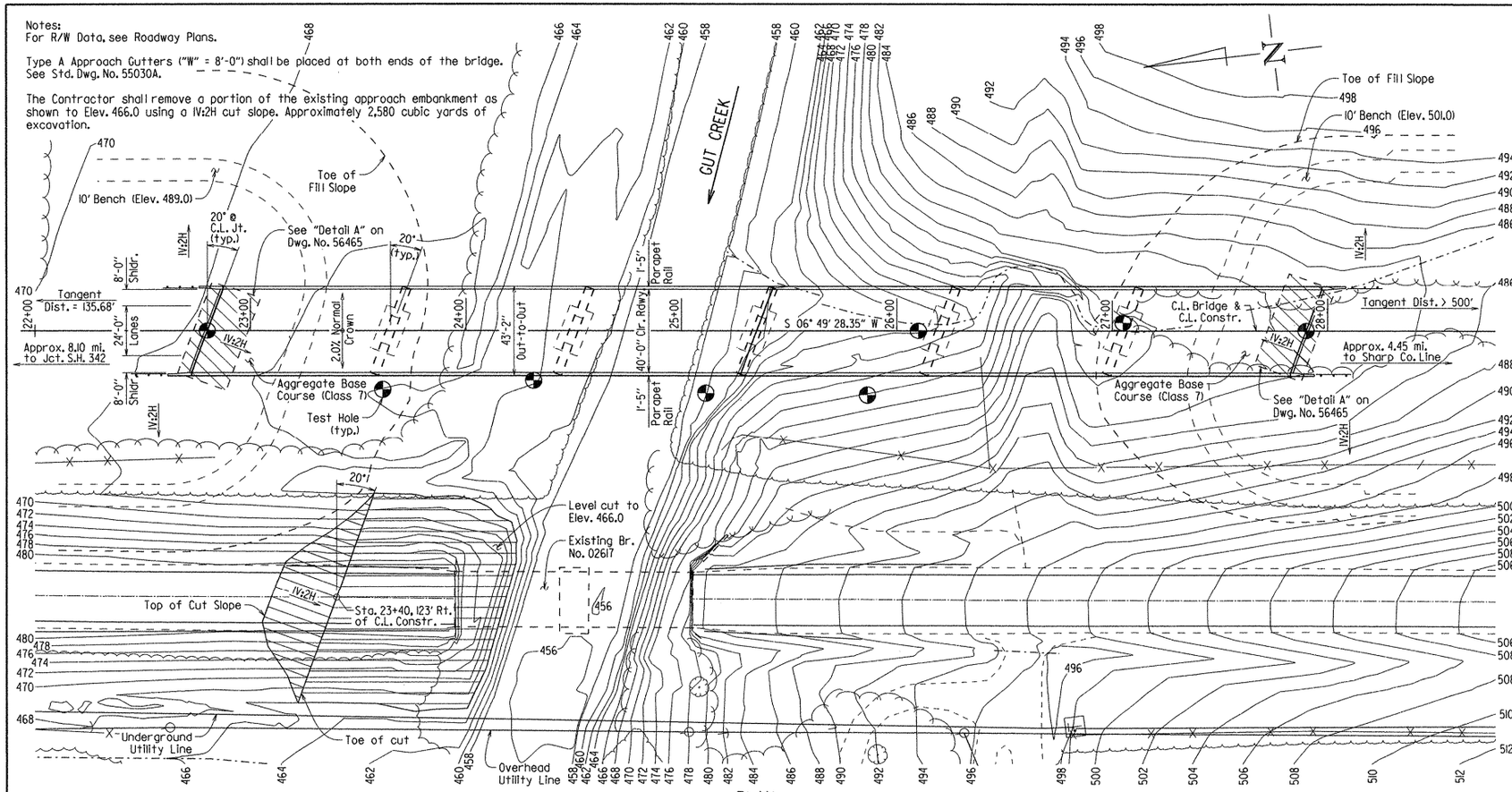
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		050274	37	102
				①		07337 - LAYOUT - 56464		

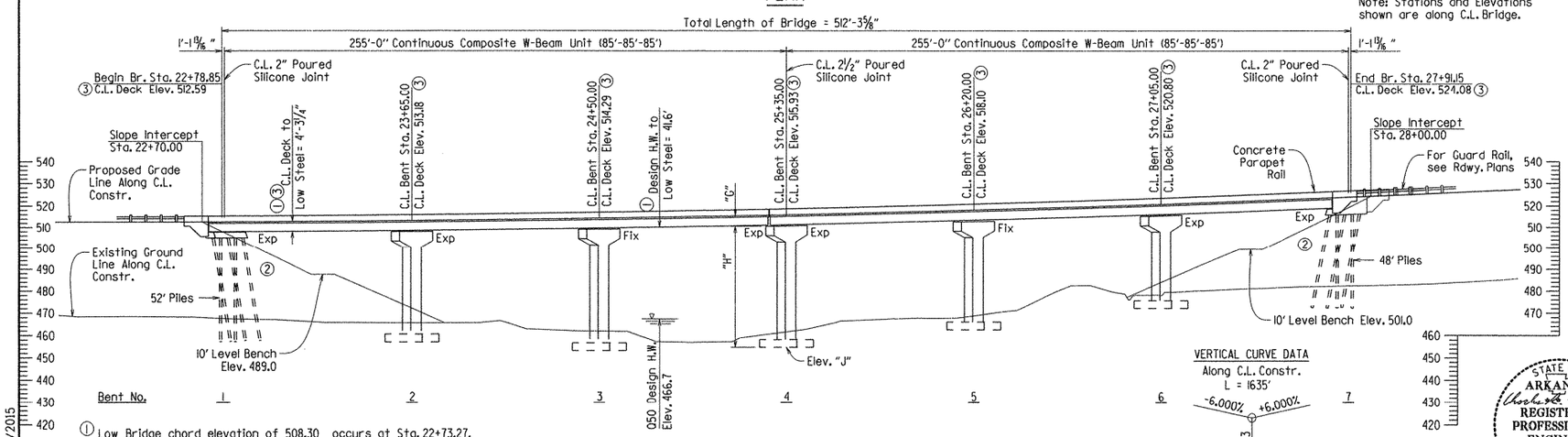
Notes:
For R/W Data, see Roadway Plans.

Type A Approach Gutters ("W" = 8'-0") shall be placed at both ends of the bridge. See Std. Dwg. No. 55030A.

The Contractor shall remove a portion of the existing approach embankment as shown to Elev. 466.0 using a 1V:2H cut slope. Approximately 2,580 cubic yards of excavation.



PLAN



Note: Stations and Elevations shown are along C.L. Bridge.

① Low Bridge chord elevation of 508.30 occurs at Sta. 22+73.27.

② Rock Fill - See Job SP "Rock Fill" & "Detail A" on Dwg. No. 56465.

③ Elevations are measured at Working Point, see Dwg. No. 56474.

ELEVATION

VERTICAL CURVE DATA
Along C.L. Constr.
L = 1635'
-6.000% +6.000%
PVI Sta. 22+29.63
Elev. 481.98

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
1-20-15
CHARLES R. ELLIS
BRIDGE ENGINEER

GENERAL NOTES

BENCH MARK: Vertical Control Data is shown in the Survey Control Data Sheets.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Unless otherwise noted in the plans, Section and Subsection refer to the Standard Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, 6th Edition (2012) with 2013 Interim Revisions.

LIVE LOADING: HL-93
SEISMIC PERFORMANCE ZONE: 1

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Class S Concrete (substructure)	f'c = 3,500 psi
Reinforcing Steel (Gr. 60, AASHTO M31 or M322, Type A)	fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50W)	Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36)	Fy = 36,000 psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Procurement Section of the Program Management Division.

STEEL PILING: All Piling shall be HP 12x53 (Grade 50) and shall be driven with an approved air, steam, or diesel hammer into a material designated as dolostone or dolostone with chert seams on the boring legend and to a minimum safe bearing capacity of 95 tons per pile. Piling in End Bents shall be driven to a minimum penetration of 8' below natural ground after embankment to bottom of cap is in place. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with Section 805. The Contractor shall use approved steel H-Pile driving points on all piles.

FOOTINGS: Footings for Bents 2 thru 5 shall be set a minimum of 2'-0" into material designated as dolostone with occasional chert layers or dolostone on the boring legend. The top of all footings shall be set at or below natural ground as determined by the lowest elevation within the footprint of the footing area. Foundations for footings shall be prepared in accordance with Subsection 801.04. Rock excavations shall be made to the neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against surfaces of rock. Excavations shall be backfilled and compacted to the level of the existing ground in accordance with Subsection 801.08.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

PROTECTIVE SURFACE TREATMENT: Class 1 Protective Surface Treatment shall be applied to the roadway surface and to the roadway face and top of the concrete parapet rail.

DETAIL DRAWINGS:	DRAWING NOS.
End Bents	56466 - 56468
Intermediate Bents	56469 - 56472
Elastomeric Bearings	56473
255'-0" Continuous W-Beam Unit	56474 - 56479
Type A Approach Gutters	55030A
Steel Piling	55020

EXISTING BRIDGE: Existing Bridge No. 02617 (L.M. 10.26) is 31.6' wide and 112' long. The existing bridge consists of a concrete deck on steel stringers supported by concrete footings at end bents and a hammerhead column at the intermediate bent.

REMOVAL AND SALVAGE: After the new bridge is opened to traffic, Existing Bridge No. 02617 shall be removed in accordance with Section 205. All material from the existing bridge shall become the property of the Contractor. The exposed grouted concrete from the existing structure shall be removed to a minimum of 2 feet below the finished surface as directed by the Engineer. This work shall be considered incidental to the item "Removal of Existing Bridge Structure".

TABLE OF VARIABLES

Bent No.	C.L. Deck @ C.L. Bent to Low Seat of Cap "G"	Low Seat of Cap to Bottom of Ftg. "H"	Bottom of Ftg. Elevation "J"
2	4'-7 15/16"	51'-6"	457.02
3	4'-8⅜"	56'-6"	453.09
4	4'-9¼"	54'-6"	456.62
5	4'-9⅜"	49'-6"	463.82
6	4'-9 11/16"	44'-0"	471.98

SHEET 1 OF 2
LAYOUT OF BRIDGE OVER GUT CREEK
GUT CREEK STR. & APPRS. (S)
FULTON COUNTY

ROUTE 63 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

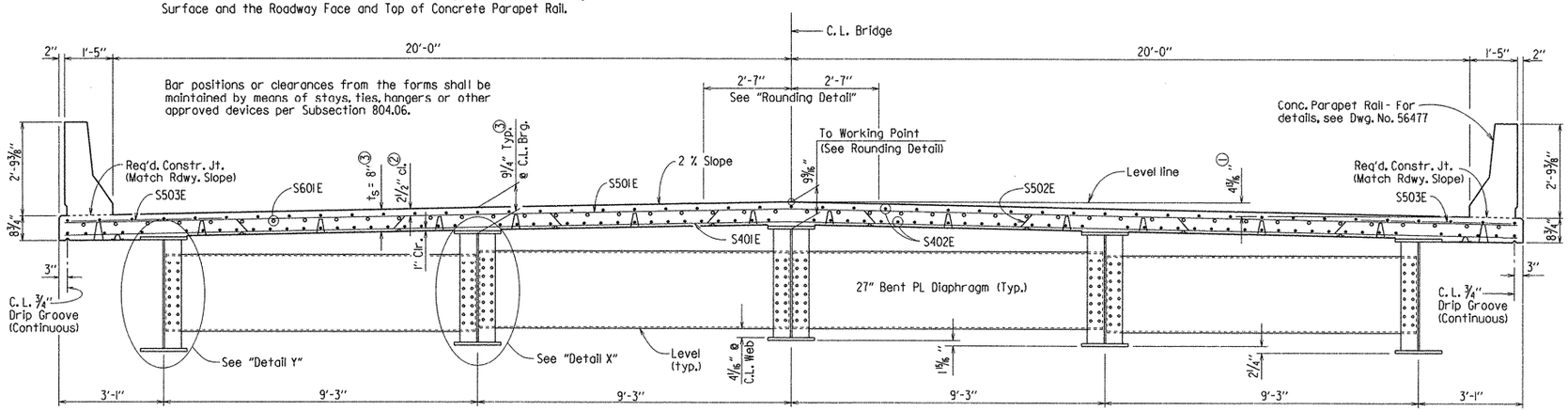
DRAWN BY: ACP DATE: 07-01-14 FILENAME: b050274_11.dgn
CHECKED BY: AMS DATE: 7/7/14 SCALE: 1" = 30'
DESIGNED BY: ACP DATE: 07-14

BRIDGE NO. 07337 DRAWING NO. 56464

PRINT DATE: 1/15/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		050274	47	162
				① 07337		CONT. UNIT		56474

Note: Class I Protective Surface Treatment shall be applied to the Roadway Surface and the Roadway Face and Top of Concrete Parapet Rail.



Slab Reinforcing:

Longitudinal: S402E Top & Bottom placed as shown
S601E placed as shown over Interior Supports
(See "Reinforcing Plan & Slab Pouring Sequence", Dwg. No. 56476)

Transverse: S501E @ 12"o.c. in top, S401E @ 12" in bottom
S502E @ 12"o.c. bent up over beams — Alternate
S503E @ 6"o.c. in top @ Overhangs (bundled with #5 bars)

TYPICAL ROADWAY SECTION

LOOKING AHEAD
½" = 1'-0"

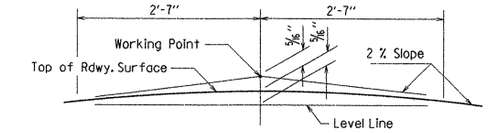
Notes:
At the Contractor's option, two straight epoxy coated #5 bars, top and bottom, may be substituted for bar S502E. Payment will be based on the weight of bar S502E.

Bars with an "E" suffix are epoxy coated.

① Working point to gutterline

② Tolerance: Minus = ¼"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance- See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE"

③ See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE"



NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

N.T.S.

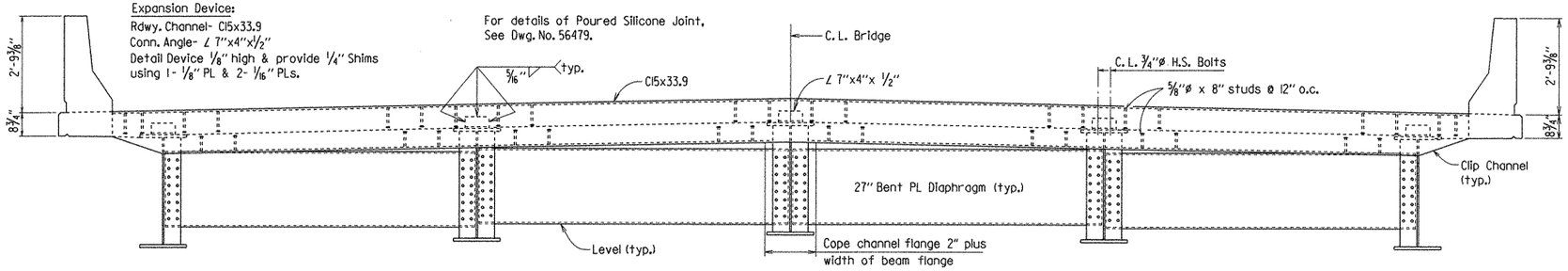
TABLE FOR WELD

Material Thickness Of Thicker Part Joined (inches)	Minimum Size Of Fillet Weld (inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	⅝"	

Note: When a fillet weld size, as shown on the plans, is larger than the minimum, the First Pass shall be that specified for minimum size of fillet weld.

Expansion Device:
Rdwy. Channel- C15x33.9
Conn. Angle- ∠ 7"x4"x½"
Detail Device ⅛" high & provide ¼" Shims using 1- ⅛" PL & 2- 1/16" PLs.

For details of Poured Silicone Joint, See Dwg. No. 56479.

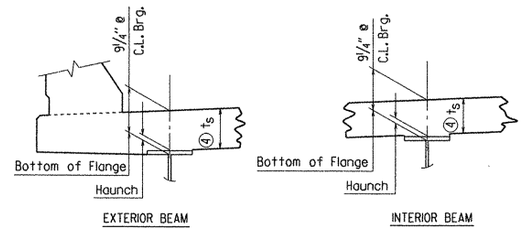


ROADWAY SECTION NEAR JOINT

LOOKING AHEAD
½" = 1'-0"

Notes:
Bolts in connections shall be properly installed and tightened in accordance with Subsection 807.71.

Stop weld ¼" to 1" from end of clip (typ.)



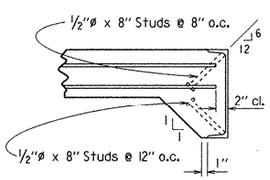
④ Tolerance when removable deck forming is used is + ½", - ¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

Notes:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance : Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 1¾". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

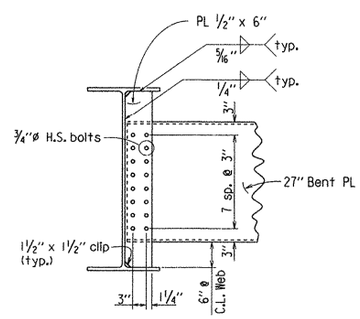
N.T.S.



Note: As an alternate to ⅝"ø studs, ½"ø x 8" studs spaced as shown may be used. Use weight of ⅝"ø stud as basis of measurement of structural steel in anchors.

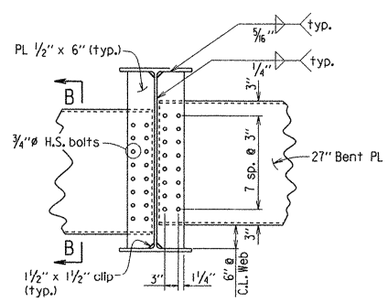
DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

N.T.S.



DETAIL Y

N.T.S.



DETAIL X

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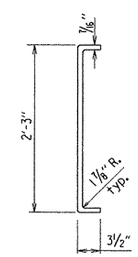

Typ. cross-section for all 27" Bent Plate Diaphragms

SECTION B-B

N.T.S.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
1-20-15
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 6
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT GUT CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 9/15/14 FILENAME: b090282_sl.dgn
CHECKED BY: ACP DATE: 01/16/15 SCALE: As Noted
DESIGNED BY: ACP DATE: 09-14

BRIDGE NO. 07337 DRAWING NO. 56474

PRINT DATE: 1/15/2015