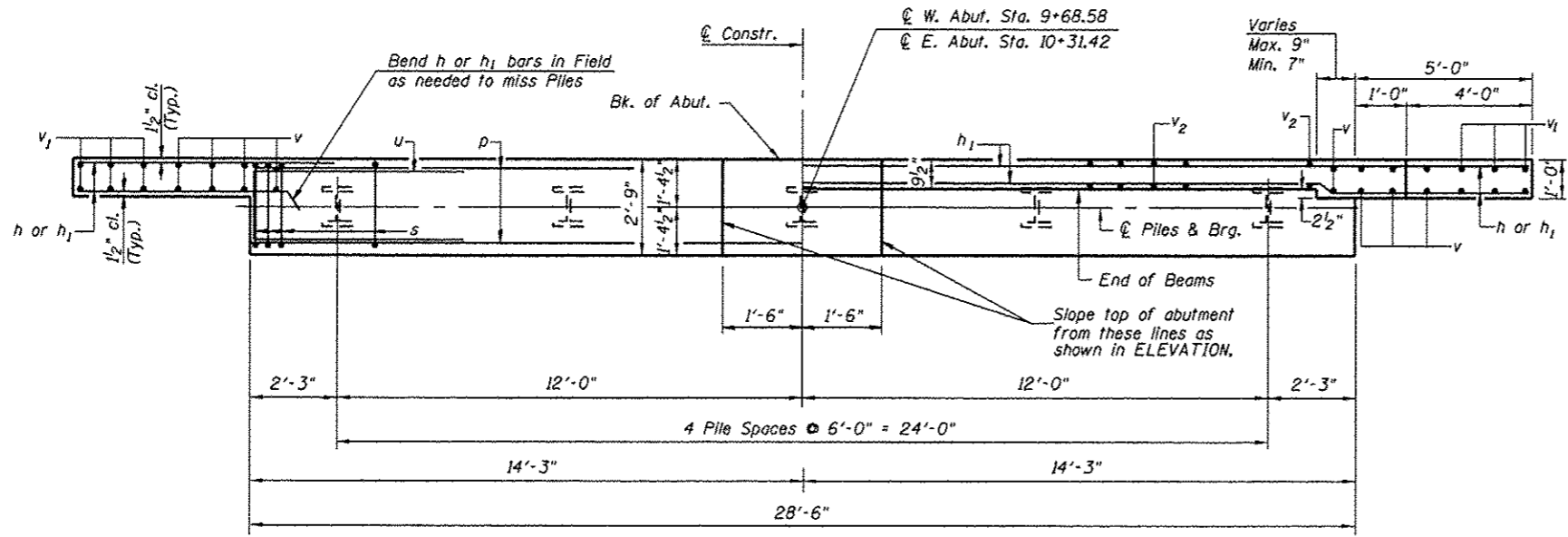


See Pile Encasement Detail on Sheet 7 of 7

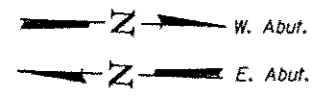
SECTION THRU ABUTMENT

BILL OF MATERIAL-2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	56	#4	6'-10"	—
h ₁	12	#4	30'-6"	—
p	20	#7	28'-2"	—
s	52	#4	10'-9"	□
u	16	#7	12'-4"	—
v	32	#4	4'-8"	—
v ₁	24	#4	3'-10"	—
v ₂	108	#4	4'-0"	—
Concrete Structures			Cu. Yd.	24.4
Reinforcement Bars			Pound	2880
Name Plates			Each	1
Steel Piles HP10x42			Foot	247
Test Pile Steel HP10x42			Each	1
Concrete Encasement			Cu. Yd.	3.6



PLAN

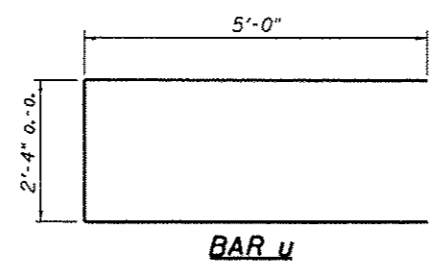


PILE DATA

Type: Steel HP10x42
 Nominal Required Bearing: 335 kips (Refusal)
 Factored Resistance Available: 167 kips
 No. Required: 10 piles*
 Estimated Length: 27 ft. @ W Abut.
 28 ft. @ E Abut.

Note:
 The Steel H-Piles shall be according to AASHTO M270 Grade 50.

*Includes one steel test piles HP10x42 to be driven in a permanent location at the East Abut. as directed by the Engineer before ordering the remainder of piles. The test pile shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.



BAR u

**ABUTMENTS
 STRUCTURE NO. 059-3329**

Sheet 6 of 7	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 10	08-00092-00-BR	MACOUPIN	23	15
	CONTRACT NO.				
FED. ROAD DIST. NO.		ILLINDIS FED. AID PROJECT		93595	

CEC Cummins Engineering Corporation
 Civil and Structural Engineering

JOB = 2228	DESIGNED	T.S.H.
FILE = 2228abut.dgn	CHECKED	M.D.C.
DATE = 5/14/2009	DRAWN	T.S.H.
	CHECKED	M.D.C.