

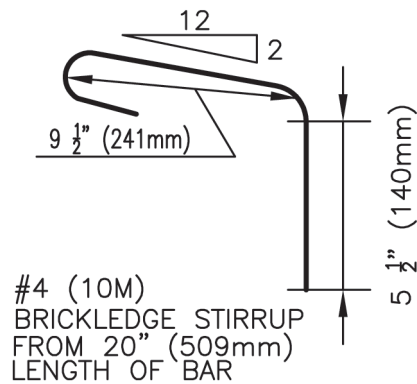
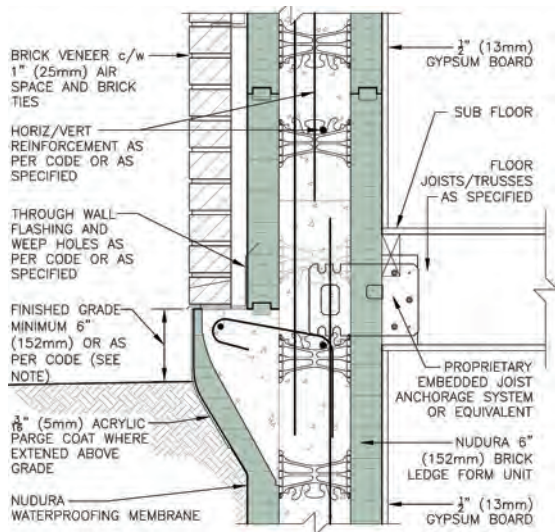
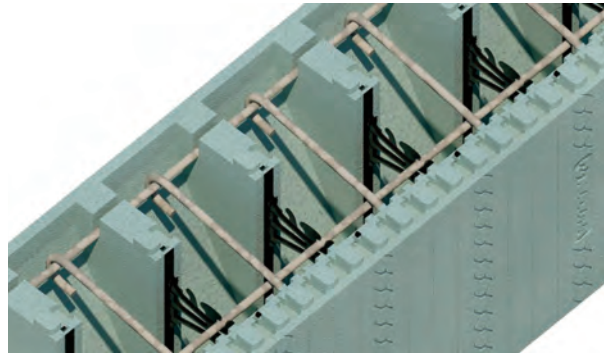
BRICK LEDGE CORNER FORM ASSEMBLY

NUDURA's Brick Ledge form units have several uses, including supporting masonry loads and limited support of floor joists or short span porch slabs. As is common with many insulated concrete form systems, the installer needs to be aware that the NUDURA Brick Ledge form unit is currently not available as a preformed corner form unit and therefore, corner conditions will require assembly in-field from either standard Brick Ledge form units or from corner form units and Brick Ledge Extensions. Installation of the standard Brick Ledge follows the same requirements as a Standard straight form. Once the contractor/installer comes to a corner condition a decision needs to be made regarding the creation of a corner brick ledge.

One method is to take 2 Brick Ledge forms and simply miter cutting them to follow the profile of the corbel on the outside panel and creating a square cut on the inside panel to complete a corner form condition. Remember that all cuts need to be completed away from the wall area to prevent a build up of EPS shavings in the bottom of the wall.

Once the miters have been completed, take both pieces of Brick Ledge and lock them onto the wall. Use NUDURA's 1" (25mm) fiber tape to tape the corbelled corner and provide strength during concrete placement. Should the miter cuts on the corbel not be in exact contact with each other, the contractor/installer can fill any gaps using NUDURA Low Expansion Spray Foam. This will accomplish two things; it will add additional bonding of the two forms at the miter location and it will also fill the gaps not allowing concrete to leak from this area.

horizontal steel be placed within the second notch of the web from the inside face of the form. Also, this reinforcing steel will be required to have a contact lap splice in order for the hooks to be located correctly. At the outer edge of the Brick Ledge, the contractor/installer will also need to place a piece of horizontal of reinforcing steel into the preformed notches that are visible between each ledge pocket to allow the Brick Ledge stirrups to rest on. This piece of steel will not require a lap splice, as it is simply a holder for the stirrups. The Brick Ledge stirrups can be created either in the field or in shop by the reinforcing steel supplier. NUDURA can provide details on request showing the bend locations along with the required dimensions to suit the various wall thicknesses. Contact your local distributor for copies of these Brick Ledge hook stirrup details.



Reinforcing steel can now be added to help support the brick that will be installed later in the construction process. The steel needed to accomplish the reinforcing for the Brick Ledge consists of 3 different pieces. The first is the horizontal steel located in the main cavity of the wall. Its location is critical as it helps to support the Brick Ledge hook stirrups. It's recommended that the

BRICK LEDGE CORNER FORM ASSEMBLY

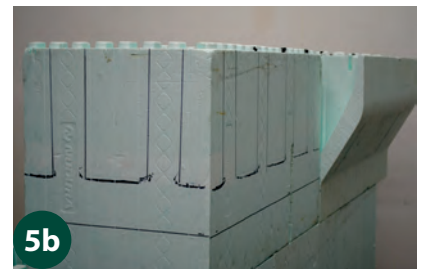
The second method available for Brick Ledge corner form assembly is to use a 90° corner and Brick Ledge Extension to complete the assembly. The process for this assembly is as follows:

- 1** Lock the Corner Form into position at the course level required for the Brick Ledge. In these photos and instructions, the process is described with the long side of the corner form extending to the RIGHT SIDE of the corner.
- 2** Abutting Brick Ledge forms should be installed flush to the corner form prior to continuing assembly.
- 3** Position a Brick Ledge Extension form against the long side of the 90° corner form so that the shoulder of the BLE aligns EXACTLY with the shoulder of the 90° corner form AND the bearing ledge of the adjacent Brick Ledge form. Using a marker draw a horizontal line at the base of the BLE using the bottom edge of the BLE as a straight edge (see photo below).
- 4** Using the BLE, repeat the process again on the short side of the corner form.

5 Use the BLE form again, this time as a template for marking the required locations for cutouts that will be made to allow the concrete to flow through from the 90° corner form into the corresponding pockets of the BLE (see photo 5a). While keeping the base in line with the horizontal guide mark drawn in Steps 3 and 4, be sure that the foam ribs of the BLE will properly align with the web location marks on the face of the 90° corner form. Remember also to mark the foam in the corner so that concrete will be able to flow into this area. Finally repeat this process to mark the short side of the form as well. When finished, the markings on the form should look similar to photo 5b.

6 MARKING BLE FOR MITER CUT AT CORNER. This process starts by taking the FIRST the BLE, holding it in place along the LONG side of the 90° corner form (and its base in line with the mark drawn in Step 5) but this time positioned exactly 12" (305 mm) from the adjacent Brick Ledge form as shown in photos 6a and 6b.

7 In this location, the BLE is now in what will be its final installed position. Mark the location where the BLE intersects with the 90° corner at its base. In addition, make a 45° angled cutting guide mark on the TOP SURFACE of the BLE that will be aimed toward the point of the 90° corner form". Once this piece has been marked - set it aside for use in Step 12.



BRICK LEDGE CORNER FORM ASSEMBLY

8 MARKING THE 2nd BLE FORM: This step will require temporary removal of the Brick Ledge form located the LEFT side of the short side of the 90° corner form (to make marking easier). With the BL form removed, hold a 2nd BLE, again in line with the base marking, but, this time against the SHORT side face of the 90° corner form so that the left side of the BLE is extending exactly 12" (305 mm) beyond the left side or end the 90° corner form. Make tick marks on the top and bottom of the form in line with this location for later use in Step 13. In addition, repeat the markings top and bottom that were made in Step 6 (complete with the 45° angled mark on the TOP of the BLE and mark at the base where it intersects with the corner) and set this piece aside in preparation for Steps 12 and 13 (See photos 8a and 8b).

9 CUTTING THE POCKETS IN THE 90° CORNER: Begin this process by removing the 90° form from the wall and working away from the installation area. Using a straight cut saw (or pruning saw as shown), cut all of the vertical lines of the pockets as shown – angling the saw on a 45° angle as you approach the base of the pocket lines.

10 Using a keyhole saw (or pruning saw as shown), stab into the form on a 45° angle downward to

complete the base cuts of each of the pockets – including at the corner as shown.

11 Once the cuts are complete, re-assemble the 90° Corner form into position on the wall beside the adjacent brick ledge forms and carefully mallet set it into position.

12 COMPLETE MITER CUTS TO BLE FORMS: As with miter cutting a standard Brick Ledge, these cuts also take practice - however using the 45° angled marks drawn on the TOP of each BLE form in Steps 7 and 8 and targeting the saw much like the site on a rifle, aim the saw blade towards the base mark on the BLE and cutting vertically downward through the depth of the BLE to create each segment required for the miter (as shown in photos 12a and 12b).

13 Finally, cut the 12" (305 mm) wide segment from the left side of the 2nd BLE that was measured and marked in Step 8. This will be used to fill the gap that was measured in the ORIGINAL positioning of the 1st BLE on the long side of the 90° corner form. This piece will be assembled in final position as the first operation of Step 14.



8a



8b



9



10



11



12a



12b



13

BRICK LEDGE CORNER FORM ASSEMBLY

14 INSTALLING THE BLE FORM SEGMENTS: Start with the long side miter cut BLE Section that was cut in Step 12b by holding it in its final position - against the long side of the 90° corner form and aligning the foam segments with the webs. Care should be taken to align the base of the BLE with the marker line indicating its position Using 5" (127 mm) long plastic grommet fitted/brass screws (NUDURA order Code #SC-WA) - anchor the miter cut BLE Section into position - first horizontally into the face to anchor through the BLE into the webs of the form behind, then a 2nd grommet fitted screw through the angled surface of the ledge approximately 4" (100 mm) up from the base of the BLE . Screw the grommets snug to the form face only (DO NOT OVERTIGHTEN). Next, (as shown in photo 14b) screw the 12"(305 mm) wide segment of BLE form measured in Step 7 and cut in Step 12 into the gap left at the very right hand side of the miter cut BLE Section that has just been installed on the long side of the 90° corner form. Do not forget to apply a grommet fitted screw at the joint between the right side of the mitered BLE form segment and the 12" (305 mm) segment as shown in photo 14c.

15 Repeat the procedures outlined in Step 14a for the second BLE mitered segment, installing it in position on the short side of the 90° corner form (photo 15).

16 Apply 1" (25mm) fiber tape as shown, diagonally in both directions to fully support the mitered edges of both BLE forms at the joint. Finally, at the joint, inject the miter gap with NUDURA® Low Expansion Foam to complete the seal at the miter to take care of any irregularities from the cuts.

17 STEEL PLACEMENT: Place No. 4 (10M) bar with a 90° bend as shown in the outer ledge support slots. For the inside steel – NOTE: the inner support steel will need to be tied in LINE with the adjacent brick ledge steel so that the brick ledge stirrups will sit properly once placed.

18 BRICK LEDGE STIRRUP PLACEMENT: Bend or order brick ledge stirrups as shown. Do not forget that the hook on the angle at the corner needs to be slightly longer than the typical hooks will be. (For instructions-please contact your local distributor) Place the stirrups as shown. The ledge is now ready for form units to be placed above it.

Instructions for assembling 90° inside corner Brick Ledges and 45° inside and outside corner Brick Ledge forms are similar – requiring pre-planning and sequential execution of the cutting of the BLE forms. Remember that a brick ledge stirrup is required every 8" (203mm) on center. These hooks can support up to 27' (8.23m) standard brick. Should the contract documents specify an alternative masonry material (i.e. stone, architectural concrete block) the overall height may have to be reduced to suit the difference in material weight. Please refer to your local distributor for brick ledge capacity documentation.



How to Prepare Outside Panels for Greater Flexibility in Smaller Radius Walls

This Technical Bulletin is prepared as a companion piece to NUDURA's Technical Bulletin on Radius Wall Estimating and Installation.

NUDURA insulation panels are sufficiently flexible that radius walls as small as 8 feet (2.44 m) in radius dimension can be formed with little difficulty in bending them to meet the required curvature. However, on the occasions where radii are smaller than this, it will be necessary to prepare the outer panels prior to installation to enable greater flexibility for being able to be installed to the desired radius.

Preparing the outside panel to bend to the required radius is very simple. Start by placing the radius form unit on a flat surface with the cut lines of the exterior panel facing up. Then, use NUDURA's 1" (25mm) fiber tape, cut 4 lengths of tape - each being 8 feet (2.44m) long. Apply the strips of tape linearly across the panel length, spaced 3" to 4" apart, and press each strip firmly onto the face of the panel. The fiber tape will provide excellent support during bending of the form and, subsequently, during placement of concrete into the assembled form.

Greater flexibility of the form is achieved by cutting grooves into the interior "dovetailed" surface of the exterior panel or the form at regular intervals. NOTE: Avoid making these cuts using a hot knife as melting the foam in this manner can change its molecular structure at the knife contact area - making it more brittle and substantially lowering the flexural strength of the foam panel between webs.

You will also need a cordless circular saw with a 5 1/4" (133 mm) non-carbide tip blade for this operation. Before mounting the blade into the saw, the blade must be prepared for making a wider than normal cut by using pliers to incrementally bend every other tooth of the blade outward off axis in opposite directions such that the width between the tips of each tooth is laterally measured at about 3/16" (5mm).

