

LONGITUDINAL SECTION

-C.L. Bridge

- Space

Riock

VERTICAL ABUTMENT

3" x 10" Sway

Bracing (typ.

3/4" Ø x 1'-6"

Bolts (typ.)

C.L. Bridge

(ODD NUMBER OF PILES)

inter ance ter

Ground Line-

(SINGLE ROW BENT)

1/2:1 end slopes. However, the temporary bridge length shown on the Bridge Layout shall also be used for a vertical wall alternate.

13/4" Ø x 1'-6"

Bolts (typ.)

3" x 10" Sway

Bracing (typ.

(EVEN NUMBER OF PILES)

DETAILS OF SWAY BRACING FOR TIMBER PILES

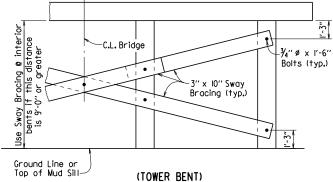
Note: Sway Bracing, if required, shall be used on both lines of piles for Tower Bents.

## Cut 3" ø hole in web after driving (typ.) < %° 31/2" x 31/2" (All contact points) Ground Line Note:

All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment for any bracing required shall be considered incidental to Item 603 "Temporary Bridge Structure".

Omit bottom bracing when "H" is less than 10'. Omit all bracing when "H" is less than 5'. When "H" exceeds 15', additional X-bracing is required to provide a maximum unbraced pile length of 14'.

DETAILS OF BRACING FOR STEEL PILES



his document was originally issued and sealed by Carl J. Fuselier, PE No. 7510, on April 17, 2014. his copy is not a signed and sealed document.

> ARKAŅSAS REGISTERED PROFESSIONAL ENGINEER No. 7510

ARKANSAS STATE HIGHWAY COMMISSION

JYP DATE: 4-17-14 FILENAME: 655052.dgn

DRAWING NO. 55052

BRIDGE ENGINEER

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges, 2002 Edition

FILMED

6

JOB NO.

FED. AID PROJ. NO.

TEMP. BRIDGE

55052

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2014 Edition, with applicable special provisions and supplemental specifications.

SEISMIC PERFORMANCE ZONE: I

REVISED

GENERAL NOTES

-Flex Rail (10 ga.)

RAILING DETAILS

DESIGN LIVE LOADS: H 15-44 (No Overload).

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DESIGN DEAD LOADS: 50 lbs.per cu.ft.for lumber 150 lbs. per cu. ft. for concrete

Precast Concrete Units shall comply with the requirements of AHTD standard drawings and special provisions. Drawings for old style units are within the drawing series 5291 thru 5307 and 14800 thru 14899. New style units (Current Design) are within the drawing series 1590 thru 15400.

Load Factor Design is used for the new style precast concrete units. Allowable Stress Design is used for the old style precast concrete units and timber components. The allowable unit stresses used assume normal duration of loading for stress arades of sawn lumber and are as follows:

> fb=1200 psi fv=85 psi

Concrete shall be Class S with a minimum 28 day compressive strength f'c =  $3500~\mathrm{psi}$  unless otherwise noted.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M3I or M322, Type A, with mill test reports.

Structural Steel shall be AASHTO M 270, Grade 36 unless otherwise noted.

Timber piling shall comply with Section 818 of the Standard Specifications and shall be driven to a minimum bearing capacity of 20 tons per pile. Steel piling shall be HPI2x53 and shall be driven to a minimum bearing capacity of 44 tons per pile.

Malleable or cast iron washers shall be used under all bolt heads and nuts bearing on timber. Standard washers shall be provided under all bolt heads and nuts in connection with concrete.

Bolts shall conform to the requirements of ASTM A 307. ASTM A 307 Threaded Rods may be used in lieu of bolts. Minimum dimensions are shown for bolts, dowels, and drift pins.

Grout placed around Drift Pins in piles shall be allowed to cure for 72 hours before caps are used to support the superstructure. Grout to consist of one part portland cement to two parts sand.

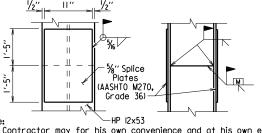
Melted sulfur may be used in lieu of grout placed around drift pins. The superstructure may be placed as soon as the sulfur has hardened.

Bent caps to be handled from points approximately 5' from the ends.

Timber material, regardless of species, must be of equal or better strength than no. 2 southern pine or douglas fir, graded by the standard grading rules. All timber widths and thicknesses are shown as nominal.

For additional notes concerning "Bridge End Protection System", see Std. Dwg. 55054.

Unless otherwise noted, the Temporary Bridge Structure shall comply with and be paid for in accordance with Section 603.



The Contractor may for his own convenience and at his own expense provide as many as three splices per pile for steel bearing piling. Minimum spacing between splices shall be 5 ft. A proprietary steel pile splicer sufficient to develop the full strength of the section may be substituted for the details shown. Pile splicers shall be installed in accordance with manufacturer's recommendations.

## PILE SPLICE DETAIL

## SHEET I OF 2

STANDARD DETAILS FOR TEMPORARY BRIDGE STRUCTURE PRECAST CONCRETE SPANS 20' ROADWAY WIDTH

> ROUTE SEC. LITTLE ROCK, ARK.

CHECKED BY: AMS DATE: 4-17-14 SCALE: No Scale DESIGNED BY: STD. DATE: \_\_\_