Addendum: Technical Guidelines for Minor Works related to Window Works in Domestic Unit
### 3.23.1 Minor Works Related to Window Works in domestic unit  
(i.e. Minor Works Items 1.6, 2.5 and 2.8)

<table>
<thead>
<tr>
<th>Case</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>The height (h) between the lowest frame of window or window wall and the existing finished floor level.</td>
<td>h ≥ 1.1 m</td>
<td>h &lt; 1.1 m</td>
<td>0.8m ≤ h &lt; 1.1m</td>
<td>h &lt; 0.8 m</td>
</tr>
<tr>
<td>Basic Design</td>
<td>All the design and installation of aluminum window should follow strictly the requirement as stipulated in “PNAP APP-116 &amp; PNRC-47” – Guidelines on design &amp; installation of aluminum window &amp; fixing of hinges. The distance between the highest point of the window or window wall and the ground is not more than 100m.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Existing Opening</td>
<td>Wall opening should not be altered.</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Original Design</td>
<td>-</td>
<td>Available</td>
<td>Not available</td>
<td></td>
</tr>
<tr>
<td>Width of Wall Opening (W)</td>
<td>-</td>
<td>-</td>
<td>W ≤ 2.5 m (If W &gt;2.5 m, then Case D)</td>
<td>-</td>
</tr>
<tr>
<td>Related Minor Works Items</td>
<td>2.8</td>
<td>2.5 and 2.8</td>
<td>2.8 and Enhancement Works</td>
<td>1.6 and 2.8</td>
</tr>
</tbody>
</table>
| Other considerations | ● Minor works item 1.6, 2.5, 2.8 and 3.6 as stipulated in Schedule 1 of the B(MW)R.  
● B(C)R 90 & FS Code subsection C5 & clause C11.1 – Requirements of fire resisting construction.  
● B(P)R 29-33 & 36 – Natural lighting & ventilation.  
● PNAP APP-24 para. 10 & PNRC 14 – No window opening within 5 m of the MTR vent shaft.  
● PNAP APP-37 – Curtain wall, window & window wall systems, in particular the guidelines on design, standards & installation of window system, quality & heat soak process of tempered glass, and submission of compliance certificate of test report.  
● PNAP APP- 110 – Protective Barriers  
● Requirements stipulated in B(C)R 8, Code of Practice for Dead and Imposed Loads section 3.8 and B(P)R 3A complied with, if applicable. |
CASE A:

- Construction, alteration or repair of the window main frame in accordance with item 2.8 and all its requirement.

CASE B:

- MW items 2.5 and 2.8 for replacement of window main frame according to original design.
**CASE C:**

- Steel / Aluminum Frame

- Aluminum Frame

- $0.8m \leq h < 1.1m$

- $W \leq 2.5m$

- Existing FFL

- **(If W > 2.5m, then case D)**

**CASE D:**

- Steel / Aluminum Frame

- Steel / Aluminum Frame

- $h < 0.8m$

- Existing FFL

- **MW Items 1.6 and 2.8**

- MW Item 2.8 for replacement of window main frame and enhancement works (Refer to sheet 3 of 3 for details)
MINOR WORKS ITEM
RELATED TO WINDOW
CONSTRUCTION, ALTERATION OR REPAIR OF ANY WINDOW IN DOMESTIC UNIT
ABOVE GROUND FLOOR (Window enhancement work detail)

Width ≤ 2.5 m

1. The distance between the highest point of the window or window wall and the ground is not more than 100m.
2. Wall opening should not be altered, and width of original wall opening should not be greater than 2500mm;
3. A 90x20mm thick G.M.S flat plate to be fixed inside the transom located at 1100mm from FFL by round head screws at spacing 300mm centre to centre, and extend to full length of opening width with both ends of flat plate rigidly fixed in place to main frame of window. Structural steel plates to be grade S275 to BS EN 10029 and shall be hot dip galvanized to BS EN ISO1461. (Record photos showing the embedded G.M.S. flat plate should be submitted together with Form MW04.)
4. Fixed glass panel below transom should not be greater than 300mm;&
5. Fixed glass panel to be safety tempered glass of minimum 6mm thick in accordance with APP-110.
6. All fixing lugs shall be of stainless steel or hot dip galvanized steel having a minimum material thickness of 1.5mm and be placed at 300mm centres maximum.
7. All structural members of a window section shall have a minimum aluminum thickness of 2mm and the depth of the mullion section shall not be less than 38mm.
8. The length of the 4-bar hinge should be at least 60% of the width of the side hung casement window.