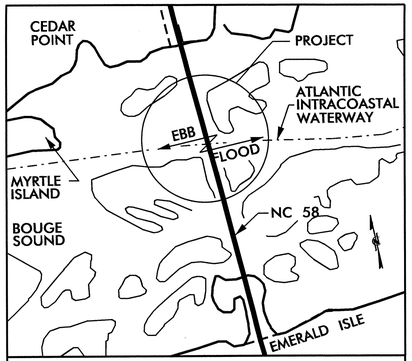
TIP #.: BK-5128

CONTRACT: C202873



VICINITY MAP

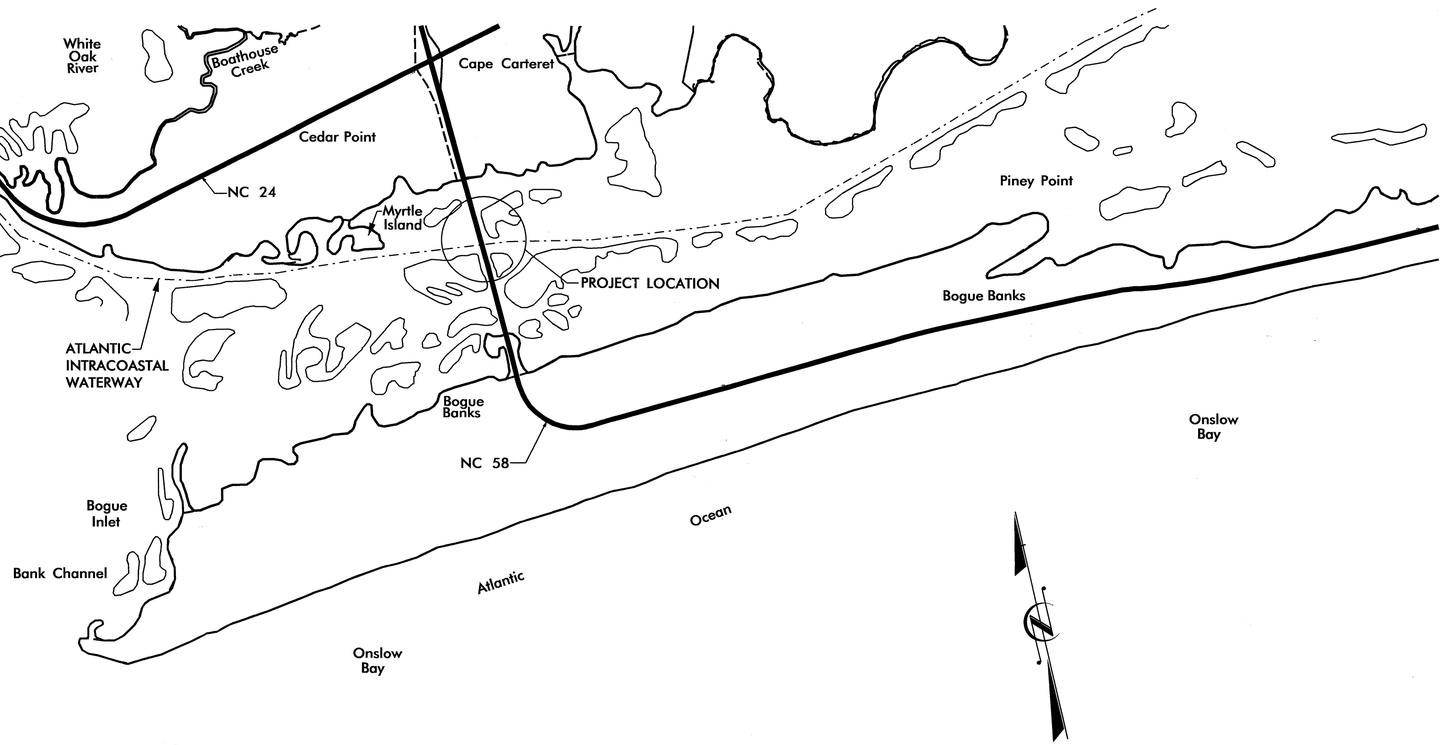
STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

CARTERET COUNTY

LOCATION: BRIDGE NO. 6 OVER ATLANTIC INTRACOASTAL WATERWAY (AIWW) BETWEEN NC 24 AND EMERALD ISLE

TYPE OF WORK: REMOVAL AND REPLACEMENT OF FENDER SYSTEM



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BK-5128		

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
47064.1.1	BRSTP-0058(13)	PE
47064.3.1	BRSTP-0058(13)	CONST.

STRUCTURE

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Prepared in the Office of:

DIVISION OF HIGHWAYS

2006 STANDARD SPECIFICATIONS

LETTING DATE:

January 17, 2012

L.I. BROOKS, P.E.
PROJECT ENGINEER

T.G. PAYNE, P.E.
PROJECT DESIGN ENGINEER

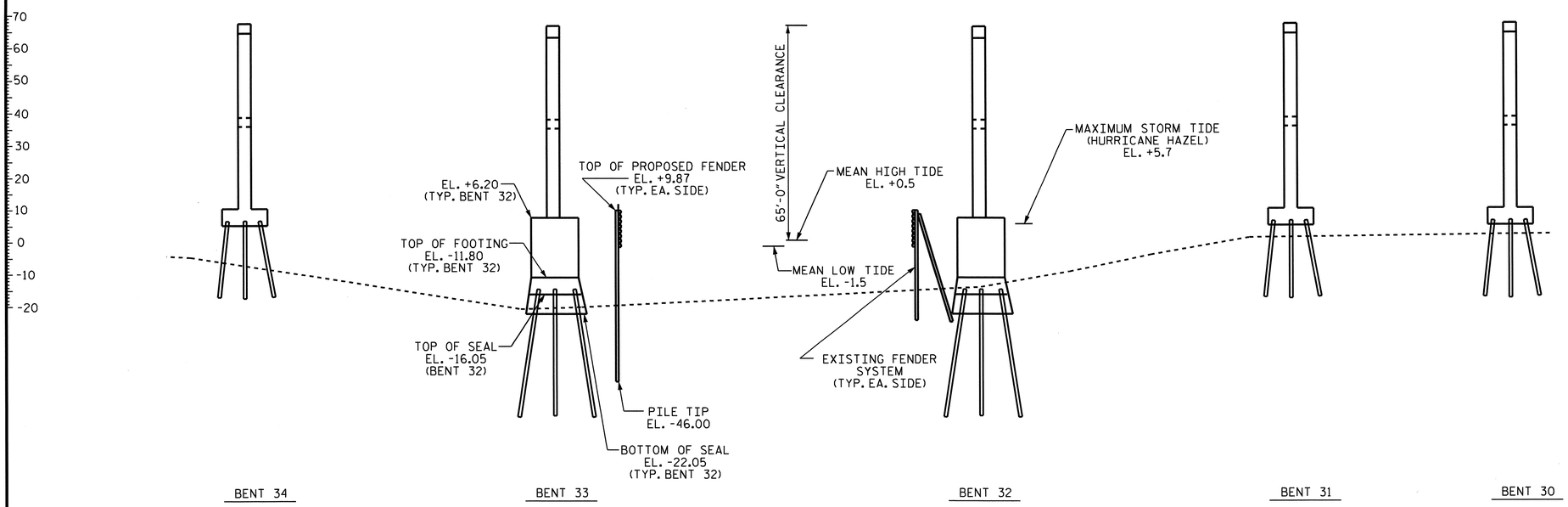
STRUCTURE DESIGN UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE DESIGN ENGINEER

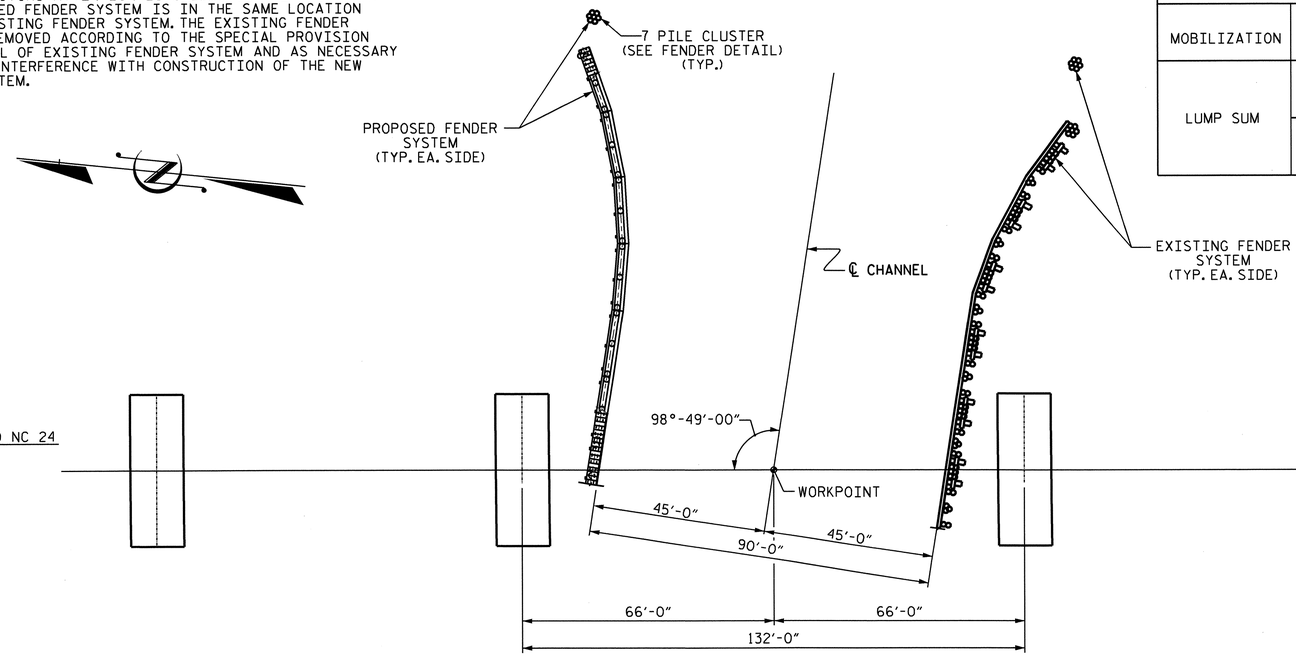
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*



ELEVATION

THE CONTRACTORS ATTENTION IS CALLED TO THE FACT THAT THE PROPOSED FENDER SYSTEM IS IN THE SAME LOCATION AS THE EXISTING FENDER SYSTEM. THE EXISTING FENDER SHALL BE REMOVED ACCORDING TO THE SPECIAL PROVISION FOR REMOVAL OF EXISTING FENDER SYSTEM AND AS NECESSARY TO AVOID INTERFERENCE WITH CONSTRUCTION OF THE NEW FENDER SYSTEM.



HALF PLAN OF FENDER SYSTEM

(SYMMETRICAL ABOUT CENTERLINE)

TOTAL BILL OF MATERIAL

MOBILIZATION	PP 14 X 0.5 STEEL PILES		PP 16 X 0.5 STEEL PILES		PLASTIC AND COMPOSITE LUMBER	REMOVAL OF EXISTING FENDER SYSTEM
	NO.	LIN. FT.	NO.	LIN. FT.		
LUMP SUM	28	1568	104	5656	LUMP SUM	LUMP SUM

NOTES:

FOR U.S. COAST GUARD NOTIFICATION, SEE SPECIAL PROVISION FOR "COORDINATION WITH THE U.S. COAST GUARD".

FOR PLASTIC LUMBER AND COMPOSITE LUMBER WALES, SEE SPECIAL PROVISION FOR "PLASTIC AND COMPOSITE LUMBER". WALES SHALL BE CONTINUOUS AND SPLICED ONLY AT LOCATIONS SHOWN ON THE PLANS.

FOR COORDINATION WITH THE U.S. COAST GUARD, SEE SPECIAL PROVISIONS.

FOR NAVIGATIONAL LIGHTING AND CLEARANCE MARKER, SEE SPECIAL PROVISION FOR "COORDINATION WITH THE U.S. COAST GUARD".

FOR SECURING OF VESSELS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR REMOVAL OF EXISTING FENDER SYSTEM, SEE SPECIAL PROVISIONS.

FOR PILE DRIVING EQUIPMENT DATA SUBMITTAL, SEE SPECIAL PROVISION FOR "SUBMITTAL OF WORKING DRAWINGS".

THE STAINLESS STEEL BOLTS SHALL BE IN ACCORDANCE WITH ASTM F593 TYPE 316. FURNISH STAINLESS STEEL THREADED BARS IN ACCORDANCE WITH ASTM A193 GRADE B8M. FURNISH STAINLESS STEEL NUTS IN ACCORDANCE WITH ASTM F594 TYPE 316. FURNISH STAINLESS STEEL SCREWS IN ACCORDANCE WITH ASTM F593 TYPE 305. FURNISH STAINLESS STEEL WASHERS UNDER HEADS AND NUTS, COMPATIBLE WITH BOLTS, THREADED RODS, AND NUTS. TORQUE NUTS ON 1" DIAMETER BOLTS AND THREADED RODS TO 150 LB-FT. KEEP THREADS ON BOLTS, THREADED BARS, AND NUTS FREE FROM DIRT, COARSE GRIME AND SAND TO PREVENT GALLING AND SEIZING DURING TIGHTENING.

THE SPLICE PLATES SHALL BE IN ACCORDANCE WITH ASTM A420 TYPE 316.

FOR WIRE ROPE FOR FENDER PILE CLUSTER, SEE SPECIAL PROVISIONS.

THE EXISTING FENDER SYSTEM INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING PILE FENDER SYSTEM SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

THE FENDER SYSTEM SERVES PRIMARILY AS A NAVIGATION AID TO VESSEL TRAFFIC BY DELINEATING THE SHIPPING CHANNEL BENEATH THE BRIDGE. IT IS DESIGNED TO BE ROBUST ENOUGH TO SURVIVE A MULTITUDE OF BUMPS AND SCRAPES FROM BARGE TRAFFIC, AND TO ABSORB KINETIC ENERGY WHILE REDIRECTING AN ERRANT BARGE OR OTHER VESSEL. THE FENDER SYSTEM IS NOT DESIGNED FOR FULL VESSEL IMPACT.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ANY UTILITIES THAT MAY BE AT THE PROJECT SITE AND TAKING APPROPRIATE MEASURES TO AVOID IMPACTS TO THOSE UTILITIES. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.

THERMAL CUTTING OF HOLES IN PILES PERMANENTLY INCORPORATED INTO THE PROJECT WILL NOT BE ALLOWED.

NORTH CAROLINA PROFESSIONAL SEAL 20211 ENGINEER THOMAS C. PAYNE
12/7/11

PROJECT NO. BK-5128

CARTERET COUNTY

SHEET 1 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FENDER SYSTEM FOR BRIDGE OVER AIWW ON NC 58

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			6

DRAWN BY : J.D. HAWK DATE : 10/20/08
CHECKED BY : DRC/T.C. PAYNE DATE : 9/12/11

07-DEC-2011 11:40
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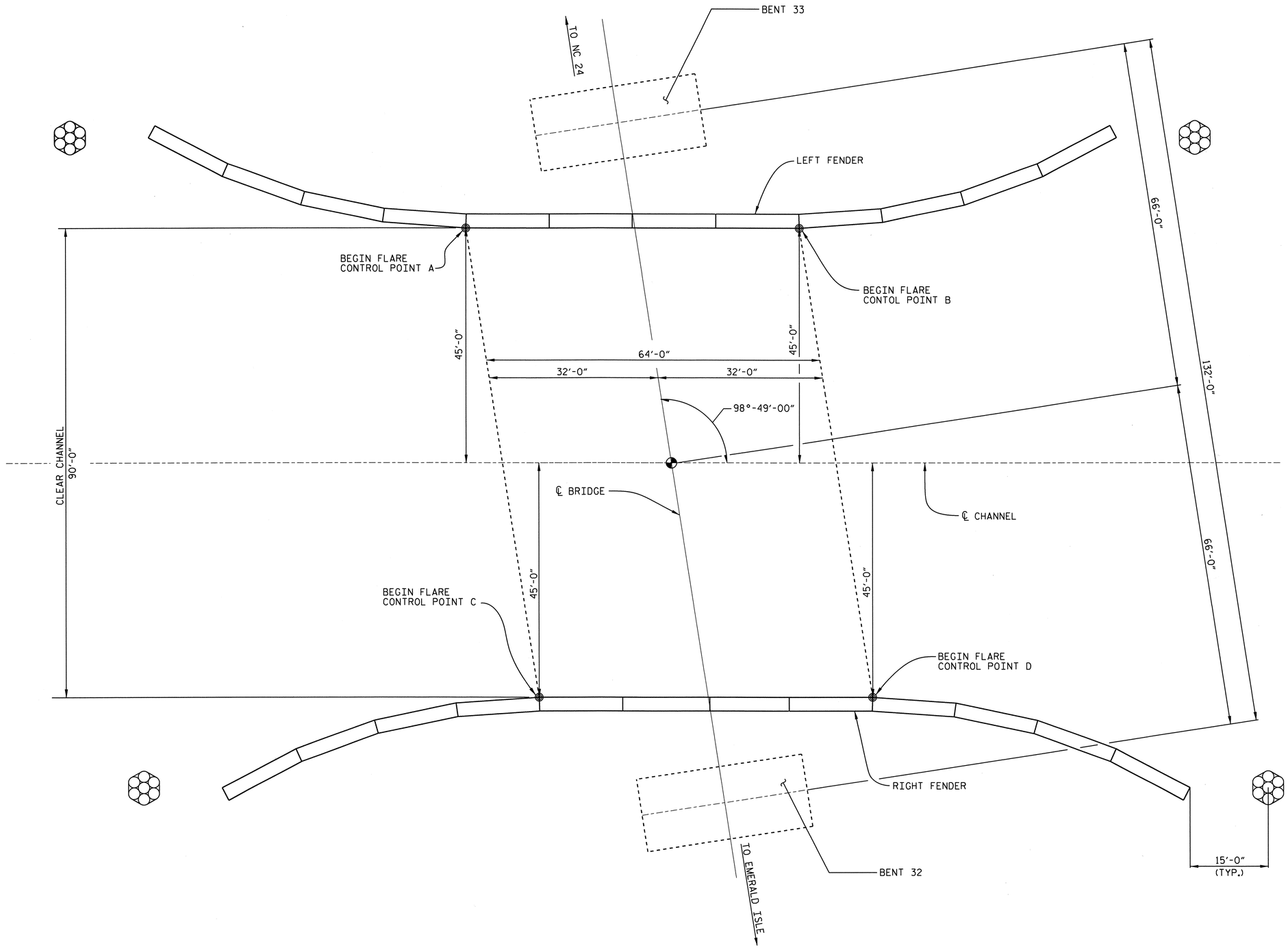
kpurohit



FENDER SYSTEM LAYOUT

PROJECT NO. BK-5128

CARTERET COUNTY

SHEET 2 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FENDER SYSTEM FOR BRIDGE OVER AIWW ON NC 58

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			6

NORTH CAROLINA PROFESSIONAL SEAL 20211 ENGINEER THOMAS G. PAYNE
9/29/11

DRAWN BY : J.D. HAWK DATE : 10/20/08
CHECKED BY DRC/T.G. PAYNE DATE : 9/12/11

28-SEP-2011 13:32
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pervin

NOTES:

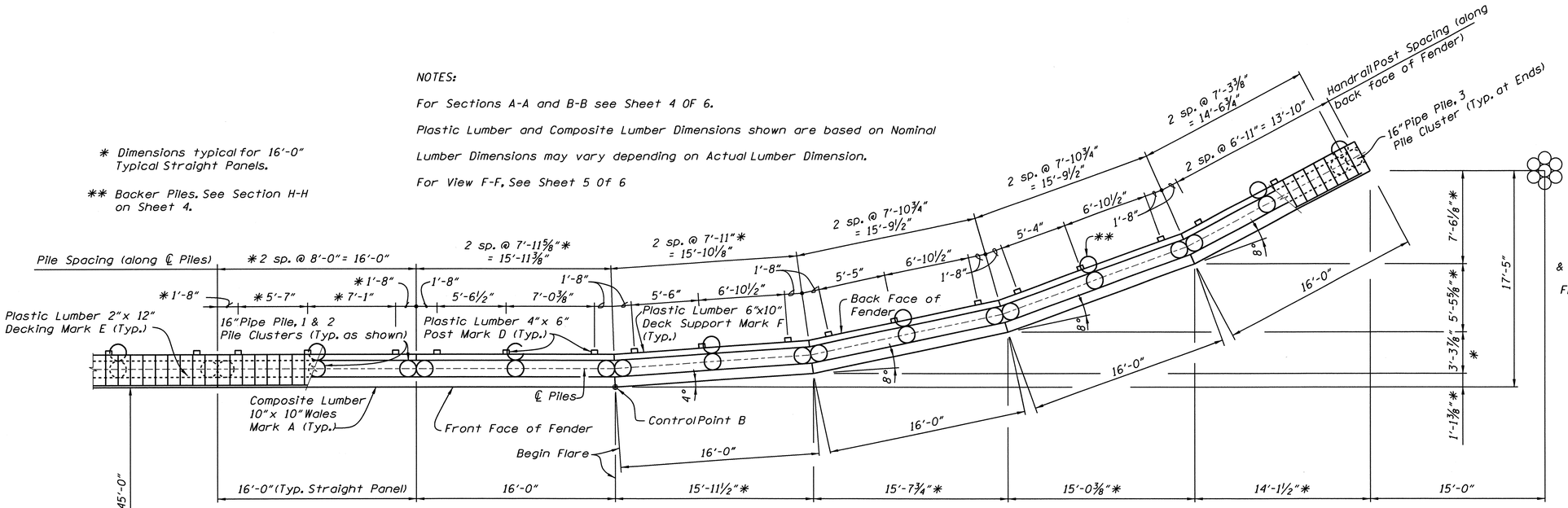
For Sections A-A and B-B see Sheet 4 OF 6.

Plastic Lumber and Composite Lumber Dimensions shown are based on Nominal Lumber Dimensions may vary depending on Actual Lumber Dimension.

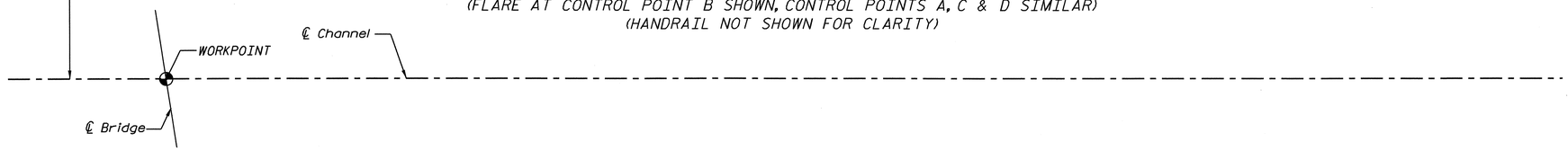
For View F-F, See Sheet 5 Of 6

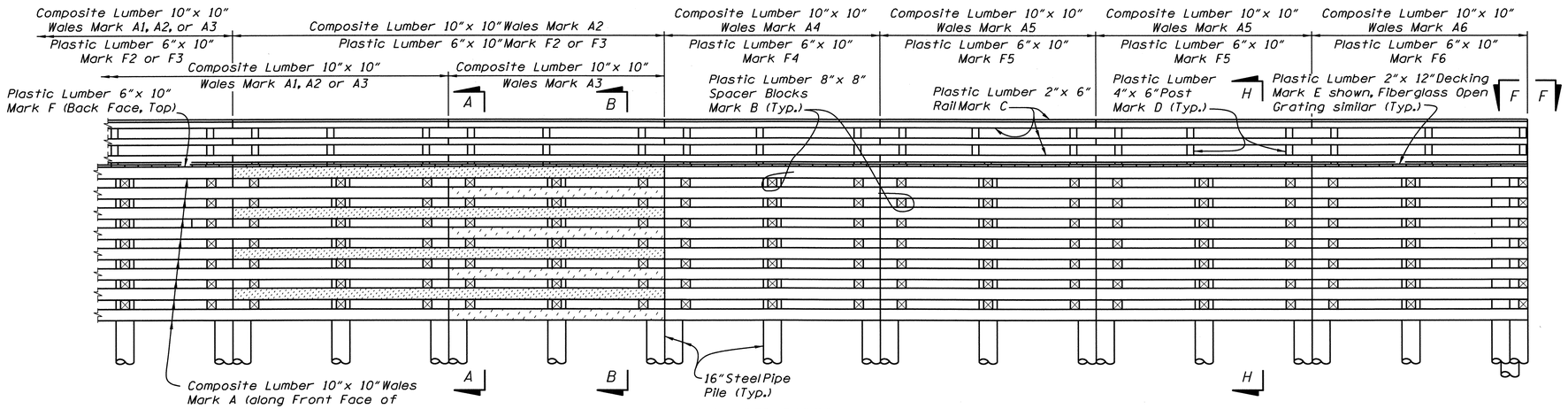
* Dimensions typical for 16'-0" Typical Straight Panels.

** Backer Piles. See Section H-H on Sheet 4.

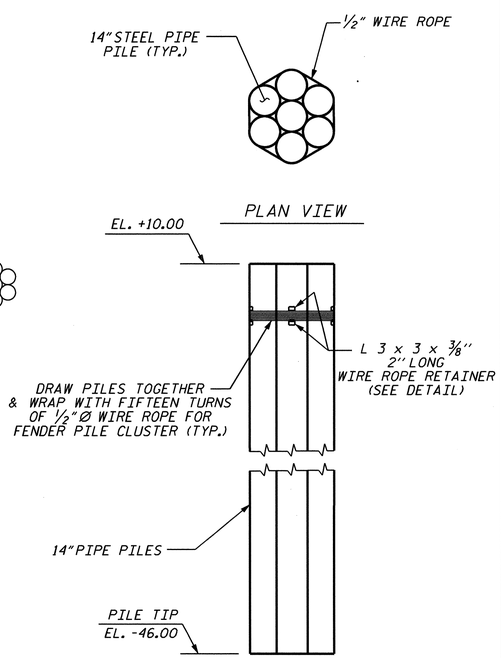


PARTIAL PLAN VIEW (TYPICAL FLARE)
(FLARE AT CONTROL POINT B SHOWN, CONTROL POINTS A, C & D SIMILAR)
(HANDRAIL NOT SHOWN FOR CLARITY)





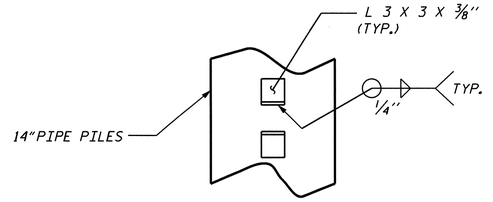
EXPANDED PARTIAL ELEVATION VIEW



VERTICAL 7-PILE CLUSTER

DOLPHIN PILE DETAILS

NOTE: IN THE 7-PILE CLUSTER (DOLPHINS), PILES ARE TO BE WRAPPED WITH FIFTEEN TURNS OF ½'' DIA. WIRE ROPE FOR FENDER PILE SYSTEM. THE WIRE ROPE FOR FENDER PILE SYSTEM SHALL BE SECURED WITH L 3 X 3 X 3/8'' RETAINING ANGLES AND TWO CABLE CLAMPS. CABLE CLAMPS TO BE STAINLESS STEEL AND INCLUDED AS HARDWARE. RETAINING ANGLES TO BE PAINTED WITH ZINC RICH PAINT OR AS APPROVED BY ENGINEER. ALL PILES TO BE DRIVEN VERTICALLY.



WIRE ROPE RETAINER DETAIL
ROPE NOT SHOWN FOR CLARITY
TYPICAL EACH PILE

PROJECT NO. BK-5128

CARTERET COUNTY

SHEET 3 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FENDER SYSTEM FOR BRIDGE OVER AIWW ON NC 58

NORTH CAROLINA PROFESSIONAL SEAL 20211 ENGINEER THOMAS G. PAYNE
9/29/11

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			6

DRAWN BY : J.D. HAWK DATE : 10/20/08
CHECKED BY DRC/T.G. PAYNE DATE : 9/12/11

28-SEP-2011 13:37
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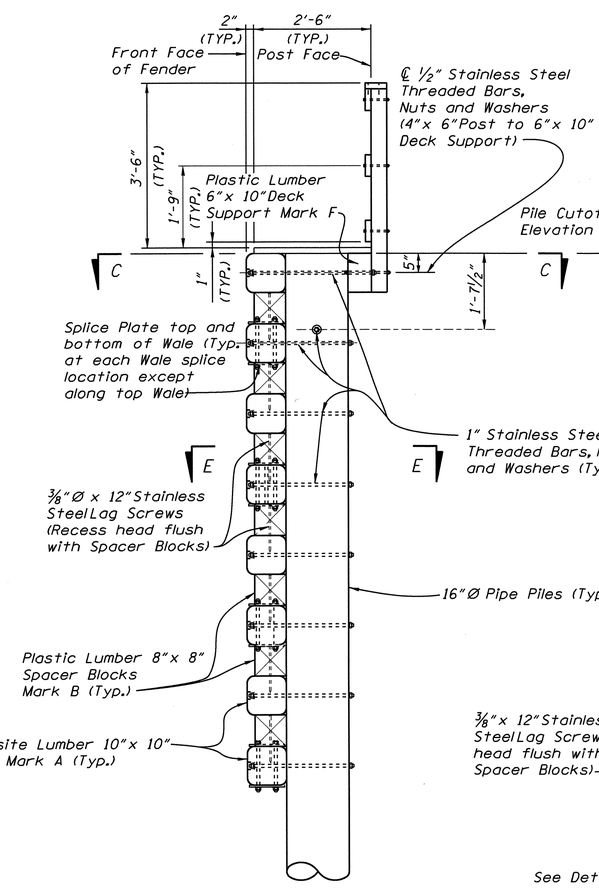
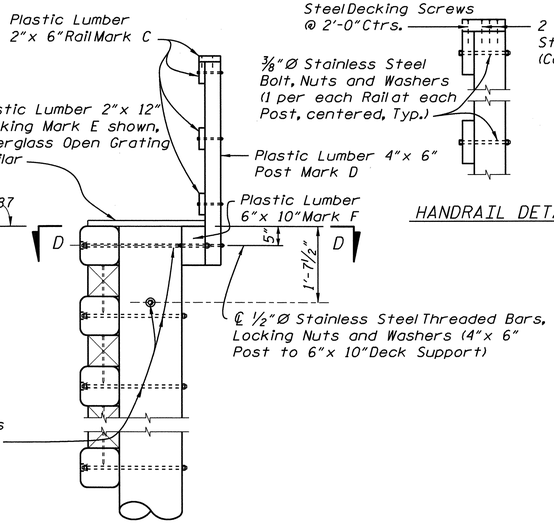
pervin

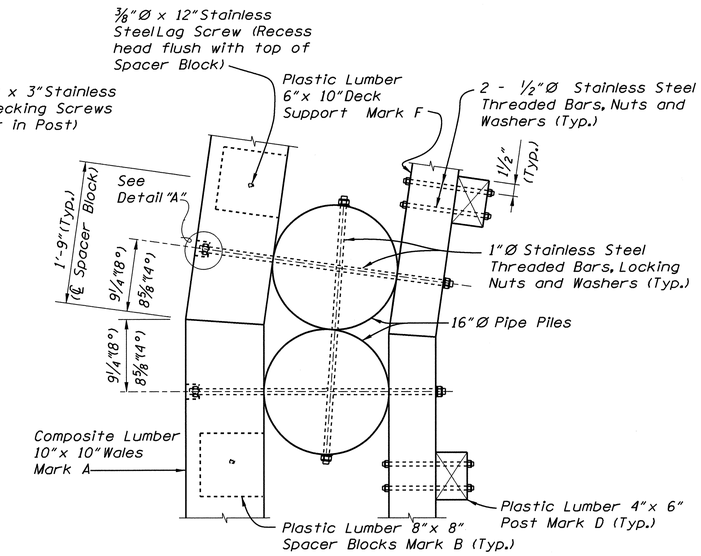


SECTION A-A

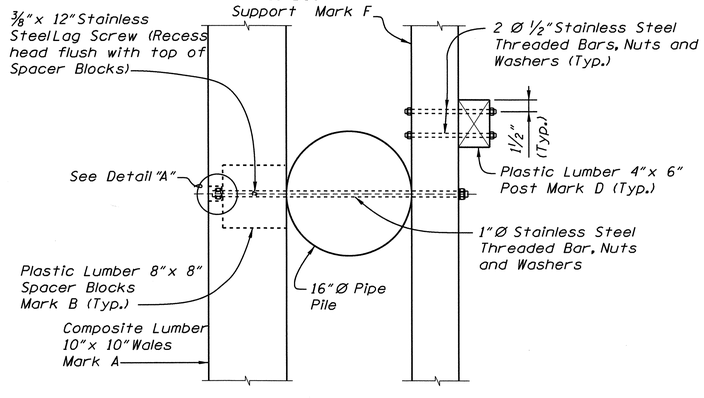


SECTION B-B

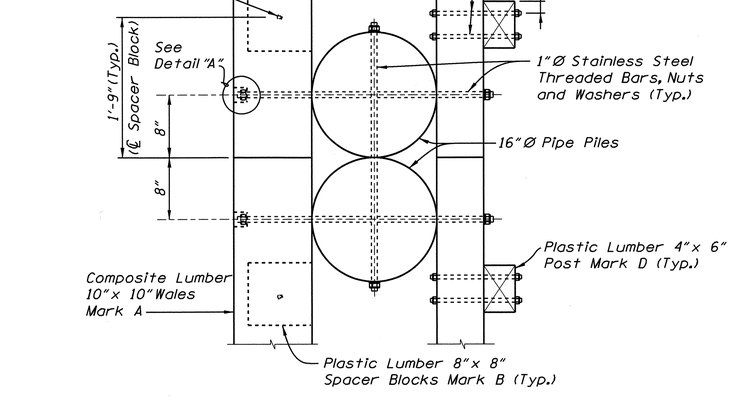
HANDRAIL DETAIL



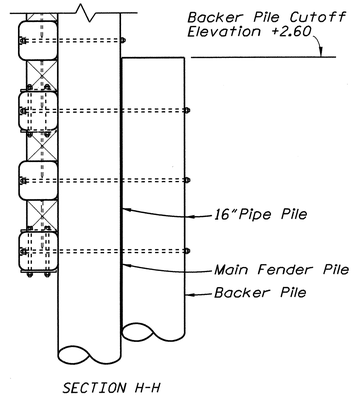
SECTION C-C
TYPICAL FLARED SECTION
(8° TURN SHOWN, 4° TURN SIMILAR)



SECTION D-D
TYPICAL AT INTERMEDIATE PILES



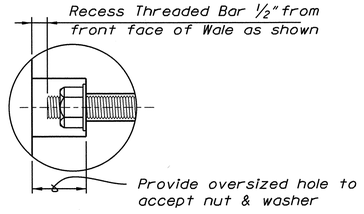
SECTION C-C
TYPICAL STRAIGHT SECTION



SECTION H-H
Backer Pile

NOTES

FOR SECTION E-E, SEE SHEET 5 OF 6.



DETAIL "A"

NORTH CAROLINA PROFESSIONAL SEAL 20211 ENGINEER DAVID C. PAYNE
4/24/11

PROJECT NO. BK-5128

CARTERET COUNTY

SHEET 4 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FENDER SYSTEM FOR BRIDGE OVER AIWW ON NC 58

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			6

DRAWN BY : J.D. HAWK DATE : 10/20/08
CHECKED BY : DRC/T.G. PAYNE DATE : 9/12/11

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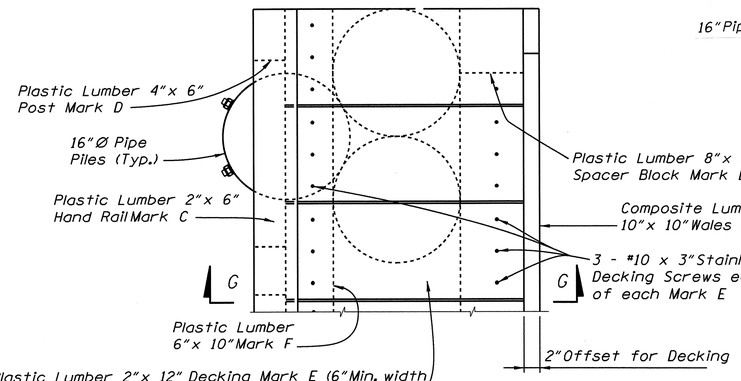
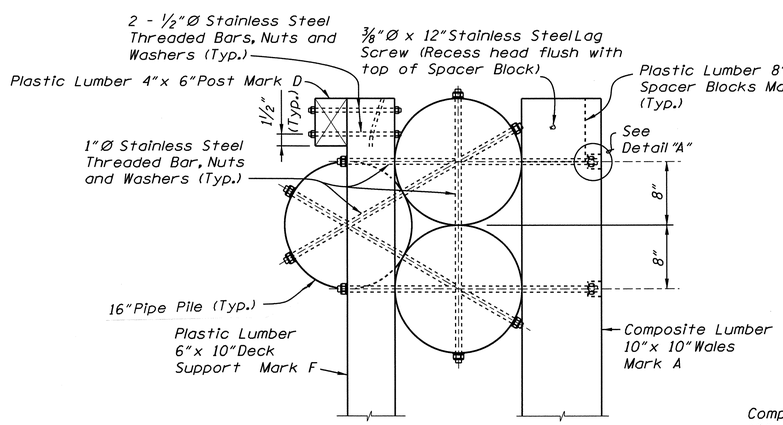
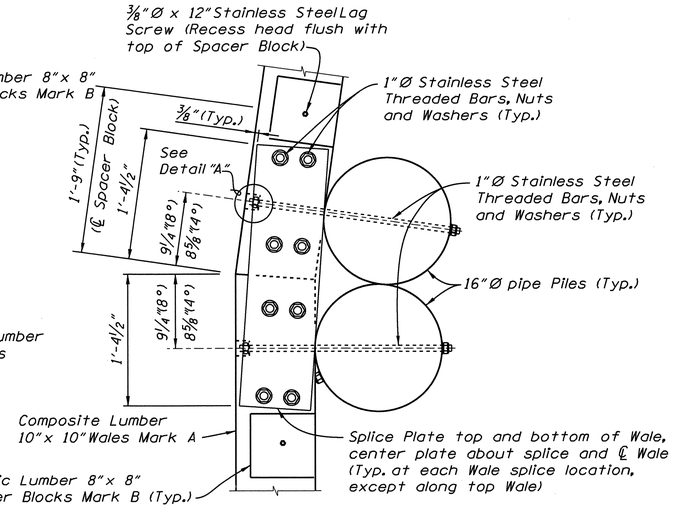
pervin



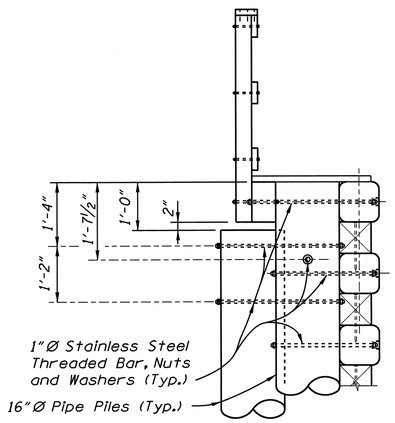
VIEW F-F
(SHOWING FENDER END)



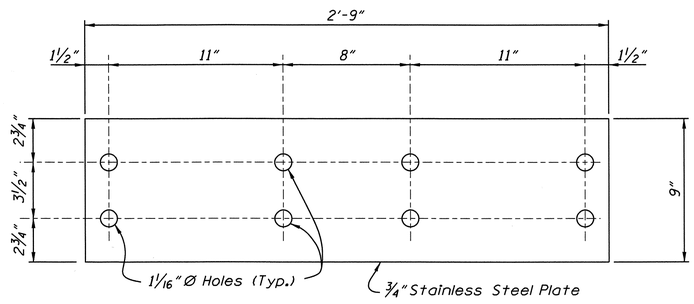
VIEW F-F
(SHOWING FENDER END; DECKING AND HANDRAIL NOT SHOWN FOR CLARITY)



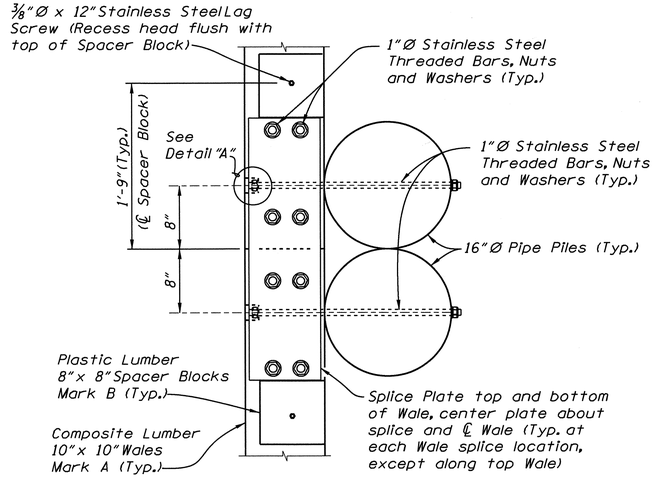
SECTION E-E
TYPICAL FLARED SECTION
(8° TURN SHOWN, 4° TURN SIMILAR)



SECTION G-G



SPLICE PLATE DETAIL



SECTION E-E
TYPICAL STRAIGHT SECTION

PROJECT NO. BK-5128
CARTERET COUNTY
SHEET 5 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FENDER SYSTEM FOR BRIDGE OVER AIWW ON NC 58

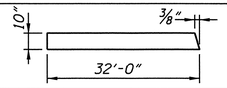
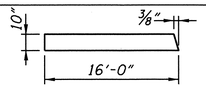
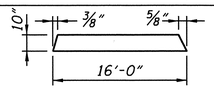
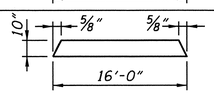
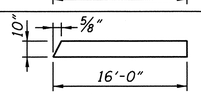
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	5-5
1			3			TOTAL SHEETS
2			4			6

NORTH CAROLINA PROFESSIONAL SEAL 20211 ENGINEER T. G. PAYNE
9/21/11

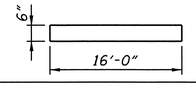
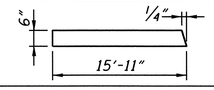
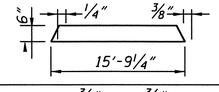
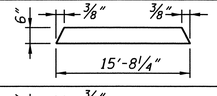
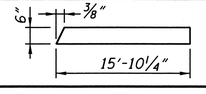
DRAWN BY : J.D. HAWK DATE : 10/20/08
CHECKED BY DRC/T.G. PAYNE DATE : 9/12/11

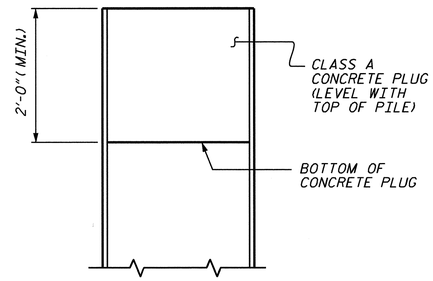
28-SEP-2011 13:38
S:\PG3\Bridge Maintenance Work\fender_systems\emerald_isle\copy_of_plans\PLANS\FENDER_sd_AB.dgn
pervin

* COMPOSITE LUMBER BILL OF MATERIALS

MARK	SIZE (NOMINAL)	DIMENSIONS	BOARD FT. PER EACH	NO. REQD.	QUANTITY (BOARD FT.)
A1	10"X 10" COMPOSITE LUMBER	32'-0"(STRAIGHT)	266.6	8	2132.8
A2	10"X 10" COMPOSITE LUMBER		266.6	16	4265.6
A3	10"X 10" COMPOSITE LUMBER		133.3	16	2132.8
A4	10"X 10" COMPOSITE LUMBER		133.3	32	4265.6
A5	10"X 10" COMPOSITE LUMBER		133.3	64	8531.2
A6	10"X 10" COMPOSITE LUMBER		133.3	32	4265.6

* PLASTIC LUMBER BILL OF MATERIALS

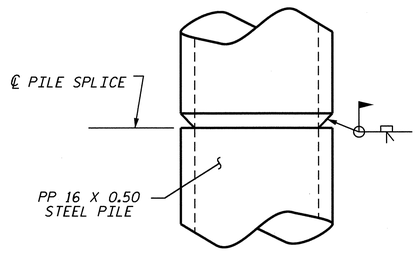
MARK	SIZE (NOMINAL)	DIMENSIONS	BOARD FT. PER EACH	NO. REQD.	QUANTITY (BOARD FT.)
B	8"X 8" PLASTIC LUMBER	8"(STRAIGHT)	3.6	504	1814.4
C	2"X 6" PLASTIC LUMBER	16'-0" (STRAIGHT) (Trim & Miter Ends as required)	16.0	96	1536.0
D	4"X 6" PLASTIC LUMBER	4'-4"(STRAIGHT)	8.7	144	1252.8
** E	2"X 12" PLASTIC LUMBER	2'-6"(STRAIGHT) (Miter as required)	5.0	384	1920.0
F2	6"X 10" PLASTIC LUMBER		80.0	4	320.0
F3	6"X 10" PLASTIC LUMBER		79.6	4	318.4
F4	6"X 10" PLASTIC LUMBER		78.8	4	315.2
F5	6"X 10" PLASTIC LUMBER		78.4	8	627.2
F6	6"X 10" PLASTIC LUMBER		79.2	4	316.8



ELEVATION

PP 16 X 0.50 STEEL PILE

ALSO TYPICAL FOR PP 14 x 0.50



PIPE PILE SPLICE DETAIL

ALSO TYPICAL FOR PP 14 x 0.50

STEEL PIPE PILE BILL OF MATERIALS

PILE TYPE	LENGTH	NO. REQD.	TOTAL LENGTH (FT.)
PP 14 X 0.50	56'-0''	28	1568
PP 16 X 0.50	56'-0''	80	4480
PP 16 X 0.50	49'-0''	24	1176

NOTES:

* ALL PLASTIC LUMBER AND COMPOSITE LUMBER DIMENSIONS AND QUANTITIES SHOWN ARE BASED ON NOMINAL LUMBER DIMENSIONS AND MAY VARY DEPENDING ON ACTUAL LUMBER DIMENSIONS.

** CONTRACTOR MAY PROVIDE FIBERGLASS OPEN GRATING IN LIEU OF 2"X 12" PLASTIC LUMBER AT NO ADDITIONAL COST TO THE DEPARTMENT.

FIBERGLASS OPEN GRATING SHALL BE HEAVY DUTY DESIGN SUITABLE FOR EXTERIOR INSTALLATIONS. MAXIMUM GAP OPENING ON THE WALKWAY SURFACE SHALL BE 1/2". DESIGN LIVE LOAD AND DEFLECTIONS SHALL BE A 50 PSF UNIFORMLY DISTRIBUTED LOAD WITH A MAXIMUM DEFLECTION OF 3/8"OR L/120 AT THE CENTER OF A SIMPLE SPAN. COLOR OF FIBERGLASS OPEN GRATING SHALL BE GRAY OR BLACK.

INSTALL FIBERGLASS OPEN GRATING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS USING STAINLESS STEEL HARDWARE, SCREWS, BOLTS, NUTS, AND WASHERS. ATTACH FIBERGLASS OPEN GRATING TO WALES AND DECK SUPPORTS AT A 2'-0"MAXIMUM SPACING SO AS TO RESIST PEDESTRIAN LIVE LOADS AND UPLIFT FORCES FROM WIND, BOUYANCY AND WAVE ACTION.

PIPE PILES SHALL BE IN ACCORDANCE WITH SECTION 1084 OF THE STANDARD SPECIFICATIONS.

REMOVE AND REPLACE OR REPAIR TO THE SATISFACTION OF THE ENGINEER PILES THAT ARE DAMAGED, DEFORMED OR COLLAPSED DURING INSTALLATION OR DRIVING.

PILE SPLICES SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND AWS D1.1.

FOR OPEN END PIPE PILES, REMOVE ENOUGH SOIL AND WATER FROM INSIDE THE PILES TO CONSTRUCT THE CONCRETE PLUG WITHOUT FOULING THE CONCRETE.

CLASS A CONCRETE AND PAINTING ARE CONSIDERED INCIDENTAL TO THE CONTRACT PRICE FOR THE PIPE PILES.

PILES SHALL BE PAINTED IN ACCORDANCE WITH SECTION 442 OF THE STANDARD SPECIFICATIONS. PILES SHALL BE PAINTED THEIR ENTIRE LENGTH AND SYSTEM 2 OF SECTION 442-7 SHALL BE USED.

PILES SHALL CONTAIN 0.2% COPPER.

NORTH CAROLINA PROFESSIONAL SEAL 20211 ENGINEER THOMAS G. PAYNE
10/6/11

DRAWN BY : J.D. HAWK DATE : 10/20/08
CHECKED BY DRC/T.G. PAYNE DATE : 9/12/11

04-OCT-2011 15:15
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hlucas

PROJECT NO. BK-5128
CARTERET COUNTY
SHEET 6 OF 6

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FENDER SYSTEM FOR BRIDGE OVER AIWW ON NC 58

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-6
1			3			TOTAL SHEETS
2			4			6

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF	
STRUCTURAL STEEL - AASHTO M270 GRADE 36	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION GRADE 60	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED - EXTREME FIBER STRESS	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2006 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN

REV. 6-16-95 EEM @ RGW REV. 5-7-03 RWW @ JTE
REV. 8-16-99 RWW @ LES REV. 5-1-06 TLA @ GM

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