

(25)

JOB # 31435

GS 15 MODEM 2m Pole

PT # DESC

1-3 SET 1/2" REBAR w/ALUM CAP

318,319 SET 60D NAIL

SJB 2 START TIE

J. FONTENOT

M. PRUETT 11/9/16

(26)

Processed by A.M.B

Filename : 31435c3 110916 Modem

Control File : Control for Bridge 008970

Anthony B.

11/11/16

27

JOB # 31435

BASE @ 3 CS 15 TRJ. POD

HI = 1.175M SATEL RADIO

PT #	DESC
319	TZE
308	"X" IN CONC WALK WAY
309	"X" IN CONC WALK WAY
316	"X" IN CONC WALK WAY
317	"X" IN CONC WALK WAY
320	"X" IN CONC SLAB
321	SET 600 MARK
319	TZE

J. FONTENOT

M. PRUETT

11/10/16

28

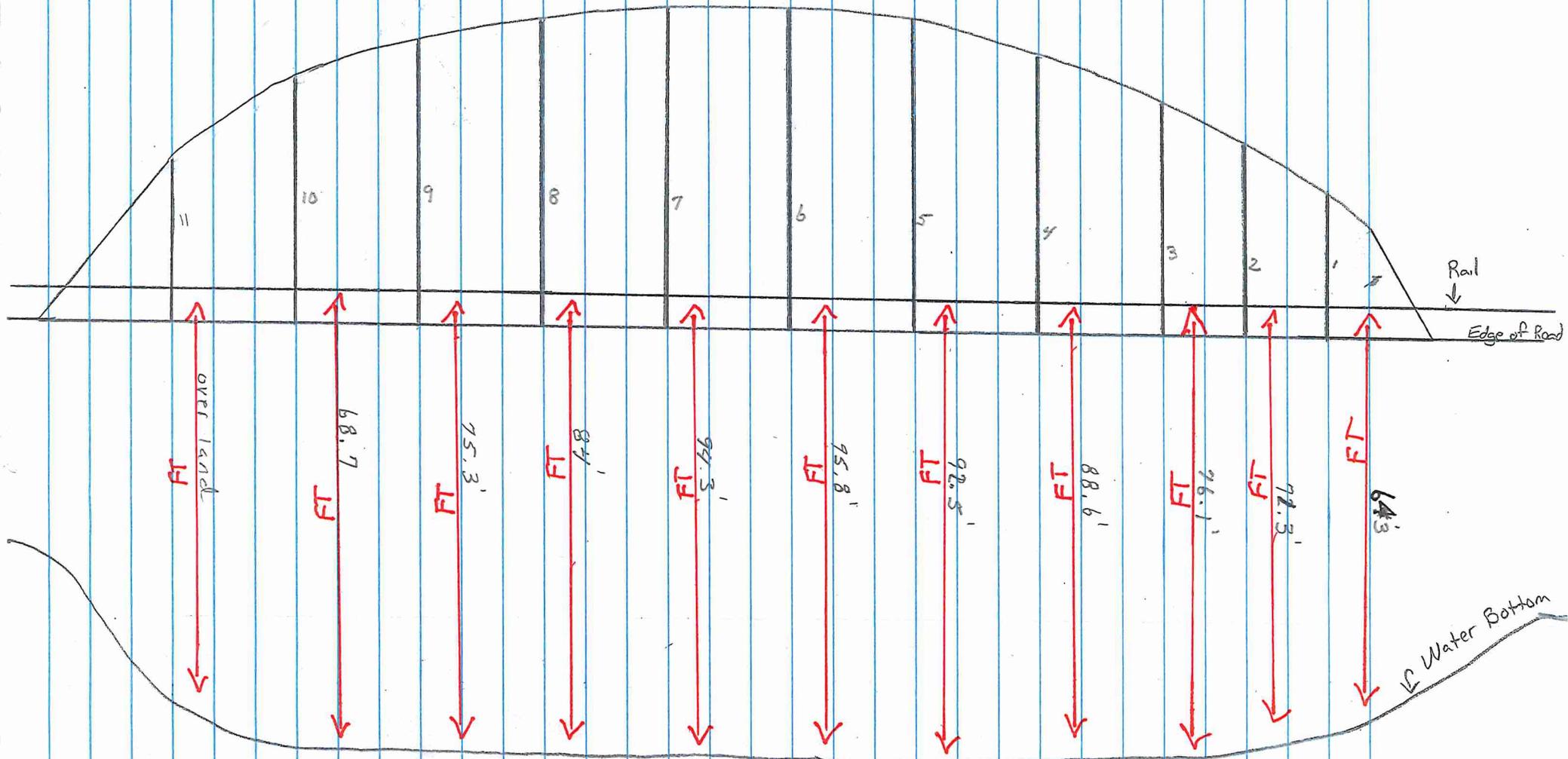
Processed by A.M.B

File name: 31435c3111016RTK

Control File name: Control for Bridge 008970

11/11/16

Cross Section of the Charenton River



Bridge 008970

AX1202				
Base @ HI		FS	DESC	
1	1.210	2	TIE $\frac{1}{2}$ " IR w/	
		308	"X" in Conc	
		309	" " "	
		316	" " "	
		317	" " "	
		2	TIE	
		2	TIE	
		308	"X" in Conc.	
		309	" " "	
		316	" " "	
		317	" " "	
		308	"X" in Conc	
		309	" " "	
		316	" " "	
		317	" " "	
		2	TIE	

R. Gillingham
T. Dupre
T. Allen

54
11-28-16
Cldy 60°

Silver Cap

Processed by A.M.B

Filename: 31435cd 112916RTK

Calvin B.

11/30/16

35

31435

π	HZ	ES	FS	DESC
308	5.00	309	317, 308 ³⁰⁹	TJE
			310-315	X IN CONC
			308 ³⁰⁹	TJE

J. FONTENOT
M. PRUITT

36

11/29/16

Processed by A.M.B

Filename: 31435c3 11/29/16 TPS

Allyn B

11/30/16

(33)

31435

BASE @ 1 AX 1202 TRI-POD

HI = 1.21 M SATEL RADIO

J. FONTENOT

M. PROFFT

11/28/16

(34)

PT #	DESCRIPTION
2, 3	TZE
318	SET 60 D NAZL
320	"X" IN LONG SLAB
321	SET 60 D NAZL
319	SET 60 D NAZL
320	SET 60 D NAZL
2	TZE

Processed by A.M.B

Filename: 31435c3112816 RTK

11/30/16

37)

31435

π	HZ	RS	FS	DESC
1	5.69	2	2	TIF
			3/8	SET LOD NAIL
			2	TIF

S. FONTENOT

M. PRUETT

11/30/16

38

Processed by A.M.B

Filename: 31435c311/3016 TFS

Anthony B.

12/4/16



318

309

312

311

310

311

312

313

314

315

316

320

316

319

317

321

bridge 008970 rl.txt

10/5/2017

Status: VALID Registration

Mean Absolute Error:

for Enabled Constraints = 0.016 ft

for Disabled Constraints = 0.000 ft

Date: 2017.10.05 10:31:16

Database name : bridge 008970

ScanWorlds

bridge 008970.txt (Leveled)

1: SW-001 (Leveled)

2: SW-002 (Leveled)

3: SW-004 (Leveled)

320: SW-003 (Leveled)

Constraints

Name	ScanWorld	ScanWorld	Type	On/Off	Weight	Error	Error Vector	Horz	Vert
319	bridge 008970.txt (Leveled)	3: SW-004 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.040 ft	(0.024, 0.017, -0.027) ft	0.029 ft	-0.027 ft
3	bridge 008970.txt (Leveled)	3: SW-004 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.023 ft	(-0.017, -0.013, 0.011) ft	0.021 ft	0.011 ft
3	bridge 008970.txt (Leveled)	320: SW-003 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.014 ft	(-0.010, -0.008, -0.006) ft	0.013 ft	-0.006 ft
2	bridge 008970.txt (Leveled)	1: SW-001 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.008 ft	(0.004, 0.007, -0.001) ft	0.008 ft	-0.001 ft
2	bridge 008970.txt (Leveled)	2: SW-002 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.013 ft	(0.006, 0.010, 0.004) ft	0.012 ft	0.004 ft
1	bridge 008970.txt (Leveled)	1: SW-001 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.008 ft	(-0.004, -0.007, 0.001) ft	0.008 ft	0.001 ft
1	bridge 008970.txt (Leveled)	2: SW-002 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.013 ft	(-0.006, -0.010, -0.004) ft	0.012 ft	-0.004 ft
320	bridge 008970.txt (Leveled)	320: SW-003 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.023 ft	(0.003, 0.004, 0.022) ft	0.004 ft	0.022 ft
1	1: SW-001 (Leveled)	2: SW-002 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.006 ft	(-0.002, -0.003, -0.005) ft	0.004 ft	-0.005 ft
2	1: SW-001 (Leveled)	2: SW-002 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.006 ft	(0.002, 0.003, 0.005) ft	0.004 ft	0.005 ft
3	3: SW-004 (Leveled)	320: SW-003 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.019 ft	(0.007, 0.005, -0.017) ft	0.008 ft	-0.017 ft

ScanWorld Transformations

bridge 008970.txt (Leveled)

translation: (0.000, 0.000, 0.000) ft

rotation: (0.0000, 1.0000, 0.0000):0.000 deg

1: SW-001 (Leveled)

translation: (3215788.765, 482043.587, 16.691) ft

rotation: (0.0000, 0.0000, 1.0000):-152.836 deg

2: SW-002 (Leveled)

translation: (3215849.117, 482144.529, 17.665) ft

rotation: (0.0000, 0.0000, 1.0000):-167.165 deg

3: SW-004 (Leveled)

translation: (3216143.428, 481954.964, 16.746) ft

rotation: (-0.0000, -0.0000, -1.0000):24.474 deg

320: SW-003 (Leveled)

translation: (3216085.007, 481873.541, 16.607) ft

rotation: (0.0000, 0.0000, 1.0000):63.134 deg

Unused ControlSpace Objects

bridge 008970.txt (Leveled):

Vertex : TargetID : 309

Vertex : TargetID : 310

Vertex : TargetID : 311

Vertex : TargetID : 312

Vertex : TargetID : 313

Vertex : TargetID : 314

Vertex : TargetID : 315

Vertex : TargetID : 316

Vertex : TargetID : 317

Vertex : TargetID : 318

Vertex : TargetID : 321

bridge 008970 r2.txt

10/5/2017

Status: VALID Registration

Mean Absolute Error:

for Enabled Constraints = 0.012 ft

for Disabled Constraints = 0.000 ft

Date: 2017.10.05 10:31:40

Database name : bridge 008970

ScanWorlds

bridge 008970.txt (Leveled)

311: SW-008 (Leveled)

312: SW-002 (Leveled)

313: SW-007 (Leveled)

315: SW-005 (Leveled)

316: SW-004 (Leveled)

Constraints

Name	ScanWorld	ScanWorld	Type	On/Off	Weight	Error	Error Vector	Horz	Vert
313	bridge 008970.txt (Leveled)	311: SW-008 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.016 ft	(0.004, -0.003, 0.015) ft	0.005 ft	0.015 ft
313	bridge 008970.txt (Leveled)	313: SW-007 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.009 ft	(0.003, -0.002, 0.008) ft	0.003 ft	0.008 ft
315	bridge 008970.txt (Leveled)	313: SW-007 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.006 ft	(-0.005, 0.003, -0.002) ft	0.006 ft	-0.002 ft
315	bridge 008970.txt (Leveled)	315: SW-005 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.011 ft	(-0.009, 0.005, -0.004) ft	0.010 ft	-0.004 ft
316	bridge 008970.txt (Leveled)	315: SW-005 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.012 ft	(0.005, -0.003, 0.010) ft	0.006 ft	0.010 ft
316	bridge 008970.txt (Leveled)	316: SW-004 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.015 ft	(-0.002, 0.001, 0.015) ft	0.002 ft	0.015 ft
317	bridge 008970.txt (Leveled)	316: SW-004 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.022 ft	(0.009, -0.006, -0.019) ft	0.011 ft	-0.019 ft
312	bridge 008970.txt (Leveled)	312: SW-002 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.009 ft	(-0.008, 0.005, -0.001) ft	0.009 ft	-0.001 ft
311	bridge 008970.txt (Leveled)	311: SW-008 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.024 ft	(-0.006, 0.004, -0.023) ft	0.007 ft	-0.023 ft
310	bridge 008970.txt (Leveled)	312: SW-002 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.009 ft	(0.008, -0.005, 0.001) ft	0.009 ft	0.001 ft
313	311: SW-008 (Leveled)	313: SW-007 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.008 ft	(-0.002, 0.001, -0.008) ft	0.002 ft	-0.008 ft
315	313: SW-007 (Leveled)	315: SW-005 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.005 ft	(-0.004, 0.002, -0.002) ft	0.004 ft	-0.002 ft
316	315: SW-005 (Leveled)	316: SW-004 (Leveled)	Coincident: Vertex - Vertex	On	1.0000	0.010 ft	(-0.007, 0.004, 0.004) ft	0.008 ft	0.004 ft

ScanWorld Transformations

bridge 008970.txt (Leveled)

translation: (0.000, 0.000, 0.000) ft

rotation: (0.0000, 1.0000, 0.0000):0.000 deg

311: SW-008 (Leveled)

translation: (3215910.405, 482057.057, 64.370) ft

rotation: (0.0000, 0.0000, 1.0000):-112.811 deg

312: SW-002 (Leveled)

translation: (3215940.670, 482009.431, 64.724) ft

rotation: (-0.0000, -0.0000, -1.0000):-133.949 deg

313: SW-007 (Leveled)

translation: (3215995.217, 482005.839, 64.663) ft

rotation: (-0.0000, -0.0000, -1.0000):59.446 deg

315: SW-005 (Leveled)

translation: (3216081.555, 481953.757, 64.420) ft

rotation: (0.0000, 0.0000, 1.0000):83.923 deg

316: SW-004 (Leveled)

translation: (3216154.723, 481909.541, 63.415) ft

rotation: (-0.0000, -0.0000, -1.0000):23.895 deg

Unused ControlSpace Objects

bridge 008970.txt (Leveled):

Vertex : TargetID : 1

Vertex : TargetID : 2

Vertex : TargetID : 3

Vertex : TargetID : 309

bridge 008970 r2.txt

10/5/2017

Vertex : TargetID : 314
Vertex : TargetID : 318
Vertex : TargetID : 319
Vertex : TargetID : 320
Vertex : TargetID : 321

State Project No. H.007020
 Historic Bridge Inventory

SJB Group performed terrestrial laser scanning and created deliverables in accordance with HAER 4.0 Measured Drawings for six bridges throughout Louisiana. The six bridges surveyed under this contract were bridge numbers 008970, 009130, 014900, 058710, 200865 and 200896. The following sections are a description of the equipment and procedures used for this project.

Section I – Equipment

The equipment used in the establishment of the primary control network for this project was manufactured by Leica. Real-time kinematic GPS observations were collected using a Leica GS15 Smart Antenna “Performance” and CS15 3.5G Field Controller. Figure 12 is an image of the equipment used.



Figure 1: Photograph of Leica TS15 Total Station and Leica CS/GS15 GPS uni

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Below is a table of the serial numbers for the equipment used for this project.

Description	Model Number	Serial Number
Leica ScanStation	C10	1260997
Leica Base	GS15	1508955
Leica Rover	GS15	1509134
Leica Controller	CS15	25022556

Section II – Field Procedures

Marks set via real-time kinematic GPS observations were established through a series of ten (10) second observations. Each mark was occupied three (3) times throughout the day from at least two (2) different base stations for a total of six (6) observations. Primary control marks were periodically cross checked throughout the day to ensure an accurate basis of measurement.

Section III – Equipment

Scanning was performed with the Leica ScanStation C-10, serial number 120997, in conjunction with HDS 6 inch circular planar fixed height (1.472 meters) targets



Figure 2: Photograph of Leica ScanStation C10

Section IV – Field Procedures

Scanning observations were made by independent instrument locations which included a minimum of four HDS targets on Secondary Control Marks. At each scanning location the C10 collects observed data relative to the instrument and builds a data set which identifies the HDS target marks. Each data set is called a “Scan World” for the purposes of computation.

Section V – Data Processing

The separate Scan Worlds were “registered” using Leica Cyclone Version 8.0 software which merges the independent observations by resection and statistical comparison of the State Plane values associated with each of the HDS target locations. The State Plane resolution data set which merges all scanned information is presented in Appendix “E.” TopoDOT version 9.0.0.0 was used to extract features from the point cloud registered in Leica Cyclone.