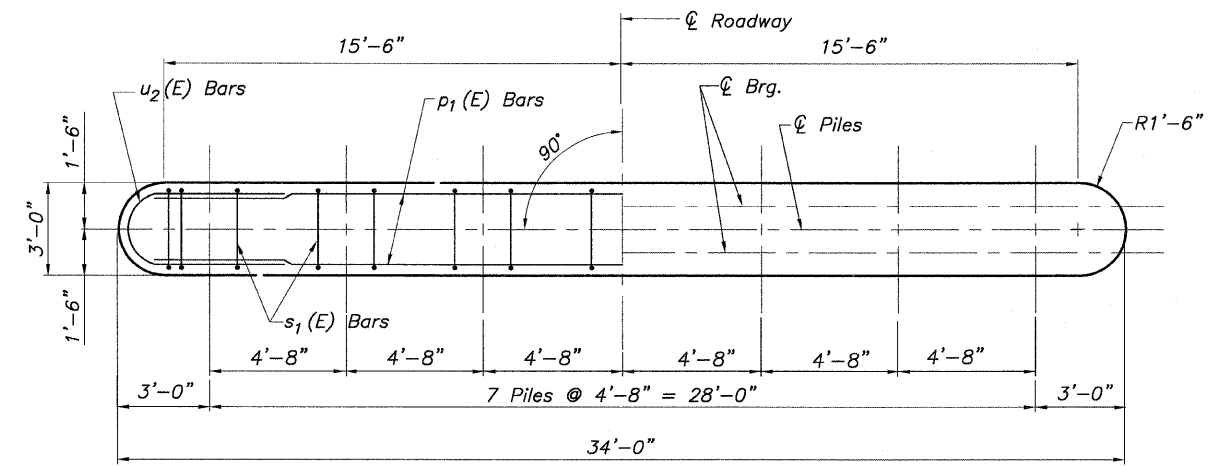
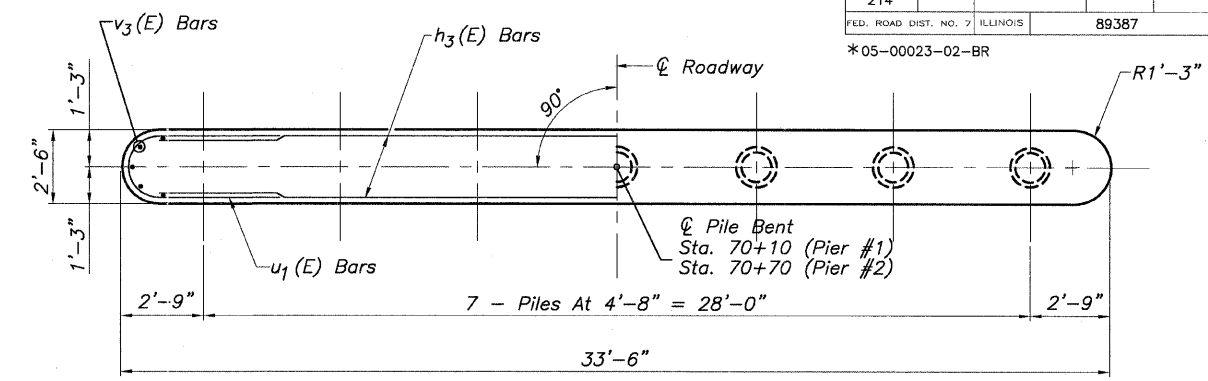


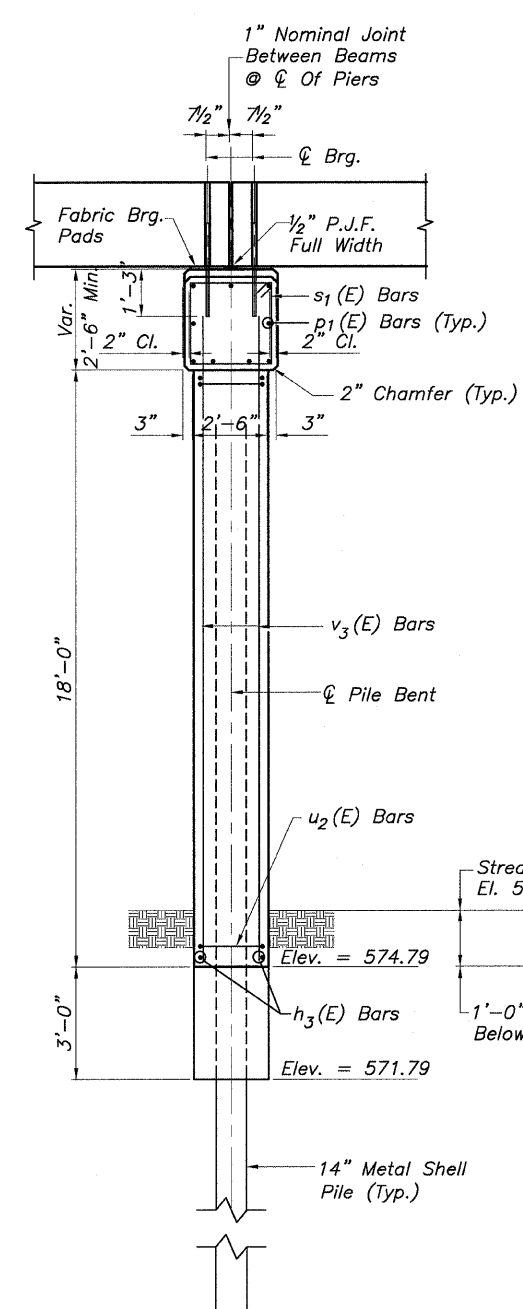
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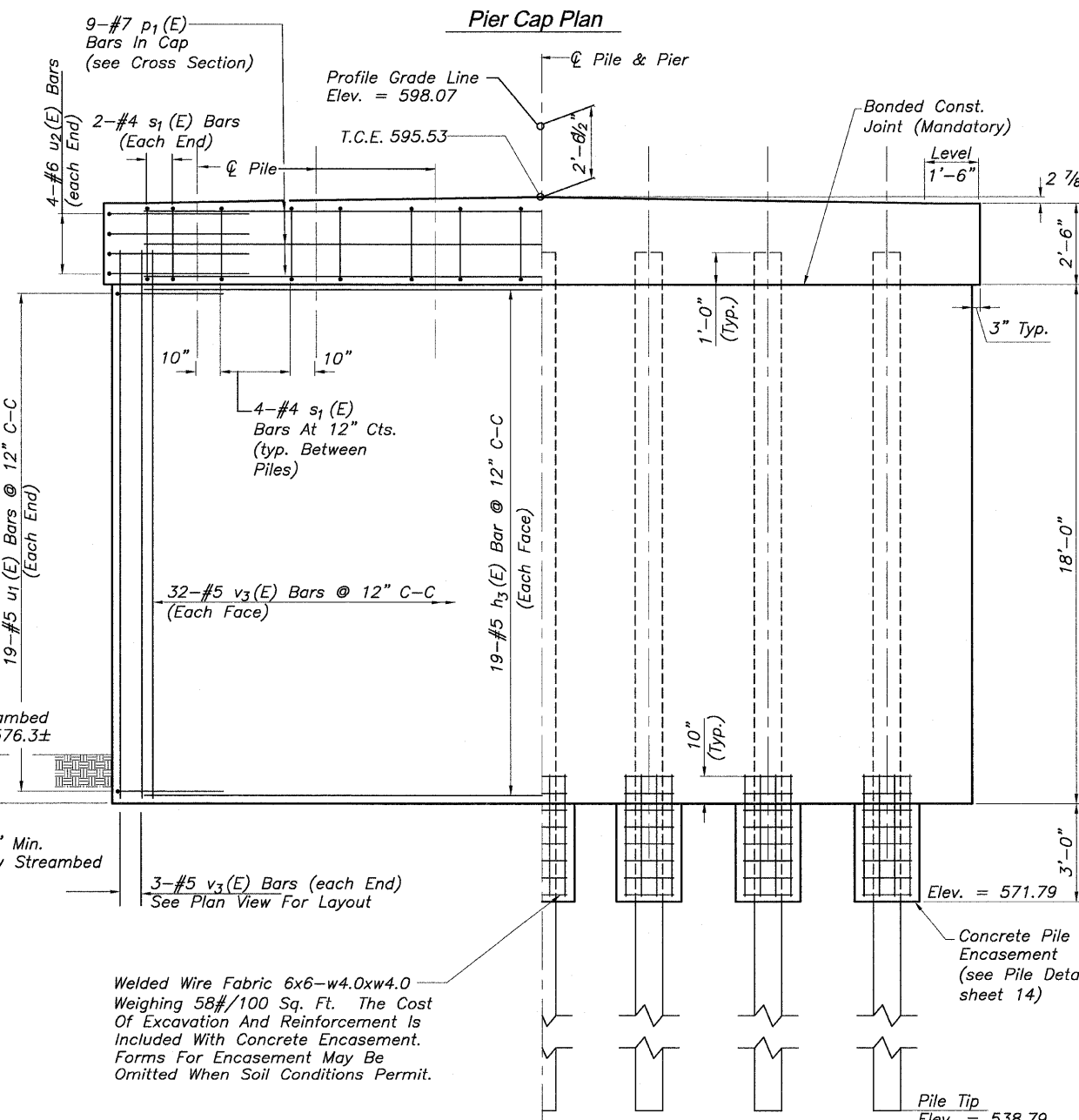
Pier Cap Plan



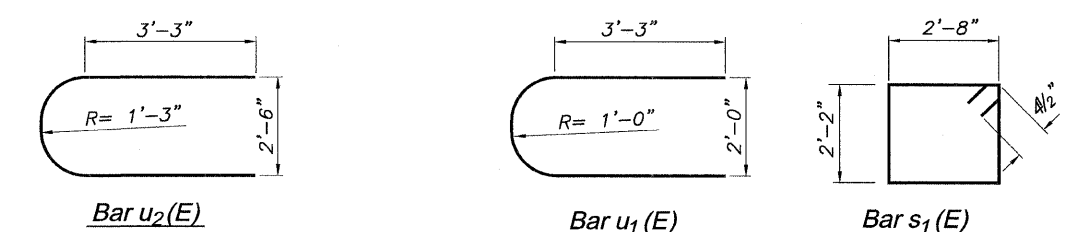
Pier Wall Plan



Pier Cross Section



Pier Elevation



Pile Data

Type & Size	Metal Shell-14 In. Dia. X 0.312 In. Walls
Nominal Required Bearing	360 Kips
Allowable Resistance Bearing	120 Kips
Estimated Length	55 Feet (Pier #1) 55 Feet (Pier #2)
Quantity	6+1 Test Pile (Pier #1) 6+1 Test Pile (Pier #2)

General Notes:

Reinforcement Bars Shall Conform To ASTM A 706 (IL MOD), Grade 60

All Reinforcement Shall Have Aminimum Clearance Of 2" Unless Noted Oterwise.

Pier Cap Top Shall Be Constructed To The Same Grade As The Proposed Roadway

The Metal Shell Piles shall be According to ASTM A 252 Grade 3.

The Test Pile(s) shall be driven to 110 Percent of the Nominal Required Bearing Indicated in the Pile Data Information.

Design Stresses

$f_y = 60,000 \text{ Psi}$
 $f'_c = 3,500 \text{ Psi}$

Bill Of Material For Two Piers

Bar	No.	Size	Length	Shape
$h_3(E)$	76	#5	31'-0"	—
$p_1(E)$	18	#7	31'-0"	—
$s_1(E)$	56	#4	10'-5"	□
$u_1(E)$	76	#5	9'-8"	C
$u_2(E)$	16	#6	10'-5"	C
$v_3(E)$	140	#5	19'-6"	—
Structure Excavation			Cu.Yd.	98.5
Concrete Structures			Cu.Yd.	129.3
Conc. Encasement			Cu.Yd.	7.6
Reinforcement Bars Epoxy Coated			Pound	7860
Furnishing Metal Shell Piles, 14"x0.312"			Feet	660
Driving Piles			Feet	660
Test Pile Metal Shells			Each	2
Underwater Structure Excavation Protection			Each	2

WALL PIER DETAILS

SECTION 05-00023-02-BR
F.A.S. 214, STA. 70+40
MERCER COUNTY
STRUCTURE NO. 066-3043

DESIGNED	MHM
CHECKED	JBF
DRAWN	MHM
CHECKED	JBF