

## PART 1 - GENERAL

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| <u>1.1 RELATED SECTIONS</u>              | .1 | Section 26 05 00 - Common Work Results - for Electrical.   |
| <u>1.2 REFERENCES</u>                    | .1 | Canadian Standards Association (CSA International)<br>.1 CSA C22.1-12, Canadian Electrical Code, Part 1, 22nd Edition, Safety Standard for Electrical Installations. . |
| <u>1.3 PRODUCT DATA</u>                  | .1 | Submit product data in accordance with Section 01 33 00.   |
| <u>1.4 WASTE MANAGEMENT AND DISPOSAL</u> | .1 | Separate waste materials for reuse and recycling in accordance with Section 01 74 20.  |

## PART 2 - PRODUCTS

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| <u>2.1 OUTLET AND CONDUIT BOXES GENERAL</u> | .1 | Size boxes in accordance with CSA C22.1.   |
|   | .2 | 102 mm square or larger outlet boxes as required for special devices.  |
|   | .3 | Gang boxes where wiring devices are grouped.   |
|   | .4 | Blank cover plates for boxes without wiring devices.   |
|   | .5 | 347 V outlet boxes for 347 V switching devices.  |
|   | .6 | Combination boxes with barriers where outlets for more than one system are grouped.  |
| <u>2.2 SHEET STEEL OUTLET BOXES</u>         | .1 | Electro-galvanized steel single and multi gang flush device boxes for flush installation, minimum size 76 x 50 x 38 mm (3" x 2" x 1.5") or as indicated. Larger 102 mm square x 54 mm deep (4"x 2") outlet boxes to be used when more than |
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| 2.2 SHEET STEEL<br>OUTLET BOXES<br>(Cont'd) | .1 | (Cont'd)<br>one conduit enters one side. Provide extension and plaster rings as required.   |
|   | .2 | For larger boxes use GSB solid type as required.  |
|   | .3 | Boxes for surface mounted switches, receptacles, communications, telephone to be 100 mm square  |
|   | .4 | Lighting fixture outlets: 102 mm (4") square outlet boxes or octagonal outlet boxes.  |
|   | .5 | 102 mm (4") square outlet boxes with extension and plaster rings for flush mounting devices in finished plaster and/or tile walls.  |
| 2.3 MASONRY BOXES                           | .1 | Electro-galvanized steel masonry single and multi gang type MDB boxes for devices flush mounted in exposed block walls.   |
| 2.4 CONCRETE BOXES                          | .1 | Electro-galvanized sheet steel concrete type boxes for flush mount in concrete with matching extension and plaster rings as required.   |
| 2.5 FLOOR BOXES                             | .1 | Concrete tight electro galvanized sheet steel floor boxes with adjustable finishing rings to suit floor finish with faceplate. Device mounting plate to accommodate short or long ear receptacles. Minimum depth: 28 mm (1.1") for receptacles; 73 mm (2.9") for communication equipment. |
|   | .2 | Adjustable, watertight, concrete tight, cast floor boxes with openings drilled and tapped for 16 mm (0.5") and 21 mm (0.75") conduit. Minimum size: 73 mm (2.9") deep.  |
| 2.6 OUTLET BOXES<br>FOR METAL CONDUIT       | .1 | Materials:<br>.1 Surface or recessed concealed type: Die formed steel, hot dip galvanized, 350 g/m <sup>2</sup> minimum zinc coating.<br>.2 Surface mounting exposed: Cast ferrous for threaded conduit, with attached lugs, corrosion resistant two coats finish.                        |
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2.7 CONDUIT BOXES .1 Cast FS or electro-galvanized sheet steel boxes with factory-threaded hubs and mounting feet for surface wiring of switches and receptacle.

2.8 FITTINGS - GENERAL .1 Bushing and connectors with nylon insulated throats.

.2 Knock-out fillers to prevent entry of debris.

.3 Conduit outlet bodies for conduit up to 32 mm and pull boxes for larger conduits.

.4 Double locknuts and insulated bushings on sheet metal boxes.

### PART 3 - EXECUTION

3.1 INSTALLATION .1 Support boxes independently of connecting conduits.

.2 Ceiling outlet boxes to be provided for each surface mounted fixture or row of fixtures installed in other than T bar ceilings with removable tiles.

.3 Fill boxes with paper, sponges or foam or similar approved material to prevent entry of debris during construction. Remove upon completion of work.

.4 For flush installations mount outlets flush with finished wall using plaster rings to permit wall finish to come within 6 mm of opening.

.5 Provide correct size of openings in boxes for conduit, mineral insulated and armoured cable connections. Do not install reducing washers.

.6 All outlet boxes to be flush mounted in all areas, excluding mechanical rooms, electrical rooms, and above removable ceilings.

.7 Adjust position of outlets in finished masonry walls to suit masonry course lines. Coordinate cutting of masonry walls to achieve neat openings for all boxes. All cutting of masonry work for installation of electrical fittings to be done using rotary cutting equipment.

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3.1 INSTALLATION  
(Cont'd)

- .8 Do not distort boxes during installation. If boxes are distorted, replace with new boxes.
- .9 Use plaster rings to correct depth. Use 30 mm on concrete block.
- .10 Do not use sectional boxes.
- .11 Provide boxes sized as required by the Canadian Electrical Code.
- .12 Install vapour barrier material to surround and seal all outlet boxes located on exterior walls of building. Maintain wall insulation.
- .13 Outlets installed in partition walls to be offset by a minimum of one stud space.
- .14 Ceiling outlet boxes shall be provided for every surface mounted fixture or row of fixtures installed on suspended "hard" ceilings.
- .15 Primary bushings in termination box for cable connection.
- .16 Secondary bushings in termination box for bus duct connection.
- .17 Provide vapour barrier wrap or boots behind outlets mounted in exterior walls. Maintain integrity of the vapour barrier and insulation to prevent condensation through boxes.
- .18 Coordinate location and mounting heights of outlets above counters, benches, splash-backs and with respect to heating units and plumbing fixtures. Coordinate with architectural details.
- .19 Outlets installed back to back in party stud walls to be off-set by one stud space.
- .20 Refer to wiring device and communication specification sections and to architectural layouts for mounting heights of outlet boxes.
- .21 Back-boxes for all communications systems equipment to be provided in accordance with specific manufacturer's recommendations and as specified in the communications sections of these specifications.

3.1 INSTALLATION  
(Cont'd)

- .22 Separate outlets located immediately alongside one another to be mounted at exactly the same height above finished floor. Similarly, outlets mounted on a wall in the same general location at varying heights to be on the same vertical centre-line unless otherwise noted.
- .23 Where outlet boxes penetrate through a fire separation, ensure that the boxes are externally tightly fitted with an approved non-combustible material to prevent passage of smoke or flame in the event of a fire.