

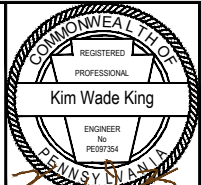
SOUTH PERKASIE COVERED BRIDGE  
FOR  
BOROUGH OF PERKASIE (PA)  
100% DESIGN DRAWINGS  
JUNE 2025



**ENGINEER OF RECORD (EOR)**  
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PREPARED FOR:  
BOROUGH OF PERKASIE (PA)

SOUTH PERKASIE  
COVERED BRIDGE

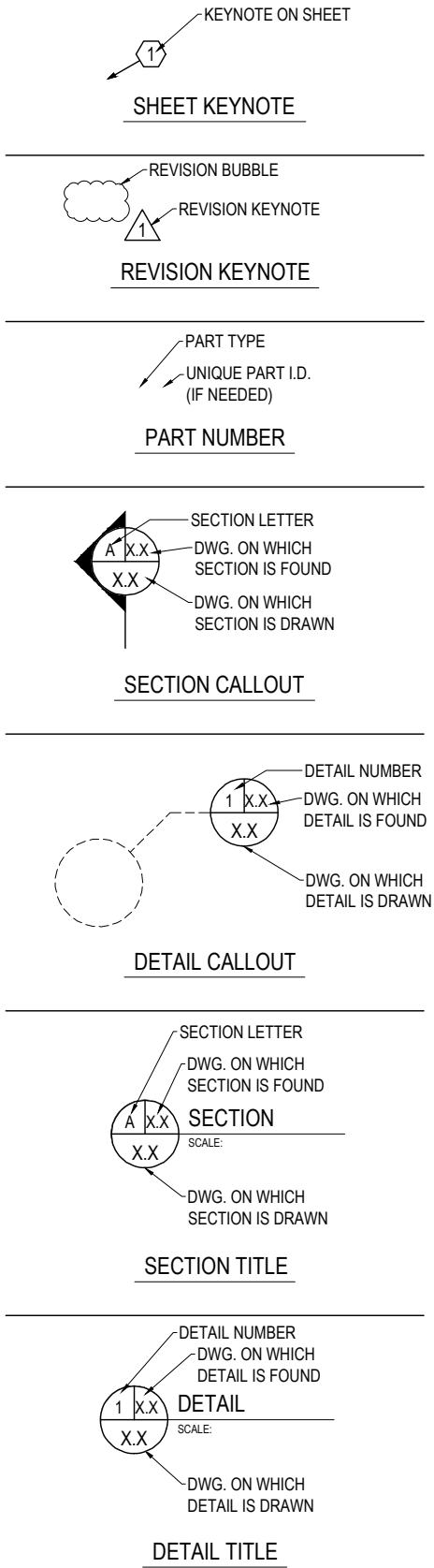
100% DESIGN DRAWINGS	REASON FOR REVISION	DATE	DRAWN BY	CHECKED BY	APPROVED BY
FOUNDATION CONNECTION		05/09/2025	UK	KWK	KWK
BRIDGE RELOCATION REVISION		06/02/2025	UK	KWK	KWK
		06/09/2025	UK	KWK	KWK

COVER SHEET

DRAWING #  
0.0  
SHEET #  
1 OF 42  
PROJECT #9101S

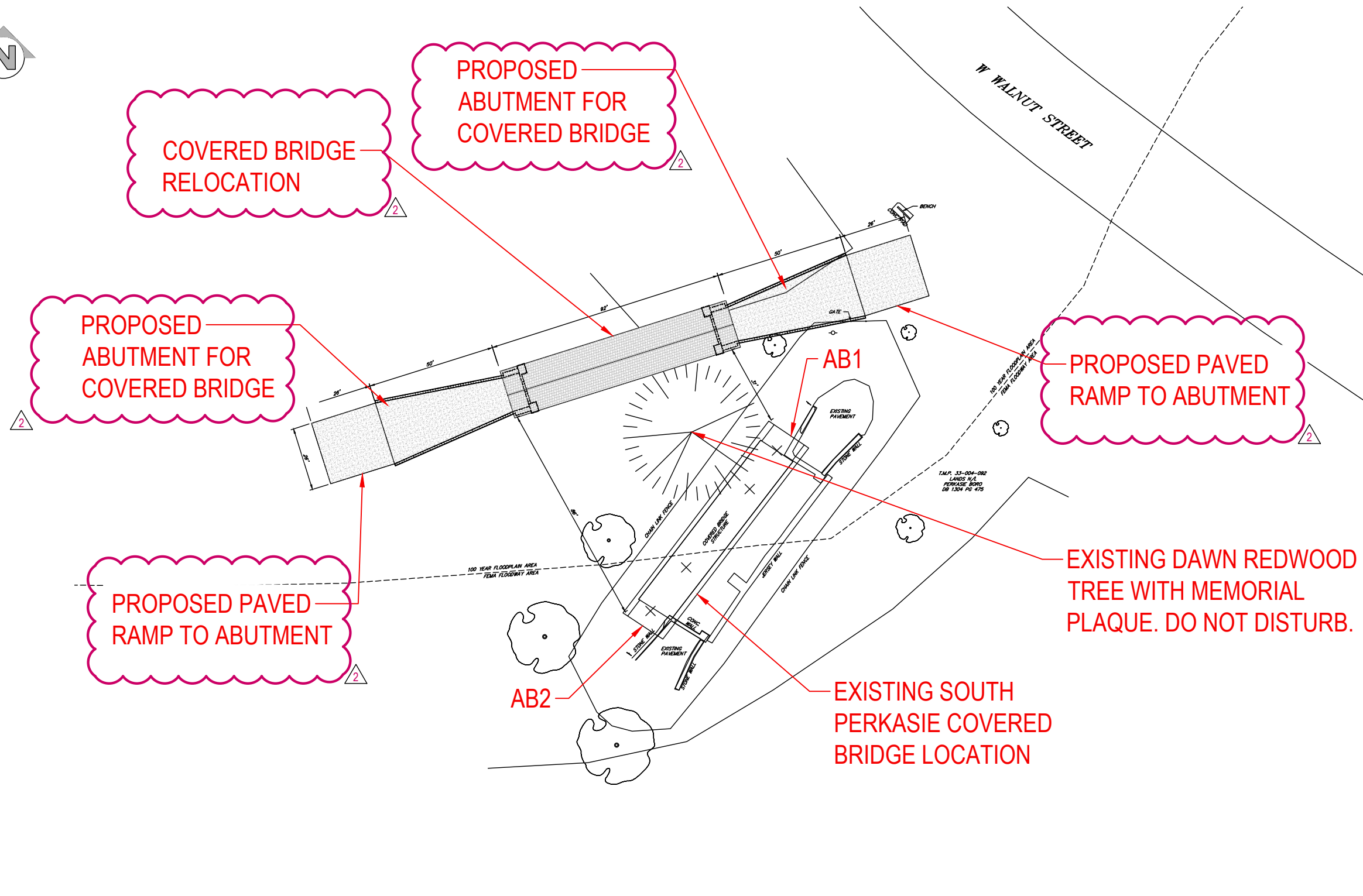
DRAWING INDEX		
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1	0.0	COVER SHEET
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6	1.1	PLAN VIEW - ROOF MEMBERS (TC'S & UCB'S) - REPAIR PLANS
7	1.2	PLAN VIEW - ROOF MEMBERS -MAIN & SECONDARY RAFTERS - REPAIR PLANS
8	1.3	ELEVATION - SIDING - NORTH SIDE - REPAIR PLANS
9	1.4	ELEVATION - SIDING - SOUTH SIDE - REPAIR PLANS
10	1.5	ELEVATION - LATTICE MEMBERS - NORTH SIDE (INSIDE) - REPAIR PLANS
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SECTION & DETAIL DESIGNATIONS



LIST OF ABBREVIATIONS

A	ABUTMENT	ABUT., AB-#	M	MATERIAL	MATL.
ADDITIONAL	ADD'L.		MINIMUM	MIN.	
ALTERNATE	ALT.		MISCELLANEOUS	MISC.	
ANCHOR SEAL	A.S.				
ANGLE BRACE	A.B.		N		
APPROVED	APPD.		NORTH	N.	
APPROXIMATE	APPROX.		NOT TO SCALE	N.T.S.	
AT	@		NUMBER	NO.	
AVERAGE	AVG.		NOT IN CONTRACT	N.I.C.	
B			O		
BASELINE OF CONSTRUCTION	BL., B		ON CENTER	O.C.	
BEAM	BM.		OUTSIDE DIAMETER	O.D.	
BEARING	BRG.		OPTIONAL	OPT.	
BENT	BT.				
BITUMEN	BIT.		P		
BUILDING	BLDG.		PEDESTRIAN	PED.	
BOTTOM	BOT.		PERPENDICULAR	PERP., ⊥	
BOTTOM OF PILE	B.O.P.		PILE	P-#	
			PILE BENT	P.B.	
C			PLATE	PL., P	
CENTER LINE	CL., C		POINT	PT.	
CIRCLE	CIR.		POST TENSION	P/T	
CLEARANCE	CLR.		POUNDS PER SQUARE INCH	PSI	
COLUMN	COL.		PRECAST	P/C	
CONCRETE	CONC.		PRESTRESSED	P/S	
CONNECTION	CONN.		PROPOSED	PROP.	
CONSTRUCTION	CONST.				
COPPER NAPHTHENATE	C.N.		Q		
COUNTERSINK	CSK.		QUANTITY	QTY.	
COUPLING	CPLG.				
CROSSHEAD	CRHD.				
			R		
D			RADIUS	RAD., R	
DETAIL	DET.		RAILROAD	RR.	
DIAGONAL	DIAG.		REINFORCED	REINF.	
DIAMETER	DIA, Ø		REHABILITATION	REHAB.	
DIMENSION	DIM.		REQUIRED	REQD.	
DRAWING	DWG.		RETROWRAP	R.W.	
DRAIN	DR.		RIGHT	Rt.	
			S		
E			SCHEDULE	SCH.	
EACH	EA.		SECTION	SECT.	
EAST	E.		SHEET	SH., SHT.	
EASTBOUND	EB.		SOUTH	S.	
ELECTRIC	ELECT.		SPACING	SPC.	
ELEVATION	EL.		SPAN	SP-#	
EXISTING	EXIST.		SQUARE	SQ.	
EXPANSION	EXP.		STANDARD	STD.	
			STAINLESS STEEL	S.S.	
F			STIFFENER	STIFF.	
FABRICATE	FAB.		STRUCTUREFILL	SF.	
FOOTING	FTG.		SYMMETRICAL	SYM.	
FOUNDATION	FDN.				
			T		
G			TEMPORARY	TEMP.	
GALVANIZE	GALV.		TRANSVERSE	TRANS.	
GIRDER	GDR.		TYPICAL	TYP.	
GRADE	GR.		TYPICAL AS NEEDED	T.A.N.	
GROUND	GND.		TIMBER	TBR.	
			V		
H			VARIES	VAR.	
HEIGHT	HT.		VERTICAL	VERT.	
HORIZONTAL	HORIZ.				
			W		
L			WORK POINT	W.P.	
LEFT	Lt.		WORKING DRAWINGS	W.D.	
LENGTH	LGTH.				
LONG	LG.				



SITE PLAN 1



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## SOUTH PERKASIE COVERED BRIDGE

- 100% DESIGN DRAWINGS
- FOUNDATION CONNECTION
- BRIDGE RELOCATION REVISION

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REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
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REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
	06/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY

SITE PLAN 1

DRAWING #  
0.2  
SHEET #  
3 OF 42  
PROJECT #9101S



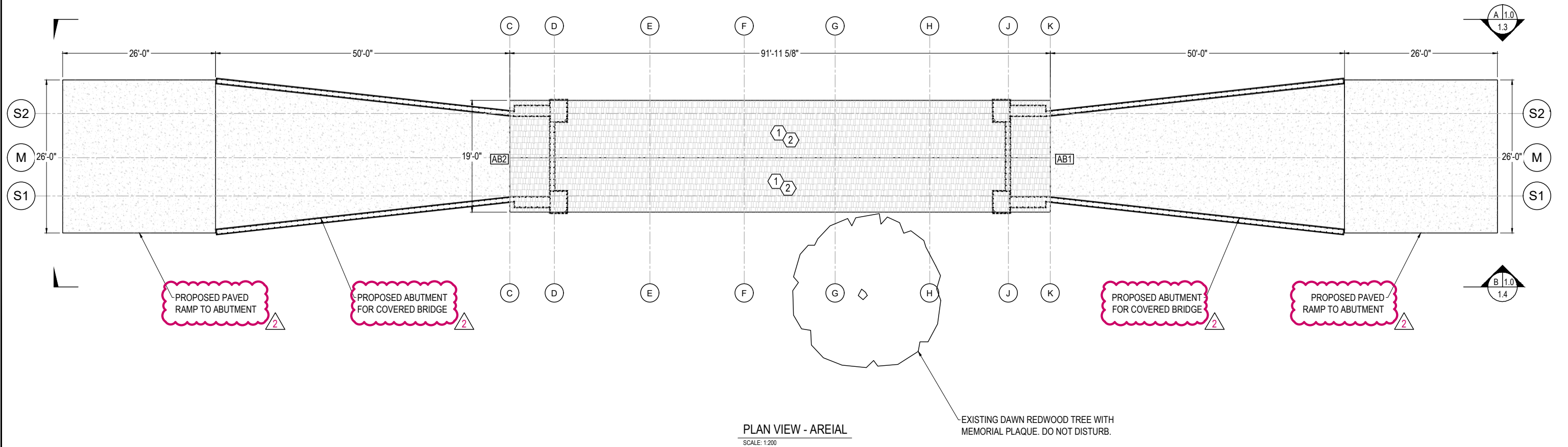


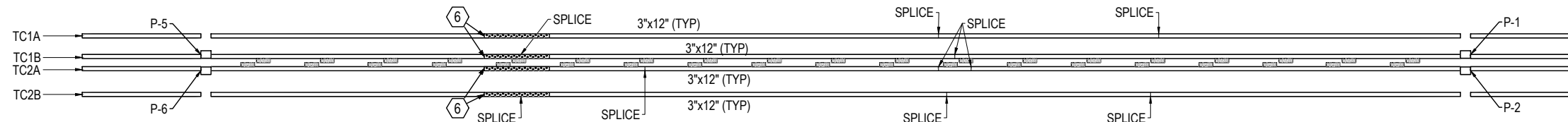
SITE PLAN 2



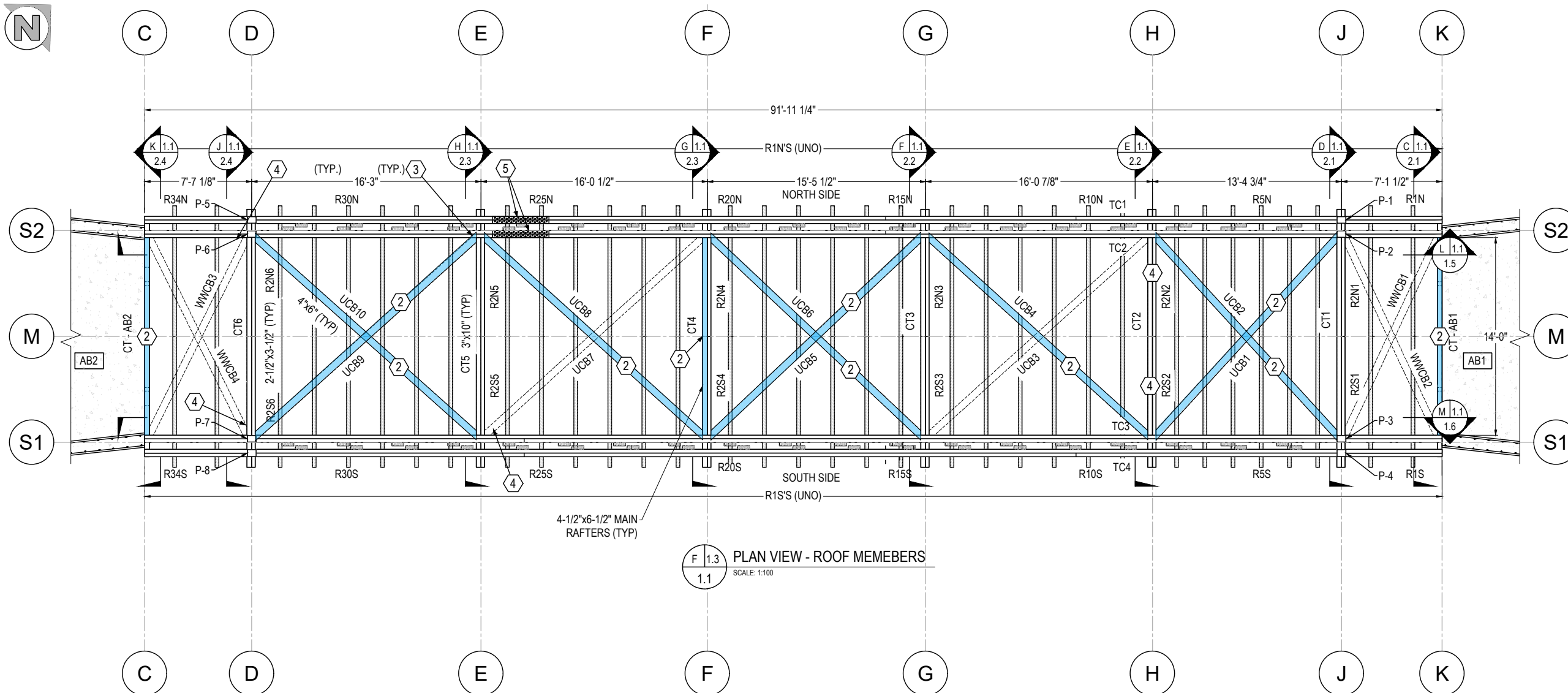


- REPAIR - SHEET KEYNOTES - ROOF SHAKES & SHINGLES
1. ROOF SHAKES - REMOVE ONE LAYER AND REPLACE.
  2. APPLY WATER BASED BORATE TOPICAL SOLUTION TO ROOF SHINGLES.

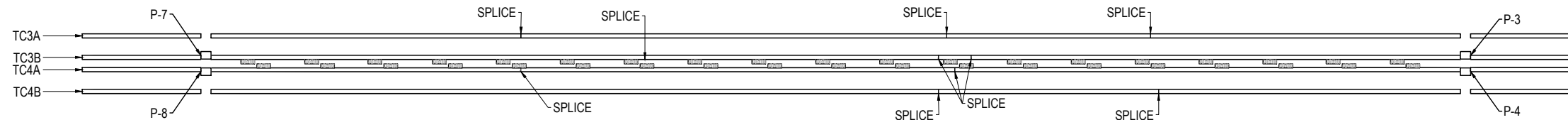




TOP CHORD 1 & 2 - REFLECTED PLAN  
SCALE: 1:100



PLAN VIEW - ROOF MEMEBERS  
SCALE: 1:100



TOP CHORD 3 & 4 - PLAN  
SCALE: 1:100

- REPAIR - SHEET KEYNOTES - TOP CHORD & UPPER CROSS BRACES
1. SISTER TIMBER ELEMENT
  2. REPLACE TIMBER ELEMENT
  3. NEW CROSS BRACE CONNECTION DETAIL
  4. REPAIR CROSS BRACE CONNECTION WITH 1/4" STRUCTURAL TIMBER SCREWS.
  5. RETROSHEAR® PANEL ON BOTTOM FACE OF TOP CHORD (CENTERED OVER CRACK)
- RETROSHEAR® PANEL ON BOTTOM FACE OF TOP CHORD (SEE SHEET 4.1 FOR REPAIR DETAILS)
  - NEW CROSS BRACE CONNECTION DETAIL (SEE SHEET 5.9 FOR REPAIR DETAIL)
  - SISTER DETAIL (SEE SHEET 4.4 FOR REPAIR DETAILS)

GENERAL NOTES:

- REALIGN AND RESTORE CONNECTIONS FOR DISPLACED OR SEPARATED ELEMENTS.

REPAIR COLOR LEGEND:

= REPLACE TIMBER ELEMENT





REPAIR - SHEET KEYNOTES - SIDING

1. SIDING - REINSTALL LOOSE AND MISALIGNED SIDING BOARDS AND REPLACE MISSING SIDING BOARDS (NOM. 1" THICK BY VARYING WIDTH).

2. REPLACE MISSING AND DAMAGED SIDING BOARDS.

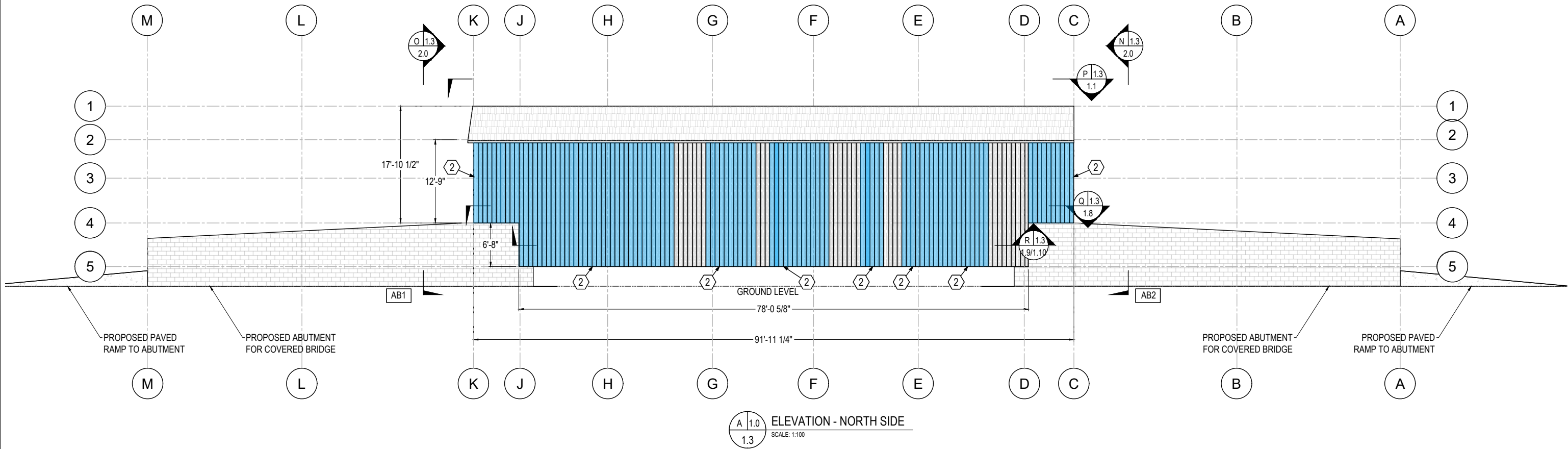
GENERAL NOTES:

1. FIELD VERIFY ALL SIDING TO BE SECURED AND REPLACED.

2. REMOVE AND REPLACE SIDING AS NECESSARY ON THE NORTH, SOUTH, AND INTERIOR WING WALLS TO PERFORM REPAIRS TO THE TENSION CHORD, VERTICAL POSTS, AND FOUNDATION CONNECTIONS.

REPAIR COLOR LEGEND:

= REPLACE TIMBER ELEMENT





REPAIR - SHEET KEYNOTES - SIDING

1. SIDING - REINSTALL LOOSE AND MISALIGNED SIDING BOARDS AND REPLACE MISSING SIDING BOARDS (NOM. 1" THICK BY VARYING WIDTH).

2. REPLACE MISSING AND DAMAGED SIDING BOARDS.

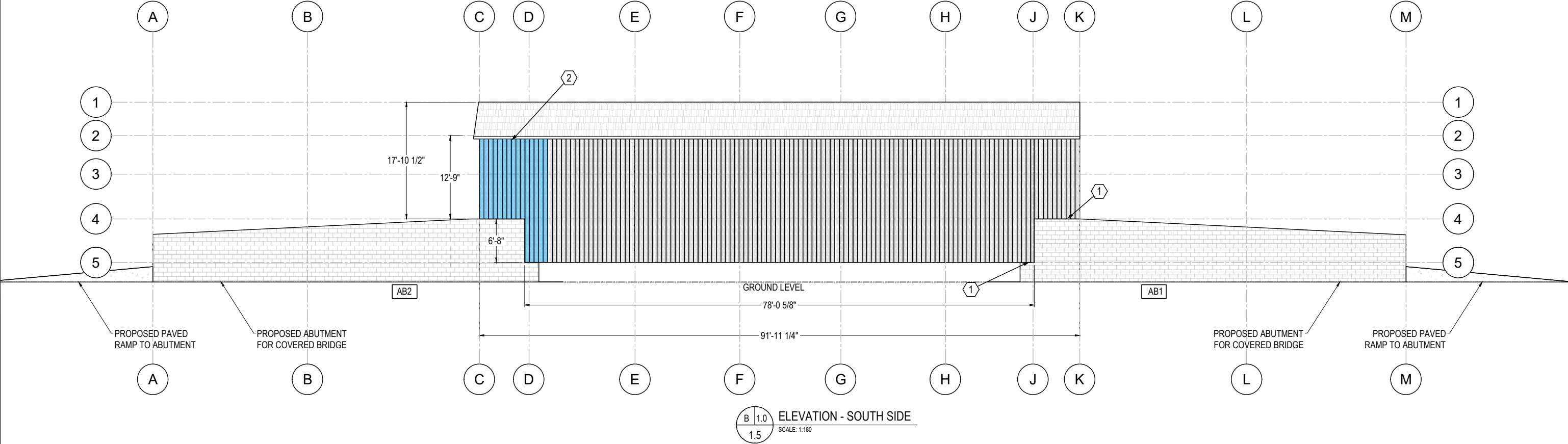
GENERAL NOTES:

1. FIELD VERIFY ALL SIDING TO BE SECURED AND REPLACED.

2. REMOVE AND REPLACE SIDING AS NECESSARY ON THE NORTH, SOUTH, AND INTERIOR WING WALLS TO PERFORM REPAIRS TO THE TENSION CHORD, VERTICAL POSTS, AND FOUNDATION CONNECTIONS.

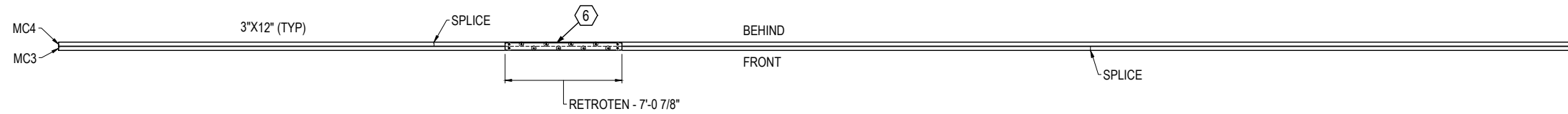
REPAIR COLOR LEGEND:

= REPLACE TIMBER ELEMENT

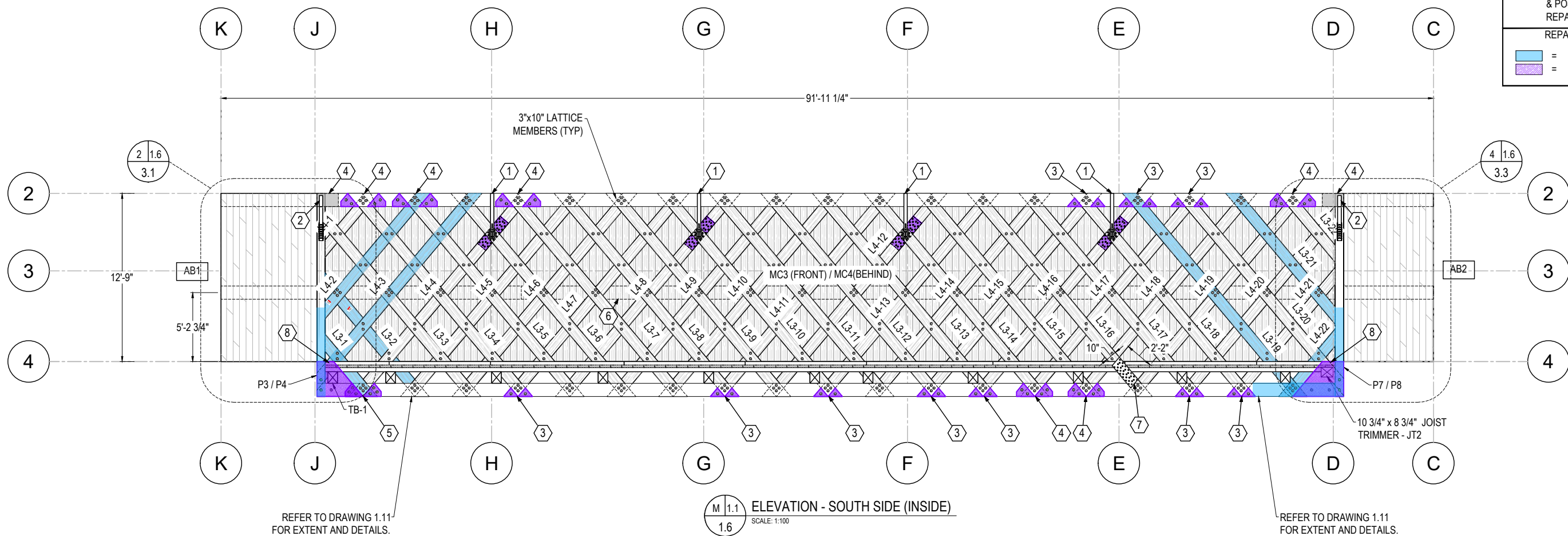








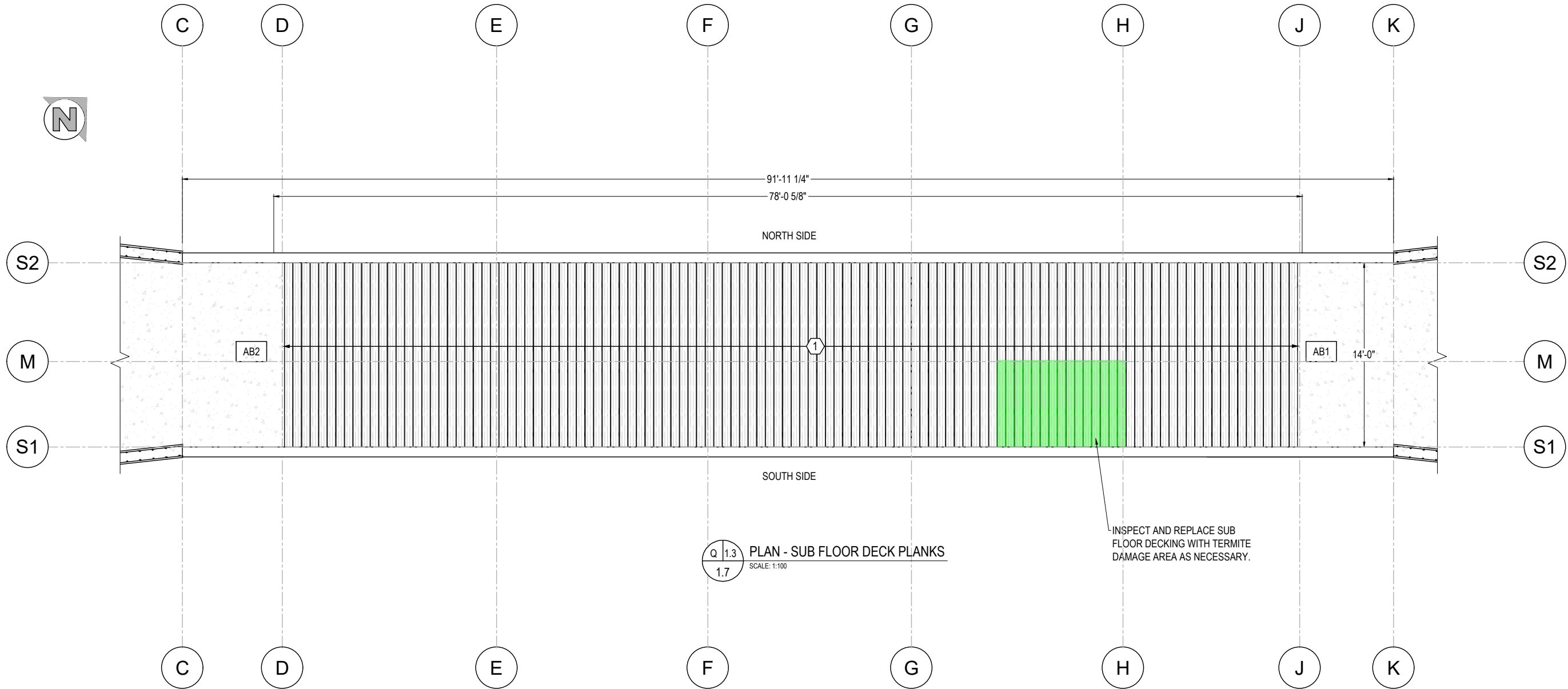
MIDDLE CHORD 3 & 4 - SWT DATA - PLAN  
SCALE: 1:100



- REPAIR - SHEET KEYNOTES - LATTICE MEMBERS & MIDDLE CHORDS
1. RETROSHEAR® PANEL WITH BLOCKING ON LATTICE AT KNEE BRACE LOCATIONS
  2. RETROSHEAR® PANEL AT ABUTMENT KNEE BRACE - REPAIR
  3. LATTICE CONNECTION REPAIR - REPAIR (TYPE 1)
  4. LATTICE CONNECTION REPAIR - REPAIR (TYPE 2)
  5. LATTICE CONNECTION REPAIR - REPAIR (TYPE 3)
  6. RETROTEN® REPAIR ON MIDDLE CHORD®
  7. RETROSHEAR® PANEL ON LATTICE BOTH SIDES.
  8. POST REPAIR - BLOCKING BETWEEN LATTICE & POST/TENSION CHORD.
- REPAIR COLOR LEGEND:
- REPLACE TIMBER ELEMENT
  - NEW PLYWOOD BLOCKING


REPAIR - SHEET KEYNOTES - LOWER FLOOR  
DECKING  
1. REMOVE BOTH LAYERS OF DECK BOARDS TO  
RESTORE JOISTS AND TRANSVERSE BEAMS.  
RESTORE DECKING AND REPLACE ELEMENTS  
AS REQUIRED (3" THICK DECK PLANKS, WIDTH  
VARIES. SEE SHEET 5.5 FOR CONNECTION  
DETAILS)

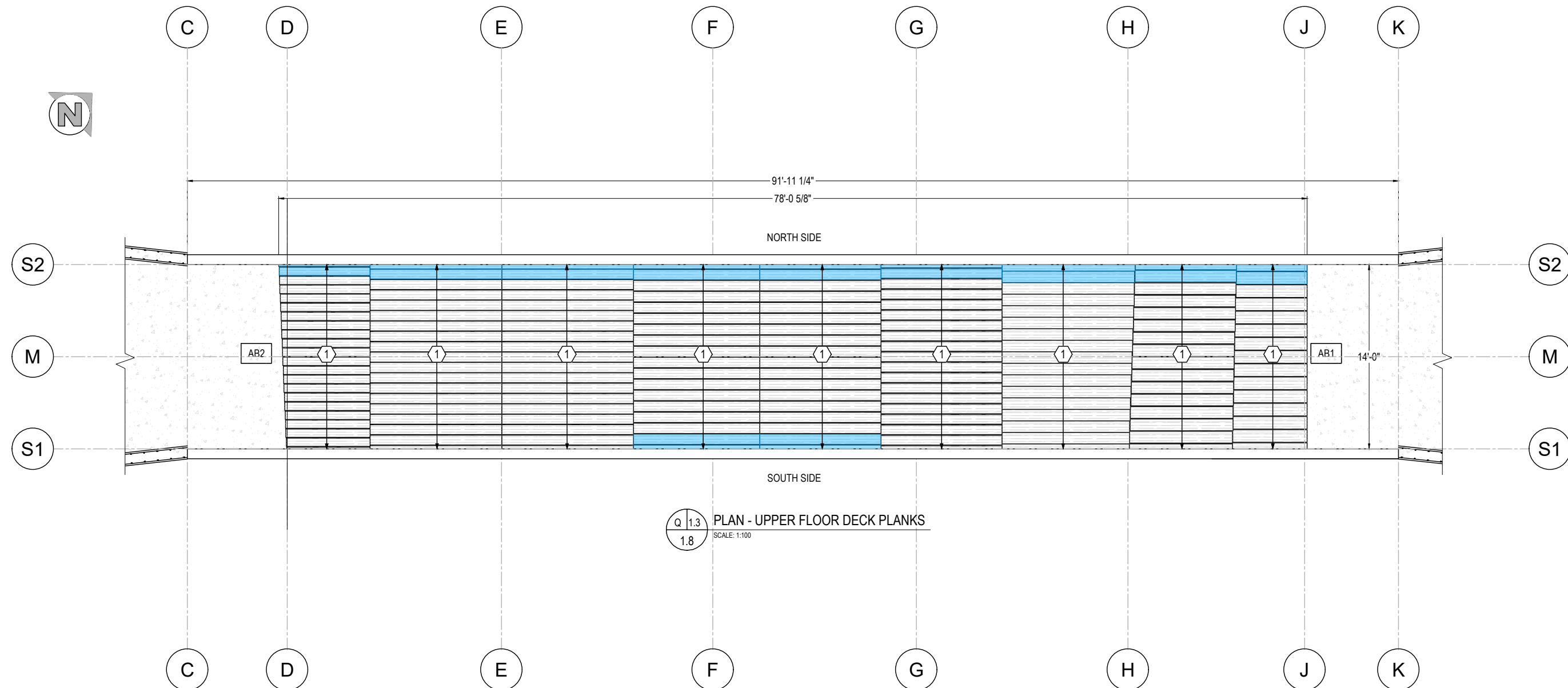
REPAIR LEGEND: DEFECTS  
[Green Box] = TERMITES DAMAGE AREA





REPAIR - SHEET KEYNOTES - UPPER FLOOR  
DECKING  
1. REMOVE BOTH LAYERS OF DECK BOARDS TO  
RESTORE JOISTS AND TRANSVERSE BEAMS.  
RESTORE DECKING AND REPLACE ELEMENTS  
AS REQUIRED (3" THICK DECK PLANKS, WIDTH  
VARIES. SEE SHEET 5.6 FOR CONNECTION  
DETAILS)

REPAIR COLOR LEGEND:  
 = REPLACE TIMBER ELEMENT



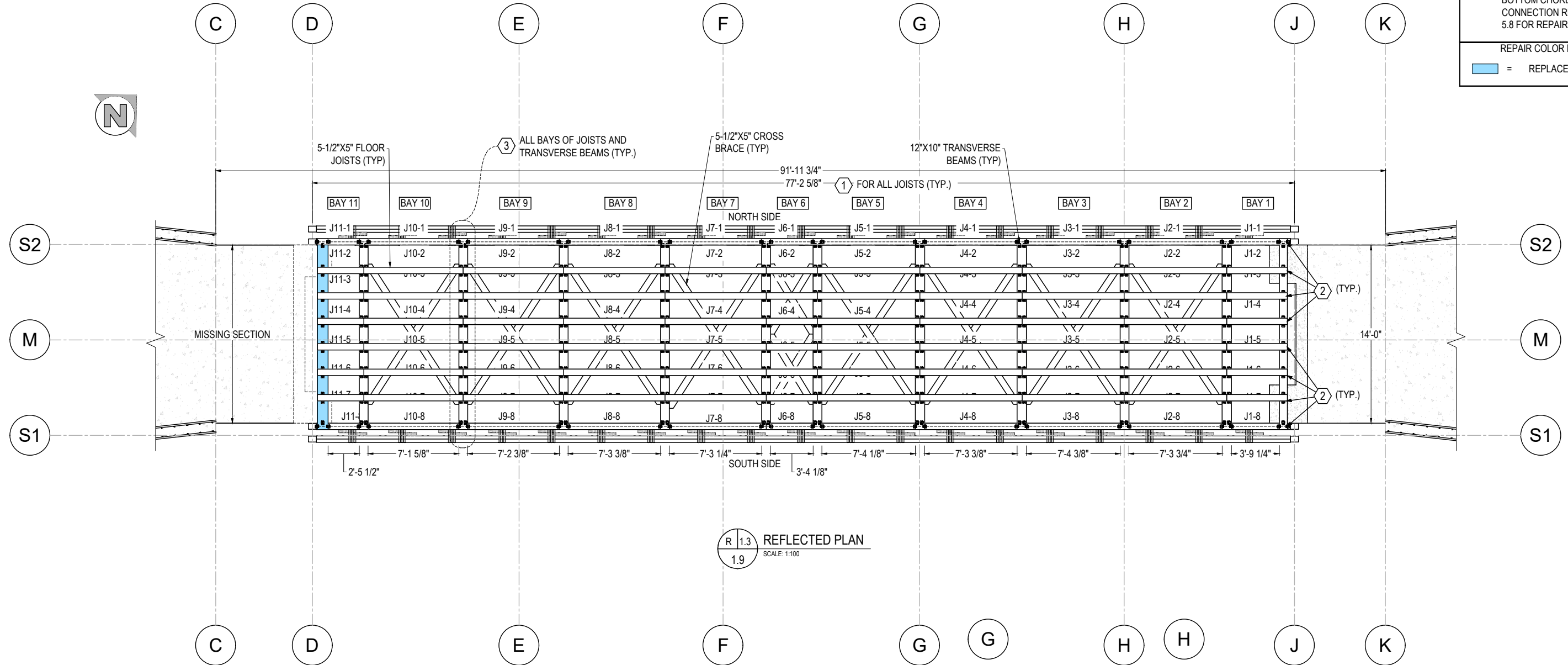
Q 1.3  
1.8  
PLAN - UPPER FLOOR DECK PLANKS  
SCALE: 1:100

JOIST'S (STRINGERS) / LOWER CROSS BRACE NOTES:		
NOTE #	NOTE:	NOMINAL MEMBER SIZE:
1	JOIST SIZE	6"x5"
2	LOWER CROSS BRACE SIZE	6"x5"

- REPAIR - SHEET KEYNOTES - FLOOR JOISTS
1. RESEAT JOISTS TO ENSURE THEY ARE LEVEL
  2. REMOVE JOISTS TO RESTORE TRANSVERSE BEAMS. REPLACE EXISTING JOISTS AT 2-FT O.C. AVOID JOISTS WITH SPLITS, CRACKS, AND LARGE KNOTS. IF JOIST HAS WANE OR KNOTS, TURN JOIST TO ORIENTATE KNOTS AND/OR WANE TO TOP. IF KNOTS ON BOTTOM FACE ARE UNAVOIDABLE, INSTALL SISTER ELEMENT
  3. JOIST TO TRANSVERSE BEAM & BOTTOM CHORD TO TRANSVERSE BEAM END CONNECTION REPAIR - INSTALL NEW SIMPSON A23Z 2" X 1-1/2" SIMPSON BRACKET WITH 2" SDWS. (1) PER END OF JOIST.
- NEW SISTER ELEMENT REPAIR (IF REQUIRED - SEE SHEET 4.4 FOR REPAIR DETAILS)
  - JOIST TO TRANSVERSE BEAM CONNECTION & BOTTOM CHORD TO TRANSVERSE BEAM END CONNECTION REPAIR DETAILS (SEE SHEET 5.8 FOR REPAIR DETAILS)

REPAIR COLOR LEGEND:

= REPLACE TIMBER ELEMENT





C

D

E

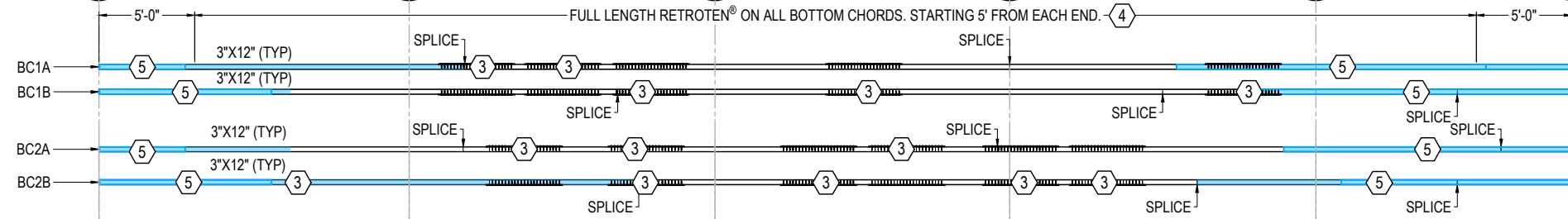
F

G

H

J

K



BOTTOM CHORD 1 & 2 - SEGMENT REPLACEMENT - PLAN

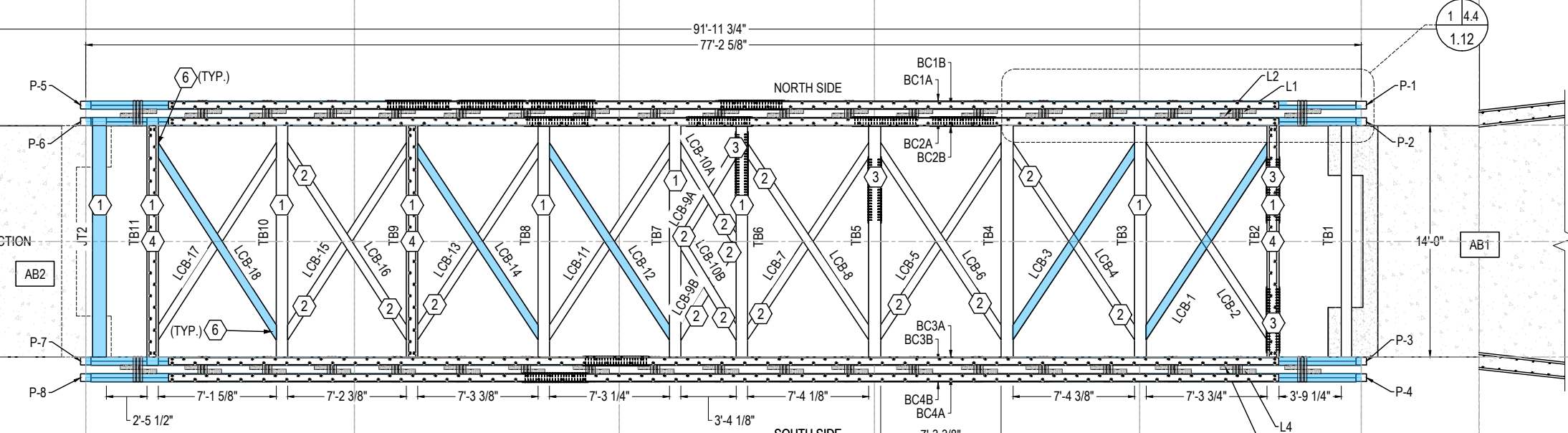
SCALE: 1:100

S2

M

S1

MISSING SECTION



BOTTOM CHORD 3 & 4 - SEGMENT REPLACEMENT - PLAN

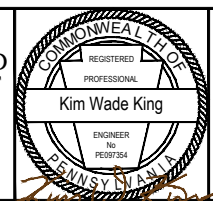
SCALE: 1:100

R 1.3  
10/1.12 REFLECTED PLAN  
SCALE: 1:100

- REPAIR - SHEET KEYNOTES - LOWER CROSS BRACES & TRANSVERSE BEAMS
1. RESEAT TRANSVERSE BEAM TO ENSURE THEY ARE LEVEL
  2. REPAIR CROSS BRACE CONNECTION WITH 1/4\"/>
- GENERAL NOTES:
- FIELD VERIFY SPLICE LOCATIONS ON BOTTOM CHORDS.
  - PLANE BEAMS AS REQUIRED FOR FIT.
- REPAIR COLOR LEGEND:
- = REPLACE TIMBER ELEMENT



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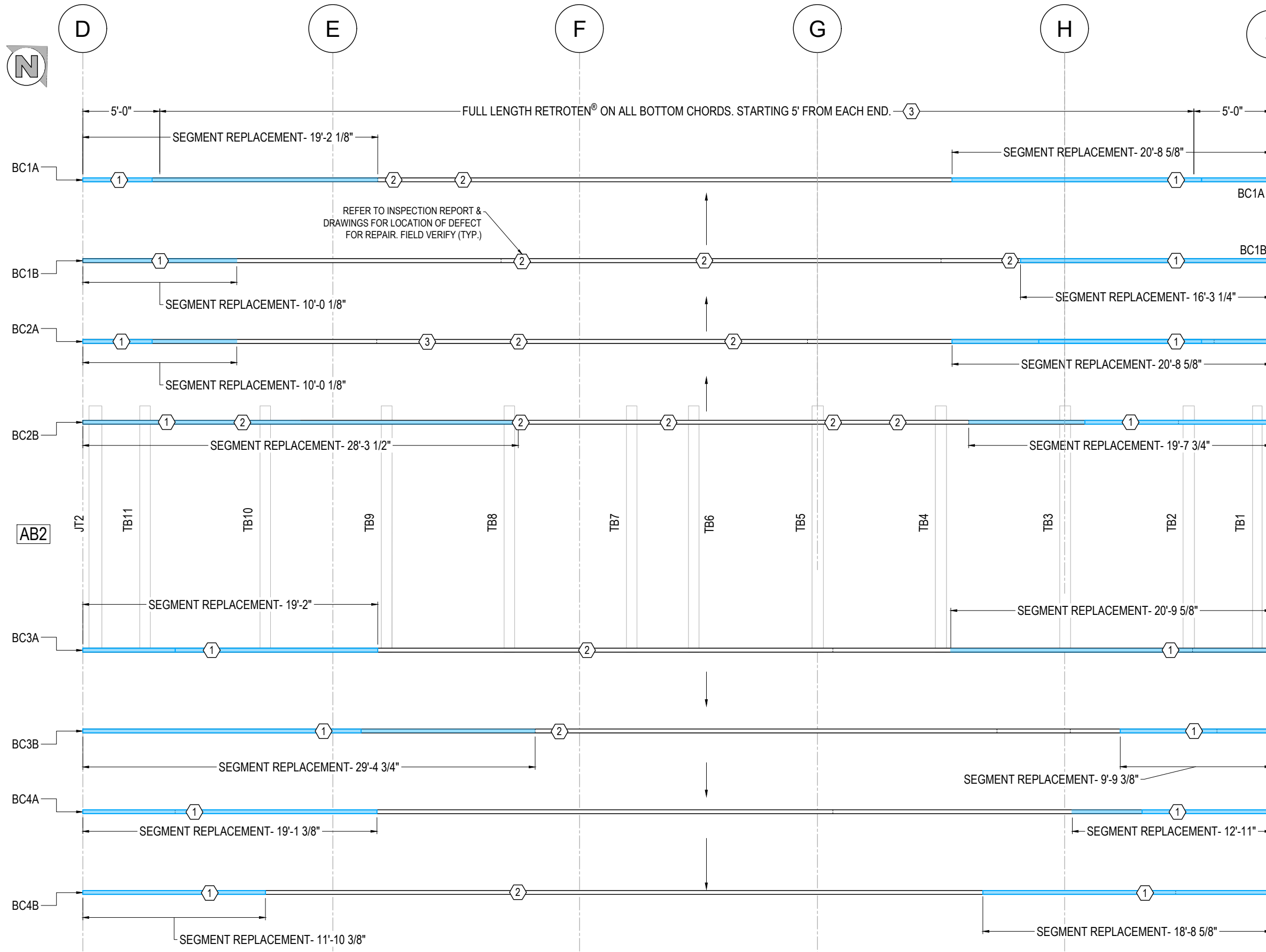
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- BRIDGE RELOCATION REVISION

REASON FOR REVISION	DATE	DRAWN BY	CHKD BY	APPRD BY
100% DESIGN DRAWINGS	05/09/2025	UK	KWK	KWK
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BRIDGE RELOCATION REVISION	06/09/2025	UK	KWK	KWK

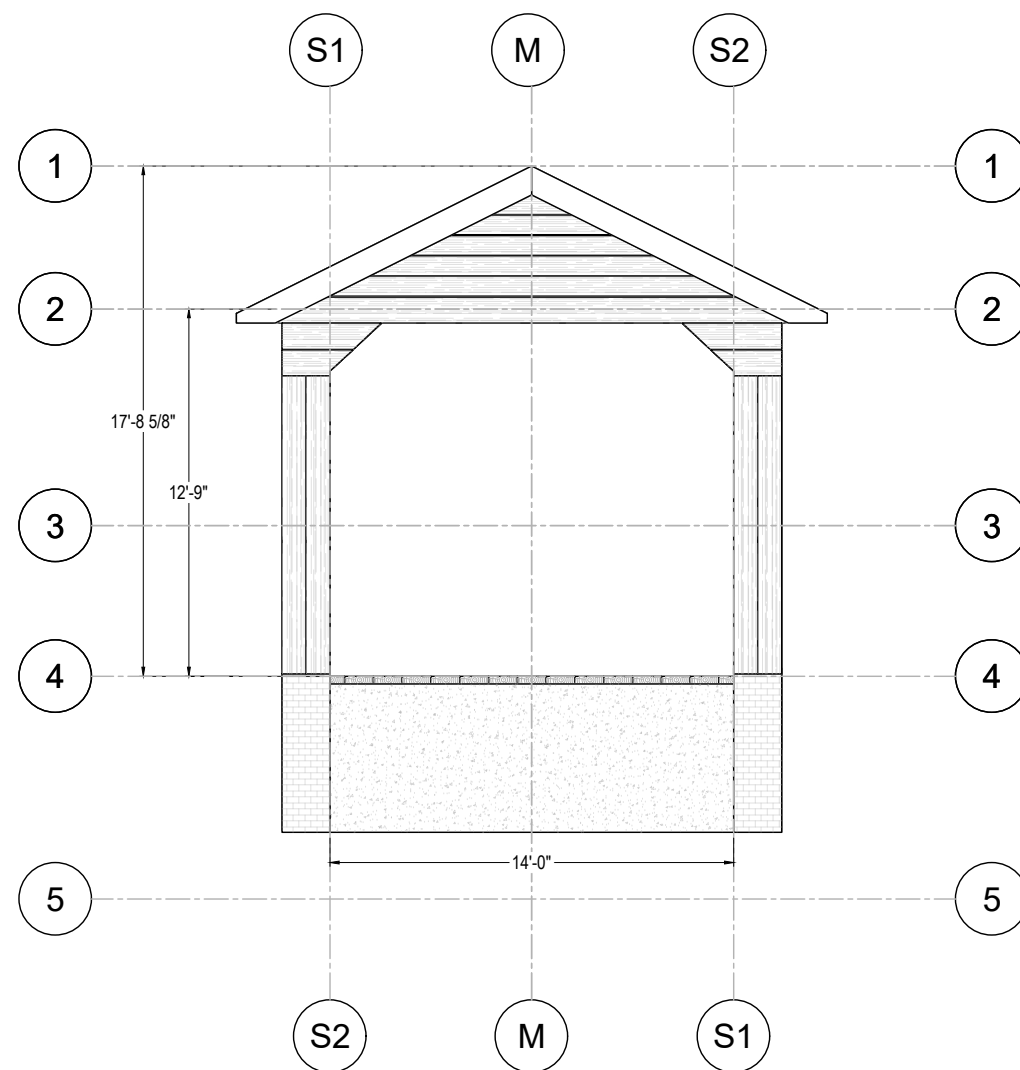
## RESTORATION DRAWINGS REPAIR PLANS BOTTOM CHORD'S, LCB'S, TB'S

DRAWING #  
1.10  
SHEET #  
15 OF 42  
PROJECT #9101S

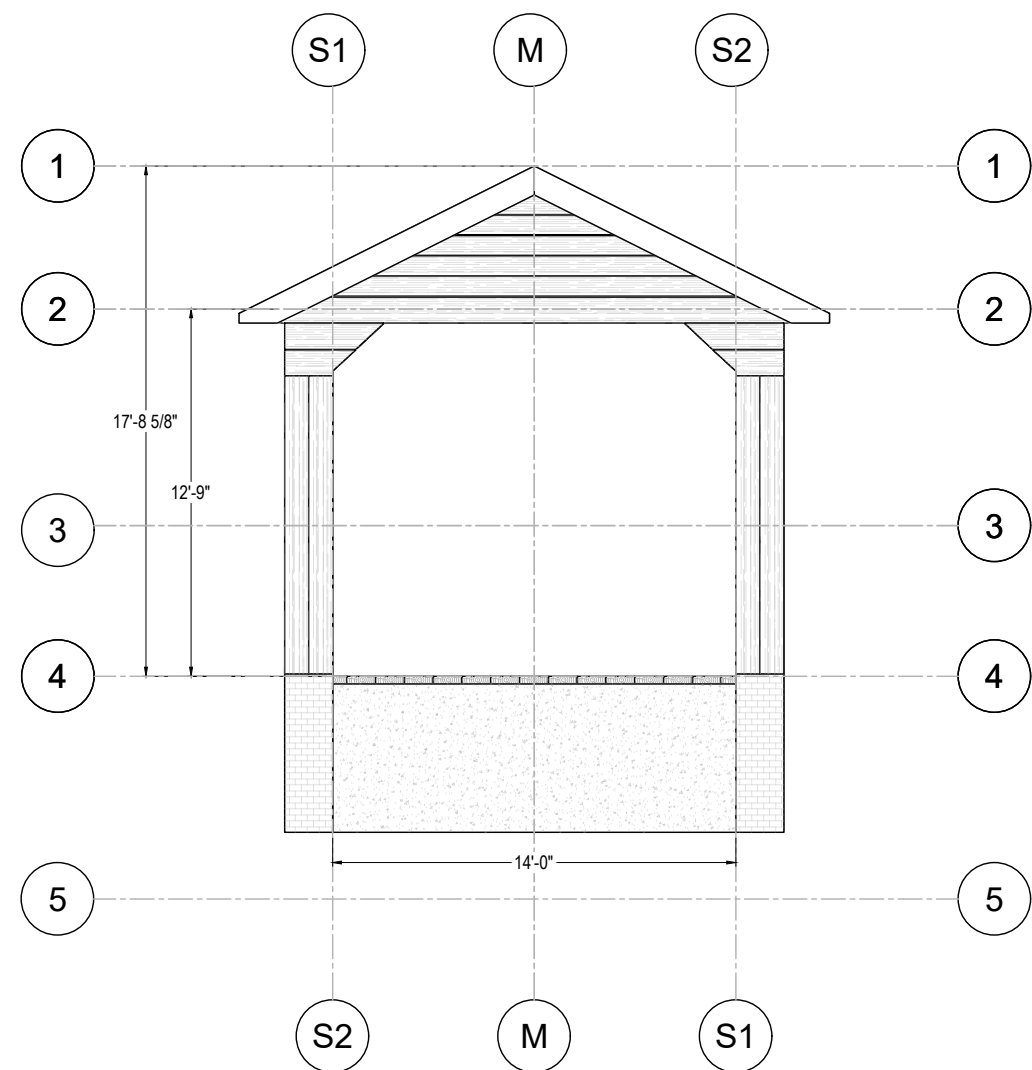




- SHEET KEYNOTES**
1. REPLACE BOTTOM CHORD SEGMENT
  2. RETROSHEAR® PANEL REPAIR
  3. RETROTEN® REPAIR
- BOTTOM CHORD SEGMENT REPLACEMENT DETAILS (SEE SHEET 4.4 FOR DETAILS)
  - RETROSHEAR PANEL® (SEE SHEET 4.0 FOR DETAILS)
  - RETROTEN® (SEE SHEET 4.1 FOR DETAILS)
- GENERAL NOTES:**
- FIELD VERIFY SPLICE LOCATIONS ON BOTTOM CHORDS.
- REPAIR COLOR LEGEND:**
- = REPLACE TIMBER ELEMENT



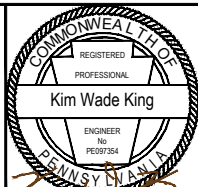
SECTION - AB1 (FRONT)  
SCALE: 1:80



SECTION - AB2 (FRONT)  
SCALE: 1:80



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REASON FOR REVISION	DATE	DRAWN BY	CHKD BY	APPR BY

RESTORATION DRAWINGS  
REPAIR PLANS  
ABUTMENTS - OUTSIDE

DRAWING #  
2.0  
SHEET #  
17 OF 42  
PROJECT #9101S

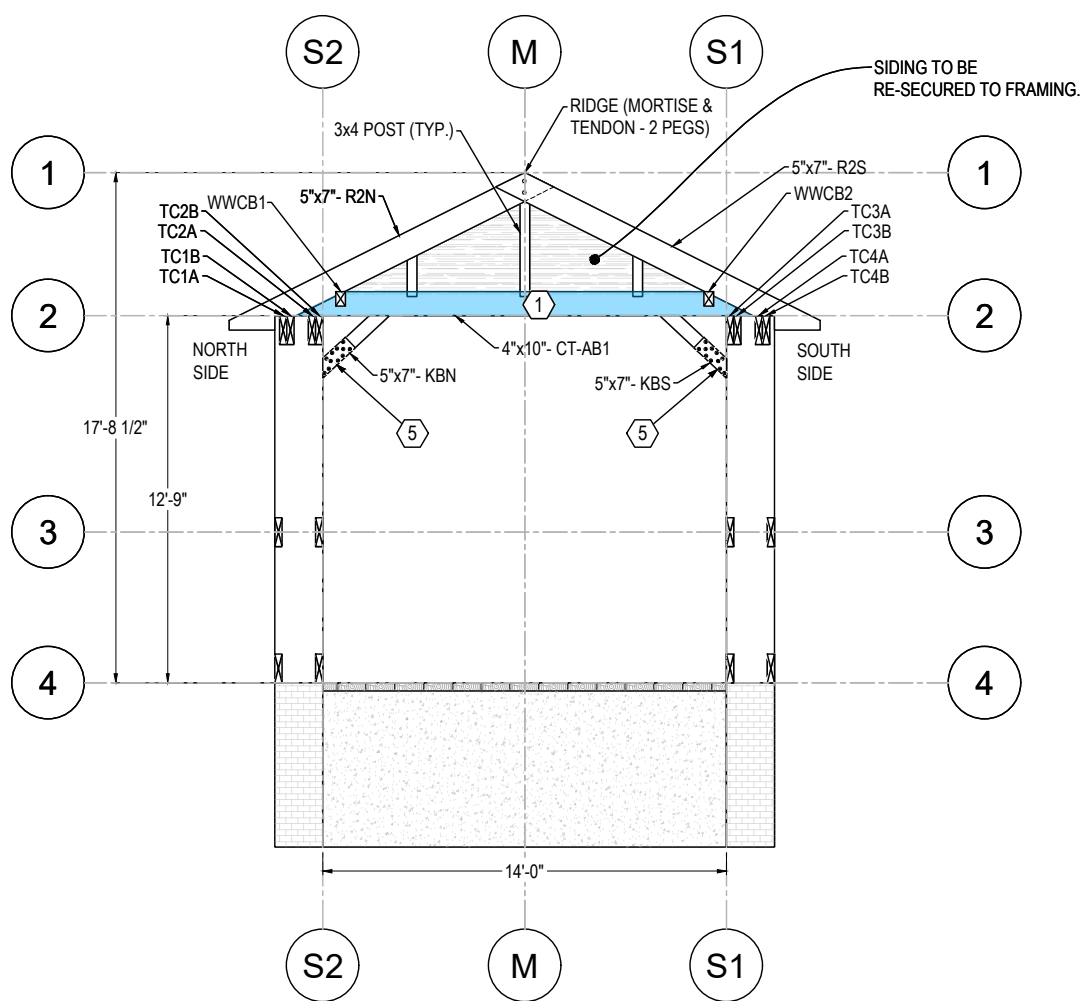
REPAIR - SHEET KEYNOTES - COLLAR TIES & KNEE BRACES

1. REPLACE TIMBER ELEMENT
2. POSTING REPAIR
3. MAIN RAFTER & KNEE BRACE UPPER CONNECTION REPAIR
4. KNEE BRACE LOWER CONNECTION REPAIR
5. KNEE BRACE AT ABUTMENT CONNECTION REPAIR
6. RETROSHEAR® PANEL AT END OF MAIN RAFTER REPAIR
7. SISTER TIMBER ELEMENT

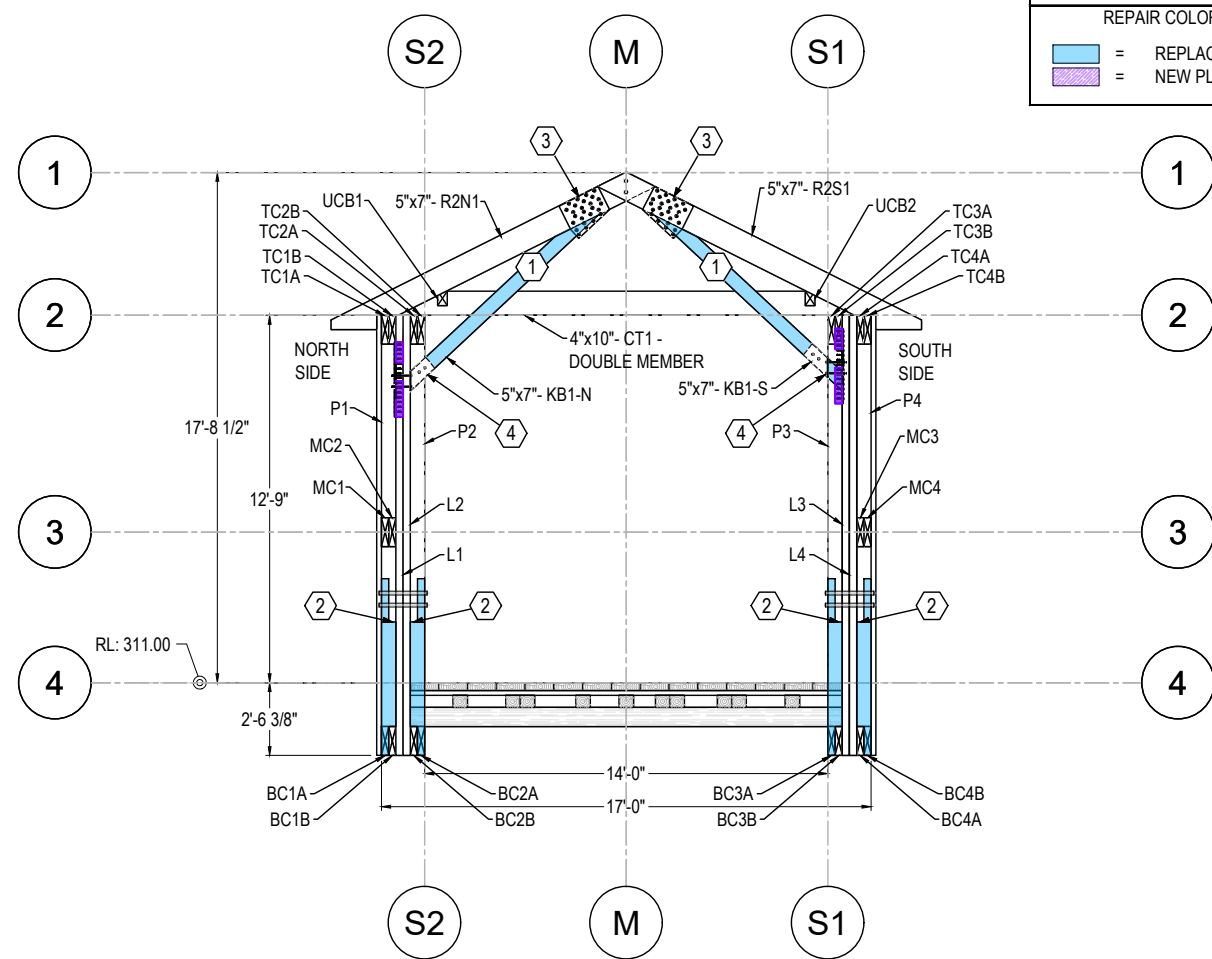
- POSTING REPAIR (SEE SHEET 4.5 FOR REPAIR DETAILS)
- MAIN RAFTER & KNEE BRACE UPPER CONNECTION REPAIR (SEE SHEET 5.3 FOR REPAIR DETAILS)
- KNEE BRACE LOWER CONNECTION REPAIR (SEE SHEET 5.4 FOR REPAIR DETAILS)
- KNEE BRACE AT ABUTMENT CONNECTION REPAIR (SEE SHEET 5.1 FOR REPAIR DETAILS)
- SISTER TIMBER ELEMENT REPAIR (SEE SHEET 4.3 FOR REPAIR DETAIL)

REPAIR COLOR LEGEND:

- = REPLACE TIMBER ELEMENT
- = NEW PLYWOOD BLOCKING

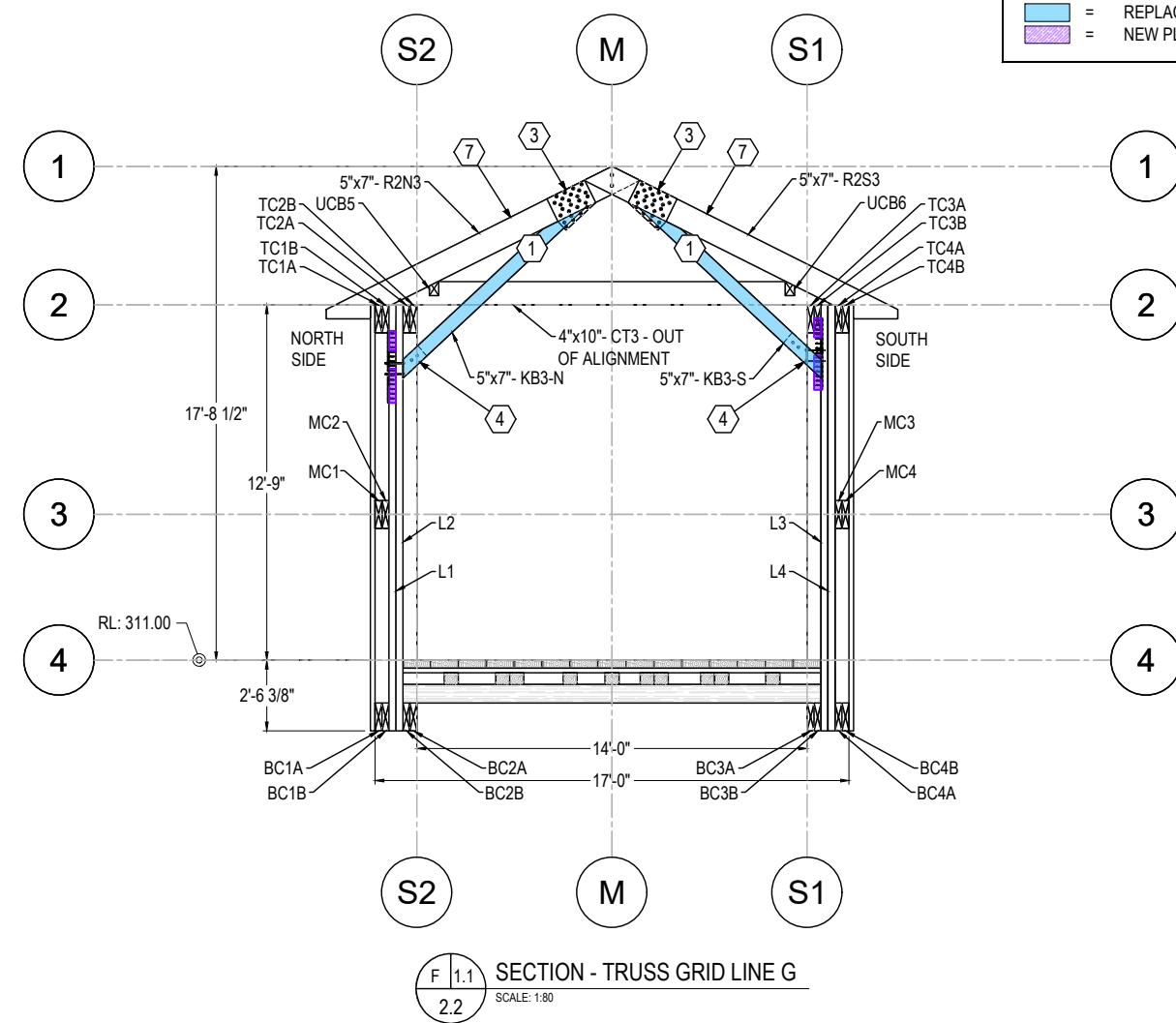
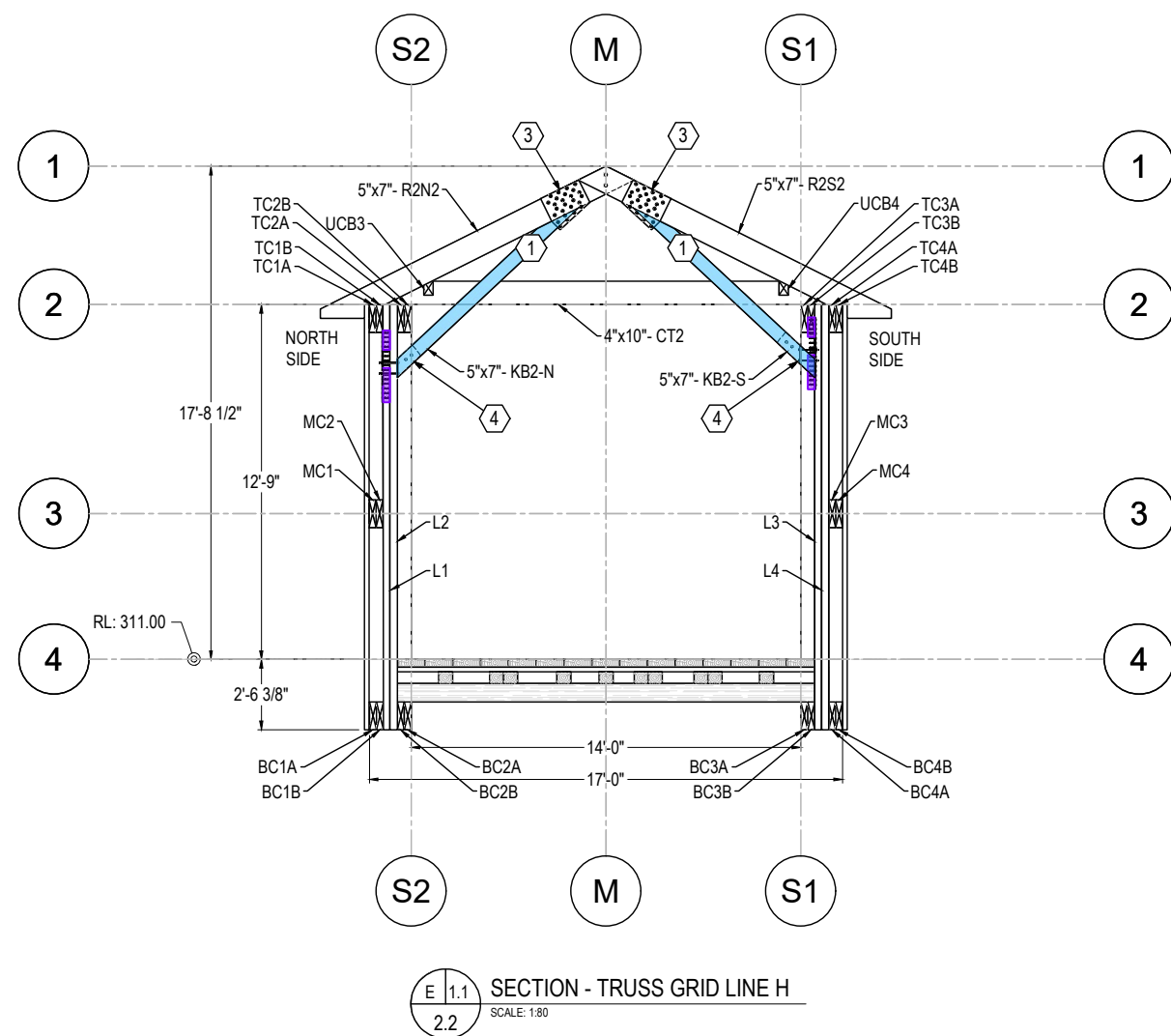


C 1.1 SECTION - AB1 TRUSS  
2.1 SCALE: 1:80



D 1.1 SECTION - TRUSS GRID LINE J  
2.1 SCALE: 1:80






- REPAIR - SHEET KEYNOTES - COLLAR TIES &  
KNEE BRACES

1. REPLACE TIMBER ELEMENT
2. POSTING REPAIR
3. MAIN RAFTER & KNEE BRACE UPPER CONNECTION REPAIR
4. KNEE BRACE LOWER CONNECTION REPAIR
5. KNEE BRACE AT ABUTMENT CONNECTION REPAIR
6. RETROSHEAR® PANEL AT END OF MAIN RAFTER REPAIR
7. SISTER TIMBER ELEMENT

- POSTING REPAIR (SEE SHEET 4.5 FOR REPAIR DETAILS)
- MAIN RAFTER & KNEE BRACE UPPER CONNECTION REPAIR (SEE SHEET 5.3 FOR REPAIR DETAILS)
- KNEE BRACE LOWER CONNECTION REPAIR (SEE SHEET 5.4 FOR REPAIR DETAILS)
- KNEE BRACE AT ABUTMENT CONNECTION REPAIR (SEE SHEET 5.1 FOR REPAIR DETAILS)
- SISTER TIMBER ELEMENT REPAIR (SEE SHEET 4.3 FOR REPAIR DETAIL)

REPAIR COLOR LEGEND:

 = REPLACE TIMBER ELEMENT  
 = NEW PLYWOOD BLOCKING

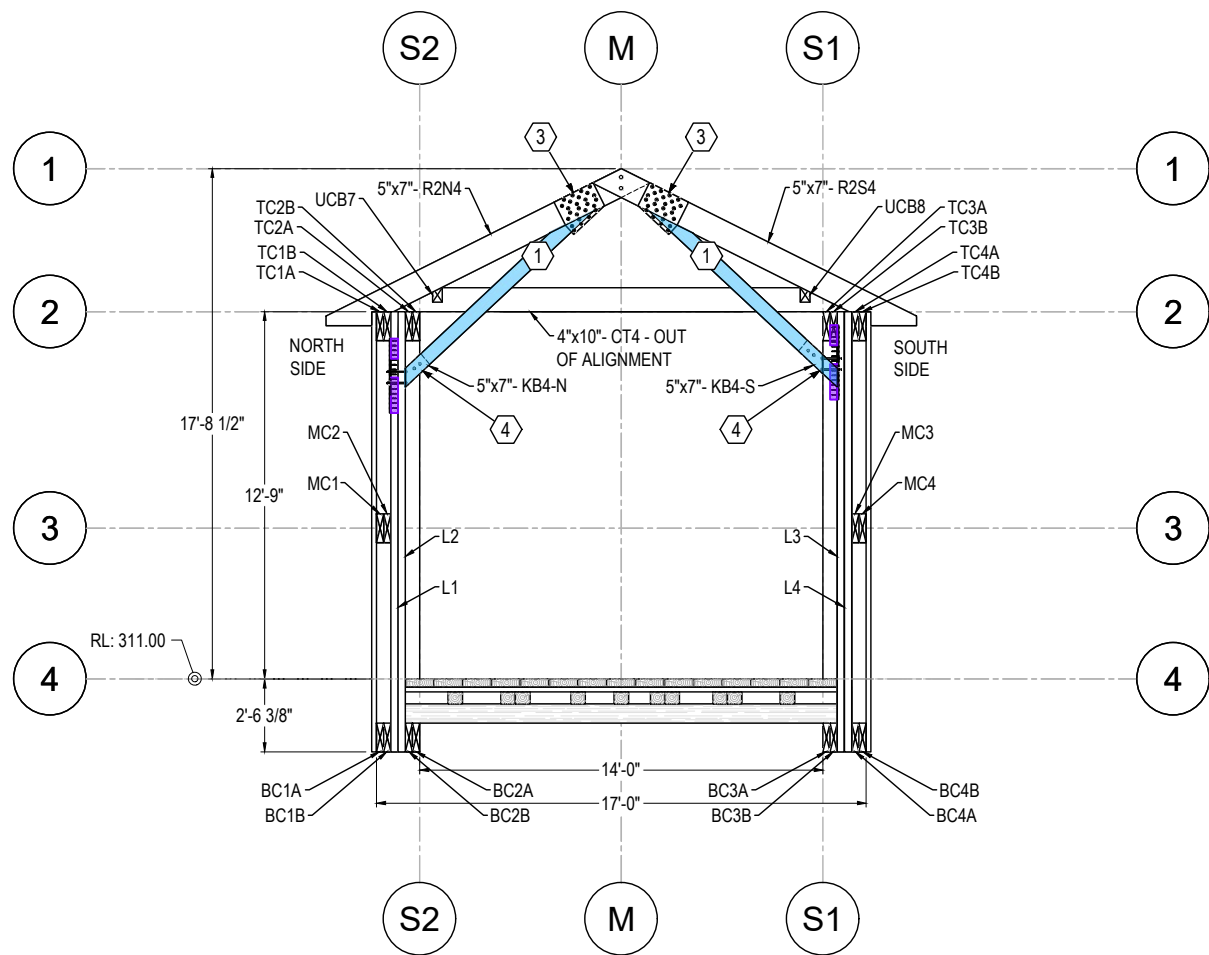
REPAIR - SHEET KEYNOTES - COLLAR TIES & KNEE BRACES

1. REPLACE TIMBER ELEMENT
2. POSTING REPAIR
3. MAIN RAFTER & KNEE BRACE UPPER CONNECTION REPAIR
4. KNEE BRACE LOWER CONNECTION REPAIR
5. KNEE BRACE AT ABUTMENT CONNECTION REPAIR
6. RETROSHEAR® PANEL AT END OF MAIN RAFTER REPAIR
7. SISTER TIMBER ELEMENT

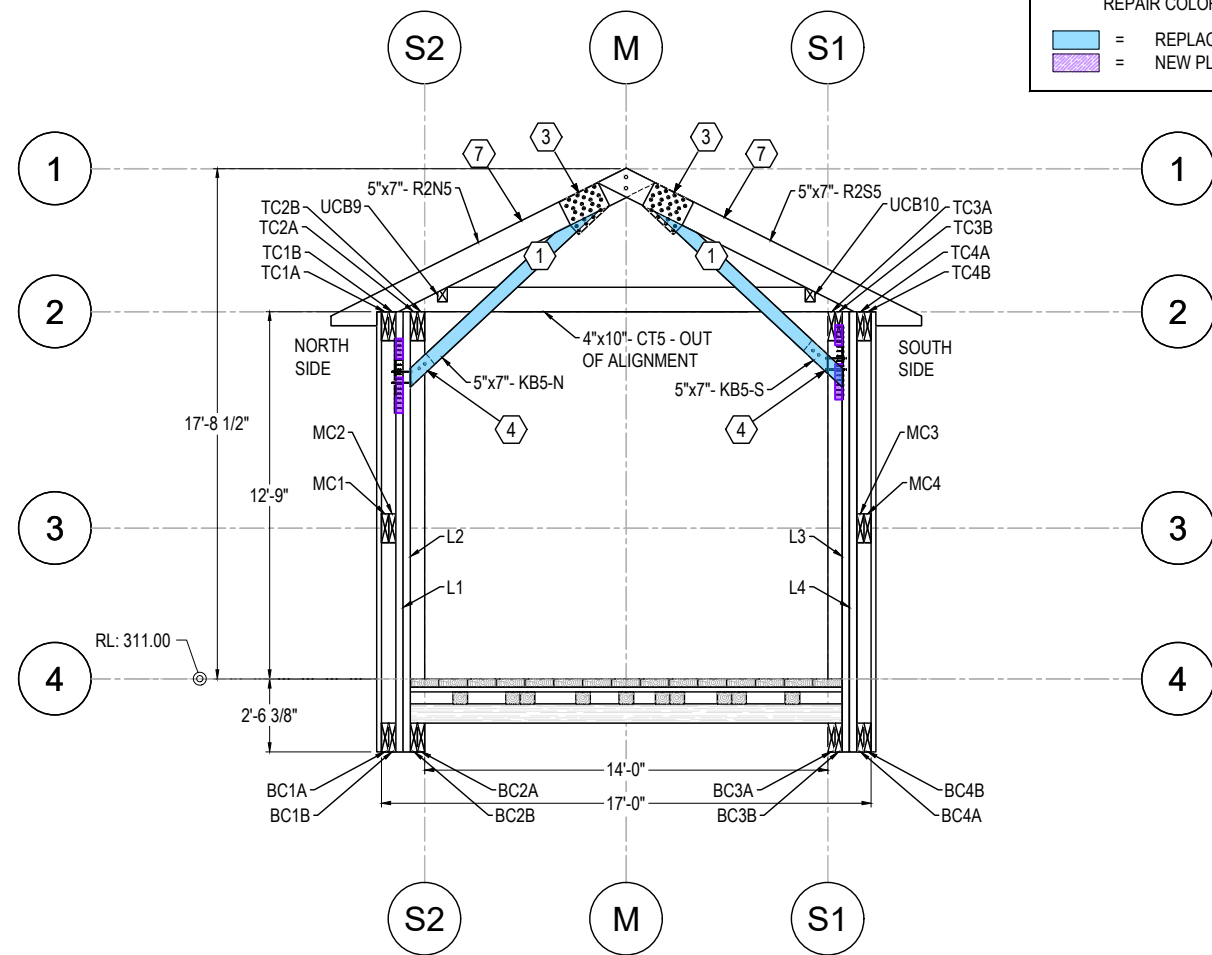
- POSTING REPAIR (SEE SHEET 4.5 FOR REPAIR DETAILS)
- MAIN RAFTER & KNEE BRACE UPPER CONNECTION REPAIR (SEE SHEET 5.3 FOR REPAIR DETAILS)
- KNEE BRACE LOWER CONNECTION REPAIR (SEE SHEET 5.4 FOR REPAIR DETAILS)
- KNEE BRACE AT ABUTMENT CONNECTION REPAIR (SEE SHEET 5.1 FOR REPAIR DETAILS)
- SISTER TIMBER ELEMENT REPAIR (SEE SHEET 4.3 FOR REPAIR DETAIL)

REPAIR COLOR LEGEND:

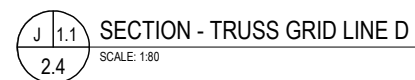
- = REPLACE TIMBER ELEMENT
- = NEW PLYWOOD BLOCKING




G 1.1 SECTION - TRUSS GRID LINE F  
2.3 SCALE: 1:80



H 1.1 SECTION - TRUSS GRID LINE E  
2.3 SCALE: 1:80

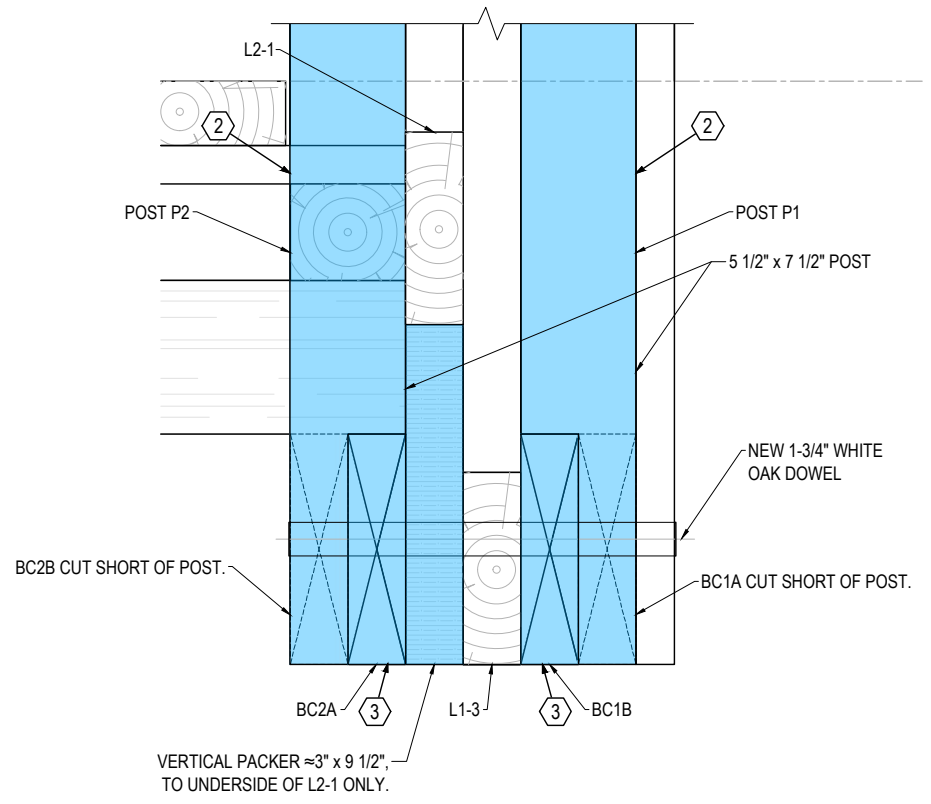


- POSTING REPAIR (SEE SHEET 4.5 FOR REPAIR DETAILS)
- MAIN RAFTER & KNEE BRACE UPPER CONNECTION REPAIR (SEE SHEET 5.3 FOR REPAIR DETAILS)
- KNEE BRACE LOWER CONNECTION REPAIR (SEE SHEET 5.4 FOR REPAIR DETAILS)
- KNEE BRACE AT ABUTMENT CONNECTION REPAIR (SEE SHEET 5.1 FOR REPAIR DETAILS)
- SISTER TIMBER ELEMENT REPAIR (SEE SHEET 4.3 FOR REPAIR DETAIL)

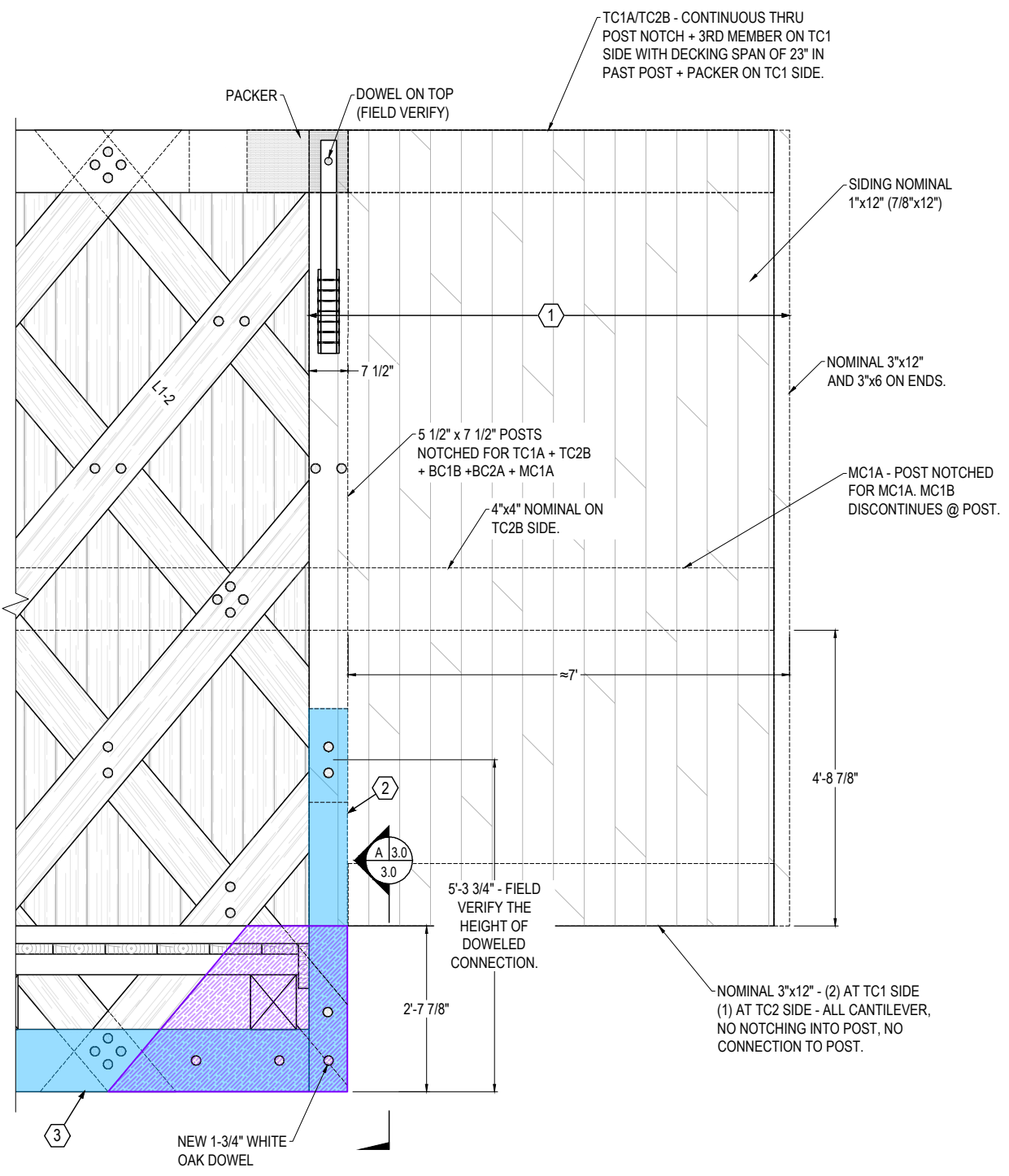
 = REPLACE TIMBER ELEMENT  
 = NEW PLYWOOD BLOCKING



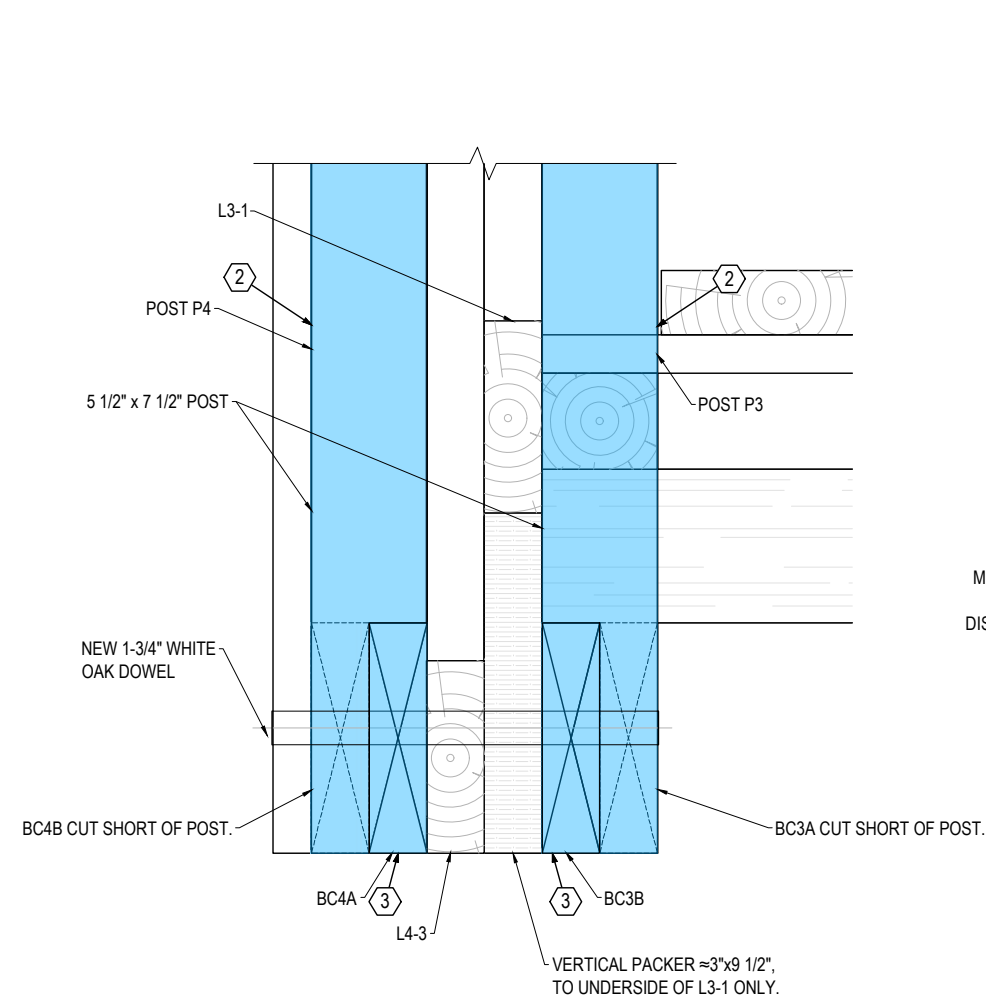
- REPAIR - SHEET KEYNOTES - WING WALL SIDING, POSTS, BOTTOM CHORDS
1. REINSTALL LOOSE AND MISALIGNED SIDING BOARDS AND REPLACE MISSING SIDING BOARDS.
  2. POSTING REPAIR - AMPUTATE POOR SEGMENTS AND POST WITH NEW TIMBER ELEMENTS AS NOTED.
  3. BOTTOM CHORD SEGMENT REPLACEMENT
- POSTING (SEE SHEET 4.5 FOR DETAILS)
  - BOTTOM CHORD SEGMENT REPLACEMENT (SEE SHEET 4.6 FOR DETAILS)
- GENERAL NOTES:
- REPLACE BLOCKING BETWEEN POSTS.
  - RESTORE CONNECTIONS TO LATTICE ELEMENTS AS REQUIRED.
- REPAIR COLOR LEGEND:
- = REPLACE TIMBER ELEMENT
  - = NEW PLYWOOD BLOCKING



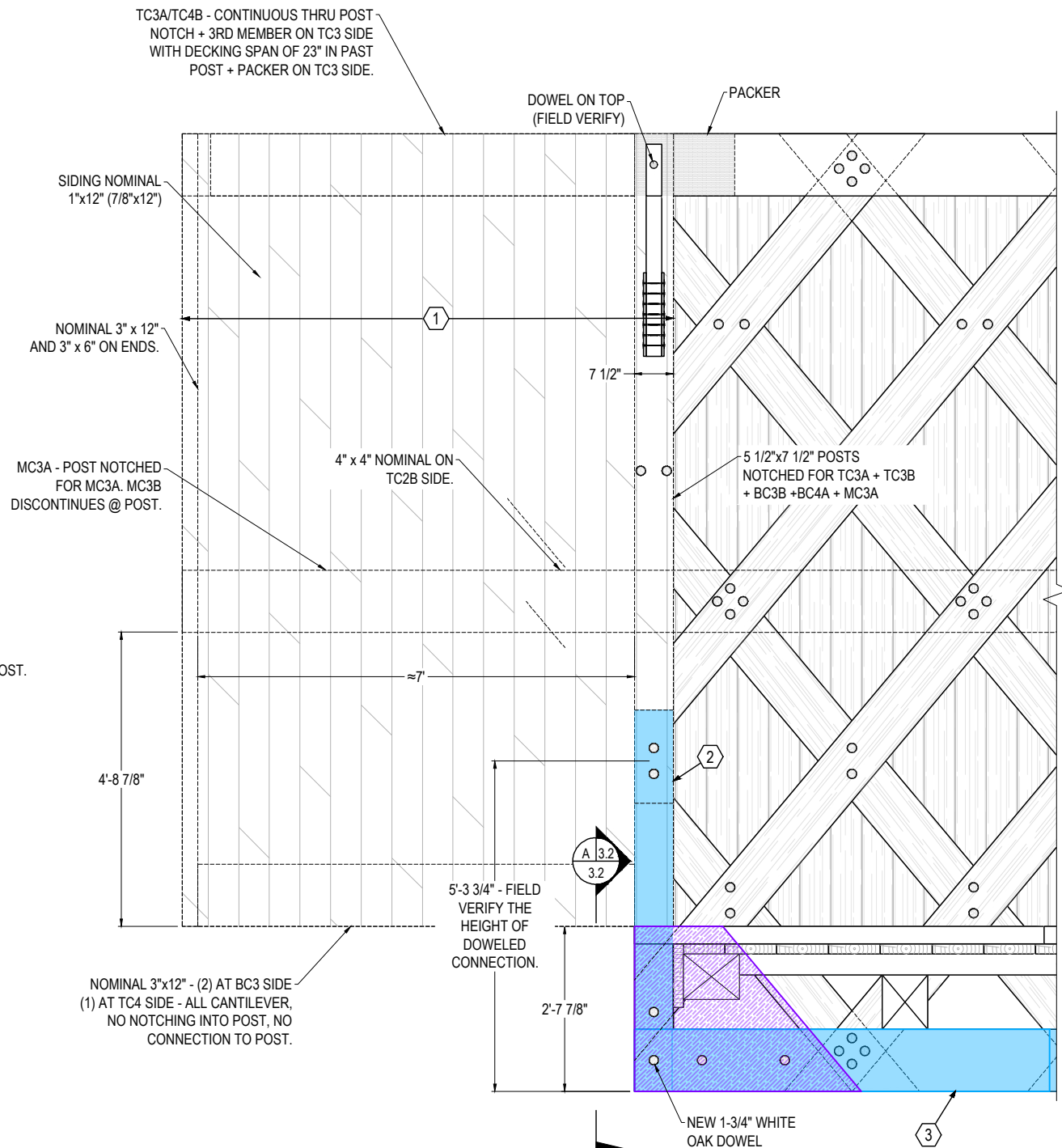
**AB1 NORTH CORNER DETAIL (POST 1 & 2)**  
SCALE: 1:10



**AB1 NORTH WEST WING WALL DETAIL (POST 1 & 2)**  
SCALE: 1:30  
NOTE: SEE DETAIL B ON SHEET 4.5 FOR FOUNDATION CONNECTION.



**AB1 SOUTH CORNER DETAIL (POST 3 & 4)**  
SCALE: 1:10



**AB1 SOUTH WEST WING WALL DETAIL (POST 3 & 4)**  
SCALE: 1:30

NOTE: SEE DETAIL B ON SHEET 4.5 FOR FOUNDATION CONNECTION.

REPAIR - SHEET KEYNOTES - WING WALL SIDING, POSTS, BOTTOM CHORDS

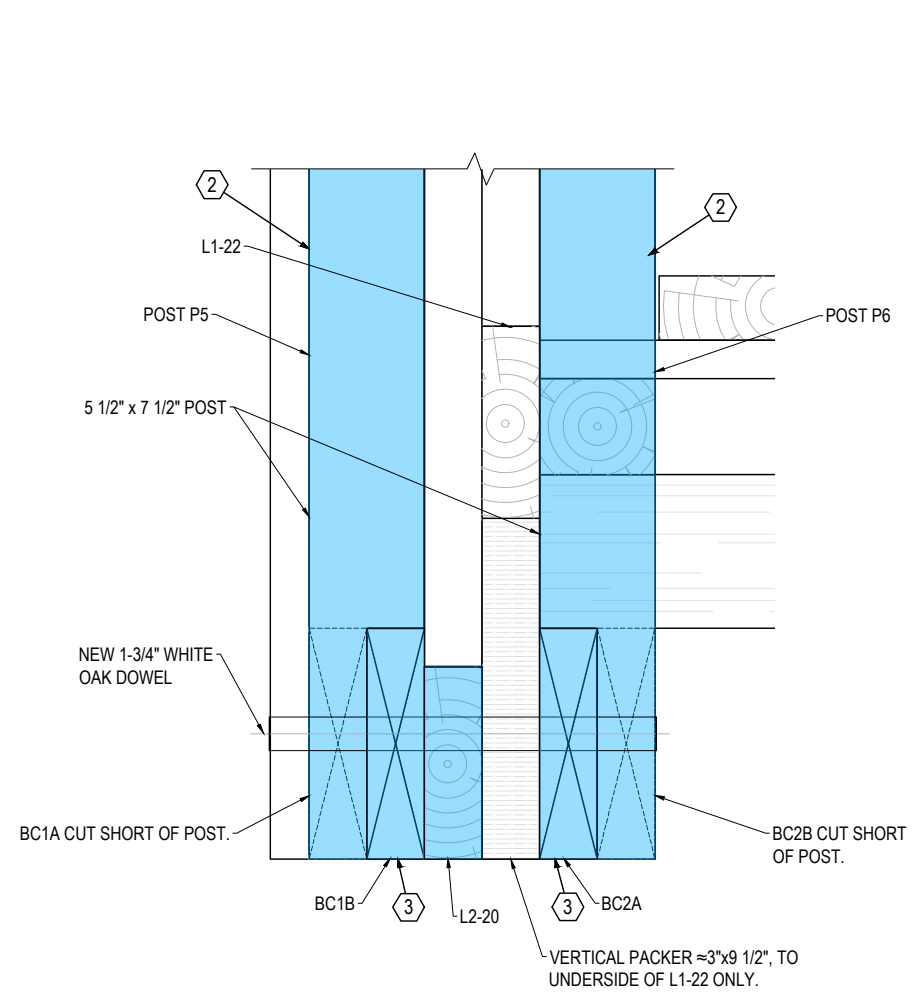
1. REINSTALL LOOSE AND MISALIGNED SIDING BOARDS AND REPLACE MISSING SIDING BOARDS.
2. POSTING REPAIR - AMPUTATE POOR SEGMENTS AND POST WITH NEW TIMBER ELEMENTS AS NOTED.
3. BOTTOM CHORD SEGMENT REPLACEMENT
  - POSTING (SEE SHEET 4.5 FOR DETAILS)
  - BOTTOM CHORD SEGMENT REPLACEMENT (SEE SHEET 4.6 FOR DETAILS)

GENERAL NOTES:

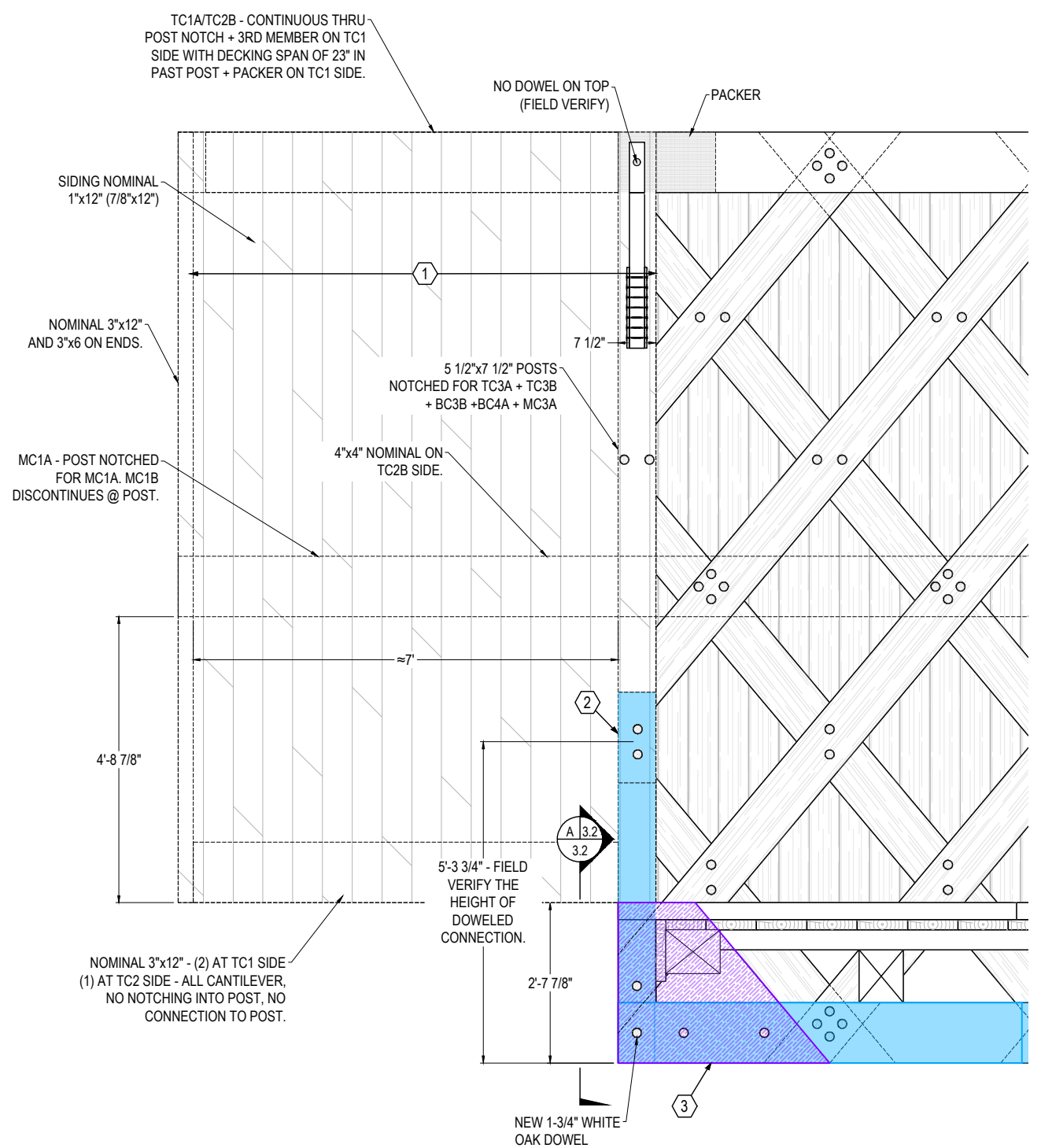
- REPLACE BLOCKING BETWEEN POSTS.
- RESTORE CONNECTIONS TO LATTICE ELEMENTS AS REQUIRED.

REPAIR COLOR LEGEND:

- = REPLACE TIMBER ELEMENT
- = NEW PLYWOOD BLOCKING



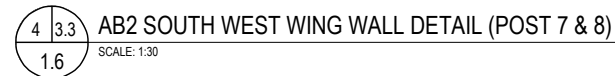
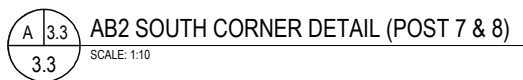
**AB2 SOUTH CORNER DETAIL (POST 5 & 6)**  
SCALE: 1:10




**AB2 SOUTH WEST WING WALL DETAIL (POST 5 & 6)**  
SCALE: 1:30  
NOTE: SEE DETAIL B ON SHEET 4.5 FOR FOUNDATION CONNECTION.

- REPAIR - SHEET KEYNOTES - WING WALL SIDING, POSTS, BOTTOM CHORDS
1. REINSTALL LOOSE AND MISALIGNED SIDING BOARDS AND REPLACE MISSING SIDING BOARDS.
  2. POSTING REPAIR - AMPUTATE POOR SEGMENTS AND POST WITH NEW TIMBER ELEMENTS AS NOTED.
  3. BOTTOM CHORD SEGMENT REPLACEMENT
- POSTING (SEE SHEET 4.5 FOR DETAILS)
  - BOTTOM CHORD SEGMENT REPLACEMENT (SEE SHEET 4.6 FOR DETAILS)
- GENERAL NOTES:
- REPLACE BLOCKING BETWEEN POSTS.
  - RESTORE CONNECTIONS TO LATTICE ELEMENTS AS REQUIRED.
- REPAIR COLOR LEGEND:
- = REPLACE TIMBER ELEMENT
  - = NEW PLYWOOD BLOCKING





- GENERAL NOTES:
- REPLACE BLOCKING BETWEEN POSTS.
  - RESTORE CONNECTIONS TO LATTICE ELEMENTS AS REQUIRED.

 = REPLACE TIMBER ELEMENT  
 = NEW PLYWOOD BLOCKING

- SHEET KEYNOTES
1.

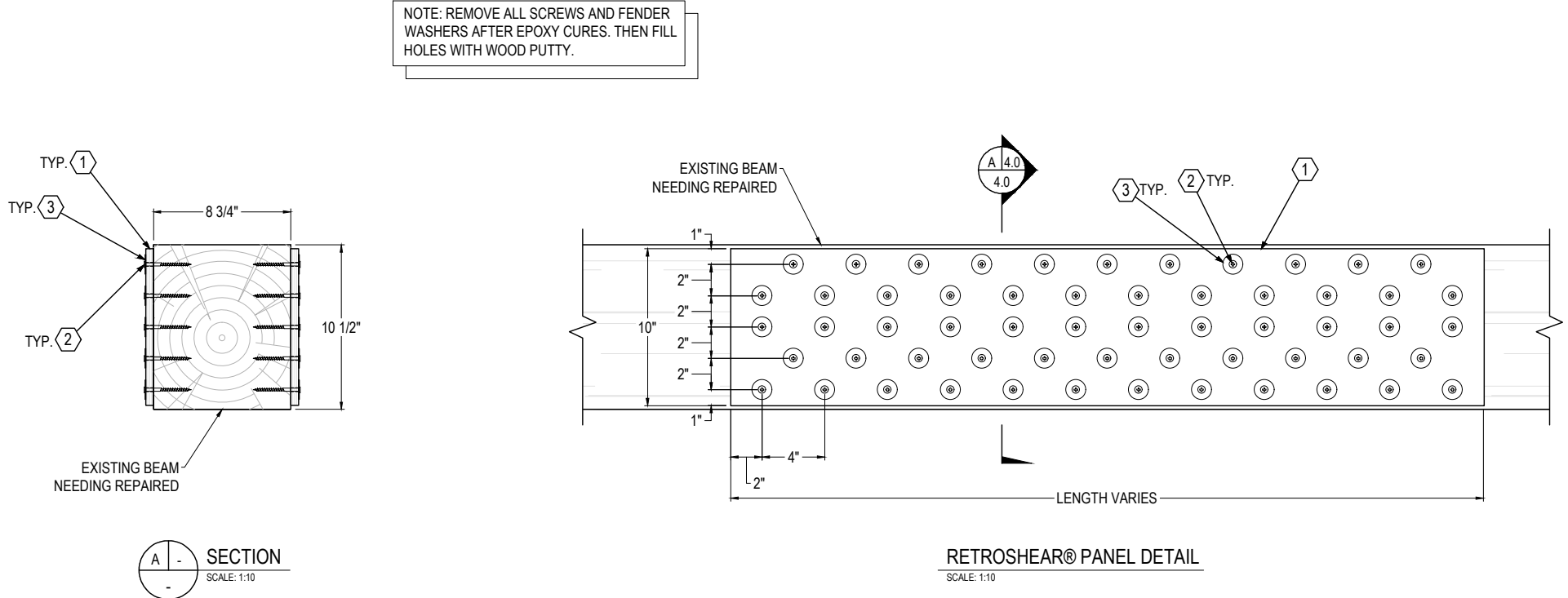
RETROSHEAR<sup>®</sup> PANEL (1" OR 1/2" THICK, AS SPECIFIED)
2.

WOOD SCREW - #10 x 3"
3.

FENDER WASHER - 1-1/4" OUTSIDE DIA.

RETROSHEAR<sup>™</sup> WORKS SCHEDULE:

1. COMPLETE PRE-RETROFIT MEETING AND ASSIGN TASKS. REVIEW DRAWINGS.
2. CONFIRM ACCESS REQUIREMENTS.
3. OBTAIN RETROSHEAR<sup>™</sup> LENGTH AND THICKNESS REQUIREMENTS PER EOR.
4. DOUBLE CHECK DRAWINGS FOR RETROSHEAR<sup>™</sup> REQUIREMENTS. FINISH PLANE THE GLUE SURFACE OF THE EXISTING TIMBER. LEVEL II TECHNICIANS TO MONITOR PLANING QUALITY. AVOID UNNECESSARY SCOUR.
5. LOCATE, ORGANIZE, AND COUNT INSTALLATION MATERIALS REQUIRED. ENSURE EXTRA SCREWS AND WASHERS ARE AVAILABLE IF NEEDED DURING INSTALLATION.
6. CHECK EQUIPMENT AND TOOLS. HAVE DRILL MOTOR AND BITS ON STANDBY IN THE EVENT NEW HOLES ARE REQUIRED TO REPLACE "SPUN-OUT" SCREWS. ENSURE FLUID LEVELS. TURN ON AND TEST EQUIPMENT PRIOR TO MIXING EPOXY.
7. STAGE KITCHEN STATION ON FLAT TERRAIN, AWAY FROM MOISTURE AND POTENTIAL CONTAMINANTS. IF RAINING, EXTREME CARE SHALL BE TAKEN TO ENSURE EPOXY DOES NOT RECEIVE MOISTURE.
8. CHECK MOISTURE CONTENT READINGS ON GLUE SURFACES TO RECEIVE EPOXY. DO NOT PROCEED WITH RETROFIT IF SURFACE MOISTURE CONTENT IS ABOVE 20%.
9. ONCE ALL PERSONNEL HAVE BEEN GIVEN THE GO AHEAD, THE ASSIGNED COOK SHALL MIX THE FIRST BATCH OF RETROBOND<sup>™</sup> EPOXY. USE RETROBOND<sup>™</sup> 277B, 275B, OR 273B HARDENER WITH RETROBOND<sup>™</sup> 175A RESIN. THE USE OF THE DIFFERENT HARDENERS SHALL BE DETERMINED BE LEVEL II TECHNICIANS AND BASED ON AVAILABILITY, ENVIRONMENTAL CONDITIONS, AND COMPLEXITY OF JOB. START CLOCK.
10. IF CREOSOTED TIMBER, WIPE GLUE FACE WITH CLEAN DRY RAG TO REMOVE THE OILY SURFACE. DO NOT USE SOLVENTS.
11. SPREAD MIXED EPOXY ON BOTH GLUE FACES (RETROSHEAR<sup>™</sup> AND EXISTING TIMBER). LEVEL II TECHNICIANS TO MONITOR SPREAD RATE. SQUEEZE OUT SHOULD BE NO LARGER THAN A 6mm BEAD AND NO SMALLER THAN 1.5mm.
12. PLACE RETROSHEAR<sup>™</sup> IN PLACE. UNLESS OTHERWISE SPECIFIED BY LEVEL II TECHNICIANS, DRIVE THE CENTER ROW OF SCREWS FIRST, THEN WORK TO TOP AND BOTTOM.
13. CONTINUE DRIVING REMAINING SCREWS WORKING FROM THE CENTER OUT, UNLESS OTHERWISE SPECIFIED.
14. LEVEL II TECHNICIANS TO TRACK AND RECORD ALL APPLICATION DETAILS ALONG WITH MATERIALS QUANTITIES CONSUMED ON AS-BUILT DRAWINGS. **TAKE FINAL PHOTOS.**

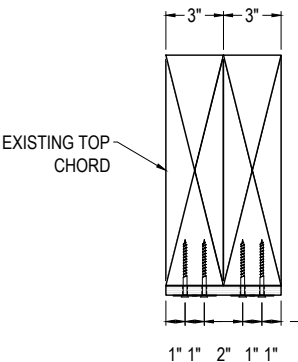


SHEET KEYNOTES

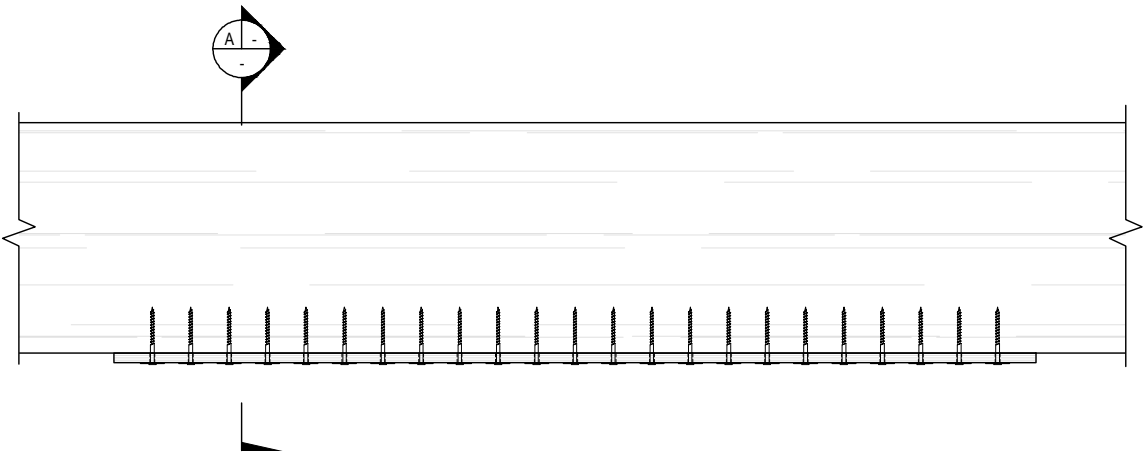
1. RETROSHEAR® PANEL (1" OR 1/2" THICK, AS SPECIFIED)
2. WOOD SCREW - #10 x 3"
3. FENDER WASHER - 1-1/4" OUTSIDE DIA.

RETROSHEAR™ WORKS SCHEDULE:

1. COMPLETE PRE-RETROFIT MEETING AND ASSIGN TASKS. REVIEW DRAWINGS.
2. CONFIRM ACCESS REQUIREMENTS.
3. OBTAIN RETROSHEAR™ LENGTH AND THICKNESS REQUIREMENTS PER EOR.
4. DOUBLE CHECK DRAWINGS FOR RETROSHEAR™ REQUIREMENTS. FINISH PLANE THE GLUE SURFACE OF THE EXISTING TIMBER. LEVEL II TECHNICIANS TO MONITOR PLANING QUALITY. AVOID UNNECESSARY SCOUR.
5. LOCATE, ORGANIZE, AND COUNT INSTALLATION MATERIALS REQUIRED. ENSURE EXTRA SCREWS AND WASHERS ARE AVAILABLE IF NEEDED DURING INSTALLATION.
6. CHECK EQUIPMENT AND TOOLS. HAVE DRILL MOTOR AND BITS ON STANDBY IN THE EVENT NEW HOLES ARE REQUIRED TO REPLACE "SPUN-OUT" SCREWS. ENSURE FLUID LEVELS. TURN ON AND TEST EQUIPMENT PRIOR TO MIXING EPOXY.
7. STAGE KITCHEN STATION ON FLAT TERRAIN, AWAY FROM MOISTURE AND POTENTIAL CONTAMINANTS. IF RAINING, EXTREME CARE SHALL BE TAKEN TO ENSURE EPOXY DOES NOT RECEIVE MOISTURE.
8. CHECK MOISTURE CONTENT READINGS ON GLUE SURFACES TO RECEIVE EPOXY. DO NOT PROCEED WITH RETROFIT IF SURFACE MOISTURE CONTENT IS ABOVE 20%.
9. ONCE ALL PERSONNEL HAVE BEEN GIVEN THE GO AHEAD, THE ASSIGNED COOK SHALL MIX THE FIRST BATCH OF RETROBOND™ EPOXY. USE RETROBOND™ 277B, 275B, OR 273B HARDENER WITH RETROBOND™ 175A RESIN. THE USE OF THE DIFFERENT HARDENERS SHALL BE DETERMINED BE LEVEL II TECHNICIANS AND BASED ON AVAILABILITY, ENVIRONMENTAL CONDITIONS, AND COMPLEXITY OF JOB. START CLOCK.
10. IF CREOSOTED TIMBER, WIPE GLUE FACE WITH CLEAN DRY RAG TO REMOVE THE OILY SURFACE. DO NOT USE SOLVENTS.
11. SPREAD MIXED EPOXY ON BOTH GLUE FACES (RETROSHEAR™ AND EXISTING TIMBER). LEVEL II TECHNICIANS TO MONITOR SPREAD RATE. SQUEEZE OUT SHOULD BE NO LARGER THAN A 6mm BEAD AND NO SMALLER THAN 1.5mm.
12. PLACE RETROSHEAR™ IN PLACE. UNLESS OTHERWISE SPECIFIED BY LEVEL II TECHNICIANS, DRIVE THE CENTER ROW OF SCREWS FIRST, THEN WORK TO TOP AND BOTTOM.
13. CONTINUE DRIVING REMAINING SCREWS WORKING FROM THE CENTER OUT, UNLESS OTHERWISE SPECIFIED.
14. LEVEL II TECHNICIANS TO TRACK AND RECORD ALL APPLICATION DETAILS ALONG WITH MATERIALS QUANTITIES CONSUMED ON AS-BUILT DRAWINGS. **TAKE FINAL PHOTOS.**

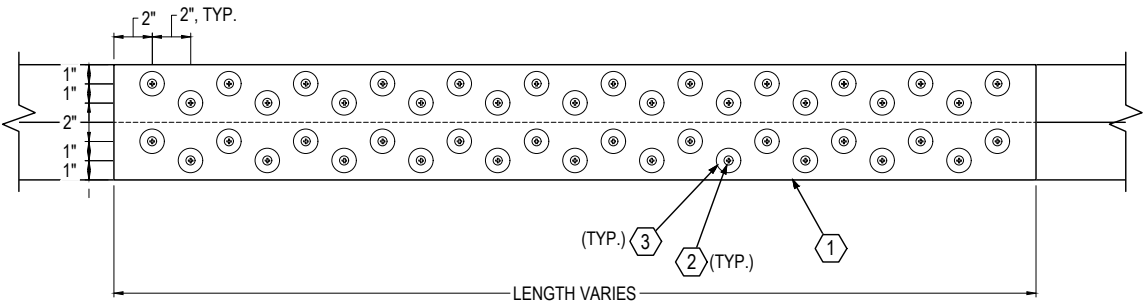


SECTION  
SCALE: 1:10



RETROSHEAR® PANEL DETAIL - TOP CHORD

SCALE: 1:10



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10476 Sunnyside Rd. SE  
P.O. Box 70  
Jefferson, Or. 97352  
541.752.0188  
info@woodrandd.com



PREPARED FOR:  
BOROUGH OF PERKASIE (PA)

SOUTH PERKASIE  
COVERED BRIDGE

- 100% DESIGN DRAWINGS
- FOUNDATION CONNECTION
- BRIDGE RELOCATION REVISION

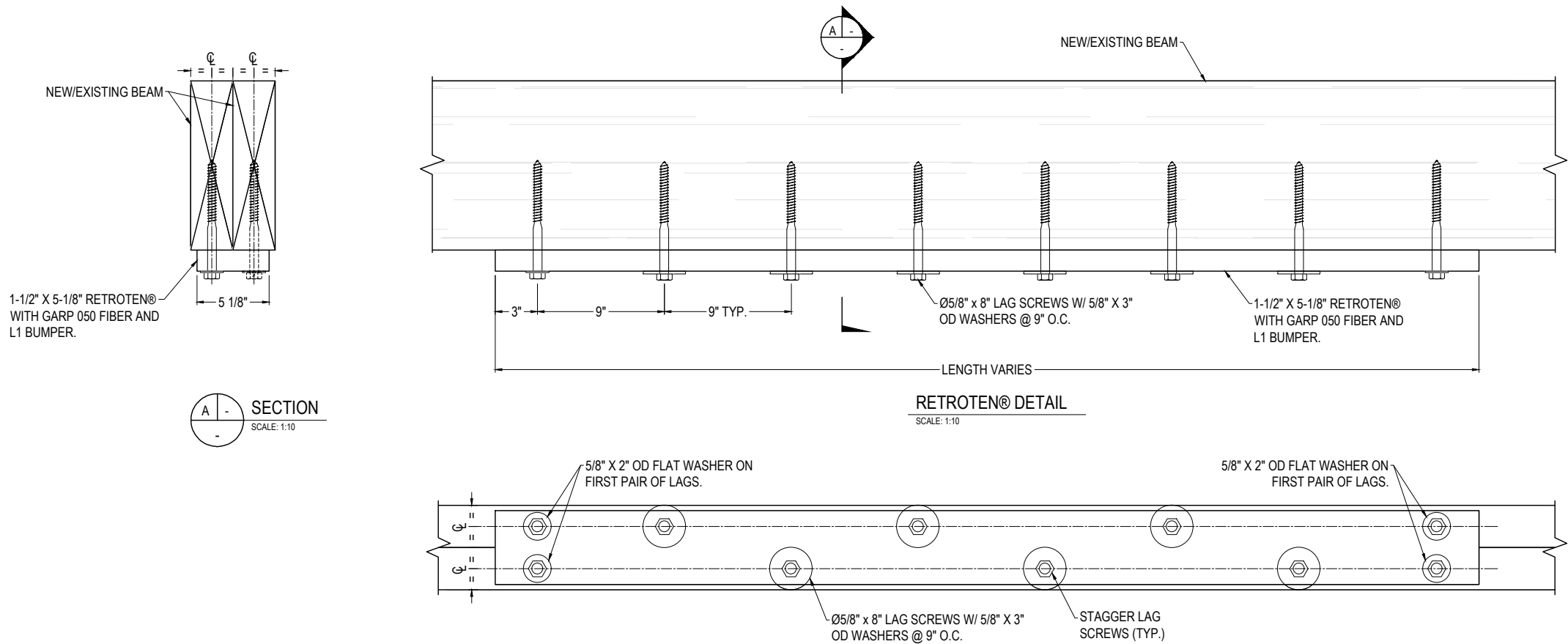
DESIGNED BY	DATE	DRAWN BY	CHECK BY	APPROVED BY
	05/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
	06/02/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
	06/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY

TOP CHORD BOTTOM FACE  
RETROSHEAR® PANEL  
REPAIR DETAIL

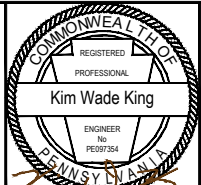
DRAWING #  
4.1  
SHEET #  
27 OF 42  
PROJECT #9101S

RETROTEN® REINFORCEMENT WORKS SCHEDULE:

1. COMPLETE PRE-RETROFIT MEETING AND ASSIGN TASKS. REVIEW DRAWINGS.
2. CONFIRM ACCESS REQUIREMENTS.
3. CONFIRM RETROTEN® PLACEMENT, ADJUST AS NEEDED FOR WEB AND BLOCKING INTERFERENCE.
4. BEGIN TENSION CHORD PREPARATIONS. DOUBLE CHECK DRAWINGS FOR RETROTEN® WIDTH REQUIREMENTS.
5. REMOVE VERTICAL THROUGH BOLTS AS DIRECTED BY EOR.
6. DOUBLE CHECK DRAWINGS FOR RETROTEN® WIDTH REQUIREMENTS. FINISH PLANE THE GLUE SURFACE OF THE TENSION CHORD. LEVEL II TECHNICIANS TO MONITOR PLANING QUALITY. AVOID UNNECESSARY SCOUR.
7. LOCATE, ORGANIZE, AND COUNT INSTALLATION MATERIALS REQUIRED. ENSURE EXTRA SCREWS AND WASHERS ARE AVAILABLE IF NEEDED DURING INSTALLATION.
8. CHECK EQUIPMENT AND TOOLS. HAVE DRILL MOTOR AND BITS ON STANDBY IN THE EVENT NEW HOLES ARE REQUIRED TO REPLACE "SPIN-OUT" LAG SCREWS. ENSURE FLUID LEVELS. TURN ON AND TEST EQUIPMENT PRIOR TO MIXING EPOXY.
9. PLACE LUBRICANT ON THREADS OF LAG BOLTS. DO NOT GET LUBRICANT ON GLUE SURFACES. DO NOT USE WATER BASED LUBRICANT.
10. PRIOR TO SANDING RETROTEN®, DRY PLACE IN POSITION ON TENSION CHORD AND USE AS TEMPLATE TO DRILL PILOT HOLES WORKING FROM THE CENTER OUT. INSTALL LAGS WITH 3" O.D. MINIMUM WASHERS TIGHT BEFORE MOVING TO THE NEXT HOLE. TEST THE TORQUE AND USE THE MAXIMUM TORQUE ATTAINABLE IN THE DRY FIT BEFORE GLUING. THE TARGET IS 175 ft-lbs OR GREATER. IF THE TORQUE VALUE THAT THE WOOD CAN HOLD IS LESS THAN 148 ft-lbs, CALL EOR FOR DIRECTION ON HOW TO PROCEED. BLOW DEBRIS FROM PILOT HOLES WITH COMPRESSED AIR.  
NOTE: DO NOT ADD CN OR SEALER TO PILOT HOLES TO PREVENT CONTAMINATION OF THE RETROFIT BOND.
11. PLANE THE SIDES OF THE TENSION CHORDS WHERE RETROTEN® IS TO BE PLACED AS NEEDED AND PROVIDE TOUCH-UP PLANING AND/OR SANDING ON BOTH SIDES OF RETROTEN® AS REQUIRED. THE RETROTEN® MUST BE CROSS SANDED AT 45 DEGREES (60 DEGREES MAXIMUM) TO THE LONG AXIS USING 40 TO 60 GRIT BELT PAPER. NO GOUGES OR SCORES ARE ACCEPTABLE. HAND SAND SMALL SHINY PATCHES WITH SANDING BLOCK AND 40 TO 60 GRIT SAND PAPER IN CROSS DIRECTION.
12. STAGE KITCHEN STATION ON FLAT TERRAIN, AWAY FROM MOISTURE AND POTENTIAL CONTAMINANTS. IF RAINING, EXTREME CARE SHALL BE TAKEN TO ENSURE EPOXY DOES NOT RECEIVE MOISTURE.
13. CHECK MOISTURE CONTENT READINGS ON GLUE SURFACES TO RECEIVE EPOXY. DO NOT PROCEED WITH RETROFIT IF SURFACE MOISTURE CONTENT IS ABOVE 20%.
14. ONCE ALL PERSONNEL HAVE GIVEN GO AHEAD, THE ASSIGNED COOK SHALL MIX THE FIRST BATCH OF RETROBOND™ EPOXY. USE RETROBOND™ 277B, 275B, OR 273B HARDENER WITH RETROBOND™ 175A RESIN. THE USE OF THE DIFFERENT HARDENERS SHALL BE DETERMINED BY LEVEL II TECHNICIANS AND BASED ON AVAILABILITY, TRACK TIME, ENVIRONMENTAL CONDITIONS, AND COMPLEXITY OF JOB. START CLOCK.
15. SPREAD MIXED EPOXY ON SIDE OF RETROTEN® AND TENSION CHORD. PLACE RETROTEN® IN POSITION.
16. UNLESS OTHERWISE SPECIFIED BY LEVEL II TECHNICIANS, DRIVE THE CENTER LAG SCREW FIRST TO TOUCHING WASHER, DO NOT USE IMPACT GUNS TO TORQUE SCREW. LEVEL II TECHNICIANS TO MONITOR SPREAD RATE, SQUEEZE OUT SHOULD BE NO LARGER THAN A 1/4" BEAD AND NO SMALLER THAN 1/16".
17. CONTINUE DRIVING REMAINING SCREWS WORKING FROM THE CENTER OUT, UNLESS OTHERWISE SPECIFIED.
18. TORQUE LAG SCREWS USING TORQUE WRENCH TO MINIMUM 175 ft-lbs OR VALUE DETERMINED IN STEP 10 ABOVE, STARTING AT THE CENTER OF THE RETROTEN® AND WORKING TO BOTH ENDS. RETURN TO THE STARTING POINT AND RE-TORQUE. RE-TORQUE EVERY 15-MINUTES UNTIL ALL SCREWS CLICK WITHOUT TURNING.
19. LEVEL II TECHNICIANS TO TRACK AND RECORD ALL APPLICATION DETAILS ALONG WITH MATERIALS QUANTITIES CONSUMED ON AS-BUILT DRAWINGS. **TAKE FINAL PHOTOS.**



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PREPARED FOR:  
BOROUGH OF PERKASIE (PA)

## SOUTH PERKASIE COVERED BRIDGE

- 100% DESIGN DRAWINGS
- FOUNDATION CONNECTION
- BRIDGE RELOCATION REVISION

REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
100% DESIGN DRAWINGS	05/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
FOUNDATION CONNECTION	06/02/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
BRIDGE RELOCATION REVISION	06/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY

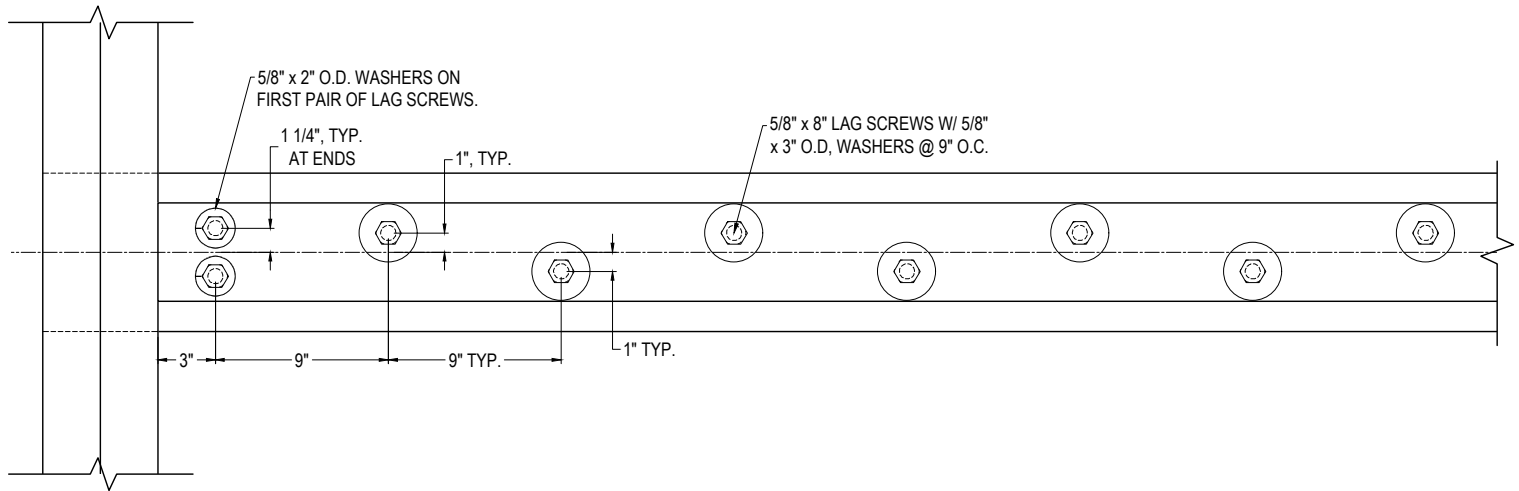
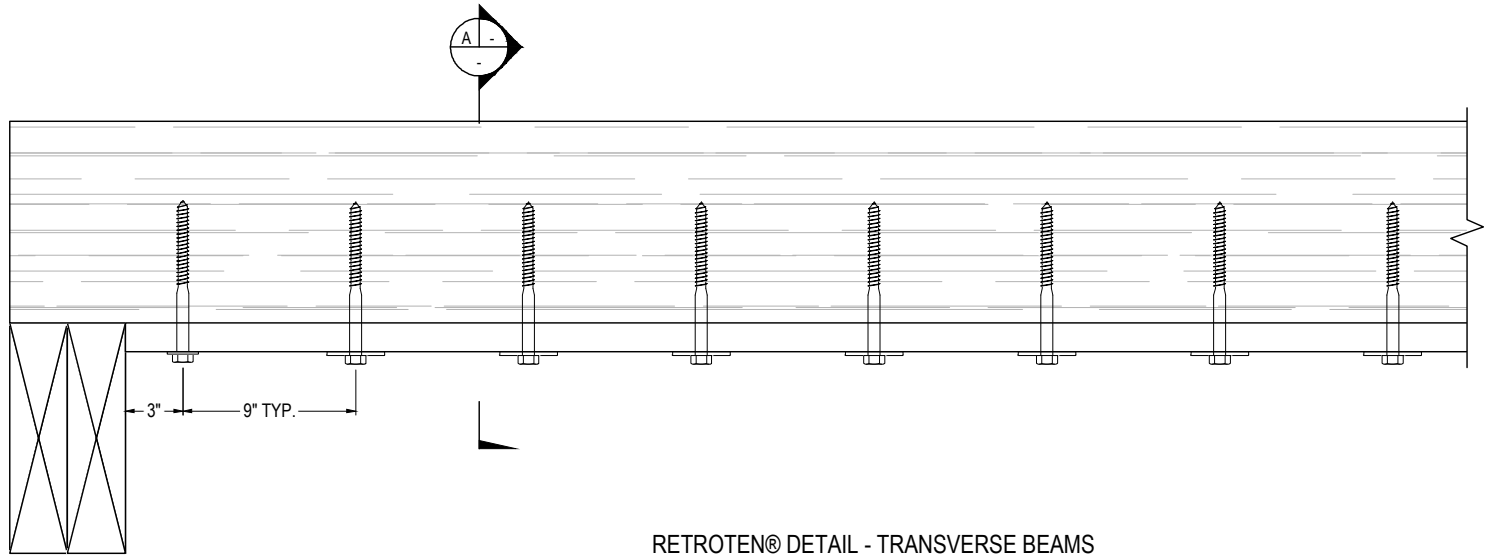
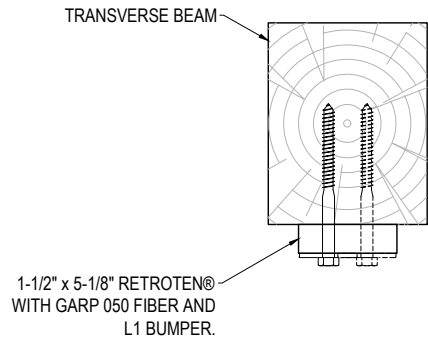
## RETROTEN® DETAIL

DRAWING #  
4.2  
SHEET #  
28 OF 42  
PROJECT #9101S

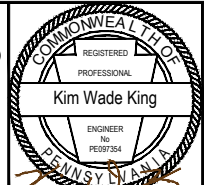


RETROTEN® REINFORCEMENT WORKS SCHEDULE:

1. COMPLETE PRE-RETROFIT MEETING AND ASSIGN TASKS. REVIEW DRAWINGS.
2. CONFIRM ACCESS REQUIREMENTS.
3. CONFIRM RETROTEN® PLACEMENT, ADJUST AS NEEDED FOR WEB AND BLOCKING INTERFERENCE.
4. BEGIN TENSION CHORD PREPARATIONS. DOUBLE CHECK DRAWINGS FOR RETROTEN® WIDTH REQUIREMENTS.
5. REMOVE VERTICAL THROUGH BOLTS AS DIRECTED BY EOR.
6. DOUBLE CHECK DRAWINGS FOR RETROTEN® WIDTH REQUIREMENTS. FINISH PLANE THE GLUE SURFACE OF THE TENSION CHORD. LEVEL II TECHNICIANS TO MONITOR PLANING QUALITY. AVOID UNNECESSARY SCOUR.
7. LOCATE, ORGANIZE, AND COUNT INSTALLATION MATERIALS REQUIRED. ENSURE EXTRA SCREWS AND WASHERS ARE AVAILABLE IF NEEDED DURING INSTALLATION.
8. CHECK EQUIPMENT AND TOOLS. HAVE DRILL MOTOR AND BITS ON STANDBY IN THE EVENT NEW HOLES ARE REQUIRED TO REPLACE "SPIN-OUT" LAG SCREWS. ENSURE FLUID LEVELS. TURN ON AND TEST EQUIPMENT PRIOR TO MIXING EPOXY.
9. PLACE LUBRICANT ON THREADS OF LAG BOLTS. DO NOT GET LUBRICANT ON GLUE SURFACES. DO NOT USE WATER BASED LUBRICANT.
10. PRIOR TO SANDING RETROTEN®, DRY PLACE IN POSITION ON TENSION CHORD AND USE AS TEMPLATE TO DRILL PILOT HOLES WORKING FROM THE CENTER OUT. INSTALL LAGS WITH 3" O.D. MINIMUM WASHERS TIGHT BEFORE MOVING TO THE NEXT HOLE. TEST THE TORQUE AND USE THE MAXIMUM TORQUE ATTAINABLE IN THE DRY FIT BEFORE GLUING. THE TARGET IS 175 ft-lbs OR GREATER. IF THE TORQUE VALUE THAT THE WOOD CAN HOLD IS LESS THAN 148 ft-lbs, CALL EOR FOR DIRECTION ON HOW TO PROCEED. BLOW DEBRIS FROM PILOT HOLES WITH COMPRESSED AIR.  
NOTE: DO NOT ADD CN OR SEALER TO PILOT HOLES TO PREVENT CONTAMINATION OF THE RETROFIT BOND.
11. PLANE THE SIDES OF THE TENSION CHORDS WHERE RETROTEN® IS TO BE PLACED AS NEEDED AND PROVIDE TOUCH-UP PLANING AND/OR SANDING ON BOTH SIDES OF RETROTEN® AS REQUIRED. THE RETROTEN® MUST BE CROSS SANDED AT 45 DEGREES (60 DEGREES MAXIMUM) TO THE LONG AXIS USING 40 TO 60 GRIT BELT PAPER. NO GOUGES OR SCORES ARE ACCEPTABLE. HAND SAND SMALL SHINY PATCHES WITH SANDING BLOCK AND 40 TO 60 GRIT SAND PAPER IN CROSS DIRECTION.
12. STAGE KITCHEN STATION ON FLAT TERRAIN, AWAY FROM MOISTURE AND POTENTIAL CONTAMINANTS. IF RAINING, EXTREME CARE SHALL BE TAKEN TO ENSURE EPOXY DOES NOT RECEIVE MOISTURE.
13. CHECK MOISTURE CONTENT READINGS ON GLUE SURFACES TO RECEIVE EPOXY. DO NOT PROCEED WITH RETROFIT IF SURFACE MOISTURE CONTENT IS ABOVE 20%.
14. ONCE ALL PERSONNEL HAVE GIVEN GO AHEAD, THE ASSIGNED COOK SHALL MIX THE FIRST BATCH OF RETROBOND™ EPOXY. USE RETROBOND™ 277B, 275B, OR 273B HARDENER WITH RETROBOND™ 175A RESIN. THE USE OF THE DIFFERENT HARDENERS SHALL BE DETERMINED BY LEVEL II TECHNICIANS AND BASED ON AVAILABILITY, TRACK TIME, ENVIRONMENTAL CONDITIONS, AND COMPLEXITY OF JOB. START CLOCK.
15. SPREAD MIXED EPOXY ON SIDE OF RETROTEN® AND TENSION CHORD. PLACE RETROTEN® IN POSITION.
16. UNLESS OTHERWISE SPECIFIED BY LEVEL II TECHNICIANS, DRIVE THE CENTER LAG SCREW FIRST TO TOUCHING WASHER, DO NOT USE IMPACT GUNS TO TORQUE SCREW. LEVEL II TECHNICIANS TO MONITOR SPREAD RATE, SQUEEZE OUT SHOULD BE NO LARGER THAN A 1/4" BEAD AND NO SMALLER THAN 1/16".
17. CONTINUE DRIVING REMAINING SCREWS WORKING FROM THE CENTER OUT, UNLESS OTHERWISE SPECIFIED.
18. TORQUE LAG SCREWS USING TORQUE WRENCH TO MINIMUM 175 ft-lbs OR VALUE DETERMINED IN STEP 10 ABOVE, STARTING AT THE CENTER OF THE RETROTEN® AND WORKING TO BOTH ENDS. RETURN TO THE STARTING POINT AND RE-TORQUE EVERY 15-MINUTES UNTIL ALL SCREWS CLICK WITHOUT TURNING.
19. LEVEL II TECHNICIANS TO TRACK AND RECORD ALL APPLICATION DETAILS ALONG WITH MATERIALS QUANTITIES CONSUMED ON AS-BUILT DRAWINGS. **TAKE FINAL PHOTOS.**



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PREPARED FOR:  
BOROUGH OF PERKASIE (PA)

## SOUTH PERKASIE COVERED BRIDGE

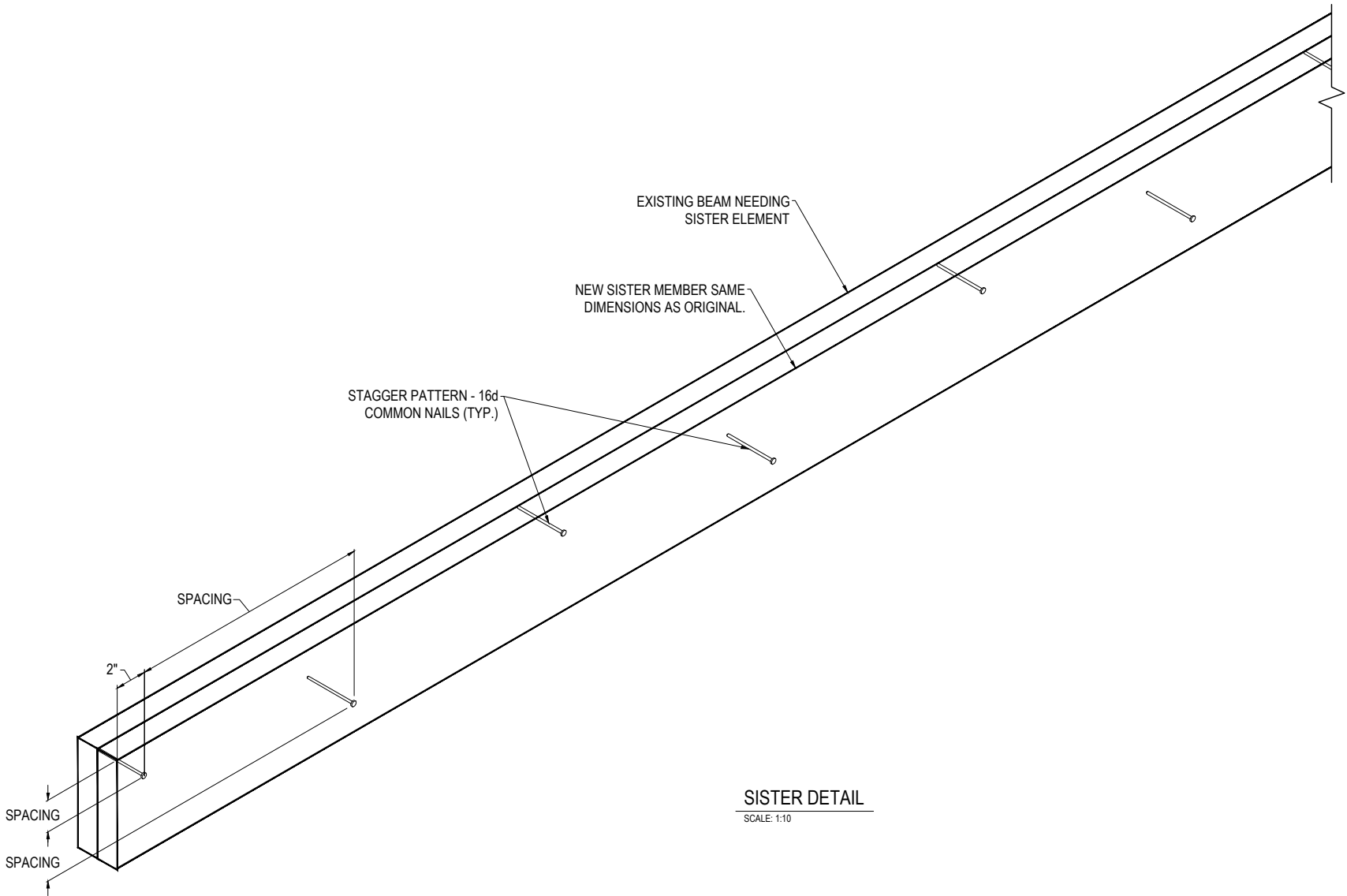
- 100% DESIGN DRAWINGS
- FOUNDATION CONNECTION
- BRIDGE RELOCATION REVISION

REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
100% DESIGN DRAWINGS	05/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
FOUNDATION CONNECTION	06/02/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
BRIDGE RELOCATION REVISION	06/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY

## RETROTEN® DETAIL FOR TRANSVERSE BEAMS

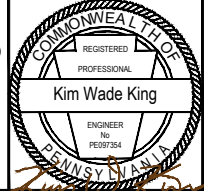
DRAWING #  
4.3  
SHEET #  
29 OF 42  
PROJECT #9101S

NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR MANUFACTURE AND INSTALLATION OF BRIDGE RETROFIT (MEASUREMENTS ARE APPROXIMATE)








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Kim Wade King

PREPARED FOR:  
BOROUGH OF PERKASIE (PA)

# SOUTH PERKASIE COVERED BRIDGE

 100% DESIGN DRAWINGS	REASON FOR REVISION: - DATE: 05/09/2025	DRAWN BY: UK CHKD BY: KWK APPR BY: KWK
 FOUNDATION CONNECTION	REASON FOR REVISION: - DATE: 06/02/2025	DRAWN BY: UK CHKD BY: KWK APPR BY: KWK
 BRIDGE RELOCATION REVISION	REASON FOR REVISION: - DATE: 06/09/2025	DRAWN BY: UK CHKD BY: KWK APPR BY: KWK
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SISTER DETAIL

DRAWING #  
4.4

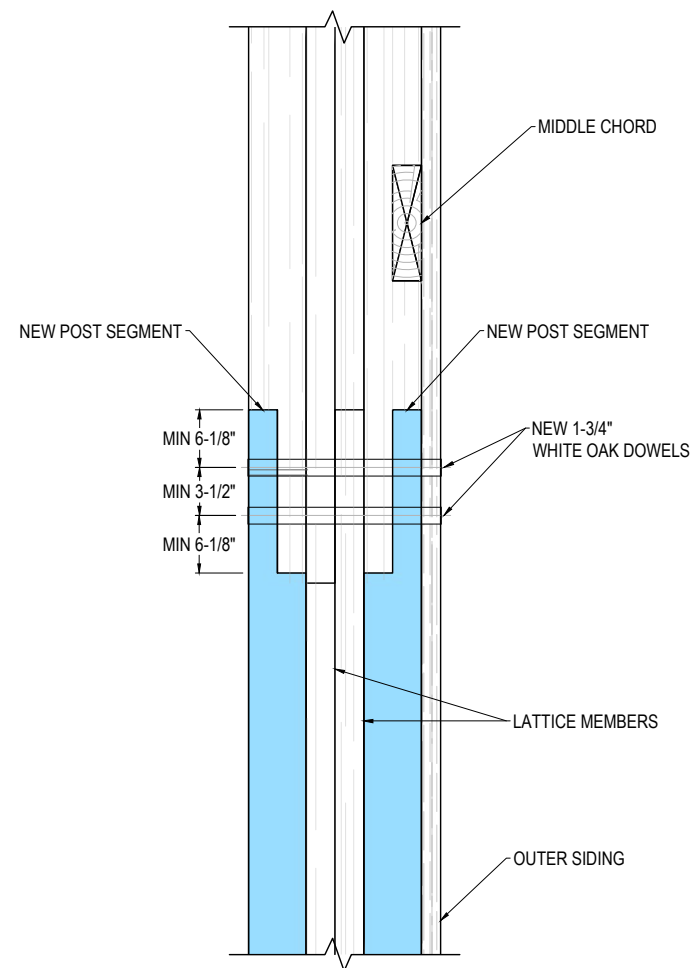
SHEET #  
30 OF 42

PROJECT #9101S

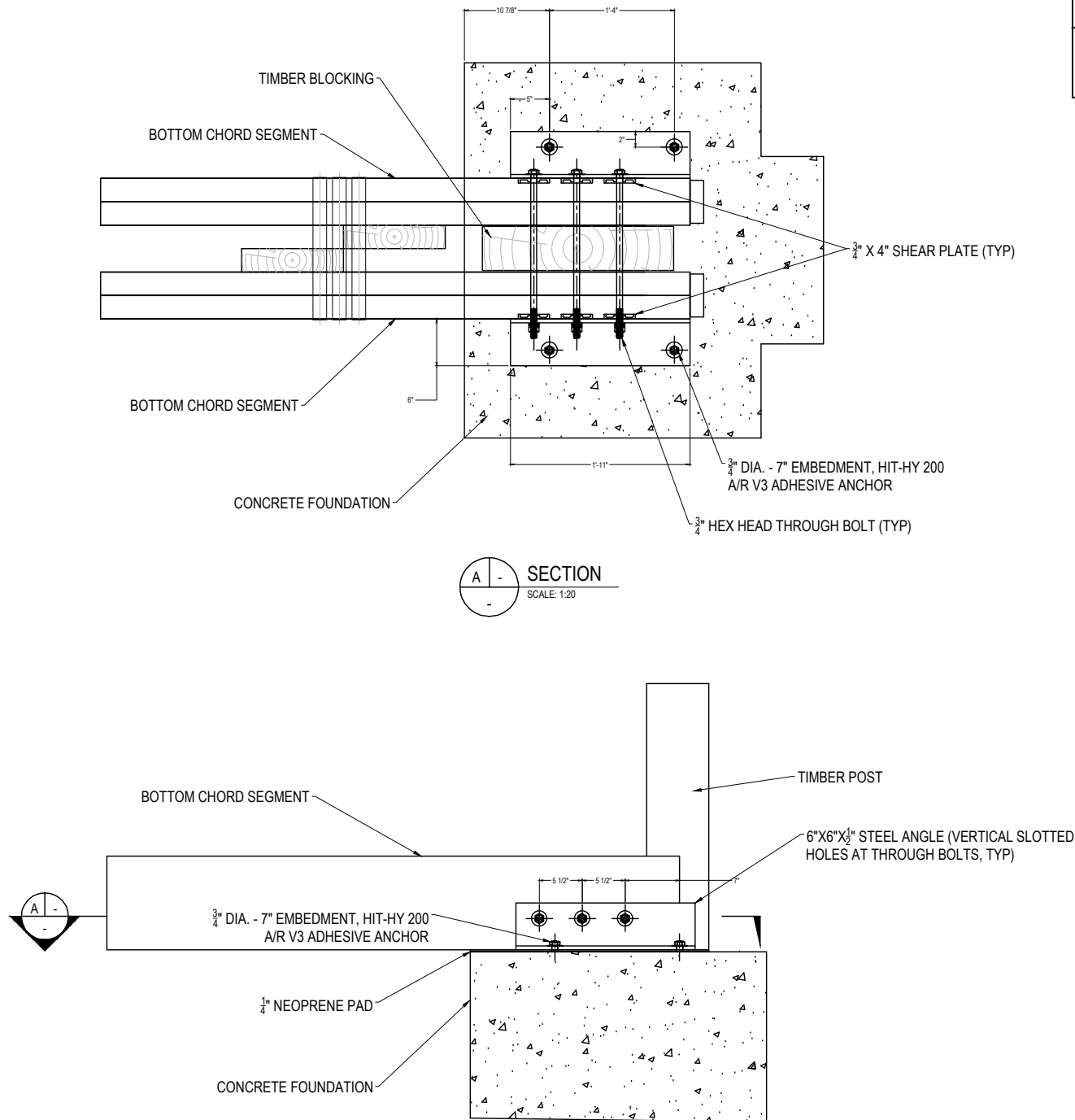
NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR  
MANUFACTURE AND INSTALLATION OF BRIDGE  
RETROFIT (MEASUREMENTS ARE APPROXIMATE)

REPAIR COLOR LEGEND:

= REPLACE TIMBER ELEMENT



**A - POSTING DETAIL**  
SCALE: 1:20

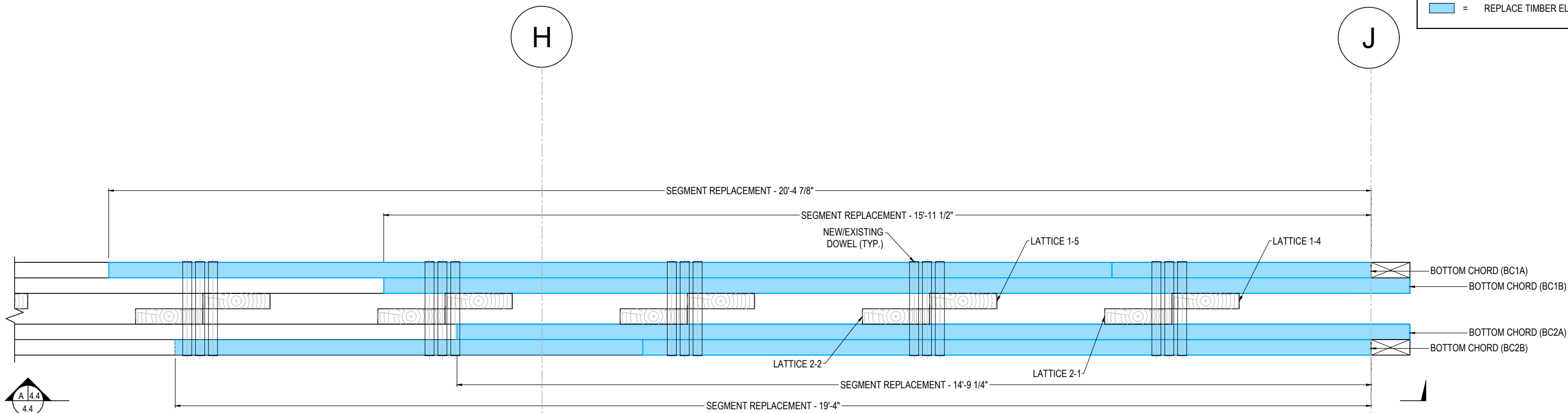


**B - FOUNDATION ANCHOR DETAIL**  
SCALE: 1:20

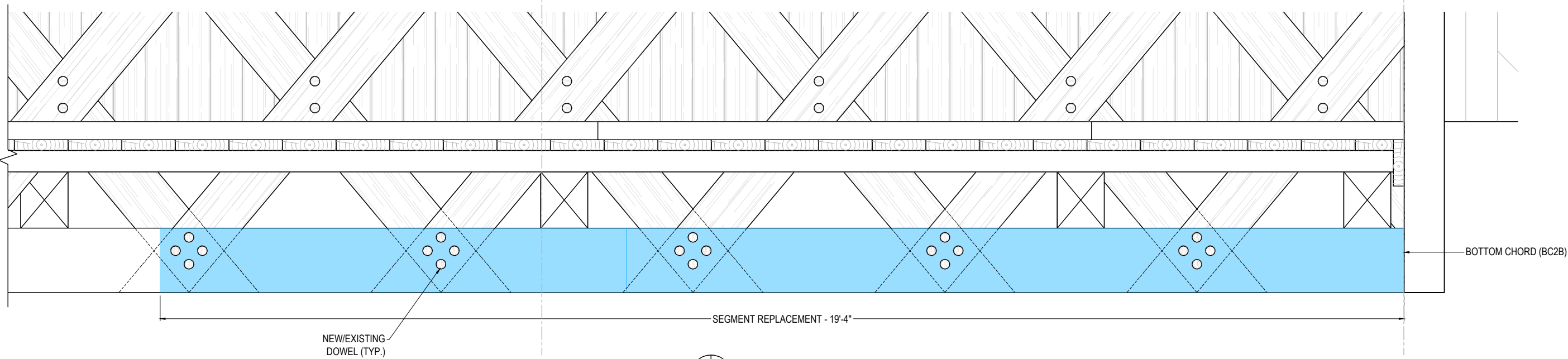
NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR  
MANUFACTURE AND INSTALLATION OF BRIDGE  
RETROFIT (MEASUREMENTS ARE APPROXIMATE)

REPAIR COLOR LEGEND:

= REPLACE TIMBER ELEMENT



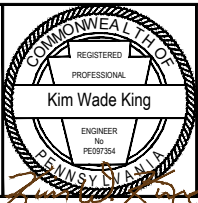
1 4.4  
1.12  
BOTTOM CHORD SEGMENT REPLACEMENT DETAIL  
SCALE: 1:20



A 4.4  
4.4  
SECTION  
SCALE: 1:20



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PREPARED FOR:  
BOROUGH OF PERKASIE (PA)

## SOUTH PERKASIE COVERED BRIDGE

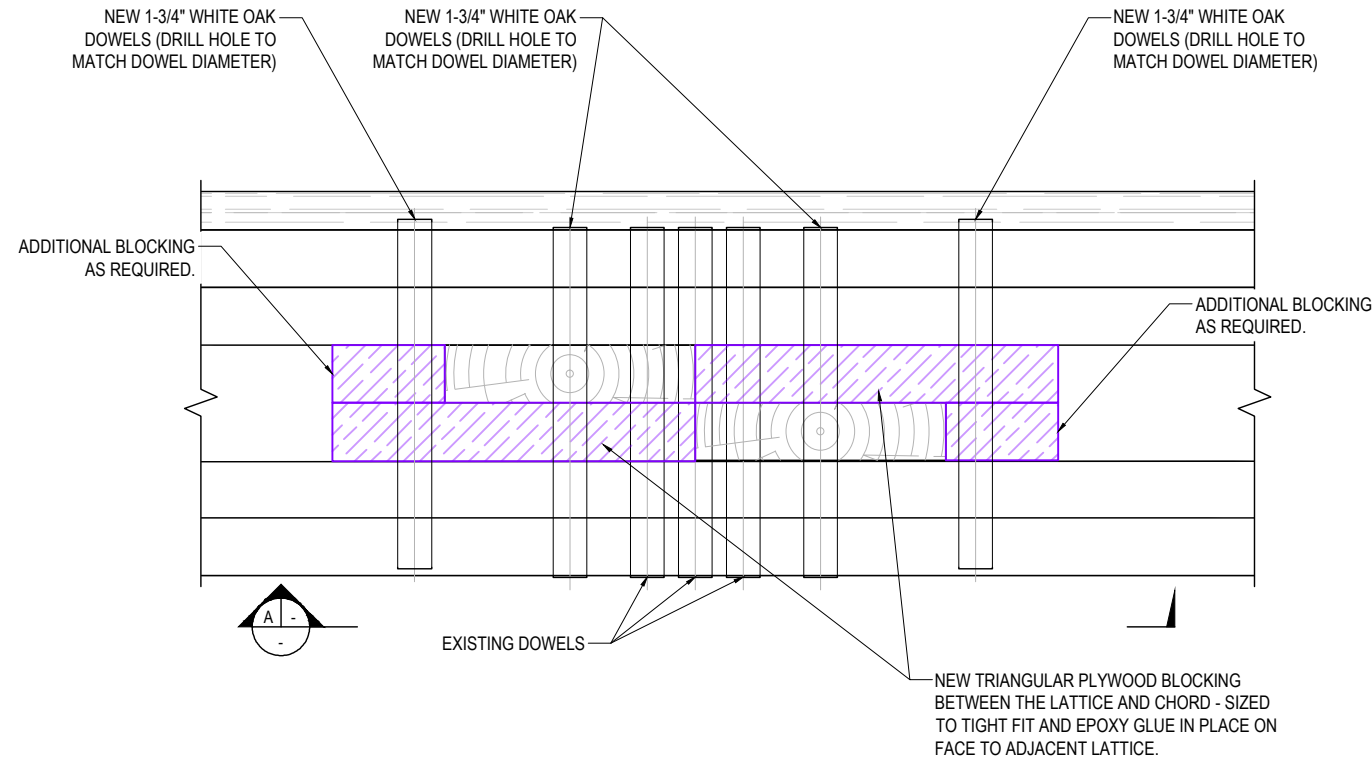
- 100% DESIGN DRAWINGS
- FOUNDATION CONNECTION
- BRIDGE RELOCATION REVISION

REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY
100% DESIGN DRAWINGS	05/09/2025	UK	KWK	KWK
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BRIDGE RELOCATION REVISION	06/09/2025	UK	KWK	KWK
REASON FOR REVISION	DATE	DRAWN BY	CHECK BY	APPROVED BY

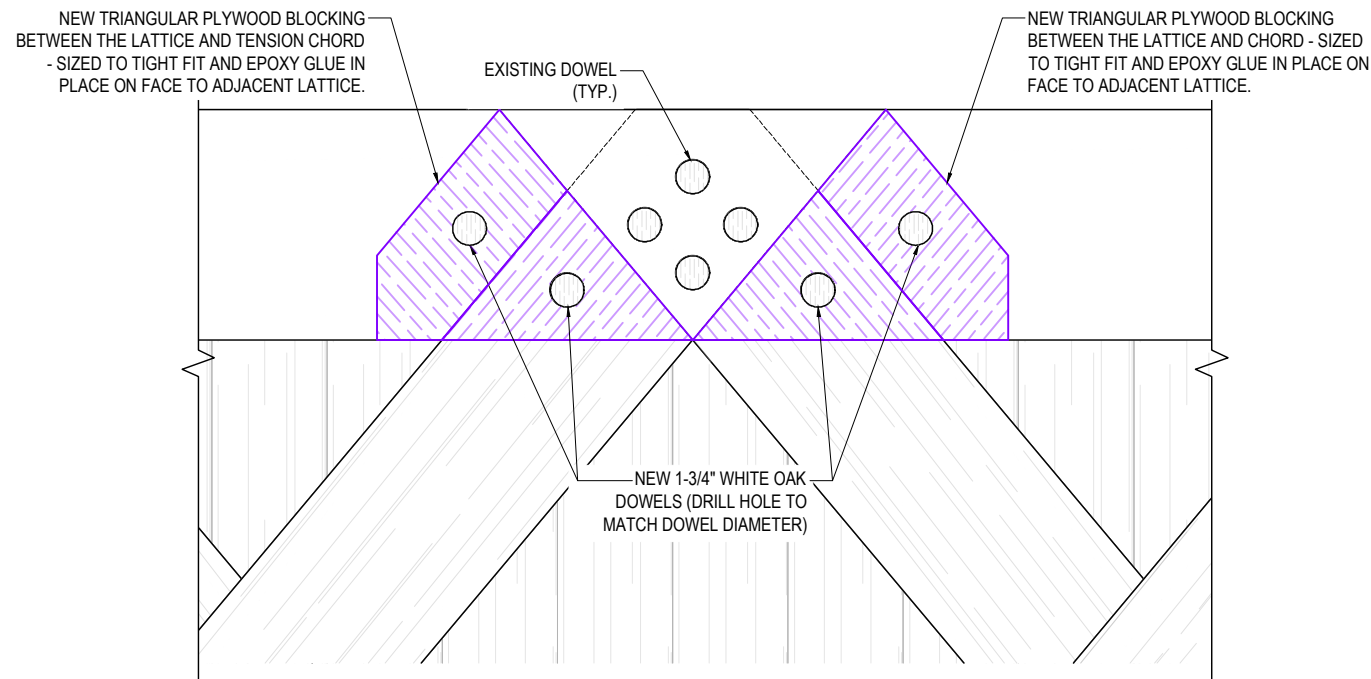
## BOTTOM CHORD SEGMENT REPLACEMENT DETAIL

DRAWING #  
4.6  
SHEET #  
32 OF 42  
PROJECT #9101S

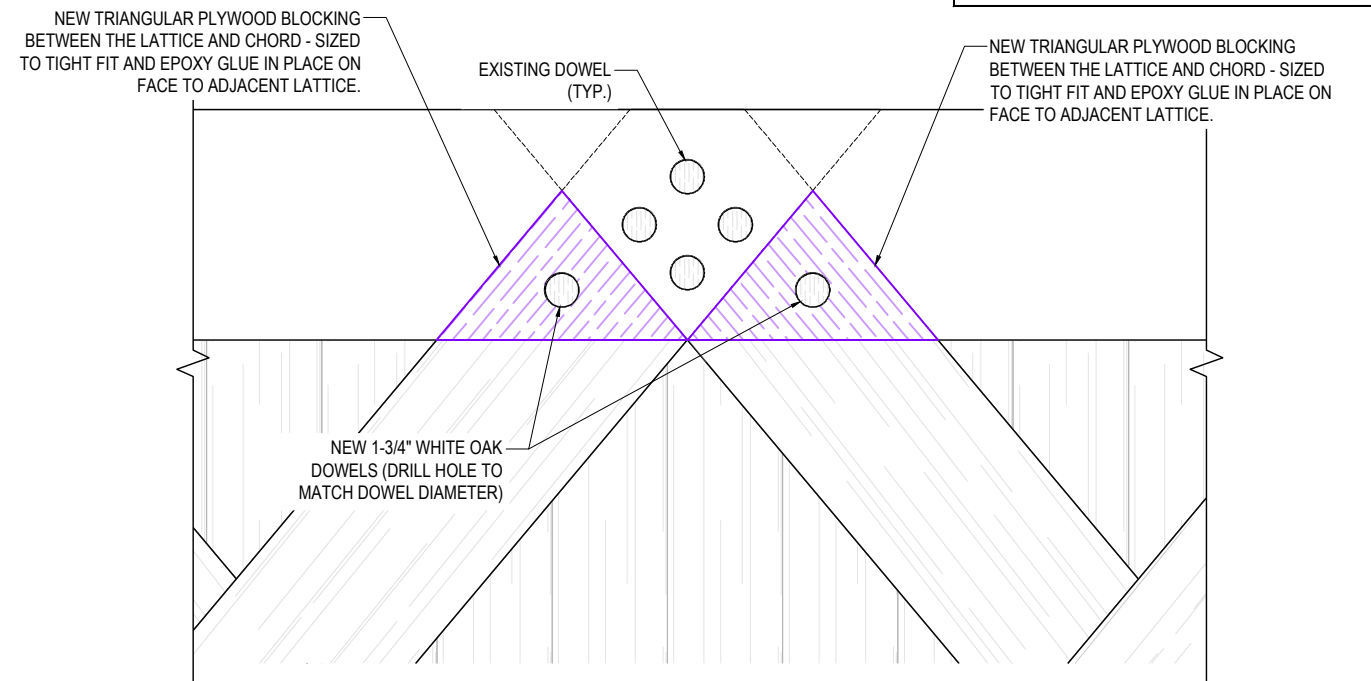




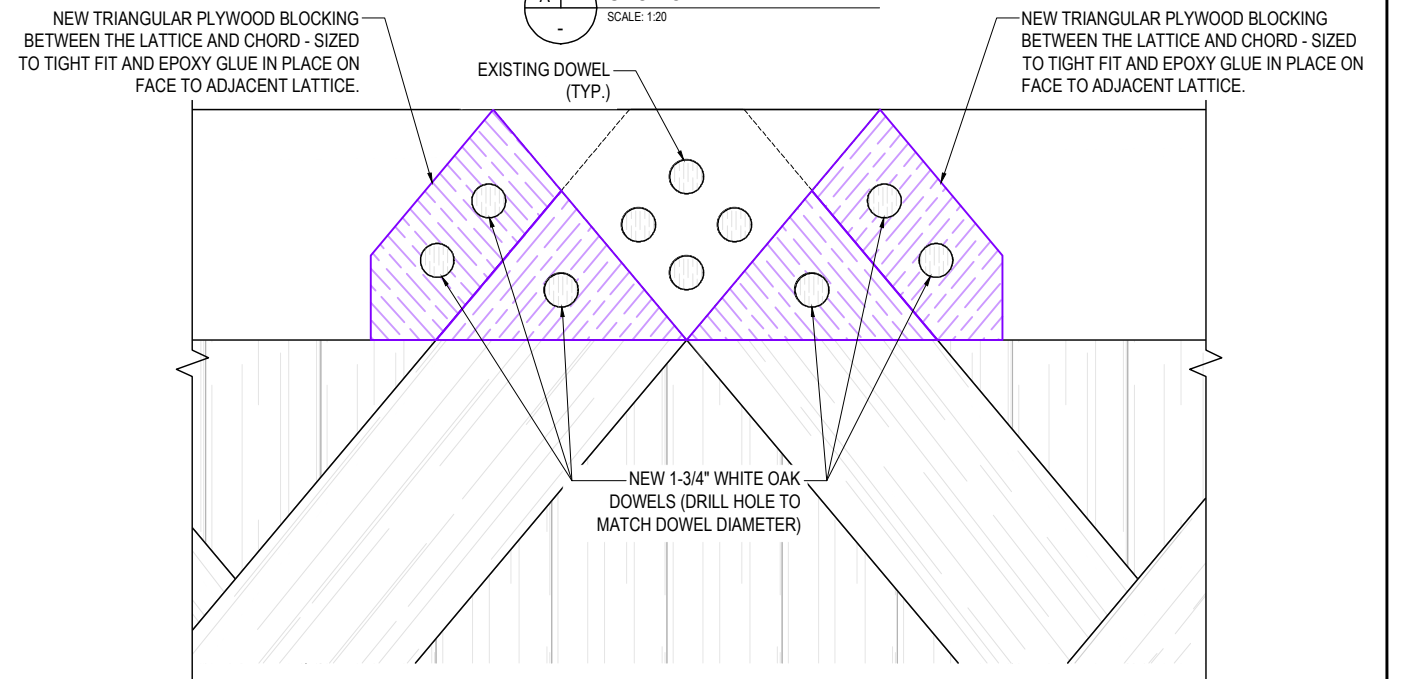
LATTICE CONNECTION DETAIL (TYPICAL)  
SCALE: 1/20



SECTION - REPAIR TYPE 2  
SCALE: 1/20



SECTION - REPAIR TYPE 1  
SCALE: 1/20



SECTION - REPAIR TYPE 3  
SCALE: 1/20

NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR MANUFACTURE AND INSTALLATION OF BRIDGE RETROFIT (MEASUREMENTS ARE APPROXIMATE)

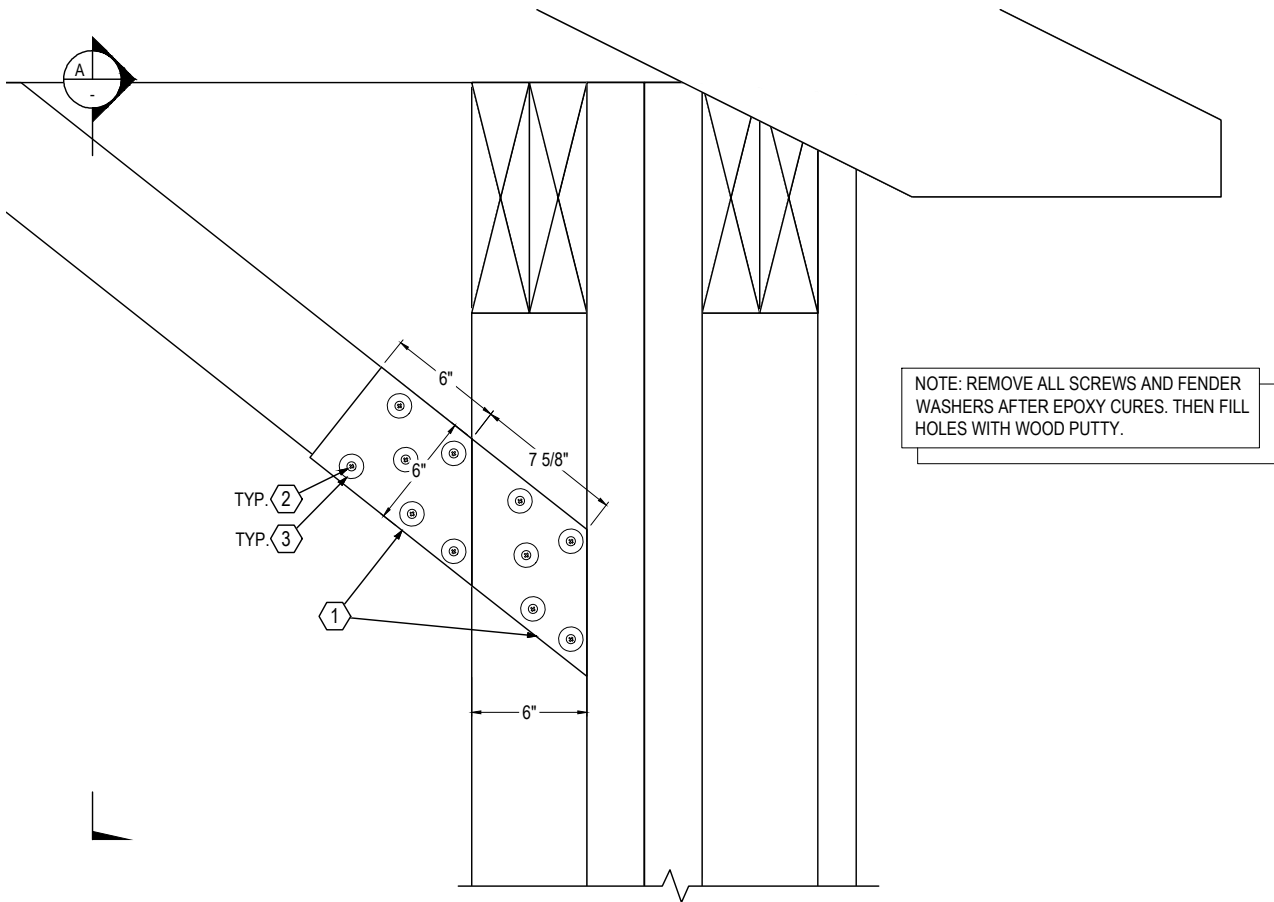
REPAIR COLOR LEGEND:  
= NEW PLYWOOD BLOCKING

NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR MANUFACTURE AND INSTALLATION OF BRIDGE RETROFIT (MEASUREMENTS ARE APPROXIMATE)

- SHEET KEYNOTES
- RETROSHEAR® PANEL (1" OR 1/2" THICK, AS SPECIFIED)
  - WOOD SCREW - #10 x 3"
  - FENDER WASHER - 1-1/4" OUTSIDE DIA.

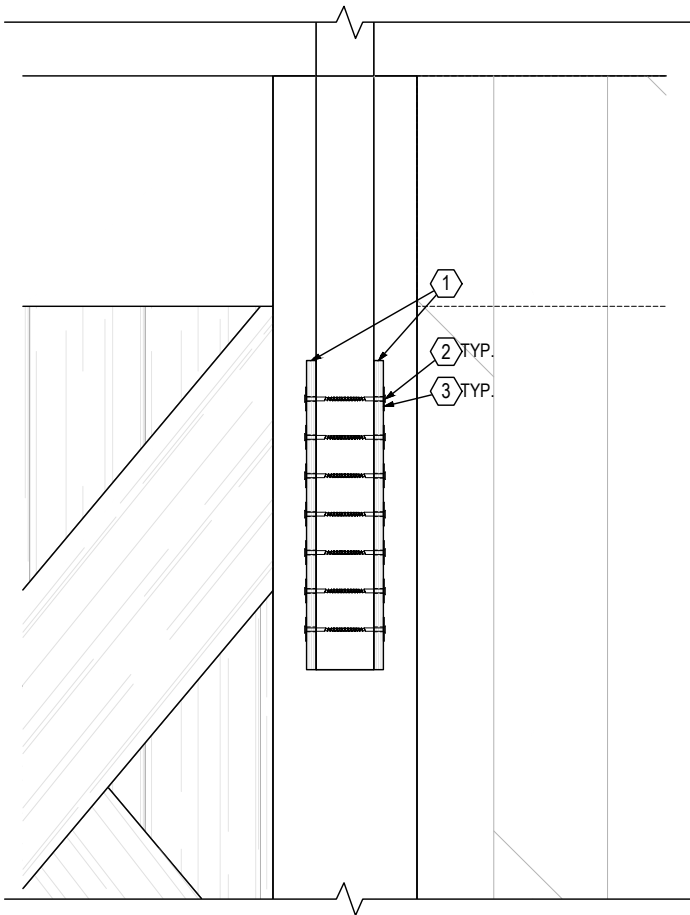
RETROSHEAR™ WORKS SCHEDULE:

- COMPLETE PRE-RETROFIT MEETING AND ASSIGN TASKS. REVIEW DRAWINGS.
- CONFIRM ACCESS REQUIREMENTS.
- OBTAIN RETROSHEAR™ LENGTH AND THICKNESS REQUIREMENTS PER EOR.
- DOUBLE CHECK DRAWINGS FOR RETROSHEAR™ REQUIREMENTS. FINISH PLANE THE GLUE SURFACE OF THE EXISTING TIMBER. LEVEL II TECHNICIANS TO MONITOR PLANING QUALITY. AVOID UNNECESSARY SCOUR.
- LOCATE, ORGANIZE, AND COUNT INSTALLATION MATERIALS REQUIRED. ENSURE EXTRA SCREWS AND WASHERS ARE AVAILABLE IF NEEDED DURING INSTALLATION.
- CHECK EQUIPMENT AND TOOLS. HAVE DRILL MOTOR AND BITS ON STANDBY IN THE EVENT NEW HOLES ARE REQUIRED TO REPLACE "SPUN-OUT" SCREWS. ENSURE FLUID LEVELS. TURN ON AND TEST EQUIPMENT PRIOR TO MIXING EPOXY.
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- IF CREOSOTED TIMBER, WIPE GLUE FACE WITH CLEAN DRY RAG TO REMOVE THE OILY SURFACE. DO NOT USE SOLVENTS.
- SPREAD MIXED EPOXY ON BOTH GLUE FACES (RETROSHEAR™ AND EXISTING TIMBER). LEVEL II TECHNICIANS TO MONITOR SPREAD RATE. SQUEEZE OUT SHOULD BE NO LARGER THAN A 6mm BEAD AND NO SMALLER THAN 1.5mm.
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- LEVEL II TECHNICIANS TO TRACK AND RECORD ALL APPLICATION DETAILS ALONG WITH MATERIALS QUANTITIES CONSUMED ON AS-BUILT DRAWINGS. **TAKE FINAL PHOTOS.**



KNEE BRACE AT ABUTMENTS REPAIR DETAIL

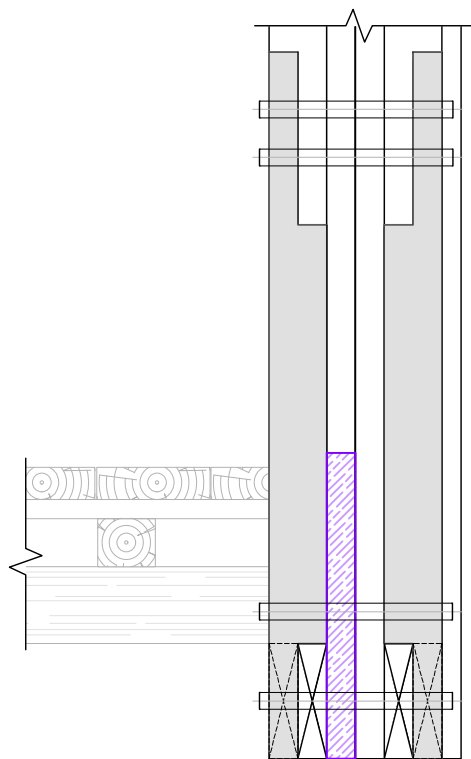
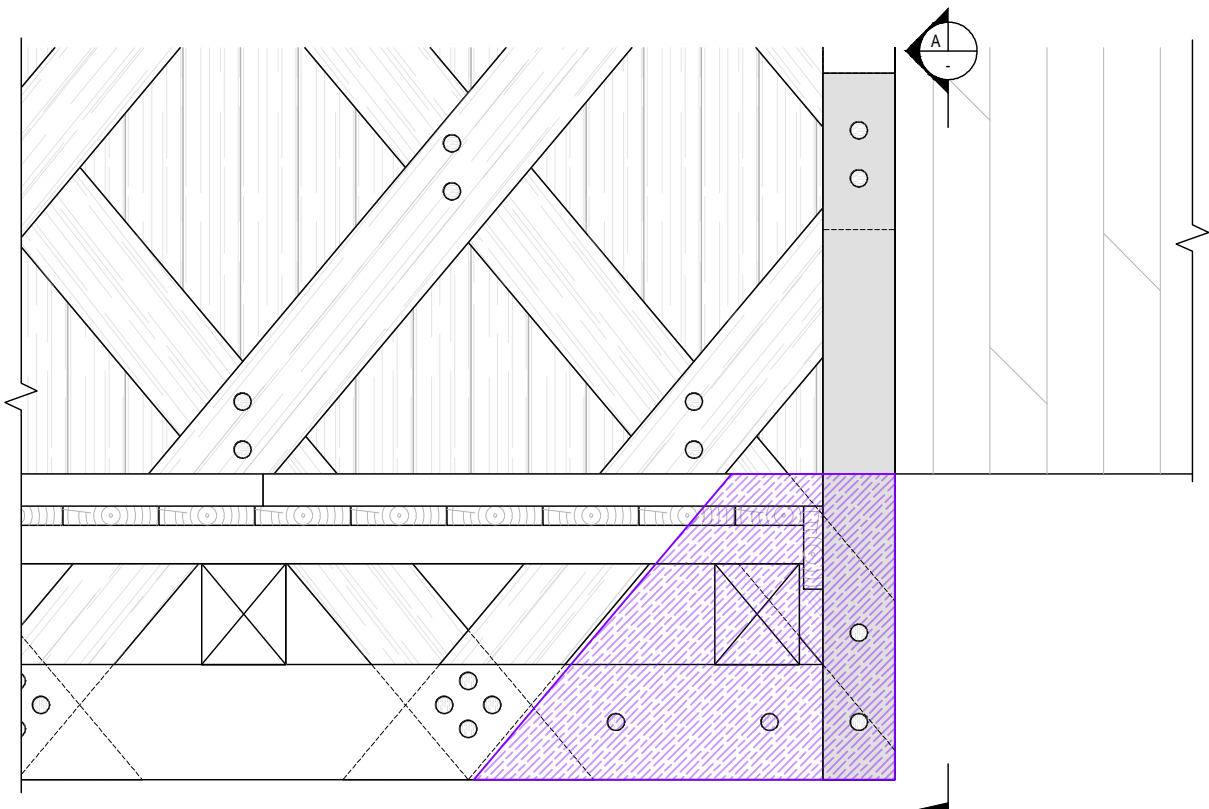
SCALE: 1:20



NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR MANUFACTURE AND INSTALLATION OF BRIDGE RETROFIT (MEASUREMENTS ARE APPROXIMATE)

REPAIR COLOR LEGEND:

 = NEW PLYWOOD BLOCKING

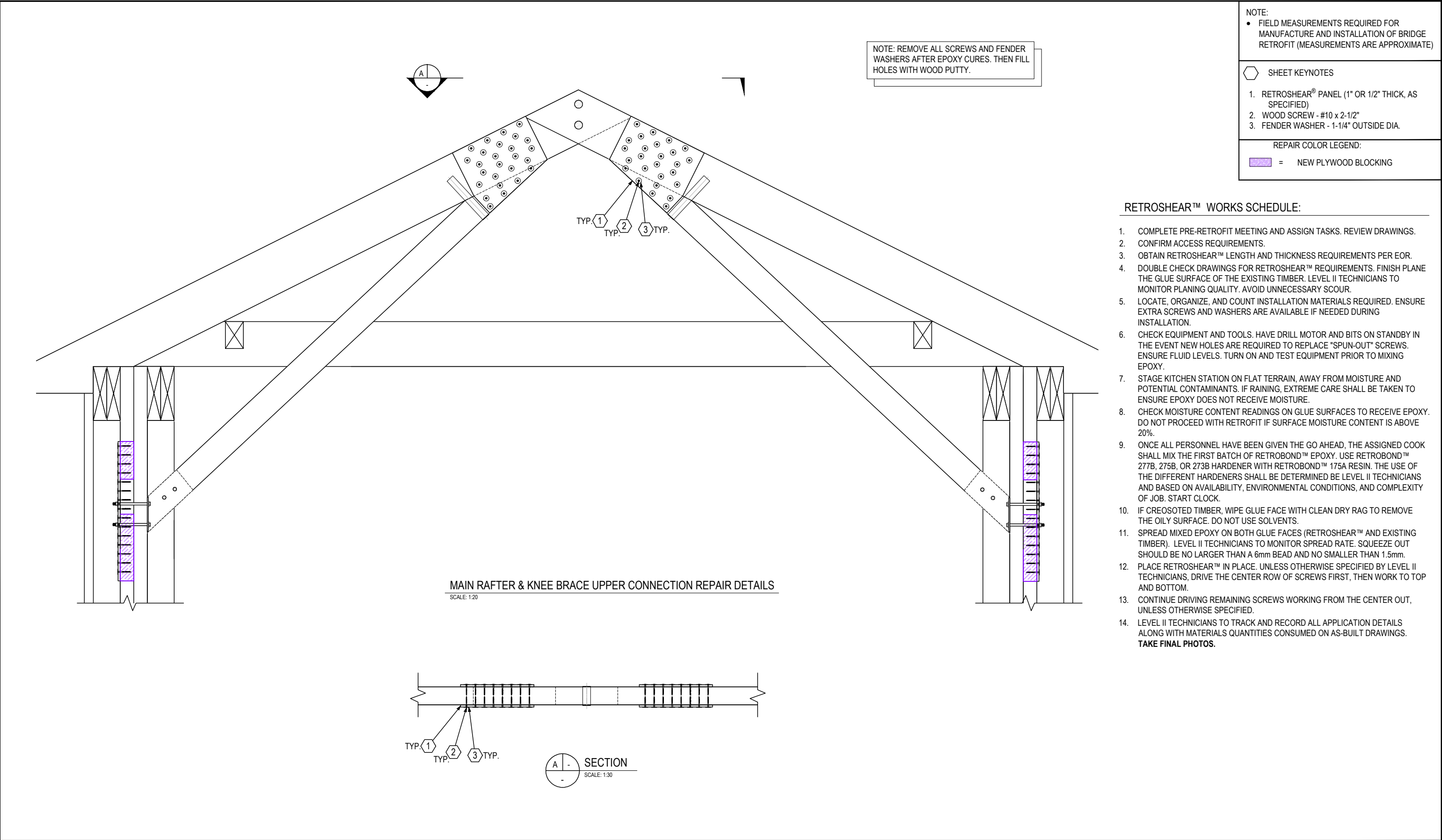


A - SECTION  
SCALE: 1:30

POST REPAIR - BLOCKING BETWEEN LATTICE & POST/TENSION CHORD  
SCALE: 1:20








NOTE:

- FIELD MEASUREMENTS REQUIRED FOR MANUFACTURE AND INSTALLATION OF BRIDGE RETROFIT (MEASUREMENTS ARE APPROXIMATE)

SHEET KEYNOTES

- RETROSHEAR® PANEL (1" OR 1/2" THICK, AS SPECIFIED)
- WOOD SCREW - #10 x 2-1/2"
- FENDER WASHER - 1-1/4" OUTSIDE DIA.

REPAIR COLOR LEGEND:

 = NEW PLYWOOD BLOCKING

RETROSHEAR™ WORKS SCHEDULE:

- COMPLETE PRE-RETROFIT MEETING AND ASSIGN TASKS. REVIEW DRAWINGS.
- CONFIRM ACCESS REQUIREMENTS.
- OBTAIN RETROSHEAR™ LENGTH AND THICKNESS REQUIREMENTS PER EOR.
- DOUBLE CHECK DRAWINGS FOR RETROSHEAR™ REQUIREMENTS. FINISH PLANE THE GLUE SURFACE OF THE EXISTING TIMBER. LEVEL II TECHNICIANS TO MONITOR PLANING QUALITY. AVOID UNNECESSARY SCOUR.
- LOCATE, ORGANIZE, AND COUNT INSTALLATION MATERIALS REQUIRED. ENSURE EXTRA SCREWS AND WASHERS ARE AVAILABLE IF NEEDED DURING INSTALLATION.
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- IF CREOSOTED TIMBER, WIPE GLUE FACE WITH CLEAN DRY RAG TO REMOVE THE OILY SURFACE. DO NOT USE SOLVENTS.
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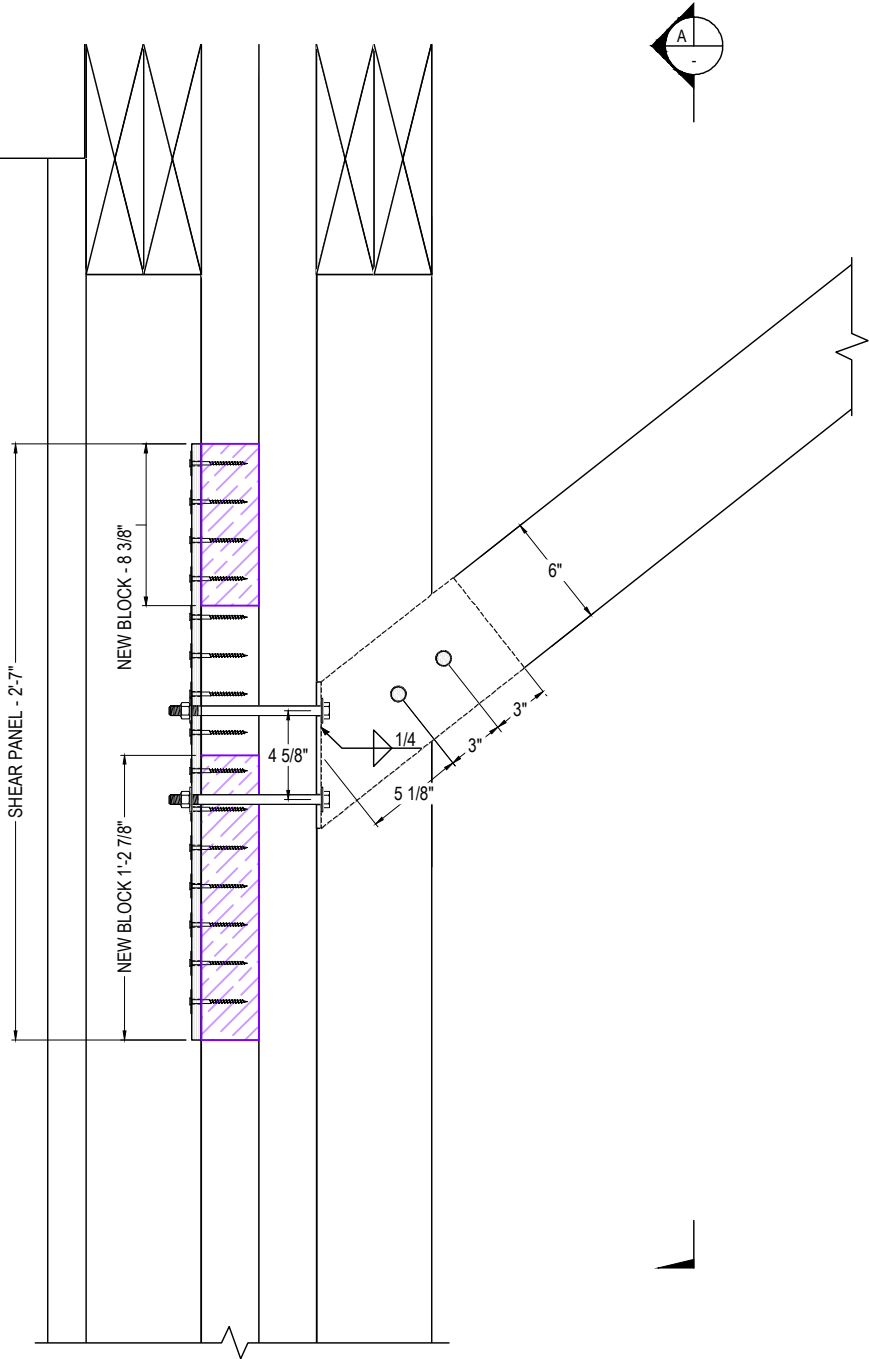
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REPAIR COLOR LEGEND:

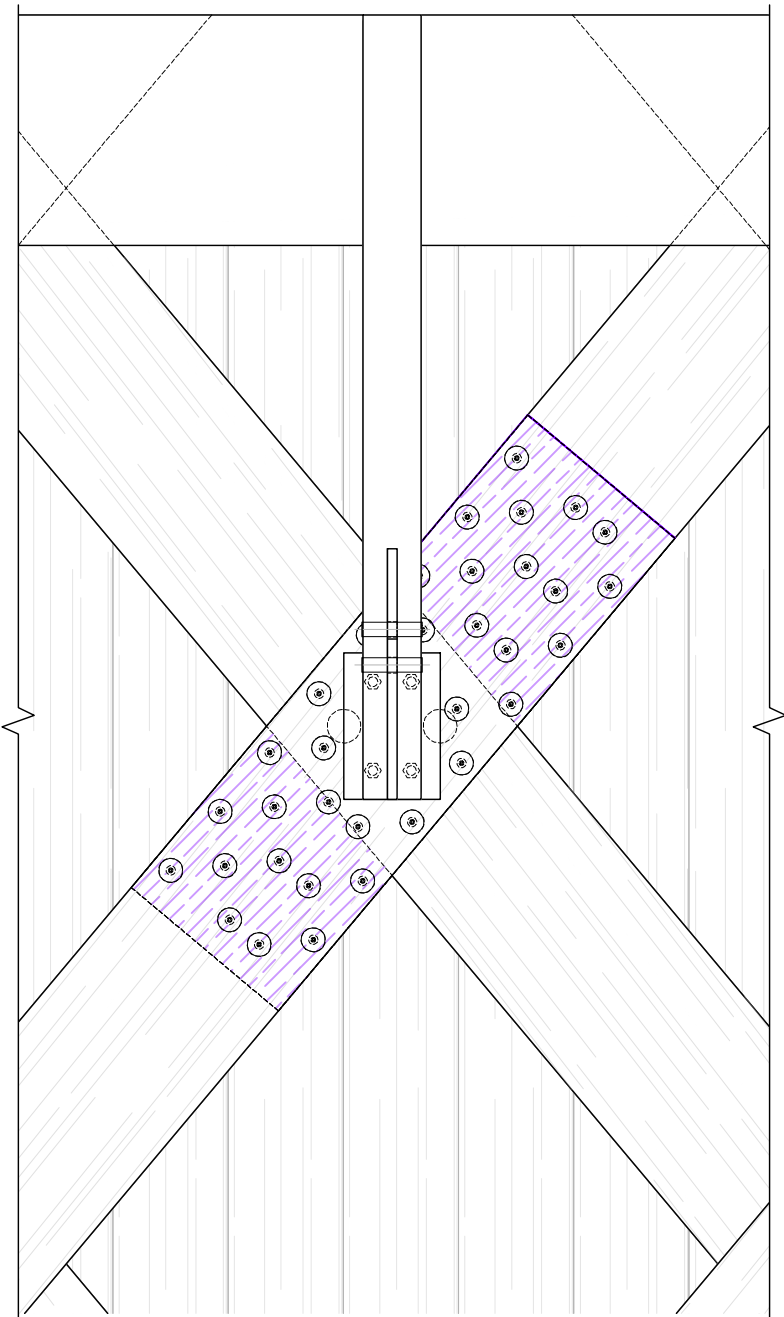
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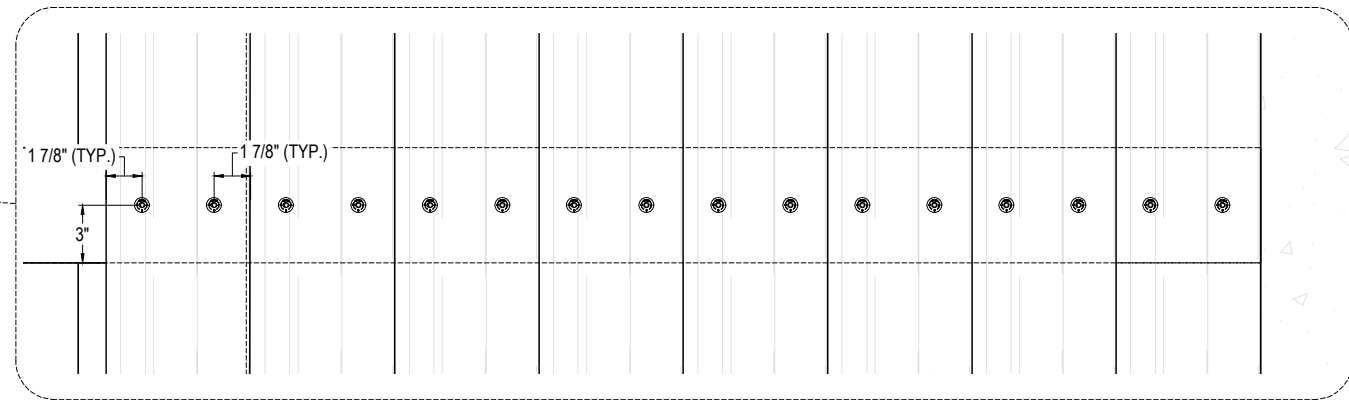
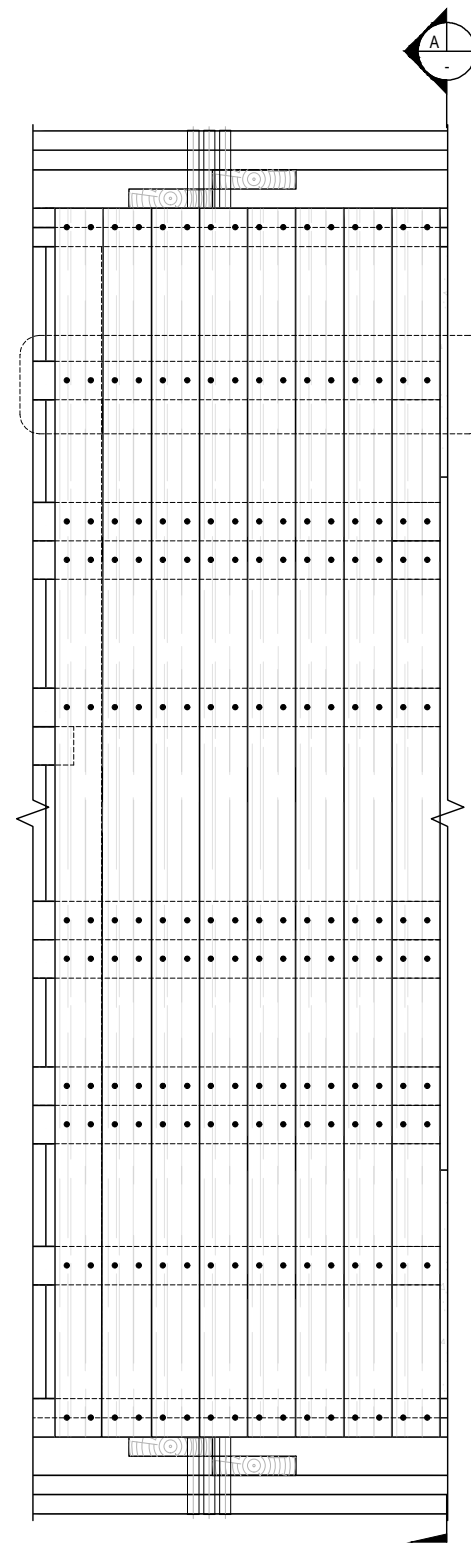
KNEE BRACE LOWER CONNECTION REPAIR DETAIL (TYPICAL)  
SCALE: 1:20



SECTION  
SCALE: 1:30

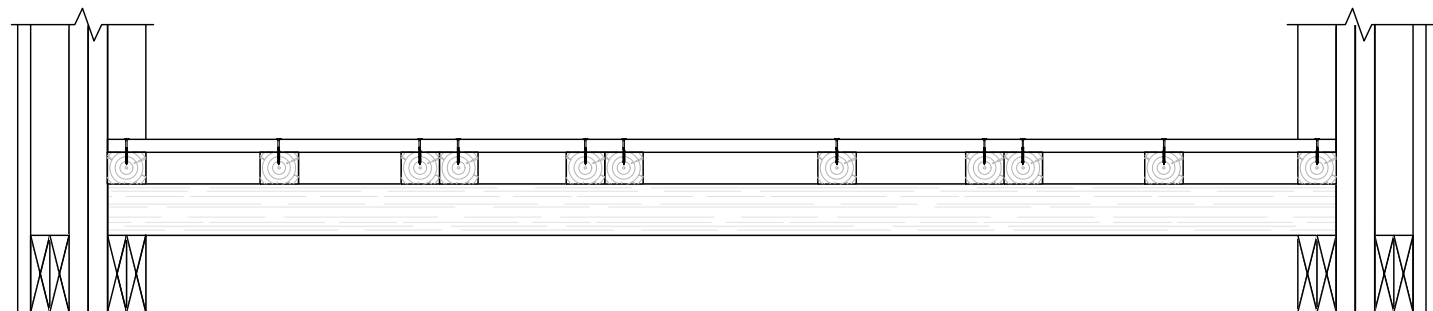
NOTE:

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SCREW PATTERN DETAIL (TYPICAL)

SCALE: 1:20



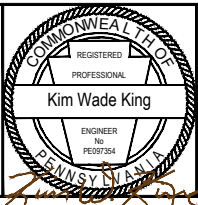
SCALE: 1:30

LOWER FLOOR DECK CONNECTION DETAIL PER BAY (TYPICAL)

SCALE: 1:30



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PREPARED FOR:  
BOROUGH OF PERKASIE (PA)

# SOUTH PERKASIE COVERED BRIDGE

△	100% DESIGN DRAWINGS	-	05/09/2025	UK		RWK	RWK	RWK
①	FOUNDATION CONNECTION	-	06/02/2025	UK		RWK	RWK	RWK
②	BRIDGE RELOCATION REVISION	-	06/09/2025	UK		RWK	RWK	RWK

LOWER FLOOR DECK  
CONNECTION  
PER BAY DETAIL (TYPICAL)

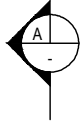
DRAWING #  
5.5

SHEET #  
8 OF 42

PROJECT #9101S

NOTE:

- FIELD MEASUREMENTS REQUIRED FOR MANUFACTURE AND INSTALLATION OF BRIDGE RETROFIT (MEASUREMENTS ARE APPROXIMATE)



SCALE: 1:20



SCALE: 1:30

SCALE: 1:30



BOROUGH OF PERKASIE (PA)

# SOUTH PERKASIE COVERED BRIDGE

△ -	100% DESIGN DRAWINGS	-				
		05/09/2025	UK	KWK	KWK	KWK
△ 1	FOUNDATION CONNECTION	-				
		06/02/2025	UK	KWK	KWK	KWK
△ 2	BRIDGE RELOCATION REVISION	-				
		06/09/2025	UK	KWK	KWK	KWK

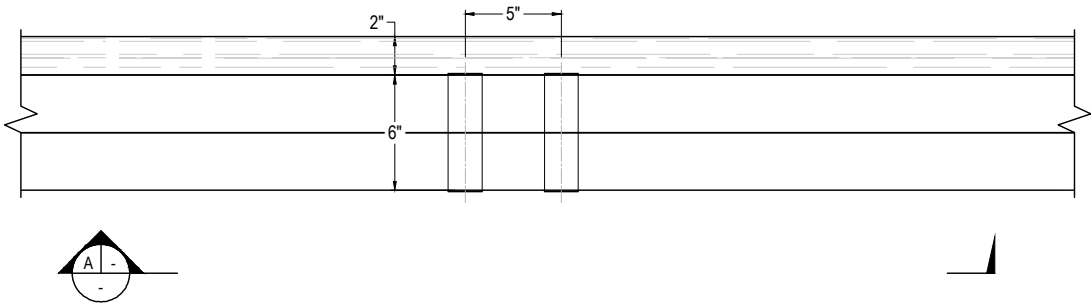
UPPER FLOOR DECK  
CONNECTION  
DETAIL PER BAY (TYPICAL)

5.6

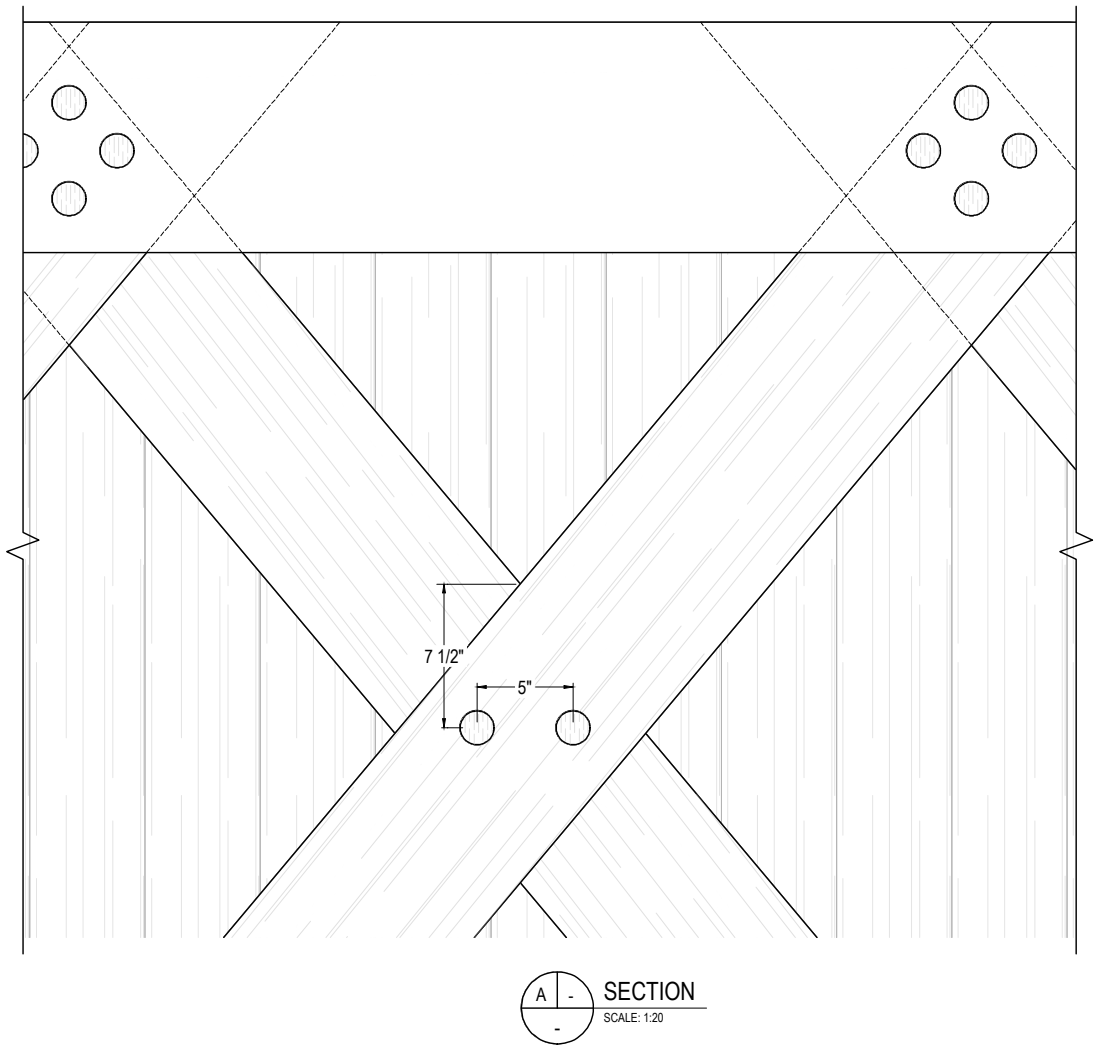
SHEET #  
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PROJECT #9101S

NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR  
MANUFACTURE AND INSTALLATION OF BRIDGE  
RETROFIT (MEASUREMENTS ARE APPROXIMATE)



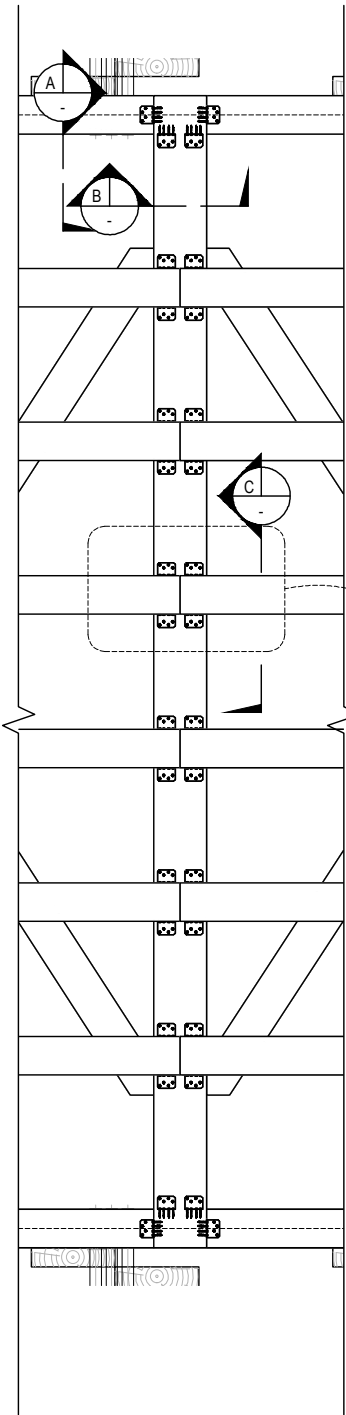
INTERMEDIATE LATTICE CONNECTION DETAIL (TYPICAL)  
SCALE: 1:20



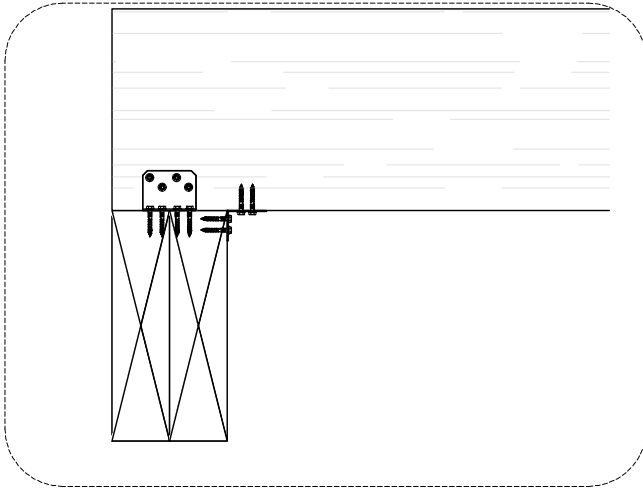
SECTION  
SCALE: 1:20



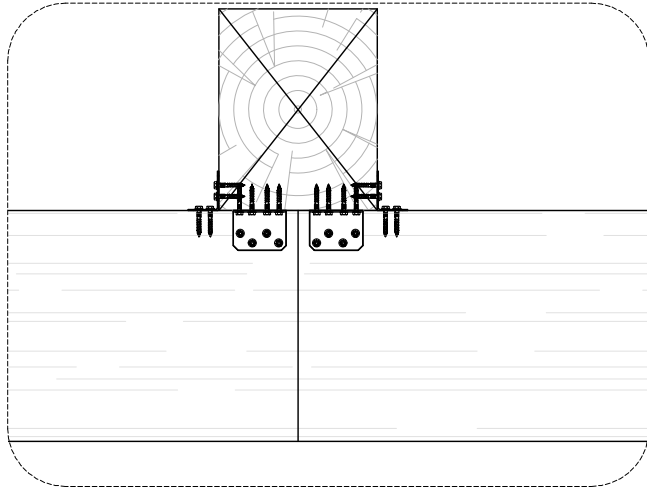
NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR  
MANUFACTURE AND INSTALLATION OF BRIDGE  
RETROFIT (MEASUREMENTS ARE APPROXIMATE)



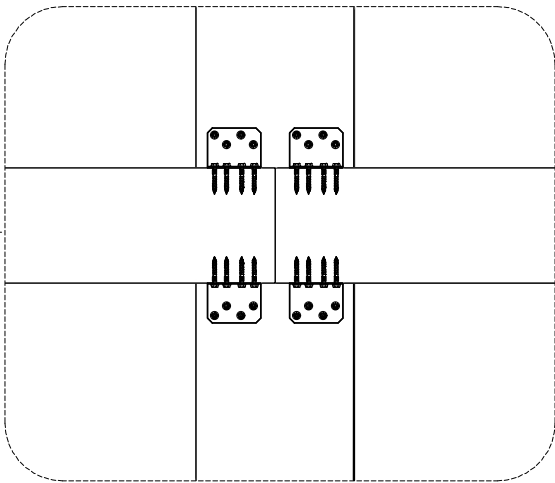
JOIST TO TRANSVERSE BEAM CONNECTION DETAILS (TYPICAL)  
SCALE: 1/20



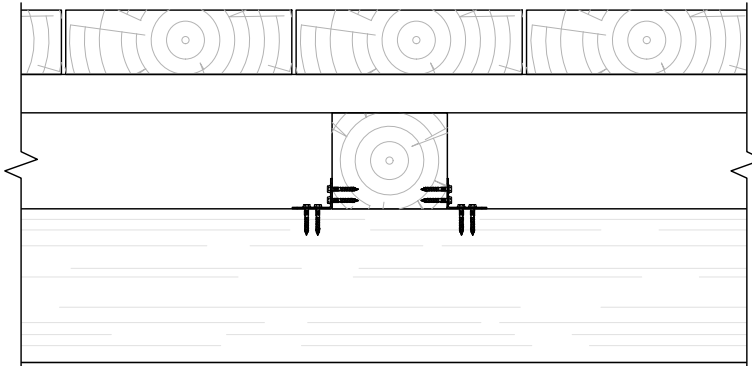
A - SECTION  
SCALE: 1/30



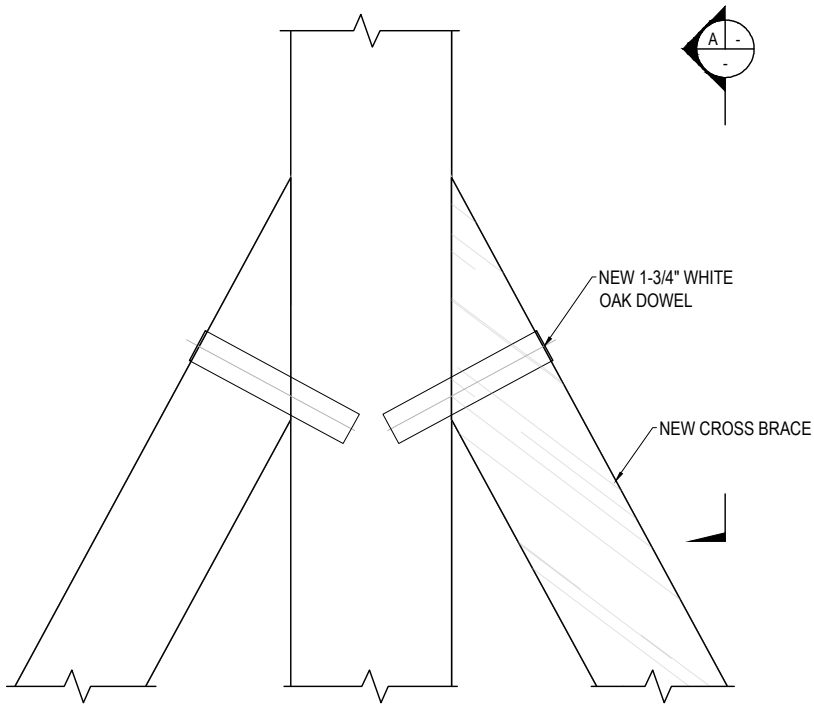
B - SECTION  
SCALE: 1/30



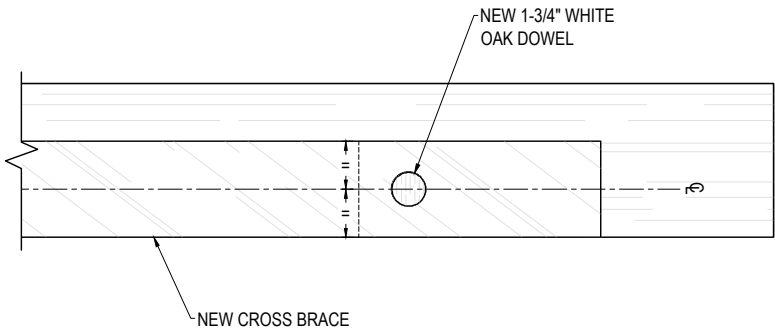
C - SECTION  
SCALE: 1/30



NOTE:  
• FIELD MEASUREMENTS REQUIRED FOR MANUFACTURE AND INSTALLATION OF BRIDGE RETROFIT (MEASUREMENTS ARE APPROXIMATE)



NOTE: CONTRACTOR TO FIELD  
VERIFY LOCATION OF DOWEL  
HOLES IN MEMBERS TO REMAIN.



CROSS BRACE CONNECTION DETAIL (TYPICAL)  
SCALE: 1:20

SECTION  
SCALE: 1:20