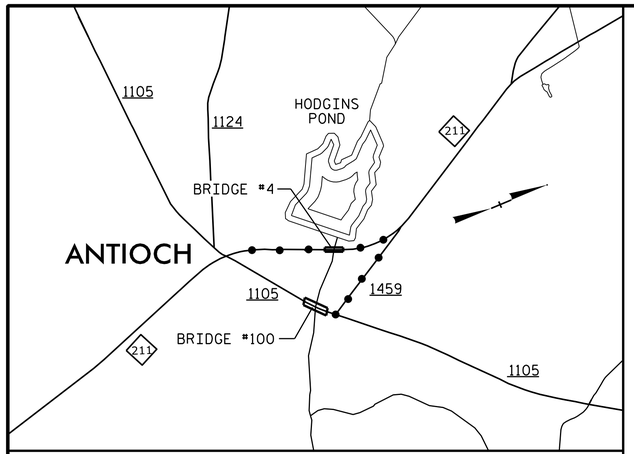


LOCATION SKETCH

OFFSITE DETOUR

TOTAL BILL OF MATERIAL

	PDA TESTING	CONCRETE FOR DECK REPAIR	APPROX. STRUCTURAL STEEL	HP 12 X 53 GALVANIZED STEEL PILES		PILE REDRIVES
	EACH	CU. FT	APPROX. LBS.	NO.	LIN.FT.	EACH
SUPERSTRUCTURE		8.2				
CRUTCH BENT 1			2,705	4	240	4
CRUTCH BENT 2			2,705	4	200	4
CRUTCH BENT 3			2,705	4	240	4
TOTAL	1	8.2	8,115	12	680	12

NOTES

ASSUMED LIVE LOAD = H15-44.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

THE CONTRACTOR SHALL SUBMIT A WORK PLAN FOR REVIEW AND APPROVAL FOR ALL OPERATIONS RELATED TO CRUTCH BENT CONSTRUCTION, INCLUDING BUT NOT LIMITED TO PLACEMENT OF FORMWORK AND FALSEWORK, CRUTCH BENT ERECTION, AND CRANE PLACEMENT.

WELDING OF TEMPORARY MEMBERS FOR SUPPORT DURING CONSTRUCTION IS NOT ALLOWED WITHOUT APPROVAL BY THE ENGINEER. TEMPORARY BOLTED CONNECTIONS MUST BE SHOWN ON THE SHOP DRAWINGS AND APPROVED BY THE ENGINEER.

✳ THE SUBSTRUCTURE OF THE EXISTING BRIDGE 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 BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

FOR REMOVAL OF POSTING ON EXISTING BRIDGE #100, SEE SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR TRAFFIC CONTROL. SEE TRAFFIC CONTROLPLANS.

NOTES FOR DRIVING PILES

FOR PILES, SEE SECTION 450 OF STANDARD SPECIFICATIONS.

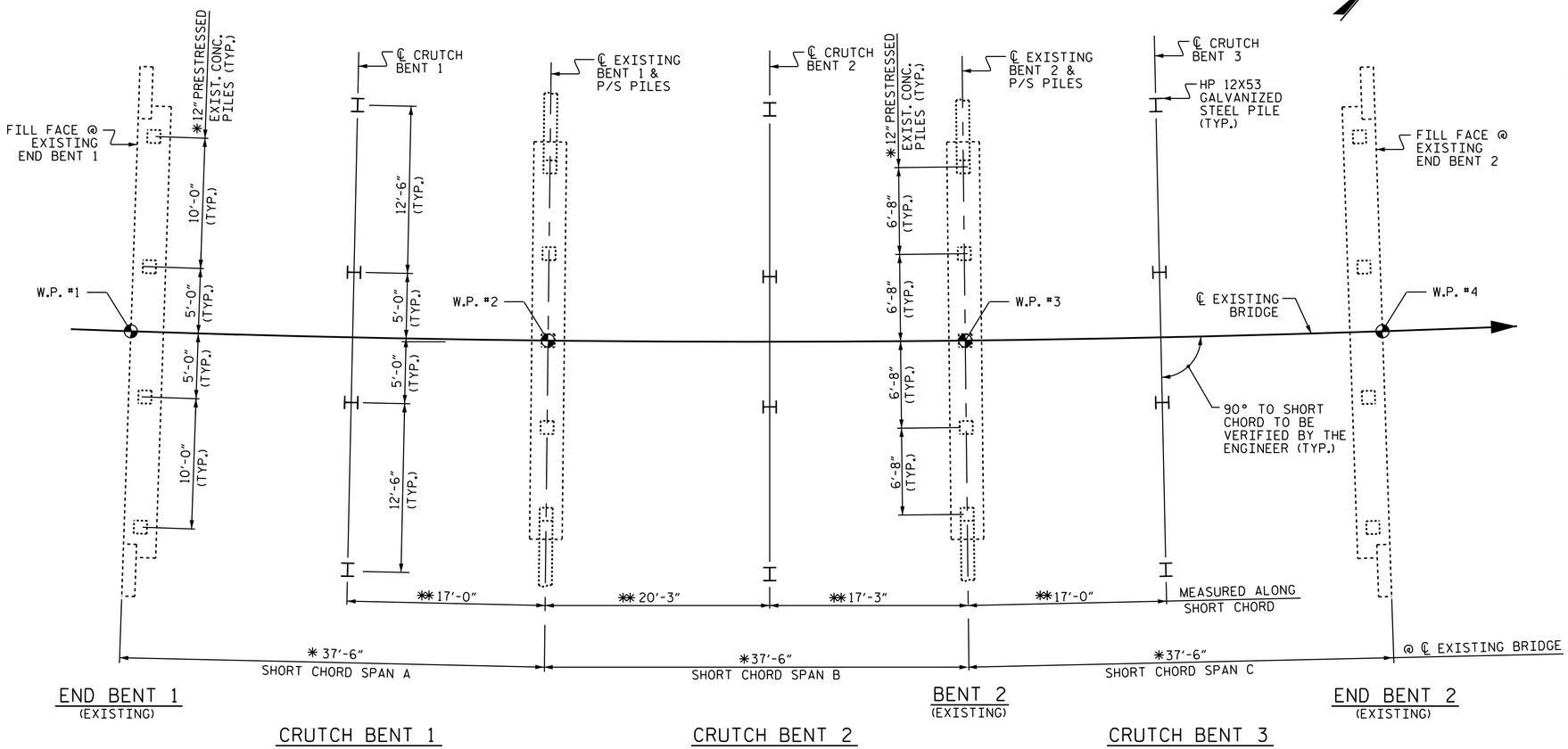
THE ALLOWABLE BEARING CAPACITY FOR PILES AT CRUTCH BENTS 1, 2, AND 3 IS 55 TONS PER PILE.

DRIVE PILES AT CRUTCH BENTS 1, 2, AND 3 TO A REQUIRED BEARING CAPACITY OF 110 TONS PER PILE. THE REQUIRED BEARING CAPACITY IS EQUAL TO THE ALLOWABLE BEARING CAPACITY WITH A MINIMUM FACTOR OF SAFETY OF TWO.

NO ELEVATION DATA WAS AVAILABLE FOR THIS PROJECT. ALL ELEVATIONS ARE REFERENCED TO A TEMPORARY BENCHMARK LABELED "GEO" ON THE SW ABUTMENT WING WALL OF THE EXISTING BRIDGE. ELEVATION = 100.00.

INSTALL PILES AT CRUTCH BENTS 1, 2, AND 3 TO A TIP ELEVATION NO HIGHER THAN 65 FT. THE SCOUR CRITICAL ELEVATION FOR CRUTCH BENT 1, CRUTCH BENT 2, AND CRUTCH BENT 3 IS ELEVATION 80 FT, 75 FT, AND 85 FT. RESPECTIVELY.

TESTING PILES WITH THE PDA DURING DRIVING, RESTRIKING, OR REDRIVING MAY BE REQUIRED. THE ENGINEER WILL DETERMINE THE NEED FOR PDA TESTING. FOR PDA TESTING, SEE SPECIAL PROVISIONS.



CRUTCH BENT LOCATION

ALL HP PLIES ARE VERTICAL AT EACH CRUTCH BENT.
PILE ORIENTATION AS SHOWN.
✳✳ TO BE ADJUSTED BY THE ENGINEER IF NECESSARY TO AVOID EXISTING BRIDGE COMPONENTS.

I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS

NORTH CAROLINA PROFESSIONAL SEAL 022506 ENGINEER JESSE McARTHUR BAILEY

DocuSigned by: J. M. Bailey 9026554D9528471...
12/19/2014

NORTH CAROLINA PROFESSIONAL SEAL 16301 ENGINEER TING HSIUNG FANG

DocuSigned by: Ting H. Fang E72088400977435...
12/19/2014

PROJECT NO. B-5127
HOKE COUNTY
BRIDGE NO.: 100

SHEET 1 OF 4 STRENGTHENING BRIDGE #100

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STEEL CRUTCH BENT

FOR BRIDGE #100 OVER RAFT SWAMP ON SR 1105 BETWEEN NC 211 & SR 1448

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

DRAWN BY : T. H. FANG DATE : 10/13/14
CHECKED BY : S. WANCE DATE : 11/03/14
DESIGN ENGINEER OF RECORD: T. H. FANG DATE : 11/07/14

19-DEC-2014 12:23
K:\TIPProjects-B\B5127\Structures\Plans\FinalPlans\b5127_sd_#100_cbt.dgn
ttfang