



Madison, Wisconsin

INDEX OF SHEETS

SHEET NO.	TITLE
SHEET NO. D1	TYPICAL SECTION
SHEET NO. D2	APPROACH SLAB DETAILS
SHEET NO. D3	SOUTH APPROACH DETAILS
SHEET NO. D4	NORTH APPROACH DETAILS
SHEET NO. D5-D9	RAILING DETAILS
SHEET NO. P1	PLAN & PROFILE
SHEET NO. TC-1	TRAFFIC CONTROL
SHEET NO. X1-X3	CROSS SECTIONS

CITY OF MADISON

CITY ENGINEERING DIVISION

DEPARTMENT OF PUBLIC WORKS

PLAN OF PROPOSED IMPROVEMENT

JOHN NOLEN DRIVE BRIDGE BIKE PATH RAILING REPLACEMENT AND BIKE PATH BRIDGE APPROACH RECONSTRUCTION, 3RD BRIDGE OUTBOUND

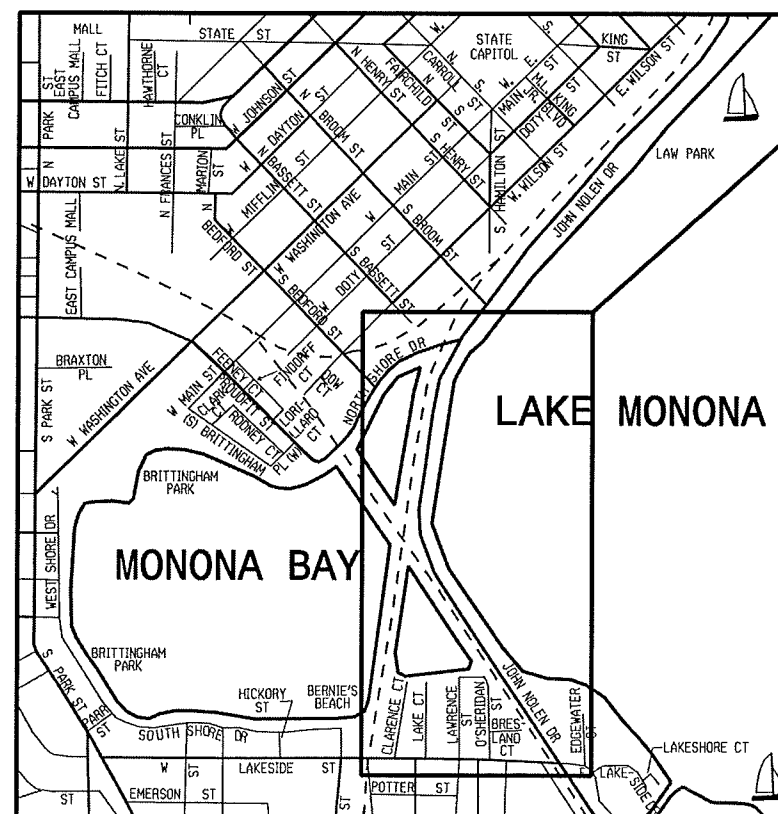
CITY PROJECT NO. 53W1535

CONTRACT NO. 6988

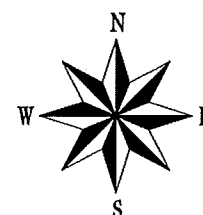
CONVENTIONAL SIGNS	
FIELD VERIFY ALL UTILITY LOCATIONS	
GAS	— G —
STORM SEWER	— ST —
SANITARY SEWER	— SAN —
WATER	— W —
OVERHEAD ELECTRIC	— OH —
POWER POLE	□
ADA COMPLIANT RAMP W/ DETECTABLE WARNING FIELD	■
COMBUSTIBLE FLUIDS	CAUTION

EARTH WORK SUMMARY

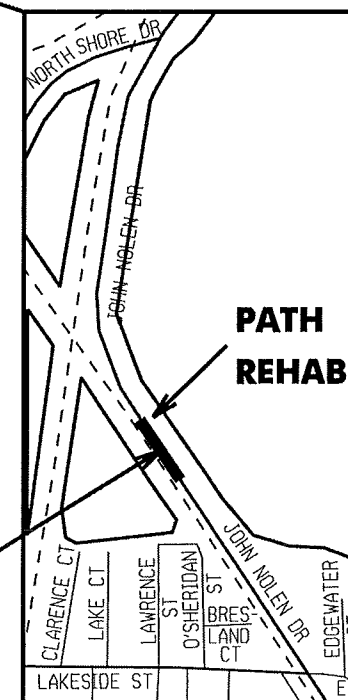
EXCAVATION CUT (MEAS. PLAN QUANTITY).....155 CY
ESTIMATED UNDISTRIBUTED UNDERCUT.....27 CY
TOTAL UNCLASSIFIED EXCAVATION CUT.....182 CY



PROJECT
LOCATION



SOUTH BRIDGE



PUBLIC IMPROVEMENT PROJECT APPROVED

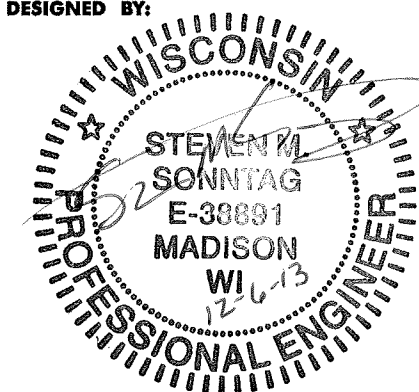
JUNE 4, 2013

BY THE COMMON COUNCIL
OF MADISON, WISCONSIN

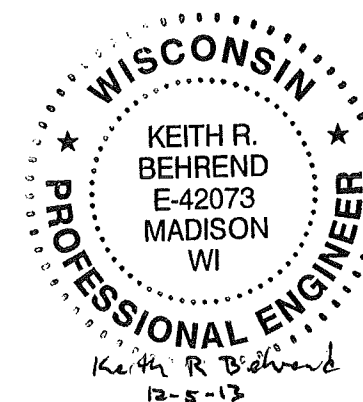
PUBLIC IMPROVEMENT DESIGN
APPROVED BY:

 12/6/13
City Engineer Date

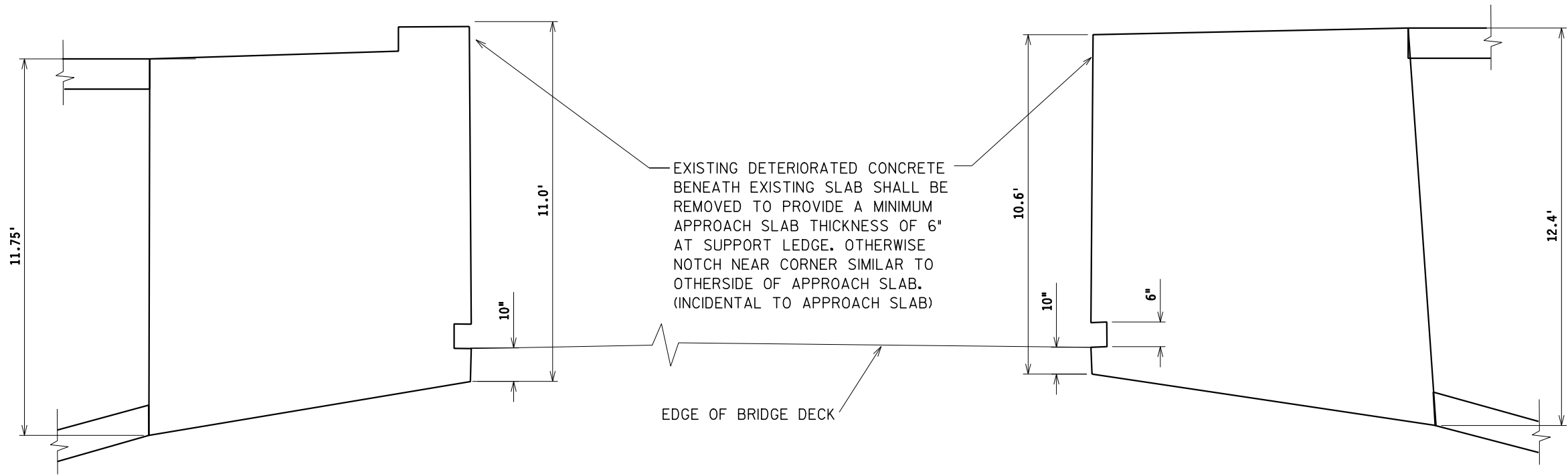
BIKE PATH
DESIGNED BY:



STRUCTURAL DESIGN
APPROVED BY:

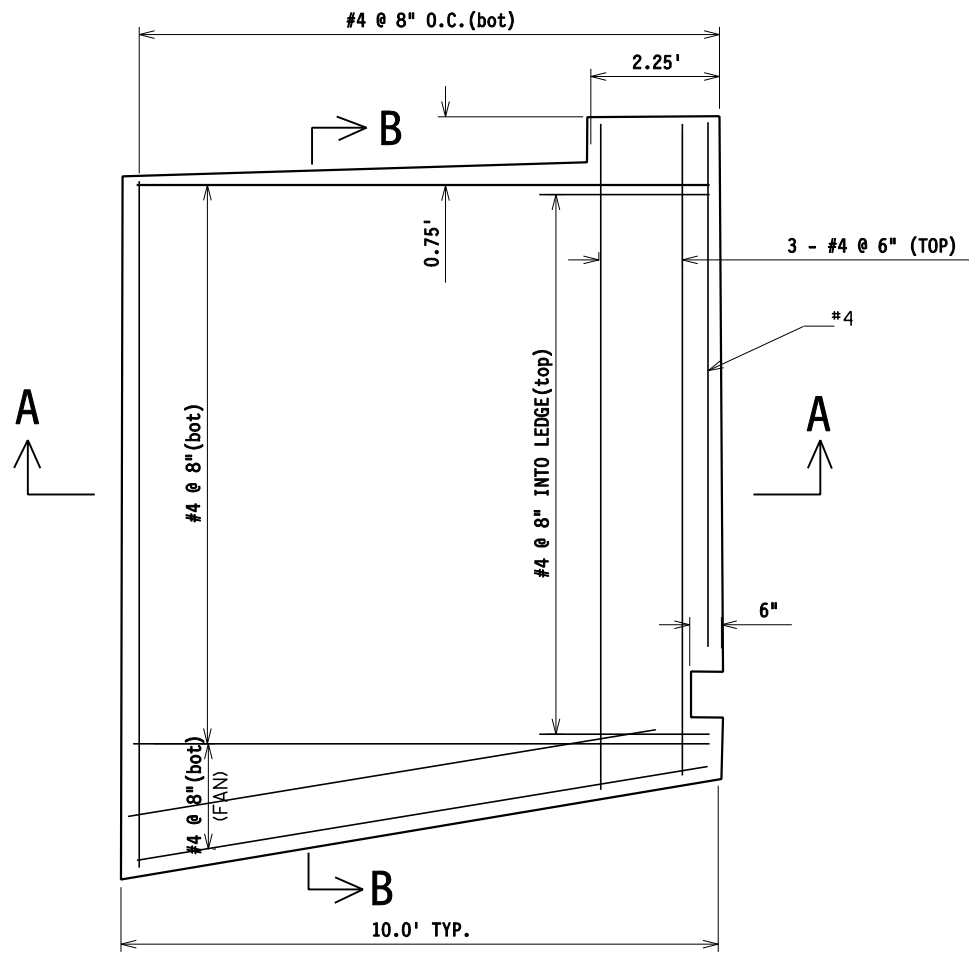


LEVELS ON = 1,2, 4,5,6,7,8,9, 11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39, 42,43,44,45,46,47,48,49, 51,52,53,54,55,56,57,58,59, 61, 63

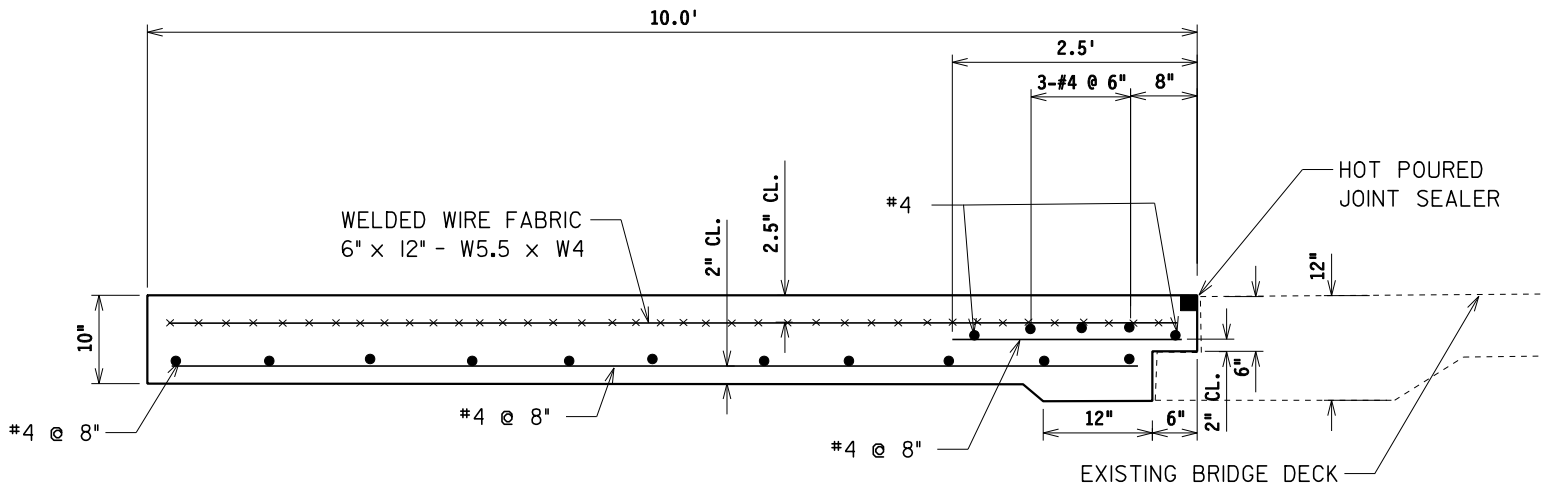


SOUTH APPROACH SLAB(TOP VIEW)

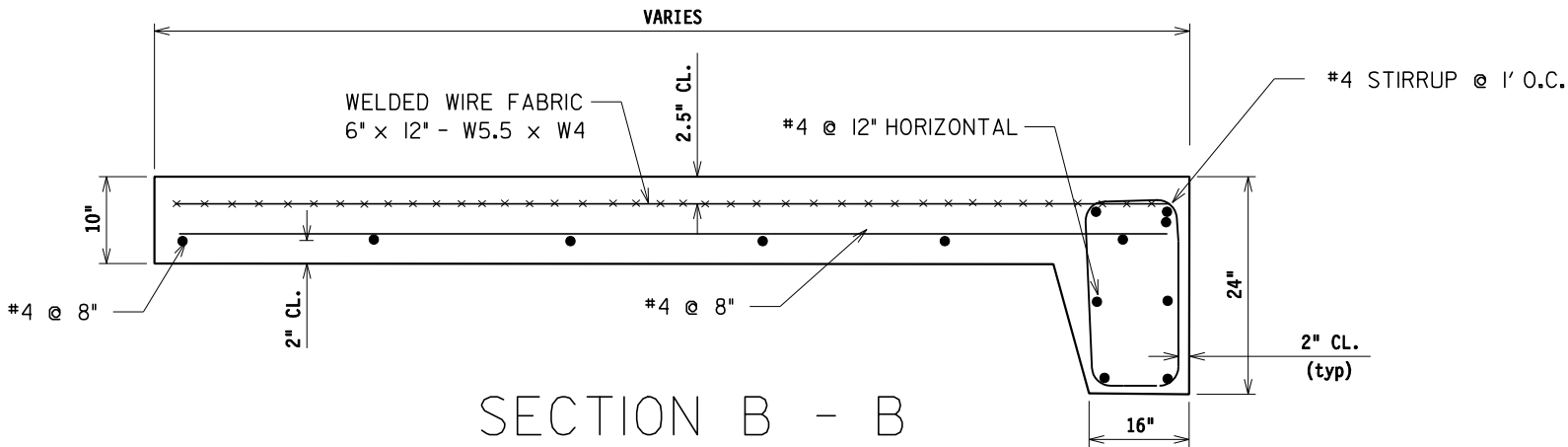
NORTH APPROACH SLAB(TOP VIEW)



APPROACH SLAB TYPICAL REINFORCEMENT



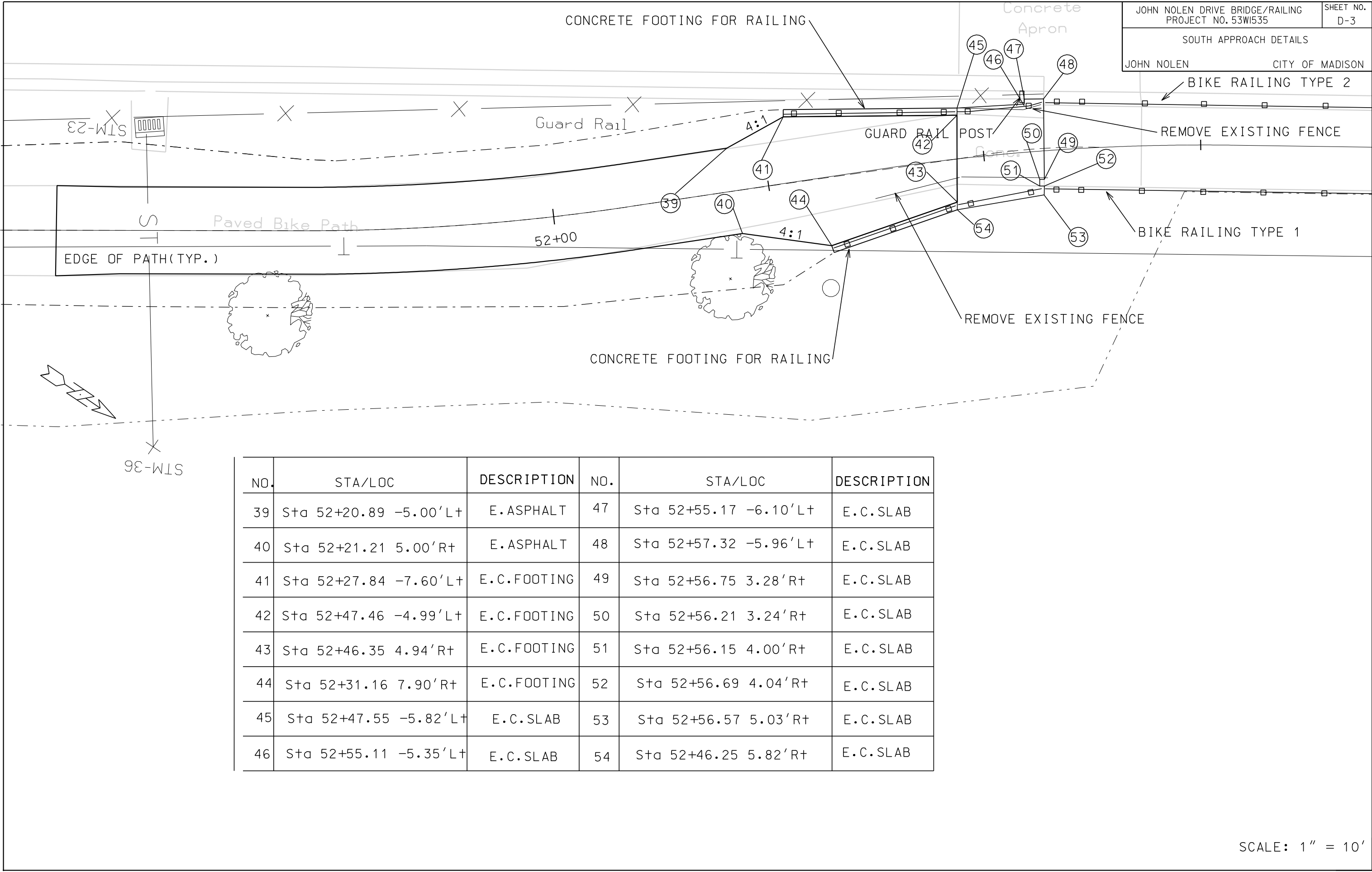
SECTION A - A



SECTION B - B

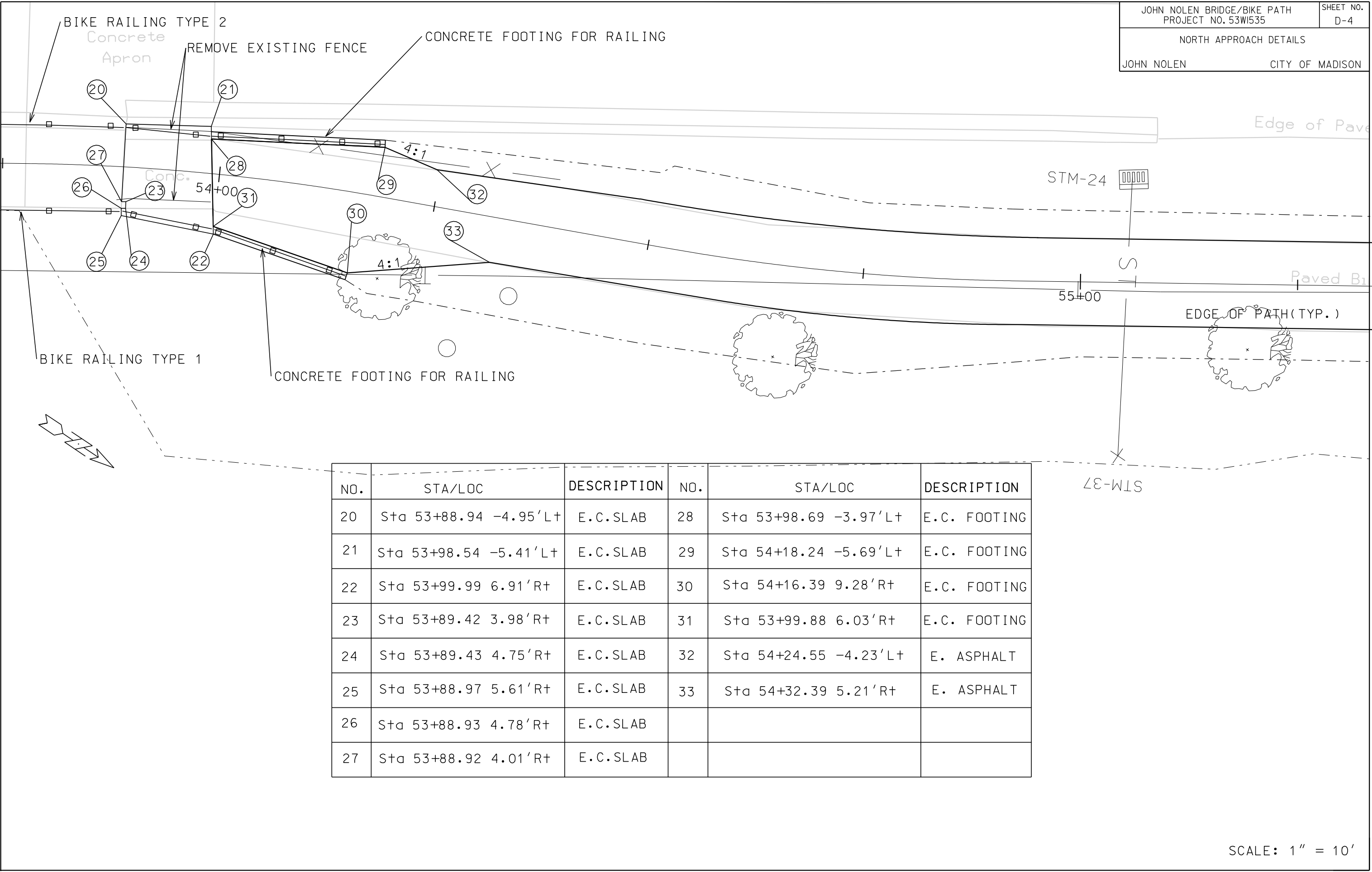
ORIGINATOR: CITY OF MADISON, STREETS DIVISION

PLOT SCALE:
PLOT NAME:
REV. DATE:



ORIGINATOR: CITY OF MADISON, STREETS DIVISION

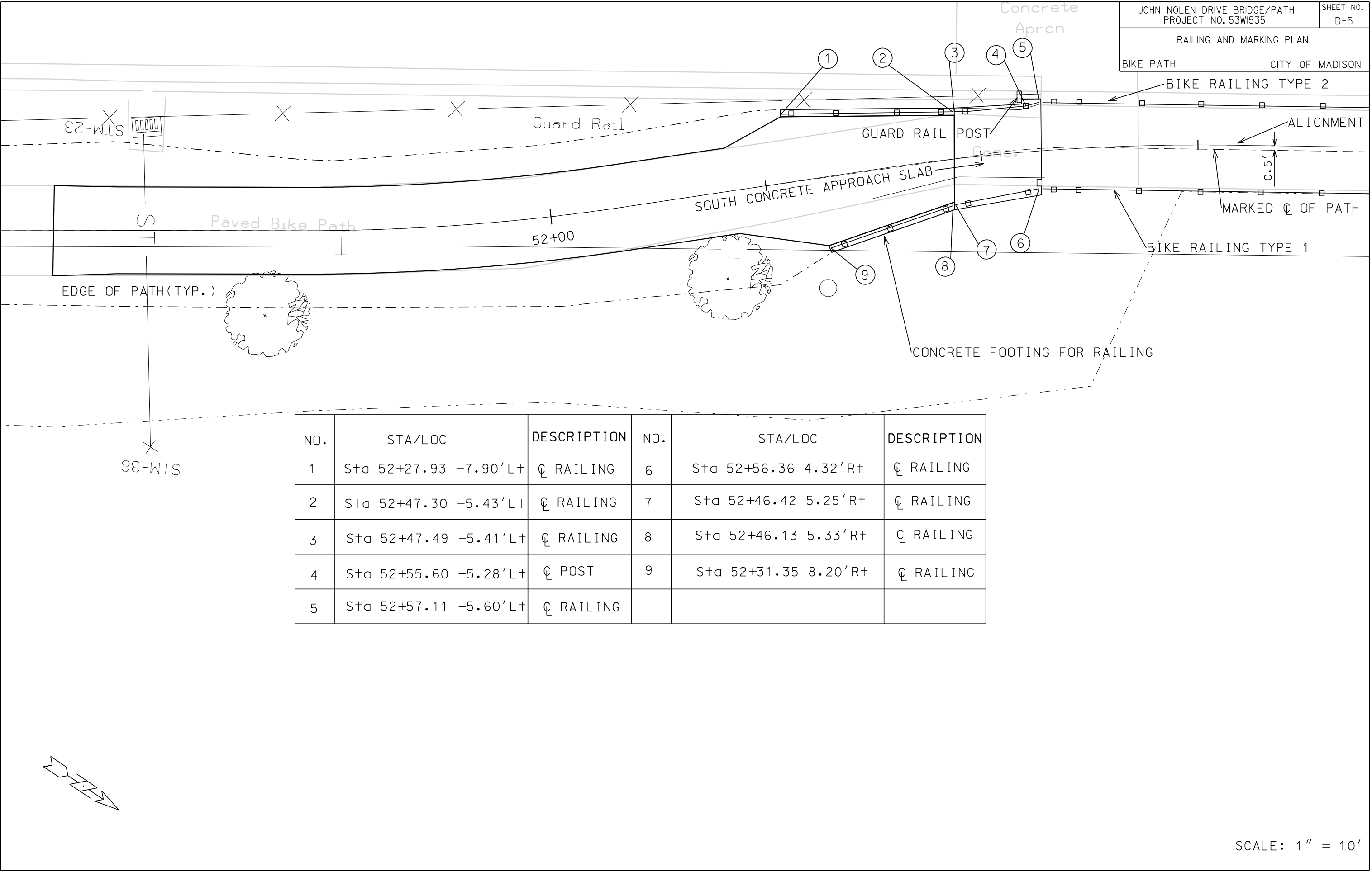
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PLOT NAME:
REV. DATE:



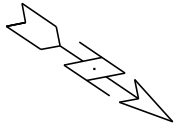
SCALE: 1" = 10'

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

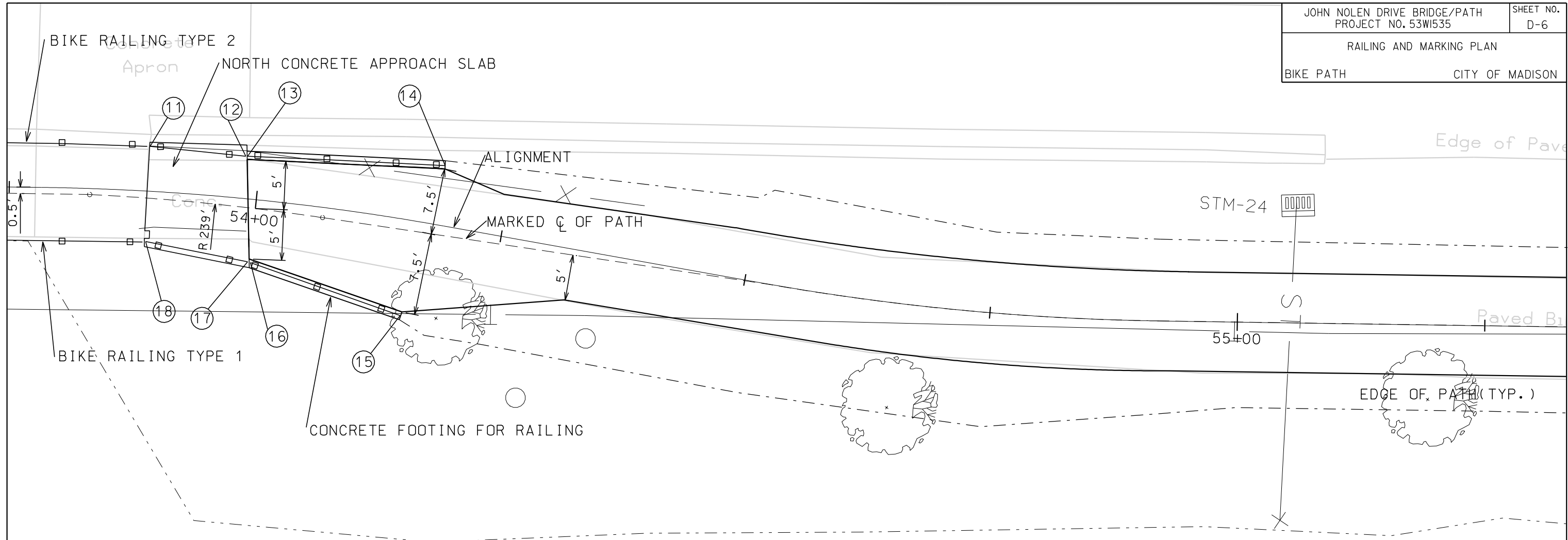
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REV. DATE:



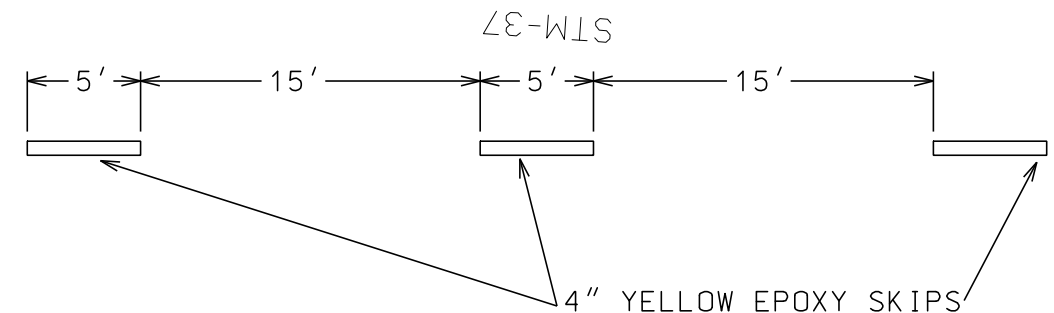
NO.	STA/LOC	DESCRIPTION	NO.	STA/LOC	DESCRIPTION
1	Sta 52+27.93 -7.90'L+	C RAILING	6	Sta 52+56.36 4.32'R+	C RAILING
2	Sta 52+47.30 -5.43'L+	C RAILING	7	Sta 52+46.42 5.25'R+	C RAILING
3	Sta 52+47.49 -5.41'L+	C RAILING	8	Sta 52+46.13 5.33'R+	C RAILING
4	Sta 52+55.60 -5.28'L+	C POST	9	Sta 52+31.35 8.20'R+	C RAILING
5	Sta 52+57.11 -5.60'L+	C RAILING			



SCALE: 1" = 10'



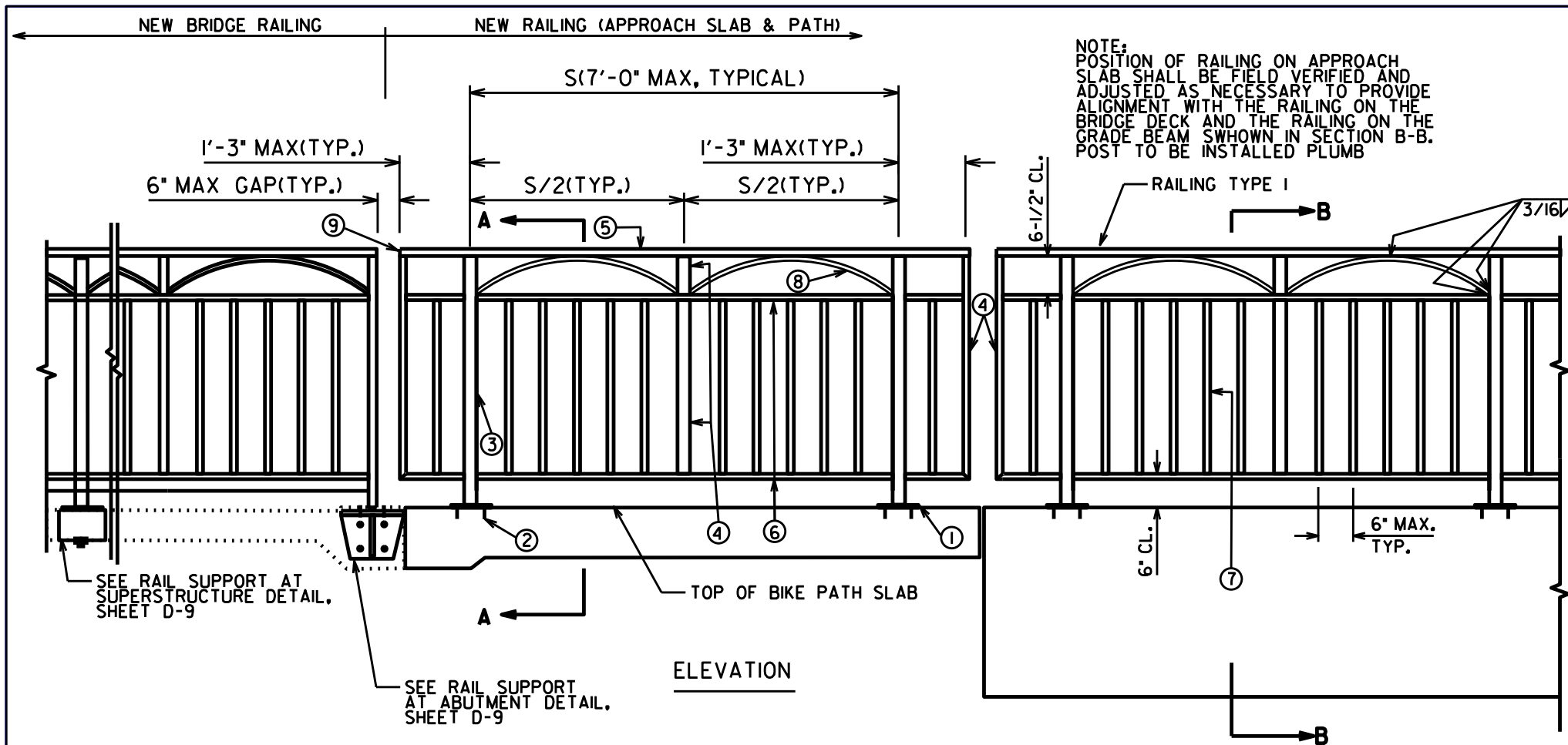
NO.	STA/LOC	DESCRIPTION	NO.	STA/LOC	DESCRIPTION
11	S+a 53+88.98 -4.53' L+	℄ RAILING	16	S+a 54+00.05 6.39' R+	℄ RAILING
12	S+a 53+98.53 -4.27' L+	℄ RAILING	17	S+a 53+99.75 6.33' R+	℄ RAILING
13	S+a 53+98.70 -4.28' L+	℄ RAILING	18	S+a 53+89.08 5.09' R+	℄ RAILING
14	S+a 54+18.20 -6.03' L+	℄ RAILING			
15	S+a 54+16.26 9.67' R+	℄ RAILING			



TYPICAL CENTERLINE MARKING DETAIL

SCALE: 1" = 10'

PLOT SCALE: _____
PLOT NAME: _____
REV. DATE: _____



AT ABUTMENTS

LEGEND

- ① PLATE 3/4" x 7" x 8" WITH 3/4" x 1-1/2" SLOTTED HOLES.
- ② 5/8" DIA. x 9" LONG, TYPE 316 STAINLESS STEEL CONCRETE MASONRY ANCHORS TYPE S (MIN. TENSILE STRENGTH = 70 KSI) WITH NUT AND WASHERS OF SAME ALLOY GROUP. EMBED 7".
- ③ STRUCTURAL TUBING 3" x 1-1/2" x 3/16". PLACE VERTICAL. WELD TO NO. 1 AND 5.
- ④ STRUCTURAL TUBING 1-1/2" x 1-1/2" x 3/16". PLACE VERTICAL. WELD TO NO. 5 AND 6.
- ⑤ STRUCTURAL TUBING 3" x 1-1/2" x 3/16" RAIL. WELD TO NO. 3 AND 4, INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- ⑥ STRUCTURAL TUBING 1-1/2" x 1-1/2" x 3/16" RAILS. WELD TO NO. 3. INSIDE OF TUBE TO BE PAINTED AT ALL FIELD ERECTION & EXPANSION JOINTS.
- ⑦ BAR 1" x 1" PICKETS, WELD TO NO. 6. PLACE VERTICAL. SPACE AT 6" MAX. C/L TO C/L SPACING.
- ⑧ BAR 1" x 1". BEND TO REQUIRED RADIUS. WELD TO NO. 3, 4 AND 5.
- ⑨ 3/16" PLATE TO CAP TOP RAIL ENDS. WELD ALL AROUND.
- ⑩ RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. PROVIDE SLIDING FIT.
- ⑪ RECTANGULAR SLEEVE FABRICATED FROM 3/16" PLATES. (1'-4" LONG.)

GENERAL NOTES

BID ITEMS SHALL BE BIKE RAILING TYPE 1 AND BIKE RAILING TYPE 2 WHICH SHALL INCLUDE ALL ITEMS SHOWN AND PAINTING.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL PLATES, BARS, AND RECTANGULAR SLEEVES SHALL CONFORM TO ASTM A709 GRADE 36. ALL STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B.

ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET NORMAL TO GRADE.

CUT BOTTOM OF POST TO MAKE POST VERTICAL IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTION.

ALL WELDS SHALL BE 3/16" FILLET WELDS WITH E70XX ELECTRODES UNLESS NOTED OTHERWISE. WELDS SHALL EXTEND AROUND PERIMETER OF TUBES AND BARS.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

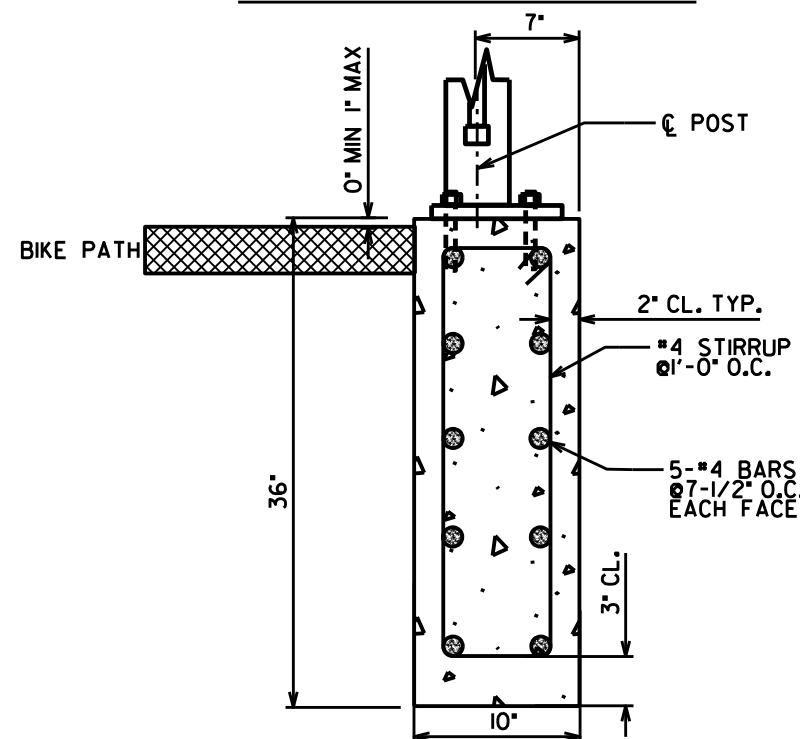
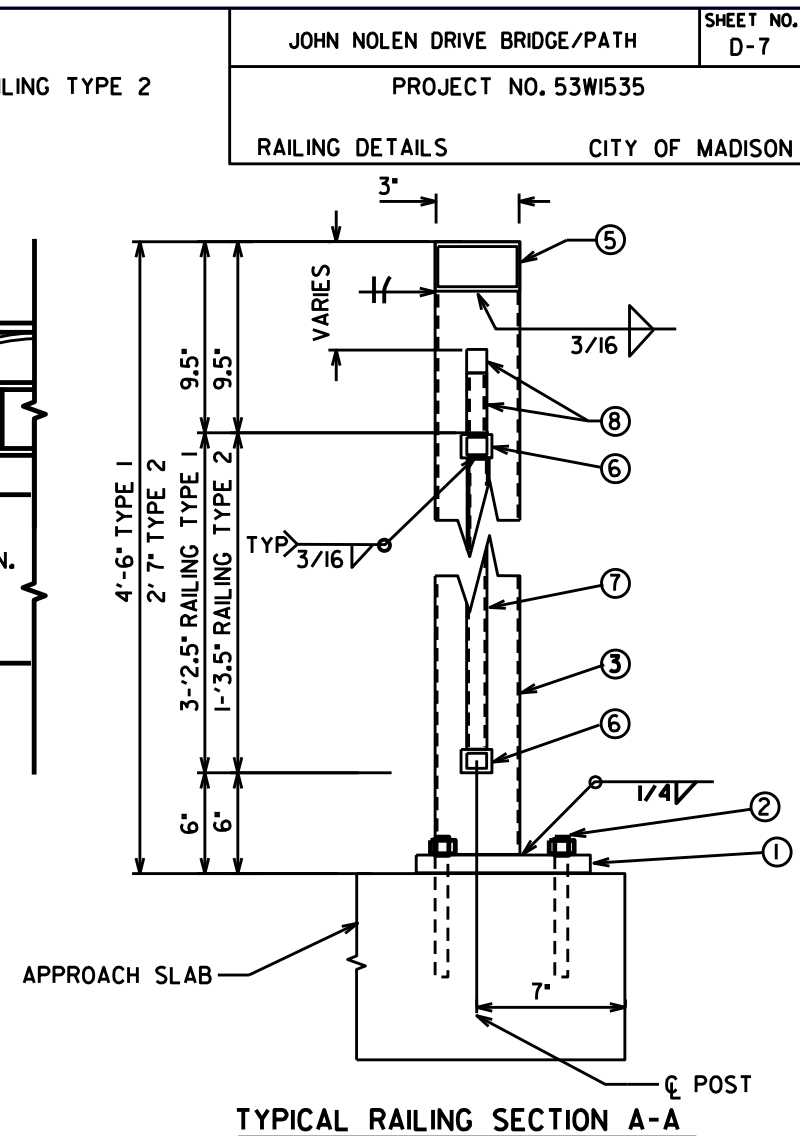
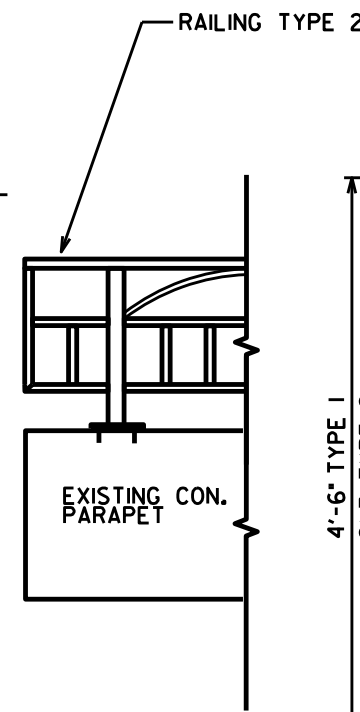
CAULK AROUND PERIMETER OF BASE PLATES, NO. 1, AND FILL BOLT SLOT OPENINGS IN SHIMS AND BASE PLATES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

ALL MATERIAL (EXCEPT NO. 3) SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, THE MATERIAL SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH AN APPROVED TIE COAT AND TOP COAT AS SPECIFIED IN THE SPECIAL PROVISIONS. THE MATERIAL SHALL BE PAINTED FEDERAL COLOR NO. 27038, BLACK.

RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE 3 OR 4 POSTS.

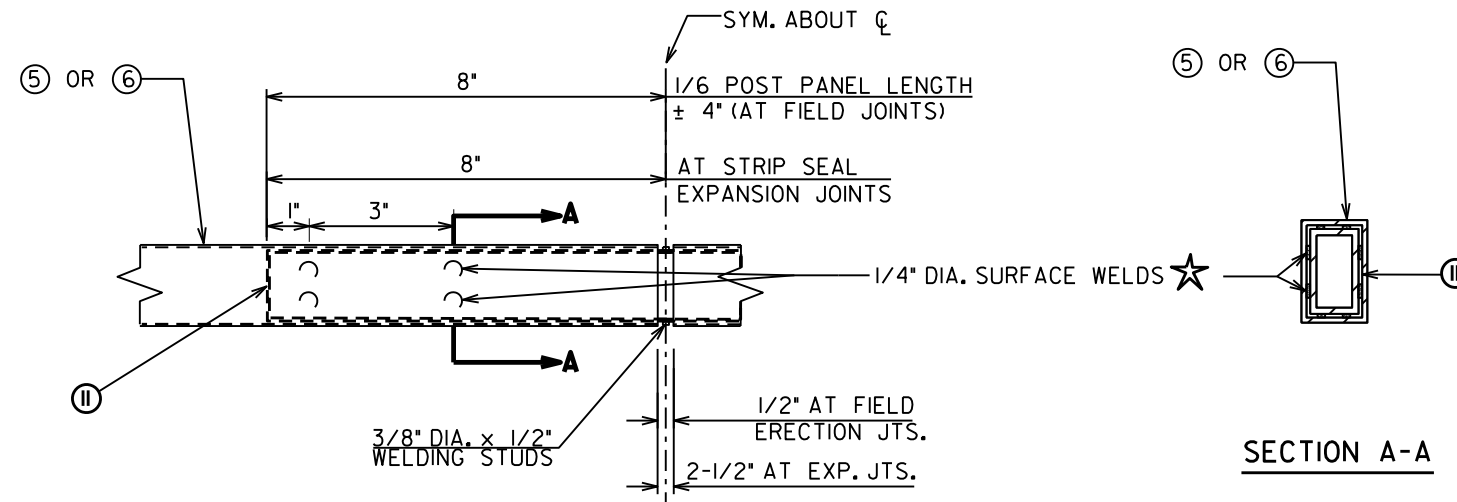
VENT HOLES SHALL BE DRILLED IN POST AND RAIL MEMBERS AS REQUIRED TO FACILITATE GALVANIZING AND DRAINAGE.

TOUCH-UP PAINTING TO BE DONE AT COMPLETION OF STEEL RAILING INSTALLATION TO THE SATISFACTION OF THE ENGINEER AT NO EXTRA COST.



GENERAL NOTES

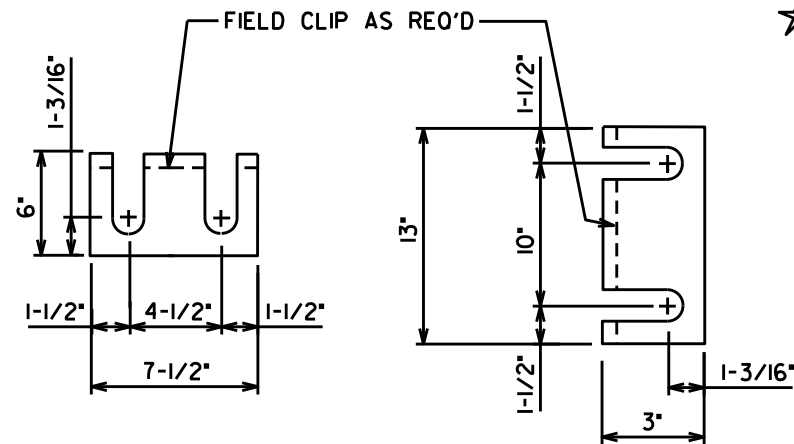
SEE LEGEND, SHEET D-7
SEE GENERAL NOTES, SHEET D-7



SECTION A-A

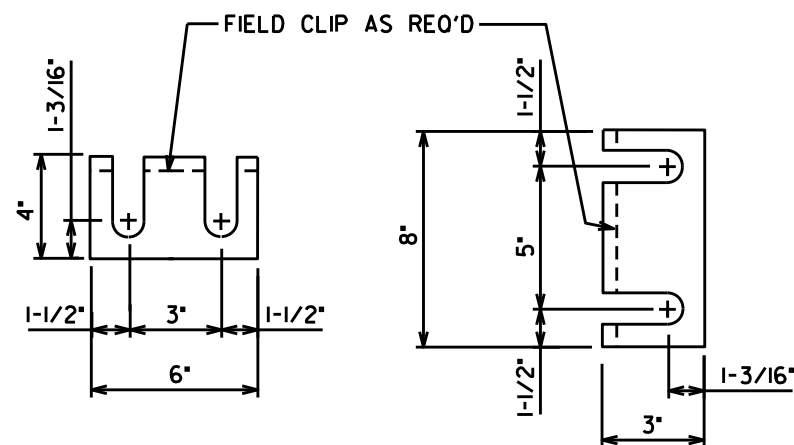
FIELD ERECTION JOINT DETAIL

★ MIN. 5/8" FLAT SURFACE DIA. PUNCHING
OR STUDS MAY BE USED AS AN ALTERNATE



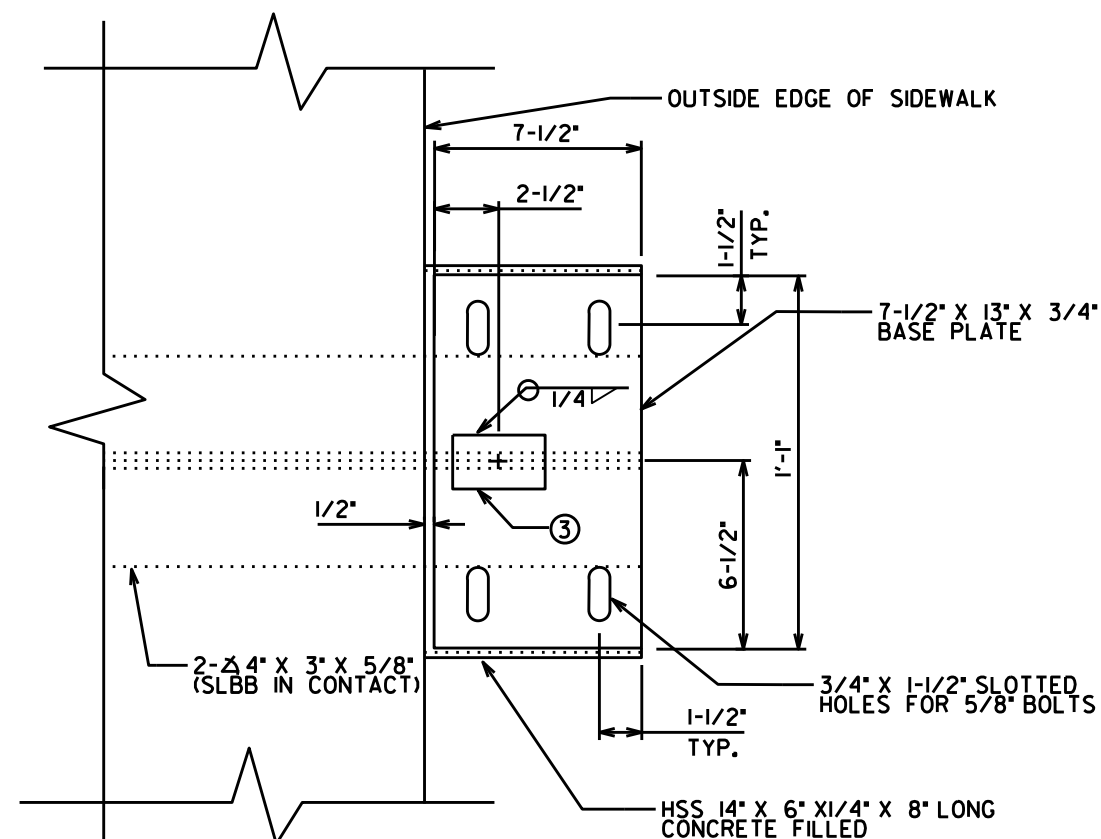
7-1/2"x13" BASE PLATE-RAIL POST SHIM DETAIL

NOTE: 2 SETS PER POST- ALL SHIMS SHALL BE GALVANIZED,
1/16" THICK AND ALL RADII ARE 11/16".

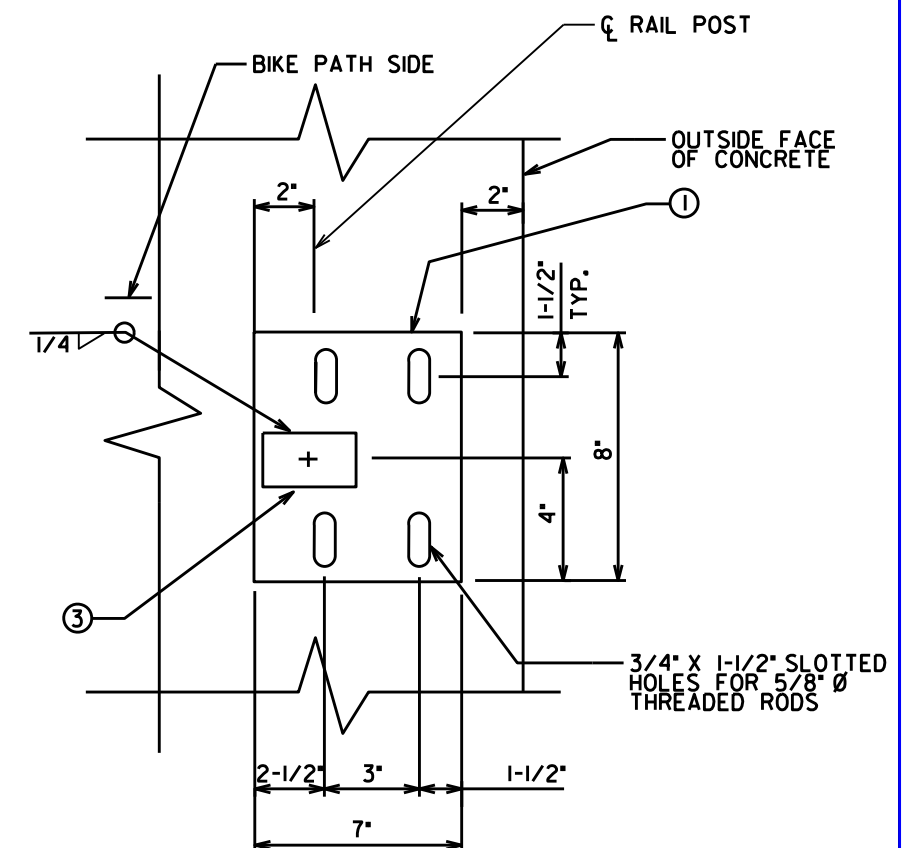


7"x8" BASE PLATE-RAIL POST SHIM DETAIL

NOTE: 2 SETS PER POST- ALL SHIMS SHALL BE GALVANIZED,
1/16" THICK AND ALL RADII ARE 11/16".



TYPICAL RAIL POST BASE PLATE
AT BRIDGE SUPERSTRUCTURE



TYPICAL RAIL POST BASE PLATE AT
APPROACH SLAB AND GRADE BEAM

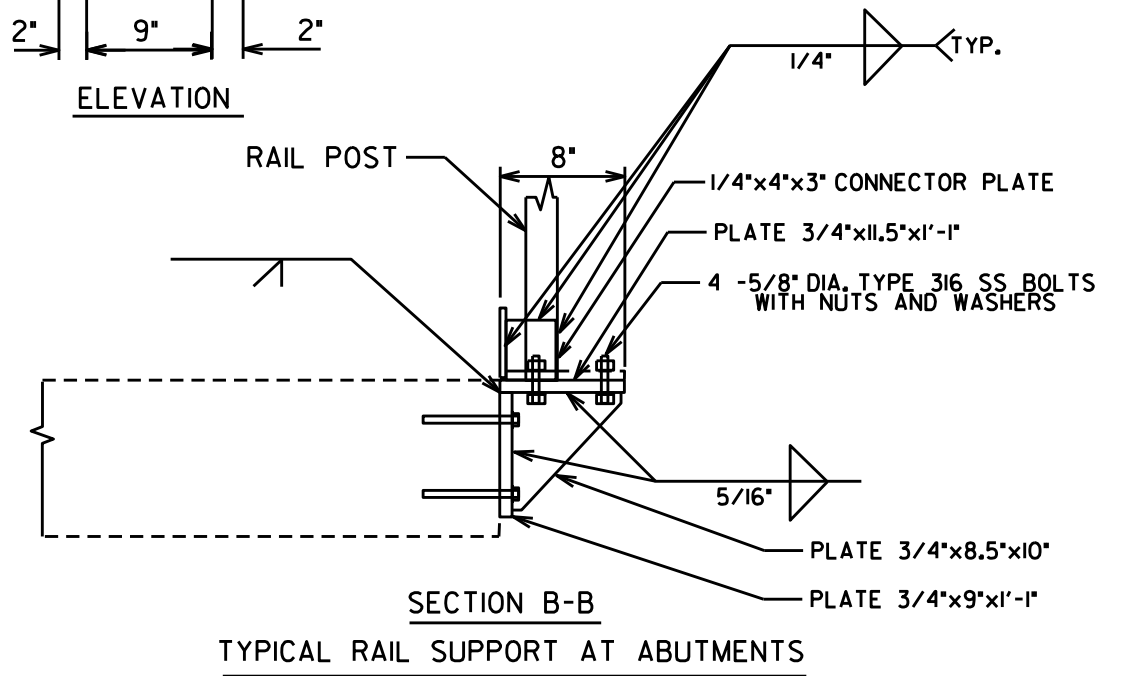
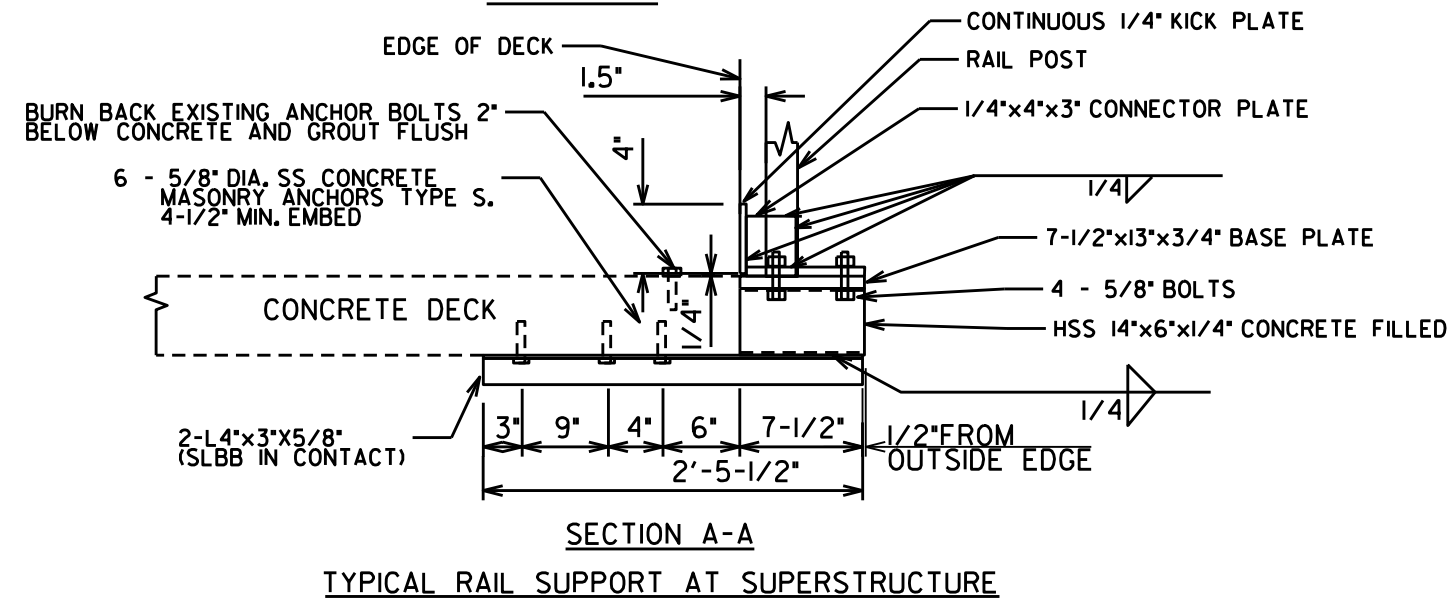
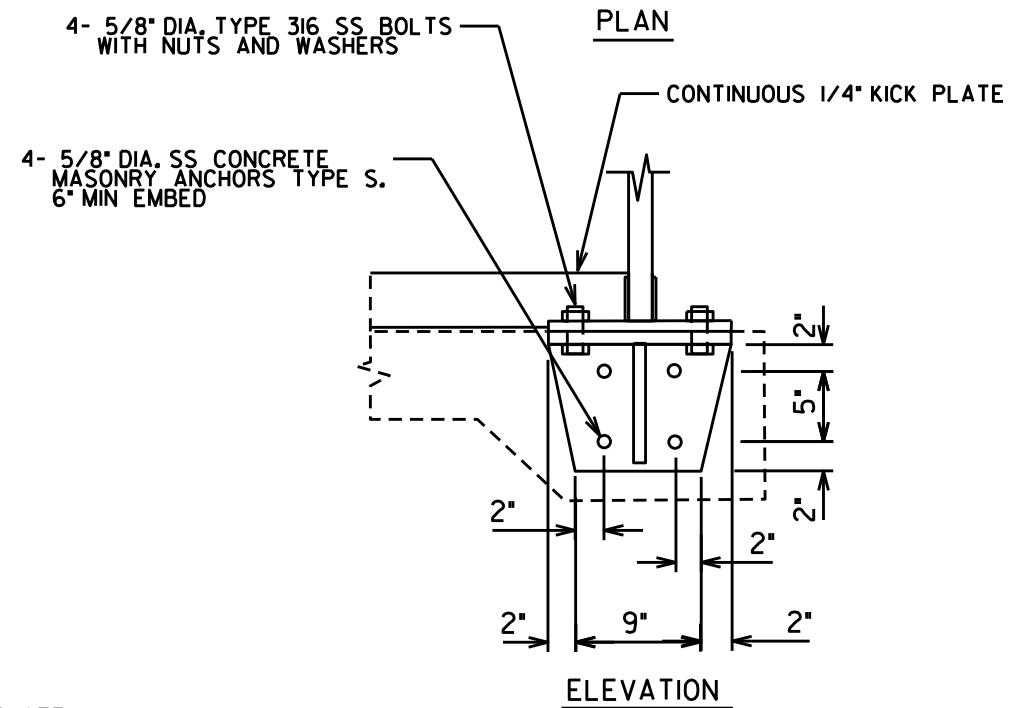
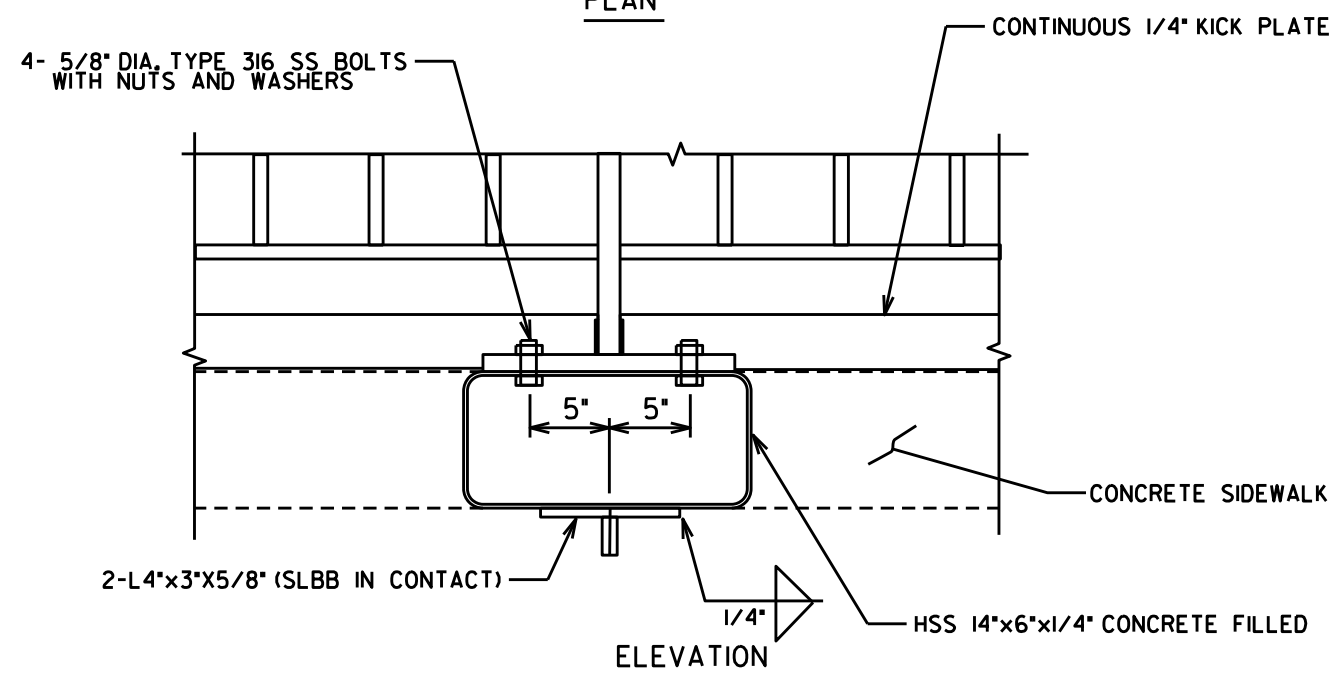
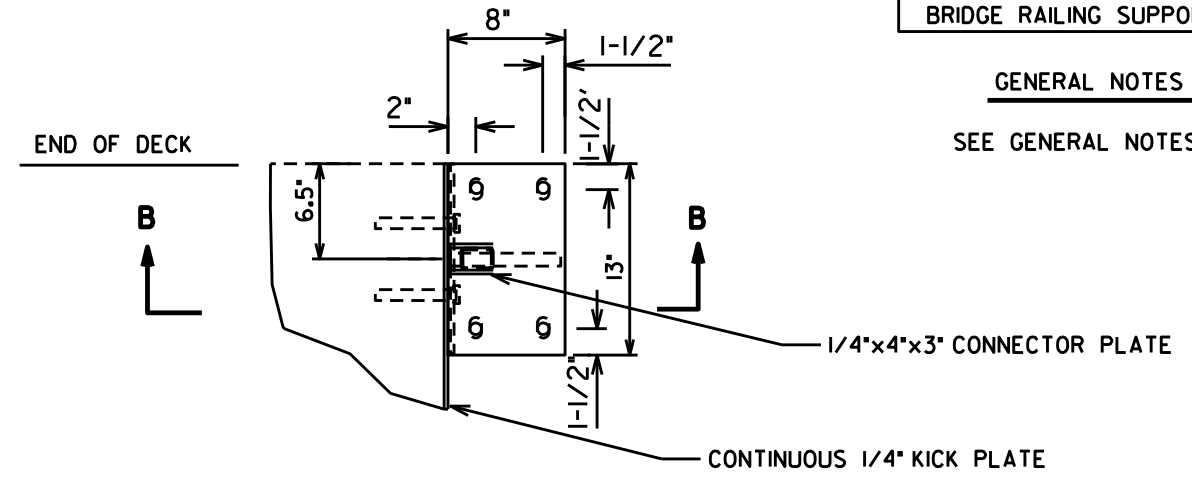
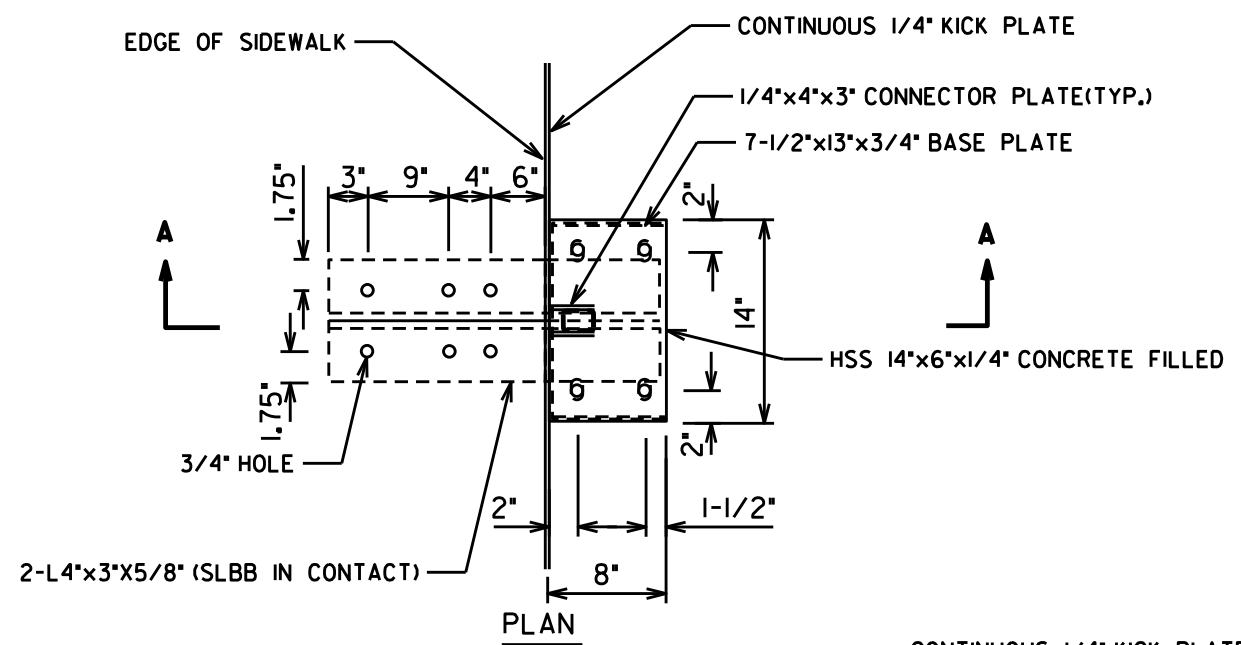
PLOT SCALE: _____

PLOT NAME: _____

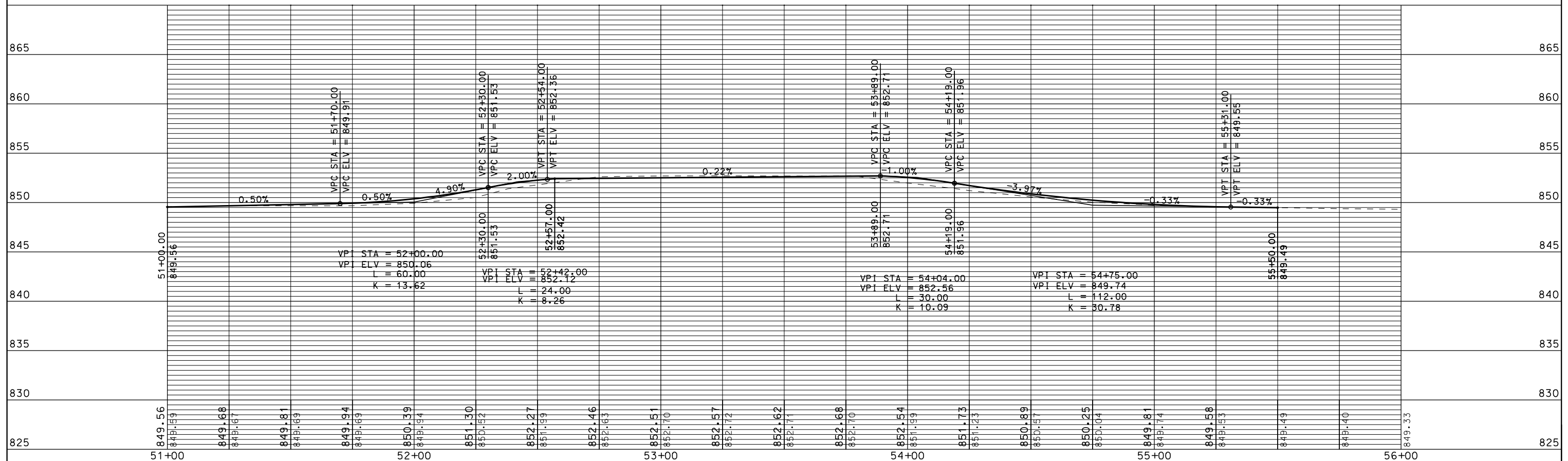
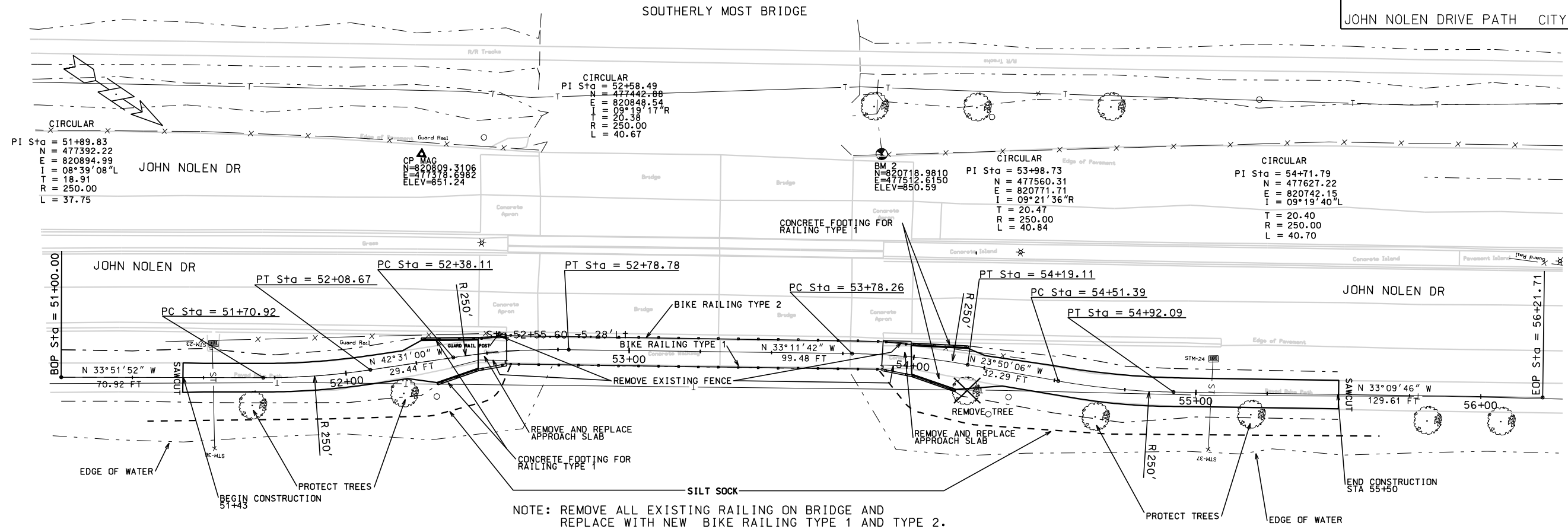
REV. DATE:

ORIGINATOR: CITY OF MADISON, STREETS DIVISION

GENERAL NOTES
SEE GENERAL NOTES, SHEET D-7



ORIGINATOR: CITY OF MADISON, STREETS DIVISION



REV. DATE: -----

ORIGINATOR: CITY_OF_MADISON, STREETS_DIVISION

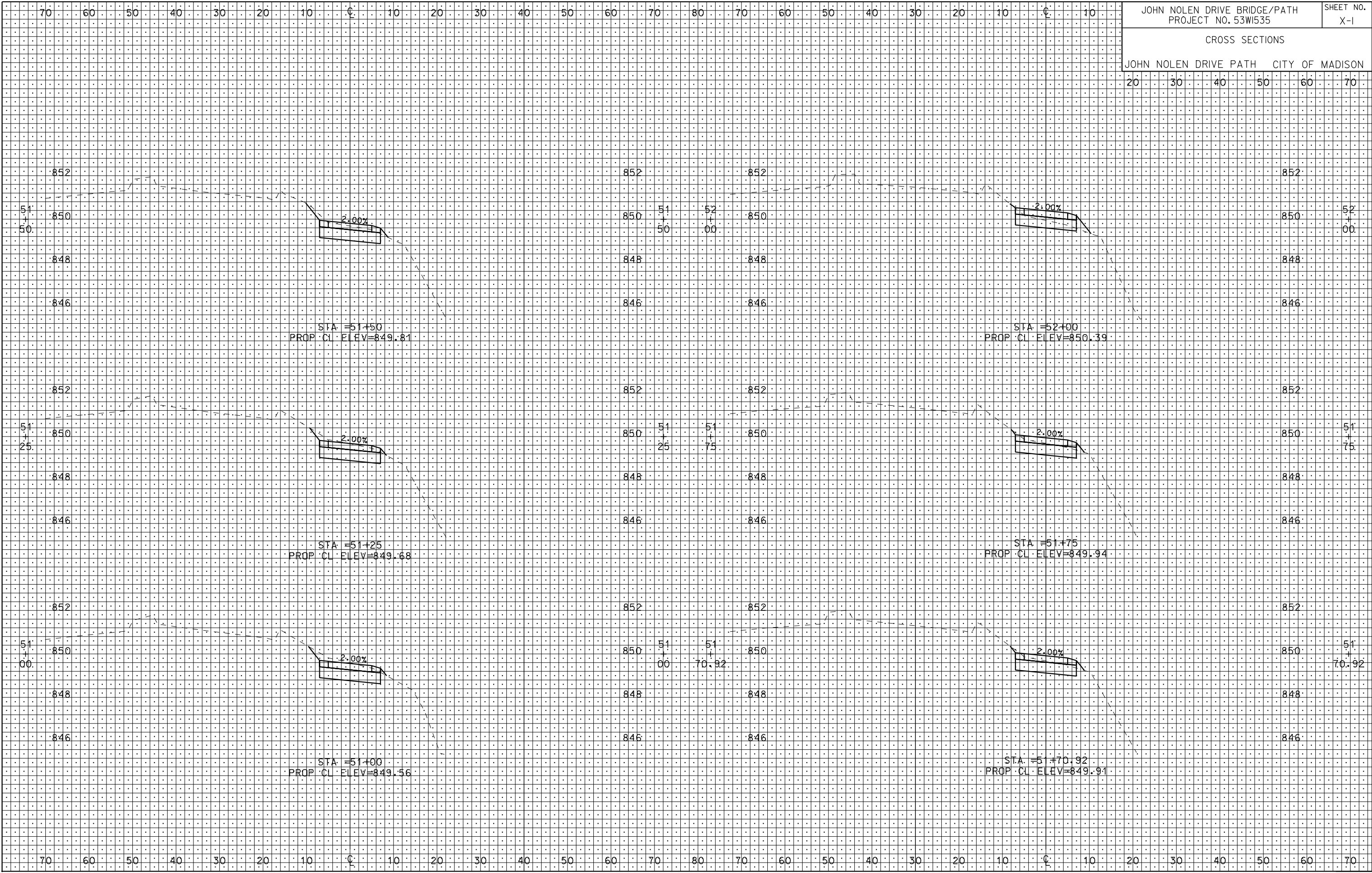


ORIGINATOR: CITY OF MADISON, STREETS DIVISION

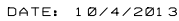
PLOT SCALE: 1"=40'

PLOT NAME: 1007.DGN

REV. DATE: 10/4/2013



JOHN NOLEN DRIVE PATH CITY OF MADISON



REV. DATE: -----

ORIGINATOR: CITY_QE_MADISON_STREETS_DIVISION

SHEET NO.
X-3

JOHN NOLEN DRIVE PATH CITY OF MADISON

