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Wall Repair

Removing and Replacing Exterior Insulation Face Method

September, 2006

Exterior Skin Removal

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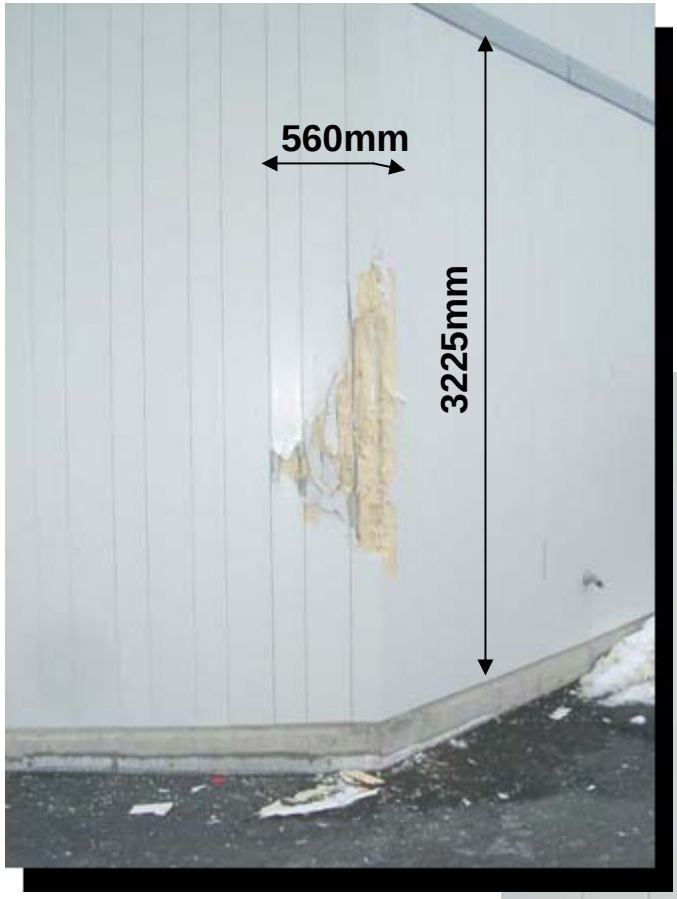
Surface Preparation

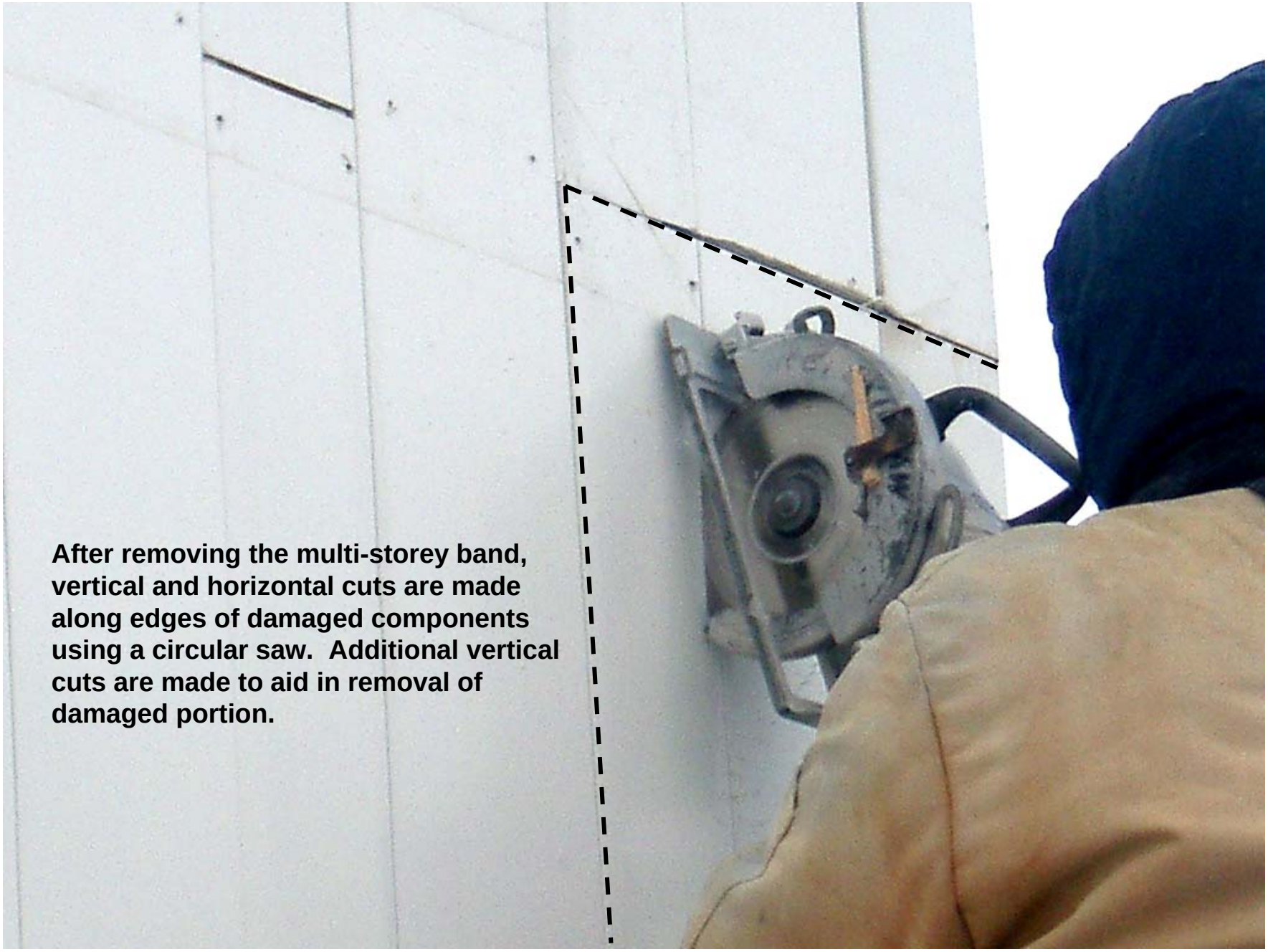


DAMAGED WALL CONSISTS OF:

1-45° OUTSIDE CORNER

1-232 PANEL

1-STRAIGHT BOX CONNECTOR



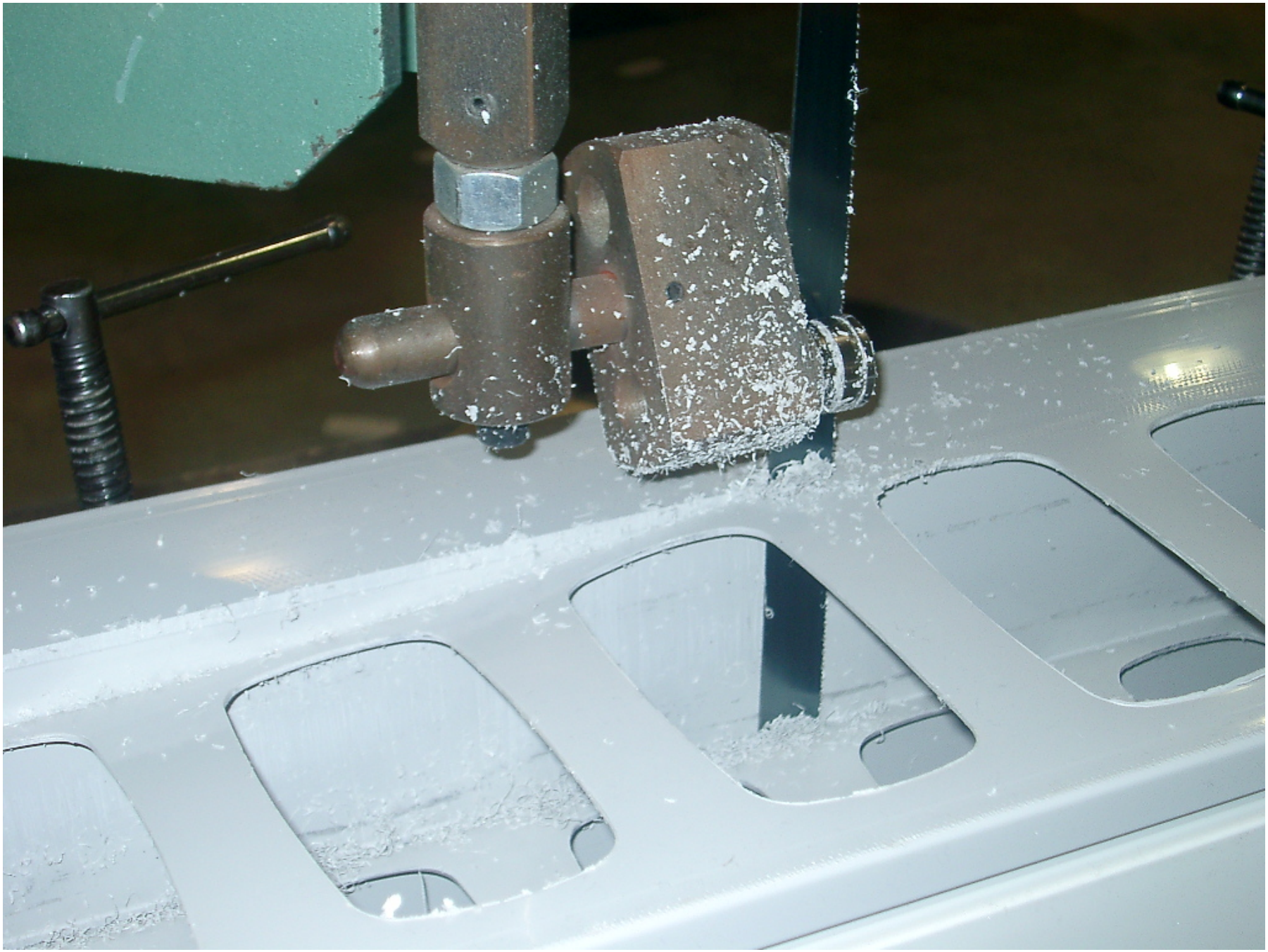
After removing the multi-storey band, vertical and horizontal cuts are made along edges of damaged components using a circular saw. Additional vertical cuts are made to aid in removal of damaged portion.

Carefully remove exterior PVC face and insulation ensuring not to damage adjacent components

Using various hand and electric tools, remaining PVC skin is removed, revealing the bare concrete.

Material Preparation


Detach insulation cavity from back portion of all three components.

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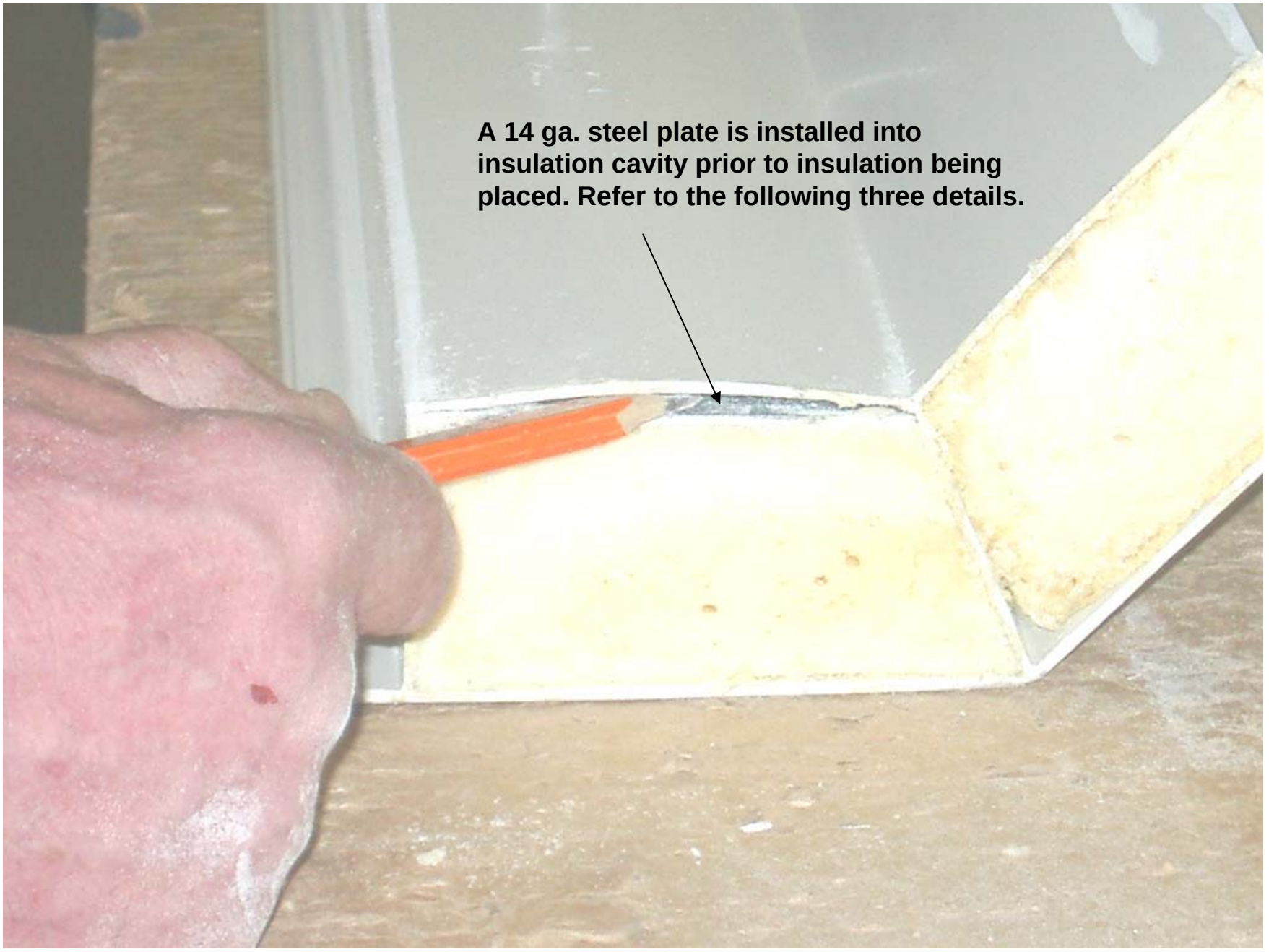
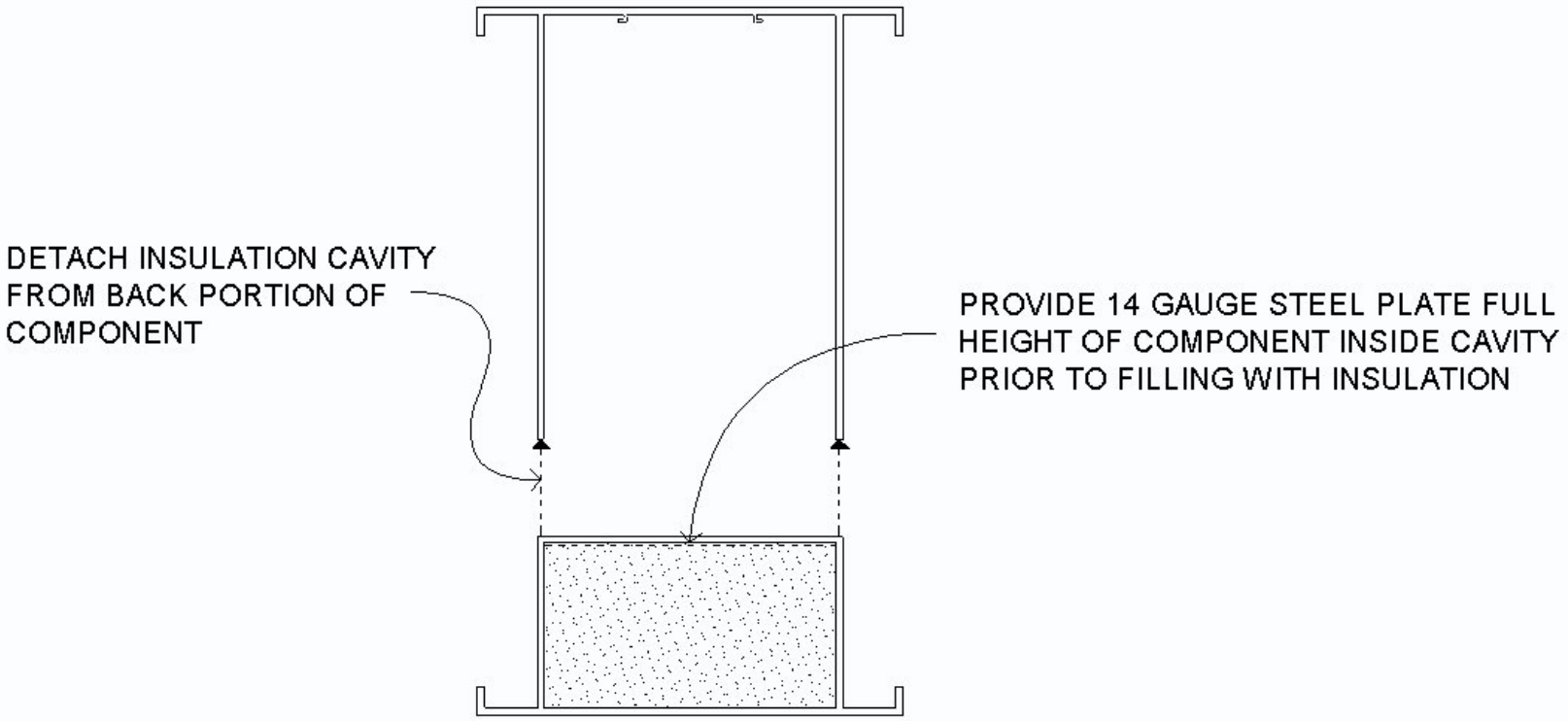
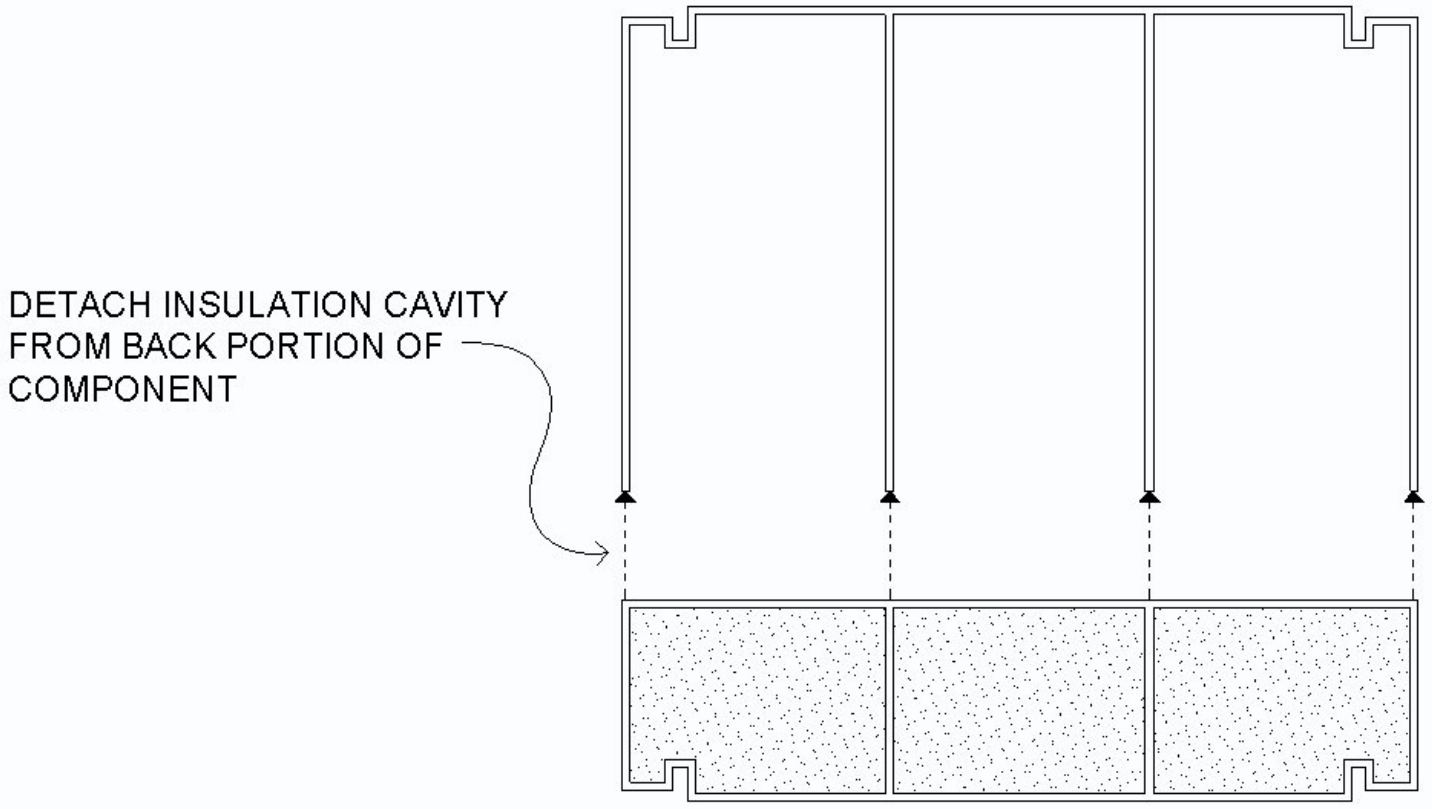

A 14 ga. steel plate is installed into insulation cavity prior to insulation being placed. Refer to the following three details.

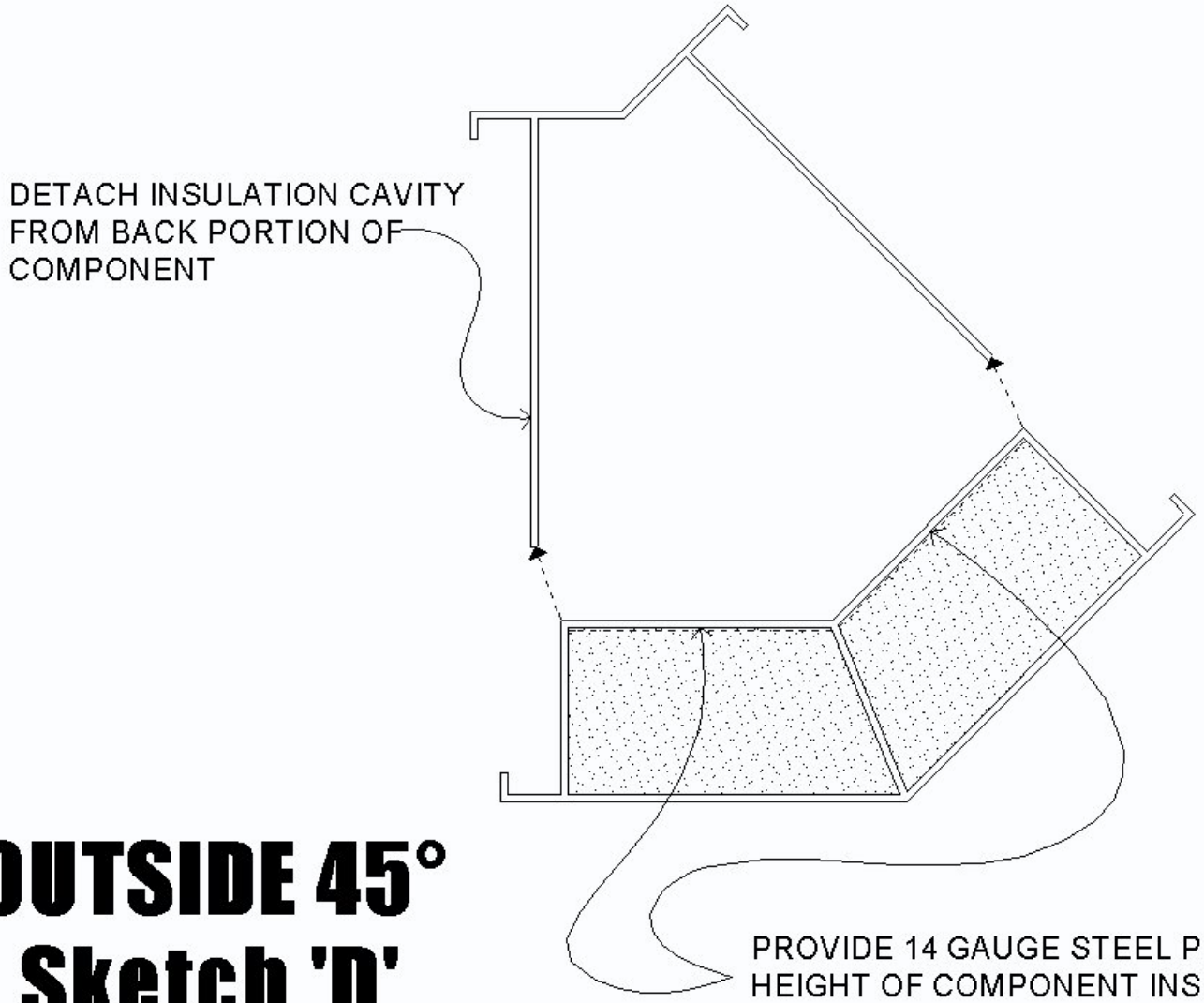


STRAIGHT BOX

Sketch 'A'



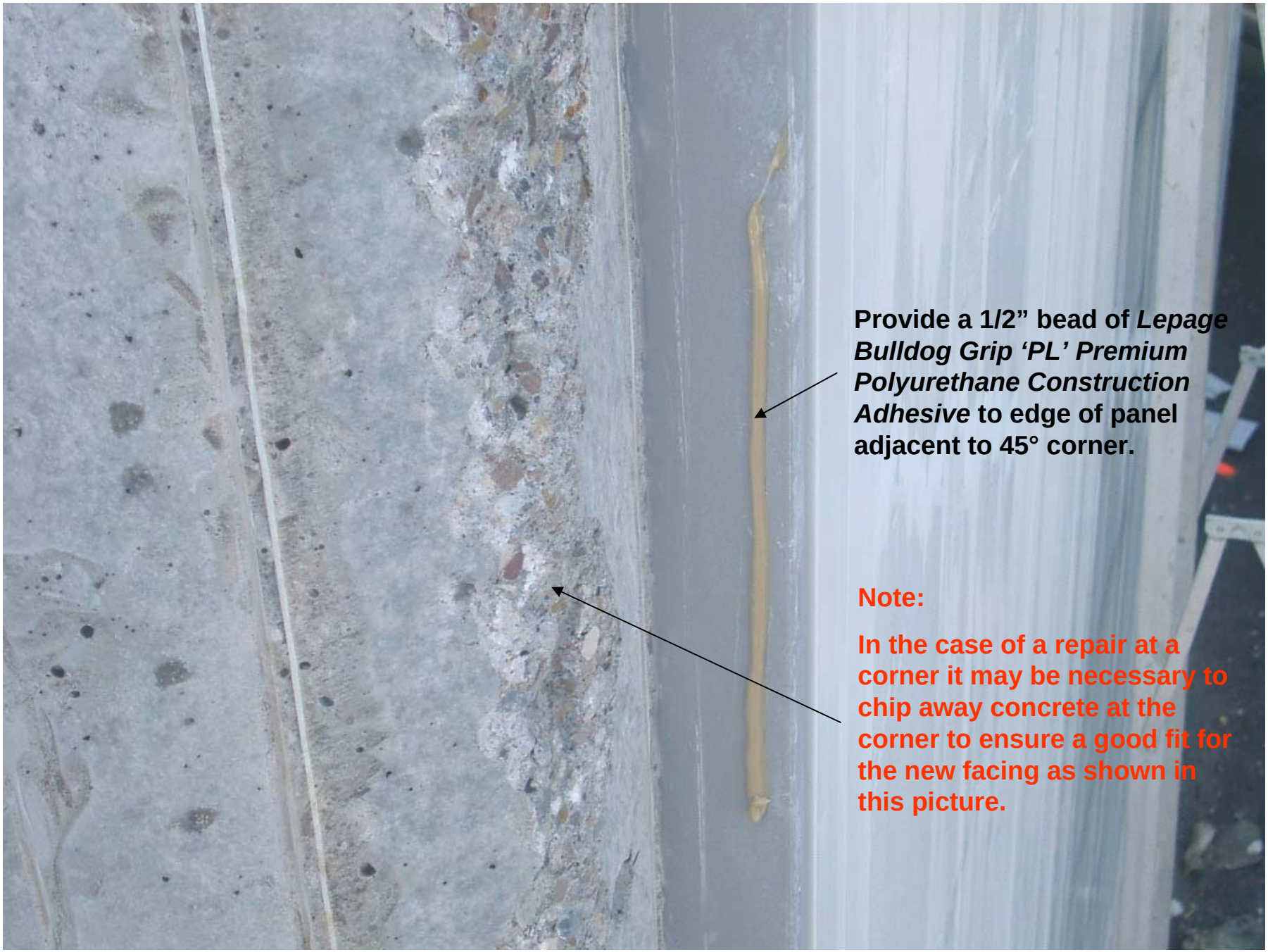
PANEL 232
Sketch 'B'



OUTSIDE 45°
Sketch 'D'

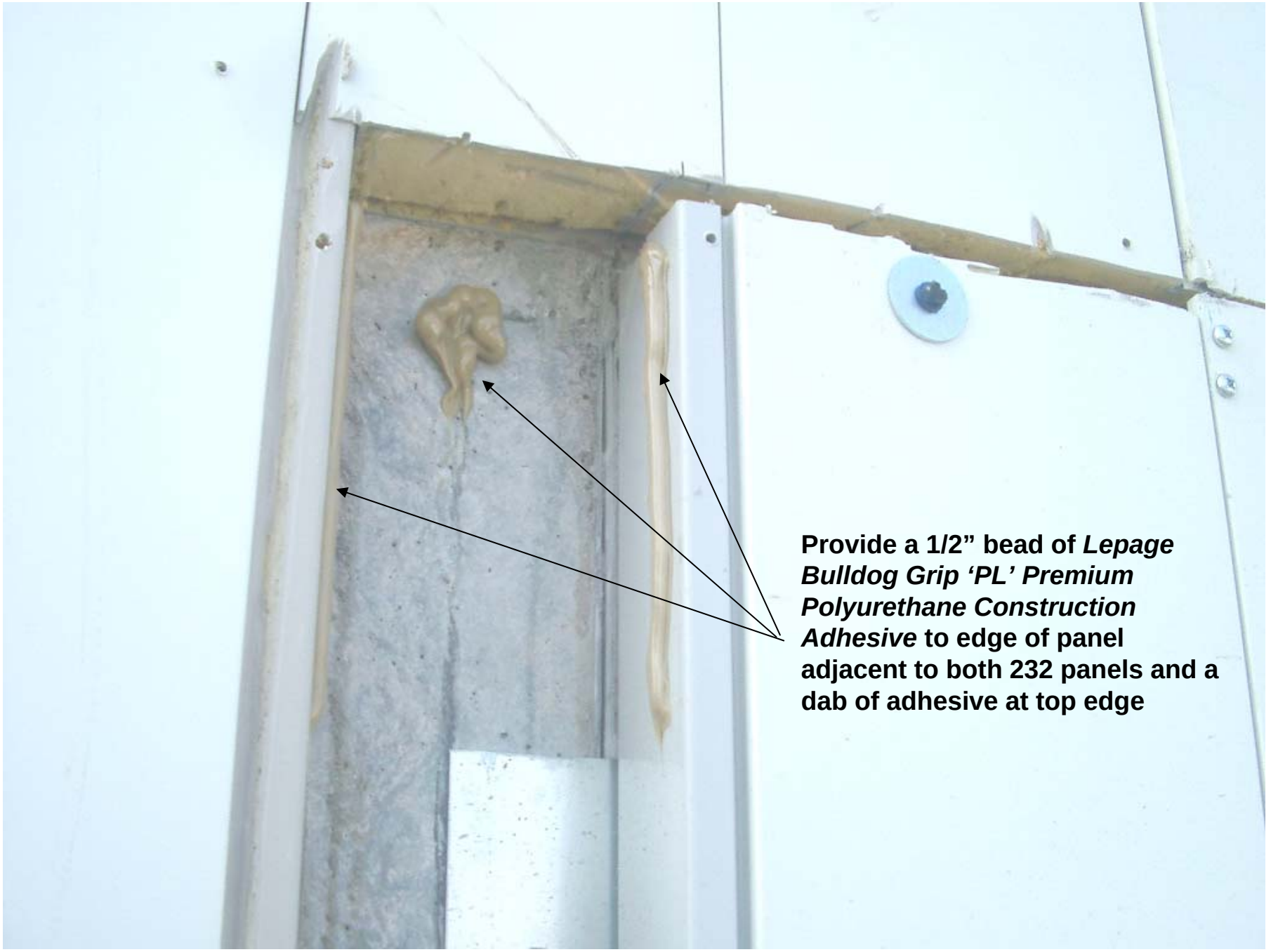
Exterior Skin Installation

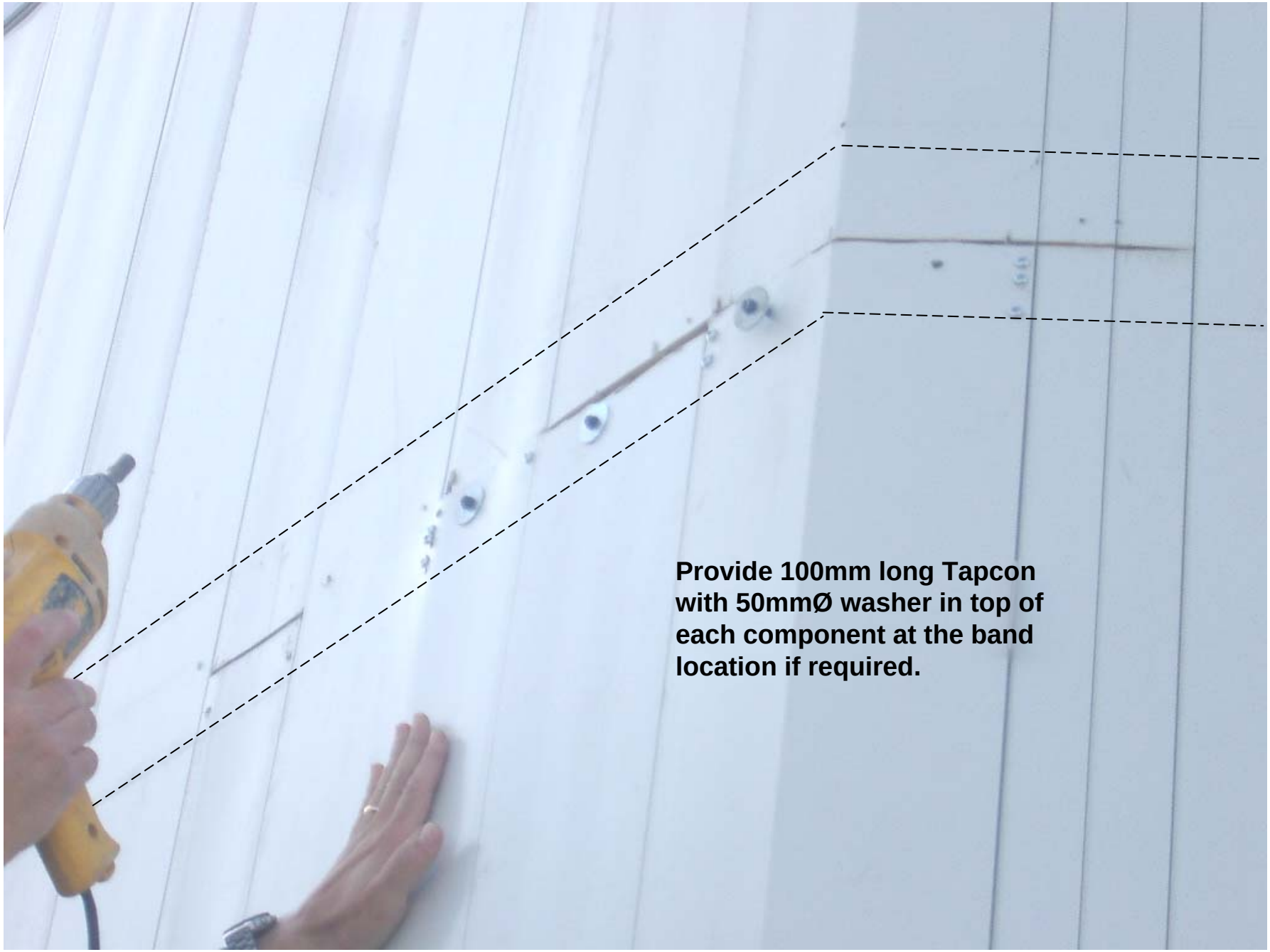
Drill 4-3/4”ø x 3” deep holes at 600mm o.c.


Provide a 1/2” bead of *Lepage Bulldog Grip ‘PL’ Premium Polyurethane Construction Adhesive* to edge of panel adjacent to 45° corner.
Note:
In the case of a repair at a corner it may be necessary to chip away concrete at the corner to ensure a good fit for the new facing as shown in this picture.

Note:

Since the work time for this product is short it would be a good idea to have already dry fit the components being installed to ensure proper fit before applying the anchoring adhesive.


Provide a 1/2” bead of *Lepage Bulldog Grip ‘PL’ Premium Polyurethane Construction Adhesive* to edge of panel adjacent to both 232 panels and a dab of adhesive at top edge


Provide 100mm long Tapcon with 50mmØ washer in top of each component at the band location if required.

Provide temporary bracing on last component for 24 hours to ensure proper adhesion.


Bracing is removed and band
is replaced
Total time required:
2-men
2-days

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Construction Bulletin No. 20

CF8i Exterior Face Repair

July 2008 - Issue #1

The Repair of the CF8i Exterior Face involves removing and replacing the insulated cells of the CF8i components. This method of reparir is used where the size of the damaged area is too large to be patched with an All Purpose Putty. This repair method will take 2 men , approximately 2 days, to replace a 1100 mm (43") wide section of wall.

1. Exterior Insulated Face Removal
   - The multi-storey band or top flashing is removed as necessary.
   - Sawcuts 50 mm (2") deep are made along the edges of the damaged components using a circular saw. Vertical cuts occur in a box connectors and are 25 mm (1") from joints.
   - Additional vertical cuts and horizontal cuts at 1.2 m (4') on centre are made to aid in removal of the damaged portion.
   - The exterior insulated face is removed carefully ensuring that adjacent components are not damaged.

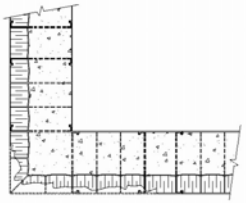

Figure 1 - Damaged Wall

2. Exterior Surface Preparation
   - Using chisels, claw hammers, scrapers, grinders and saws, the remaining PVC skin is removed to reveal the bare concrete.
   - The PVC webs are cut and ground flush with the face of the concrete.
   - The edge of the panel at each side of the repair is exposed and cleaned flush to the face of the concrete.

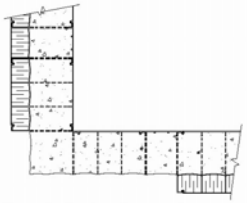

Figure 2 - Surface Preparation

3. Material Preparation
   - The replacement corner boxes and straight box connectors are ordered with 14 ga steel plates placed full height in the insulation cavities prior to foaming.
   - The replacement facing components are ordered with the insulation cavity detached from webs of the components.
   - Self-Drilling Hex Head Screws, 1/4" dia x 2" long, are installed on the back of the replacement box connector facing components. The screws are installed in the centre of the steel plates so that the head of the screw projects 38 mm (1 ½"). The screws are located 100 mm (4") from the top and bottom and 610 mm (24") on center, maximum.

Figure 3 - Replacing Facing Components

4. Final Preparation
   - Holes are drilled 3/4" dia x 2" deep into the concrete to match the location of the screws in the replacement box connector components.
   - At one side of corners, the drilled holes are chipped horizontally to create a bevelled slot in order to install the corner section.
   - ALL COMPONENTS ARE DRY FIT TO ENSURE A SMOOTH FINISHED SURFACE. The face of the concrete especially at corners and at each side of the repair is ground to ensure a good fit for the new facing.

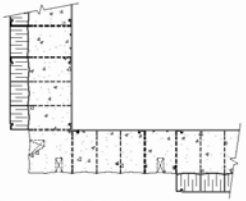

Figure 4 - Drilled Holes

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Construction Bulletin No. 20

CF8i Exterior Face Repair (cont'd)

July 2008 - Issue #1

5. Exterior Facing Installation
   - Lepage Bulldog Grip "PL" Premium Polyurethane Construction Adhesive is applied to the concrete at the panel locations. The adhesive is applied at both sides of the replacement panel facings, in 50 mm (2") dia. blobs, 3/4" thick, and is located 100 mm (4") from the top and bottom and 610 mm (24") on center. The panel section is put in place and pushed hard to ensure a good bond.
   - A 10 mm (3/8") bead of the Bulldog Grip Adhesive, 300 mm (12") long is applied along each side of each panel section, centred on each of the drilled holes for the box connector facings.
   - Starting at a corner, the holes for the screws are filled with Simpson Strong Tie "AT" Acrylic Based Anchoring Adhesive (Model AT30). <u>This product has a short curing time and the work must be done rapidly to ensure a good fit before the adhesive sets.</u>
   - Immediately after applying the adhesive, the corner replacement facing is pushed into place and interlocked with the adjacent undamaged panel at one side and the adjacent replacement panel facing at the other side. The corner box is held with braces at 1.5 m (5') on centre for 5 to 10 minutes until the adhesive sets.
   - The other box connector facings are installed in a similar manner. Each piece is installed immediately after the epoxy adhesive is placed in the holes for the screws and the piece is held in place with bracing for 5 to 10 minutes. If required, the adjacent replacement panel facing can be pushed sideways slightly to suit the box connector facing legs, while maintaining the adhesive bond to the concrete.
   - To complete the installation, the multi-storey band or top flashing is replaced.

Figure 5 - Replacement Facing Installed

<u>Materials</u>

- Replacement CF8i insulated facing components
- Polyurethane Construction Adhesive and caulking gun
  - Bulldog Grip 'PL' Premium Polyurethane Construction Adhesive by Lepage
- Two Part Epoxy Adhesive and applicator gun
  - Simpson Strong Tie 'AT' Acrylic Based Anchoring Adhesive, Model AT30 by Simpson Strong Tie
  - include 10 to 15 spare applicator nozzles for each cartridge of adhesive
- 1/4" dia x 2" long Self-Drilling Hex Head Screws
- Bracing materials

<u>Tools</u>

- Circular Saw
- Claw Hammer
- Chisel
- Scraper
- Grinder with Concrete Blades
- Hammer Drill with 3/4" concrete bit
- Cordless Drill with hex head driver

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