PART 1 GENERAL

1.1 REFERENCE

.1 Comply with the General Conditions of the Contract, Supplementary General Conditions and the requirements of Division 1.

1.2 RELATED WORK SPECIFIED ELSEWHERE

.1	Unit Masonry	Section 04200
.2	Miscellaneous Metals	Section 05500
.3	Metal Ceiling System: Angle	Section 05590
.4	Acoustic Ceilings	Section 09510
.5	Painting	Section 09900
.6	Mechanical (incl. access panels)	Division 15
.7	Electrical (incl. access panels)	Division 16

1.3 SCOPE OF WORK INCLUDED

.1 Supply and install Gypsum drywall ceilings, walls and bulkheads, cement board ceiling interior and exterior c/w all required cementitious coatings etc and related support as shown on the drawings.

1.4 SUBMITTALS

.1 Submit shop drawings in accordance with Section 01340.

.2 Submit shop drawings where structural studs are required to support loads of drywall bulkheads / wood trim. Clearly indicate fabrication details, plans, installation details and loads supported.

.3 This shop drawing shall be stamped by a Professional Engineer licensed by the APEO (if requested by the Architect due to imposed loading concerns of the supported assembly).

1.5 STANDARDS

1. Metal furring , and gypsum wallboard shall comply with the requirements of CSA A82.27-M1977, A82.30M1980, and A82.31-M1980 unless otherwise specified herein.

PART 2 PRODUCTS

2.1 MATERIALS

.1 Anchors for Hangers : KWIK BOLT tie wire anchors, 1 1/4" x 1 1/4" manufactured by Hilti Fastening Systems Ltd.

.2 Ceiling Suspension System : Manufactured by Domtar Construction Material Ltd. Donn Canada Ltd.

.3 Hangers : 3/16" dia. galvanized mild steel pencil rods.

.4 Runner Channels : 1 1/2" or 2 1/2" deep cold rolled galvanized steel channels weighing not less than 475 lb/1000 1in. ft.

.5 Furring Channels : Screw type, 3/4" deep cold rolled steel channels weighing not less than 300 1lb/1000 1in. ft. shop painted after fabrication.

.6 Tie Wire : 0.048" annealed and galvanized steel.

.7 Steel studs : Unless otherwise indicated, 3 5/8" or 5 1/2" wide as indicated or required, 0.021" thick, hot dipped galvanized sheet steel, for self drilling screws.

.8 Steel Partition Runners : Channel 0.03 thick, hot dipped galvanized steel.

.9 Corner Beads : 1 1/4" x 1 1/4" expanded flanges, 0.021" thick, galvanized steel equal to CGC No. 114.

.10 Control Joints : Formed galvanized steel equal to CGC No. 093. Approximately 20' runs of drywall ceiling between control joints - confirm layout with architect

.11 Gypsum Board: shall have tapered edges, conforming to CSA A82.27-M1977, and as specified in paragraphs below. Sizes 4' wide and in lengths to minimize the number of joints.

.12 Gypsum Board : 1/2" thick typical; 5/8" thick for ceilings; and 3/4" thick where indicated.

.13 Gypsum Board for Fire Protection : Gyproc Fireguard wall board or Sheetrock Fire Code C as listed by ULC.

.14 Cement Board : Duroroc ceilings for **washrooms** 1/2" thickness - support at 16" o.c. on 20 gauge channels c/w cement skimcoat ready to apply finish paint coatings.

Duroroc ceilings for all washrooms bulkheads and at exterior canopies soffit assemblies - Supply and install skim coat ready to accept final applied finish.

Exterior Canopy - Support / Suspension Methodology : 1/2" thickness Cement Board - support at 16" o.c. on 20 gauge channels. Note electrical light fixture locations.

Note at External Entrance Canopies there is to be a ½" x ½" control aluminum joint reveal around the perimeter of the steel channel and as a grid through the soffit of the canopies (typical) as indicated on the Architectural drawings.

Final Finish on the Exterior Canopy Cement Board Soffits shall be :

Durex Architectural Coatings - Dilex Textured Finish Type Marble Coat Colour " Crystal Grey 46-19P) Contact Woolatt Building Supply @ 672-7630. Contact Manufacturer for installation and application instructions. Do not apply finish coating into aluminum reveals at time of application as this will be requested to be cleaned out by the Architect.

.15 Screws : Type S self drilling, self tapping steel drywall screws for use with a power operated drill.

.16 Joint Treatment Materials : As recommended by the manufacturer of the gypsum board / cement board, slow drying and Asbestos free.

.17 Sound Attenuation Batts (acoustical insulation) : 2 1/2" thick glass fibre " Noise Stop Blanket " by Fiberglas Canada Inc or equal. Product is to be supplied and installed above ceiling space **in ceiling above Dispatch Rooms, Dormitory Rooms, Kitchen and Day room**

.18 Sealant (acoustical) : Tremco Acoustical Sealant as manufactured by the Tremco Manufacturing Company or equal.

.19 Sealant : Fire Resistant : PRC Chemicals PR855 or equal.

.20 Foam Tape : Foamed vinyl, self adhesive, 1/4" thick and non-bituminous in character.

.21 **Taped Exterior and Interior Corners.**

.21 Provide ULC listed materials and assemblies to conform to ratings required by drawings.

PART 3 EXECUTION

3.1 LOCATION

.1 Refer to Finish Schedule, Reflected Ceiling Plan and wall legend and drawings for location of drywall, cement board including fire rated and sound rated partitions. And thier associated heights.

3.2 COORDINATION

.1 Prior to commencing installation, check that all overhead architectural, mechanical and electrical work is complete and that work area is free from excessive moisture.

.2 After installation of lighting fixtures and diffusers, check ceiling and make good ceiling deficiencies.

3.3 INSTALLATION

.1 Install drywall / cement to conform to applicable ULC designs, and caulk both sides of fire rated partitions around penetrations with fire resistant sealant.

.2 Where mechanical fire dampers occur, instal gypsum drywall full depth of partition around fire damper opening.

.3 Unless otherwise specified, install furring as stated below.

.4 Finished work shall be rigid, secure, square, level and plumb, constructed to maintain dimensions and contours shown. Make allowance for thermal movement.

.5 Furring shown on drawings may not be exact or complete. The location and the method of securing pieces is to the option of contractor but to the consultant's acceptance.

.6 Frame around openings, access panels, ventilating and lighting fixtures, with runner and furring channels in such a manner that the runner and furring channels are located symmetrically and not to induce rotation of the members.

.7 Furr around ducts, and pipes in finished areas and at vertical breaks within or at termination of suspended ceilings.

.8 Erect furring for suspended ceilings independent of walls, columns, pipes and ducts. Furring shall be level and securely fastened to hangers attached to concrete or steel structure.

.9 Fasten hanger to underside of concrete slab using specified anchors or cast in place inserts.

.10 Kinks or bends shall not be made in hangers as a means of levelling main runner channels.

.11 Locate main runners not more than 4' o.c. to suit ceiling layouts and to frame items such as ventilating and light fixtures.

.12 Space furring channels at right angles to main runner at not more than 16" o.c.

.13 Provide cross bracing between ceiling suspension system and structure to prevent sway where ceiling is unrestricted around perimeter by vertical walls extending to structure above.

.14 Provide skim coat finish to all cement board ceilings ready to accept paint application. Skimcoat product to be supplied and installed per manufacturer’s written recommendations / instructions for “ moisture borne environment “.

3.4 APPLICATION OF GYPSUM BOARD / CEMENT BOARD

.1 Apply drywall to ceilings/walls perpendicular to framing members.

.2 Apply drywall with screws spaced at 12" o.c. at mid panel and at edges, staggered, no closer than 3/8" from edges and ends driven slightly below the surface leaving a shallow dimple.

.3 Apply drywall with power driven screws. Provide jointing discs at joints.

.4 Cut all openings with saw or knife and straight edge leaving square edges.

.5 Loosely butt all joints to be taped.

.6 Stagger all end joints and the joints between panels to achieve a maximum of bridging and a minimum of continued joints. Stagger joints on opposite sides of partitions.

.7 Apply skim coat and final specified finishes in accordance with manufacturer’s written instructions ready to accept final paint or coating application. (Interior or exterior applications)

3.5 INSTALLATION OF METAL AND PLASTIC TRIM

.1 Drawings do not purport to show all metal trim required - verify with consultant the precise locations and types of trim to be used.

.2 Carefully inspect drawings and verify locations of all metal trim required.

.3 Install all trim in strict accordance with the manufacturer's recommendation paying particular attention to make trim installation plumb, level and true to line with firm attachment to supporting members.

.4 Reinforce all vertical projecting angles, vertical and horizontal exterior corners with metal corner beads fastened with staples 9" o.c. on both flanges along entire length of beads. All vertical reinforcing to be in one piece full height.

.5 Where gypsum wall board assembly terminates against concrete, masonry, windows, screens, door frames or other dissimilar material, install shadow mould casing bead to stop wallboard and form proper junction. Secure at 12" o.c.along entire length of beads.

Beads shall be in one length up to 10" and no lengths shall be less than 6'. Mitre and fit corners and junctions accurately and free from rough edges.

3.6 INSTALLATION OF ACCESS PANELS

_____.1 Install all access panels provided by others.

3.7 TAPING AND FINISHING

_____.1 Control heating and ventilating during finishing operations to ensure the maintenance of 13 degrees C minimum temperature.

.2 **First Coat**

.1 Spread filling compound evenly over all joints, using suitable tools designed for the purpose.

.2 Fill all joint recesses and metal trim.

.3 Centre the reinforcing tape on the joint and press into the fresh compound, wiping down with sufficient pressure to remove excess compound but leaving sufficient compound under the tape for proper bond.

.4 Feather all edges and leave the surface free from blisters and tape wrinkles.

.5 Apply compound to all fasteners recesses, metal trim and control joints, leaving flush with adjacent surfaces.

.6 Fold reinforcing tape along its centreline and apply to all interior angles, following the same procedure as for joints.

.3 **Second Coat**

.1 Lightly sand the dry compound with fine sandpaper to remove all irregularities.

.2 Apply a second coat of filling compound to all joints, feathering approximately 3" beyond edges of tape.

.3 Apply second coat to all fastener recesses, metal trim and control joints; allow to dry.

.4 **Third Coat**

.1 Lightly sand the dry compound with fine sandpaper to remove irregularities.

.2 Apply final skim topping coat, feathering out to approximately 2" beyond second coat.

.3 Third coat all fastener recess, metal trim, control joints and all interior angles; allow to dry.

.4 Carefully sand the third coat to a uniform smooth surface completely free from irregularities visible to the unaided eye at a distance of 5'.

.5 Contact Architect when all drywall work is complete for walk through. Painting contractor will not be allowed to start until this walk through has taken place.

3.8 SOUND RATED CEILINGS

_____.1 Install 2 1/2" thick sound attenuation batts above ceilings indicated in specification.

3.9 BULKHEADS AND FURRING

_____.1 Construct gypsum wallboard bulkheads as indicated extending to a level at least 6" above acoustic ceiling. Frame with 1 1/2" main channels at 2' o.c. and 3/4" furring channels at 16" o.c.

.2 Construct bulkheads at change in ceiling levels in drywall and suspended ceilings, light coves, valance and mechanical coves at heads of openings and recess, ducts and beams as indicated on drawings. Bulkheads to be of the same construction as ceilings to obtain the same assembly rating as the ceiling in which they occur. Securely attach gypsum wallboard to steel furring at 24" vertically o.c. attached to 1 1/2" channels to panel bottom suspended at 4' o.c. from structure above. Provide cross bracing of 3/4" channels as required. Install corners beads, and casing beads at all junctions of other materials.

3.10 REQUIREMENT

.1 It is the requirement of this Section, that the resulting work shall provide plumb, straight, level, rigid, and secure installation. Failing to achieve this result shall be cause for rejection and reinstallation of this work.

END OF SECTION