Fall 2018 Las Vegas

Constructability of Elevating Concrete Slabs on Grade

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Lateral forces from moving floodwater
Typical foundation connections

- Cast-in-place bent reinforcing steel
- Turned down slab on grade
- CMU pier
- Strap from cast into pier

- Designed strap from pier to sill
- Designed overlap

- Sill
- Strap from pier to sill

- Designed hook

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Slab separation method
Slab separation method
Slab separation method
Slab separation method
Slab separation method
Slab elevation

Slab on grade
After excavation around the foundation holes are made in the foundation wall below the slab, tunnels are dug underneath the slab, and the I-beams and jacks are installed.

Figure 5-9a through 5-9d. Elevating a slab-on-grade home with the slab attached.

FEMA, Homeowner’s Guide to Retrofitting, p. 5-13
Slab elevation – safety issues

http://media.nola.com/hurricane_katrina/photo/house-collapsejpg-594f2450adfabc69.jpg
Slab elevation – unsupported spans
Slab elevation – unsupported spans
Slab elevation – bearing areas
Slab elevation – prestressing tendons
Slab elevation – hydraulic jack placement/slippage
Slab elevation – “crack repair”
Slab elevation – “crack repair” anchor stick-out
Questions?

We built that.

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