

**ADVANCE**

CONCRETE FORM, INC.

THE ADVANCE FORMING SYSTEM

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Complex jobs become simple when using the Advance Forming System. That's because every Advance panel is ready for immediate positioning into the excavation or onto the above-grade site. Setting goes quickly because you can work from one or more corners or from any point in the wall, and the forms allow you to set both inside and outside walls at the same time. Placing the ties into the notches will hold the panels erect, and keep them securely together. By engaging the attached levers, the panels are now locked together. You can see how the speed and simplicity of the Advance system makes it the favorite of concrete contractors.

## ADVANCE CONCRETE FORMS DELIVER!

**Accuracy** - Each form is equipped with sturdy steel backing bars that become continuous when latched. These provide superior strength and minimize deflection. The result is smooth, straight walls.

**Dependability** - You can depend on hundreds of smooth walls because Advance forms are made with high-density overlay plywood panels. This overlay adds to panel life, gives smooth results and minimizes absorption of oil and water to maintain a lightweight panel.

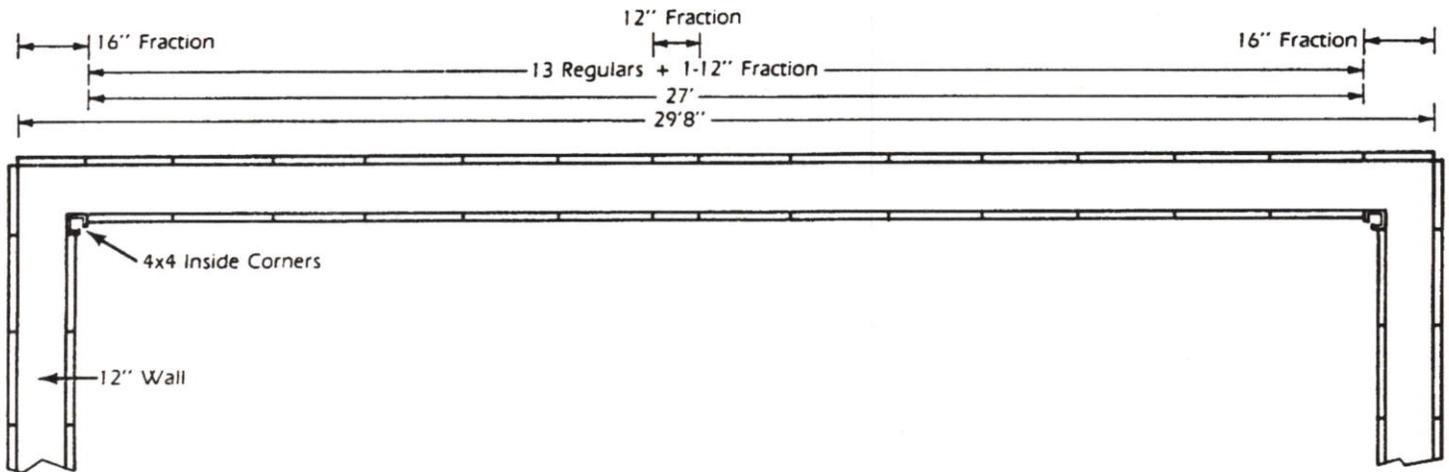
**Flexibility** - Even complex jobs are easy because the flexibility of the Advance system allows you to handle forming basements, offsets, pilasters and most any other forming situation...all with standard panels and corners.

**Quality** - Every panel and component is constructed and assembled by experienced craftsmen. We can even customize forms to suit your special needs.

**Efficiency** - No other system is faster than the Advance Forming System. Our lightweight construction, attached hardware and simple-to-set forms cannot be beat for speed and efficiency.

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## LAYING OUT THE JOB

The Advance system saves you time and money by allowing you to make a layout in advance. Because the steel backing bars butt each other exactly, precise dimensions are maintained. To determine the number of panels, fractions, tie wires and accessories, consult your blueprint or make a sketch yourself. Start at a corner to figure the size of the corner fractions needed. When using the standard 1" x 1" outside corner, just add the wall thickness to the inside corner dimension and you have the size of the fraction needed. For example, if you're pouring the 8" wall and you're using 4" x 4" inside corners, you'll need a pair of 12" (8" + 4") fractions for the outside corner. This works because the 1" x 1" outside corner actually adds no length to the run. However, when using 2" x 2" outside corners, you must take the 2" length into account. So on an 8" wall with 2" x 2" outside corners and 4" x 4" inside corners would require a 10" fraction (8" + 4" - 2").

There are three steps in calculating the number of panels and fractions in a run.

1. Subtract the sum of the corner fractions on the outside wall from overall length of run.
2. Divide this result by 2' to obtain the number of panels required. The remainder is the size of the fraction needed to complete the wall.
3. Double these figures to obtain the requirements for both sides.

For example, when setting a 12" wall 29'8" long with 4" x 4" corners, what combination of forms would be needed? First determine the corner fractions and subtract them from the length of run.

$$12" \text{ wall} + (4" \times 4") \text{ corner} = 16" \text{ fraction}$$

$$16" \times 2 = 32" \text{ or } 2'8"$$

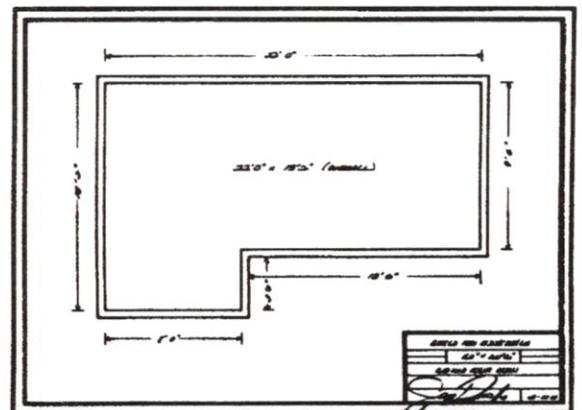
$$29'8" - 2'8" = 27'0"$$

Second, divide 27'0" by 2'.

$$27'0" \div 2' = 13, \text{ with a remainder of } 1'0"$$

So you will need 13 panels and a fraction of 1'0" (or 12") for one side of the wall. Finally, double these figures to get your requirements for both sides of the wall. you will need 26 panels, two 12" fractions and for 16" fractions for both corners. A simple sketch will show the accuracy of this method.

Determining the fractions needed at a "T" is also easy to calculate. Just take the cross-wall thickness and add the sum of the inside corner dimensions to determine the outside wall fractions needed. For a 12" wall with 4" x 4" corners, the fractions needed would be 4" + 12" + 4" = 20". This method is also the most popular for forming stoop walls because nothing special is required.



## SETTING THE FORMS

Before the forms can be set, footings must be installed. Footings can be dug by hand or machine, and grade elevation at the top of the footings is determined with a transit. Then concrete is poured into the trenches and roughly leveled with a 2 x 4. Minor high and low spots (up to 1/2") create no problems because the panels will ride with these imperfections and still anchor to the footing. After the concrete has set, mark the footings for form setting with a chalk line.

To begin the setting operation, it is convenient to start at a corner and work in both directions. Set an inside corner and one panel each way on the inside footing. Place tie wires in the tie slots, making sure the flat of the is horizontal.

Now set the outside panels opposite of the inside ones, threading the ties through the corresponding slots in the outside forms. It is a matter of personal preference if the outside corner fractions are set now or left until later. Before engaging the levers over the tie wires, take a level and check all edges for plumbness on both the inside and outside forming. It may be necessary to slightly adjust one or both of the starter panels to plumb them. Once plumb, engage all levers. Make sure to check the succeeding panels for plumbness, too. A check should be made to see if the inside and outside panels are set squarely opposite each other. If they are set squarely, all the ties should be 90 degrees to the panel face.

After about ten or twelve lineal feet of wall has been set, attach a sidewall brace for protection against the wind. A brace for approximately every 20 feet is usually sufficient.

Any fractions needed are best placed near the middle of a run. However, do not finish the setting of the forms in the middle of a run. Try to end near a corner, because a minor misfitting can be corrected by moving the corner slightly. Be sure to check for plumbness again. If walers are to be used, attach the waler brackets now. Place brackets on every form at the height desired. These are

usually placed on the outside forms, but can be utilized on the inside also, if needed. Place the waler planks on these brackets. If waler brackets and planks are needed, place them at this time. Next, oil the forms. Any windows, doors, beam pockets and bulkheads may be put in now. Make sure windows and doors are set squarely and securely. Make sure all levers are locked, and install top walers or line-up rail on the full perimeter of the forming. This provides positive alignment of the panels, and you are now ready to establish grade elevation for the top of the wall, using a transit. Drive small grade nail into the outside forming at the corners. Snap a chalk line between these nails and put grade nails into the panels along this line. After completing these requirements, you are ready to pour the wall. But first make sure you check:

- 1) All walls and panels for plumbness
- 2) All levers locked
- 3) Line-up rail or top walers installed
- 4) Windows, bulkheads and other inserts secured
- 5) All forms adequately oiled

Always start your pour at or near a corner, because this is the strongest point of the form setting. The two main factors that put stress on forms are the rate of pour and the outside air temperature. The higher the temperature, the faster you can pour; however, we do not recommend pouring more than four feet of concrete per hour - when pouring walls above 8'.

Fill the forms up to the grade nails and strike off, using a thin wood float. Now, while the concrete is still plastic, line up the walls and check for plumbness. Lining up can be accomplished by nailing a block of wood to the outside of the forms at each corner, about three inches below the top. Stretch a mason line between these blocks, and use a third block of the same dimension to check the space between these blocks, and use a third block of the same dimension to check the space between the forms and the mason line. Because the concrete is still plastic at this time, you can push the forms in or out to line up the wall. Use 2 x 4 braces, if necessary, to hold the forms in position.

## STRIPPING

The final step in building concrete walls is stripping. This is done after the concrete has set, usually the next day. Remove line-up rail, waler planks and brackets, bulkhead nails and any bracing. Now break off the ties with a break-off tool so you can release the levers. After the levers have been disengaged, you can strip the forms and move on to the next job.

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