

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 Forward Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-12-11	Pile Number: 29	
Pile Type: 16 x 88H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50			84	21		118		
51		INSPECT WELD	85	21		119		
52	11		86	20	30.6	120		
53	11		87	23	seconds	121		
54	12		88		10	122		
55	12		89		20	123		
56	12		90		Blows	124		
57	12		91			125		
58	14		92	stroke	9.09'	126		
59	14		93			127		
60	15		94			128		
61	17		95			129		
62	19		96			130		
63	19		97			131		
64	22		98			132		
65	22		99			133		
66	23		100			134		
67	24		101			135		
68	25		102			136		
69	25		103			137		
70	25		104			138		
71	23		105			139		
72	27		106			140		
73	29		107			141		
74	29		108			142		
75	28		109			143		
76	27		110			144		
77	25		111			145		
78	22		112			146		
79	23		113			147		
80	23		114			148		
81	20	30.3	115			149		
82	20		116			150		
83	22		117			151		

x Ken Setz (SOMAT)

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD ABUTMENT		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-10-2011	Pile Number: 30	
Pile Type: 16 x 88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 KIP	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ± 229 - 2.45 PM	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	15	MINIMUM	84	31		118		
51	17	INSPECT Weld	85	31		119		
52	17		86	30		120		
53	17		87	35	33.0	121		
54	20		88		Seconds	122		
55	18		89		@	123		
56	20		90		20	124		
57	20		91		BLOWS	125		
58	22		92			126		
59	23		93	Stroke	10.62'	127		
60	23		94			128		
61	25		95			129		
62	25		96			130		
63	25		97			131		
64	25		98			132		
65	25		99			133		
66	26		100			134		
67	26		101			135		
68	25	32.2	102			136		
69	28		103			137		
70	29		104			138		
71	27		105			139		
72	27		106			140		
73	29		107			141		
74	28		108			142		
75	26		109			143		
76	28		110			144		
77	25		111			145		
78	26		112			146		
79	27		113			147		
80	27		114			148		
81	27		115			149		
82	29		116			150		
83	31	32.6	117			151		

X

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R BRIDGE 6		2.3 blows per foot	
SFN: FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584±	
Substructure Unit:	Date Driven: 11-22-2011	Pile Number: 31	
Pile Type: 16x88 H-PILE	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 KIPS	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	16		84	30		118		
51	20		85	28		119		
52	13		86	29		120		
53	18		87	29	234	121		
54	17		88		KIPS	122		
55	20		89			123		
56	20		90			124		
57	19		91	stroke	10.7'	125		
58	22		92			126		
59	22		93			127		
60	22		94			128		
61	21		95			129		
62	23		96			130		
63	24		97			131		
64	22		98			132		
65	26		99			133		
66	24		100			134		
67	27		101			135		
68	25		102			136		
69	26		103			137		
70	29		104			138		
71	28		105			139		
72	27		106			140		
73	29		107			141		
74	27		108			142		
75	27		109			143		
76	28		110			144		
77	30		111			145		
78	33		112			146		
79	28		113			147		
80	28		114			148		
81	28		115			149		
82	29		116			150		
83	28		117			151		

1st section 50'  
2nd section 50'

x Burke

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: Bridge 6 Forward Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584±	
Substructure Unit:	Date Driven: 12-6-2011	Pile Number: 32	
Pile Type: 16x88H STEEL	Wall Thickness: 9/16	Hammer: D-30	
Required Ultimate Bearing: 383.2 KIPS	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	14		84	30		118		
51	16	INSPECT WARD	85	29		119		
52	16		86	29		120		
53	17		87	29	32.7	121		
54	18		88		seconds	122		
55	18		89		@	123		
56	18		90		20	124		
57	18		91		BLOWS	125		
58	19		92			126		
59	19		93			127		
60	21		94	Stroke	10.42'	128		
61	22		95			129		
62	24		96			130		
63	22		97			131		
64	22		98			132		
65	23		99			133		
66	24		100			134		
67	25		101			135		
68	28		102			136		
69	25		103			137		
70	28		104			138		
71	27	33.0	105			139		
72	28		106			140		
73	30		107			141		
74	30		108			142		
75	32		109			143		
76	33		110			144		
77	31		111			145		
78	31		112			146		
79	32		113			147		
80	31		114			148		
81	31		115			149		
82	31		116			150		
83	32	32.8	117			151		

1st section - 50'  
2nd section - 50'

X

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 Forward Abutment		1 foot stroke 8.7 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584±	
Substructure Unit:	Date Driven: 12-6-2011	Pile Number: 33	
Pile Type: 16x88 H STEEL	Wall Thickness: 9/16	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
13 50			84	34		118		
13 51		INSPECT WELD	85	34		119		
52	15		86	31		120		
53	12		87	30	32.2	121		
54	14		88		seconds	122		
55	16		89		10	123		
56	16		90		20	124		
57	16		91		BLOWS	125		
58	18		92			126		
59	21		93	stroke	10.09"	127		
60	20		94			128		
61	20		95			129		
62	21		96			130		
63	22		97			131		
64	25		98			132		
65	26		99			133		
66	24		100			134		
67	24		101			135		
68	26		102			136		
69	29		103			137		
70	26		104			138		
71	28		105			139		
72	31		106			140		
73	31		107			141		
74	35	32.0	108			142		
75	34		109			143		
76	36		110			144		
77	36		111			145		
78	35		112			146		
79	34		113			147		
80	35		114			148		
81	37		115			149		
82	34		116			150		
83	34	32.5	117			151		

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(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 90'		Final Tip Elevation: 581 ±	
Substructure Unit:	Date Driven: 12-3-11	Pile Number: 34	
Pile Type: 16 X 88 H STEEL	Wall Thickness: 9/16	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	16	WVVVVVVV	84	23		118		
51	17	INSPECT Weld	85	20	32.1 e	119		
52	18		86	20	20 blows	120		
53	15		87	21		121		
54	16		88	25		122		
55	16		89	24		123		
56	17		90	24		124		
57	19		91			125		
58	21		92	STROKE	10.02'	126		
59	20		93			127		
60	21		94			128		
61	24		95			129		
62	23		96			130		
63	24		97			131		
64	24		98			132		
65	27		99			133		
66	30		100			134		
67	21		101			135		
68	28		102			136		
69	27		103			137		
70	28		104			138		
71	26	32.2	105			139		
72	25		106			140		
73	30		107			141		
74	31		108			142		
75	30		109			143		
76	28		110			144		
77	25		111			145		
78	25		112			146		
79	26		113			147		
80	27		114			148		
81	25		115			149		
82	23		116			150		
83	22		117			151		

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(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		2.3 blows per foot	
SFN: BRIDGE 6 FORWARD ABUTMENT		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584±	
Substructure Unit:	Date Driven: 12-9-2011	Pile Number: 35	
Pile Type: 16x88H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 kips	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	14		84	24		118		
51	14	Inspect Weld	85	25	32.0	119		
52	14		86	25	seconds	120		
53	16		87	23	@	121		
54	16		88		20	122		
55	17		89		BLOWS	123		
56	17		90			124		
57	18		91	stroke	9.97'	125		
58	18		92			126		
59	19		93			127		
60	21		94			128		
61	19		95			129		
62	21		96			130		
63	22		97			131		
64	22		98			132		
65	25	31.6	99			133		
66	24		100			134		
67	24		101			135		
68	26		102			136		
69	26		103			137		
70	25		104			138		
71	26		105			139		
72	24		106			140		
73	25		107			141		
74	25		108			142		
75	24		109			143		
76	24		110			144		
77	24		111			145		
78	24	31.9	112			146		
79	24		113			147		
80	22		114			148		
81	26		115			149		
82	25		116			150		
83	24		117			151		

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(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		2.3 blows per foot	
SFN: BRIDGE 6 FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584±	
Substructure Unit:	Date Driven: 12-2-2011	Pile Number: 36	
Pile Type: 16x88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splines: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	16	mmmmmm	84	29		118		
51	16	Inspect Weld	85	30		119		
52	17		86	30	32.8	120		
53	16		87	32	seconds	121		
54	1.8		88		20	122		
55	18		89		20	123		
56	18		90		Blows	124		
57	19		91			125		
58	19		92	STROKE	10.49'	126		
59	20		93			127		
60	20		94			128		
61	21		95			129		
62	24		96			130		
63	25		97			131		
64	24		98			132		
65	21		99			133		
66	24		100			134		
67	24		101			135		
68	25		102			136		
69	25		103			137		
70	26		104			138		
71	26	33.0	105			139		
72	25		106			140		
73	25		107			141		
74	25		108			142		
75	25		109			143		
76	24		110			144		
77	25		111			145		
78	26		112			146		
79	27		113			147		
80	27		114			148		
81	26		115			149		
82	29	32.8	116			150		
83	27		117			151		

x Ron Ho  
 Ken Seif (SOMAT)



(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD Abutment		4.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 589±	
Substructure Unit:	Date Driven: 12-9-2011	Pile Number: 37	
Pile Type: 16X88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 KIPS	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
11 50	11		84	33		118		
12 51 INSPECT WELD			85	34		119		
52	13		86	32		120		
53	13		87	34	33.0	121		
54	14		88		Seconds	122		
55	17		89		@	123		
56	16		90		20	124		
57	15		91		BLOWS	125		
58	17		92			126		
59	19		93	stroke	10.62'	127		
60	19		94			128		
61	19		95			129		
62	19		96			130		
63	21		97			131		
64	21		98			132		
65	22		99			133		
66	22		100			134		
67	22	31.1	101			135		
68	23		102			136		
69	25		103			137		
70	26		104			138		
71	24		105			139		
72	26		106			140		
73	25		107			141		
74	26		108			142		
75	27		109			143		
76	25		110			144		
77	26		111			145		
78	26		112			146		
79	27		113			147		
80	27		114			148		
81	29		115			149		
82	30	32.6	116			150		
83	34		117			151		

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(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 Forward Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-2-2011	Pile Number: 38	
Pile Type: 16x88H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	15		84	34		118		
51	14	INSPECT WELD	85	34		119		
52	14		86	33		120		
53	15		87	33	32.8	121		
54	14		88		seconds	122		
55	14		89		@	123		
56	15		90		20	124		
57	17		91		BLOWS	125		
58	16		92			126		
59	17		93	STROKE	10.49'	127		
60	19		94			128		
61	19		95			129		
62	22		96			130		
63	20		97			131		
64	23		98			132		
65	23		99			133		
66	22	32.0	100			134		
67	23		101			135		
68	22		102			136		
69	24		103			137		
70	26		104			138		
71	28		105			139		
72	27		106			140		
73	27		107			141		
74	28		108			142		
75	26		109			143		
76	25	32.3	110			144		
77	27		111			145		
78	27		112			146		
79	30		113			147		
80	28		114			148		
81	30		115			149		
82	33	32.8	116			150		
83	33		117			151		

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**(BR-2-75) Pile Driving Log**



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 Forward Abutment		90' foot stroke 87' foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-8-2011	Pile Number: 39	
Pile Type: 16X88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	15		84	31		118		
51	14		85	29		119		
52	14		86	29		120		
53	15		87	31	31.8	121		
54	15		88		seconds	122		
55	15		89		0	123		
56	13		90		20	124		
57	16		91		BLOWS	125		
58	15		92			126		
59	15		93			127		
60	15		94	stroke	9.84'	128		
61	15		95			129		
62	18		96			130		
63	19		97			131		
64	20		98			132		
65	22		99			133		
66	24		100			134		
67	25		101			135		
68	25		102			136		
69	25		103			137		
70	28		104			138		
71	28		105			139		
72	27		106			140		
73	28		107			141		
74	29		108			142		
75	26		109			143		
76	27		110			144		
77	27	31.8	111			145		
78	28		112			146		
79	28		113			147		
80	28		114			148		
81	29		115			149		
82	29		116			150		
83	30	31.8	117			151		

1<sup>st</sup> section: 50'  
2<sup>nd</sup> section: 50'

X *[Signature]*

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R BRIDGE 6		23 blows per foot	
SFN: FORWARD ABUTMENT		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-1-2011	Pile Number: 40	
Pile Type: 16K88H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	14		84	32		118		
51	INSPECT WELD		85	33		119		
52	14		86	32	33.0	120		
53	16		87	32	seconds	121		
54	16		88		@	122		
55	17		89		20	123		
56	17		90		BLOWS	124		
57	18		91			125		
58	20		92	stroke	10.62'	126		
59	17		93			127		
60	19		94			128		
61	26		95			129		
62	25		96			130		
63	26		97			131		
64	26		98			132		
65	25		99			133		
66	26		100			134		
67	26		101			135		
68	27		102			136		
69	27		103			137		
70	29		104			138		
71	30		105			139		
72	32		106			140		
73	36	32.7	107			141		
74	35		108			142		
75	35		109			143		
76	34		110			144		
77	34		111			145		
78	31		112			146		
79	31		113			147		
80	32		114			148		
81	34	32.3	115			149		
82	32		116			150		
83	32		117			151		

X

# Non-Viaduct (BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		Pile Drive Length: 28 blows per foot 9.1 foot stroke	
Bridge # <b>b</b>		Stroke Height Verification: <u>Timed</u> / Visual 87 foot per	
Heat #		Final Tip Elevation: 584 ±	
Criteria:			
Substructure Unit: FWD ABVT		Date Driven: 11/29/11	Pile Number: 41
Pile Type: HP 16x88 50'		Wall Thickness: 9/16"	Hammer: D 30
Required Ultimate Bearing: 383.2 k		Batter: N/A	Drop Hammer Ram Weight: 6615
Cutoff Elevation: 683 ±		Ground Elevation: 671 ±	No. of Splices: 1

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure
1			35			69	27	
2			36			70	30	45.38
3			37			71	28	
4			38			72	29	
5			39			73	34	
6			40			74	33	
7			41			75	33	50.75
8			42			76	31	
9			43			77	34	
10			44			78	34	
11			45			79	33	
12			46			80	32	49.75
13			47			81	36	
14			48			82	34	53.19
15			49			83	34	
16			50			84	35	54.84
17			51	12	splice	85	35	
18			52	19		86	36	57.46
19			53	16		87	27	
20			54	15		88		
21			55	17	24.66	89	Stroke	9.92
22			56	16		90		
23			57	16		91		
24			58	18		92		
25			59	18		93		
26			60	22		94		
27			61	20	30.16	95		
28			62	23		96		
29			63	23		97		
30			64	25		98		
31			65	24	35.97	99		
32			66	23		100		
33			67	27		101		
34			68	25		102		

x Joe M. Berger

**(BR-2-75) Pile Driving Log**



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R <b>BRIDGE 6</b>		2.3 blows per foot	
SFN: <b>FORWARD ABUTMENT</b>		9.1 foot stroke 87 foot penetration	
Total Drive Length: <b>87'</b>		Final Tip Elevation: <b>584 ±</b>	
Substructure Unit:	Date Driven: <b>11-22-2011</b>	Pile Number: <b>42</b>	
Pile Type:	Wall Thickness: <b>9/16"</b>	Hammer: <b>D-30</b>	
Required Ultimate Bearing: <b>383.2 KIPS</b>	Batter: <b>N/A</b>	Drop Hammer Ram Weight: <b>6615</b>	
Cutoff Elevation: <b>683. ±</b>	Ground Elevation: <b>671 ±</b>	No. of Splices: <b>1</b>	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	15		84	28		118		
51	16		85	27		119		
52	16		86	29		120		
53	16		87	30	259	121		
54	16		88		KIPS	122		
55	16		89			123		
56	16		90			124		
57	18		91			125		
58	17		92			126		
59	19		93	stroke	9.8"	127		
60	19		94			128		
61	20		95			129		
62	22		96			130		
63	21		97			131		
64	22		98			132		
65	24		99			133		
66	22		100			134		
67	26		101			135		
68	25		102			136		
69	24		103			137		
70	29		104			138		
71	26		105			139		
72	29		106			140		
73	29		107			141		
74	32		108			142		
75	28		109			143		
76	30		110			144		
77	30		111			145		
78	28		112			146		
79	31		113			147		
80	27		114			148		
81	30		115			149		
82	28		116			150		
83	28		117			151		

1<sup>st</sup> section 50'  
 2<sup>nd</sup> section 50'

x *[Signature]*

# Non-Viaduct (BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		Pile Drive Length: 23 blows per foot 9.1 foot stroke	
Bridge # 6		Stroke Height Verification: (Timed) / Visual 87 foot pen.	
Heat #		Final Tip Elevation: 584±	
Criteria: 29 bPF, 9.4 ft stroke 87' ft.			
Substructure Unit: FWD ABUT	Date Driven: 11/29/11	Pile Number: 43	
Pile Type: HP 16X88	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 k <sub>w</sub>	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure
1			35			69	27	
2			36			70	29	43.81
3			37			71	33	
4			38			72	32	
5			39			73	32	
6			40			74	31	
7			41			75	33	50.29
8			42			76	36	
9			43			77	38	
10			44			78	35	
11			45			79	34	
12			46			80	31	46.13
13			47			81	34	
14			48			82	32	49.38
15			49			83	35	
16			50	12		84	34	52.97
17			51	12	splice	85	35	
18			52	10		86	33	51.34
19			53	12		87	33	
20			54	13		88		
21			55	13		89		
22			56	15		90	Stroke 9.4'	
23			57	16		91		
24			58	14		92		
25			59	17		93		
26			60	19	28.15	94		
27			61	22		95		
28			62	21		96		
29			63	24		97		
30			64	25		98		
31			65	23	34.78	99		
32			66	26		100		
33			67	27		101		
34			68	27		102		

Revised Date: 2-14-2011

x Jane M. Bays

Walsh Form 28

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R BRIDGE 6		2.3 blows per foot	
SFN: FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 11-30-2011	Pile Number: 44	
Pile Type: 16x88H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	13		84	35		118		
51	INSPECT WELD		85	36		119		
52	13		86	36		120		
53	13		87	36	32.0	121		
54	14		88		seconds	122		
55	14		89		@	123		
56	14		90		20	124		
57	15		91		BLOW	125		
58	16		92			126		
59	17		93	Stroke	9.97'	127		
60	17		94			128		
61	19		95			129		
62	23		96			130		
63	23		97			131		
64	25		98			132		
65	27		99			133		
66	26		100			134		
67	26		101			135		
68	26		102			136		
69	27		103			137		
70	27		104			138		
71	27		105			139		
72	28		106			140		
73	28		107			141		
74	29		108			142		
75	30		109			143		
76	30		110			144		
77	31		111			145		
78	31		112			146		
79	32		113			147		
80	32	31.63	114			148		
81	33		115			149		
82	35		116			150		
83	36	32.0	117			151		

x Rm 25



(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R BRIDGE 6		23 blows per foot	
SFN: Forward Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-1-2011	Pile Number: 45	
Pile Type: 16x88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6015	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	20		84	39		118		
51	22	INSPECT Wed	85	39		119		
52	23		86	42		120		
53	24		87	40	33.0	121		
54	23		88		seconds	122		
55	22		89		@	123		
56	23		90		20	124		
57	23		91		Blows	125		
58	24		92			126		
59	28		93			127		
60	28		94	stroke	10.62'	128		
61	29		95			129		
62	30		96			130		
63	30		97			131		
64	30		98			132		
65	31		99			133		
66	31		100			134		
67	30		101			135		
68	31		102			136		
69	30		103			137		
70	37		104			138		
71	39		105			139		
72	34	32.7	106			140		
73	37		107			141		
74	37		108			142		
75	38	33.0	109			143		
76	37		110			144		
77	35		111			145		
78	36		112			146		
79	36	33.0	113			147		
80	39		114			148		
81	33		115			149		
82	37		116			150		
83	39		117			151		

x Ron Jones  
 Ken Seitz (SOBAT)

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-8-2011	Pile Number: 46	
Pile Type: 16x88H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing:	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	16		84	37		118		
51	18	INSPECT WELD	85	37		119		
52	18		86	36	32.4	120		
53	18		87		seconds	121		
54	18		88		20	122		
55	17		89		BLOWS	123		
56	18		90			124		
57	19		91			125		
58	19		92	stroke	10.22	126		
59	20		93			127		
60	20		94			128		
61	21		95			129		
62	23		96			130		
63	25		97			131		
64	25		98			132		
65	28		99			133		
66	24		100			134		
67	27		101			135		
68	27		102			136		
69	27		103			137		
70	26		104			138		
71	29		105			139		
72	30	32.0	106			140		
73	30		107			141		
74	32		108			142		
75	32		109			143		
76	30		110			144		
77	29		111			145		
78	32		112			146		
79	30	31.8	113			147		
80	32		114			148		
81	31		115			149		
82	37		116			150		
83	39		117			151		

1st section: 50'  
2nd section: 50'

x Ron W

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		2.3 blows per foot	
SFN: BRIDGE 6 Forward Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-2-2011	Pile Number: 47	
Pile Type: 16X88 H STEEL	Wall Thickness: 9/16	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	16		84	29	32.7	118		
51	16	INSPECT Weld	85	29		119		
52	16		86	30		120		
53	15		87	30	32.7	121		
54	16		88		seconds	122		
55	16		89		@	123		
56	17		90		20	124		
57	18		91		BLOWS	125		
58	19		92			126		
59	20		93	Stroke	10.4 2'	127		
60	21		94			128		
61	19		95			129		
62	21		96			130		
63	23		97			131		
64	25		98			132		
65	24		99			133		
66	24		100			134		
67	24		101			135		
68	27		102			136		
69	27	31.2	103			137		
70	26		104			138		
71	26		105			139		
72	27		106			140		
73	25		107			141		
74	25		108			142		
75	26		109			143		
76	26		110			144		
77	26		111			145		
78	25	32.2	112			146		
79	26		113			147		
80	27		114			148		
81	27		115			149		
82	29		116			150		
83	29		117			151		

x Ken 20

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD ABUTMENT		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584'	
Substructure Unit:	Date Driven: 12-9-2011	Pile Number: 48	
Pile Type: 16x88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 KIPS	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683'	Ground Elevation: 671'	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	13	MINIMUM	84	31		118		
51	14	INSPECT WELD	85	32		119		
52	14		86	30		120		
53	14		87	31	32.6	121		
54	16		88		Seconds	122		
55	16		89		@	123		
56	18		90		20	124		
57	18		91		BLOWS	125		
58	19		92			126		
59	21		93	Stroke	10.35'	127		
60	22		94			128		
61	22		95			129		
62	22		96			130		
63	24		97			131		
64	25		98			132		
65	25		99			133		
66	28		100			134		
67	30		101			135		
68	32		102			136		
69	29	31.9	103			137		
70	29		104			138		
71	28		105			139		
72	27		106			140		
73	28		107			141		
74	28		108			142		
75	29		109			143		
76	30		110			144		
77	30		111			145		
78	31		112			146		
79	29	32.0	113			147		
80	29		114			148		
81	28		115			149		
82	30		116			150		
83	33		117			151		

X

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		2.3 blows per foot	
SFN: BRIDGE 6 Forward Abutment		9.1 foot stroke 87-foot penetration	
Total Drive Length: 89		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-3-2011	Pile Number: 49	
Pile Type: 16 x 88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	10		84	23		118		
51	11	INSPECT WELD	85	23		119		
52	11		86	22		120		
53	13		87	25		121		
54	13		88	25	31.8 e	122		
55	12		89	24	20 BLOWE	123		
56	14		90			124		
57	12		91	STROKE	9.837'	125		
58	13		92			126		
59	13		93			127		
60	14		94			128		
61	18		95			129		
62	16		96			130		
63	17		97			131		
64	18	31.2	98			132		
65	19		99			133		
66	19		100			134		
67	20		101			135		
68	22		102			136		
69	22		103			137		
70	23	32.0	104			138		
71	23		105			139		
72	23		106			140		
73	24		107			141		
74	26		108			142		
75	24		109			143		
76	24		110			144		
77	23		111			145		
78	22		112			146		
79	22		113			147		
80	22		114			148		
81	22	31.5	115			149		
82	23		116			150		
83	24		117			151		

1<sup>st</sup> section: 50'  
2<sup>nd</sup> section: 50'

*[Handwritten signature]*

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD ABUTMENT		2.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-10-11	Pile Number: 50	
Pile Type: 16 x 88# STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	10		84	25		118		
51	10	INSPECT WELD	85	25		119		
52	10		86	25		120		
53	11		87	25	32.4	121		
54	12		88		seconds	122		
55	12		89		6	123		
56	12		90		20	124		
57	13		91		BLOWS	125		
58	13		92			126		
59	14		93	stroke	10.22'	127		
60	15		94			128		
61	14		95			129		
62	17		96			130		
63	16		97			131		
64	19		98			132		
65	19		99			133		
66	21		100			134		
67	22		101			135		
68	22		102			136		
69	25	31.6	103			137		
70	21		104			138		
71	22		105			139		
72	23		106			140		
73	24		107			141		
74	23		108			142		
75	23		109			143		
76	21		110			144		
77	25		111			145		
78	23		112			146		
79	24		113			147		
80	23		114			148		
81	22		115			149		
82	24		116			150		
83	24	32.4	117			151		


*Ken Seely (SOMAT)*

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 Forward Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length:		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-3-2011	Pile Number: 51	
Pile Type: 16x88	Wall Thickness: 9/16	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671.00 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	17		84	26		118		
51	17	Inspect Wed	85	30		119		
52	17		86	30	32.8	120		
53	16		87	31	Seconds	121		
54	18		88		10	122		
55	18		89		20	123		
56	21		90		BLOWS	124		
57	22		91			125		
58	23		92	stroke	10.49'	126		
59	25		93			127		
60	26		94			128		
61	25		95			129		
62	26		96			130		
63	24		97			131		
64	25		98			132		
65	28		99			133		
66	27		100			134		
67	27		101			135		
68	27		102			136		
69	28	32.9	103			137		
70	28		104			138		
71	29		105			139		
72	29		106			140		
73	29		107			141		
74	28		108			142		
75	29		109			143		
76	30		110			144		
77	30		111			145		
78	29		112			146		
79	28		113			147		
80	30		114			148		
81	29		115			149		
82	29		116			150		
83	26	32.8	117			151		

X   
 Ron Seitz (SONAT)

### (BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-6-2011	Pile Number: 52	
Pile Type: 16 X 88 H STEEL	Wall Thickness: 9/16	Hammer: D-30	
Required Ultimate Bearing: 383.2 KIPS	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	17		84	28		118		
51	15	Inspect Weld	85	25		119		
52	16		86	25		120		
53	16		87	29	32.2	121		
54	15		88		Seconds	122		
55	16		89		@	123		
56	18		90		20 Blows	124		
57	18		91			125		
58	19		92		stroke 10.09'	126		
59	21		93			127		
60	20		94			128		
61	22		95			129		
62	23		96			130		
63	21		97			131		
64	24		98			132		
65	22		99			133		
66	23		100			134		
67	22		101			135		
68	29		102			136		
69	27	32.4	103			137		
70	31		104			138		
71	29		105			139		
72	29		106			140		
73	32		107			141		
74	33		108			142		
75	34		109			143		
76	27		110			144		
77	31		111			145		
78	31		112			146		
79	27		113			147		
80	28		114			148		
81	29		115			149		
82	30		116			150		
83	30	32.0	117			151		

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(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: BRIDGE 6 FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-10-2011	Pile Number: 53	
Pile Type: 16x88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 Kips	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	10	W W W W W W	84	29		118		
51	10	INSPECT Weld	85	28		119		
52	10		86	30		120		
53	12		87	31	32.3	121		
54	12		88		Seconds	122		
55	13		89		(w)	123		
56	12		90		20	124		
57	15		91		BLOWS	125		
58	16		92			126		
59	16		93	stroke	10.16'	127		
60	17		94			128		
61	17		95			129		
62	17		96			130		
63	17		97			131		
64	19		98			132		
65	19		99			133		
66	23		100			134		
67	24		101			135		
68	26		102			136		
69	29	32.2	103			137		
70	23		104			138		
71	28		105			139		
72	28		106			140		
73	27		107			141		
74	27		108			142		
75	28		109			143		
76	30		110			144		
77	26		111			145		
78	26		112			146		
79	27		113			147		
80	29		114			148		
81	29		115			149		
82	29		116			150		
83	28	32.4	117			151		

*Ken Seitz (SONAT)*

(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: Bridge 6 Forward Abutment		9-1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584 ±	
Substructure Unit:	Date Driven: 12-10-2011	Pile Number: 54	
Pile Type: 16 x 88 H STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683 ±	Ground Elevation: 671 ±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50	11		84	28		118		
51	12	INSPECT Weld	85	27		119		
52	14		86	(28)		120		
53	15		87	(27)	32.3	121		
54	16		88			122		
55	17		89	stroke	10.16'	123		
56	18		90			124		
57	20		91			125		
58	20		92			126		
59	20		93			127		
60	18		94			128		
61	19		95			129		
62	18		96			130		
63	18		97			131		
64	20		98			132		
65	20		99			133		
66	21		100			134		
67	22		101			135		
68	23		102			136		
69	25	32.2	103			137		
70	25		104			138		
71	24		105			139		
72	24		106			140		
73	30		107			141		
74	28		108			142		
75	28		109			143		
76	30		110			144		
77	31		111			145		
78	29		112			146		
79	26		113			147		
80	26		114			148		
81	28		115			149		
82	27		116			150		
83	27	32.7	117			151		

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(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: Bridge 6 Forward Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584±	
Substructure Unit:	Date Driven: 12/12/2011	Pile Number: 55	
Pile Type: 16 x 58 # STEEL	Wall Thickness: 9/16"	Hammer: D-30	
Required Ultimate Bearing: 383.2 KIPS	Batter: N/A	Drop Hammer Ram Weight: 61015	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure
50			84	24		118		
14 51 INS	PECT	WELD	85	25		119		
52	15		86	24		120		
53	17		87	27	32.6	121		
54	17		88		seconds	122		
55	19		89		6	123		
56	19		90		25	124		
57	19		91		BLOW	125		
58	19		92			126		
59	19		93	stroke	10.35'	127		
60	19		94			128		
61	19		95			129		
62	20		96			130		
63	22		97			131		
64	22		98			132		
65	23		99			133		
66	24		100			134		
67	24		101			135		
68	25	32.3	102			136		
69	25		103			137		
70	25		104			138		
71	27		105			139		
72	25		106			140		
73	25		107			141		
74	26		108			142		
75	27		109			143		
76	27		110			144		
77	27		111			145		
78	26		112			146		
79	26		113			147		
80	24		114			148		
81	25		115			149		
82	25		116			150		
83	25		117			151		

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(BR-2-75) Pile Driving Log



Project No: 10-3000		County-Route-Section: CUY-90-14.90	
Bridge No: CUY-90-1651R		23 blows per foot	
SFN: Bridge 6 FORWARD Abutment		9.1 foot stroke 87 foot penetration	
Total Drive Length: 87'		Final Tip Elevation: 584±	
Substructure Unit:	Date Driven: 12/12/11	Pile Number: 56	
Pile Type: 16x88 H STEEL	Wall Thickness: 9/16	Hammer: D-30	
Required Ultimate Bearing: 383.2	Batter: N/A	Drop Hammer Ram Weight: 6615	
Cutoff Elevation: 683±	Ground Elevation: 671±	No. of Splices: 1	

Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/Ft	Stroke or Pressure	Penetration	Blows/ft	Stroke or Pressure
50			84	24	31.7	118		
51	INSPECT WELDS		85	26		119		
52			86	28		120		
53	16		87	29	31.6	121		
54	16		88		Seconds	122		
55	18		89		20	123		
56	17		90		BLOWS	124		
57	18		91			125		
58	18		92			126		
59	18		93			127		
60	18		94	stroke	9.71'	128		
61	18		95			129		
62	20		96			130		
63	22		97			131		
64	20		98			132		
65	20		99			133		
66	21		100			134		
67	22		101			135		
68	23		102			136		
69	22		103			137		
70	22		104			138		
71	24		105			139		
72	23		106			140		
73	23		107			141		
74	23		108			142		
75	22		109			143		
76	23		110			144		
77	23		111			145		
78	21		112			146		
79	22		113			147		
80	24		114			148		
81	23		115			149		
82	22		116			150		
83	23		117			151		

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