What is PPCP?

- **Precast** Prestressed Concrete Pavement
  - “Standardized” full-depth precast panels
  - Keyed panel joints for vertical alignment during assembly (generally, not match-cast)
  - Constructed over a prepared base (HMA, LCB, Aggregate Base, etc.)
What is PPCP?

- Precast *Prestressed* Concrete Pavement
  - 2-way prestressing
  - Combination of pretensioning/post-tensioning
  - *Or* 2-way post-tensioning
  - Bonded/grouted P-T system
Typical PPCP Panel

- Ducts for Post-tensioning
- Continuous Shear Key
- Pretensioning Strands
Typical PPCP Panel Layout

- Duct Holes
- Polyethylene Sheet

Joint Panel
Base or Existing pavement

Traffic Flow
Typical PPCP Panel Layout

Joint Panel  Base Panel  C.S. Panel  Base Panel  Joint Panel
(Multiple)  (Multiple)  Base or Existing pavement
Typical PPCP Panel Layout
Typical PPCP Panel Layout
Benefits

◆ *Why Prestressed Concrete?*

- Reduces/eliminates slab cracking *(maintenance)*
- Reduced number of joints *(maintenance/smoothness)*
- Reduced Slab Thickness *(8” vs. 12”)*
  - Material savings
  - Allows for replacement of pavement in-kind
- Ability to span voids/unsound support layers
- Proven Long-Term Performance
  - 6” CIP post-tensioned pavement constructed in 1985 (near West, Texas)
  - Virtually no maintenance in 23 years