

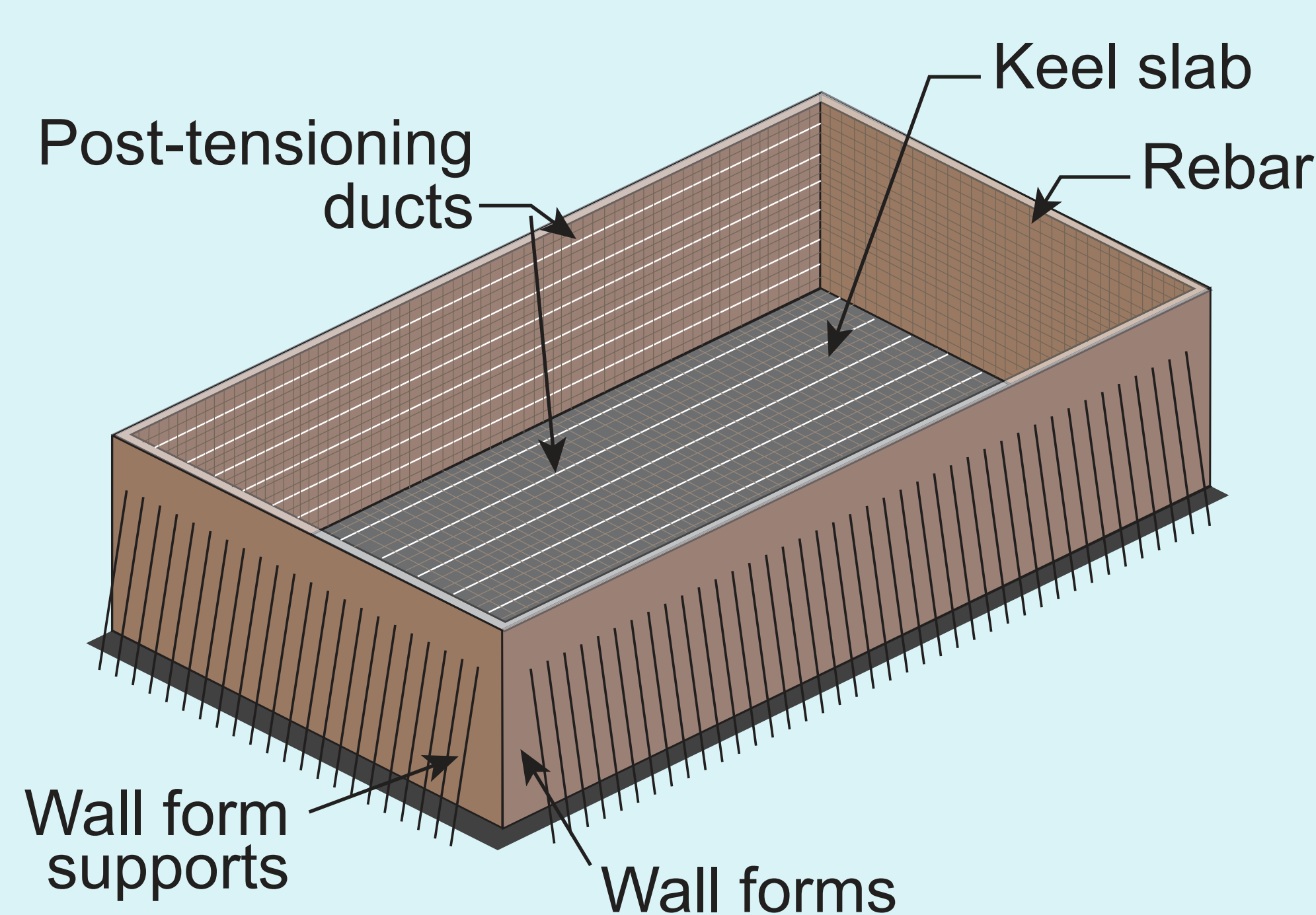
HOW TO BUILD A PONTOON

A bridge pontoon basically is just a box. A re-e-e-ally big, watertight concrete box. Here on the SR 520 floating bridge, 77 pontoons keep the roadway afloat and stable. Each of the 21 biggest ones is longer than a football field, as tall as a three-story building, and as heavy as 1,600 African bull elephants.

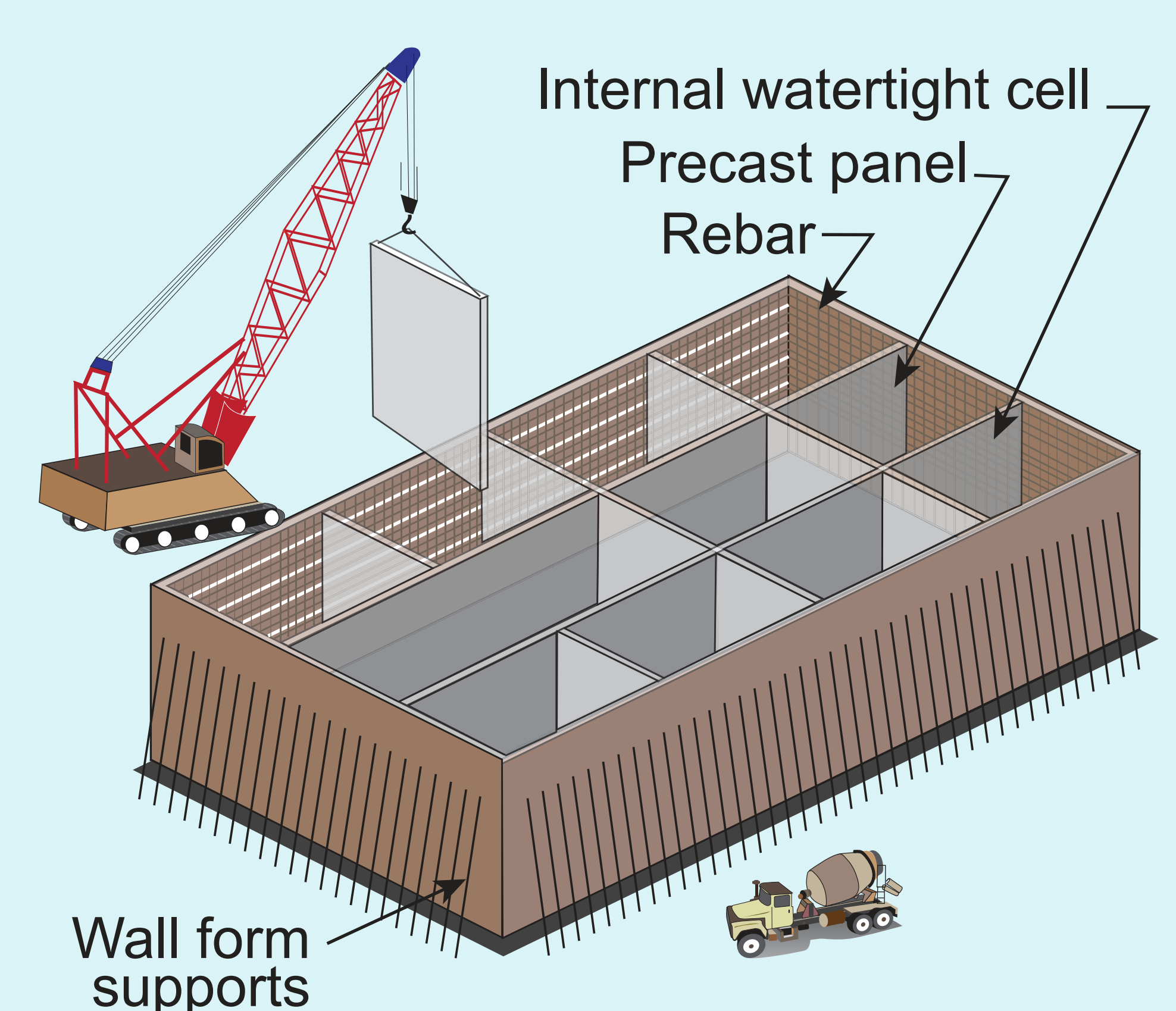
We built all of the jumbo pontoons next to Grays Harbor in Aberdeen, Wash. Most of the smaller, “supplement stability” pontoons were built along Commencement Bay in Tacoma, Wash. It took about 6 months to build each set of pontoons. There were six to eight pontoons in each set, or “cycle,” and six total cycles.

THE 6 MAJOR STEPS FOR CONSTRUCTING PONTOONS:

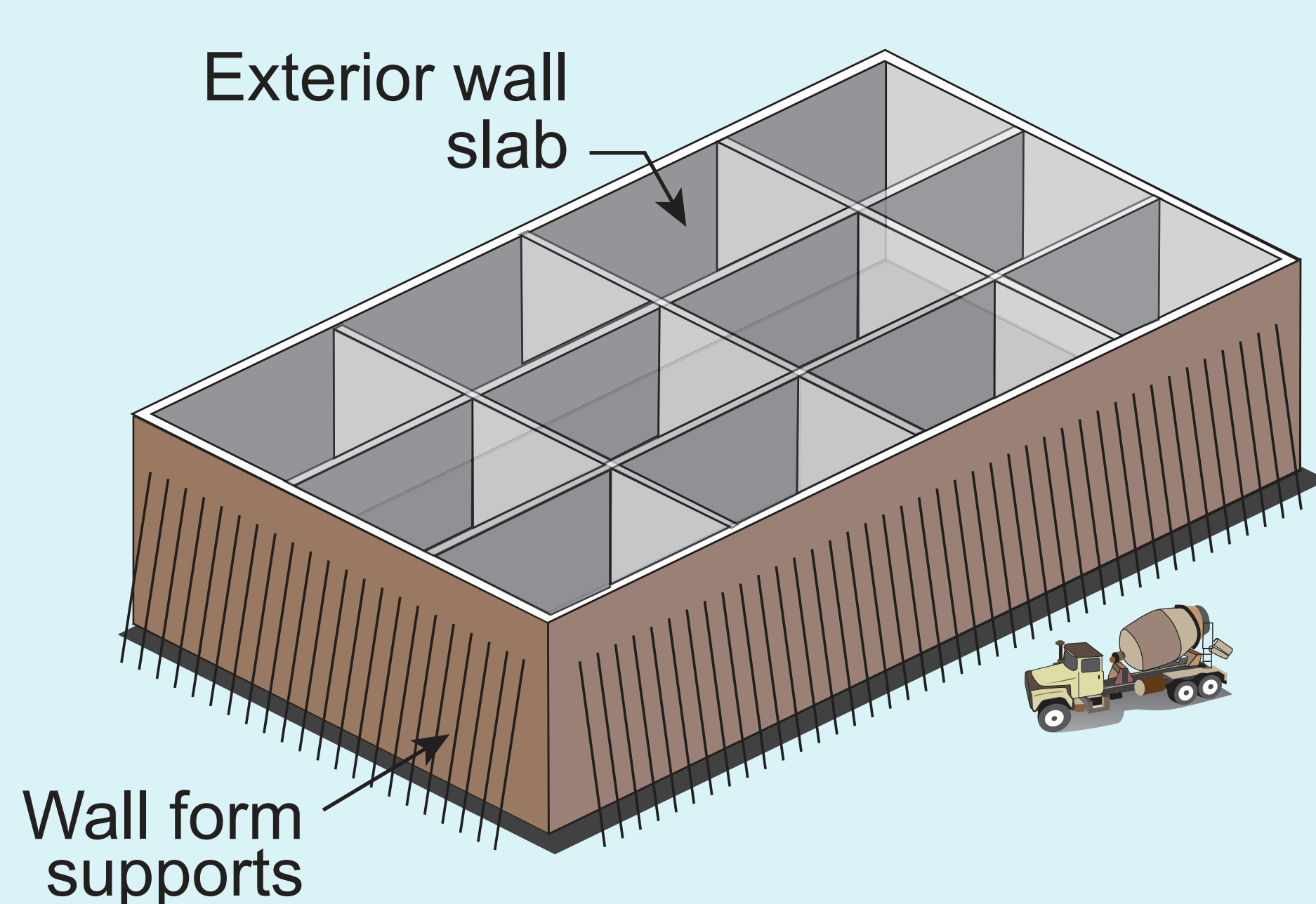
STEP 1: Set the wall forms; install rebar and ducts for the post-tensioning cables



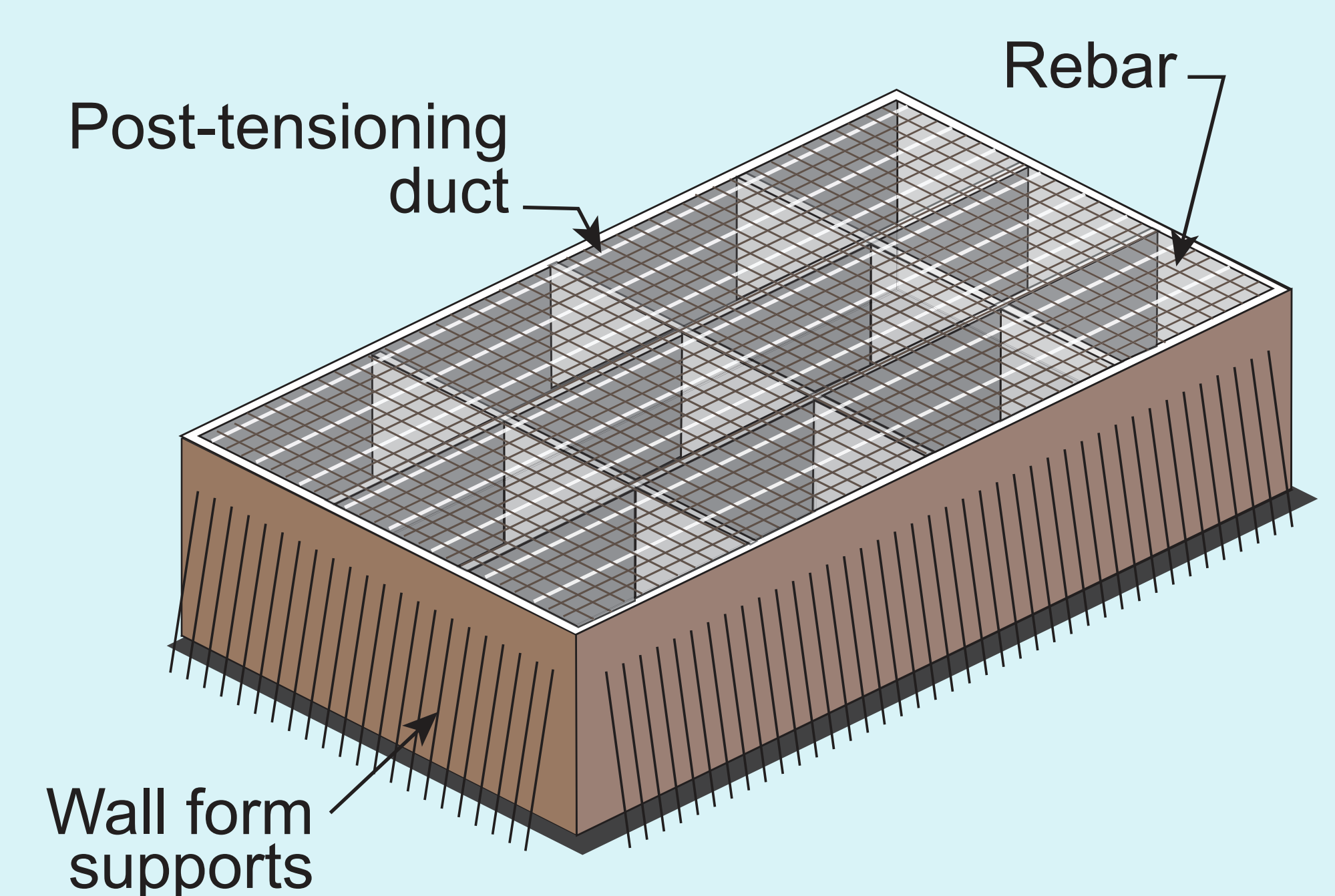
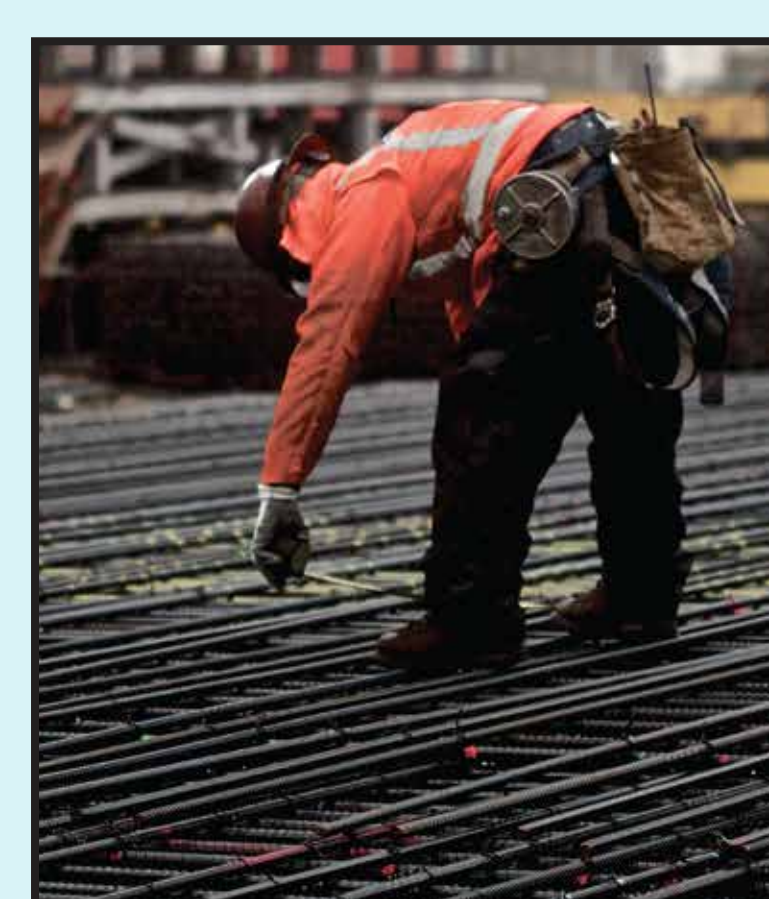
STEP 2: Install precast walls for the interior chambers; pour concrete for the pontoon floor, or “keel slab”



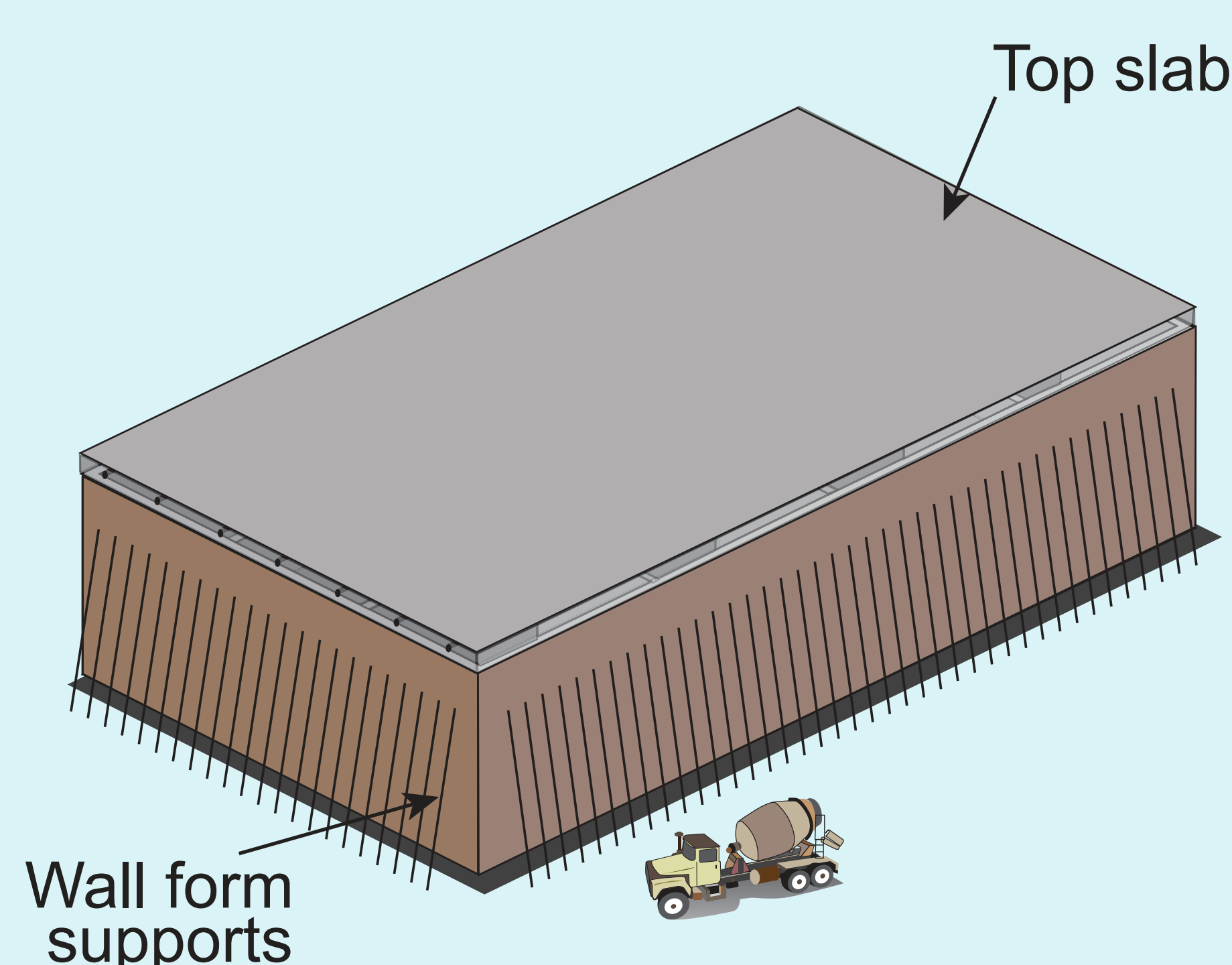
STEP 3: Pour concrete for the exterior walls and the joints between interior, precast walls



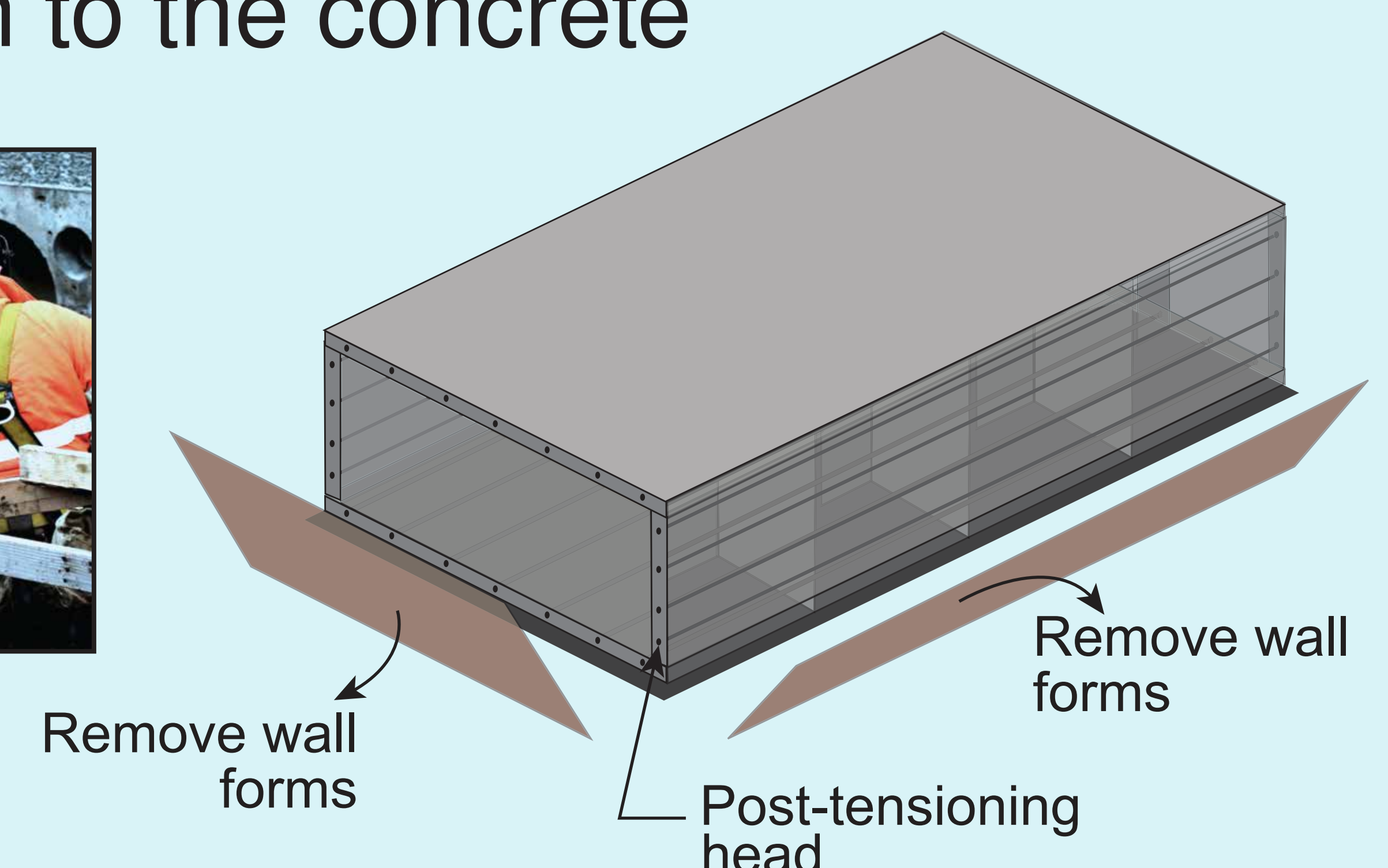
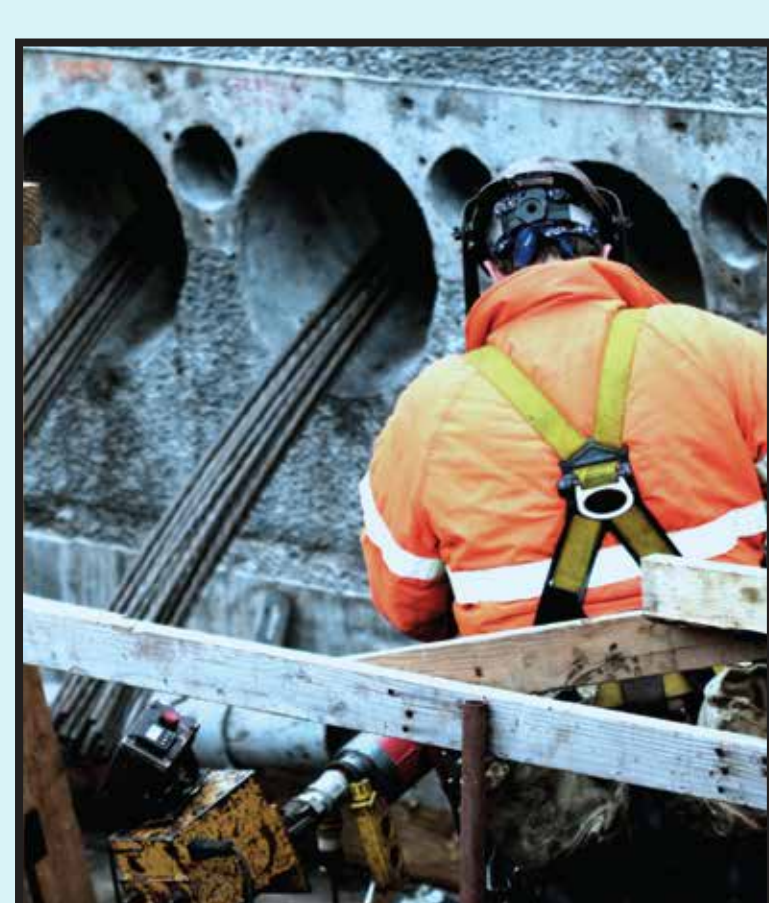
STEP 4: Install rebar and post-tensioning ducts for the pontoon’s top slab



STEP 5: Pour concrete for the top slab



STEP 6: Remove plywood wall forms and perform post-tensioning to add strength to the concrete



PONTOON FACTS:

LONGITUDINAL PONTOON

- 22 million pounds of concrete and steel rebar
- 360 ft L x 75 ft W x 30 ft H
- Designed to last at least 75 years

SUPPLEMENTAL PONTOON

- Up to 5.6 million pounds of concrete and steel rebar
- 98 ft L x up to 60 ft W x 28 ft H
- Designed to last at least 75 years