Part 1 GENERAL

1.1 GENERAL REQUIREMENTS

1. Division One - General Requirements, is part of this section and shall apply as if repeated here.

1.2 RELATED WORK

1. Gypsum Board Systems - Section 09 29 00
2. Carpentry - Section 06 10 00 and Section 06 41 00
3. Concrete - Section 03 30 00
4. Structural Steel - Section 05 12 00
5. Masonry Units - Section 04 04 25
6. Mineral Fibre Insulation - Section 07 21 16
7. Vapour Barrier - Section 07 26 00
8. Air/Vapour Barrier System – Section 07 27 13
9. Sprayed Foam Insulation/Air Vapour Barrier System - Section 07 21 29

1.3 QUALIFICATIONS

1. Conform to CSA A82.30-M1980 including appendices.

1.4 SHOP DRAWINGS

1. Submit shop drawings in accordance with Section 01 33 00 Submittals

2. Shop drawings are to be designed for fabrication to meet all codes and be stamped by a Professional Engineer registered in the Province of Ontario.

3. Clearly indicate construction details, sizes, thickness or gauge of steel studs, connections, joints, method of anchorage, number of anchors, supports, reinforcement and accessories. Confirm all dimensions on site.

4. Indicate control joint and expansion joint locations and framing details.

Part 2 PRODUCTS

2.1 MATERIALS

1. Non-loadbearing channel stud framing less than 4800 mm long: to ASTM C645-83 size as noted on drawings, roll formed from 25-gauge (0.53 mm) thickness electrogalvanized steel sheet; for screw attachment of gypsum board. Knock-out service holes at 1'-6" (460 mm) centres.

2. Extra strength channel stud framing (4800mm long and greater): to CAN 3-S146-M84 for design and ASTM A446 for steel, 3 5/8" (92 mm) or 6" (152 mm) stud size, roll formed from 20 ga. (0.91 mm) thickness hot dipped galvanized steel sheet; for screw attachment of gypsum board. Knock-out service hole a 1'-6" (460mm) centres. Use this type at exterior framing above vestibule entrances.

3. Floor and ceiling tracks: to ASTM C645-83; in widths to suit stud sizes, 1 1/4" (32 mm) flange height.

4. Metal channel stiffener: size to suit studs, 2 mm thick cold rolled steel, coated with rust inhibitive coating.

5. Bridging channels and diagonal tension straps (load bearing stud systems): material and gauge to match studs, let into or surface fastened to studs for diagonal/lateral bracing and reinforcement.

6. Screws: CGC Branch Screws (or approved equal) of type recommended in the selector guide on Page 5 of Canadian Gypsum Brochure 09250 - 1E.

7. Furring Channels: 7/8" (22 mm) x 2 3/8" (60 mm), 25 MSG cold rolled galvanized after fabrication, types manufactured by Donn Products, Universal Sections or Canadian Gypsum Co. to meet CSA A82.30-M1980.

8. Carrying Channels: 1 1/2" (38 mm) x 6 lbs./10 ft. (892 g/m) cold rolled steel after fabrication to meet CSA A82.30-M1980.

9. Hangers: 1/4" (6.3 mm) dia. galvanized pencil rods at 4'-0" (1220 mm) o.c. maximum on main tees to meet CSA A82.30-M1980.

10. Tie Wire: No. 16 (1.5 mm) Imperial Wire gauge galvanized soft annealed to meet CSA A82.30 - M1980.

11. Anchors: to meet CSA A82.30-M1980 standard.

12. Heavy Duty Studs: 4" (100 mm) and 6" (150 mm) 16 gauge (1.5 mm) as supplied by Bailey Metal Products Ltd., Toronto, Ontario.

13. Batt Insulation (exterior stud walls): Fibreglass batt, thickness to suit stud cavity.

14. Vapour Barrier: at exterior stud walls install 6 mil poly to CGSB 51.34 complete with sealants.

15. Acoustical Sealant: Acoustical sealant to CGSB 19-GP-21M by Tremco or approved equal.

16. Insulating Strip: Rubberized, moisture resistant 1/8" (3mm) thick foamstrip, 2" (12mm) wide with self-sticking adhesive on one face, lengths as required.

Part 3 EXECUTION

3.1 GENERAL

1. Installation shall be by mechanics skilled in this trade and done in accordance with best standard practice and material manufacturer's printed directions.

2. Do not cover piping, conduit, duct and the like until inspected and approved by the Consultant.

3. Furring indicated shall not be regarded as exact or complete.

4. Method of framing and furring left to Contractor's option but shall result in a rigid, secure, plumb framing and forming, erected to maintain overall sizes as indicated

and of adequate strength to support without distortion of the facing indicated. Wall furring and suspended and furred ceilings must be installed to meet CSA A82.31-M1980 except where specified otherwise.

5. Do not make fastenings to ducts, pipes, conduit, door frames, backers or inserts of other trades not specifically intended for fastening metal furring.

6. The completed installation of framing and furring must allow drywall to be installed free of waves, depressions, other defects that would mar the finished appearance.

3.2 PARTITION AND EXTERIOR WALL FURRING

1. Install partition tracks at top and bottom of studs, align accurately, and make allowance for deflection under beams and structural slabs to avoid transmission of structural loads to studs. Use 2" (50 mm) leg ceiling track.

2. Secure tracks to concrete and steel with power actuated fasteners at 24" (600 mm) o.c.

3. Install dampproof course under stud shoe tracks of partitions on slabs-on-grade.

4. Place studs vertically at 16" (400 mm) centres and not more than 2" (50 mm) from abutting walls, openings and each side of corners. Secure studs to tracks at floor and ceiling using screws or crimp method. Place interior heavy duty studs vertically at 12" (300 mm) centres where indicated on drawings.

5. When necessary, splice studs with 8" (200 mm) nested lap and one positive attachment per stud flange. Place studs in direct contact with door frame jambs, abutting partitions, partition corners and existing construction elements. Where studs are installed directly against uninsulated surfaces install insulating strips between studs and wall surfaces.

6. Anchor studs for shelf-walls and those adjacent to door and window frames, partition intersections and corners to ceiling and floor runner flanges with an approved crimping tool. Securely anchor studs to jamb and head anchor clips of door or borrowed-light frames, place horizontally a cut-to-length section of runner, with a web-flange bent at each end, and secure with one positive attachment per flange. Position a cut-to-length stud (extending to ceiling runner) at vertical panel joints over door frame header.

7. Install heavy gauge single jamb studs at all openings.

8. Erect metal studding to tolerance of 1:1200.

9. Stiffen partitions exceeding 8' (2400 mm) in height and/or 10' (3000 mm) in length with 3/4" (19 mm) channel bracing extending horizontally across the length of the partition. Provide one horizontal stiffener for partitions under 12' (3600 mm) high; at least two horizontal stiffeners for partitions 12 or more feet high (3600 or more mm), at maximum 6' (1800 mm) centres. Install metal strapping securing stud to masonry or concrete walls at every other stud where horizontal stiffeners occur. Provide other partition reinforcing necessary to support wall hung components, cupboards, closets and the like. Use 2 studs at jambs of openings and corners.

10. Where horizontal runs of service lines are to be installed within the partition, erect studs with web openings aligned.

11. Provide reinforcing and necessary stiffeners to support hollow metal screens. Reinforcing to be capable of supporting screens rigidly and solid without deflection.

12. Work includes the installation of hollow metal frames.

13. All fire rated partitions must be installed from floor to underside of floor slab at ceiling above.

14. All wood blocking for trim, base, millwork, miscellaneous specialties, to be installed by Section 06100 after erection of metal studs and ceiling suspension system.

3.3 BULKHEADS

1. Work includes fire separations in ceiling space, drywall surfaces above windows and bulkheads to suspended ceilings.

2. Install steel studs and furring of sizes shown at 16" (400 mm) o.c. or as shown.

3. Furring indicated shall not be regarded as exact or complete. Provide adequate bracing at bulkheads to structure to ensure a rigid installation and to meet CSA A82.31-M1980.

4. Locate bulkhead furring no more than 2" (50 mm) from corners abutting partitions or other construction.

3.4 CEILINGS

1. Supply and install suspension and furring system for exposed gypsum board ceiling.

2. Do not regard suspension system indicated on drawings as exact or complete. The specification for metal framing contained in Canadian Gypsum Co. Ltd. Brochure 09260 - 1E and CSA-A82.31-M80 shall govern installation conditions not covered by this specification. The more stringent being the acceptable.

3. Install hangers for suspended bulkhead or ceiling to support the grillage independent of the walls, columns, pipes, ducts and the like. Erect plumb and securely anchor to the structure. submit details of the proposed method to the consultant for approval. If so requested by the Consultant, test hangers to provide that anchorage is adequate to support the proposed loading.

4. Supply hangers to support the grid in time to be installed in slabs.

5. Space hangers at maximum 3'-0" (910 mm) centres in the direction of the carrying channels and at 4'-0" (1200 mm) centres at right angles to the carrying channels, within 6" (150 mm) of ends and where normally required in good standard practice.

6. Space furring channels at maximum 16" (400 mm) o.c.

7. Erect the grillage for suspended ceilings and beams of required elevation to provide rigid, secure, framing independent of walls.

8. Frame all openings on all sides with suitable channels. Check clearances with respective trades. Co-operate with others to accommodate diffusers, grilles, light fixtures and access panels in drywall ceilings. Provide additional hangers and supports for fixtures as required.

9. Level drywall screw channels to a maximum tolerance of 1/8" (3.2 mm) over 12'-0" (3650 mm).

10. Erect ceiling furring system in strict accordance with system manufacturer's printed directions to allow drywall board installation to be free of waves or loose boards.

11. Frame exterior soffits using hot dipped galvanized framing materials and rustproof fasteners.

3.5 CONTROL JOINTS

1. Provide metal studs or furring next to end condition of each side of control joint. Control joints to be provided in accordance to the best standard practice to meet the approval of the Consultant and as noted on the drawings.

2. Provide control joints every 25'-0" (7600 mm) o.c. and/or where shown on drawings.

3. Install additional control joints as directed on site by the Consultant.

3.6 HEAVY DUTY STUDS

1. Use heavy duty studs where shown on drawings and as required in other locations to give firmness to bulkheads.

2. Secure studs at ends with solid bearing at bulkheads.

3.7 CONSTRUCTION OF SOUND ATTENUATED PARTITIONS

1. Install insulating strips under studs and tracks around perimeter of sound control partitions. Install acoustical sealant at joints at each side of studs and tracks, against insulating strips between studs and tracks and floor, wall or underside of floor or roof deck above.

End of Section 09 22 00