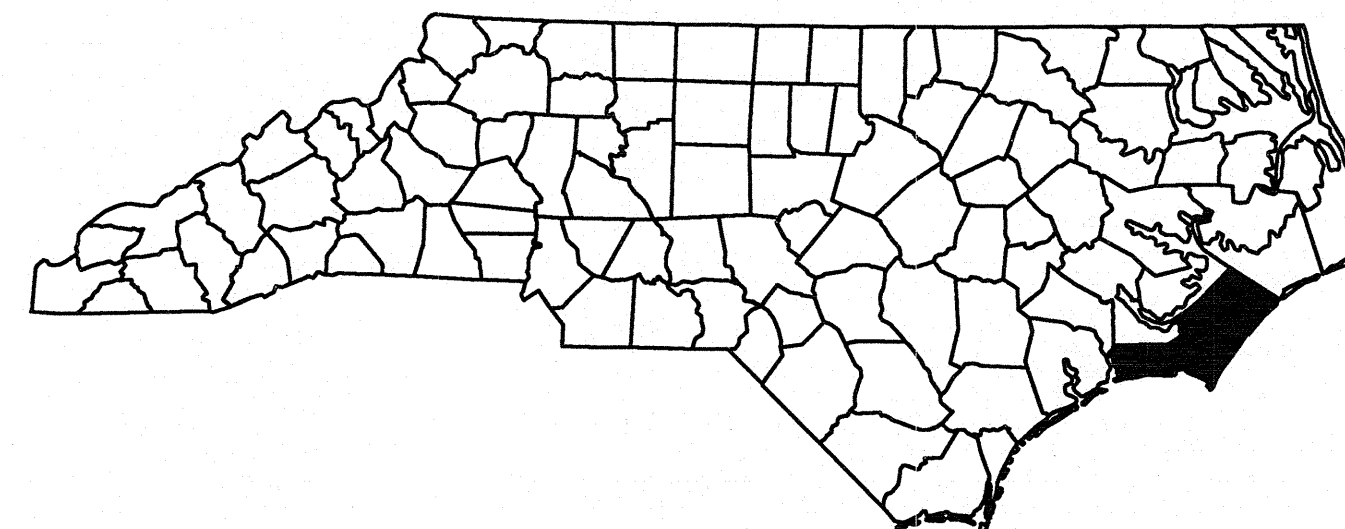
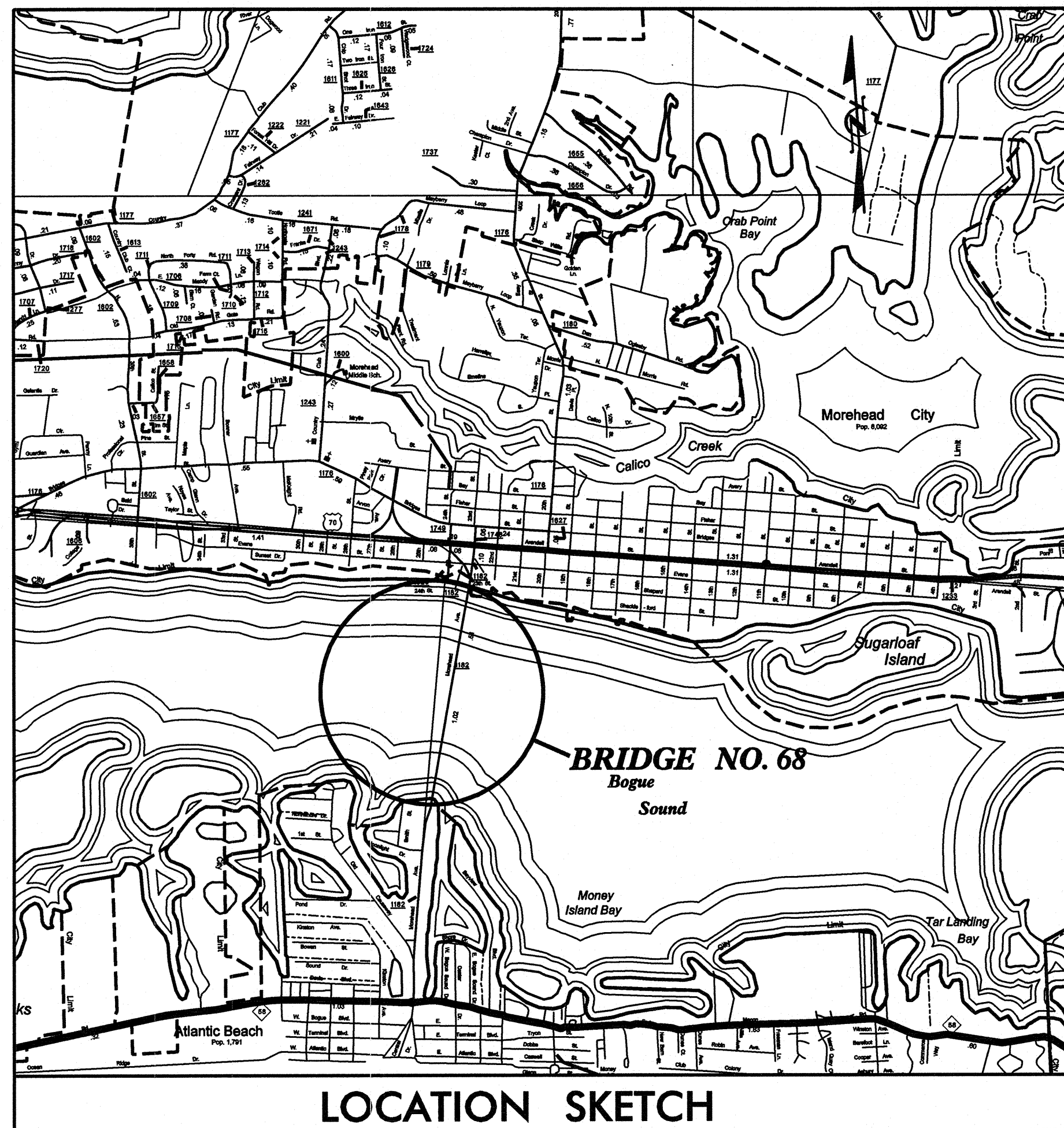


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WBS: 41733.1 TIP PROJECT: F150068



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CARTERET COUNTY

LOCATION: BRIDGE NO. 68, SR 1182 @ MOREHEAD CITY
PROJECT: MOREHEAD BRIDGE
TYPE OF WORK: REPAIR OF EXISTING FENDER SYSTEM

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	F-150068	1	9
STATE PROJECT NO.	F.A. PROJ. NO.	DESCRIPTION	

SHEET #1 TITLE SHEET

SHEET #2 ELEVATION & PLAN VIEW

SHEET #3 GENERAL NOTES & BILL OF MATERIALS

SHEET #4 FENDER SYSTEM LAYOUT

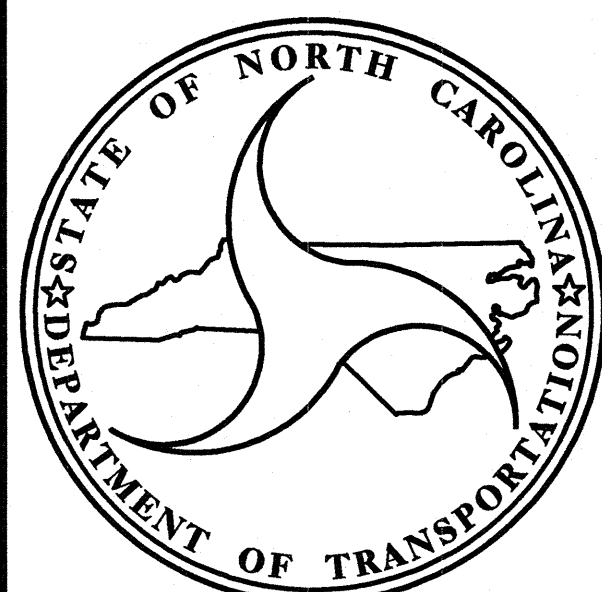
SHEET #5 BRACE PILE CLUSTERS & SECTIONS LAYOUT

SHEET #6 TIMBER FACINGS - 1 NORTH THRU 8 NORTH

SHEET #7 TIMBER FACINGS - 1 SOUTH THRU 8 SOUTH

SHEET #8 CROSS SECTIONS & REPAIR DETAILS

**SHEET #9 VERTICAL TIMBER & WALKWAY
REPAIR DETAILS**



DESIGN DATA

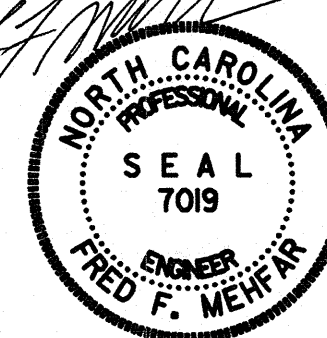
PROJECT LENGTH



Prepared for the North Carolina Department
of Transportation in the Office of:

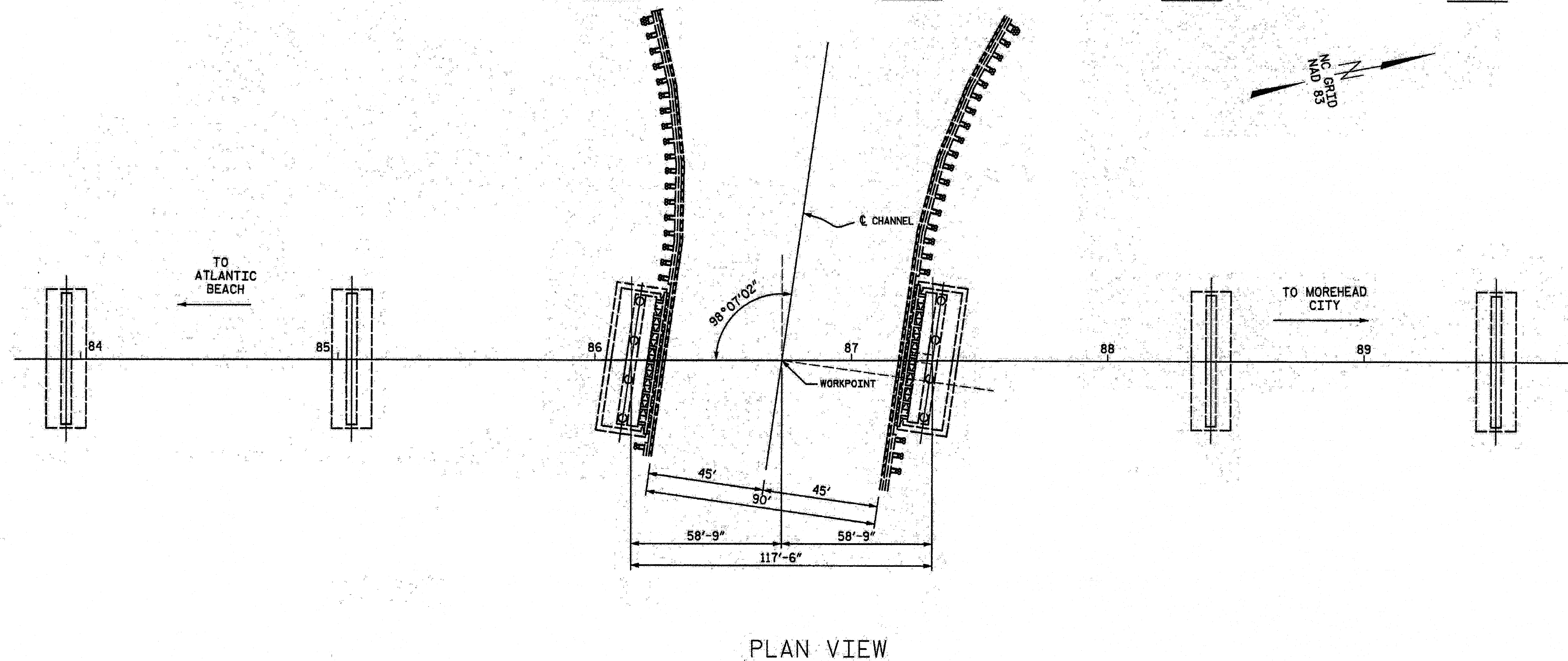
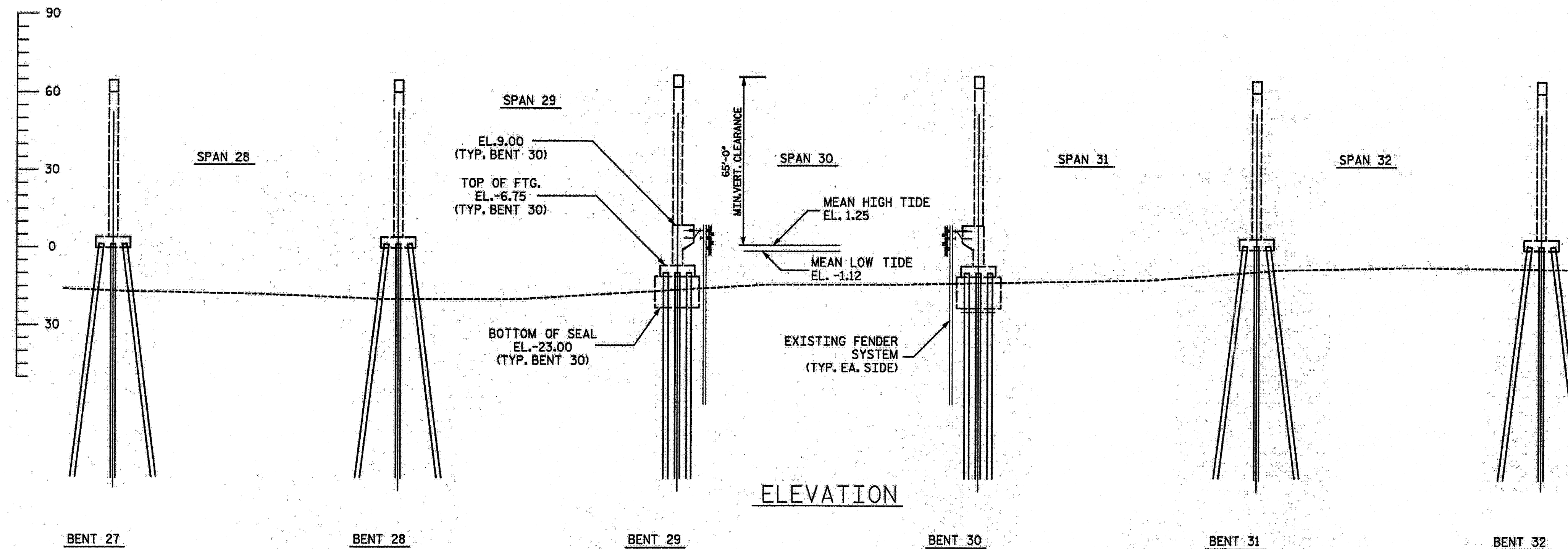
559 JONES FRANKLIN ROAD
SUITE 164
RALEIGH, N.C. 27606
Tel: 919 881 8077
Fax: 919 881 8107
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2006 STANDARD SPECIFICATIONS	
LETTING DATE: JUNE 16, 2011	EDWARD G. WETHERILL, PE PROJECT ENGINEER
NCDOT CONTACT:	MIKE SUMMERS BRIDGE MANAGEMENT PROJECT MANAGER



3/6/2011

FRED MEHFAR, PE
PROJECT DESIGN ENGINEER



MOREHEAD N.C., CARTERET CO.
BRIDGE NO. 68 OVER BOUGE SOUND

ELEVATION & PLAN VIEW



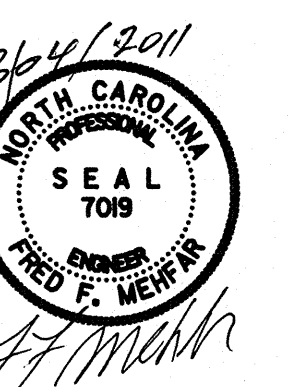
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

REVISIONS

NO.	DATE	DESCRIPTION	BY

DATE: 1/6/11
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 DRAWN: F MEHFAR
 CHECKED: JAD
 PROJ. NO.: 10104.02
 SHEET: 2 OF 9



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TREATED TIMBER					
ITEM	NO.	SIZE	SURFACE TO	LENGTH	TOTAL
VERTICAL TIMBER	10	10x12	S4S 9½" x 11½"	12'-0"	120
VERTICAL TIMBER	74	10x12	S4S 9½" x 11½"	5'-0"	370
RUB WALER	15	6x12	S4S 5½" x 11½"	16'-0"	240
HORIZONTAL WALER	10	12x12	S4S 11½" x 11½"	16'-0"	160
RAILS	8	4x4	S4S 3½" x 3½"	15'-0"	120
MID RAIL	8	2x4	S4S 1½" x 3½"	15'-0"	120
EDGE BEAM	16	6x6	S4S 5½" x 5½"	15'-0"	240
PLANK	24	3x10	S4S 2½" x 9½"	15'-0"	360
POST	28	4x4	S4S 3½" x 3½"	4'-2"	120
SUPPORT	28	6x6	S4S 5½" x 5½"	5'-0"	140
BRACE	28	2x4	S4S 1½" x 3½"	6'-5"	180
STRUT	28	4x6	S4S 3½" x 5½"	1'-8"	56

HARDWARE	NO.	UNIT WT. LBS./FT.	WEIGHT
⅞" x 28" GALV. DOME HEAD BOLTS W/NUTS & STD. WASHERS	50	5.10	255
⅞" x 26" GALV. DOME HEAD BOLTS W/NUTS & O.G. WASHERS	324	4.76	1542
⅞" x 20" GALV. DOME HEAD BOLTS W/NUTS & O.G. WASHERS	216	3.79	818
⅞" x 18" GALV. DOME HEAD BOLTS W/NUTS & STD. WASHERS	180	3.46	623
⅞" x 14" GALV. BOLTS W/NUTS & STD. WASHERS	250	2.78	695
½" x 8" GALV. BOLTS W/NUTS & STD. WASHERS	200	0.50	100
½" x 7½" GALV. BOLTS W/NUTS & O.G. WASHERS	80	0.44	35
½" x 6" GALV. BOLTS W/NUTS & STD. WASHERS	80	0.38	30
½" x 3½" GALV. BOLTS W/NUTS & O.G. WASHERS	40	0.27	11
½" x 12" GALV. LAG SCREW	80	0.59	47
½" x 10" GALV. LAG SCREW	20	0.50	10
½" x 8" GALV. LAG SCREW	50	0.41	21
¾" DIA. WIRE ROPES - 6x19 FIBER CORE	144	22.44	3231
⅜" x 4" STAPLE GALV.	80		45
⅜" WIRE ROPE CLIP, GALV. FF C-450	240		96
STRUCTURAL STEEL			
L ⅜" x 3" x 3" x 2" PLAIN ANGLES	864	1.22/EA.	1054
⅜" x 3½" x 11" GALV. P STRUT CONNECT	50	4.47	224
⅜" x 3" x 9" GALV. P BRACE CONNECT	25	3.23	81
½" x 1'-6" x 1'-6" GALV. P BRACKETS	10	20.4	21
⅜" x 1'-0" x 1'-0" PLAIN PILE COVER P	20	15.3	306
HP 14x73	10'	73	730
¾" GALV. STEEL CHAIN	20	6.5	130
PAINT - NCDOT SPEC.	50	GAL.	

MOREHEAD N.C., CARTERET CO.
BRIDGE NO. 68 OVER BOUGE SOUND

GENERAL NOTES & BILL OF MATERIALS

GENERAL NOTES

FOR U.S. COAST GUARD NOTIFICATION, SEE PROJECT SPECIAL PROVISION FOR "COORDINATION WITH THE U.S. COASR GUARD.
FOR NAVIGATIONAL LIGHTING, SEE SPECIAL PROVISIONS, COORDINATION WITH THE U.S. COAST GUARD".

FOR SECURING OF VESSELS, SEE THE PROJECT SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE THE PROJECT SPECIAL PROVISIONS.

FOR REMOVAL OF EXISTING FENDER SYSTEM, SEE THE PROJECT SPECIAL PROVISIONS.

~~FOR PILE DRIVING EQUIPMENT DATA SUBMITTAL, SEE THE PROJECT SPECIAL PROVISIONS FOR "SUBMITTAL OF WORKING DRAWINGS".~~

ALL THE REPLACEMENT MEMBERS SHALL BE NEW.

ALL THE BOLTS, WASHER, NUTS, AND ALL OTHER HARDWARE SHALL BE GALVANIZED & SHALL BE GRADE A-307.

GALVANIZING SHALL BE DONE IN ACCORDANCE WITH SECTION 1076 OF NCDOT STANDAED SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JULY 2006.

ALL O.G. WASHERS SHALL CONFIRM TO ASTM A47 CLASS 30.

ALL STRUCTURAL STEEL SHALL CONFIRM TO ASTM GRADE A-36. STRUCTURAL STEEL SHALL BE GALVANIZED.

ALL TREATED LUMBER SHALL CONFIRM TO SECTION 1082 OF THE STANDARD SPECIFICATIONS OR AS NOTED ON THE PLANS.

FOR WIRE ROPE FOR PILE CLUSTERS, 6x19 CLASS FIBER CORE GALV.

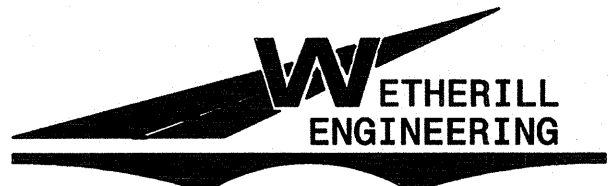
THE CONTRACTOR SHALL VISIT THE JOB SITE AND CHECK THE MATERIALS AND THE QUANTITY NEEDED TO COMPLETE ALL THE WORK IN ACCORDANCE WITH THE PLANS, PROJECT SPECIAL PROVISIONS, AND NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JULY 2006, AND AS DIRECTED BY THE ENGINEER.

ANY CHANGES TO THE LIMIT OF REPAIR OR REPLACEMENT OTHER THAN SHOWN ON THE PLANS MUST BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK TO BE DONE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULFILLING ALL THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JULY 2006, EXCEPT AS OTHERWISE SPECIFIED ON THE PLANS AND SPECIAL PROVISIONS.

THE CONTRACTOR RELOCATE THE CLEARANCE MARKERS AT BOTH ENDS OF THE FENDER SYSTEM DURING CONSTRUCTION OF CLUSTER PILES AND FENDER REPLACEMENT TO THE LOCATION DESIGNATED BY THE ENGINEER.

THE CONTRACTOR RELOCATE THE NAVIGATIONAL LIGHTINGS AS DEEMED NECESSARY DURING COURSE OF FENDER SYSTEM CONSTRUCTION TO THE LOCATION DESIGNATED BY THE ENGINEER & PROTECT ELECTRICAL LINES TO THE LIGHTINGS FROM ANY DAMAGES.



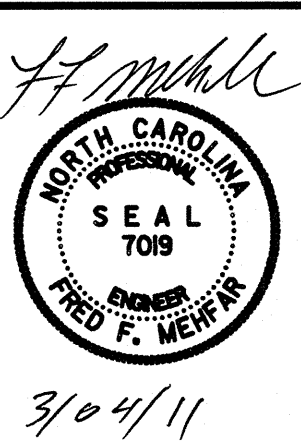
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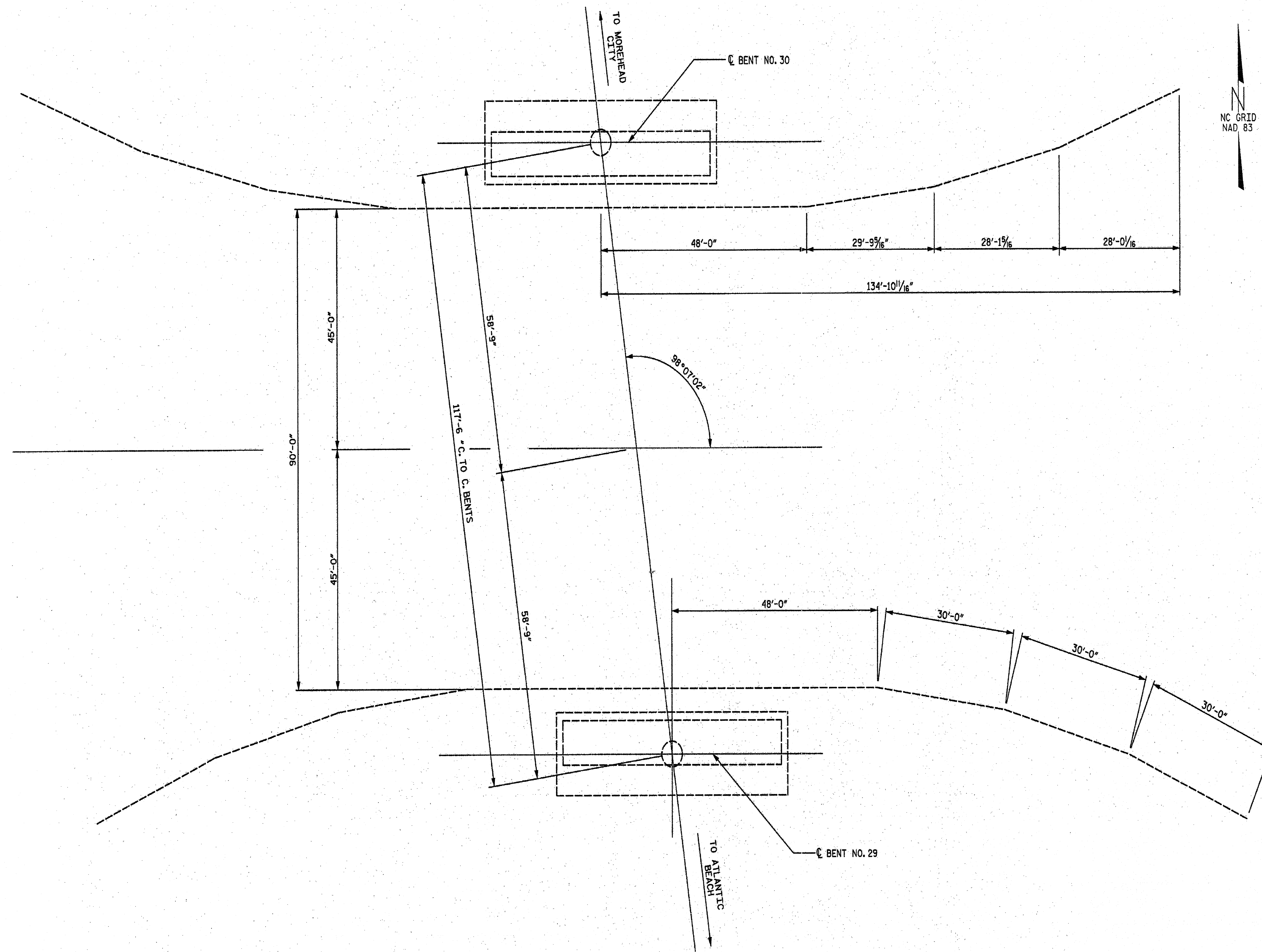
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PROJ. NO.: 10104.02
SHEET: 3 OF 9



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FENDER SYSTEM LAYOUT PLAN

MOREHEAD N.C., CARTERET CO.
BRIDGE NO. 68 OVER BOUGE SOUND

FENDER SYSTEM LAYOUT



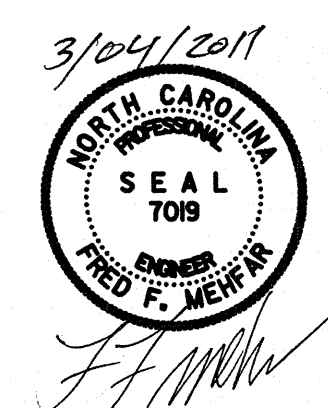
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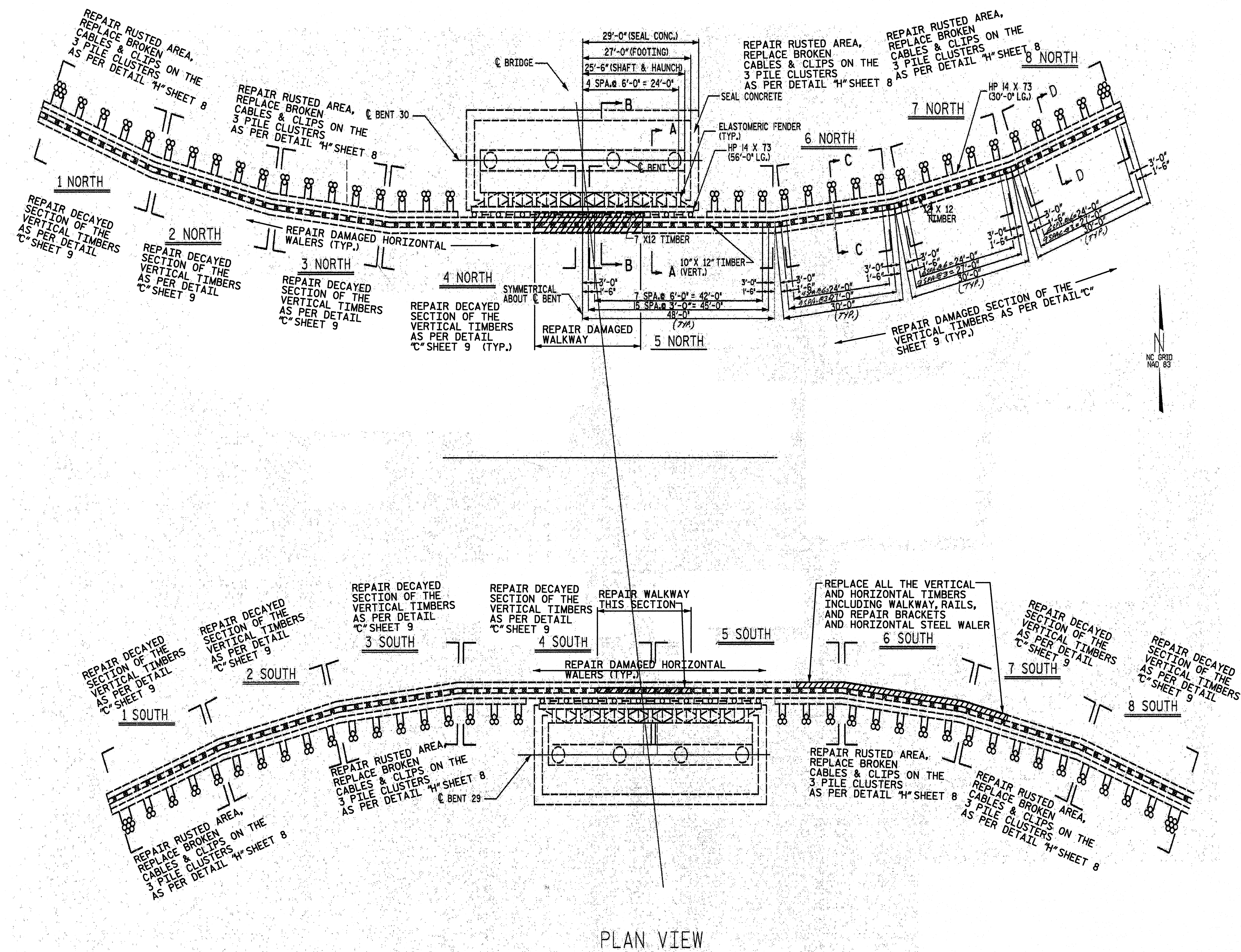
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MOREHEAD N.C., CARTERET CO.
BRIDGE NO. 68 OVER BOUGE SOUND

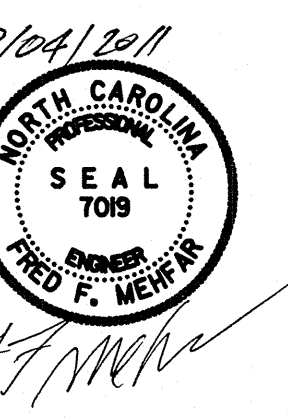
BRACE PILE CLUSTERS & SECTIONS LAYOUT



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				SHEET: 5 OF 9

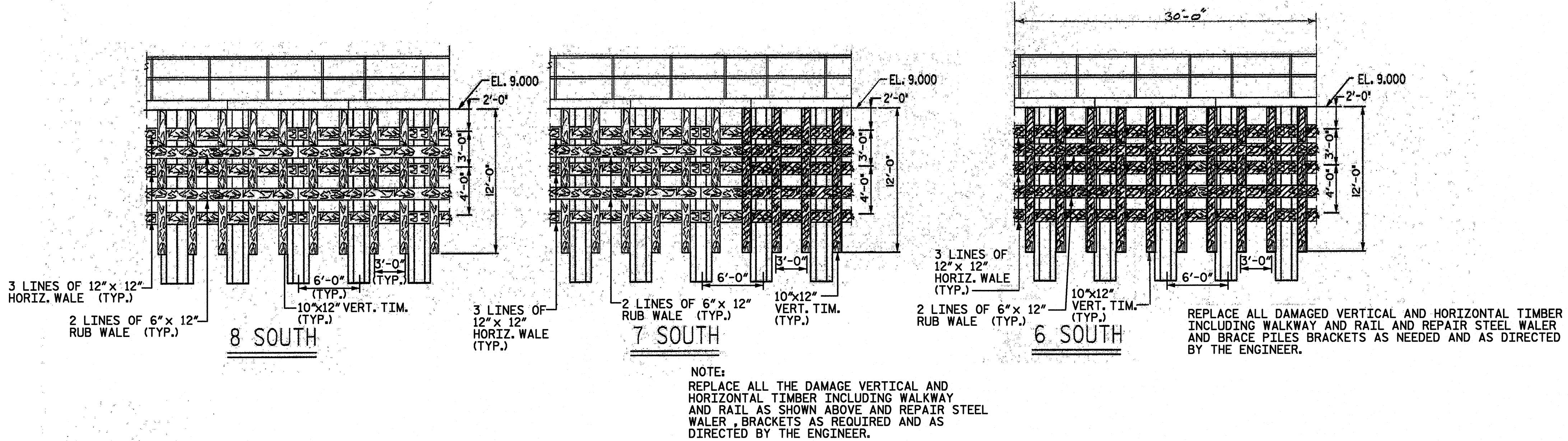
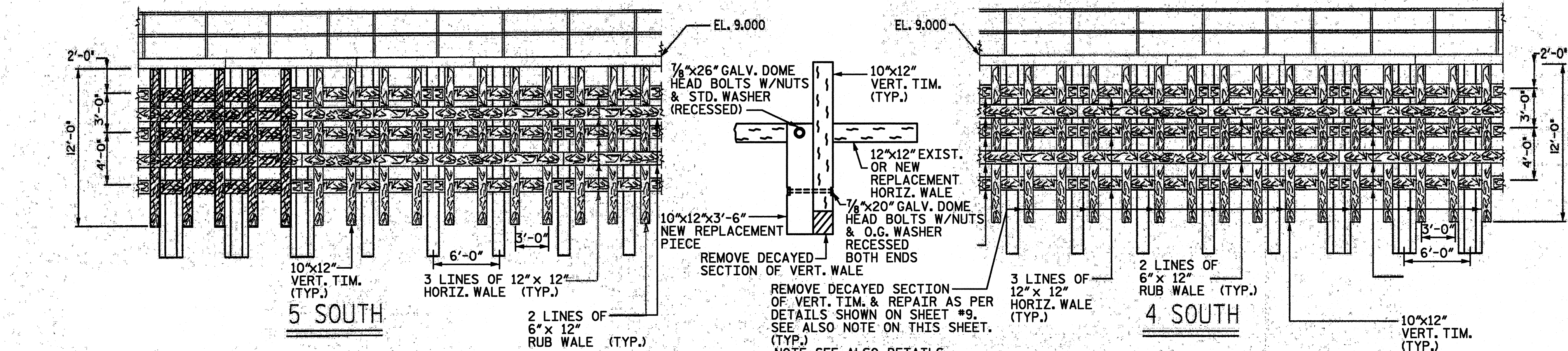
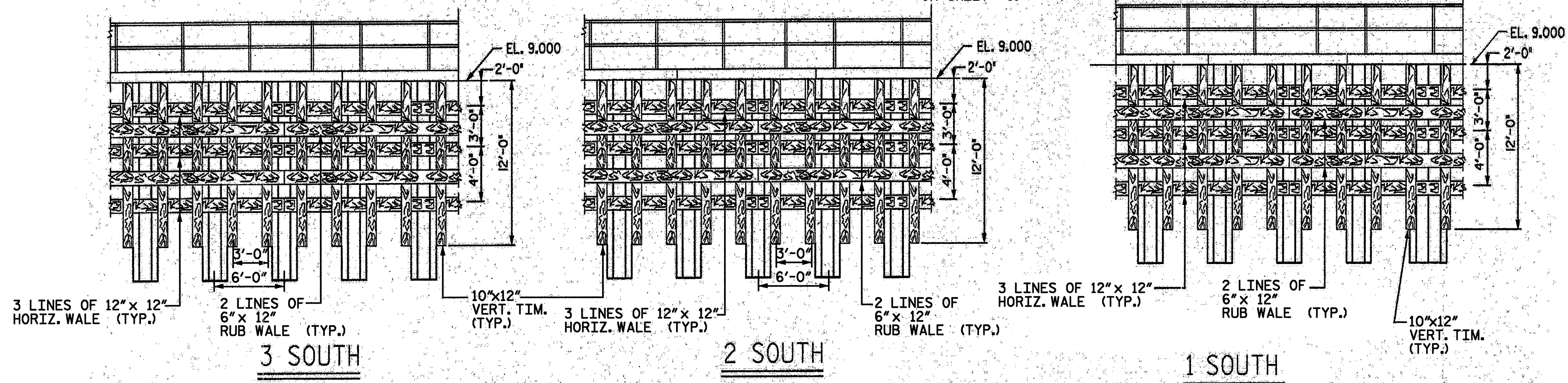


3/04/2011

NORTH CAROLINA
PROFESSIONAL
SEAL
7019
ENGINEER
FRED F. MEHFAR

F. F. Mehfar

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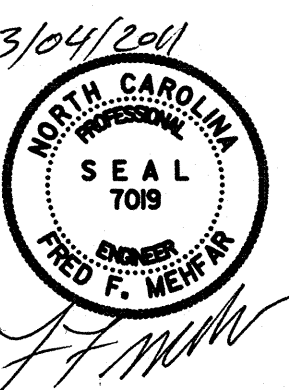
MOREHEAD N.C., CARTERET CO.
BRIDGE NO. 68 OVER BOUGE SOUND
TIMBER FACINGS - 1 SOUTH THRU 8 SOUTH



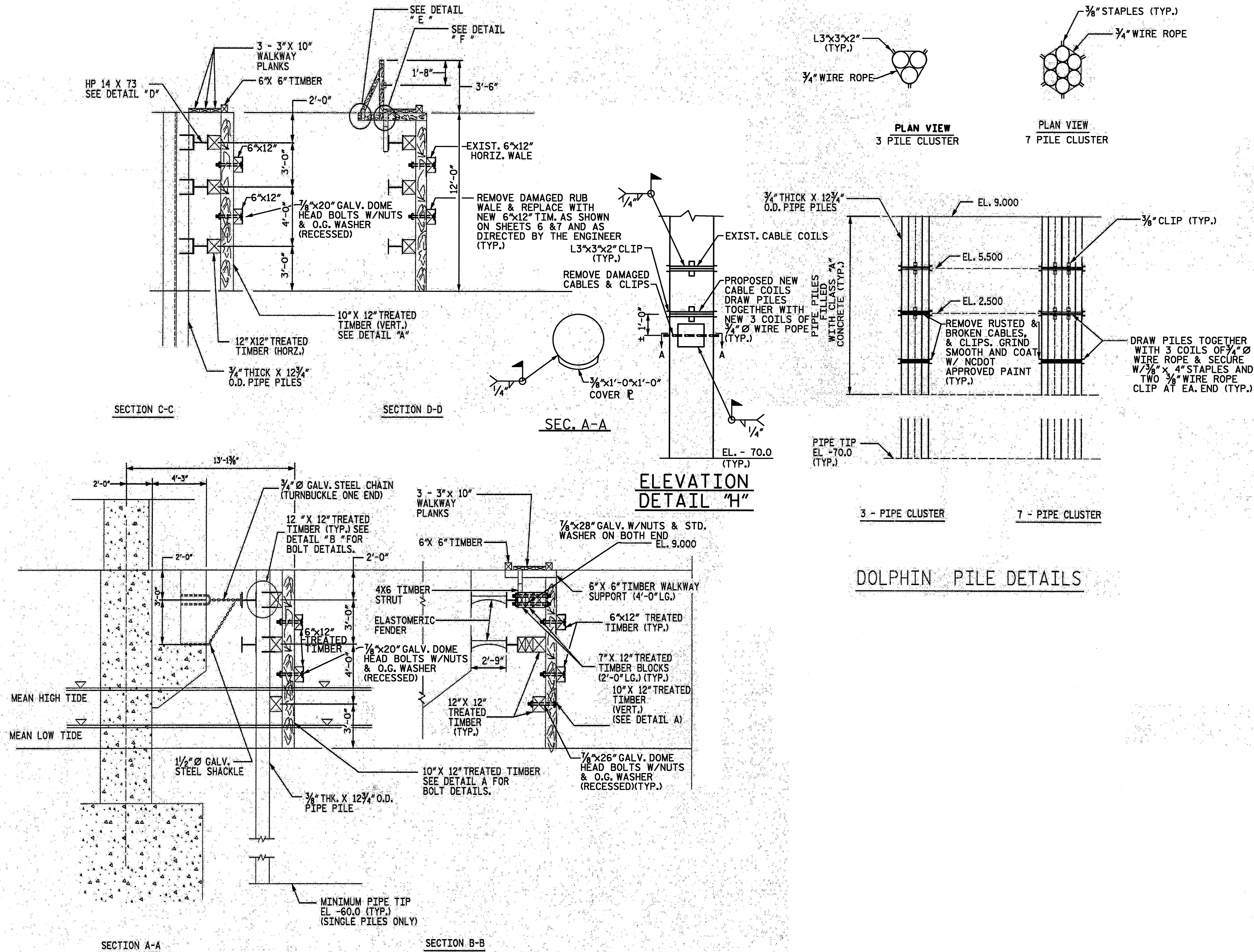
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				SHEET:	7 OF 9



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MOREHEAD N.C., CARTERET CO.
BRIDGE NO. 68 OVER BOUGE SOUND
CROSS SECTIONS & REPAIR DETAILS



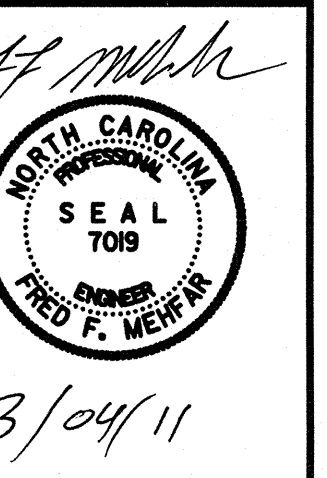
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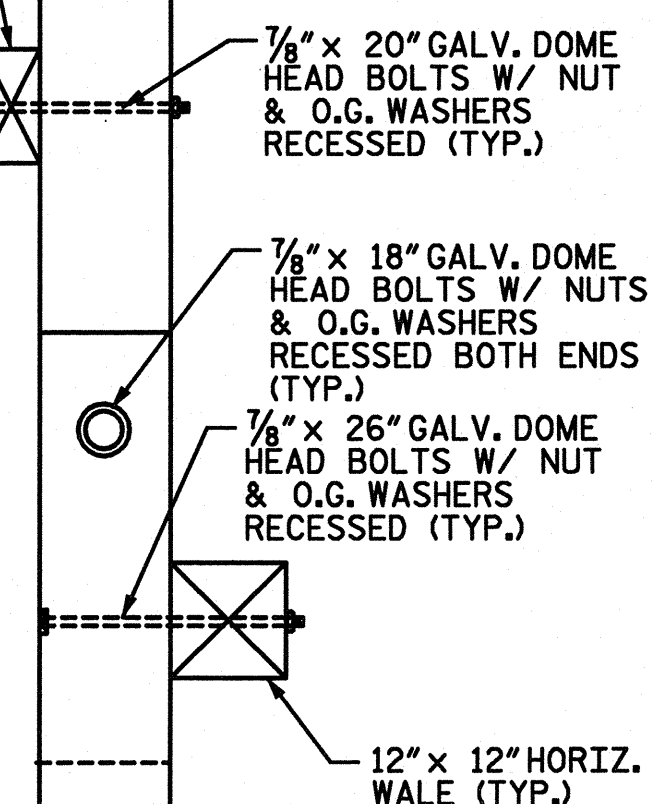
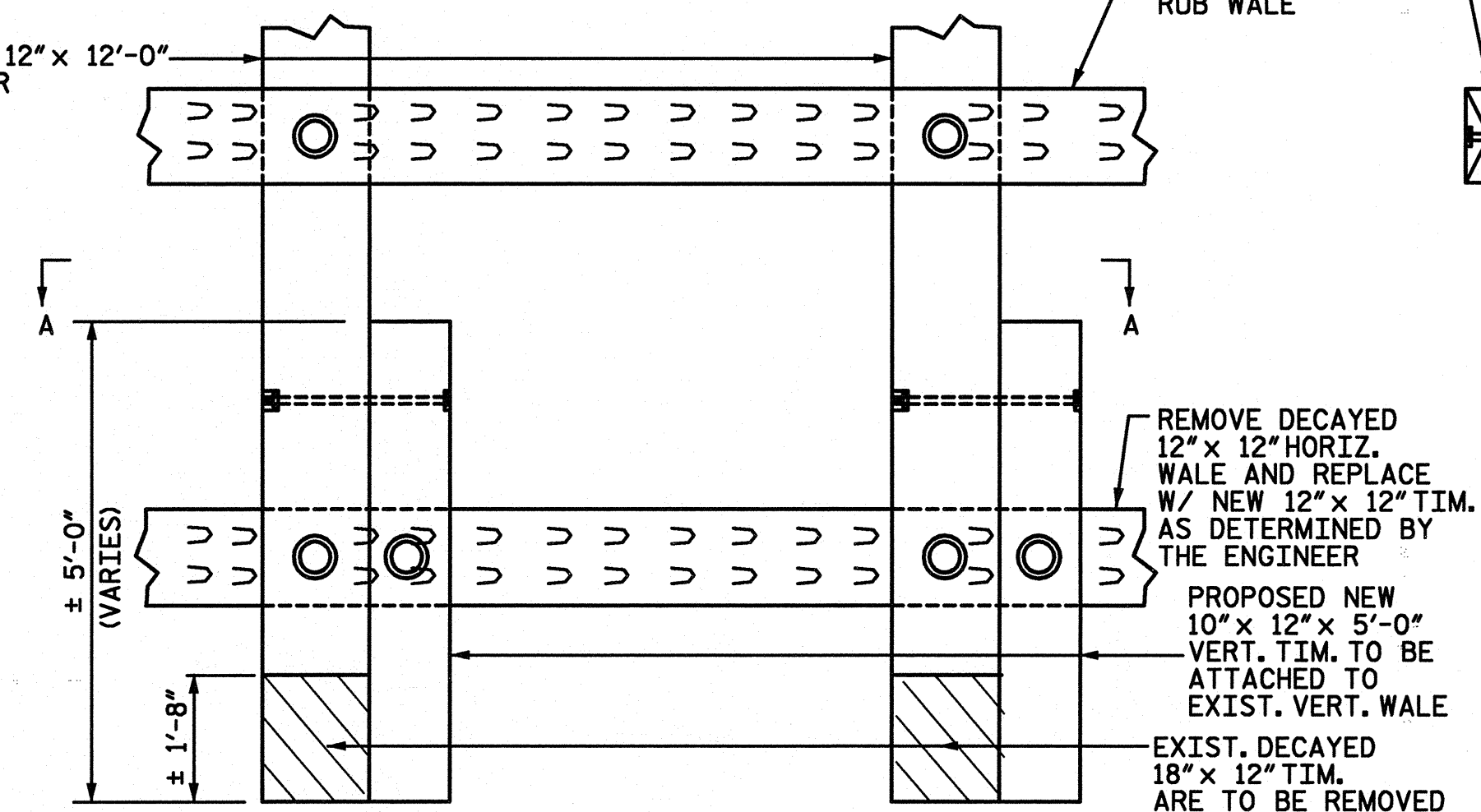
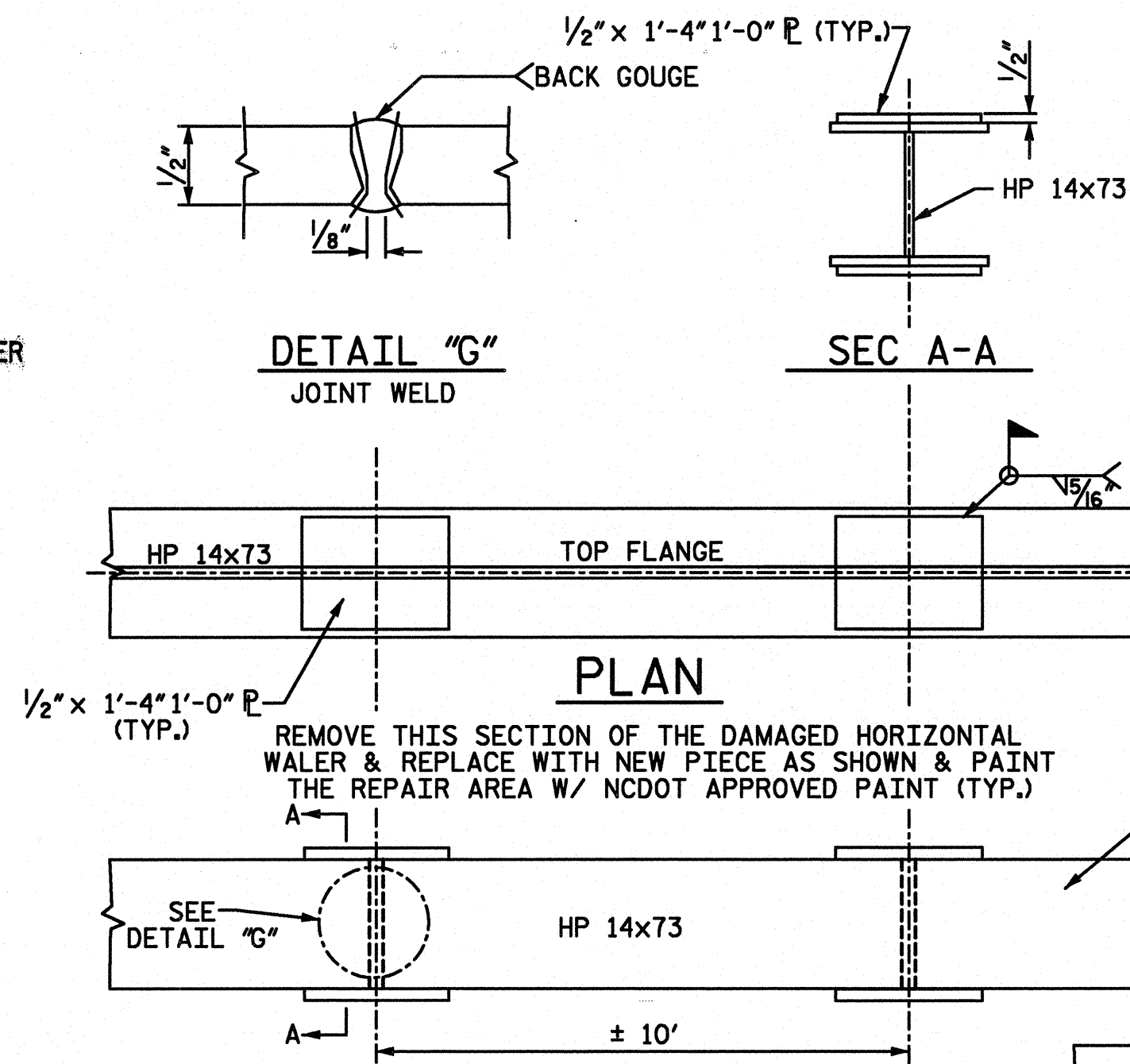
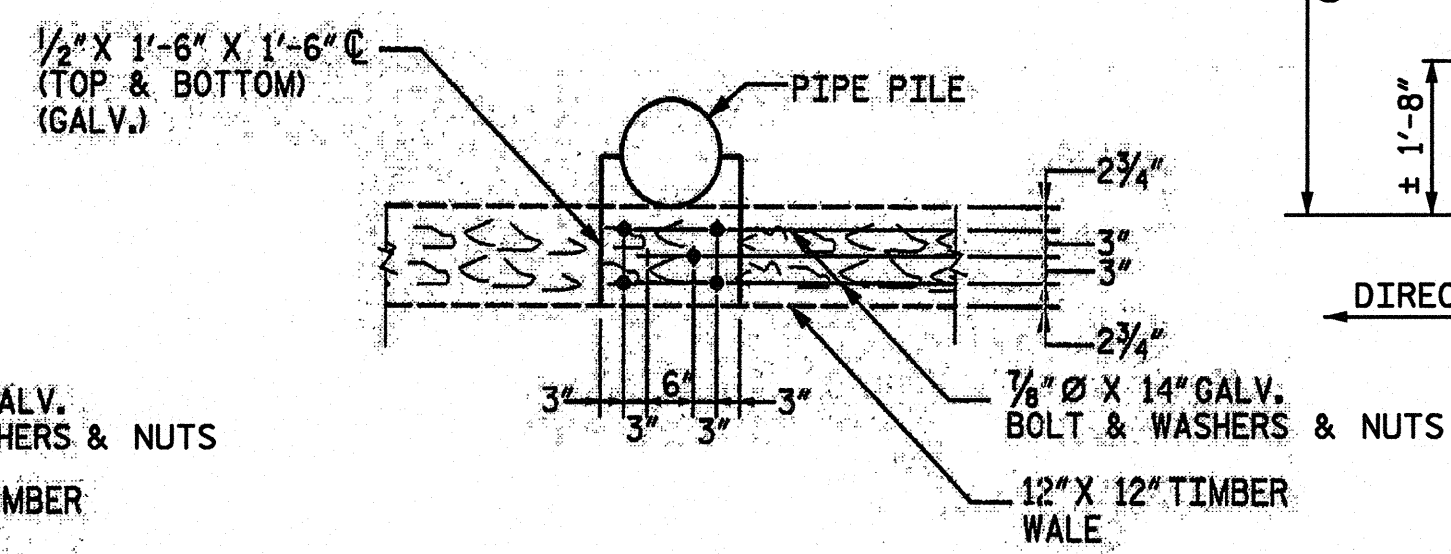
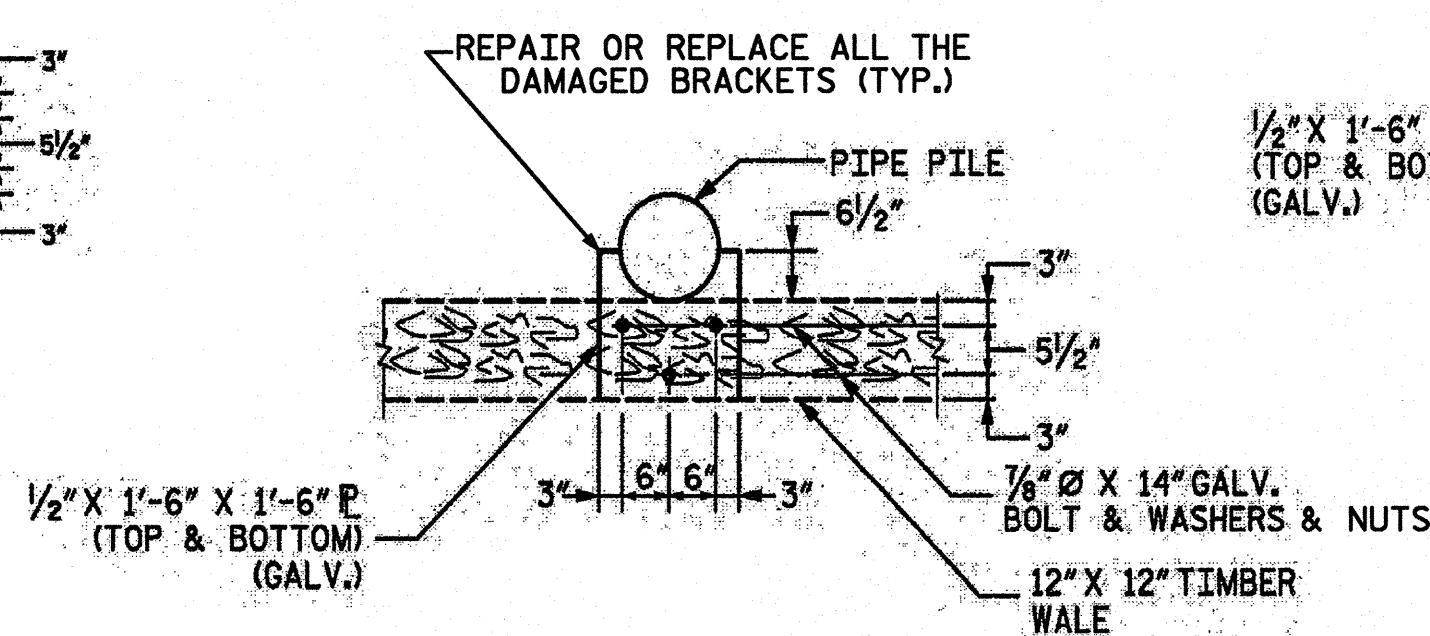
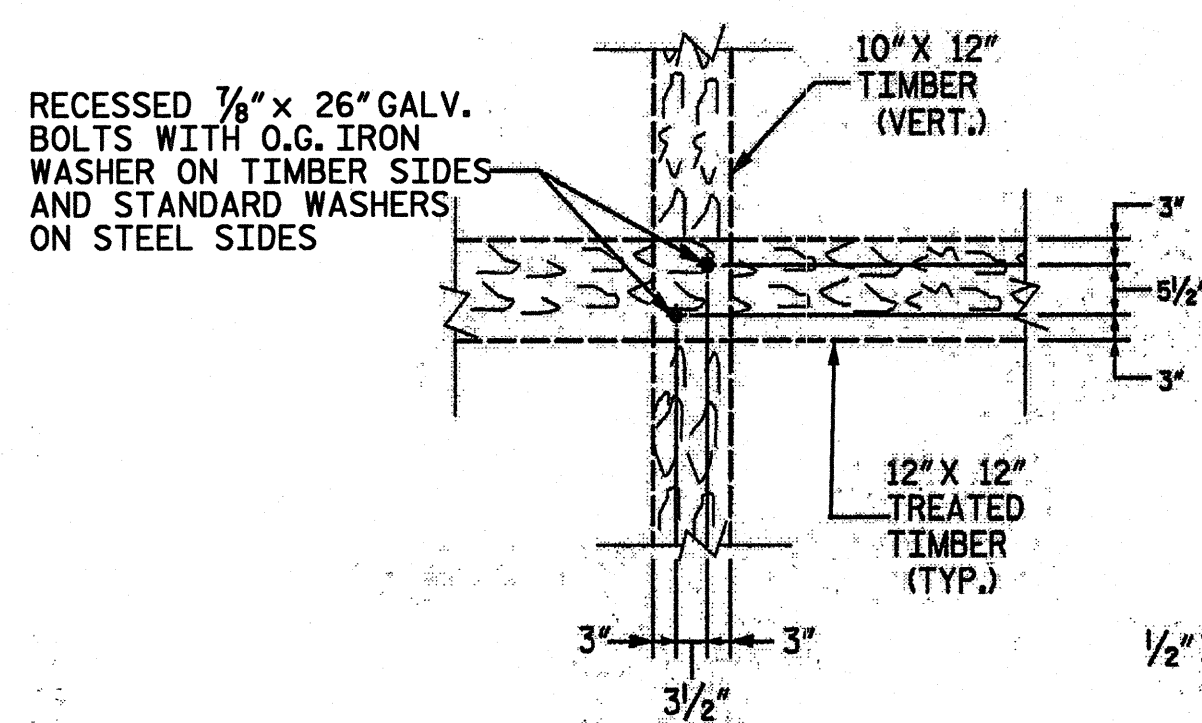
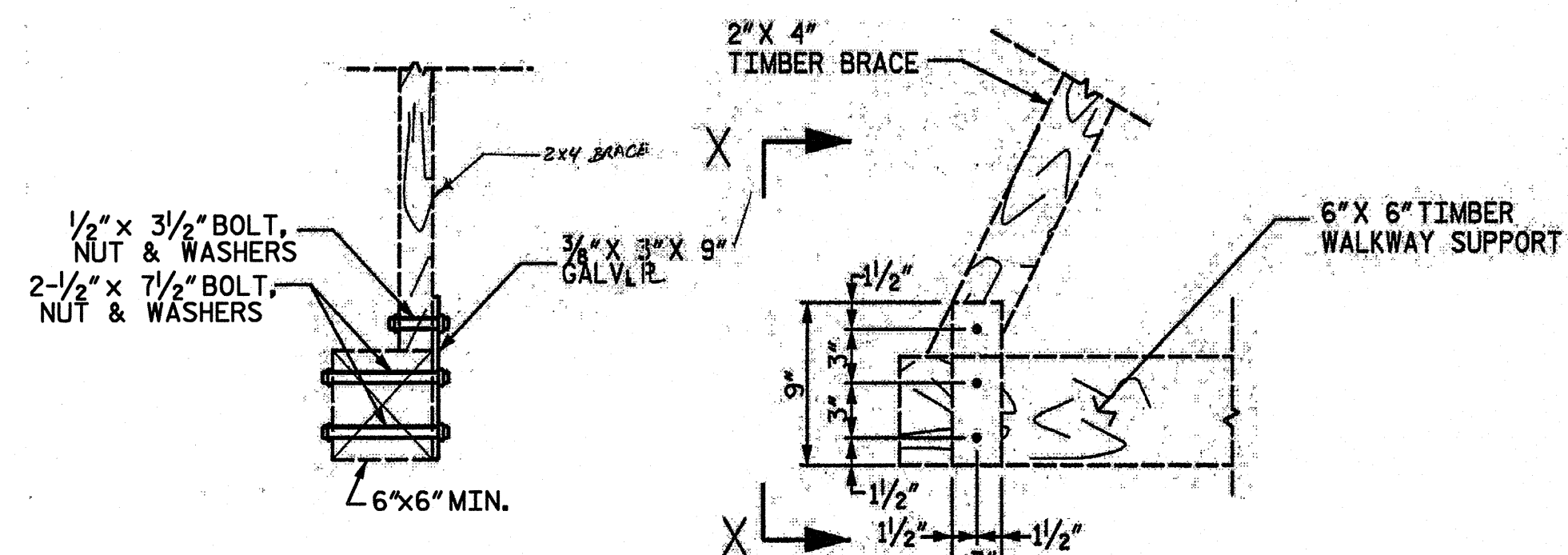
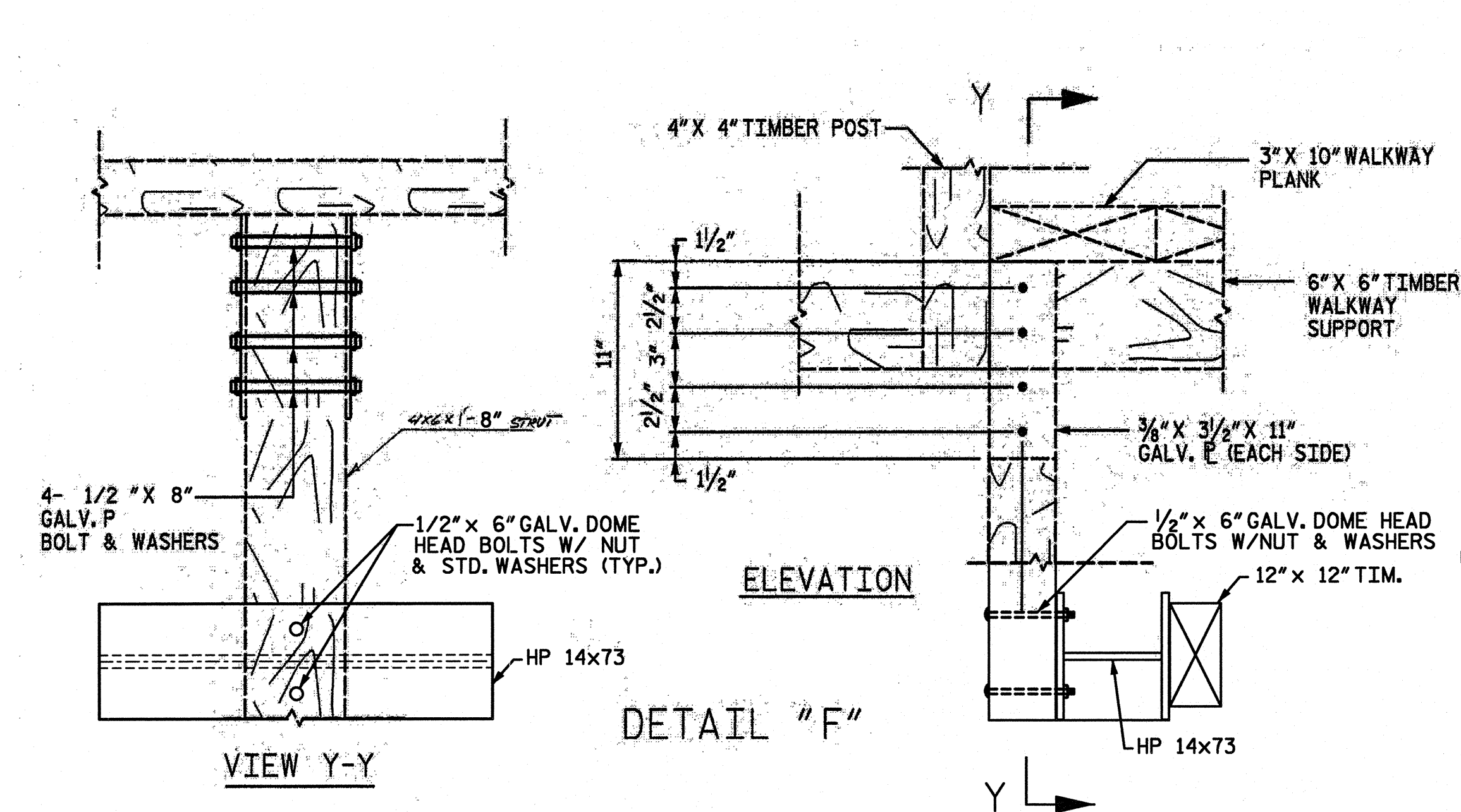
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				CHECKED: JAD
				PROJ. NO.: 1010402
				SHEET: 9 OF 9

