

ABUTMENT PLAN
SCALE: 1/4" = 1'-0"

CMP VOID (TYP.)
(See Note 4 on
Dwg. No. 2.1.2.)

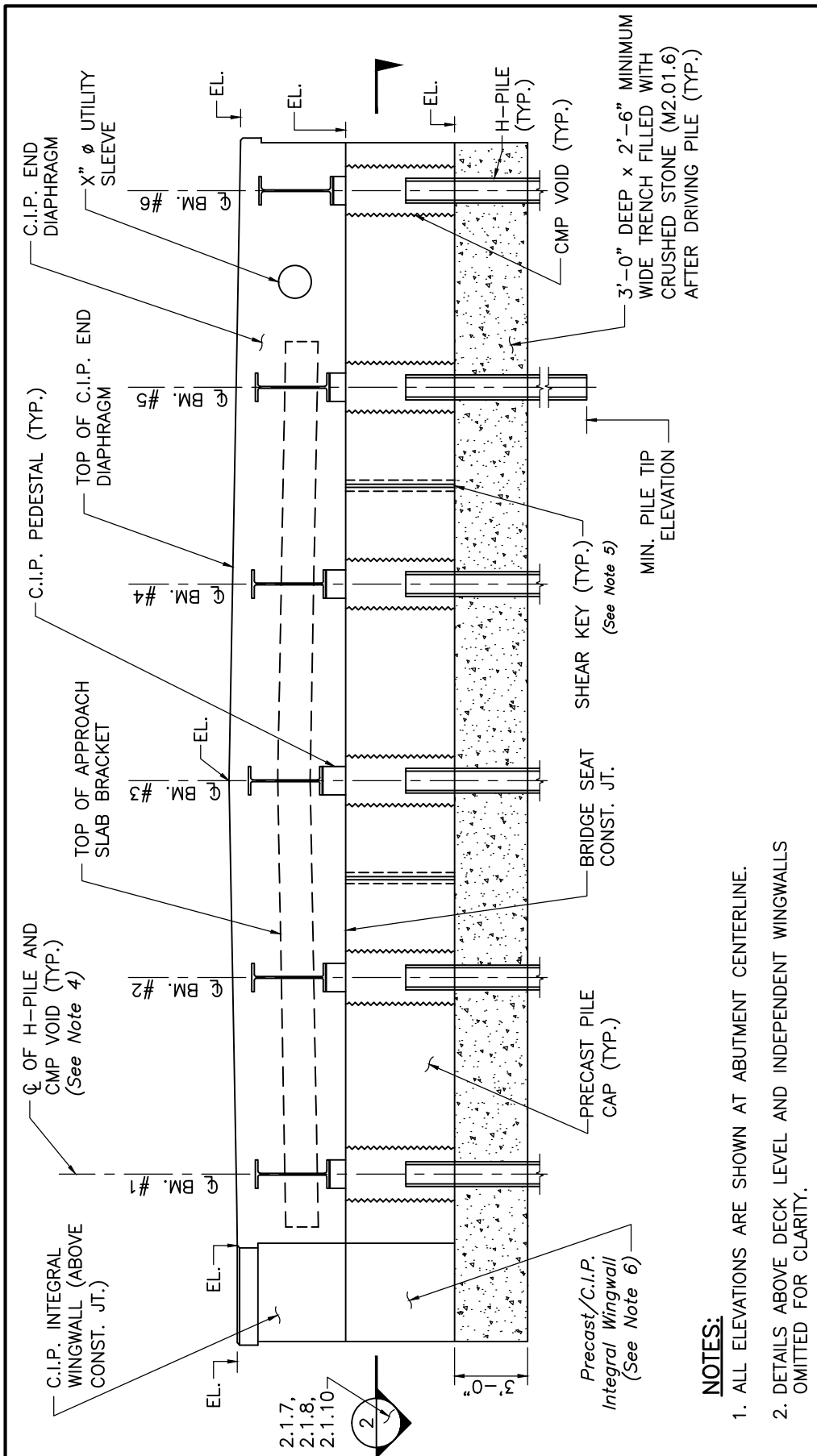
NOTES:

1. For precast approach slab panel and longitudinal joint details see Chapter 3, Part III of this Bridge Manual.
2. For Staged Construction, joints between precast abutment segments may be skewed.
3. The distance between curb and approach slab is to facilitate granite curb installation.

**SECTION AT CENTERLINE
 OF ABUTMENT
 PRECAST INTEGRAL ABUTMENTS**

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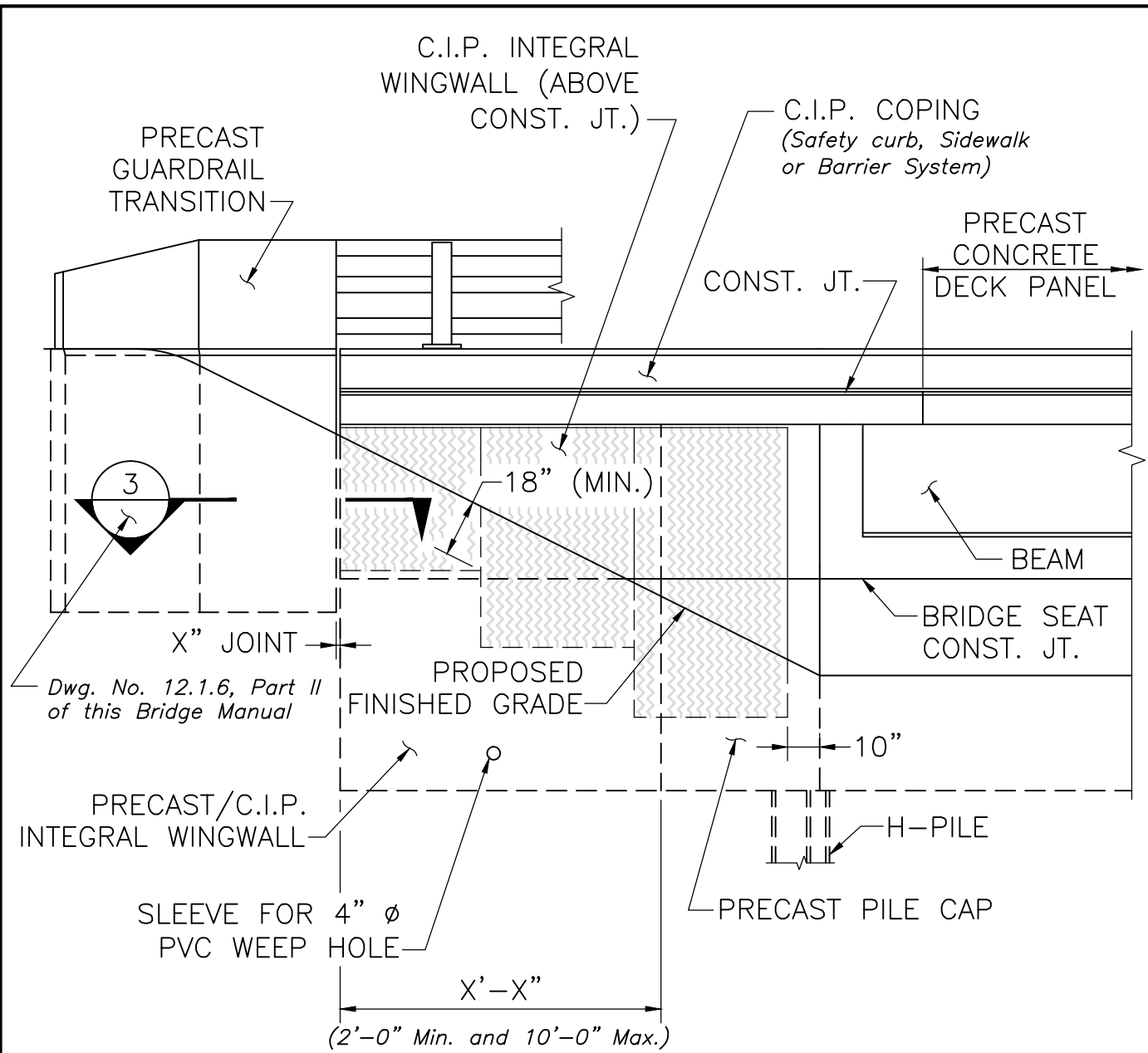


SECTION 1
 SCALE: $\frac{1}{4}'' = 1'-0''$

- NOTES:**
1. Provide top of pedestal elevations to nearest 0.01 ft.
 2. Rolled beams are shown. Show actual beam type and position of the beams relative to the piles at the centerline of the abutment.
 3. Show steps in the bridge seat, if any, centered between stringers.
 4. Additional CMP voids may be provided, if feasible, to reduce the weight of the precast integral abutment pile cap sections. In this case, the Designer shall provide sufficient amount of required reinforcement and detail it accordingly.
 5. For abutment shear key, see Dwg. No. 1.1.16, Part III of this Bridge Manual.
 6. The Designer shall specify preferred method of construction.

TOP OF PEDESTAL ELEVATIONS			
BM. #1	XX.XX	BM. #4	XX.XX
BM. #2	XX.XX	BM. #5	XX.XX
BM. #3	XX.XX	BM. #6	XX.XX

NOTE:
 ELEVATIONS DO NOT INCLUDE ERECTION PAD THICKNESS.



WINGWALL ELEVATION

SCALE: $\frac{1}{4}$ " = 1'-0"

NOTES:

1. Type S3-TL4 railing shown. Modify for other railing/barriers as required.
2. Show each wingwall elevation.
3. See Section 3.4, Part II of this Bridge Manual for general striation details.



LRFD BRIDGE
MANUAL, PART III

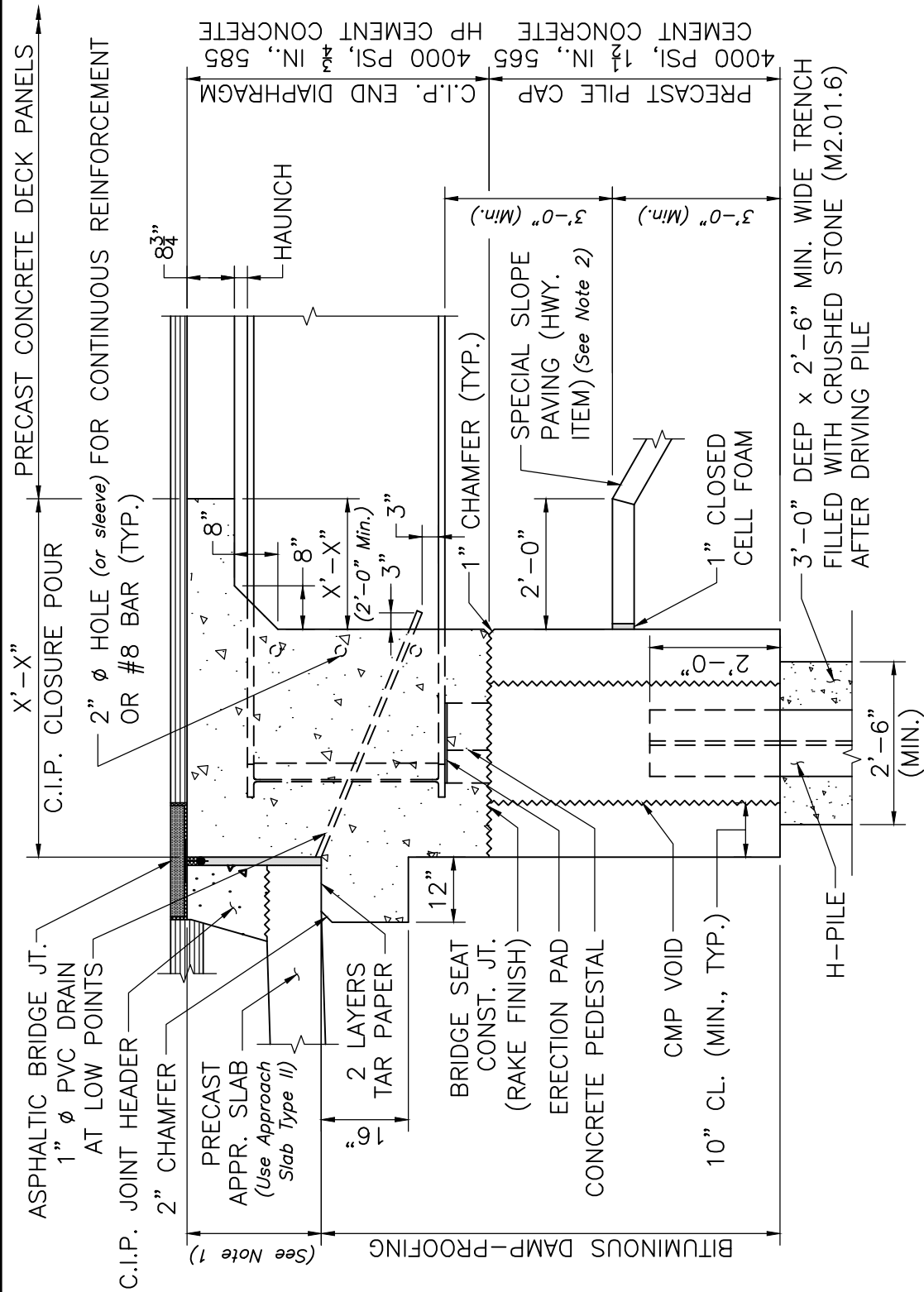
WINGWALL ELEVATION

PRECAST INTEGRAL ABUTMENTS

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2.1.3



PRECAST INTEGRAL ABUTMENT SECTION

SCALE: $\frac{1}{2}$ " = 1'-0"

NOTES:

1. "Varies" or 2'-0" as per Dwg. No. 2.1.5.
2. Special slope paving treatment is shown. If different treatment is required, modify as necessary.
3. Precast integral abutment with rolled beams shown. For other beam types, see Dwg. No's. 12.2.2 thru 12.2.5, Part II of this Bridge Manual and modify as necessary.
4. Connection Plate and Diaphragm are not shown for clarity.
5. For additional Designer Notes, see Dwg. No. 2.1.14.
6. For Construction Notes see Dwg. No. 2.1.13. For Pile Notes see Dwg. No. 12.2.10, Part II of this Bridge Manual.



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MANUAL, PART III

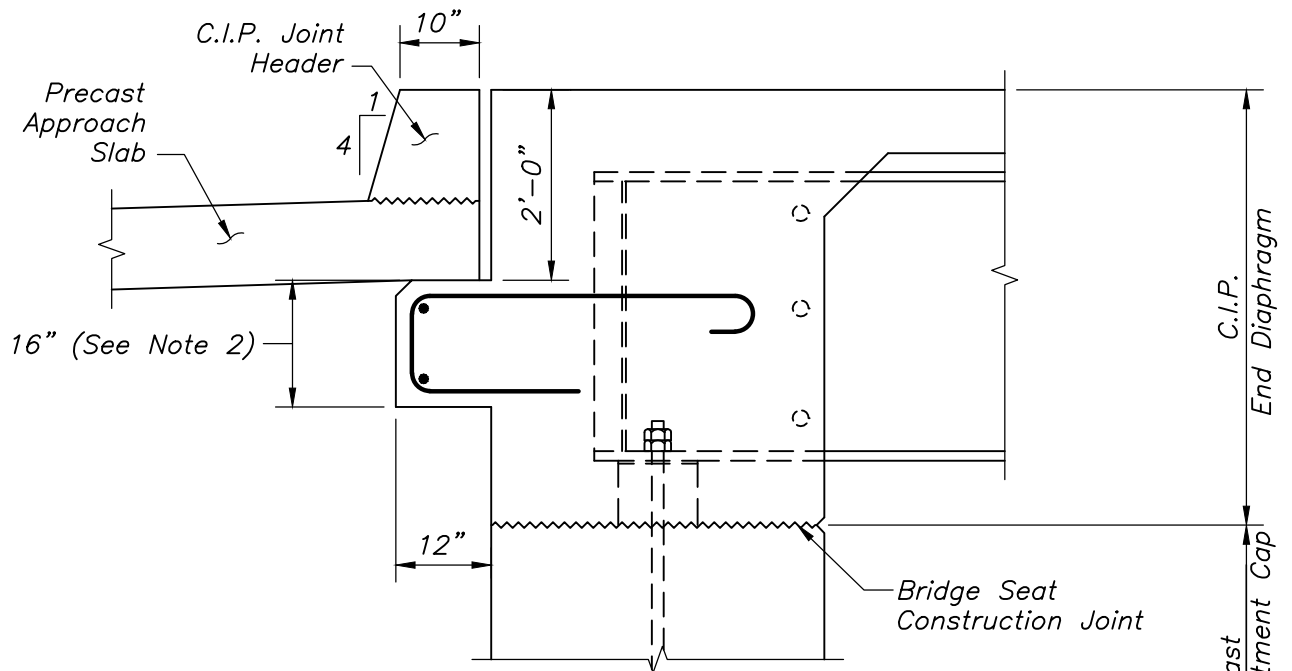
ABUTMENT SECTION

PRECAST INTEGRAL ABUTMENTS

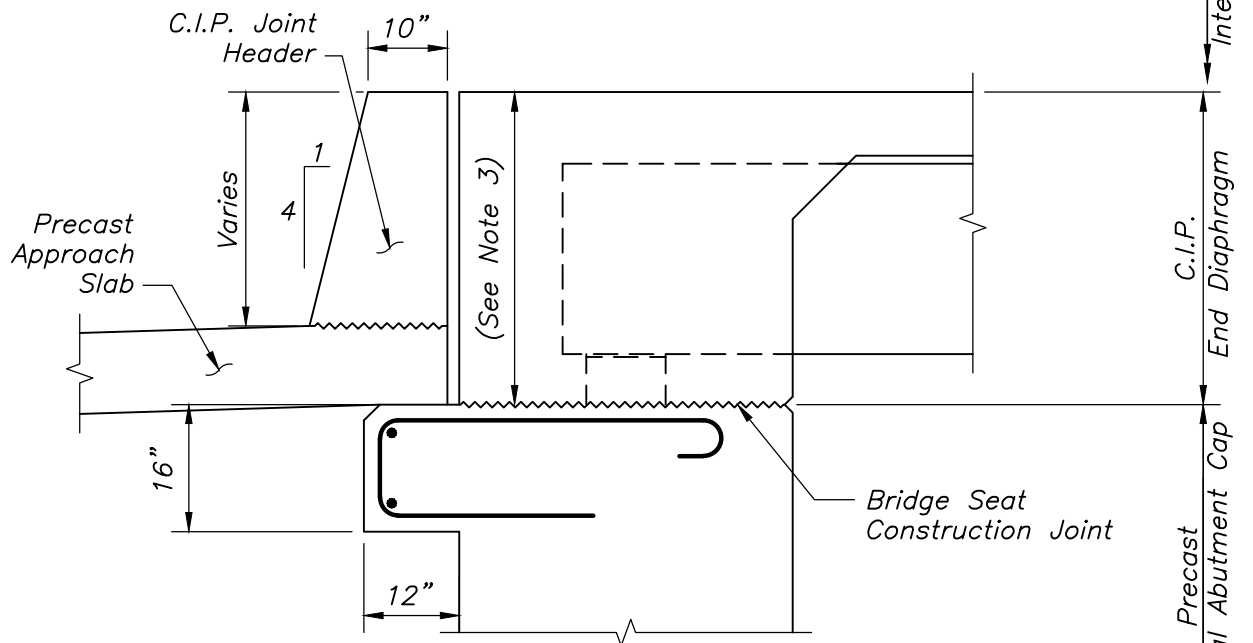
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2.1.4



**APPROACH SLAB BRACKET ABOVE
BRIDGE SEAT CONSTRUCTION JOINT**



**APPROACH SLAB BRACKET BELOW
BRIDGE SEAT CONSTRUCTION JOINT**

NOTES:

1. Modify Dwg. No's. 2.1.4 and 2.1.6 according to the above details.
2. Approach Slab Bracket shall be 16" deep. If bracket of this dimension will not fit above the bridge seat construction joint, relocate entire bracket below bridge seat construction joint and modify approach slab as shown in the detail below.
3. Minimum depth shall be 2'-0". Top of approach slab shall match top of abutment diaphragm.



LRFD BRIDGE

MANUAL, PART III

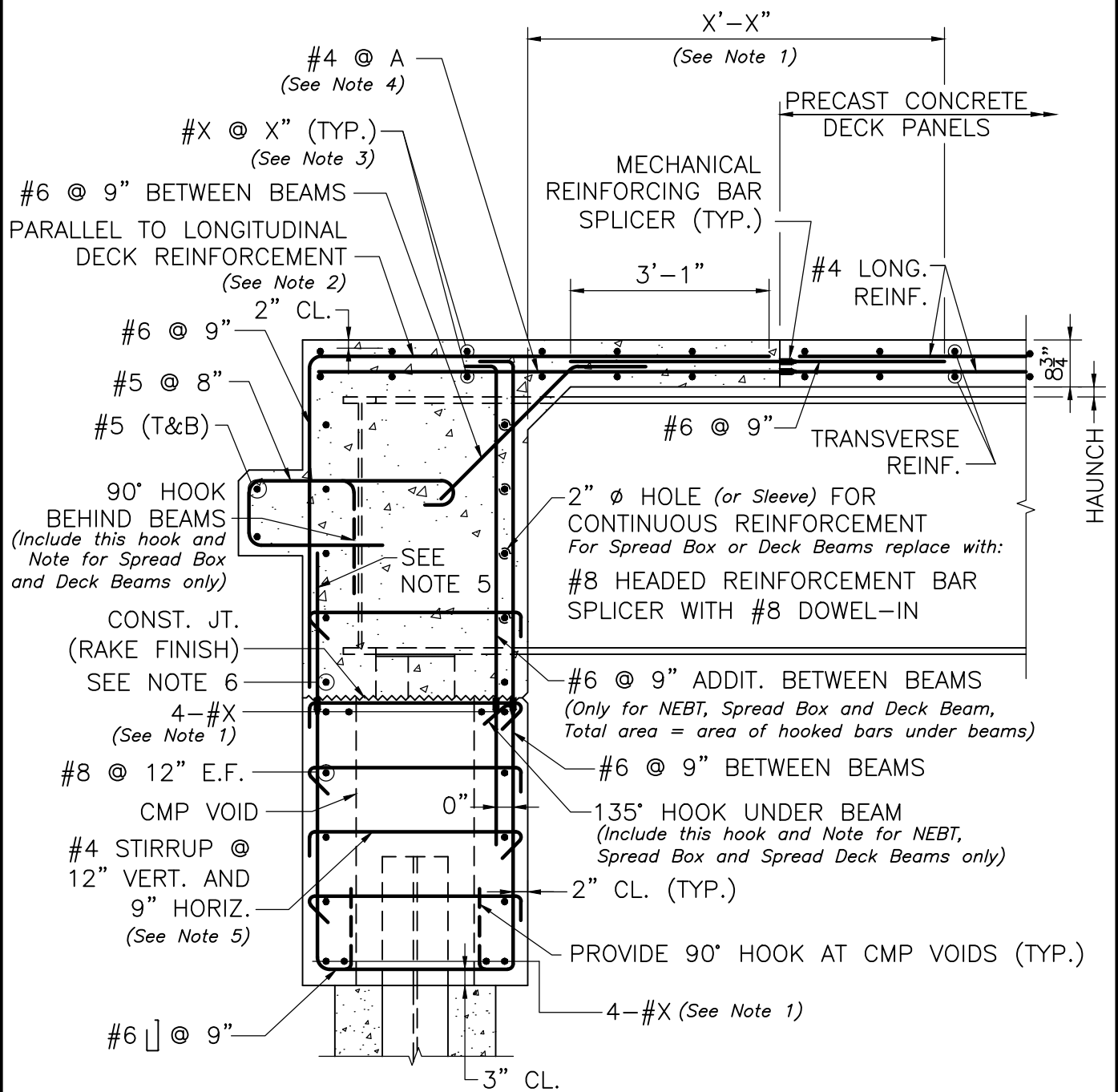
APPROACH SLAB BRACKET

PRECAST INTEGRAL ABUTMENTS

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2.1.5



TYPICAL PRECAST INTEGRAL ABUTMENT REINFORCEMENT

SCALE: $\frac{1}{2}$ " = 1'-0"

NOTES:

1. For Designer Notes see Dwg. No. 2.1.14.
2. For Integral Abutment Construction Notes see Dwg. No. 2.1.13.
3. For Integral Abutment Pile Notes see Dwg. No. 12.2.10 of Part II of this Bridge Manual.
4. Plate Girder shown. Substitute actual beam type for design under consideration.



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MANUAL, PART III

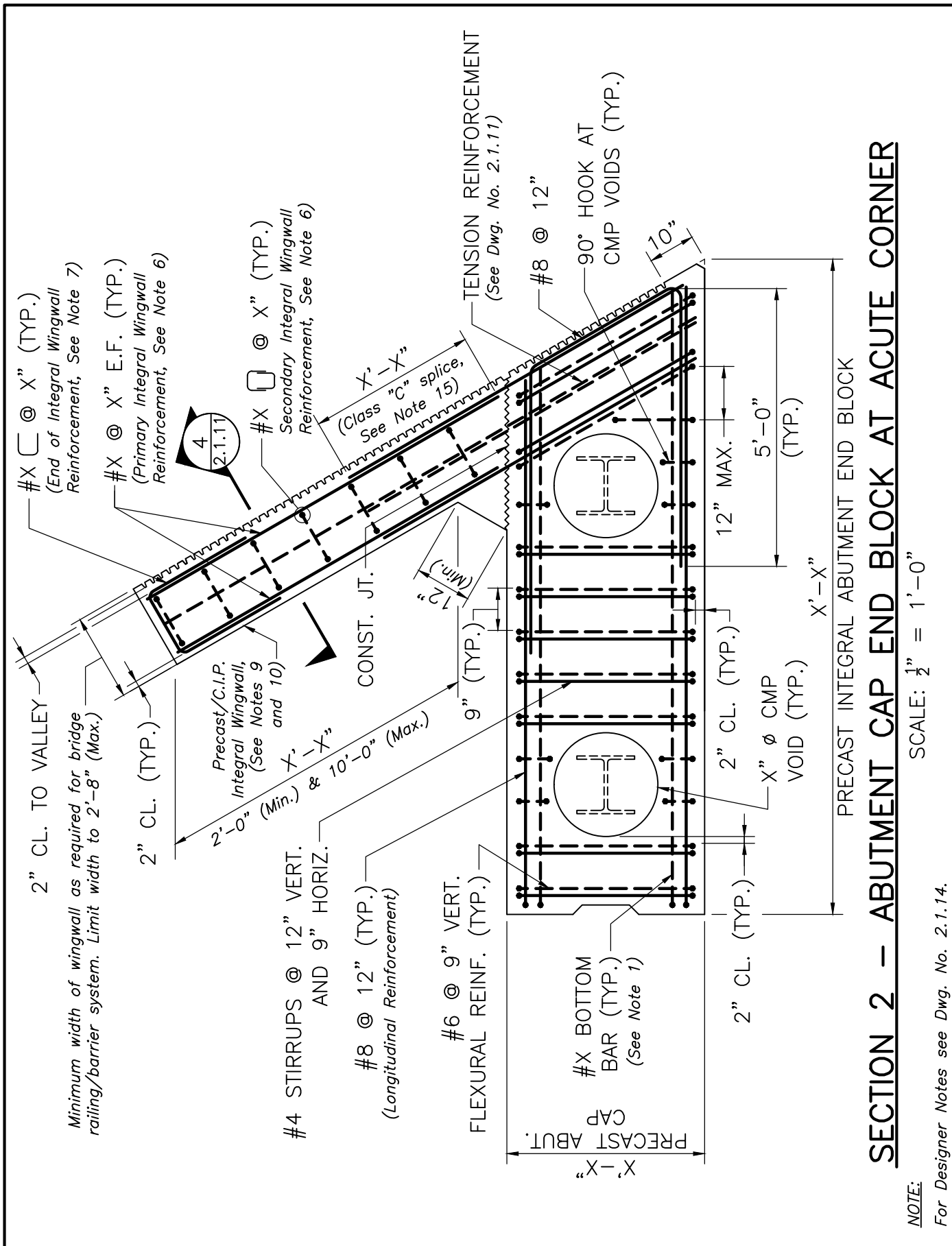
TYPICAL ABUTMENT REINFORCEMENT

PRECAST INTEGRAL ABUTMENTS

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2.1.6

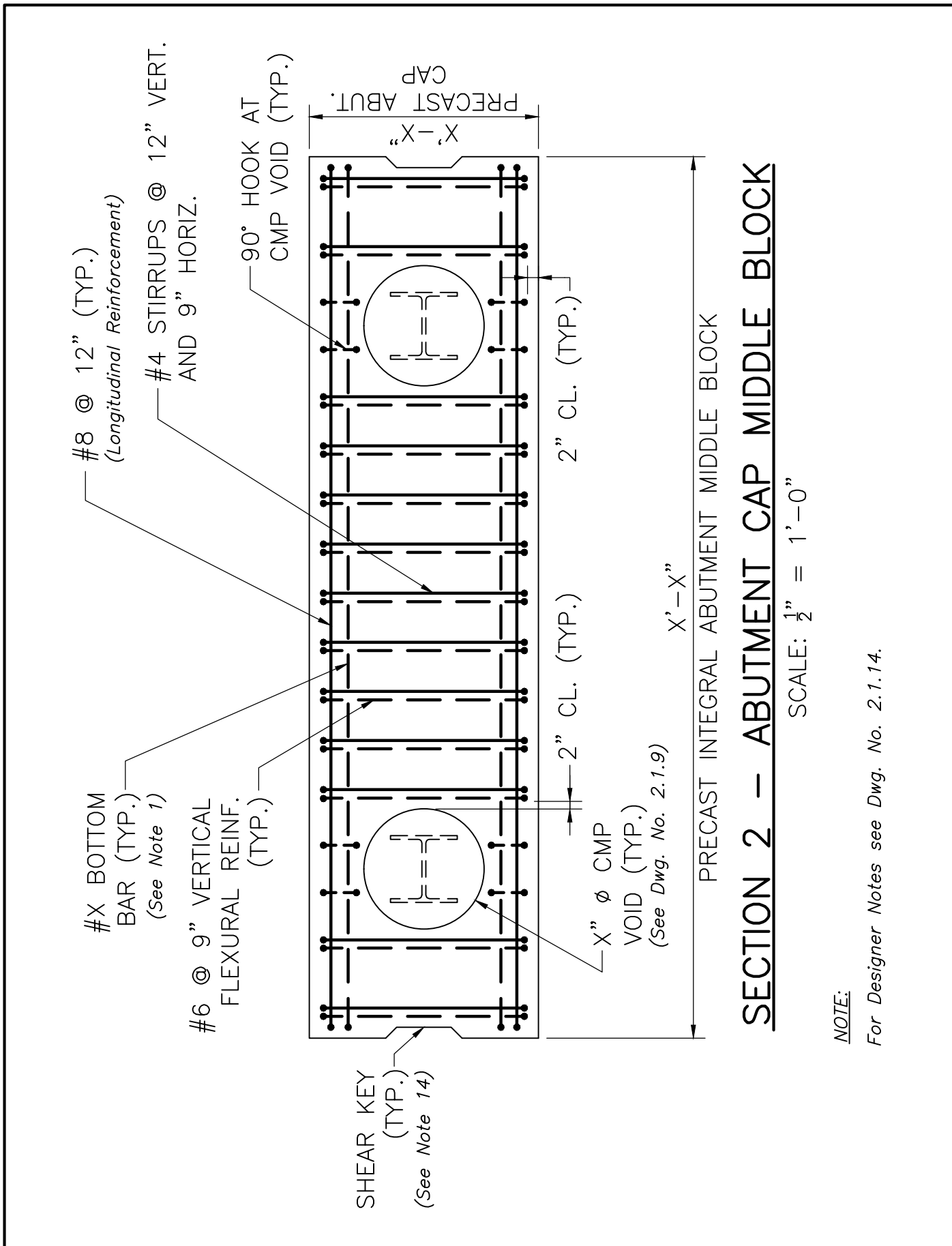


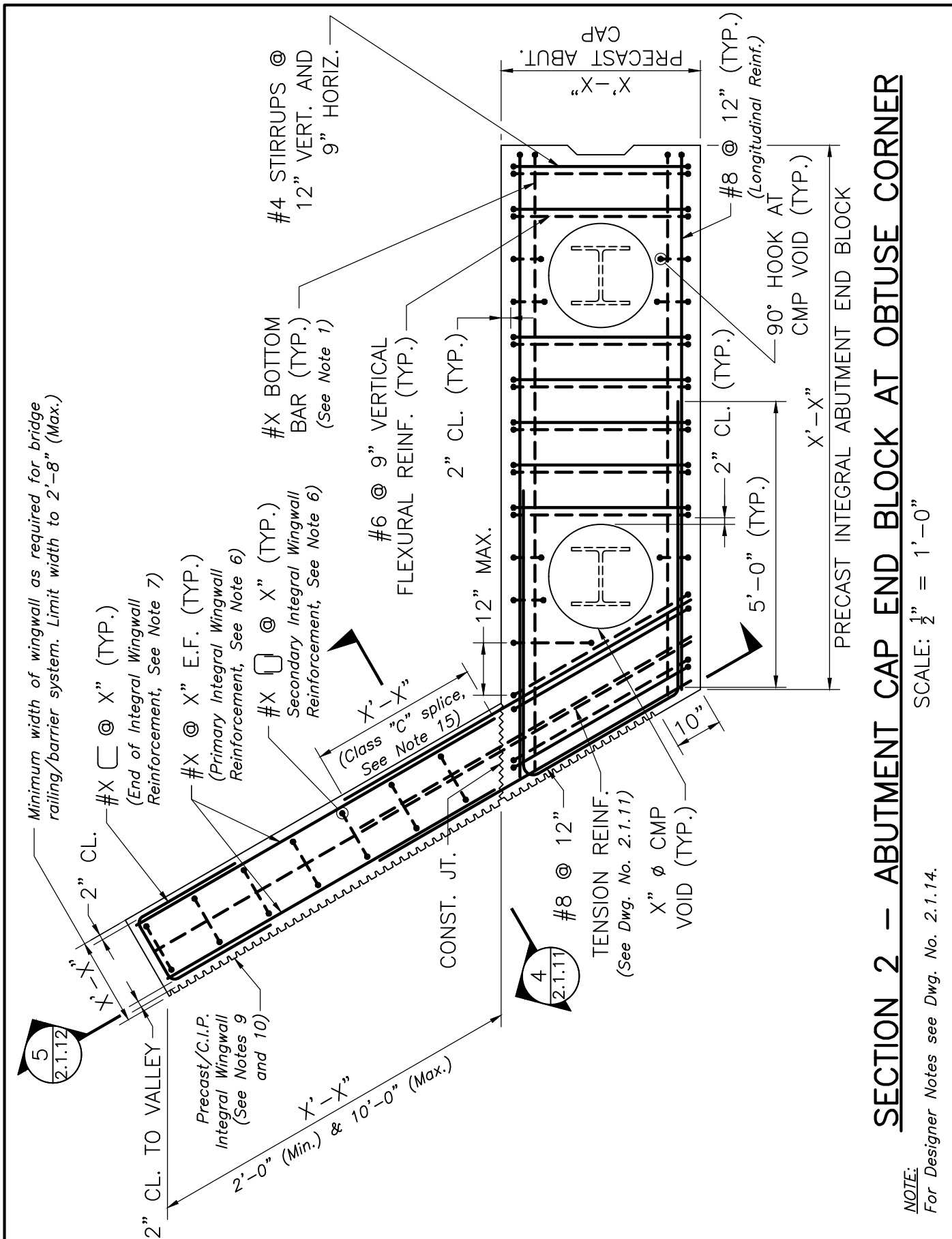
SECTION 2 - ABUTMENT CAP END BLOCK AT ACUTE CORNER

SCALE: 1/2" = 1'-0"

NOTE:
For Designer Notes see Dwg. No. 2.1.14.

HORIZ. SECTION THRU
 ABUTMENT MIDDLE BLOCK
 PRECAST INTEGRAL ABUTMENTS





SECTION 2 – ABUTMENT CAP END BLOCK AT OBTUSE CORNER

SCALE: $\frac{1}{2}'' = 1'-0''$

NOTE:
For Designer Notes see Dwg. No. 2.1.14.

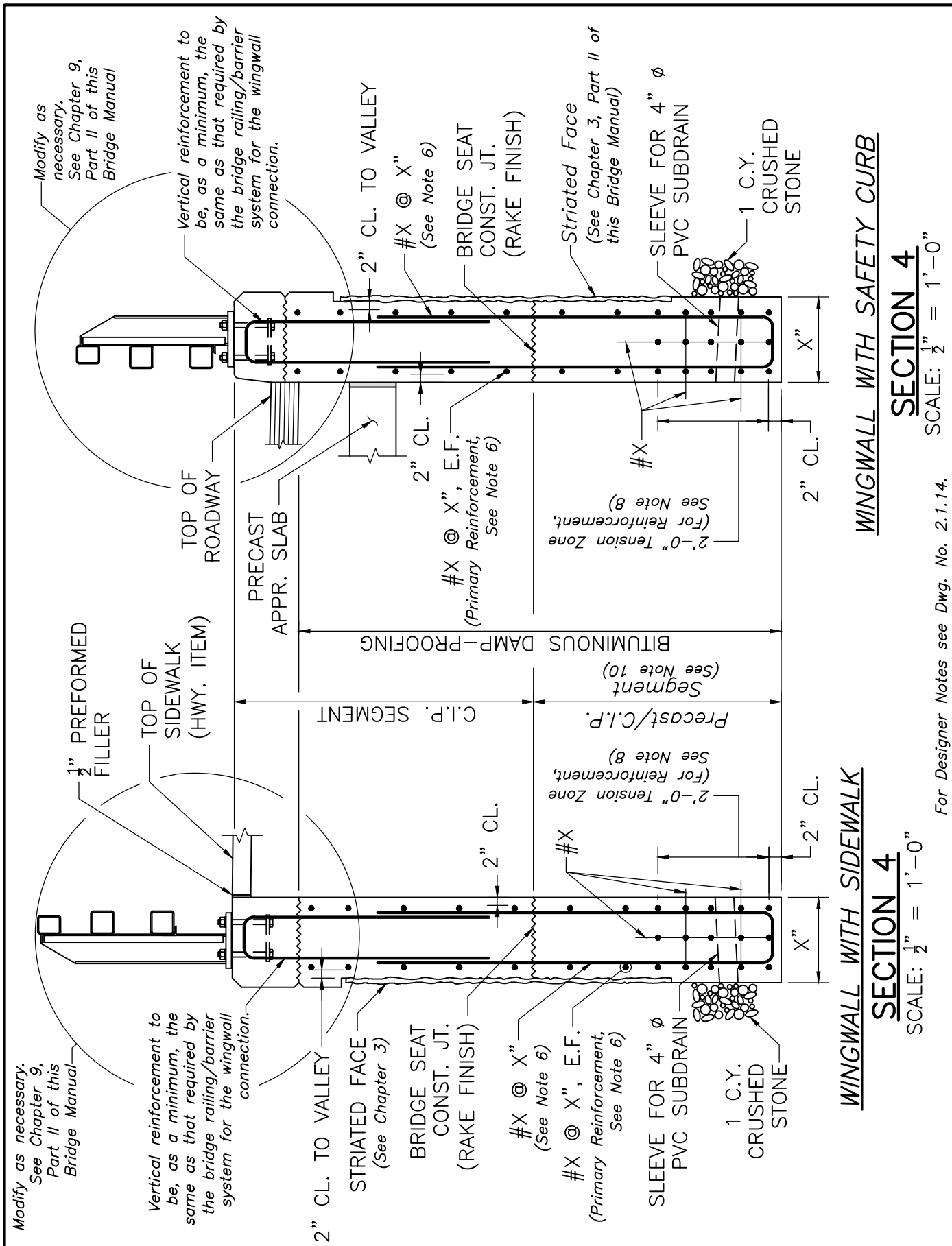
CORRUGATED METAL PIPE DIAMETERS

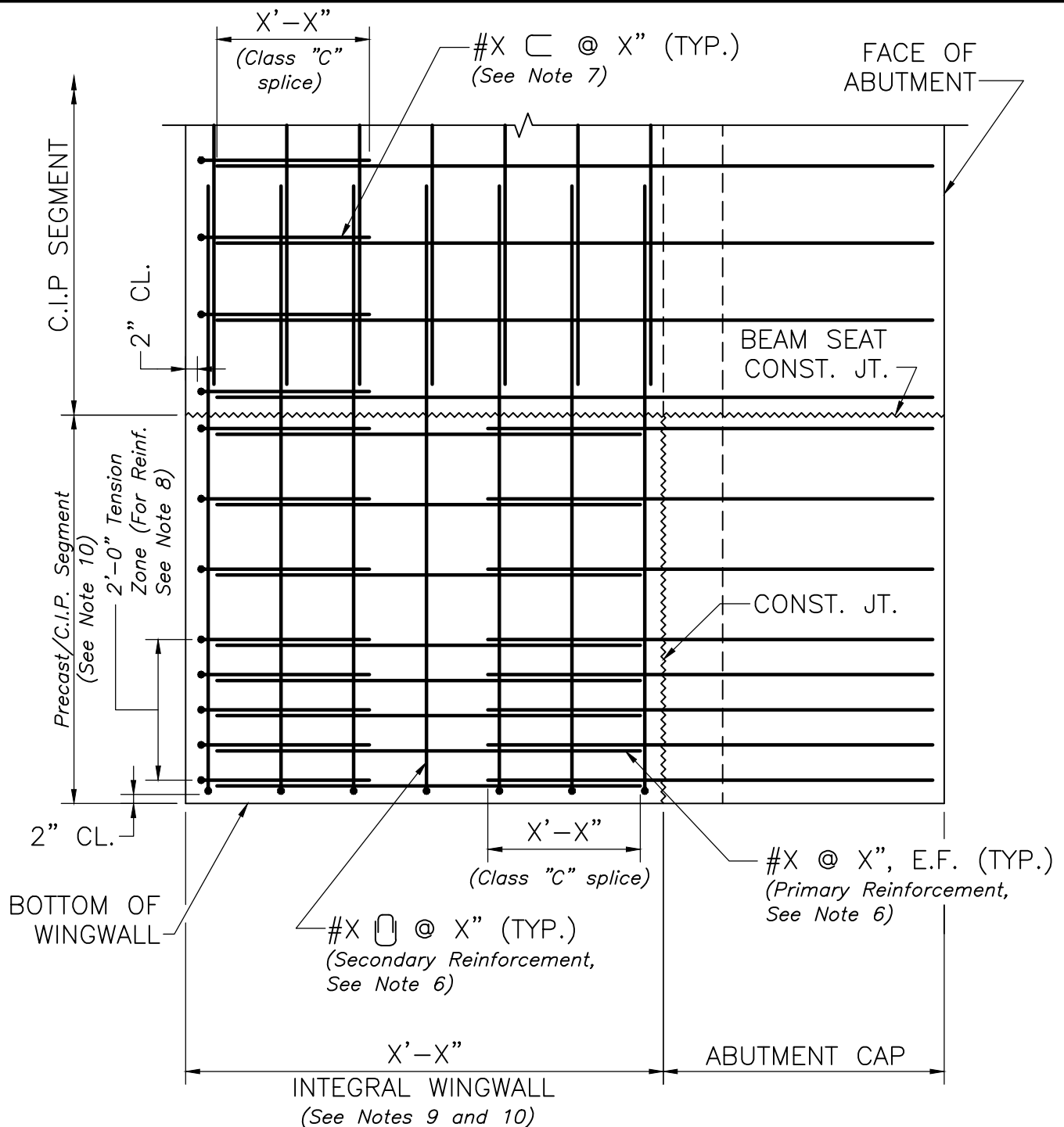
<i>Pile Size</i>	<i>CMP Diameter</i>
<i>HP12X84</i>	<i>24"</i>
<i>HP10X57</i>	<i>21"</i>

NOTES:

1. The CMP diameters shown above shall be specified and provide adequate tolerance after pile driving.
2. The Designer may elect to use larger diameter CMP's, but will need to ensure adequate cover and strength requirements in the vicinity of the piles.
3. CMP shall conform to the requirements of AASHTO M36.







NOTE:

ABUTMENT REINFORCEMENT, CMP VOIDS AND H-PILES ARE NOT SHOWN FOR CLARITY.

SECTION 5

SCALE: $\frac{1}{2}'' = 1'-0''$

NOTE:

For Designer Notes see Dwg. No. 2.1.14.



LRFD BRIDGE

MANUAL, PART III

INTEGRAL WINGWALL
VERTICAL SECTION
PRECAST INTEGRAL ABUTMENTS

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2.1.12

Place these notes on the Construction Drawing containing the Abutment Section Reinforcement (Dwg. No. 2.1.6). Use the appropriate notes to the particular superstructure type.

CONSTRUCTION NOTES:

1. ALL REINFORCEMENT SHALL BE COATED.
2. ALL CONCRETE SHALL CONTAIN SUPERPLASTICIZER TO ENSURE ADEQUATE CONSOLIDATION.
3. BOTH ABUTMENTS SHALL BE BACKFILLED SIMULTANEOUSLY. NO MORE THAN 2 FEET OF DIFFERENTIAL BACKFILL HEIGHT SHALL BE PERMITTED. BACKFILLING SHALL NOT BEGIN UNTIL THE ABUTMENT AND DECK CONSTRUCTION IS COMPLETE.
4. ALL UNPAINTED WEATHERING STEEL EMBEDDED IN THE ABUTMENT AND WITHIN 12 INCHES OF THE ABUTMENT FACE SHALL BE PAINTED. THE FINISH COAT COLOR SHALL MATCH COLOR CHIP NO. 30045 OF FEDERAL STANDARD 595B.
(Do not include this note if weathering steel is not used.)
5. THE CONTRACTOR MAY USE MECHANICAL REINFORCING BAR SPLICERS IN LIEU OF TENSION LAP SPLICES TO FACILITATE CONSTRUCTION. HOWEVER, NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THE USE OF MECHANICAL REINFORCING BAR SPLICERS.
(Dimension the length required for a Class "A" Lap Splice. If a Class "A" Lap Splice will not fit into the depth provided, replace Note 5 with the following:)
MECHANICAL REINFORCING BAR SPLICERS SHALL BE INSTALLED TO MAKE THIS REINFORCEMENT CONTINUOUS.
6. MECHANICAL REINFORCING BAR SPLICERS SHALL BE INSTALLED AT STAGE CONSTRUCTION JOINTS FOR ALL TRANSVERSE REINFORCEMENT.
(Do not include this note if stage construction is not used.)
7. THE TOP OF THE APPROACH SLAB JOINT HEADER SHALL MATCH THE TOP OF THE ABUTMENT DIAPHRAGM.



LRFD BRIDGE

MANUAL, PART III

CONSTRUCTION NOTES

PRECAST INTEGRAL ABUTMENTS

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JUNE 2013

DRAWING NUMBER

2.1.13

NOTES:

1. *Abutment Pile Cap Top and Bottom Longitudinal Reinforcement shall be as per Design Table on Dwg. No. 12.2.11, Part II of this Bridge Manual.*
2. *The horizontal leg of the L-shaped connection bars shall be extended into the precast concrete deck panels beyond the inside face of the abutment diaphragm for a length of:*
 - *for Simple Span Bridges:
10% of the Span Length + Ld*
 - *for Continuous Span Bridges:
10% of the End Span Length + Ld*
3. *Closure pour transverse reinforcement bar size and spacing shall be the same as for precast concrete deck panels transverse (primary) reinforcement.*
4. *A = spacing of longitudinal reinforcement as per design table of Chapter 7, Part II of this Bridge Manual.*
5. *Continue stirrups to bridge seat construction joint or to a level just below approach slab support bracket, whichever is higher.*
6. *Minimum Required Primary (Longitudinal) and Secondary (Vertical) Integral Wingwall Reinforcement shall be as per Dwg. No. 12.2.11, Part II of this Bridge Manual.*
7. *Specify the same size and spacing as for Primary Wingwall Reinforcement.*
8. *The Tension Zone Reinforcement shall be of the same size as the Primary Integral Wingwall Reinforcement and shall be distributed throughout the tension zone as shown.*
9. *Each integral wingwall and the adjacent to it abutment cap end block may be constructed as a single precast unit, if the size and weight limitations of such unit for shipping are not violated.*
10. *The Designer shall specify the preferred method of construction. C.I.P. integral wingwall shown. For reinforcement and details of precast integral wingwall/abutment cap end block see Dwg. No. 12.2.7, Part II of this Bridge Manual.*
11. *Check contractibility of NEBT integral abutment bridges on skew. Ensure sufficient clearance between flanges and the back of the abutment for placement of reinforcement and consolidation of concrete. The minimum clear cover between flanges and the back of the abutment shall be 4". The abutment thickness may be increased to accommodate these requirements. Box and Deck Beam ends shall be skewed for this purpose.*
12. *Reinforcement configuration shown is conceptual. The Designer shall modify the arrangement as necessary by design.*
13. *Deck drains shall be specified for all integral abutment bridges with HMA wearing surface and shall be located in relation to the abutment diaphragm as shown on Dwg. No. 7.3.1, Part II of this Bridge Manual.*
14. *Joint may be on skew to accommodate staged construction.*
15. *Mechanical Reinforcing Bar Splicers may be used for abutment to integral wingwall connection.*

