Caltrans
Accelerated Bridge Construction
(ABC) Projects-
Precast Bent Cap Alternatives

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I-405: Temple Ave OC (Rehab)-

Elevation

Plan
I-405: Temple Ave OC (Rehab) -
I-405: Temple Ave OC (Rehab)-

• Proposed strategies- current
  – Bulb-Tee Girders
  – 2 CISS piles shafts
  – Bent Cap:
    1) CIP Integral Cap:
       – require falsework and temporary support for the precast girders, need work space, thus shifting of HOV + mixed-use lanes.
    2) Inverted T-Cap: Precast or CIP?
       – CIP: require falsework that needs work space, thus shifting of HOV + mixed-use lanes
       – Precast: minimum space required, need to implement details and design from research
I-710: East Yard OH (widen)

- Elevation

- Plan
I-710: East Yard OH (widen)
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- Proposed strategies - current
  - Bulb-Tee Girders
  - Pile Shaft
  - Bent Cap:
    1) CIP Drop Cap: require falsework support, need work space, thus shoe-fly for UP Railroad track
    2) Precast Drop Cap: No falsework needed, and no impact to railroad
Precast Bent Cap Research- NCH 12-74
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Offset Column Bars in Ducts
Research: Seismic Performance of an I-Girder to Inverted-T Bent Cap Connection

Figure 1: A view of the test unit
As-built Connection

Proposed Strands Connection