

The Pre-Pour Walk: teacher script

Apprentices and construction-management students check every plumbing and conduit stub-out against the plan, from two gridlines, before the concrete makes a mistake permanent.

Prep: Tape the 16 ft x 20 ft slab outline (or roll out the print). Mark gridline A on the west edge and gridline 1 on the south edge. Place the stub-out markers at the AS-PLACED positions on the teacher scenario sheet (not the plan positions). Leave P4 out on purpose. Print one check sheet per team.

Teacher only: place the markers at these AS-PLACED positions (x, y from gridlines A and 1). P1: 22 in, 14 1/2 in; P2: 60 1/4 in, 29 3/4 in; P3: 120 in, 96 in; P4: leave out; E1: 152 1/2 in, 140 in; E2: 230 in, 10 3/4 in.

Min	Step and what to do	Ask	Listen for
0-5	Hook Show the slab outline. "Tomorrow at 7 a.m. this is about 4 yards of concrete. What do we check tonight?"	What gets buried in a slab?	Drains, water lines, conduit, sleeves.
5-12	Model one item Measure P3 from gridline A (x) and gridline 1 (y) with two tapes held square. Read to 1/8 in. Compare with the plan: 120 in and 96 in.	Why two references and not one?	One measurement fixes a line; two fix a point.
12-35	Teams check P1-P6 Teams measure every item, record the offsets, and mark OK, FAIL or MISSING against the tolerance: plumbing within 1/2 in, conduit within 1 in.	Which items failed, and by how much?	P1 1 1/2 in short in y, E1 2 1/2 in long in x, P4 missing.
35-45	Code check For the water closet, measure from the finished-wall lines (4 in inside the slab edges) to the drain center.	Will a standard 12-in rough-in toilet fit? Is the side clearance at least 15 in?	Back 10 1/2 in: too tight for a 12-in rough-in. Side 18 in: passes 15 in.
45-55	Hold list Teams write the hold list: item, error, fix, who.	Do we pour tomorrow?	Not until P1 and E1 are moved and P4 is installed and re-checked.
55-60	Exit ticket Individual exit ticket.		

Common misconceptions

- **Learners may think:** If it is within an inch it is fine. **Address it:** Tolerances differ by trade and fixture; a toilet rough-in has almost no room. Use the stated tolerance for each item.
- **Learners may think:** We can fix it after the pour. **Address it:** After the pour, a move means saw-cutting, trenching and patching. The walk is the cheapest moment to catch it.

Supports

- Pre-mark the gridlines with large letters and numbers; give the tape-reading card (eighths of an inch) to anyone who wants it.
- Multilingual learners: label each marker with its ID and a picture of the fixture.
- Mobility: one teammate can read tapes seated at the gridline while another holds the far end.

References

- **Perkins V (CTE):** postsecondary and secondary CTE program context
- **IRC R307.1 / IPC 405.3.1:** water closet side clearance of at least 15 in from the centerline (check the edition your jurisdiction adopted)

Scenario sheet

Slab 20 ft (east-west) x 16 ft (north-south). Gridline A = west slab edge; gridline 1 = south slab edge. x is measured east from A, y north from 1, in inches. Finished wall faces sit 4 in inside the slab edges (3 1/2-in studs + 1/2-in drywall). Tolerance: plumbing within 1/2 in, conduit within 1 in, both directions.

ID	Item	Plan x	Plan y
P1	Water closet drain (center)	22 in	16 in
P2	Shower drain (center)	60 in	30 in
P3	Floor drain (center)	120 in	96 in
P4	Cleanout (center)	200 in	60 in
E1	Conduit stub, island receptacle	150 in	140 in
E2	Conduit stub, panel feed	230 in	10 in

LEARNER SHEET • THE PRE-POUR WALK

Name _____ Date _____

ID	Measured x	Measured y	dx	dy	OK / FAIL / MISSING
P1					
P2					
P3					
P4					
E1					
E2					

Water closet P1: back to finished wall _____ in (needs 12 in for a 12-in rough-in) side to finished wall _____ in (15 in minimum)

Hold list

Item	Error	Fix	Who

Exit ticket

1. Name the two references you measure a stub-out from on a slab.

2. P1 sits 1 1/2 in toward the back wall. What two things does that break?

3. Write one hold-list line for the missing cleanout.

Answer key

ID	dx	dy	Result
P1	0 in	-1 1/2 in	FAIL
P2	1/4 in	-1/4 in	OK
P3	0 in	0 in	OK
P4	-	-	MISSING
E1	2 1/2 in	0 in	FAIL
E2	0 in	3/4 in	OK

P1 back to finished wall: 10 1/2 in (a 12-in rough-in will not fit); side: 18 in (passes 15 in).

Hold the pour: move P1 1 1/2 in north, move E1 2 1/2 in west, install P4; re-check all three.

Exit ticket

1. Name the two references you measure a stub-out from on a slab.

Answer: Two fixed, perpendicular references: gridlines or established slab edges.

2. P1 sits 1 1/2 in toward the back wall. What two things does that break?

Answer: It is outside the 1/2-in tolerance, and the 12-in rough-in no longer fits (10 1/2 in to the finished wall).

3. Write one hold-list line for the missing cleanout.

Answer: P4 cleanout missing at 200 in / 60 in: plumber to install and re-check before pour.

Scoring: Item 1: 1 point. Item 2: 2 points (tolerance and fit). Item 3: 2 points (item, location, action). 4 or more = secure.