

Accelerated Bridge Construction

Flexible Precast Solutions for
Rapid Bridge Replacement

by

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Rapid City, SD - October 17-18, 2018



Total Precast Solutions

- Double T Beams
- Trideck Beams
- Bulb Tee Beams
- Box Beams
- Slab Beams
- Precast Abutments and Bents
- Precast Wing Walls - Skewed or Straight
- Precast Loose or Cast on Back Walls
- Safe Crash Tested Bridge Rail Systems

Typical Foundations

- Grade Beam/Abutment on Soil
- Precast Abutment, Pier Cap or Bent Cap on Driven Pile.

Soil / Geocell Foundation



Soil/Geocell Foundation



Precast Abutment



Precast Abutment - Spliced



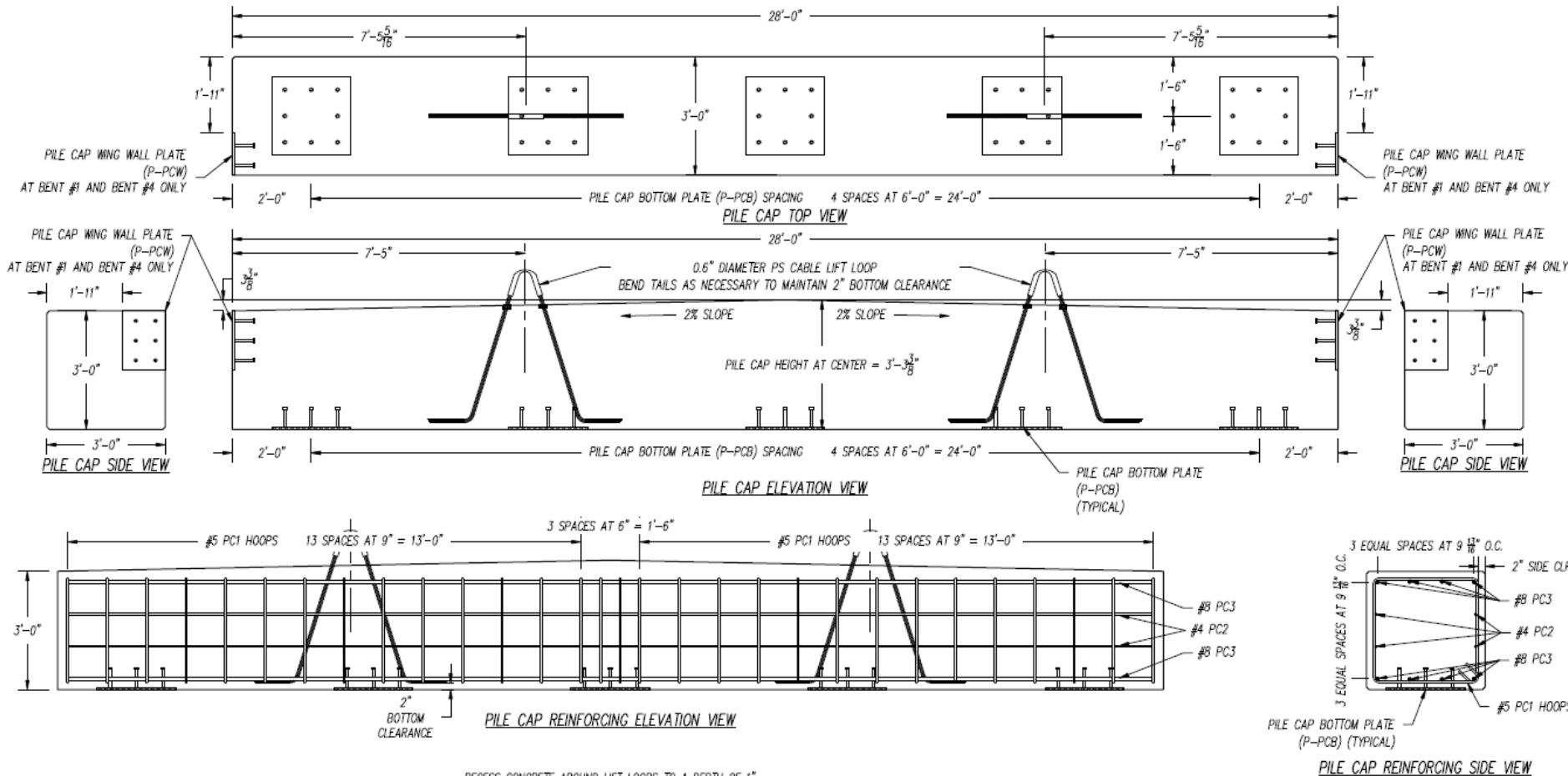
Embedded Weld plate on H Pile



Embedded Weld Plate on Pipe Pile

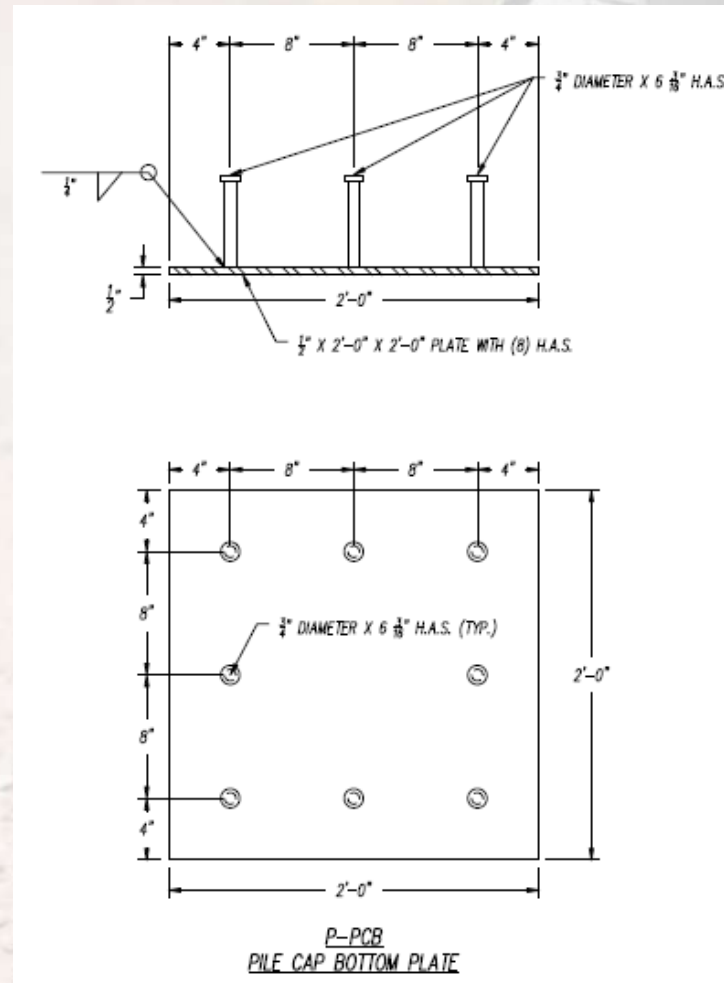


Typical Precast Abutment Weld Plate Detail



RECESS CONCRETE AROUND LIFT LOOPS TO A DEPTH OF 1".
 CONTRACTOR TO FILL VOID WITH MDT APPROVED NON-SHRINK GROUT AFTER CUTTING OFF LIFT LOOPS 1" BELOW CONCRETE SURFACE.

Typical Weld Plate Detail



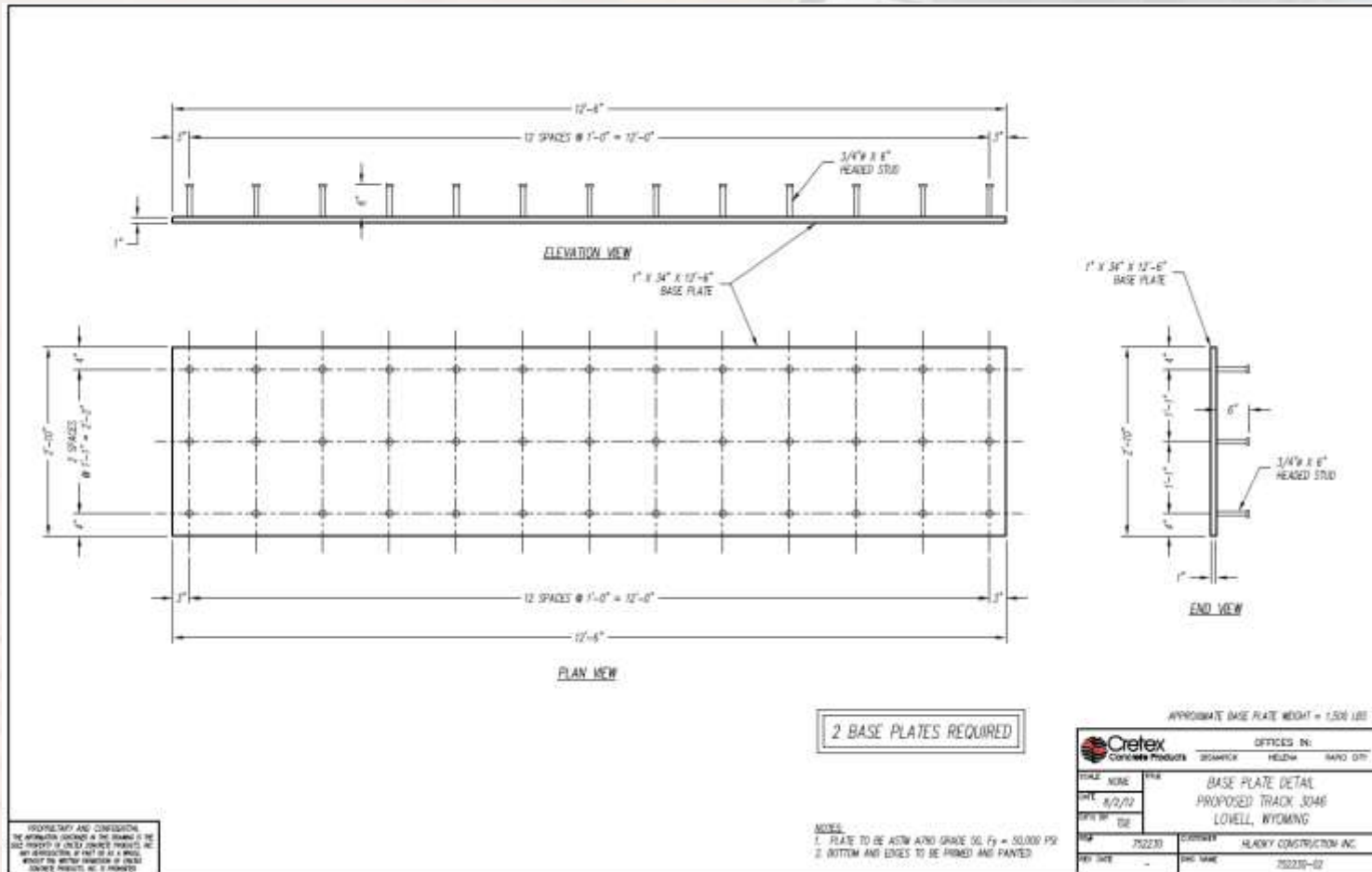
Precast Abutment with Weld Plate Attachment



Precast - RR Abutment



RR Abutment with Embedded Weld Plate Pile Connection



Precast Abutment and Bent with Void and Reinforcing



Precast Bent Caps & Abutments on Pipe Pile



Prestressed “Deck” Beams

- Trideck
- Double Tee
- Bulb Tee



Deck Beam on Grade Beam



Beam ends w/paving notch



Precast Wingwalls & Curb



Trideck Beam w/end Walls



Tri Deck Beam Placement



Double Tee Beams



Double Tee Beams



Precast End Panels - Wing walls



Bulb Tee with End Walls



Bulb Tee w/End Wall



Bulb Tee w End walls and Welded Splice Embed Plates



Box Beams



Precast Wingwalls



Precast Wingwall In Place



Embedded Rail Bolts & Loose Precast End Panels



Idaho - Tube Rail System



Timber Rail - Forest Service



Forest Service - Cast on Curb



Bridge Rail on Bulb Tee



Slab Beam w/SL-1 bridge rail



Other Precast Structure Replacement Options

- Arch Structures
- Three sided Box Cuvlverts
- Box Culverts
- Round Pipe

Precast Arch Bridge on Precast Spread Footing



Precast Arch w Precast Block Wing Walls and Precast Parapets



Precast Arch & Parapets



Three Sided Box Culvert on Precast Spread Footings



Box Culvert Customized for your jobsite!



Reinforced Concrete Pipe



Advantages of a Complete Precast Structural System

- Long Lasting - Durable Components.
- Rapid Installation Times.
- Crash Tested Rail Systems.
- Flexible Design Parameters.
- Very Low Risk for the Designer.
- Very Low Risk for the Owner / Customer.
- Cast in a Certified Plant Environment.

Rapid Bridge Replacement Precast Solutions

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