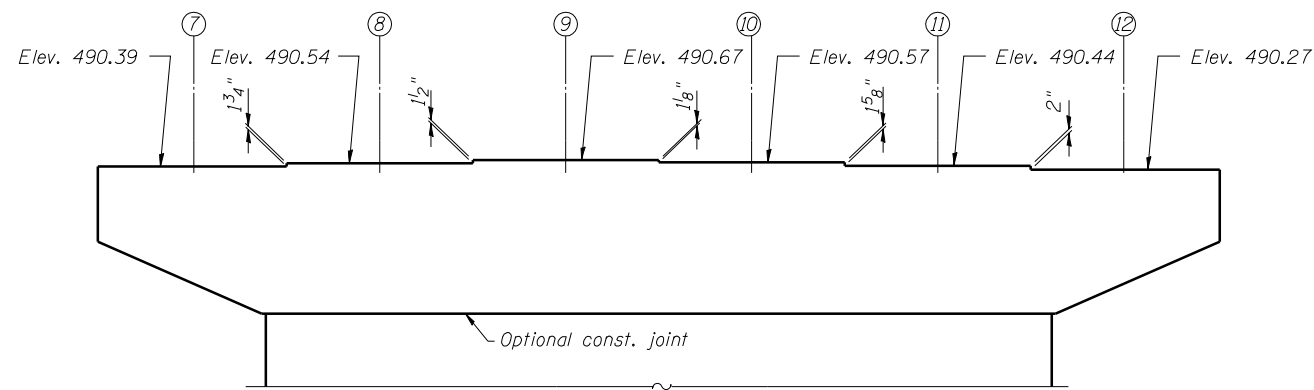


**PIER 4**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h <sub>10</sub> (E)	32	#5	26'-9"	—
h <sub>11</sub> (E)	94	#6	30'-6"	—
h <sub>12</sub> (E)	40	#5	11'-3"	—
h <sub>13</sub> (E)	40	#5	11'-2"	—
h <sub>14</sub> (E)	20	#5	30'-0"	—
h <sub>15</sub> (E)	7	#5	7'-5"	—
n <sub>6</sub> (E)	66	#11	18'-6"	—
n <sub>7</sub> (E)	66	#10	12'-7"	—
p <sub>3</sub> (E)	7	#9	49'-5"	—
p <sub>4</sub> (E)	12	#10	20'-6"	—
p <sub>5</sub> (E)	10	#7	9'-9"	—
p <sub>6</sub> (E)	2	#7	33'-2"	—
s <sub>3</sub> (E)	4	#5	14'-7"	□
s <sub>4</sub> (E)	4	#5	15'-0"	□
s <sub>5</sub> (E)	4	#5	15'-5"	□
s <sub>6</sub> (E)	4	#5	15'-10"	□
s <sub>7</sub> (E)	4	#5	16'-3"	□
s <sub>8</sub> (E)	4	#5	16'-9"	□
s <sub>9</sub> (E)	4	#5	17'-2"	□
s <sub>10</sub> (E)	4	#5	17'-7"	□
s <sub>11</sub> (E)	96	#5	13'-0"	□
s <sub>12</sub> (E)	70	#5	14'-2"	□
s <sub>13</sub> (E)	11	#5	7'-6"	□
s <sub>14</sub> (E)	582	#4	5'-3"	□
t <sub>3</sub> (E)	136	#10	22'-10"	—
u <sub>4</sub> (E)	94	#6	11'-2"	—
u <sub>5</sub> (E)	10	#6	11'-10"	—
u <sub>6</sub> (E)	32	#5	7'-11"	—
v <sub>10</sub> (E)	66	#10	24'-1"	—
w <sub>1</sub> (E)	19	#8	49'-4"	—
w <sub>2</sub> (E)	56	#10	19'-10"	—
w <sub>3</sub> (E)	21	#10	50'-4"	—
<b>Cofferdam Excavation</b> Cu. Yd. 1090				
<b>Cofferdam (Type 2) (Location-4)</b> Each 1				
<b>Seal Coat Concrete</b> Cu. Yd. 141.6				
<b>Concrete Structures</b> Cu. Yd. 335.0				
<b>Reinforcement Bars, Epoxy Coated</b> Pound 58500				
<b>Furnishing Steel Piles HP14x89</b> Foot 2016				
<b>Driving Piles</b> Foot 2016				

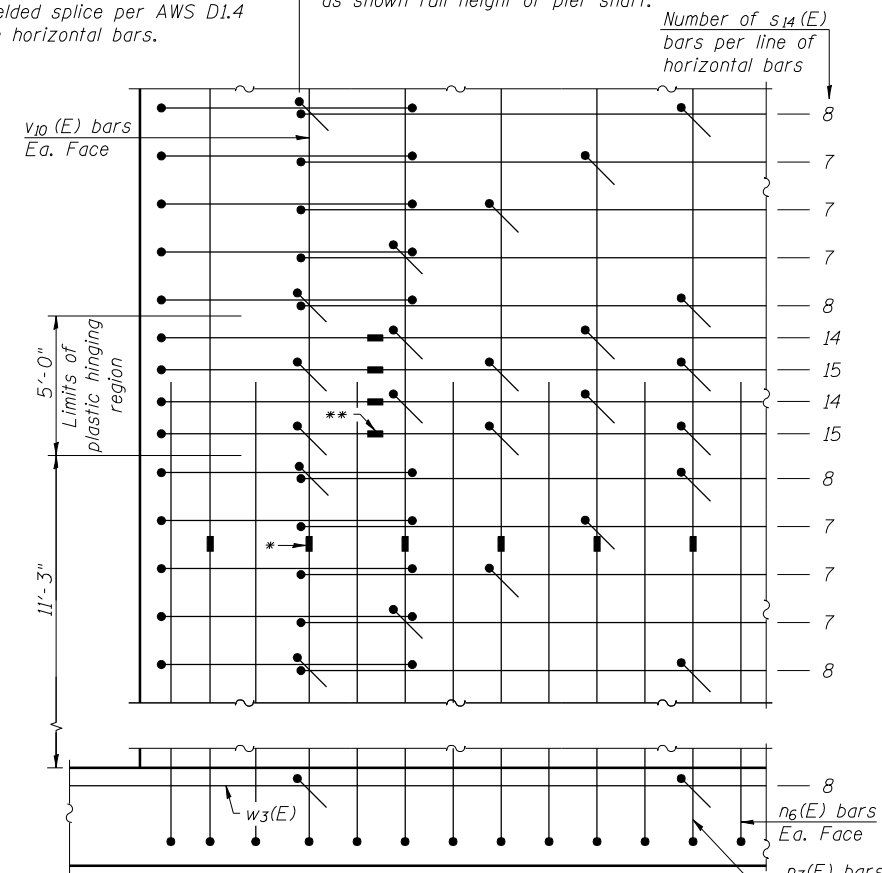
For cofferdam details, see sheet 105 of 113.



**TOP OF PIER**

\* Mechanical splice on vertical bars.  
\*\* Mechanical splice or shop welded splice per AWS D1.4 on horizontal bars.

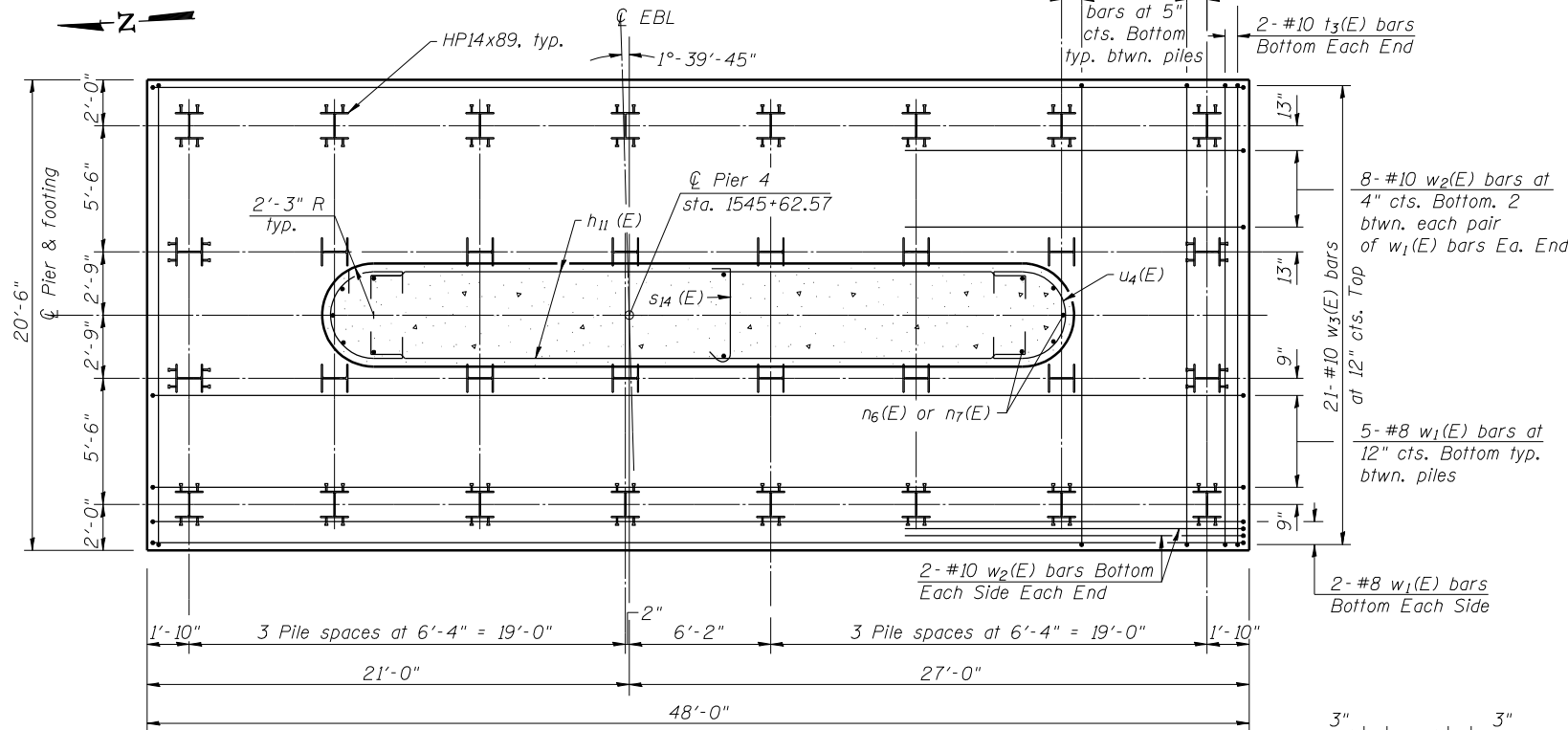
#4 s<sub>14</sub>(E) bars at 4'-0" cts. max. outside limits of plastic hinging region and top of footing, 2'-0" max. inside limits of plastic hinging region. Stagger as shown full height of pier shaft.



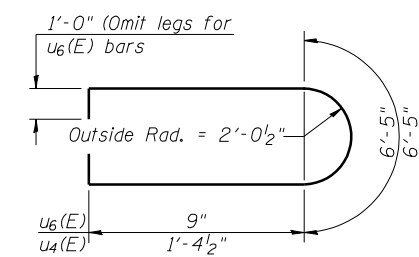
**PARTIAL ELEVATION**  
(Showing s<sub>14</sub>(E) bar pattern)

Note:

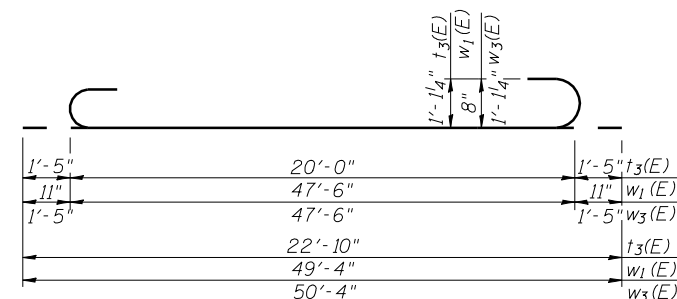
Not all lines of horizontal reinforcement bars are shown. Total number of s<sub>14</sub>(E) bars in Bill of Materials is based on applying the pattern shown to the actual pier dimensions and horizontal reinforcement spacing.



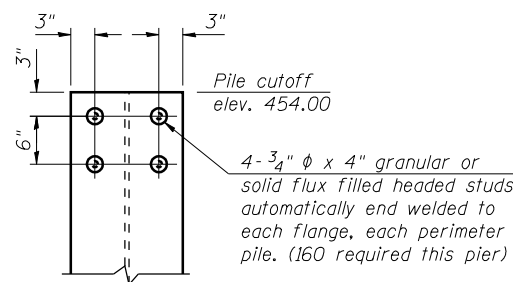
**FOOTING PLAN**



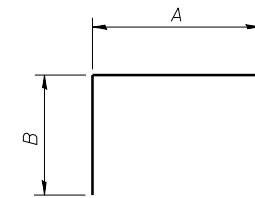
**BARS u<sub>4</sub>(E) & u<sub>6</sub>(E)**



**BARS t<sub>3</sub>(E), w<sub>1</sub>(E) & w<sub>3</sub>(E)**

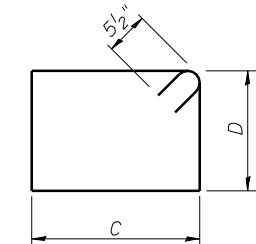


**TOP OF PERIMETER PILE DETAIL**



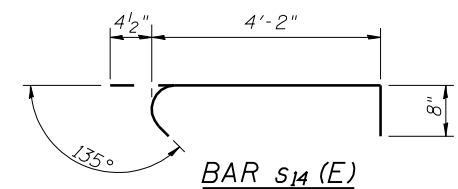
**A & B DIMENSIONS**

Bar	A	B
h <sub>11</sub> (E)	28'-6"	1'-0"
p <sub>3</sub> (E)	46'-3"	1'-7"
s <sub>11</sub> (E)	4'-0"	4'-6"
s <sub>12</sub> (E)	5'-2"	4'-6"
s <sub>13</sub> (E)	5'-2"	1'-2"
u <sub>5</sub> (E)	5'-0"	3'-5"



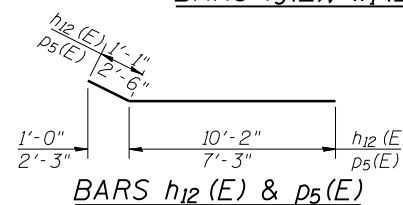
**C & D DIMENSIONS**

Bar	C	D
s <sub>3</sub> (E)	4'-0"	2'-10"
s <sub>4</sub> (E)	4'-0"	3'-0 1/2"
s <sub>5</sub> (E)	4'-0"	3'-3"
s <sub>6</sub> (E)	4'-0"	3'-5 1/2"
s <sub>7</sub> (E)	4'-0"	3'-8"
s <sub>8</sub> (E)	4'-0"	3'-11"
s <sub>9</sub> (E)	4'-0"	4'-1 1/2"
s <sub>10</sub> (E)	4'-0"	4'-4"

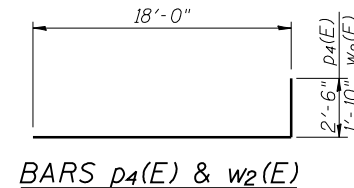


**BAR s<sub>14</sub>(E)**

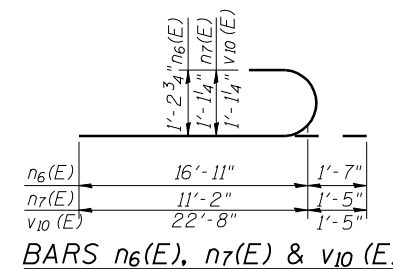
**PILE DATA**  
Type: HP14x89  
Nominal Required Bearing: 705 kips  
Factored Resistance Available: 388 kips  
Est. Length: 63 feet  
No. Production Piles: 32  
No. Test Piles: 0



**BARS h<sub>12</sub>(E) & p<sub>5</sub>(E)**



**BARS p<sub>4</sub>(E) & w<sub>2</sub>(E)**



**BARS n<sub>6</sub>(E), n<sub>7</sub>(E) & v<sub>10</sub>(E)**



USER NAME = has  
ESCA PROJECT NO. 1070.09  
PLOT DATE = 1/28/2014 3:24:22 PM

DESIGNED - RDP 08/13  
CHECKED - MTD 08/13  
DRAWN - DWH 08/13  
CHECKED - ELH 01/14

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PIER 4 - EB**  
**STRUCTURE NO. 026-0107**

SHEET NO. 102 OF 113 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	(26-3B-1, 3B-1(3))BR	FAYETTE	277	182

CONTRACT NO. 74175  
ILLINOIS FED. AID PROJECT