

**Part 1 General****1.1 REFERENCE STANDARDS**

- .1 ASTM C139-[11], Standard Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes.
- .2 CSA Group
  - .1 CSA A23.1/A23.2-[09], Concrete Materials and Methods of Concrete Construction/Test Methods and Standard Practices for Concrete.
  - .2 CAN/CSA-A165 Series-[04(R2009)], CSA Standards on Concrete Masonry Units (Consists of A165.1, A165.2 and A165.3).
  - .3 CAN/CSA-A3000-[08], Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).

**Part 2 Products****2.1 MATERIALS**

- .1 Adjusting rings: to ASTM C478M.
- .2 Concrete Brick: to CAN/CSA-A165 Series.

**Part 3 Execution****3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for maintenance holes and catch basin structures installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

**3.2 ADJUSTING TOPS OF EXISTING UNITS**

- .1 Remove existing gratings, frames and store for re-use.
- .2 Sectional units:
  - .1 Raise or lower straight walled sectional units by adding or removing precast sections as required.
  - .2 Raise or lower tapered units by removing cone section, adding, removing, or substituting riser sections to obtain required elevation, then replace cone section.

- .1 When amount of raise is less than 600 mm use standard maintenance hole brick, moduloc or grade rings.
- .3 Monolithic units:
  - .1 Raise monolithic units by roughening existing top to ensure proper bond and extend to required elevation with mortared brick course for 150 mm or less alteration.
  - .2 Lower monolithic units with straight wall by removing concrete to elevation indicated for rebuilding.
  - .3 When monolithic units with tapered upper section are lowered more than 150 mm, remove concrete for entire depth of taper plus as much straight wall as necessary, then rebuild upper section to required elevation with cast-in-place concrete.
  - .4 Install additional maintenance hole ladder rungs in adjusted portion of units as required.
  - .5 Re-use existing gratings and frames.
  - .6 Re-set gratings and frames to required elevation on not more than 4 courses of brick.
    - .1 Make brick joints and join brick to frame with cement mortar, parge and trowel smooth.
    - .2 Re-set gratings and frames to required elevation on full bed of cement mortar, parge and trowel smooth.

### 3.3 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11- Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11- Cleaning.

**END OF SECTION**