PT Slab-on-Ground
Technical Session 5

The Impact of the IRC 2024 Code Change on Residential PT Slab-on-Ground

Speaker: Tim Christle

8:05am – 8:30am

The Impact of the IRC 2024 Code Change on Residential PT Slab-on-Ground

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Learning Objectives

At the end of this presentation, you will be able to…

- Understand the specifics of the IRC 2024 code change related to residential PT slab-on-ground design
- Understand how the requirements in PTI DC10.5 relate to PTI M10.6 and DC10.2 requirements
- Learn more about PTI plant certification and unbonded PT materials used in PT slabs-on-ground
- Learn more about PTI field personnel certification and both installation and inspection of PT slab-on-ground construction
- Understand the positive impacts this code change will have on residential PT slab-on-ground project stakeholders

IRC Code Change

Stronger Standards, Exceptional Structures

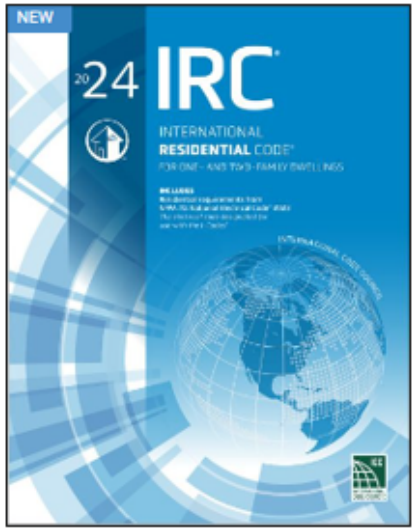
IRC Code Change

- 2024 International Residential Code (IRC)

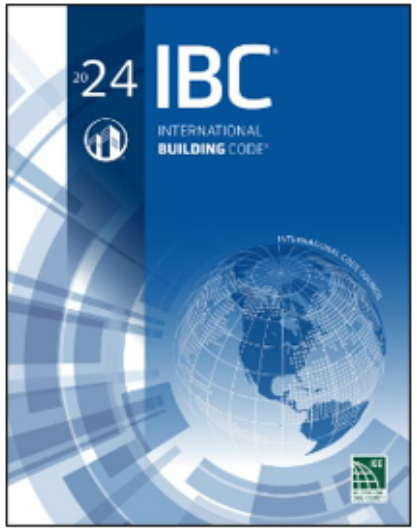
R506.2 Post-tensioned slab-on-ground floors. Post-tensioned concrete slabs-on-ground floors placed on expansive or stable soils shall be designed in accordance with PTI DC10.5.
(Re-designate the remaining sections.)

PTI Post-Tensioned Institute. DC10.5-19: Standard Requirements for Design and Analysis of Shallow Concrete Foundations on Expansive and Stable Soils

- A direct reference to PTI DC10.5 for design requirements
- No longer ACI 332 → ACI 360 → PTI DC10.1



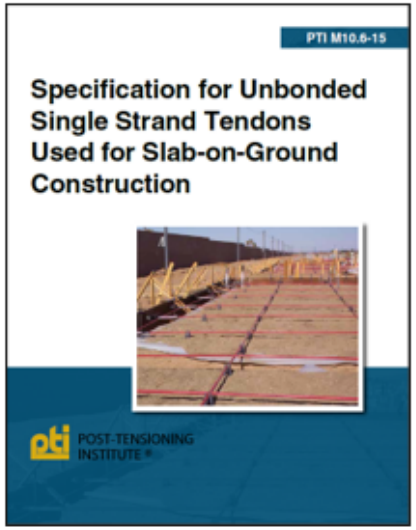
PT DESIGN



PT DESIGN

PTI PLANT CERTIFICATION

PTI FIELD PERSONNEL CERTIFICATION



PTI FIELD PROCEDURES

IRC Code Change

- DC10.5-19
  - Standard Requirements for Design and Analysis of Shallow Post-Tensioned Concrete Foundations on Expansive and Stable Soils
    - 10.2.1.1 – Tendons shall conform to PTI M10.6-15

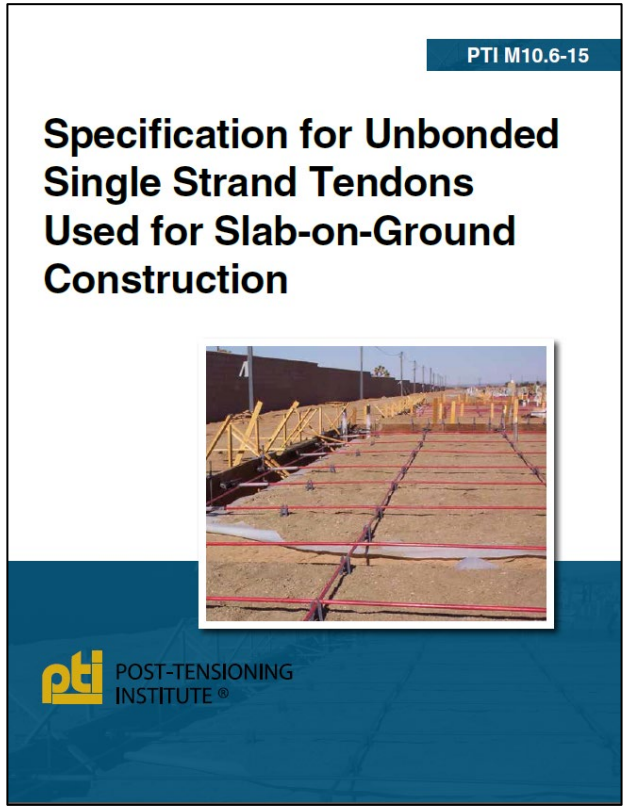
10.2 — Reinforcement

10.2.1 — Prestressed reinforcement

10.2.1.1 —Tendons shall conform to PTI M10.6-15.[13]

IRC Code Change

- M10.6-15
  - Specification for Unbonded Single Strand Tendons Used for Slab-on-Ground Construction
    - 1.6 – Fabrication
      - 1.6.1.1 and 1.6.1.2 – PTI certified plants or equal
    - 3.0 – Execution (Installation, Stressing, Finishing, Inspection)
      - Shall conform to the procedures of PTI DC10.2



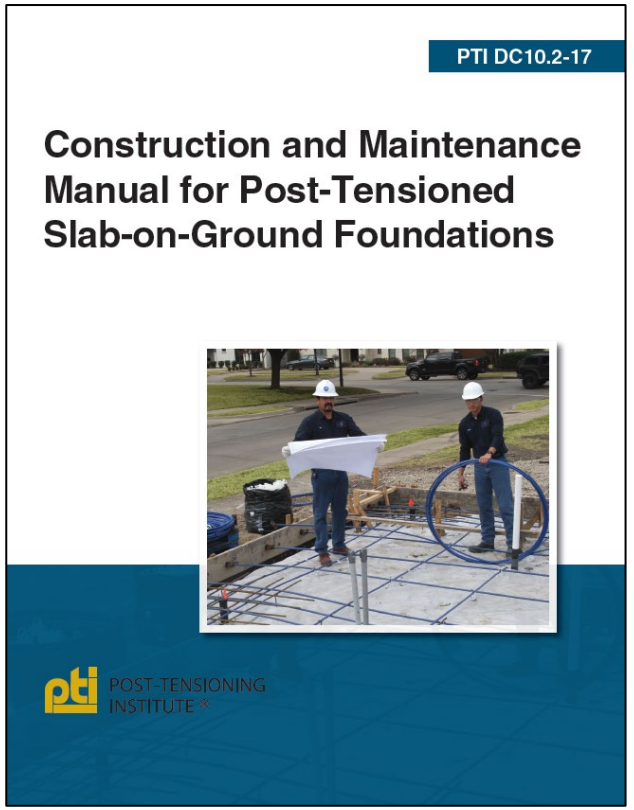
1.6.1.1 — PTI certified plants

Plants shall be certified by the Post-Tensioning Institute (PTI) according to the procedures set forth in PTI-CRT20 G1.

3.1.1.1 — Installation and stressing shall be performed under the supervision of individuals holding a current certification from the PTI Slab-on-Ground Installer/Stressor Field Certification Program or equivalent, unless otherwise specified in the Contract Documents.

IRC Code Change

- DC10.2-17
  - Construction and Maintenance Manual for Post-Tensioned Slab-on-Ground Foundations
    - Field personnel certification – installation, stressing, inspection
    - PT and rebar installation supervisor
      - Level 1 or 2 Slab-on-Ground Installer Certification or
      - Level 1 Unbonded PT Installation Certification
    - Stressing operation personnel
      - Level 1 or 2 Slab-on-Ground Installer Certification or
      - Level 2 Unbonded PT Installer
    - Inspection
      - Level 2 Slab-on-Ground Inspector or
      - Level 2 Unbonded PT Inspector



IRC Code Change

- PTI Website (www.post-tensioning.org)
  - Plant Certification
    - Certification of Plants Producing Unbonded Single Strand Tendons
    - Find a Certified Plant
  - Field Personnel Certification
    - Level 1 & 2 Slab-on-Ground Installer & Inspector
    - 2024 Certification Weeks upcoming
      - Houston – May 6-10
      - Miami – September 9-13
      - Denver – October 21-24
      - Austin – November 18-24
      - Special request workshops

IRC Code Change

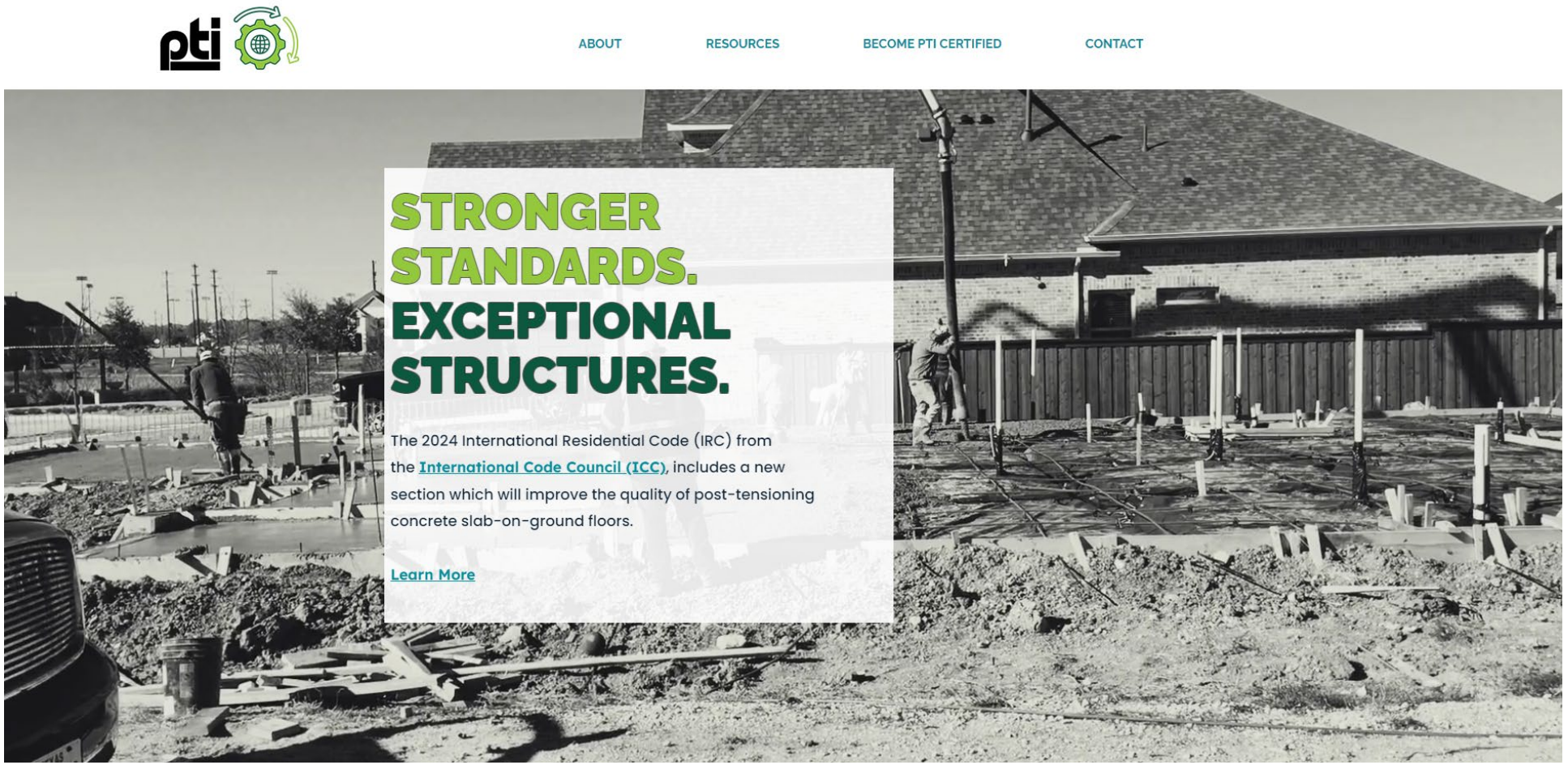
- Major benefits
  - Higher-quality materials
  - Higher-quality installation, stressing, finishing, inspection
  - Improved safety
  - Schedule savings
  - Fewer troubleshooting incidents
  - Improved structural durability
  - Fewer homebuilder warranty issues, greater risk mitigation

IRC Code Change

- PTI education goals
  - Licensed design professionals (LDP), architects and designers/builders
  - Municipalities and building inspectors
  - Homebuilders, contractors, subcontractors and suppliers
  - Home sellers, real estate agents and homeowners

https://www.ptstrongerstandards.com/

IRC Code Change



Questions

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This concludes the Educational Content of this activity.

Thank you for your interest in this presentation. If you have questions or would like more information, you can contact me at:

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