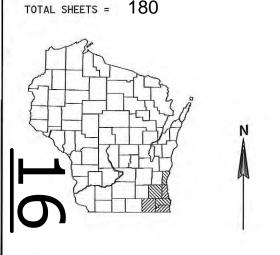
#### MAY 2015 STATE OF WISCONSIN ORDER OF SHEETS DEPARTMENT OF TRANSPORTATION Section No. 1 Typical Sections and Details Section No. 2 Estimate of Quantities

FEDERAL PROJECT STATE PROJECT PROJECT CONTRACT 1000-20-67

PLAN OF PROPOSED IMPROVEMENT

SIGN BRIDGE REPAIR AND REPLACEMENT 2015

VARIOUS FREEWAYS, STATE HIGHWAYS, AND US HIGHWAYS SOUTHEAST REGION WIDE



Section No. 5 Plan and Profile Section No. 6 Standard Detail Drawings

Section No. 8 Structure Plans

Section No. 9 Cross Sections

Section No. 9 Computer Earthwork Data

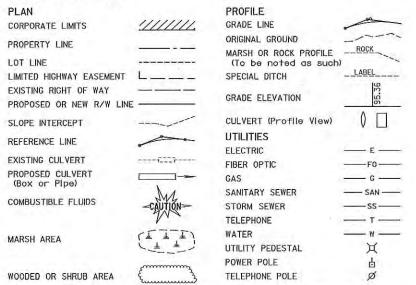
Section No. 7 Sign Plates

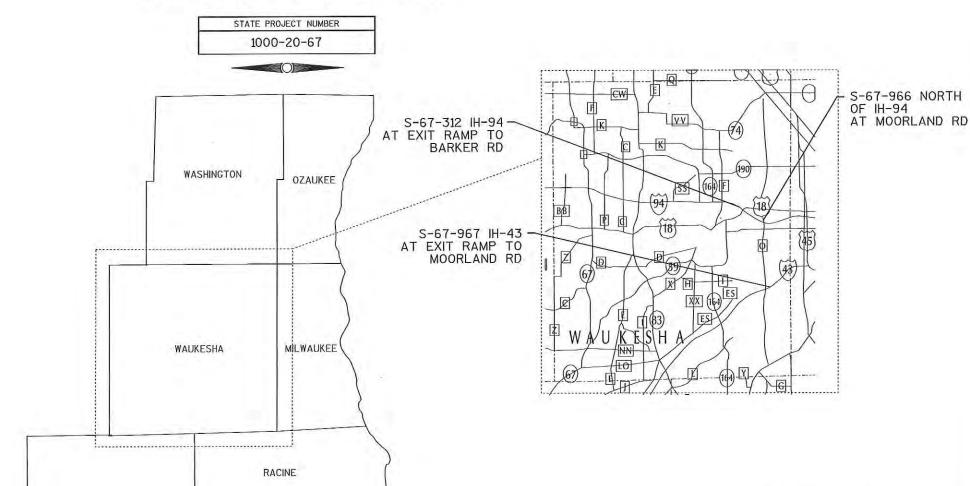
Miscellaneous Quantities Right of Way Plat

#### DESIGN DESIGNATION N/A

A.D.T.	= N/A
A.D.T.	= N/A
D.H.V.	= N/A
D.	= N/A
T.	= N/A
DESIGN SPEED	= N/A
FSALS.	= N/A

#### CONVENTIONAL SYMBOLS





STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION PREPARED BY Surveyor COLLINS ENGINEERS, INC. Designer Project Manager TOM HEYDEL District Supervisor\_ADRIAN LOPEZ C.O. Examiner

FILE NAME: 00\_Title Sheet.dgn PLOT DATE: 1/23/2015

1:35:44 PM PLOT BY: Veronica Chavezv8I

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WALWORTH

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PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADDS SHEET 10

TOTAL NET LENGTH OF CENTERLINE = 0.00 MI.

KENOSHA

#### UTILITIES CONTACT LIST

MILWAUKEE COUNTY HIGHWAY DIVISION ELECTRICAL SHOP MR. STANLEY JACKSON 10320 W. WATERTOWN PLANK RD. WAUWATOSA, WI. 53226 (414) 257-6593

WE ENERGIES (GAS) MR. TOM MINESAL 5400 GREEN BAY AVE. MILWAUKEE, WI 53209 414-944-5755

WE ENERGIES-ELECTRIC MR. DAN SANDE 333 W EVERETT ST.-A279 MILWAUKEE WI 53203 414-221-4578 DAN.SANDE@WE-ENERGIES.COM WISCONSIN DEPARTMENT OF TRANSPORTATION SE REGION LIGHTING ENGINEER MR. MATT PFEIFER 262-548-8778 MATTHEW.PFEIFER@DOT.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS CENTER MR. JEFF MADISON 433 W ST PAUL AVE, STE 300 MILWAUKEE, WI 53203 414-255-3723 JEFFERY.MADISON@DOT.WI.GOV

#### DNR CONTACT LIST

MILWAUKEE AND RACINE COUNTY MS. KRISTINA BETZOLD 2300 N. MARTIN LUTHER KING DR. MILWAUKEE, WI 53212 (414) 263-8517

WASHINGTON COUNTY MR. MIKE THOMPSON 2300 N. MARTIN LUTHER KING DR. MILWAUKEE, WI 53212 (414) 263-8648

KENOSHA AND WAUKESHA COUNTY MR. CRAIG WEBSTER 141 N W BARSTOW ST., RM. 180 WAUKESHA, WI 53187 (262) 574-2141

#### DESIGN CONTACT

COLLINS ENGINEERS, INC. 2033 W. HOWARD AVE MILWAUKEE, WI 53221 ATTN: VERONICA CHAVEZ DE FERNANDEZ (414) 282-6905

#### GENERAL NOTES

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN.



PROJECT NO: 1000-20-67

HWY: VARIOUS

COUNTY: SOUTHEAST REGION WIDE

GENERAL NOTES AND UTILITY CONTACTS

PLOT NAME :

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FILE NAME: 02\_01\_Utility.dgn

PLOT BY: Veronica Chavezv8I

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PLOT DATE: 1/27/2015 CEI\_TextSub\_ScreenControlByLevel.tbl

#### SIGN BRIDGE LOCATIONS - OZAUKEE COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-45-001	IH-43	SB	AT EXIT TO STH 33
S-45-003	IH-43	SB	1/2 MILE NORTH OF STH 33 EXIT
S-45-004	IH-43	NB	JUST SOUTH OF STH 57/IH-43 SPLIT
S-45-215	STH-167	EB	JUST EAST OF GRANVILLE ROAD

# SIGN BRIDGE LOCATIONS - RACINE COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-51-212	STH-31	SB	JUST NORTH OF STH 11
S-51-213	STH-11	EB	JUST WEST OF STH 11

#### SIGN BRIDGE LOCATIONS - WALWORTH COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-64-008	STH-12	EB	AT IH-43 ON RAMP
S-64-014	USH-12	WB	AT THE ENTRANCE RAMP TO IH-43 NB
S-64-208	STH-11	NB	AT CHESTNUT ST (CTH DD)

# SIGN BRIDGE LOCATIONS - WAUKESHA COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-67-023	USH-18	WB	AT USH-18/CTH-JJ GORE
S-67-044	USH-41/45	SB	1/2 MILE NORTH OF STH 145
S-67-045	USH-41/45	SB	1/2 MILE NORTH OF STH 145
S-67-200	IH-94	EB	1 3/4 MILES EAST OF MOORLAND ROAD
S-67-250	STH-83	SB	JUST SOUTH OF IH-94
S-67-266	CTH JJ	EB	JUST WEST OF STH 16
S-67-306	USH-45	NB	1/4 MILE SOUTH OF PILGRIM ROAD
S-67-307	USH-41/45	NB	AT GORE TO PILGRIM ROAD NB EXIT
S-67-404	STH-190	EB	1/10 MILE WEST OF 127TH STREET
S-67-409	IH-94	WB	1/8 MILE EAST OF CALHOUN ROAD
S-67-919	STH-67	SB	JUST NORTH OF MCMAHON ROAD
S-67-920	USH-18	EB	1/8 MILE EAST OF STH 83

# SIGN BRIDGE LOCATIONS - MILWAUKEE COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-40-004	IH-94	WB	AT GORE TO IH-894
S-40-006	USH-41	NB	1/4 MILE SOUTH OF LLOYD STREET
S-40-032	SILVER SPRING	WB	1/10 MILE EAST OF USH-45
	DRIVE		
S-40-066	IH-894	WB	AT GORE TO IH-43 SOUTH
S-40-108	FREDERICK MILLER WAY	EB/WB	300 FEET EAST OF STH 341
S-40-162	IH-794	WB	AT EXIT TO LINCOLN MEMORIAL DRIVE
S-40-200	IH-94	EB	JUST WEST OF STH-100
S-40-265	STH-794	WB	1/4 MILE SOUTH OF OKALAHOMA AVE
S-40-266	STH-794	WB	200 FEET NORTH OF BOLIVAR AVE
S-40-276	USH-45	NB	CAPITOL DRIVE ON RAMP
S-40-278	USH-45	NB	AT SILVER SPRING ON RAMP
S-40-279	USH-45	NB	AT WISCONSIVE AVENUE ON RAMP
S-40-280	USH-45	NB	AT WATERTOWN PLAN ROAD ON RAMP
S-40-281	USH-45	NB	AT NORTH AVENUE ON RAMP
S-40-282 S-40-284	USH-45 IH-43	NB NB	AT BURLEIGHT STREET ON RAMP ENTRANCE RAMP FROM HOLT AVE
S-40-284 S-40-296	STH-38	NB NB	JUST SOUTH OF STH-100
S-40-236	STH-794	EB	JUST NORTH OF OKLAHOMA AVE
S-40-300	GOOD HOPE ROAD	WB	EAST OF USH-45 ON RAMP
S-40-303	USH-41/45	SB	1/2 MILE NORTH OF GOOD HOPE ROAD
S-40-308	IH-94	EB	AT GORE TO IH-894 EB
S-40-315	STH-341	NB	JUST SOUTH OF CAN STREET EXIT
S-40-316	USH-41	NB	1/4 MILE SOUTH OF STADIUM INTERCHANGE
S-40-317	USH-41	NB	AT GORE TO IH-94 EB/WB RAMPS
S-40-318	USH-41	SB	1/10 MILE SOUTH OF IH-94
S-40-319	USH-41	SB	AT EXIT TO MILLER PARK
S-40-320	STH 341	SB	AT NATIONAL AVENUE
S-40-324	FREDERICK MILLER WAY	WB	300 FT WEST OF STH 341
S-40-325	STH-794	WB	AT EXIT TO HOWARD AVE
S-40-343	IH-94	WB	1/2 MILE SOUTH OF COLLEGE AVE
S-40-356	STH 145	WB	AT GORE TO USH-45
S-40-357	USH-41/45	NB	1/4 MILE SOUTH OF STH 145
S-40-358	USH-41/45	NB	AT EXIT TO STH 145
S-40-361	IH-43	NB	1/4 MILE SOUTH OF CAPITOL DRIVE
S-40-367	IH-794	WB	ON NB TO WB LAKE INTERCHANGE RAMP
S-40-370	USH-45	NB	1/2 MILE SOUTH OF HAMPTON AVENUE
S-40-371	USH-45	NB	AT HAMPTON AVE EXIT RAMP
S-40-372	USH-45	NB	1/2 MILE SOUTH OF SILVER SPRING DRIV E
S-40-373	USH-45	NB	AT SILVER SPRING DRIVE EXIT
S-40-374 S-40-377	USH-45 USH-45	NB NB	1/2 MILE SOUTH OF APPLETON AVENUE 1/4 MIL SOUTH OF GOOD HOPE ROAD
S-40-377 S-40-378	USH-45 USH-45	NB NB	AT NORTH AVENUE WB EXIT LANE
S-40-310	IH-43	SB	1/4 MILE NORTH OF STH 190
S-40-391	IH-94	WB	1/2 MILE WEST OF 84TH ST
S-40-408	IH-94	EB	1/10 MILE WEST OF 84TH ST
S-40-409	IH-43	SB	AT OKLAHOMA AVE
S-40-415	STH 59	EB	JUST WEST OF STH-100
S-40-429	IH-43	NB	1/4 MILE NORTH OF FOND DU LAC AVE
S-40-434	IH-94	WB	1/4 MILE SOUTH OF COLLEGE AVE
S-40-502	IH-43	NB	JUST SOUTH OF STH 145 EXIT RAMP
S-40-504	IH-43	NB	1/8 MILE SOUTH OF WINNEBAGO ST
S-40-530	IH-94	EB	AT RAMP TO IH-43 NORTH
S-40-620	PORT WASHINGTON RD SILVER SPRING	NB	JUST SOUTH OF SILVER SPRING DRIVE
S-40-622	DRIVE DRIVE	WB	JUST EAST OF PORT WASHINGTON ROAD
S-40-705	IH-43	SB	3/8 MILES NORTH OF MCKINLEY AVE EXIT
S-40-708	IH-43	NB	AT THE USH 145 ENTRANCE RAMP
S-40-761	IH-94	NB	ON RAMP FROM COLLEGE AVENUE
S-40-781	IH-94	SB	ON DREXEL AVENUE EXIT RAMP
S-40-801	IH-894	WB	EAST OF 76TH STREET
			ON SILVER SPRING/PORT WASHINGTON ROAD

#### SIGN BRIDGE LOCATIONS - WASHINGTON COUNTY

STRUCTURE NUMBER	HIGHWAY	DIRECTION OF TRAVEL	LOCATION
S-66-205	STH 145	EB	WEST OF USH 41 ON RAMP
S-66-206	STH 145	EB	WEST OF USH 41
S-66-207	STH 145	EB	WEST OF CABLELA WAY
S-66-208	STH 145	EB	WEST OF USH 45 SB ON RAMP
S-66-209	STH 145	WB	WEST OF USH 45
S-66-210	STH 145	WB	EAST OF USH 41 NB ON RAMP
S-66-211	STH 145	WB	EAST OF USH 41
S-66-213	USH 41	NB	ON EXIT RAMP TO STH 145
S-66-214	USH 41	SB	ON EXIT RAMP TO STH 145
S-66-215	CABLEA WAY	NB	SOUTH OF STH 145
S-66-216	USH 45	SB	AT EXIT RAMP TO STH 145
S-66-217	STH 164	SB	1/10 MILE NORTH OF CTH Q

PROJECT NO: 1000-20-67

HWY: VARIOUS

COUNTY: SOUTHEAST REGION WIDE

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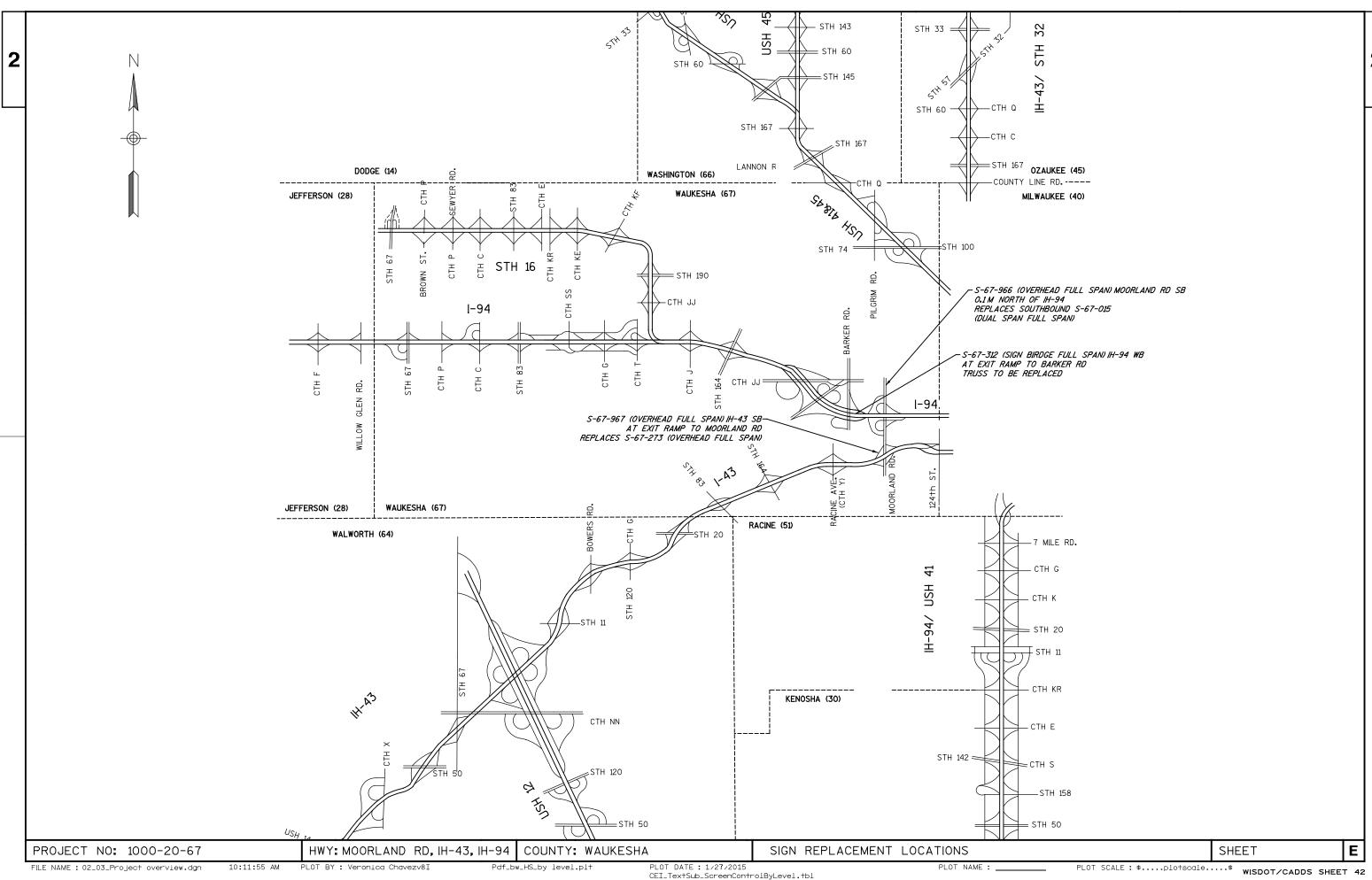
SIGN REPAIR LOCATIONS

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PLOT NAME :

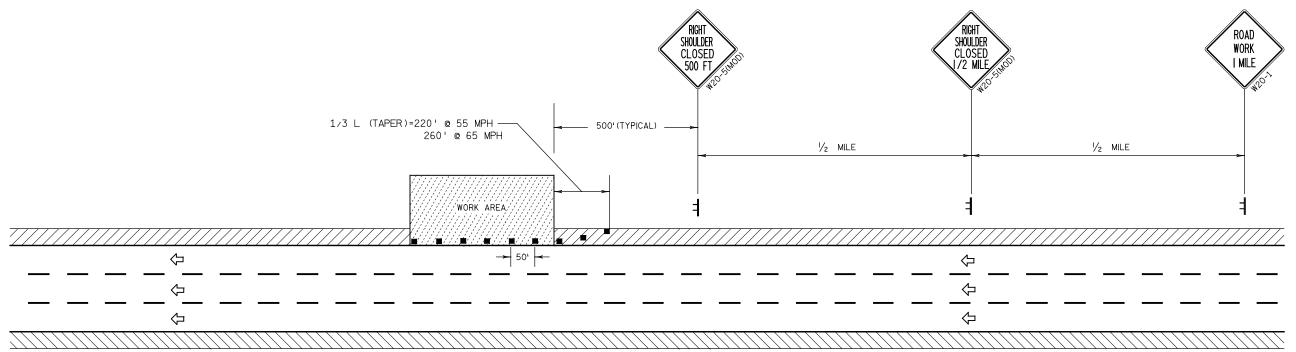
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FILE NAME: 02\_02\_location.dgn 10:11:54 AM PLOT BY: Veronica Chavezv8I



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#### SHOULDER CLOSURE



MEDIAN

#### **LEGEND**

SIGN ON TEMPORARY SUPPORT

■ TRAFFIC CONTROL DEVICE

ARROW BOARD

#### SPECIAL APPLICATION NOTES

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER, UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

#### GENERAL NOTES FOR TRAFFIC CONTROL

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE AND OFF OF SHOULDER WHEN WORK IS NOT IN PROGRESS.

DURING HOURS OF DARKNESS, TYPE "C" (STEADY BURN) LIGHTS SHALL BE PROVIDED ON ALL CHANNELIZING DEVICES IN TAPERS. BARRICADES SHIELDING AN ISOLATED HAZARD, SHALL BE EQUIPPED WITH TYPE "A" (LOW-INTENSITY FLASHING) LIGHTS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000'ACROSS THE CLOSED LANE TO HELP ENFORCE

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500'IN FRONT OF DRUMS.

PROJECT NO: 1000-20-67

HWY: VARIOUS

COUNTY: SOUTHEAST REGION WIDE

TRAFFIC CONTROL DEVICES FOR HIGHWAY MAINTENANCE

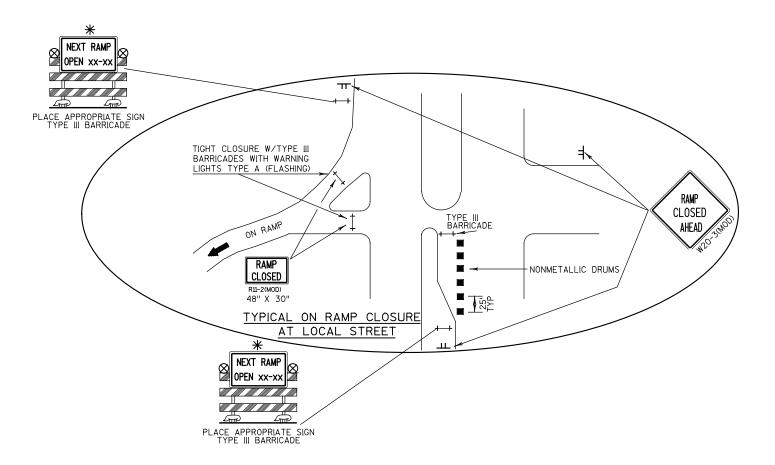
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PLOT BY: Veronica Chavezv8I

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#### TRAFFIC CONTROL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

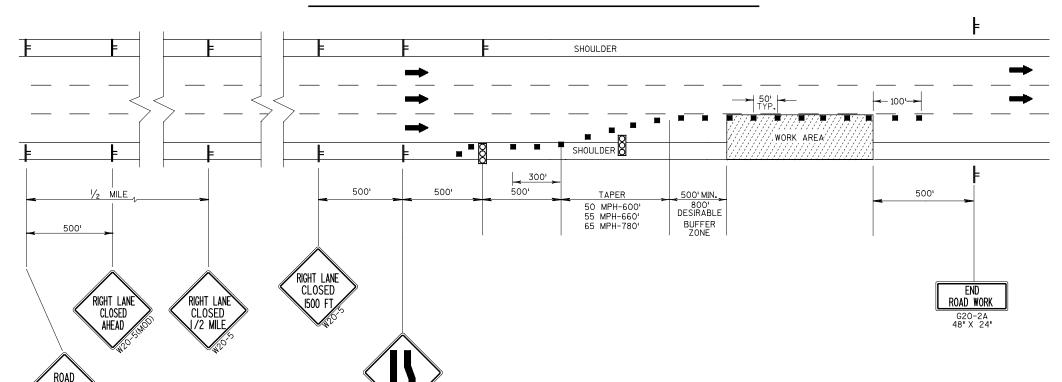
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

#### **LEGEND**

- TRAFFIC CONTROL DEVICE
- F SIGN ON TEMPORARY SUPPORT FOR SHORT TERM 3 DAYS OR LESS
- TYPE III BARRICADE
- ₩ARNING LIGHT, TYPE A (FLASHING)

PROJECT NO: 1000-20-67 HWY: VARIOUS COUNTY: SOUTHEAST REGION WIDE TRAFFIC CONTROL FOR ON-RAMP CLOSURE (SHORT TERM) SHEET **E** 

# TYPICAL ONE-LANE CLOSURE (SHORT TERM-3 DAYS OR LESS)



#### LEGEND

WORK

TRAFFIC CONTROL DEVICE SIGN ON FIXED SUPPORT SIGN ON TEMPORARY SUPPORT ARROW BOARD

#### TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

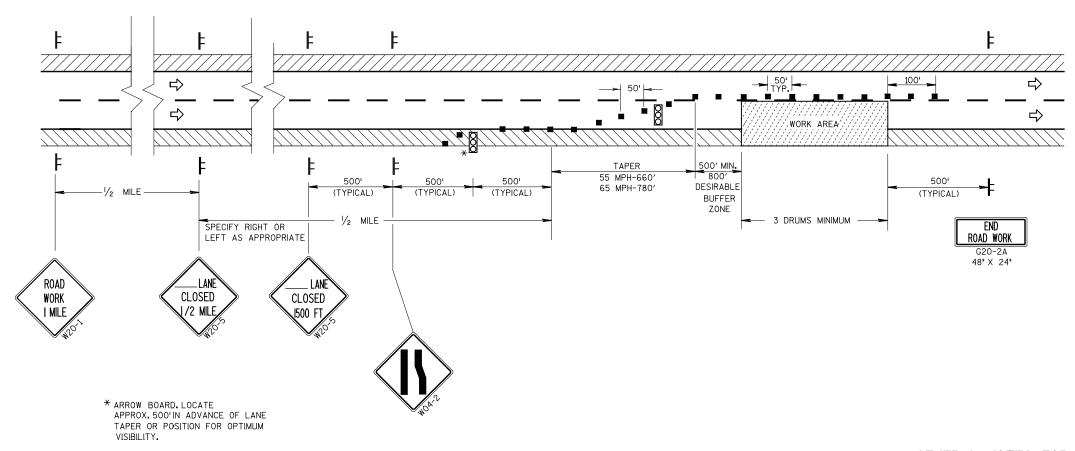
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000 ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500'IN FRONT OF DRUMS.

PROJECT NO: 1000-20-67 COUNTY: SOUTHEAST REGION WIDE TRAFFIC CONTROL FOR CLOSING ONE LANE OF FREEWAY (SHORT TERM) Ε HWY: VARIOUS FILE NAME: 02\_05\_work zone.dgn 10:11:56 AM PLOT BY: Veronica Chavezv8I PLOT DATE: 1/27/2015 PLOT NAME :

# TYPICAL ONE-LANE CLOSURE (SHORT TERM - 3 DAYS OR LESS)



#### **LEGEND**

SIGN ON TEMPORARY SUPPORT

TRAFFIC CONTROL DEVICE

ARROW BOARD

#### SPECIAL APPLICATION NOTES

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER, UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

#### GENERAL NOTES FOR TRAFFIC CONTROL

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE AND OFF OF SHOULDER WHEN WORK IS NOT IN PROGRESS.

DURING HOURS OF DARKNESS, TYPE "C" (STEADY BURN) LIGHTS SHALL BE PROVIDED ON ALL CHANNELIZING DEVICES IN TAPERS. BARRICADES SHIELDING AN ISOLATED HAZARD, SHALL BE EQUIPPED WITH TYPE "A" (LOW-INTENSITY FLASHING) LIGHTS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000'ACROSS THE CLOSED LANE TO HELP ENFORCE

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROWBOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500'IN FRONT OF DRUMS.

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMULAR.

PROJECT NO: 1000-20-67 HWY: VARIOUS

COUNTY: SOUTHEAST REGION WIDE Pdf\_bw\_HS\_by level.plt

TRAFFIC CONTROL DEVICES FOR MAINTENANCE LANE CLOSURE (SHORT TERM)

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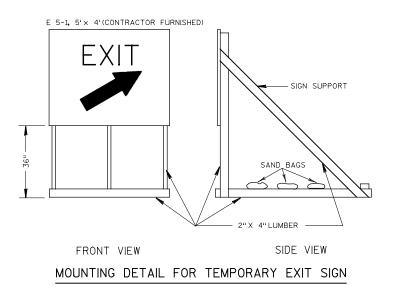
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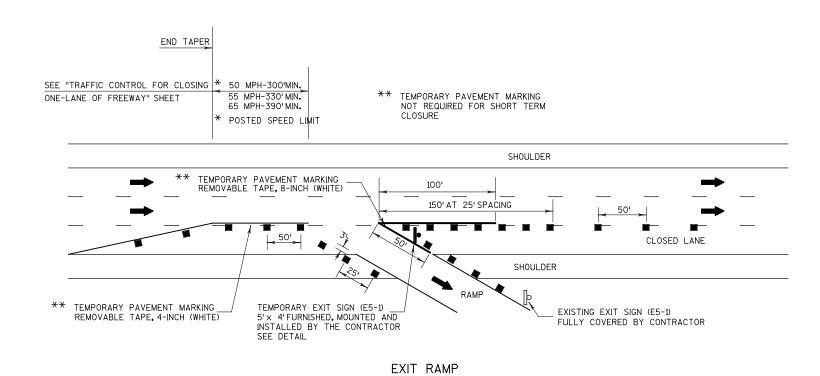
#### GENERAL NOTES

- 1. ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED.
- 2. FOR NIGHTIME OPERATION ALL DRUMS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).
- 3. FOR SHORT TERM (3 DAYS OR LESS) FREEWAY LANE CLOSURES TEMPORARY SIGN SUPPORTS MAY BE USED. REMOVE OR COVER SIGNS WHEN NOT IN USE.

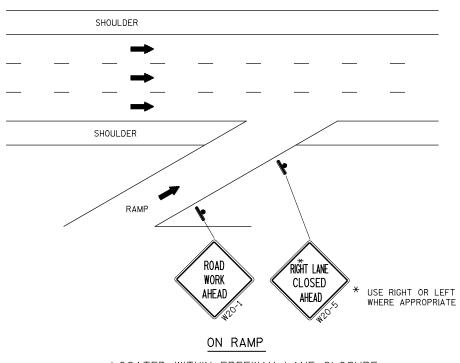
#### LEGEND

- - TRAFFIC CONTROL DEVICE
- → SIGN ON TEMPORARY SUPPORT





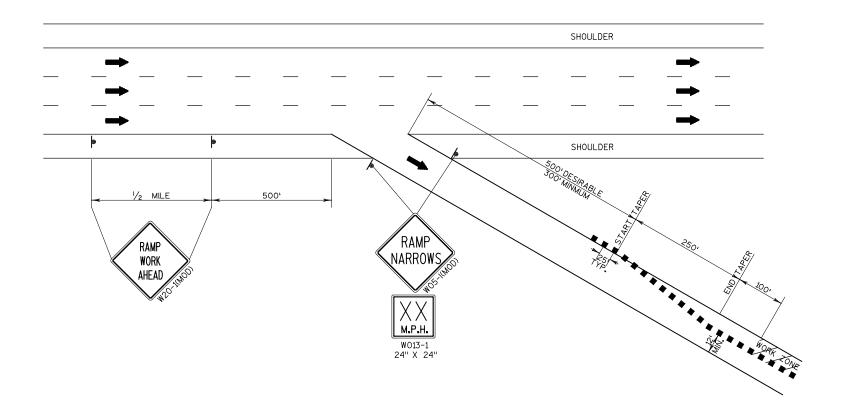
LOCATED WITHIN CLOSED FREEWAY LANE AREA



LOCATED WITHIN FREEWAY LANE CLOSURE ADVANCE SIGNING AREA

PROJECT NO: 1000-20-67 COUNTY: SOUTHEAST REGION WIDE TRAFFIC CONTROL FOR SERVICE RAMPS Ε HWY: VARIOUS

# TYPICAL PARTIAL EXIT RAMP CLOSURE (SHORT TERM-3 DAYS OR LESS)



#### LEGEND

- TRAFFIC CONTROL DEVICE
- SIGN ON TEMPORARY SUPPORT
- WARNING LIGHT, TYPE A (FLASHING)

#### TRAFFIC CONTROL NOTES

LEFT SIDE CLOSURE SHOWN, RIGHT SIDE CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE "C" (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE ROADWAY IS RESTORED TO A SAFE OPERATING CONDITION.

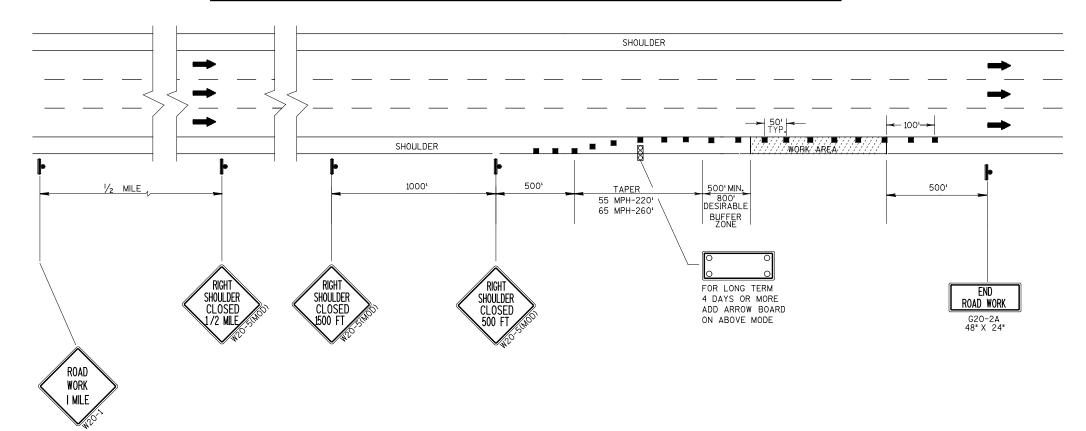
SPEED RECOMMENDED BY WO5-1(MOD) SIGN SHALL BE 5 M.P.H. BELOW ADVISORY EXIT RAMP SPEED OR AS DIRECTED BY THE ENGINEER.

SIGNING ON FREEWAY IN ADVANCE OF EXIT RAMP GORE SHALL BE LOCATED ON THE SAME SIDE OF THE FREEWAY AS THE EXIT RAMP.

COUNTY: SOUTHEAST REGION WIDE TRAFFIC CONTROL FOR PARTIAL EXIT RAMP CLOSURE (SHORT TERM) Ε PROJECT NO: 1000-20-67 HWY: VARIOUS PLOT SCALE: \$.....plotscale.....\$ wisdot/cadds sheet 42 FILE NAME: 02\_05\_work zone.dgn 10:11:57 AM PLOT BY: Veronica Chavezv8I Pdf\_bw\_HS\_by level.plt PLOT DATE: 1/27/2015 PLOT NAME :

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#### TYPICAL SHOULDER CLOSURE (SHORT TERM-3 DAYS OR LESS OR 4 DAYS OR MORE)



#### LEGEND

- TRAFFIC CONTROL DEVICE
- SIGN ON TEMPORARY SUPPORT (FOR 3 DAYS OR LESS SHORT TERM)
- SIGN ON FIXED SUPPORT FOR 4 DAYS OR MORE (LONG TERM)
- ARROW BOARD

#### TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN, LEFT LANE CLOSURE SIMILAR.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

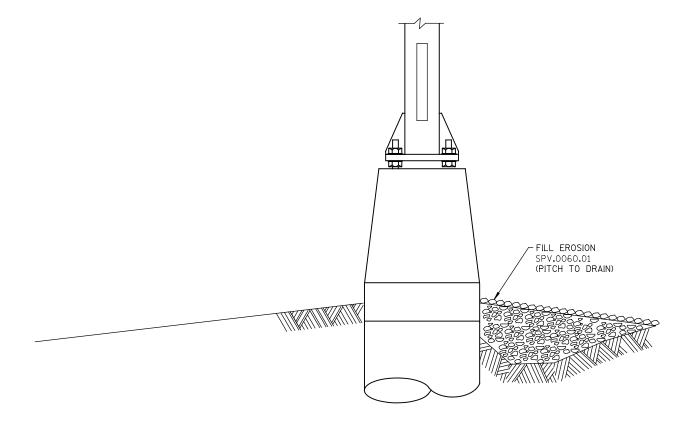
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

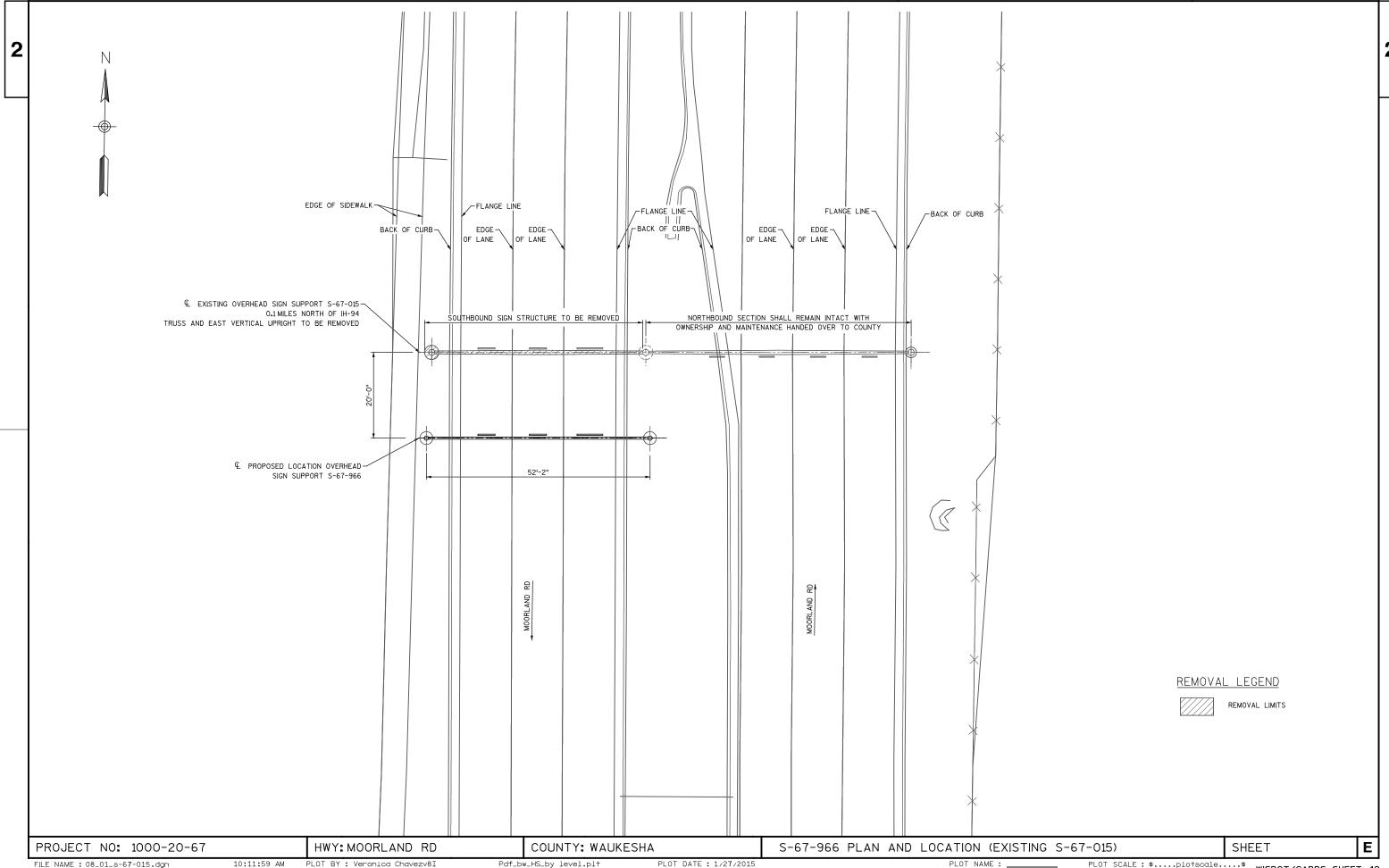
ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROWBOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

TRAFFIC CONTROL FOR FREEWAY SHOULDER CLOSURE PROJECT NO: 1000-20-67 HWY: VARIOUS COUNTY: SOUTHEAST REGION WIDE FILE NAME: 02\_05\_work zone.dgn 10:11:57 AM PLOT BY: Veronica Chavezv8I PLOT DATE: 1/27/2015 PLOT NAME :

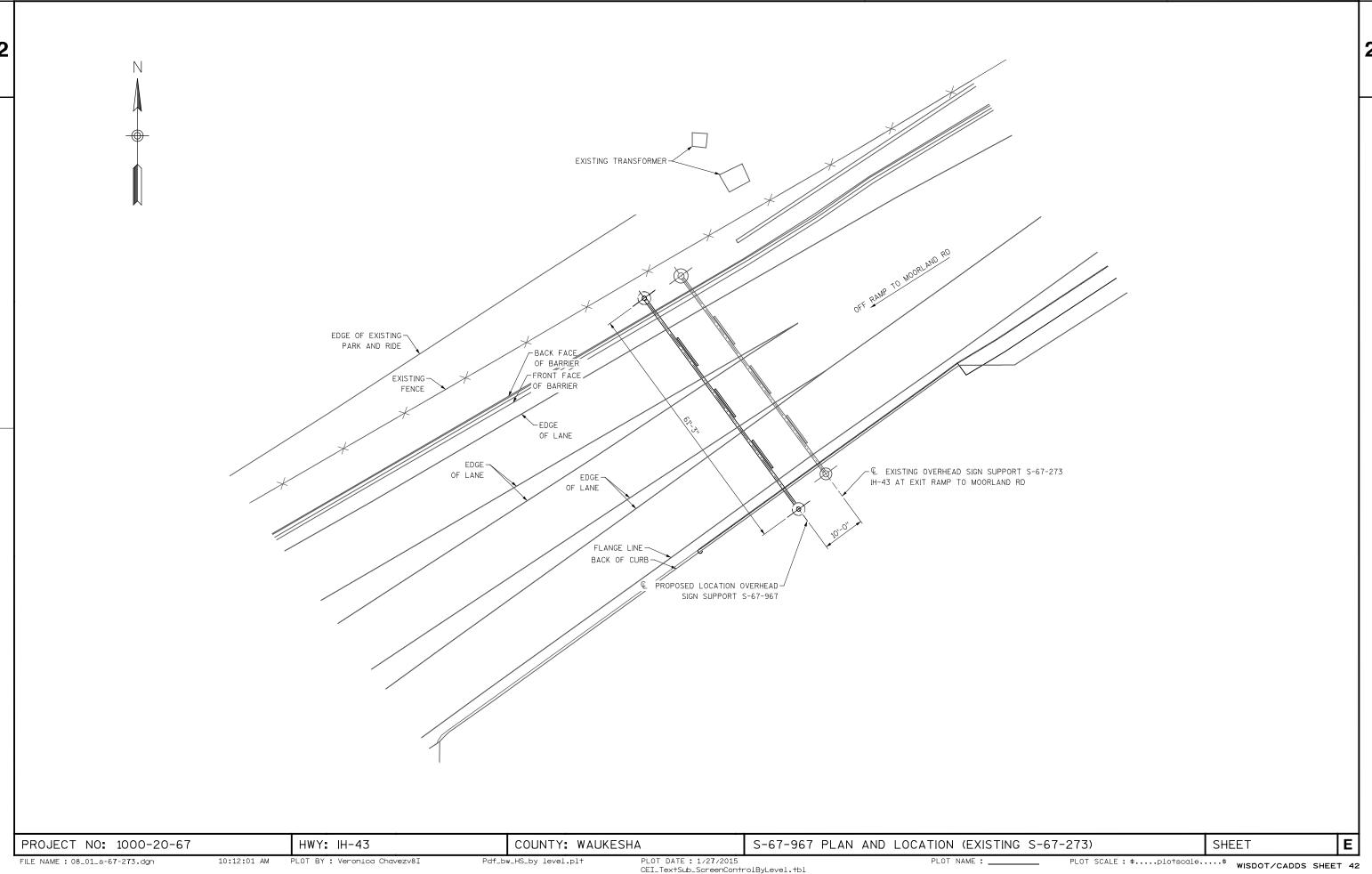


FILL EROSION

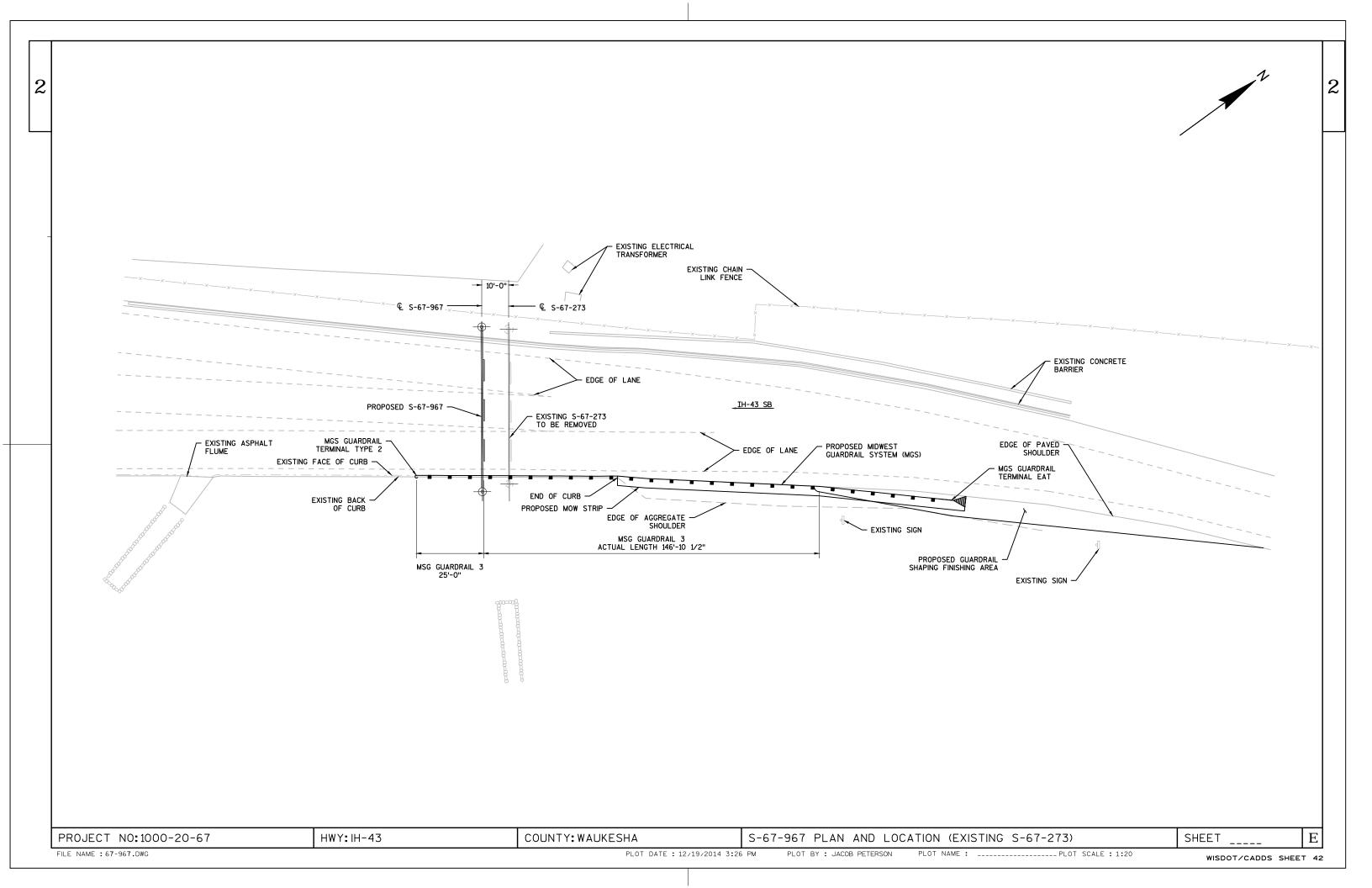
PROJECT NO: 1000-20-67 COUNTY: SOUTHEAST REGION WIDE CONSTRUCTION DETAILS Ε HWY: VARIOUS PLOT SCALE: \$.....plotscale.....\$ wisdot/cadds sheet 42 FILE NAME: 02\_06\_Details.dgn PLOT BY: Veronica Chavezv8I 10:11:57 AM

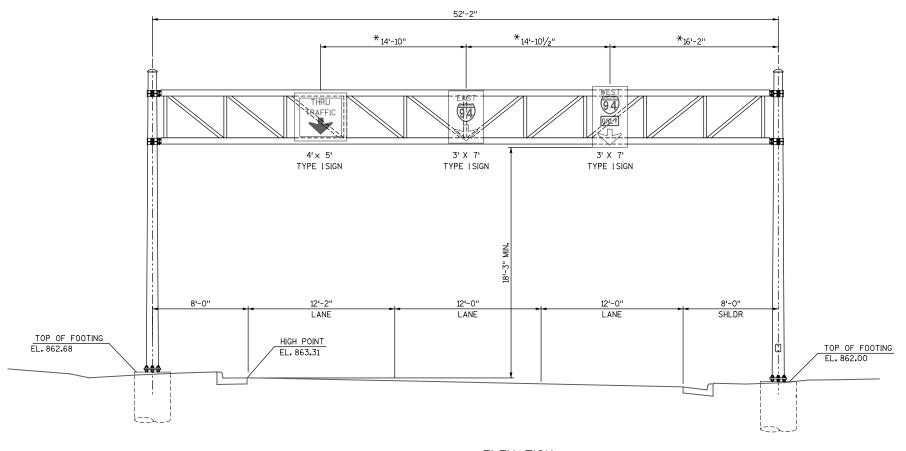


PLOT SCALE: \$.....plotscale.....\$ WISDOT/CADDS SHEET 42 PLOT DATE: 1/27/2015 CEI\_TextSub\_ScreenControlByLevel.tbl Pdf\_bw\_HS\_by level.plt PLOT NAME : \_\_\_\_\_



PLOT DATE: 1/27/2015 CEI\_TextSub\_ScreenControlByLevel.tbl





#### ELEVATION

S-67-966 TO REPLACE S-67-015 LOOKING SOUTH AT FRONT FACE OF SIGNS MOORLAND RD JUST NORTH OF IH-94

#### GENERAL NOTES

DRAWINGS NOT TO SCALE

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTUAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

TRUSS SHALL BE 2 CHORD ARMS WITH DIAGONALS.

I-BEAMS FOR SIGN PANELS ARE INCIDENTAL TO "SIGNS TYPE | REFLECTIVE"

NOTE, CONTRACTOR SHALL: 1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT TO TOM HEYDEL, WISDOT TRAFFIC OPS. 2.) FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT. 3.) PROVIDE DESIGN CALCULATIONS. 4.) SHOW SIGNS ON SHOP DRAWINGS. 5.) I.D. PLAQUE INCIDENTAL TO SIGN SUPPORT. 6.) MIN. OF 6 ANCHER RODS SHALL BE USED PER SDD. 7.) THE OVERHEAD SIGN SHALL BE DESIGNED FOR FATIGUE CATEGORY I.

\* SIGN PANEL DIMENSIONS ARE TO THE CENTER OF THE SIGN PANEL. CONTRACTOR TO FIELD VERIFY SIGN PANEL DISPLAYS CORRELATE WITH ROADWAY LANE LAYOUT.

CONTRACTOR REFER TO WISDOT SDD 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE DETAILS SHEET FOR THE FOUNDATION DETAILS

PROJECT NO: 1000-20-67 COUNTY: WAUKESHA S-67-966 OVERHEAD SIGN SUPPORT Ε HWY: MOORLAND SHEET FILE NAME: 08\_01\_s-67-015.dgn 10:12:01 AM PLOT BY: Veronica Chavezv8I Pdf\_bw\_HS\_by level.plt PLOT DATE: 1/27/2015 PLOT NAME :

# GENERAL NOTES

DESIGN ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTUAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS".

THE SIGN STRUCTURES SHALL BE DESIGNED TO SUPPORT THE SIGN SHOWN.

WIND VELOCITY PER WISDOT STD SPECIFATIONS

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 3" CLEAR UNLESS DETAILED OTHERWISE.

TRUSS SHALL BE 2 CHORD ARMS WITH DIAGONALS.

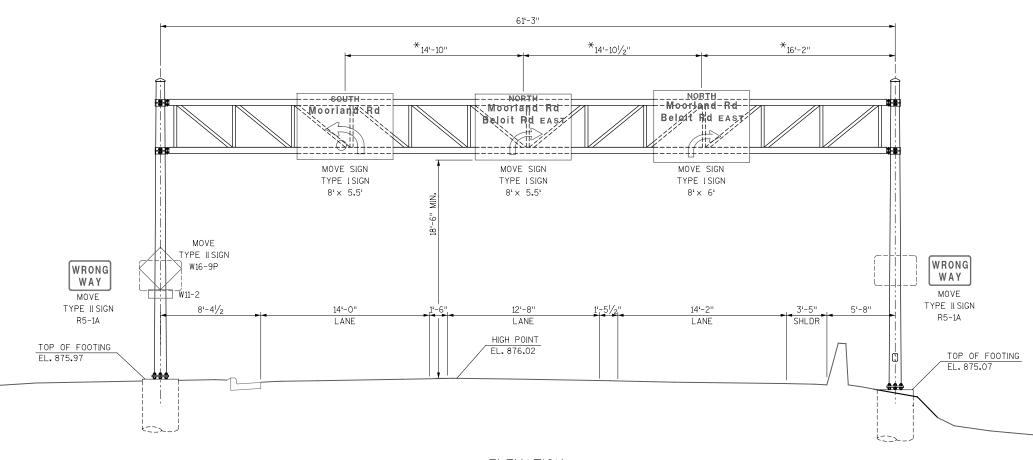
I-BEAMS FOR SIGN PANELS ARE INCIDENTAL TO "MOVING SIGNS TYPE I"

#### NOTE, CONTRACTOR SHALL:

- 1.) SUBMIT SHOP DRAWINGS OF OVERHEAD SIGN SUPPORT TO TOM HEYDEL, WISDOT TRAFFIC OPS.
- 2.) FOOTING IS INCIDENTAL TO OVERHEAD SIGN SUPPORT.
- 3.) PROVIDE DESIGN CALCULATIONS.
- 4.) SHOW SIGNS ON SHOP DRAWINGS.
- 5.) I.D. PLAQUE INCIDENTAL TO SIGN SUPPORT.
- 6.) MIN. OF 6 ANCHER RODS SHALL BE USED PER SDD.
- 7.) THE OVERHEAD SIGN SHALL BE DESIGNED FOR FATIGUE CATEGORY L

\* SIGN PANEL DIMENSIONS ARE TO THE CENTER OF THE SIGN PANEL. CONTRACTOR TO FIELD VERIFY SIGN PANEL DISPLAYS CORRELATE WITH ROADWAY LANE LAYOUT.

CONTRACTOR REFER TO WISDOT SDD 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE DETAILS SHEET FOR THE FOUNDATION DETAILS



#### ELEVATION

S-67-967 TO REPLACE S-67-273 LOOKING WEST AT FRONT FACE OF SIGNS IH-43 AT EXIT RAMP TO MOORLAND RD

S-67-967 OVERHEAD SIGN SUPPORT Ε PROJECT NO: 1000-20-67 HWY: IH-43 COUNTY: WAUKESHA SHEET FILE NAME: 08\_01\_s-67-273.dgn PLOT BY: Veronica Chavezv8I Pdf\_bw\_HS\_by level.plt

PLOT NAME : \_\_\_\_ PLOT SCALE: \$.....plotscale.....\$ WISDOT/CADDS SHEET 42 PLOT DATE: 1/27/2015 CEI\_TextSub\_ScreenControlByLevel.tbl

DATE 16	MAR15	EST	I M A	TE OF QUANT	
LI NE NUMBER	ITEM	ITEM DESCRIPTION	UNI T	TOTAL	1000-20-67 QUANTI TY
0010	614. 0010	Barrier System Grading Shaping Finishing	EACH	1. 000	1. 000
0020	614. 0396	Guardrail Mow Strip Asphalt	SY	77. 000	77. 000
0030	614. 2300	MGS Guardrail 3	LF	250.000	250.000
0040	614. 2610	MGS Guardrail Terminal EAT	EACH	1. 000	1. 000
0050	614. 2620	MGS Guardrail Terminal Type 2	EACH	1. 000	1. 000
0060	619. 1000	Mobilization	EACH	1.000	1.000
0070 0080	637. 1220 638. 2101	Signs Type I Reflective SH	SF EACH	62. 000 5. 000	62. 000 5. 000
0090	638. 2101	Moving Signs Type I Moving Signs Type II	EACH	3. 000	3. 000
0100	638. 2602	Removing Signs Type II	EACH	3. 000	3. 000
0110	641. 6600	Sign Bridge (structure) 01. S-67-312	LS	1. 000	1. 000
0120	641. 8100	Overhead Sign Support (structure) 01. S-67-966	LS	1. 000	1. 000
0130	641. 8100	Overhead Sign Support (structure) 02. S-67-967	LS	1. 000	1.000
0140	643. 0100	Traffic Control (project) 01. 1000-20-67	EACH	1. 000	1.000
0150	650. 6500	Construction Staking Structure Layout	LS	1. 000	1. 000
		(structure) 01. S-67-966			
0160	650. 6500	Construction Staking Structure Layout (structure) 02. S-67-967	LS	1. 000	1.000
0170	SPV. 0060	Special 01. FILL EROSION	EACH	1. 000	1.000
0180	SPV. 0060	Special 02. INSTALL U-BOLT	EACH	1. 000	1. 000
0190	SPV. 0060	Special O3. SIGN STRUCTURE ANCHOR ROD REPAIR	EACH	8. 000	8. 000
0200	SPV. 0060	Special O4. REMOVE GROUT PAD	EACH	1. 000	1.000
0210	SPV. 0060	Special O5. INSTALL NEW POST TO CHORD BOLT CONNECTION	EACH	56. 000	56. 000
0220	SPV. 0060	Special O6. REPLACE DISHED WASHER	EACH	1. 000	1. 000
0230	SPV. 0060	Special O7. REPLACE MISSING HANDHOLE COVER	EACH	2. 000	2. 000
0240	SPV. 0060	Special 08. REPLACE RODENT SCREEN	EACH	37. 000	37. 000
0250	SPV. 0060	Special 09. REPLACE SAFETY CHAIN	EACH	1. 000	1. 000
0260	SPV. 0060	Special 10. REPLACE SIGN BRIDGE ID	EACH	6. 000	6. 000
		PLAQUE			
0270	SPV. 0060	Special 11. REPLACE SIGN CONNECTION ASSEMBLY	EACH	12. 000	12. 000
0280	SPV. 0060	Special 12. REPLACE SIGN PANEL CONNECTORS	EACH	101. 000	101. 000
0290	SPV. 0060	Special 13. SPLICE CONNECTION BOLT REPLACEMENT	EACH	16. 000	16. 000
0300	SPV. 0060	Special 14. REPLACE TRUSS MEMBER	EACH	1.000	1.000
0310	SPV. 0060	Special 15. SECURE LUMINAIRE COVER	EACH	9. 000	9. 000
0320	SPV. 0060	Special 16. SECURE/REPLACE POST CAP	EACH	1. 000	1. 000
0330	SPV. 0060	Special 17. SLOTTED VERTICAL SIGN SUPPORT REPAIR	EACH	79. 000	79. 000
0340	SPV. 0060	Special 18. TENSION ANCHOR RODS	EACH	4. 000	4. 000
0350	SPV. 0060	Special 19. TENSION POST TO TRUSS	EACH	9. 000	9. 000
		CONNECTION BOLT			
0360	SPV. 0060	Special 20. TIGHTEN LOOSE U-BOLT	EACH	1. 000	1. 000
0370	SPV. 0060	Special 21. TIGHTEN / REPLACE HANDHOLE	EACH	1. 000	1. 000
0380	SPV. 0060	COVER BOLT Special 22. REPAIR FOUNDATION	EACH	3. 000	3. 000
0390	SPV. 0060	Special 23. ALIGN LOCKING PIN	EACH	1. 000	1. 000
0400	SPV. 0060	Special 24. INSTALL VERTICAL SIGN	EACH	1. 000	1. 000
		SUPPORT			

3	
_	

DATE 16	MAR15		ESTIMATE	OFQUAN	TITIES
LINE					1000-20-67
NUMBER	ITEM	ITEM DESCRIPTION	UNI T	TOTAL	QUANTI TY
0410	SPV. 0060	Special 25. TENSION TRUSS GUSSET	EACH	1.000	1.000
		CONNECTION BOLT			
0420	SPV. 0060	Special 26. REPLACE CONDUIT PLUG	EACH	1.000	1. 000
0430	SPV. 0090	Special O1. INSTALL/REPLACE CATWALK	LF	22.000	22.000
		HANDRAI L			
0440	SPV. 0105	Special O1. REMOVING SIGN BRIDGE	LS	1.000	1.000
		S-67-312			
0450	SPV. 0105	Special O2. REMOVING OVERHEAD SIGN	LS	1.000	1.000
		SUPPORT S-67-015			
0460	SPV. 0105	Special 03. REMOVING OVERHEAD SIGN	LS	1. 000	1. 000
		SUPPORT S-67-273			

3

Ε PROJECT NO: 1000-20-67 HWY: VARIOUS COUNTY: SE REGION WIDE SIGN REPAIR MISCELLANEOUS QUANTITIES SHEET

PLOT NAME :

3

<sup>\*</sup> ESTIMATE OF QUANTITIES FOR ROADWAY ITEMS ONLY.

ADDITIONAL CONSTRUCTION DETAILS ARE SHOWN IN STRUCTURE ELEVATION VIEW
OF THE STRUCTURE PLANS.

		Gl	614.2300 GU, MGS TE JARDRAIL 3	MGS ARDRAIL GL RMINAL TI EAT	ARDRAIL 1 ERMINAL S FYPE 2 AS	RDRAIL MOW TRIP	614.0010 BARRIER SYSTEM GUARDRAIL PING FINISHING				ST PROP ——————————————————————————————————	OSED	RE NUMBER REMOVED	SPV.0105.01 REMOVING SIGN BRIDGE S-67-312 LS	SPV.0105.XX REMOVING OVERHEAD SIGN SUPPORTED (EXISTING STRUC, NO.) LS	PORT REMARKS
	STRUCTUR S-67	E NUMBER	LF 250	EACH 1		SY 77	EACH 1				S-67 S-67	-966	S-67-015 S-67-273	 	1 1	SPV.0105.02 SPV.0105.03
	T0		250	1		77	1						TOTAL	1	2	
								CATEGOR	RY CODE	0020					CA	TEGORY CODE 0020
SIGNS UCTURE NUMBER	SIGN NO.	TYPE I SIGN SIZE FT X FT	I TYPE I SIGN MESSAGE	TYPE II SIGN CODE	TYPE II SIGN SIZE IN X IN	TYPE II SIGN MESSAGE	637,1220 SIGNS TYPE I REFLECTIVE SF	638.2101 MOVING SIGNS TYPE I EACH	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH						
S-67-312	1	14 × 9	94 WEST 164 NORTH					1			SIGN BRID	GES &	OVERHEAD SIG	N SUPPORTS		
	2	21 X 12	EXIT 297 18 164 JJ Barker Rd Bluemound R					1			STR PROPOS		NUMBER REMOVED	641.8100.XX OVERHEAD SIGN SUPPORT (STRUCTURE) LS	X 641.6600 SIGN BRIDGE S-67-312 LS	REMARKS
S-67-966	3	4 × 5	THRU TRAFFIC				20.00			1	S-67-3 S-67-9 S-67-9	166	 S-67-015 S-67-273	 1	1  	641.8100.01
S-67-966	4	3 × 7	EAST 94				21.00			1		161	3-61-213	1		641.8100.02
S-67-966	5	3 × 7	WEST 94 ONLY				21.00			1			TOTAL	2	1	
S-67-967	6	8 X 5.5	SOUTH Moorland Ro	d				1								
S-67-967	7	8 X 5.5	NORTH Moorland Ro Beloit Rd EAST	b				1								
S-67-967	8	8 X 6	NORTH Moorland Ro Beloit Rd EAST	d				1								
S-67-967	9			R5-1A	3.5 X 2.5	WRONG WAY	Y		1		X EUD 1	NEORMATI	ION ONLY NOT TO	BE COUNTED AS		
S-67-967	10			W11-2	2.5 X 2.5	PEDESTRIAN CROSSING	N		1		ADDIT		TAHT OT YTITNA	LISTED ON PLAN AND		
	11			W16-9P	2 X 1	AHEAD			1							
		-	TOTAL				62	5	3	3 DRY CODE 0						ATEGORY CODE 0010

FILE NAME: 03\_quantity2.dgn PLOT DATE: 3/16/2015

3

10:17:01 AM PLOT BY: Veronica Chavezv8I

Pdf\_bw\_HS\_by level.plt

CEI\_TEXTSUB\_SCREENCONTROLBYLEVEL.TBL

PLOT NAME: \_\_\_\_\_ PLOT SCALE: \$\$.....plotscale.....\$\$ wisdot/cadds sheet 43

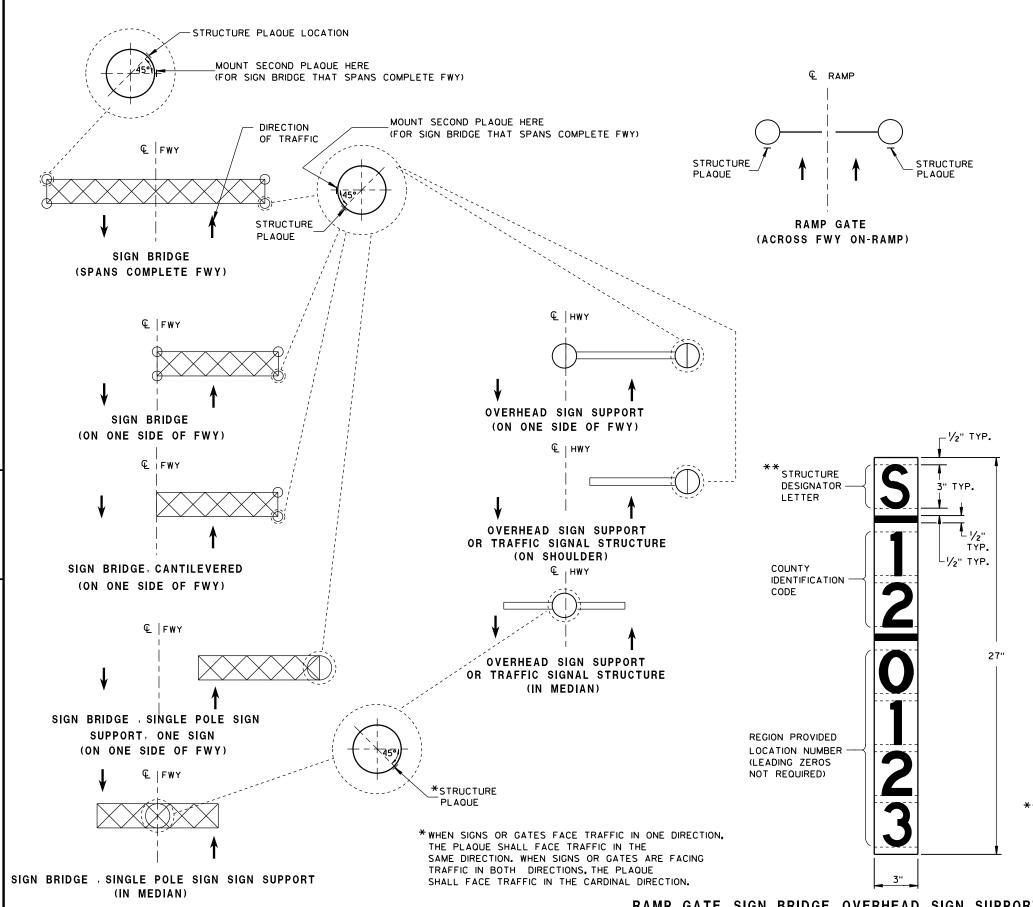
# Standard Detail Drawing List

12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C15-03	36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE
15D14-02	TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-02	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D22-02	TRAFFIC CONTROL, TWO LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-02	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE
16A01-06	LANDMARK REFERENCE MONUMENTS AND COVERS

6



3.D.D. 12 A 4-3



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12

 $\triangleright$ 

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD

SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

#### GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

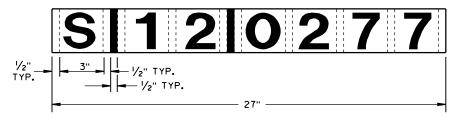
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



# IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

\*\* LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

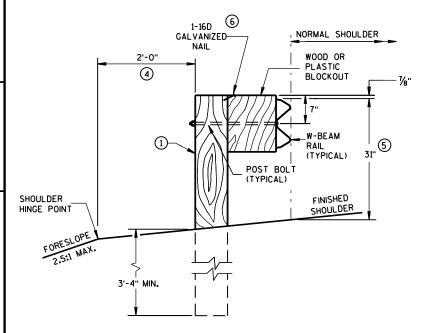
APPROVED

DATE STATE TRAFFIC ENGINEER OF DESIGN

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

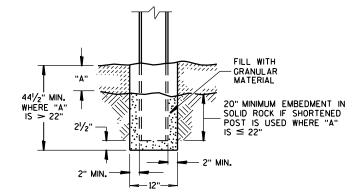
#### **GENERAL NOTES**

- (1) WOOD OR STEEL POSTS (W6X9 OR W6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- 2 USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- (3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 21/2 INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- (4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- (5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 273/4" TO 32".
- (6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



**END VIEW** 

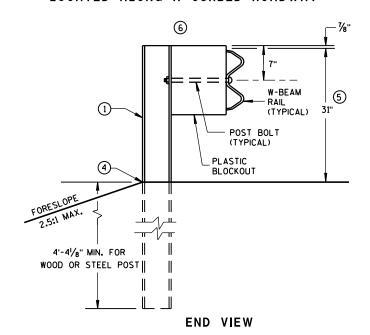
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



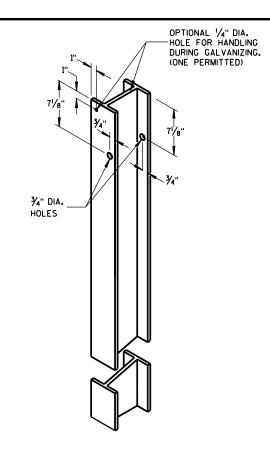
SETTING STEEL OR WOOD POST IN ROCK  $^{\scriptsize{\textcircled{3}}}$ 



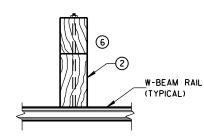
END VIEW
LOCATED ALONG A CURBED ROADWAY



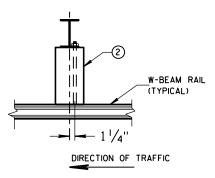
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



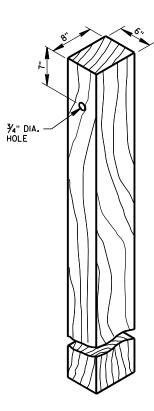
STEEL POST & HOLE PUNCHING DETAIL (w6X9)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



WOOD POST (6" X 8") NOMINAL  $^{\scriptsize \textcircled{1}}$ 



WOOD OR PLASTIC BLOCKOUT

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 4

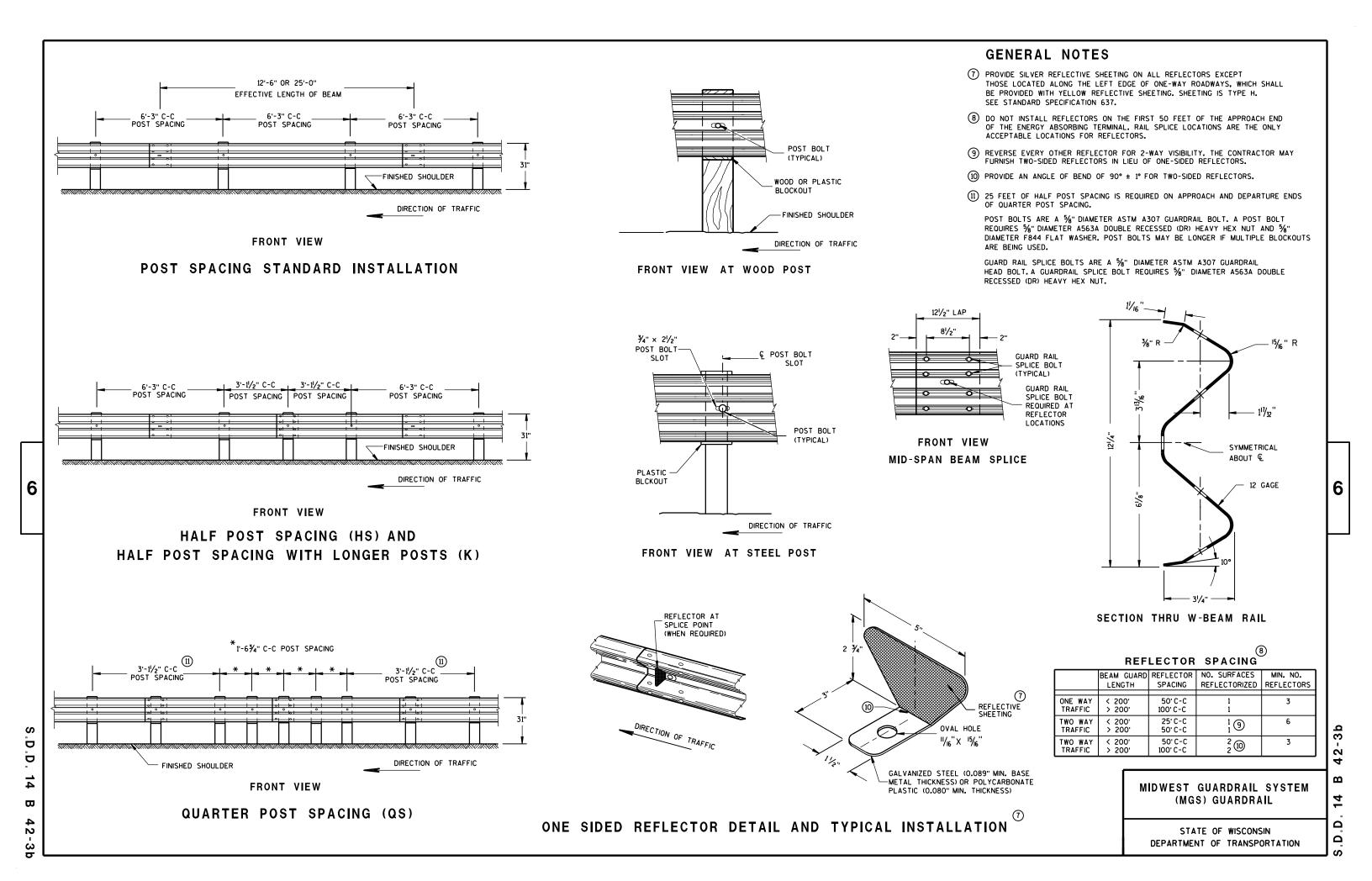
6

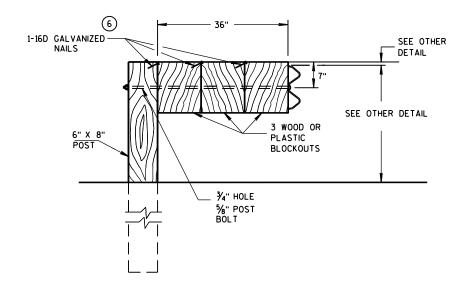
.D.D. 14 B

3a

2

6



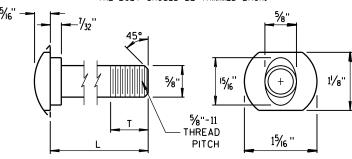


## DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

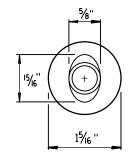
> DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF  $\frac{1}{16}$ ". 2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

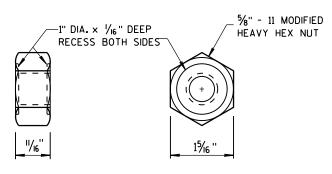


#### POST BOLT TABLE

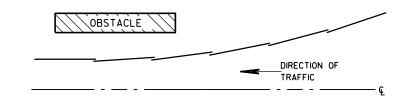
11/8"
437
13/4"
4"
41/16"
4"
41/16"
4"



ALTERNATE BOLT HEAD

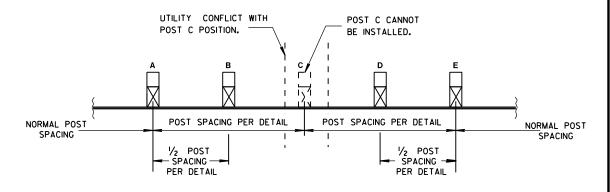


POST BOLT AND RECESS NUT



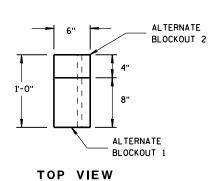
#### **PLAN VIEW**

# **BEAM LAPPING DETAIL**



# POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION





SIDE VIEW

# ALTERNATE WOOD **BLOCKOUT DETAIL**

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014 /S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER FHWA

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# SECTION A-A SECTION B-B

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PLAN VIEW

# BILL OF MATERIALS

PART NO.	DESCRIPTION  MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
1	WOOD BREAKAWAY POST
2	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1AND 2
3	WOOD CRT
4	WOOD BLOCKOUT
(5)	PIPE SLEEVE
6	BEARING PLATE
7	BCT CABLE ASSEMBLY
8	ANCHOR CABLE BOX
9	GROUND STRUT
10	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL.MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
12	END SECTION EAT
(3)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



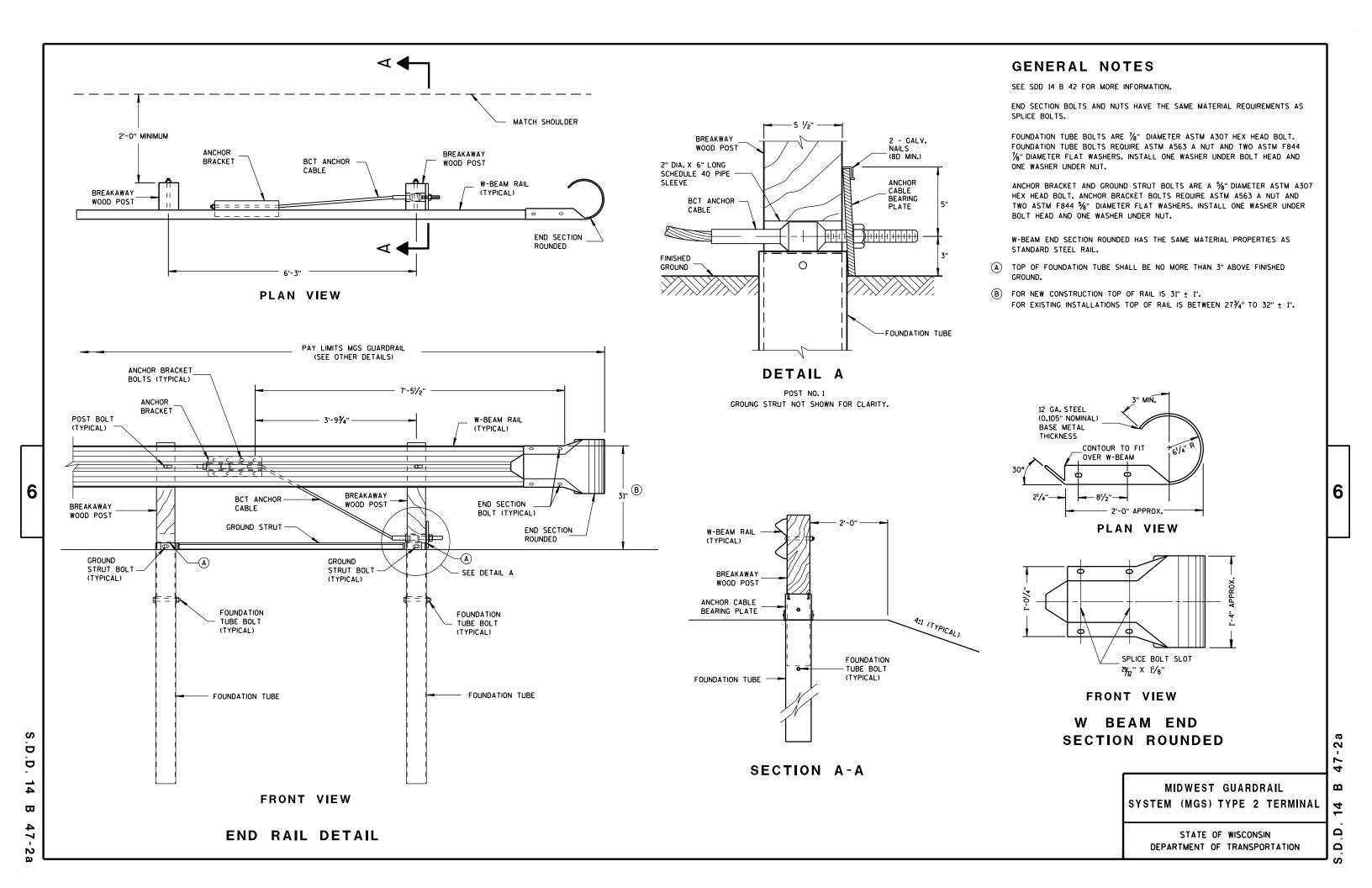
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

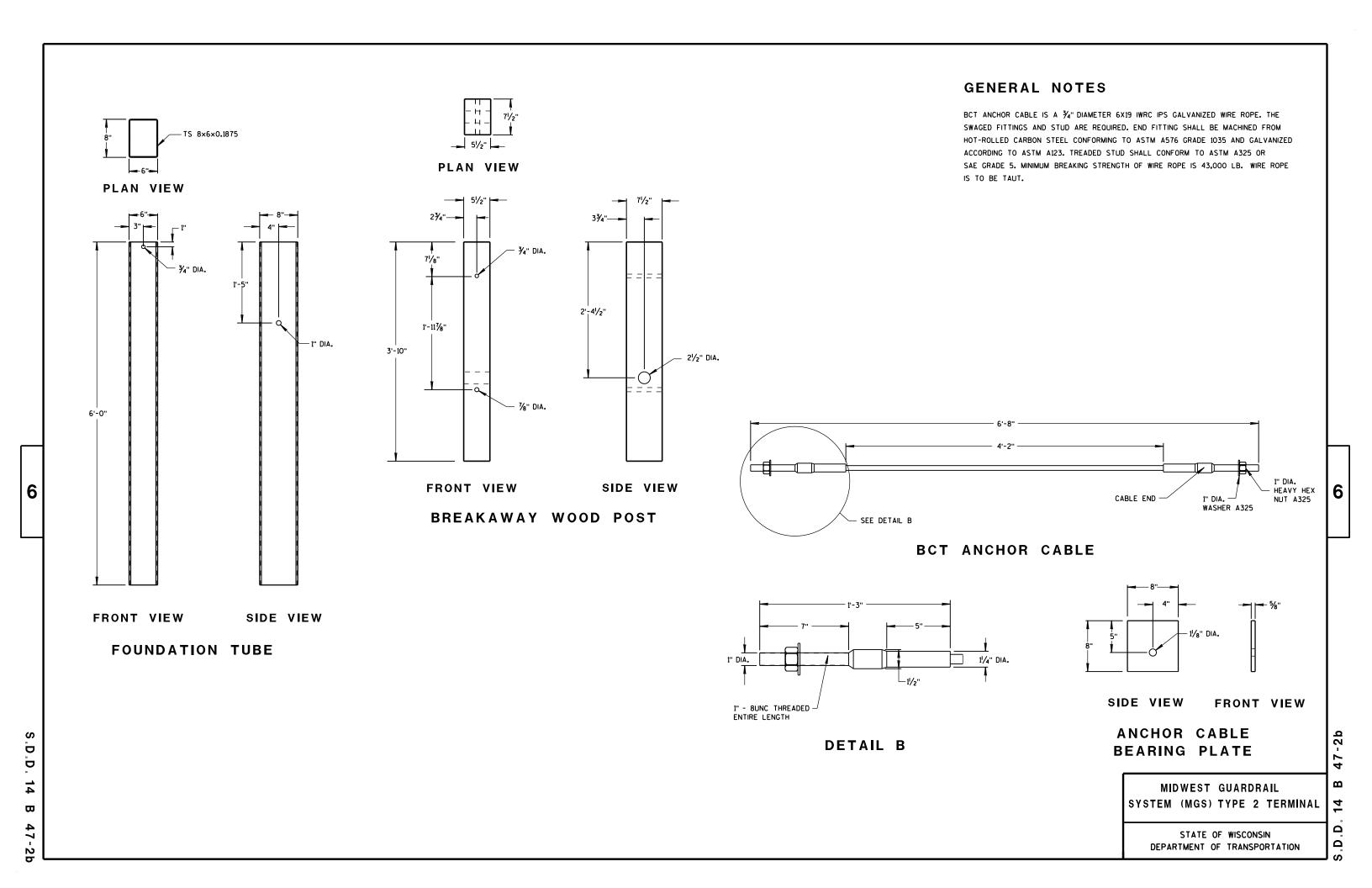
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

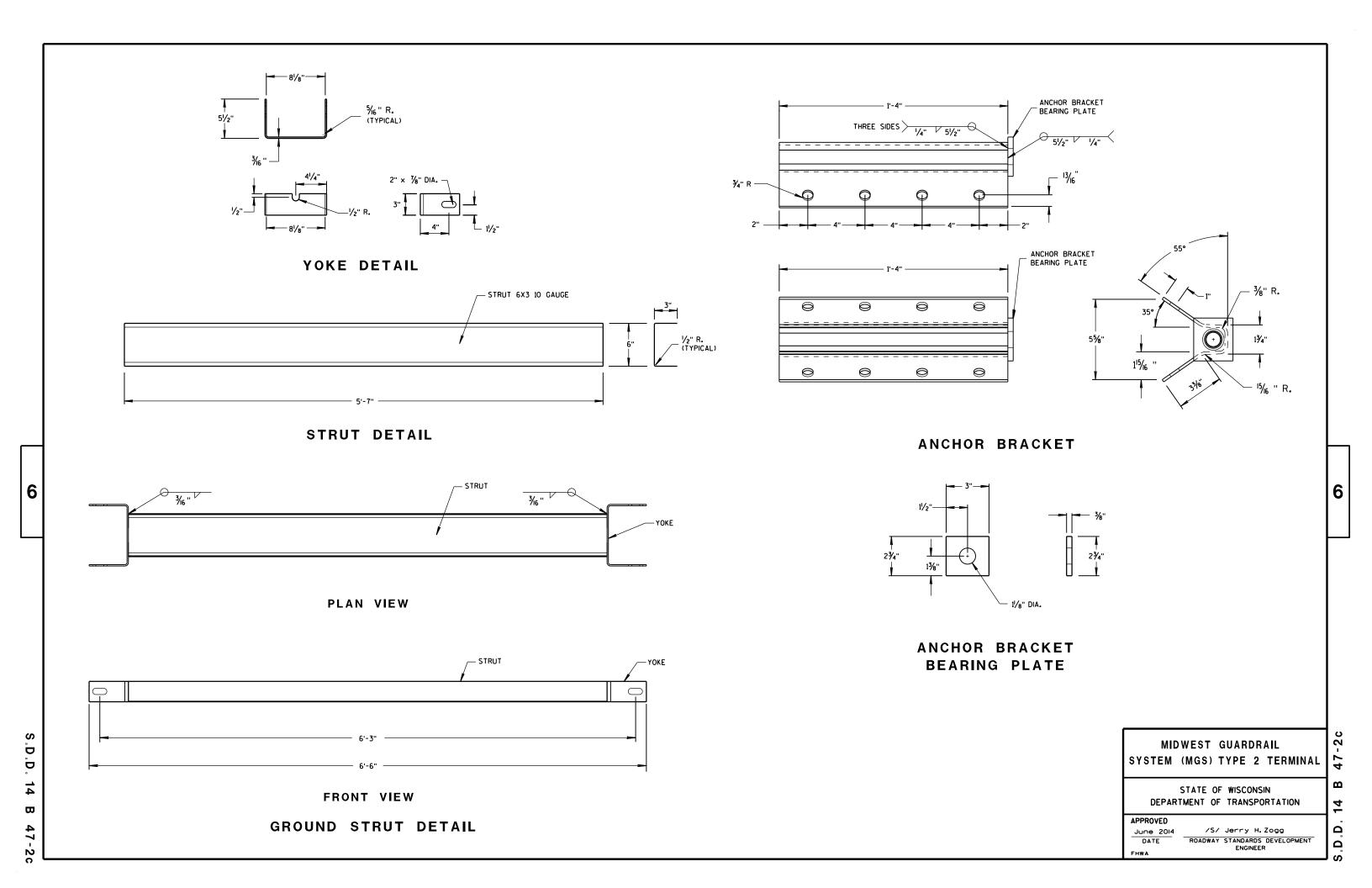
44-2b

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BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

SIGN SUPPORTS SHALL BE LOCATED NORMAL TO ROADWAY.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

WELDING OF ANCHOR BOLTS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR CAGE TO BE ASSEMBLED USING TIE WIRES ONLY, NO WELDING.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACK FILLING AROUND THE BASE. ANY REQUIRED BACKFILL SHALL BE WELL COMPACTED IN LAYERS OF 1 FOOT OR LESS. COMPACTION SHALL BE BY MECHANICAL MEANS. CARE SHALL BE TAKEN SO NO DAMAGE OCCURS TO THE CONCRETE BASE DURING COMPACTION.

EXCAVATION OF MATERIALS NOT OCCUPIED BY CONCRETE SHALL BE MINIMIZED TO REDUCE DISTURBANCE OF THE SURROUNDING SOILS.

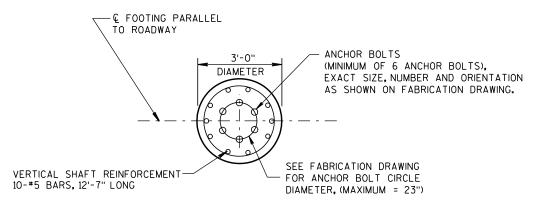
THE BOTTOM OF THE DRILLED HOLE SHALL BE FIRM AND THOROUGHLY CLEANED SO NO LOOSE OR COMPRESSIBLE MATERIALS ARE PRESENT AT THE TIME OF THE CONCRETE PLACEMENT.

IF THE DRILLED HOLE CONTAINS STANDING WATER, THE CONCRETE SHALL BE PLACED USING A TREMIE TO DISPLACE THE WATER.

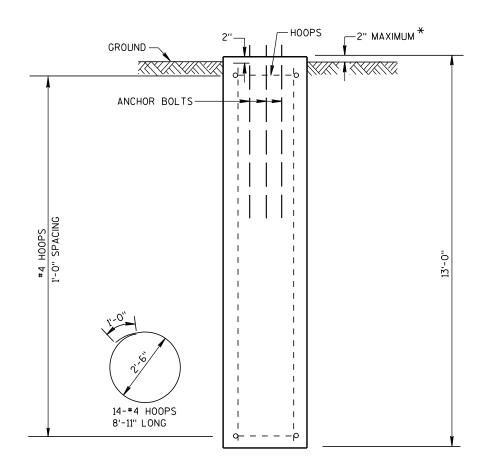
THE REINFORCEMENT AND ANCHOR BOLTS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ANY DAMAGE TO THE CONCRETE BASE DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION. AT THE EXPENSE OF THE CONTRACTOR.

THIS FOOTING HAS BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 20 DEGREES (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 350 PSF (COHESIVE SOILS).



#### **PLAN VIEW**



\* FOR OVERHEAD SIGN SUPPORTS THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE BASE SHALL BE POURED FLUSH WITH THE GROUND.

**ELEVATION VIEW** 

CONCRETE - 3.4 C.Y. PER FOOTING H.S. REINFORCEMENT - 215 LBS. PER FOOTING 36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

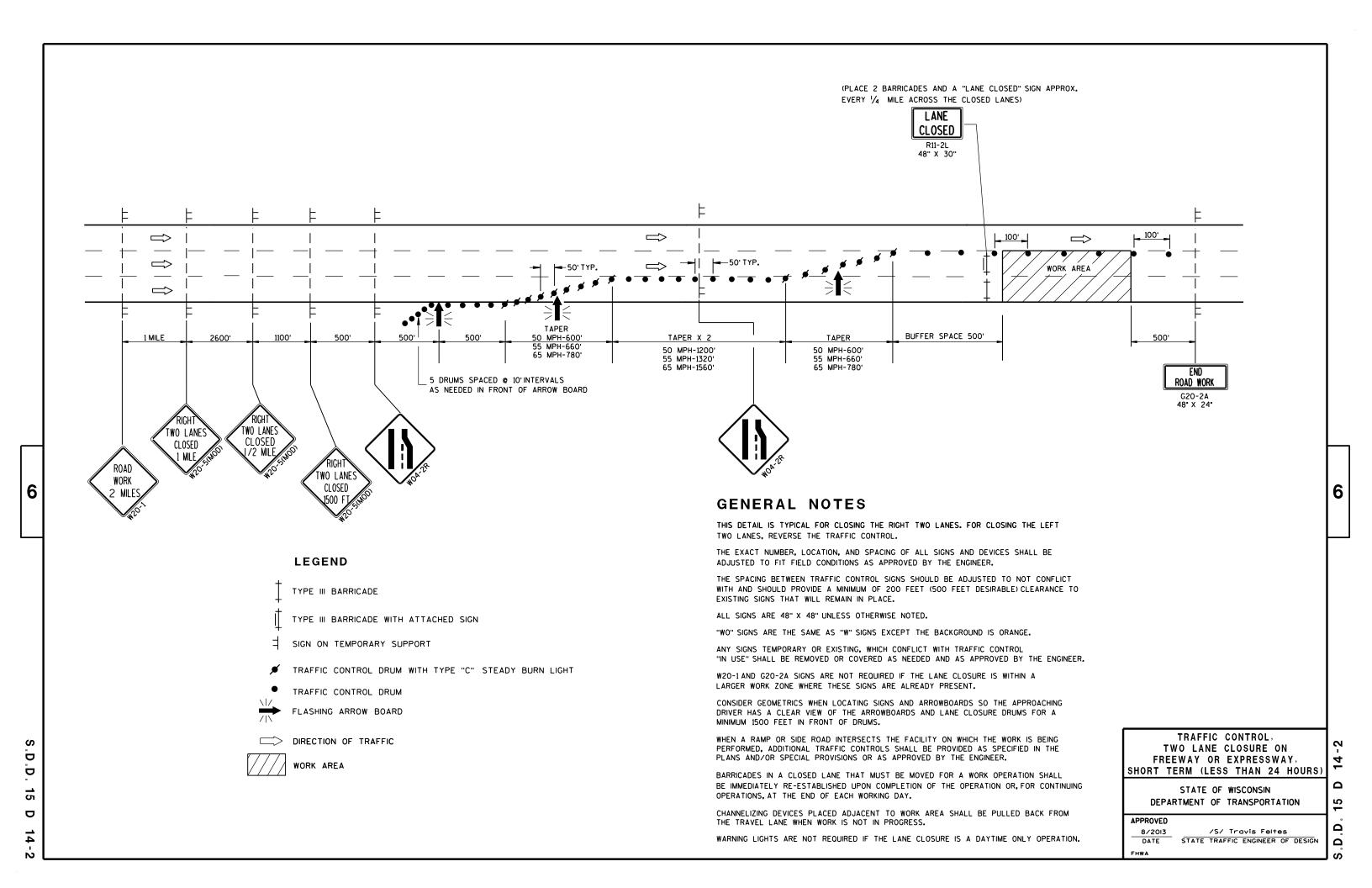
APPROVED

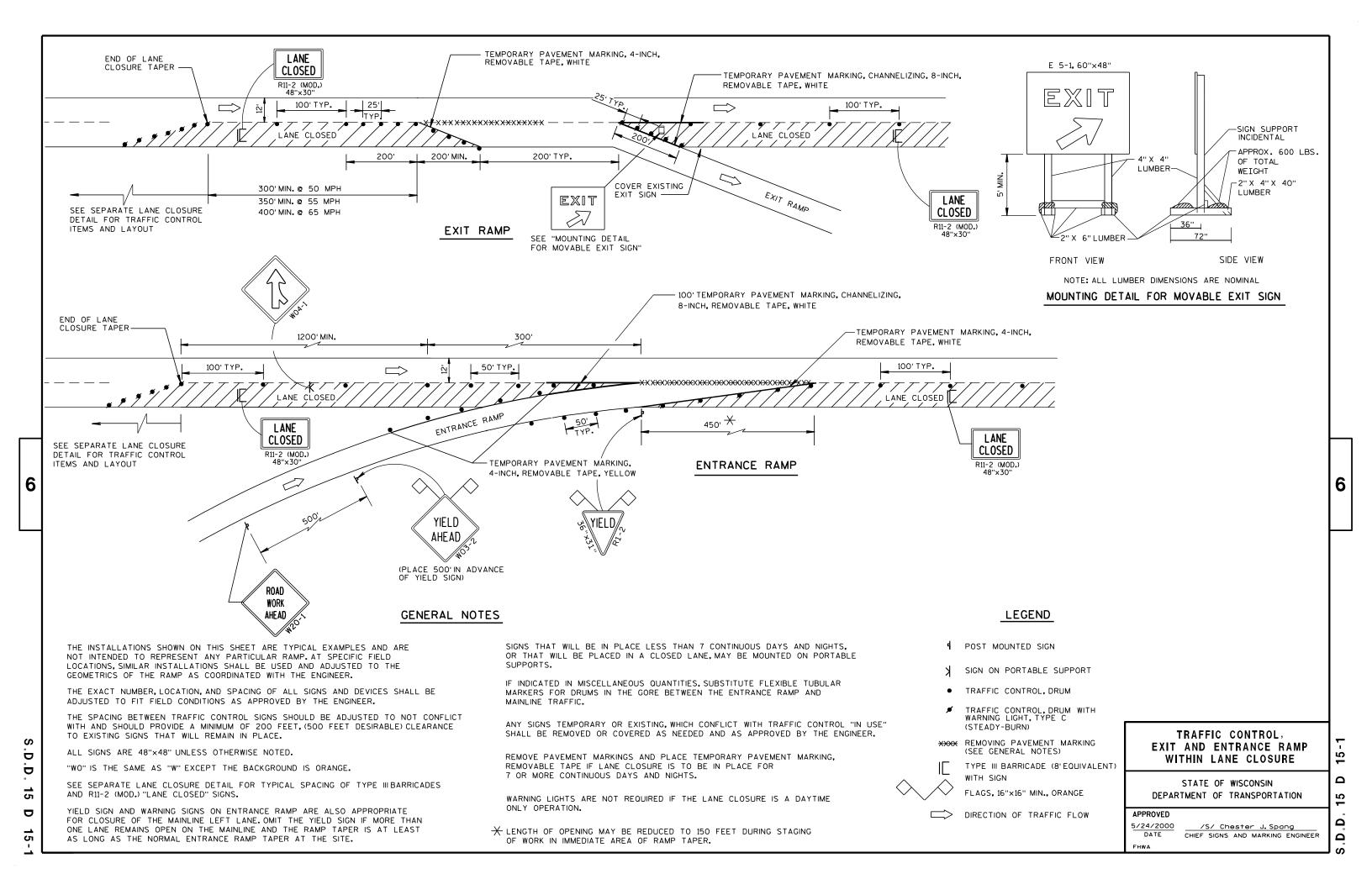
4/17/09
DATE STATE TRAFFIC ENGINEER OF DESIGN

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3.D.D. 15 C

3.D.D. 15





# LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

(△) TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

16

# **GENERAL NOTES**

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

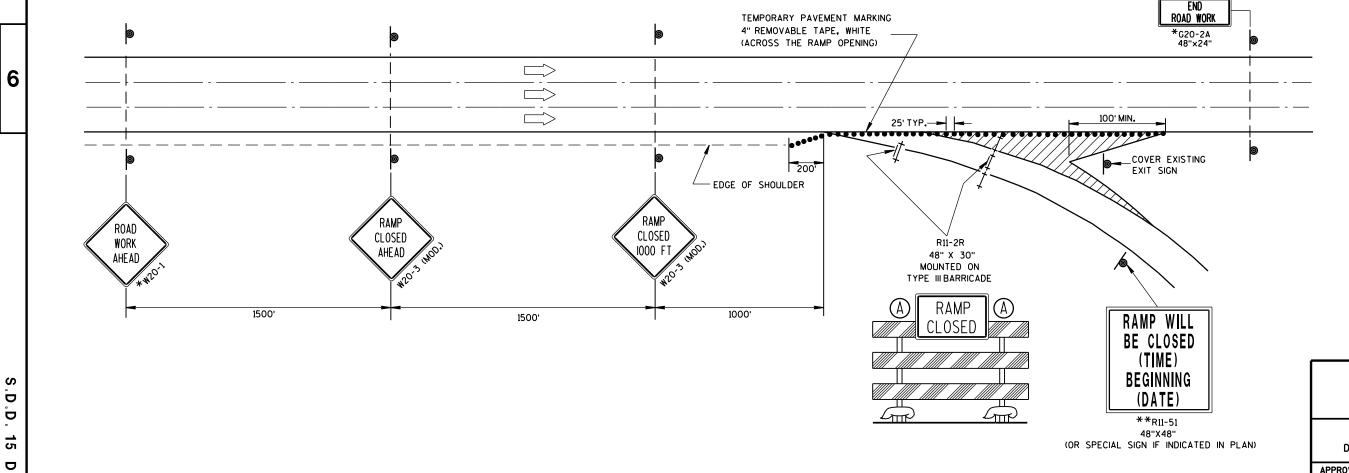
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

\*W20-1AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

\*\* PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED 8/2013

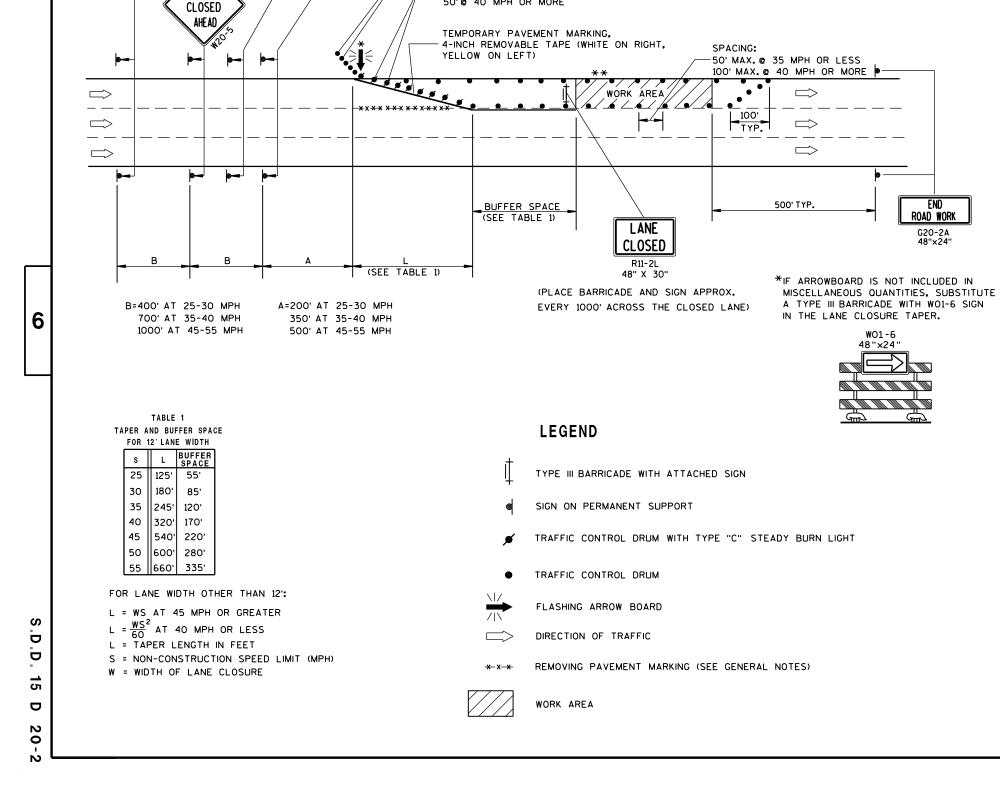
B/2013

DATE

STATE TRAFFIC ENGINEER OF DESIGN
FHWA

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(5) DRUMS SPACED @ 10'

INTERVALS AS NEEDED IN

FRONT OF ARROW BOARD

25' @ 35 MPH OR LESS 50' @ 40 MPH OR MORE

SPACING:

ROAD WORK

NEXT\_\_\_MILES

G20-1

60" X 24"

AHEAD

## **GENERAL NOTES**

\*\*THE LINE OF DRUMS SHOWN ALONG THE MEDIAN/CENTERLINE

ADJACENT TO THE WORK AREA. FOR THIS CONDITION INSTALL

W20-1 "ROAD WORK AHEAD" SIGN FOR OPPOSING DIRECTION OF

IS REQUIRED ONLY WHERE THERE IS OPPOSING TRAFFIC

TRAFFIC. IN ADVANCE OF THE WORK AREA.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE, FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"×48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

ON UNDIVIDED ROADWAYS, OMIT THE SIGNS SHOWN ON LEFT SIDE OF ROAD.

W2O-1, G2O-1 AND G2O-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROWBOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROWBOARDS AND LANE CLOSURE DRUMS.

PLACE THE ARROWBOARD AS CLOSE AS POSSIBLE TO THE BEGINNING OF THE LANE CLOSURE TAPER, PREFERABLY ON THE SHOULDER OR TERRACE.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY

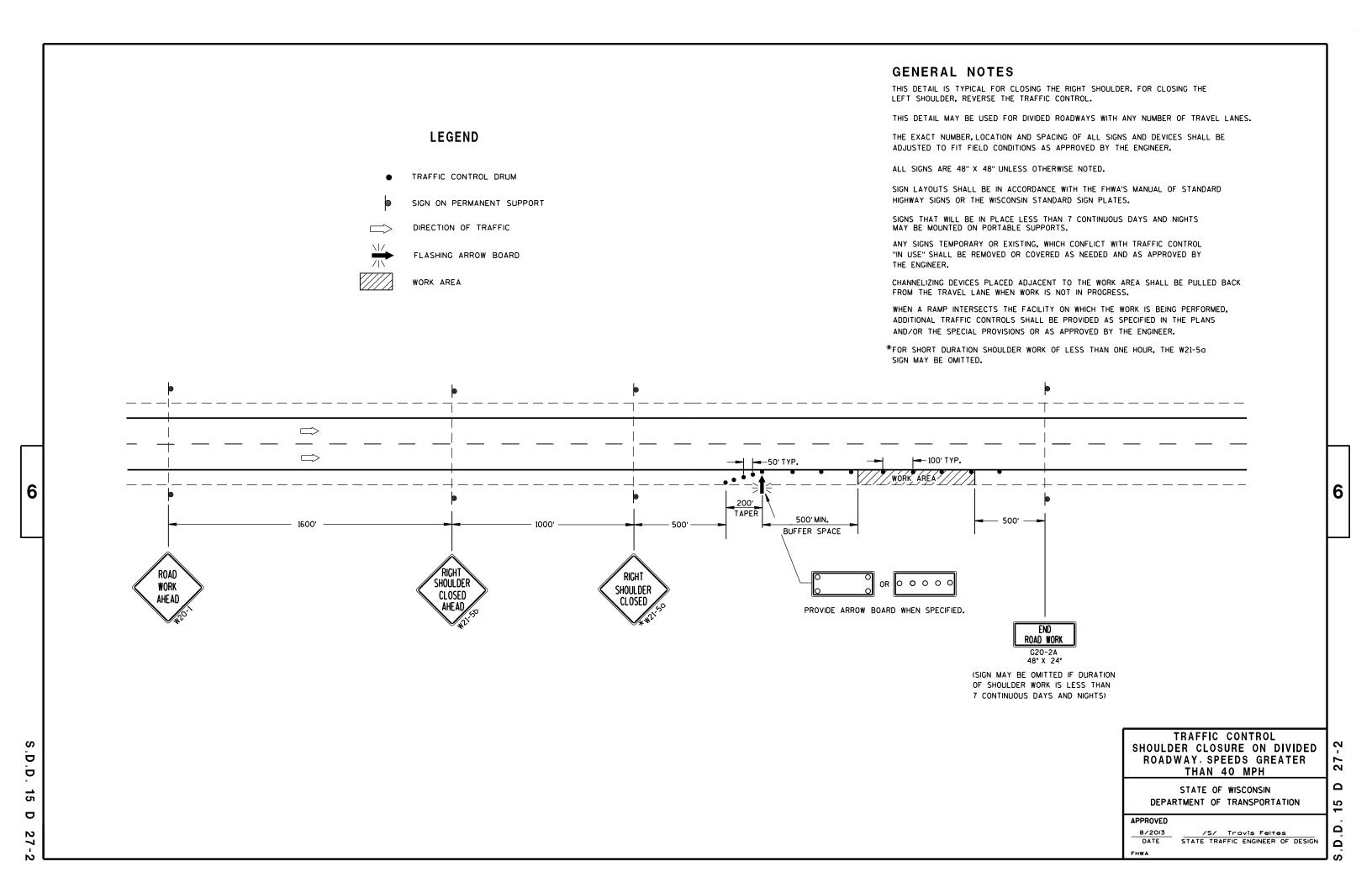
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

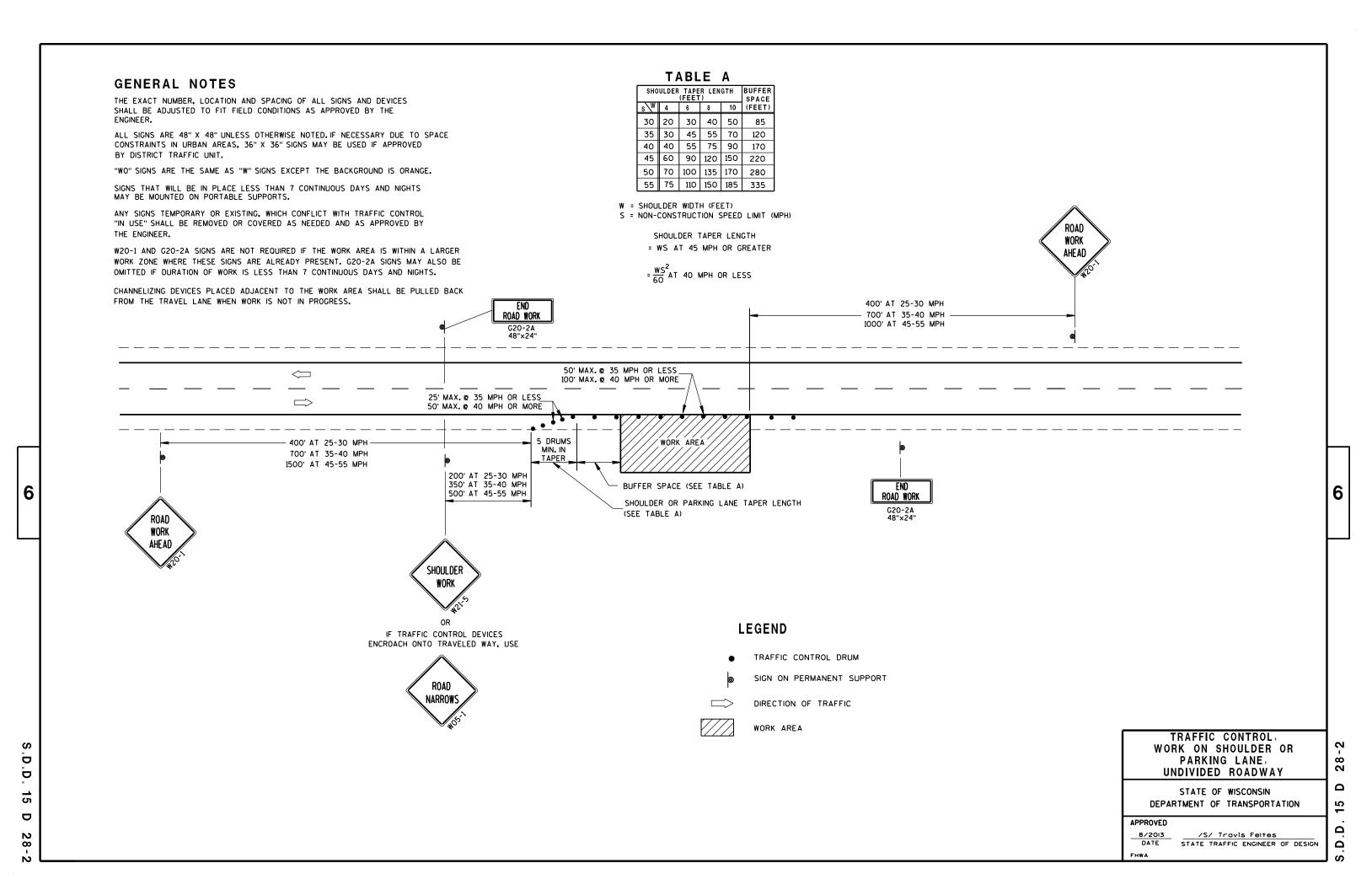
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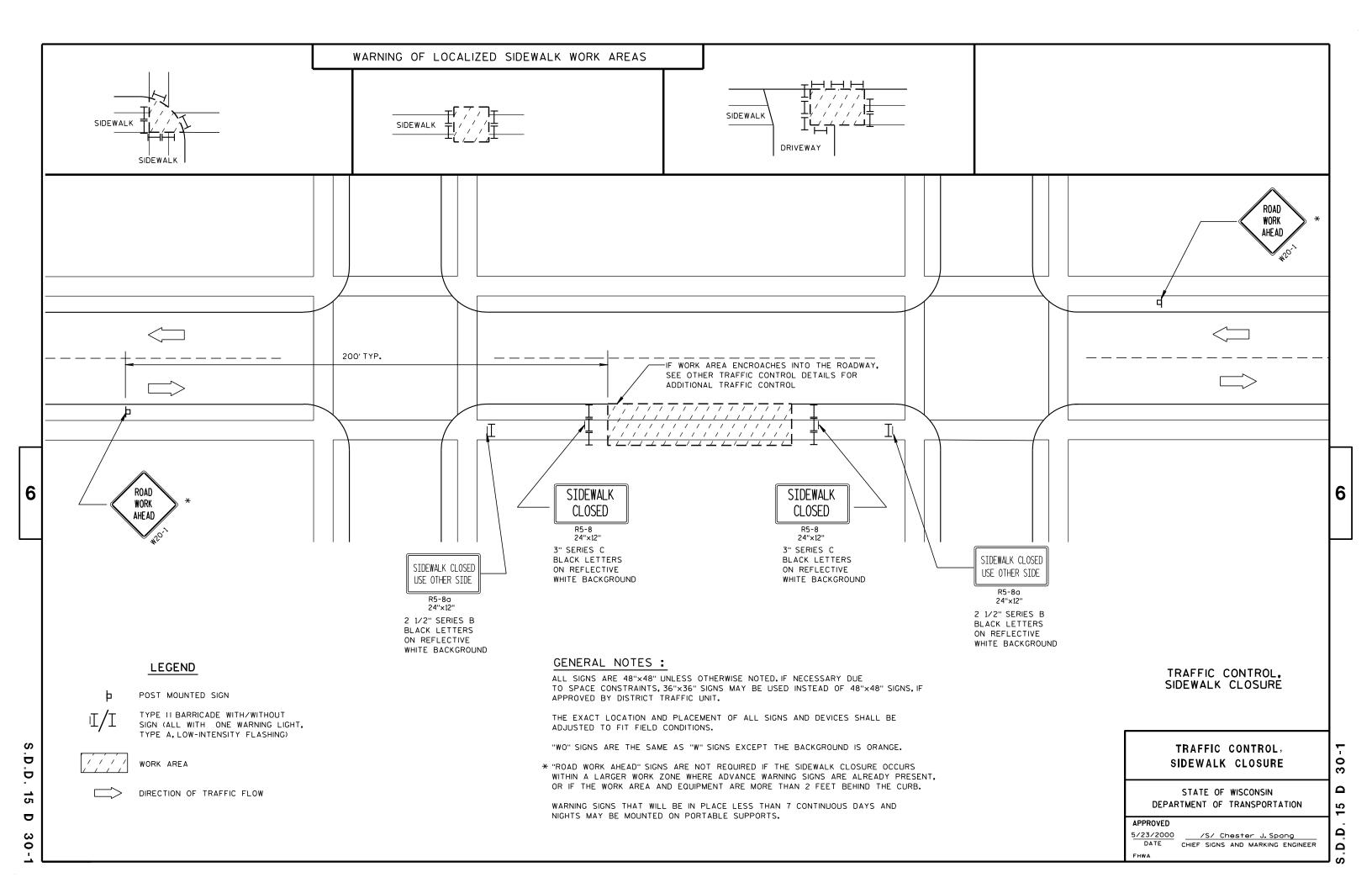
8/2013 /S/ Travis Feites

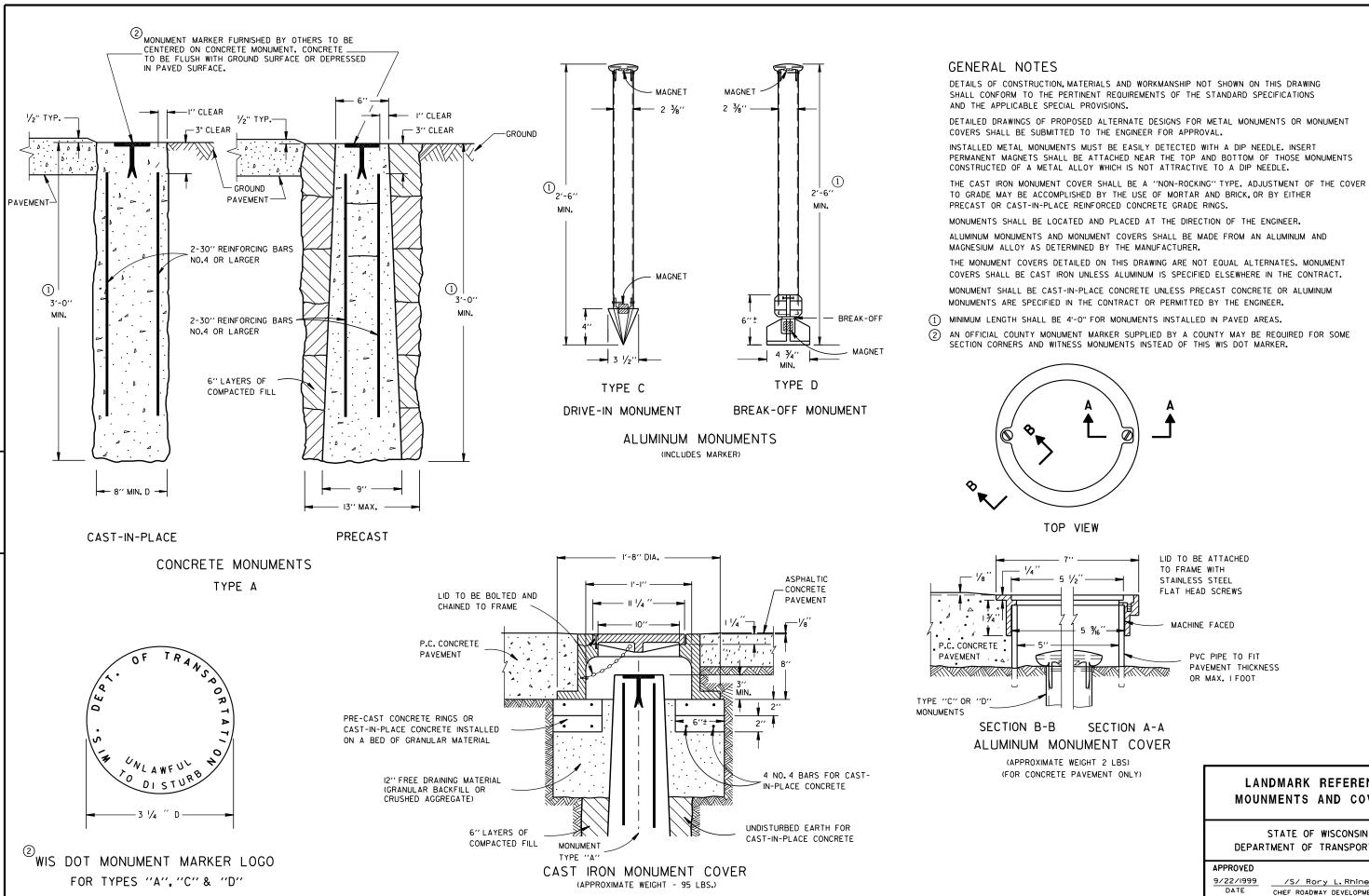
DATE TRAFFIC ENGINEER OF DESIGN

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LANDMARK REFERENCE MOUNMENTS AND COVERS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER

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2. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE I".

3. UNLESS OTHERWISE NOTED, TYPE II SIGNS ON
THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND,
"TYPE H MESSAGE MATERIAL". TYPE ISIGNS SHALL HAVE TYPE SH
REFLECTIVE SHEETING.

4. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE A GREEN BACKGROUND AND WHITE MESSAGE.

5. TYPE IISIGNS ALL UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES E. ALL LOWER CASE MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE "SERIES E.

6.TYPE ISIGNS - ALL
UPPER CASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE
NOTED) SHALL BE SERIES "E" MODIFIED. ALL LOWER CASE
MESSAGE WITH AN INITIAL UPPER CASE LETTER SHALL BE SERIES "E" MODIFIED.
ALL CAP WORDS ARE "SERIES E"

7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

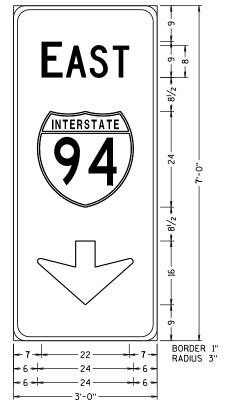
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.

**W**EST /INTERSTATE 2 **THRU** YELLOW PLAQUE-**TRAFFIC** BLACK LETTERS 8" CAPS 2 2 BORDER 3/4" RADIUS 21/4" BORDER 6" + 6 <del>-|-</del> 95/8 <del>-|-</del> 163/4 <del>-|-</del> 95/8 <del>-|-</del> 6 + <del>-</del> 6 <del>-</del>|41/2|------ 26 ½ -D1-3 - 24 - 18<sup>1</sup>/<sub>8</sub> -<del>-|-</del>8% -- 4'-0" - 3'-0" COLORS -COLORS -BACKGROUND: WHITE
MESSAGE: BLACK
LETTERS - SERIES C BACKGROUND: GREEN MESSAGE: WHITE LETTERS - SERIES C SHEETING - TYPE H S-6**7**-966



COLORS BACKGROUND: GREEN
MESSAGE: WHITE
LETTERS - SERIES C
SHEETING - TYPE H
S-67-966

SHEET 1 OF 1

PROJECT NO: 1000-20-67

HWY: VARIOUS

COUNTY: WAUKESHA

SIGNING DETAIL - TYPE I SIGNS

PLOT BY : MSCBXD

S-67-966

SCALE: 0 1/2"

SHEET

FILE NAME: J:\projects\d2\_10002067\Sign\070101\_ms.dgn

PLOT DATE: 06-JAN-2015 07:28

PLOT NAME :

PLOT SCALE: 48.125:1

THORIZONTAL DIMENSION

Ø ♥	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft
Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel  Type "B" (2 Posts) 1.6 CY Conc. 98 LBs Bar Steel																	1.8 C	" (2 Posts) Y Conc. s Bar Steel			Type "D" (2 Posts 1.8 CY Conc. 112 LBs Bar Steel	,	2.7 C	" (3 Posts) Y Conc. Bar Steel				

STEEL POST SIZE

"A" - W10" x 12"

"B" - W12" x 16"

"C" - W12" x 19"

"D" - W12 x 22"

DETERMINATION OF HIGH STRENGTH
STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew & Rawh

for State Traffic Engineer

DATE 3/03/10 PLATE NO. \_A3-2.2

SHEET NO:

FILE NAME : C:\users\PROJECTS\tr\_stdplate\A32.DGN

PROJECT NO:

PLOT DATE: 05-MAR-2010 10:10

PLOT BY • dition

			Type "A" (	2 Posts)																								
$\Diamond \diamondsuit$	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16
22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 5
23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368
24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384
25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400
26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416
27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432
28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448
29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464
30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480
31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496
32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512
33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528
34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544
35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560
36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576
	Type "B" (2 Posts) 1.6 CY Conc. 98 LBs Bar Steel										<u>'</u>		Type "C" (2 Posts 1.8 CY Conc. 100 LBs Bar Stee		Type "D" (2 Posts) 1.8 CY Conc. 112 LBs Bar Steel		2.7 CY Conc.			Type "D" (3 Posts) 2.7 CY Conc. 168 LBs Bar Steel			•		•	•		

## STEEL POST SIZE

"A" - W10" x 12"

"B" - W12" x 16"

"C" - W12" x 19" "D" - W12 x 22"

> DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

> > WISCONSIN DEPT OF TRANSPORTATION

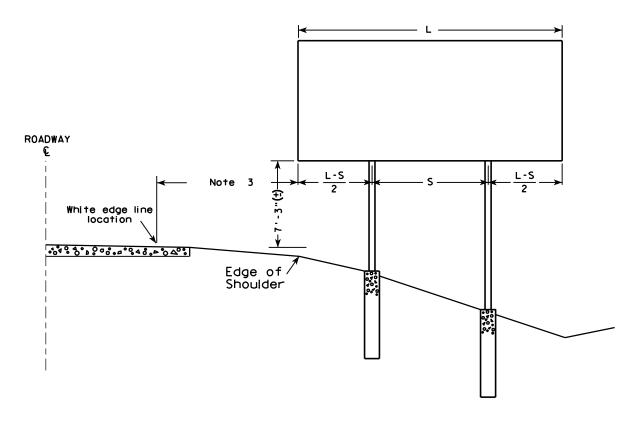
APPROVED Matthew & Rauch For State Traffic Engineer

DATE 3/5/10 

SHEET NO:

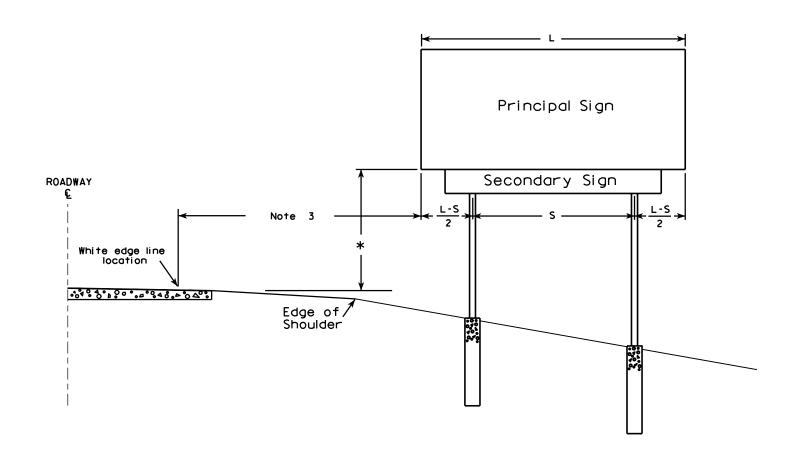
PROJECT NO:

PLOT DATE: 05-MAR-2010 10:07



## GENERAL NOTES

- 1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
- 2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
- 3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
- 4. The  $(\pm)$  tolerance shown on this sheet is 3 in.
- 5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
- 6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
- 7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.



\* Clearance is 8'-3"( $\pm$ ) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"( $\pm$ ).

TYPICAL INSTALLATION
OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew & Rauch

For State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

SHEET NO:

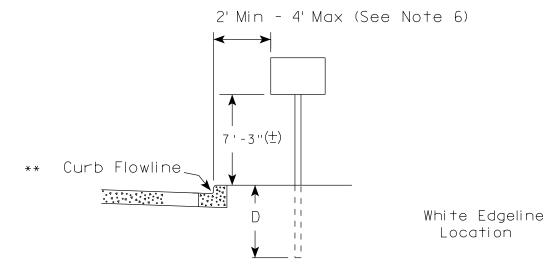
PLOT BY : ditjph

PLOT DATE: 02-APR-2008 15:49

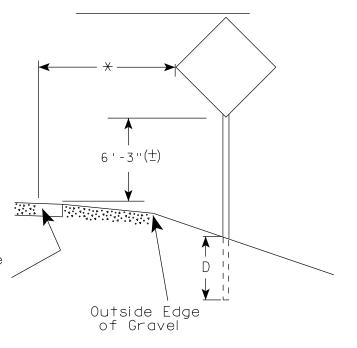
PROJECT NO:



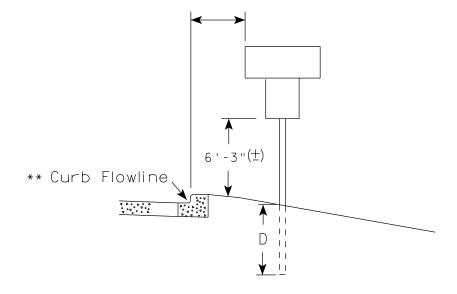
## URBAN ARFA



RURAL AREA (See Note 2)



2' Min - 4' Max (See Note 6)



5'-3"(生) White Edgeline  $D^{-1}$ Location Outside Edae of Gravel

\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where

there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

HWY:

\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

PLOT BY: mscsja

## GENERAL NOTES

- 1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- 2. If signs are mounted on barrier wall, see A4-10 sign plate.
- 3. For expressways and freeways, mounting height is  $7'-3''(\pm)$  or 6'-3" (±) depending upon existence of a sub-sign.
- 4. Minimum mounting height for J assemblies (A2-1S) is  $7'-3''(\pm)$  or  $6'-3''(\pm)$ per urban or rural detail respectively.
- 5. Minimum mounting height for signs mounted on traffic signal poles is  $5' - 3'' (\pm)$ .
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. The (+) tolerance for mounting height is 3 inches.
- 8. Folding signs shall be mounted at a height of 5'-3'' ( $\pm$ ) or as directd by the Engineer.
- 9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3"  $(\pm)$ . The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3'' ( $\pm$ ).

#### POST EMBEDMENT DEPTH

Area of Sign	
Installation	D
( Sq. Ft.)	(Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

for State Traffic Engineer

DATE 11/12/14

PROJECT NO: FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A43.DGN COUNTY:

PLOT DATE: 12-NOV-2014 14:03

PLOT NAME :



NOTES: 1. ALL MATERIAL TO BE APPROVED

BY ENGINEER PRIOR TO INSTALLATION

- 2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
- 3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



## **ELEVATION VIEW**

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

HWY:



#### PLAN VIEW

COUNTY:

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A43B.DGN

PROJECT NO:

PLOT DATE: 27-JAN-2014 09:48

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 13.659812:1.000000

APPROVED

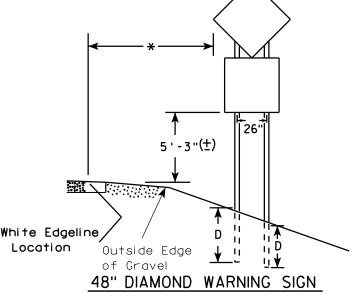
## GENERAL NOTES

- 1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- 2. See tables below for required number of posts.
- 3. For expressways and freeways. mounting height is 7'-3'' (±) or 6'-3'' (±) depending upon existence of sub-sign.
- 4. The (±) tolerance for mounting height is 3 inches.
- 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3'' (±) or 6'-3'' (±) per urban or rural detail respectively.
- 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
- 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
- 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8). Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).
- \* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- \*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- \*\*\* See A4-3 sign plate for signs 4' or less in width or less than 20 S.F. in area.

#### URBAN AREA RURAL AREA (See Note 3) 2'Min - 4'Max (See Note 6) ₩E# FF# 6'-3"(±) 6'-3"(±) 7'-3"(±) \*\* Curb **\*\*\*\***\ Flowline D **7000** White Edgeline

# 2'Min - 4'Max (See Note 6) 6'-3"(±) Curb Flowline. 48" DIAMOND WARNING SIGN

D 11



COUNTY:

Outside Edge

of Gravel

	SIGN SHAPE OTHER THAN (TWO POSTS REQUIRED	
	L	E
<del>* * *</del>	Greater than 48" Less than 60"	12"
	60" to 120"	L/5

SIGN SHAPE OTHER THAN (THREE POSTS REQUIR	
L	E
Greater than 120" less than 168"	12"

HWY:

White Edgeline,

Location

SIGN SHAPE OTHER THAN (FOUR POSTS REQUIRE	
L	E
168" and greater	12"

Location

Outside Edae

of Gravel

### POST EMBEDMENT DEPTH

Area of Sign	
Installation	D
( Sq. Ft.)	(Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

Matther

PLATE NO. A4-4.13

FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A44.DGN

PROJECT NO:

PLOT DATE: 12-NOV-2014 14:01

PLOT NAME :

PLOT BY: mscsja

PLOT SCALE: 107.021305:1.000000

WISDOT/CADDS SHEET 42

SHEET NO:

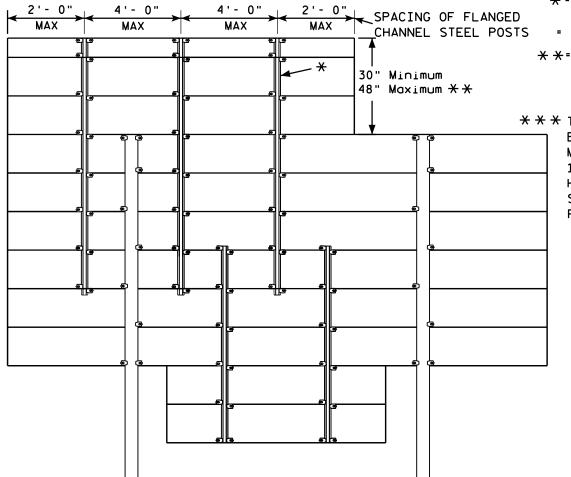
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

For State Traffic Engineer

DATE 11/12/14





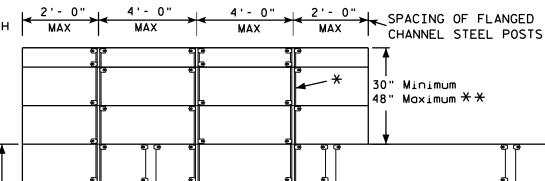
\*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH

CHANNEL STEEL POSTS = 60,000 PSI (GRADE 60) GALVANIZED

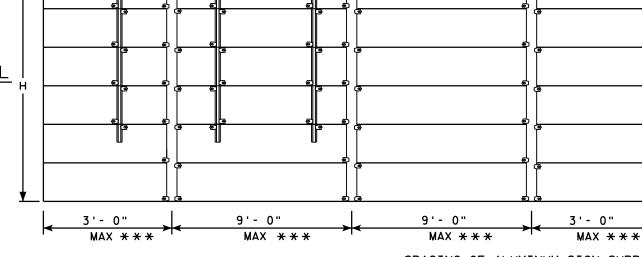
SIGN BRIDGE MOUNTED SIGN

\* \*= FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

\* \* THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.



FLANGE CHANNEL DETAIL 1/<sub>4</sub> → 1/<sub>4</sub> → NOT TO SCALE



SPACING OF ALUMINUM SIGN SUPPORTS 5" X 3.5" X 3.7 LBS./ft.

## GENERAL NOTES

- 1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
- 2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.

3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.

2'- 0"

- 4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
- 5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
- 6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

PLOT BY: mscs.ja

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

For State Traffic Engineer

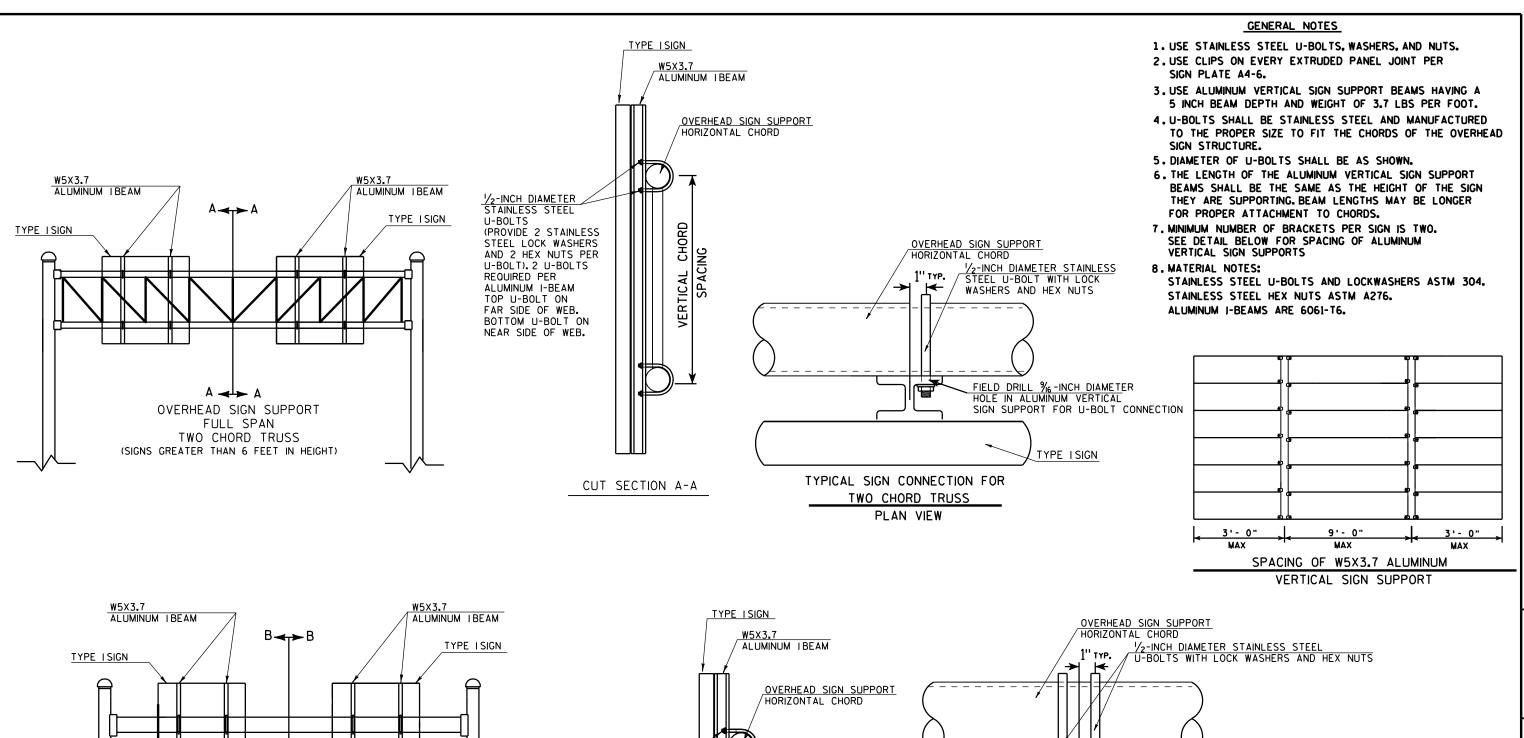
DATE 12/05/13

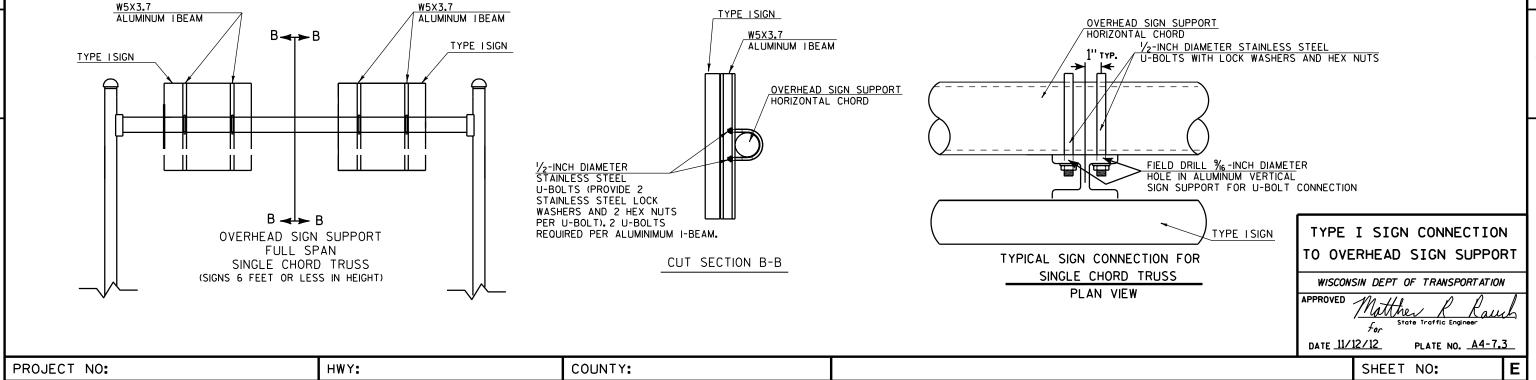
PLATE NO. A4-6.12

SHEET NO:

PROJECT NO:

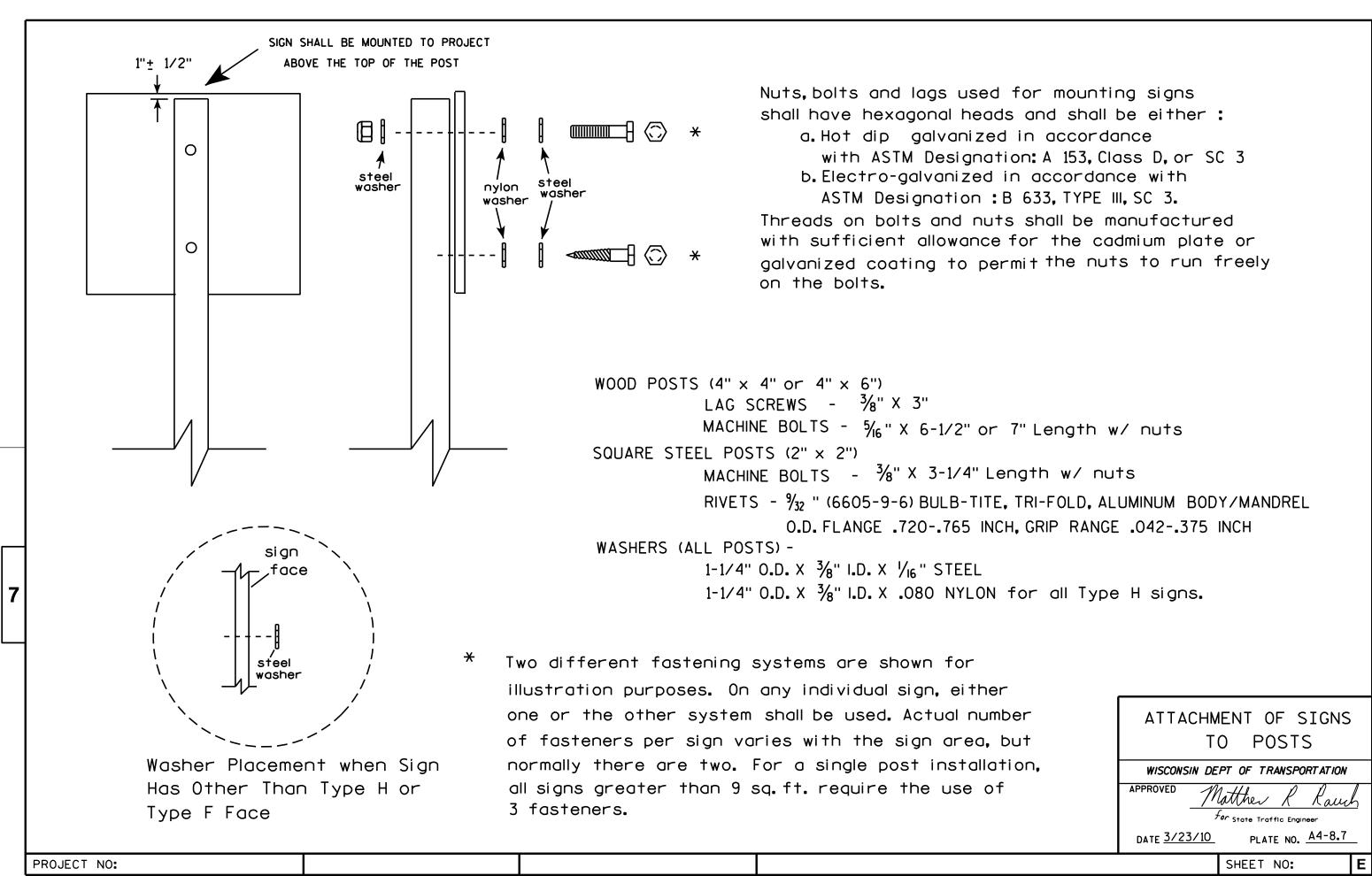
FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A46.DGN





FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A47.DGN

PLOT BY : msc i9h



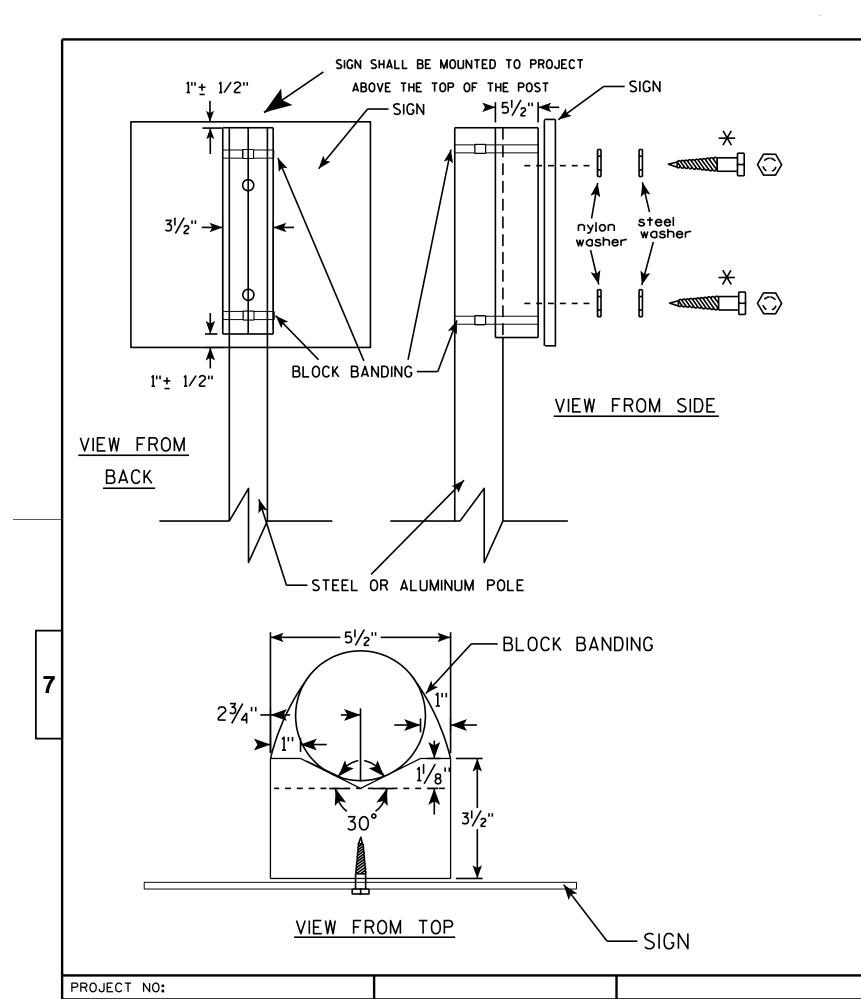


PROJECT NO: HWY: COUNTY: SHEET NO: FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A49.DGN PLOT DATE: 05-FEB-2015 17:09 PLOT BY: mscsja PLOT NAME : PLOT SCALE: 13.659812:1.000000

DATE 2/05/15

PLATE NO. <u>A4-9.9</u>

For State Traffic Engineer



## GENERAL NOTES

- 1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
- 2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, 3/4" WIDTH AND 0.025" THICKNESS
- 3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
- 4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
- 5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
  - b. Cadmium plated in accordance with ASTM Designation: B 766 TYPE 3, Class 12, or
  - c. Electro-galvanized in accordance with ASTM Designation: B 633, TYPE III, SC 3.
- 6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
- 7. STEEL WASHERS SHALL BE 11/4" O.D. X 3/8" I.D. X 1/16"
- 8. NYLON WASHERS SHALL BE  $1^{1}/_{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

X LAG BOLTS SHALL BE 3/8" X 21/2"

BLOCK BANDING DETAIL ( V-BLOCK OPTION ) WISCONSIN DEPT OF TRANSPORTATION APPROVED For State Traffic Engineer PLATE NO. <u>A5-10.1</u>

DATE 7/12/07

SHEET NO:

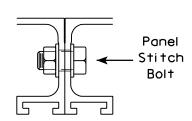
## STITCH BOLT, WASHER & NUT

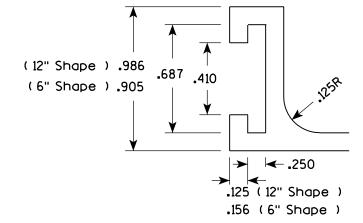
The hardware includes:

3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy

3/8 " - Stainless steel stop nut

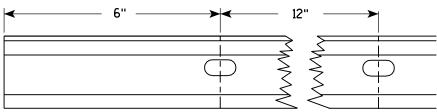
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy







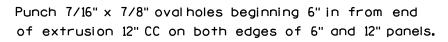
**←.**125

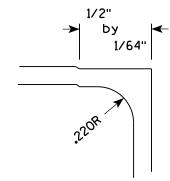


.078

**←** 2" →

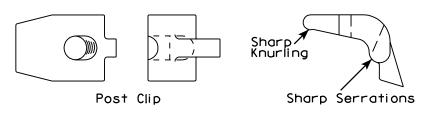
6" Extrusion Minimum Weight 1.1 lb./ft.

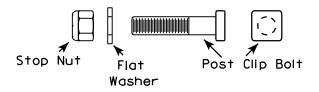




## POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6 Post Clip Bolt shall be Stainless Steel. Flat washer shall be 3/8" X .091, Stainless Steel. Stop nut shall be stainless steel.





### NOTES

- 1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
- 2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
- 3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED hester J Spang For State Traffic Engineer PLATE NO. 45-2.9

DATE 11/18/99

SHEET NO:

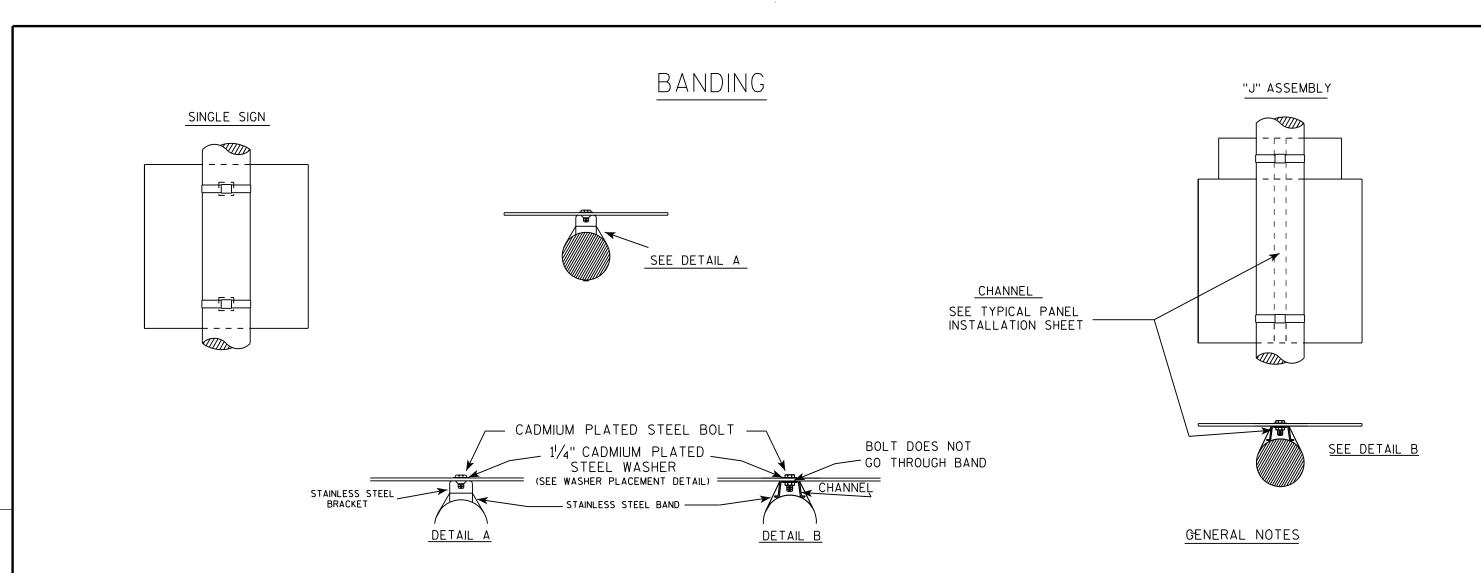
PROJECT NO:

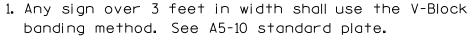
PLOT DATE: 28-SEP-2005 07:20 PLOT BY : DOTDZK

12" Extrusion

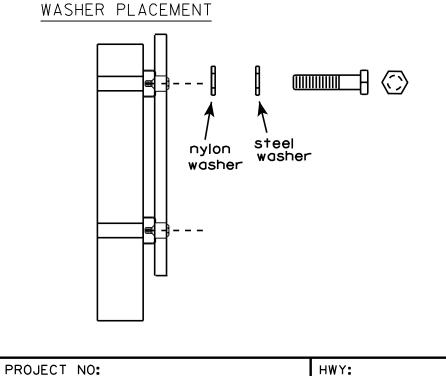
Minimum Weight

2.45 lb./ft.





- 2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
- 3. Banding and assembly bracket shall be stainless steel. All bands shall be  $\frac{3}{4}$ " in width and 0.025" thickness.



WASHERS (ALL POSTS) -

COUNTY:

1-1/4" O.D. X3/8" I.D. X1/16" STEEL 1-1/4" O.D. X3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer DATE 8/16/13

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A59.DGN

PLOT DATE: 16-AUG-2013 13:27

PLOT BY: mscsja

PLOT NAME :

PLOT SCALE: 33.740899:1.000000

WISDOT/CADDS SHEET 42

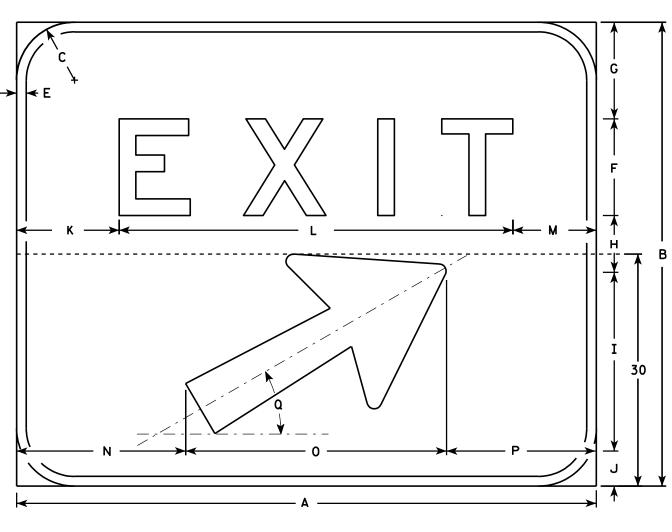
PLATE NO. A5-9.3

## NOTES

- 1. Sign is Type II Type H reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Green Message - White (Type H reflective)

- 3. Message Series E
- 4. Corners may be square or rounded but borders shall be rounded as shown.
- 5. Base material for this sign shall be plywood and shall be split into two seperate pieces for the 72 x 60 size as shown on the detail by the dashed line (-----).
- 6. Arrow is Type "A" from sign plate A1-1.
- 7. As per the Standard Spec's, this sign shall not have a vertical joint.



Metric equivalent for this sign is:

SIZE					
1					
2					
3					
4	1500	mm	X	1200	mm
5	1800	mm	X	1500	mm

PROJECT NO:

E5-1

Area sq. ft. SIZE Α Ε 0 2 3 5 % 18 1/2 3 % 10 % 40 3/4 8 % 17 1/2 27 15 1/2 30° 4 60 48 10 10 20.0 1.80 18 1/2 7 1/2 13 1/4 48 1/2 10 1/4 23 1/2 27 21 1/2 5 72 12 12 10 30.0 2.70 60 HWY: COUNTY:

STANDARD SIGN

E5 - 1

WISCONSIN DEPT OF TRANSPORTATION

SHEET NO:

APPROVED

DATE 6/22/00

PLATE NO. E5-1.8

PLOT DATE: 12-OCT-2005 10:13

PLOT BY : DITJPH

PLOT NAME :

PLOT SCALE: 9.934722:1.000000

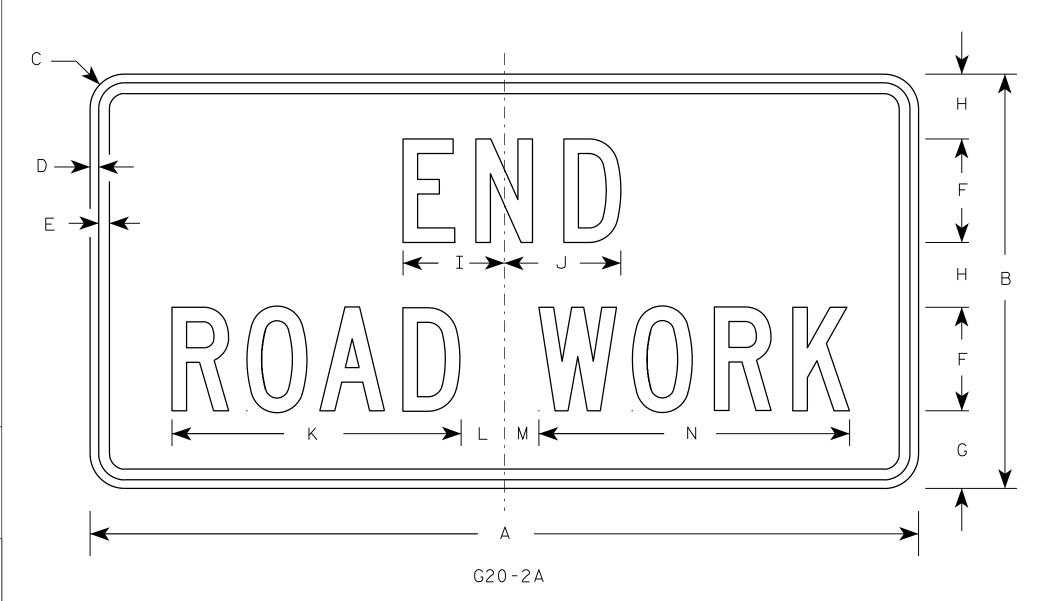
## NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.

2. Color:

Background - Orange Message - Black

- 3. Message Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Metric equivalent for this sign is:

SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Р	Q	R	S	Т	U	٧	W	Х	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 %	6 3/4	16 ¾	2 1/2	1 3/4	18 ½													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 %	6 3/4	16 ¾	2 1/2	1 3/4	18 ½													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 %	6 3/4	16 ¾	2 1/2	1 3/4	18 ½													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 1/8	6 3/4	16 ¾	2 1/2	1 3/4	18 ½													8.0	0.72

COUNTY:

STANDARD SIGN G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED AND UN A O N

Matther R Lauch

For State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

SHEET NO:

FILE NAME : C:\Users\PROJECTS\tr\_stdplate\G202A.DGN

HWY:

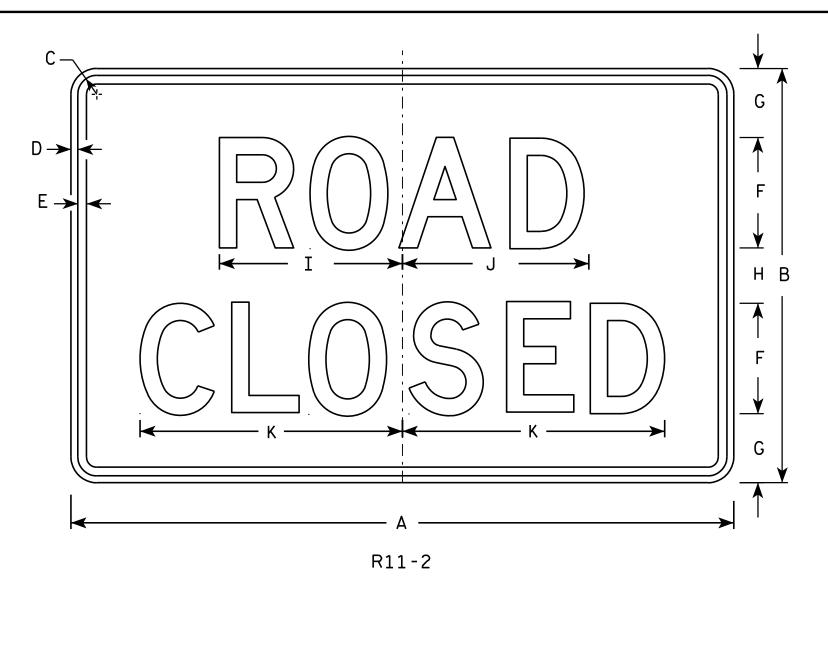
PROJECT NO:

PLOT DATE: 30-SEP-2009 09:31

PLOT BY: ditjph

PLOT NAME :

PLOT SCALE: 5.561773:1.000000

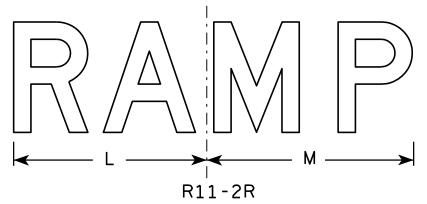


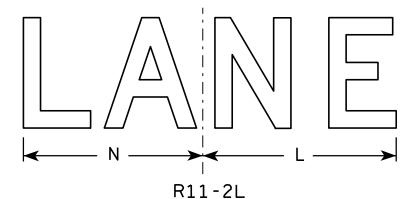
## <u>NOTES</u>

- 1. Sign is Type II Type H Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - White Message - Black

- 3. Message Series D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Modify the message as required.





SIZE	SIZE A B C D E F G H I J K											L	M	N	0	Ρ	0	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	3 48 30 1 3/8 1/2 5/8 8 5 4 13 1/4 13 1/2 19 14										15	13													10.0		
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	5 48 30 1 3/8 1/2 5/8 8 5 4 13 1/4 13 1/2 19										14	15	13													10.0	
PRO	PROJECT NO: HWY:												С	OUNTY	<b>':</b>												

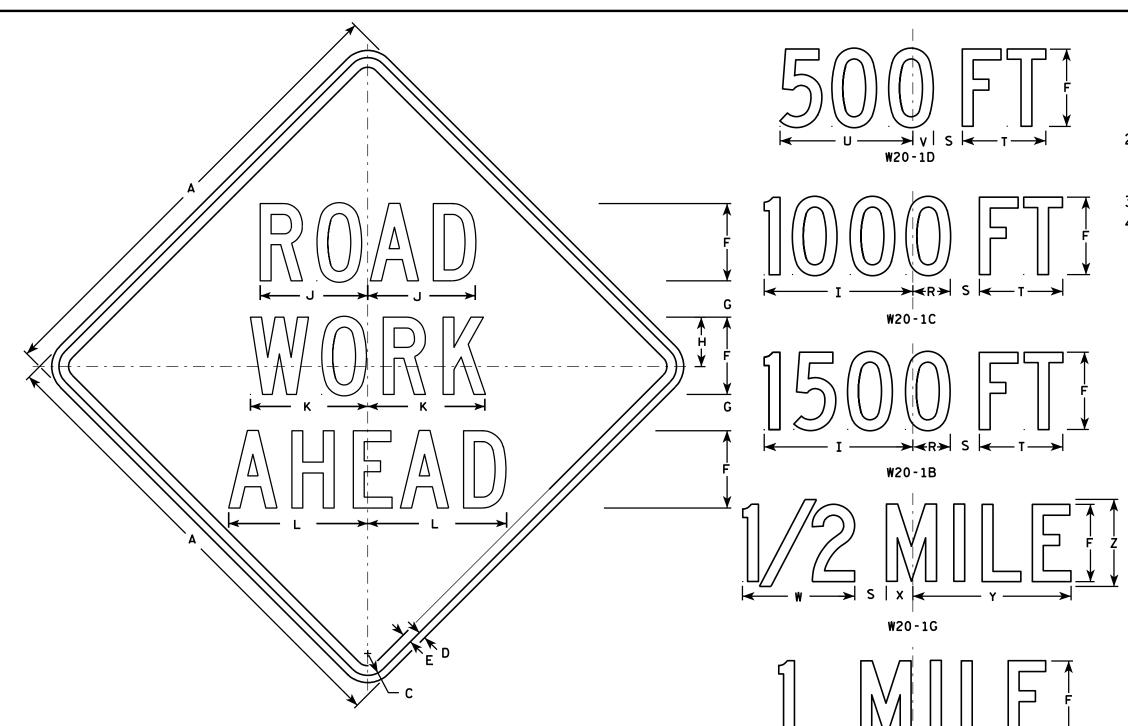
STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION

DATE 4/1/11 PLATE NO. R11-2.10

SHEET NO:

PLOT BY: mscj9h



7 5/8 8 7/8 1 1/8 4 1/2 3 1/2

3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 |

3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 3/8 | 5 3/8

3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8

3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 |

| 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 |

W20-1A

2 \\ 8 | 3 \\ 4 | 10 \\ 8 |

NOTES

- Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

3. Message Series - C

Area sq. ft.

16.0

16.0

16.0

4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

STANDARD SIGN W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matther R Rauch

For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

SHEET NO:

1 3/4 10 3/4

16 3/8 9

1 3/8

2 1/4

2 1/4

1/2

3/4

3/4

SIZE A

3

4

5

36

48

48

48

48

48

PROJECT NO:

W20-1F

1 3/8

13 3/4 2 1/8 11 1/8 2 3/4 16 3/8

13 3/4 2 1/8 11 1/8 2 3/4 16 3/8

13 3/4 2 1/8 11 1/8 2 3/4 16 3/8

8 \% | 13 \% | 2 \% | 11 \% | 2 \% | 16 \% | 9

| 13 3/4 | 2 1/8 | 11 1/8 | 2 3/4 |

5 %

8 %

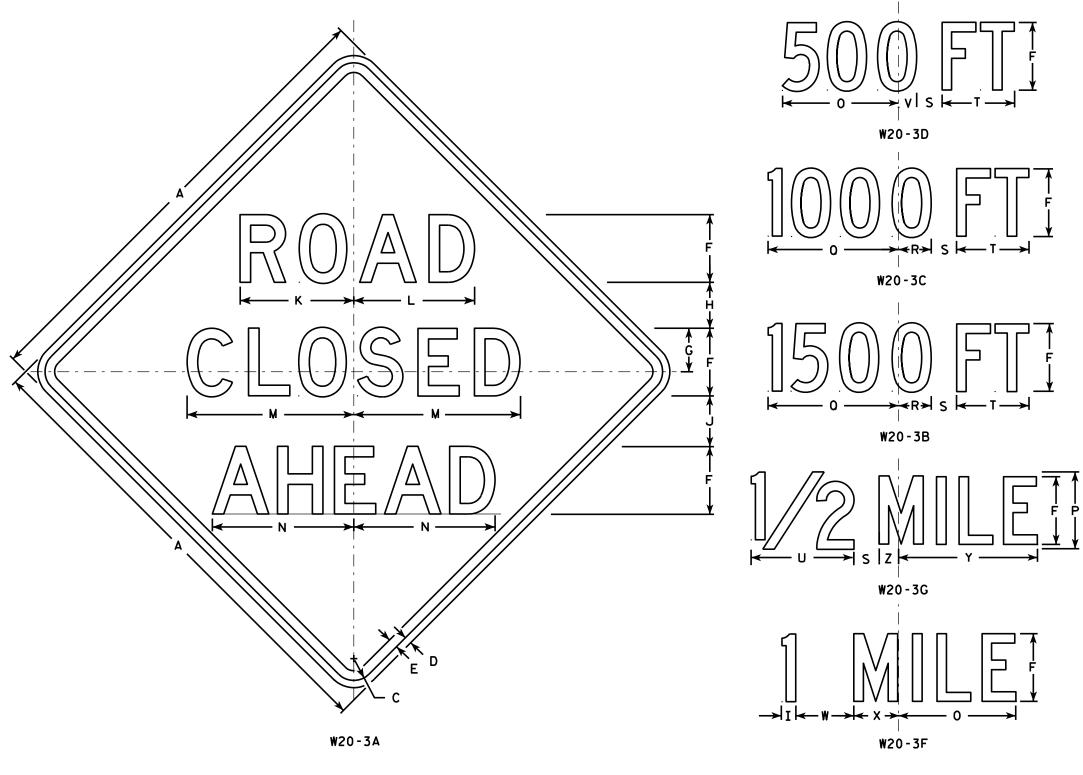
2 1/2 1 1/8

3 1/8

3 %

3 %

3 %



## **NOTES**

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Message Series see note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Lines 1 and 2 are Series D. Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	Α	В	С	D	E	F	G	н	I	J	К	L	М	N	0	Р	0	R	S	Т	U	٧	w	х	Y	Z	Areo sq. ft.
1	36		1 %	5/8	₹4	5	3 3/8	3 ½	1 1/8	4	8 3%	8 %	12 1/2	11	9	6	10 1/8	2 1/2	1 %	5 %	8	1 3/8	4 1/2	3 1/2	10 ¾	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 %	12	8	13 1/2	3 %	2 %	7 1/2	10 %	1 1/8	6	4 %	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 ¾	12 1/2	17 1/4	14 %	12	8	13 1/2	3 %	2 %	7 1/2	10 %	1 1/8	6	4 %	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 ¾	12 1/2	17 1/4	14 %	12	8	13 1/2	3 %	2 %	7 1/2	10 %	1 1/8	6	4 %	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 %	12	8	13 1/2	3 %	2 %	7 1/2	10 %	1 1/8	6	4 %	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 %	12	8	13 1/2	3 %	2 5/8	7 1/2	10 %	1 1/8	6	4 %	14 3/8	2 3/8	16.0
ت			- /-	/ -			1 / 2	- / -	- /2	· /-	/ -	/2	7,4	- 70			10 /2	- 70	- 78	. , 2	78	- 78		- 70	- 70	- 78	

STANDARD SIGN W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

DATE 3/18/11

For State Traffic Engineer
PLATE NO. W20-3.7

SHEET NO:

HWY:

COUNTY:

PLOT NAME :

PLOT SCALE: 9.931739:1.000000

PROJECT NO:

## <u>NOTES</u>

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Message Series See Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. " LANE" is Series B. Allother copy is Series C.

500 FT

W20-5C

1500 FT



PLOT BY: mscj9h



									W20-	5A																	W 4	20-3F
SI	ZE	Α	В	С	D	E	F	G	Н	I	J	K	L	M	N	0	Р	0	R	S	T	U	V	W	Х	Y	Z	Area sq. ft.
	1	36	6	1 5/8	5/8	₹4	5	<b>1</b> /8	2 1/2	13 1/8	10 ¾	9 1/2	14 1/4	13 %	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 %	10 1/8	2 1/2	1 3/4	8	9.0
2	?S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0
2	M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0
	3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0
	4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 %	19	18 3/8	16	14 1/4	1 %	1 1/2	6	4 5/8	12	2 %	7 1/2	13 1/2	3 %	2 3/8	10 %	16.0
	5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 %	19	18 3/8	16	14 1/4	1 1/8	1 1/2	6	4 %	12	2 %	7 1/2	13 1/2	3 3/8	2 3/8	10 %	16.0

COUNTY:

STANDARD SIGN W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew & Rauch

For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

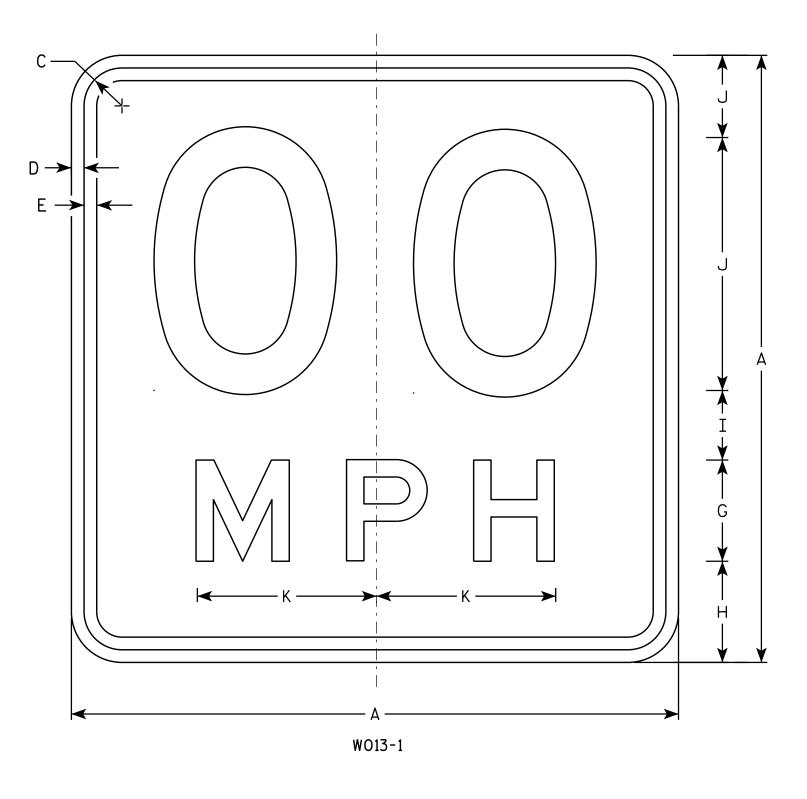
SHEET NO:

PROJECT NO:

HWY:

W20-56A

W20-55A



## <u>NOTES</u>

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Message Series See Note 6
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
- 6. Line 1 is Series D Line 2 is Series E

SIZE	Α	В	С	D	E	F	G	Н	I	J	К	L	М	N	0	Ρ	0	R	S	T	U	٧	₩	X	Y	Z	Areg sq. ft.
1	24		1 1/8	3∕8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 %	5/8	3∕4	16	6	5 1/2	4	4 1/2	10 %																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 %																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 %																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 %																9.00
5	36		1 %	5/8	3/4	16	6	5 1/2	4	4 1/2	10 %																9.00

COUNTY:

STANDARD SIGN W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R Rauch

For State Traffic Engineer

DATE 11/21/13 PLATE NO. WO13-1.1

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\W0131.DGN

HWY:

PROJECT NO:

PLOT DATE: 02-DEC-2013 13:55

PLOT NAME :

PLOT BY: mscsja

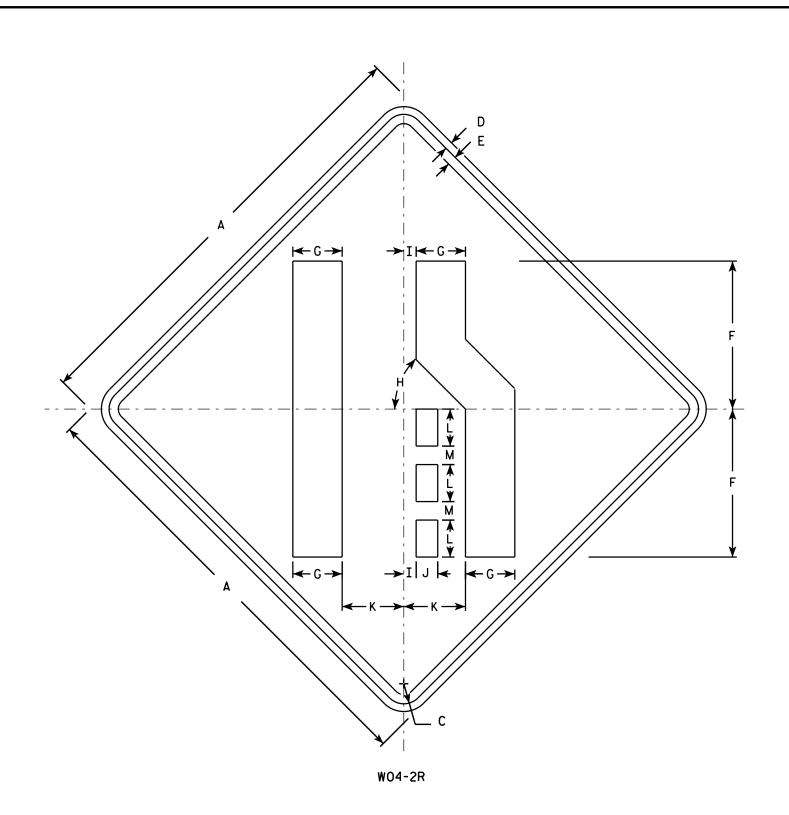
PLOT SCALE: 3.794391:1.000000

## NOTES

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-2L is the same as W04-2R except the symbolis reversed along the vertical centerline.



SIZE 1 % 5/8 3/4 12 45° 1 3/4 5 1 1/2 4 36 3 9.0 2S 2 1/4 5 3/8 45° 1 ¼ 2 ¾ 6 ¾ 3/4 48 16.0 45° 1 ¼ 2 ¾ 6 ¾ 3/4 5 3/8 48 2 1/4 2 16.0 2 1/4 3 48 3/4 5 % 45° | 1 1/4 | 2 3/8 | 6 3/4 2 16.0 2 1/4 3/4 5 3/8 45° | 1 1/4 | 2 3/8 | 6 3/4 48 2 16.0 5 2 1/4 3/4 5 3/8 45° | 1 1/4 | 2 3/8 | 6 3/4 48 2 16.0

STANDARD SIGN W04 - 2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

ForState Traffic Engineer

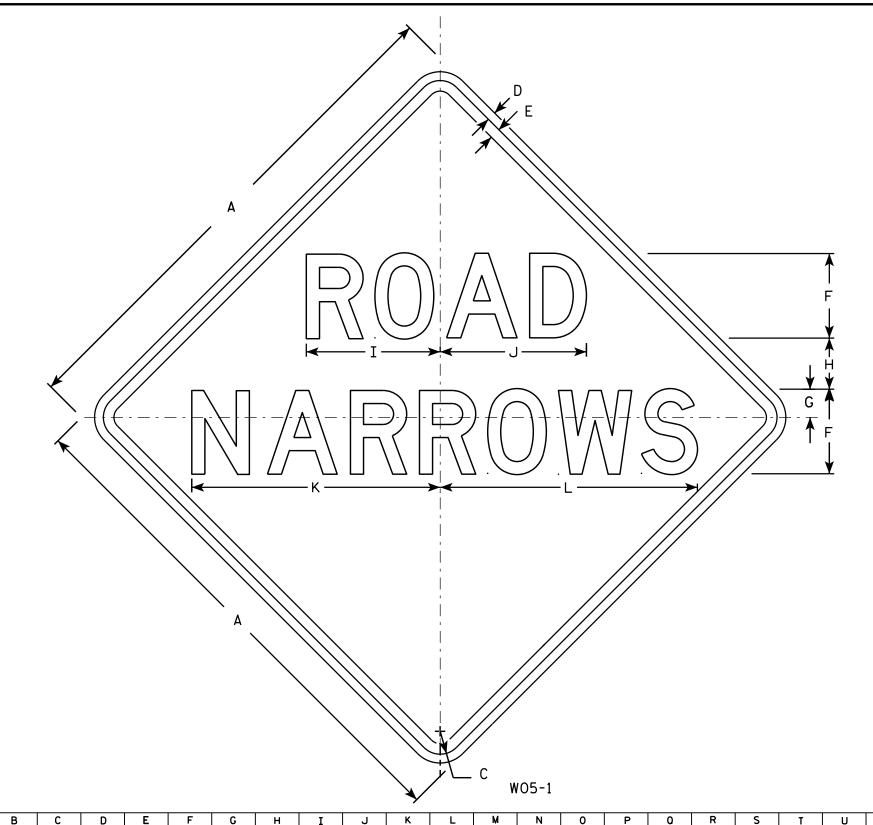
DATE 11/20/13 PLATE NO. <u>WO4-2.1</u>

SHEET NO:

FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\W042.DGN

PROJECT NO:

PLOT DATE: 20-NOV-2013 11:43



## NOTES

- 1. Sign is Type II Type F Reflective reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:

Background - Orange Message - Black

- 3. Message Series D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE A 1 5/8 3 1/2 9 1/2 10 3/8 17 5/8 18 1/4 3/4 9.0 2S 2 1/4 3/4 12 3/4 13 3/4 23 1/2 24 3/8 48 16.0 2M 2 1/4 3/4 12 3/4 13 3/4 23 1/2 24 3/8 48 16.0 12 3/4 13 3/4 23 1/2 24 3/8 2 1/4 3/4 48 16.0 2 1/4 3/4 12 3/4 13 3/4 23 1/2 24 3/8 48 3 16.0 2 1/4 3/4 12 3/4 13 3/4 23 1/2 24 3/8 48 3 16.0

COUNTY:

STANDARD SIGN WO5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

far State Traffic Engineer

DATE 11/20/13

SHEET NO:

HWY:

PROJECT NO:

PLOT BY: mscsja

PLATE NO. W05-1.1

1000-20-67

	LIST OF REPAIR DRAW	VINGS	2
1.	FOUNDATION DETAILS (1 OF 3)	56.	S-40-377
2.	FOUNDATION DETAILS (2 OF 3)	57.	S-40-378
3.	FOUNDATION DETAILS (2 OF 3)	58.	S-40-381
4.	TRUSS DETAILS (1 OF 2)	59.	S-40-391
5.	TRUSS DETAILS (2 OF 2)	60.	S-40-408
6.	SIGN PANEL DETAILS (1 OF 2)	61.	S-40-409
7.	SIGN PANEL DETAILS (2 OF 2)	62.	S-40-415
8.	CATWALK DETAILS	63.	S-40-429
9.	ELECTRICAL DETAILS	64.	S-40-434
10.	S-30-015	65.	S-40-502
11.	S-30-019	66.	S-40-504
12.	S-30-021	67.	S-40-530
13.	S-30-027	68.	S-40-620
14.	S-30-216	69.	S-40-622
15.	S-30-217	70.	S-40-705
16.	S-40-004	71.	S-40-708
17.	S-40-006	72.	S-40-761
18.	S-40-032	73.	S-40-781
19.	S-40-066	74.	S-40-801
20.	S-40-108	75.	S-40-911
21.	S-40-162	76.	S-40-922
22.	S-40-200	77.	S-45-001
23.	S-40-265	78.	S-45-003
24.	S-40-266	79.	S-45-004
25.	S-40-276	80.	S-45-215
26.	S-40-278	81.	S-45-216
27.	S-40-279	82.	S-51-212
28.	S-40-280	83.	S-51-213
29.	S-40-281	84.	S-64-008
30.	S-40-282	85.	S-64-014
31.	S-40-284	86.	S-64-208
32.	S-40-296	87.	S-66-205
33.	S-40-300	88.	S-66-206
34.	S-40-302	89.	S-66-207
35.	S-40-303	90.	S-66-208
36.	S-40-308	91.	S-66-209
37.	S-40-315	92.	S-66-210
38.	S-40-316	93.	S-66-211
39.	S-40-317	94.	S-66-213
40.	S-40-318	95.	S-66-214
	S-40-319	96.	S-66-215
42.	S-40-320	97.	S-66-216
43.	S-40-324	98.	S-66-217
44.	S-40-325	99.	S-67-023
45.	S-40-343	100 <b>.</b> 101 <b>.</b>	S-67-044
46.	S-40-356	101.	S-67-045 S-67-200
47.	S-40-357	103.	S-67-250
48.	S-40-358		S-67-266
49.	S-40-361 S-40-367	104 <b>.</b> 105 <b>.</b>	S-67-306
50 <b>.</b>	S-40-367 S-40-370	106.	S-67-307
51 <b>.</b>	S-40-370 S-40-371	107.	S-67-404
52 <b>.</b> 53 <b>.</b>	S-40-371 S-40-372	107.	S-67-409
54 <b>.</b>	S-40-372 S-40-373	109.	S-67-919
55.	S-40-374	110.	S-67-920
JJ.	J 70 JIT	110.	5 01 520

REVISION NO. DATE

# COLLINS ENGINEERS

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION ACCEPTED William C. Drehu 3/16/15

## SIGN BRIDGE REPAIR AND REPLACEMENT 2015

SOUTHEAST REGION WIDE COUNTY
SOUTHEAST REGION WIDE TOWN/CITY/VILLAGE VARIOUS

CHIEF STRUCTURES DESIGN ENGINEER

DESIGN SPEC.

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED VC CK'D. PRT BY MS CK'D.

FOUNDATION DETAILS

(1 OF 3)

SHEET 1 OF 110

8

TABLE OF ESTIMATED QUANTITES FOR FOUNDATIONS\*

SPV.0060.03

EACH

HIGHWAY

120th AVE

USH-41

ELEVATION

VIEW SHEET NUMBER

14 OF 110

17 OF 110

20 OF 110

STRUCTURE NUMBER

S-30-216

S-40-006

S-40-108

FREDERICK MILLER WAY 25 OF 110 S-40-276 USH-45 S-40-278 26 OF 110 USH-45 1 S-40-279 27 OF 110 USH-45 S-40-280 28 OF 110 USH-45 1 29 OF 110 1 S-40-281 USH-45 S-40-282 30 OF 110 USH-45 S-40-303 35 OF 110 USH-41/45 1 S-40-315 37 OF 110 STH-341 S-40-316 38 OF 110 39 OF 110 S-40-317 USH-41 S-40-318 40 OF 110 1 USH-41 S-40-319 41 OF 110 USH-41 1 S-40-320 42 OF 110 STH 341 1 FREDERICK MILLER WAY 43 OF 110 S-40-324 1 45 OF 110 S-40-343 IH-94 8 1 S-40-356 46 OF 110 STH 145 S-40-357 47 OF 110 USH-41/45 1 S-40-358 48 OF 110 USH-41/45 1 S-40-367 50 OF 110 IH-794 S-40-370 S-40-371 52 OF 110 USH-45 S-40-372 53 OF 110 USH-45 1 S-40-373 54 OF 110 USH-45 55 OF 110 USH-45 S-40-374 S-40-377 56 OF 110 USH-45 S-40-378 57 OF 110 S-40-381 58 OF 110 IH-43 S-40-408 60 OF 110 IH-94 1 S-40-409 61 OF 110 IH-43 S-40-429 63 OF 110 IH-43 S-40-434 64 OF 110 IH-94 S-40-761 72 OF 110 IH-94 S-64-208 86 OF 110 STH-11 S-67-044 100 OF 110 USH-41/45 1 S-67-045 101 OF 110 USH-41/45 1 102 OF 110 S-67-200 IH-94 S-67-306 105 OF 110 USH-45 S-67-307 106 OF 110 USH-41/45 S-67-404 107 OF 110 STH-190

REPLACE RODENT SCREEN

SPV.0060.08

EACH

1

37

TENSION ANCHOR RODS

SPV.0060.18

EACH

REPAIR

FOUNDATION

SPV.0060.22

EACH

REMOVE GROUT PAD

SPV.0060.04

EACH

TOTAL \* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW

IH-94

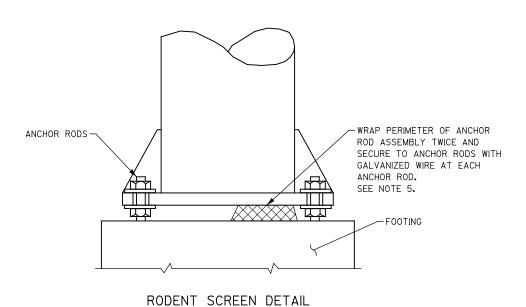
PLOT BY : Veronica Chavezv8l DRV :Pdf\_bw\_HS\_by level.plt PEN :CELTextSub\_ScreenControlByLevel.tbl

S-67-409

108 OF 110

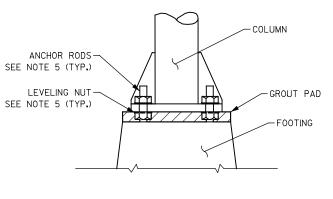
### FOUNDATION NOTES:

- 1. CONCRETE fc' = 3,500 P.S.I.
- 2. BAR STEEL REINF. GRADE 60 fy = 60,000 P.S.I.
- 3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
- 4. THE CONTRACTOR SHALL FIELD VERIFY DIMENSION OF THE ITEM REQUIRED. DISCREPANCIES SHALL BE SUBMITTED TO THE ENGINEER FOR CLARIFICATION PRIOR TO BEGINNING WORK.
- 5. APPLY ZINC-RICH PAINT TO THE ANCHOR RODS, NUTS, WASHERS, AND LEVELING NUTS IN ACCORDANCE WITH SPECIFICATIONS AFTER REMOVING THE GROUT PAD OR TENSIONING THE ANCHOR ROD. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM, "REMOVE GROUT PAD" OR "TENSION ANCHOR RODS."
- 6. STEEL ANCHOR ROD NUTS AND WASHERS SHALL BE AASHTO M314 GRADE 55 Fy=55,000 PSI
- 7. THE TOP OF THE FOOTING SURFACE SHALL BE SMOOTHED AND SLOPED TO DRAIN.

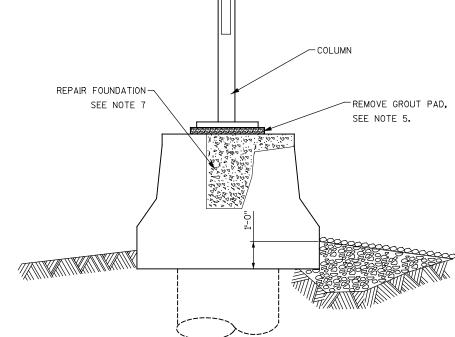


## REQUIRED ON ALL GROUT PAD REMOVALS

## FOUNDATION DETAIL



GROUT PAD DETAIL



FOUNDATION DETAIL

REMOVE UNSOUND CONCRETE -EXISTING REINFORCEMENT -CLEAN TO SOUND CONCRETE

-COLUMN

-REPAIR FOUNDATION

SEE NOTE 7

-FOOTING

-DRILLED SHAFT

REPAIR FOUNDATION DETAIL

NO. DATE REVISION 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2015

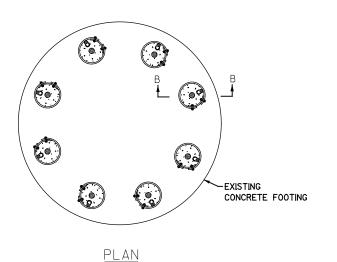
FOUNDATION SHEET 2 OF 110 DETAILS (2 OF 3)

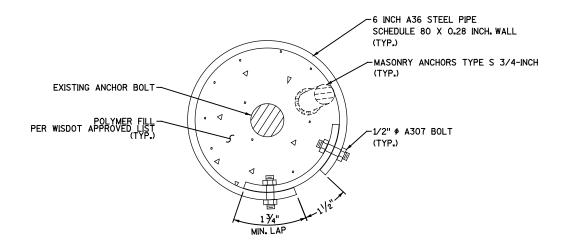
FILE NAME :08\_02\_found.dgn PLOT DATE :1/27/2015

8

DRV :Pdf\_bw\_HS\_by leveLplt PEN :CELTextSub\_ScreenControlByLeveLtbl

1000-20-67





SECTION A-A



DRAWINGS SHALL NOT BE SCALED

EXISTING GEOMETRY BASED OFF FIELD OBSERVATIONS AND INSPECTIONS. CONTRACTOR TO FIELD VERIFY PRIOR TO FABRICATION AND/OR ORDERING MATERIALS FOR ANCHOR BOLT

THE 6 INCH STEEL PIPE SHALL BE EITHER HOT-DIPPED GALVANIZED OR COLD GALVANIZED IN ACCORDANCE WITH THE A.A.S.H.T.O. SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT 2014 STANDARD SPECIFICATION.

THE ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE COLD GALVANIZED WITH ZINC RICH PAINT IN ACCORDANCE TO THE

CLEAN ALL SURFACES AS SPECIFIED IN THE PLANS AND PER THE SPECIAL PROVISIONS. ALL CLEANING OF THE ITEMS ARE INCIDENTAL SIGN STRUCTURE ANCHOR ROD REPAIR.

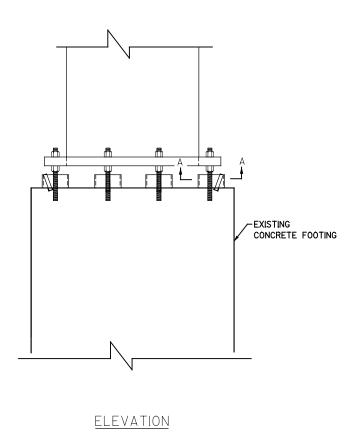
REFER TO THE SPECIAL PROVISIONS FOR POLYMER FILL MATERIAL.

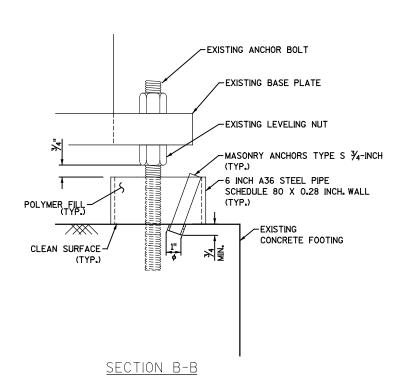
\* THE NUMBER OF ANCHOR BOLTS SHOWN ARE FOR INFORMATION PURPOSES ONLY. NUMBER OF ANCHOR BOLTS VARY PER STRUCTURE.

ROD REPAIR".

STRUCTURE NEEDED PRIOR TO ANY FABRICATION. ALL ITEMS SHOWN ARE INCIDENTAL TO "SIGN STRUCTURE ANCHOR

CONTRACTOR TO FIELD VERIFY NUMBER OF ANCHORS PER





SIGN STRUCTURE ANCHOR ROD REPAIR DETAIL

NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2015

FOUNDATION SHEET 3 OF 110 DETAILS (3 OF 3)

FILE NAME :08\_02\_found.dgn PLOT DATE :1/27/2015

PLOT BY : Veronica Chavezv8i

DRV :Pdf\_bw\_HS\_by level.plt PEN :CEL\_TextSub\_ScreenControlByLevel.tb

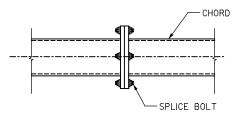
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STATE PROJECT NUMBER

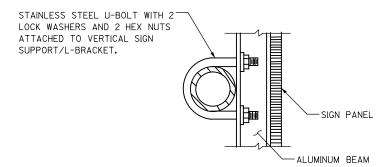
1000-20-67

STRUCTURE	ELEVATION VIEW	HIGHWAY	INSTALL U-BOLT	INSTALL NEW POST TO CHORD BOLT CONNECTION	SPLICE CONNECTION BOLT REPLACEMENT	REPLACE TRUSS MEMBER	SECURE/REPLACE POST CAP	TENSION POST TO TRUSS CONNECTION BOLT	TIGHTEN LOOSE U-BOLT	TENSION TRUSS GUSSET CONNECTION BOL
NUMBER	SHEET NUMBER		SPV.0060.02	SPV.0060.05	SPV.0060.13	SPV.0060.14	SPV.0060.16	SPV.0060.19	SPV.0060.20	SPV.0060.25
			EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
S-30-019	11 OF 110	IH-94						2		
S-30-021	12 OF 110	IH-94						2		
S-30-027	13 OF 110	IH-94						4		
S-40-004	16 OF 110	IH-94			8					
S-40-300	33 OF 110	STH-794		36						
S-40-343	45 OF 110	IH-94								1
S-40-409	61 OF 110	IH-43				1				
S-45-003	78 OF 110	IH-43							1	
S-45-004	79 OF 110	IH-43	1							
S-64-008	84 OF 110	STH-12			4					
S-64-014	85 OF 110	USH-12					1			
S-67-023	99 OF 110	USH-18			4		-			
S-67-200	102 OF 110	IH-94		16						
S-67-250	103 OF 110	STH-83		4						
S-67-919	109 OF 110	STH-67						1		
		TOTAL	1	56	16	1	1	9	1	1

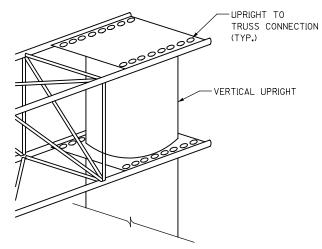
 $<sup>^{\</sup>star}$  THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.



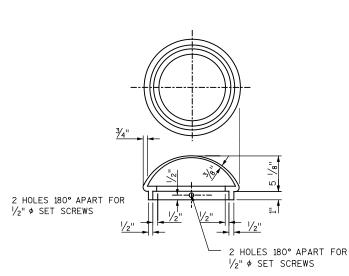
SPLICE CONNECTION BOLT DETAIL



INSTALL U-BOLT & TIGHTEN
LOOSE U-BOLT DETAIL



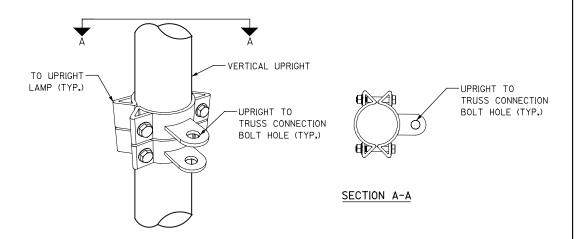
CANTIEVER SIGN BRIDGE
POST TO TRUSS CONNECTION DETAIL



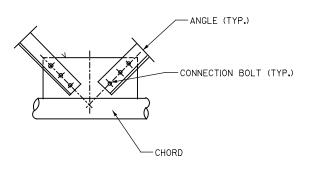
POST CAP CAP DETAIL

## TRUSS NOTES:

- 1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS OF THE ITEM REQUIRED.
  DISCREPANCIES SHALL BE SUBMITTED TO THE ENGINEER FOR CLARIFICATION PRIOR TO
  BEGINNING WORK.
- 3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:
  -ANCHOR BOLTS/HEX BOLTS ASTM F593 ANY ALLOY GROUP 1, 2, OR 3
  -HEX NUTS ASTM F594
  -WASHERS ASTM A240
  ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER 3/4" \$\dagger\$ AND 12% FOR 3/4" \$\dagger\$ AND SMALLER.
- 4. REPLACE MISSING BOLTS ON TOWER CAPS WITH A STAINLESS STEEL BOLT.



#### OVERHEAD POST TO TRUSS CONNECTION DETAIL



### TRUSS GUSSET CONNECTION DETAIL

NO. DATE REVISION BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2015

DRAWN VC PLANS
CK'D. RW

TRUSS DETAILS

SHEET 4 OF 110

(1 OF 2)

FILE NAME :08\_03\_trues.dgn PLOT DATE :1/27/2015

PLOT BY : Veronica Chavez

ronlaa Chavezvõl DRV :Pdf\_bw\_HS\_by level.plt PEN :CEL\_TextSub\_ScreenControlByLevel.tbi

STATE PROJECT NUMBER 1000-20-67 TRUSS NOTES: - COLUMN 1. WHEN A FULL SPAN SIGN BRIDGE IS OVER BOTH DIRECTIONS AND SIGNS ARE ON STRUCTURE FOR BOTH DIRECTIONS, THEN NORTHBOUND AND EASTBOUND GOVERN THE NUMBERING SYSTEM. 2. THE CANTILEVER SIGN BRIDGE NUMBERING SYSTEM ALWAYS COUNTS UP FROM LEFT TO RIGHT REGARDLESS OF COLUMN LOCATION. - CHORD (TYP.) 3. TYPICAL SIGN BRIDGE CONFIGURATION FOR INFORMATION ONLY. TRAFFIC CANTILEVER SIGN BRIDGE -COLUMN (TYP.) WEB (TYP.) CHORD (TYP.) - COUPLING (TYP.) TRAFFIC 4-CHORD FULL SPAN SIGN BRIGE UPPER CHORD-UF4 SPLICE COUPLING (TYP.)-DIAGNOL -MIDDLE BACK-CHORD MB2 DIAGONAL PERPENDICULARS (EACH END OF UNITS ONLY) TRAFFIC NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION LF1 -LOWER CHORD 3-CHORD FULL SPAN SIGN BRIGE SIGN BRIDGE REPAIR AND REPLACEMENT 2015 SHEET 5 OF 110 TRUSS DETAILS (2 OF 2)

8

1000-20-67

VERTICAL SIGN SUPPORT
W5 x 3.7 ALUM. TO BE
SUPPLIED WITH SIGN

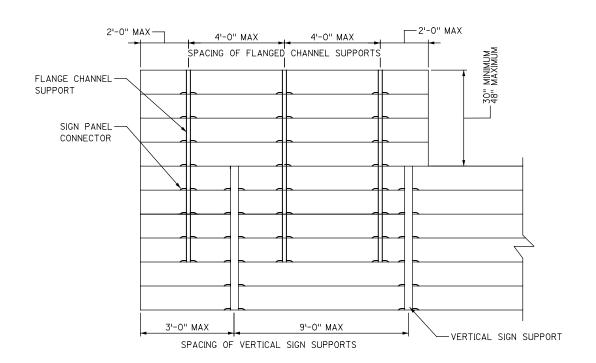
B

VERTICAL SIGN SUPPORT
W5 x 3.7 ALUM. TO BE
SUPPLIED WITH SIGN

SIGN PANEL

SECTION B-B

## TYPICAL SIGN PANEL CONNECTION (TYPE ISIGN)



FLANGE CHANNEL SUPPORT/VERTICAL SIGN SUPPORT DETAILS

NO.	DATE			R	EVISION	1				Е	3Y
			TMEN	T C	OF WIS OF TRA DES	NSPO	RTAT		N		
SI	GN BR	IDGE	REP	AIR	AND	REF	PLAC	ЕМЕ	NT	2	015
					DRAWN BY	٧	С	PLAI CK'D.			RW
	SI	GN			ΞL		SHE	ET (	6	OF	110
		(1 (	ΓAIL DF								

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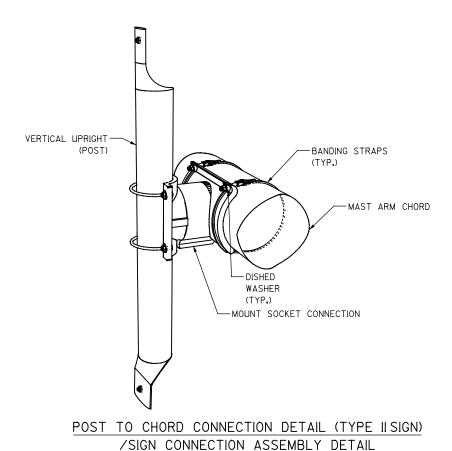
TABLE OF ESTIMATED QUANTITES FOR SIGNS\*

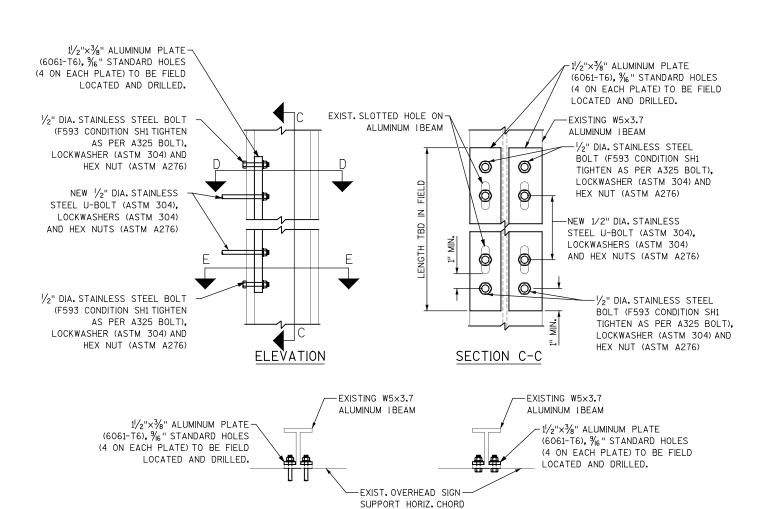
STRUCTURE NUMBER	ELEVATION VIEW	HIGHWAY	REPLACE DISHED WASHER	REPLACE SIGN BRIDGE ID PLAQUE	REPLACE SIGN CONNECTION ASSEMBLY	REPLACE SIGN PANEL CONNECTOR	SLOTTED VERTICAL SIGN SUPPORT REPA
NOMBER	SHEET NUMBER		SPV.0060.06	SPV.0060.10	SPV.0060.11	SPV.0060.12	SPV.0060.17
			EACH	EACH	EACH	EACH	EACH
S-30-015	10 OF 110	STH-165					1
S-30-217	15 OF 110	118+h AVE		1			
S-40-004	16 OF 110	IH-94				7	
S-40-032	18 OF 110	SILVER SPRING DRIVE				55	
S-40-265	23 OF 110	STH-794				6	
S-40-266	24 OF 110	STH-794				6	
S-40-284	31 OF 110	IH-43	1				
S-40-296	32 OF 110	STH-38			1		
S-40-300	33 OF 110	STH-794				15	
S-40-325	44 OF 110	STH-794				9	
S-40-367	50 OF 110	IH-794					1
S-40-391	59 OF 110	IH-94				3	
S-40-415	62 OF 110	STH 59		1			
S-40-530	67 OF 110	lH-94		1			
S-40-620	68 OF 110	PORT WASHINGTON RD			1		
S-40-622	69 OF 110	SILVER SPRING DRIVE			1		
S-40-708	71 OF 110	IH-43			1		
S-40-781	73 OF 110	IH-94					6
S-40-911	75 OF 110	IH-43			2		
S-40-922	76 OF 110	STH 24					6
S-45-215	80 OF 110	STH-167		1			
S-45-216	81 OF 110	STH-167		1			
S-51-212	82 OF 110	STH-31			2		
S-51-213	83 OF 110	STH-11			2		
S-66-205	87 OF 110	STH 145					6
S-66-206	88 OF 110	STH 145					5
S-66-207	89 OF 110	STH 145					6
S-66-208	90 OF 110	STH 145					5
S-66-209	91 OF 110	STH 145					6
S-66-210	92 OF 110	STH 145					5
S-66-211	93 OF 110	STH 145					5
S-66-213	94 OF 110	USH 41					6
S-66-214	95 OF 110	USH 41					5
S-66-215	96 OF 110	CABLEA WAY					5
S-66-216	97 OF 110	USH 45					5
S-66-217	98 OF 110	STH 164					6
S-67-250	103 OF 110	STH-83			1		
S-67-266	104 OF 110	CTH JJ			1		
S-67-920	110 OF 110	USH-18		1			
	1	TOTAL	1	6	12	101	79

\* THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.

STATE PROJECT NUMBER

1000-20-67





## SLOTTED VERTICAL SIGN SUPPORT REPAIR DETAIL

SECTION D-D

EACH REPAIR INCLUDES ALL BOLT CONNECTIONS PER I-BEAM

SECTION E-E

NO.	DATE	REVISION	BY
		STATE OF WISCONSIN	

8

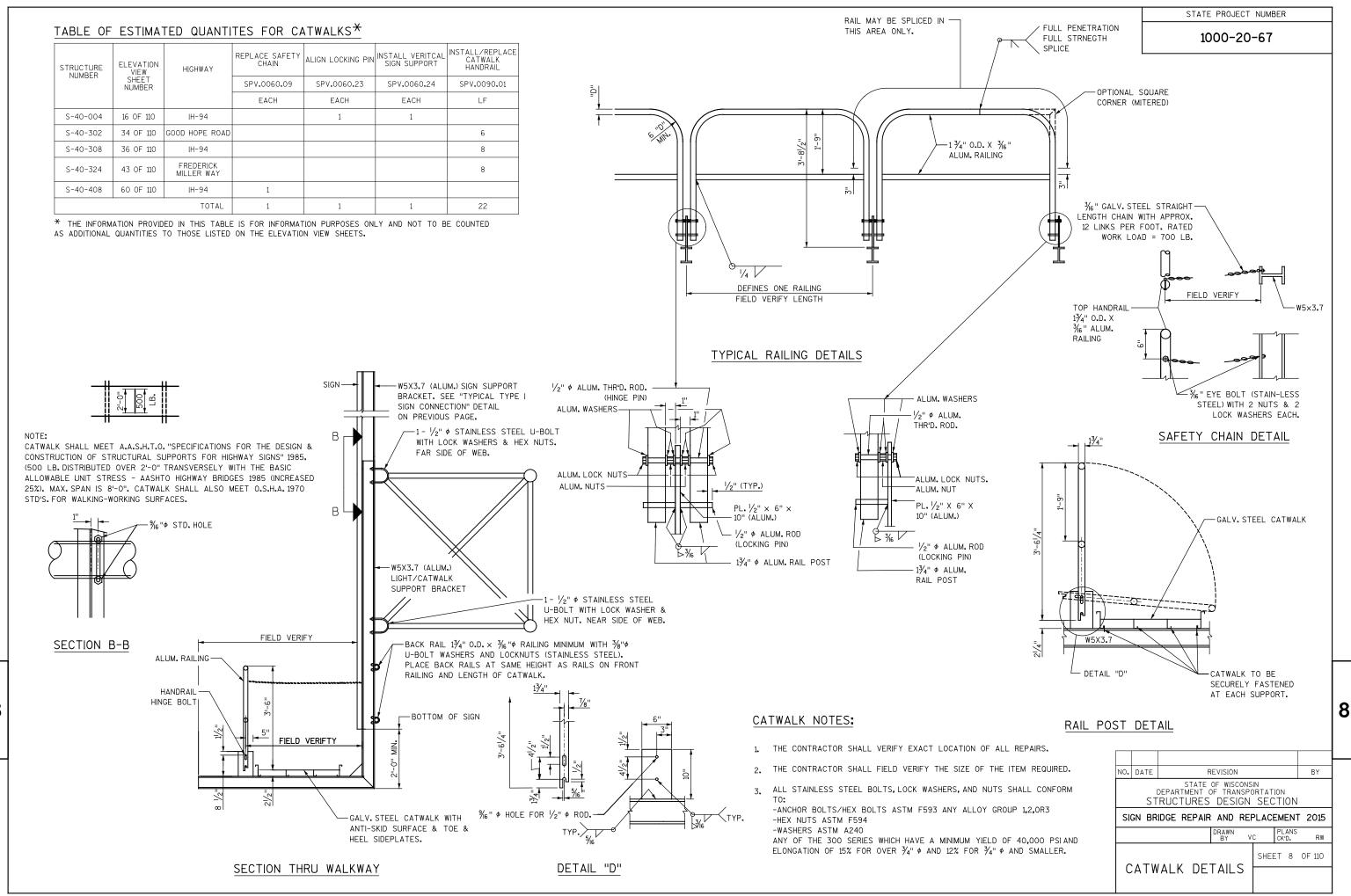
DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2015 DRAWN PLANS

	BY	V	0	CK	D.	RW
SIGN PANE	SHEE	ĒΤ	7	OF 110		
DETAILS						
(2 OF 2)	)					

FILE NAME 108\_05\_stgn.dgn PLOT DATE :1/27/2015

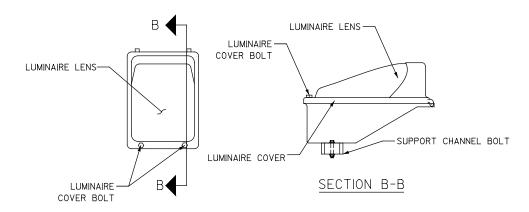
DRV :Pdf\_bw\_HS\_by level.plt PEN :CEL\_TextSub\_ScreenControlByLevel.tbl



1000-20-67

## ELECTRICAL NOTES:

- 1. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL REPAIRS.
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE OF THE ITEM REQUIRED.
- 3. ALL STAINLESS STEEL BOLTS, LOCK WASHERS, AND NUTS SHALL CONFORM TO:
  - -ANCHOR BOLTS/HEX BOLTS ASTM F593 ANY ALLOY GROUP 1, 2, OR 3 -HEX NUTS ASTM F594
  - -WASHERS ASTM A240
  - ANY OF THE 300 SERIES WHICH HAVE A MINIMUM YIELD OF 40,000 PSI AND ELONGATION OF 15% FOR OVER 3/4" \$\phi\$ AND 12% FOR 3/4" \$\phi\$ AND SMALLER.
- 4. THE CONTRACTOR SHALL USE ANTI-SIEZE COMPOUND ON ELECTRICAL HANDHOLE COVER BOLTS, JUNCTION BOX BOLTS, LUMINAIRE COVER BOLTS, AND CONDUIT PLUGS PER SECTION 651.3.1 (5) OF THE WISDOT STANDARD SPECIFICATION.
- 5. CAP ALL EXPOSED WIRES AND CLOSE THE JUNCTION BOX.
- 6. REPLACE THE JUNCTION BOX BOLT WITH A STAINLESS STEEL BOLT.



TYPICAL LUMINAIRE DETAILS

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NO.	DATE	RE	٧
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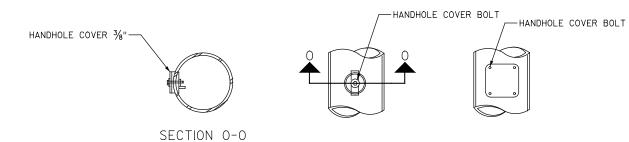
NO.	DATE		REVISION					
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTIO								
SI	GN BR	IDGE	REPAIR	R AND	REF	PLAC	EMEN1	2015
				DRAWN BY	٧	С	PLANS CK'D.	RW
	ELECTRICAL					SHE	ET 9	OF 110
DETAILS								

8

TABLE OF	ESTIMAT	ED QUANTI	TIES FOR EL	ECTRICAL *			
STRUCTURE NUMBER	ELEVATION VIEW SHEET NUMBER		HIGHWAY	REPLACE MISSING HANDHOLE COVER	SECURE LUMINAIRE COVER	TIGHTEN/ REPLACE HANDHOLE COVER BOLT	REPLACE CONDUIT PLUG
NOMBER			SPV.0060.07	SPV.0060.15	SPV.0060.21	SPV.0060.26	
			EACH	EACH	EACH	EACH	
S-40-004	16 OF 110	IH-94			1		
S-40-066	19 OF 110	IH-894		1			
S-40-162	21 OF 110	IH-794	1				
S-40-200	22 OF 110	IH-94		1			
S-40-300	33 OF 110	STH-794		1			
S-40-361	49 OF 110	IH-43		1			
S-40-409	61 OF 110	IH-43				1	
S-40-502	65 OF 110	IH-43		1			
S-40-504	66 OF 110	IH-43		1			
S-40-705	70 OF 110	IH-43		1			
S-40-801	74 OF 110	IH-894		2			
S-45-001	77 OF 110	IH-43	1				

<sup>\*</sup> THE INFORMATION PROVIDED IN THIS TABLE IS FOR INFORMATION PURPOSES ONLY AND NOT TO BE COUNTED AS ADDITIONAL QUANTITIES TO THOSE LISTED ON THE ELEVATION VIEW SHEETS.

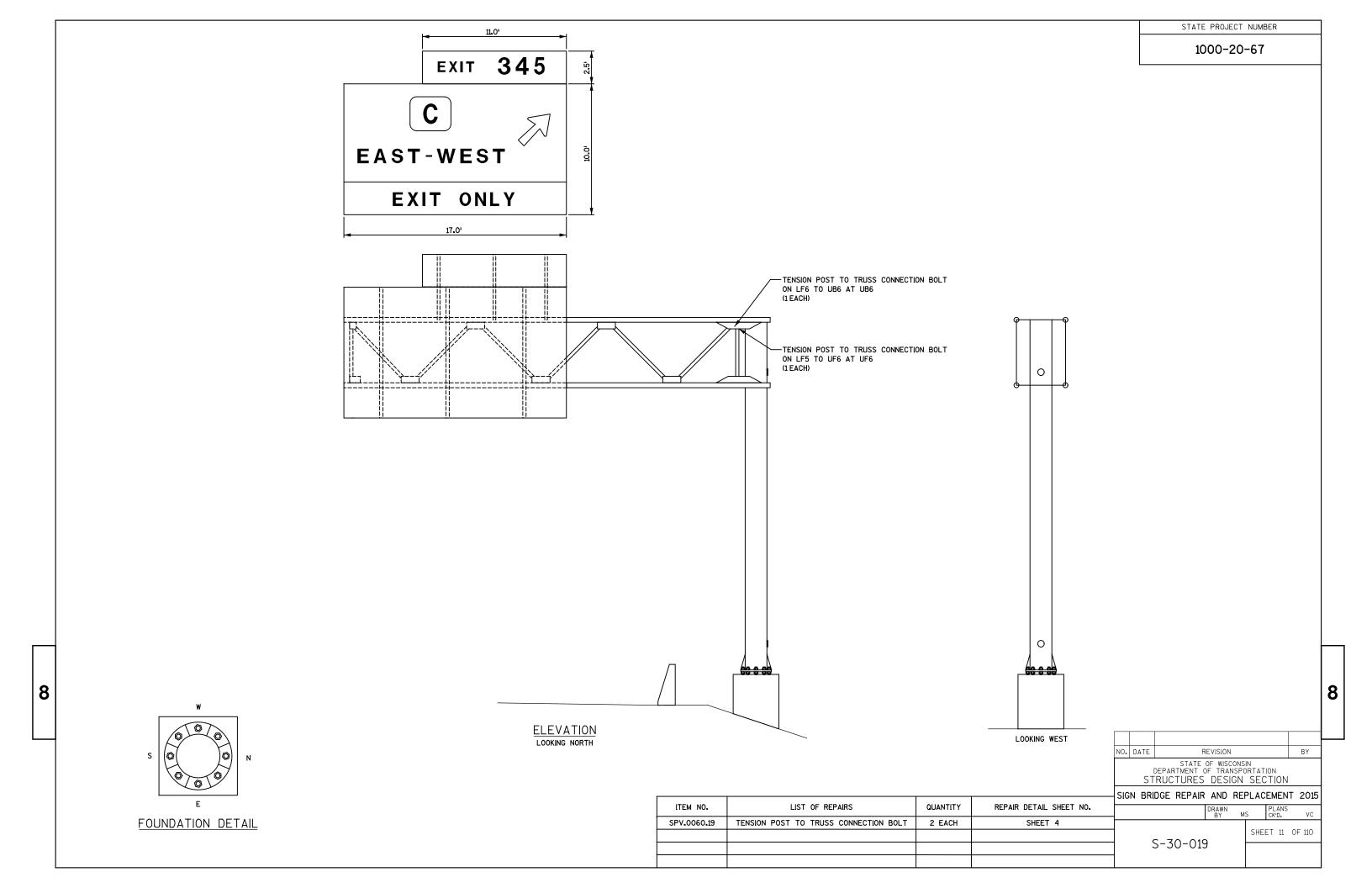
TOTAL

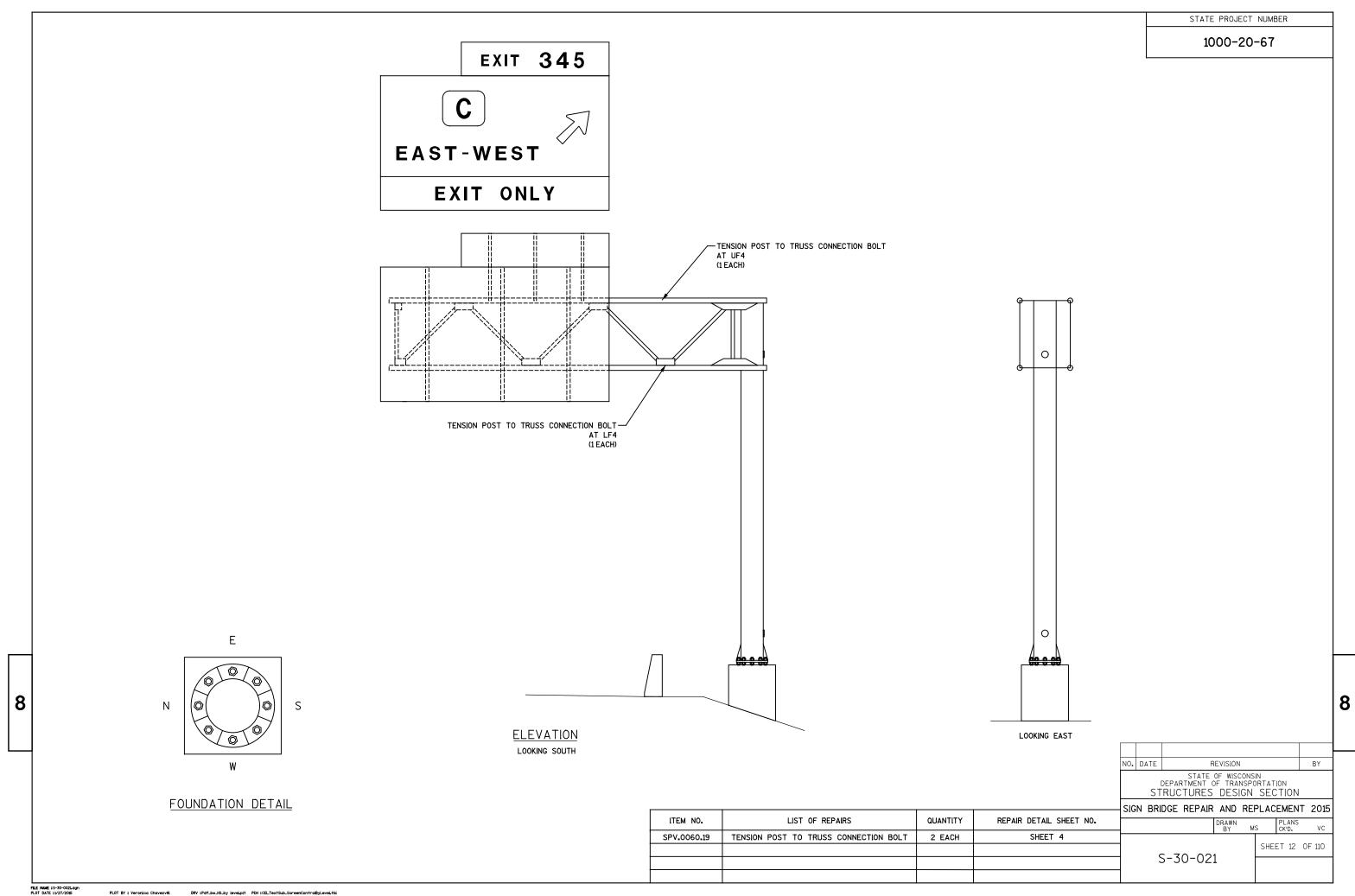


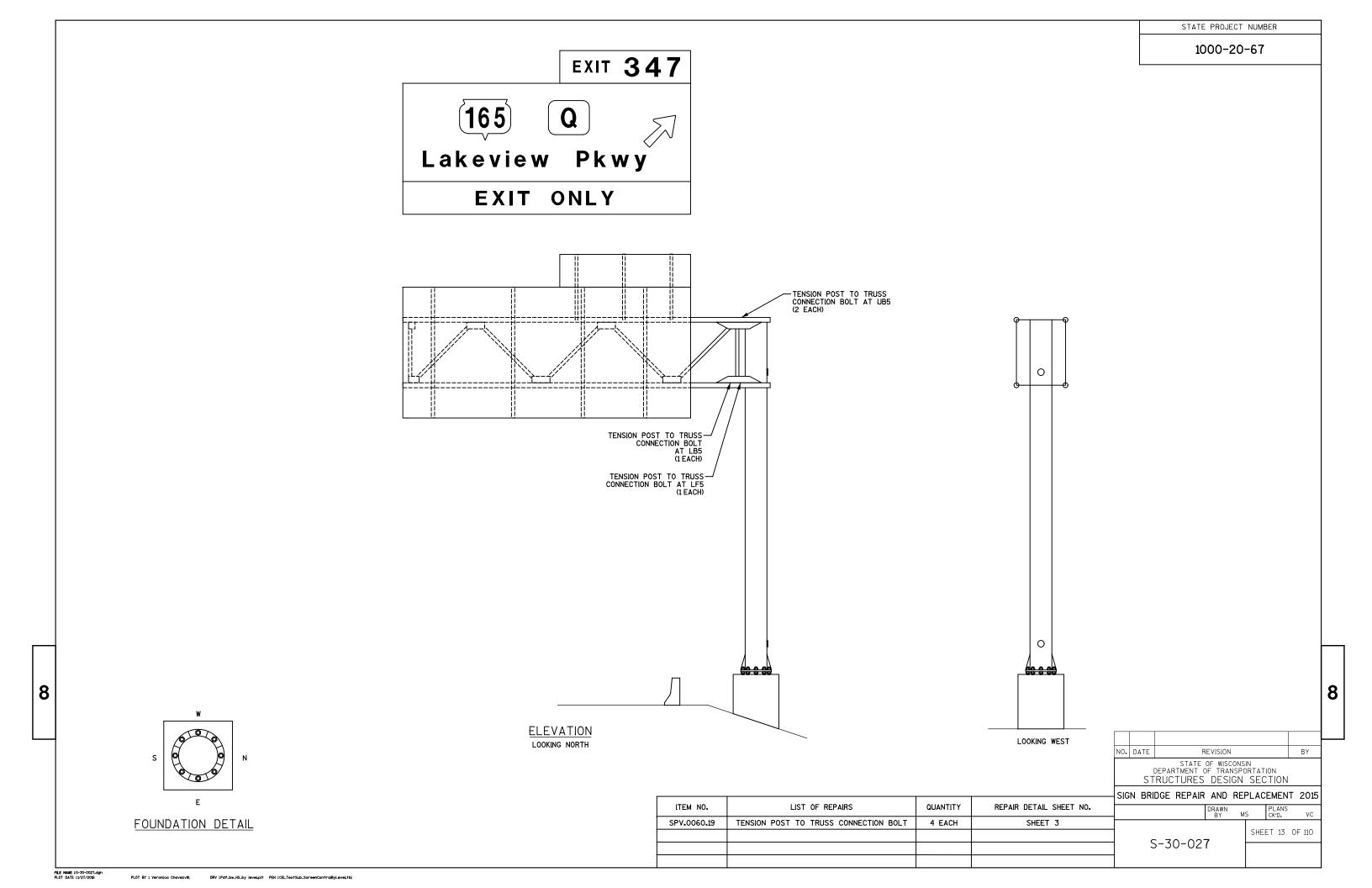
HANDHOLE DETAILS

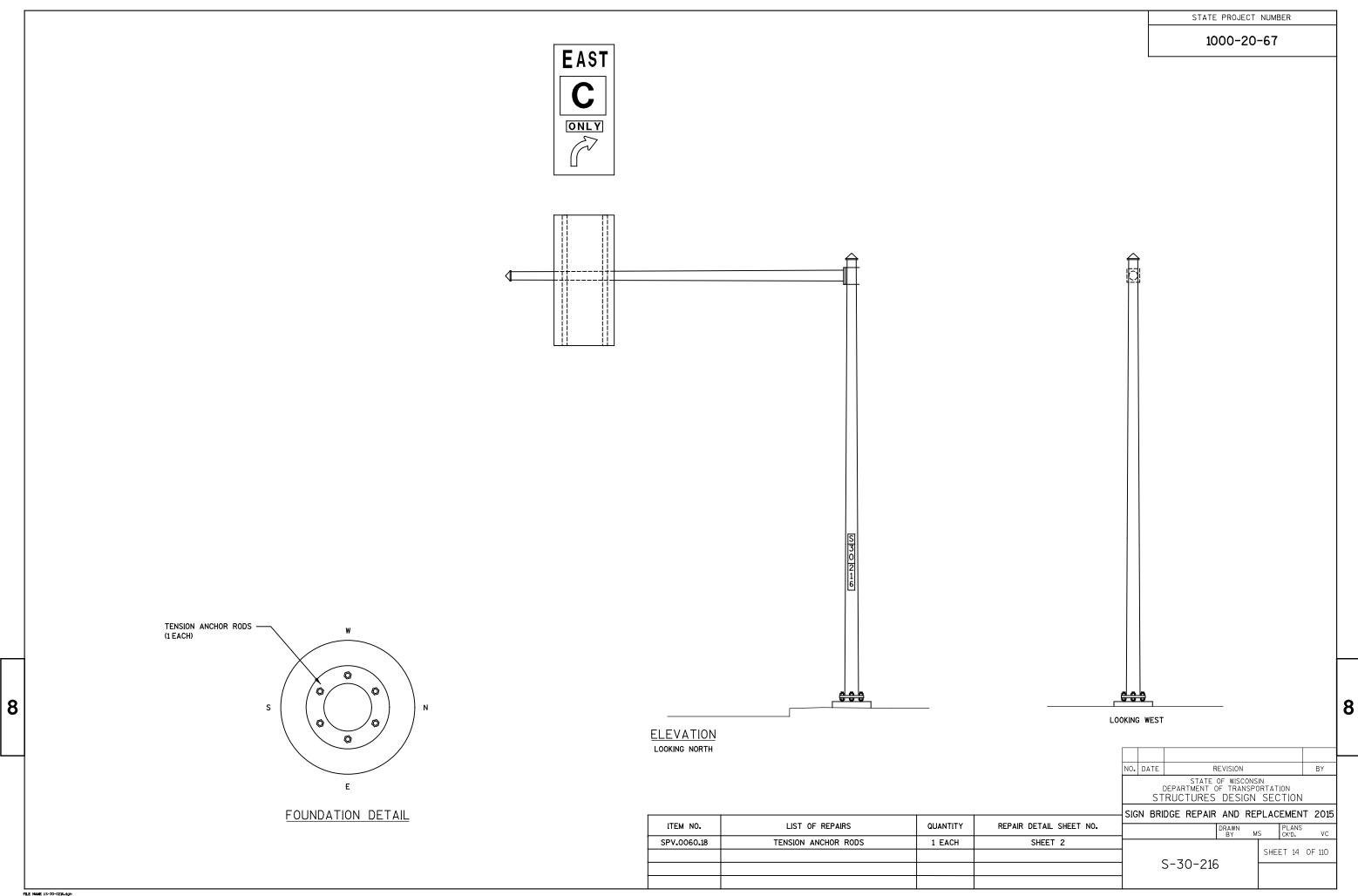
STATE PROJECT NUMBER 1000-20-67 WEST EAST Milwaukee Chicago ONLY ONLY —SLOTTED VERTICAL SIGN SUPPORT REPAIR (1 EACH) **ELEVATION** 8 LOOKING SOUTH LOOKING WEST NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION SIGN BRIDGE REPAIR AND REPLACEMENT 2015 REPAIR DETAIL SHEET NO. ITEM NO. LIST OF REPAIRS QUANTITY FOUNDATION DETAIL SPV.0060.17 SLOTTED VERTICAL SIGN SUPPORT REPAIR 1 EACH SHEET 7 SHEET 10 OF 110 S-30-015

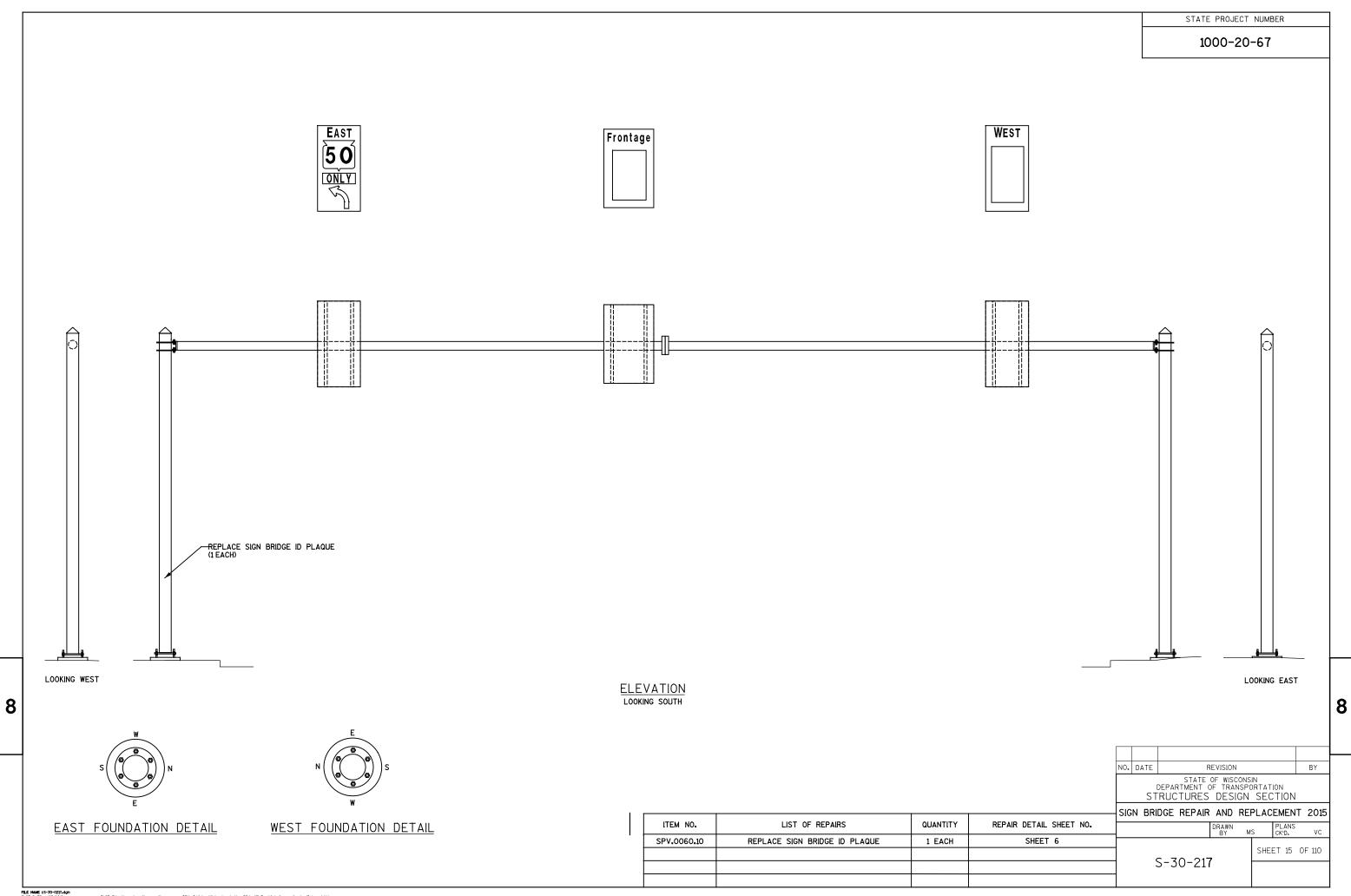
LE NAME: 15-30-0015.dgm
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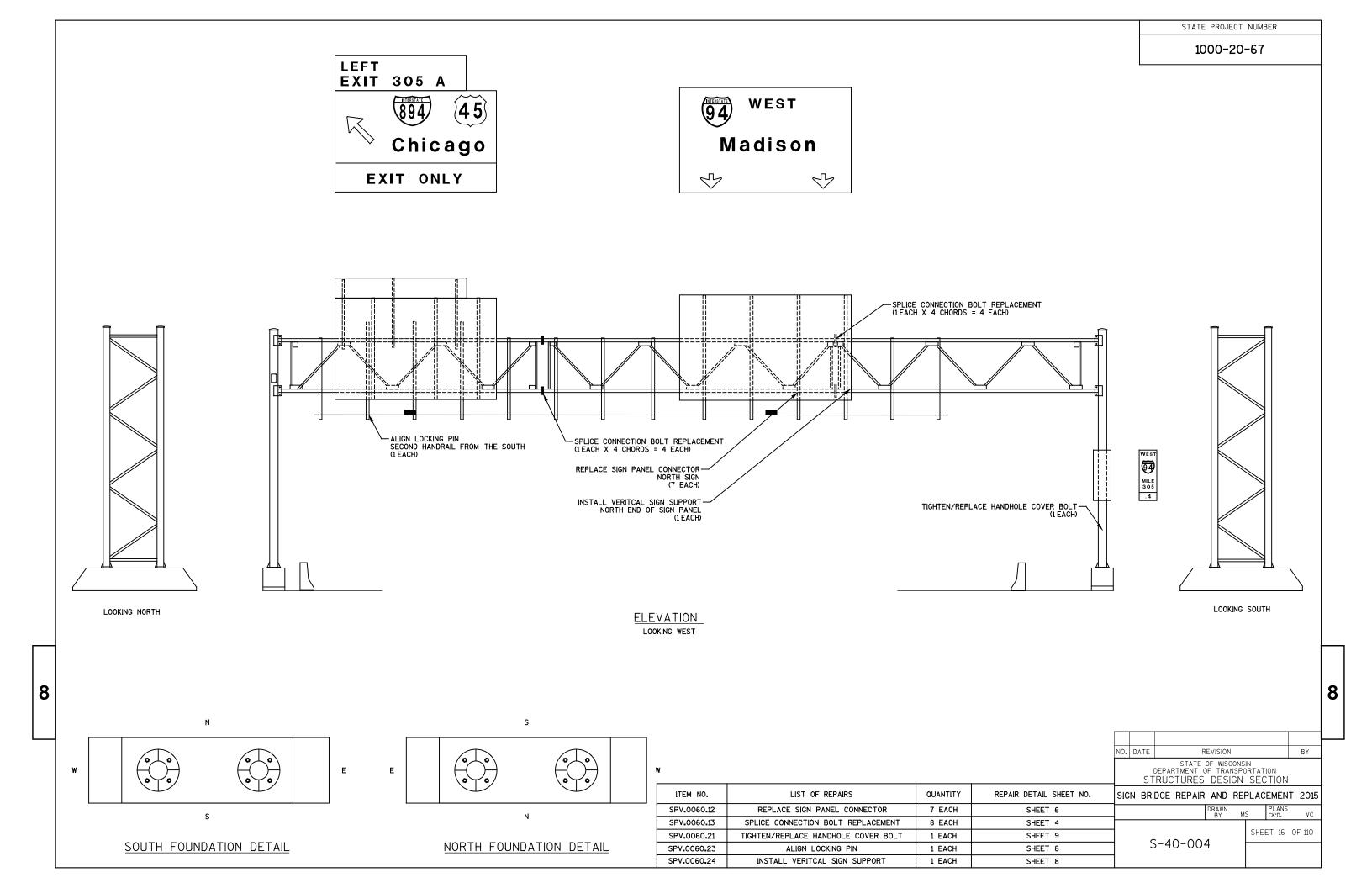




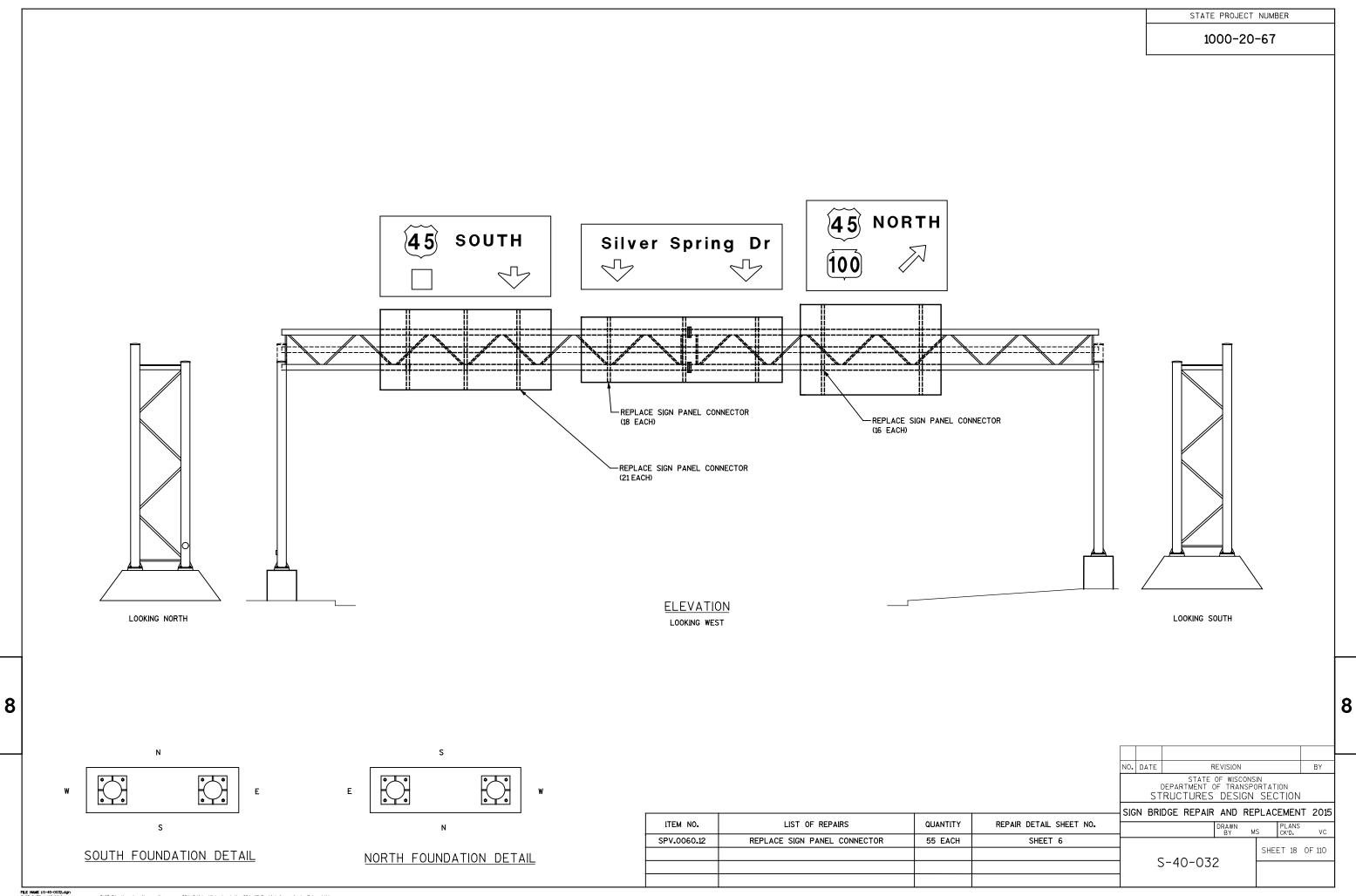




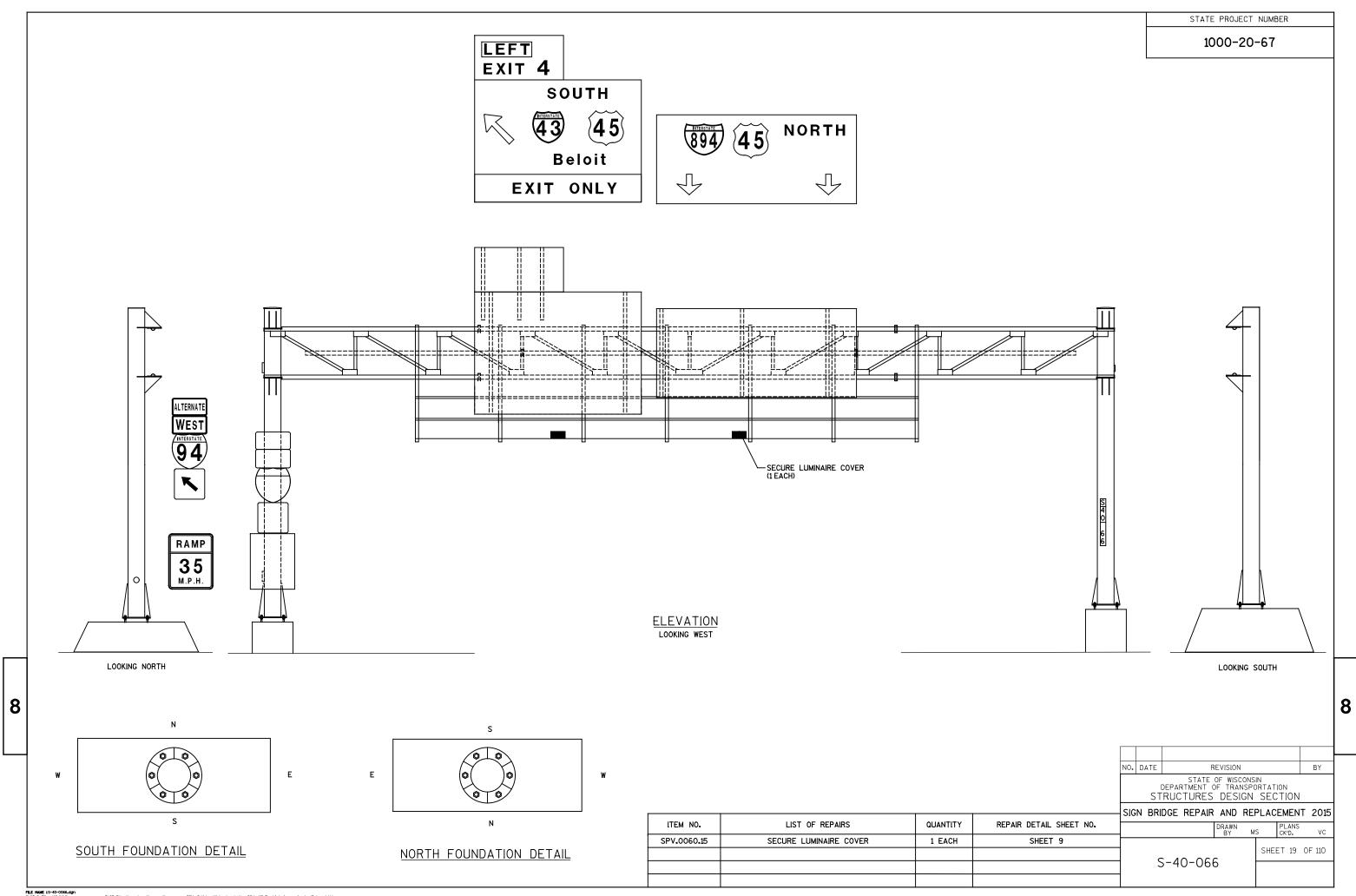


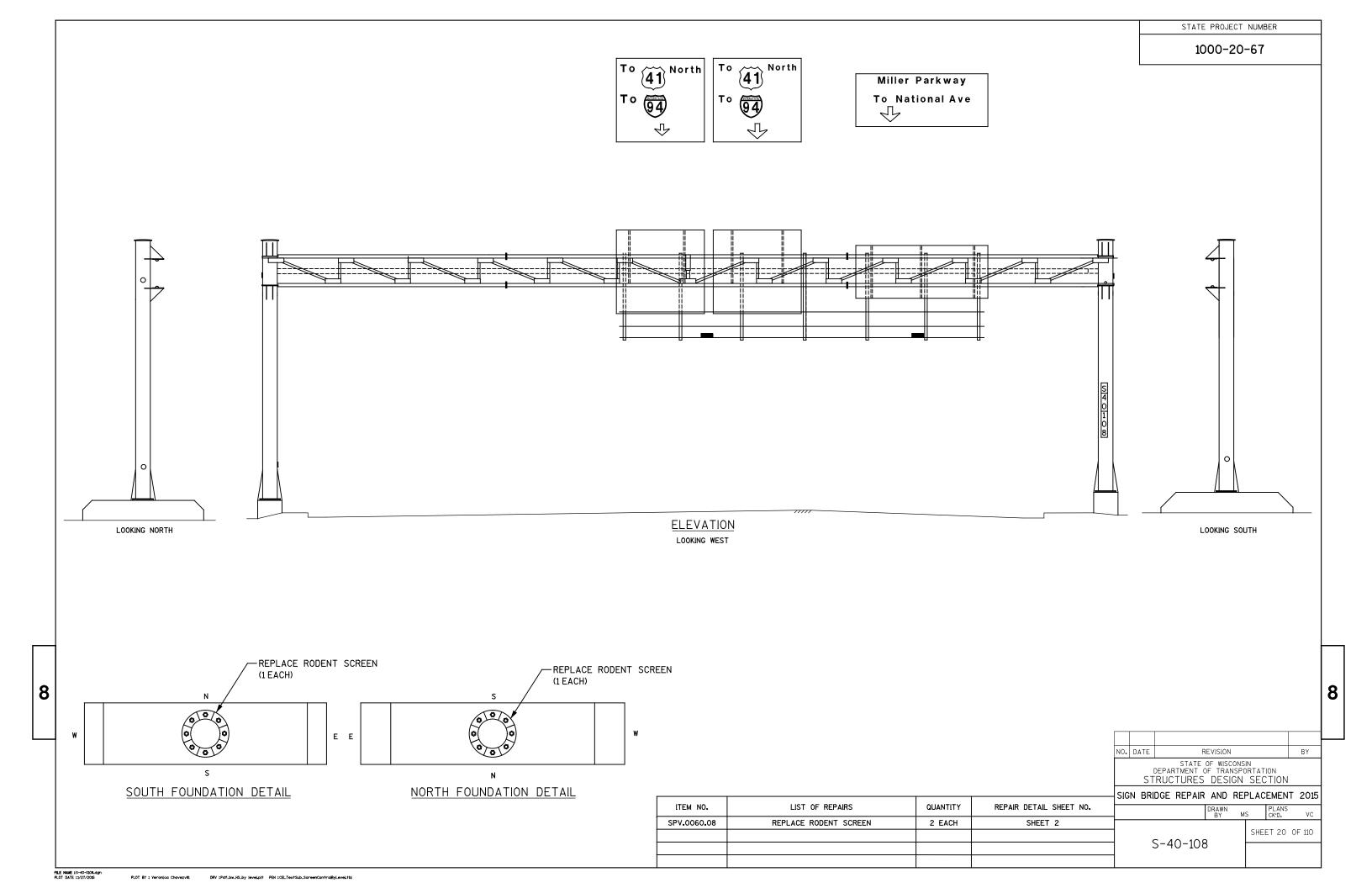


STATE PROJECT NUMBER 1000-20-67 Vliet - State Sts 1/4 Lloyd St FREEWAY ENDS Wells - Wisconsin  $\frac{1}{2}$ ½ MILE  $\sqrt{\phantom{a}}$ EXIT ONLY Hwy 94 LOOKING EAST **ELEVATION** LOOKING WEST LOOKING NORTH REPLACE RODENT SCREEN NORTHEAST POST (1 EACH) Ε 8 8 NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION WEST FOUNDATION DETAIL EAST FOUNDATION DETAIL SIGN BRIDGE REPAIR AND REPLACEMENT 2015 REPAIR DETAIL SHEET NO. ITEM NO. LIST OF REPAIRS QUANTITY SPV.0060.08 REPLACE RODENT SCREEN 1 EACH SHEET 2 SHEET 17 OF 110 S-40-006

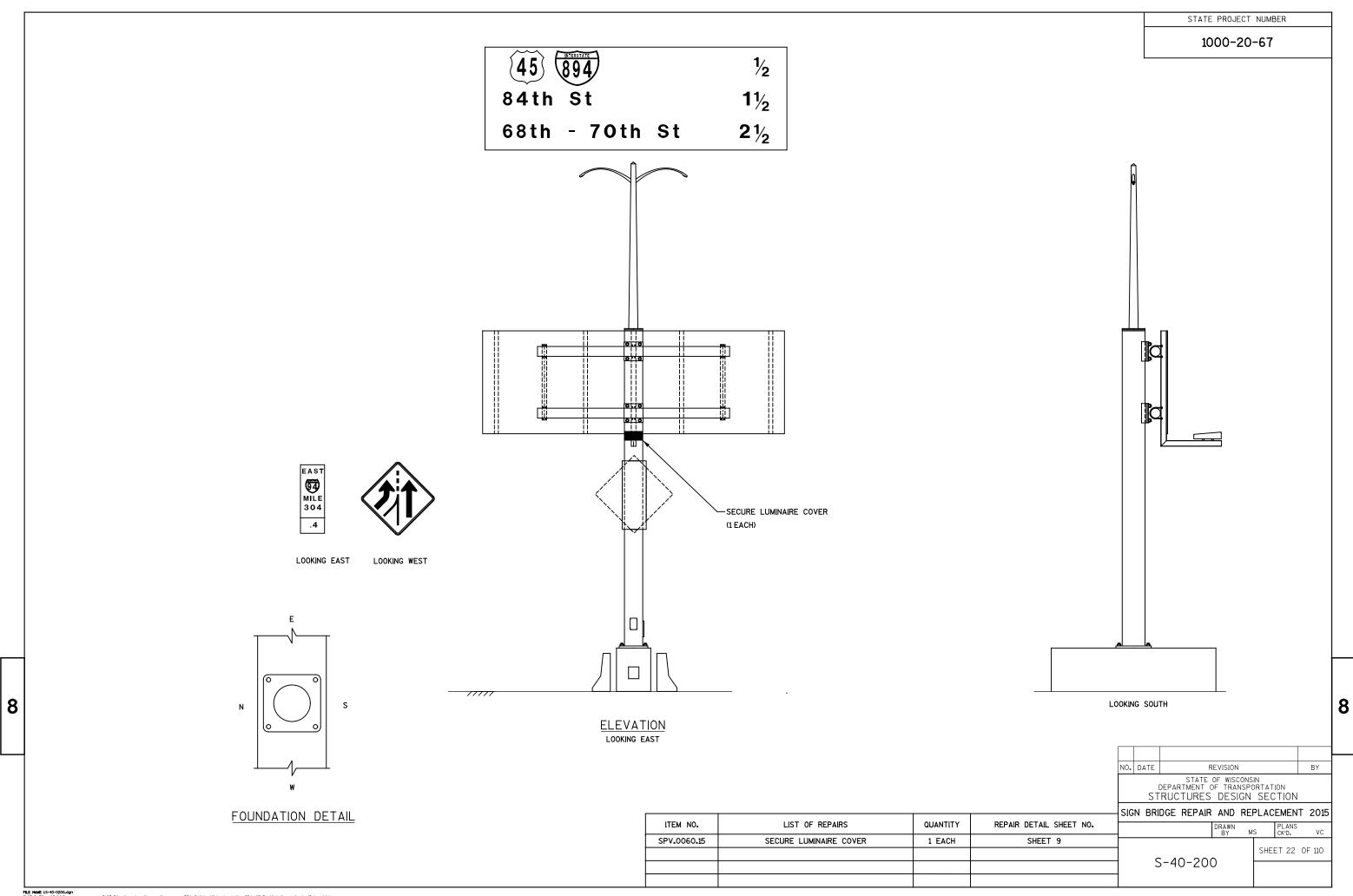


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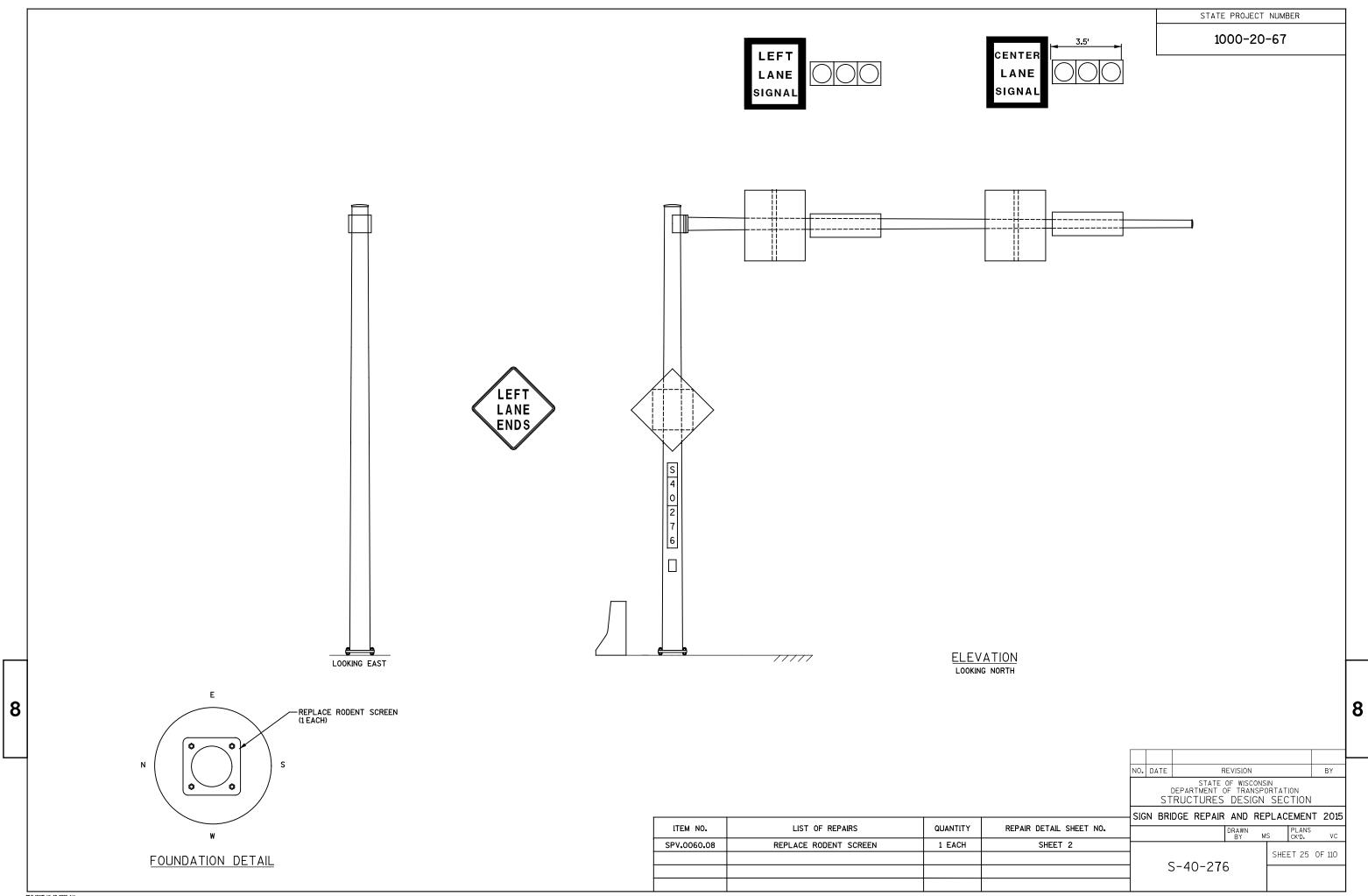
STATE PROJECT NUMBER 1000-20-67 REPLACE MISSING HANDHOLE COVER— (1 EACH) LOOKING EAST LOOKING WEST **ELEVATION** LOOKING NORTH 8 NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION SIGN BRIDGE REPAIR AND REPLACEMENT 2015 REPAIR DETAIL SHEET NO. ITEM NO. LIST OF REPAIRS QUANTITY WEST FOUNDATION DETAIL EAST FOUNDATION DETAIL SPV.0060.07 REPLACE MISSING HANDHOLE COVER SHEET 9 1 EACH SHEET 21 OF 110 S-40-162 PLOT BY: Veronica Chavezv8l DRV: Pdf\_bw\_HS\_by level.plt PEN: CELTextSub\_ScreenControlByLevel.tbl

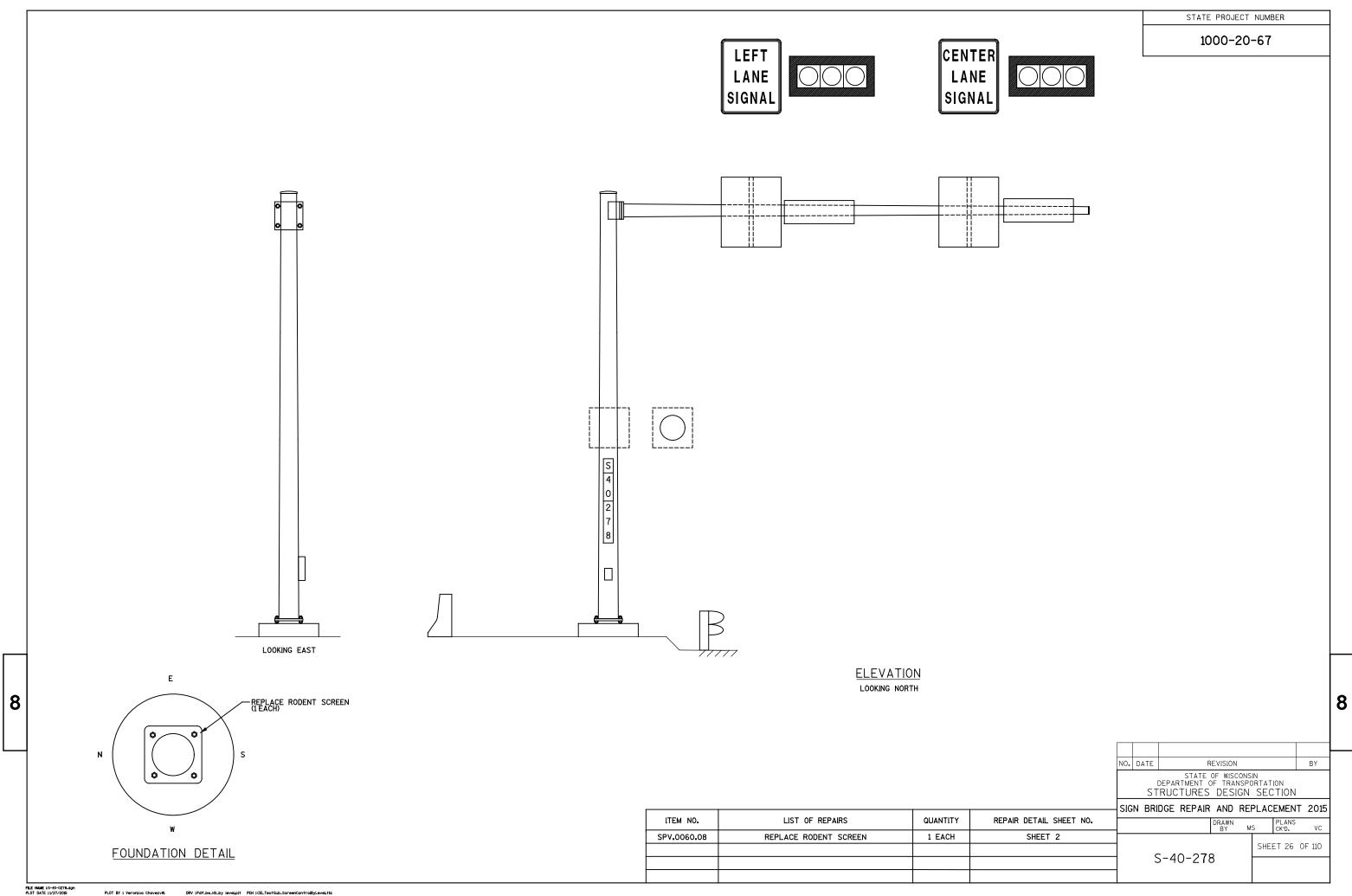


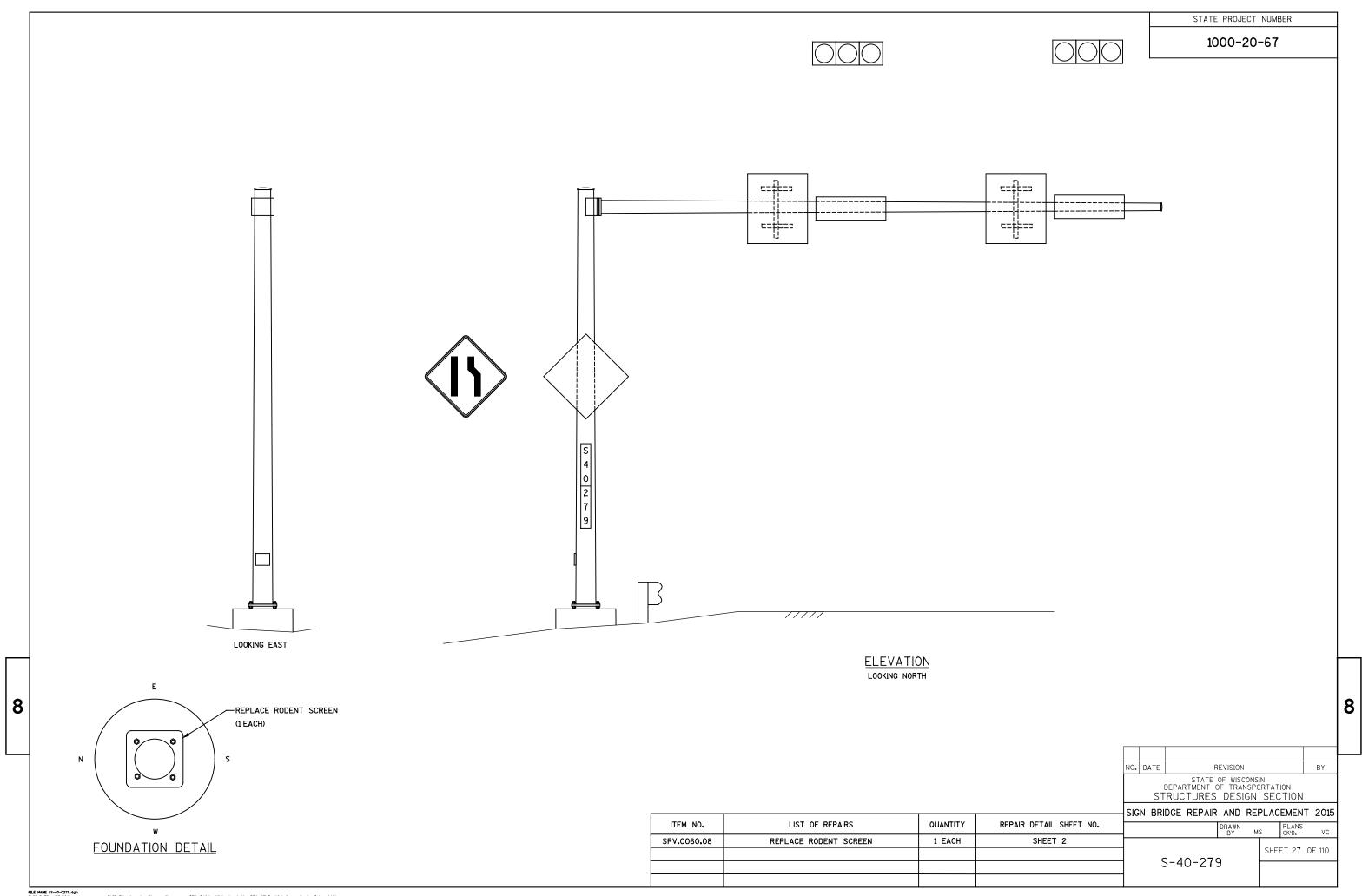
STATE PROJECT NUMBER 1000-20-67 Oklahoma Ave JCT 1/4 MILE -REPLACE SIGN PANEL CONNECTOR (6 EACH) LOOKING WEST 8 **ELEVATION** 8 LOOKING NORTH NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION FOUNDATION DETAIL SIGN BRIDGE REPAIR AND REPLACEMENT 2015 LIST OF REPAIRS REPAIR DETAIL SHEET NO. ITEM NO. QUANTITY REPLACE SIGN PANEL CONNECTOR SPV.0060.12 SHEET 6 6 EACH SHEET 23 OF 110 S-40-265

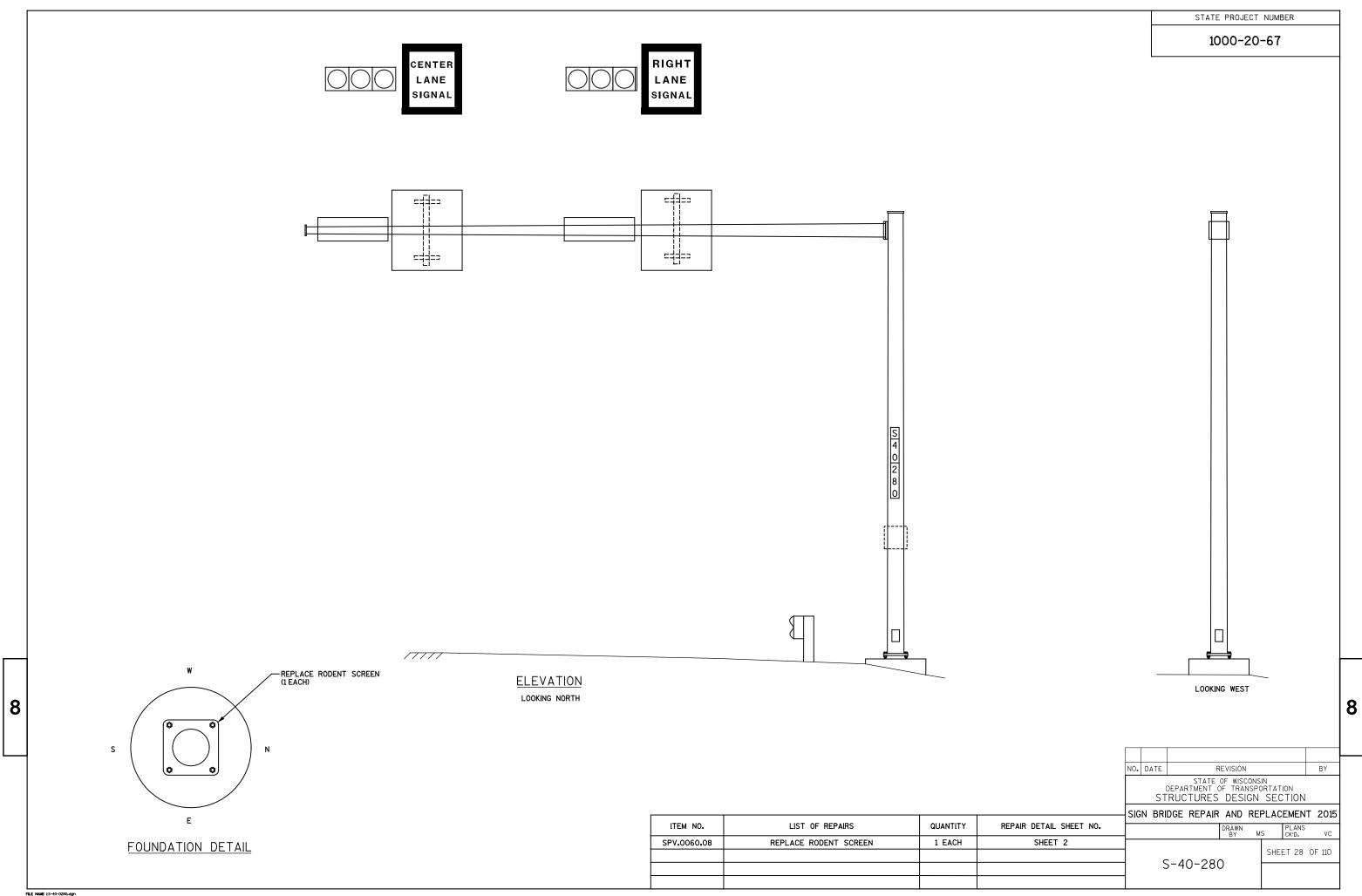
STATE PROJECT NUMBER 1000-20-67 Layton Ave NEXT RIGHT REPLACE SIGN PANEL CONNECTOR-(6 EACH) Ε LOOKING EAST 8 8 **ELEVATION** LOOKING SOUTH NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION FOUNDATION DETAIL SIGN BRIDGE REPAIR AND REPLACEMENT 2015 LIST OF REPAIRS QUANTITY REPAIR DETAIL SHEET NO. ITEM NO. SPV.0060.12 REPLACE SIGN PANEL CONNECTOR 6 EACH SHEET 6 SHEET 24 OF 110 S-40-266

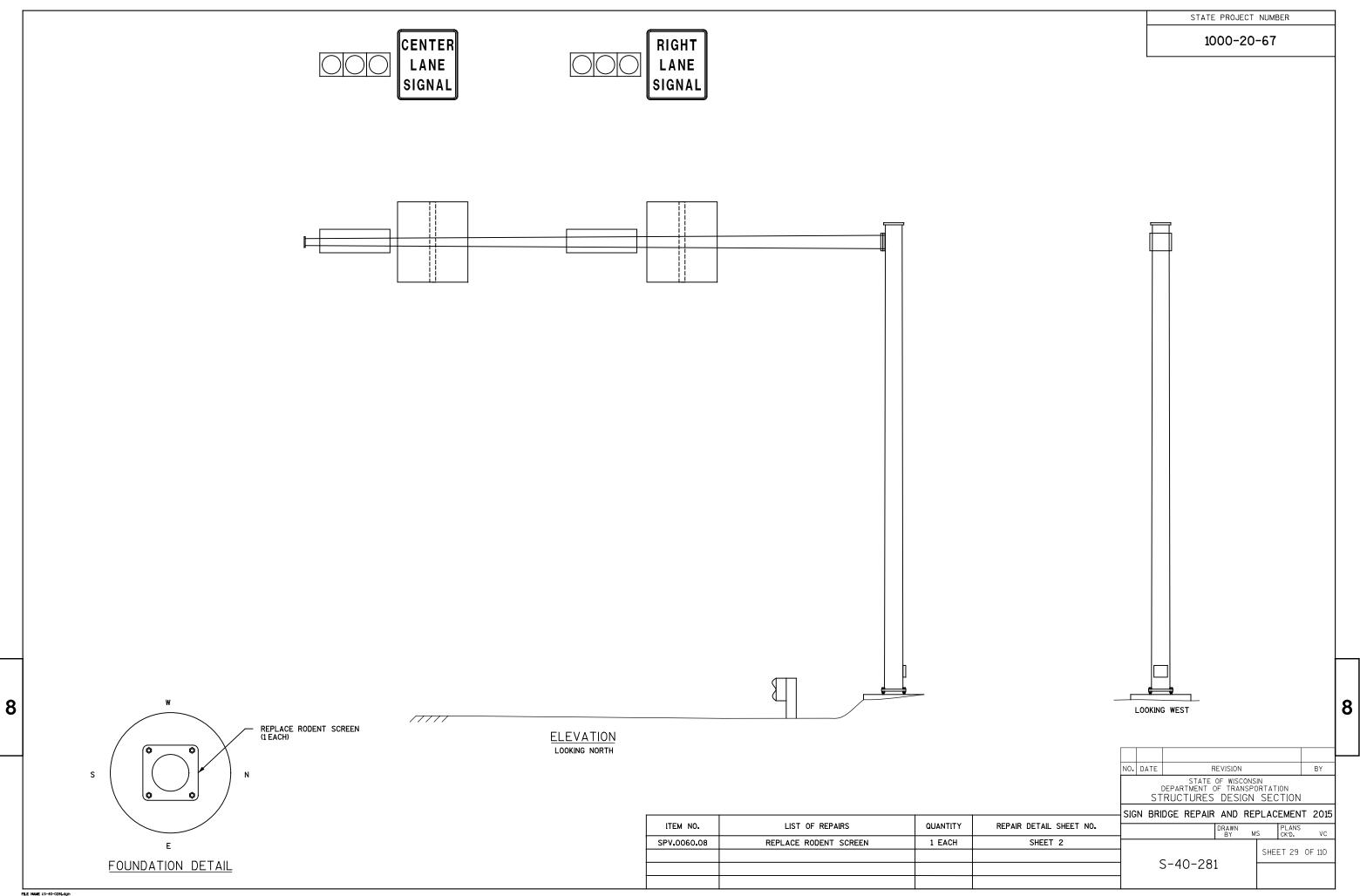
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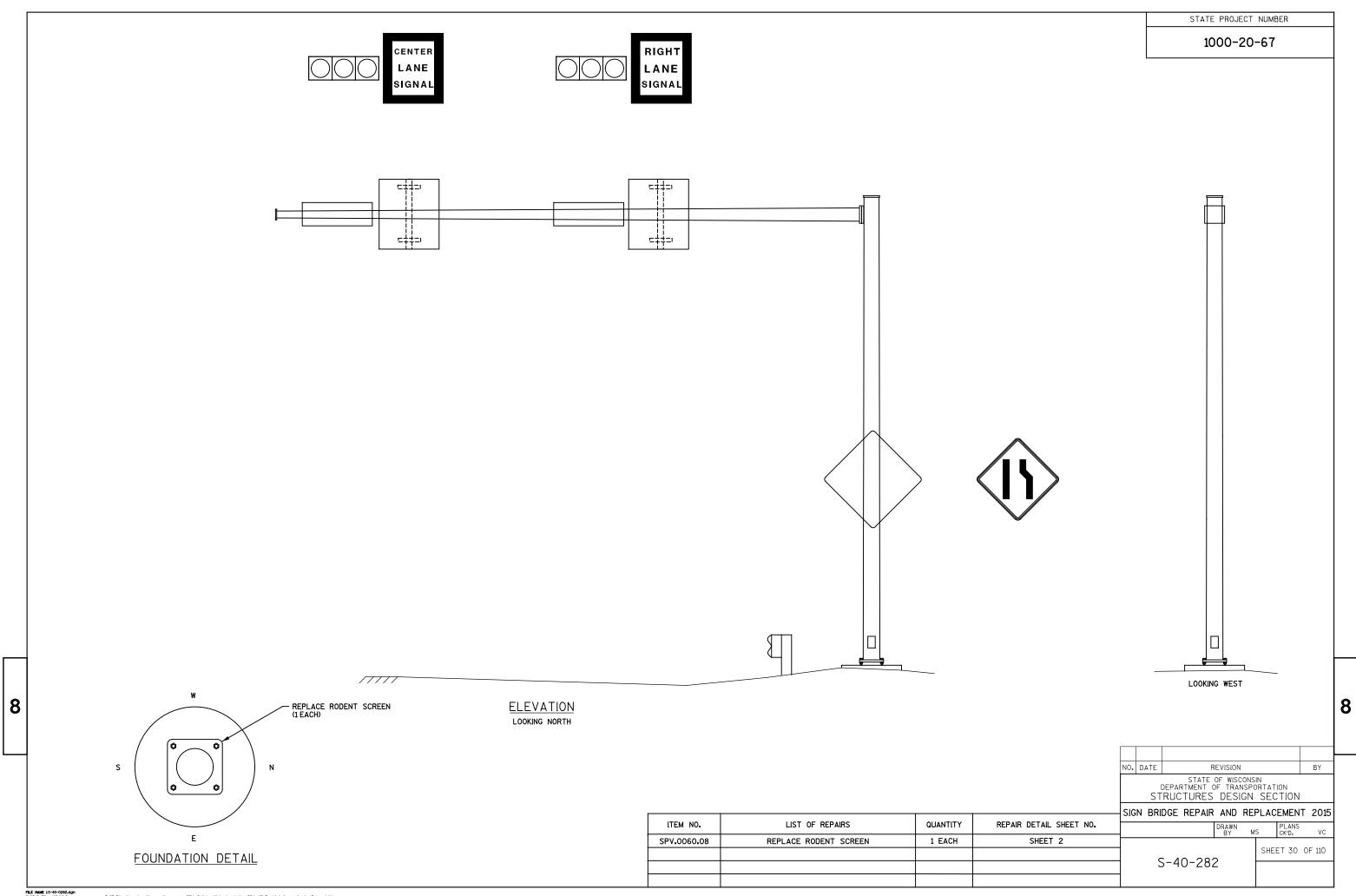


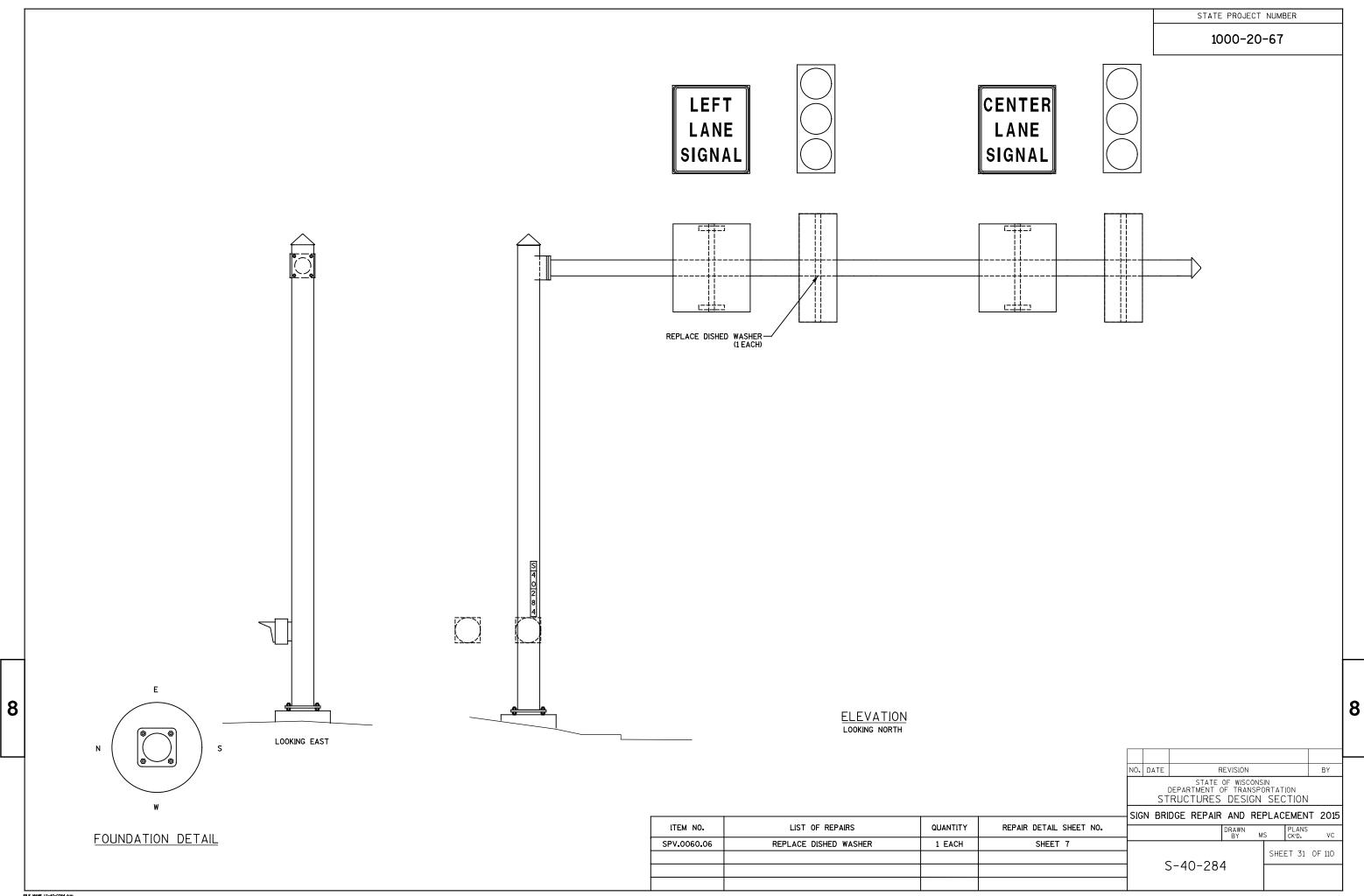


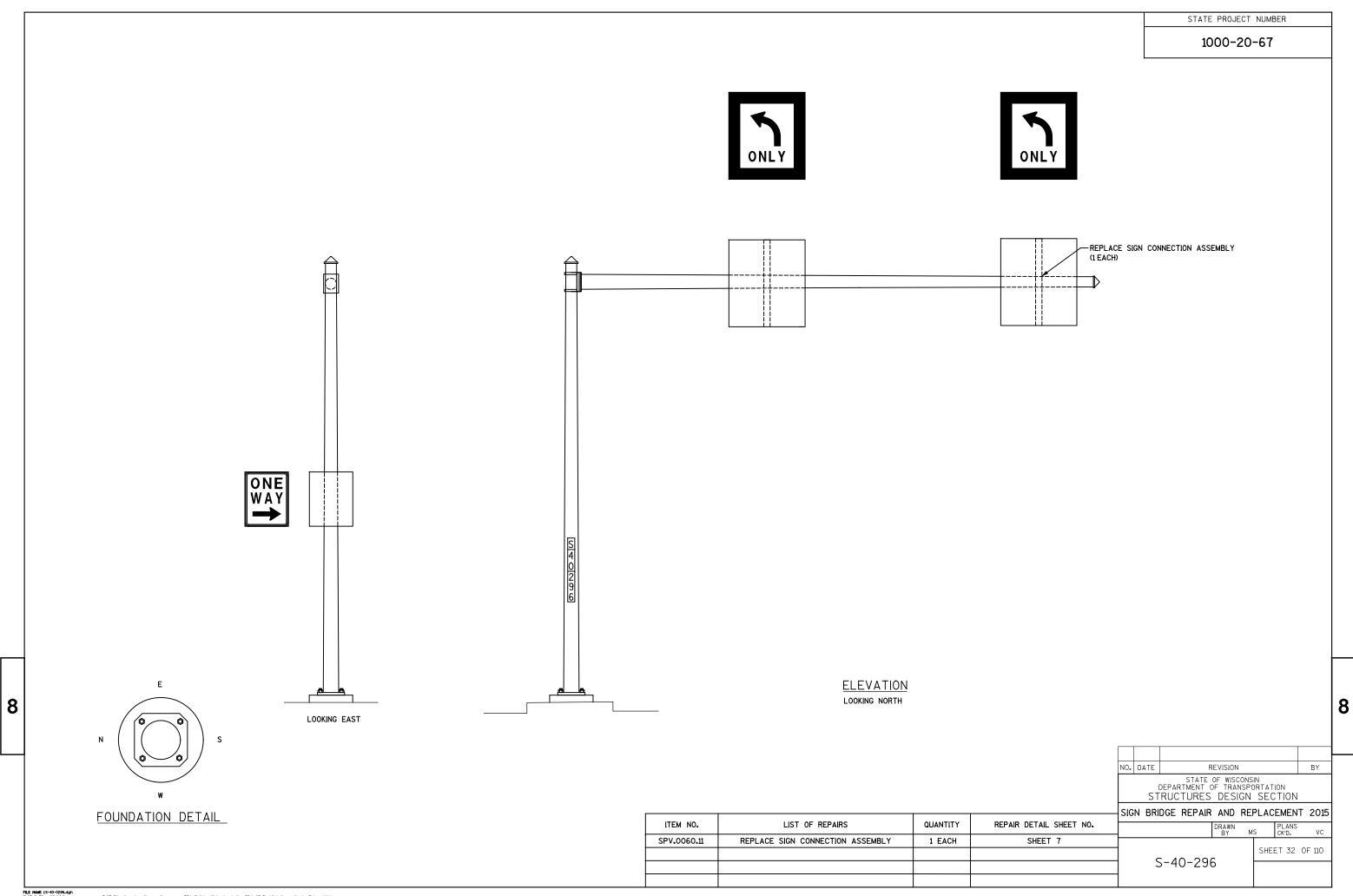












STATE PROJECT NUMBER

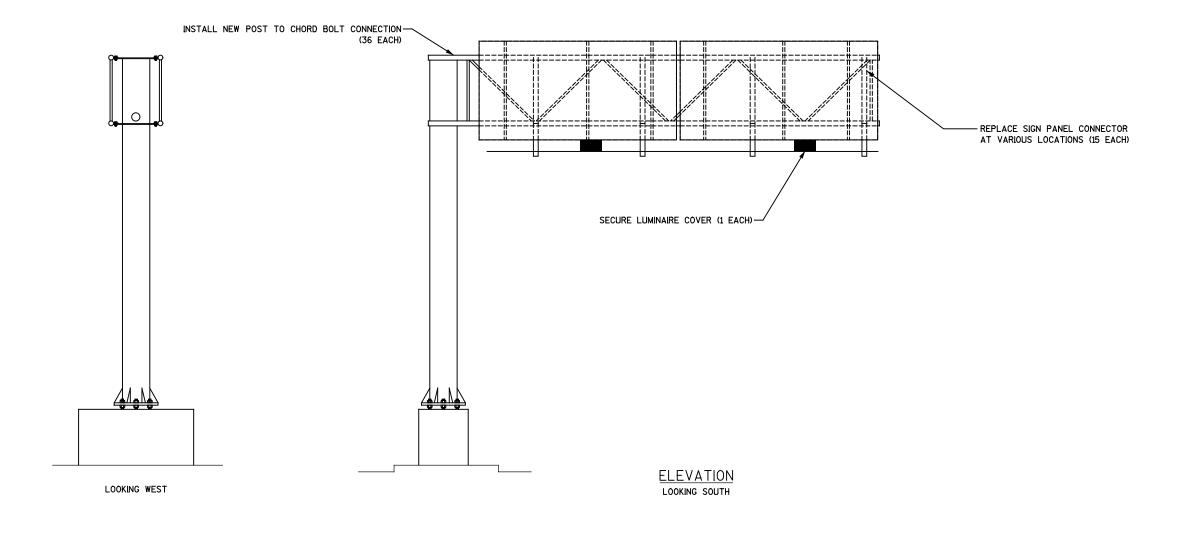
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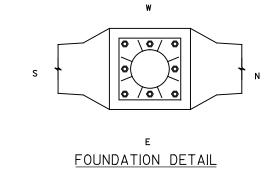




EAST







NO. DATE REVISION

SHEET 33 OF 110

8

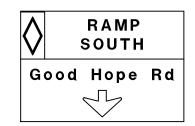
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2015 REPAIR DETAIL SHEET NO. ITEM NO. LIST OF REPAIRS QUANTITY SPV.0060.05 INSTALL NEW POST TO CHORD BOLT CONNECTION 36 EACH SHEET 4 SPV.0060.12 REPLACE SIGN PANEL CONNECTOR 15 EACH SHEET 6 S-40-300 SPV.0060.15 SECURE LUMINAIRE COVER 1 EACH SHEET 9

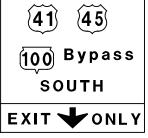
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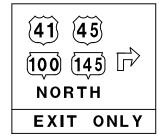
STATE PROJECT NUMBER

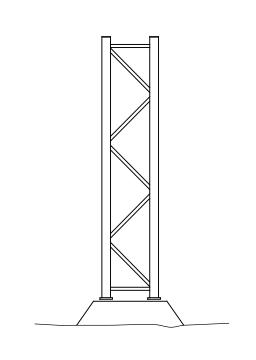
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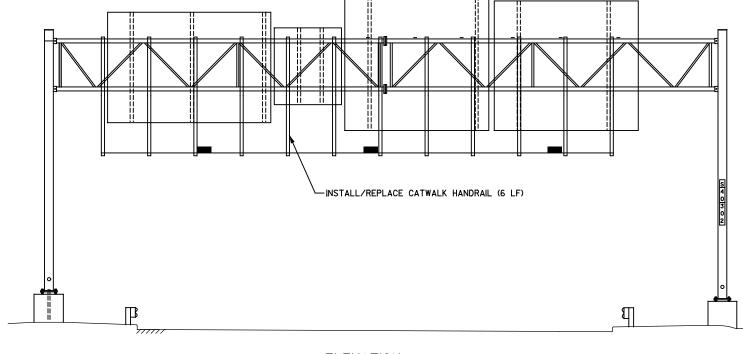


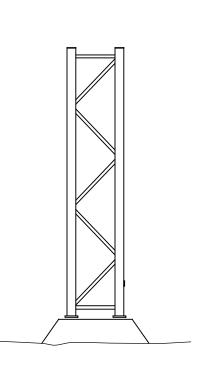












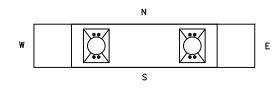
LOOKING NORTH

ELEVATION LOOKING WEST

LOOKING SOUTH

8

SOUTH FOUNDATION DETAIL



NORTH FOUNDATION DETAIL

ITEM NO. LIST OF REPAIRS QUANTITY REPAIR DETAIL SHEET NO.

SPV.0090.01 INSTALL/REPLACE CATWALK/HANDRAIL 6 LF SHEET 8

				Г
NO.	DATE	REVISION	BY	
		STATE OF WISCONSIN		

8

DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

SIGN BRIDGE REPAIR AND REPLACEMENT 2015

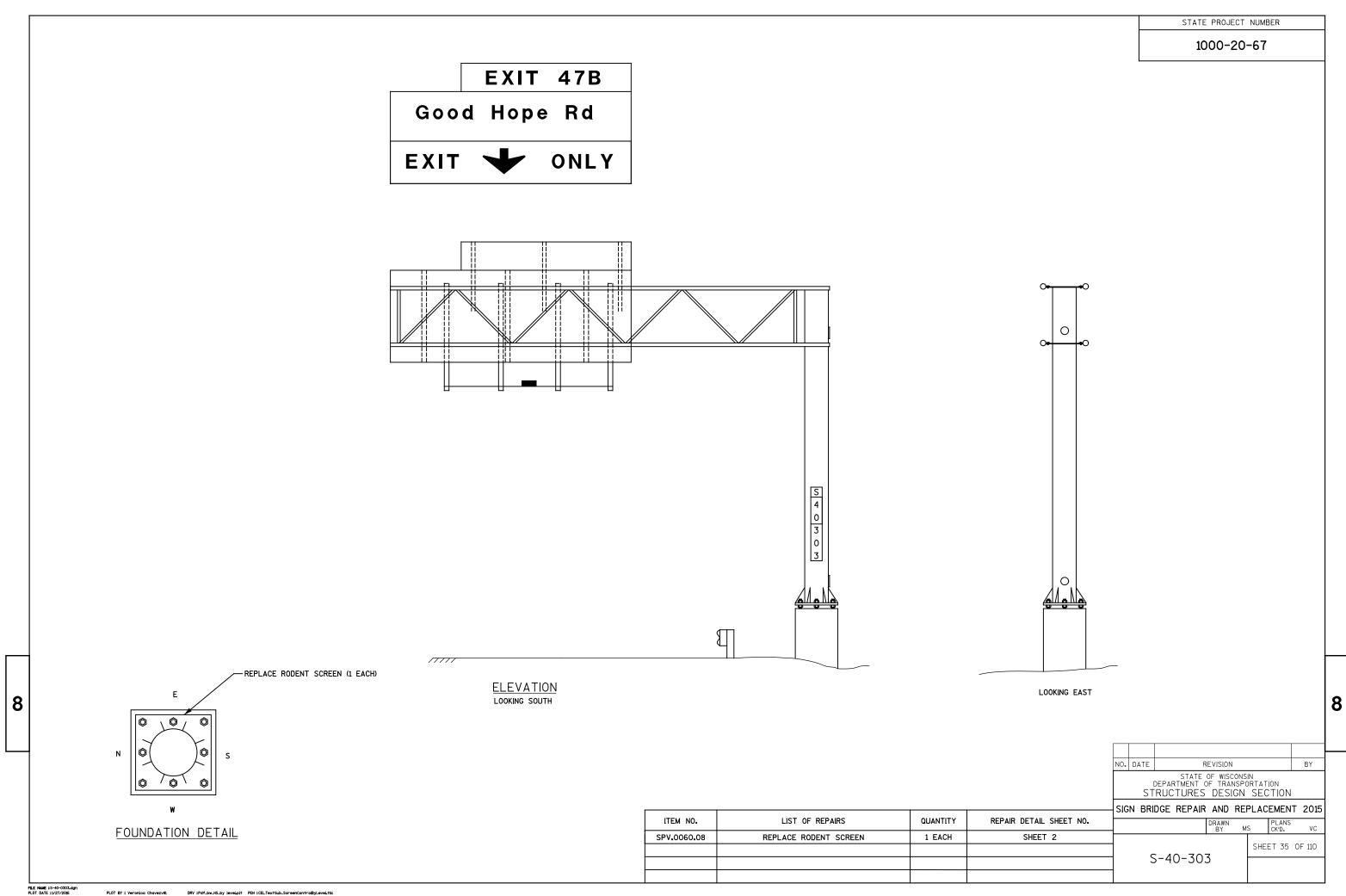
| DRAWN | BY | MS | CK'D. | VC |

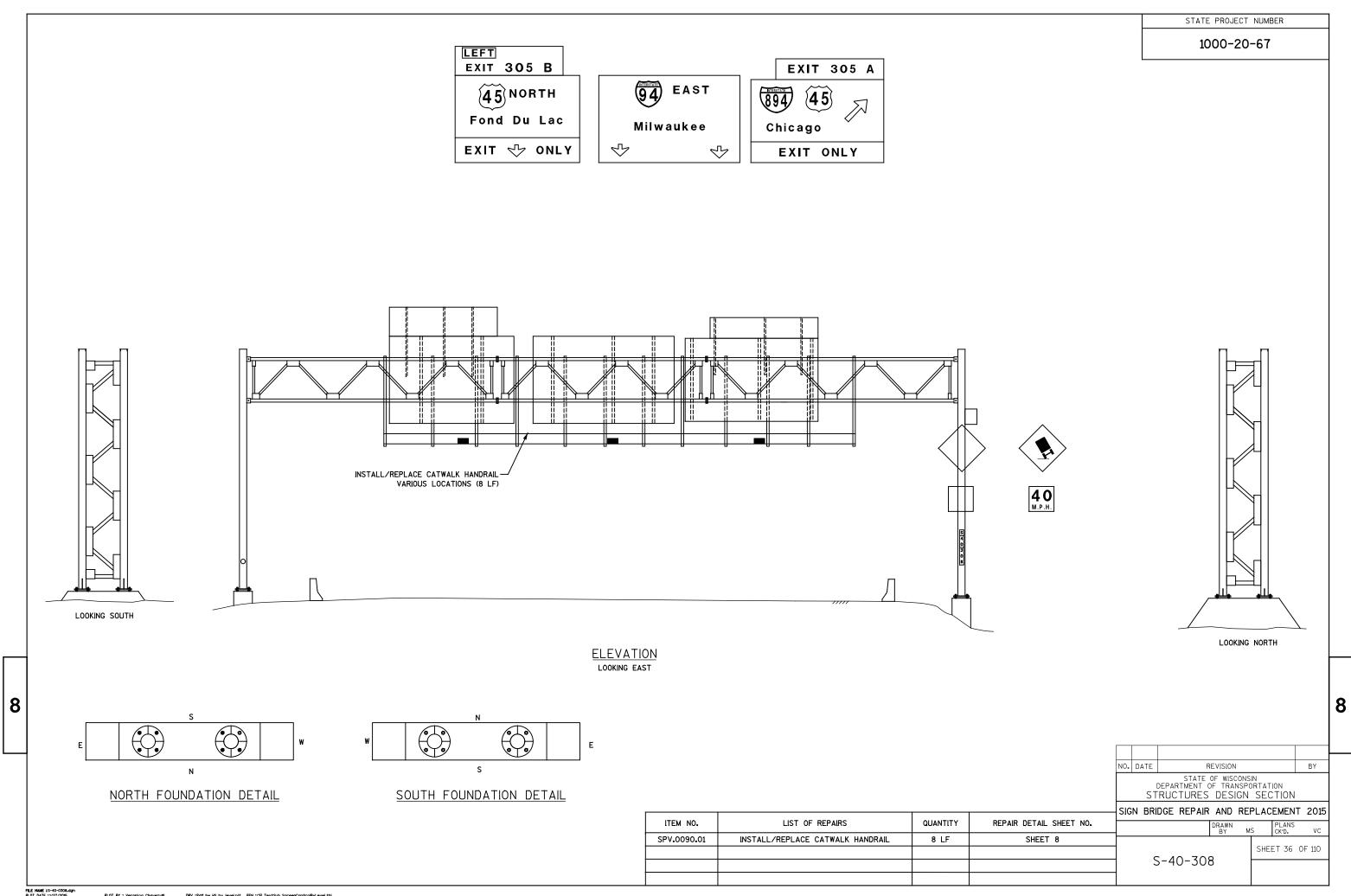
SHEET 34 OF 110

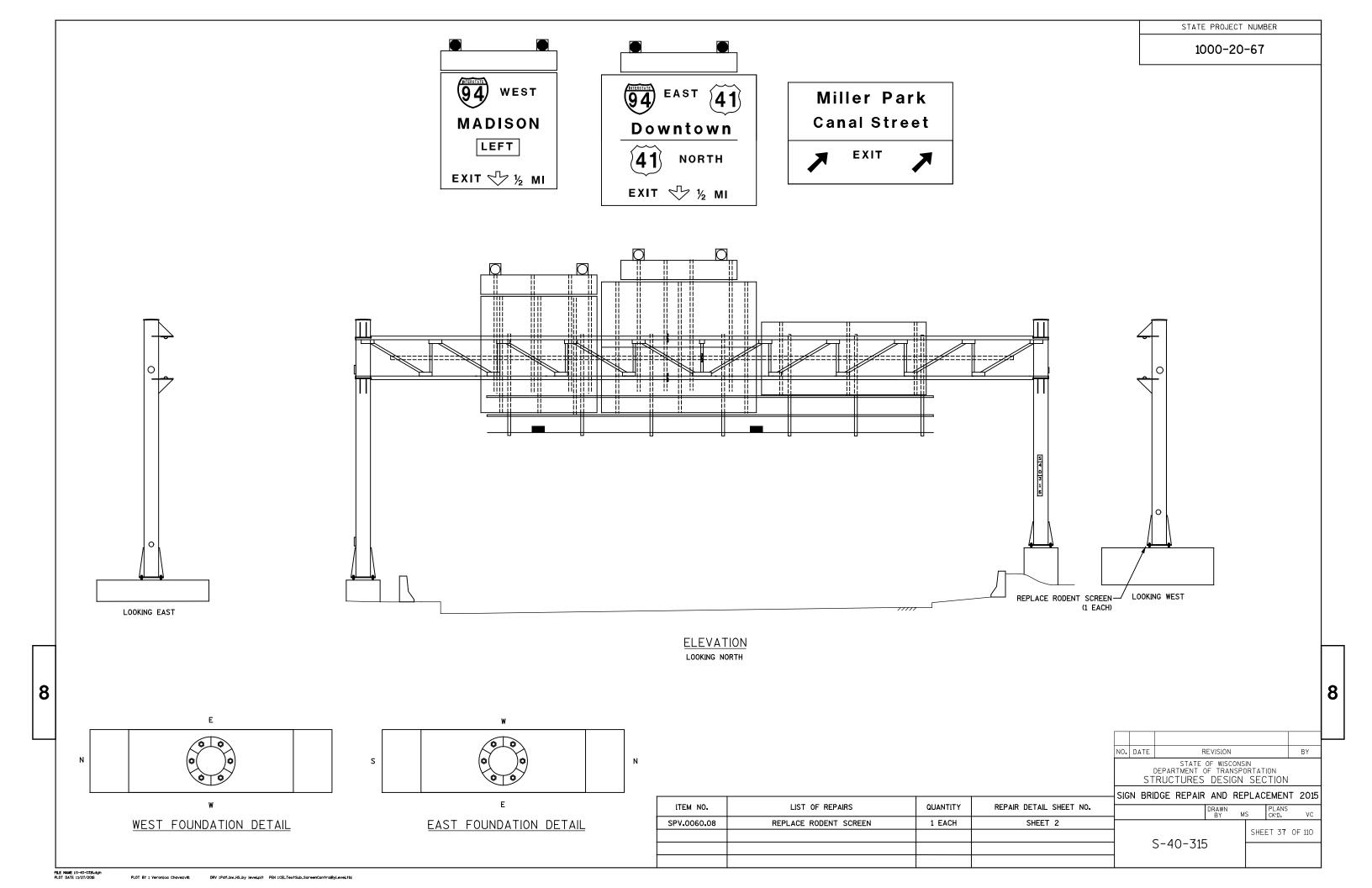
S-40-302

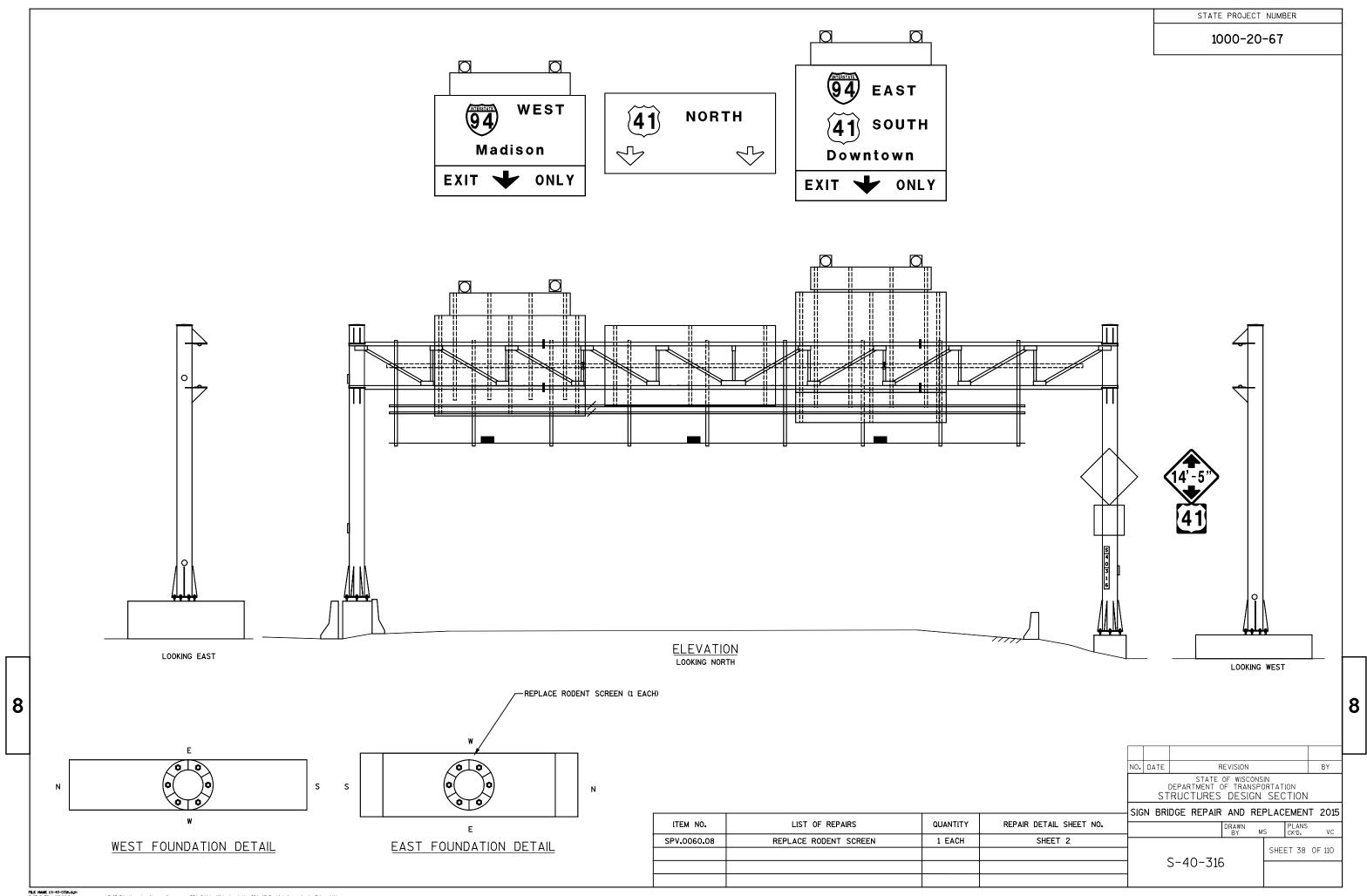
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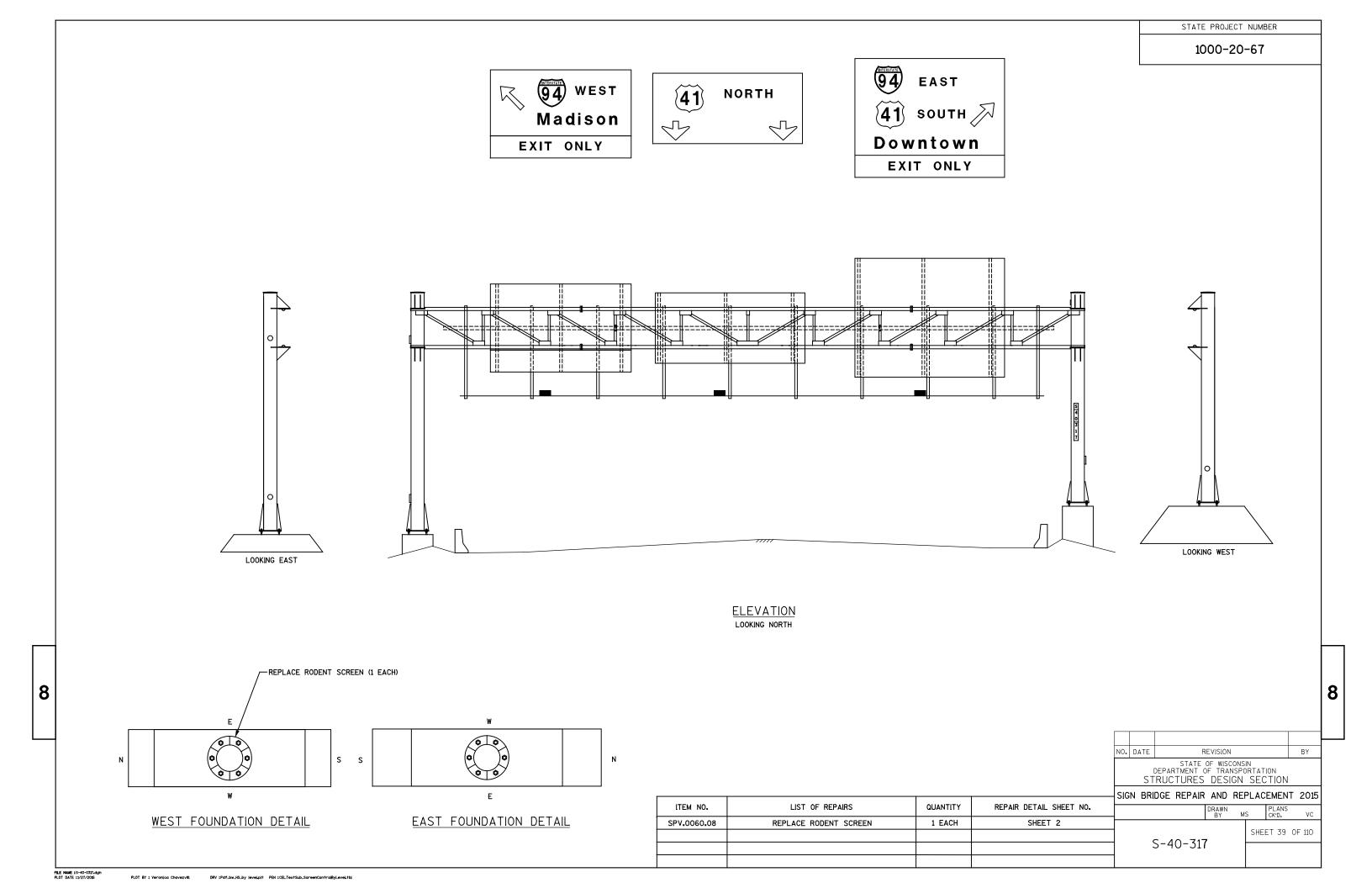
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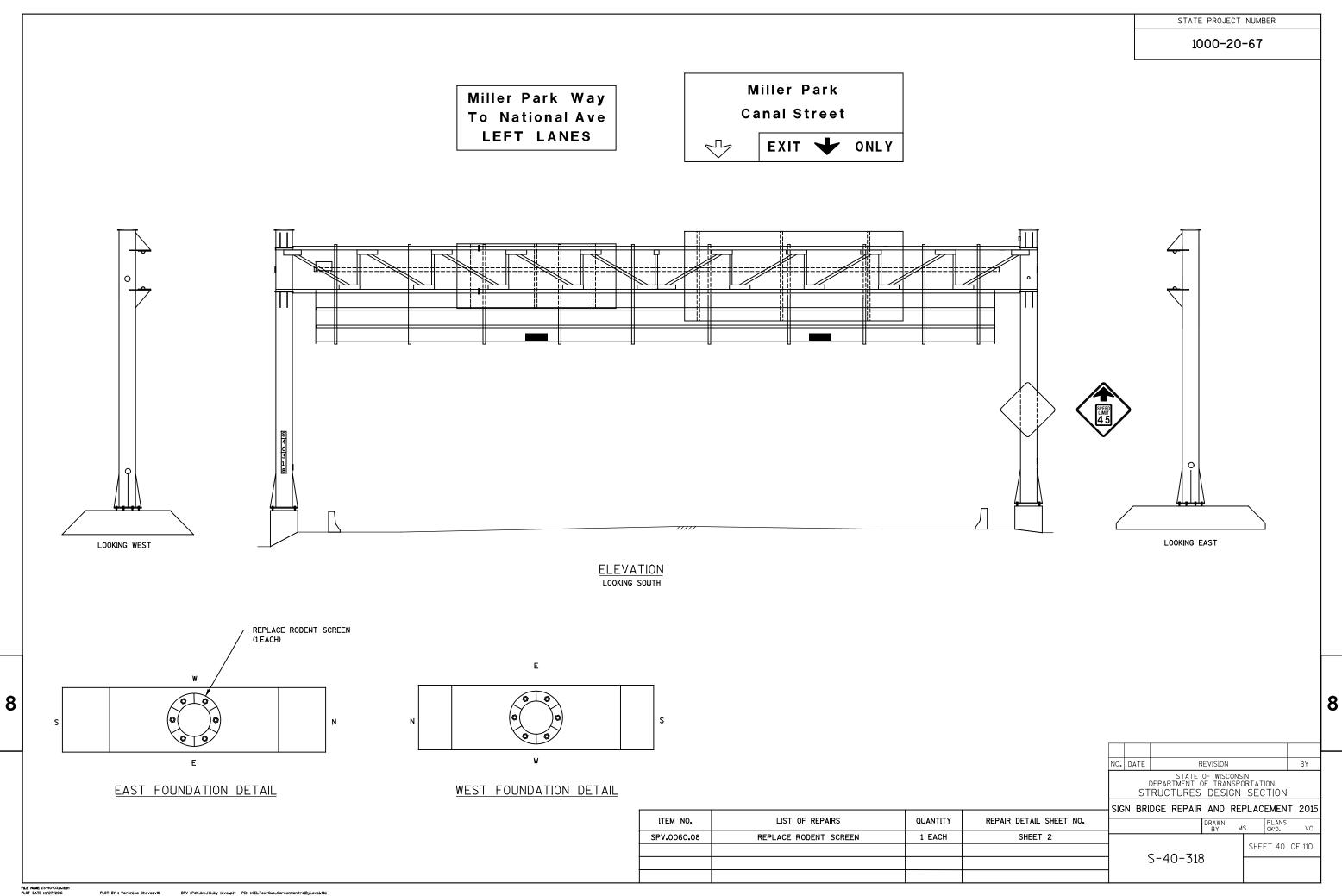




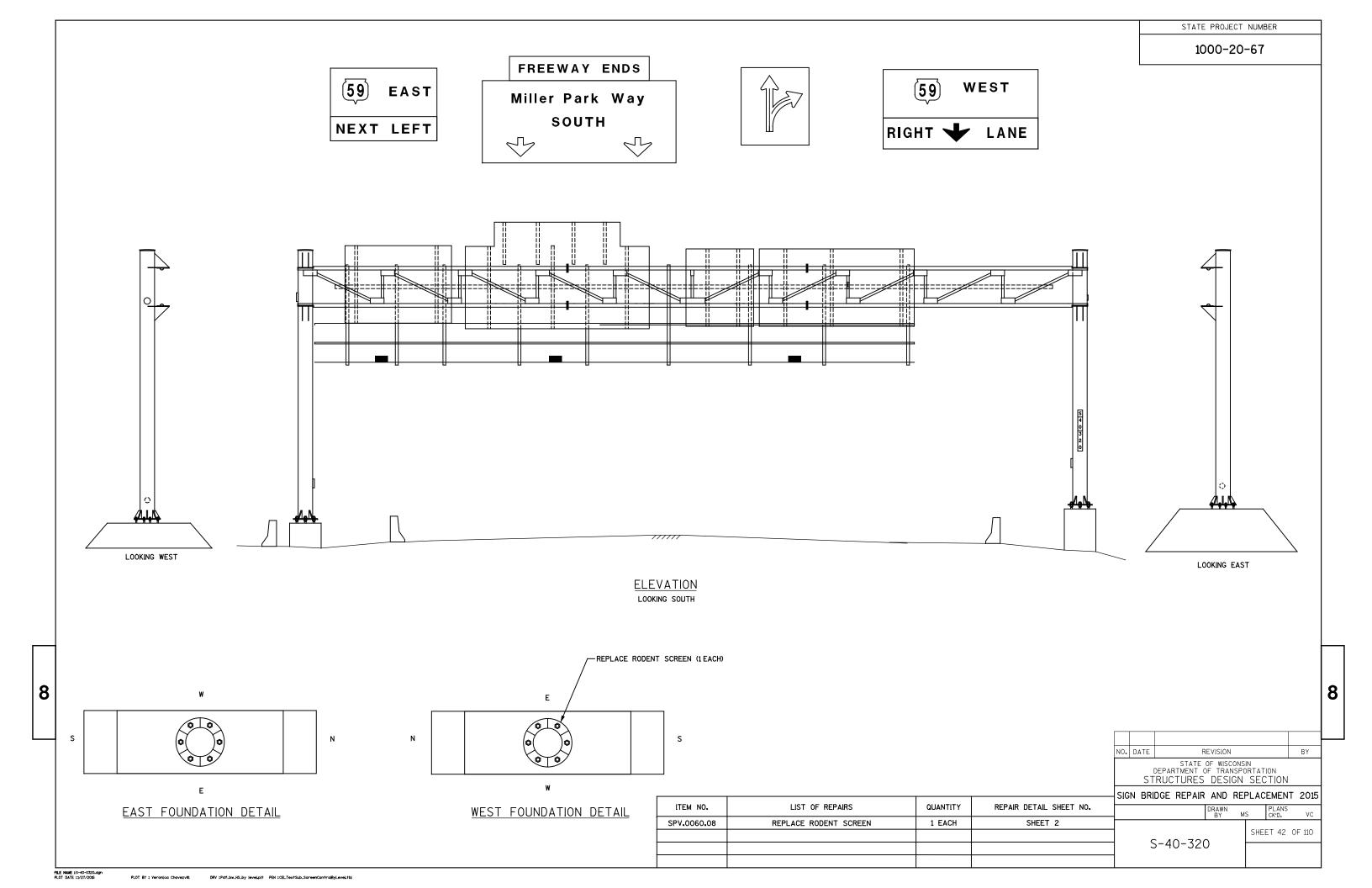


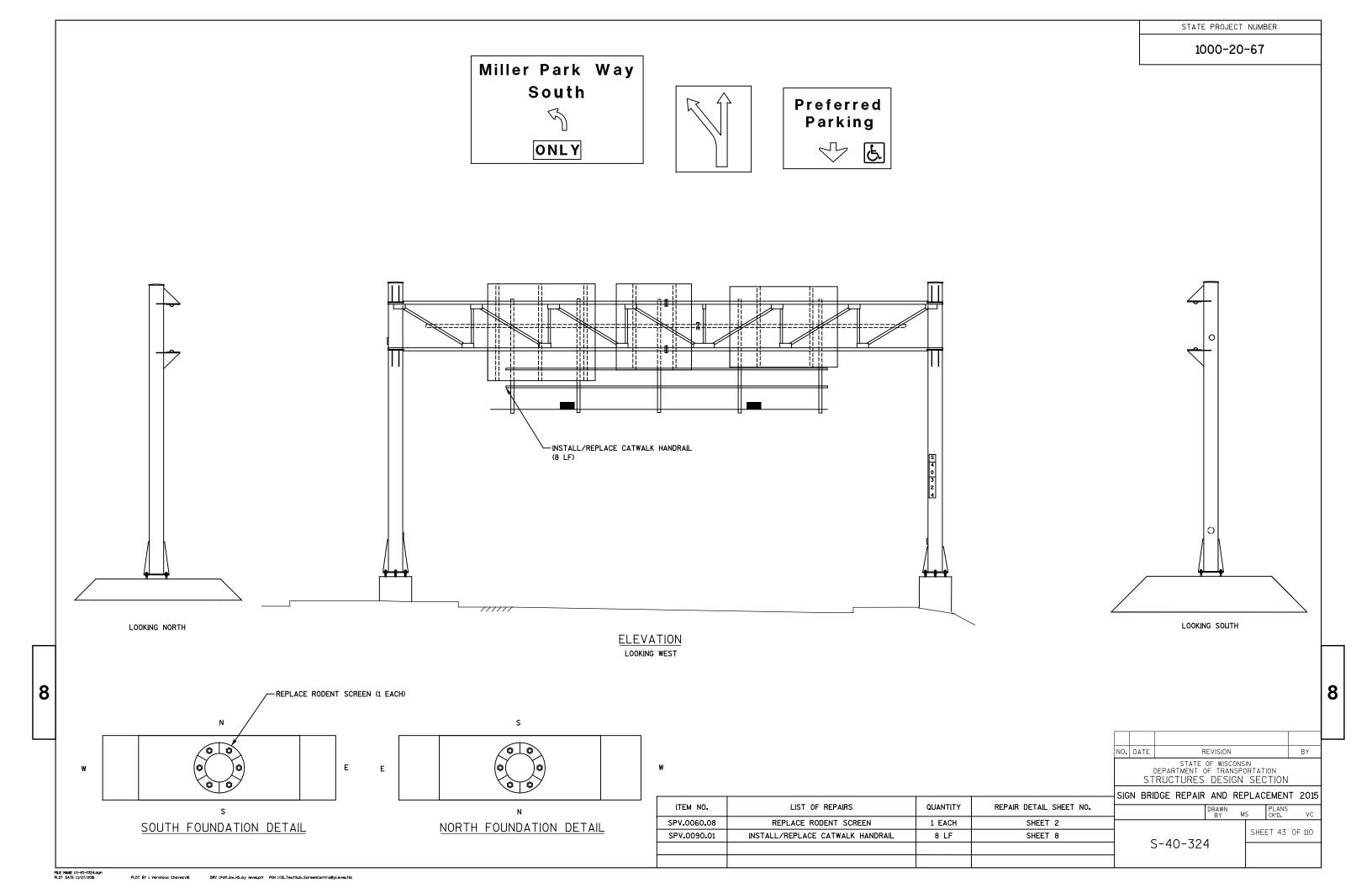






STATE PROJECT NUMBER 1000-20-67 Miller Park Miller Park Way Canal Street To National Ave LEFT LANES EXIT ONLY **25 MPH** LOOKING EAST LOOKING WEST ELEVATION VIEW LOOKING SOUTH REPLACE RODENT SCREEN (1 EACH) 8 NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION SIGN BRIDGE REPAIR AND REPLACEMENT 2015 ITEM NO. LIST OF REPAIRS QUANTITY REPAIR DETAIL SHEET NO. WEST FOUNDATION VIEW EAST FOUNDATION VIEW SPV.0060.08 REPLACE RODENT SCREEN 1 EACH SHEET 2 SHEET 41 OF 110 S-40-319 PLOT BY: Veronica Chavezv8i DRV: Pdf\_bw\_HS\_by level.plt PEN: CELTextSub\_ScreenControlByLevel.tbl

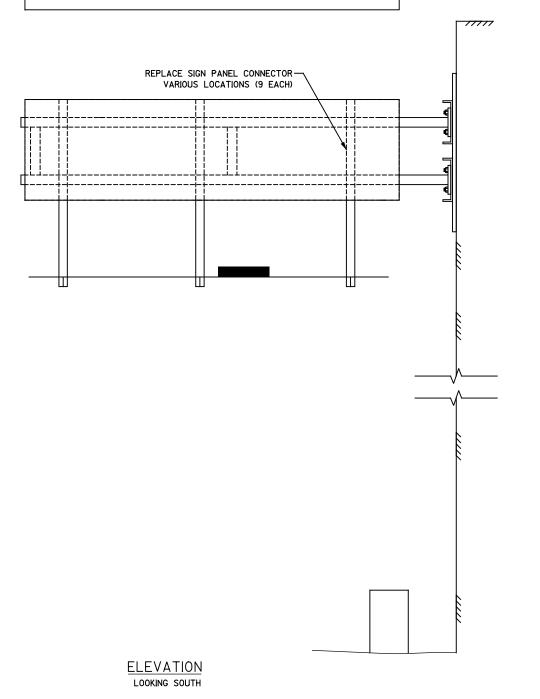


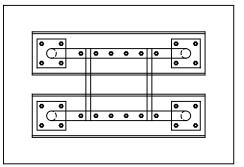


STATE PROJECT NUMBER

1000-20-67







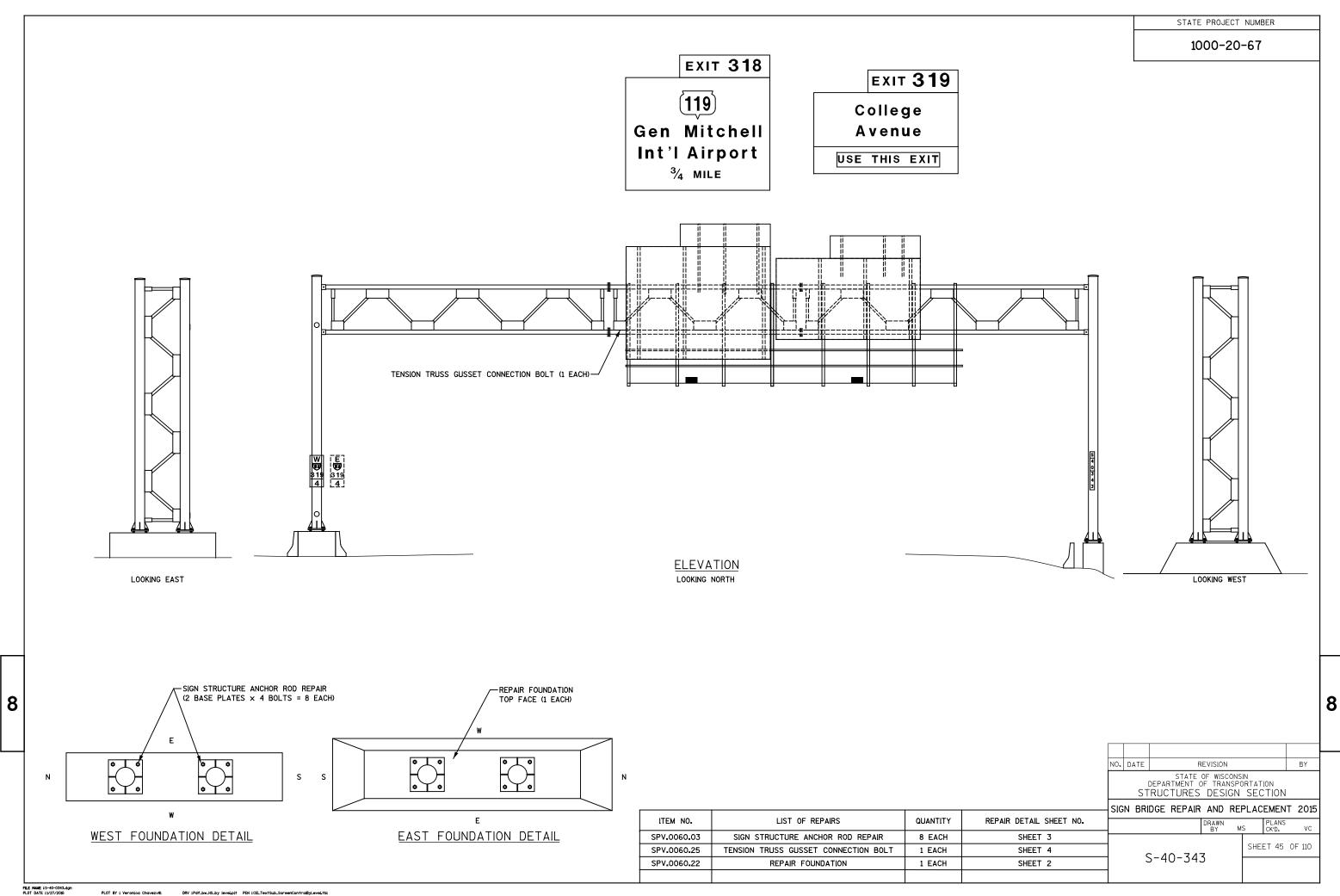
CONNECTION DETAIL LOOKING WEST

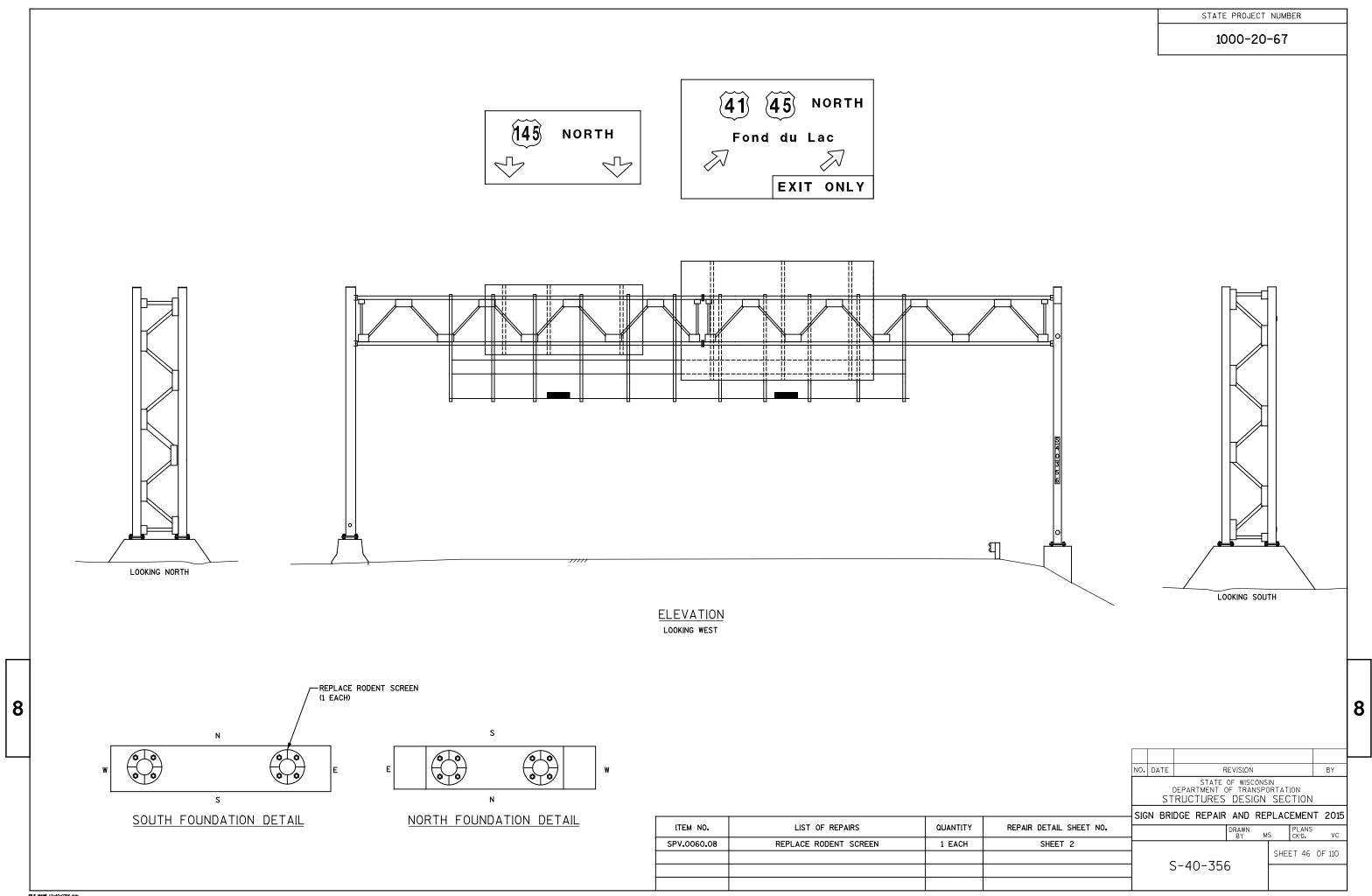
NO. DATE

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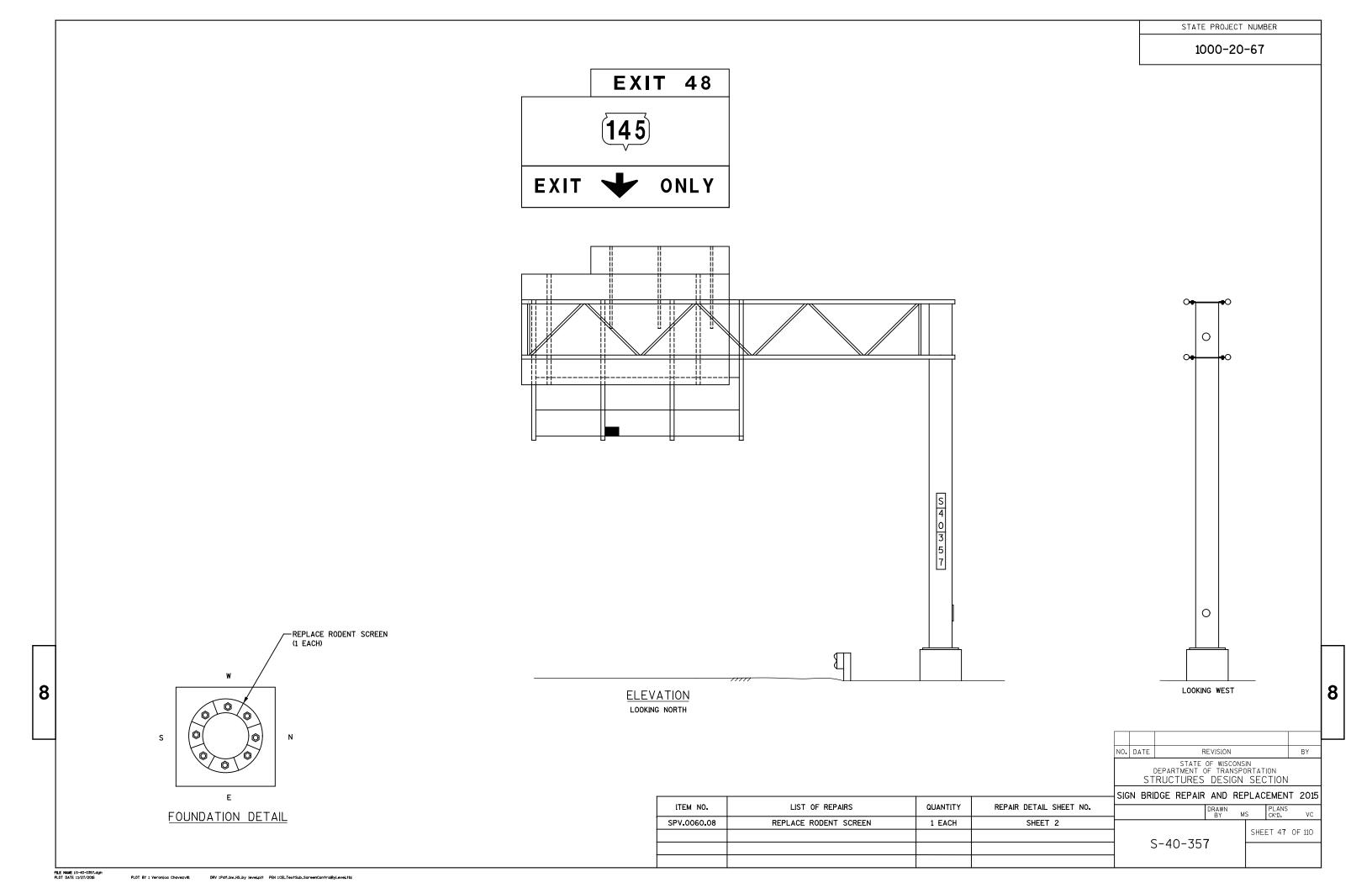
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

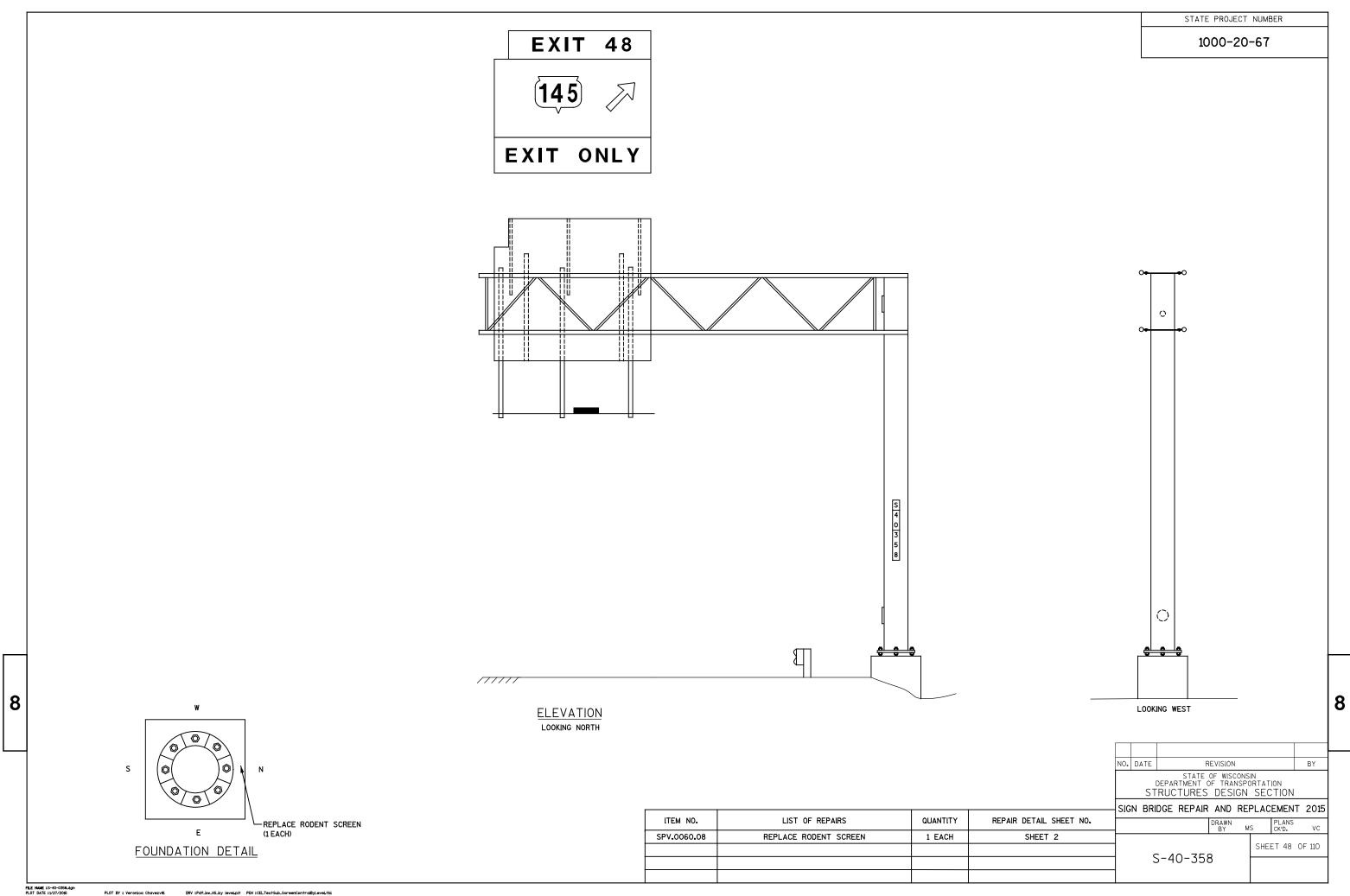
SIGN BRIDGE REPAIR AND REPLACEMENT 2015 ITEM NO. LIST OF REPAIRS QUANTITY REPAIR DETAIL SHEET NO. REPLACE SIGN PANEL CONNECTOR SPV.0060.12 9 EACH SHEET 6 SHEET 44 OF 110 S-40-325

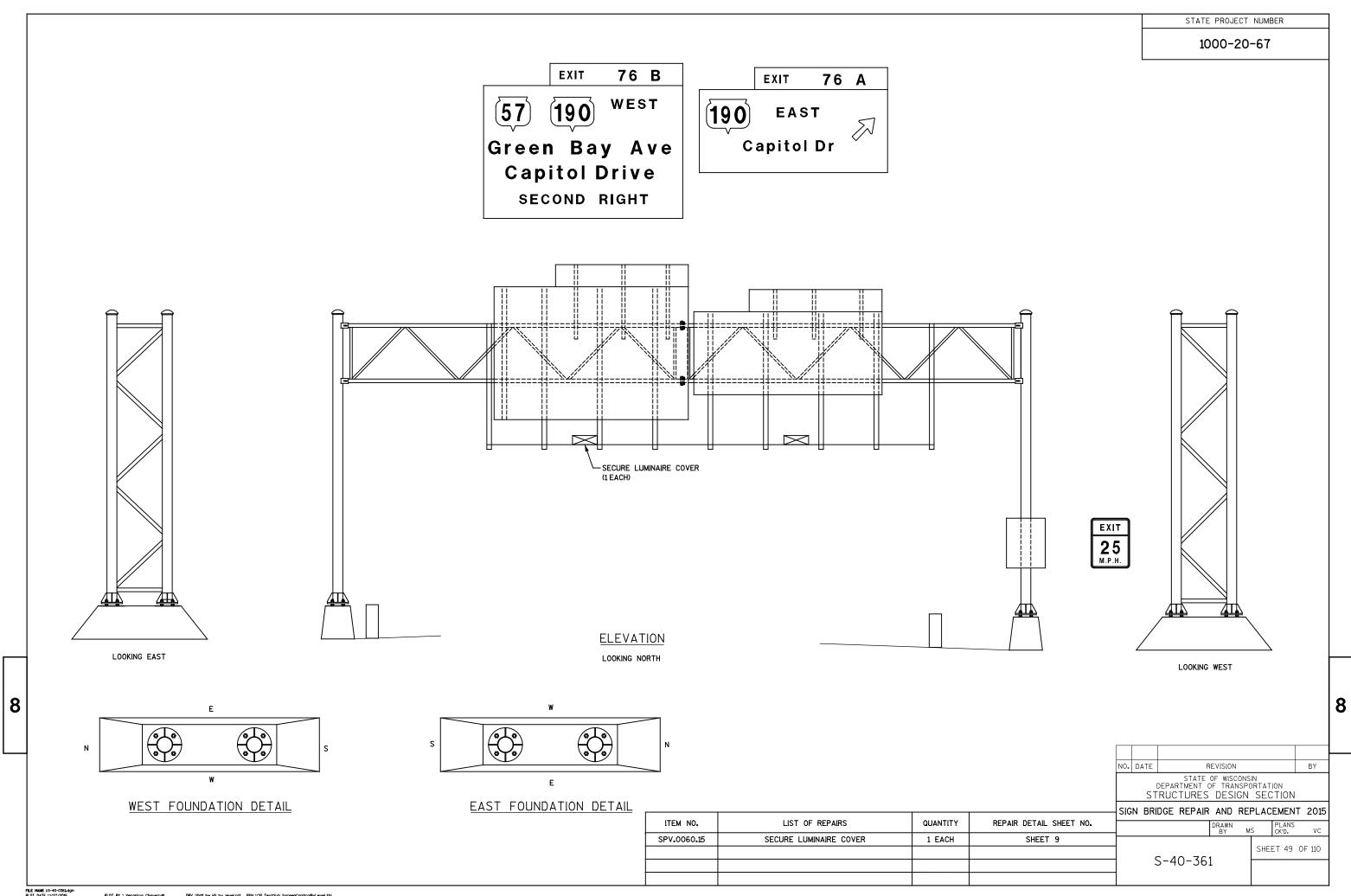


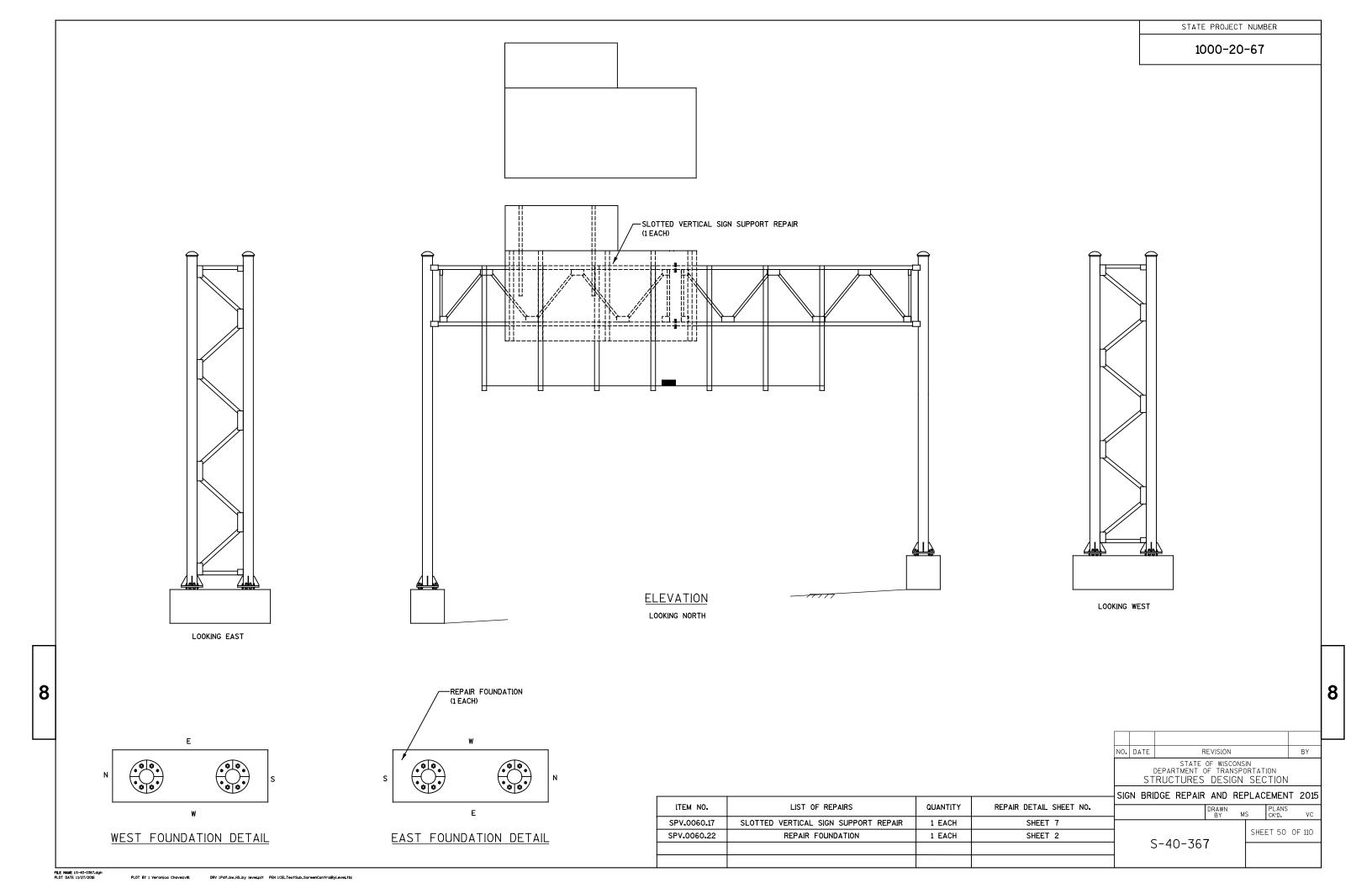


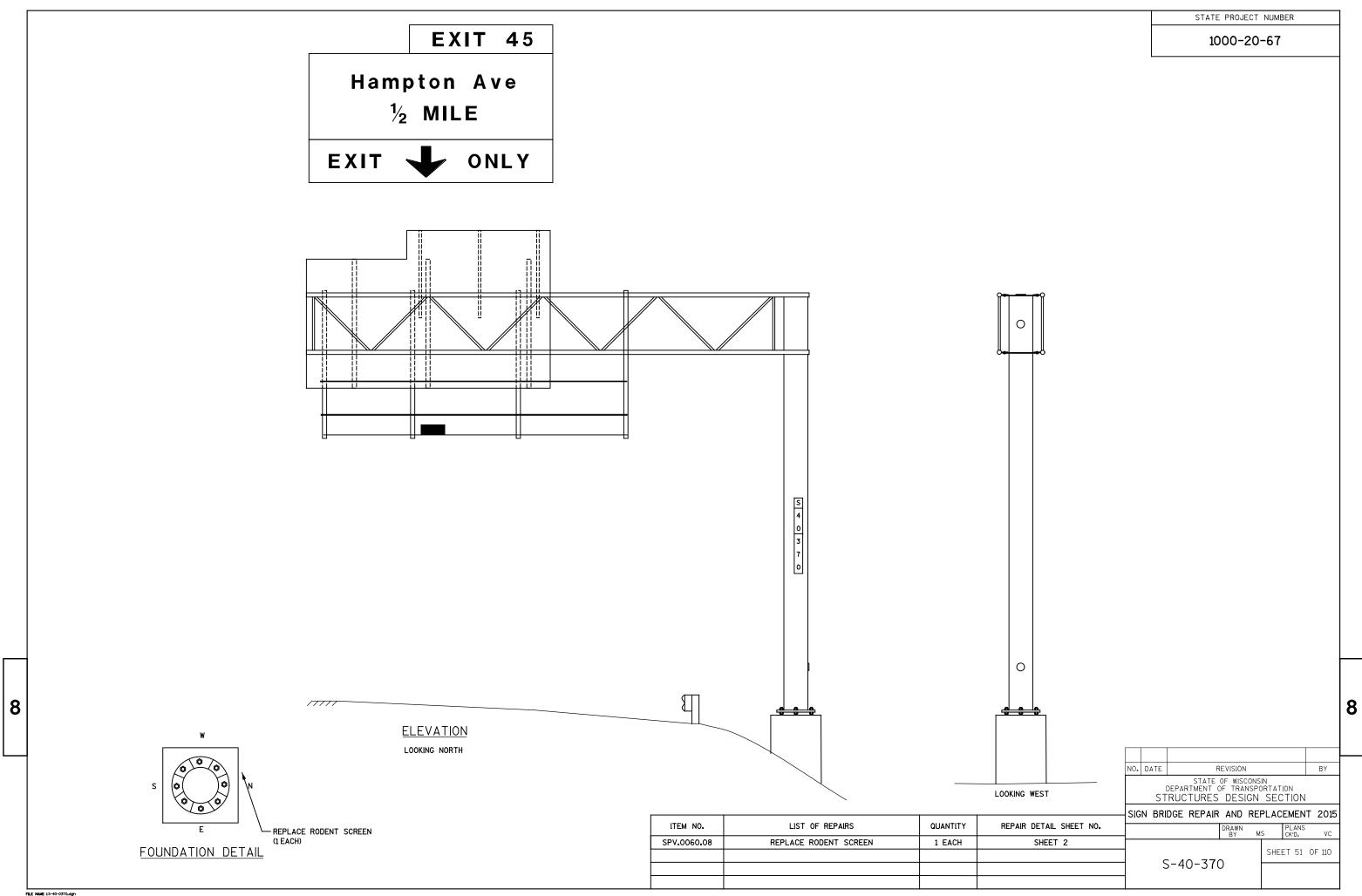
PLOT BY: Veronica Chavezv8l DRV: Pdf\_bw\_HS\_by level.plt PEN: CELTextSub\_ScreenControlByLevel.tbl

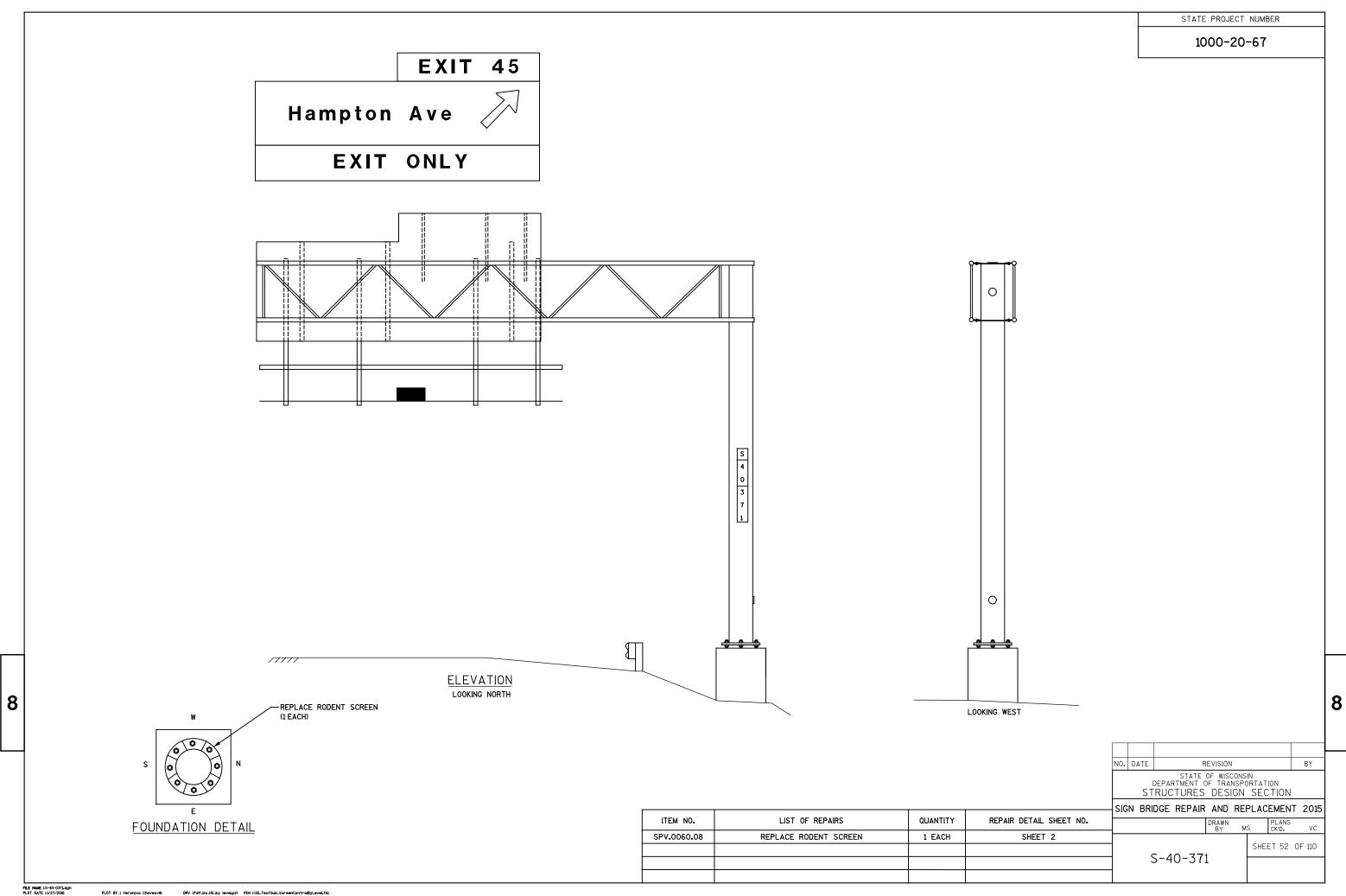


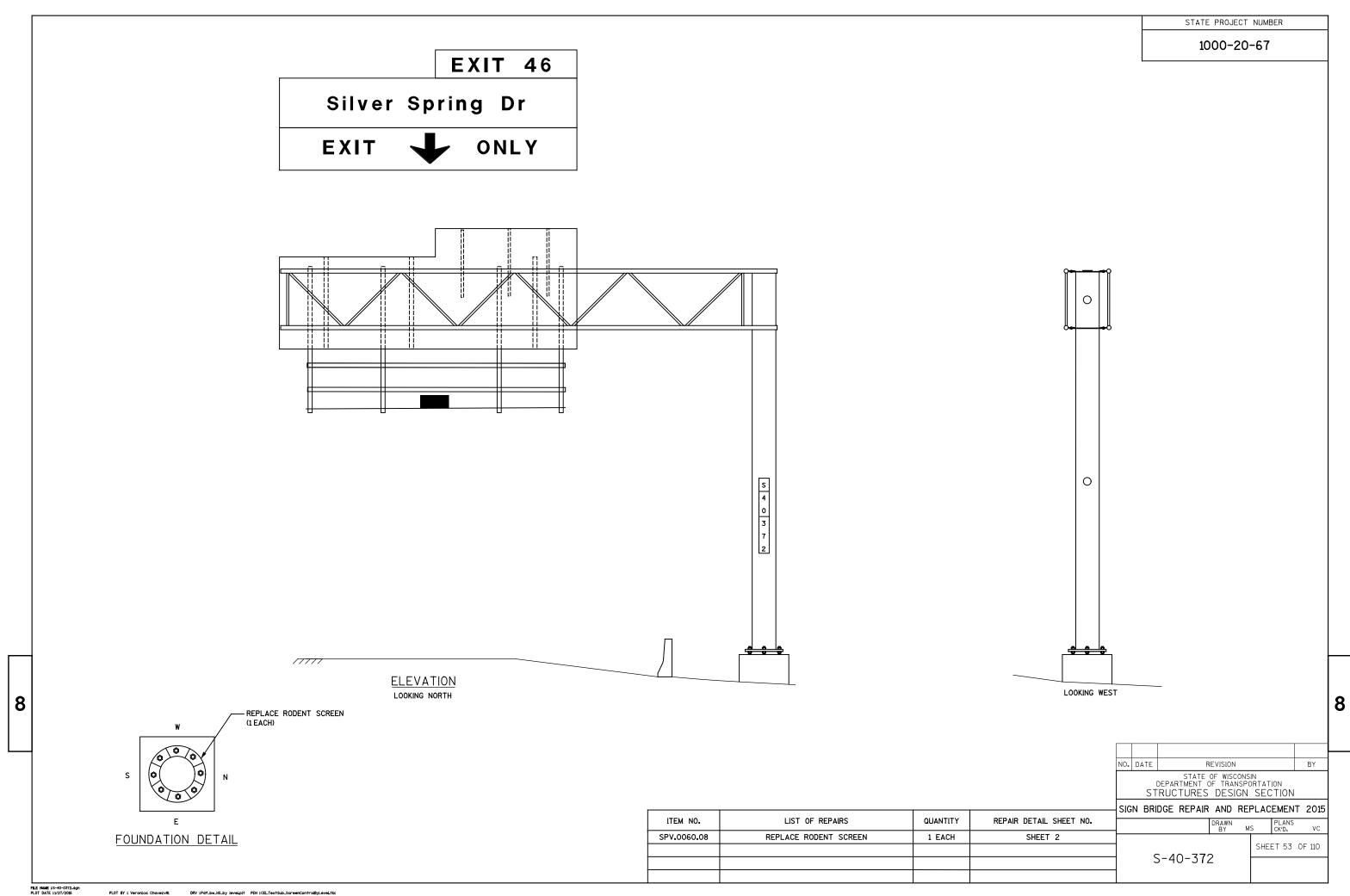


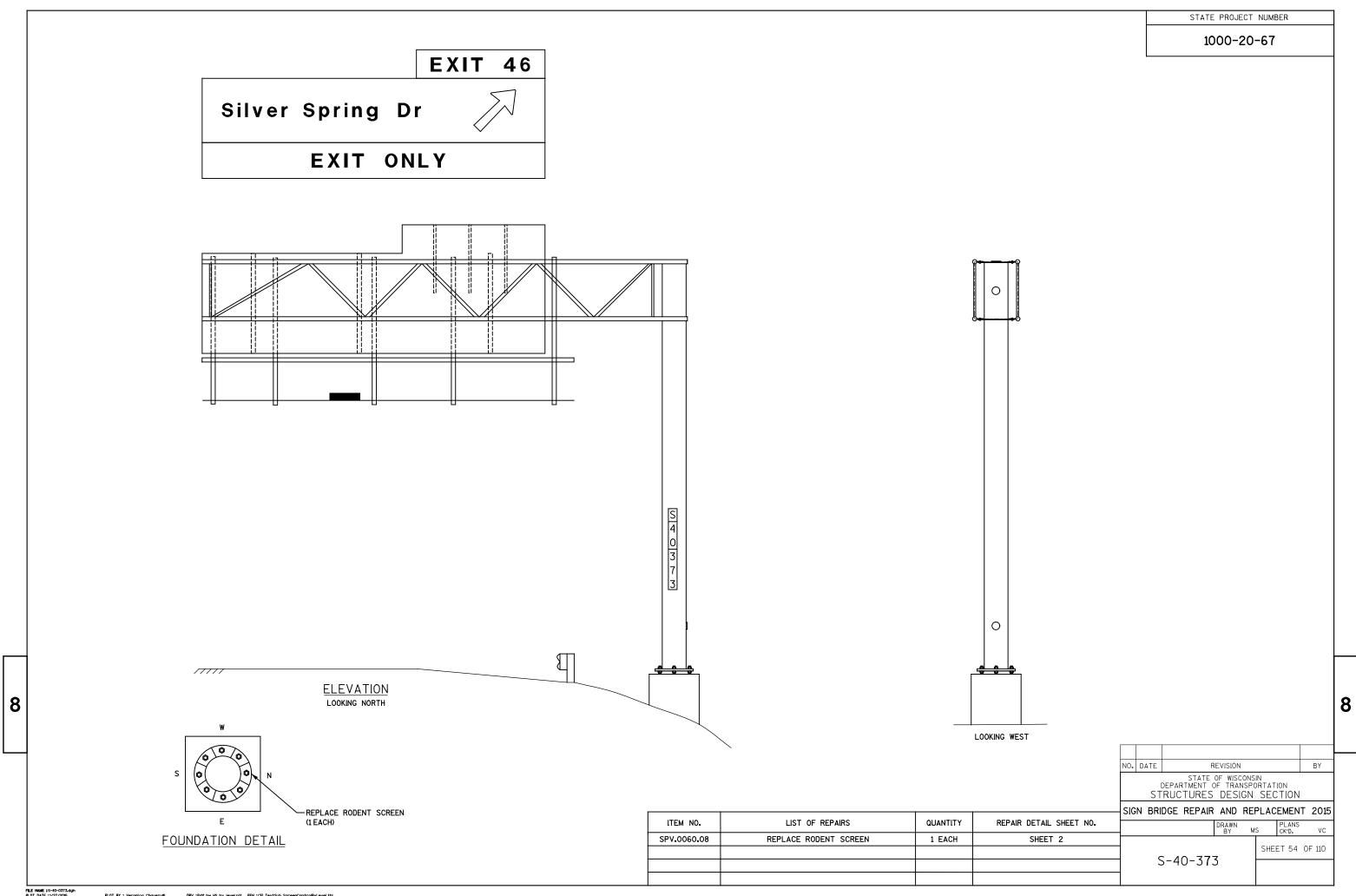


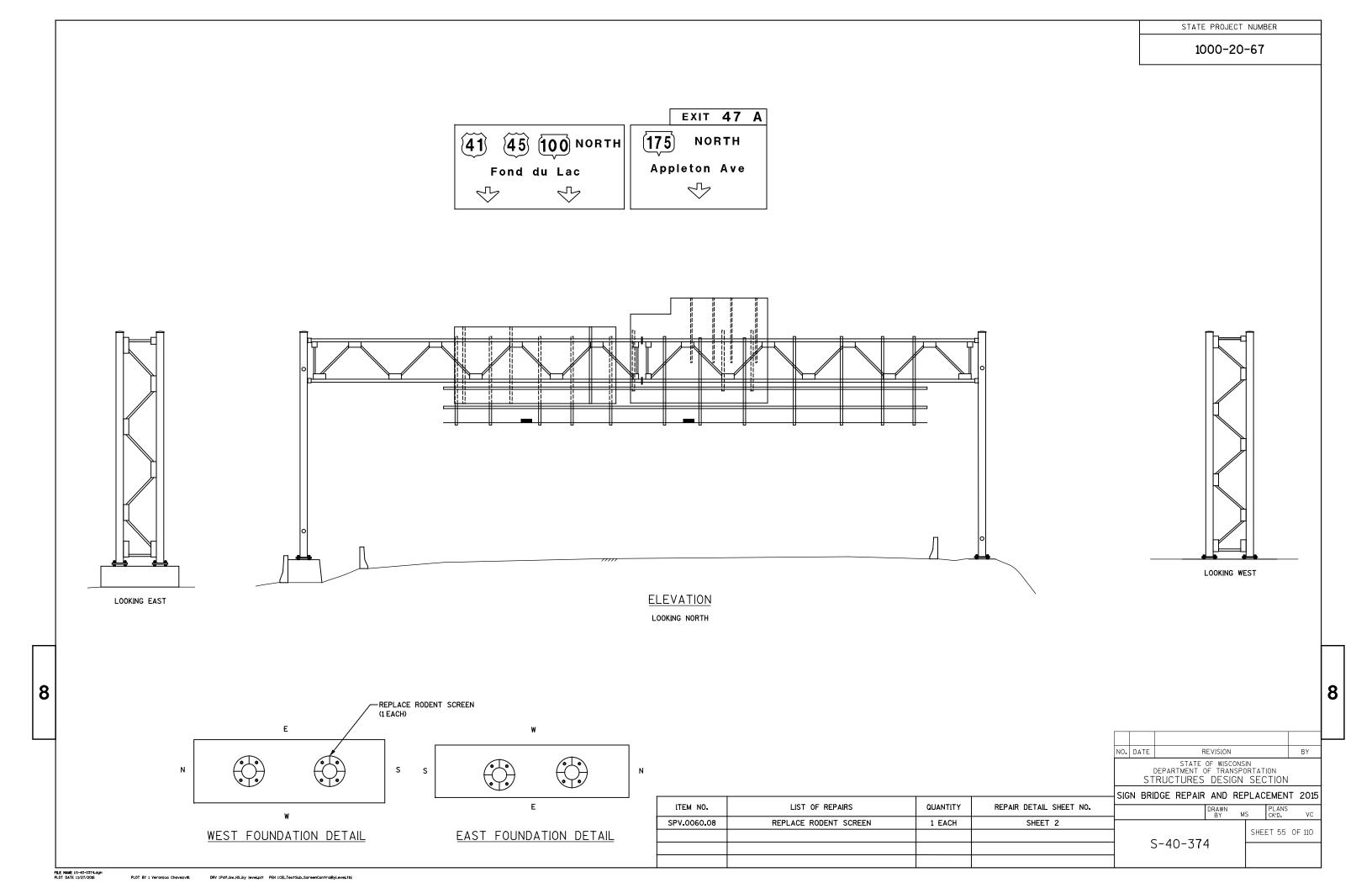


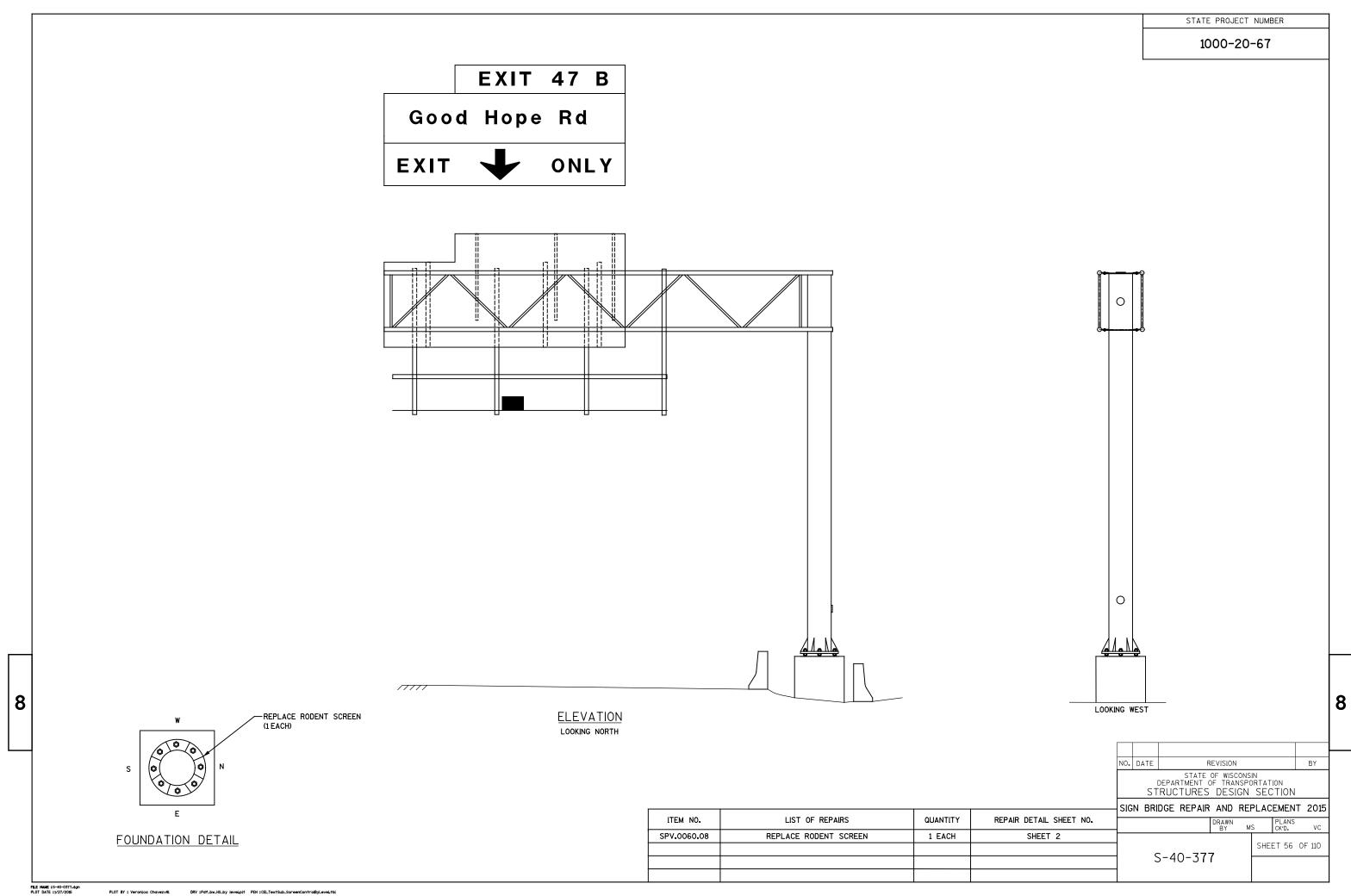


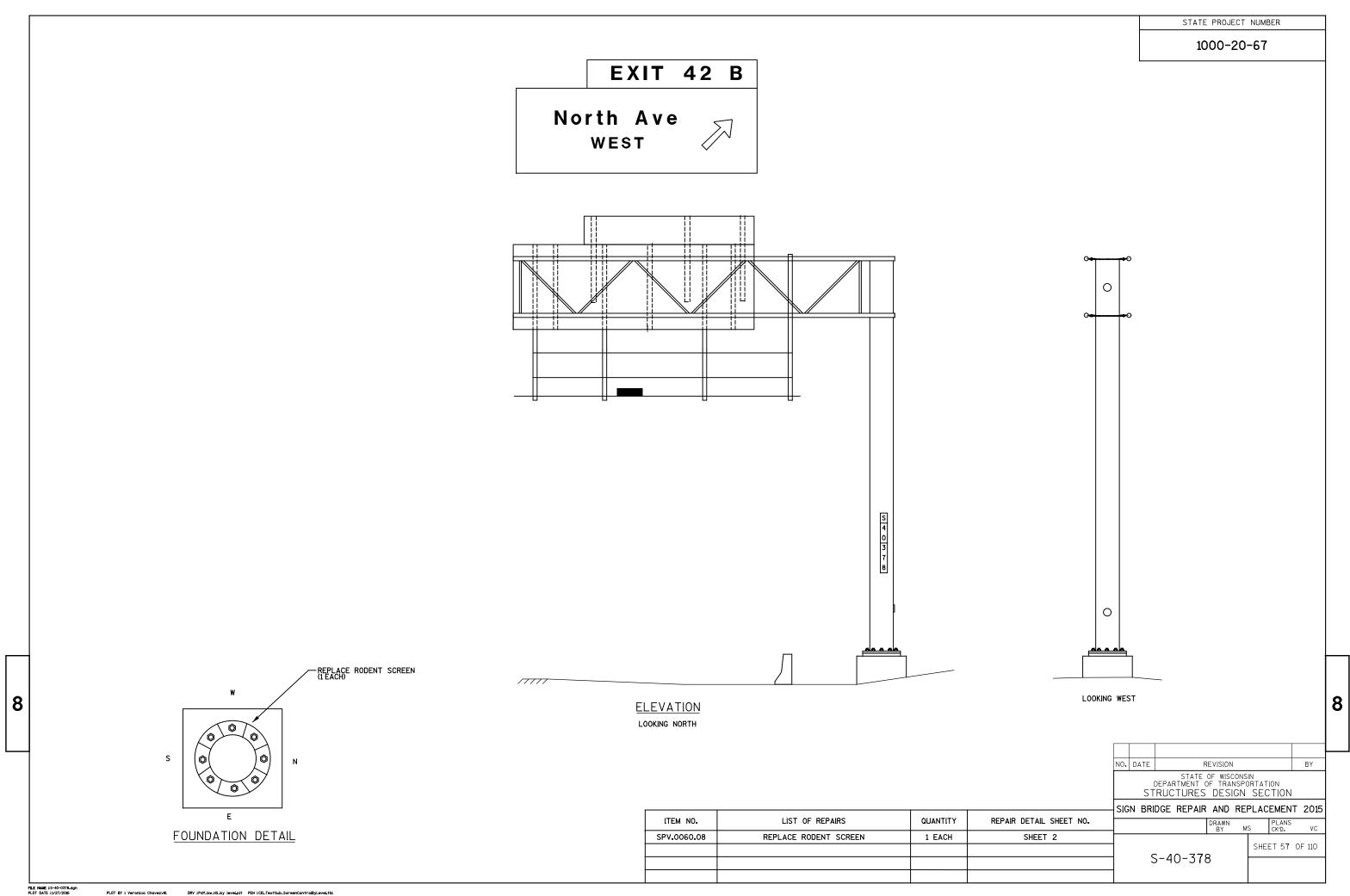


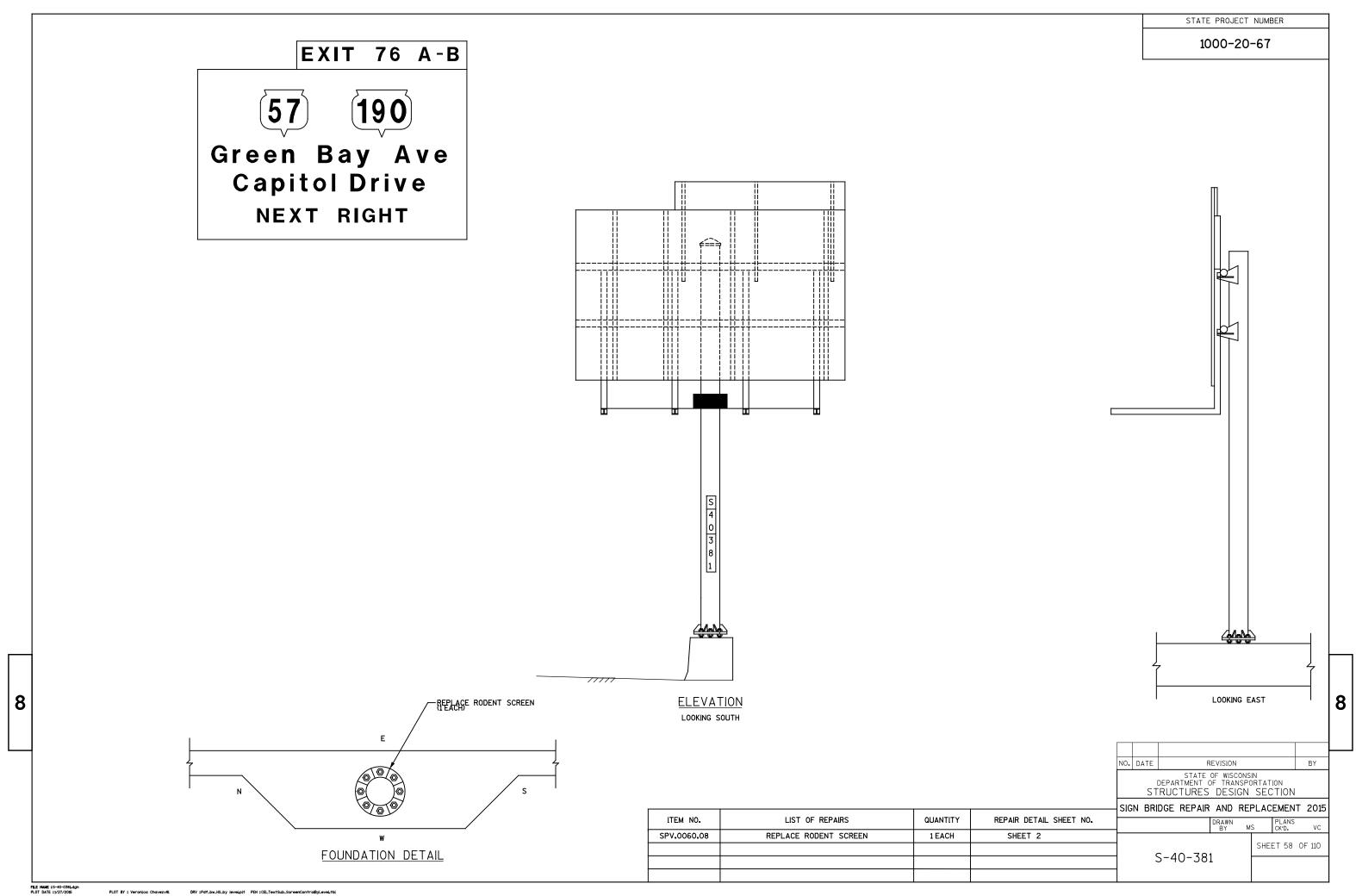


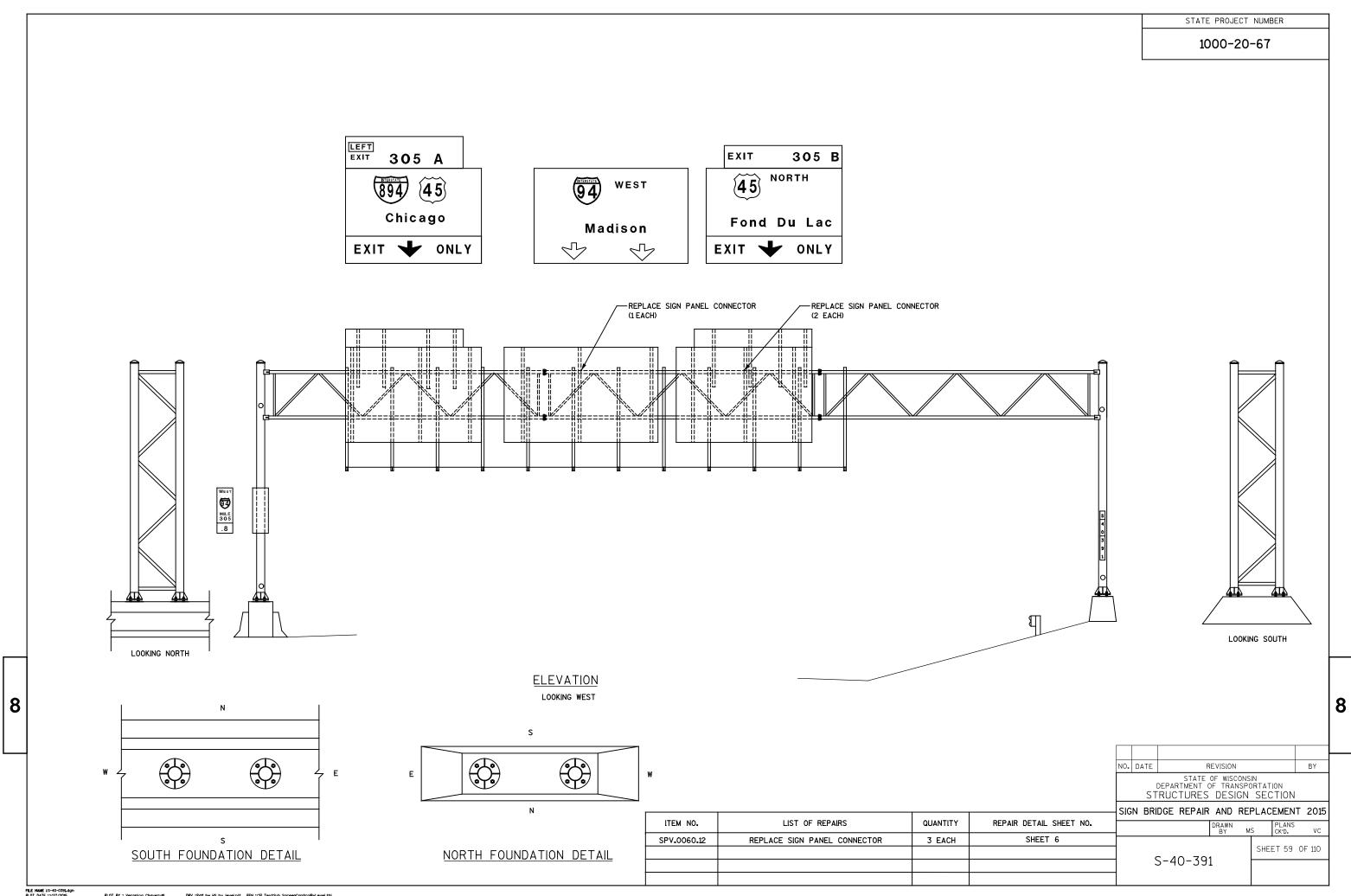


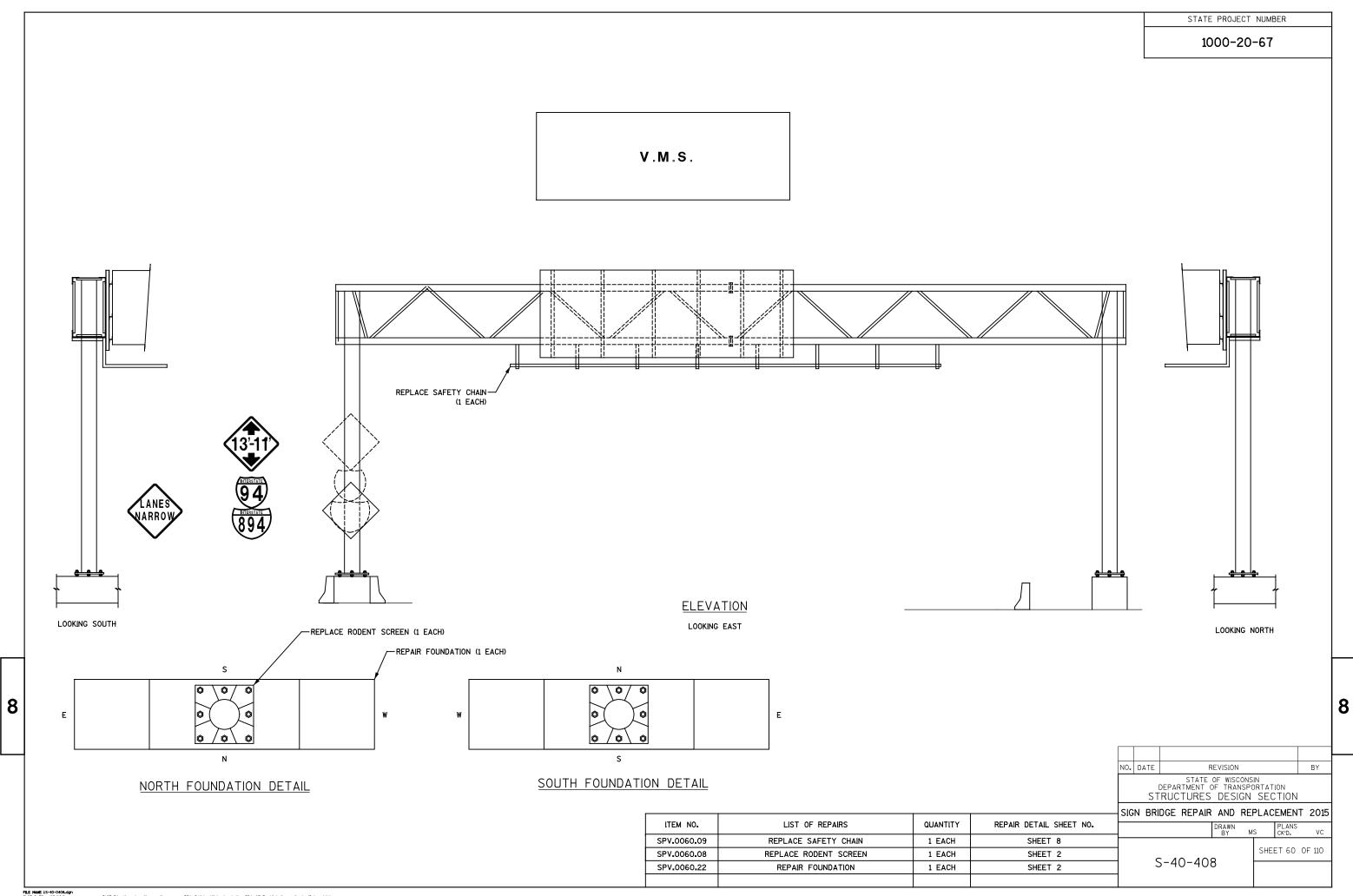


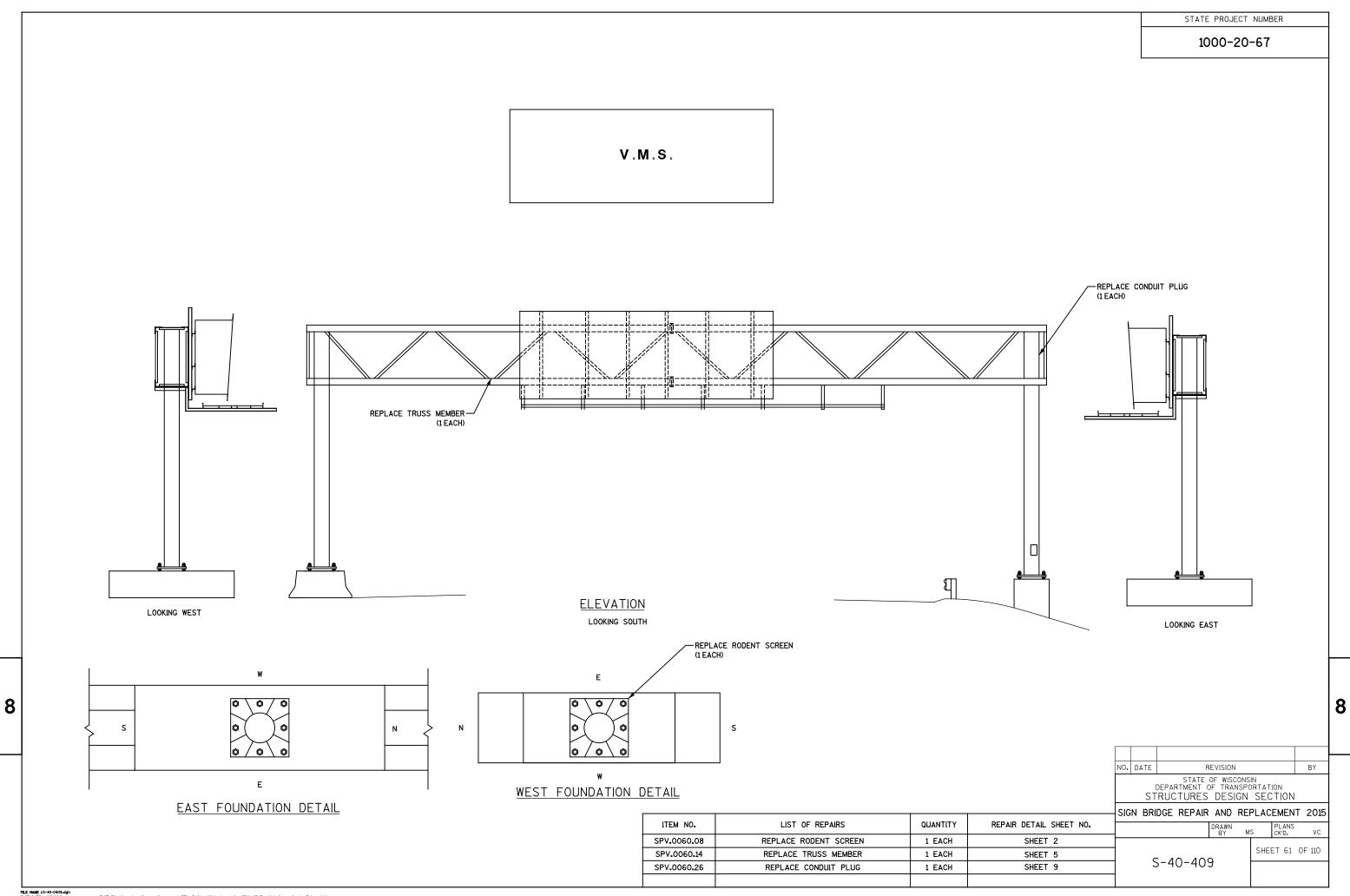


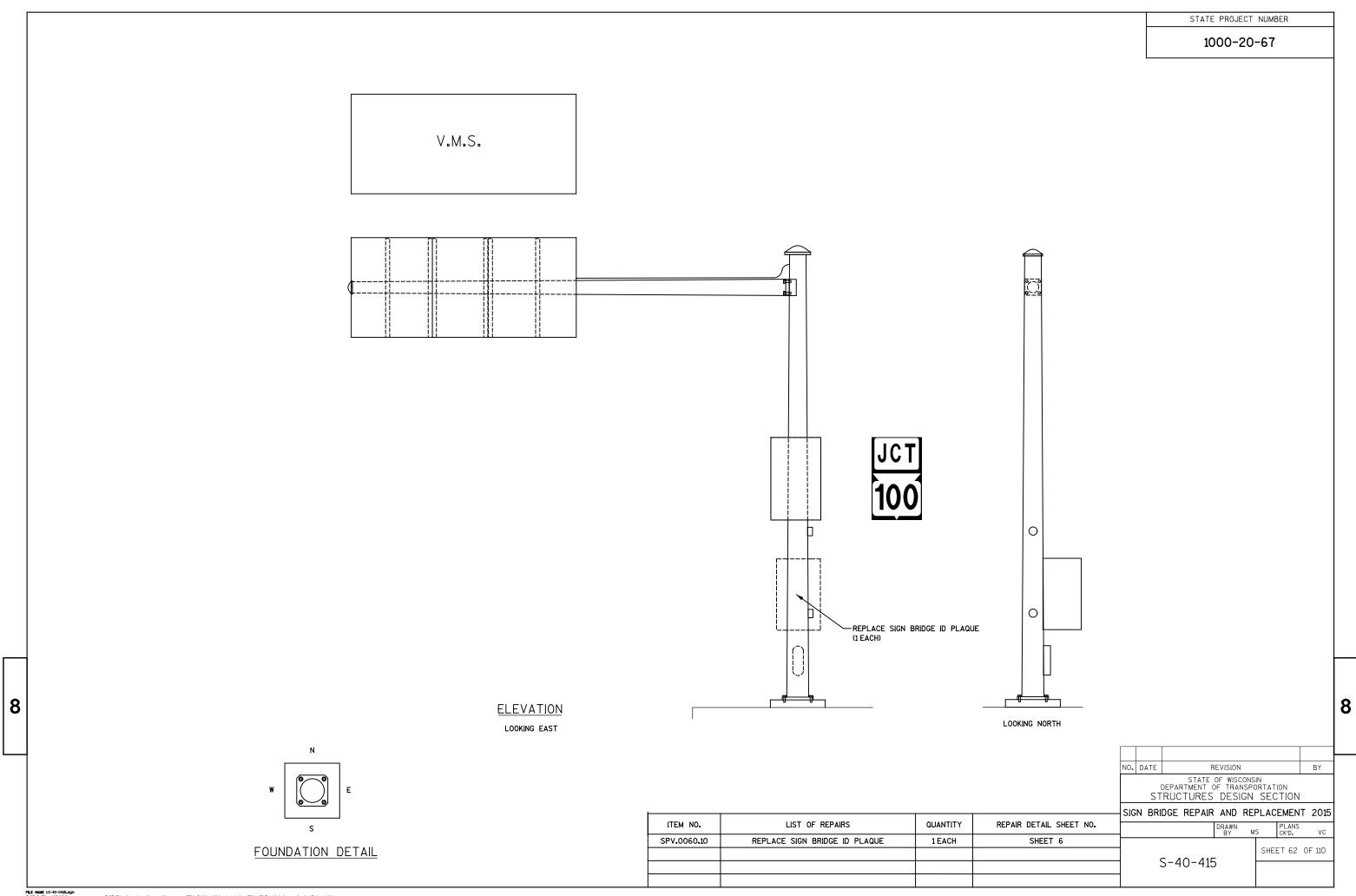


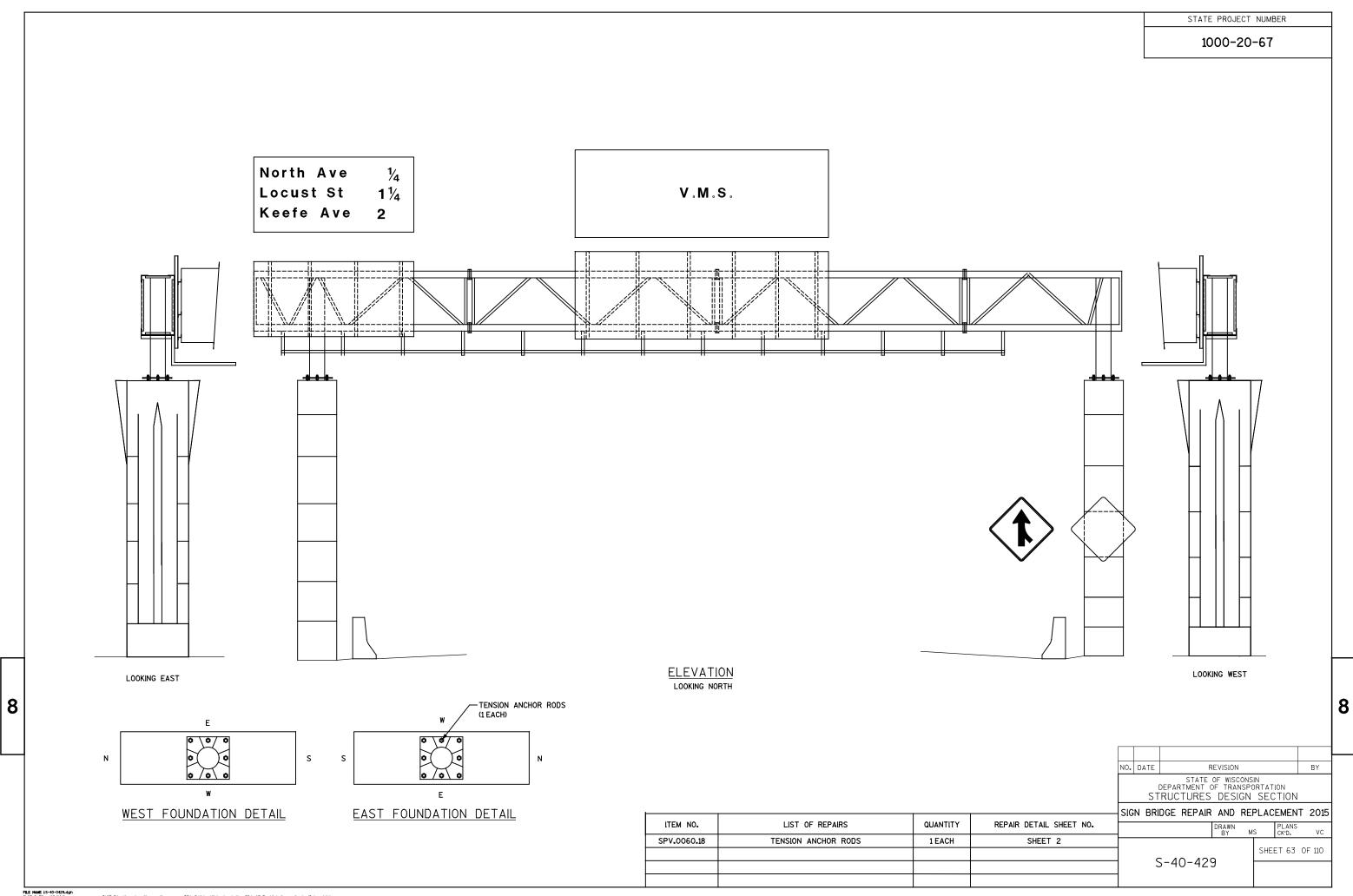


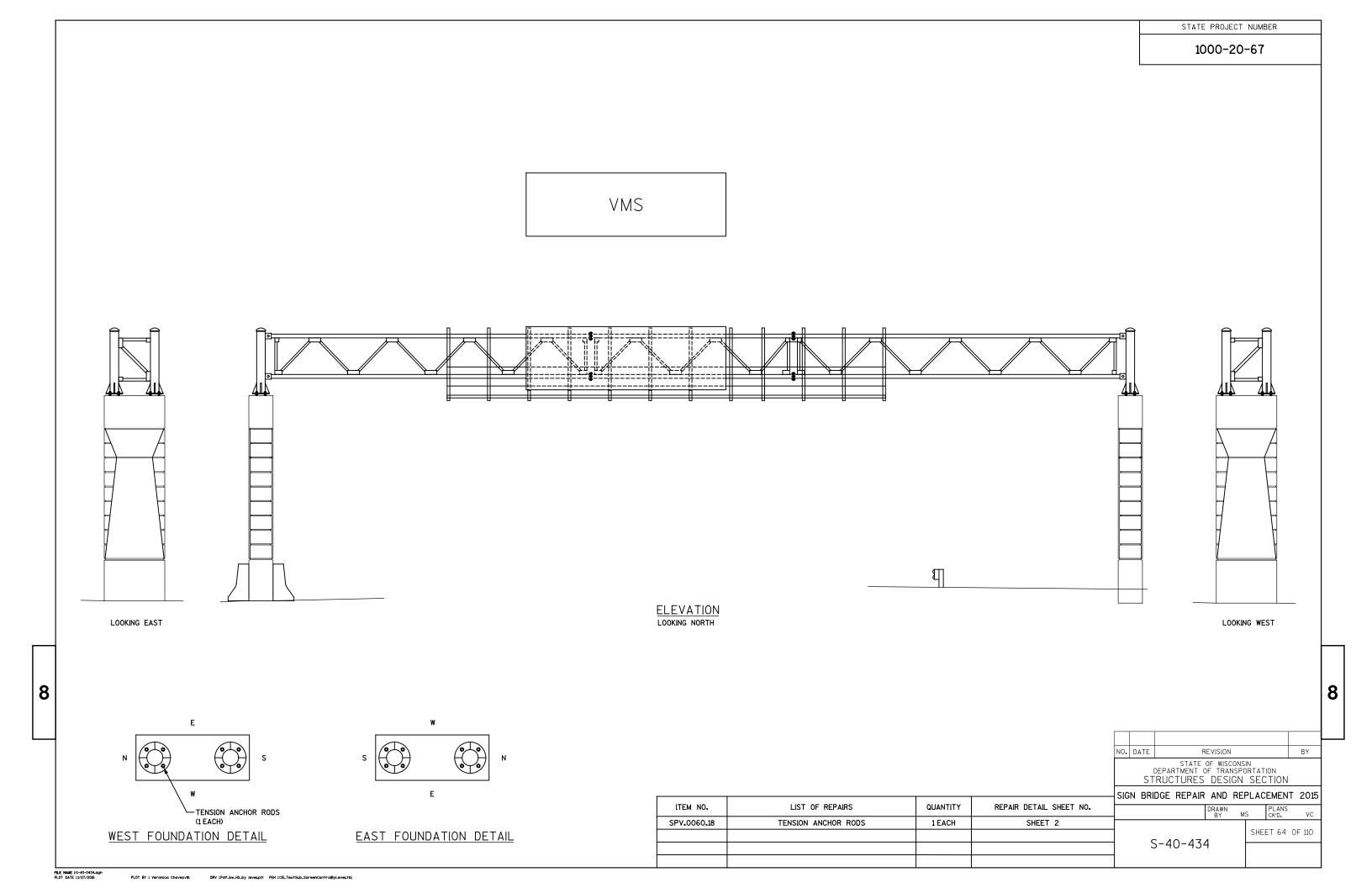


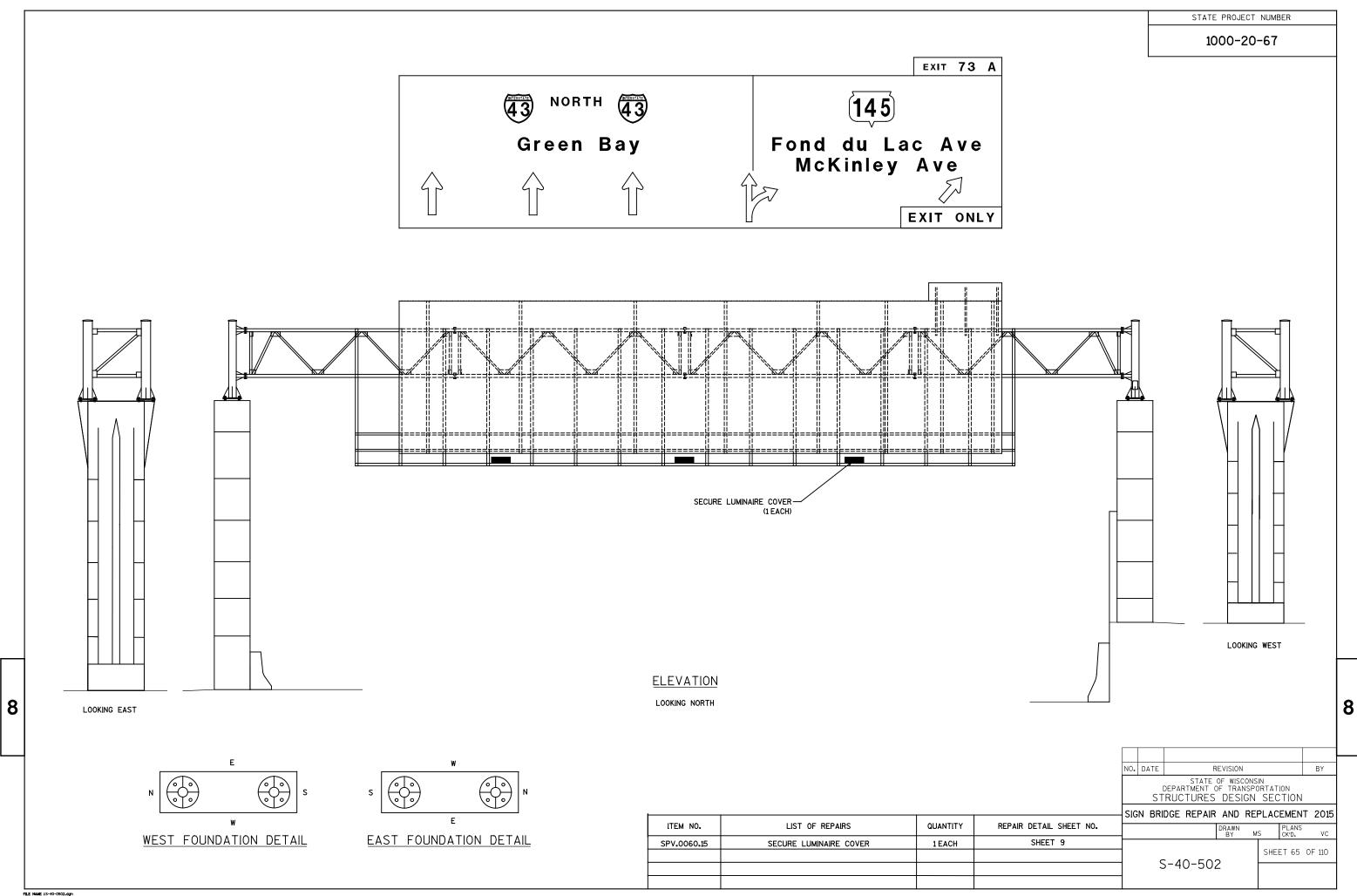




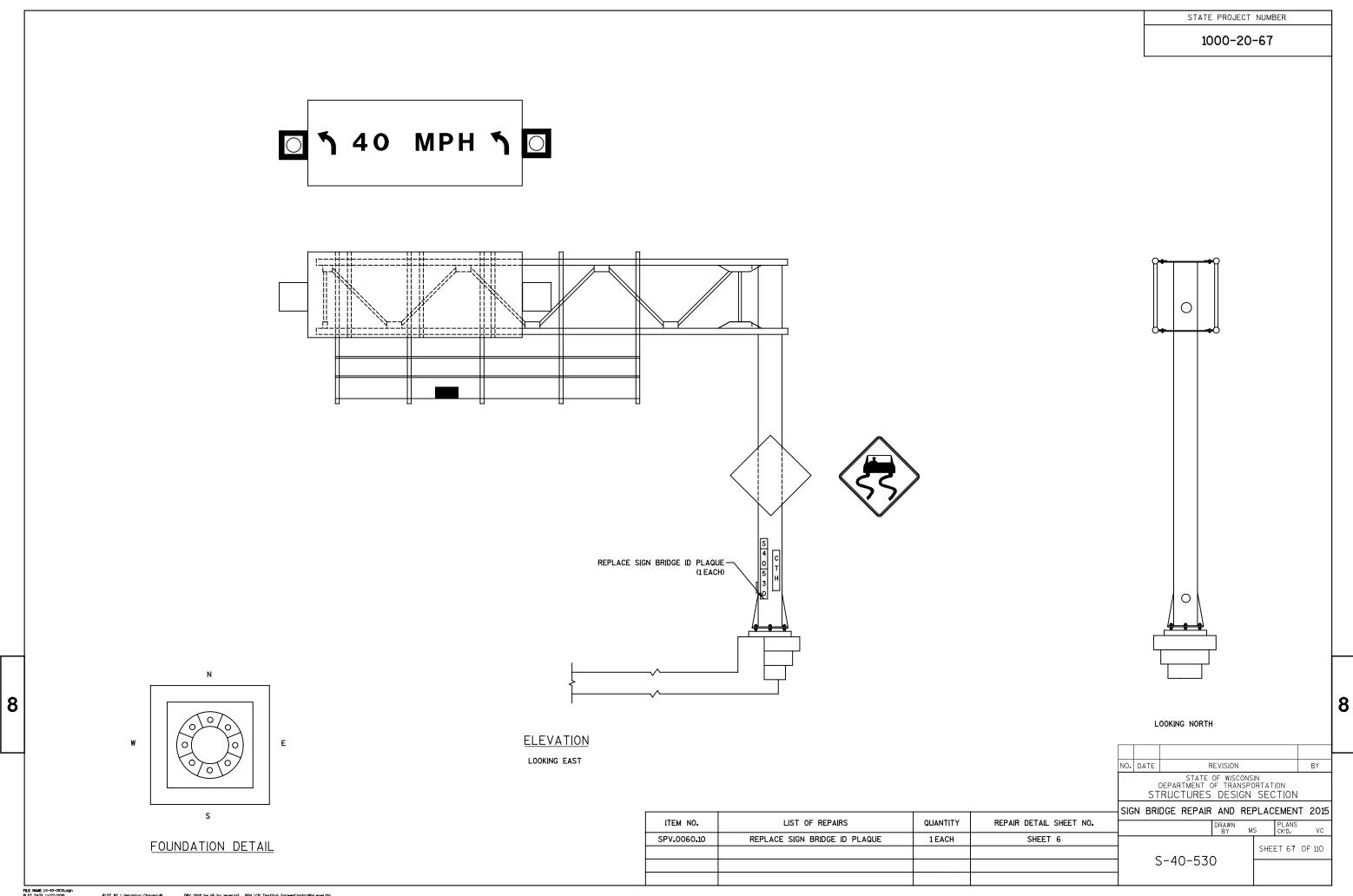


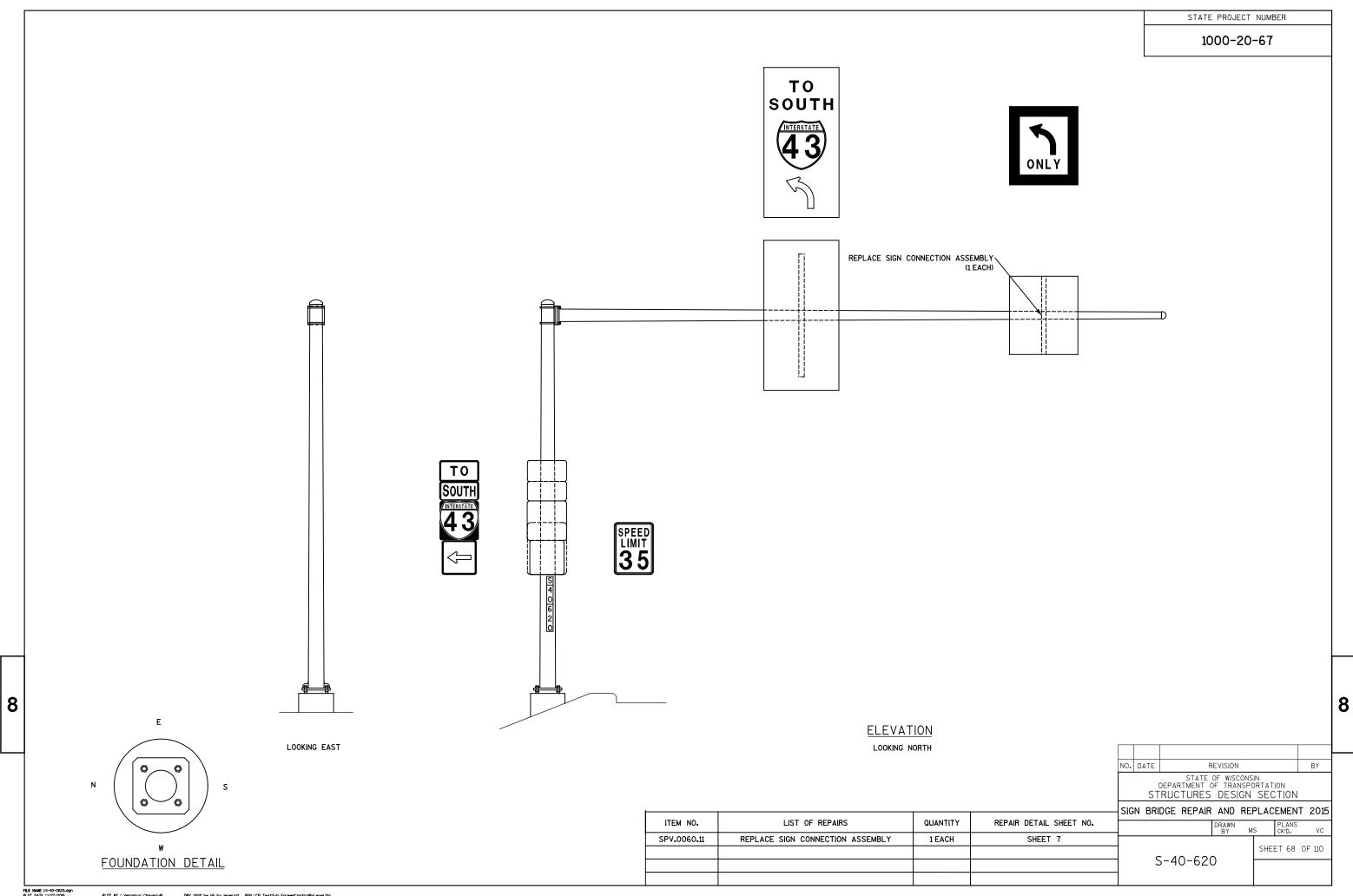


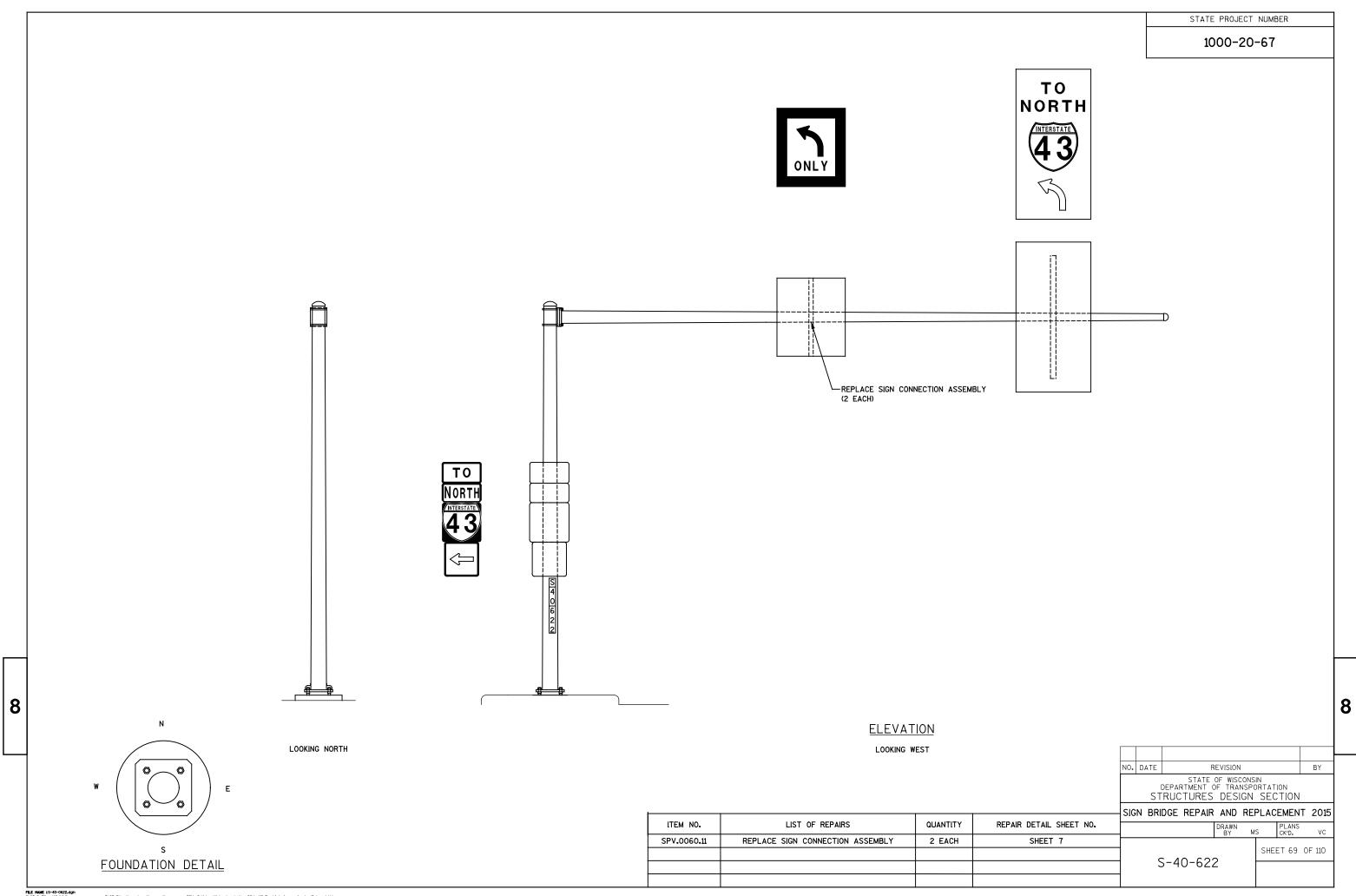




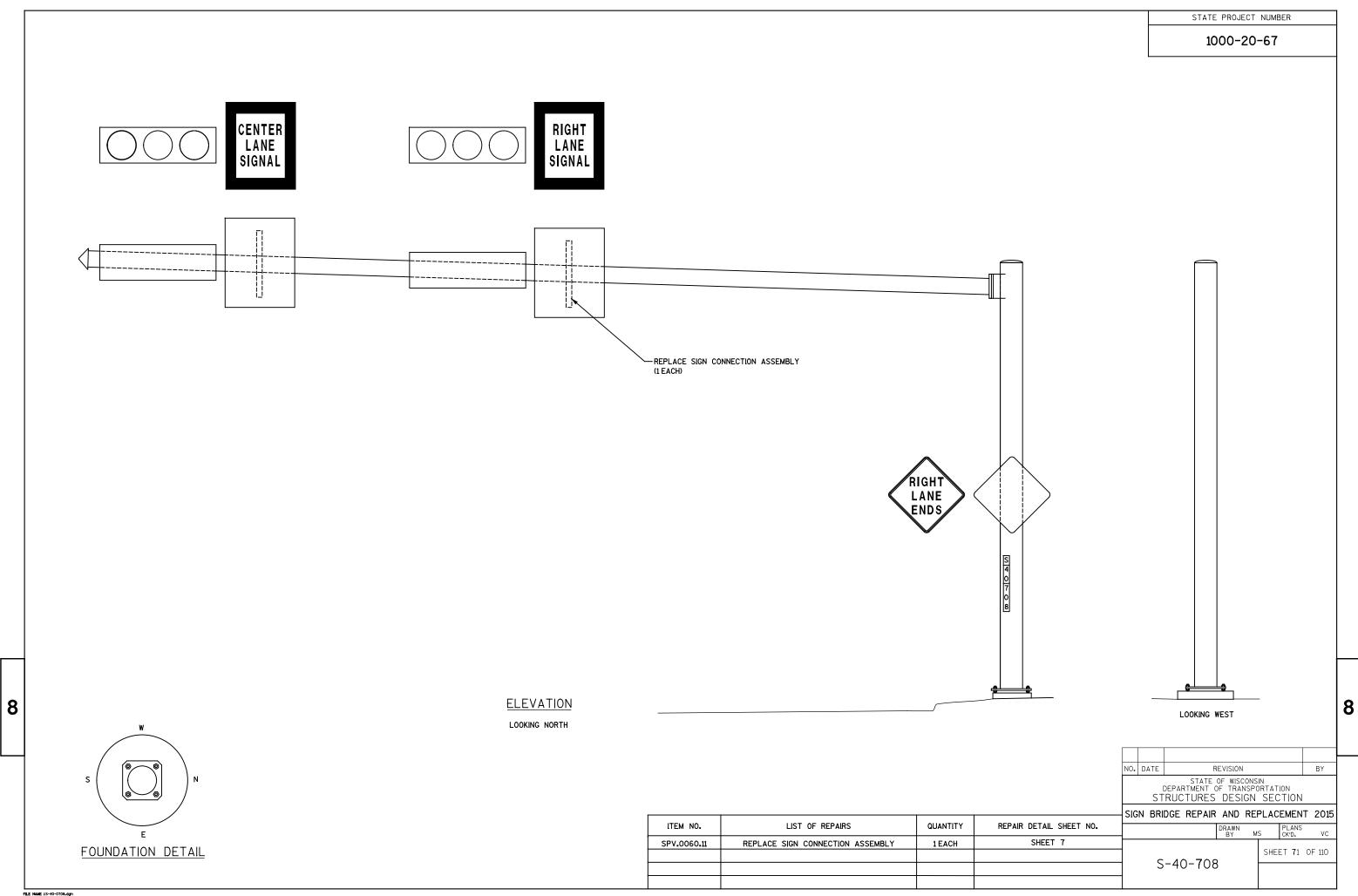
STATE PROJECT NUMBER 1000-20-67 EXIT 73 B North Ave 3/4 MILE - SECURE LUMINAIRE COVER (1 EACH) 8 **ELEVATION** LOOKING NORTH LOOKING WEST NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION SIGN BRIDGE REPAIR AND REPLACEMENT 2015 LIST OF REPAIRS REPAIR DETAIL SHEET NO. ITEM NO. QUANTITY FOUNDATION DETAIL SPV.0060.15 SECURE LUMINAIRE COVER SHEET 9 1 EACH SHEET 66 OF 110 S-40-504 PLOT BY: Veronica Chavezv8l DRV: Pdf\_bw\_HS\_by level.plt PEN: CELTextSub\_ScreenControlByLevel.tbl

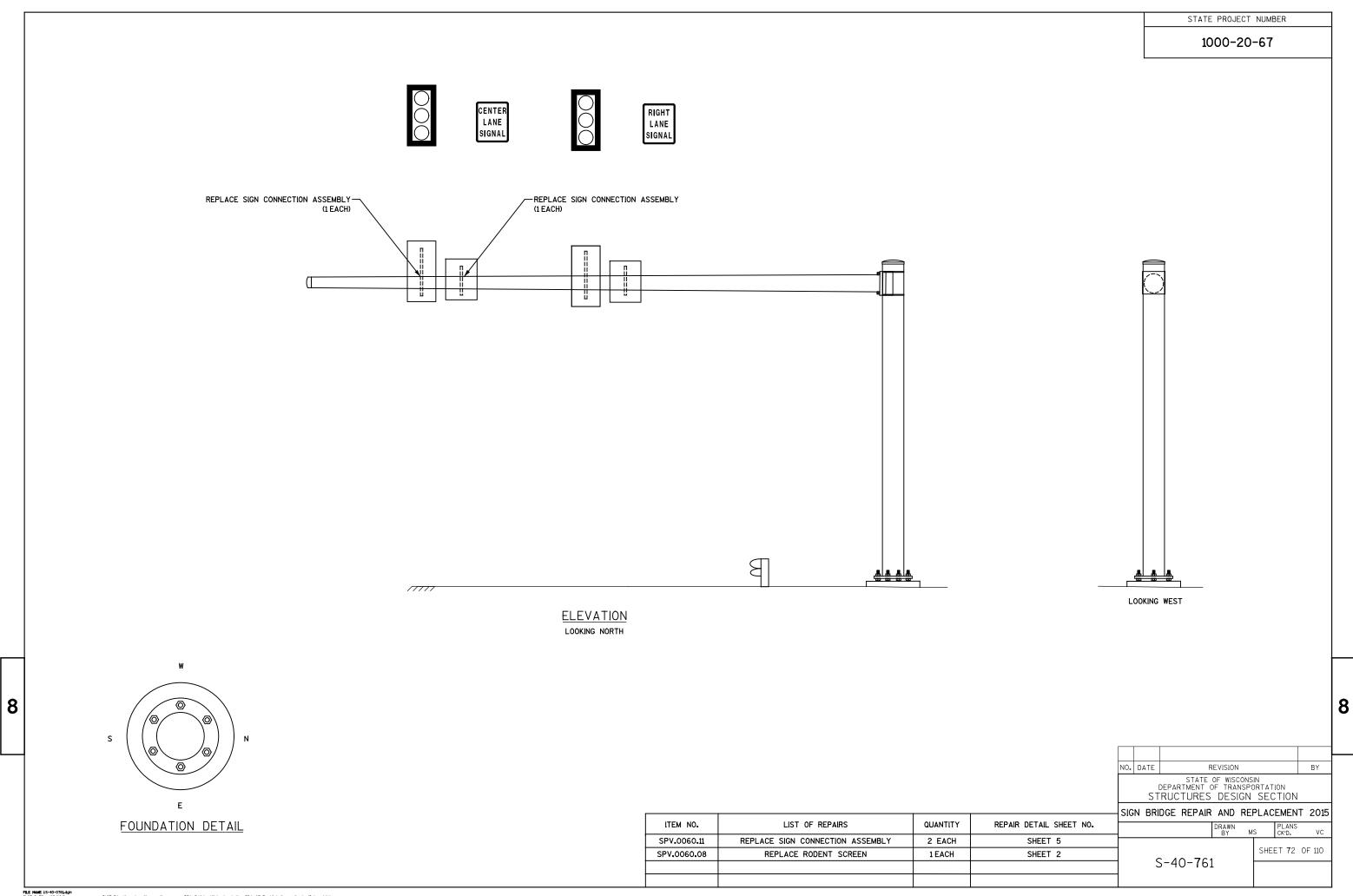


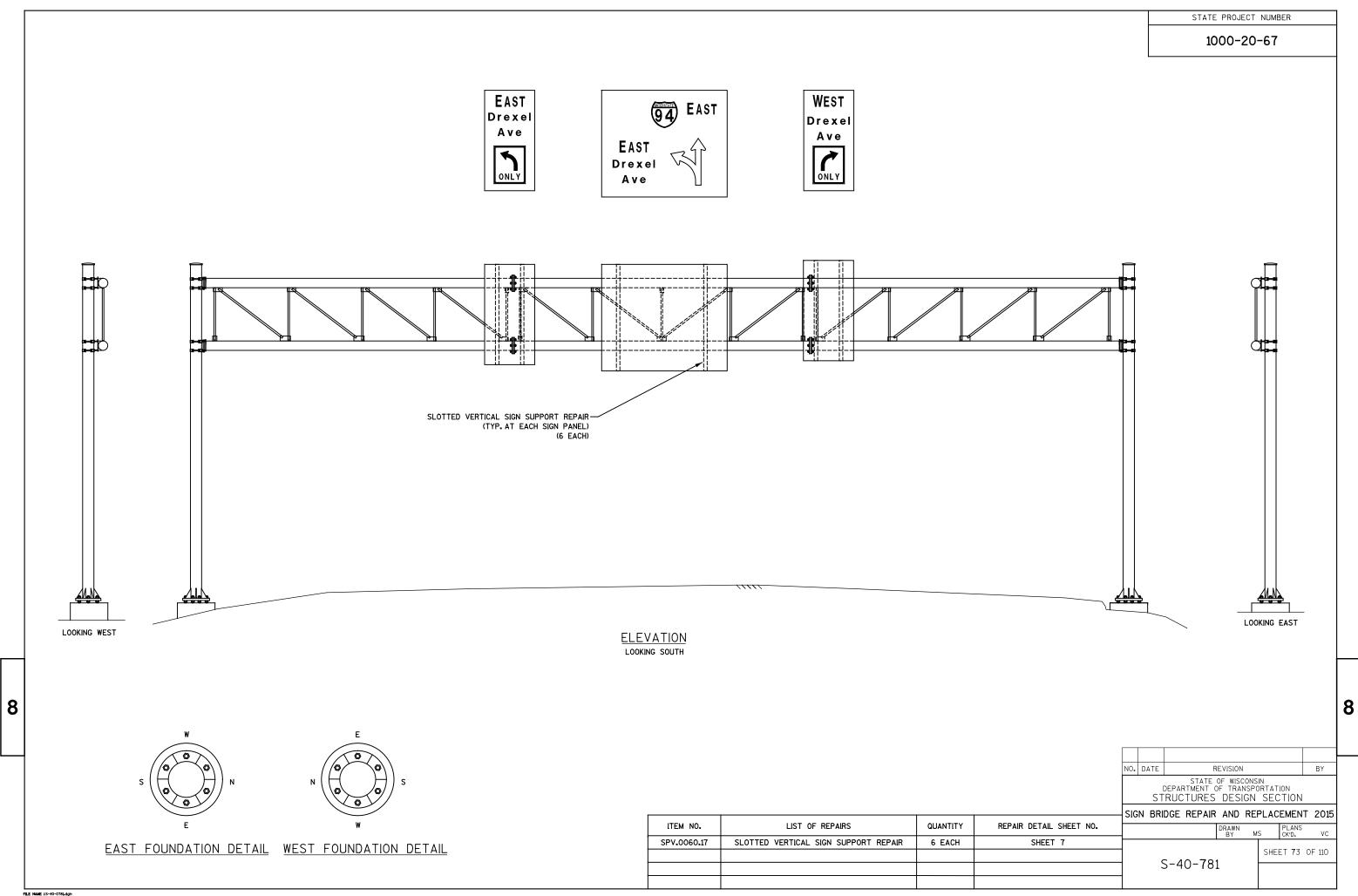


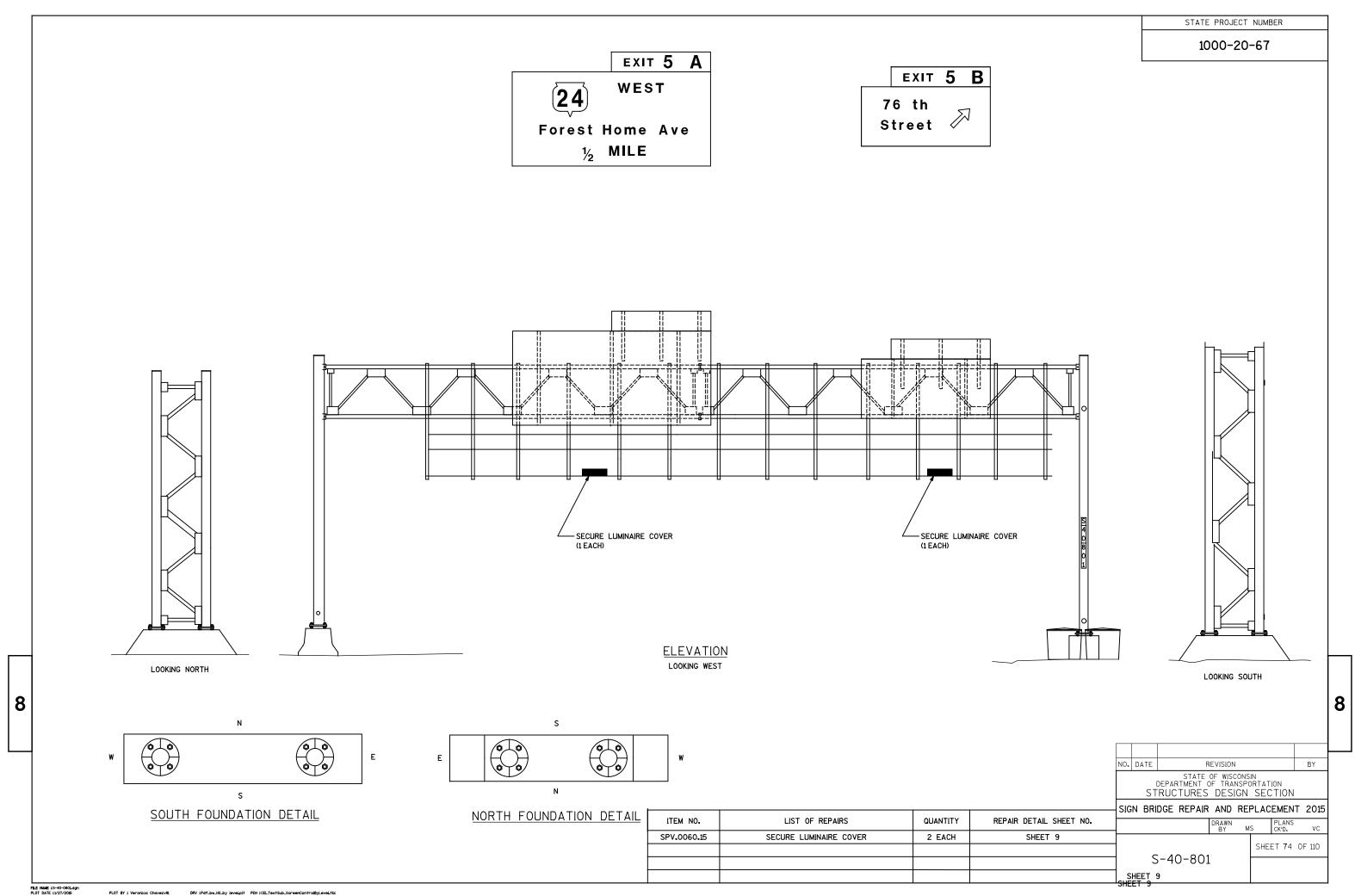


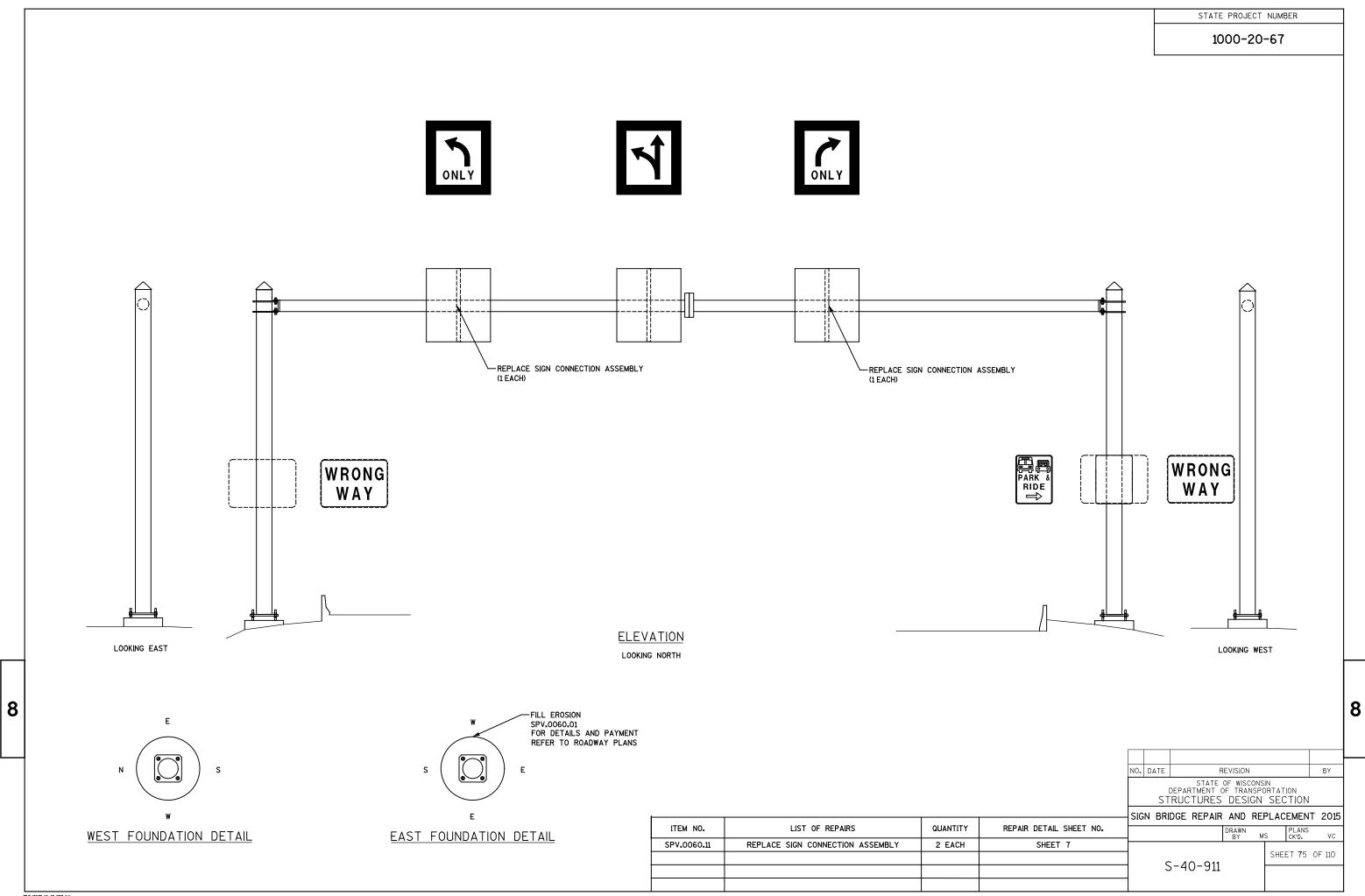
STATE PROJECT NUMBER 1000-20-67  $\begin{array}{|c|c|c|c|c|c|}\hline \hline 145 & McKinley & Ave & \frac{3}{8} \\ \hline Highland & Ave & \frac{3}{4} \\ \hline \end{array}$ 1 1/4 - SECURE LUMINAIRE COVER (1 EACH) 8 ////// Ε ////// LOOKING EAST **ELEVATION** LOOKING SOUTH S NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION SIGN BRIDGE REPAIR AND REPLACEMENT 2015 LIST OF REPAIRS REPAIR DETAIL SHEET NO. ITEM NO. QUANTITY SPV.0060.15 SECURE LUMINAIRE COVER 1 EACH SHEET 9 FOUNDATION DETAIL SHEET 70 OF 110 S-40-**7**05 DRV :Pdf\_bw\_HS\_by level.plt PEN :CELTextSub\_ScreenControlByLevel.tbl

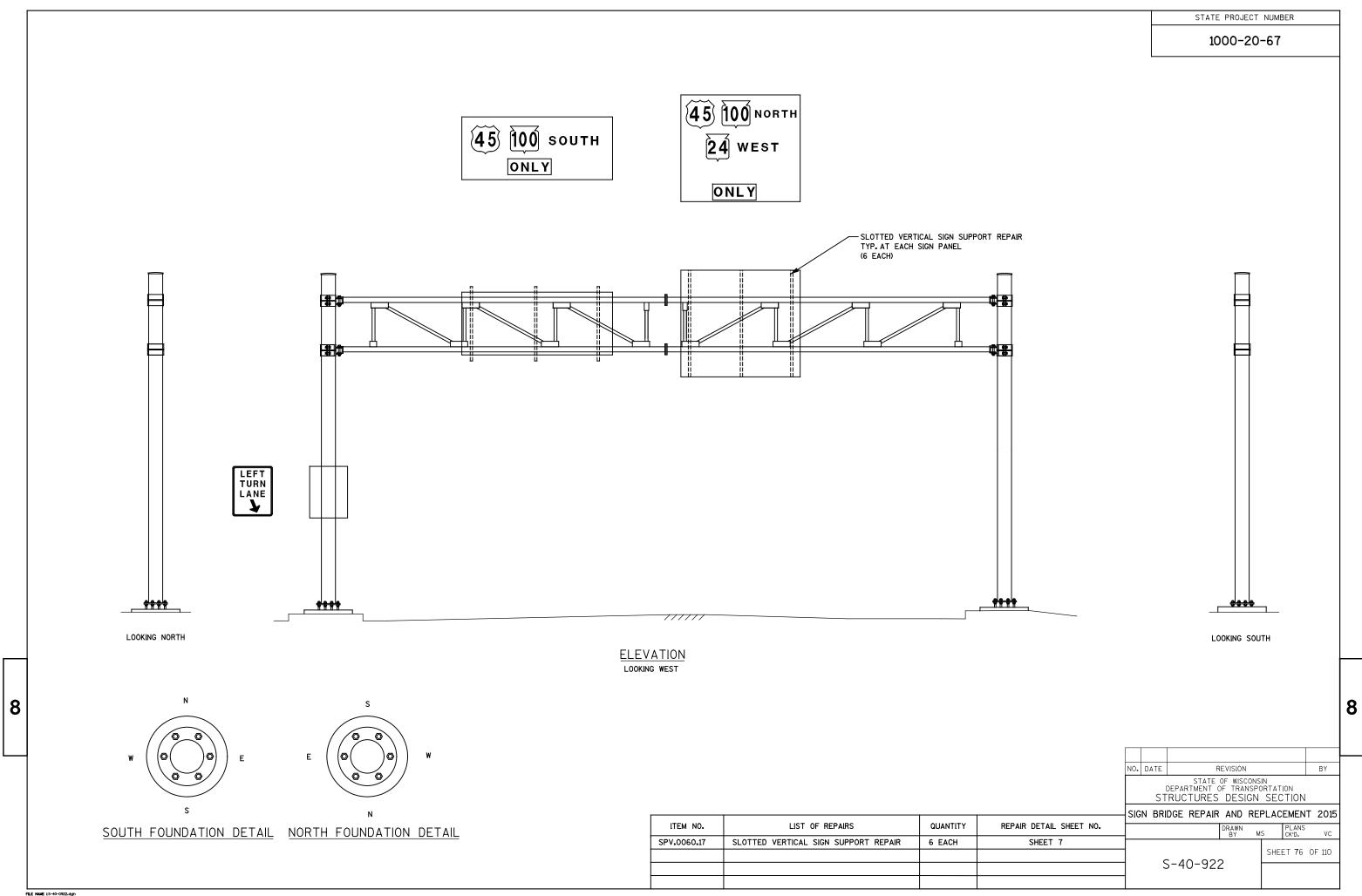


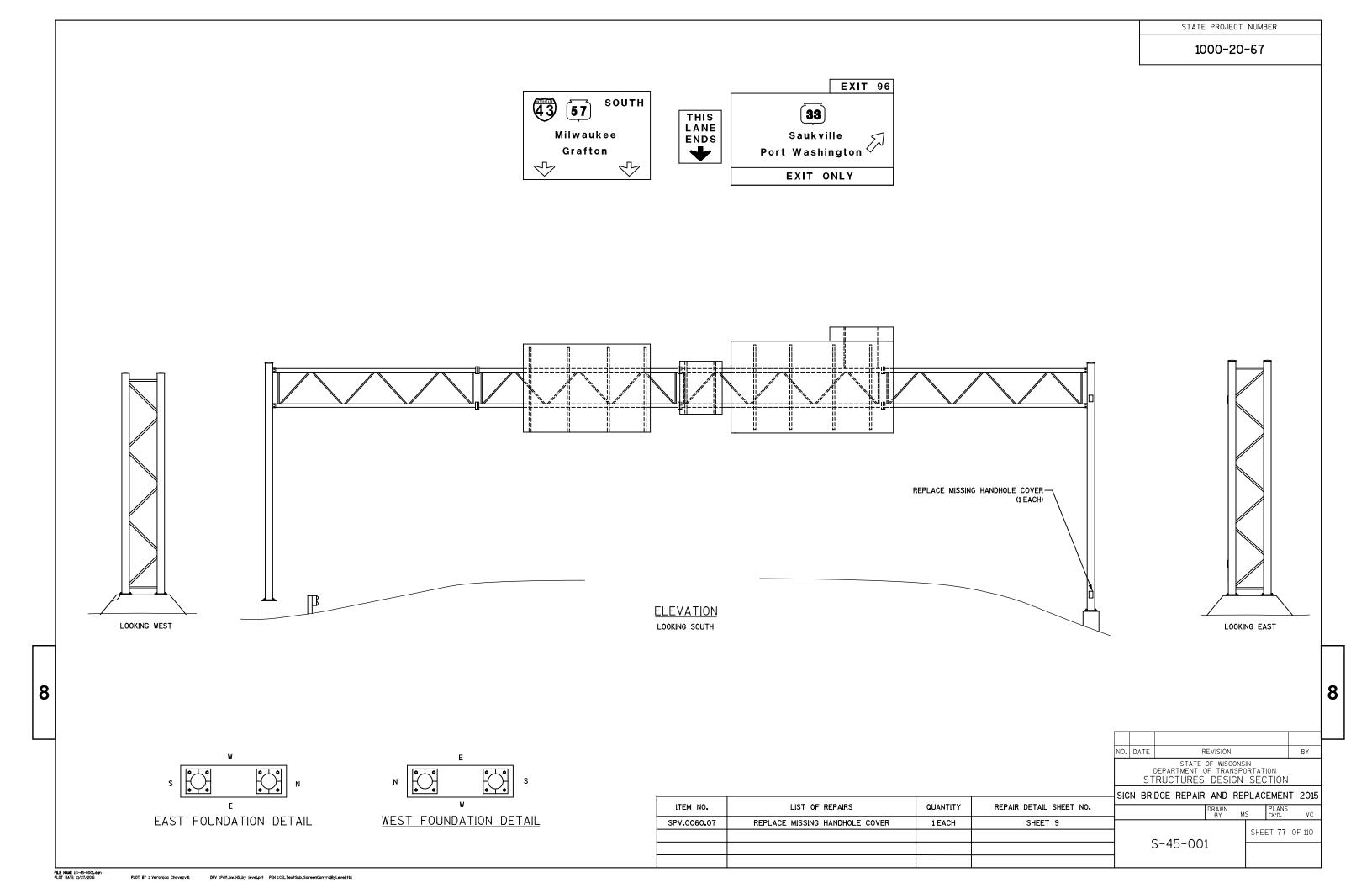




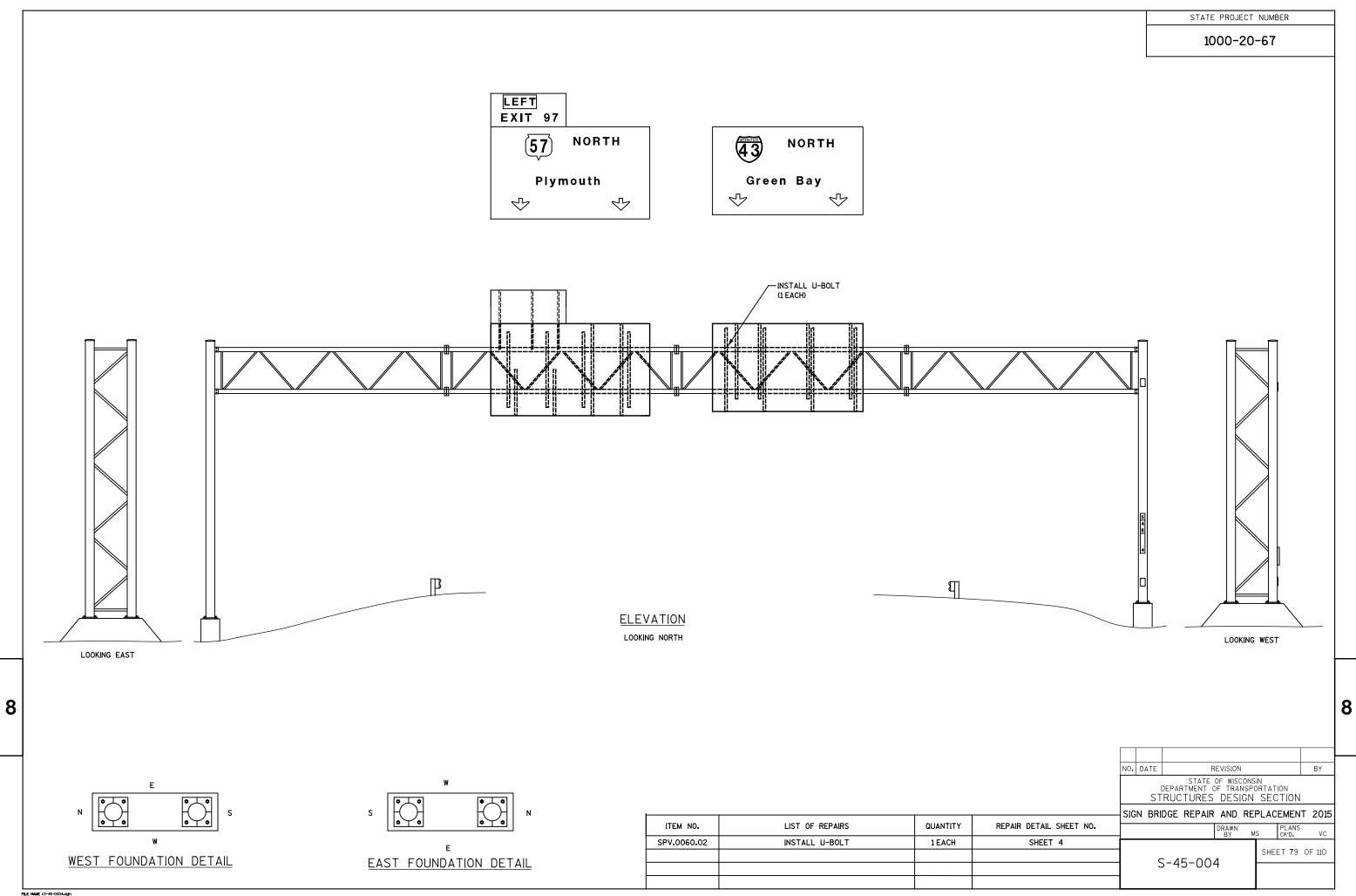




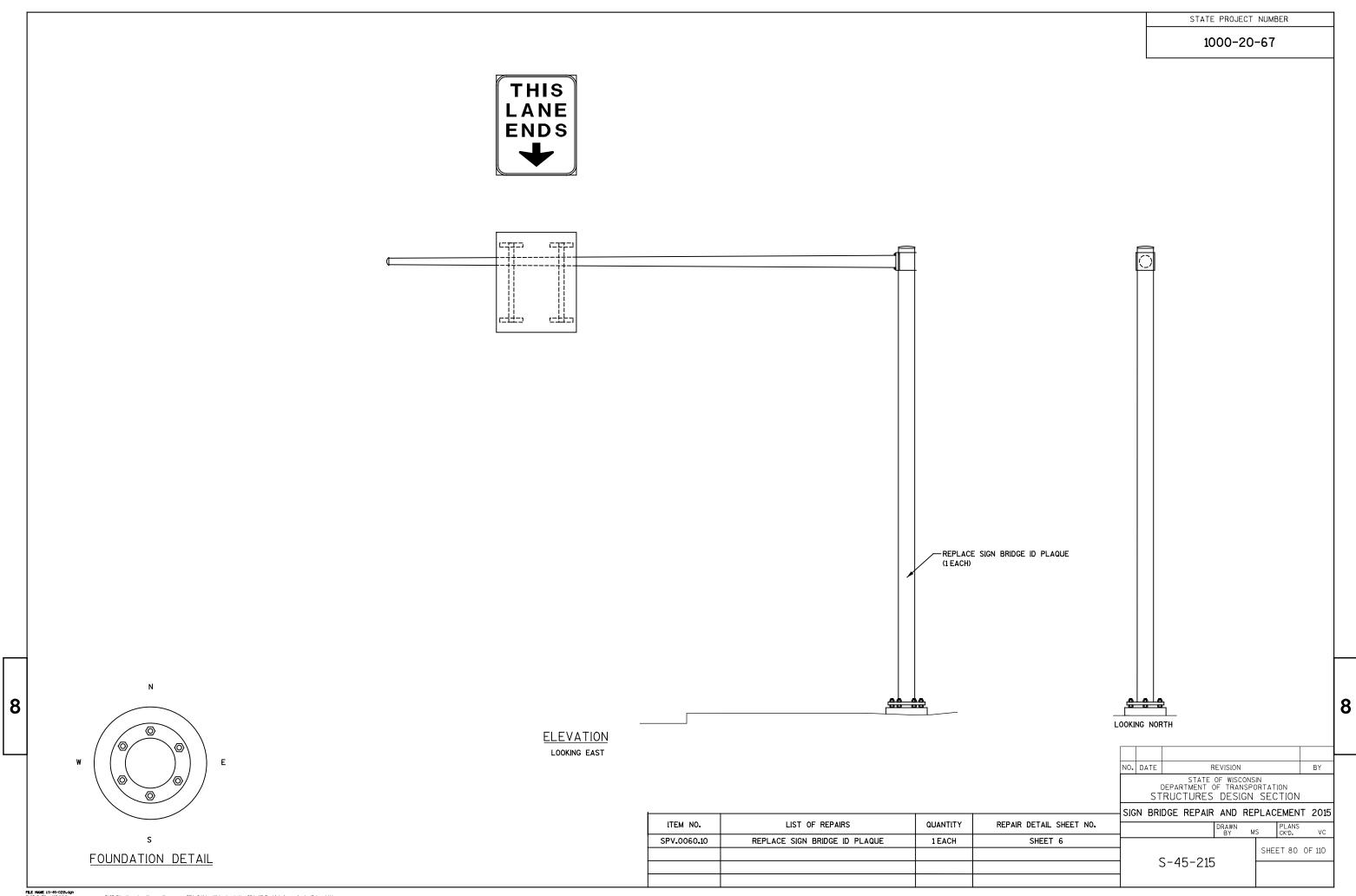


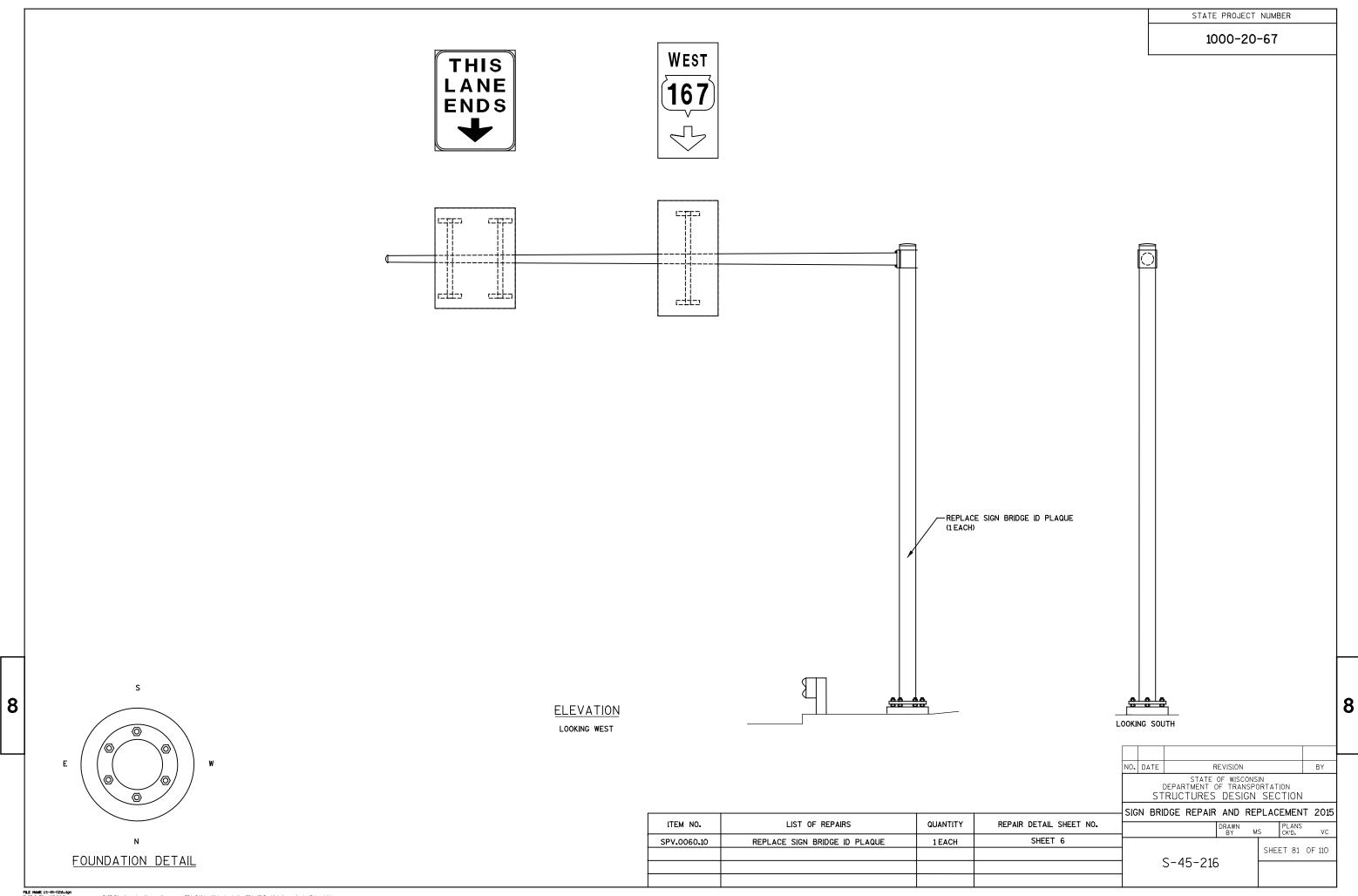


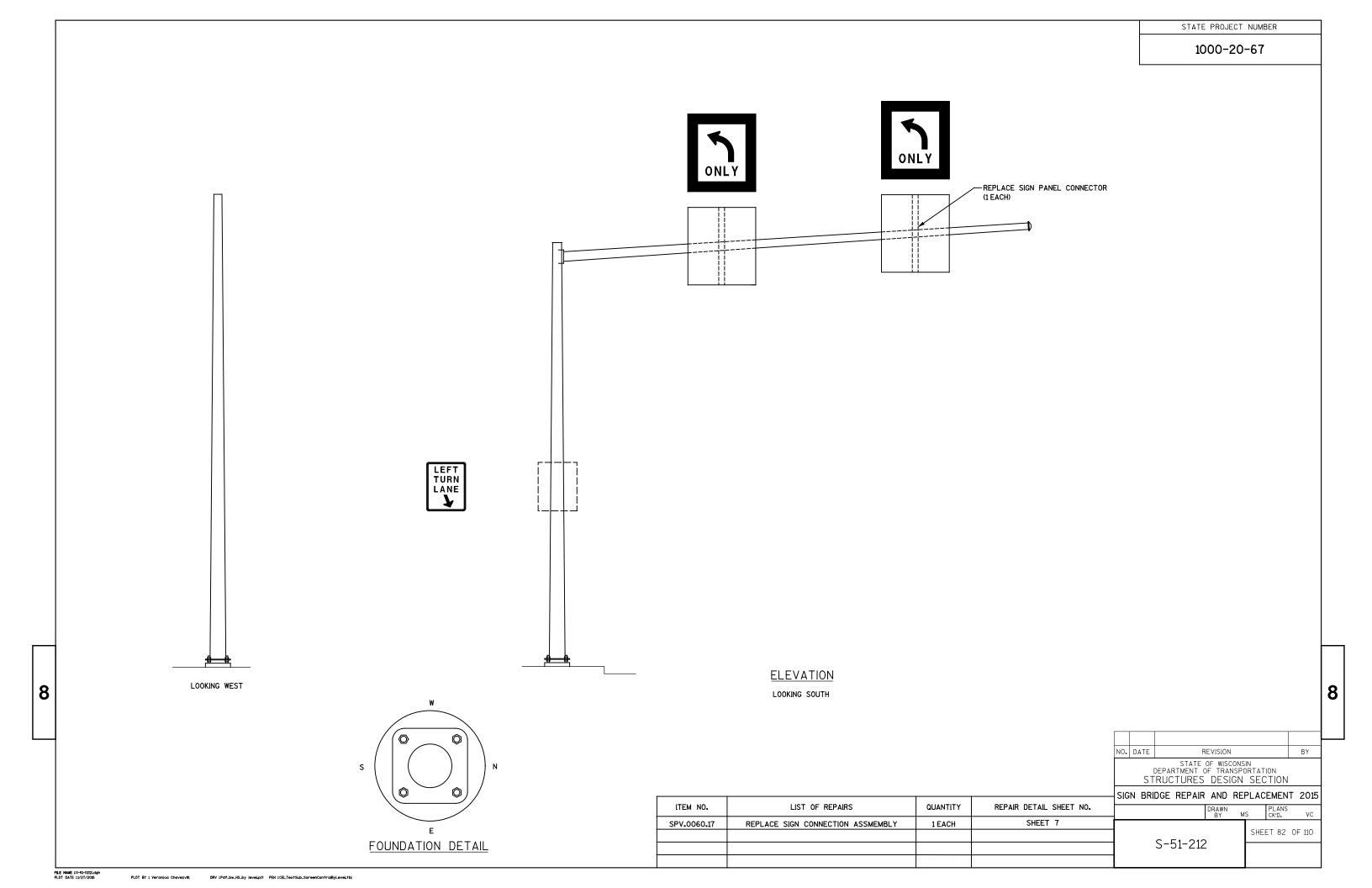
STATE PROJECT NUMBER 1000-20-67 EXIT 96 SOUTH **43 57** (33) THIS LANE ENDS Saukville Milwaukee Port Washington Grafton EXIT 🗣 ONLY — TIGHTEN LOOSE U-BOLT (1 EACH) **ELEVATION** LOOKING EAST LOOKING SOUTH LOOKING WEST 8 8 NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION EAST FOUNDATION DETAIL WEST FOUNDATION DETAIL SIGN BRIDGE REPAIR AND REPLACEMENT 2015 REPAIR DETAIL SHEET NO. ITEM NO. LIST OF REPAIRS QUANTITY SPV.0060.20 TIGHTEN LOOSE U-BOLT SHEET 3 1 EACH SHEET 78 OF 110 S-45-003 DRV :Pdf\_bw\_HS\_by level.plt PEN :CELTextSub\_ScreenControlByLevel.tbl

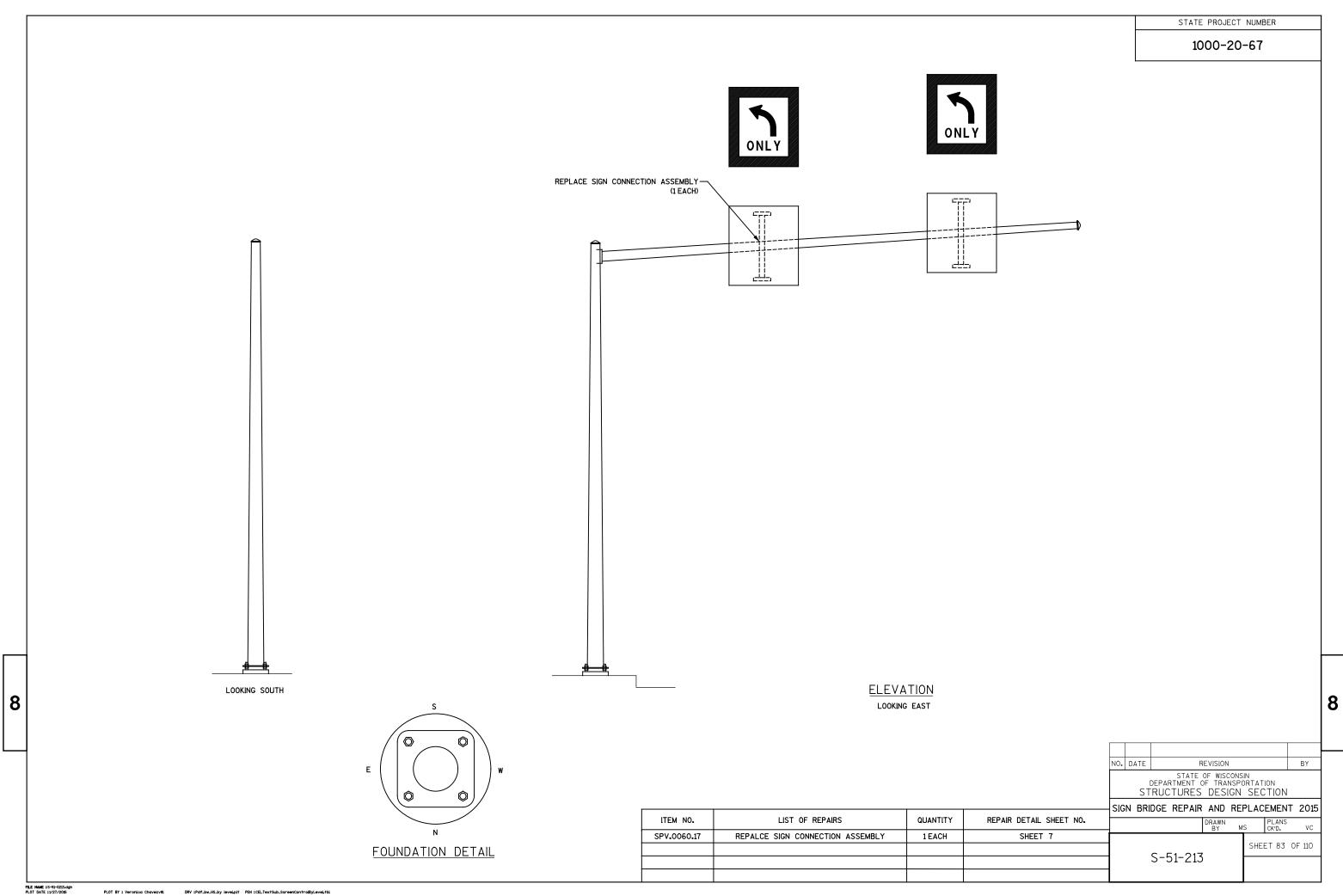


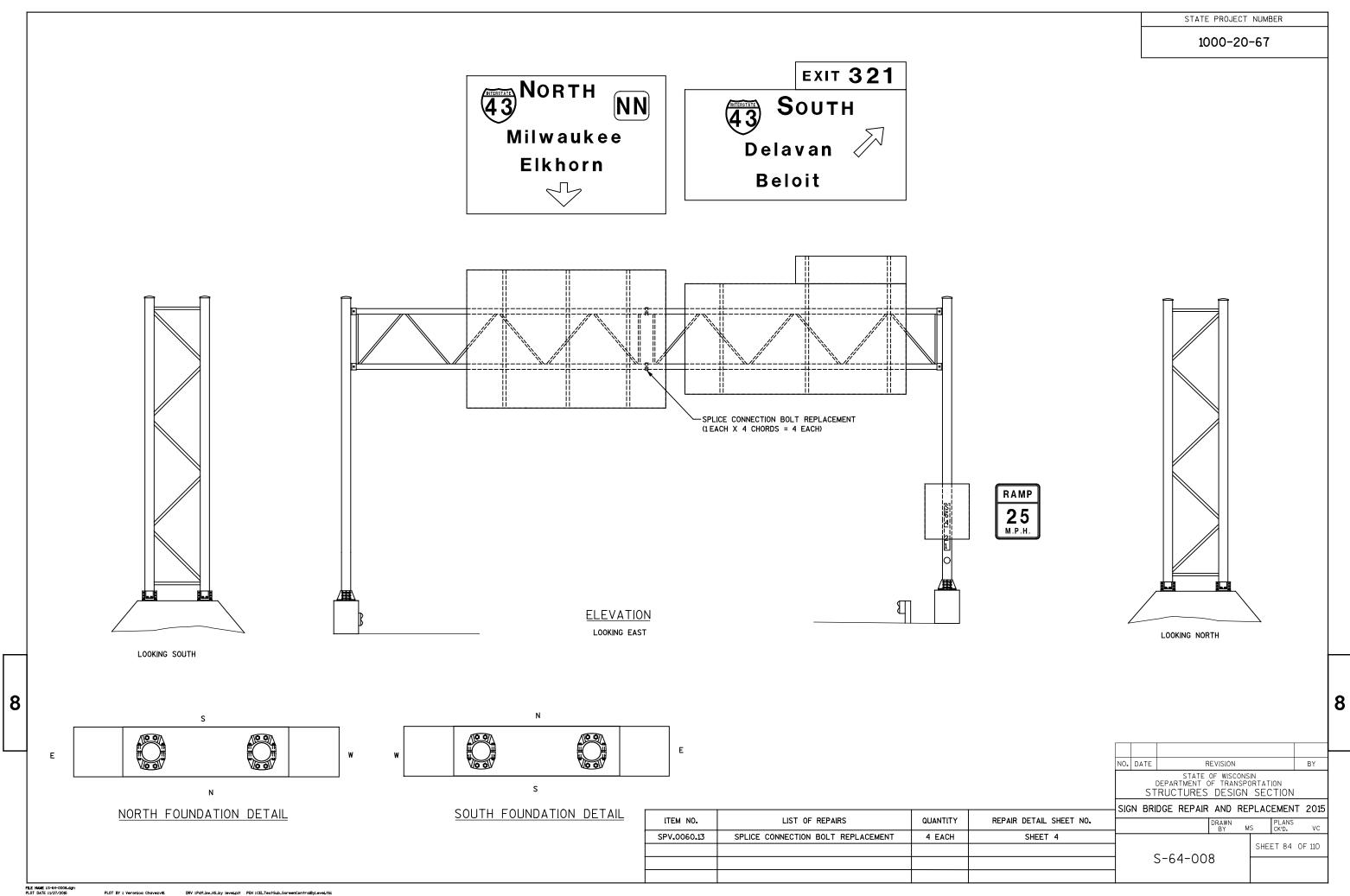
gn
PLOT BY: Veronica Chavezvěl DRV:Pdf\_bw\_HS\_by level.plt PEN:CELTextSub\_ScreenControlByLevel.tbl



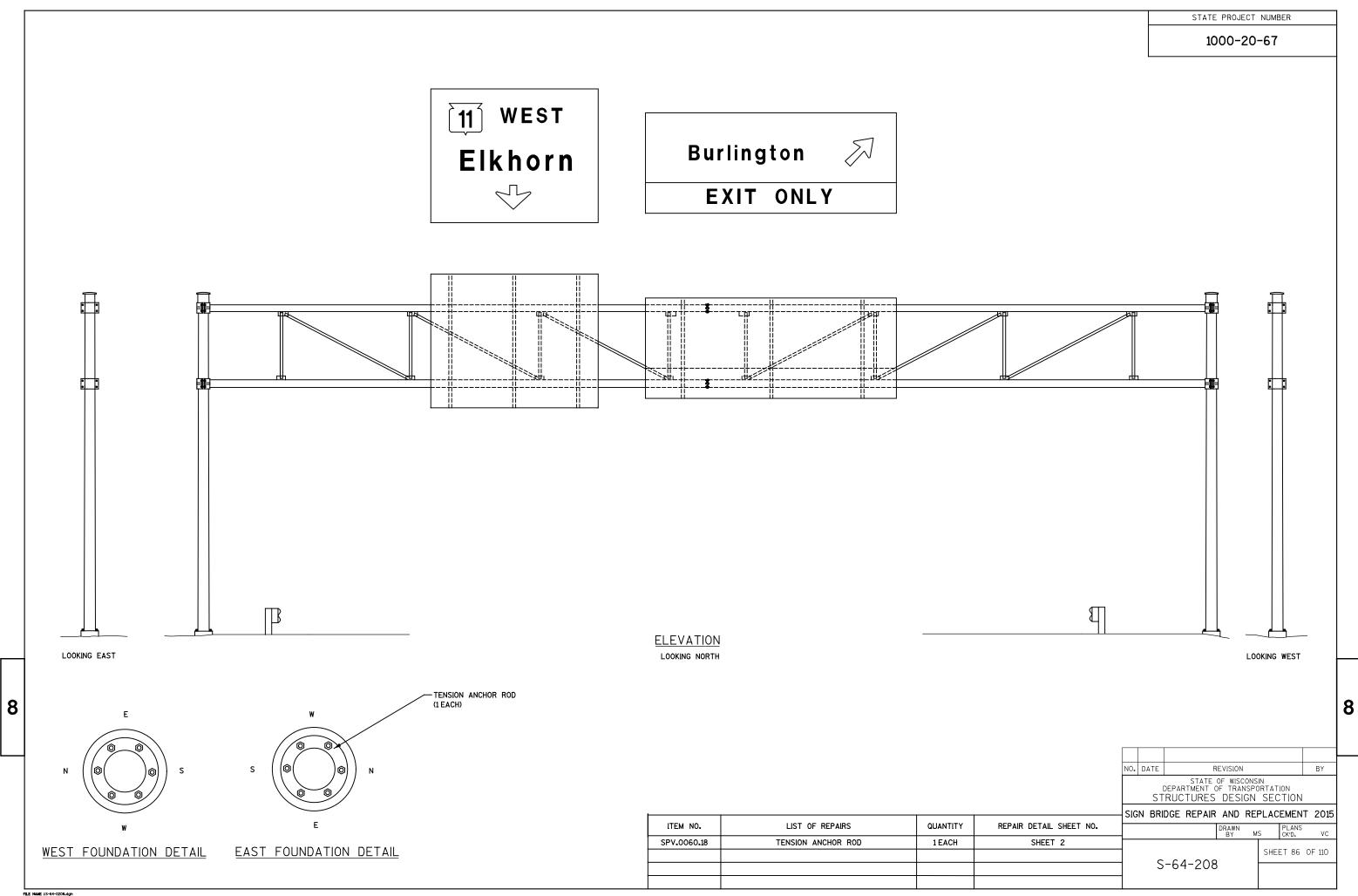


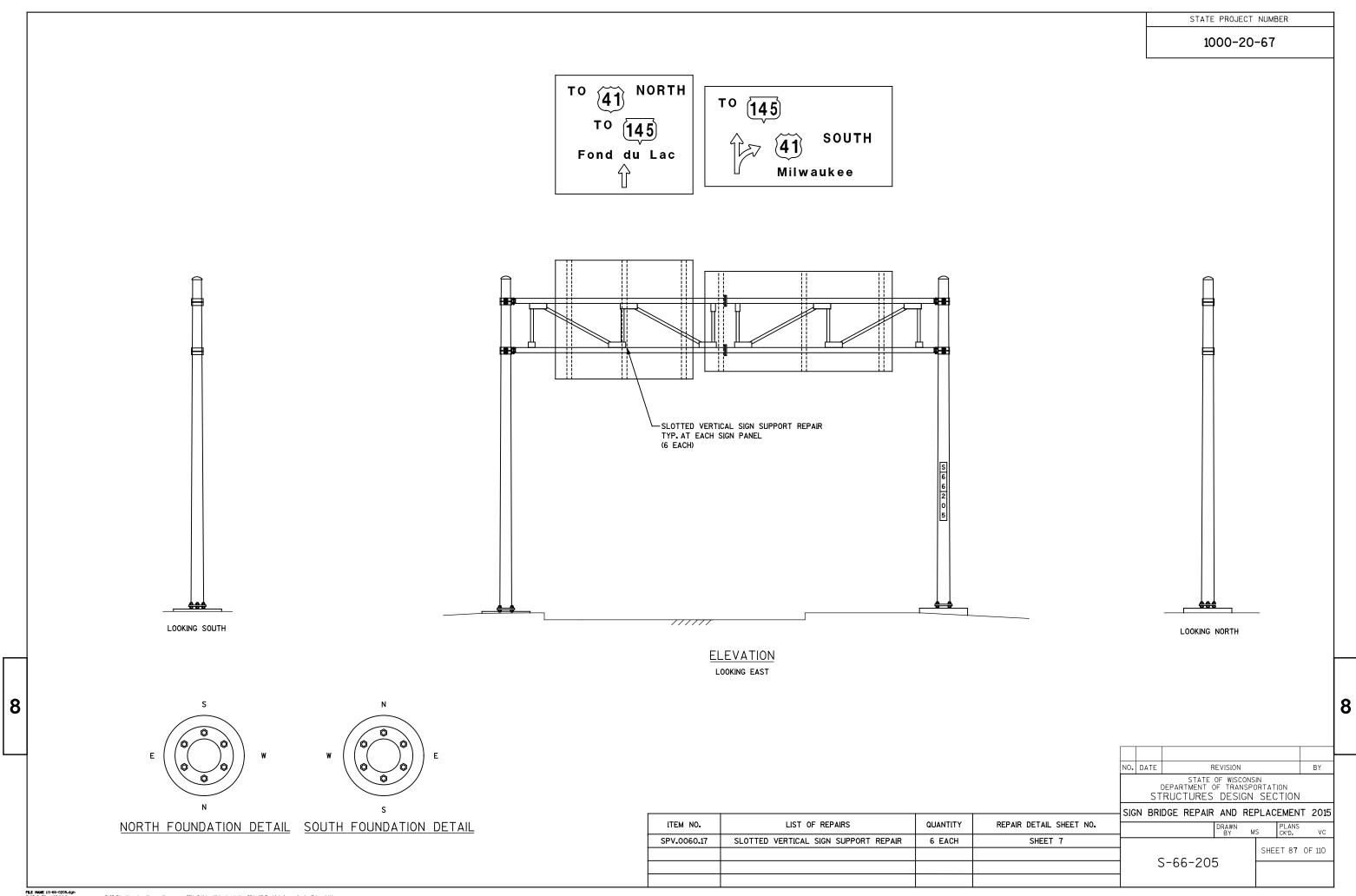


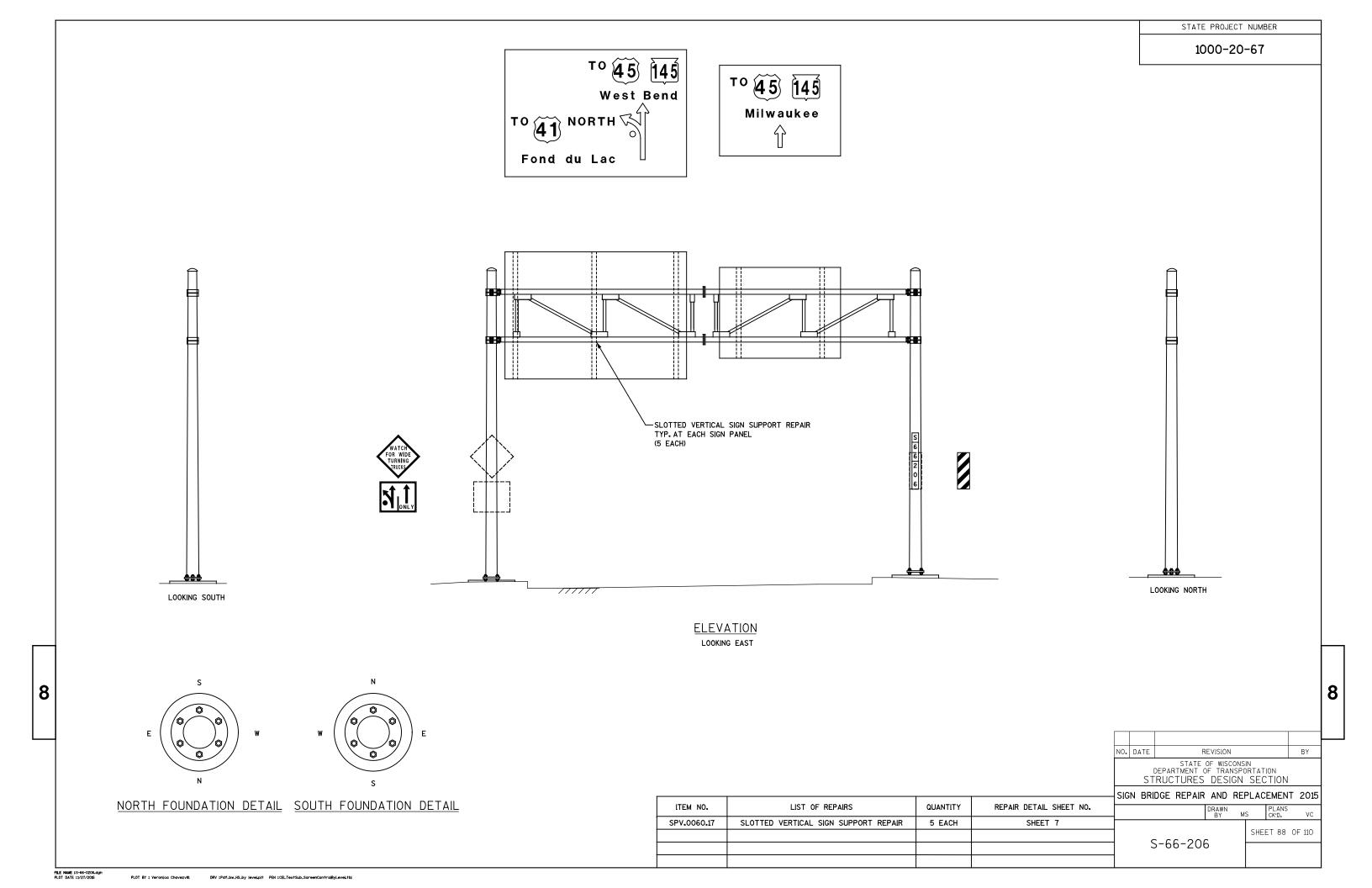


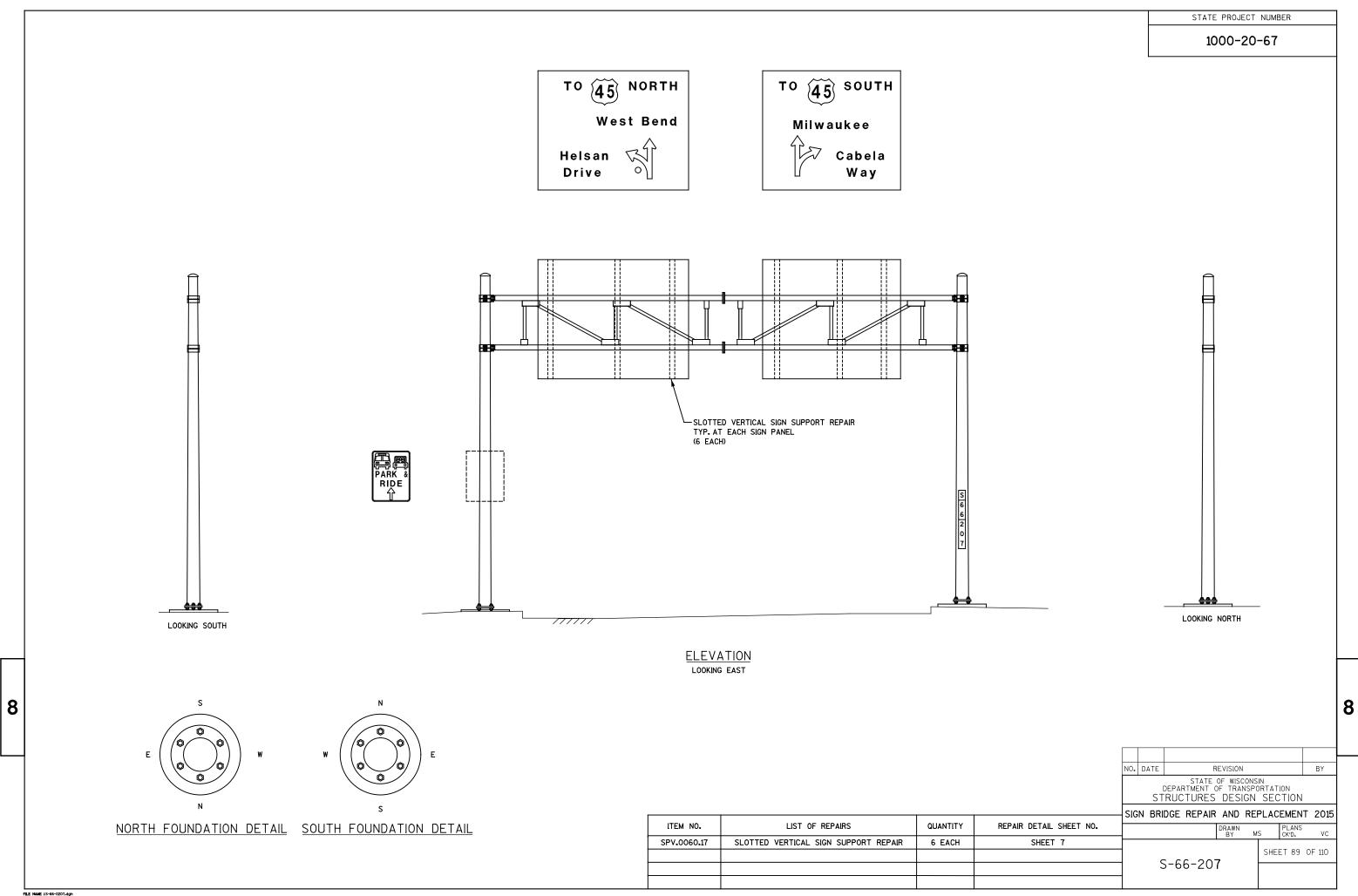


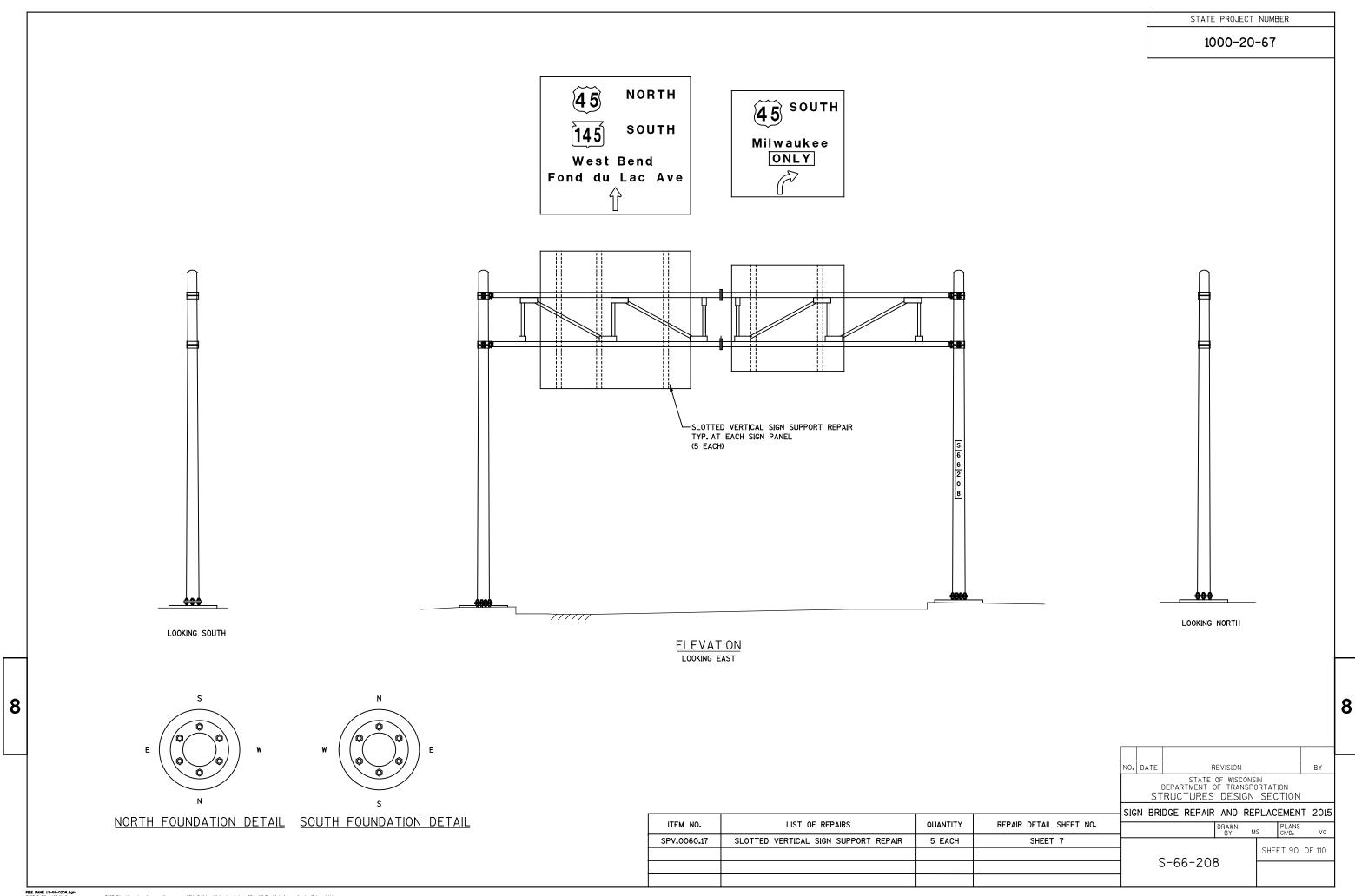
STATE PROJECT NUMBER 1000-20-67 **EXIT** 321 south NORTH 43 Delavan Beloit Milwaukee  $\frac{1}{4}$  MILE SECURE/REPLACE POST CAP-35 M.P.H. **ELEVATION** LOOKING WEST LOOKING NORTH LOOKING SOUTH 8 8 Ε NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION S SOUTH FOUNDATION DETAIL NORTH FOUNDATION DETAIL SIGN BRIDGE REPAIR AND REPLACEMENT 2015 ITEM NO. LIST OF REPAIRS QUANTITY REPAIR DETAIL SHEET NO. SPV.0060.16 SECURE/REPLACE POST CAP SHEET 4 1 EACH SHEET 85 OF 110 S-64-014 PLOT BY : Veronica Chavezv8l DRV :Pdf\_bw\_HS\_by level.plt PEN :CELTextSub\_ScreenControlByLevel.tbl

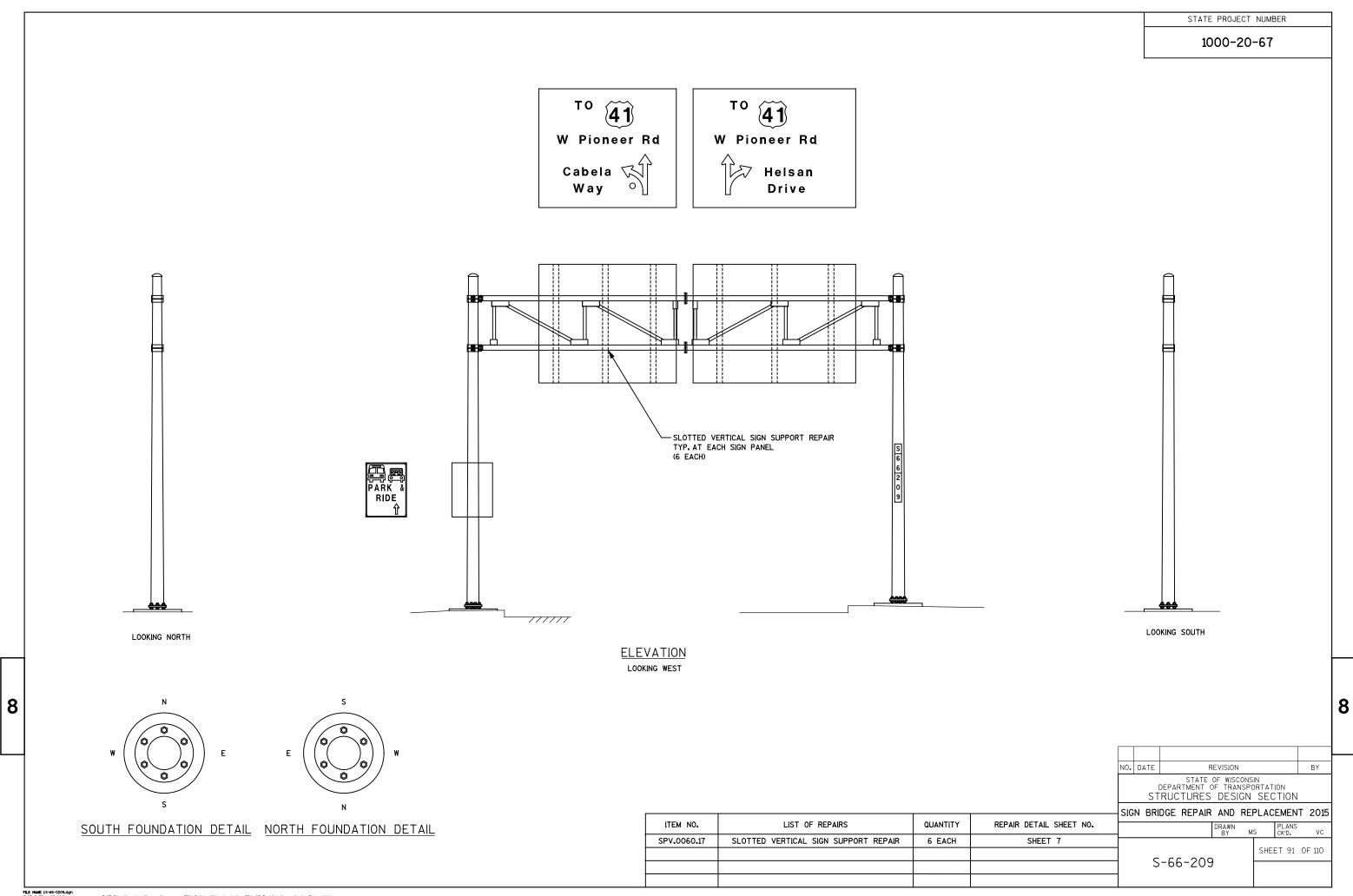


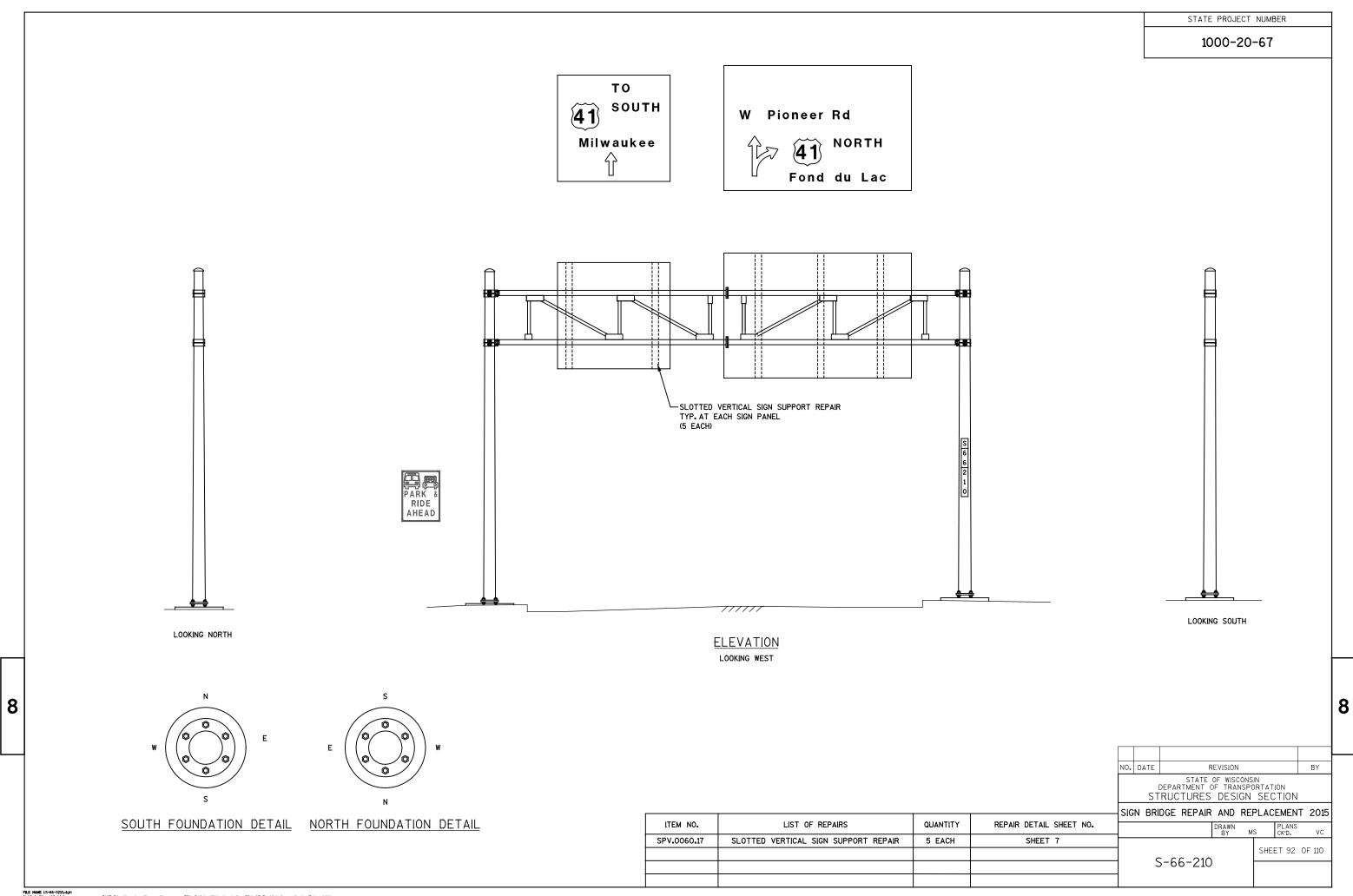


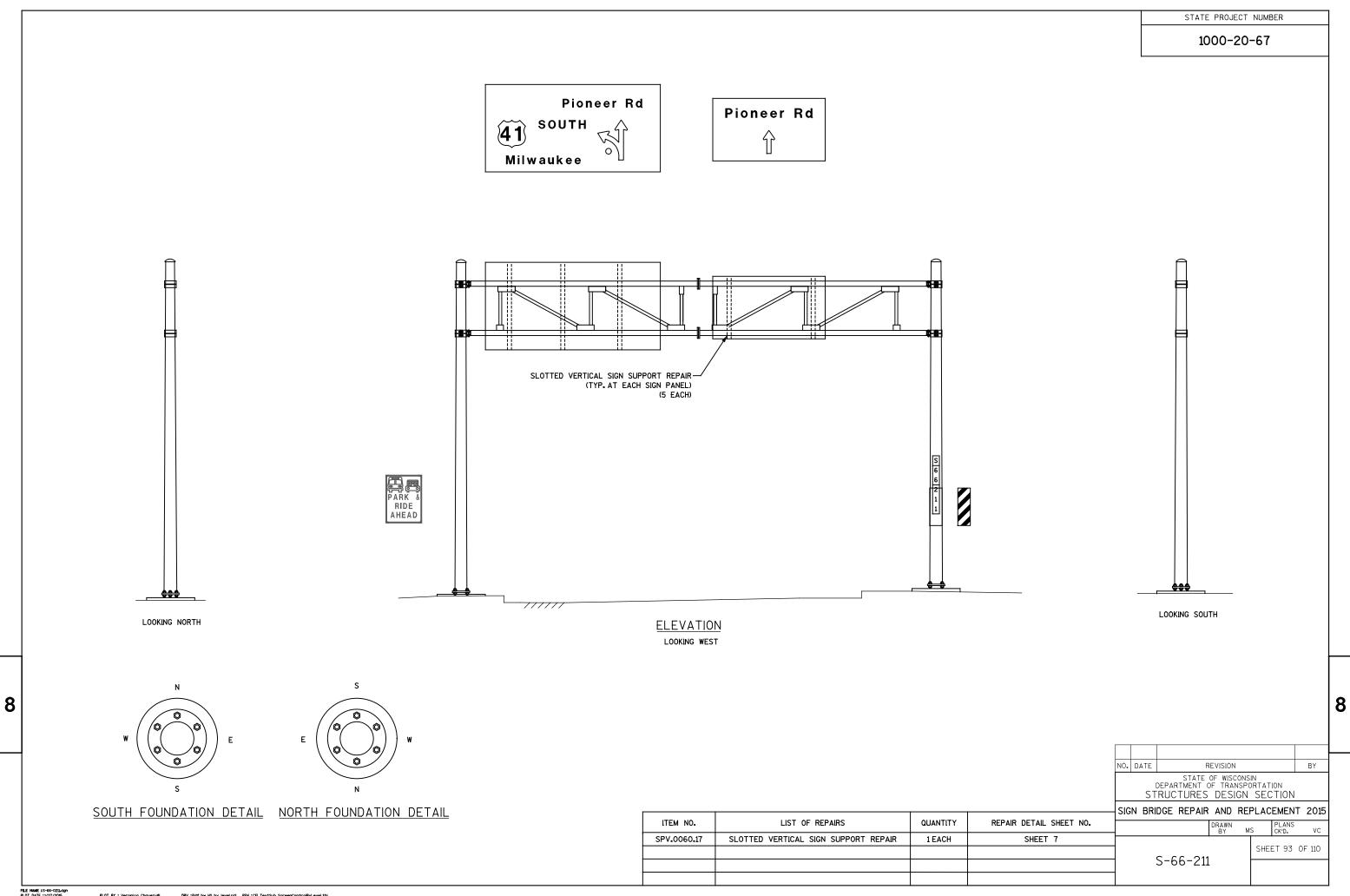


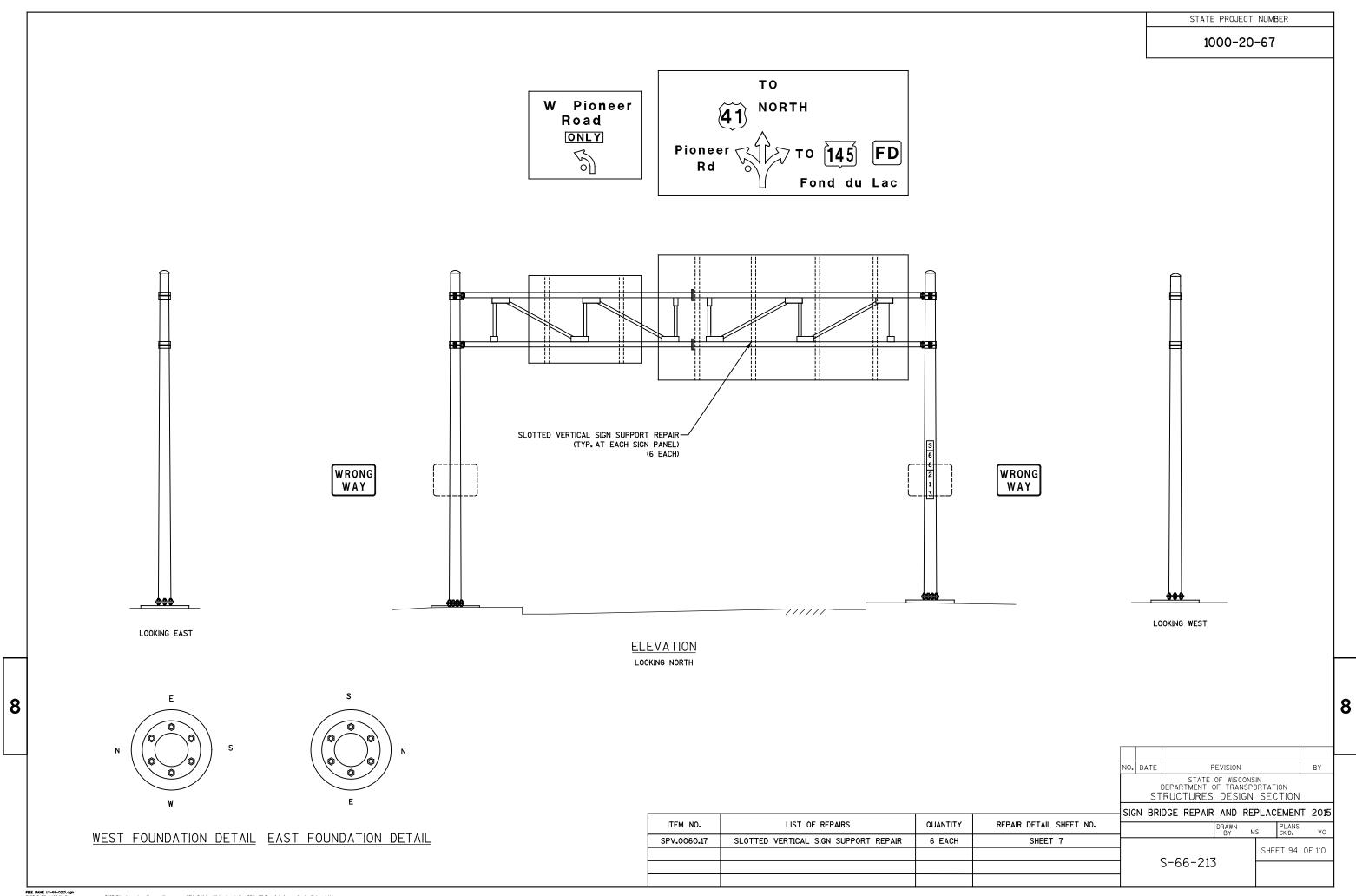


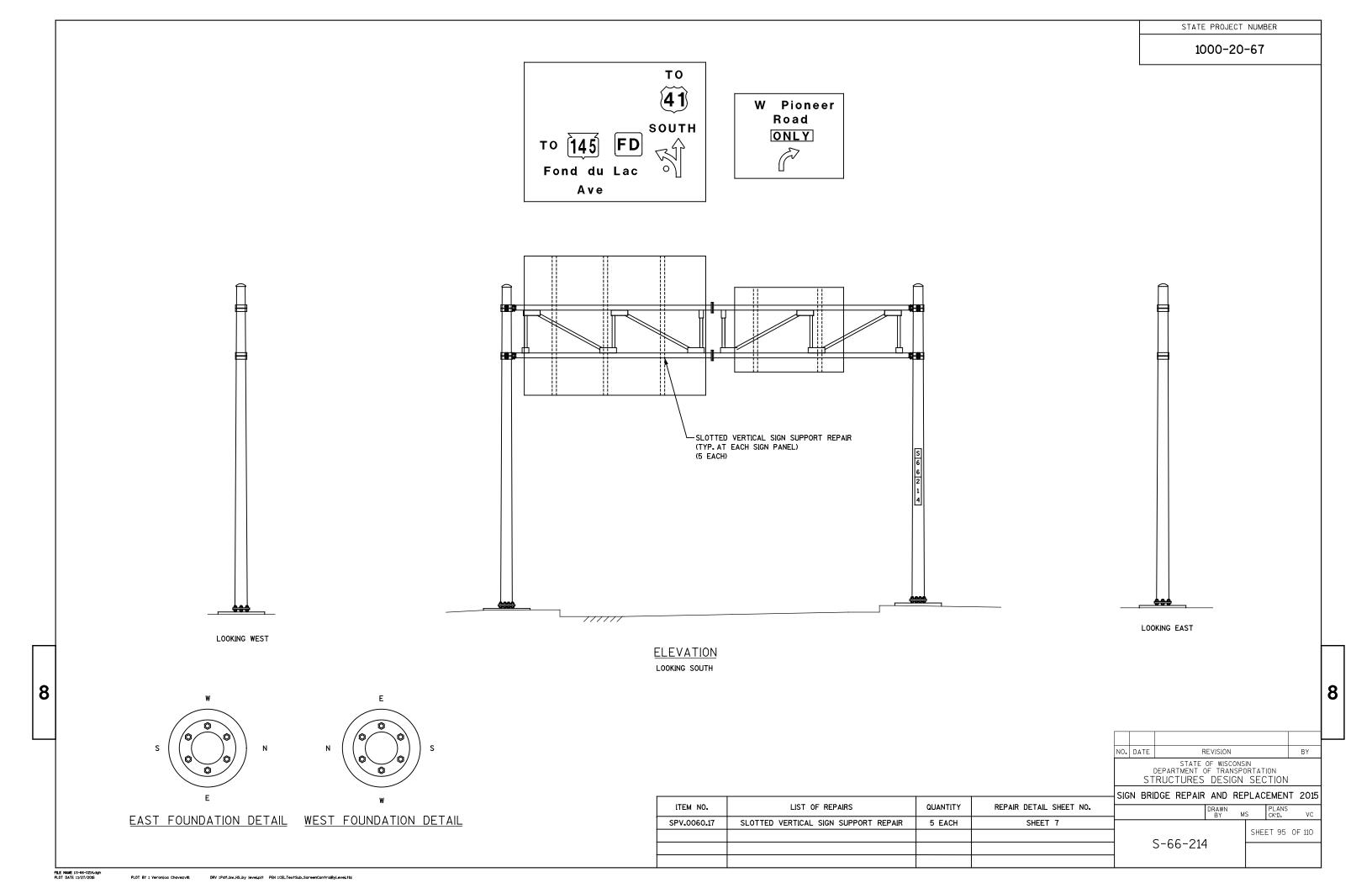


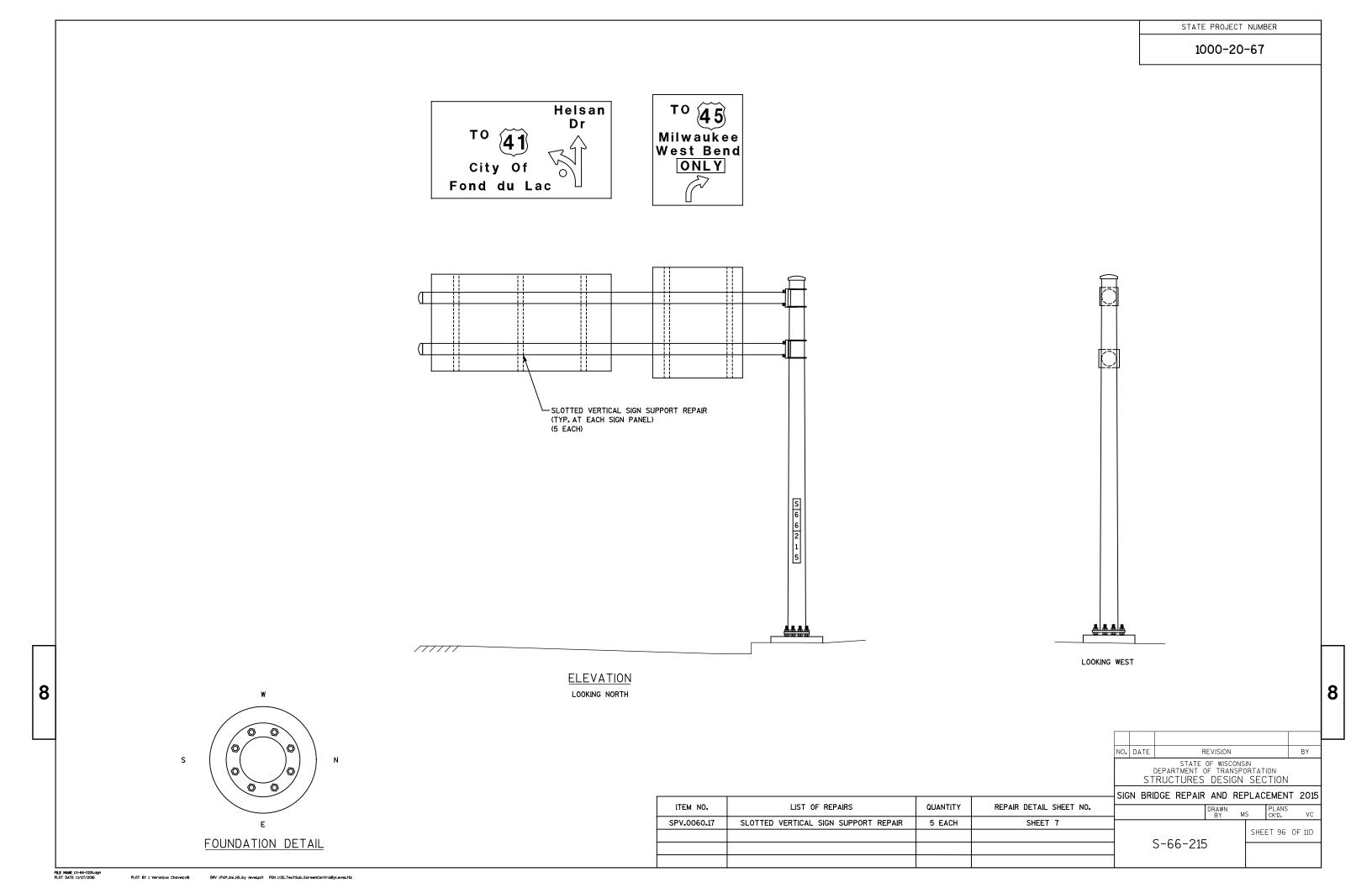


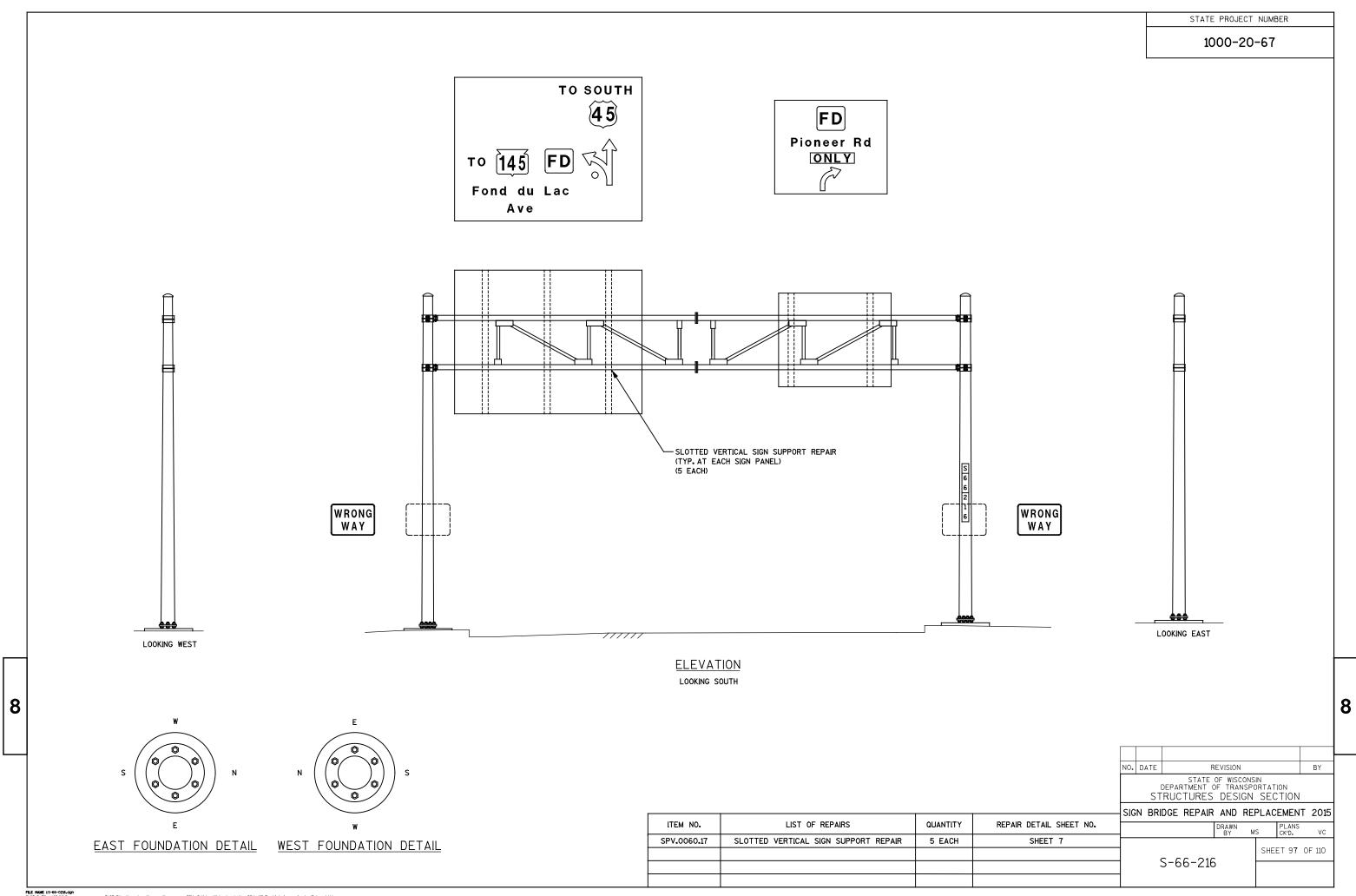


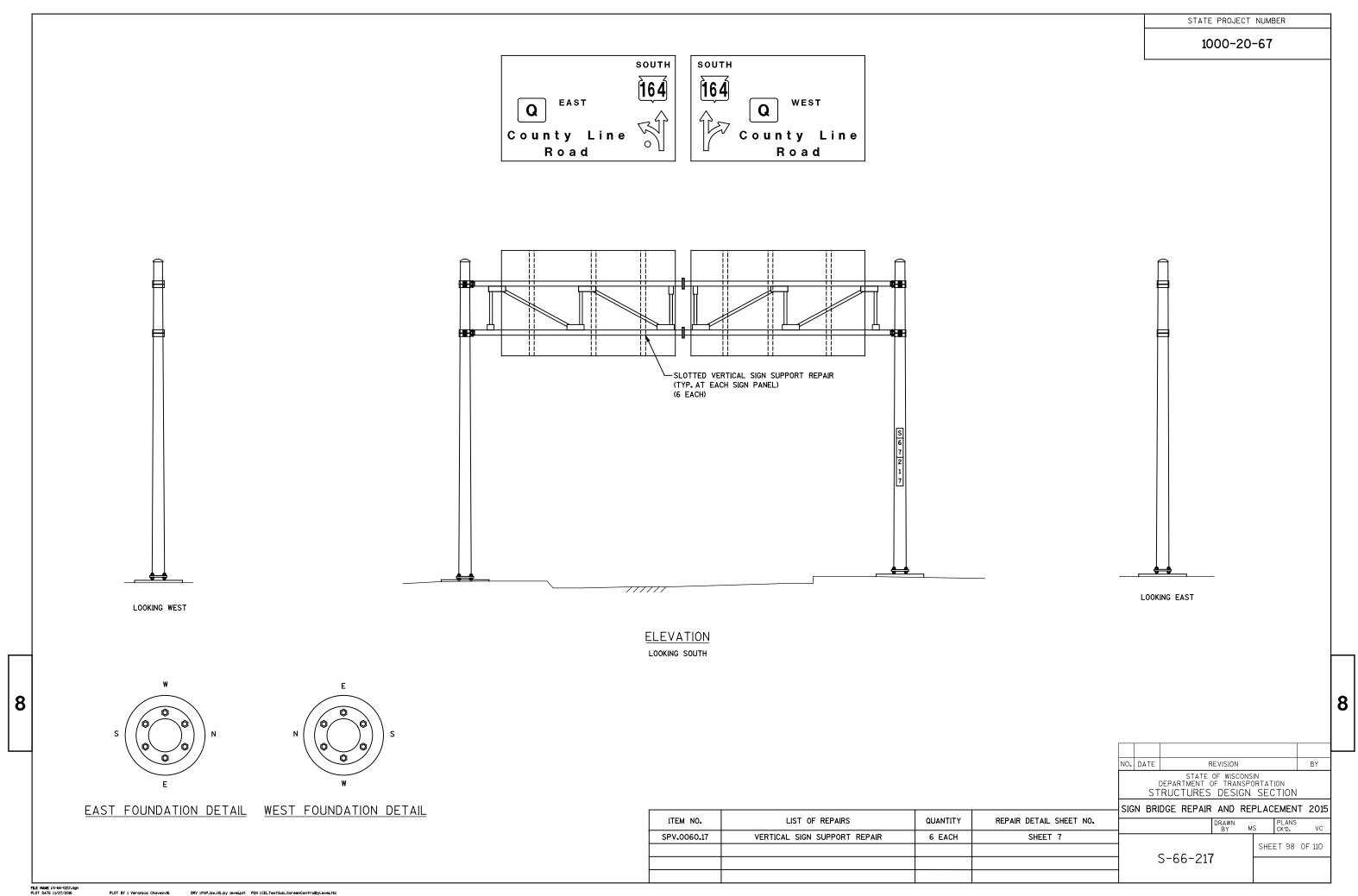


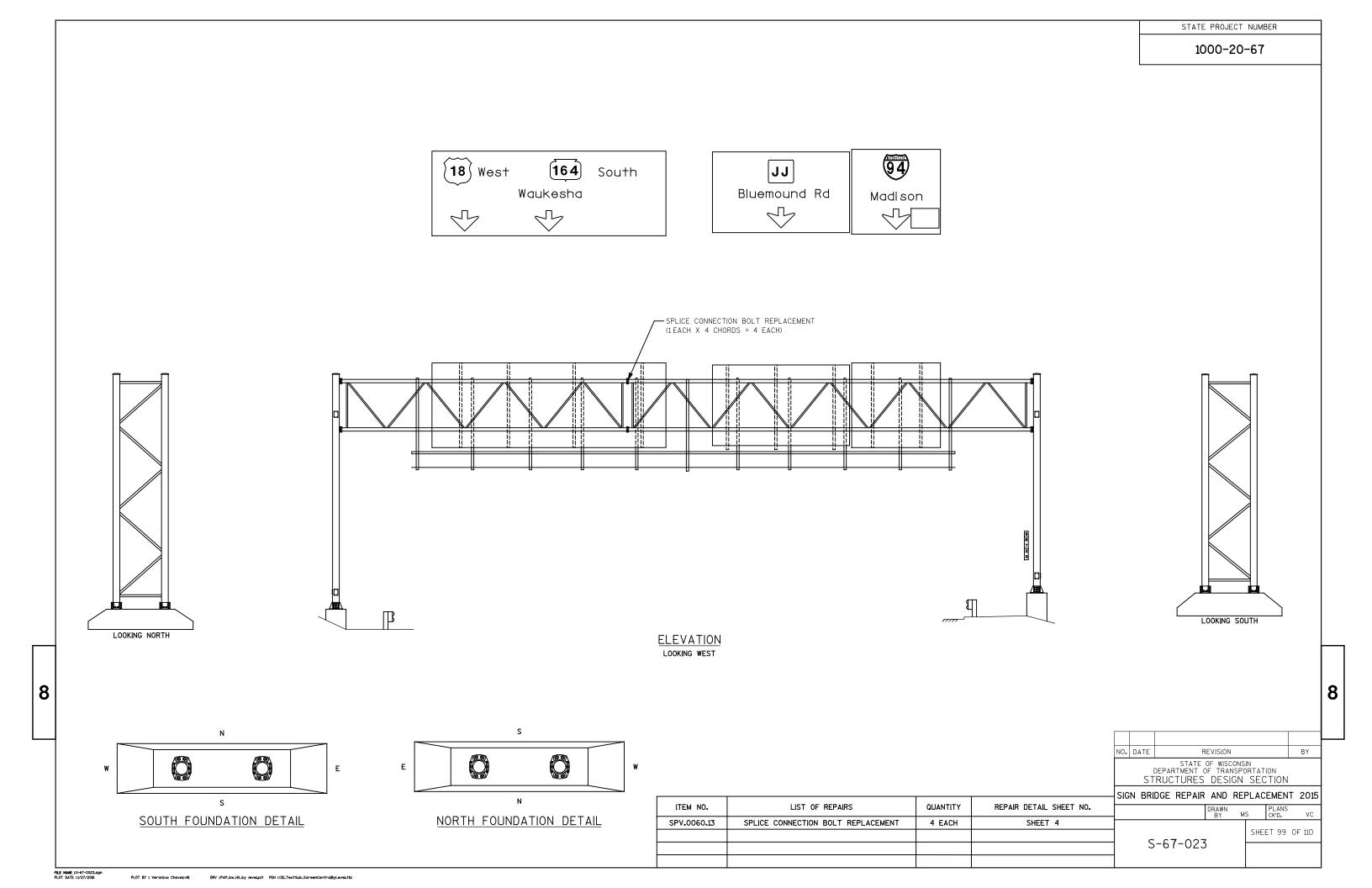


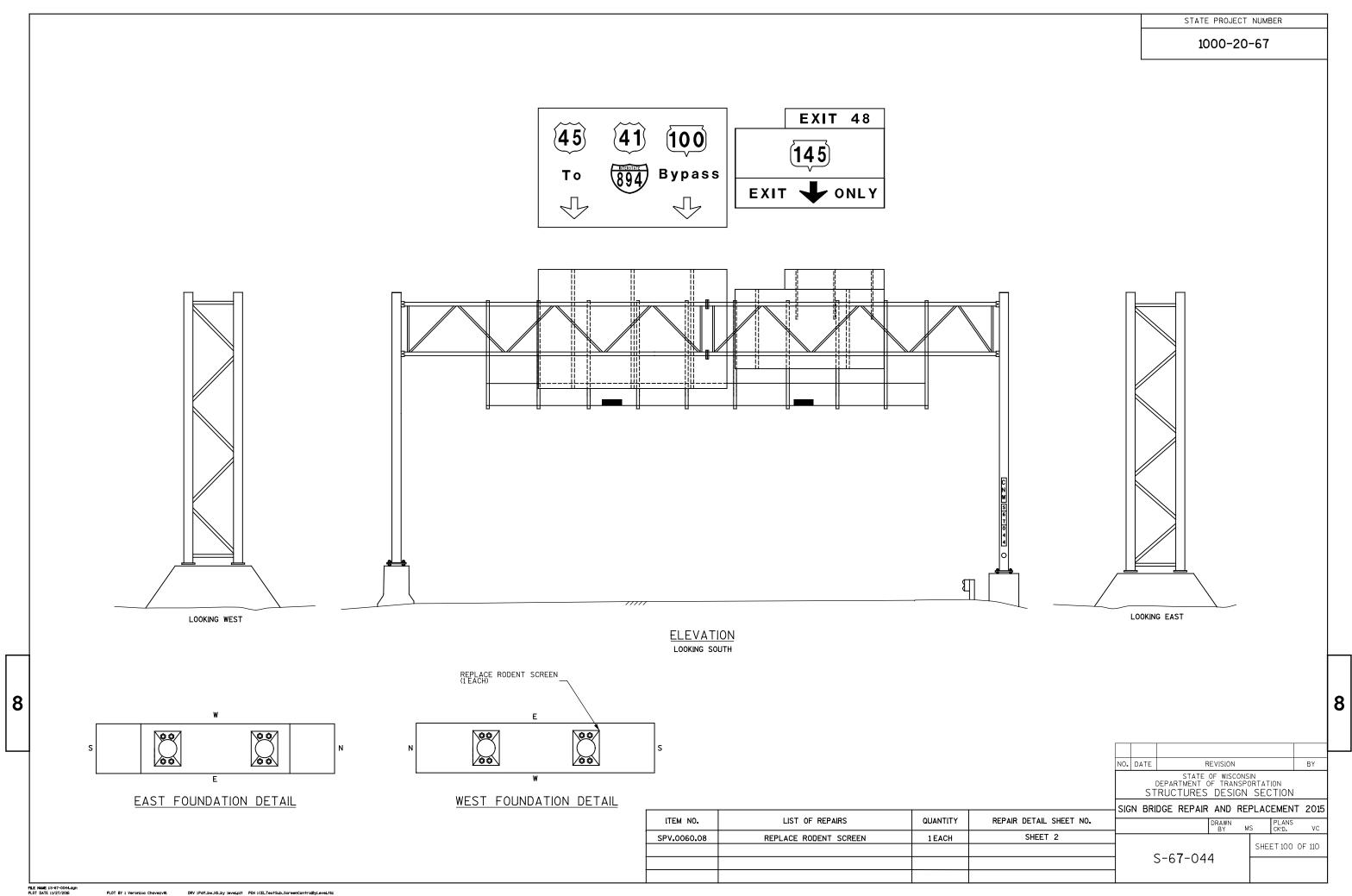


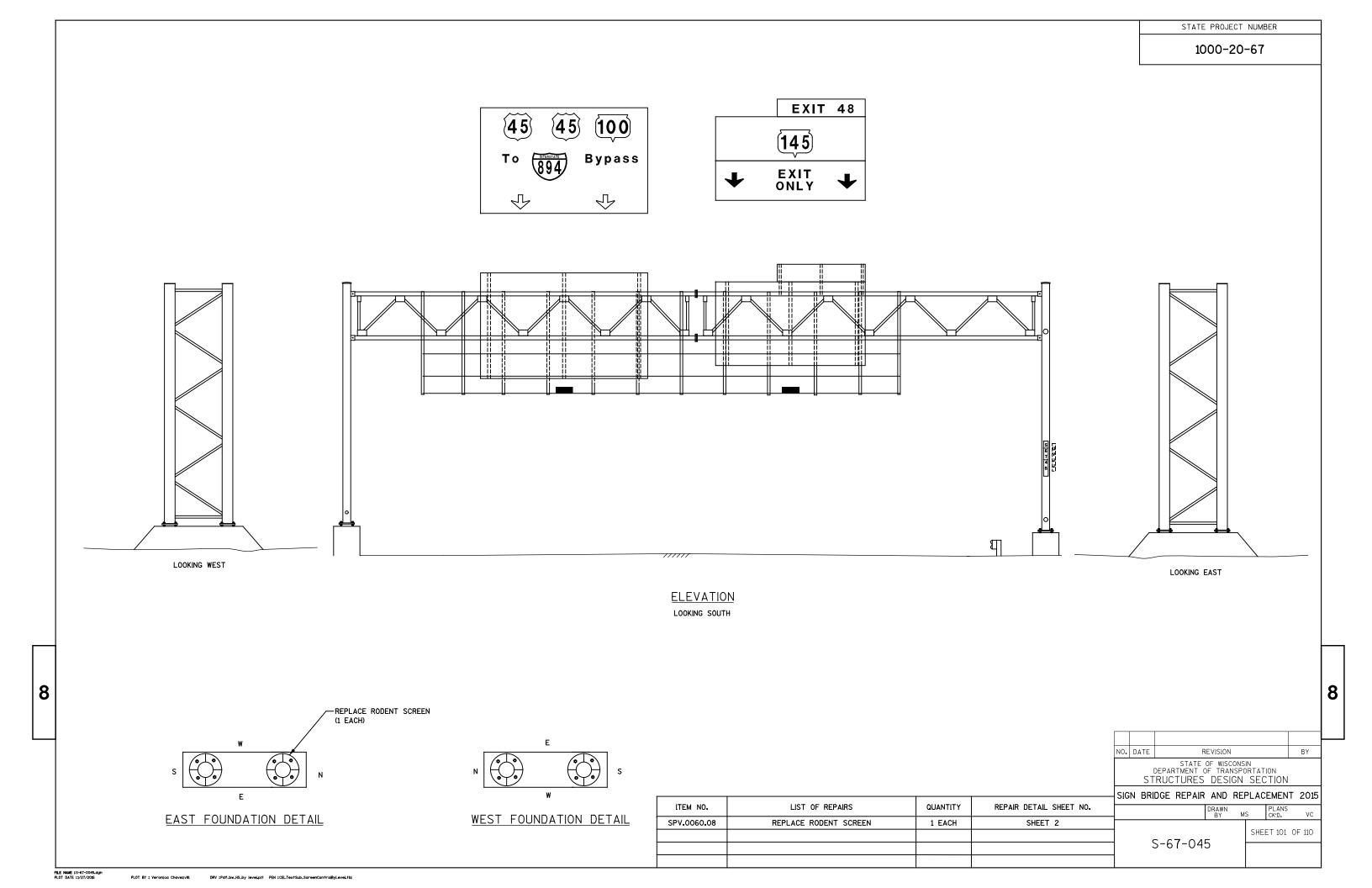




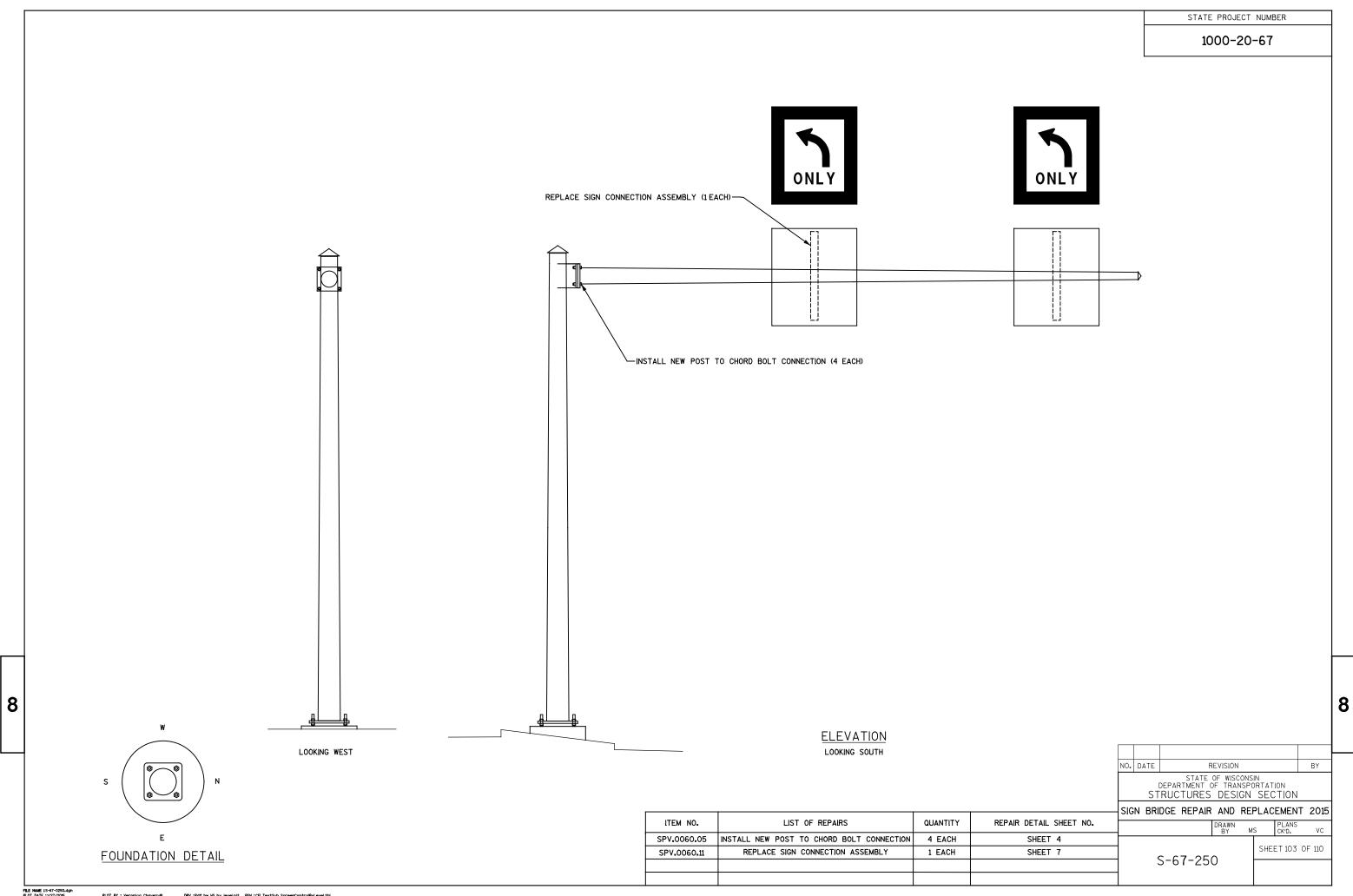


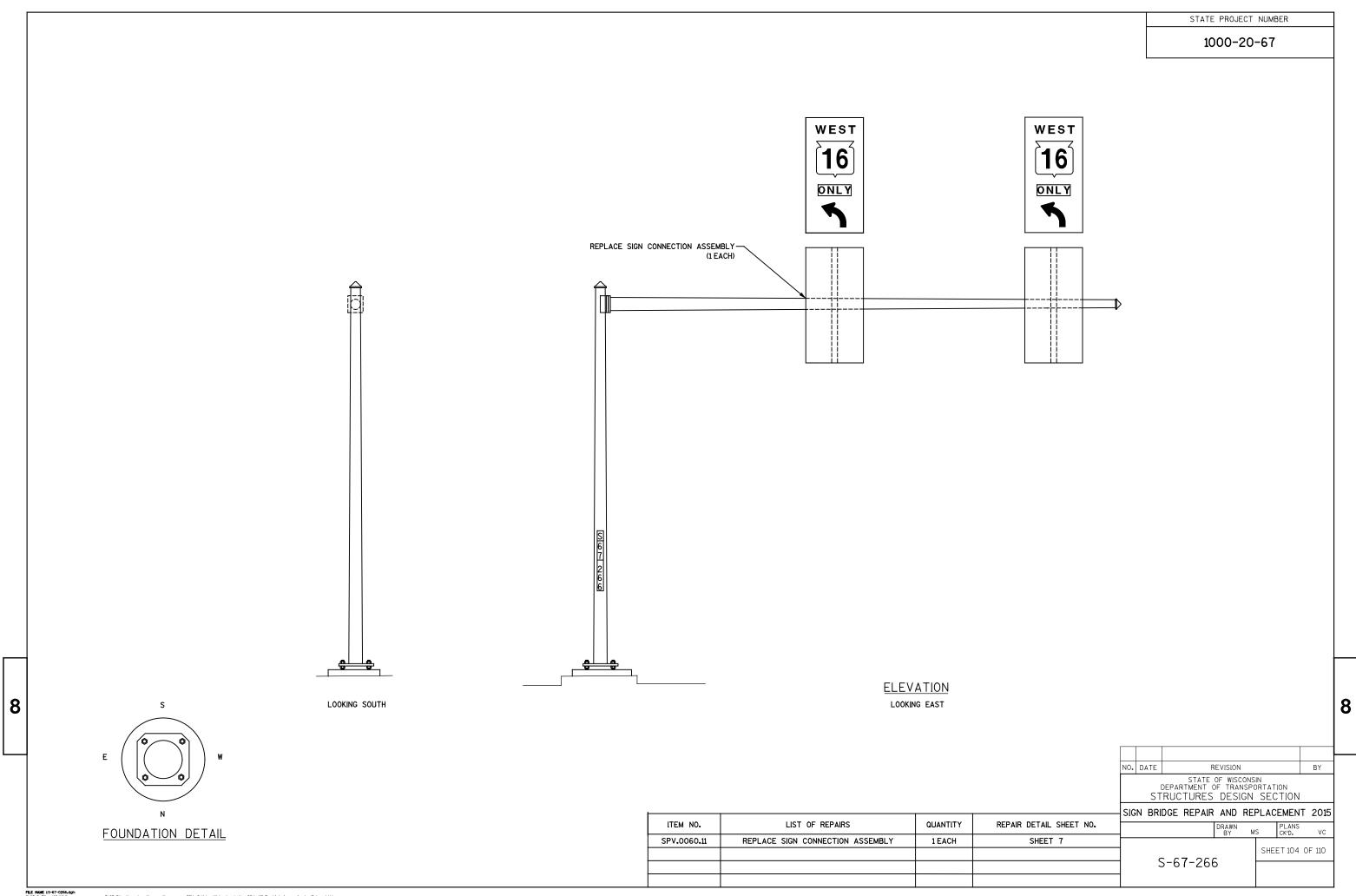


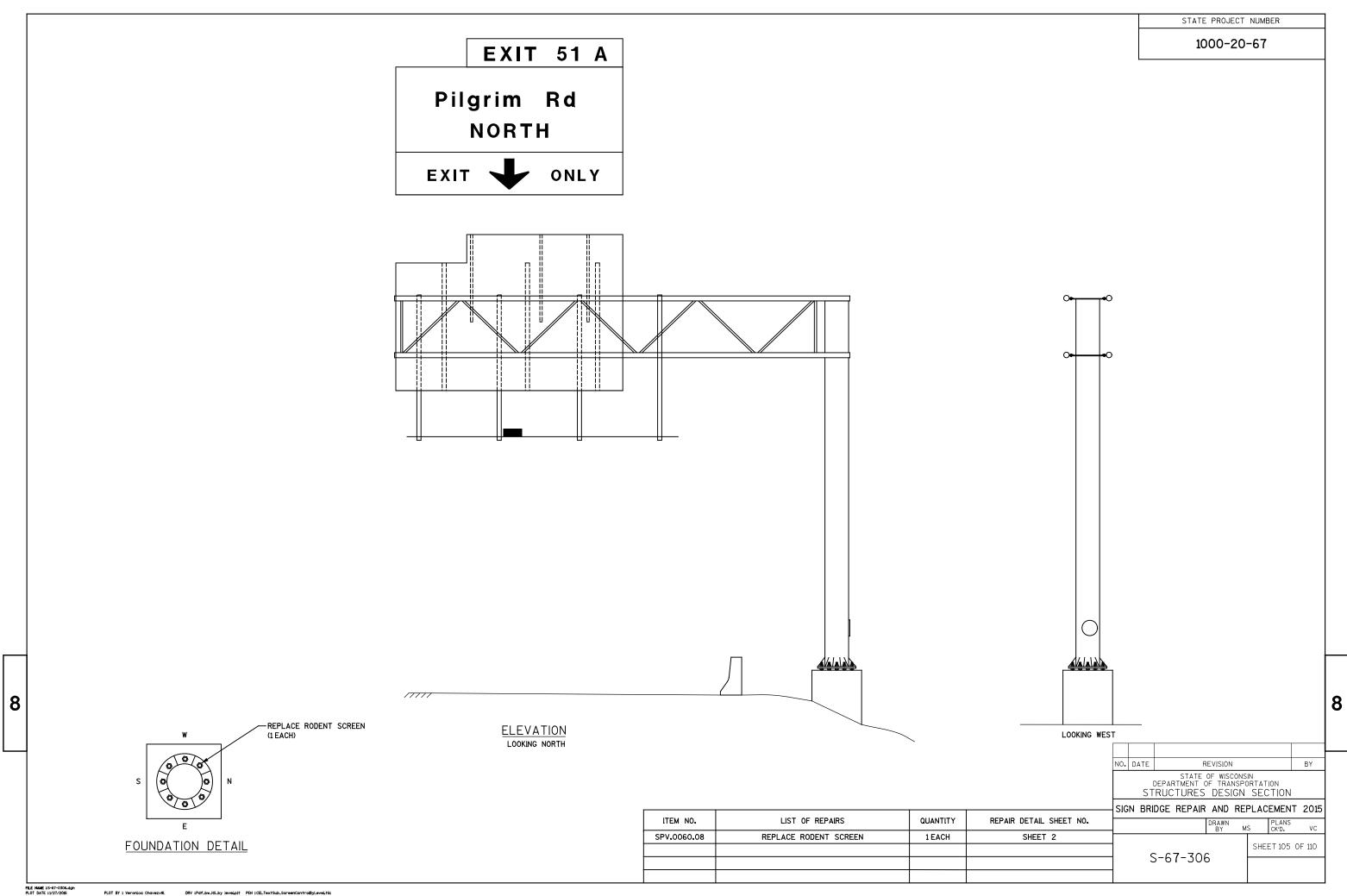


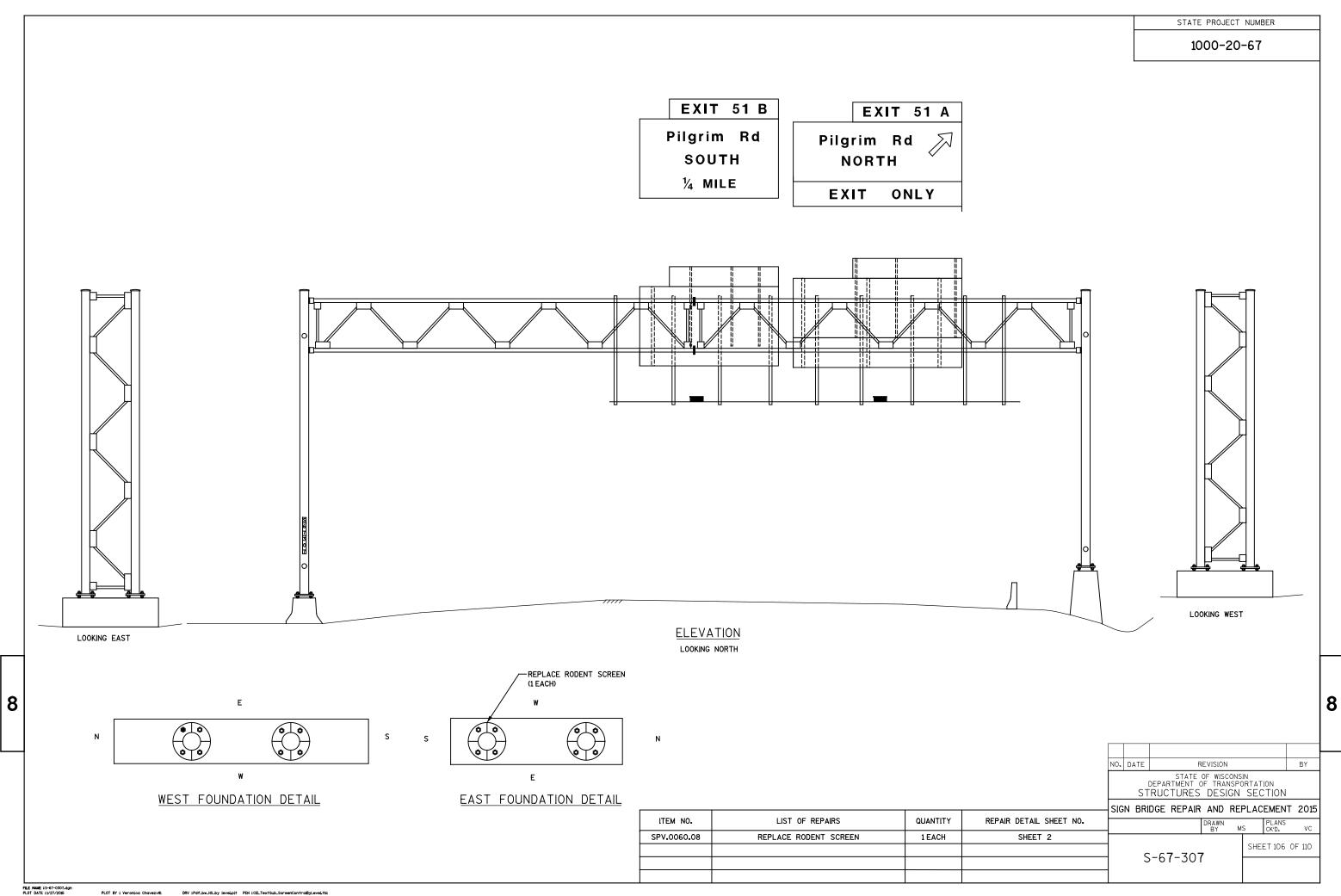


STATE PROJECT NUMBER 1000-20-67 Moorland Rd 13/4 100 CLOSED Y 164 SOUTH 4 3/4 13/4 F 84th St 3 7 LOOKING EAST LOOKING WEST - INSTALL NEW POST TO CHORD BOLT CONNECTION (16 EACH) WEST 94 MILE 303 .1 LOOKING SOUTH **ELEVATION** LOOKING WEST 8 8 NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION REMOVE GROUT PAD SIGN BRIDGE REPAIR AND REPLACEMENT 2015 (1 EACH) REPAIR DETAIL SHEET NO. ITEM NO. LIST OF REPAIRS QUANTITY SPV.0060.04 1 EACH SHEET 2 REMOVE GROUT PAD SHEET 102 OF 110 FOUNDATION DETAIL SPV.0060.05 INSTALL NEW POST TO CHORD BOLT CONNECTION 16 EACH SHEET 4 S-67-200 PLOT BY: Veronica Chavezv8i DRV: Pdf\_bw\_HS\_by level.plt PEN: CELTextSub\_ScreenControlByLevel.tbl





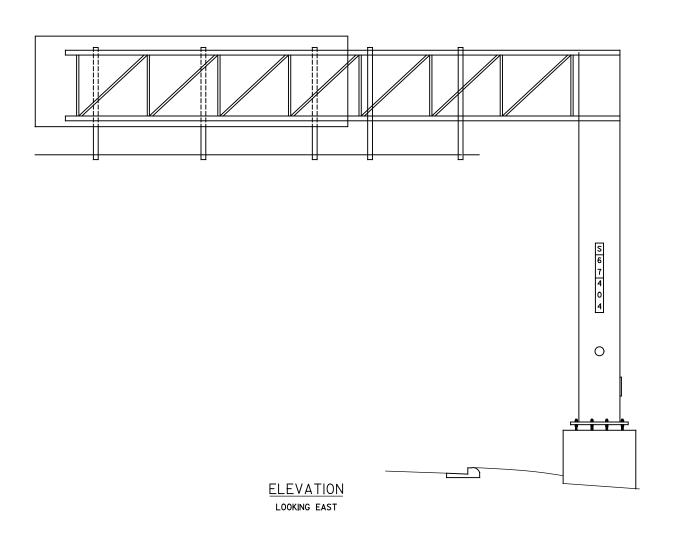


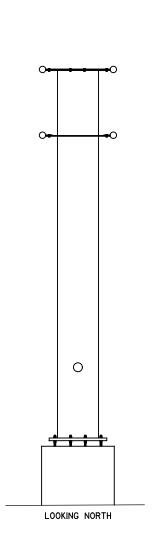


STATE PROJECT NUMBER

1000-20-67

**VMS** 





- REPLACE RODENT SCREEN (1 EACH)

FOUNDATION DETAIL

				Г
NO.	DATE	REVISION	BY	
		STATE OF WISCONSIN		

DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

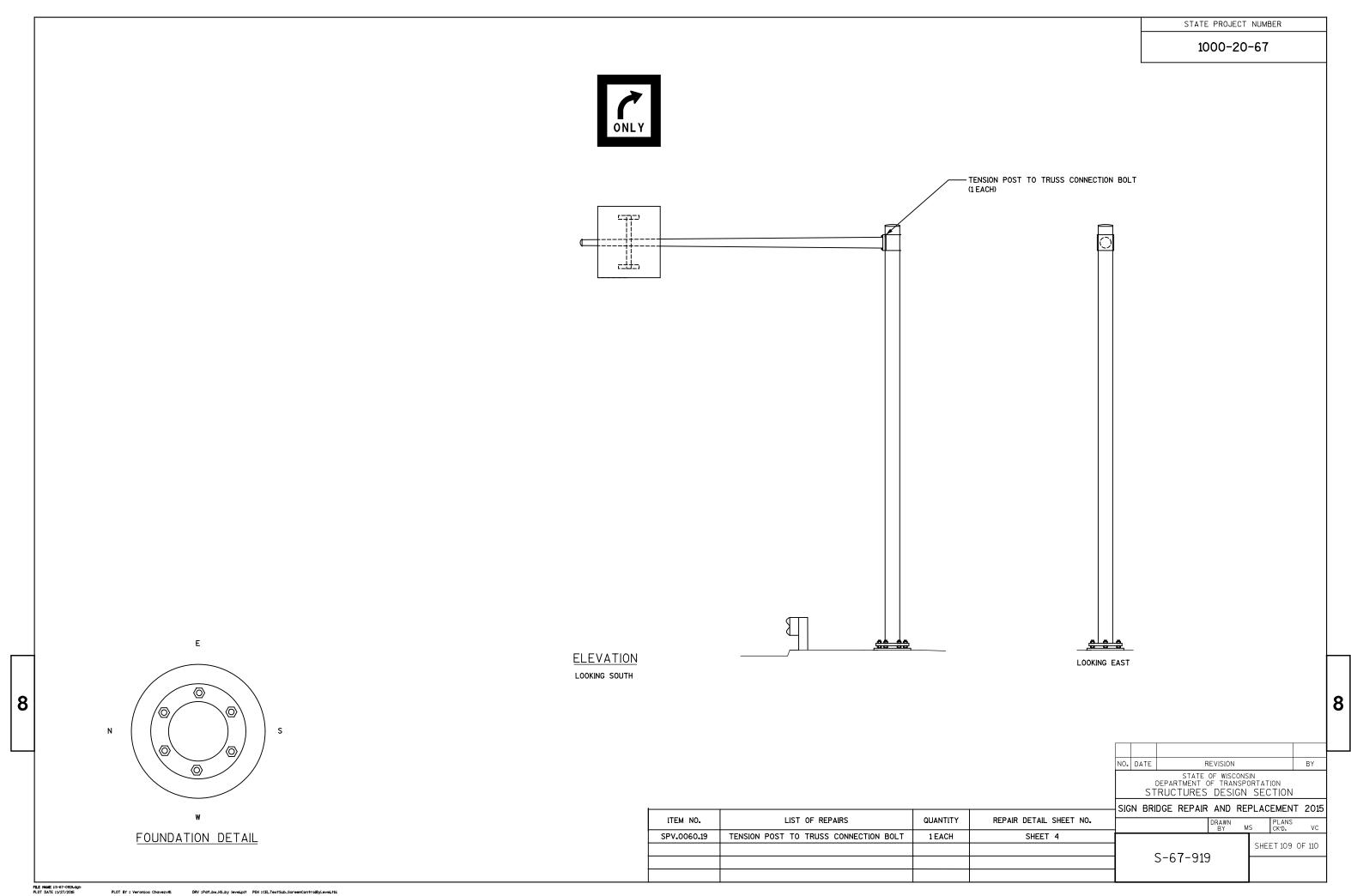
SIGN BRIDGE REPAIR AND REPLACEMENT 2015 LIST OF REPAIRS REPAIR DETAIL SHEET NO. ITEM NO. QUANTITY SPV.0060.08 REPLACE RODENT SCREEN 1 EACH SHEET 2 S-67-404

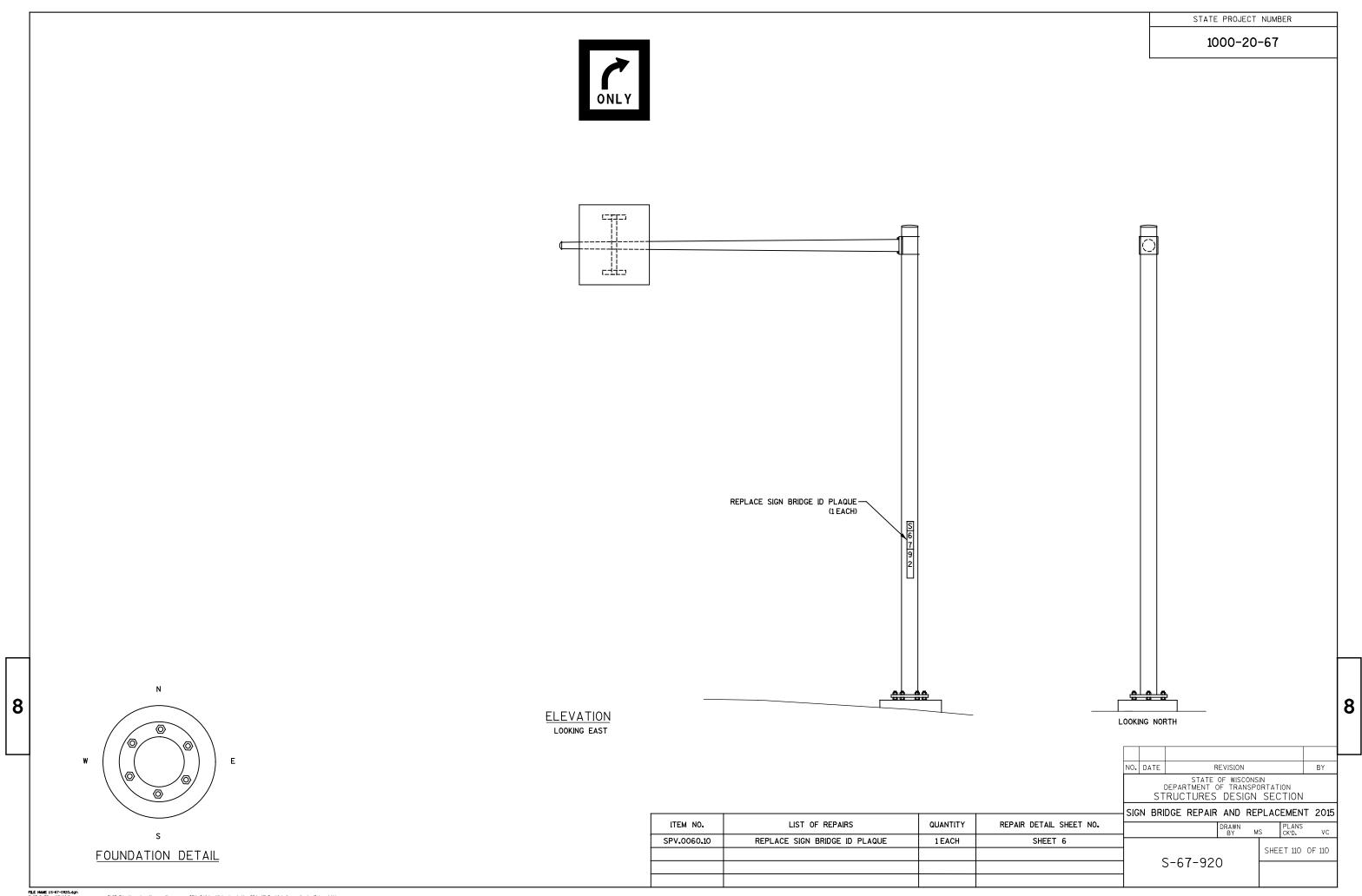
SHEET 107 OF 110

8

STATE PROJECT NUMBER 1000-20-67 VMS 111111 LOOKING NORTH LOOKING SOUTH ELEVATION LOOKING WEST REPLACE RODENT SCREEN (1 EACH) 8 8 Ε NO. DATE REVISION STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION SOUTH FOUNDATION DETAIL NORTH FOUNDATION DETAIL SIGN BRIDGE REPAIR AND REPLACEMENT 2015 REPAIR DETAIL SHEET NO. ITEM NO. LIST OF REPAIRS QUANTITY SPV.0060.08 REPLACE RODENT SCREEN SHEET 2 1 EACH SHEET 108 OF 110 S-6**7**-409

FILE NAME :S-67-0409.dgm PLOT DATE :1/27/2015





1000-20-67

#### LIST OF DRAWINGS

1. PLAN & ELEVATION

-EDGE OF ASPHALT

♠ EXISTING

S-67-312

-FRONT FACE

OF BARRIER

-BACK FACE

OF BARRIER

├── © OF EXISTING TOWER 2

11'-0" × 2'-6" TYPE I

SALVAGE SIGN PANEL

-REMOVE EXISTING TRUSS AND CATWALK

AND REPLACE WITH NEW TRUSS

(NO NEW CATWALK REQUIRED)

FOR NEW TRUSS

EL 850.93

2. GALVANIZED STEEL SIGN BRIDGE

#### ULTIMATE DESIGN STRESSES:

STEEL COLUMN PIPE: ..... ....fy = 42,000 psi A.P.J. SPEC 5L GRADE X42 STEEL PIPE MEMBERS OF TRUSS: ... ...fy = 42,000 psi A.P.I. SPEC 5L GRADE X42

PLATES, BARS, STRUCTURAL ANGLES: ......fy = 36,000 psl A.S.T.M. A709 GRADE 36 ALL BOLTED CONNECTIONS:  $\frac{3}{4}$ "  $\phi$  A325 BOLTS, GALVANIZED A.S.T.M. A153, CLASS C

#### DESIGN DATA

DEAD LOAD - WT. OF SIGN AND SUPPORTING STRUCTURE. PROVISIONS HAVE BEEN INCLUDED FOR A CATWALK OR LIGHTING. LIVE LOAD - 500 LB, DISTRIBUTED OVER 2'-0" TRANSVERSELY. ICE LOAD - 3 P.S.F. TO 1 FACE OF SIGN & AROUND SURFACE OF MEMBERS.

WIND PRESSURE - 90 M.P.H. (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS NORMAL TRANSVERSE COMBINATION 1 0.2 COMBINATION 2 0.6

GROUP LOADS % OF ALLOWABLE STRESS 1. DEAD

2. DEAD + WIND 3. DEAD + ICE +  $\frac{1}{2}$  (WIND\*) 133 \*MIN. VALUE OF 25 PSF FOR GR. 3

#### TYPE I SIGN DESIGN DATA

MAX DESIGN SIGN AREA	MAX. TYPE I SIGN
(SQ. FT.)	DEPTH
792	12'-0"

#### **GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.

ALL ELEVATIONS ARE BASED ON NGVD 29 UNLESS OTHERWISE SHOWN OR NOTED.

THE SIGN BRIDGE WAS DESIGNED ACCORDING TO THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS.

ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

CENTER SIGNS VERTICALLY ON CHORD/TRUSS.

CENTER TYPE ISIGNS OVER RESPECTIVE LANE.

ALTERNATE DESIGNS ARE NOT ALLOWED.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE, THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN, UTILITY SERVICES ARE NOT SHOWN

VERIFY UTILITY INTERFERENCES PRIOR TO

ALL EXISTING ELECTRICAL CONDUIT SHALL BE DISCONNECTED AND CAPPED OFF.

NEW I-BEAMS ARE REQUIRED FOR SIGNS AND ARE INCIDENTAL TO "SIGN BRIDGE S-67-312".

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF UNIT CAN BE GALVANIZED IN ONE

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE THE 1/4 LENGTH OF THE BRIDGE, 2'-O" DEEPER THAN CENTER TO CENTER OF CHORDS & SHALL BE CENTERED ON THE BRIDGE, SIGNS SHALL BE AS DESIGNATED IN PLANS. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE INCIDENTAL TO "SIGN BRIDGE S-67-312".

WELD TEST AS PER AWS D1.1

SUBMIT SHOP DRAWINGS OF SIGN BRIDGE S-67-312 TO TOM HEYDEL, WISDOT TRAFFIC OPS.

- SIGNIFIES THE LOCATION OF THE CENTER OF THE SIGN PANEL.

## Wiscons, **VERONICA** CHAVEZ **DE FERNANDEZ** E-42456 **MILWAUKEE** WI 02/16/2015

### ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
641.6600	SIGN BRIDGE S-67-312	LS	1



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Diche 15 03/13/15 CHIEF STRUCTURES DESIGN ENGINEER

8

I-94 WB AT EXIT TO BARKER ROAD

S-67-312 TOWN/CITY/VILLAGE WAUKESH/ WAUKESHA DESIGN SPEC. AASHTO SPECIFICATIONS FOR STRUCTURAL SUPPORTS (6TH FOR HIGHWAY SIGNS, LUMINAISES, AND TRAFFIC SIGNALS EDITION OF THE PROPERTY OF DESIGNED VC CK'D. PRT BY MS CK'D.

> PLAN & **ELEVATION**

SHEET 1 OF 2

FILE NAME :08\_01\_e-67-312\_dgn PLOT DATE :2/16/2015

PLOT BY: Veronica Chavezv8i

EL 850.88

€ OF EXISTING TOWER 1-

DRV :Pdf\_bw\_HS\_by level.plt PEN :CEL\_TextSub\_ScreenControlByLevel.tb

10'-4'

SHOULDER

14'-0" × 9'-0" TYPE I-

12'-0"

LANE

SALVAGE SIGN PANEL

FOR NEW TRUSS

-BACK FACE OF BARRIER

10'-4"

SHOULDER

-FRONT FACE

OF BARRIER

OF LANE

12'-0"

LANE

/-EDGE

OF LANE

12'-0"

LANE

OF LANE

12'-0"

LANE

75'-4

REMOVE EXISTING TRUSS AND CATWALK

AND REPLACE WITH NEW TRUSS

(EXISTING UPRIGHTS TO REMAIN)

PLAN

75'-4"

\*24'-2"

12'-0"

LANE

12'-0"

LANE

21'-0" × 12'-0" TYPE I-

SALVAGE SIGN PANEL

FOR NEW TRUSS

12'-0"

LANE

HIGH POINT

**ELEVATION** 

(LOOKING WEST AT FRONT FACE OF SIGNS) L-94 WB AT EXIT TO BARKER ROAD

TRUSS REPLACEMENT

(EXISTING UPRIGHTS TO REMAIN)

EL 848.01

-EDGE

OF LANE

12'-0"

LANE

-EDGE

10'-2"

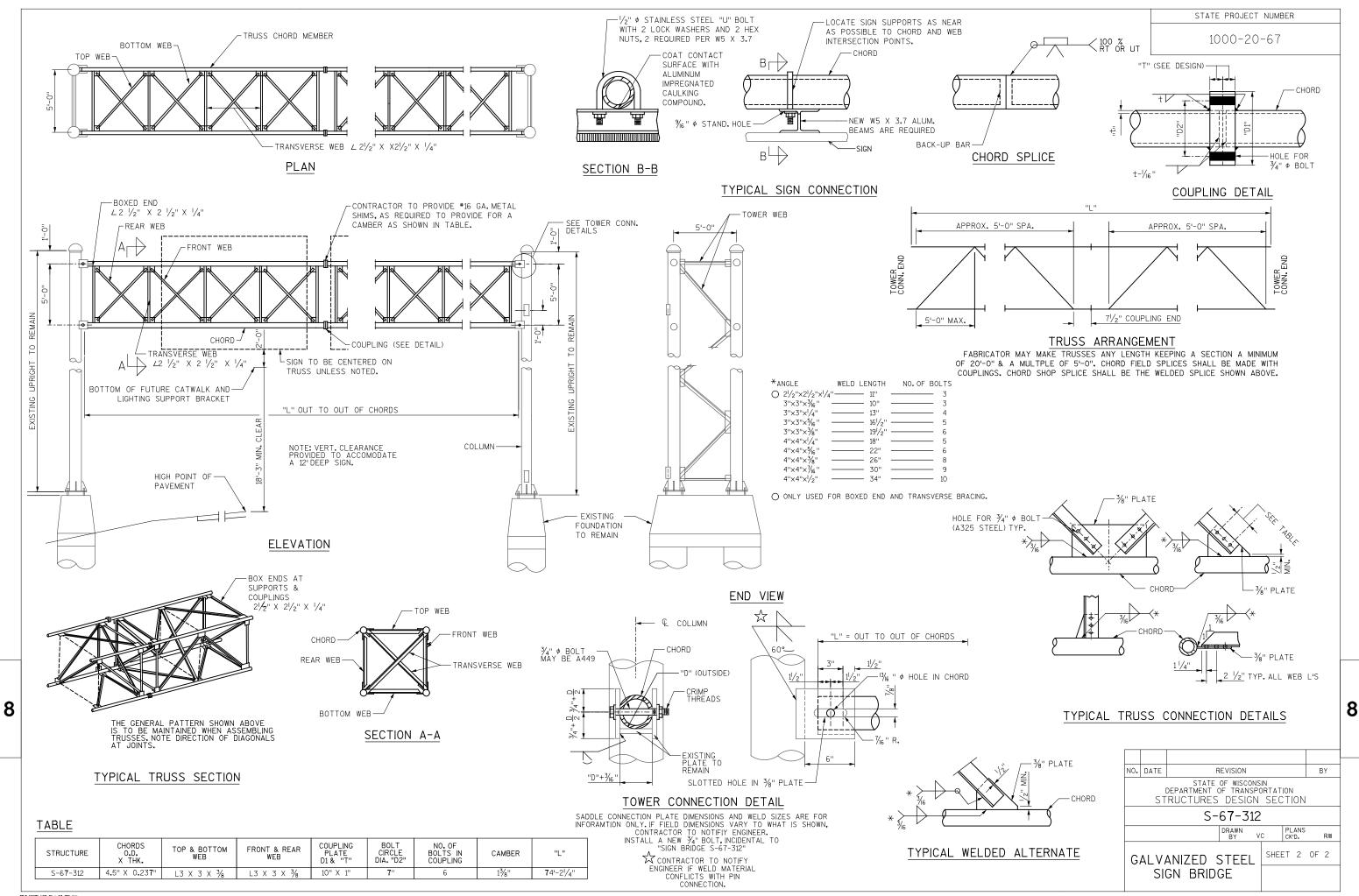
SHOULDER

\* 18'-10"

10'-2"

SHOULDER

OF LANE

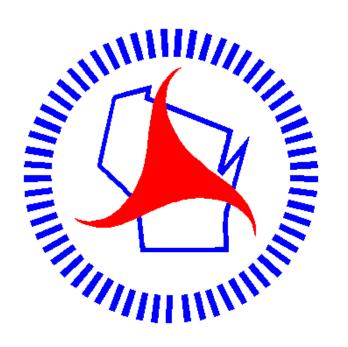


FILE NAME : 08\_01\_s-67-312.dgs

PLOT BY : Veronica Chavezy

BRY: Pdf\_bw\_HS\_by level.plt PEN: CELTextSub\_ScreenControlByLevel.tb

Notes



# Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

http://www.dot.wisconsin.gov