



TEXAS DEPARTMENT OF TRANSPORTATION



TXDOT ACCELERATED BRIDGE CONSTRUCTION

Jamie F. Farris, P.E.

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TxDOT Accelerated Bridge Construction

1 Foundations

2 Prefabricated Elements - Superstructure

3 Prefabricated Elements - Substructure

4 Self Propelled Modular Transporters (SPMTS)

5 Modular Units

6 Lateral Slide-in Bridge Construction

7 Questions

Foundations: Steel and Precast/Prestressed Piling



Foundations: Precast Cylinder Piles

Copano Bay Bridge (first in TX)
54" and 66" dia.



Foundations: Large Mon shafts



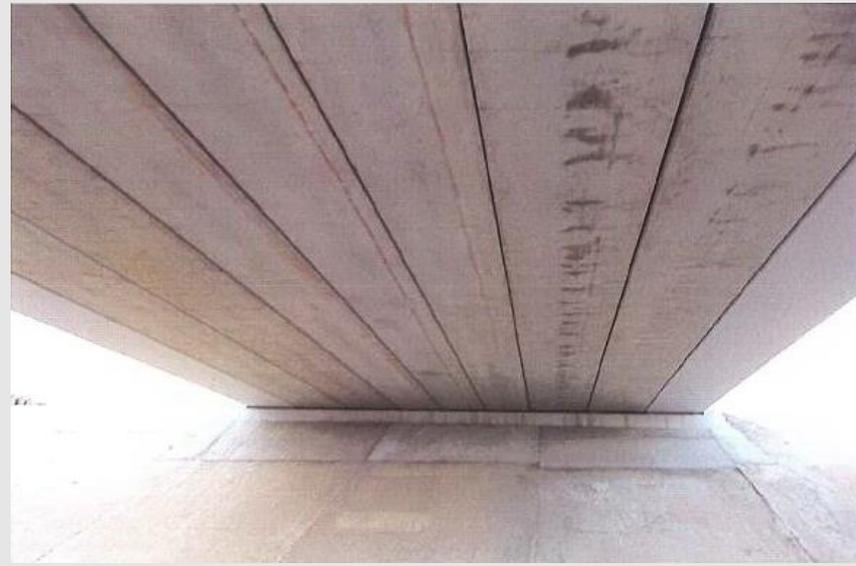
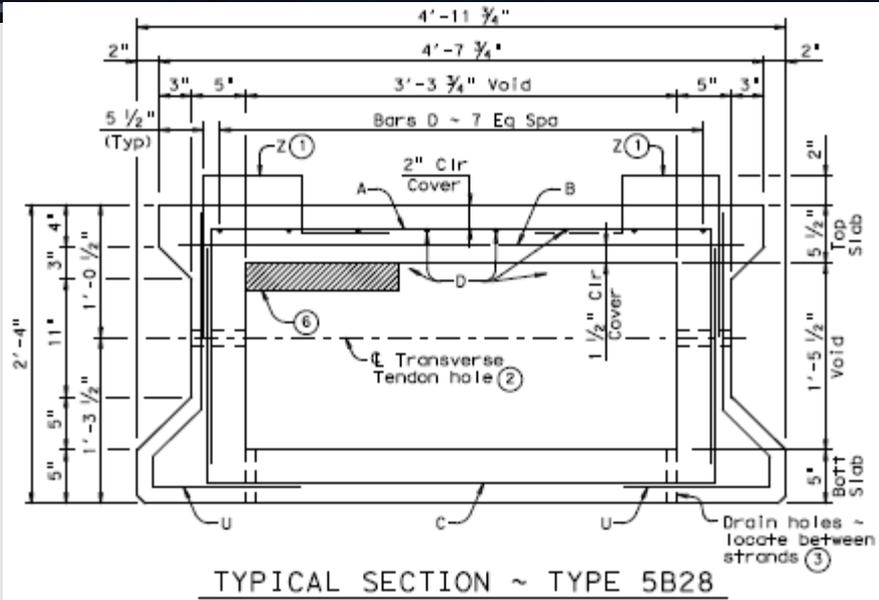
- 12 ft. dia. x 130 ft.
- IH 45 Clear Lake, TX

GIRDERS, BEAMS, AND DECKS

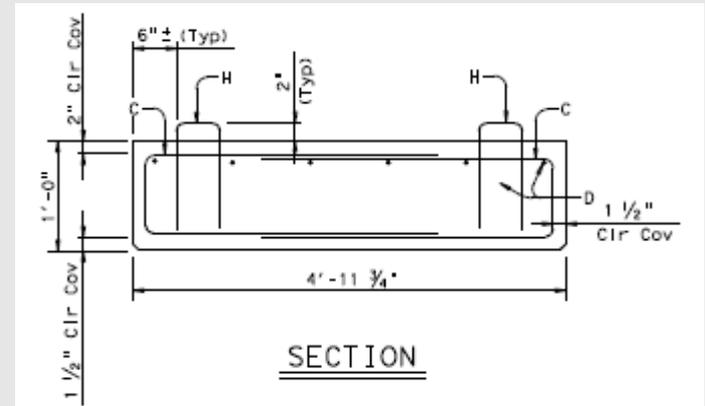
Prefabricated Elements - Superstructure

- Precast, Prestressed
 - I-Girders
 - Box Beams
 - X Beams
 - Slab Beams
 - Decked Slab Beams
 - U Beams
 - Precast Concrete Panels
 - Full Width, Full Depth Panels

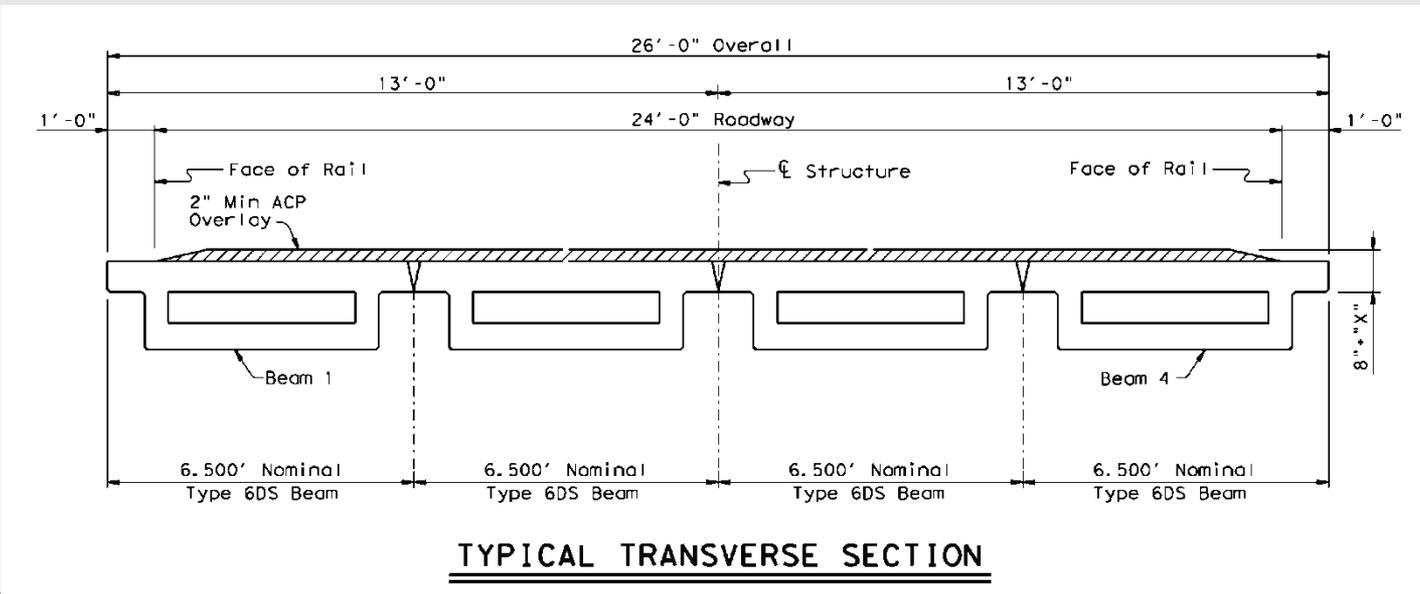
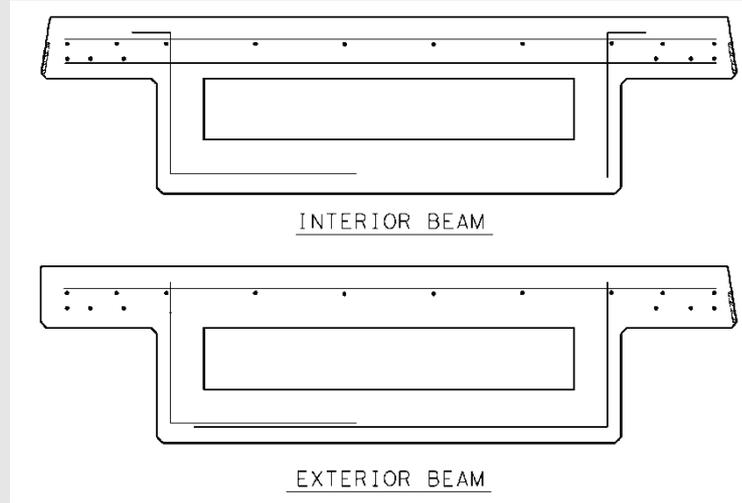
Box Beams



Slab Beams



Decked Slab Beams



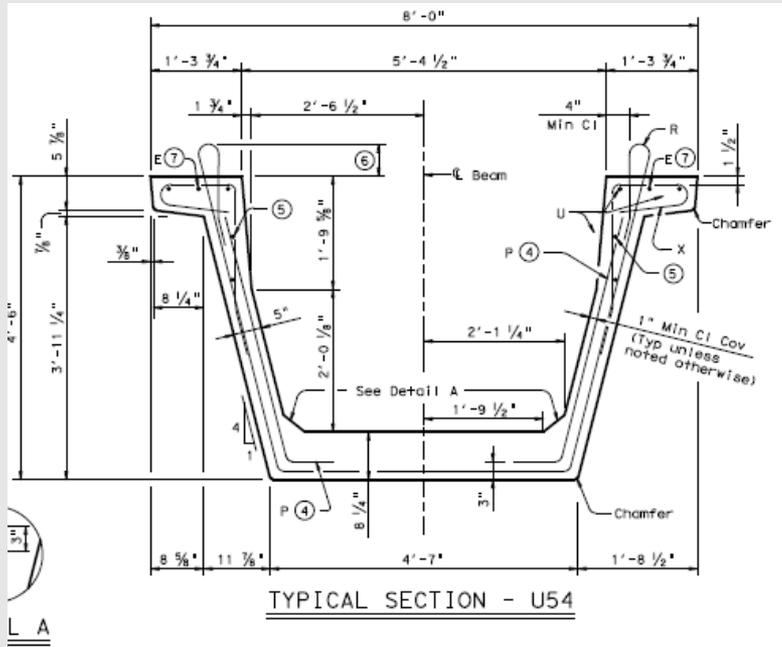
Decked Slab Beams



FM 1660 Cottonwood Creek, AUS



U Beams



IH35 and 290
Interchange,
Austin, Texas
U54



Spur 115 at FM 1016, Hidalgo Co.
U54

Prestressed Concrete Overhang Panels



- Improved work area
- No overhang forms to strip
- TxDOT Standard

Full Width, Full Depth Panels – Ozona Live Oak Creek 2008

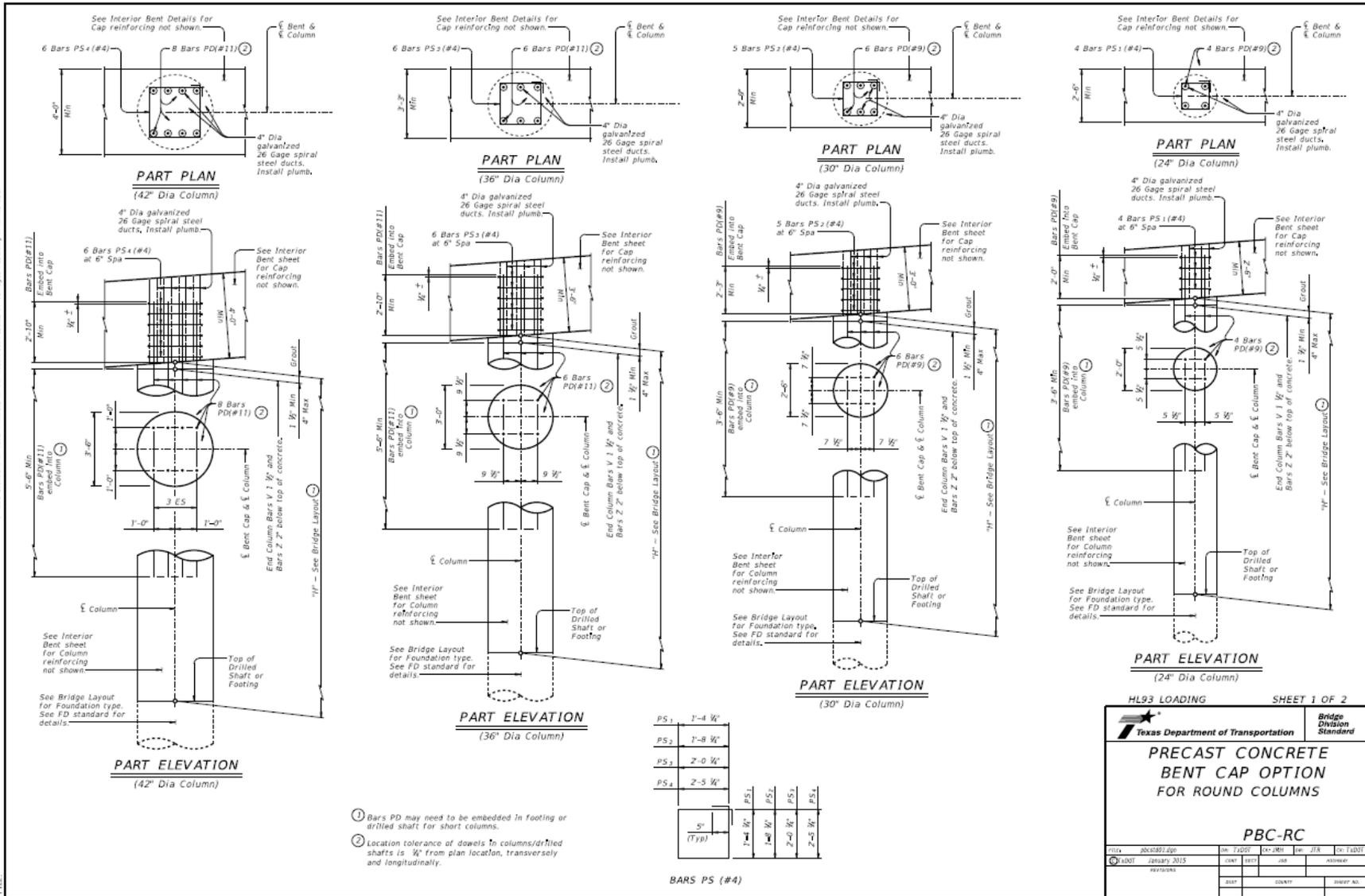


PRECAST CAPS AND COLUMNS

Precast Bent Caps



Standard Precast Cap Details for Round Columns



HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation Bridge Division Standard

PRECAST CONCRETE BENT CAP OPTION FOR ROUND COLUMNS

PBC-RC

DATE	20K1201-000	BY	TADOT	CHK	MM	JTS	NO.	12017
REV	01	DATE	JANUARY 2015	BY	MM	JTS	NO.	12017
PROJECT		COUNTY		JOB		SHEET NO.		

Standard Precast Cap Details for Round Columns



Precast Abutments



Precast Columns



SPMT – Fort Worth West 7th Street Arches



Modular Units (No Deck) – West Dallas St. in Houston



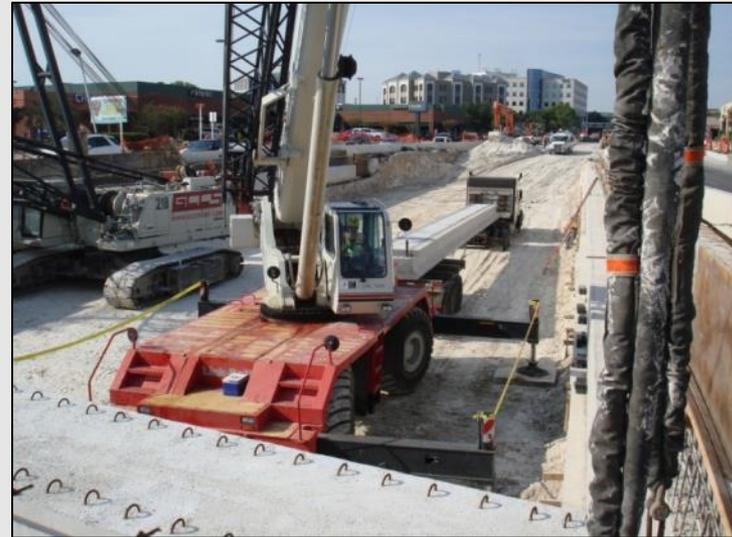
Modular Units – West Dallas St. in Houston



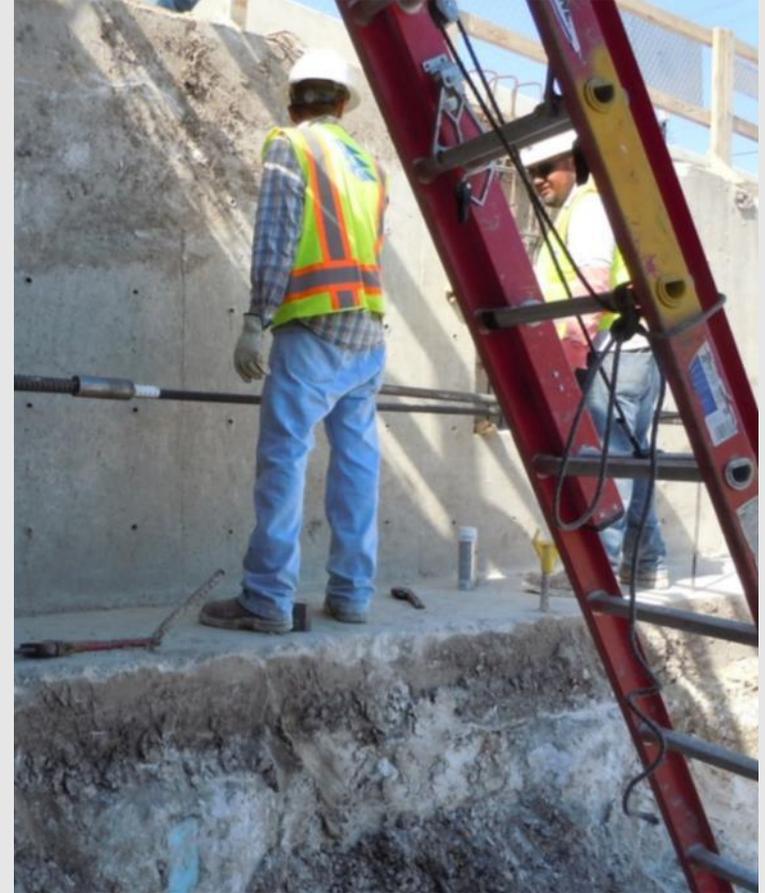
Lateral Slide-in – LP 345 (San Antonio)



Lateral Slide-in – LP 345 (San Antonio)



Lateral Slide-in – LP 345 (San Antonio)



Questions?



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General Design Considerations

- For more

- TxDOT Bridge Design Manual – LRFD

<http://onlinemanuals.txdot.gov/txdotmanuals/lrf/lrf.pdf>

- TxDOT Bridge Division Website

<http://www.txdot.gov/inside-txdot/division/bridge.html>

- TxDOT Bridge Standard Details

<http://www.dot.state.tx.us/insdtdot/orgchart/cmd/cserve/standard/bridge-e.htm>

- TxDOT Bridge Detailing Guide

<http://ftp.dot.state.tx.us/pub/txdot-info/brg/design/bridge-detailing-guide.pdf>