



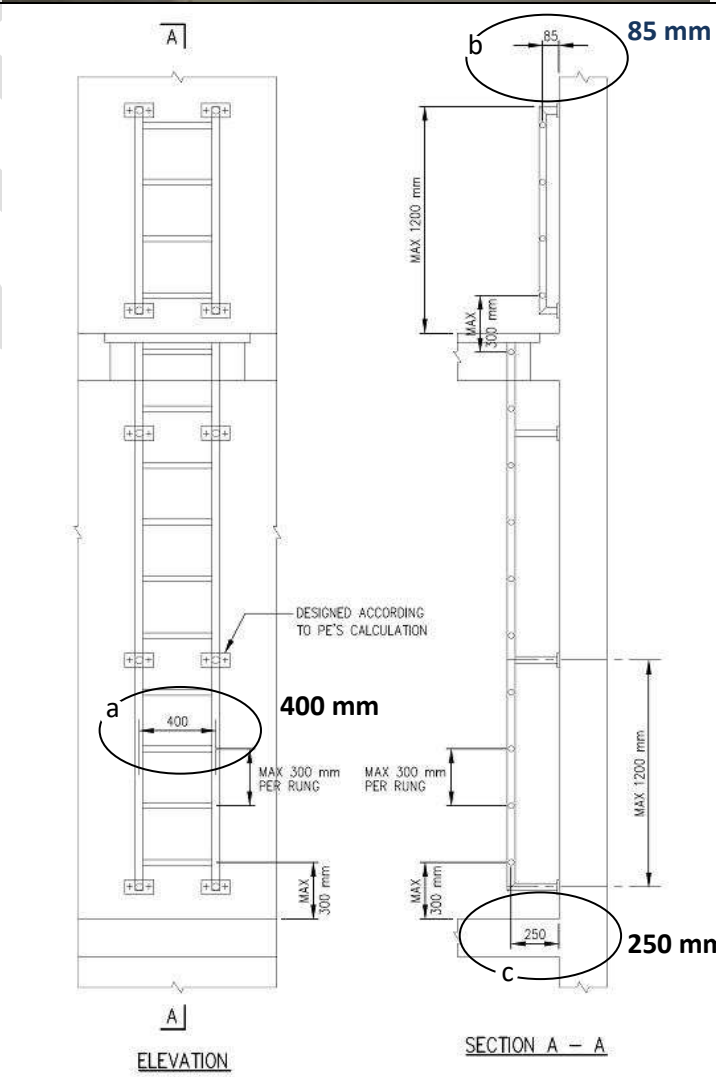
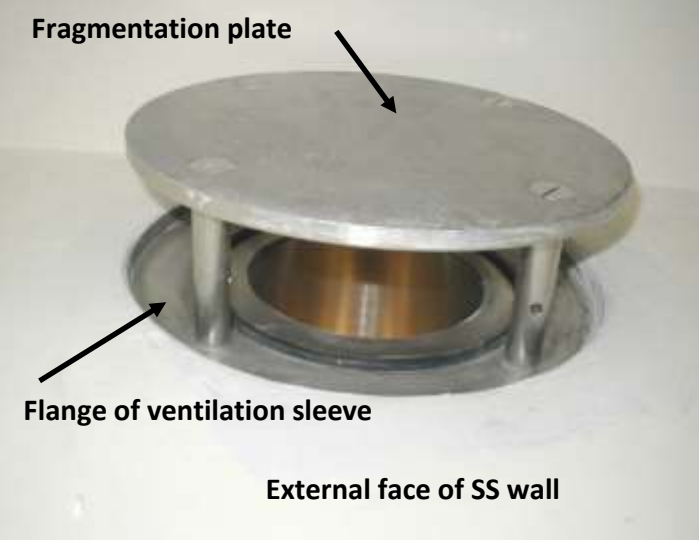





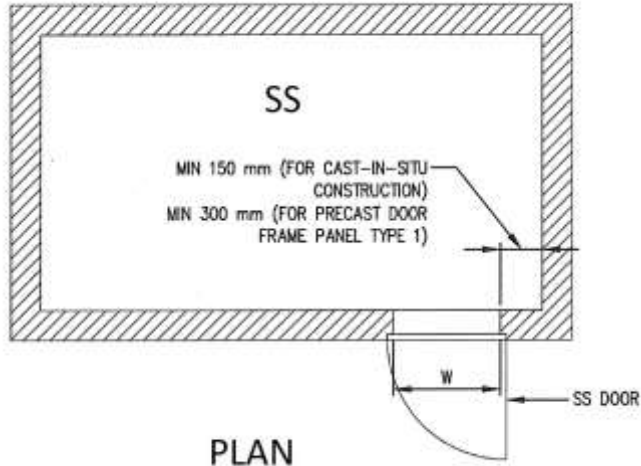
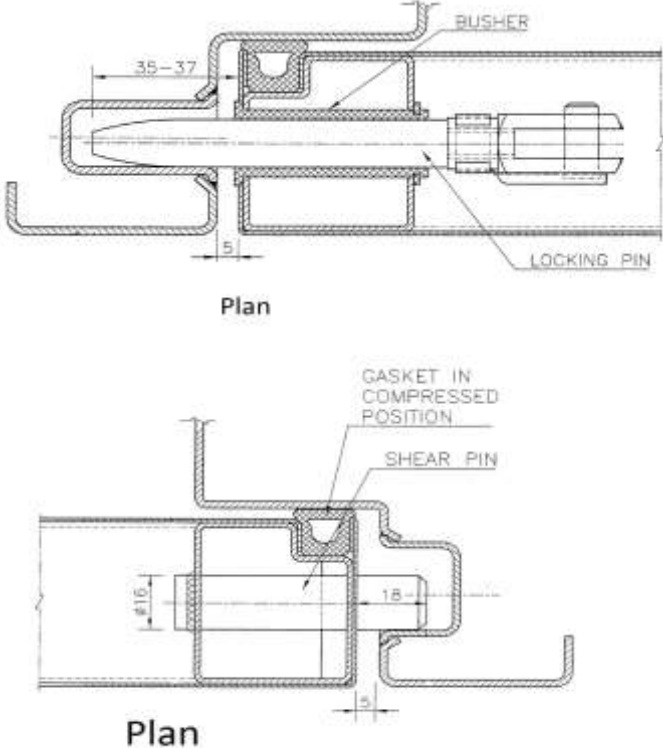
Sample checklist for Commissioning of Storey Shelter (SS)




S/No	Items	Sample photos
A 1	<u>Readiness condition of SS</u> To apply for commissioning inspection, SS must be completed (see attached photo) in compliance with technical requirements. (e.g. setback distance, services, CD door, rescue hatch, cat ladder for rescue hatch, ventilation sleeves, internal/external floor finish level and no plastering on the internal wall.)	
B 1	<u>Rescue Hatch</u> A rescue hatch shall be provided on the floor and ceiling of every SS in a SS tower. (Except that of the bottom-most SS and ceiling of the top-most SS.)	
2	The nett clear opening of the rescue hatch shall be 700mmX700mm.	

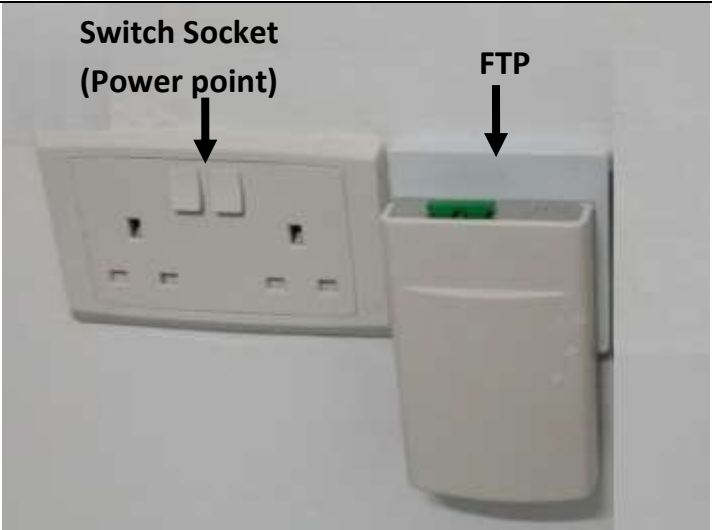
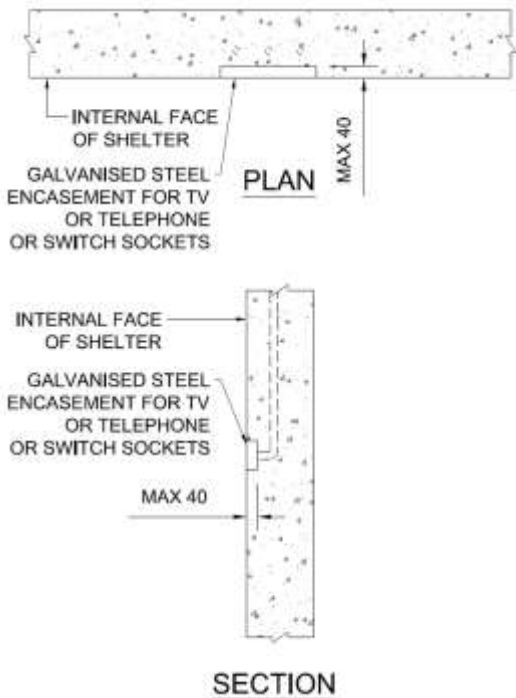
3	<p>The rescue hatch shall be positioned such that its edge (without hinges) is minimum 150 mm and its edge (with hinges) is minimum 250 mm from the adjacent SS wall.</p>	 <p>A photograph showing a metal rescue hatch installed in a wall. A dimension line indicates a 250 mm distance from the wall to the edge of the hatch with hinges. Another dimension line indicates a 150 mm distance from the wall to the edge of the hatch without hinges. The hatch is labeled 'Floor level'.</p>
C 1	<p><u>Cat Ladder to Rescue hatch</u></p> <ol style="list-style-type: none"> The width of the cat ladder shall be 400 mm measured between centre of vertical members. The cat ladder (above hatch opening) shall be 85 mm measured from SS wall to centre of vertical members. The cat ladder (below hatch opening) shall be 250 mm from SS wall to centre of vertical members 	 <p>Technical drawing of a cat ladder. The drawing includes an elevation view and a section view labeled 'SECTION A - A'. The elevation view shows a ladder with rungs. Dimensions include a width of 400 mm between vertical members (labeled 'a'), a distance of 85 mm from the wall to the center of vertical members above the hatch (labeled 'b'), and a distance of 250 mm from the wall to the center of vertical members below the hatch (labeled 'c'). The section view shows the ladder's profile with a maximum height of 1200 mm and a maximum rung width of 300 mm. The text 'DESIGNED ACCORDING TO P.E.'S CALCULATION' is present.</p>

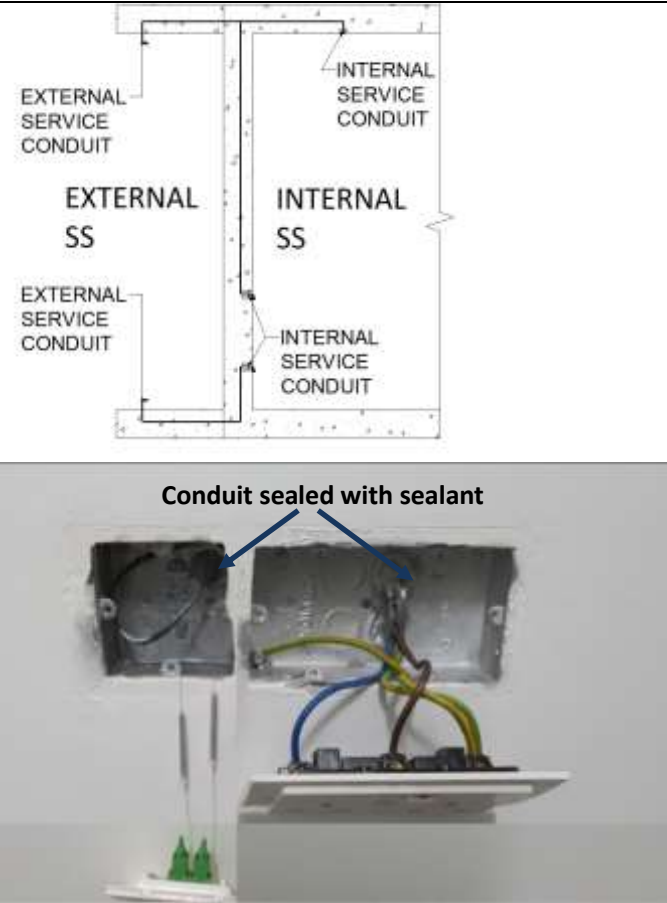

<p>D</p> <p>1</p>	<p><u>Ventilation Sleeves</u></p> <p>The flange of ventilation sleeve and fragmentation plate shall be cleared and free of cement grout and painting.</p>	 <p>Fragmentation plate</p> <p>Flange of ventilation sleeve</p> <p>External face of SS wall</p>
<p>2</p>	<p>All screw threaded holes on flange of ventilation sleeve shall be cleared and free of cement grout.</p>	 <p>Flange of ventilation sleeve</p> <p>Internal face of SS wall</p>
<p>3</p>	<p>The flange of ventilation sleeve shall be flushed with internal face of SS wall.</p>	
<p>4</p>	<p>Ventilation sleeve (inside SS) shall be positioned such that the centre of the sleeves shall be:</p> <ul style="list-style-type: none"> a) minimum 350 mm from any wall and ceiling slab. b) minimum 1900 mm above finished floor level. c) minimum 1000 mm apart. 	 <p>Min 350mm</p> <p>Min 350mm</p> <p>Min 1000mm</p> <p>Min 1900mm</p>




<p>E</p> <p>1</p>	<p><u>SS Door / Door frame</u></p> <p>SS door notice shall be pasted on the inner face of SS door.</p> <p>(Note: rubber gasket, Door hinges, locking pins and shear pins shall not be printed)</p>	 <p>SS Door notice</p>
<p>2</p>	<p>PLS label shall be pasted on the side of the SS frame and door.</p>	 <p>PLS label</p>
<p>3</p>	<p>SS door and door frame shall be completed with final painting.</p> <p>SS door shall be able to close and lock in CD mode as shown in the door notice.</p> <p>External floor finish shall be clear from the bottom edge of the SS door.</p>	

<p>4</p>	<p>The vertical edge of the SS door frame shall have a minimum 150 mm RC nib.</p>	 <p>SS</p> <p>MIN 150 mm (FOR CAST-IN-SITU CONSTRUCTION)</p> <p>MIN 300 mm (FOR PRECAST DOOR FRAME PANEL TYPE 1)</p> <p>W</p> <p>SS DOOR</p> <p>PLAN</p>
<p>5</p>	<p>The locking pin and pin hole on the door frame shall be aligned so that the door can be closed easily.</p>	 <p>BUSHER</p> <p>35-37</p> <p>5</p> <p>LOCKING PIN</p> <p>Plan</p> <p>GASKET IN COMPRESSED POSITION</p> <p>SHEAR PIN</p> <p>16</p> <p>18</p> <p>5</p> <p>Plan</p>


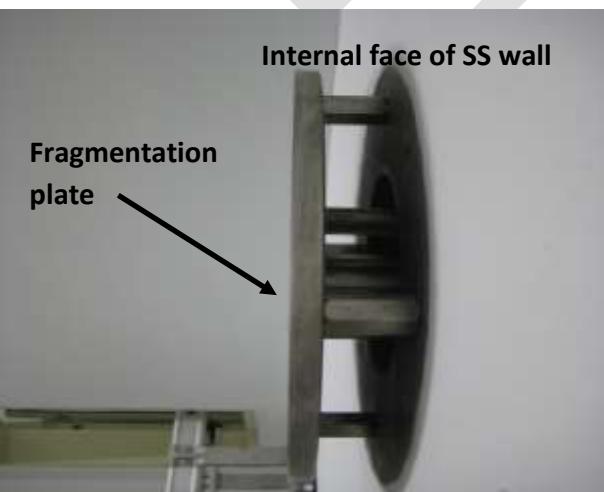
<p>6</p>	<p>The design gap between the door and door frame is 5mm.</p> <p>The maximum gap allowable shall not more than:</p> <ul style="list-style-type: none"> - 6mm along door with hinges and - 7mm along door with locking pins. <p>Maximum total gap (hinges side + locking pin side) shall not exceed 13mm.</p> <p>Maximum clear width of doorframe for net door opening of 900mm, 950mm, 1000mm shall not exceed 1003mm, 1053mm and 1103mm respectively.</p>	
<p>7</p>	<p>Rubber gasket shall be fully secured into the recess along the side of the door panel.</p>	
<p>8</p>	<p>Handle shall be secured properly, such that it is not loose or jammed from turning.</p>	

<p>F 1</p>	<p><u>Services</u> The following electrical and communication fixtures shall be provided in each SS: Three (3) 13A switch socket outlets; Lighting switch; Fibre Termination Point (FTP).</p>	
<p>2</p>	<p>Galvanised steel encasement for FTP, power point and lighting switch shall be placed within the inner face of concrete cover.</p>	

<p>3</p>	<p>All open ends of conduit at internal and external of SS shall be sealed with sealant to a minimum depth of 100mm</p>	
<p>G 1</p>	<p><u>Commissioning Testing (Trial)</u> Trial testing shall be carried out at the site by a competent representative for all shelter units prior to application for commissioning inspection.</p>	

2	<p><u>Chalk mark test</u></p> <p>To apply chalk to the part of the door frame where the door seal will come into contact with when the door is closed.</p> <p>The test is considered to have passed if there is an unbroken and uniform transfer of the chalk markings onto the door seal when the door is closed and re-opened.</p>	
H 1	<p><u>Additional fixture applicable to public housing</u></p> <p>Latch for rescue hatch</p> <p>Two Latches are installed underneath the hatch door.</p>	
2	<p>Cement board for rescue hatch</p> <p>A cement board is placed on top face of the rescue hatch such that the board is flushed with finished floor level.</p>	

Floor level

<p>3</p>	<p>Ventilation sleeve with external protective netting</p> <p>Protective netting was installed on external face of ventilation sleeve.</p> <p>Fragmentation plate is mounted to the flange of ventilation sleeve at internal face of SS wall during peacetime.</p>	<p>External face of SS wall</p>  <p>External view of ventilation sleeve with protective netting</p> <p>Internal face of SS wall</p> <p>Fragmentation plate</p> 
<p>4</p>	<p>External latch and lock</p> <p>Latch and lock shall be provided outside the SS door</p>	