



2023 Highway Maintenance Conference

Bridge Maintenance

Superior Region



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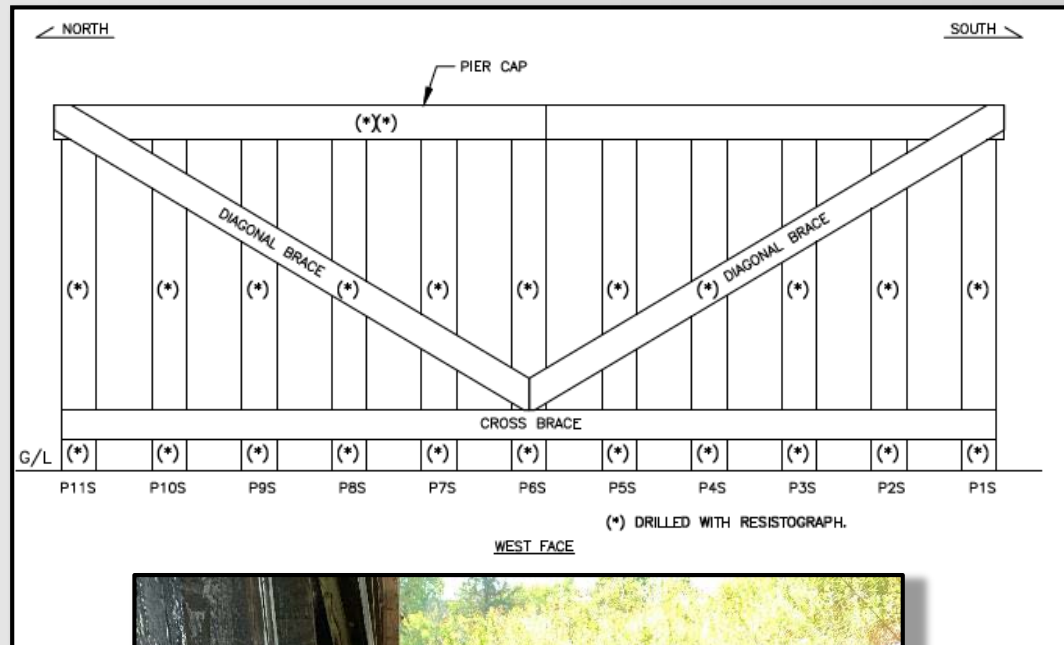
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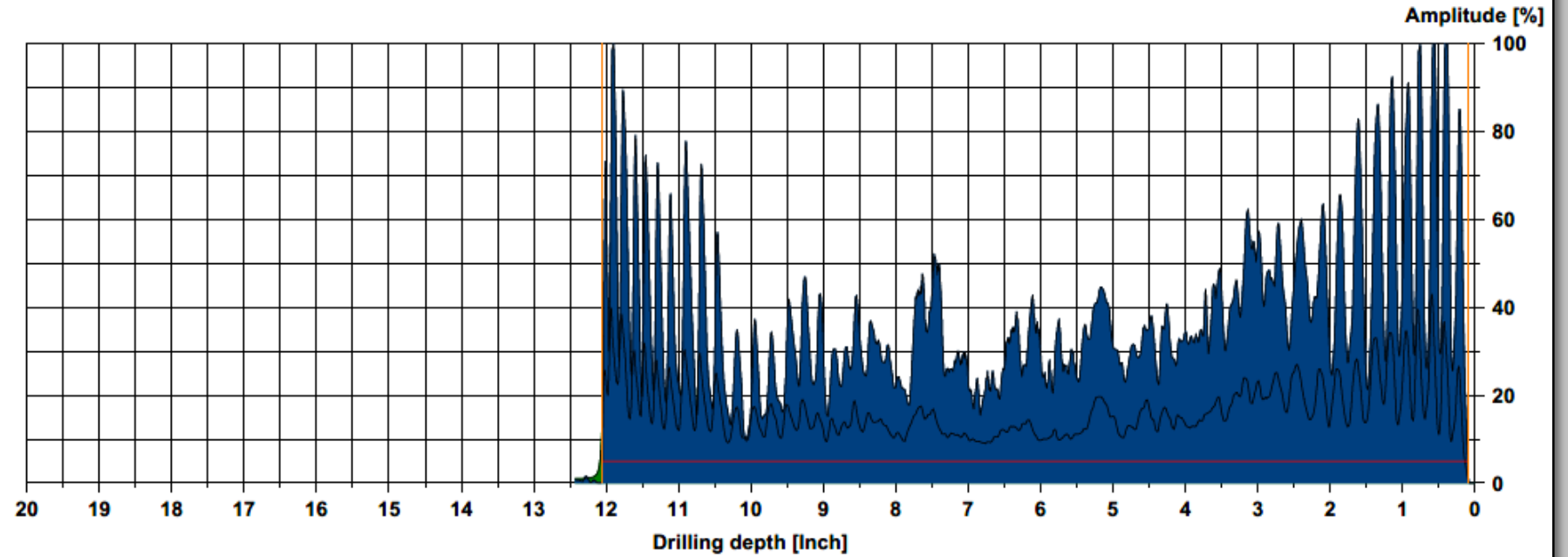


Measuring / object data

Measurement no. :	29	Needle speed :	3000 r/min	Diameter :	
ID number :	3398	Needle state :	---	Level :	
Drilling depth :	12.425 "	Tilt :	0°	Direction :	West
Date :	14.09.2021	Offset :	115/290	Species :	
Time :	10:21:49	Avg. curve :	off	Location :	Pier 2 West
Feed speed :	40 "/min			Name :	Pile 7 South

Wood Inspector

Program :	Standard
Mode :	Full piercing
Start / stop :	0.098 " / 12.055 "
Effective length :	11.957 "
Cavity detection :	0.000 " / 0%



Assessment

<input type="checkbox"/>	From	0.00 "	to	0.00 " :
<input type="checkbox"/>	From	0.00 "	to	0.00 " :
<input type="checkbox"/>	From	0.00 "	to	0.00 " :
<input type="checkbox"/>	From	0.00 "	to	0.00 " :
<input type="checkbox"/>	From	0.00 "	to	0.00 " :
<input type="checkbox"/>	From	0.00 "	to	0.00 " :

Comment

PIER2W P7S MID

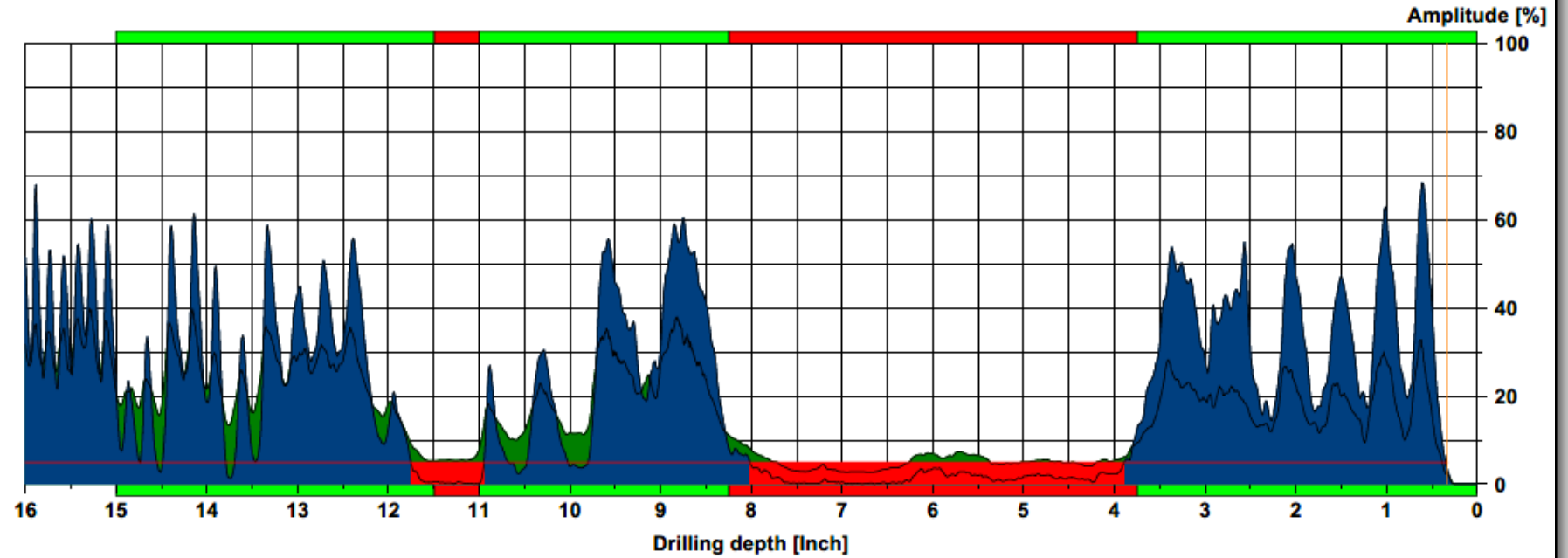


Measuring / object data

Measurement no. :	12	Needle speed :	2500 r/min	Diameter :	
ID number :	3398	Needle state :	---	Level :	
Drilling depth :	17.736 "	Tilt :	-45°	Direction :	
Date :	20.05.2021	Offset :	61/246	Species :	
Time :	10:10:00	Avg. curve :	off	Location :	
Feed speed :	40 "/min			Name :	

Wood Inspector

Program :	Standard
Mode :	Full piercing
Start / stop :	0.327 " / 16.996 "
Effective length :	16.669 "
Cavity detection :	4.933 " / 30%



Assessment

From 0.00 " to 3.75 " :	No Rot
From 3.75 " to 8.25 " :	Rot
From 8.25 " to 11.00 " :	No Rot
From 11.00 " to 11.50 " :	Rot
From 11.50 " to 15.00 " :	No Rot
From 0.00 " to 0.00 " :	

Comment

PIER1 P11N

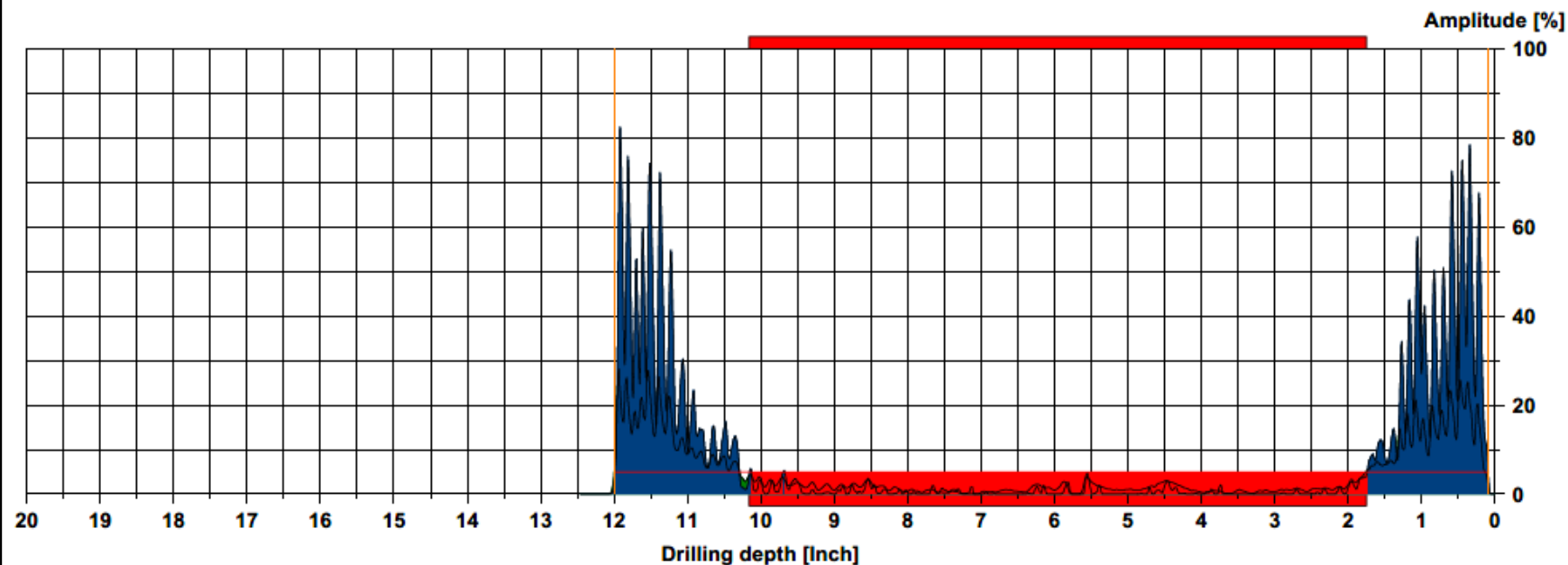


Measuring / object data

Measurement no. :	33	Needle speed :	3000 r/min	Diameter :	
ID number :	3398	Needle state :	---	Level :	
Drilling depth :	12.461 "	Tilt :	0°	Direction :	West
Date :	14.09.2021	Offset :	121/294	Species :	
Time :	10:26:17	Avg. curve :	off	Location :	Pier 2 West
Feed speed :	40 "/min			Name :	Pile 3 South

Wood Inspector

Program :	Standard
Mode :	Full piercing
Start / stop :	0.087 " / 11.996 "
Effective length :	11.909 "
Cavity detection :	8.362 " / 70%

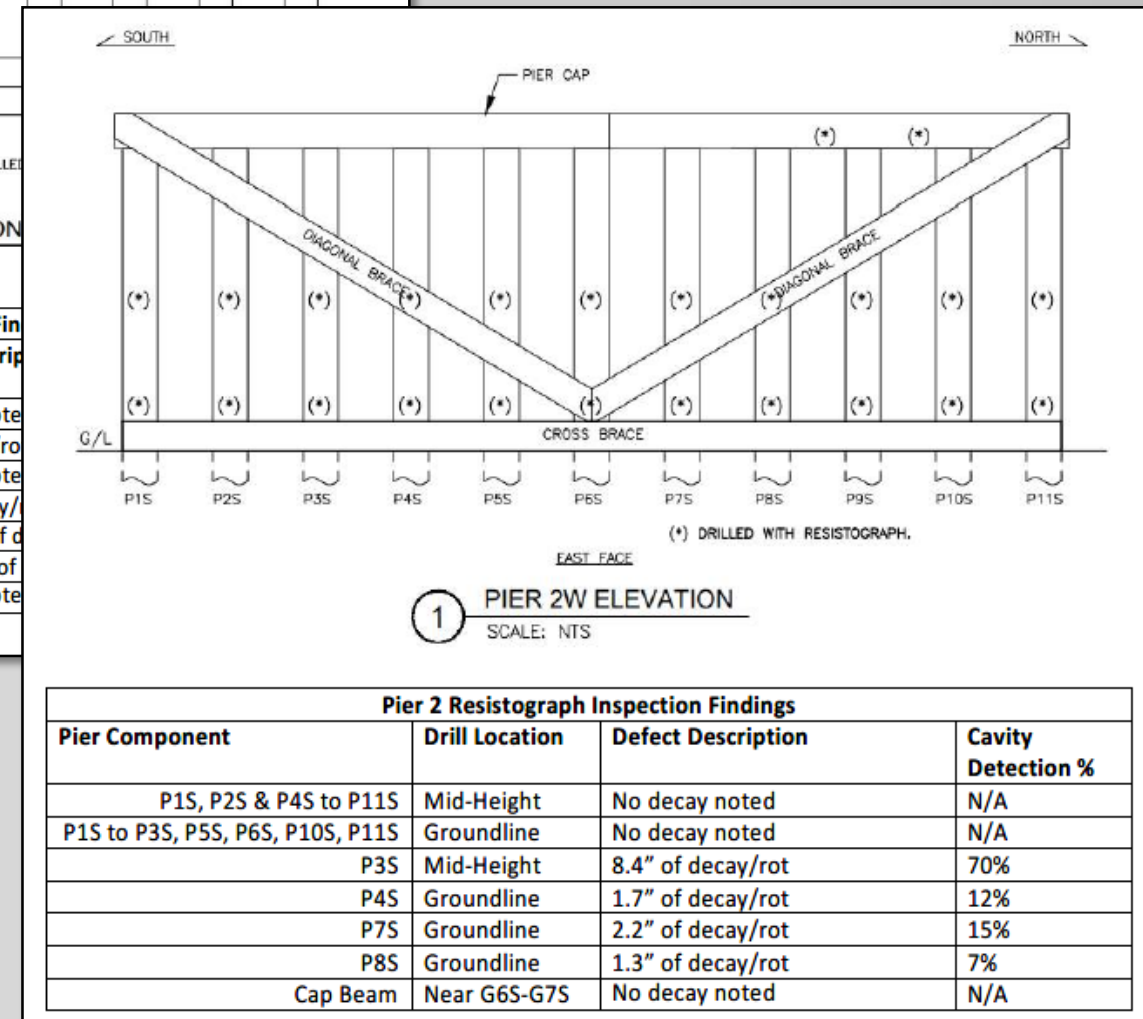
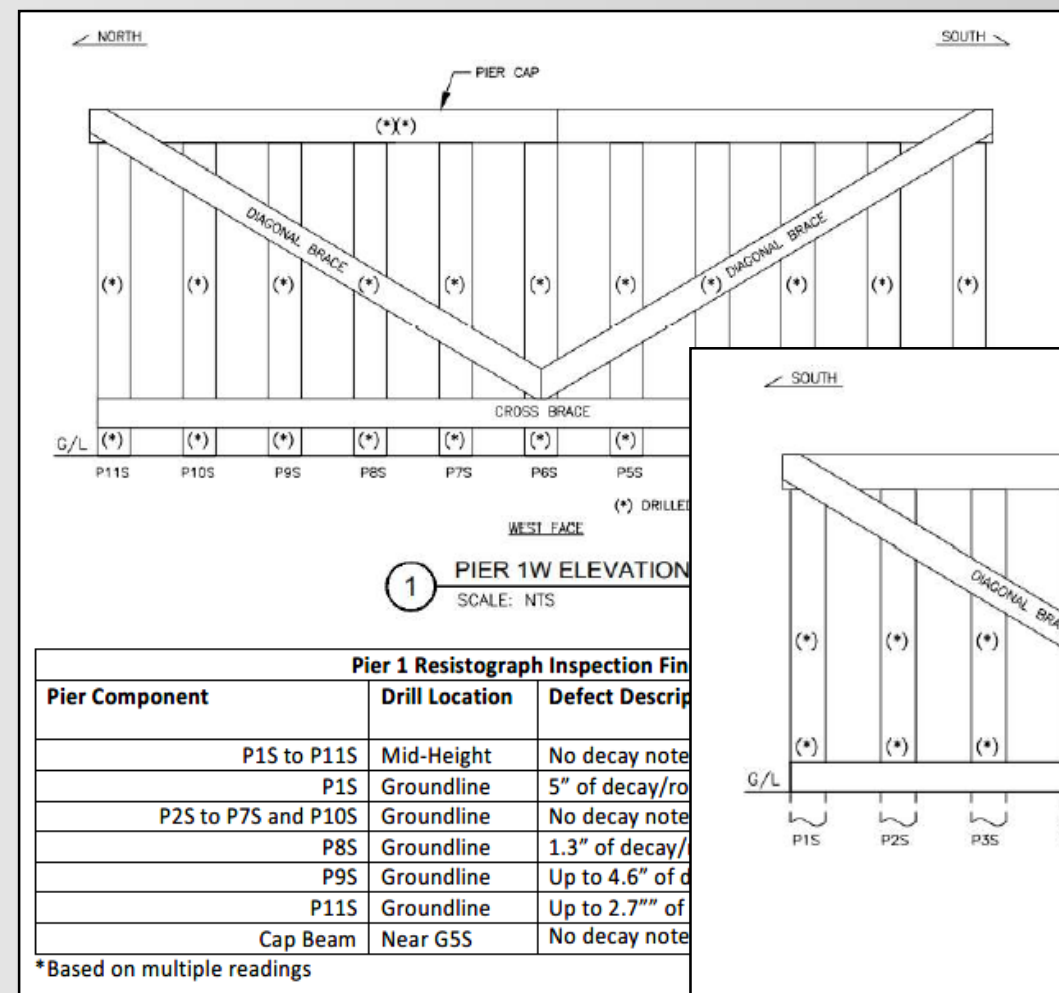


Assessment

■	From	1.75 "	to	10.16 "	: Decay
□	From	0.00 "	to	0.00 "	:
□	From	0.00 "	to	0.00 "	:
□	From	0.00 "	to	0.00 "	:
□	From	0.00 "	to	0.00 "	:
□	From	0.00 "	to	0.00 "	:

Comment

PIER2W P3S MID





4 1/2" x 12" ROUGH CUT OR EQUIVALENT (TOTAL 4 1/2") DIMENSIONAL SPACERS UNDER EACH DIAGONAL BRACE. TRIM TO MISS PILE REPAIR.

14" x 14" FIBERGLASS ENCASEMENT (TYP)

3/4" BOLT (TYP)

3/4" BOLT (TYP)

3/4" BOLT (TYP)

TY

Michigan D

FILE: 31041-B01

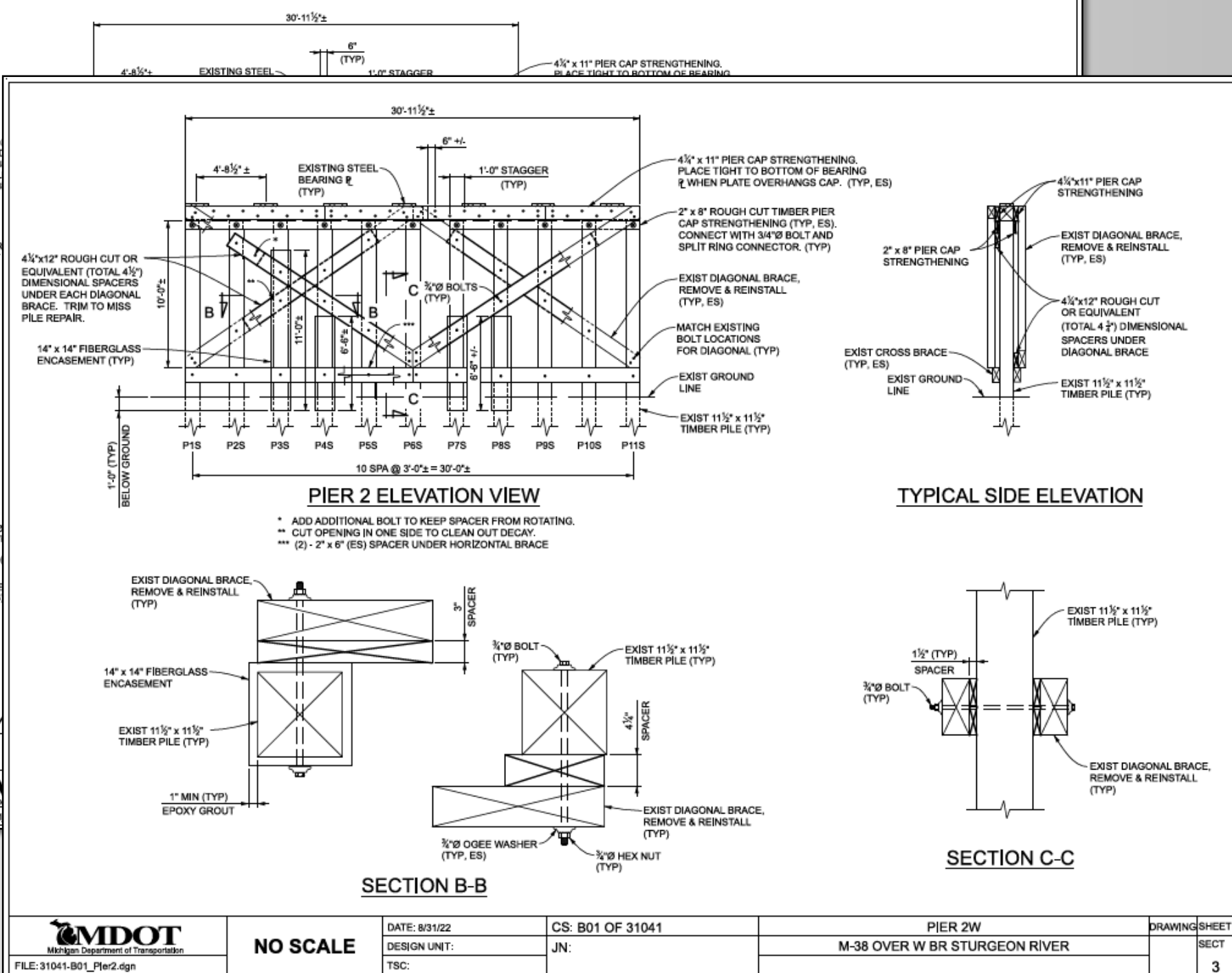




TABLE 10A - SPECIES GROUPS FOR SPLIT RING AND SHEAR PLATE CONNECTORS

GROUP A	GROUP B	GROUP C	GROUP D
Beech-Birch-Hickory Douglas Fir-Larch (Dense)	Douglas Fir-Larch Douglas Fir-Larch (North)	Douglas Fir-South Eastern Hemlock - Tamarack (North)	Apsen Balsam Fir
Mixed Oak Northern Red Oak Red Oak Southern Pine (Dense) White Oak	Mixed Maple Mixed Southern Pine Red Maple Southern Pine ¹	Hem-Fir Hem-Fir (North) Mountain Hemlock Northern Pine Ponderosa Pine Red Pine Redwood (close grain) Sitka Spruce Spruce-Pine-Fir Western Hemlock Western Hemlock (North) Yellow Poplar	Coast Sitka Spruce Cottonwood Eastern Hemlock Eastern Hemlock-Tamarack Eastern Softwoods Eastern Spruce Eastern White Pine Northern Species Northern White Cedar Redwood (open grain) Spruce-Pine-Fir (South) Western Cedars Western Cedars (North) Western White Pine Western Woods

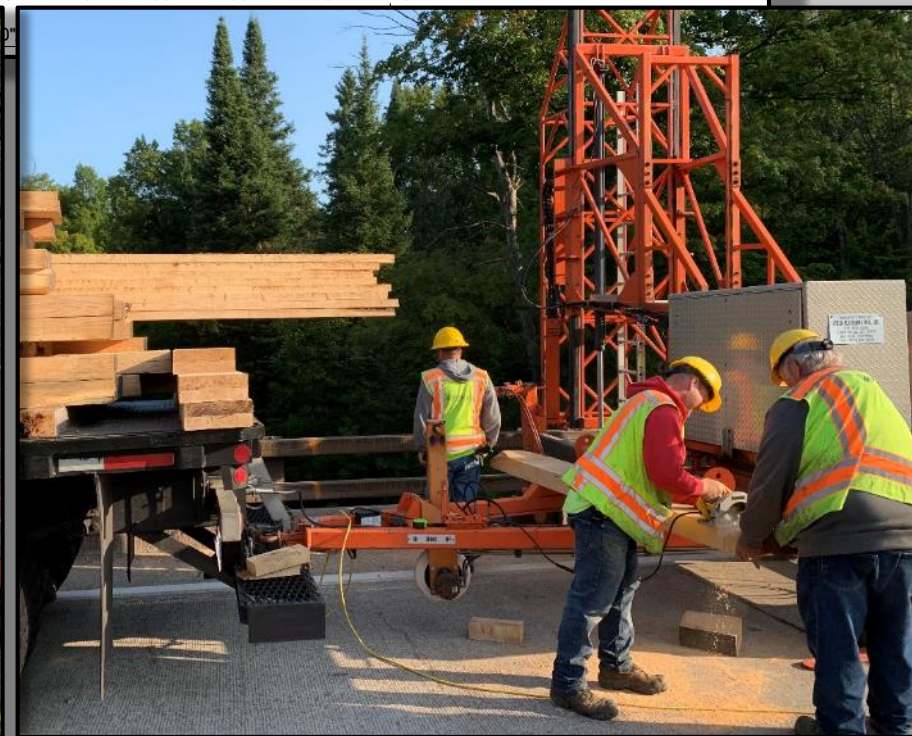
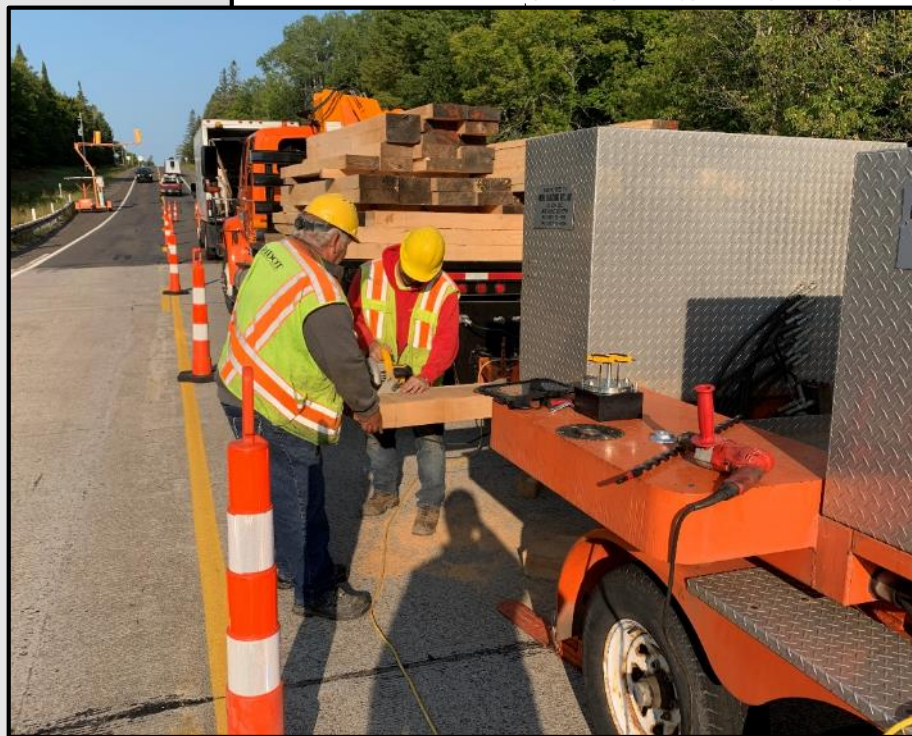
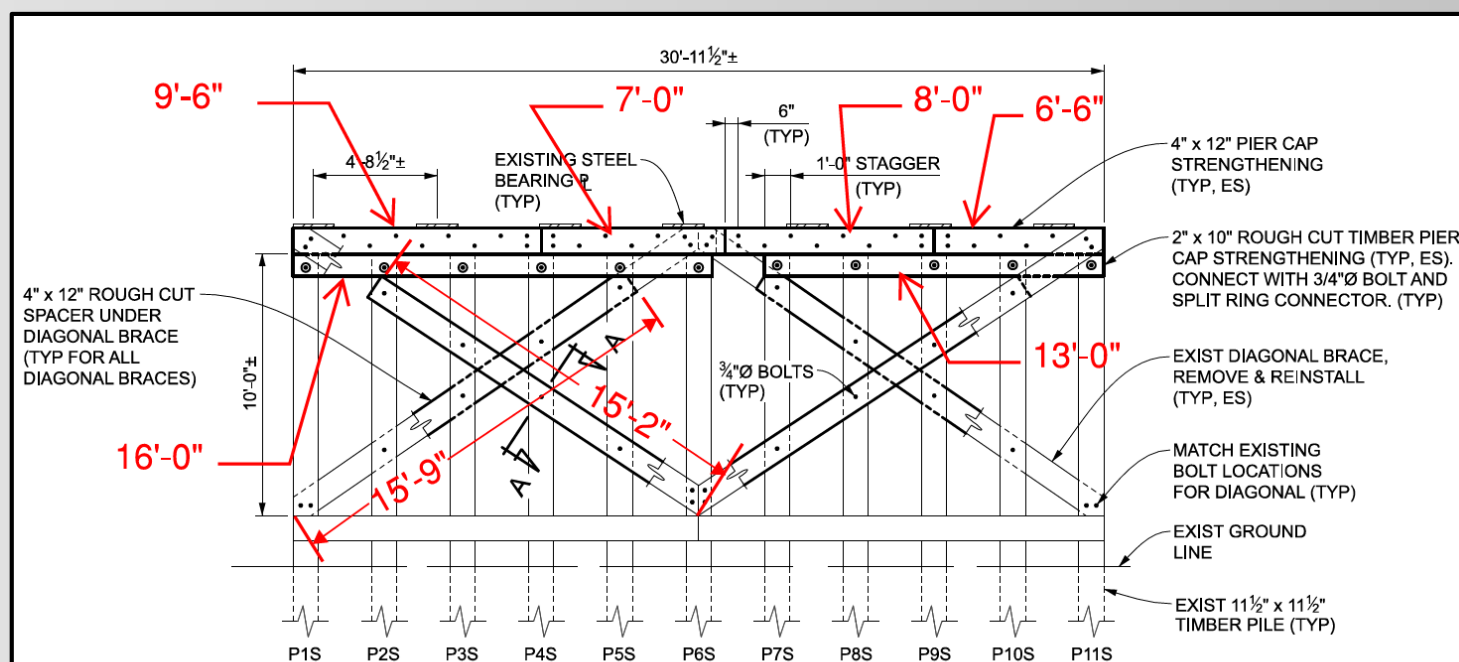
Phase 1 – Timber Repairs

September 12



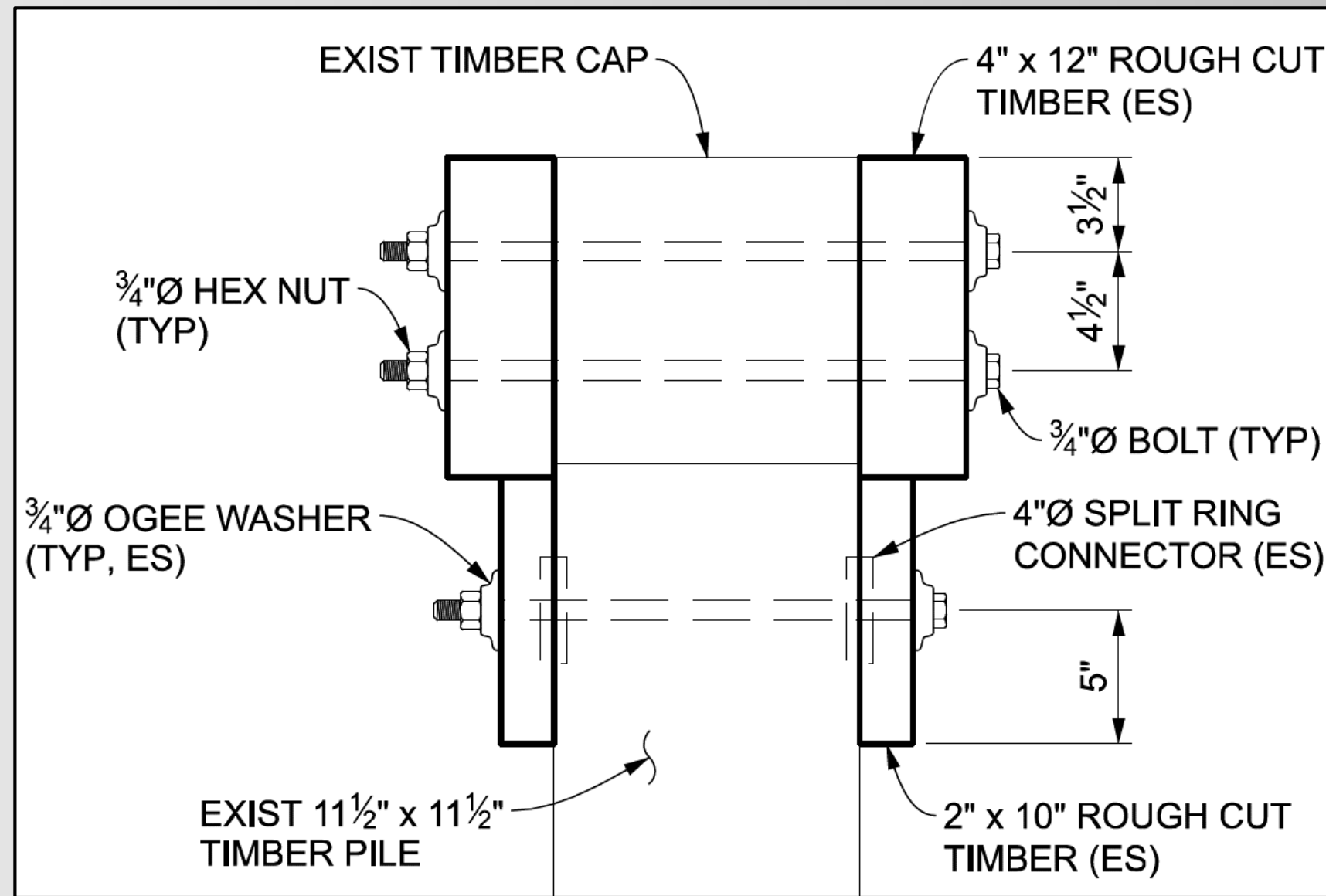






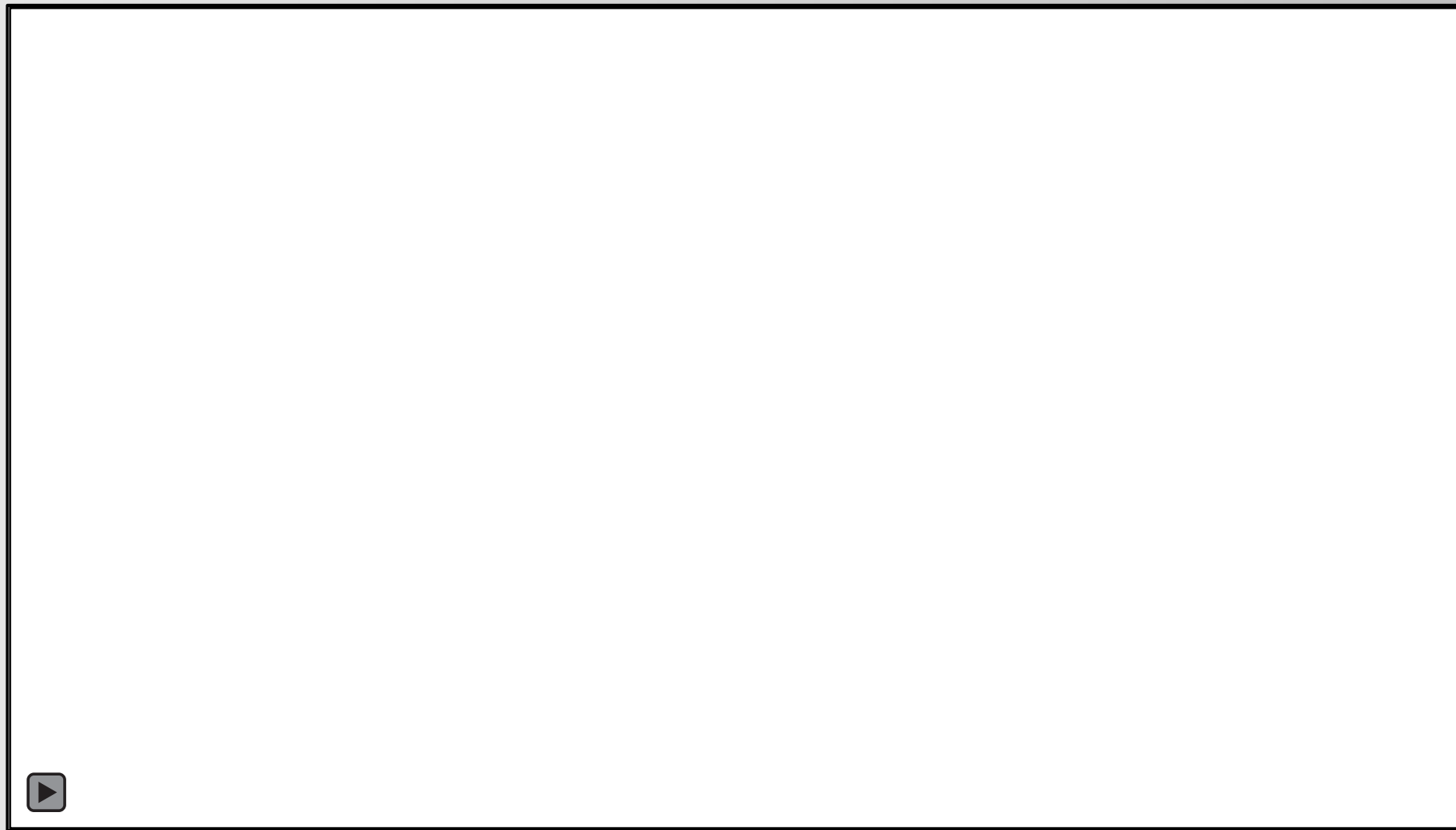












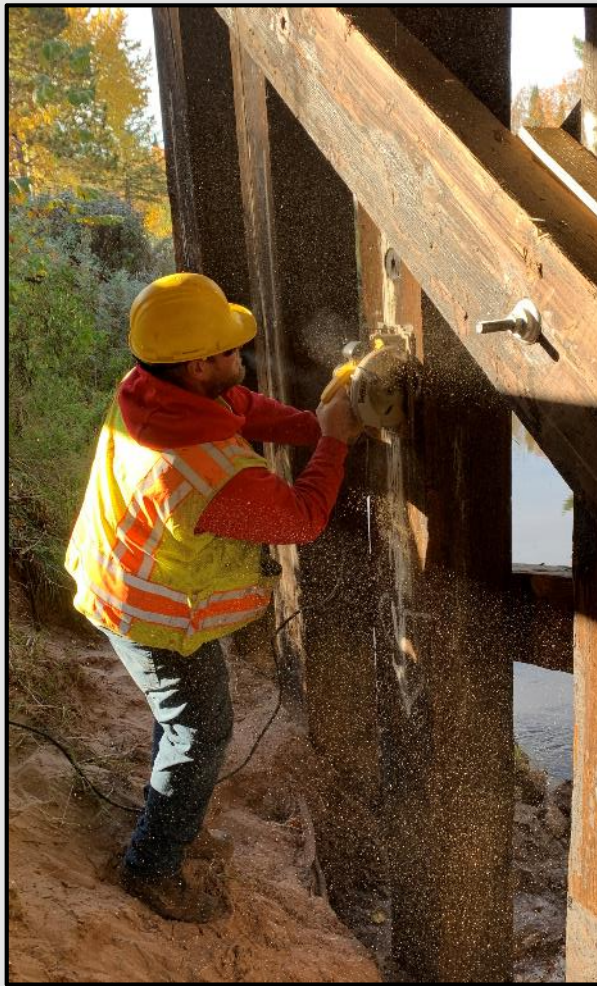


Phase 1 - Finished Product



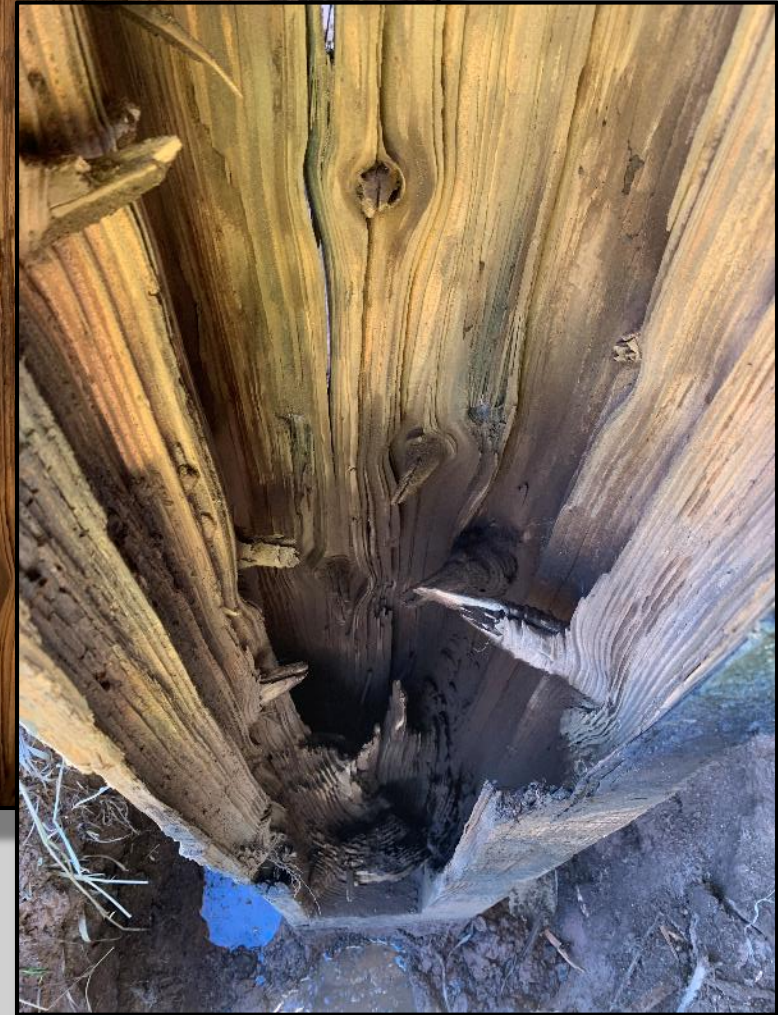
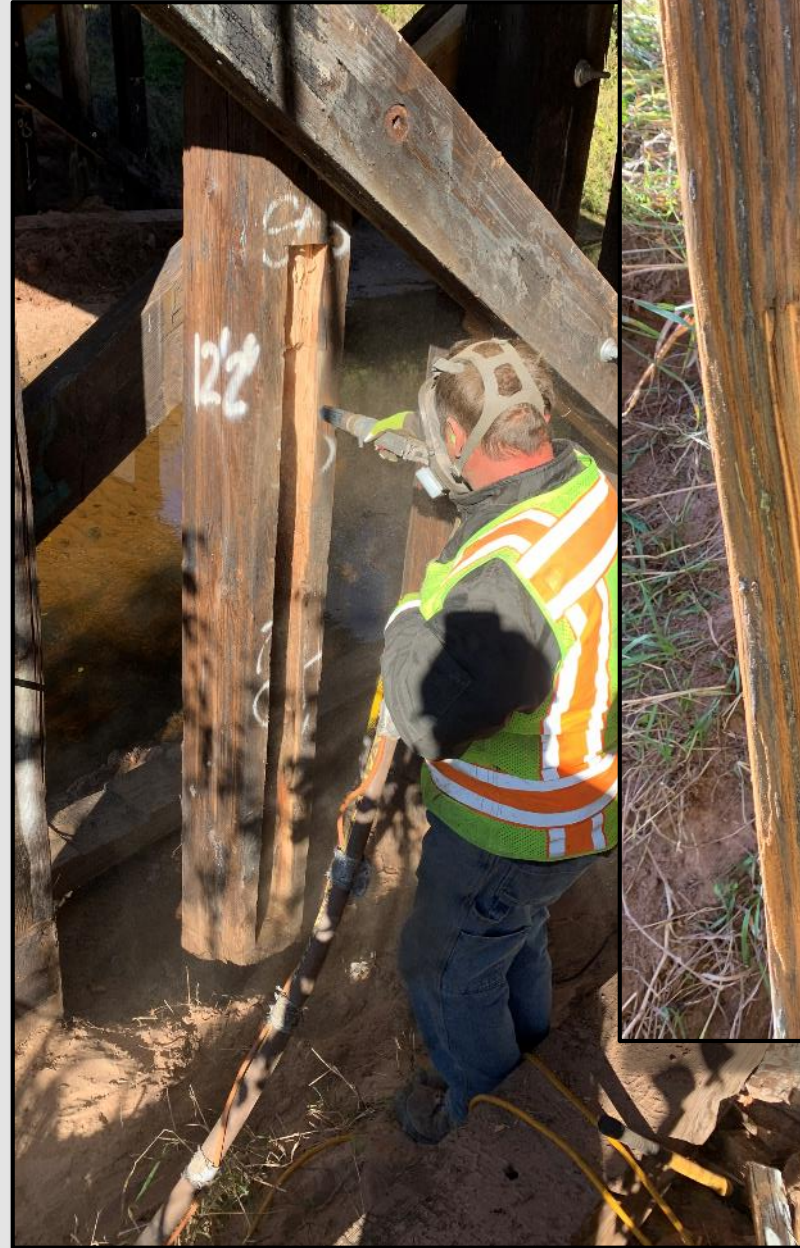
Phase 2 – Jacket Installation October 10





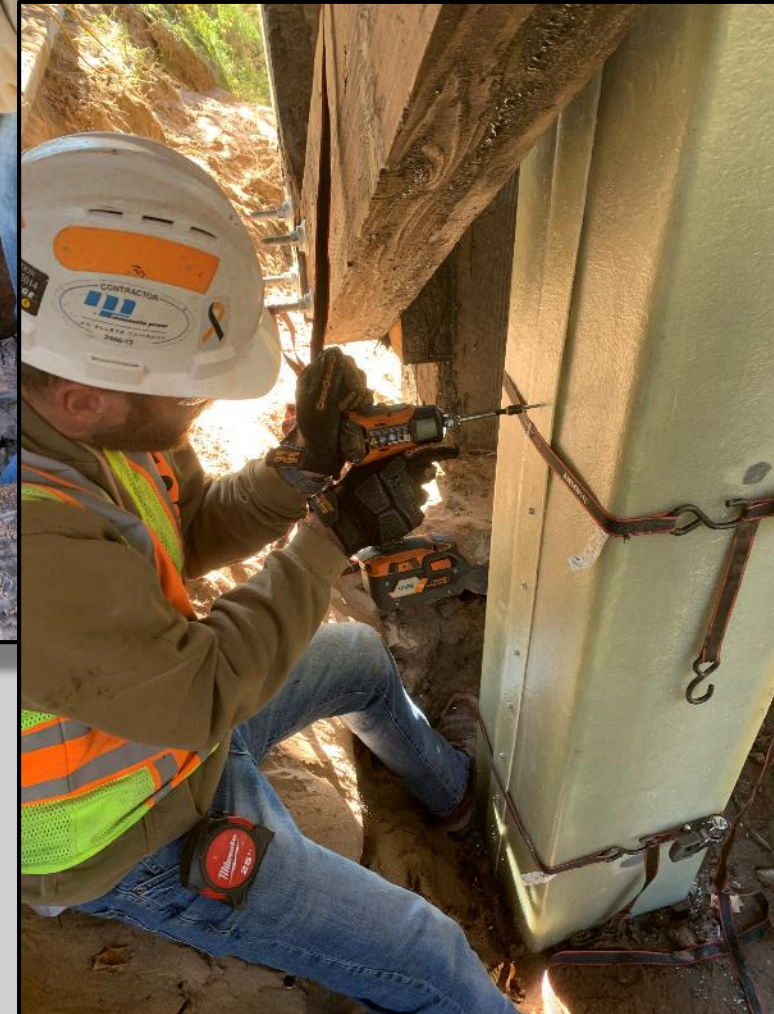












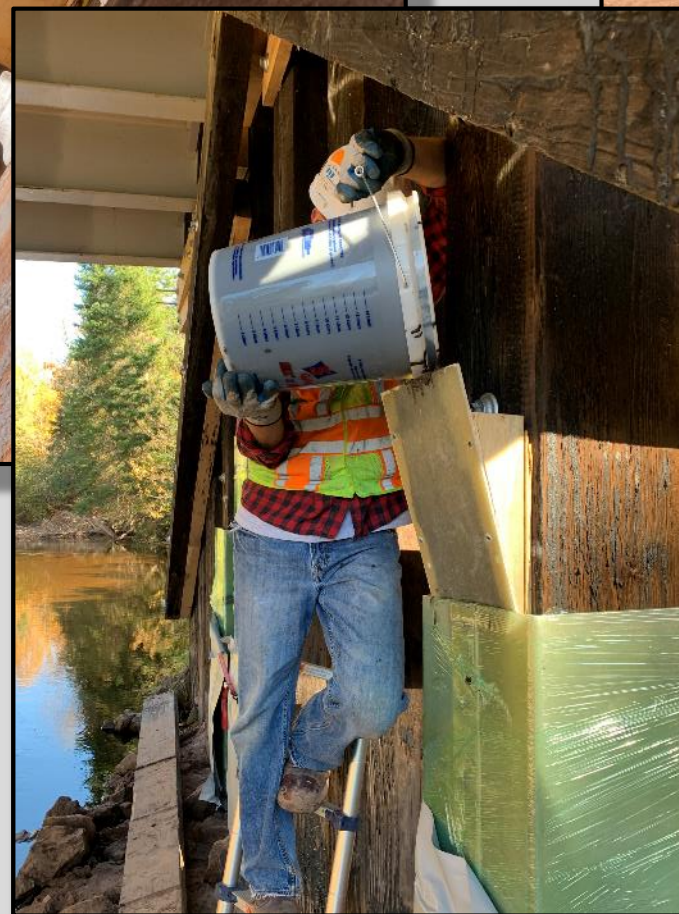








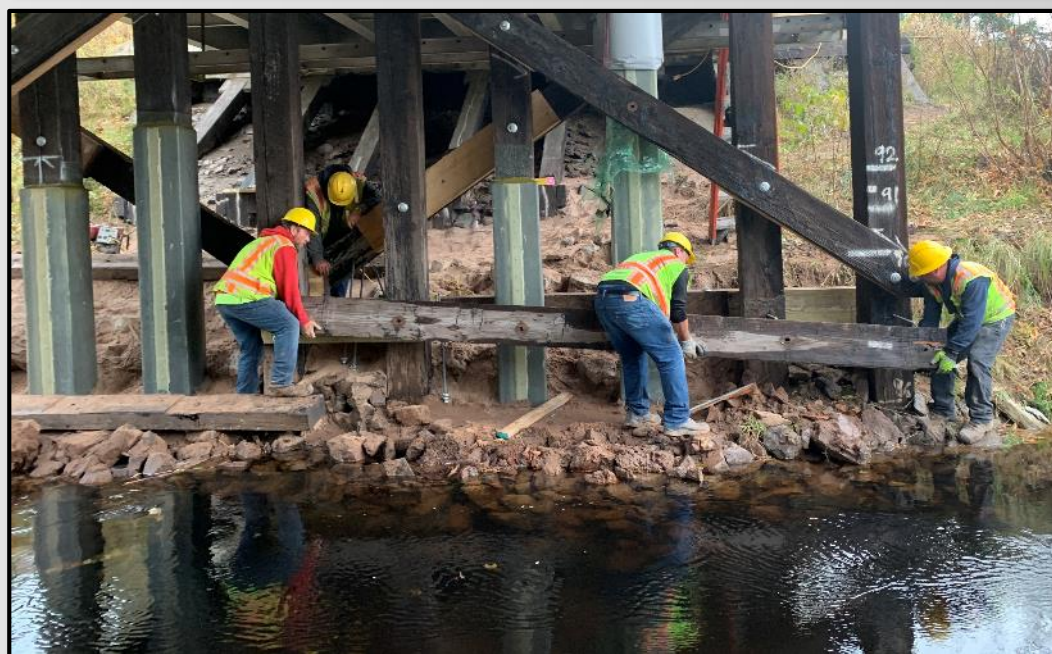














QUESTIONS?

