Section 7

Pouring Concrete

PRE-POUR CHECKLIST

CHECK OUTSIDE PERIMETER FOR THESE THINGS

OUTSIDE CORNERS

- □ Any missing bracing lumber on outside corner bracing?
- □ Does the outside corner bracing match the detail manual drawing?
- □ Are there any missing screws?
- □ Are corners plumb in both directions?

BACK SIDE OF T-INTERSECTIONS

- □ Any missing bracing lumber?
- □ Does it look like the detail manual drawing?
- □ Are there any missing screws?
- Are there enough kickers to stop the back side of the T-intersection from popping or bowing?

KICKERS

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- Are the stakes that the kicker attaches to strong enough? (If you can move the stakes with your bare hands, then concrete will move them)
- \Box Are the walls plumb?
- □ Are any screws, bolts, or pins missing?
- □ Is a string line installed for plumbing wall?

RESPONSIBILITY FOR ONES OWN MISTAKES

All too often people try to blame the form system or the company when there is a mistake. THE NUMBER ONE MISTAKE IS THAT PEOPLE DO NOT READ THIS MANUAL! Please remember that the form system does not erect itself, it simply holds concrete to the shape it is braced.

Pre-Pour Check List

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Concrete

-Always follow project specific engineering and applicable codes when determining

the concrete mix design and appropriate reinforcement.

-A standard 3/4" aggregate wall mix is suitable in most cases.

- -A 3/8" aggregate wall mix is good for pumping applications
- -TF Forming Systems, Inc. recommends a 5"-6" slump and professional consolidation of the concrete.
- -Only use water to increase slump by 1" otherwise use water reducing agent. (Super plasticizor)

Methods of placing concrete

- -Front discharge concrete truck (recommended)
- -Concrete pump truck (recommended)

*Use a 5" to 3" reducing flexible hose, or

*Reduce to a 3" hose with a double 90° bend on the end and shut off if available.

- -Rear discharge concrete truck
- -Trailer or "pony" pump
- -Conveyor Truck
- -Crane and bucket

Pouring tips

- -Pour in approximately 4' lifts.
- -Break the fall of the concrete by forcing the concrete to fall over the cross ties of the

stud rails, rebar intersection, or use a square shovel as a deflector.

-Consolidate each lift separately without over consolidating the previous lift.

-Use personnel who have experience pouring concrete walls.

-Check and straighten walls between lifts.

Post Pour

-Smooth the top of the wall.

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-Be sure to install all anchor bolts or rebar for the next level.

-Clean the c-channel after the pour. (A small piece of polystyrene works well.)

Concrete Placement

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Internal Consolidation

Mechanical vibration

Use a 1-1/2" maximum diameter concrete vibrator to internally consolidate the concrete. Contact a TF Forming Systems, Inc. technical representative before using a vibrator larger than 1-1/2".

Concrete should be a 5"-6" slump.

Stay at least six feet behind where the forms are being filled.

On the first lift, run the vibrator down to the footing and pull it back up once in every cell between the stud rails. You should see some water trickle out the bottom of the forms between the footing and the C-channel. If no water trickles out, your concrete slump needs to be checked; the concrete may not be flowing freely enough. For the second and succeeding lifts, drop the vibrator head one foot into the preceding lift to help knit the lifts together.

Vibrating Walls: Do's and Don'ts

Do understand that any form system can be blown out by over vibrating. Common sense is a must!

Do vibrate concrete walls whenever possible. A stiffer mixed concrete that is vibrated has much less head pressure than a wetter mixed concrete that is not vibrated.

Don't allow vibrator to sit in one spot. Always keep it moving.

Don't try to move or flow the concrete in the wall forms with a vibrator.

Don't pour a stiff mix in any wall that will not be vibrated. The chances of getting a void or honeycomb in the wall are significantly increased.

External Consolidation

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If you do not have access to a mechanical vibrator, use a hammer and piece of wood to tap the exterior of the wall.

Concrete should be at a 6"-7" slump when externally consolidating.

Stay at least 6 feet behind the filling position.

Place the board horizontally across two stud rails and tap with a hammer twice at several levels of each poly panel. Use medium velocity taps.

Common sense must be used. Vibrating walls takes skill and knowledge. You can blow out any form system if consolidation is done incorrectly.

Concrete Consolidation

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Small Windows:

- #2 Pour on one side of the window until concrete fills at least halfway across.
- #4 Move hose and fill on other side until bottom of opening is full.Do not fill higher than 6' at any time.

Small Areas:

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In small areas between windows, add some extra horizontal support by screw attaching 2"x4" 's to the window bucks on each side, plus screw to each plastic rail. These areas will have higher than normal pressure wave (Dynamic Load) that normally dissipates down a wall. In these areas, the dynamic load cannot dissipate, therefore creating higher than normal force/pressure on the forms.

Pouring Around Windows

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INSTRUCTIONS:

1. Remove spilled concrete.



Repairing a blowout

Occasionally a poly panel will fail, or "blowout" as it is commonly referred to, and concrete will escape from the form. This can be the result of improper bracing, lack of bracing in the necessary locations, incorrect pouring techniques, or a panel that was damaged in transport or installation.

Rule No. 1 - Don't Panic!

Blowouts happen with any type of concrete form including steel, plywood, and aluminum. One advantage of the ThermoForm system is that a blowout will only affect one panel; thus you will lose only a small amount of concrete, and if repaired correctly the resulting wall will be dimensionally correct and nobody will ever know the difference.

Rule No. 2 - Don't Rush it!

Let the concrete set up slightly so it doesn't continue to run out of the form as you start to repair it. Use this time to organize the tools you will need to complete the repair. You will likely need a shovel and wheel barrow, drywall saw, handsaw, screw gun and screws, and plywood or lumber to cover the replacement panel.

Rule No. 3 - Don't Hold up the Pour!

Have the rest of your crew continue to pour in another area while you repair the form. A blowout is no reason to risk the wrath of the concrete company by keeping their trucks on the job site too long.

Step No. 1 - Remove the concrete that has spilled from the form. It can be put back into the wall if possible or spread out in a thin layer to keep from interfering with pouring the concrete floor (if this is a basement pour).

Step No. 2 - Remove the damaged panel, or as much of the damaged plank as is required to complete the repair. If a portion of the panel is intact it may still be used in the form.

Step No. 3 - Replace the damaged panel or the portion of the panel that is damaged with a replacement panel pushed in place from the top of the wall. (See the diagram on the facing page.)

Step No. 4 - Carefully place concrete in repaired area in a few lifts so as not to put undue strain on the repaired area.

If these directions are followed carefully a blowout is quickly and easily repaired and does not affect the pour or the resulting wall in any way. The replacement poly panel will adhere to the concrete behind it and will stay in place after the temporary bracing is removed.

 Repairing a Blowout
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AFTER THE POUR

- Clean up concrete spills and splatter off turnbuckles, scaffold, and floor.
- Once the color of the concrete starts turning lighter, begin removing spillage off the poly panels, plastic rails, window & door bucks, and any bracing.
- Wait a proper amount of time to remove bracing. The next day is suitable to remove all bracing except that which is holding up headers and kickers.
- Header bracing must stay in place until concrete is cured sufficiently enough that it will support its own weight (and the weight of any load placed on it, such as a floor joist) without cracking. 7 days of cure is generally a safe guideline to follow. Ask an experienced and knowledgable concrete supplier when unsure.



Post-Pour Instructions

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