contractor & roofer that, with materials & method used, specified .3 Indicate attachment clips, system extrusions, fastening, anchor and installation details. locations of expansion joints, control joints, & reveals. installation under conditions of warranty will be successfully achieved. PART 2 - PRODUCTS 1.6 Product Delivery, Handling and Storage 2.1 Materials .1 Protect panel face with a plastic film adhered to panel in accordance with panel manufacturer's recommendation. .1 Maintain fire watch for one hour following each day's work when membranes are thermos-fused. .1 System: Dryvit Outsulation Plus NC System. All components of the System shall be supplied by &/or obtained from Dryvit Systems Canada or its authorized distributors. .2 Store components and materials in accordance with panel manufacturer's recommendations. .2 Maintain one fully operational fire extinguisher per torch applicator within 10m of point of work. Dryvit Systems Canada, 129 Ringwood Drive, Stouffville, Ontario L4A 8A2 .3 Protect membrane from site damage during application. Cover traffic areas with appropriate protection to serve as walkways so as to prevent any damage to the membrane. .2 Air/Moisture Barrier:Dryvit Dryflex: A non-combustible polymer-based cementitious material as determined by CAN/ULC-S114 evaluation. .1 Provide manufacturer's written warranty: Furnish panel manufacturer's written warranty covering failure of factory-applied exterior finish on composite metal panels within warranty .4 Protect all walls at hoisting and pumping areas. .3 Drainage Track: Dryvit Drainage Strip: Corrugated plastic sheet material, which provides drainage. period; warrant finish per ASTM D4214 for chalk not in excess of 8 NBS units & fade not in excess of 5 NBS units. Warranty period for finish:10 years after the date of Substantial .5 The water tightness of the roof must be maintained at all times. .4 Insulation Board: Expaned Polystyrene with a minimum density of 1.00 lbs/cf and conform to CAN/ULC- S701-97. Minimum thickness: 2". See drawings for thickness. 1.8 Extended Warranty .5 Standard Reinforcing Mesh: Balanced, open-weave, glass fiber fabric treated for compatibility with other system materials. 1.8 Warranty - Material and Workmanship .1 Submit warranty of roofing installation specified in this Section covering the period for four (4) years beyond expiration of warranty period specified in General Conditions of the Contract .6 Insulation Adhesive: Liquid polymer-based material, which is field mixed with Portland cement, compatible with water resistant barrier. 1 Submit a warranty of the joint sealant installation specified in this Section covering the period for one year beyond expiration of warranty period specified in the General Conditions of .2 Warranty shall be against all defects & against any actual leakage, such defects to include, but not be restricted to leaking, blistering, lifting, curling, wrinkling, alligatoring, fish mouths, .7 Base Coat: A non-combustible polymer-modified cementitious material as determined by CAN/ULC-S114 evaluation the Contract. .8 Primer & Finish Coat: Standard DPR:water-based, acrylic coating with integral colour and texture and formulated with DPR chemistry PART 2 - PRODUCTS .3 Warranty shall include an agreement to make good promptly any & all defects which occur or become apparent within the extended warranty period. .9 Colours & Final Texture: To be selected by Owner. 2.1 Panels PART 2 - PRODUCTS .10 Caulking/Sealants: Caulking for all joints & termination points shall be one part low modulous silicone sealant. Refer to section 07900 for further specifications & application procedures. 2.1 Roof Systems .1 Aluminum Composite Panel (ACP): **PART 3 - EXECUTION** .1 Products to comply with to comply with US EPA Energy Star Products Program. .1 Composition:Two sheets of aluminum sandwiching a core of extruded thermoplastic formed in a continuous process without the use of glues or adhesives between dissimilar 3.1 Installation .2 Standards of Acceptance: Sika Sarnafil Energy Smart System; Soprema Soprastar GR Membrane System materials. Bond integrity testing to adhere to ASTM D1781-76. 1 Preparation: Consult manufacturer representative to review procedures prior to installation. 2.2 Materials .2 Aluminum face sheets: Aluminum alloy 3003, thickness: 0.51 mm. .2 Surface Condition: Surface must be dry and free of any dust, dirt, oil, grease or any other foreign matter. .1 Compatibility between roofing materials is essential. .3 Panel thickness: 4 mm. .3 Drainage Track: Drainage track shall be used above all openings and at base of walls. Apply drainage track while bear coat is still wet. .2 Primer: Primer for all hot asphalt applied membranes shall be 910-01 as recommended by manufacturer and be fully compatible with membranes. .4 Panel weight: 5.28 kg./sq. m. .4 Moisture Barrier: Moisture barrier to be applied to exterior grade gypsum board. .3 Air/vapour barrier: Hot Asphalt Adhered Air/vapour barrier shall be modifiedPLUS G100s/s SBS modified bituminous membrane with a 100 g/m² glass reinforcement and .5 Tolerances: have a sanded surface top and bottom with a minimum thickness of 2.0mm (80 mils). Product shall conform to the requirements of CGSB 37-GP-56MType 2 Class C Grade 1. .5 Apply fiberglass tape to all joints between sheathing and metal frame. .1 Panel bow:Maximum 0.8% of panel dimension (width or length). .6 Apply a minimum 2mm uniform coat thickness. .4 Mopping asphalt:Mopping asphalt shall be CSA A 123.4 M Type 2 for slopes up to 1:16 and Type 3 for slopes 1:16 to 3:12.Use Type 3 for all flashings. .2 Panel dimensions: Take site measurements before proceeding with production unless dimensions can be guaranteed by General Contractor. .7 Air Seal Transition Membrane: Apply Bakor Blueskin SA or Dörken Products Inc., Delta-Flashing after moisture barrier coat is dry. Apply membrane to all openings in wall starting from .5 Roof Insulation:Polyisocyanurate to CAN/CGSB-51.26M,Two layers (R36 L.T.T.R.). Johns Manville or Atlas AC Foam 2 faced. Max. dimension when hot mopping shall be interior face of opening extending 2"(50mm) onto coated face of sheathing board. Apply membrane in shingle fashion with joints overlapping a minimum of 2". .3 Panel lines, breaks and angles to be sharp and true; panel surfaces to be free from warp or buckle. .8 Detail Mesh: .6 Tapered Roof Insulation: Tapered fiberglass by Posi-slope tapered from 75mm (3") to 0 where shown on roof plan. Insulation at curbs shall taper from 25mm(1") to 0. .6 Panel System: Dry joint (SL-2000) with 20 mm wide panel joints using proprietary aluminum extrusions complete with formed aluminum composite corners. .1 Detail mesh used to wrap around & reinforce edge of insulation board around all openings, along all termination points of insulated system & both edges along all expansion joints. .7 Protection Board: 1/4" Asphaltic core Protection Board S/S by Bakor. .7 Acceptable material and manufacturer: .2 Apply detail mesh to the wall prior to installation of insulation board. .8 Vent Stack Covers: Lexsuco Model No. VSC-S. .1 Alucobond supplied by Sobotec Ltd., 67 Burford Road, Hamilton, Ontario, L8E 3C6, Tel: (905) 578-1278. .3 Apply a ribbon 50mm wide by 18mm thick of mix along edge of joint or opening to receive detail mesh. .9 Precast Concrete Pavers:Brooklyn built in ped-slab pedestal system 24"x24"x2.25" square, to meet specified requirements of CSA Standard A23.11. Provide at flat roof area where noted .2 Reynobord by Kanalco Ltd., 1080 Brock Road South, Pickering, Ontario, L1W 3H3, Tel: (905) 420-1044. on drawings. (800 655 3430) .4 Embed under insulation board and wrap around edge of board. .8 Panel finishes: Colorweld 500 Series One, Reynobond Brite Red (Confirm) .9 Insulation Board: The insulation board shall be min 2" thick installed to areas as indicated by the architectural drawings. Apply the insulation adhesive mixture to back of insulation .10 Roof Drain: Supplied by Division 15. .2 Panel and Wall Accessories: .11 Membrane base sheet:(Provide Self Adhered systems for combustible constructions.)Modified PLUS NP180p/p an SBS modified bitumen membrane having a min, thickness of 3.0mm board using a 3/8"x3/8"x1 1/4" notched trowel held at a 30 degree angle. Apply the adhesive so that the notches align vertically on the wall to permit drainage. .1 Provide proprietary aluminum extrusions to manufacturer's standard profiles for a complete installation. (120mils)& a non-woven polyester reinforcement of 180g/m² meeting CGSB 37-GP-56M Type 2 Class C Grade 2.The upper & lower surface shall have a polyethylene film. .10 Reinforcing Mesh:Reinforcing mesh shall be installed prior to installation of fasteners & fastener plates. Corners of openings where no expansion joint is detailed, shall be reinforced with an additional strip 9"x12" reinforcing mesh installed diagonally across top of corner. 2 Cap sheet (& cap flashing): White in colour to comply with US EPA Energy Star Products Program (Initial reflectivity of 0.83, initial emissivity 0.90, solar reflective index SRI of>104. .2 Fasteners: As recommended by panel manufacturer, concealed and non-corrosive Modified PLUS NP250gT4 for flat roof & NP180gT4 for the sloped roof an SBS modified bitumen membrane having a minimum thickness of 4.0mm(160mils)& a non-woven polyester 11 Fasteners:Use only whenever conditions do not permit the use of adhesive. Fasteners & fastener plates shall be installed through the reinforcing mesh, through the insulation board & .3 Extrusions and extrusion clips for attaching panels to the sub-structure: Purpose made aluminum. reinforcement of 250g/m² meeting CGSB 37 -GP-56M Type 1 Class A Grade 2.The upper surface shall have ceramic granules & the lower surface shall have a polyethylene film. into the substrate .4 Extrusions shall be full length around panel perimeter for panel reinforcement and alignment. Intermittent clips are unacceptable. .13 Flashing Membrane: Flashing membrane shall be 1 ply of NP180p/p base sheet and 1 ply NP250GT4 cap sheet torch applied. .12 Mesh Base Coat: .5 Joint filler strip:Same material and colour as panels. Use of caulking at joints is not acceptable. .14 Sealant: Sealant for rain collars and around all "Z" girt framing shall be Dow 795 high temperature sealant. .1 Application of the mesh base coat shall not begin until all reinforcing mesh and fasteners are properly installed. .6 Plastic shims, shall be used as thermal separator between extrusions and sub-girts. PART 3 - EXECUTION .2 Apply a 3mm thick coat of base coat mix to entire surface, applying sufficient pressure in the trowelling process to ensure good contact with insulation & that all voids are filled. .7 Sub-girts:To be manufactured from G-90 galvanized steel & shall be designed to accommodate expansion & contraction, dynamic movements & design load requirements. .3 Reinforceing fibreglass mesh shall be fully embedded into the base coat. 8.1 Examination .8 Rigid Insulation Board:Polystyrene Board:Extruded,closed cell,cellular,smooth skin,foamed polystyrene to meet specified requirements of CGSB Specification 51-GP-20M, .1 Existing Conditions:Examine deck surfaces to ensure that the existing substrate is stable and acceptable for installation of the system. .13 Final Base coat: Type 4. Thickness: see Wall Type Schedule. .2 Before proceeding with roofing application, ensure that: .1 Inspect mesh base coat prior to application of finish base coat. Surface shall be dry strong, not powdery, free of any dirt or other foreign matter. .9 Air and vapour barrier: As per Section 07270. .2 Apply the base coat mixture to the entire surface evenly, applying sufficient pressure to the trowel to ensure good contact with the mesh base coat throughout. .1 Roof deck is constructed smoothly, in true planes; and level, or sloped to drains, whichever is design intent. .10 Alternative Insulation & Air Barrier:(R12.5) Spray insulation as per Section 07263. .2 Roof drains are set at a level to drain, and are connected. .3 Total thickness of both base coats shall be not less than 6mm. PART 3 - INSTALLATION/EXECUTION .3 Roof deck is clean and sufficiently dry for application under specified warranty. .14 Primer Coat Finish: .4 Adjacent construction and installation of other systems incorporated with roof is completed. 3.1 Wall Panel System .1 Brush coat (primer) shall be same colour as the selected finish texture. .5 Roofing surfaces are free of cracks that are wider than bridging ability of roofing materials. 1 Before proceeding, examine work of other Sections upon which this Section depends. .2 Applied so to evenly cover the substrate throughout. Substrate shall not be visible through the primer in any one area. .6 Preparations have been made for bases on which equipment will be installed. .2 Air and vapour barrier: Install as per Section 07270. .7 Items that penetrate roof have been installed. .3 Subgirts: Erect subgirts fastened through air/vapour barrier to steel stud in accordance with system manufacturer's installation instructions. Ensure that all penetrations through .1 Application of final texture shall be in complete conformance to manufacturer's recommended procedure for the selected texture. .3 Defective roofing resulting from application to unsatisfactory previously completed construction provided by other Sections will be considered the responsibility of this Section. .2 Final texture pattern and colour shall be equivalent as approved site sample. 3.2 Preparation .4 Insulation:Ensure that wall surfaces are free of matter which may be detrimental to a uniform bedding of insulation. Apply insulation using Air-Bloc 21 A/V Barrier & insulation adhesive .1 Sweep roof deck completely free of dust and debris. at 3mm thickness.Butter all joints between insulation panels & ensure a firm & continuous contact with air/vapour barrier & adjacent insulation boards. Section 07420 ALUMINUM COMPOSITE PANELS .5 Erect panels and joint filler strip in accordance with manufacturer's details to meet specified design criteria and performance. .2 Protection: **PART 1 - GENERAL** .6 Finished work shall be securely anchored, free of distortion, free of surface imperfections and uniform in colour. .1 Ensure that stored porous materials absorb no moisture. Remove wet materials from Project site. 1.1 Scope of Work .2 Protect surrounding work,& adjacent building & other property from damage during roofing operations,taking property from damage during roofing operations,preventing bitumen .7 Use concealed fastenings only. .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. droppings & dis-colouration of surrounding buildings by smoke from kettles.Locate kettles to prevent smoke entering adjacent & Project buildings. .8 Install panels plumb,true,level and in alignment to established lines and elevations. .2 Work in this Section shall include design, fabrication, supply and installation of aluminum composite panels as follows: .3 This Section shall make payment for repair of damage caused by its operations. 3.2 Clean Up .1 General: Aluminum composite panels as described in this Section, including, hot dip galvanized steel sub-girts as required and fastening hardware. .4 Install temporary blocking and otherwise protect drains during roofing operations, and remove at completion of roofing installation. .1 Remove protective plastic film from panels. .2 Aluminum composite panels, insulation, air/vapour barriers & colour matched coping flashings. .2 Repair and touch-up with colour matching high grade enamel minor surface damage. .3 Aluminum composite panel fascia, soffits,& cladding on canopies. .1 Install a Factory Mutual Class 1 roof in compliance with current FM Approval Guide and Supplements for I-90 wind uplift. .3 Replace damaged panels and components which cannot be satisfactorily repaired. .4 Aluminum composite panels for curtain wall spandrels. .2 Apply roofing in accordance with Drawings, Specifications, requirements of jurisdictional authorities, & of material manufacturer's printed directions which shall establish min. .3 Work performed by other Sections and which is related to this Section is specified in: requirements not otherwise specified. Section 07500 MODIFIED BITUMEN ROOFING Section 04220: Unit Masonry Section 05120: Structural Steel Section 07510: Bituminous Membrane Roofing .3 Apply roofing as soon as possible after roof deck is finished. PART 1 - GENERAL Section 07600: Flashing and Sheet Metal Section 08412: Entrances & Screens Section 08920: Glazed Aluminum Curtain Walls .4 Make adjustments to specified roofing procedures caused by weather and conditions only when approved. 1.1 Description Division 15: Mechanical .5 Maintain equipment in good working order to ensure control of roofing openings and protection of adjacent construction and property. Use only approved roofing equipment. .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. .4 Installation of work which shall be supplied by this Section is specified in: .6 Coat or spray concrete & masonry surfaces with asphalt primer,at rate of 2-6m²/L uniformly with no pools,where air/vapour barrier membrane is to be applied,and allow to dry. Section 08920: To install aluminum composite panels in Glazed Curtain Wall spandrels noted on Elevations and details. .2 Work performed by other sections and which is related to this Section is specified in: .7 Ensure that each part of the roofing system is completely bonded to the other unless otherwise specified. Section 07500: To install colour matched aluminum coping flashing for Glazed Curtain Wall and Composite panel roof curbs noted on elevations and details. Section 03300: Concrete Roof Deck Section 06100: Wood blocking and cants Section 07420: Aluminum Composite Panels .8 Coordinate application of roof air/vapour barrier with wall air/vapour barrier to ensure continuity. .5 This Section shall include performance of work which is specified in: Section 07600: Flashing and Sheet Metal Division 15: Roof drains, Duct supports, Equipment curbs, Vent stack covers .9 Unroll and align air/vapour barrier centered at low point of roof or drain. Apply air/vapour membrane in Type 2 asphalt applied at a rate of 1.25 kg/m² (25 lbs/100SF), lapping Section 07270: Membrane Air Barrier 75mm (3") on sides and 150mm (6") on ends. A bead of asphalt should be observed flowing out of the seams. Seal around projections as per manufacturers recommendations .3 This Section specifies work which shall be performed by: Section 07920: Caulking & Sealants Section 07600: For field quality control of flashing installation contiguous with roofing installed by Section 07550. .10 Extend membrane to outer edges of roof and up vertical surfaces. 1.2 Quality Assurance .11 Maintain constant supervision of kettles to ensure bitumen is not overheated. Check temperature of bitumen in kettle every10-15 minutes with accurate thermometer constantly .1 Supplier/installer shall have minimum 10 years proven experience & must have completed at least 5 major projects in the specified aluminum composite material panel system. available at,but not attached to,each kettle.Do not use bitumen which is outside of specified temperature range.Dispose,away from site,bitumen heated in excess of highest Supply all labour, materials and equipment necessary to install new roofing temperature recommended for type by manufacturer & that is either on roof or at kettle. .2 Remove and dispose of all debris to an authorized landfill site or recycling centre. .12 Complete entire roofing system up to line of termination of installation each day. .3 Protect all walls, windows, landscaping and pavement against damage. Restore any items damaged or altered to original condition. 3.4 Field quality control .4 Prefinished metal flashing and copings. .1 Inspection Services:Roofing inspection company will be selected by Owner to supervise installation of roofing & to verify its completion in accordance with this Specification for installation included in both Section 07550 & 07600. Notify designated Owner's representative & roofing inspection company at least (72) hours before roofing operations commence, & arrange for a job site meeting to be held the day before the roofing starts. 8.5 Protection .1 Coordinate roofing installation to ensure that special protection against damage from traffic or other construction operations performed on top of completed roofing is installed when PROIECT: SHEET TITLE: Drawing No.: A.R.C. esign: M.G rawn: KIYA DEVELOPMENT A.R.C. Checked:

SPECIFICATIONS SPECIFICATIONS SPECIFICATIONS Section 07600 FLASHING AND SHEET METAL 1 Except where specified in other Sections, seal open joints in surfaces exposed to view, & to make the building weather-tight & airtight as applicable, as indicated typically on Drawings, & **PART 1 - GENERAL** .1 Steel sheet: Commercial grade steel to ASTM A526M-85 ZF075 (wiped) zinc finish as otherwise specified. Refer to Caulking Schedule. Include, but do not restrict it to sealing the following joints: 1.1 Quality Assurance Perimeter joints of exterior wood door, wood window, frames. Exterior Door Frames: 1.52mm, (16 Gauge) Perimeter joints of exterior and interior pressed steel opening frames, where installed in masonry & where a weathertight joint is otherwise required. Interior Door Frames: 1.22mm base thickness steel sheet.(18 Gauge) Subcontractor Qualifications: Provide sheet metal specified in this Section only by Subcontractor who has adequate plant, equipment & skilled tradesmen, & is known to have been Floor anchors, channel spreaders and wall anchors: minimum 1.52mm base thickness steel sheet. Perimeter joints of exterior and interior aluminum opening frames. responsible for satisfactory installations similar to that specified during a period of at least the immediate past five years. Guard boxes: minimum 0.76mm(14 Gauge) base thickness steel sheet. Perimeter joints of exterior louvre and vent frames. PART 2 - PRODUCTS Joints between underside of window sills and walls. Glazing stops: minimum 1.22mm base thickness steel sheet, screw fixed. 2.1 Materials 2 Reinforcing channel: to CAN3-G40.20-M81, type 300W, 0.91 mm. Exposed control joints and expansion joints in masonry walls. .1 Galvanized Steel Sheet for Precoated Finish: ASTM A525M, zinc coating designation Z275; flashings, 0.5mm thick; cleats & edge strips, 1.6mm thick; other Work in thickness indicated on Exposed control joints in concrete except for floors. .3 Door bumpers: black neoprene single stud. .4 Primer: for touchup to CGSB 1-GP-181M+Amdt-Marc-78. Exposed expansion joints in concrete. Drawings or specified. Raked joints at masonry wall junctions and masonry to concrete junctions. .5 For exterior doors provide of full galvanized sheet steel. .2 Precoated Finish: .10 Interior and exterior exposed joints, between dissimilar materials, & not concealed from view. .6 Fabricate frames as detailed to Canadian Steel Door and Frame Manufacturers' Association, (CSDFMA) "Canadian Manufacturing Specifications for Steel Doors and Frames. Reinforce .1 Use sheet metal with precoated finish at all locations. frames to suit hardware requirements specified in Section 08710 - Finish Hardware .11 Joints at wall floor junctions, and at floors only where indicated on Drawings. .2 Organic coating applied to galvanized sheet steel in shop by continuous coating line, by Stelco or Dofasco. .12 Full length of exterior door thresholds. .13 Close-fitted space between mechanical and electrical ducts, conduits and pipes, and walls and also at floors where fire separations must be maintained. .1 Exterior Doors full galvanized steel sheet:1.22mm interior doors 0.91mm base thickness,commercial grade steel to ASTM A366-85,Class 1 ASTM A525M-86 finished to ASTM .3 Apply 10,000 Series coating to dry film thickness of 0.025mm on surface exposed to view. .14 Joints between base angle and structure at preformed metal siding. A526M-85, ZF075 (wiped) zinc finish .4 Colour and gloss of finish will be selected from manufacturer's standard range. .15 In all unfinished areas on the interior of the building where no base is called for, seal the junction between concrete floor and block or concrete walls. 2 Glazing stops: minimum 1.22mm base thickness, wiped coated galvanized sheet steel to ASTM A525M-86, tamperproof screw fixed 2 Prime surfaces to receive sealants as required by substrate and manufacturer's specifications to ensure positive & permanent adhesion & to prevent staining. .3 Door Core: .5 Supply of precoated metal to be installed in conjunction with preformed metal siding &/or roofing systems is included in specification for these systems.Form & install this sheet .3 Pack joints tightly with sealant backing set at depth specified for sealant. Fill all other voids with filler. .1 Interior Doors: Semi-rigid board, mineral fibre, bound by resins, non-combustible, with density of 24 kg/m³. .4 Install bond breaker tape in bottom of joints in lieu of sealant backing where proper depth cannot be obtained when backing is installed. .2 Exterior Doors hollow steel: vertically stiffened with steel ribs and all voids filled with polyurethane insulation (R11). .3 Fasteners: Use only nails, bolts, screws & other fasteners that are approved & of same finish as metal being fastened. Use a size suitable for the particular fastening condition & service. .5 Maintain depth of sealant as follows for joint widths of: 4 Primer: for touch up to CGSB 1-GP-181+Amdt-mar-78. .4 Caulking: One or two part polysulphide as specified in Section 07920. 6 mm (minimum joint width): joint depth 6 mm. .5 Fabricate steel doors as detailed,in accordance with Canadian Steel Door and Frame Manufacturers' Association, (CSDFMA), "Canadian Manufacturing Specifications for Steel Doors .5 Felt: No.15 asphalt saturated roof felt, to meet specified requirements of CSA Standard A123.3. 6 to 13 mm: depth equal to joint width. and Frames", for hollow steel core construction, except where specified otherwise. 13 to 25 mm: depth equal to one half joint width. .6 Building Paper:Smooth, unsaturated quality, rosin-sized paper weighing not less than 0.25 kg/m². .6 Mortise, reinforce, drill and tap doors and reinforcements to receive hardware using templates provided by finish hardware supplier. 25 to 50 mm; maximum depth of 13 mm. PART 3 - EXECUTION 2.2 Fabrication .6 Install sealant in joints over 50 mm wide only after consultation with and approval of sealant manufacturer. .1 Fabricate all possible sheet metal in shop by brake forming, and bench cutting, drilling and shaping. 7 Fill joints with sealant compound to specified or indicated depths. Perform joint sealing in accordance with compound manufacturer's specifications, under his supervision, & using 1 Take field dimensions of construction into which fabrications of this Section are incorporated before fabrication. Field adaptation of Work fabricated in error or without field check will not pressure guns & other equipment as approved by him. Finish joints with a full bead so that they are smooth, free from ridges, wrinkles, air pockets & embedded foreign materials. be allowed without approval. .2 Form bends with straight sharp lines, angles and arises; and sheets into true planes free from twists, buckles, dents and other visual distortions. 8 Tool surface of joints to a slight concave profile. Installation .3 Supply accessories required for installation of sheet metal specified in this Section. Fabricate accessories of same material as sheet metal with which they will be incorporated. .9 Make compounds workable only as manufacturer specifies. .1 Pressed Steel Frames: .4 Double back exposed metal edges at least 12.7mm. .10 Caulk joints in site painted materials after adjacent surfaces have been painted. Match compound to paint colour. Setting up of pressed steel frames in masonry walls is included in Section 06200. **PART 3 - EXECUTION** .11 Do not allow sealants to cover or spot surfaces outside of joints. Use masking tape protection to prevent coating of adjacent surfaces if necessary. Building in of pressed steel frames is included in Section 04200 of the Specifications. Setting up & building in of pressed steel frames in metal stud drywall partitions is included in Section 09250. 3.4 Cleaning 3.1 Installation 1 Remove sealant smears & droppings, & masking tape immediately on completion of joint sealing. Do not use chemicals, scrapers, or other tools which would damage surfaces from which Secure frame to floor construction with two fasteners at each jamb, set & brace them securely to maintain true alignment until built in. .1 Lengths:Install precoated sheet metal wherever possible in min. lengths of 3600mm on typical runs, except where conditions for securing dictate lengths =/<1200mm are preferable. excess compounds or droppings are removed. Make good materials damaged by cleaning by the installer of the damaged material & at the expense of this Section. .2 Flashings: Install metal flashings as indicated on Drawings or as otherwise required where building components penetrate exterior construction, & for which flashing is not specified .2 Instruct Contractor on proper final cleaning methods. Install doors only when construction has progressed to a stage when no damage will occur to them in place. by other Sections. Fasten by cleats 1.6mm (16 Gauge) in doubled back edges of drip. 3.5 Caulking schedule Hang doors to swing easily and freely on their hinges, to remain stationary in any position, and to close tightly and evenly on frames without binding. .1 Sealant Type A: Joints between exterior metal door frames & masonry; joints between window frames & masonry; masonry control & expansion joints; caulking of joints between 3 Roof Edge Trim:Install 0.5mm thick galvanized steel trim secured by nailing and edge strip.(26 Gauge) Installation of hollow metal doors supplied by this Section and finish hardware supplied by Section 08710 is included in Section 06200. underside of concrete floor slabs & masonry; & all other locations where caulking is required except in locations designated. Ensure that sealant chosen (from the several specified under Adjustment and cleaning .4 Copings:Install 0.5mm thick galvanized steel secured by edge strips. (26 Gauge) "MATERIALS") for each location is recommended by manufacturer for use on surface encountered Refinish damaged & defective fabrication before completion of Project. Refinish exposed surfaces to ensure no variation in appearance is discernible. Clean surfaces in preparation for .5 Fascias:Install 0.5mm thick galvanized steel as indicate on Drawings with bottom secured by edge strips. .2 Sealant Type B: Joints between interior metal door frames and masonry, millwork and where painted, exposed to view. specified finishing at completion of installation. 3 Sealant Type C: Joints between urinals, lavatories, walls, vanities and where moisture, mildew, etc. can occur. 4 Sealant Type D: All joints, junctions and penetrations of components and adjacent surfaces, through existing and/or new fire separations. .6 Pitch Pockets:0.5mm thick galvanized steel, with minimum 150mm flanges on roof surface and minimum 200mm high vertical sides. .7 Reglets: Caulk all reglets and open sheet metal joints that do not mechanically provide weather tight construction, in accordance with Section 07920. Section 08210 WOOD DOORS Perform caulking in accordance with this Section by: PART 1 - GENERAL 1.1 Description .8 Joints: Join sheet metal by slip lock seams to permit thermal movement. Space joints evenly where exposed. Lock seam & solder internal corners. Form mitres with standing seams in Section 07240 for Exterior Insulation & Finishing System. pre-coated metal. Section 07600 for sheet metalwork. 1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. **3.2 Quality control:** A roofing inspection company will be selected to review installation of this section. Section 08410 for Aluminum Entrance System. .2 Work performed by other Sections and which is related to this Section is specified in: Section 08572 for Fiberglass Windows. Section 08800: Glazing Section 06200 : Installation of hardware supplied by Section 07810 Section 08920 for Aluminum Curtain Walls. 07920 SEALANTS AND CAULKING Steel Hollow Metal Frames & Doors Section 09900: Painting & Finishing Section 09250 for gypsum drywall fire separations. Section 08710 : Supply of Hardware PART 1 - GENERAL Section 09300 for tile at plumbing fixtures. .3 Installation of work which shall be supplied by this Section is specified in: Section 06200: To install doors. This Section for other joints as required by Article 3.03. 1.1 Description Quality assurance 1 Manufacturer Qualifications: Manufacturers approved for fabrication of doors specified in this Section are: .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply here. Section 07950 FIRESTOPPING & SMOKE SEALS Cambridge Door Co. Ltd., Premium Forest Products Ltd., Super Structure Door Co. of Canada Ltd., Premdor Inc. .2 Work performed by other Sections and which is related to this Section is specified in: PART 1 - GENERAL References: Reference standards quoted in Contract Documents refer to: CSA Standard 0132.2-M1977, Wood Doors General Requirements Section 04200: Raking of unit masonry joints Delivery, storage and handling 1.2 Quality Assurance .1 Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. 1 Package doors: identify with labels. 1.2 Work in Other Sections .2 Store doors flat at site in piles on skids with bottom face on bottom of piles protected from moisture by water resistant material under skids top of piles covered, air circulation at sides. .1 Subcontractor qualifications: Seal joints specified in this Section by Subcontractor approved by manufacturers of sealants incorporated; who has equipment adequate for Project & skilled .1 Related Work Specified in Other Sections: tradesmen to perform it expeditiously; & is known to have been responsible for satisfactory installations similar to that specified, during a period of at least the immediate past 5 years. Section 04200: Unit Masonry Section 07900: Sealants Section 09250: Gypsum Drywall .1 Environmental Requirements:Install doors only in areas that have dried out & where no further installation of damp materials is contemplated.Moisture readings of building surfaces at .2 Mock-Up:Test sealant in contact with samples of materials to be caulked to ensure that proper adhesion will be obtained no staining of the material will result. Prepare sample joints at Section 09900: Painting Division 15: Mechanical Division 16: storage & installation locations shall not exceed 15%. the site of each type of sealant for each joint condition to provide mock-up as specified in Section 01400. 1.3 Reference Standards PART 2 - PRODUCTS .1 CAN4-S115-M85: Provide fire stopping and smoke sealing systems in accordance with this standard. Core: Solid, laminated strips, kiln dried, clear Ontario White Pine or Western Red Cedar. .2 Materials(asbestos-free) & systems fully capable of maintaining an effective barrier against gases, flame & smoke in compliance with this standard, not exceeding opening sizes stated & .2 Adhesive: .1 Reference standards quoted in Contract Documents refer to: CGSB Specification 19-GP-5M, Sealing Compound, One Component, Acrylic Base, Solvent Curing.; CAN2-19.13-M82, conforming to special requirements in Part 3.5. .1 Water resistant urea resin. Sealing Compound, One Component, Elastomeric, Chemical Curing.; CAN2-19.24-M80, Sealing Compound, Multi-Component, Chemical Curing. 3 Service Penetration Assemblies: Certified by this standard & used by ULC Guide No.40 U19. Service components listed as certified in this guide are noted under Label Service of ULC. .2 Adhesive for exterior doors shall be waterproof phonolic resin. 1.4 Submittals 4 Fire-resistance rating of fire stopping material assembly must meet or exceed the fire-resistance rating of the floor or wall section being penetrated. .3 Face Veneers .1 Samples: Submit samples of sealant and backing if requested. 4 Scope of Work Natural or stain finish, Birch - rotary cut, Yellow Birch veneer, carefully selected ("Selected White") for uniformity of colour and grain character. 1 The Work of this Section shall supply all labour & material to carry all sealing of penetrations & joints of floor, wall & ceiling located in fire separations, where noted on the drawings & as .2 Product List: Submit manufacturer's and product name for each sealant which will be used for Project, before commencing joint sealing. .2 Paint grade - Yellow Birch .3 Plastic Laminate, (PL) 1.5 Site conditions Qualifications .4 Sealer: Lepages Ltd., Woodlife, penetrating sealer. .1 Environmental Conditions: Apply sealants only to completely dry surfaces, and at air temperatures above minimum established by manufacturer's specifications. 1 Execute Work of this Section only by Applicator who has adequate plant, equipment & skilled tradesmen to perform it expeditiously & is known to have been responsible for satisfactory 1 Fabrication installations similar to that specified during a period of at least five (5) years. 1.6 Warranty Fabricate doors in accordance with CSA 0132.2, free of surface irregularities, knots, warp and twist. 2 Door size, type, fire rating and thickness indicated on door schedule. 3 Materials to be kiln dried with moisture content closely controlled. Wood core components shall be dried to uniform moisture content not exceeding 7%. Submit a warranty of the joint sealant installation specified in this Section covering the period for one year beyond expiration of warranty period specified in the General Conditions .1 Fire stopping & smoke seals at openings around penetrations for pipes, ductwork & other mechanical items requiring sound & vibration control:elastomeric seal; do not use a .4 Solid Core Doors:Slab type, framed core construction with 2 plies of veneer or 3 ply plywood 1/8"(3.18) or thicker after sanding hardwood edges; Veneers selected for "natural" finish of the Contract, including materials & application. Replacement of joint sealants shall include removal of defective materials, preparation for & application of new material, & the cementitious or rigid seal at such locations. Unik or approved equal. repair & making good of damaged adjacent materials. .2 Primers: to manufacturer's recommendation for specific material, substrate & end use. .5 Hollow Core Doors: 3 ply 1/8" (3.18) plywood faced, slab type, hardwood edges. Finish, selected paints Defective joint sealant installation shall include, but not be restricted to:joint leakage, hardening, cracking, crumbling, melting, bubbling, shrinkage, running, sagging, change of colour, 3 Damming & backup materials, supports & anchoring devices: to manufacturer's recommendations; & in strict accordance with tested assembly being installed as acceptable to authorities .6 Vision Frames for Glazed Openings: Constructed of clear anodized aluminum finish. Mitred corners and slant design sill as manufactured by KNC Door Lites or equal. loss of adhesion, loss of cohesion, & staining of adjoining or adjacent materials or surfaces. having jurisdiction .7 Accurately cut openings and install louvers as per HVAC Drawings and Door Schedule. .4 Sealants: for vertical joints, shall be non-sagging type. .8 Hardwood edge strips shall be one piece, same specie as face veneer. PART 2 - PRODUCTS 2.2 Acceptable Materials and Systems .9 Stiles and rails of doors shall be of sufficient width to receive surface mounted and concealed hardware. Check the hardware list for requirements. 2.1 Materials PART 3 - EXECUTION Installation of Wood Doors is included in Section 06200. .1 <u>Joint Fire stop Systems:</u> .1 Dymeric ULC .1 All materials utilized in a sealant system shall be compatible. Dymeric ULC .2 Specified proprietary products are min. acceptable quality. Products of other manufacturers of equal or superior quality will be acceptable where specifically approved by Architect. THC-900 ULC Section 08360 SECTIONAL OVERHEAD DOORS .3 Sealants: Fyre - Sil JF5, JF6, JF18 PART 1 - GENERAL .1 Provide sealant formulation recommended by manufacturer for type of joint, substrate and service conditions applicable. Fyre Shield 1 Description 2 Service Penetration Fire stop Systems 1 Fyre - Sil SP143, SP146, SP147, SP172, SP173, SP178, SP179 .2 Refer to Caulking Schedule for utilization of the following sealants. .1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. .3 Colours of sealants will be selected from manufacturer's standard range. .2 Work performed by other Sections and which is related to this Section is specified in: .2 Fyre Shields SP136-139, SP144, SP145, SP169, SP170, SP171, SP180 Section 05500 : Door frames and lintels Section 09900: Finish painting Division 16: Electrical connections .4 Sealants: **PART 3 - EXECUTION** .2 Submittals Type A:Multi-component, chemical cured to meet specified requirements of CAN2 192-M80, such as Dymeric, as manufactured by Tremco (Canada) Ltd. Use at all exterior building .1 Shop Drawings: Submit shop drawings. joints, floor, wall and masonry joint locations, except where another type is specified. .1 Examine size & condition of voids to establish correct thickness & installation of materials. Ensure substrates & surfaces are properly clean & dry, & meet manufacturer's instructions. Samples:Submit samples of finishes .2 Maintain insulation around pipes & ducts penetrating fire separation. Type B:Acrylic solvent release, one part sealant. To meet specified requirements of CGSB 19-GP-5M, such as Mono, by Tremco (Canada) Ltd. Use at interior joints between windows, .3 Maintenance and Operating Instruction:Submit maintenance and operating instruction for incorporation in Project Data Book. .3 Mask where necessary to avoid spillage and over coating onto adjoining surfaces; remove stains on adjacent surfaces. .3 Delivery, storage and handling 3.2 Installation Type C:Silicone sealant.One part sealant;to meet specified requirements of CGSB 19-GP-9Ma, such as Proglaze, by Tremco(Canada)Ltd.Sealant for fixtures, vanity tops, & where 1 Package or crate & brace products to prevent distortion in shipment & handling. Label packages & crates, & protect finish surfaces by sturdy wrappings. 1 Install fire stopping & smoke seal material & components in accordance with ULC certification & manufacturer's instructions. .4 Warranty .2 Seal holes/voids made by through penetrations poke-through termination devices & un-penetrated openings or joints to ensure continuity & integrity of fire separation are maintained. .1 Guarantee overhead doors for 3 years against sagging or racking in excess of 1/4"(6.35) measured across any face, failure or malfunctioning of moving parts. Type D:As specified in Section 07950. 3 Provide temporary forming as required & remove forming only after materials have gained sufficient strength and after initial curing. .2 Guarantee shall include delivery, hanging, fitting and refinishing of overhead door and hardware. .4 Primer: Specifically designed for use with sealant compounds on surfaces encountered, as specified by the compound manufacturer to assure adhesion of compound & to prevent .4 Tool or trowel exposed surfaces to a neat finish, removing excess compound promptly as work progresses and upon completion. PART 2 - PRODUCTS 2.1 Materials .1 Advise the Architect when service penetration assemblies are in place and ready for inspection. Do not conceal or enclose fire-stopping materials prior to inspection. 5 Sealant Backing (Bedding Material) Extruded,foamed,closed cell,round,polyethylene,urethane,neoprene or vinyl rod,30% greater diameter than joint width,with Shore "A" hardness of .1 Galvanized steel sheet:0.91mm thick commercial quality to ASTM A526M-85 with Z275 zinc coating. 4 Schedule 20,& 830-900 kPa tensile strength,& manufactured especially for the purpose. 2 Primer:To CGSB 1-GP-181M+Amdt-Mar-78, for galvanized steel surfaces. .1 Firestop & Smoke Seal at following locations: .3 Insulation:Foamed-in-place polyurethane lamination process to meet design requirements. .6 Void Filler: Loose glass fibre. 1 Penetrations of ducts, pipe, conduit, etc. through fire-resistance rated masonry, concrete, & gypsum board partitions & walls. .4 Bituminous Paint:To meet specified requirements of CGSB Specification 1-GP-108M. 7 Bond Breaker:(for installation where minimum specified depth of joints is unobtainable): Pressure sensitive plastic tape, 3M #266 or #481. 2 Top of fire-resistance rated masonry and gypsum board partitions. .5 Glass and Glazing:To meet specified requirements of Section 08800. .3 Intersection of fire-resistance rated masonry and gypsum board partitions. PART 3 - EXECUTION .6 Finish:Pre-painted prior to manufacturer. Two-step coating of epoxy primer and acrylic finish primer for exterior skin. Interior skin polyester wash coat or approved alternate finish. .4 Control & sway joints in fire-resistance rated masonry & gypsum board partitions and walls. 3.1 Examination 2.2 Doors .5 Rigid Ducts:>129cm²:fire stopping to consist of bead of fire stopping material between retaining angle&fire separation & between retaining angle&duct,on each side of fire separation. Type 1 - Overhead Sectional Door .1 Before commencing joint sealing, verify on site that joint configuration & surfaces have been provided as specified in other Sections to meet intent of sealant specification, that joint Model: Overhead Door Co. Thermacore 593 with insulated steel panels or equivalent. conditions will not adversely affect execution, performance or quality of completed sealed joints & that they be put into acceptable condition by means of preparation specified in this .1 Remove excess materials & debris & clean adjacent surfaces immediately after application. Glazing: Three 8" x 24" double glazed ports in fourth panel from bottom, with acrylic plastic. Section. If in doubt, verify site conditions together with manufacturer's representative of the sealant to be applied. .2 Remove temporary dams after initial set of fire stopping and smoke materials. B Operation: Electric motor with photo-sensor and reversing safety bar at bottom panel for all doors. .2 Ascertain that sealers & coatings applied to sealant substrates are compatible with the sealant used & that full bond between sealant & substrate is attained.Request samples of the Locking: One point latch at interior. Section 08110 STEEL HOLLOW METAL FRAMES AND DOORS sealed or coated substrate from their fabricators for testing of compatibility & bond if necessary. .5 Size: as noted on drawings- Exterior drive-in doors unless noted otherwise. PART 1 - GENERAL .3 Verify that specified environmental conditions are ensured before commencing joint sealing. 2.3 Track Description Vertical High-lift, 11 ga. galvanized formed steel, 3" wide. .4 Defective sealed joints resulting from application to unsatisfactory joint conditions will be considered the responsibility of this Section. .1 General Requirements: Division 1, General Requirements, is a part of this section and shall apply as if repeated here. Slope vertical track to ensure weather-tight closing by wedging door against stop. 3.2 Preparation .2 Work performed by other Sections and which is related to this Section is specified in: .3 Form curves smoothly and join with gusset plate between vertical and horizontal track. .1 Remove loose mortar,dust,oil,grease,oxidation,mill scale,coatings & all other materials affecting compounds from surfaces to which sealant compounds must adhere except for painted Section 04200: Reinforced Block Lintels Section 06200: Finish Hardware Installation Section 05500: Steel Lintels .4 Fit horizontal track with spreader rods & reinforce full length with steel angles to prevent deflection. Hang track by 1"x1"x13 ga. galvanized steel angles surfaces, by brushing, scrubbing, scraping or grinding. Section 07920: Caulking Frames Section 06200: Hanging of Wood Doors Section 08710: Supply of Finish Hardware Electrical operators Section 08800: Glazing Section 09900: Painting & Finishing Model 1000-A 1 HP with 2 sets of transmitters for each door, by Overhead Door Co. or model 1260 by Lift-Master. .2 Clean down caulked metal surfaces with clean cellulose sponges or rags soaked in solvent recommended by sealant manufacturer & wipe dry with clean cloths. Ensure solvent is not 3 Installation of work which shall be supplied by this Section is specified in: .2 Key-fob operated control stations for both interior & exterior locations with push-button and open, close and stop buttons override on interior. Section 06200: To install hollow metal doors Section 04200: To build in anchors and frames at concrete unit masonry .3 Use methods of preparation suitable for substrate as recommended by sealant manufacturer,& that does not damage adjacent surfaces. Section 09250: To install and anchor frames in drywall partitions. Section 06200 : To set up frames in masonry openings .4 Ensure that releasing agents, coatings or other treatments have either not been applied to joint surfaces, or that they are entirely removed. 1.2 Quality Assurance 1 Supply information & templates required for installation of doors, hardware and accessories specified in this Section. Subcontractor Qualifications: Provide fabrications specified in this Section only by Subcontractor who has adequate plant, equipment & skilled tradesmen to perform expeditiously, & is .1 Install hangers, brackets, fastenings, guides, operating hardware & fittings, & other specified equipment as recommended by door manufacturer. Also meet requirements for ULC labels. known to have been responsible for satisfactory installations similar to that specified during a period of at least the immediate past five years. .2 Attach track & accessories to opening frame & building construction as suitable for door operation, & to avoid conflict with the installations of other Sections. Do not use fastenings which penetrate through walls, floors or roofs. Construct fire rated doors & frames of ratings indicated, in accordance with validating label requirements, & as otherwise required by jurisdictional authorities. Adjustment and Cleaning Ensure that hardware & installation meet requirements of CAN4-S104, Standard Method for Fire Tests of Door Assemblies, as adopted by Insurance Advisory Organization, when 1 Adjust doors & hardware to ensure free-running,tightly closing & properly counterbalanced operation. Ensure that installation is free from warp,twist or other distortion. Lubricate .3 Doors & frames indicated as labelled, shall meet all conditions of NFPA No. 80, for installation, & shall have attached ULS labels. 2 Refinish damaged or defective surfaces so that no variation in surface appearance is discernible. Refinish surfaces at site only if approved. .3 Clean surfaces exposed to view on completion of installation. Final cleaning is specified in Section 01700. PROIECT: SHEET TITLE: A.R.C. esign: M.G rawn:

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.1 Division 1, General Requirements, is part of this Section and shall apply as if repeated. .2 Work performed by other Sections and which is related to this Section is specified in: Section 03300: Cast in Place Concrete Support Section 07430: Insulated Metal Wall Panels Unit Masonry Section 07600: Flashing & Sheet Metal Structural Section 09250: Gypsum Board Spraved insulation on inside face of curtain wall spandrels and frames. Section 13122: Pre-Engineered Metal Buildings-Steel Framed openings. .3 This Section shall include performance of work which is specified in: Membrane Air Barrier-Transition strip between glazing and adjoining construction. Section 07950: Fire Stopping and Smoke Seals Section 08400: Aluminum Entrances & Storefronts Curtain Wall Insulation Section 07920: Sealants and Caulking Section 08800: Glazing .4 Installation of work which shall be supplied by this Section is specified in: Section 07420: To install aluminum composite spandrel panel (At corner, see drawings) .1 Drawings & specifications of this section are based on the Kawneer Company of Canada 1600 Wall System 2. Alternate manufacturer products meeting the design criteria & project requirements of "Kawneer 1600 Wall System 2" may be acceptable only upon submission of supporting technical literature, samples, drawings & performance data for comparison 10 days prior to tender closing date. .1 Submit shop drawings. All work of this Section shall be executed in strict accordance with approved shop drawings. These shall be complete details of all conditions, construction & interfacing. Submit one representative sample type of profile and finish for approval by Consultant. .1 Design based on CAN3-S157 "Strength Design in Aluminum", with a maximum deflection of L/175 of the span not to exceed 12.7mm(1/2"). .2 Provide reinforcing as required for the condition shown. 1 Wind loads:Provide Curtain Wall system;include anchorage,capable of withstanding wind load design pressures of 25lbs/SF inward & outward. The design pressures are based on the Ontario 2 Air Infiltration: Test specimen shall be tested in accordance with ASTM E 283.Air infiltration rate shall not exceed 0.06cfm/SF(0.3 l/s·m²) at a static air pressure differential of 6.24psf (300Pa). 3 Water Resistance (static): Test specimen shall be tested in accordance with ASTM E331. There shall be no leakage at static air pressure differential of 12psf(575 Pa) as defined in AAMA 501. .4 Water Resistance (dvnamic): Test specimen shall be tested in accordance with AAMA 501.1. There shall be no leakage at an air pressure differential of 12psf(575 Pa) as defined in AAMA 501. .5 Uniform Load: A static air design load of 40psf(1915 Pa) shall be applied in the positive & negative direction in accordance with ASTM E 330. There shall be no deflection in excess of L/175 of the span of any framing member at design load. At structural test load equal to 1.5x the specified design load, no glass breakage or permanent set in the framing members in excess of 0.2% of their clear spans shall occur 6 Seismic: When tested to AAMA 501.4, system must meet design displacement of 0.010x the story height & ultimate displacement of 1.5x the design displacement. 7 Thermal Transmittance (U-factor):When tested to AAMA Specification 1503,the thermal transmittance (U-factor) shall not be more than: 0,40 with (1/4"Pilkington Evergreen High Performance Tinted Glass, Low E #3, Argon Filled = .29 BTU/hr/ft² /°F). 8 Condensation Index (I):when tested to CSA-A440-00,the Condensation Index shall not be less than 65frame and 62.2 glass (HP glass). .9 Sound Transmission Loss: When tested to ASTM E90,the Sound Transmission Class (STC) shall not be less than 31 & the outdoor-indoor transmission class (OITC) shall not be less than 25 based upon 1" sealed glass unit (1/4"+ 1/2" AS,+1/4"). 1 Provide maintenance data for maintenance and cleaning in accordance with instructions under General Conditions. .1 The work of this division shall be guaranteed against defects of materials & workmanship for a period of (4) years beyond expiration of warranty period specified in General Conditions .1 Protect adjacent surfaces from damage resulting from work of this trade. .1 Acceptable Manufacturers: Kawneer Company Ltd. Curtain Wall Series: 1600 Wall System®2 .2 Substitution Acceptance: Acceptance will be in written form, either as an addendum or modification, & documented by a formal change order signed by the Owner & Contractor. Substitution Documentation required as follows: .1 Product Literature & Drawings: Submit product literature & drawings modified to suit specific project requirements & job conditions. .2 Certificates: Submit certificate(s) certifying substitute manufacturer (1) attesting to adherence to specification requirements for curtain wall system performance criteria, & (2) has been engaged in the design, manufacturer & fabrication of aluminum curtain wall for a period of not less than ten years. .3 Test Reports: Submit test reports verifying compliance with each test requirement for curtain wall required by the project. .4 Product Sample and Finish: Submit product sample, representative of curtain wall for the project, with specified finish and color. .1 Aluminum (Curtain Wall and Components): .1 Material Standard: Extruded Aluminum, ASTM B 221, 6063-T6 alloy & temper. .2 Member Wall Thickness: Each framing member shall have a wall thickness sufficient to meet the specified structural requirements. .2 Weathering & Glazing Gaskets: Glazing gaskets shall comply with ASTM C 864 and be extruded of a silicone compatible EPDM rubber that provides for silicone adhesion. .3 Insulated Air-Barrier Panels: Insulated air-barrier panels in the spandrel, column, or similar functional area shall be steel, galvanized (1.25 oz./ft² coating).20 gauge thick (or as otherwise specified) with sealed corners. .4 Insulation: Insulation shall be 4" as specified in Section 07213. .5 Glass and Glazing Materials: Glass and glazing shall be included in this sub-contract. Glass shall be as specified in Section 08800. .6 Aluminum Spandrel Panels: Composite aluminum panel as specified in Section 07420. .7 Structural Anchors: Aluminum Structural anchors shall have three way adjustment & be welded after curtain wall alignment. When steel anchors are used, provide insulation between steel material & aluminum material to prevent galvanic action. 8 Caulking: All caulked seals at connections between the air-seal planes shall be high grade butyl. As specified in Section 07900. .9 Fastening Steel and Anchors: Cadmium plated 400 series stainless steel. .10 Bituminous Paint: To meet CGSB Specifications 1-GP-108. .11 Lacquer: Methacrylate type to meet CGSB Specification 1-GP-159. .12 Thermal Separator: Solid extruded PVC Sections with a durometer hardness between Shore "A" 75 and 85. .1 Caps: Clear anodized finish, designated (AA-A41 Class 1 18 um (.0007") in accordance with Aluminum Association specification AA-M12C22A31. Color #14 Clear. 2 Interior Back section Frames:Clear anodized finish designated AA-A41 Class1 18um(.0004") in accordance with Aluminum Association specification AA-M12C22A31 Color #14 Clear .1 Fabricate framing from extrusions of size & shape shown on shop drawings. Vertical & horizontal members shall be tubular extrusions designed for shear block corner construction. All ioints shall be accurately machined assembled & sealed to provide neat weathertight joints. Shielded drainage & pressure equalization vents shall be provided where required. All horizontal members shall be sealed to vertical members to provide individual compartments within the system in accordance with the rain screen principle. .2 Overall assembled curtain wall member profile dimensions shall be: : 2-1/2" x 7-1/2" (5-1/4" SSG) Vertical structural silicone glazed format. 2-1/2" x 7-1/2" (5-1/4" Capped) Horizontal Rails. .3 Snap Caps (Horizontal & Jambs): : 2-1/2" x 3/4" at head, sill and jambs. .1 Framing shall be installed, glazed & adjusted by experienced personnel in accordance with the manufacturer's instructions & approved shop drawings. All items in this section shall be set in their correct location & shall be set level, square, plumb & at proper elevations, & in alignment with other work. .2 The insulating glass edge construction must be suitable for structural silicone sealant application. Shop drawings must be submitted to the structural silicone sealant manufacturer for review of the details. All materials & finishes which contact the structural silicone sealant should be submitted to the structural sealant manufacturer for adhesion & compatibility testing. Application of the structural silicone sealant should not proceed until details have been reviewed, testing has been successfully completed. All surface preparation, structural silicone sealant application, & curing procedures shall be in strict accordance with the sealant manufacturer's standards & recommendations. .1 Aluminum shall be isolated from concrete,mortar,plaster & dissimilar metals with bituminous paint. Framing shall be protected from other building materials during & after installation until acceptance by the General Contractor. Thereafter, it shall be the responsibility of the General Contractor to maintain protection & provide final cleaning. Section 09111 METAL STUD SYSTEMS Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. Gypsum Board: Section 09250 Setting Door Frames: Section 06200 Non-loadbearing channel stud framing: to ASTM C645-83, 92 mm stud size, roll formed from 0.53 (25ga) or 0.91 (20ga) mm thickness hot dipped galvanized steel sheet, for screw attachment of gypsum board. Knock-out service holes at 460mm centres. Floor and ceiling tracks: to ASTM C645-83, in widths to suit stud sizes, 32 mm flange height. Metal channel stiffener: 38x19mm size, 1.4mm thick cold rolled steel, coated with rust inhibitive coating. 2.4 Acoustical sealant: to CGSB 19-GP-21M. Extend partitions to underside of structure height except where noted otherwise on drawings. (See Wall Type Schedules) Align partition tracks at floor and ceiling and secure at 600mm O.C. maximum. Install dampproof course under stud shoe tracks of partitions on slabs on grade. Place studs vertically @400mm O.C. & not >50mm from abutting walls, at each side of openings & corners. Attach studs to bottom & ceiling track using screws or rivets. 3.5 Co-ordinate simultaneous erection of studs with installation of service lines. When erecting studs ensure web openings are aligned. 3.6 Co-ordinate erection of studs with installation of screen/door frames and special supports or anchorage for work specified in other Sections. Provide 40mm stud or furring channel secured between studs for attachment of fixtures behind lavatory basins, toilet & bathroom accessories, & other fixtures including grab bars & towel rails, attached to steel stud partitions. Install two continuous beads of acoustical sealant or insulating strip under studs and tracks around perimeter of sound control partitions. 3.9 Suspended Drywall Ceiling System. Carrying Channels: 16ga cold rolled steel 1-1/2" x 3/4". Furring Channels: 25ga cold rolled steel 3/4" x 1-1/4" hat type.



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SPECIFICATIONS Section 09250 GYPSUM BOARD PART 1 - GENERAL Division 1 - General Requirements .1 Work performed by other Sections and which is related to this Section is specified in: Section 09510: Acoustic Tile Ceiling Section 09900: Painting and Finishing 1.2 Supply of work which shall be installed by this Section is specified in: Section 08110: To furnish pressed steel door frames Section 09111: Metal Stud Systems Division 15: To furnish access panels .3 This Section shall include performance of work which is specified in: Section 07920: To specify caulking at fire rated construction .4 This Section specifies work which shall be performed by: Section 04220: Closures at top of masonry walls at metal joists, where applicable. 1.5 Coordinate gypsum board installation with Section 07212 to ensure metal furring channels used to secure insulation are located to provide complete attachment of gypsum board where applicable PART 2 - PRODUCTS .1 To meet specified requirements of CSA Standard A82-27. .2 Plain Gypsum Board: 5/8" With tapered edges. .3 Fire-Rated Gypsum Board: 5/8" Type X,with tapered edges classified for fire hazard by Underwriters' Laboratories of Canada, labelled in conformance with the ULC Label Service for the application specified. 4 Moisture Resistant Gypsum Board: 5/8" Georgia Pacific Dens Armor Plus panels with tapered edges Typical for all Washrooms, Janitor Closets, Shower/Locker Rooms .5 Abuse Resistant Gypsum Board: 5/8" dense gypsum core reinforced by glass fibre. CGC Fibrerock abuse resistant board where indicated. .1 To meet specified requirements of ASTM Specification C475. .2 Joint Reinforcing Tape: 2"x0.012" thick, perforated paper, with chamfered edges. .3 Gypsum Board Joint Compounds: Latex, resin base, possessing good adhesion, mixed with fresh, unadulterated water having no detrimental effect on compounds 3 Fastenings and Ties: Screws: For securing gypsum board to wood studs: Self-drilling, self-tapping, case-hardened, Phillips head, drywall screws, with corrosion resistant finish; to meet requirements of ASTM Specification C646. #6 x 1" for single thickness board fastening. Acoustic Insulation: For walls: AFB by Rockwool orEcotouch Quietzone by Owens Corning Before application of board systems commences, ensure that services have been installed, tested, approved; that conduits, pipes, cables, outlets are plugged, capped, or covered; or covered; that fastenings & supports installed by other Sections are in place. PART 3 - EXECUTION .1 Frame openings on every side with suitable sections. Provide clearances required at mechanical & electrical services, such as grilles, diffusers, access panels, & lighting fixtures only after verification of requirements in each case. .2 Cooperate with other Sections. Where the installations of other Section penetrate board construction, fit openings snugly, & to ensure cover by escutcheons & plates utilized. .3 Coordinate installation of board systems with Section 09111. .4 Attach to framing adequate steel reinforcing members to support load of, to withstand the withdrawal & shear forces imposed by items installed by other Sections upon systems. Such items are, but are not restricted to, coat hooks, washroom accessories, handrail anchors, guards, wall-hung cabinets & fitments, shelving, curtain equipment & fixtures. Heavy mechanical & electrical equipment shall be self-supporting as specified in Divisions 15 & 16. .5 Install each grab rail anchorage to withstand a force of 500 pounds in all directions. .6 Provide fire stopping; bulkheads over doors, frames, screens, & changes in ceiling levels; stair soffits; furred beams; pipe spaces; as indicated on Drawings. 3.2 Fire Separations .1 Construct gypsum board fire separation assemblies, where located at fire separations of metal framing covered on both sides by fire-rated gypsum board. .2 Fit assemblies tightly to enclosing construction to maintain integrity of the separations. Install casing beads at all perimeter edges. .3 Provide 1/2" minimum clearance for tops of studs in fire rated partitions, where applicable. .3 Adjustment and Cleaning .1 Remove droppings & excess of joint compound from property, material and surfaces of others, & from board & accessories installed by this Section, before it sets. .2 Make good to cut-outs for services and other installations, fill in defective joints, holes & other depressions with joint compound. .3 Make good defective board installations, & ensure that surfaces are smooth, evenly textured & within specified tolerances to receive finish treatments. .4 Clean off bead, casings & other metal trim, & leave all surfaces ready for specified finishes. Section 09300 TILE PART 1 - GENERAL Work performed by other Sections and which is related to this Section is specified in: Section 03300: Cast-In-Place Concrete Section 04220: Concrete Unit Masonry Section 05500: Metal Fabrications Section 10800: Washroom, Toilet and Bath Accessories Section 09250: Gypsum Drywall This Section shall include performance of work which is specified in: Section 07920: Sealants and Caulking Quality Assurance: Perform tile installation in this Section only by Subcontractor who had adequate plant, equipment, & skilled tradesmen to perform it expeditiously, & is known to have been responsible for satisfactory installations to that specified during a period of at least the immediate past five years. PART 2 - PRODUCTS Porcelain Tile (Include all Trim as available) .1 Floor Tile No: (POR.T) To be selected by Owner and included in cash allowance specified in Section 01020. .2 Wall Tile No: WT-1To be selected by Owner and included in cash allowance specified in Section 01020. .3 Setting: Install in accordance with 200-6A details & specifications of Terrazzo, Tile & Marble Association of Canada and Specification ANSI-A108.1. .4 Caulking: Caulk all joints between tile and adjacent surfaces, lavatories, urinals and water closet bowls. (Typical) .2 Quarry Tile: (Q.T.) (Include cove base and trim) .1 Type 1 Not applicable. .1 Type 1 to meet specified requirements of Section 07920. .2 Silicone rubber manufactured by Tremco, MacNaughton-Brooks, Dow Corning, Canadian General Electric, or approved equal. .4 Cleaner: To meet specified requirements of #1000 Series of Terazzo, Tile and Marble Association of Canada. .5 Sealer: To meet specified requirements of #3000 Series of Terazzo, Tile and Marble Association of Canada. PART 3 - EXECUTION .1 Install tile in accordance with details & specifications of the Terazzo, Tile and Marble Association of Canada Installation Manual 200-1979, Ceramic Tile, as applicable, & otherwise in accordance with ANSI Specification A108.1. .2 Lay out tile so that fields are centered on areas, with no tiles of less than half size included. Maintain heights of panels in full courses to nearest indicated dimension. .3 Lay tile on vertical surfaces with joints parallel to walls and at right angles to each other unless pattern is otherwise indicated on Drawings. 3.2 Control Joints: .1 Install control joints for interior quarry tile installations as indicated on Drawings,or if not indicated, at min. 16'-0" O.C. & max. 20'-0" O.C. .2 Install control joints around perimeter of areas,around columns & where flooring abuts other hard materials. Also incorporate control joints over all building expansion joints. .3 Fill joints with sealant in accordance with Section 07920. Width of joints shall be 3/8", except for exterior joints 16'-0" O.C. the width of joint shall be 1/2" .4 Match colour of sealant to colour of grouted joints. Section 09681 CARPET TILE PART 1 - GENERAL .1 General Requirements: Division 1. General Requirements, is a part of this Section and shall apply as if repeated here. .2 Work performed by other Sections and which is related to this Section is specified in: Section 03300 : Concrete Floor Finishing 1.2 System Description .1 Flammability:Rating tests shall be in accordance with CGSB 4-GP-129, Section 6.2.5-1.2.3.4., outlining the ignition Media-Mathenamine Timed Burning Tablet (Eli-Lilly No.1588) & procedure. The flame resistance (Section 4.8) of carpet shall be such that the longest diameter of the charred area shall not exceed 2" (50mm) when tested. .2 Colour Fastness: A minimum light fastness rating of L5 is required and rating shall be in accordance with CAN2-4.2-M77 Canadian Government Test Method 18.1 or 18.2. .3 Static: A maximum peak potential of 3.0 kilovolts is acceptable using walking test approved by American Carpet Institute Technical Committee. .1 Samples: Submit samples of each specified carpet, of each colour, and accessories prior to ordering. .2 Submit moisture level and acid-alkali test results prior to prior to ordering products. .3 Carpet Waste:On completion of installation,determine with Owner whether he requires waste carpet of significant size, & deliver selected material to him as directed, wrapped & identified. .1 Materials .1 General: Provide carpet as selected from manufacturer's standard range. Permanently treat carpet materials to ensure resistance to insect attack. .2 Carpet Tile (CARP): To be selected by Owner Pattern: TBD Colour: From Standard Range Backing: Tractionbac .3 Adhesive: Pressure sensitive adhesive to suit carpet tile and subfloor as recommended by manufacturer. Zero V.O.C., & Anti-microbial. **Examination** Before commencement of carpet laying, ensure that: .1 Construction and installations of others in areas where carpet is installed has been completed and is satisfactory for installation of carpet. .2 Floors are level, and free from cracks, ridges, dust, oil, grease, debris and other soil which would harm installation. .3 Concrete floors are cured and free of dusting. .4 Moisture content of concrete slabs and compatibility of sealer meets requirements of adhesive manufacturer. .2 Preparation .1 Grind or sand ridges and high spots level and smooth. .2 Fill holes, cracks or other irregularities remaining from surface finishing performed by other Sections with filler suitable for substrate material. Level subfloor to openings with filler. .3 Remove soil, oil, grease, wax, paint and similar foreign materials from surfaces to receive carpet. .4 Vacuum clean surfaces to receive carpet with an industrial type machine. .5 Cover or mask surfaces adjacent to those receiving application of adhesive to protect them from soil. .6 Damp surfaces before application of adhesive. .7 Protection:Prevent traffic and construction operations on newly laid carpet by barricading carpeted areas .3 Installation 1 Application of pressure sensitive adhesives or primers, as may be required, must be in strict accordance with manufacturers recommended spread rates. .2 Install Modular tiles in order they were manufactured by selecting pallets in sequential order & following numbers located on each carton of tiles. Installation should begin with lowest carton numbers & progress through highest numbers until project is complete. Installing modular tiles by carton sequence will assure the most even uniform look possible. .3 Measure area to be carpeted to determine best staring positions. Chalk two lines that intersect these positions at right angles. Proper planning should avoid trimming perimeter tiles more than one half their width. Fit carpet tightly to perimeter edges of area. .4 Lay out carpet tile to ensure that possible colour variations are distributed to appear inconspicuous, & that direction is the same in each separate area. .5 Install by butting edges together evenly though do not to compress modules causing peaked edges. Arrows are on module backing to show pile direction. Unless instructions are stated for quarter turn installation always lay tile with arrows in the same direction. To ensure proper alignment, check spacing every ten modules. Modules for proper spacing should be within 1/4" inch. .6 Carry carpet into recesses, toe spaces under heating units,& around pilasters,columns & other fixtures. .7 Cut & trim carpet around holes for cut-outs & door frames.Whenever modules are cut or trimmed adhesive must be used. 3.4 Adjustment and Cleaning .1 Remove soil & spots & excess adhesive from carpet surfaces with solvent which will not harm carpet & remove loose pieces of face yarn with sharp scissors. .2 Clean off adhesive spread on adjacent exposed surfaces. .3 Vacuum clean carpets at completion of installation.

SPECIFICATIONS Section 0650 RESILIENT FLOORING PART 1 - GENERAL 1.1 Reference Standards: CSA Standard A126.1-M1984, Vinyl Composition Floor Tile. 1.2 Samples: Submit samples of each specified flooring, base, stair and accessory, that is specified. PART 2 - PRODUCTS 2.1 Flooring: Luxury Vinyl Tile (LVT): as selected by Owner from samples submitted. 2.2 Resilient Base: TBD 2.3 Stair Covering Materials: N/A .1 Treads: Vinyl, 3/16" thick, ribbed pattern, square hosing. .2 Vinyl Nosings: Heavy duty, colour, square nosing, for vinyl composition tile treads, where indicated. 2.4 Flooring Accessories: Reducer Strips: Bevelled, 1" wide, vinyl. 2.5 Filler: As recommended by manufacturer for subfloor on which this material is installed 2.6 Primers and Adhesives: As recommended for each subfloor condition. Use clear adhesive for vinyl polymer flooring. 2.7 Cleaner: Neutral chemical compound that will not damage tile or affect its colour. 2.8 Sealer: As recommended by flooring manufacturer. 2.9 Wax: Self-polishing water emulsion type, as recommended by flooring manufacturer. 2.10 Floor Protection: Heavy kraft paper laminated with non-staining adhesive to both sides of glass fibre reinforcing ply, min. weight of 3.7 lbs/100 sq. ft. 2.11 Extra Stock: 2% of the quantity of flooring installed, of each material and colour, in labelled packages. Deliver to Owner as directed. PART 3 - EXECUTION 3.1 Examination Perform Moisture testing in accordance with ASTM-F2170-19 'Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In-situ Probes'. Provide necessary floor preparation to address testing results. Defective resilient flooring resulting from application to unsatisfactory surfaces will be considered the responsibility of this Section. .1 Lay each material in accordance with manufacturer's specification. .2 Lay flooring with joints closely butted. Scribe, cut and fit around floor outlets and openings, door frames, and heavy equipment supports. .3 Cut flooring and bases to fit within 0.4mm of abutting surfaces where exposed to view. .4 Avoid abrupt variations in shades between adjacent flooring material. Do not install units that are off-colour or contain untypical pattern variations. .5 Carry floor patterns through openings. .6 Roll flooring with three section, 45 kg roller, in two directions from centre of area. .7 Maintain rollers clean and polished. 3.3 Adjustment cleaning, sealing and waxing 1 Replace defective flooring. .2 Clean resilient flooring as recommended by manufacturer. .3 Apply sealer to resilient flooring as recommended by manufacturer. Section 09510 ACOUSTICAL CEILINGS **PART 1 - GENERAL** 1.1 Description 1 General Requirements: Division 1, General Requirements, is a part of this Section and shall apply as if repeated here. 2 Work performed by other Sections and which is related to this Section is specified in: Section 09250: Gypsum Drywall, Bulkheads and Ceilings Division 15: Mechanical Services Division 16: Electrical Fixtures 1.2 System description .1 Tolerances: Install ceilings within 1/8" of dimensioned height above floor unless approved otherwise, and level within a maximum tolerance of 1/8" in 10'-0". .2 Install framing members to ensure that deflection of each member does not exceed 1/360 of its span under dead load & loads imposed by mechanical & electrical equipment & fixtures supported by the ceiling. 1.3 Quality Assurance .1 Subcontractor Qualifications .1 Install acoustical ceilings specified in this Section only by a Subcontractor who has adequate equipment & skilled mechanics to perform it expeditiously, & is known to have been responsible for satisfactory installations similar to that specified during a period of at least five years. .2 Ensure that mechanics have full knowledge of specified systems & requirements of jurisdictional authorities. .2 Requirements of Regulatory Agencies: Install only materials which have been tested by testing laboratories acceptable to jurisdictional authorities, to ensure that restrictions imposed by authorities are met. Install ceilings that serve as fire protective membranes exactly as specified in Underwriter's Laboratories test design specification that validates specified rating. Verify, before installation of ceiling, that installations specified in other Sections, as a part of the entire assembly, are installed to meet validating specification for a ceiling-floor or a ceiling-roof assembly, whichever is applicable. 1.4 Submittals .1 Samples: Submit two samples of each specified acoustical board and exposed grid material. .2 Affidavits: Submit two copies of affidavits to verify that ceiling meets fire protective requirements. 1.5 Delivery, storage and handling .1 Deliver finish materials in unopened packaging provided by manufacturer. Store materials in protected dry area. .2 Ensure that finish metal members are not bent, dented or otherwise deformed. .1 Install acoustical ceilings only in areas closed & protected against weather, & maintained at no less than 10°C. Do not install acoustical ceilings in any area unless satisfied that construction in place has dried out,& that no further installation of damp materials is contemplated. .1 Accessories: Fabricate miscellaneous clips, splicers, connectors, screws & other standard accessories of steel, zinc coated or cadmium plated, of strength & design compatible with suspension methods and system specified. Include special accessories required to provide a complete assembly of acoustical ceilings. .1 Galvanized annealed steel wire: :12 ga. to support a maximum weight of 150 pounds per hanger :#9 ga. to support a maximum weight of 310 pounds per hanger. .2 Galvanized annealed steel rod: 3/16" dia. to support a maximum weight of 500 pounds per hanger. .3 Hanger Anchoring Devices:Phillips Red Head by Phillips Drill Company of Canada Limited, Thornhill, Ontario: :SW-3822 wedge anchor with tie wire insert for use in composite concrete and steel deck. :SKI-3822 for use in steel floor deck, with screw eve bolts to suit inserts. .4 Exposed Tee Ceiling Grid System .1 To meet specified requirements of ASTM Specification C635. .2 Two directional, 24" x 48" x 15/16". .3 Main Beams: Steel bulb tees, Intermediate Duty. .4 Cross Tees: Steel bulb tees, Intermediate Duty, with tongues to interlock with main beams. .5 Wall Moulding: Angle section to match tees. .6 Finish: Baked vinyl enamel, white. .5 Exposed Tee, Fire Rated Ceiling Grid System Where Noted. .1 Two directional, 24" x 24" x 15/16". .2 Main Beams and Cross Tees: As specified in ULC Test Design Specification validating required rating, and complete with bracing, splines and hold-down clips. .3 Wall Moulding: Angle sections to match tees. .4 Finish: Baked vinyl enamel, white. .5 Fire Protection Rating: 1 hour 6 Acoustical Units (2' x 4'): .1 Acoustical units shall match submitted samples with no perceptible visual variations within a building area. Fabricate edges uniformly & true to fit suspension system, & to maintain true lines & surface planes. Acoustic Units: Type: Lay-in panels. Pattern: Ceramaguard, plain pattern. Colour: White. Edge: Square. Size: 2'-0" x 2'-0". Thickness: 5/8" Manufacturer: Armstrong World Industries Canada Ltd.

SPECIFICATIONS 8.1 Examination .1 Ensure that environmental conditions & installations preceding that of this Section are satisfactory, will permit compliance with quality & dimensions required of acoustical ceilings. .2 Verify that installations by other Sections which are a part of an underwriter specification for a fire rated protective assembly have been done in accordance with that specification. .1 Install metal ceiling suspension system to meet specified requirements of ASTM Specification C636. .2 Coordinate installation of acoustical ceiling systems in this Section with that of other Sections. Ensure that adequate preparation is made for attachment of hangers & fasteners. Instal framing for support & incorporation of flush-mounted & recessed service components. Ensure adequacy of supports by consultation & verification of methods & locations of installations .3 Install hanger anchoring devices in appropriately drilled holes in composite concrete & metal deck. .4 Screw apply hanger anchoring devices to metal floor deck. .5 Do not use through the roof hangers. .6 Space hangers for supporting grid at 4'-0" max. centres each way,& to suit structure & ceiling system. Secure hangers to structure by permanent method as approved. Secure wire hangers to framing by bending sharply upward & wrapping securely with three turns. Install hangers free of kinks & at no more than 5° off vertical. Install extra hangers at each corner of lighting fixtures,& reinforce other ceiling equipment with hangers. 7 Install the entire hanger & suspension grid to adequately support ceiling assembly, including services incorporated, with a max. specified deflection for each component member, & free from horizontal movement .8 Enclose recessed lighting fixtures to maintain fire rating as required by UL test design specification validating system. Enclosure by an insulating blanket will not be acceptable should such a method by approved by UL. .9 Support recessed lighting fixtures independently from ceiling framing system. Install supports in accordance with UL test design specification validating system. .10 Lay out ceilings with acoustic units evenly spaced in each area, with grid lines symmetrical about room axes, columns & service elements, & with max. border widths of equal dimensions on opposite sides of areas, or as indicated on reflected ceiling plans. Provide angle mouldings to match exposed grid where ceilings abut walls or other vertical surfaces. .11 Frame around recessed fixtures, diffusers, grilles and openings. .12 Maintain true surface planes, and component and joint lines throughout each area. .13 Butt joints between components tightly together. .14 Install grid system ceilings as specified by manufacturer of the system. Ensure that methods of installation used are acceptable to manufacturer of each system component & .15 Brace system to maintain alignment of grid. .16 Install acoustical panels in exposed tee system. Cut panels neatly to fit off-module grid & with sufficient clearances, ensure removal without damage. .17 Do not install acoustical units with broken or marred edges exposed to view. .18 Install hold-down clips at each panel. Adapt installation to provide ceiling access where required for services. .19 Mark access panels in unobtrusive manner. .20 Provide expansion joints in ceiling where required. 3.3 Adjustment and Cleaning .1 Clean soiled or discoloured surfaces of exposed ceiling surfaces on completion of ceiling installation. Replace components which are visibly damaged, marred or uncleanable. .2 Final cleaning is specified in Section 01700. 3.4 Extra stock .1 Provide two sealed cartons of each specified acoustical board for Owner's use. Deliver to him as he directs.



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SPECIFICATIONS SPECIFICATIONS Section 09900 PAINTING AND FINISHING 3.7 Painting and Finishing Schedule (Note: Prepare sample wall for approval to verify colour & gloss prior to proceeding) Exterior Ferrous Metal, Shop Primed **PART 1 - GENERAL** Touch up coat of primer, alkyd type, 1-GP-40. 1.1 Work performed by other Sections and which is related to this Section is specified in: 2 coats enamel, semi-gloss, alkyd type, 1-GP-59. Section 05500 : Shop coat for metal fabrications Division 15: Piping identification Exterior Ferrous Metal, Galvanized Section 08110: Shop coat for metal doors and frames Touch up damaged galvanized with "Galvafroid". Wash prime galvanized surfaces with vinyl pre-treatment coating, 1-GP-121, Division 16: Conduit identification 1.2 Quality Assurance 1 coat primer, zinc chromate, 1-GP-132. 2 coats enamel, semi-gloss, type 1, 1-GP-88. .1 Subcontractor Qualifications:Perform painting & finishing specified in this Section only by Subcontractor who has adequate equipment & skilled tradesmen to perform Work Interior Concrete Block expeditiously, & is known to have been responsible for satisfactory applications similar to that specified during a period of at least the immediate past five years. 1 coat masonry blockfiller of approved manufacturer. .2 Mock-Up: Completely finish a sample room for each finishing system to test application procedures & coverage, colour, texture & gloss of finish materials. Perform work under 2 coats interior paint, 100% acrylic ICI Dulux Lifemaster, Semi-gloss 59211 finish. supervision of paint manufacturer's representative. Interior Concrete .3 Inspection Services: 1 coat primer-sealer, solvent type, 1-GP-68. Source quality control may be performed by an inspection and testing company. 2 coats interior paint, alkyd type, semi-gloss texture, 1-GP-118. .2 The inspection and testing company will verify that materials supplied for this Project conforms to the Specifications. Interior Drywall walls and ceilings. .3 Obtain samples of materials for testing from sealed containers stored at site, selected at random, & as direct by inspector. Provide each sample of material in closed one quart 1 coat primer-sealer, solvent type, 1-GP-68. 2 coats 100% acrylic ICI Dulux Lifemaster, Semi-gloss 59211 containers.labeled to indicate contents Interior Woodwork, Painted Do not remove or add to stored materials at site, after samples have been take, without approval. 1 coat undercoater, 1-GP-38 Payment will be made from specified cash allowance 2 coats enamel, semi-gloss, alkyd type, 1-GP-57. Material that replaces tested material failing to meet specification requirements shall be tested again at no expense to the Owner. Interior Ferrous Metal, Shop Primed .3 References 1 coat, ICI 9531 Cementitious Primer .1 Reference Standards: The best practices specified in CAN2-85.100-M81, Painting, shall govern for painting materials, methods & procedures, unless specified otherwise in this Section. 2 coats interior enamel, semi-gloss, alkyd type, 1-GP-57. Interior Ferrous Metal, Galvanized .1 Samples:Submit 216mmx280mm samples at least 30 days before materials are required; labeled to indicate finish, formula, colour, name number, sheen & gloss units of: Each specified 1 coat primer, zinc chromate, 1-GP-132. colour in each specified finish coat material. 2 coats interior enamel, semi-gloss, alkyd type, 1-GP-57. Interior Ferrous Metal, Unprimed PART 2 - PRODUCTS 1 coat primer, alkyd type, 1-GP-40. See Painting & Finishing Schedule: Use only products of manufacturers whose best quality lines meet or exceed CGSB Specifications, except where otherwise specified by reference 2 coats, interior enamel semi-gloss, alkyd type, 1-GP-57. to another material or by a specific manufacturer. Materials, such as oils, shellacs, putties, thinners, & other materials required for specified finishes shall be of the best quality produced or Heat Resistant Metal Surfaces recommended by the manufacturer approved for supply of finish materials in which they are incorporated. 2 coats heat resistant enamel, interior and exterior, 1-GP-76. 2.2 Use only exterior grade materials for exterior surfaces. Metal doors, frames, & grilles in walls, etc., with factory applied shop coats shall be touched up with Metal Primer where raw material has become exposed, finished with 2 coats of PART 3 - EXECUTION Semi-Gloss Enamel or Gloss Enamel, colour to match adjacent wall surfaces. Review with Architect before proceeding. 3.1 Examination Include in this Section the painting of all gas piping, supplied & installed for this project. Undercoat to be corrosion resistant & final coats to be high visibility yellow-orange paint .1 Verify that specified environmental conditions are ensured before commencing painting and finishing preparation and applications. .2 Ensure that surfaces to receive finishing materials are satisfactory for specified materials; have been provided by other Sections as specified will not adversely affect execution. Section 14210 TRACTION PASSENGER ELEVATORS .3 Test all surfaces for moisture content with an electronic moisture meter. Test surfaces of materials containing lime for acid-alkali balance. PART 1 - GENERAL .4 Maintain at site at all times until applications are completed a moisture meter, hygrometer and thermometer to verify surface and environmental conditions. 1.1 Description of Work .5 Defective painting & finishing applications resulting from failure to properly test surfaces &/or from application to unsatisfactory surfaces will be the responsibility of this Section. .1 This section covers and includes the furnishing and installing of passenger traction elevator equipment as hereinafter described. Refer to Division 1 for general project requirements. 3.2 Preparation .2 All terms of this specification shall have their meaning defined in the American Society of Mechanical Engineers Safety Code for Elevators and Escalators A17.1 and hereinafter .1 General: referred to as the ANSI A17.1 Code, including all revisions and authorized changes to date. .1 Vacuum clean interior areas immediately before finishing Work commences. .3 Card Reader Requirements: Remove from surfaces grease,oil,dirt,dust,ridges,rust& other soil and materials that would adversely affect the adhesion or appearance of finish coatings. .1 Elevator contractor to coordinate the installation of a card reader inside the elevator car with the Security Contractor Touch up damaged prime coats on shop primed metals with same priming material. Feather out edges of shop coat and smooth repair coat into shop coat surfaces. 1.2 Work performed by other Sections and which is related to this Section is specified in: .4 Finish, patch and smooth surfaces to remove cracks, holes, ridges, and similar blemishes. Section 03300 : Cast-In-Place Concrete Section 05120 : Structural Steel Section 05500 : Metal fabrications .5 Neutralize highly alkaline surfaces with a neutralizing wash of 4% solution of zinc sulphate. Brush off residue before painting. Division 15: Mechanical Division 16: Electrical .6 Scrub mildewed surfaces with a solution of tri-sodium phosphate, bleach with a solution of one part sodium hypochlorite(Javex): three parts water, & rinse with clear water. 1.3 Quality Assurance .2 Metal Surfaces: .1 Elevator Contractor is company specializing in manufacturing and installing elevator equipment with not less than 10 years successful experience. Unprimed Steel: Remove weld flux & scale with scrapers, wire brushes, wire power wheels, sandblasting, chipping, or grinding as may be required. Finish surface smooth, & remove 1.3 References alkali contamination from weld flux with phosphoric acid solution. Wash with solvent. .1 Reference Standards: ANSI 17.1 Code; CAN/CSA C22.1 Canadian Electrical Code; CAN/CSA-B44 Safety Code for Elevators and Escalators Primed Steel: Before touch-up of prime paint, smooth out surface irregularities; clean weld joints, bolts, nuts, & damaged areas with phosphoric acid solution; & wash with solvent. 1.4 Submitals Galvanized Steel: Wash thoroughly with mineral spirits, wipe dry with completely clean cloths. Apply galvanized steel primer: Alternatively, phosphatize surfaces in accordance .1 Elevator Contractor shall, after structural & architectural drawings are finished, submit complete shop drawings, showing location of all equipment, loads, & all other information with CGSB Specification 31-GP-116a, or apply one coat of etch type primer except where either of these treatments are specified in another Section. necessary to render a totally functional elevator to the owner. .3 Cementitious Substrates: Masonry: 1.5 Warranty .1 Fill minor holes & cracks with portland cement mix. Match patches to texture of adjacent surfaces. .1 Elevator Contractor shall guarantee material and workmanship of equipment installed by him under these specifications and made good any defects not due to ordinary wear or to .2 Remove dirt, scale, loose mortar, and similar foreign matter by brushing. improper use which may develop within one year after completion of installation or acceptance thereof by beneficial use. .3 Remove oil and grease with a washing with tri-sodium phosphate solution followed by a thorough rinsing with water. PART 2 - PRODUCTS Remove efflorescence by dry brushing; or, if required, by washing with dilute muriatic solution of one part commercial muriatic acid to 20 quarts water, followed by a complete rinse 2.1 Acceptable Manufacturers with a drenching by clear water. .1 Subject to compliance with requirements, provide products of one of the following manufacturers or approved equivalent .1 Schindler Elevator Corporation Sand finish surfaces smooth with No.00 sandpaper. Alternative Manufacturers: Clean soiled surfaces with an alcohol wash. .2 Thyssen-Hrupp Elevator Wipe off dust & other loose dirt, or vacuum clean before application of coatings. .3 Kone Elevator Seal knots, pitch, and sapwood with two coats of orange shellac where painted, or an application of special sealer. 2.2 Elevator System and Components .5 After prime coat is dry and sanded, fill nail and screw holes, & cracks with wood filler, or with putty. .1 Elevator Equipment Summary: .5 Gypsum Board: 6 Storey Residential Condominium Fill minor holes and depressions, caused by accidental damage, with drywall joint compound, a sand smooth when it is set, taking care not to raise nap of paper cover. Customer Kiya Developments Inc. .6 Existing Painted Surfaces: Location: 513 Dundas Street East, Whitby, ON .1 Remove finish that is incompletely bonded to substrate. May 2020 .2 Smooth uneven and rough surfaces. Machine Room Type: Machine Room Less .3 Roughen highly finished surfaces to ensure adhesion of new coatings. Counterweight Location: TBD .4 Reprime areas bared to substrate by preparation. General Purpose Passenger Quantity of Units: .1 Cover or mask surfaces adjacent to those receiving treatment & finishing to protect materials & surfaces installed by other Sections from damage& soil. Mask instruction & specification plates attached to equipment being painted. 3500 lbs Take particular car in storage and mixing areas that floors are protected by tarpaulins and metal pans. 150 fpm Place cloths and other disposable finishing materials, that are a fire hazard, in closed metal containers containing water, & remove from building every night. 73'-10" (22.5m) Ensure that the appropriate trades remove from finished surfaces, store & reinstall after finishing is completed finish hardware, switch & receptacle plates, escutcheons, luminaire Landings: Front Openings: .5 Porous materials from which soil from finish materials cannot be completely removed shall be replaced by this Section. Rear Openings: .6 Post "No Smoking" signs and ensure that spark-proof electrical equipment is used in areas where inflammable painting materials are being applied. Door Type: Two Speed Side Opening .7 Post "Wet Paint" signs throughout freshly finished areas and remove when finishes are dry. Door Hand: Left and Right 3.3 Application 7'-9" Cab Height: .1 General: .1 Perform painting & finishing specified in this Section under supervision of experienced foremen, with clean equipment designed for purpose used, & under directions & specific Cab Inside Dimensions: 6'-9-3/8" wide x 5'-6-7/8" deep recommendations of manufacturers whose materials are used. Hoistway Entrance Dimensions: 3'-6" wide x 7'-0" high Before commencing applications, arrange for a site meeting, in accordance with Section 01200, at which conditions of surfaces & possible adaptations to suit & use of materials & Power Supply: 600 Volts 3 Phase 60Hz (TBD) application procedures shall be discussed between Contractor, Painting Subcontractor, Architect, & representatives of materials manufacturers. Special Emergency Service Phase I and II - Emergency Recall and In-Car Emergency Operation for Red Hat Fire Fighter use. Consult with Architect before proceeding with application of finishes to surfaces for which a formula is not given in Specifications. .2 Included Additional Features: .4 Finish glazing rebates before glazing commences. Braille and Audible Signals; Cab Pads and Fasteners; Certificate Frame; Dispatch Protection; Door Nudging; Emergency Lighting; Emergency Power; Failed Car; False Car Canceling; .5 Do not paint caulked joints. Firefighter's Service; Hoistway Access Switch at top and bottom floors; Independent Service Feature; Infrared Light Curtain Door Protection; Inspection Service; Load Weigh Bypass; .6 Remove spatters of finish materials from adjacent surfaces, including glass, before they set up, and by methods not harmful to the surfaces. Locking Service Panel in Car Operating Panel; Remote Monitoring Capable; Roller Guide Shoes; Status Panel Indicator; Telephone (ADA compliant); Provision for Card Reader in Car. .2 Finishing Methods: 2.3 Materials and Components .1 Apply paint coats in sequence as follows: .1 Cab walls, Cab return & transom, Cab doors: #4 Stainless Steel Finish 1st Coat: White .2 Base, frieze & reveals, Cab threshold: Aluminum 2nd Coat: A slightly lighter colour than selected finish coat. .3 Handrail Mounting, Type, & Finish: Rear & Side Walls, Round brushed stainless steel 3rd Coat: To match colour of finish coat selection. .4 Cab Ceiling: #4 Stainless Steel finish with down Lit LED Lighting .2 Apply finishing materials at proper consistency, free from brush marks, sags, crawls, streaks, runs, laps, skips, voids, pinholes, missed areas, & other perceptible defects, & with .5 (1) set of quilted, soil resistant and fire-retardant pads with appropriate fasteners shall be provided even colour, sheen & texture. .3 Priming and Backpriming: .6 Hall fixtures: Verify, by review of other Sections of the Specifications, the extent of surfaces primed by other Sections. Priming of unprimed surfaces shall be provided by this Section. .1 Up and Down buttons at intermediate floors and a single button at each terminal floor at a height to comply with Barrier-Free Requirements. Backprime exterior & interior woodwork, fitments & similar wood installations as soon as it is delivered & before it is installed. Use exterior primer compatible to finish coat .2 Digital Hall Position Indicator at Main Floor for exterior surfaces, & enamel undercoater for interior surfaces to receive paint or enamel undercoated for interior surfaces to receive paint or enamel finishes. Prevent .3 Hall Fixtures shall be finished in #4 Stainless Steel. primer from running over faces. PART 3 - EXECUTION Prime tops & bottoms of painted wood doors with enamel undercoater. 3.1 Examination .4 Painting: .1 Prior to commencing elevator installation, inspect hoistways, hoistway openings, and pit are of correct size and within tolerance and are ready for work of this section. Notify General .1 Apply paint by brush or rollers. Spray paint only when requested or approved, & in approved areas. Discontinue spraying if directed because of inadequate coverage, overspray, Contractor in writing of any dimensional discrepancies or other conditions detrimental to proper installation or performance of elevator work. Do not proceed with elevator installation paint fog drift, or disturbance to construction operations until satisfactory conditions have been corrected in a manner acceptable to the installer. Arrange for temporary electrical power to be available for installation work and testing of Use only brushes for enamels & varnishes, & for painting wood. elevator components. Specified formulas are intended to completely cover surfaces. If it is considered that coverage is inadequate, do not commence application without direction. Otherwise, apply as 3.2 Installation of Elevator System many coats as necessary to ensure completely satisfactory cover. .1 Coordinate elevator work with work of other trades, for proper time and sequence to avoid construction delays. .4 Use only unadulterated paint. Thin paint as specified by manufacturer. .2 Set entrances in vertical alignment with car openings, and aligned with plumb hoistway lines. Touch up visible suction spots on dried primer,& ensure that they are sealed before application of second coat.Repeat on second coat if still visible. .3 Adjust for smooth acceleration and deceleration of car so not to cause passenger discomfort. Adjust doors to prevent opening of doors at any landing on the corridor side unless the .6 Do not paint metal access & electrical panels when they are closed. Paint only when open & leave open until dry. car is at rest at that landing, or is in the leveling zone and stopping at that landing. Adjust automatic floor leveling feature at each floor to achieve within 1/4" of the landing. Where exposed to view, fill holes & open grain of exposed plywood edges with wood filler following prime coats. Smooth & sand before applying next coat. 3.3 Permits and Tests .5 Existing Surfaces: .1 Elevator Contractor shall obtain and pay for all necessary Municipal and Provincial permits relating to installation of the elevator at their expense .1 Apply two final finish coats as specified in Finish Formula Schedule on existing painted surfaces. Primer is required only on surfaces bared by preparation. 3.4 Field Quality Control .1 Arrange for periodic visits to site by paint manufacturers' representative while finishing applications are in progress. On each visit he shall verify that specified materials & methods are used,& that procedures agreed upon at the initial site meeting are followed. .2 Manufacturers' representatives shall submit reports of each site visit to the Architect as specified in Article 1.03. 3.5 Adjustment and Cleaning Touch up & refinish minor defective applications. Refinish entire wall, ceiling or similar surfaces where finish is damaged or not acceptable. .2 Remove spilled or splattered finish materials from surfaces of installations provided by other Sections. Do not mar surfaces while removing. 3.6 Extra Stock Deliver to Owner on completion of painting & finishing, & as he directs, sealed containers of each finish painting material applied, & in each colour. Label each container as for original, including mixing formula. Provide 1L of extra stock when < 50 to 200L are used, and 1L of extra stock when over 200L are used.

SPECIFICATIONS SHEET TITLE: A.R.C. esign:



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KIYA DEVELOPMENT

513 DUNDAS STREET EAST

WHITBY, ON

PROJECT:

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