

FULL DEPTH PRECAST PRESTRESSED CONCRETE PAVEMENT SYSTEM

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Background

- Focus on **full-depth**, large scale pavement construction for new pavements or **removal and replacement of existing deteriorated pavements**.
- Overnight or weekend construction time frame
- Extended design life compared to conventional PCC pavements

Background

- Benefits
 - Expedited construction ↑ Reduced User Costs



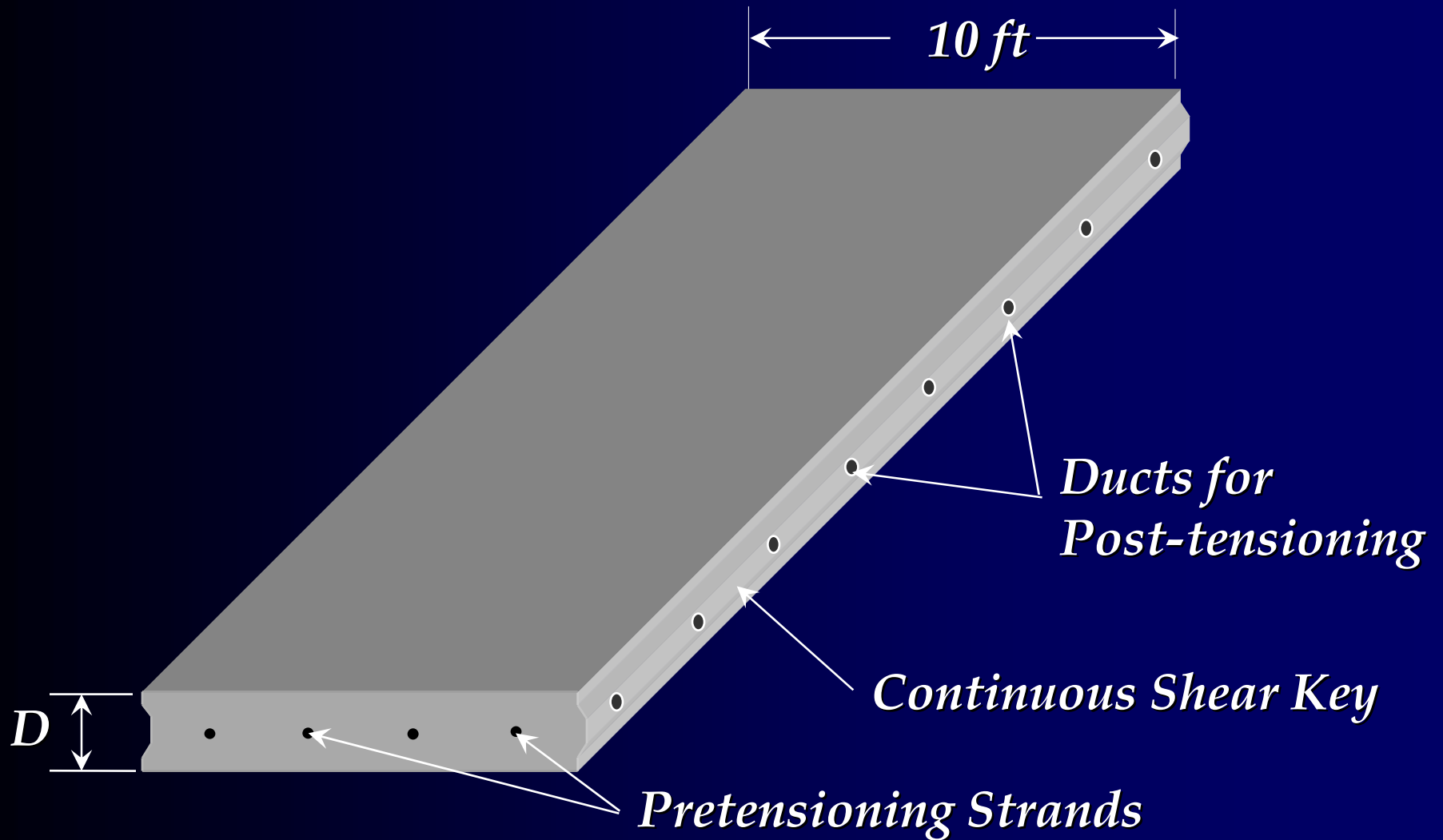
Background

- Benefits
 - Expedited construction ↑ Reduced User Costs
 - Reduced pavement thickness
(prestressed pavement)
 - Controlled concrete fabrication conditions ↑
Improved performance

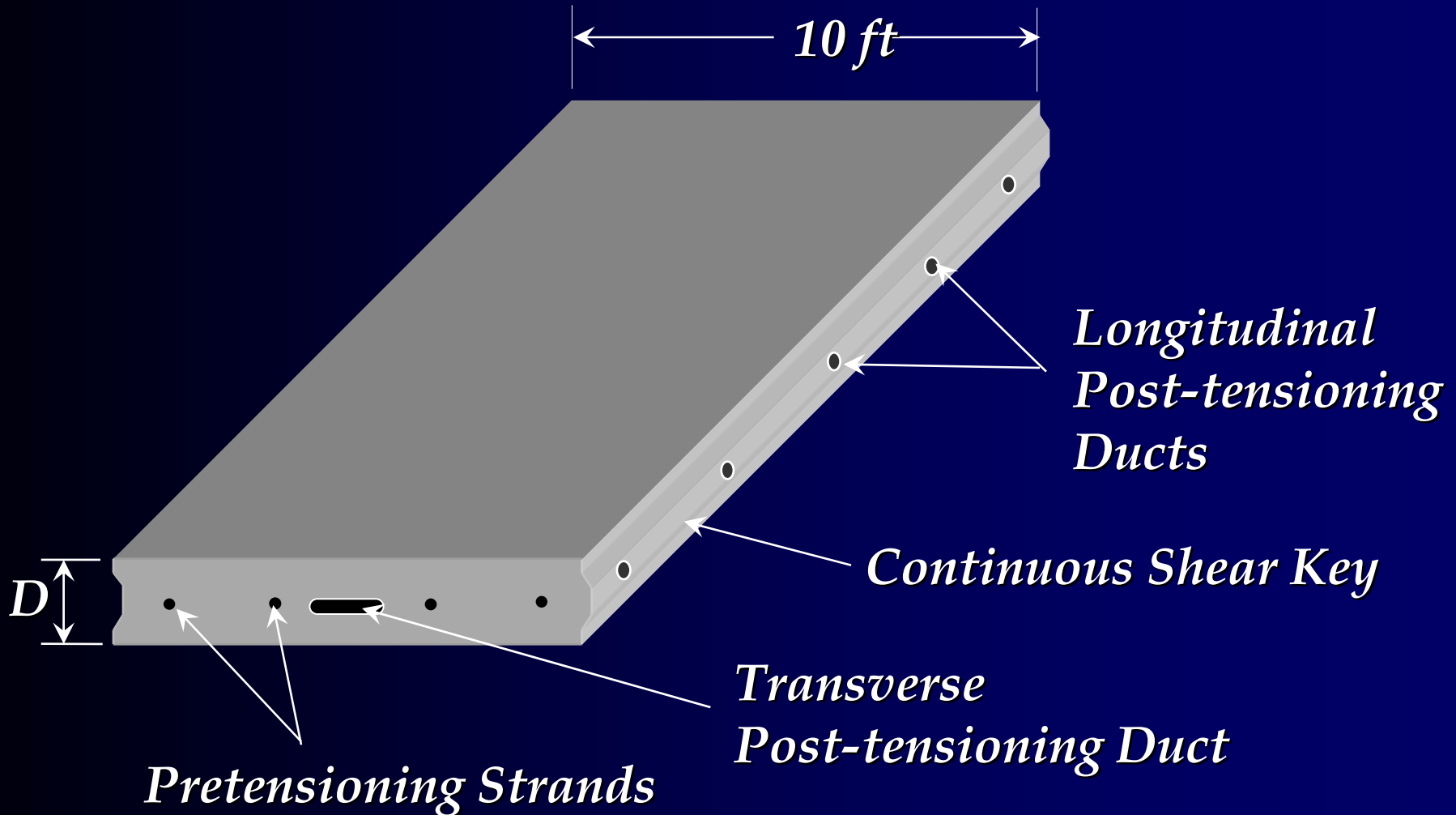
Proposed Concept

- Surface preparation
 - 2" ACP layer as leveling course, plane/grind if necessary
 - Place single layer of polyethylene as friction reducing membrane
- Joints
 - Epoxy – similar to segmental bridge construction

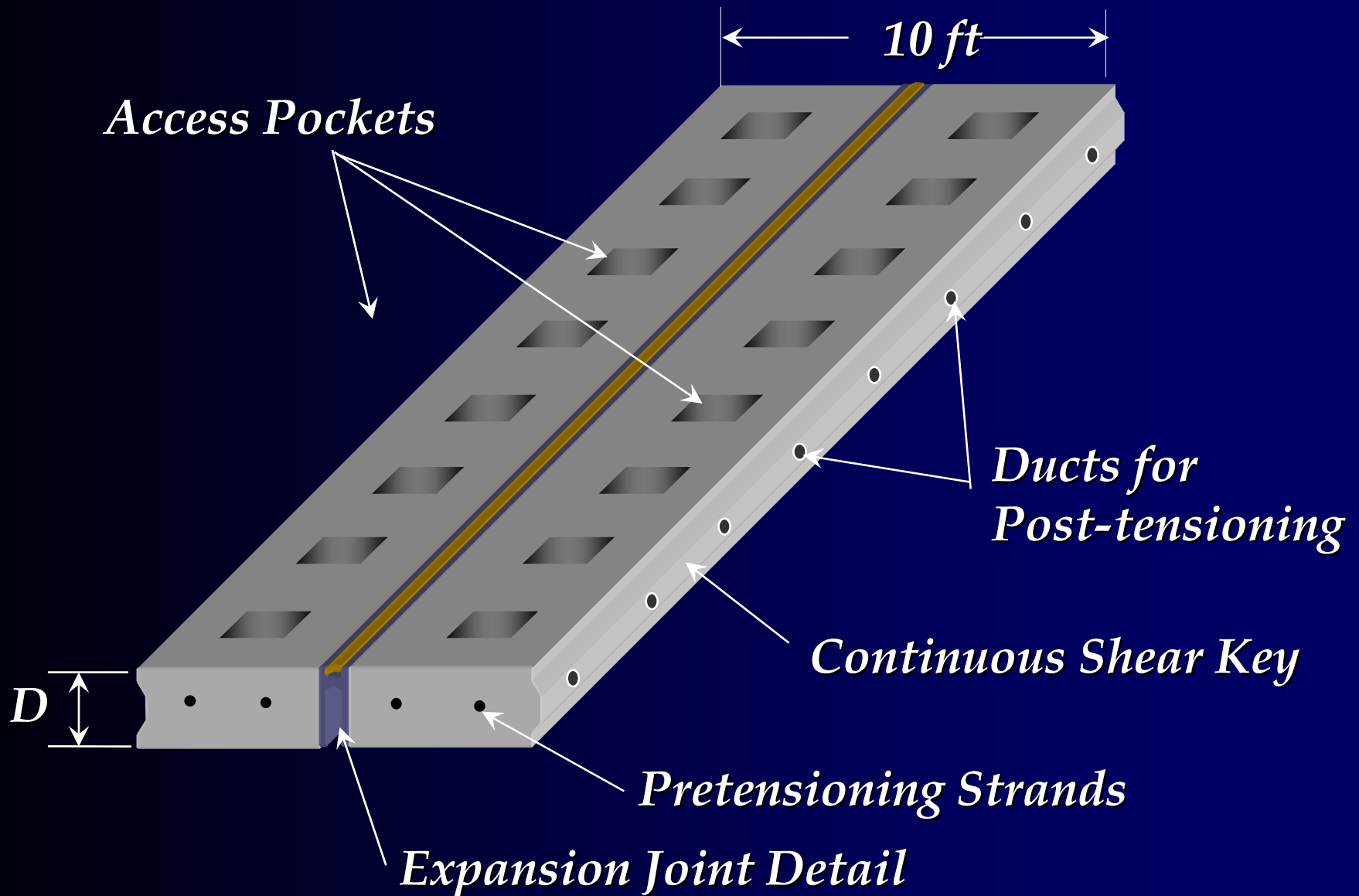
Base Panel



Base Panel: “Partial Width” Panels

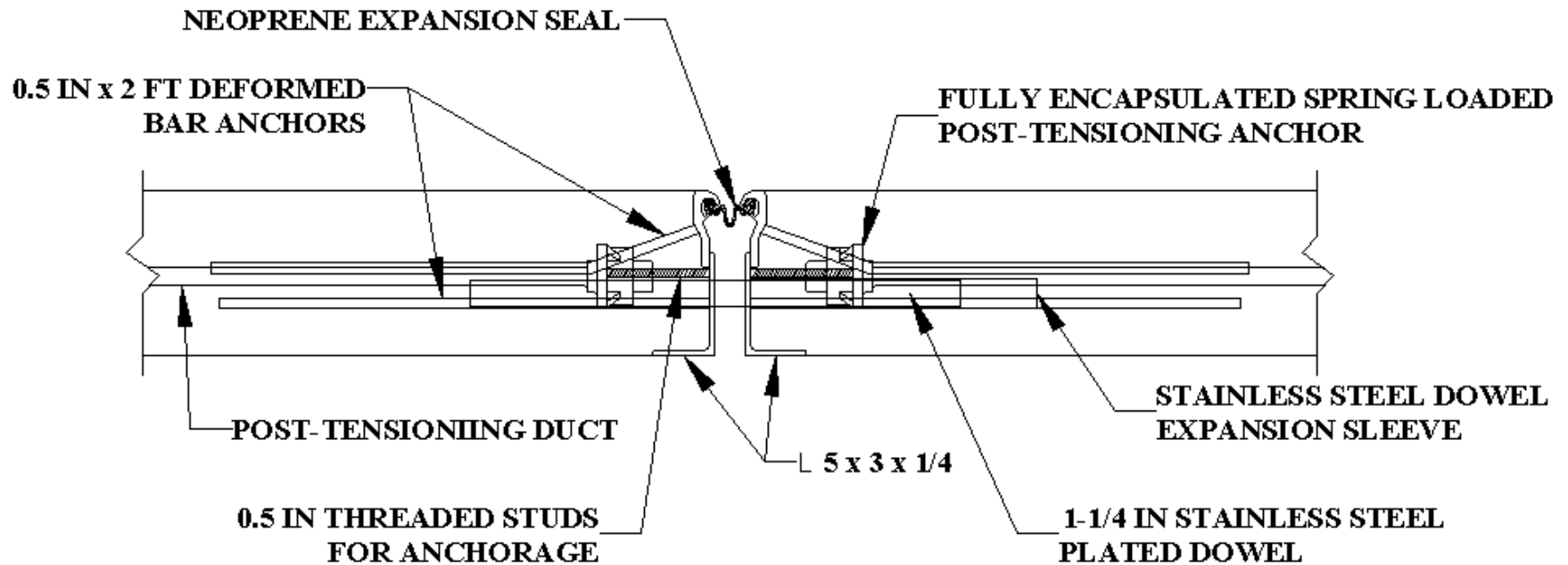


Expansion Joint Panel



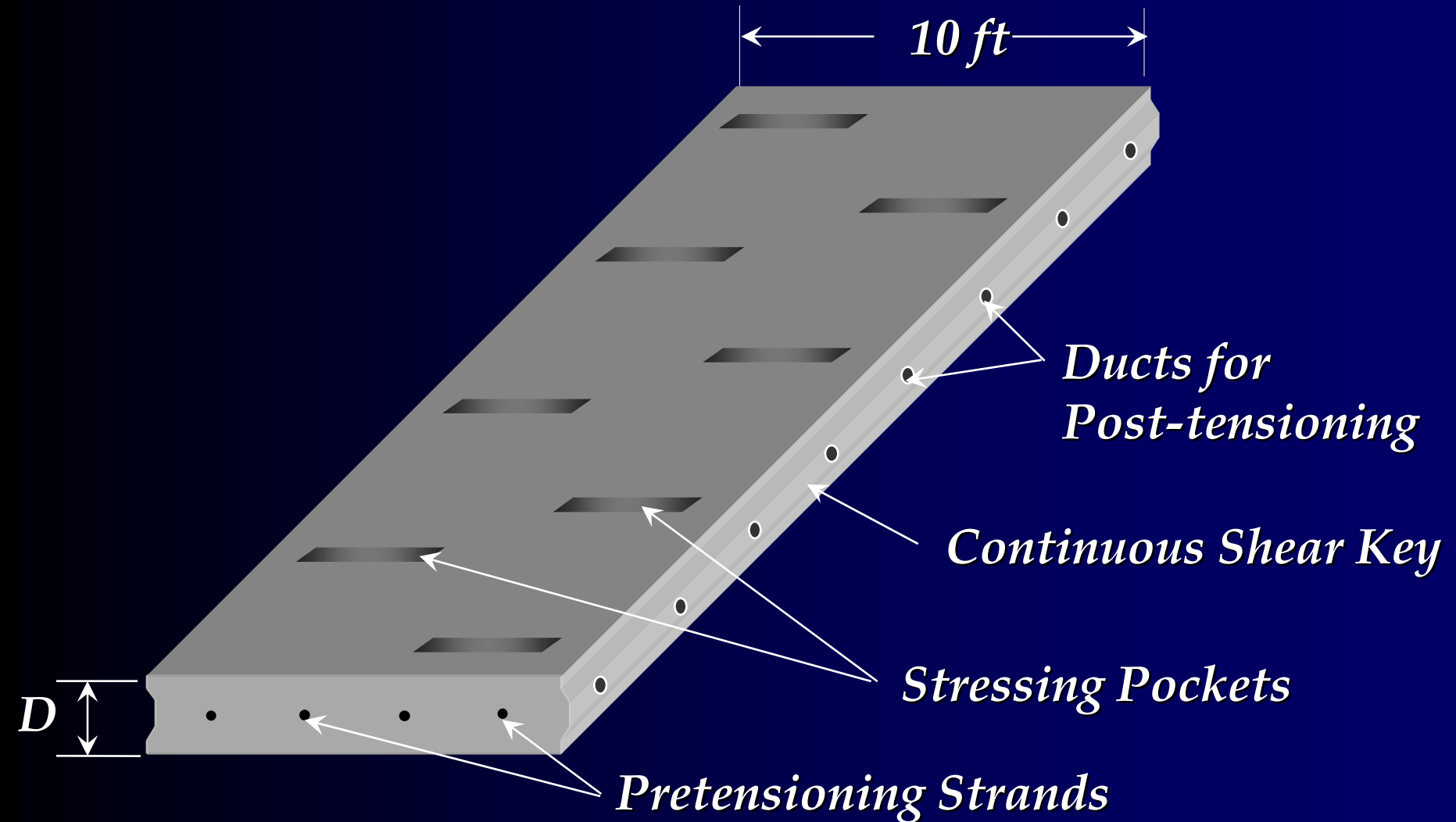
Expansion Joint Detail

Joint Panel



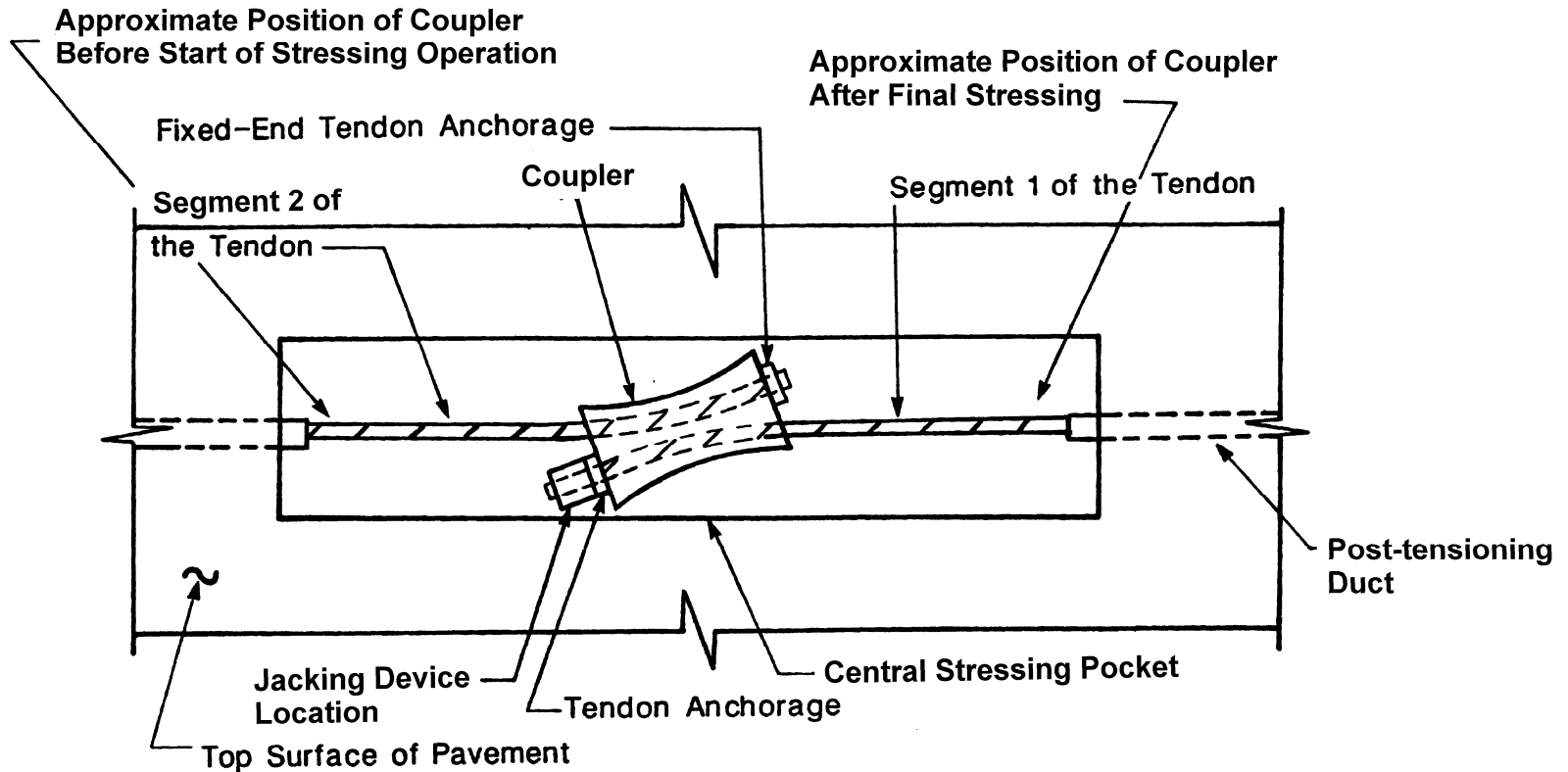


Central Stressing Panel



Central Stressing

Coupler/Stressing Device in Stressing Pockets

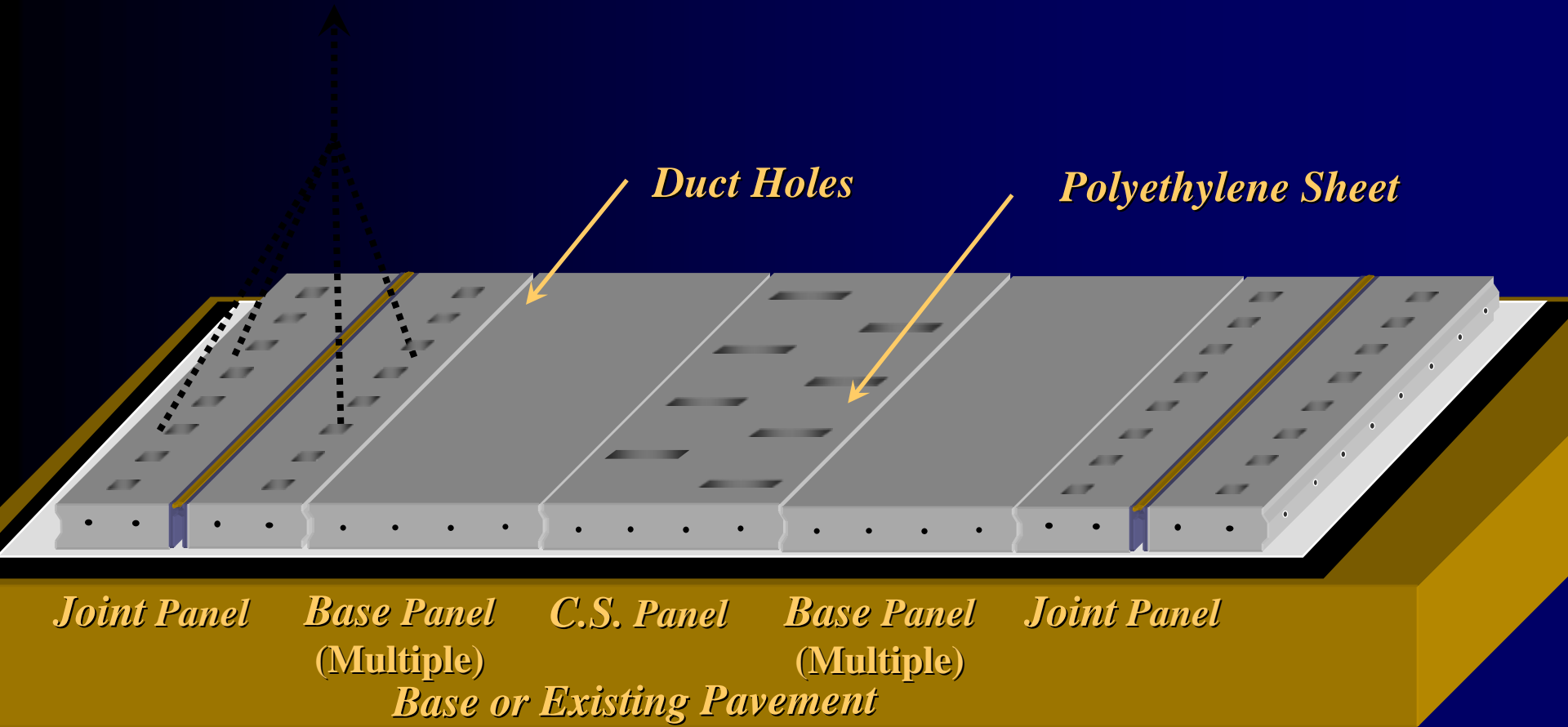


Plan View

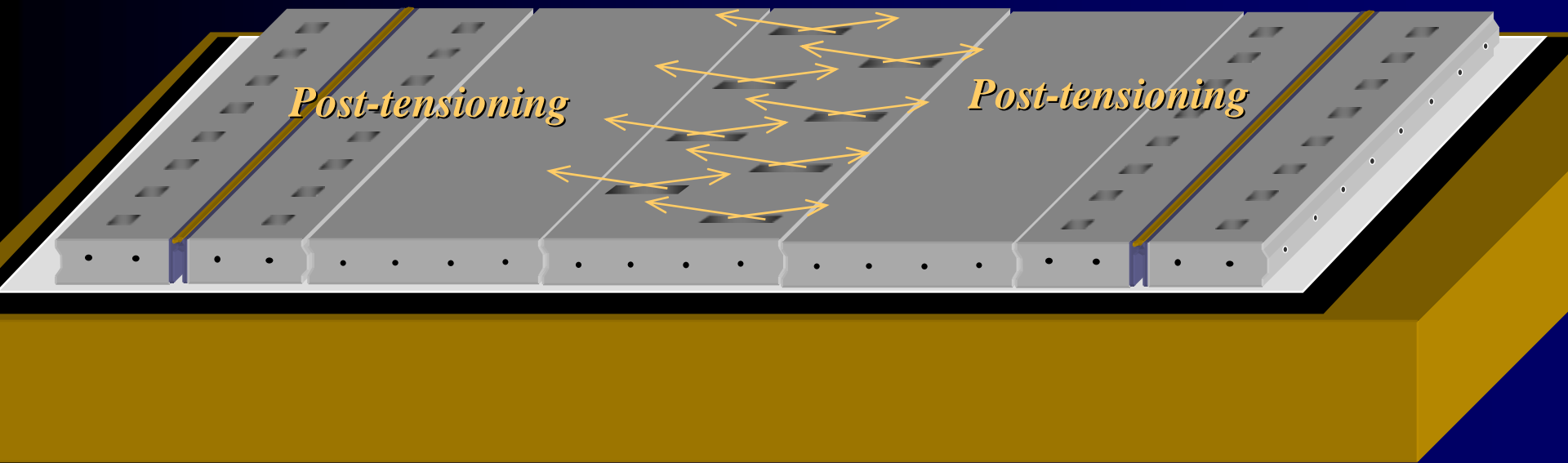
Central Stressing Circumferential Tank Anchors



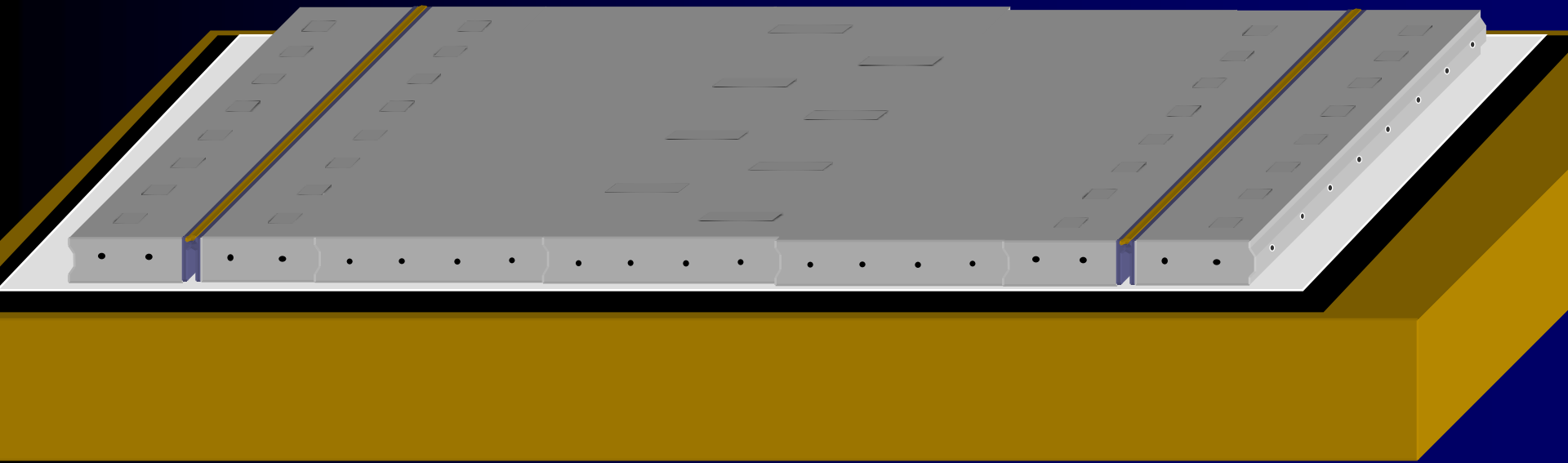
Panel Assembly



Panel Assembly



Panel Assembly



Fabrication



Fabrication



Fabrication



Fabrication



Fabrication



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Fabrication



Fabrication



Fabrication



Fabrication



Fabrication



Fabrication



Fabrication



Fabrication



Fabrication



AC Leveling Course



AC Leveling Course



Polyethylene Sheet



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Panel Placement



Partial Width Slabs



Approach Slab Joint



Post-Tensioning



Post-Tensioning



Post-Tensioning



Slab Anchor



Slab Anchor



Post-Tensioning



Post-Tensioning



Expansion Joint After Stressing



Finished P/T Pocket



Finished Central Stressing Panel



Finished Expansion Panel



POMEROY CORPORATION
and
SUMIDEN WIRE PRODUCTS

With Special Thanks to
Mr. Dave Merritt (CTS)