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Arizona Water Company
W-01445A-15-0277

Amendment to Application

PART 9 OF 12

Arizona Corporation Commission
DOCKETED

AUG 21 2015

DOCKETED BY

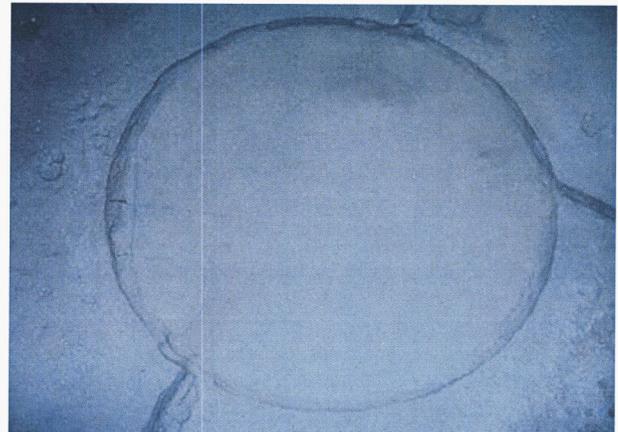
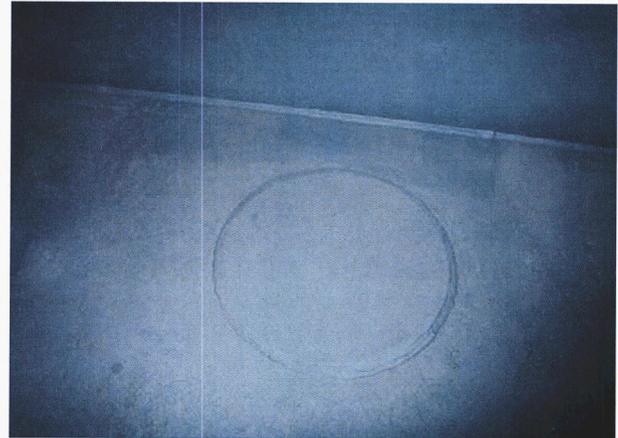
INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning
Interior Floor



Company:	Arizona Water Company	Report No.	9	Page	3
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	April 6th 2015		

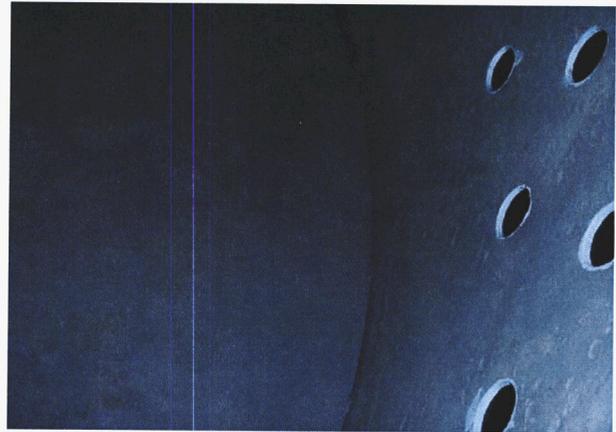
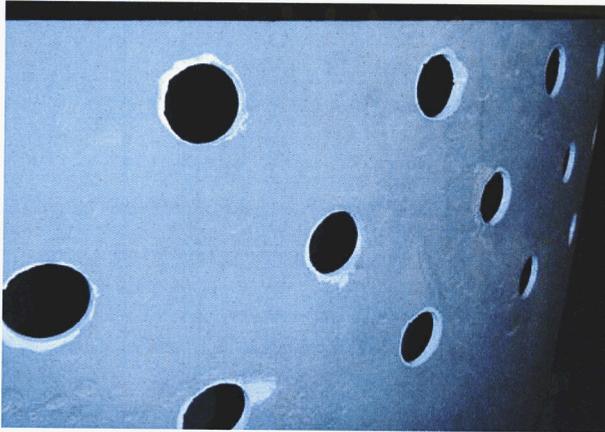
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Surface Preparation In Accordance With An SSPC-SP10 Near White Metal Blast Cleaning
Interior Floor



Company:	Arizona Water Company	Report No.	9	Page	4
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	April 6th 2015		

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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Surface Profile Measurements - Testex Extra Course Replica Tape



Company:	Arizona Water Company	Report No.	9	Page	5
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	April 6th 2015		

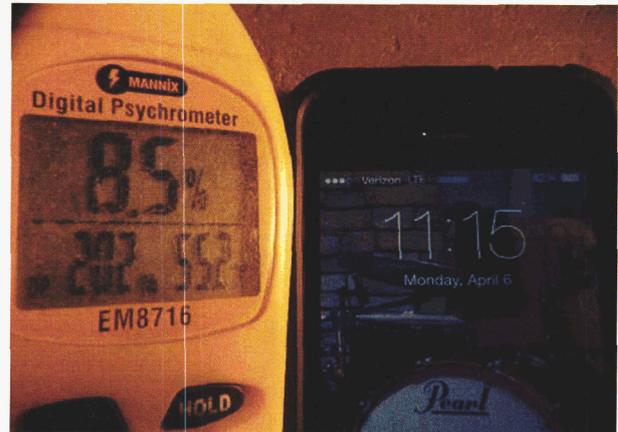
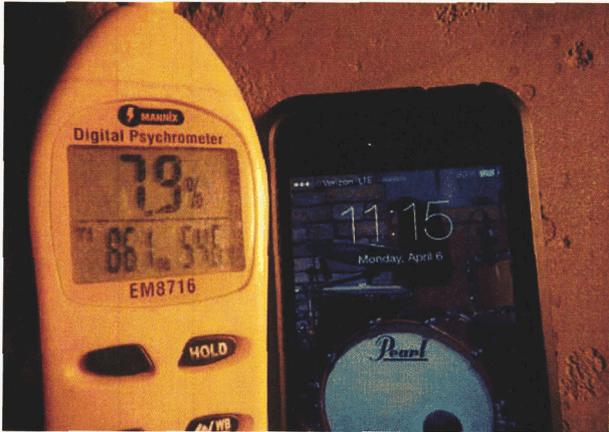
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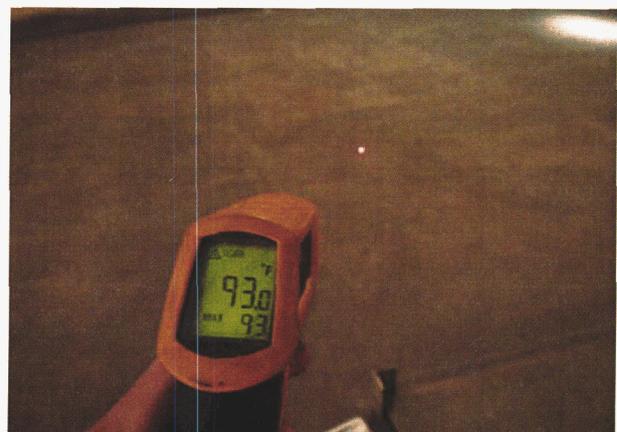
Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Environmental Conditions



Surface Temperatures



Company:	Arizona Water Company	Report No.	9	Page	6
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	April 6th 2015		

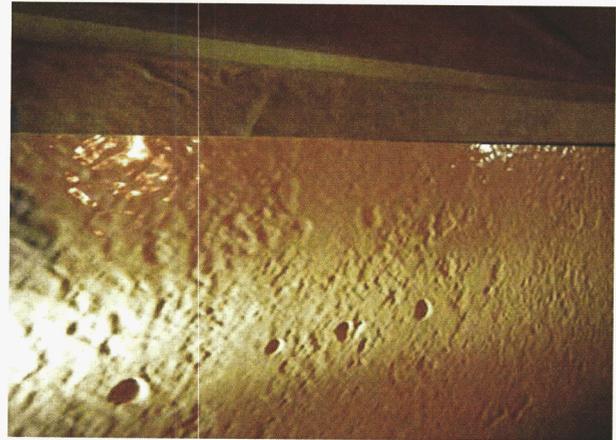
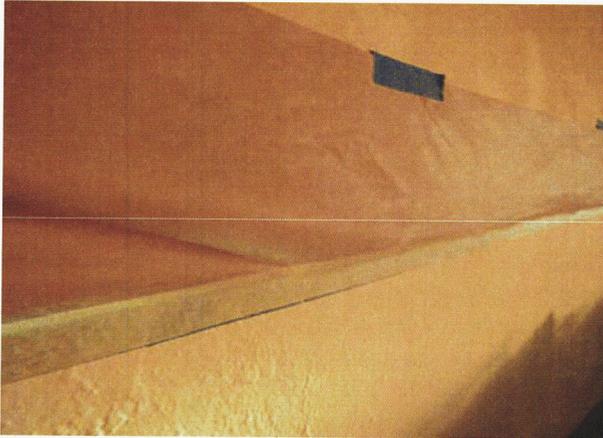
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Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

Masking Of Lower Shell Prior To Coating Application



Insufficient Abrasion At The Termination Point



Company:	Arizona Water Company	Report No.	9	Page	7
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	April 6th 2015		

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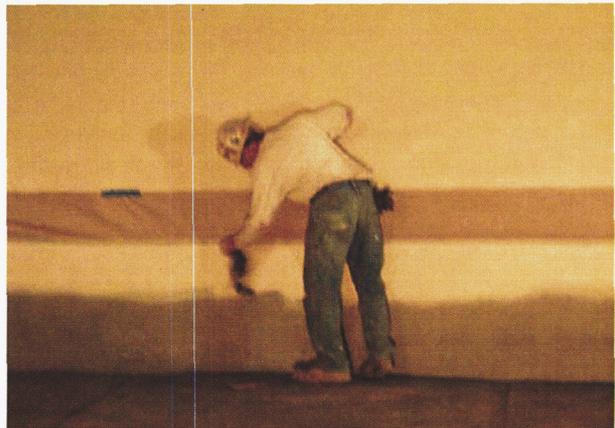
Paint Inspection Photo Documentation

Cottonwood Lane Tank Rehabilitation

SSPC-SP 3 Power Tool Cleaning - Termination



SSPC-S01 Solvent Wipe Of Termination



Company:	Arizona Water Company	Report No.	9	Page	7
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Phoenix, Arizona	Date:	April 6th 2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC
CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

April 13th, 2015

James T. Wilson P.E.
Senior Engineer
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

I performed a surface preparation inspection for this project on the above-mentioned date. This report documents the work activities of this site visit.

A surface preparation inspection was done on the exterior roof of the tank. The roof sheets are new so they were zinc coated on a different site. The contractors used an SSPC-SP 3 Power Tool Cleaning standard to grind the weld seams on the roof exterior. Contractors will stripe coat all weld seams with Carboline Carboguard 891. This will be applied with rollers and brushes due to the residential surrounding area. An intermediate coat of Carboline Carboguard 891 will be rolled on after stripe coating is completed. Top coat will be Carboline Carbothane 133 HB. Photo documentation will follow in this report.

Respectfully,



Kevin Osterhaus
Certified NACE Level II Coating Inspector #51,484



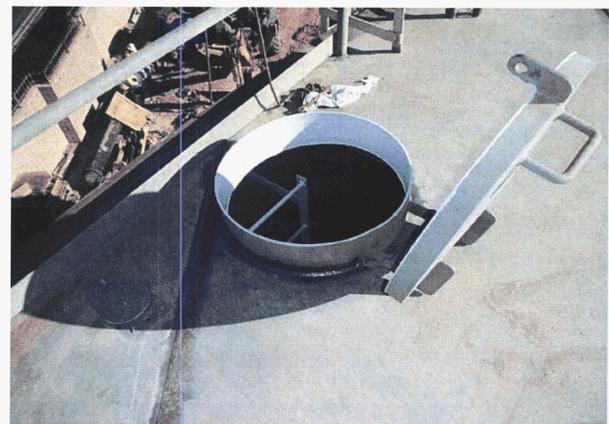
Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

New Exterior Roof (Carboline Carbozinc 859.)



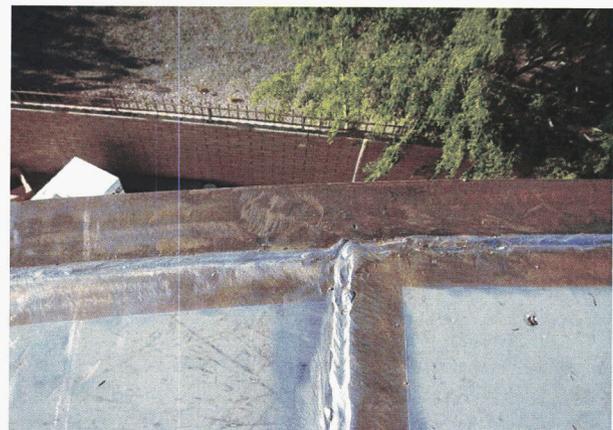
Company:	Arizona Water Company	Report No.	11	Page	2
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/13/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Exterior Weld Seams Grinded (SSPC-SP 3 Power Tool Cleaning)



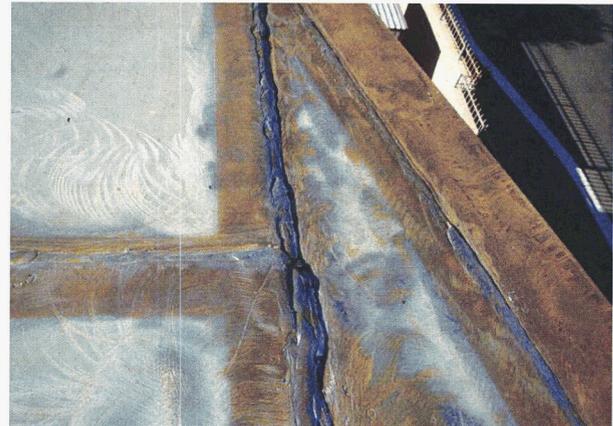
Company:	Arizona Water Company	Report No.	11	Page	3
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/13/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Exterior Weld Seams Grinded (SSPC-SP 3 Power Tool Cleaning)



Company:	Arizona Water Company	Report No.	11	Page	4
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/13/2015		

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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Power Tools Utilized (Makita Power Grinder)



Company:	Arizona Water Company	Report No.	5	Page	5
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/13/2015		

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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Solvent Cleaning (SSPC-SP 1 Solvent Wipe Cleaning)



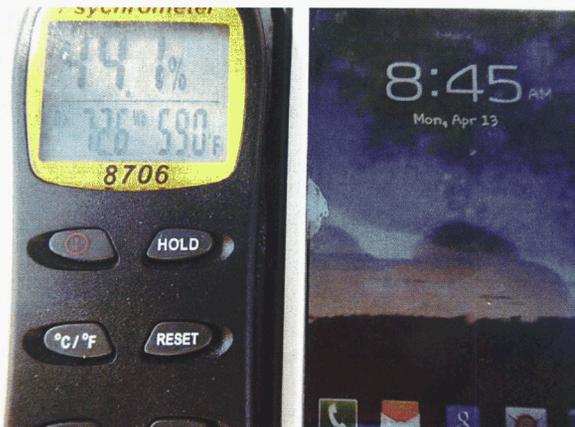
Company:	Arizona Water Company	Report No.	11	Page	6
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/13/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Carboline Carboguard 891 Mixing In Process



Company:	Arizona Water Company	Report No.	11	Page	7
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/13/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Carboline Carboguard 891 Stripe Coat Application



Company:	Arizona Water Company	Report No.	11	Page	8
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/13/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

April 16th, 2015

James T. Wilson P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

I performed an existing coating, spot prime coat and intermediate coating inspection for this project on the above-mentioned date. This report documents the work activities of this site visit.

An existing coating inspection was done on the exterior shell of the tank. The entire exterior coating system was power washed prior according to method SSPC-SP12/NACE5 LPWC (low pressure water cleaning of 5000 psi or less). This water cleaning removed dirt, contaminants and chalking prior to the new top coat application. Post power washing, the contractors spot coated the exterior shell with Carboline Carbomastic 15. Contractors will roll on Carboline Carbothane 133 HB. Photo documentation will follow in this report.

Respectfully,



Kevin Osterhaus
Certified NACE Level II Coating Inspector #51,484



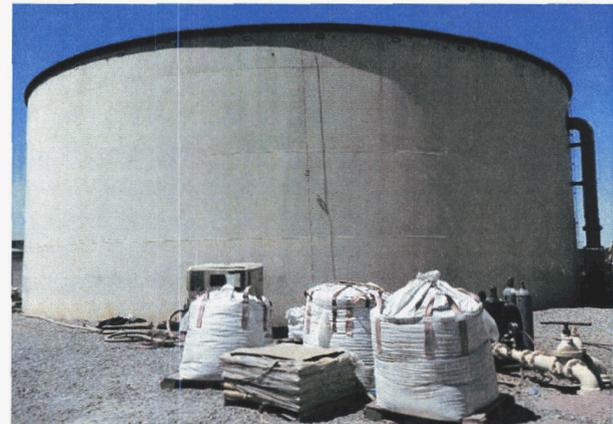
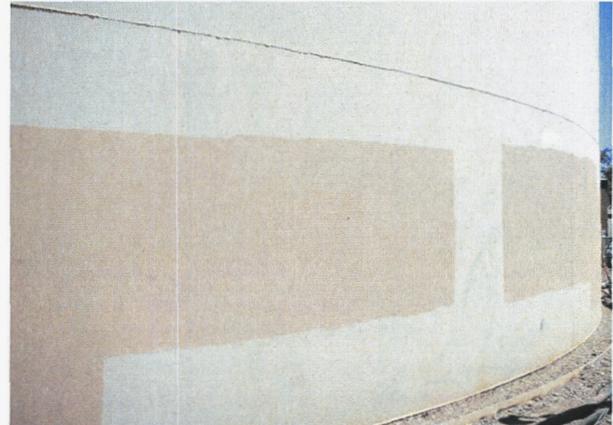
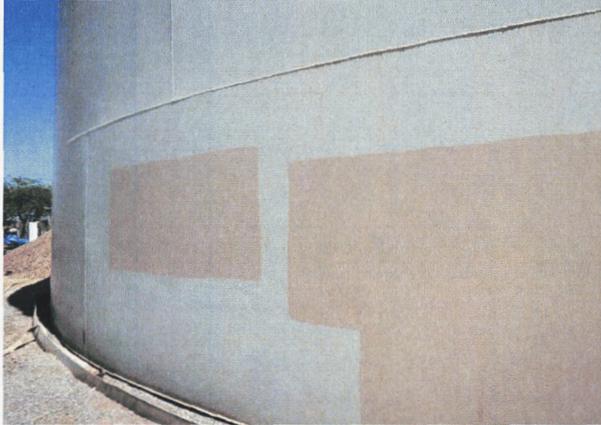
Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Existing Exterior Prior To Power Washing (April 7th 2014)



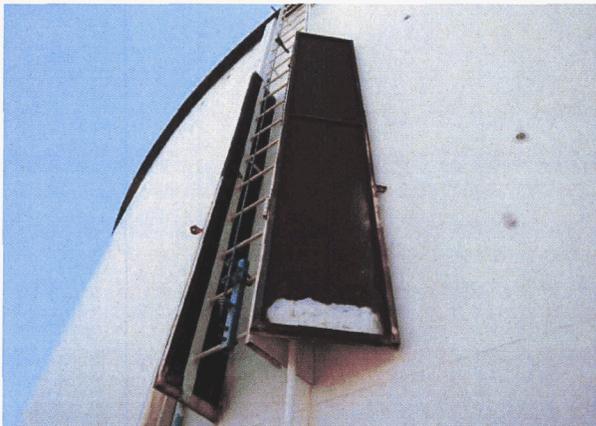
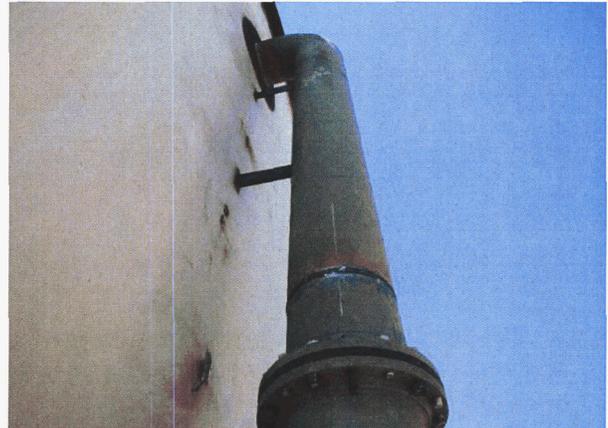
Company:	Arizona Water Company	Report No.	12	Page	2
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/16/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Existing Exterior Prior To Power Washing (April 7th 2014)



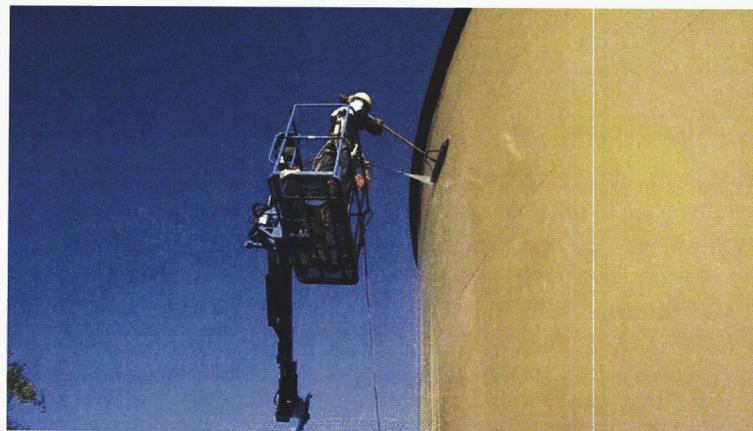
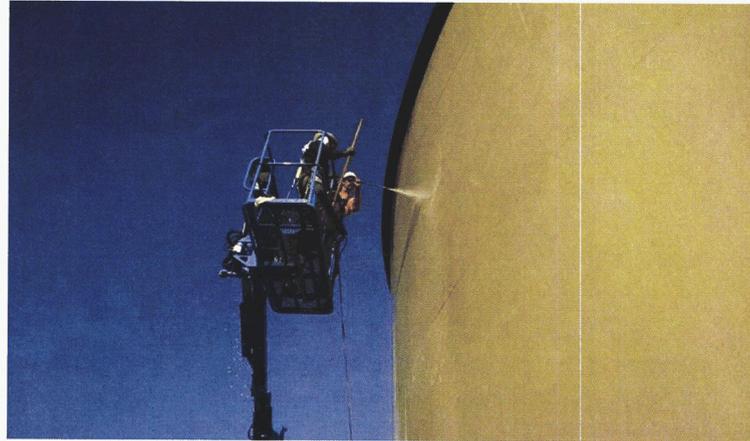
Company:	Arizona Water Company	Report No.	12	Page	3
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/16/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Power Washing (Pictures Supplied By Contractor 4/15/2015)



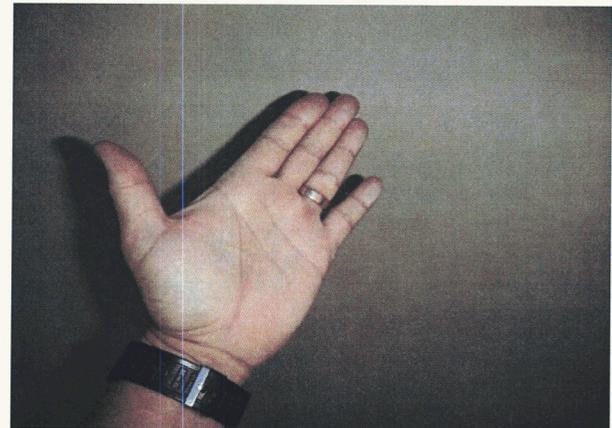
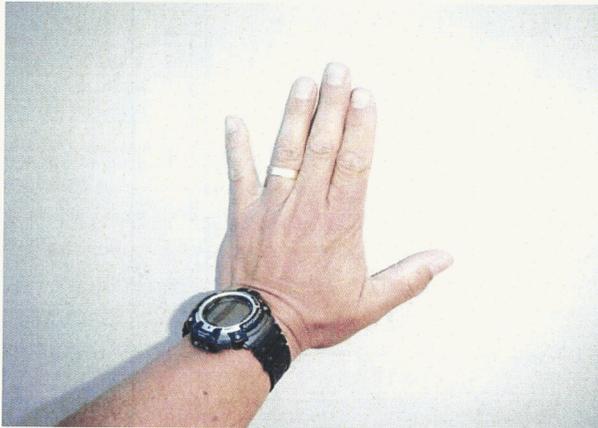
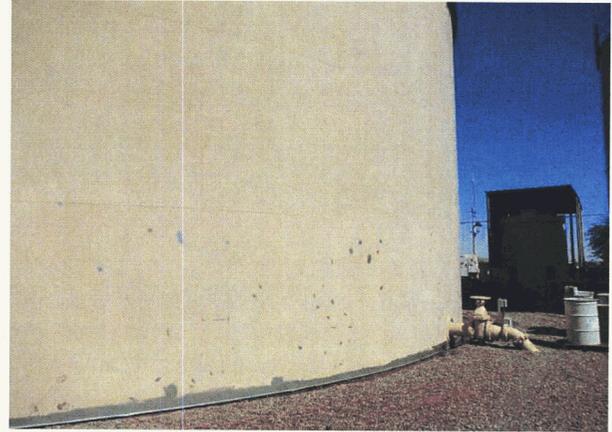
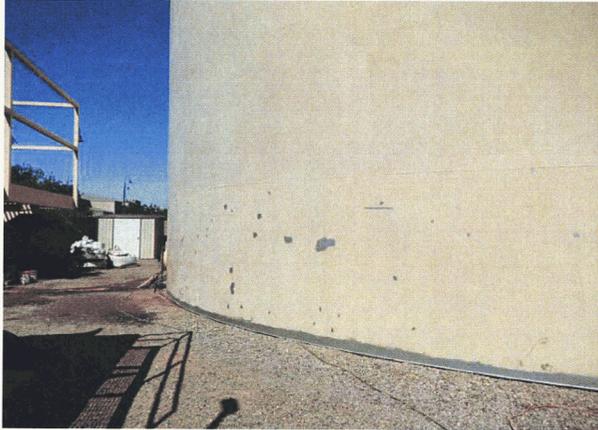
Company:	Arizona Water Company	Report No.	12	Page	4
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/15/2015		

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Paint Inspection Photo Documentation

Power Washed Exterior



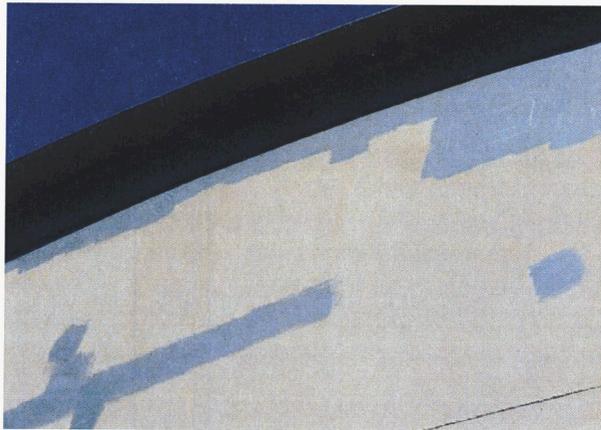
Company:	Arizona Water Company	Report No.	12	Page	5
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/16/2015		

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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Exterior Spot Priming (Carboline Carbomastic 15)



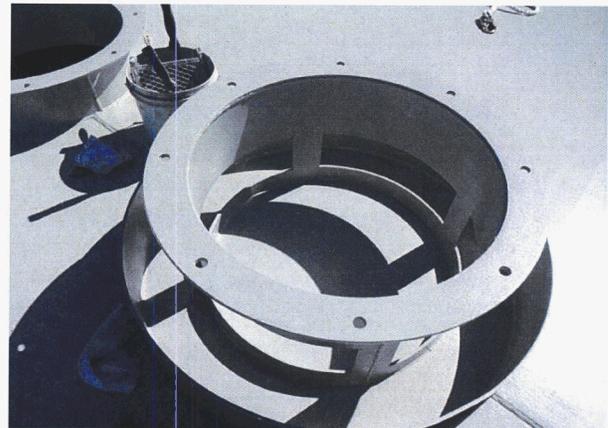
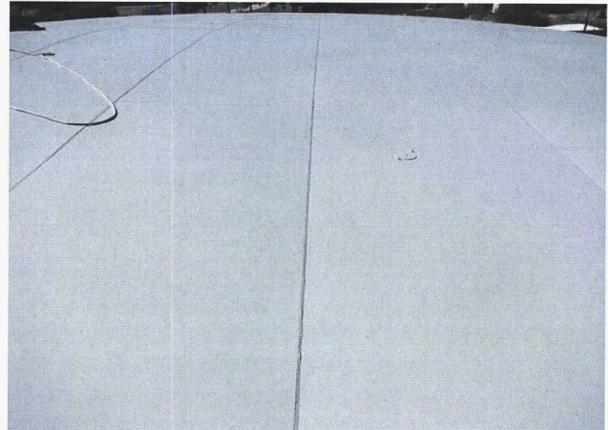
Company:	Arizona Water Company	Report No.	12	Page	6
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/16/2015		

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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Exterior Roof Intermediate Coat (Carboline Carbogaurd 891)



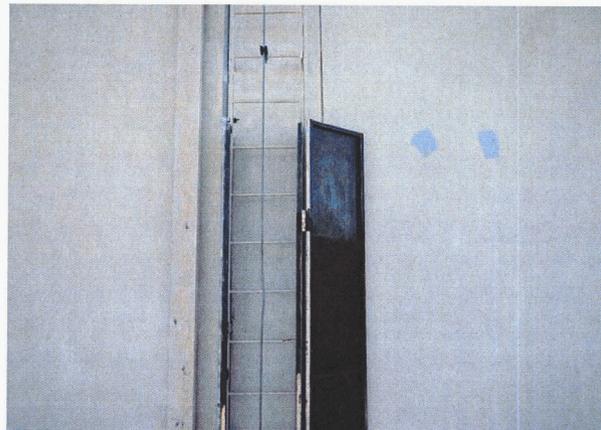
Company:	Arizona Water Company	Report No.	12	Page	7
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/16/2015		

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Paint Inspection Photo Documentation

Ladder Guard Repair In Process (SSPC-SP 3 Power Tool Cleaning)



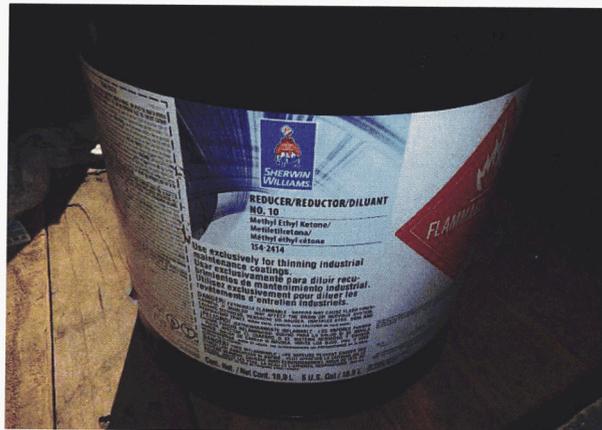
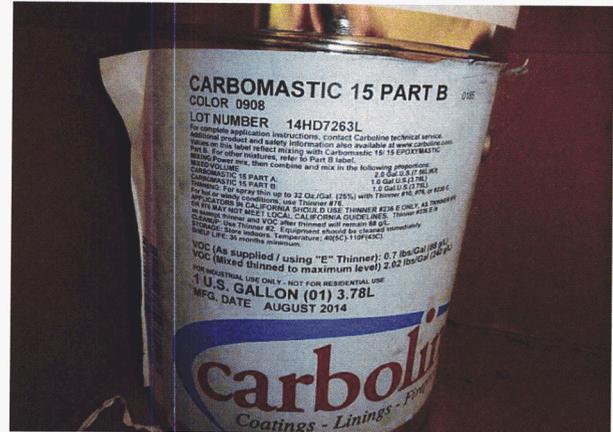
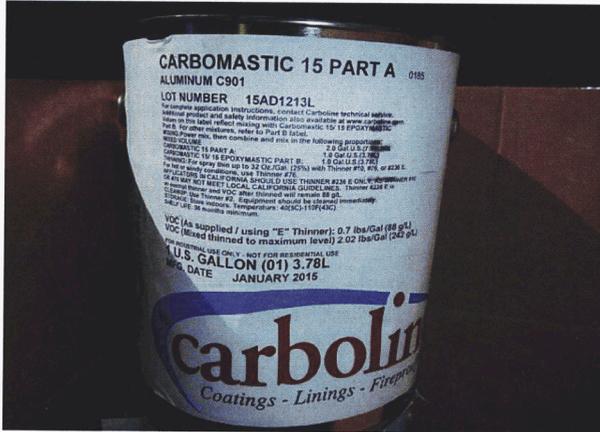
Company:	Arizona Water Company	Report No.	12	Page	8
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/16/2015		

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CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Carboline Carbomastic 15 (Spot Priming)



Company:	Arizona Water Company	Report No.	12	Page	9
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/16/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

April 17th, 2015

James T. Wilson P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

I witnessed a disinfection chlorine spray for this project on the above-mentioned date. This report documents the work activities of this site visit.

A disinfection of the interior of the tank was performed today by spraying 200 gallons of chlorine treated water (200ppm) on the interior tank shell, roof and floor. Multi-Chlor (sodium hypochlorite) was taken from the facility and mixed with the 200 gallons of water and tested with chlorine test strips to show strength of chlorine. New nuts, bolts and a gasket were to be installed on the manway cover. Photo documentation will follow in this report.

Respectfully,



Kevin Osterhaus
Certified NACE Level II Coating Inspector #51,484



Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

PO BOX 51026 PHOENIX, ARIZONA 85076-1026

GREGSPRINKLE@HOTMAIL.COM

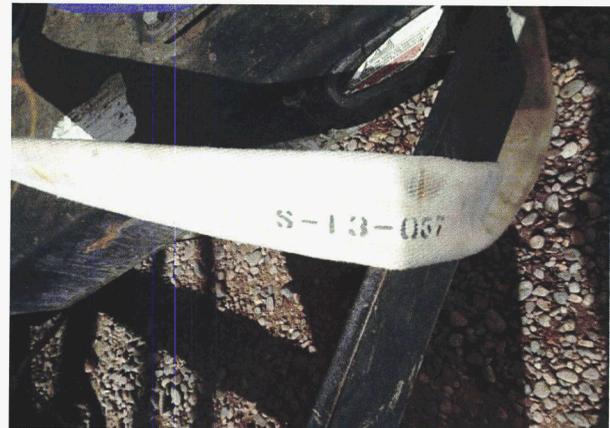
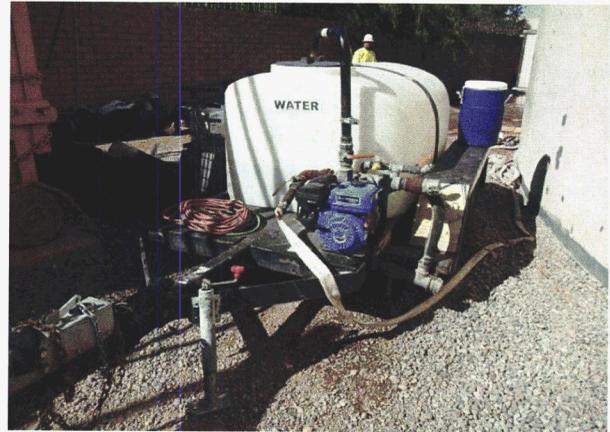
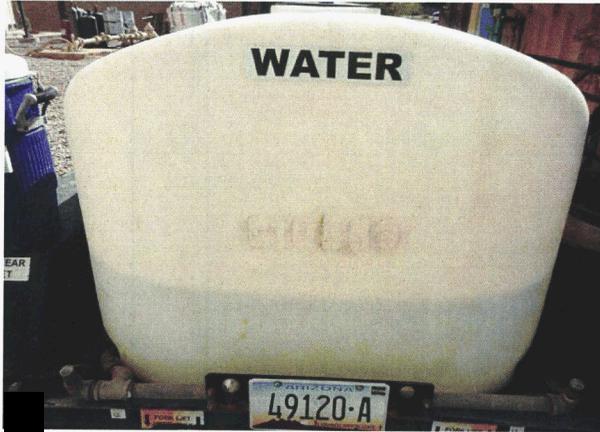
PHONE 480-993-8999

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Paint Inspection Photo Documentation

Equipment Used For Interior Tank Disinfection



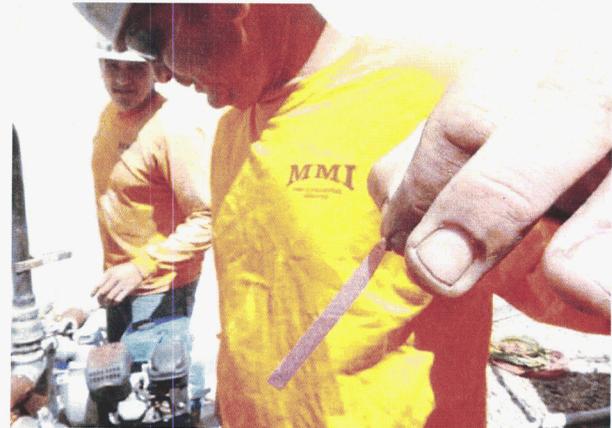
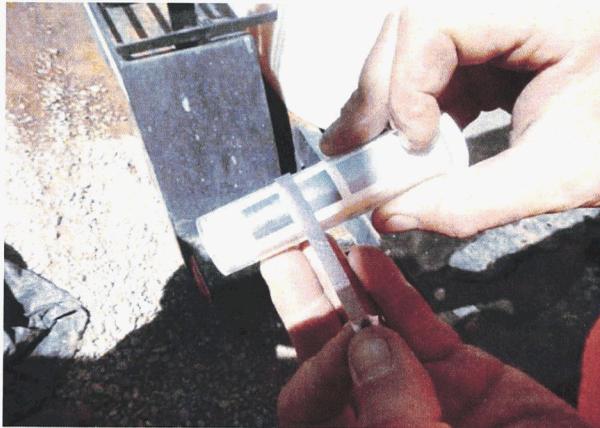
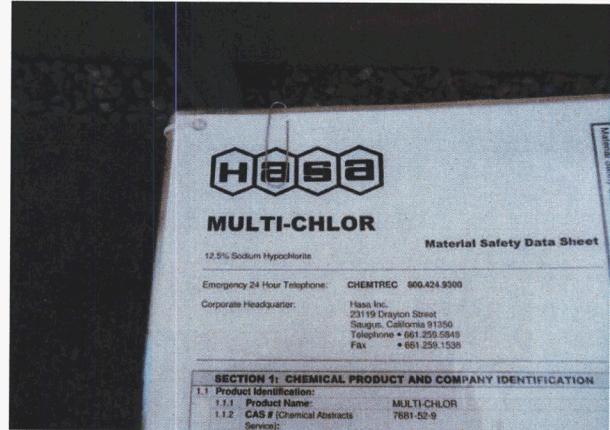
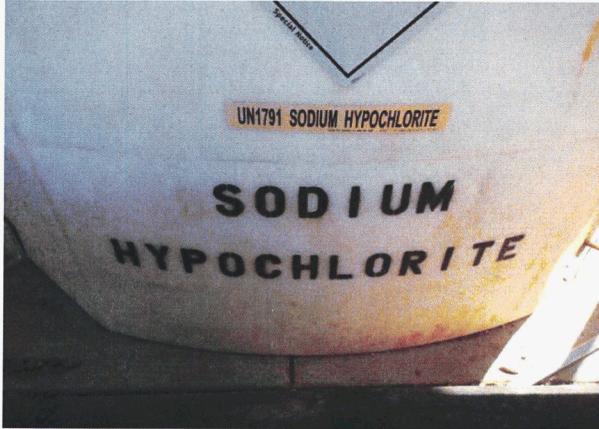
Company:	Arizona Water Company	Report No.	13	Page	2
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/17/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

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Paint Inspection Photo Documentation

Chlorine Utilized Interior Disinfection



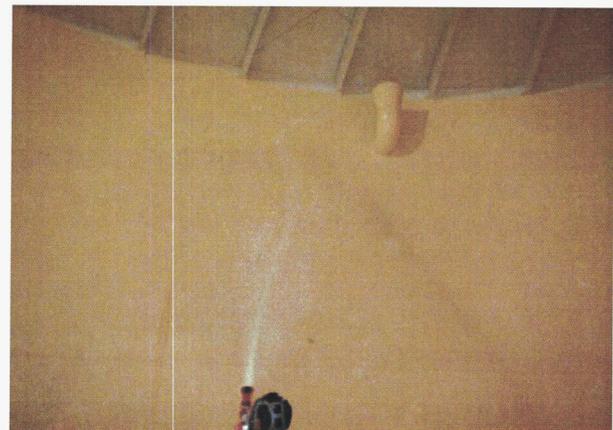
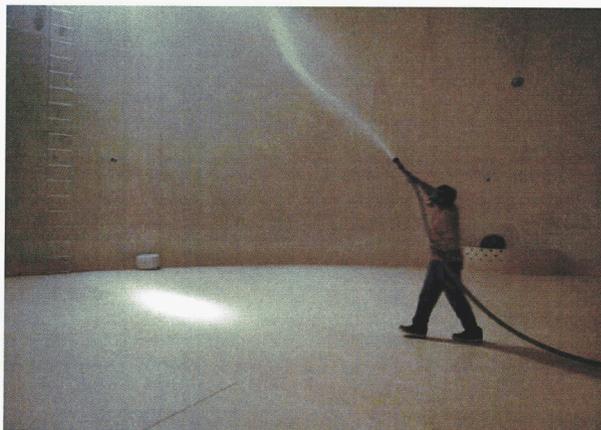
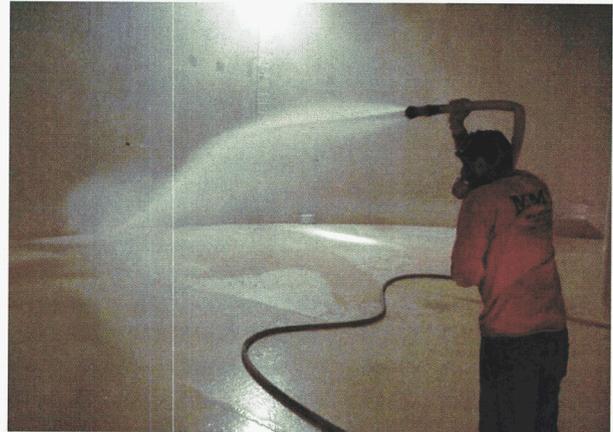
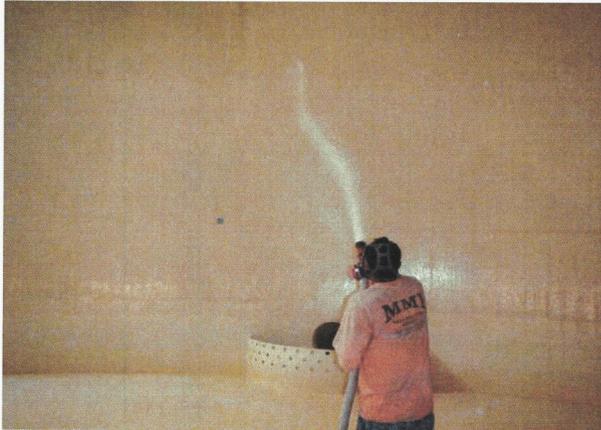
Company:	Arizona Water Company	Report No.	13	Page	3
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/17/2015		

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Paint Inspection Photo Documentation

Disinfection In Process



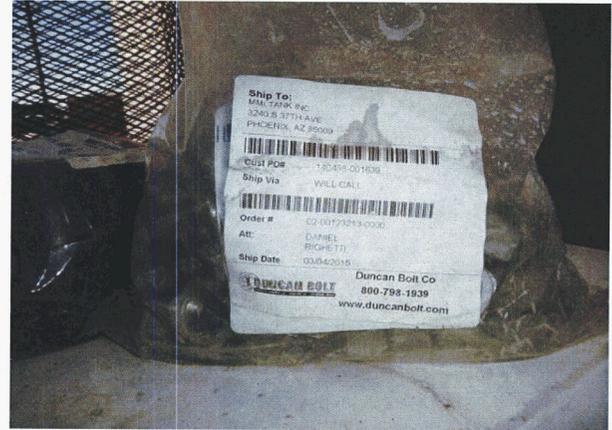
Company:	Arizona Water Company	Report No.	13	Page	4
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/17/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

New Nuts, Bolts & Gasket For Manway Cover



Company:	Arizona Water Company	Report No.	13	Page	5
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/17/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE AND SSPC INSPECTION AND CONSULTING SERVICES

April 22nd, 2015

James T. Wilson P.E.
Senior Engineer
Arizona Water Company
3805 North Black Canyon Highway
Phoenix, Arizona 85015

Project: Cottonwood Lane Tank Rehabilitation

Mr. Wilson,

I conducted a final exterior roof and shell coating inspection for this project on the above-mentioned date. This report documents the work activities of this site visit.

Today, documentation was done for the final inspection of the tank exterior. Carboline Carbothane 133 HB was rolled on the exterior roof and shell. Dry film thickness measurements were taken using a Positector 6000. Dry film thickness measurements were taken on the roof because it is a newly installed coating system. All measurements taken were found to be in the specified mil thickness. The coating application was uniform and aesthetically pleasing to the eye. Photo documentation will follow in this report.

Respectfully,



Kevin Osterhaus
Certified NACE Level II Coating Inspector #51,484



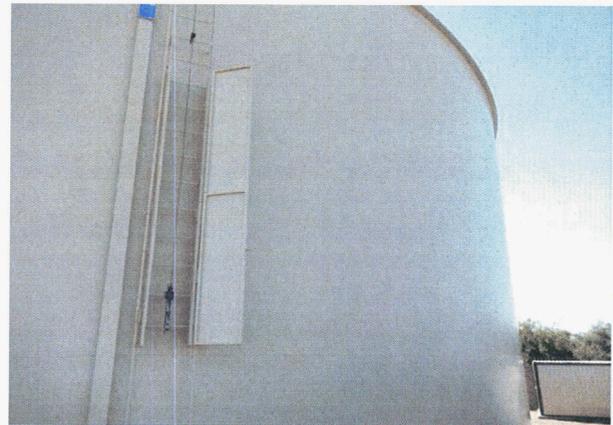
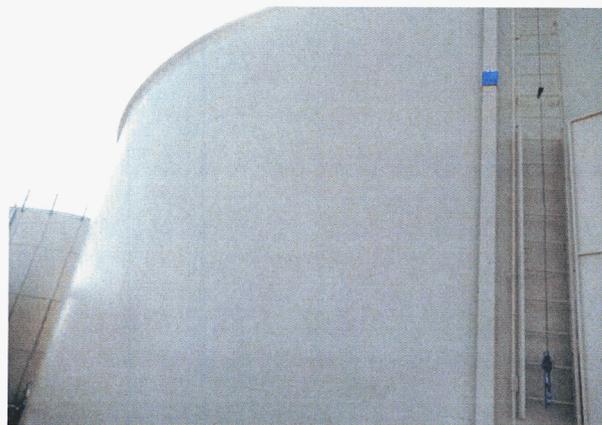
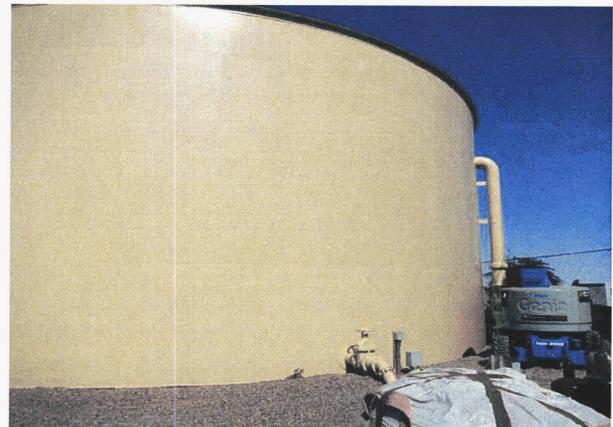
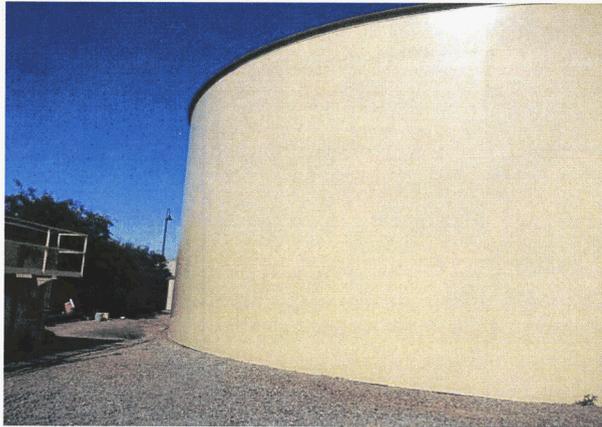
Greg Sprinkle
Certified NACE Level III Coating Inspector #5417
Certified Special Protective Coatings Inspector

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

New Exterior Coating System (Carboline Carbothane 133 HB)



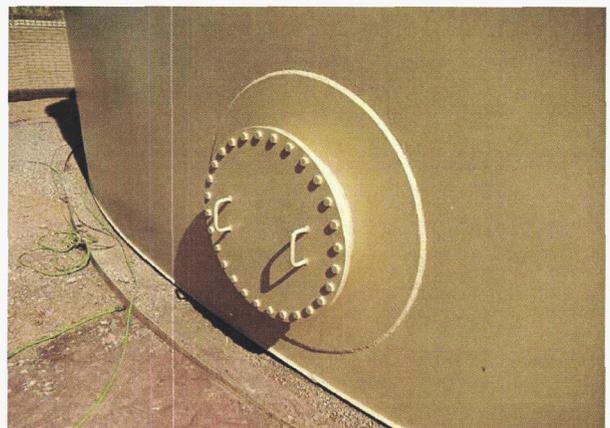
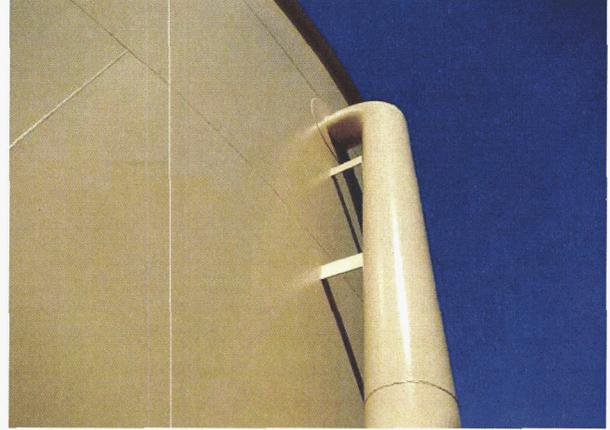
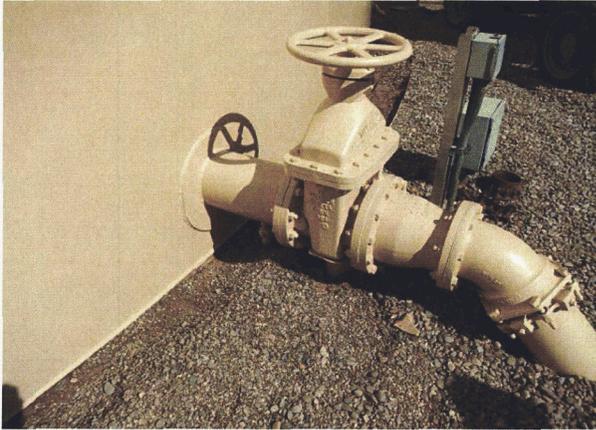
Company:	Arizona Water Company	Report No.	14	Page	2
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/22/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

New Exterior Coating System (Carboline Carbothane 133 HB)



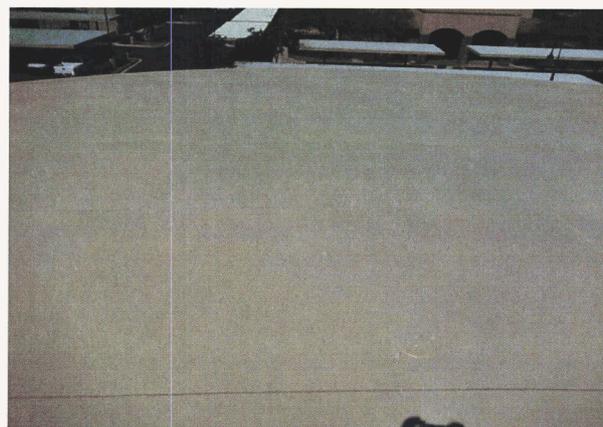
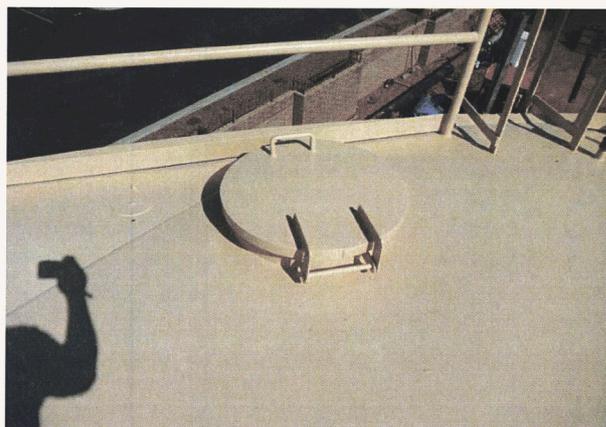
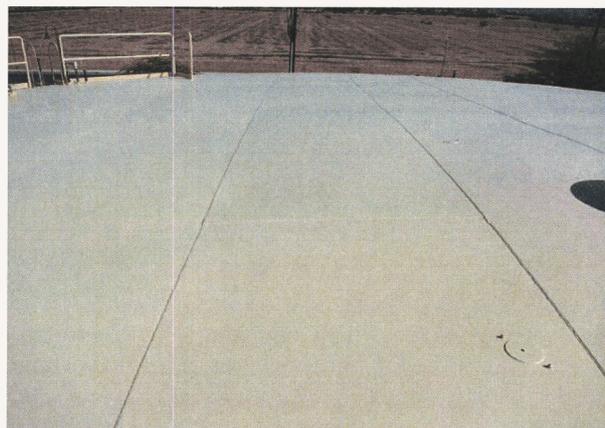
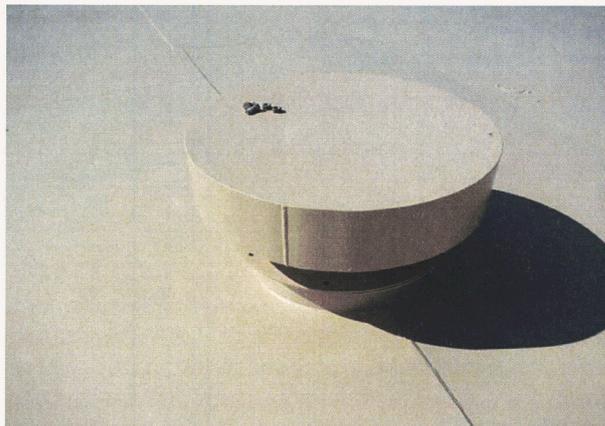
Company:	Arizona Water Company	Report No.	14	Page	3
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/22/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

New Exterior Coating System (Carboline Carbothane 133 HB)



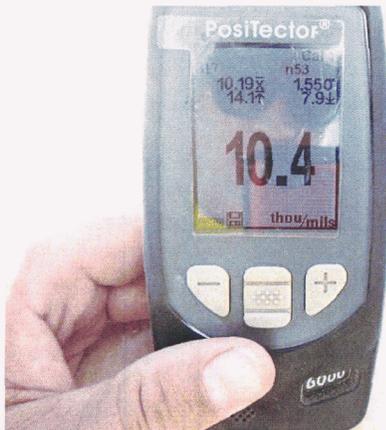
Company:	Arizona Water Company	Report No.	14	Page	4
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/22/2015		

INDUSTRIAL INSPECTION AND CONSULTING, LLC

CERTIFIED NACE INSPECTORS

Paint Inspection Photo Documentation

Dry Film Thickness Measurements (PosiTector 6000)



Company:	Arizona Water Company	Report No.	14	Page	5
Project:	Cottonwood Lane Tank Rehabilitation	Job No.	140498		
Location:	Casa Grande, Arizona	Date:	4/22/2015		

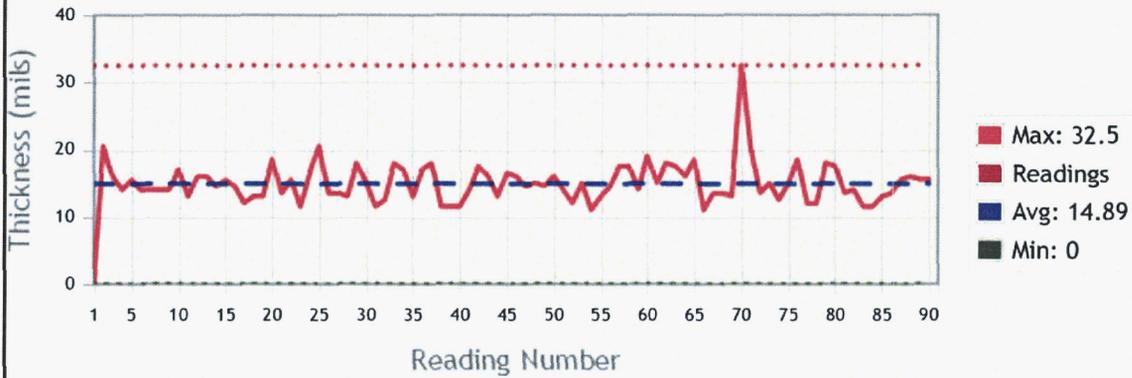
Header

Batch Name: B1 Batch Date: 2015-03-30 14:00:57
 Gage S/N: 758584
 Probe Type: FT Probe S/N: 228971
 Cal: Cal 1 Substrate: F
 Batch Notes: Interior Roof

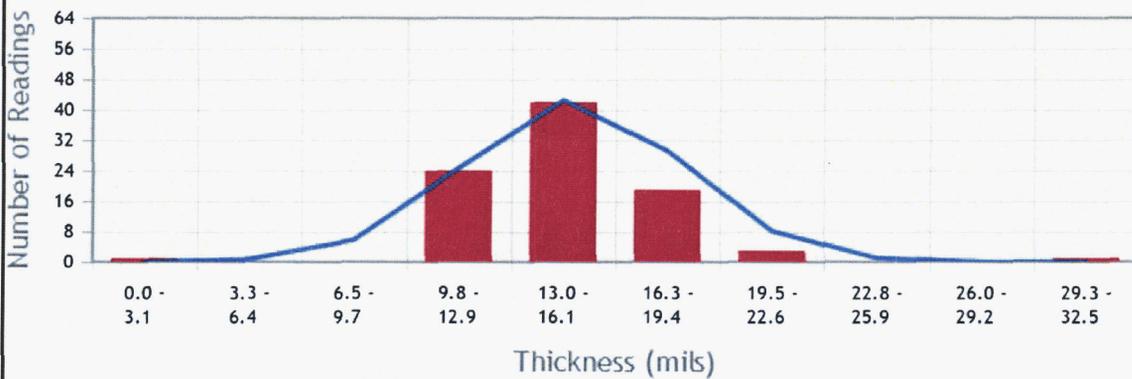
Summary

	#	\bar{x}	σ	↓	↑
B1	90	14.89	3.36	0.0	32.5

Chart



Histogram



Readings

Reading #	mils	Date/Time	Ignore	Notes
1	0.0	2015-03-30 14:01:10	<input type="checkbox"/>	
2	20.5	2015-03-30 14:03:59	<input type="checkbox"/>	
3	16.0	2015-03-30 14:04:17	<input type="checkbox"/>	
4	14.0	2015-03-30 14:04:19	<input type="checkbox"/>	
5	15.5	2015-03-30 14:04:22	<input type="checkbox"/>	
6	14.0	2015-03-30 14:04:24	<input type="checkbox"/>	
7	14.0	2015-03-30 14:04:27	<input type="checkbox"/>	
8	14.0	2015-03-30 14:04:30	<input type="checkbox"/>	
9	14.0	2015-03-30 14:04:40	<input type="checkbox"/>	
10	17.0	2015-03-30 14:04:49	<input type="checkbox"/>	
11	13.0	2015-03-30 14:04:54	<input type="checkbox"/>	
12	16.0	2015-03-30 14:05:00	<input type="checkbox"/>	
13	16.0	2015-03-30 14:05:36	<input type="checkbox"/>	
14	14.5	2015-03-30 14:06:07	<input type="checkbox"/>	
15	15.5	2015-03-30 14:06:10	<input type="checkbox"/>	
16	14.5	2015-03-30 14:06:34	<input type="checkbox"/>	
17	12.0	2015-03-30 14:06:53	<input type="checkbox"/>	
18	13.0	2015-03-30 14:07:06	<input type="checkbox"/>	
19	13.0	2015-03-30 14:07:55	<input type="checkbox"/>	
20	18.5	2015-03-30 14:08:10	<input type="checkbox"/>	
21	13.5	2015-03-30 14:08:20	<input type="checkbox"/>	
22	15.5	2015-03-30 14:10:58	<input type="checkbox"/>	
23	11.5	2015-03-30 14:11:33	<input type="checkbox"/>	
24	16.5	2015-03-30 14:11:37	<input type="checkbox"/>	
25	20.5	2015-03-30 14:11:40	<input type="checkbox"/>	
26	13.5	2015-03-30 14:12:13	<input type="checkbox"/>	
27	13.5	2015-03-30 14:12:34	<input type="checkbox"/>	
28	13.0	2015-03-30 14:13:10	<input type="checkbox"/>	
29	18.0	2015-03-30 14:13:51	<input type="checkbox"/>	
30	15.0	2015-03-30 14:14:07	<input type="checkbox"/>	
31	11.5	2015-03-30 14:14:22	<input type="checkbox"/>	
32	12.5	2015-03-30 14:14:33	<input type="checkbox"/>	
33	18.0	2015-03-30 14:14:44	<input type="checkbox"/>	
34	17.0	2015-03-30 14:14:46	<input type="checkbox"/>	
35	13.0	2015-03-30 14:14:48	<input type="checkbox"/>	
36	17.0	2015-03-30 14:14:51	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
37	18.0	2015-03-30 14:14:59	<input type="checkbox"/>	
38	11.5	2015-03-30 14:15:03	<input type="checkbox"/>	
39	11.5	2015-03-30 14:15:40	<input type="checkbox"/>	
40	11.5	2015-03-30 14:15:43	<input type="checkbox"/>	
41	14.0	2015-03-30 14:19:44	<input type="checkbox"/>	
42	17.5	2015-03-30 14:19:47	<input type="checkbox"/>	
43	16.0	2015-03-30 14:20:42	<input type="checkbox"/>	
44	13.0	2015-03-30 14:20:44	<input type="checkbox"/>	
45	16.5	2015-03-30 14:21:02	<input type="checkbox"/>	
46	16.0	2015-03-30 14:21:07	<input type="checkbox"/>	
47	14.5	2015-03-30 14:21:17	<input type="checkbox"/>	
48	15.0	2015-03-30 14:21:25	<input type="checkbox"/>	
49	14.5	2015-03-30 14:21:30	<input type="checkbox"/>	
50	16.0	2015-03-30 14:21:32	<input type="checkbox"/>	
51	14.0	2015-03-30 14:21:38	<input type="checkbox"/>	
52	12.0	2015-03-30 14:23:53	<input type="checkbox"/>	
53	15.0	2015-03-30 14:23:56	<input type="checkbox"/>	
54	11.0	2015-03-30 14:23:58	<input type="checkbox"/>	
55	13.0	2015-03-30 14:24:00	<input type="checkbox"/>	
56	14.5	2015-03-30 14:24:17	<input type="checkbox"/>	
57	17.5	2015-03-30 14:24:23	<input type="checkbox"/>	
58	17.5	2015-03-30 14:24:31	<input type="checkbox"/>	
59	14.0	2015-03-30 14:26:10	<input type="checkbox"/>	
60	19.0	2015-03-30 14:26:13	<input type="checkbox"/>	
61	15.0	2015-03-30 14:26:43	<input type="checkbox"/>	
62	18.0	2015-03-30 14:26:52	<input type="checkbox"/>	
63	17.5	2015-03-30 14:26:54	<input type="checkbox"/>	
64	16.0	2015-03-30 14:26:57	<input type="checkbox"/>	
65	18.5	2015-03-30 14:27:57	<input type="checkbox"/>	
66	11.0	2015-03-30 14:28:03	<input type="checkbox"/>	
67	13.5	2015-03-30 14:28:12	<input type="checkbox"/>	
68	13.5	2015-03-30 14:28:19	<input type="checkbox"/>	
69	13.0	2015-03-30 14:29:07	<input type="checkbox"/>	
70	32.5	2015-03-30 14:29:14	<input type="checkbox"/>	
71	20.5	2015-03-30 14:30:49	<input type="checkbox"/>	
72	13.5	2015-03-30 14:30:54	<input type="checkbox"/>	
73	15.0	2015-03-30 14:30:56	<input type="checkbox"/>	
74	12.5	2015-03-30 14:30:59	<input type="checkbox"/>	
75	15.0	2015-03-30 14:31:01	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
76	18.5	2015-03-30 14:31:54	<input type="checkbox"/>	
77	12.0	2015-03-30 14:31:57	<input type="checkbox"/>	
78	12.0	2015-03-30 14:31:59	<input type="checkbox"/>	
79	18.0	2015-03-30 14:32:04	<input type="checkbox"/>	
80	17.5	2015-03-30 14:32:19	<input type="checkbox"/>	
81	13.5	2015-03-30 14:33:10	<input type="checkbox"/>	
82	14.0	2015-03-30 14:33:48	<input type="checkbox"/>	
83	11.5	2015-03-30 14:33:50	<input type="checkbox"/>	
84	11.5	2015-03-30 14:33:53	<input type="checkbox"/>	
85	13.0	2015-03-30 20:56:32	<input type="checkbox"/>	
86	13.5	2015-03-30 20:56:35	<input type="checkbox"/>	
87	15.5	2015-03-30 20:56:41	<input type="checkbox"/>	
88	16.0	2015-03-30 20:56:44	<input type="checkbox"/>	
89	15.5	2015-03-30 20:56:47	<input type="checkbox"/>	
90	15.5	2015-03-30 21:00:56	<input type="checkbox"/>	

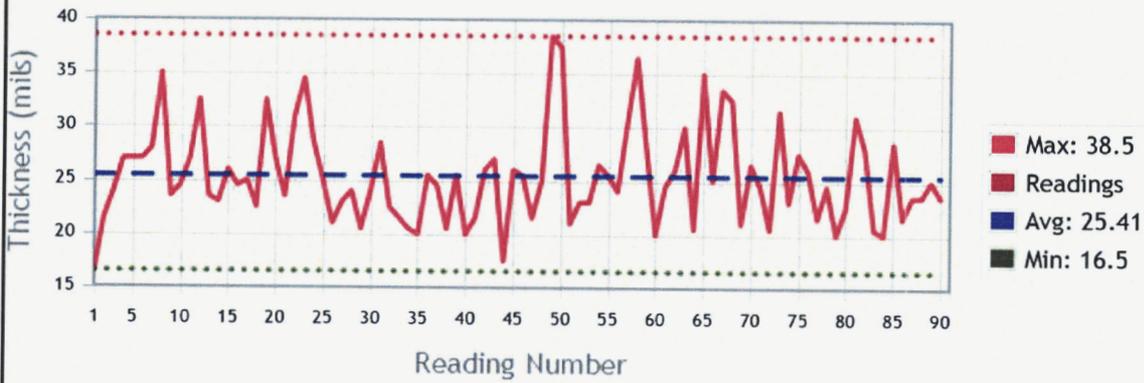
Header

Batch Name:	B1	Batch Date:	2015-03-26 10:08:50
Gage S/N:	758584		
Probe Type:	FT	Probe S/N:	228971
Cal:	Cal 1	Substrate:	F
Batch Notes:	Top Ring		

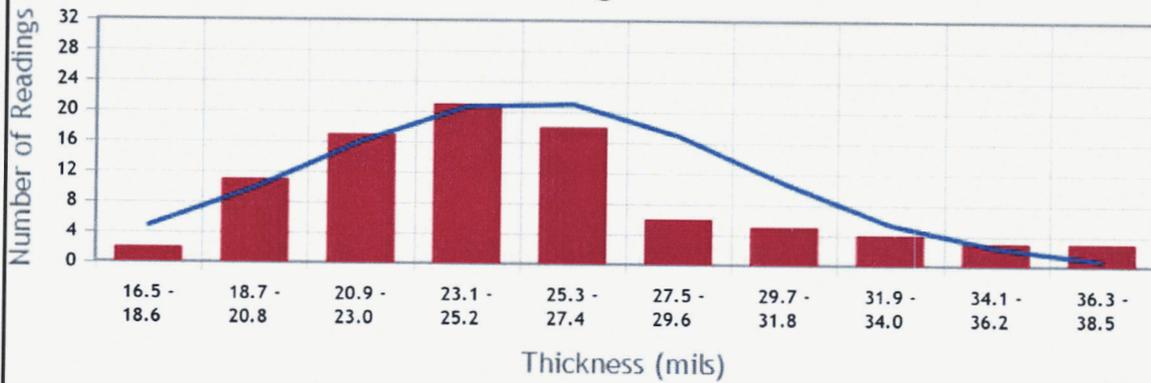
Summary

	#	\bar{x}	σ	\downarrow	\uparrow
B1	90	25.41	4.52	16.5	38.5

Chart



Histogram



Readings

Reading #	mils	Date/Time	Ignore	Notes
1	16.5	2015-03-26 10:08:55	<input type="checkbox"/>	
2	21.5	2015-03-26 10:08:57	<input type="checkbox"/>	
3	24.0	2015-03-26 10:17:54	<input type="checkbox"/>	
4	27.0	2015-03-26 10:17:57	<input type="checkbox"/>	
5	27.0	2015-03-26 10:18:00	<input type="checkbox"/>	
6	27.0	2015-03-26 10:18:02	<input type="checkbox"/>	
7	28.0	2015-03-26 10:18:06	<input type="checkbox"/>	
8	35.0	2015-03-26 10:18:09	<input type="checkbox"/>	
9	23.5	2015-03-26 10:18:12	<input type="checkbox"/>	
10	24.5	2015-03-26 10:18:14	<input type="checkbox"/>	
11	27.0	2015-03-26 10:18:17	<input type="checkbox"/>	
12	32.5	2015-03-26 10:18:19	<input type="checkbox"/>	
13	23.5	2015-03-26 10:18:34	<input type="checkbox"/>	
14	23.0	2015-03-26 10:18:41	<input type="checkbox"/>	
15	26.0	2015-03-26 10:18:44	<input type="checkbox"/>	
16	24.5	2015-03-26 10:18:51	<input type="checkbox"/>	
17	25.0	2015-03-26 10:18:58	<input type="checkbox"/>	
18	22.5	2015-03-26 10:19:25	<input type="checkbox"/>	
19	32.5	2015-03-26 10:19:37	<input type="checkbox"/>	
20	27.0	2015-03-26 10:19:40	<input type="checkbox"/>	
21	23.5	2015-03-26 10:19:42	<input type="checkbox"/>	
22	31.0	2015-03-26 10:19:51	<input type="checkbox"/>	
23	34.5	2015-03-26 10:20:14	<input type="checkbox"/>	
24	28.5	2015-03-26 10:20:16	<input type="checkbox"/>	
25	25.0	2015-03-26 10:20:17	<input type="checkbox"/>	
26	21.0	2015-03-26 10:21:58	<input type="checkbox"/>	
27	23.0	2015-03-26 10:22:01	<input type="checkbox"/>	
28	24.0	2015-03-26 10:22:03	<input type="checkbox"/>	
29	20.5	2015-03-26 10:22:06	<input type="checkbox"/>	
30	24.0	2015-03-26 10:25:29	<input type="checkbox"/>	
31	28.5	2015-03-26 10:25:30	<input type="checkbox"/>	
32	22.5	2015-03-26 10:25:45	<input type="checkbox"/>	
33	21.5	2015-03-26 10:26:08	<input type="checkbox"/>	
34	20.5	2015-03-26 10:26:19	<input type="checkbox"/>	
35	20.0	2015-03-26 10:27:37	<input type="checkbox"/>	
36	25.5	2015-03-26 10:27:39	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
37	24.5	2015-03-26 10:28:52	<input type="checkbox"/>	
38	20.5	2015-03-26 10:28:55	<input type="checkbox"/>	
39	25.5	2015-03-26 10:28:57	<input type="checkbox"/>	
40	20.0	2015-03-26 10:29:04	<input type="checkbox"/>	
41	21.5	2015-03-26 10:29:11	<input type="checkbox"/>	
42	26.0	2015-03-26 10:29:19	<input type="checkbox"/>	
43	27.0	2015-03-26 10:29:22	<input type="checkbox"/>	
44	17.5	2015-03-26 10:29:55	<input type="checkbox"/>	
45	26.0	2015-03-26 10:30:01	<input type="checkbox"/>	
46	25.5	2015-03-26 10:30:08	<input type="checkbox"/>	
47	21.5	2015-03-26 10:30:17	<input type="checkbox"/>	
48	25.0	2015-03-26 10:30:20	<input type="checkbox"/>	
49	38.5	2015-03-26 10:31:00	<input type="checkbox"/>	
50	37.5	2015-03-26 10:31:38	<input type="checkbox"/>	
51	21.0	2015-03-26 10:31:40	<input type="checkbox"/>	
52	23.0	2015-03-26 10:31:42	<input type="checkbox"/>	
53	23.0	2015-03-26 10:31:45	<input type="checkbox"/>	
54	26.5	2015-03-26 10:31:47	<input type="checkbox"/>	
55	25.5	2015-03-26 10:34:27	<input type="checkbox"/>	
56	24.0	2015-03-26 10:34:29	<input type="checkbox"/>	
57	30.5	2015-03-26 10:34:33	<input type="checkbox"/>	
58	36.5	2015-03-26 10:34:35	<input type="checkbox"/>	
59	28.0	2015-03-26 10:35:19	<input type="checkbox"/>	
60	20.0	2015-03-26 10:35:22	<input type="checkbox"/>	
61	24.5	2015-03-26 10:35:28	<input type="checkbox"/>	
62	26.0	2015-03-26 10:35:31	<input type="checkbox"/>	
63	30.0	2015-03-26 10:35:34	<input type="checkbox"/>	
64	20.5	2015-03-26 10:35:39	<input type="checkbox"/>	
65	35.0	2015-03-26 10:35:42	<input type="checkbox"/>	
66	25.0	2015-03-26 10:36:33	<input type="checkbox"/>	
67	33.5	2015-03-26 10:36:36	<input type="checkbox"/>	
68	32.5	2015-03-26 10:36:39	<input type="checkbox"/>	
69	21.0	2015-03-26 10:36:42	<input type="checkbox"/>	
70	26.5	2015-03-26 10:36:45	<input type="checkbox"/>	
71	24.5	2015-03-26 10:36:58	<input type="checkbox"/>	
72	20.5	2015-03-26 10:37:01	<input type="checkbox"/>	
73	31.5	2015-03-26 10:37:04	<input type="checkbox"/>	
74	23.0	2015-03-26 10:37:20	<input type="checkbox"/>	
75	27.5	2015-03-26 10:37:28	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
76	26.0	2015-03-26 10:37:30	<input type="checkbox"/>	
77	21.5	2015-03-26 10:39:16	<input type="checkbox"/>	
78	24.5	2015-03-26 10:39:20	<input type="checkbox"/>	
79	20.0	2015-03-26 10:42:20	<input type="checkbox"/>	
80	22.5	2015-03-26 10:42:23	<input type="checkbox"/>	
81	31.0	2015-03-26 10:42:47	<input type="checkbox"/>	
82	28.0	2015-03-26 10:42:50	<input type="checkbox"/>	
83	20.5	2015-03-26 10:42:53	<input type="checkbox"/>	
84	20.0	2015-03-26 10:42:55	<input type="checkbox"/>	
85	28.5	2015-03-26 10:43:07	<input type="checkbox"/>	
86	21.5	2015-03-26 10:43:09	<input type="checkbox"/>	
87	23.5	2015-03-26 10:44:03	<input type="checkbox"/>	
88	23.5	2015-03-26 10:44:06	<input type="checkbox"/>	
89	25.0	2015-03-26 10:44:55	<input type="checkbox"/>	
90	23.5	2015-03-26 10:45:02	<input type="checkbox"/>	

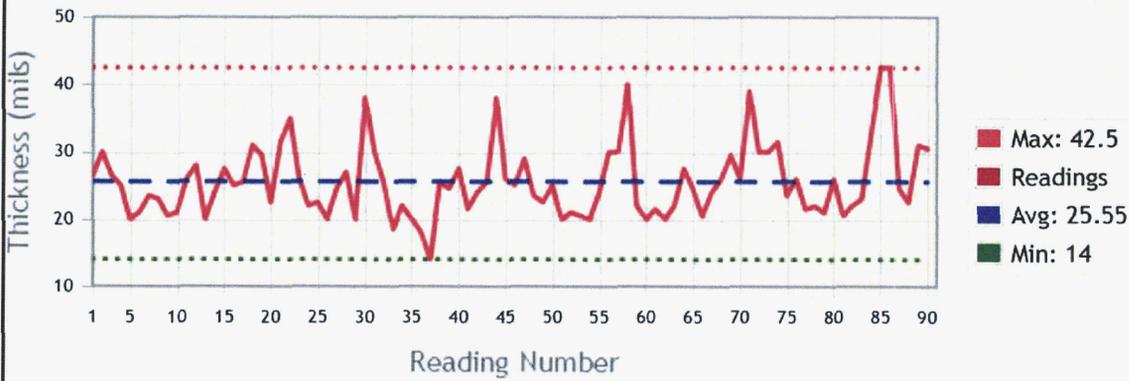
Header

Batch Name: B2 Batch Date: 2015-03-26 10:45:06
 Gage S/N: 758584
 Probe Type: FT Probe S/N: 228971
 Cal: Cal 1 Substrate: F
 Batch Notes: Second Ring For Top

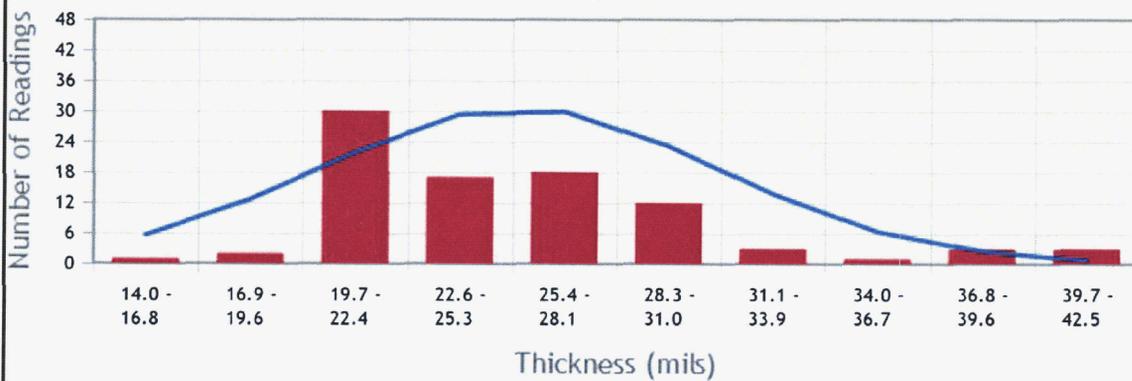
Summary

	#	\bar{x}	σ	\downarrow	\uparrow
B2	90	25.55	5.47	14.0	42.5

Chart



Histogram



Readings

Reading #	mils	Date/Time	Ignore	Notes
1	26.5	2015-03-26 10:45:28	<input type="checkbox"/>	
2	30.0	2015-03-26 10:45:31	<input type="checkbox"/>	
3	26.5	2015-03-26 10:45:33	<input type="checkbox"/>	
4	25.0	2015-03-26 10:53:35	<input type="checkbox"/>	
5	20.0	2015-03-26 10:53:37	<input type="checkbox"/>	
6	21.0	2015-03-26 10:54:05	<input type="checkbox"/>	
7	23.5	2015-03-26 10:54:21	<input type="checkbox"/>	
8	23.0	2015-03-26 10:54:26	<input type="checkbox"/>	
9	20.5	2015-03-26 10:54:28	<input type="checkbox"/>	
10	21.0	2015-03-26 10:54:41	<input type="checkbox"/>	
11	26.0	2015-03-26 10:54:44	<input type="checkbox"/>	
12	28.0	2015-03-26 10:54:46	<input type="checkbox"/>	
13	20.0	2015-03-26 10:54:50	<input type="checkbox"/>	
14	24.0	2015-03-26 10:54:52	<input type="checkbox"/>	
15	27.5	2015-03-26 10:54:55	<input type="checkbox"/>	
16	25.0	2015-03-26 10:54:58	<input type="checkbox"/>	
17	25.5	2015-03-26 10:55:01	<input type="checkbox"/>	
18	31.0	2015-03-26 10:55:03	<input type="checkbox"/>	
19	29.5	2015-03-26 10:55:05	<input type="checkbox"/>	
20	22.5	2015-03-26 10:57:29	<input type="checkbox"/>	
21	31.5	2015-03-26 10:57:43	<input type="checkbox"/>	
22	35.0	2015-03-26 11:02:23	<input type="checkbox"/>	
23	26.0	2015-03-26 11:02:31	<input type="checkbox"/>	
24	22.0	2015-03-26 11:10:17	<input type="checkbox"/>	
25	22.5	2015-03-26 11:10:24	<input type="checkbox"/>	
26	20.0	2015-03-26 11:10:30	<input type="checkbox"/>	
27	24.5	2015-03-26 11:10:45	<input type="checkbox"/>	
28	27.0	2015-03-26 11:10:54	<input type="checkbox"/>	
29	20.0	2015-03-26 11:11:02	<input type="checkbox"/>	
30	38.0	2015-03-26 11:11:26	<input type="checkbox"/>	
31	30.0	2015-03-26 11:11:53	<input type="checkbox"/>	
32	25.5	2015-03-26 11:12:15	<input type="checkbox"/>	
33	18.5	2015-03-26 11:12:21	<input type="checkbox"/>	
34	22.0	2015-03-26 11:12:27	<input type="checkbox"/>	
35	20.0	2015-03-26 11:39:36	<input type="checkbox"/>	
36	18.0	2015-03-26 11:39:38	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
37	14.0	2015-03-26 11:39:46	<input type="checkbox"/>	
38	25.5	2015-03-26 11:39:59	<input type="checkbox"/>	
39	24.5	2015-03-26 11:40:43	<input type="checkbox"/>	
40	27.5	2015-03-26 11:40:45	<input type="checkbox"/>	
41	21.5	2015-03-26 11:40:50	<input type="checkbox"/>	
42	24.0	2015-03-26 11:42:55	<input type="checkbox"/>	
43	25.5	2015-03-26 11:42:57	<input type="checkbox"/>	
44	38.0	2015-03-26 11:43:04	<input type="checkbox"/>	
45	26.0	2015-03-26 11:43:07	<input type="checkbox"/>	
46	25.0	2015-03-26 11:43:09	<input type="checkbox"/>	
47	29.0	2015-03-26 11:43:18	<input type="checkbox"/>	
48	23.5	2015-03-26 11:43:23	<input type="checkbox"/>	
49	22.5	2015-03-26 11:43:29	<input type="checkbox"/>	
50	25.0	2015-03-26 11:43:33	<input type="checkbox"/>	
51	20.0	2015-03-26 11:45:44	<input type="checkbox"/>	
52	21.0	2015-03-26 11:46:03	<input type="checkbox"/>	
53	20.5	2015-03-26 11:46:14	<input type="checkbox"/>	
54	20.0	2015-03-26 11:46:20	<input type="checkbox"/>	
55	24.0	2015-03-26 11:46:28	<input type="checkbox"/>	
56	30.0	2015-03-26 11:46:51	<input type="checkbox"/>	
57	30.0	2015-03-26 11:47:43	<input type="checkbox"/>	
58	40.0	2015-03-26 11:47:46	<input type="checkbox"/>	
59	22.0	2015-03-26 11:48:07	<input type="checkbox"/>	
60	20.0	2015-03-26 11:48:08	<input type="checkbox"/>	
61	21.5	2015-03-26 11:48:12	<input type="checkbox"/>	
62	20.0	2015-03-26 11:48:14	<input type="checkbox"/>	
63	22.0	2015-03-26 11:48:17	<input type="checkbox"/>	
64	27.5	2015-03-26 11:48:40	<input type="checkbox"/>	
65	24.5	2015-03-26 11:48:50	<input type="checkbox"/>	
66	20.5	2015-03-26 11:49:33	<input type="checkbox"/>	
67	24.0	2015-03-26 11:49:35	<input type="checkbox"/>	
68	26.0	2015-03-26 11:49:37	<input type="checkbox"/>	
69	29.5	2015-03-26 11:49:40	<input type="checkbox"/>	
70	26.0	2015-03-26 11:49:58	<input type="checkbox"/>	
71	39.0	2015-03-26 11:52:27	<input type="checkbox"/>	
72	30.0	2015-03-26 11:52:30	<input type="checkbox"/>	
73	30.0	2015-03-26 11:52:32	<input type="checkbox"/>	
74	31.5	2015-03-26 11:52:44	<input type="checkbox"/>	
75	23.5	2015-03-26 11:53:17	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
76	26.0	2015-03-26 11:53:38	<input type="checkbox"/>	
77	21.5	2015-03-26 11:53:44	<input type="checkbox"/>	
78	22.0	2015-03-26 11:53:57	<input type="checkbox"/>	
79	21.0	2015-03-26 11:53:59	<input type="checkbox"/>	
80	26.0	2015-03-26 11:54:02	<input type="checkbox"/>	
81	20.5	2015-03-26 11:54:05	<input type="checkbox"/>	
82	22.0	2015-03-26 11:54:48	<input type="checkbox"/>	
83	23.0	2015-03-26 11:54:56	<input type="checkbox"/>	
84	33.0	2015-03-26 12:12:04	<input type="checkbox"/>	
85	42.5	2015-03-26 12:12:06	<input type="checkbox"/>	
86	42.5	2015-03-26 12:12:10	<input type="checkbox"/>	
87	24.5	2015-03-26 12:12:23	<input type="checkbox"/>	
88	22.5	2015-03-26 12:12:25	<input type="checkbox"/>	
89	31.0	2015-03-26 12:12:29	<input type="checkbox"/>	
90	30.5	2015-03-26 12:12:32	<input type="checkbox"/>	

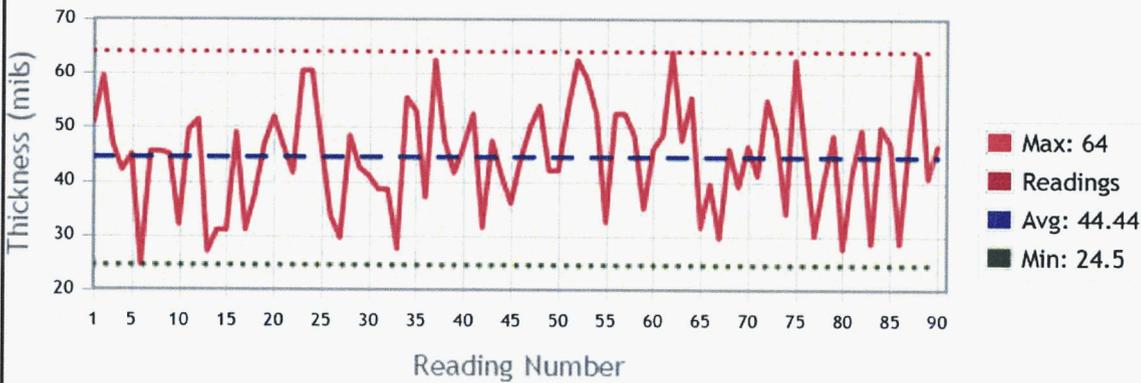
Header

Batch Name: B1 Batch Date: 2015-04-07 09:48:57
 Gage S/N: 758584
 Probe Type: FT Probe S/N: 228971
 Cal: Cal 1 Substrate: F
 Batch Notes: Interior Lower Ring - Cottonwood Lane

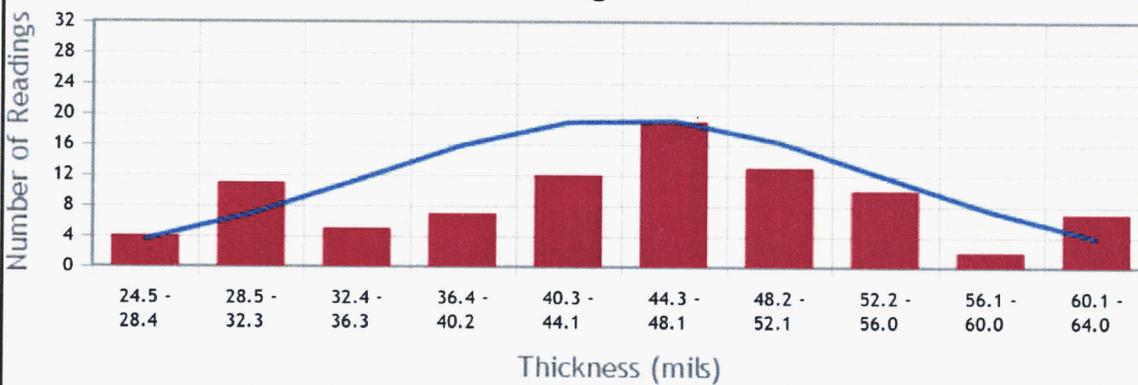
Summary

	#	\bar{x}	σ	\downarrow	\uparrow
B1	90	44.44	9.68	24.5	64.0

Chart



Histogram



Readings

#	Reading mils	Date/Time	Ignore	Notes
1	51.0	2015-04-07 09:50:00	<input type="checkbox"/>	
2	59.5	2015-04-07 09:50:03	<input type="checkbox"/>	
3	47.0	2015-04-07 09:50:06	<input type="checkbox"/>	
4	42.0	2015-04-07 09:50:10	<input type="checkbox"/>	
5	45.0	2015-04-07 09:50:14	<input type="checkbox"/>	
6	24.5	2015-04-07 09:50:17	<input type="checkbox"/>	
7	45.5	2015-04-07 09:50:36	<input type="checkbox"/>	
8	45.5	2015-04-07 09:50:40	<input type="checkbox"/>	
9	45.0	2015-04-07 09:50:43	<input type="checkbox"/>	
10	32.0	2015-04-07 09:50:51	<input type="checkbox"/>	
11	49.5	2015-04-07 09:50:53	<input type="checkbox"/>	
12	51.5	2015-04-07 09:52:49	<input type="checkbox"/>	
13	27.0	2015-04-07 09:52:52	<input type="checkbox"/>	
14	31.0	2015-04-07 09:52:55	<input type="checkbox"/>	
15	31.0	2015-04-07 09:53:21	<input type="checkbox"/>	
16	49.0	2015-04-07 09:53:25	<input type="checkbox"/>	
17	31.0	2015-04-07 09:53:38	<input type="checkbox"/>	
18	37.5	2015-04-07 09:53:45	<input type="checkbox"/>	
19	47.0	2015-04-07 09:53:47	<input type="checkbox"/>	
20	52.0	2015-04-07 09:53:57	<input type="checkbox"/>	
21	46.5	2015-04-07 09:53:59	<input type="checkbox"/>	
22	41.5	2015-04-07 09:54:03	<input type="checkbox"/>	
23	60.5	2015-04-07 09:54:19	<input type="checkbox"/>	
24	60.5	2015-04-07 09:54:27	<input type="checkbox"/>	
25	46.5	2015-04-07 09:54:32	<input type="checkbox"/>	
26	33.5	2015-04-07 09:54:39	<input type="checkbox"/>	
27	29.5	2015-04-07 09:54:42	<input type="checkbox"/>	
28	48.5	2015-04-07 09:55:03	<input type="checkbox"/>	
29	42.5	2015-04-07 09:55:05	<input type="checkbox"/>	
30	41.0	2015-04-07 09:55:31	<input type="checkbox"/>	
31	38.5	2015-04-07 09:55:33	<input type="checkbox"/>	
32	38.5	2015-04-07 09:55:36	<input type="checkbox"/>	
33	27.5	2015-04-07 09:55:39	<input type="checkbox"/>	
34	55.5	2015-04-07 09:55:43	<input type="checkbox"/>	
35	53.0	2015-04-07 09:55:46	<input type="checkbox"/>	
36	37.0	2015-04-07 09:55:49	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
37	62.5	2015-04-07 09:56:24	<input type="checkbox"/>	
38	47.5	2015-04-07 09:56:28	<input type="checkbox"/>	
39	41.5	2015-04-07 09:56:30	<input type="checkbox"/>	
40	46.5	2015-04-07 09:56:33	<input type="checkbox"/>	
41	52.5	2015-04-07 09:56:49	<input type="checkbox"/>	
42	31.5	2015-04-07 09:57:23	<input type="checkbox"/>	
43	47.5	2015-04-07 09:57:25	<input type="checkbox"/>	
44	41.0	2015-04-07 09:57:27	<input type="checkbox"/>	
45	36.0	2015-04-07 09:57:30	<input type="checkbox"/>	
46	44.0	2015-04-07 09:57:32	<input type="checkbox"/>	
47	50.0	2015-04-07 09:57:36	<input type="checkbox"/>	
48	54.0	2015-04-07 09:57:38	<input type="checkbox"/>	
49	42.0	2015-04-07 09:57:40	<input type="checkbox"/>	
50	42.0	2015-04-07 09:57:49	<input type="checkbox"/>	
51	53.5	2015-04-07 09:57:51	<input type="checkbox"/>	
52	62.5	2015-04-07 09:57:54	<input type="checkbox"/>	
53	59.0	2015-04-07 09:57:56	<input type="checkbox"/>	
54	52.5	2015-04-07 09:57:58	<input type="checkbox"/>	
55	32.5	2015-04-07 09:58:01	<input type="checkbox"/>	
56	52.5	2015-04-07 09:58:03	<input type="checkbox"/>	
57	52.5	2015-04-07 09:58:08	<input type="checkbox"/>	
58	48.5	2015-04-07 09:58:10	<input type="checkbox"/>	
59	35.0	2015-04-07 09:58:12	<input type="checkbox"/>	
60	46.0	2015-04-07 09:58:15	<input type="checkbox"/>	
61	48.5	2015-04-07 09:58:17	<input type="checkbox"/>	
62	64.0	2015-04-07 09:58:20	<input type="checkbox"/>	
63	47.5	2015-04-07 09:58:22	<input type="checkbox"/>	
64	55.5	2015-04-07 10:00:54	<input type="checkbox"/>	
65	31.5	2015-04-07 10:00:56	<input type="checkbox"/>	
66	39.5	2015-04-07 10:03:44	<input type="checkbox"/>	
67	29.5	2015-04-07 10:03:46	<input type="checkbox"/>	
68	46.0	2015-04-07 10:03:49	<input type="checkbox"/>	
69	39.0	2015-04-07 10:03:52	<input type="checkbox"/>	
70	46.5	2015-04-07 10:03:54	<input type="checkbox"/>	
71	41.0	2015-04-07 10:03:57	<input type="checkbox"/>	
72	55.0	2015-04-07 10:03:59	<input type="checkbox"/>	
73	48.5	2015-04-07 10:04:01	<input type="checkbox"/>	
74	34.0	2015-04-07 10:04:04	<input type="checkbox"/>	
75	62.5	2015-04-07 10:04:07	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
76	46.0	2015-04-07 10:04:09	<input type="checkbox"/>	
77	30.0	2015-04-07 10:04:12	<input type="checkbox"/>	
78	40.0	2015-04-07 10:04:14	<input type="checkbox"/>	
79	48.5	2015-04-07 10:04:17	<input type="checkbox"/>	
80	27.5	2015-04-07 10:04:19	<input type="checkbox"/>	
81	41.5	2015-04-07 10:06:58	<input type="checkbox"/>	
82	49.5	2015-04-07 10:07:00	<input type="checkbox"/>	
83	28.5	2015-04-07 10:07:30	<input type="checkbox"/>	
84	50.0	2015-04-07 10:07:32	<input type="checkbox"/>	
85	47.0	2015-04-07 10:07:51	<input type="checkbox"/>	
86	28.5	2015-04-07 10:07:53	<input type="checkbox"/>	
87	47.0	2015-04-07 10:07:56	<input type="checkbox"/>	
88	63.5	2015-04-07 10:07:58	<input type="checkbox"/>	
89	40.5	2015-04-07 10:08:01	<input type="checkbox"/>	
90	46.5	2015-04-07 10:08:03	<input type="checkbox"/>	

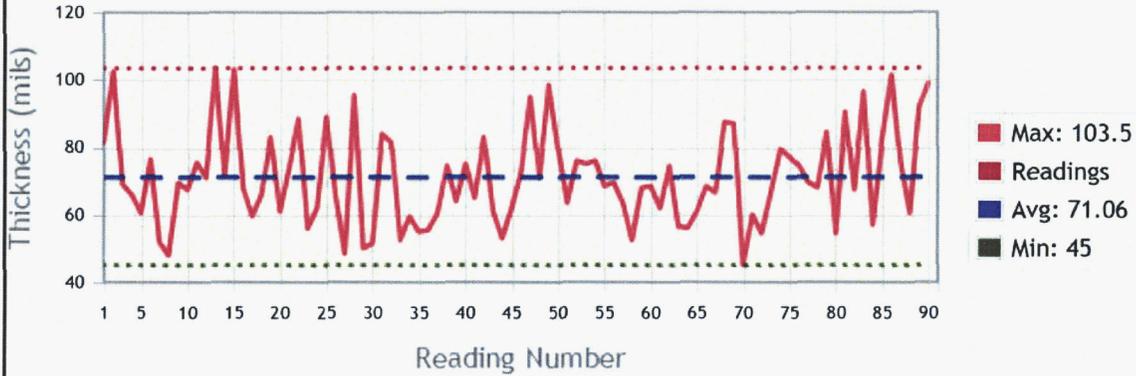
Header

Batch Name: B2 Batch Date: 2015-04-07 10:09:49
 Gage S/N: 758584
 Probe Type: FT Probe S/N: 228971
 Cal: Cal 1 Substrate: F
 Batch Notes: Lower Interior Floor (North)

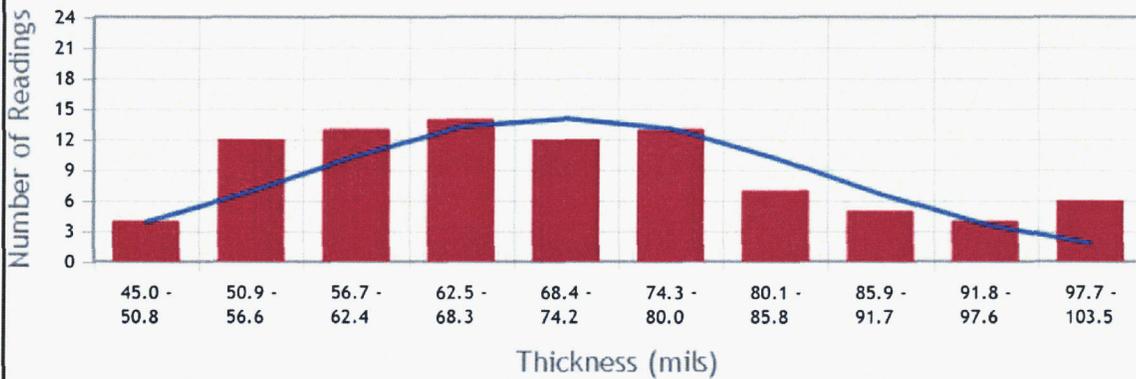
Summary

	#	\bar{x}	σ	↓	↑
B2	90	71.06	14.29	45.0	103.5

Chart



Histogram



Readings

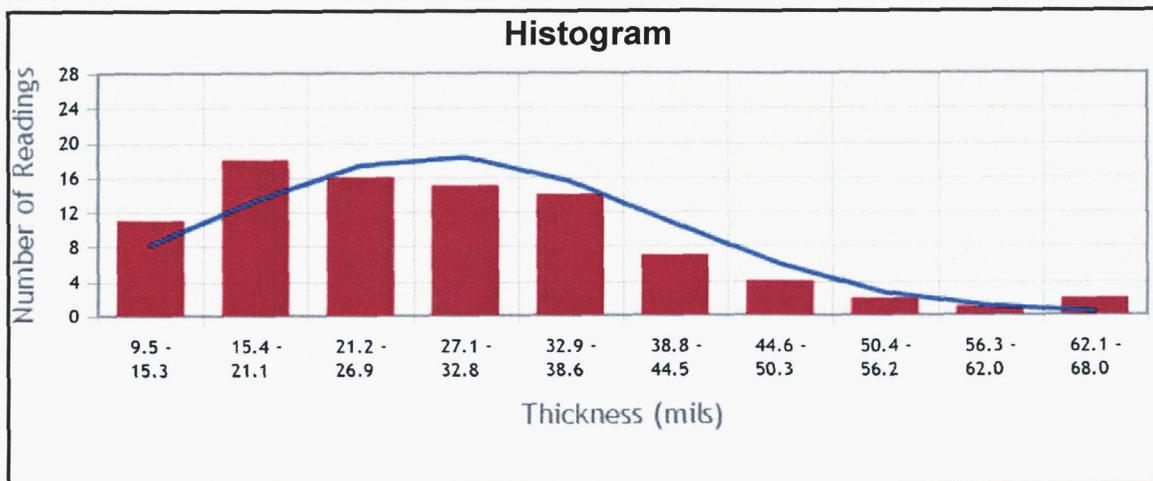
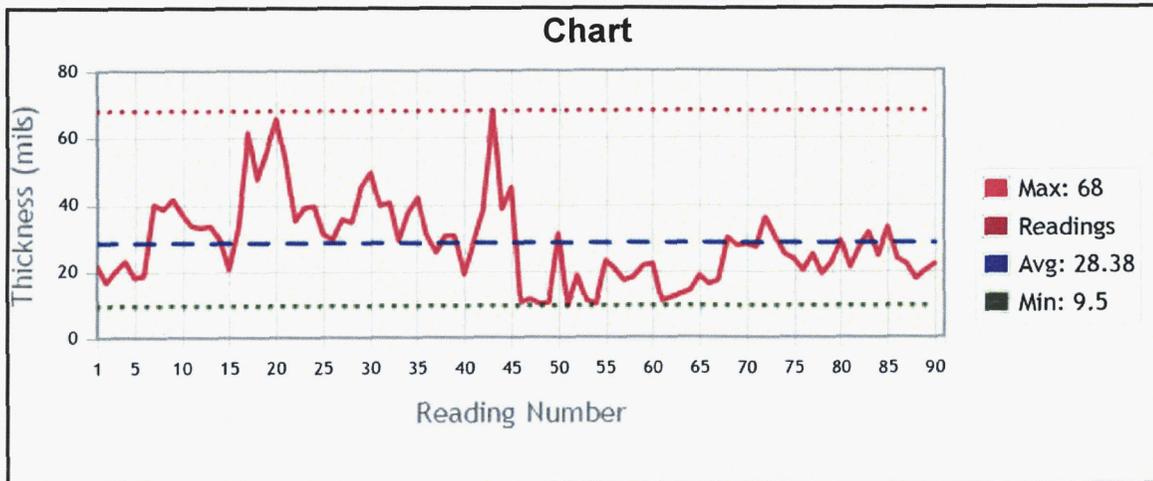
Reading #	mils	Date/Time	Ignore	Notes
1	81.5	2015-04-07 10:10:05	<input type="checkbox"/>	
2	102.5	2015-04-07 10:10:07	<input type="checkbox"/>	
3	69.0	2015-04-07 10:10:10	<input type="checkbox"/>	
4	66.0	2015-04-07 10:10:15	<input type="checkbox"/>	
5	60.5	2015-04-07 10:10:18	<input type="checkbox"/>	
6	76.5	2015-04-07 10:10:20	<input type="checkbox"/>	
7	52.0	2015-04-07 10:10:44	<input type="checkbox"/>	
8	48.0	2015-04-07 10:10:46	<input type="checkbox"/>	
9	69.5	2015-04-07 10:10:50	<input type="checkbox"/>	
10	67.5	2015-04-07 10:10:55	<input type="checkbox"/>	
11	75.5	2015-04-07 10:10:57	<input type="checkbox"/>	
12	71.0	2015-04-07 10:11:00	<input type="checkbox"/>	
13	103.5	2015-04-07 10:11:14	<input type="checkbox"/>	
14	71.5	2015-04-07 10:11:20	<input type="checkbox"/>	
15	103.0	2015-04-07 10:11:28	<input type="checkbox"/>	
16	68.0	2015-04-07 10:11:50	<input type="checkbox"/>	
17	59.5	2015-04-07 10:11:52	<input type="checkbox"/>	
18	66.0	2015-04-07 10:11:55	<input type="checkbox"/>	
19	83.0	2015-04-07 10:11:57	<input type="checkbox"/>	
20	61.0	2015-04-07 10:12:01	<input type="checkbox"/>	
21	74.0	2015-04-07 10:12:22	<input type="checkbox"/>	
22	88.5	2015-04-07 10:12:24	<input type="checkbox"/>	
23	56.0	2015-04-07 10:12:27	<input type="checkbox"/>	
24	62.0	2015-04-07 10:12:29	<input type="checkbox"/>	
25	89.0	2015-04-07 10:12:35	<input type="checkbox"/>	
26	65.5	2015-04-07 10:12:37	<input type="checkbox"/>	
27	48.5	2015-04-07 10:12:44	<input type="checkbox"/>	
28	95.5	2015-04-07 10:12:46	<input type="checkbox"/>	
29	50.0	2015-04-07 10:12:56	<input type="checkbox"/>	
30	51.5	2015-04-07 10:13:05	<input type="checkbox"/>	
31	84.0	2015-04-07 10:13:09	<input type="checkbox"/>	
32	81.5	2015-04-07 10:13:16	<input type="checkbox"/>	
33	52.5	2015-04-07 10:13:20	<input type="checkbox"/>	
34	59.5	2015-04-07 10:13:23	<input type="checkbox"/>	
35	55.0	2015-04-07 10:13:29	<input type="checkbox"/>	
36	55.5	2015-04-07 10:13:32	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
37	60.5	2015-04-07 10:13:37	<input type="checkbox"/>	
38	74.5	2015-04-07 10:13:43	<input type="checkbox"/>	
39	64.0	2015-04-07 10:13:46	<input type="checkbox"/>	
40	75.0	2015-04-07 10:13:51	<input type="checkbox"/>	
41	65.0	2015-04-07 10:13:55	<input type="checkbox"/>	
42	83.0	2015-04-07 10:13:58	<input type="checkbox"/>	
43	61.0	2015-04-07 10:14:04	<input type="checkbox"/>	
44	53.0	2015-04-07 10:16:03	<input type="checkbox"/>	
45	62.0	2015-04-07 10:16:19	<input type="checkbox"/>	
46	72.5	2015-04-07 10:26:41	<input type="checkbox"/>	
47	95.0	2015-04-07 10:26:43	<input type="checkbox"/>	
48	71.0	2015-04-07 10:26:46	<input type="checkbox"/>	
49	98.5	2015-04-07 10:26:49	<input type="checkbox"/>	
50	80.0	2015-04-07 10:26:50	<input type="checkbox"/>	
51	63.5	2015-04-07 10:26:53	<input type="checkbox"/>	
52	76.0	2015-04-07 10:26:56	<input type="checkbox"/>	
53	75.0	2015-04-07 10:26:58	<input type="checkbox"/>	
54	76.0	2015-04-07 10:27:07	<input type="checkbox"/>	
55	68.5	2015-04-07 10:27:09	<input type="checkbox"/>	
56	69.5	2015-04-07 10:27:13	<input type="checkbox"/>	
57	63.5	2015-04-07 10:27:16	<input type="checkbox"/>	
58	52.5	2015-04-07 10:27:24	<input type="checkbox"/>	
59	68.0	2015-04-07 10:28:17	<input type="checkbox"/>	
60	68.5	2015-04-07 10:28:48	<input type="checkbox"/>	
61	62.0	2015-04-07 10:28:51	<input type="checkbox"/>	
62	74.5	2015-04-07 10:28:54	<input type="checkbox"/>	
63	56.5	2015-04-07 10:28:56	<input type="checkbox"/>	
64	56.0	2015-04-07 10:28:58	<input type="checkbox"/>	
65	61.0	2015-04-07 10:29:01	<input type="checkbox"/>	
66	68.5	2015-04-07 10:29:03	<input type="checkbox"/>	
67	66.5	2015-04-07 10:29:16	<input type="checkbox"/>	
68	87.5	2015-04-07 10:29:19	<input type="checkbox"/>	
69	87.0	2015-04-07 10:29:21	<input type="checkbox"/>	
70	45.0	2015-04-07 10:29:24	<input type="checkbox"/>	
71	60.0	2015-04-07 10:29:26	<input type="checkbox"/>	
72	54.5	2015-04-07 10:29:28	<input type="checkbox"/>	
73	67.0	2015-04-07 10:29:38	<input type="checkbox"/>	
74	79.5	2015-04-07 10:29:41	<input type="checkbox"/>	
75	77.0	2015-04-07 10:29:43	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
76	74.5	2015-04-07 10:29:45	<input type="checkbox"/>	
77	69.5	2015-04-07 10:29:47	<input type="checkbox"/>	
78	68.0	2015-04-07 10:29:50	<input type="checkbox"/>	
79	84.5	2015-04-07 10:29:52	<input type="checkbox"/>	
80	54.5	2015-04-07 10:29:54	<input type="checkbox"/>	
81	90.5	2015-04-07 10:29:56	<input type="checkbox"/>	
82	67.5	2015-04-07 10:30:04	<input type="checkbox"/>	
83	96.5	2015-04-07 10:30:10	<input type="checkbox"/>	
84	57.0	2015-04-07 10:30:13	<input type="checkbox"/>	
85	82.0	2015-04-07 10:30:17	<input type="checkbox"/>	
86	101.5	2015-04-07 10:30:20	<input type="checkbox"/>	
87	75.5	2015-04-07 10:30:23	<input type="checkbox"/>	
88	60.5	2015-04-07 10:30:28	<input type="checkbox"/>	
89	92.0	2015-04-07 10:30:30	<input type="checkbox"/>	
90	99.0	2015-04-07 10:30:33	<input type="checkbox"/>	

Header			
Batch Name:	B3	Batch Date:	2015-04-07 10:34:38
Gage S/N:	758584		
Probe Type:	FT	Probe S/N:	228971
Cal:	Cal 1	Substrate:	F
Batch Notes:	Interior Floor (South)		

Summary					
	#	\bar{x}	σ	\downarrow	\uparrow
B3	90	28.38	12.55	9.5	68.0



Readings

Reading #	mils	Date/Time	Ignore	Notes
1	21.5	2015-04-07 10:35:02	<input type="checkbox"/>	
2	16.5	2015-04-07 10:36:54	<input type="checkbox"/>	
3	20.0	2015-04-07 10:37:16	<input type="checkbox"/>	
4	23.0	2015-04-07 10:37:18	<input type="checkbox"/>	
5	18.0	2015-04-07 10:37:31	<input type="checkbox"/>	
6	18.5	2015-04-07 10:38:01	<input type="checkbox"/>	
7	40.0	2015-04-07 10:43:37	<input type="checkbox"/>	
8	38.5	2015-04-07 10:43:40	<input type="checkbox"/>	
9	41.5	2015-04-07 10:43:44	<input type="checkbox"/>	
10	37.0	2015-04-07 10:43:48	<input type="checkbox"/>	
11	33.5	2015-04-07 10:43:50	<input type="checkbox"/>	
12	33.0	2015-04-07 10:44:08	<input type="checkbox"/>	
13	33.5	2015-04-07 10:44:12	<input type="checkbox"/>	
14	29.5	2015-04-07 10:44:16	<input type="checkbox"/>	
15	20.5	2015-04-07 10:44:20	<input type="checkbox"/>	
16	33.5	2015-04-07 10:44:23	<input type="checkbox"/>	
17	61.5	2015-04-07 10:44:26	<input type="checkbox"/>	
18	47.5	2015-04-07 10:44:29	<input type="checkbox"/>	
19	56.0	2015-04-07 10:44:33	<input type="checkbox"/>	
20	65.5	2015-04-07 10:44:36	<input type="checkbox"/>	
21	53.0	2015-04-07 10:44:39	<input type="checkbox"/>	
22	35.0	2015-04-07 10:44:44	<input type="checkbox"/>	
23	39.0	2015-04-07 10:44:46	<input type="checkbox"/>	
24	39.5	2015-04-07 10:44:49	<input type="checkbox"/>	
25	31.0	2015-04-07 10:45:16	<input type="checkbox"/>	
26	29.5	2015-04-07 10:45:19	<input type="checkbox"/>	
27	35.5	2015-04-07 10:45:21	<input type="checkbox"/>	
28	34.5	2015-04-07 10:45:30	<input type="checkbox"/>	
29	45.0	2015-04-07 10:45:33	<input type="checkbox"/>	
30	49.5	2015-04-07 10:45:36	<input type="checkbox"/>	
31	39.5	2015-04-07 10:45:40	<input type="checkbox"/>	
32	40.5	2015-04-07 10:45:42	<input type="checkbox"/>	
33	29.0	2015-04-07 10:45:44	<input type="checkbox"/>	
34	37.5	2015-04-07 10:45:48	<input type="checkbox"/>	
35	42.0	2015-04-07 10:45:51	<input type="checkbox"/>	
36	31.0	2015-04-07 10:45:54	<input type="checkbox"/>	

Reading		Date/Time	Ignore	Notes
#	mils			
37	25.5	2015-04-07 10:45:57	<input type="checkbox"/>	
38	30.5	2015-04-07 10:46:00	<input type="checkbox"/>	
39	30.5	2015-04-07 10:46:03	<input type="checkbox"/>	
40	19.0	2015-04-07 10:46:10	<input type="checkbox"/>	
41	28.5	2015-04-07 10:46:14	<input type="checkbox"/>	
42	38.0	2015-04-07 10:46:16	<input type="checkbox"/>	
43	68.0	2015-04-07 10:46:20	<input type="checkbox"/>	
44	38.5	2015-04-07 10:46:23	<input type="checkbox"/>	
45	45.0	2015-04-07 10:46:26	<input type="checkbox"/>	
46	10.5	2015-04-07 11:12:23	<input type="checkbox"/>	
47	11.5	2015-04-07 11:12:26	<input type="checkbox"/>	
48	10.0	2015-04-07 11:12:29	<input type="checkbox"/>	
49	10.5	2015-04-07 11:12:46	<input type="checkbox"/>	
50	31.0	2015-04-07 11:12:58	<input type="checkbox"/>	
51	9.5	2015-04-07 11:13:02	<input type="checkbox"/>	
52	18.5	2015-04-07 11:13:05	<input type="checkbox"/>	
53	11.0	2015-04-07 11:13:09	<input type="checkbox"/>	
54	10.0	2015-04-07 11:13:22	<input type="checkbox"/>	
55	23.0	2015-04-07 11:13:34	<input type="checkbox"/>	
56	20.5	2015-04-07 11:13:36	<input type="checkbox"/>	
57	17.0	2015-04-07 11:13:39	<input type="checkbox"/>	
58	18.0	2015-04-07 11:13:42	<input type="checkbox"/>	
59	21.5	2015-04-07 11:13:44	<input type="checkbox"/>	
60	22.0	2015-04-07 11:13:47	<input type="checkbox"/>	
61	11.0	2015-04-07 11:13:51	<input type="checkbox"/>	
62	12.0	2015-04-07 11:13:53	<input type="checkbox"/>	
63	13.0	2015-04-07 11:14:26	<input type="checkbox"/>	
64	14.0	2015-04-07 11:14:29	<input type="checkbox"/>	
65	18.5	2015-04-07 11:14:31	<input type="checkbox"/>	
66	16.0	2015-04-07 11:14:34	<input type="checkbox"/>	
67	17.0	2015-04-07 11:14:37	<input type="checkbox"/>	
68	30.0	2015-04-07 11:20:41	<input type="checkbox"/>	
69	27.5	2015-04-07 11:20:46	<input type="checkbox"/>	
70	28.0	2015-04-07 11:20:49	<input type="checkbox"/>	
71	27.0	2015-04-07 11:20:52	<input type="checkbox"/>	
72	36.0	2015-04-07 11:20:54	<input type="checkbox"/>	
73	30.5	2015-04-07 11:20:57	<input type="checkbox"/>	
74	25.0	2015-04-07 11:21:04	<input type="checkbox"/>	
75	23.5	2015-04-07 11:21:06	<input type="checkbox"/>	

Reading				
#	mils	Date/Time	Ignore	Notes
76	20.0	2015-04-07 11:21:17	<input type="checkbox"/>	
77	25.0	2015-04-07 11:21:35	<input type="checkbox"/>	
78	19.0	2015-04-07 11:21:37	<input type="checkbox"/>	
79	22.5	2015-04-07 11:21:40	<input type="checkbox"/>	
80	29.0	2015-04-07 11:21:47	<input type="checkbox"/>	
81	21.0	2015-04-07 11:21:57	<input type="checkbox"/>	
82	27.0	2015-04-07 11:22:04	<input type="checkbox"/>	
83	31.5	2015-04-07 11:22:07	<input type="checkbox"/>	
84	24.5	2015-04-07 11:22:18	<input type="checkbox"/>	
85	33.0	2015-04-07 11:22:27	<input type="checkbox"/>	
86	23.5	2015-04-07 11:22:29	<input type="checkbox"/>	
87	22.0	2015-04-07 11:22:38	<input type="checkbox"/>	
88	17.5	2015-04-07 11:23:01	<input type="checkbox"/>	
89	20.0	2015-04-07 11:23:13	<input type="checkbox"/>	
90	22.0	2015-04-07 11:23:16	<input type="checkbox"/>	

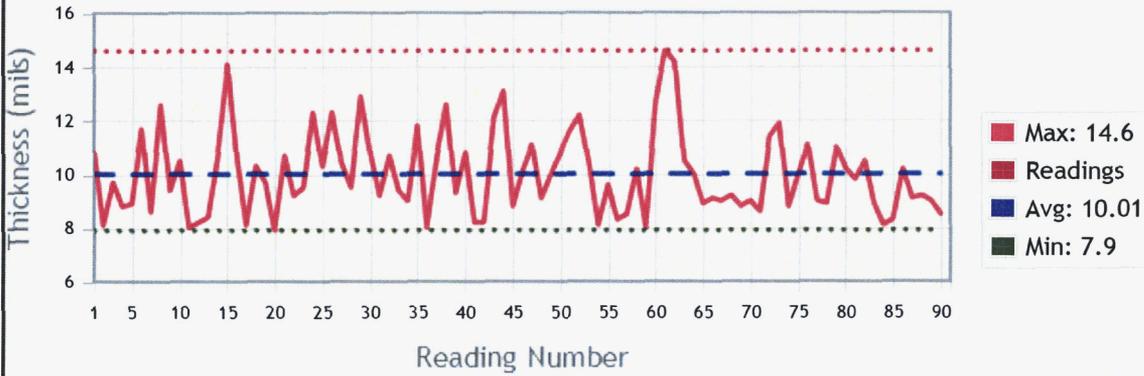
Header

Batch Name:	B17	Batch Date:	2015-04-22 09:38:09
Gage S/N:	765437		
Probe Type:	F	Probe S/N:	242636
Cal:	Cal 1	Substrate:	F
Batch Notes:	EXTERIOR ROOF		

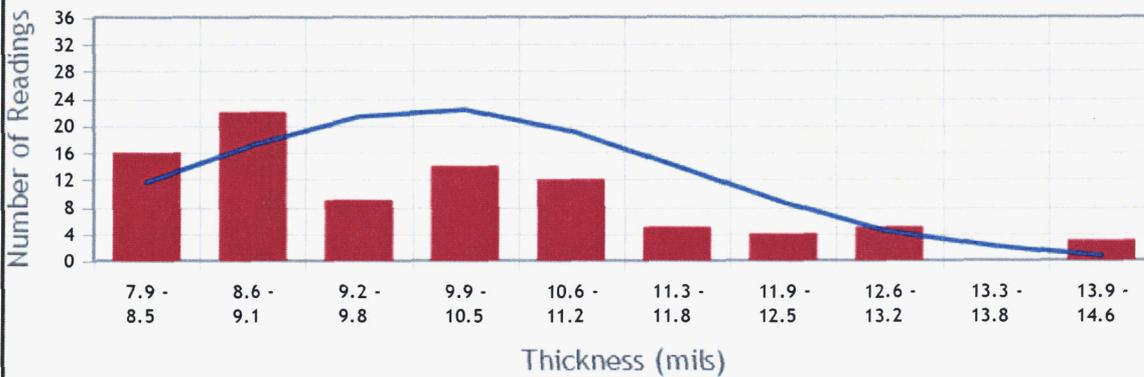
Summary

	#	\bar{x}	σ	↓	↑
B17	90	10.01	1.57	7.9	14.6

Chart



Histogram



Readings

Reading #	mils	Date/Time	Ignore	Notes
1	10.8	2015-04-22 09:43:27		
2	8.1	2015-04-22 09:45:48		
3	9.7	2015-04-22 09:46:04		
4	8.8	2015-04-22 09:46:17		
5	8.9	2015-04-22 09:46:28		
6	11.7	2015-04-22 09:46:39		
7	8.6	2015-04-22 09:46:42		
8	12.6	2015-04-22 09:46:49		
9	9.4	2015-04-22 09:46:52		
10	10.5	2015-04-22 09:47:40		
11	8.0	2015-04-22 09:47:44		
12	8.2	2015-04-22 09:47:56		
13	8.4	2015-04-22 09:47:59		
14	10.7	2015-04-22 09:48:04		
15	14.1	2015-04-22 09:48:06		
16	10.6	2015-04-22 09:48:08		
17	8.1	2015-04-22 09:48:13		
18	10.3	2015-04-22 09:48:26		
19	9.7	2015-04-22 09:49:10		
20	7.9	2015-04-22 09:49:34		
21	10.7	2015-04-22 09:49:36		
22	9.2	2015-04-22 09:49:39		
23	9.5	2015-04-22 09:49:46		
24	12.3	2015-04-22 09:49:48		
25	10.3	2015-04-22 09:49:50		
26	12.3	2015-04-22 09:49:53		
27	10.4	2015-04-22 09:49:55		
28	9.5	2015-04-22 09:50:11		
29	12.9	2015-04-22 09:50:13		
30	10.8	2015-04-22 09:50:15		
31	9.2	2015-04-22 09:50:16		
32	10.7	2015-04-22 09:50:20		
33	9.4	2015-04-22 09:50:22		
34	9.0	2015-04-22 09:50:26		
35	11.8	2015-04-22 09:50:28		
36	8.0	2015-04-22 09:50:41		

Reading		Date/Time	Ignore	Notes
#	mils			
37	10.6	2015-04-22 09:50:47		
38	12.6	2015-04-22 09:52:55		
39	9.3	2015-04-22 09:53:19		
40	10.8	2015-04-22 09:53:36		
41	8.2	2015-04-22 09:53:38		
42	8.2	2015-04-22 09:53:41		
43	12.1	2015-04-22 09:54:01		
44	13.1	2015-04-22 09:54:06		
45	8.8	2015-04-22 09:54:14		
46	10.1	2015-04-22 09:54:32		
47	11.1	2015-04-22 09:55:01		
48	9.1	2015-04-22 09:55:23		
49	10.0	2015-04-22 09:55:25		
50	10.8	2015-04-22 09:55:28		
51	11.6	2015-04-22 09:55:44		
52	12.2	2015-04-22 09:56:25		
53	10.4	2015-04-22 09:56:46		
54	8.1	2015-04-22 09:57:36		
55	9.6	2015-04-22 09:57:54		
56	8.3	2015-04-22 09:58:01		
57	8.5	2015-04-22 09:58:18		
58	10.2	2015-04-22 09:58:22		
59	8.0	2015-04-22 09:58:28		
60	12.7	2015-04-22 09:58:30		
61	14.6	2015-04-22 09:58:32		
62	14.2	2015-04-22 09:58:35		
63	10.5	2015-04-22 09:58:44		
64	10.0	2015-04-22 09:58:47		
65	8.9	2015-04-22 09:58:51		
66	9.1	2015-04-22 09:59:16		
67	9.0	2015-04-22 09:59:19		
68	9.2	2015-04-22 09:59:35		
69	8.8	2015-04-22 09:59:50		
70	9.0	2015-04-22 09:59:57		
71	8.6	2015-04-22 10:00:05		
72	11.4	2015-04-22 10:00:22		
73	11.9	2015-04-22 10:00:34		
74	8.8	2015-04-22 10:00:53		
75	10.0	2015-04-22 10:01:02		

Reading		Date/Time	Ignore	Notes
#	mils			
76	11.1	2015-04-22 10:01:17		
77	9.0	2015-04-22 10:01:19		
78	8.9	2015-04-22 10:01:21		
79	11.0	2015-04-22 10:01:24		
80	10.2	2015-04-22 10:01:27		
81	9.8	2015-04-22 10:01:33		
82	10.5	2015-04-22 10:01:35		
83	8.9	2015-04-22 10:01:43		
84	8.1	2015-04-22 10:01:48		
85	8.3	2015-04-22 10:01:50		
86	10.2	2015-04-22 10:01:56		
87	9.1	2015-04-22 10:01:58		
88	9.2	2015-04-22 10:02:13		
89	9.0	2015-04-22 10:02:23		
90	8.5	2015-04-22 10:02:43		

Selection & Specification Data

Generic Type Solvent Free Aromatic Polyurethane Hybrid

Description Environmentally friendly, advanced hybrid technology, plural-component applied coating used as a lining for water, wastewater, manholes, penstocks, dam gates, pipelines and other aggressive immersion applications. Provides protection against microbiologically induced corrosion (MIC) and hydrogen sulfide corrosion found in wastewater treatment service.

Features

- UL approved for ANSI/NSF Std. 61 potable water*
- Complies with 21 CFR 175.300 Method D, E, & G and Direct Dry Food Contact
- Complies with Greenbook
- Cold temperature cure
- Fast cure and walk on time
- Excellent barrier properties, low permeability
- Single-coat application 60 to 125 mils
- Bridges normal shrinkage cracks in concrete
- True monolithic film on steel and concrete
- Encapsulates rivets, bolts, and edges in one coat
- Outstanding abrasion, impact and tear resistance
- Combines polyurethane and polyurea technologies to form a hybrid polyurethane

*Valid if manufactured at a certified location.

Color Light Tan (0200) is the only standard color that is potable water approved. Other colors available are Blue (0100), Light Blue (P100), Black (0900), Beige (S200) & Red (0500). All colors are unmatched colors.

Finish Gloss

Primers Steel: Self-priming
Concrete: Self-priming when concrete is dry. Use Phenoline 311, Carboguard 1340 WB, Carboguard 690 or Plasite 4503 as primer over damp concrete.

Dry Film Thickness 20.0 - 125.0 mils (508 - 3175 microns) Total DFT

20 to 125 mils (508 to 3175 microns) for most applications on steel
60 to 125+ mils (1524-3175+ microns) or higher for most applications on concrete.

Solids Content By Volume 100%

Theoretical Coverage Rate 1604 ft² at 1 mil (39 m²/l at 25 microns)
80 ft² at 20 mils (2 m²/l at 500 microns)
13 ft² at 125 mils (0.3 m²/l at 3125 microns)

Allow for loss in mixing and application.

VOC Values As Supplied 0

Limitations

- Reactamine 760 will tend to yellow or darken in exterior UV exposure but will not affect performance
- Not recommended for exposure to concentrated acids, aromatic, ketone or chlorinated solvents
- Dry temperature resistance from -20 to 180°F (-29 to 82°C)

Substrates & Surface Preparation

General Surfaces must be properly cleaned. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.

Steel SSPC-SP10 with a 3.5 mil (89 micron) to 5 mil (127 microns) surface profile.

Concrete Concrete must be cured 28 days at 75°F (24°C) Prepare surfaces in accordance with SSPC-SP13/NACE 6 or ICRI 03732 to obtain CSP 4 to 6 roughness. Attain a surface profile resembling extra coarse sandpaper. Eliminate leaks and infiltrations and remove standing water. Resurface areas with excessive cavities (bugholes) or exposed aggregate using a high-strength resurfacing product. Carboguard 510 may be used to patch bugholes or to resurface. Before application of Reactamine 760, the surface must be free of condensation and visible moisture. Vacuum to dust-free condition before application. Reactamine 760 can go direct to the concrete if the concrete is clean and dry. Use a moisture tolerant primer before applying Reactamine 760 on damp surfaces.

Performance Data

Test Method	System	Results
ASTM 2794, Impact Direct and Reverse	1 ct. Reactamine 760	160 inch-pounds
ASTM B117, Salt Fog Resistance for 1,000 hours	1 ct. Reactamine 760	Plane No Blisters Scribe No Blisters & 1.7 mm UCC
ASTM D 624 Tear Strength	1 ct. Reactamine 760	347 pli
ASTM D2240, Shore D Hardness	1 ct. Reactamine 760	60-65
ASTM D2247, Humidity Resistance	1 ct. Reactamine 760	1,000 hours with no effect
ASTM D4060 (1000 cycles with 1000g), Abrasion Resistance	1 ct. Reactamine 760	37 mg loss,
ASTM D412 Tensile strength Elongation	1 ct. Reactamine 760	2,000 to 3,000 psi 90 to 110%
ASTM D522, Flexibility Method B, 1/8 inches Cylindrical Mandrel Bend	1 ct. Reactamine 760	Pass
ASTM D570 Water Absorption, Long Term Method	1 ct. Reactamine 760	Less than 0.7%
ASTM E-96, Permance	1 ct. Reactamine 760	0.23 Perms
ASTM E96, Water Vapor Transmission Rates	1 ct. Reactamine 760	0.1 g/100 in ² /24 hours
Membrane Bio-Reactor Lining, 20 cycles	1 ct. Reactamine 760	Pass
Pickle Jar Test from Greenbook Section 210-2.3	1 ct. Reactamine 760	Pass

November 2013

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8857

Reactamine[®] 760

Mixing & Thinning

Gel Time	3 to 4 minutes at 70 to 80°F (21 to 27°C)
Mixing	Power mix Resin (Part A) with an air-driven agitator for 30 minutes just prior to use. Catalyst (Part B) requires no mixing before using unless tinted.
Thinning	Not recommended
Ratio	2:1 Ratio (A to B) by volume

Application Equipment Guidelines

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Plural Component Airless Spray Heated plural airless will be a fixed-volume ratio 2A:1B. Standard equipment typically includes heated hoses, drum heaters, pressure feed from 50 gallon steel drums or heated hoppers, recirculation system, automatic high-pressure shut-off system. Please call Carboline Technical Service (1-800-848-4645) for complete pump, static mixer, whip hose and airless gun with tip set up recommendations. Applicator training is required and spray equipment must be approved by Carboline's Field Technical Service. Note: Part A optimum material temperature should be 80° to 90°F (27° to 32°C) and Part B should be 75° to 85°F (24° to 29°C).

Touch Up Brush apply material from Reactamine 760 Repair Kit. For use on small areas only. Available in dual cartridge system for spray application. Requires HSS (hand spray system) gun to apply. Contact Technical Service for details.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	75 °F (24 °C)	35 °F (2 °C)	25 °F (-4 °C)	0%
Maximum	110 °F (43 °C)	140 °F (60 °C)	120 °F (49 °C)	95%

Application on substrate from 110 to 140°F will require special application techniques. Please consult Carboline's Technical Service for details. Industry standards are for substrate temperatures to be 5°F (3°C) above the dew point. Caution: This product has some moisture tolerance, but it can be moisture sensitive depending on conditions. Excessive material temperatures can reduce film build. See detail material temperature range for part A and B in plural component airless spray section.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Cure for Most Immersion Services	Dry Time (Light Foot Traffic)	Dry to Touch	Maximum Recoat Time
38 °F (3 °C)	16 Hours	6 Hours	4 Hours	36 Hours
73 °F (23 °C)	2 Hours	2 Hours	1 Hours	18 Hours

2 hour cure to immersion refers to water and wastewater service only. Inquire for other services, consult with Carboline's Technical Service Department. These times are based on recommended dry film thickness. If maximum recoat is exceeded, the surface must be abraded to roughen surface and cleaned of dust and debris and then solvent wiped with MEK or acetone prior to the application of additional coats. Maximum recoat time with itself: 4 hours in direct sunlight, 8 hours not in sunlight and 18 hours inside closed tank at 73°F (23°C).

Testing / Certification / Listing

Underwriters Laboratories, Inc Reactamine 760 (color 0200) was tested by UL and is approved for ANSI/NSF Standard 61 (potable water lining). It is approved for water tanks greater than or equal to 100 gallons and pipes greater than or equal to 20 inches. Maximum film thickness is 125 mils (3175 microns) DFT. Minimum cure time for potable water service is 4 hours at 61°F (16°C).

Packaging, Handling & Storage

Shelf Life Part A: Min. 24 months at 75°F (24°C)
Part B: Min. 12 months at 75°F (24°C)
When kept at recommended storage conditions and in original unopened containers

Shipping Weight (Approximate) 150 Gallon kit weighs 1400 lbs. (635 kg)
75 Gallon kit weighs 700 lbs. (318 kg)
15 Gallon kit weighs 140 lbs. (63.5 kg)
3 Quart Repair Kit weighs 7 lbs. (3.2 kg)
900 ml Dual Cartridges, Six Cartridges to a carton weighs 43 lbs. (19.5 kg)

Storage Temperature & Humidity 40 to 120°F (4 to 49°C)
0 to 95% Humidity
Store indoors and keep Dry. Do not place drums directly on concrete or earth. Store on top of wood slats or pallets. Blanket all partial drums with nitrogen gas to prevent moisture contamination. Avoid freezing. Do not open until ready to use. Rotate Resin (Part A) drums regularly if stored for the long term.

Flash Point (Setofflash) Part A: >300°F (148°C)
Part B: 390°F (199°C)



An **RPM** Company

November 2013

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8857

Selection & Specification Data

Generic Type	Cycloaliphatic Amine Epoxy
Description	High solids, high-build potable water coating widely used for lining interior steel and concrete tanks, valves and pipe. Formulated for application at conventional builds (4.0-6.0 mils per coat) as well as high builds (10.0 mils per coat).
Features	<ul style="list-style-type: none"> ■ Excellent film build and edge protection ■ VOC compliant to current AIM regulations ■ Meets or exceeds all requirements of: <ul style="list-style-type: none"> •ANSI/NSF Std. 61 for potable water tanks of 6000 gallons or larger •AWWA D102 Inside System 1 and 2 •AWWA C210 for use on interior of steel water pipe •Complies with FDA 21CFR 175.300 criteria for food contact
Color	White (S800); Gray (0794); Blue (4169); Other colors may be available but are limited to various approvals.
Finish	Gloss
Primers	Self-priming
Topcoats	Acrylics, Alkyds, Epoxies, Polyurethanes for non-immersion applications.
Dry Film Thickness	4.0-10.0 mils (100-250 microns) per coat. Do not exceed 17 mils (425 microns) per system for potable water applications.
Solids Content	By Volume: 75% ± 2%
Theoretical Coverage Rate	1203 mil ft ² (30.0 m ² /l at 25 microns) 241 ft ² at 5 mils (6.0 m ² /l at 25 microns) Allow for loss in mixing and application.
VOC Values	As supplied: 1.8 lbs./gal (214 g/l) Thinned:* 8 oz/gal w/ #2 2.1 lbs./gal (249 g/l) 16 oz/gal w/ #33: 2.4 lbs./gal (285 g/l) These are nominal values and may vary with slightly with color. *Maximum thinning for 250 g/l restricted areas is 7 oz/gal for Thinner #33. Use Thinner #76 up to 8 oz/gal where non-photochemically reactive solvent is required.
Dry Temp. Resistance	Continuous: 250°F (121°C) Non-Continuous: 300°F (149°C) Discoloration and loss of gloss is observed above 200°F (93°C).
Wet Temp. Resistance	Immersion temperature resistance depends upon exposure. Consult Carboline Technical Service for specific information. It is recommended that metal tanks operating above 140°F (60°C) be insulated.
Limitations	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.

Substrates & Surface Preparation

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating.
Steel	<u>Immersion:</u> SSPC-SP10 <u>Non-Immersion:</u> SSPC-SP6 <u>Surface Profile:</u> 1.5-3.0 mils (38-75 microns)
Concrete	<u>Immersion:</u> Concrete must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing.

Performance Data

Test Method	System	Results	Report #
ASTM D3363 Pencil Hardness	Blasted Steel 2 cts. 891	3H	03457
ANSI/NSF Std. 61	Blasted Steel 2 cts. 891	Pass	09434
AWWA C210 Specification	Blasted Steel 2 cts. 891	Pass	03457

Test reports and additional data available upon written request.

Application Equipment

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results. **General Guidelines:**

Spray Application (General)	This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.
Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 30:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: .017-.021" Output PSI: 2100-2300 Filter Size: 60 mesh *Teflon packings are recommended and available from the pump manufacturer. Use 45:1 pump ratio for elevated applications and 1/2" I.D. for hose lengths greater than 60'.
Brush & Roller (General)	Not recommended for tank lining applications except when striping welds. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).
Brush	Use a medium bristle brush.
Roller	Use a short-nap synthetic roller cover with phenolic core.

April 2010 replaces November 2004

0982

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Carboguard® 891

Mixing & Thinning

Mixing Power mix separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

Ratio 1:1 Ratio (A to B)

Thinning* Spray: Up to 8 oz/gal (6%) w/#2 (NSF Std.61 approved)
Brush: Up to 16 oz/gal (13%) w/#33 (Non-NSF Std.61)
Roller: Up to 16 oz/gal (13%) w/#33 (Non-NSF Std.61)

Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

*See VOC values for thinning limits.

Pot Life Material begins to lose film build in 90 minutes at 75°F (24°C), and less at higher temperatures.

Cleanup & Safety

Cleanup Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

Ventilation When used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.

Caution This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	60°-85°F (16°-29°C)	60°-85°F (16°-29°C)	60°-90°F (16°-32°C)	0-80%
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	90°F (32°C)	125°F (52°C)	110°F (43°C)	80%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Recoat	Dry to Topcoat w/ Other Finishes	Final Cure for Immersion Service	Maximum Recoat Time
50°F (10°C)	12 Hours	24 Hours	N/R*	60 Days
60°F (16°C)	8 Hours	16 Hours	10 Days	30 Days
75°F (24°C)	4 Hours	8 Hours	5 Days	30 Days
90°F (32°C)	2 Hours	4 Hours	3 Days	15 Days

These times are based on a 4.0-6.0 mil (100-150 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating. If the maximum recoat time is exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats. For force curing, contact Carboline Technical Service for specific requirements. *Note: Final cure temperatures below 60°F (16°C) are not recommended for tank linings.

Packaging, Handling & Storage

Shipping Weight (Approximate) 2 Gallon Kit 29 lbs (13 kg) 10 Gallon Kit 145 lbs (66 kg)

Flash Point (Setaflash) Part A: 75°F (24°C)
Part B: 81°F (27°C)

Storage (General) Store Indoors.

Storage Temperature & Humidity 40° -110°F (4°-43°C)
0-100% Relative Humidity

Shelf Life Part A: Min. 36 months at 75°F (24°C)
Part B: 6 months at 75°F (24°C)

***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**



2150 Schuertz Rd., St. Louis, MO 63146
PH: 314-644-1000 Toll-Free: 800-848-4645
www.carboline.com

An **RPM** Company

April 2010 replaces November 2004

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Selection & Specification Data

Generic Type	Aliphatic Acrylic-Polyester Polyurethane
Description	High build, low sheen finish that has excellent resistance to corrosion, chemicals and abrasion. Suitable for application over a number of Carboline primers and intermediates, this material provides very good weathering performance in a broad range of colors.
Features	<ul style="list-style-type: none"> ▪ Outstanding performance properties in both mild and aggressive environments ▪ High build; suitable for many two-coat systems ▪ Suitable for application direct to inorganic zincs ▪ Application by spray, brush or roller ▪ Indefinite recoatability ▪ VOC compliant to current AIM regulations
Color *	Refer to Carboline Color Guide. Certain colors may require multiple coats to hide.
Finish	Satin
Primers	Refer to <i>Substrates & Surface Preparation</i>
Topcoats	Carbothane® Clear Coat when required.
Dry Film Thickness	3.0-5.0 mils (75-125 microns) per coat. Dry film thickness in excess of 7 mils (175 microns) per coat is not recommended.
Solids Content	By Volume: 57% ± 2%
Theoretical Coverage Rate	914 mil ft ² (22.8 m ² /l at 25 microns) 228 ft ² at 4 mils (5.7 m ² /l at 100 microns) Allow for loss in mixing and application.
VOC Values	As supplied: 3.2 lbs/gal (383 g/l) Thinned: 11 oz/gal w/ #25: 3.5 lbs/gal (420 g/l) 18 oz/gal w/ #25: 3.7 lbs/gal (449 g/l) 6 oz/gal w/ #214: 3.3 lbs/gal (403 g/l) 11 oz/gal w/#241: 3.5 lbs/gal (423 g/l) 1.5 oz/gal of Additive 101 adds 0.08 lbs/gal (10g/l) These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C) Discoloration and loss of gloss is observed above 200°F (93°C).

* The alignment of aluminum flakes in aluminum-filled finishes is very dependent on application conditions and techniques. Care must be taken to keep conditions as constant as possible to reduce variations in final appearance. It is also advisable to work from a single batch of material since variations can occur from batch to batch. For more information consult Carboline Technical Service Department.

Substrates & Surface Preparation

General	Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. Refer to the specific primer's Product Data Sheet for detailed requirements of the specified primer.
Steel	SSPC-SP6 with a 1.5-2.5 mil (37.5-62.5 micron) surface profile for maximum protection. SSPC-SP2 or SP3 as minimum requirement. Prime with specific Carboline primers as recommended by your Carboline sales representative.
Galvanized Steel	Prime with specific Carboline primers as recommended by your Carboline Sales Representative. Refer to the specific primer's Product Data Sheet for substrate preparation requirements.
Aluminum	SSPC-SP1 and prime with appropriate Carboline primer as recommended by your Carboline sales representative.
Previously Painted Surfaces	Lightly sand or abrade to roughen and degloss the surface. Existing paint must attain a minimum 3B rating in accordance with ASTM D3359 "X-Scribe" adhesion test. Prime with specific Carboline primers as recommended by your Carboline sales representative.

Performance Data

Test Method	System	Results	Report #
ASTM D4213 Scrub Resistance	1 ct. 133 HB	.0027 microliters erosion rate after 100 cycles with abrasive scrub medium.	03403
ASTM G26 Weatherometer	Blasted Steel 1 ct. IOZ 1 ct. 133 HB	No blistering, rusting or cracking after 3500 hours.	01982
ASTM G53 QUV (2500 hours w/ UVA 340 bulb)	Blasted Steel 1 ct. Epoxy 1 ct. 133 HB	Color change less than 2 McAdam units; no blistering, rusting, cracking or chalking.	03394
ASTM B117 Salt Fog	Blasted Steel 1 ct. OZ 1 ct. 133 HB	No rusting, or blistering on plane or scribe 4,000 hours	02585
ASTM B117 Salt Fog	Blasted Steel 1 ct. IOZ 1 ct. 133 HB	No rusting, or blistering on plane or scribe 2,000 hours	02585
ASTM D5894 QUV A Prohesion	1 ct. 133 HB	No effect on plane area and 78% gloss retention after 1008 hours of wet/dry salt fog cycle	03274
ASTM D4585 Humidity	Blasted Steel 1 ct. IOZ 1 ct. 133 HB	No rusting or blistering after 3000 hours.	02585
Graffiti Resistance	Blasted Steel 1 ct. Epoxy 1 ct. 133 HB	All markings and stains removed by solvent after exposure to: shoe polish, Sharpie marker, crayon, lipstick, spray cans of acrylic, alkyd and epoxy.	03395
ASTM D1735 Water Fog	Blasted Steel 1 ct. Epoxy 1 ct. 133 HB	No rusting or blistering after 8600 hours.	02061

Test reports and additional data available upon written request.

June 2010 replaces March 2010

0840

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Carbothane® 133 HB

Application Equipment

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General Guidelines:

Spray Application (General) This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

Conventional Spray Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

Airless Spray Pump Ratio: 30:1 (min.)*
GPM Output: 3.0 (min.)
Material Hose: 3/8" I.D. (min.)
Tip Size: .013-.015"
Output PSI: 2100-2300
Filter Size: 60 mesh
*Teflon packings are recommended and available from the pump manufacturer.

Brush & Roller (General) Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C).

Brush Recommended for touch-up only. Use a medium, natural bristle brush.

Roller Use a medium-nap synthetic roller cover with phenolic core.

Mixing & Thinning

Mixing Power mix Part A separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

Ratio 6:1 Ratio (A to B)
Part A: .88 Gal. Kit 5.0 Gal. Kit
1 gal. can (partial filled) 5 gal. can (partial filled)
UC 133: 1 pint 1 gallon can (partial filled)

Thinning Spray: Up to 11 oz/gal (9%) w/ #25
Roller: Up to 18 oz/gal (14%) w/ #25.
Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Thinner #214 may also be used up to 6 oz/gal for either spray or brush/roller application. Thinner #236E may also be used to thin this product to minimize HAP and VOC emissions. Consult Carboline Technical Service for guidance.

Pot Life 4 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use. MOISTURE CONTAMINATION WILL SHORTEN POT LIFE AND CAUSE GELLATION.

Cleanup & Safety

Cleanup Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

Cleanup & Safety Cont.

Ventilation When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.

Caution This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	65°-85°F (18°-29°C)	65°-85°F (18°-29°C)	65°-85°F (18°-29°C)	35-60%
Minimum	40°F (4°C)	40°F (4°C)	40°F (4°C)	0%
Maximum	100°F (38°C)	110°F (43°C)	110°F (43°C)	90%

Industry standards are for substrate temperatures to be 5°F (3°C) above the dew point. This product simply requires the substrate temperature to be above the dew point.

Caution: This Product is moisture sensitive in the liquid stage and until cured. Protect from high humidity, dew and direct moisture contact until cured. Application and/or curing in humidities above maximum, or exposure to moisture from rain or dew may result in a loss of gloss and/or microbubbling of the product.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Handle	Minimum Dry to Recoat*	Final Cure
40°F (4°C)	20 Hours	20 Hours	28 Days
50°F (10°C)	12 Hours	12 Hours	14 Days
75°F (24°C)	5 Hours	5 Hours	7 Days
90°F (32°C)	1 Hour	1 Hour	4 Days

These times are based on a 3.0-5.0 mil (75-125 micron) dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Additive 101 may be used at 1.5 oz/mixed gal to accelerate the cure by 30%.

*Maximum recoat times are indefinite. Surface must be clean and dry. As part of good painting practice it is recommended to test for adhesion by wiping the surface with Thinner 25. If the film shows a slight "tack" the surface is suitable for recoating without extensive surface preparation such as abrading.

Packaging, Handling & Storage

Shipping Weight (Approximate) .88 Gallon Kit 11 lbs (5 kg) 5 Gallon Kit 64 lbs (29 kg)

Flash Point (Setflash) Part A: 95°F (35°C)
Part B: 91°F (33°C)

Storage (General) Store Indoors.

Storage Temperature & Humidity 40° - 110°F (4°-43°C)
0-90% Relative Humidity

Shelf Life Part A: Min. 36 months at 75°F (24°C)
Part B: Min. 24 months at 75°F (24°C)

*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.


Coatings - Linings - Fireproofing
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An RPM Company

June 2010 replaces March 2010

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Selection & Specification Data

Generic Type	Phenalkamine epoxy
Description	High performance epoxy that has excellent resistance to fresh and salt water exposures. This coating exhibits outstanding moisture and surface tolerance during application, low temperature cure capability, and very fast cure response for quick return to service. It contains an inert flake reinforcement (micaceous iron oxide) to enhance film strength and performance.
Features	<ul style="list-style-type: none"> · High solids, low VOC · Low temperature cure · Excellent wetting properties · Excellent surface tolerance · Excellent moisture tolerance (application) · Fast cure response · Suitable for immersion service in fresh or salt water after 60 minute cure @75°F
Gloss	Semi-gloss
Color	Tan
Primers	Self Priming
Topcoats	Acrylics, Alkyds, Epoxies, Polyurethanes
Dry Film Thickness	For most applications: 5-10 mils (125-250 microns)
Solids Content	Theoretical solids of mixed material by volume: 80 +/- 2%
Theoretical Coverage Rate	1283 mil ft ² (32 m ² /l at 25 microns) 256 sq. ft. at 5 mils (6.4 sq. m/l @ 125 microns) NOTE: Material losses during mixing and applications will vary and must be taken into consideration when estimating job requirements.
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C)
Wet Temp. Resistance	Immersion temperature resistance depends upon exposure. Consult Carboline Technical Service for specific information.
VOC Values (calculated)	As supplied: 1.42 lbs/gal (170 g/l) mixed Thinned: 16* oz/gal w/ #2: 2.06 lbs/gal (248 g/l) These are nominal values and may vary with color.
HAPS Values	As supplied: 1.4 lbs/solid gal
Limitations	Epoxies lose gloss, discolor and eventually chalk in sunlight exposure. Discoloration is more pronounced with Carbomastic 615 HS.

Substrates & Surface Preparation

General	Remove any oil or grease from surface to be coated with clean rags soaked in Carboline Thinner #2, or toluol. Concrete Do not apply coating unless concrete has cured at least 28 days @ 70°F (21°C) and 50% RH or equivalent.
Substrates Steel	<p><u>Immersion:</u> SSPC-SP10 with a 2.0-3.0 mil (50-75 micron) surface profile.</p> <p><u>Non-Immersion:</u> SSPC-SP6 with a 2.0-3.0 mil (50-75 micron) surface profile for maximum protection. SSPC-SP2, SP3, SP7, or SP12 are also acceptable methods</p> <p>Concrete: Normally clean and dry. Remove all loose, unsound concrete. This product can tolerate damp concrete (green appearance but not visibly wet). Consult Carboline Technical Service for more specific recommendations.</p>

Ordering Information

Prices may be obtained from Carboline Sales Representative or Main Office. Terms – Net 30 days.

	<u>1 Gal. Kit</u>	<u>5 Gal. Kit</u>
Shipping Weight	615 HS 15.8 lbs.	79 lbs.

Application Equipment

Listed below are the general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application	Hold gun 12-14 inches from the surface and at a right angle to the surface.																				
Airless Spray	<table border="0"> <tr> <td>Pump Ratio:</td> <td>30:1 (min.)</td> </tr> <tr> <td>Volume Output:</td> <td>9.5 l/min min. (2.5gpm min.)</td> </tr> <tr> <td>Material Hose:</td> <td>9.5mm min. (3/8" I.D. min.)</td> </tr> <tr> <td>Tip Size:</td> <td>0.43-0.53mm (0.017-0.021")</td> </tr> <tr> <td>Output Pressure:</td> <td>140-175kg/cm² (2000-2500 psi)</td> </tr> </table> <p>Use a 1/2" minimum I.D. material hose The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.</p> <table border="0"> <tr> <td><u>Mfr. & Gun</u></td> <td><u>Pump*</u></td> </tr> <tr> <td>Use either model below:</td> <td>Huskie</td> </tr> <tr> <td>Graco 207-300</td> <td>(DeVilbiss)</td> </tr> <tr> <td>Binks Model 520</td> <td>Bulldog 45:1</td> </tr> <tr> <td></td> <td>Jupiter 8D</td> </tr> </table> <p>*Teflon packings are recommended and available from pump manufacturer.</p>	Pump Ratio:	30:1 (min.)	Volume Output:	9.5 l/min min. (2.5gpm min.)	Material Hose:	9.5mm min. (3/8" I.D. min.)	Tip Size:	0.43-0.53mm (0.017-0.021")	Output Pressure:	140-175kg/cm ² (2000-2500 psi)	<u>Mfr. & Gun</u>	<u>Pump*</u>	Use either model below:	Huskie	Graco 207-300	(DeVilbiss)	Binks Model 520	Bulldog 45:1		Jupiter 8D
Pump Ratio:	30:1 (min.)																				
Volume Output:	9.5 l/min min. (2.5gpm min.)																				
Material Hose:	9.5mm min. (3/8" I.D. min.)																				
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<u>Mfr. & Gun</u>	<u>Pump*</u>																				
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Binks Model 520	Bulldog 45:1																				
	Jupiter 8D																				

December 2008

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Carbomastic 615 HS

Conventional Spray Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

Brush or Roller Not recommended for tank lining applications except when striping welds. For non-immersion applications over damp surfaces, brush and roller is the preferred method. Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 75°F (24°C). Thin up to 11% by volume per gallon with Carboline #2. Use a short-nap synthetic roller cover with phenolic core

Mixing & Thinning

Mixing Mix separately, then combine and mix in the following proportions:

	<u>1 Gal. Kit</u>	<u>5 Gal. Kit</u>
Part A	.2 gallon	1 gallon
Part B	.8 gallon	4 gallon

Thin up to 12% by volume with Carboline Thinner #2.

Pot Life 1½ hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use.

Cleanup & Safety

Cleanup Use Thinner #2 or Acetone. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

Safety Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

Ventilation When used as a tank lining or in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved supplied air respirator.

Caution This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Optimum	60°-75°F (16°-24°C)	60°-75°F (16°-24°C)	60°-75°F (16°-24°C)	30-70%
Minimum	45°F (7°C)	20°F (-7°C)	20°F (-7°C)	0%
Maximum	90°F (32°C)	120°F (50°C)	100°F (35°C)	95%

Industry standards are for substrate temperatures to be above the dew point. For immersion conditions it is recommended to follow this procedure. For non-immersion conditions Carbomastic 615 HS can tolerate damp substrates. See Brush or Roller above. Special thinning and application techniques may be required above or below normal conditions. Do not apply to substrates with ice or ice crystal formation. Dehumidify or raise the temperature to eliminate ice on the substrate.

Curing Schedule

Surface Temperature @ 50% RH	Dry to topcoat minimum	Minimum cure for water immersion	Maximum recoat time
20°F (-7°C)	72 hours	7 days	90 days
35°F (2°C)	17 hours	48 hours	60 days
60°F (14°C)	8 hours	3 hours	30 days
75°F (24°C)	2 hours	1 hour	15 days
90°F (32°F)	1.5 hours	1 hour	7 days

These times above are based on a 5.0-10.0 mil (125-250 micron) dry film thickness per coat. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush must be removed by water washing before recoating. If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats. For force curing, contact Carboline Technical Service for specific requirements.

Packaging, Handling & Storage

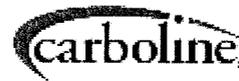
Flash Point (Setaflash) Part A: >300°F (63°C)
Part B: 45°F (7°C)
Thinner 2 23°F (-5°C)

Storage (General) Store Indoors. **KEEP DRY**

Storage Temperature & Humidity 40 -100°F (4-38°C).
0-95% Relative Humidity

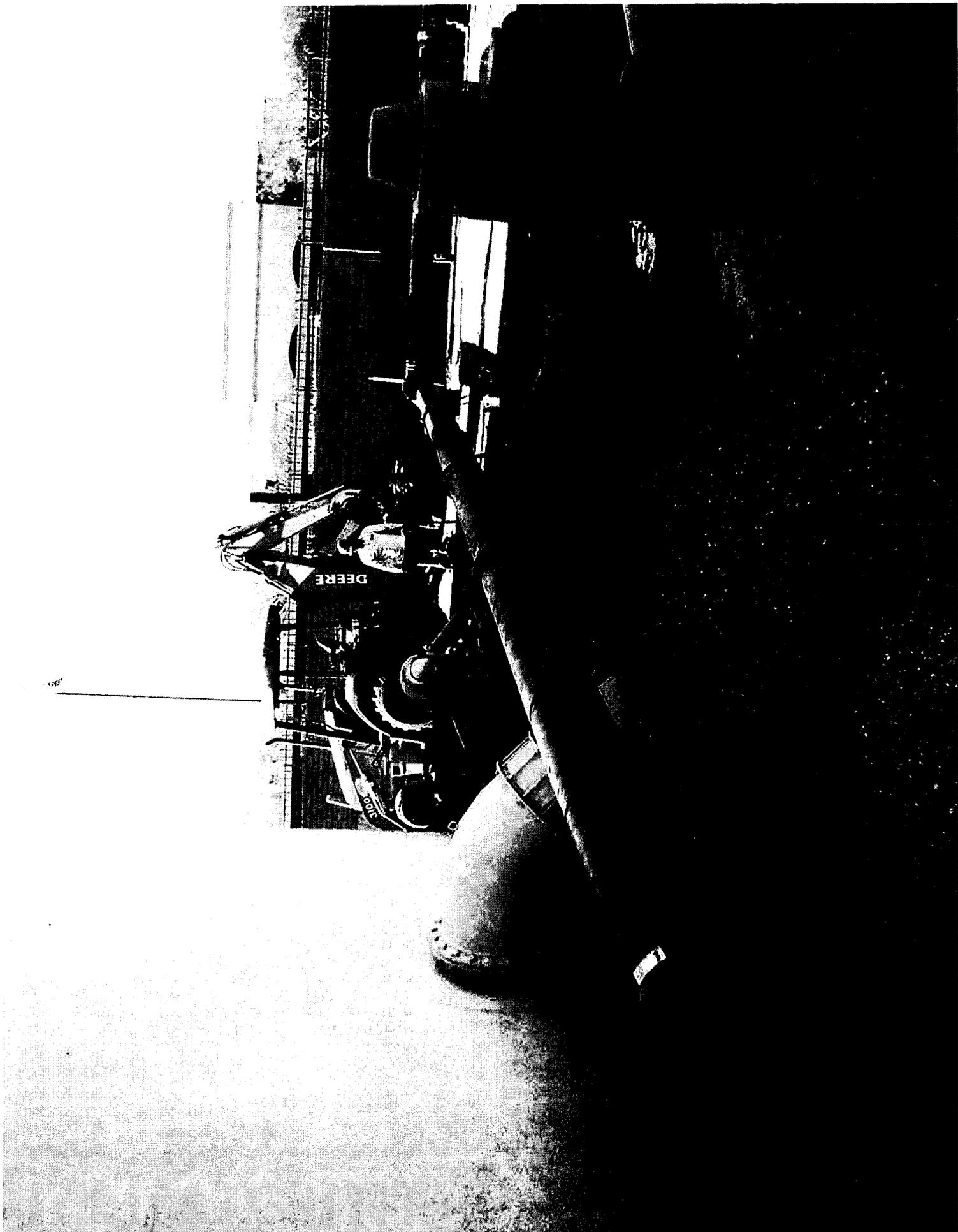
Shelf Life Part A: 24 months at 76°F (24°C)
Part B: 24 months at 76°F (24°C)

*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.

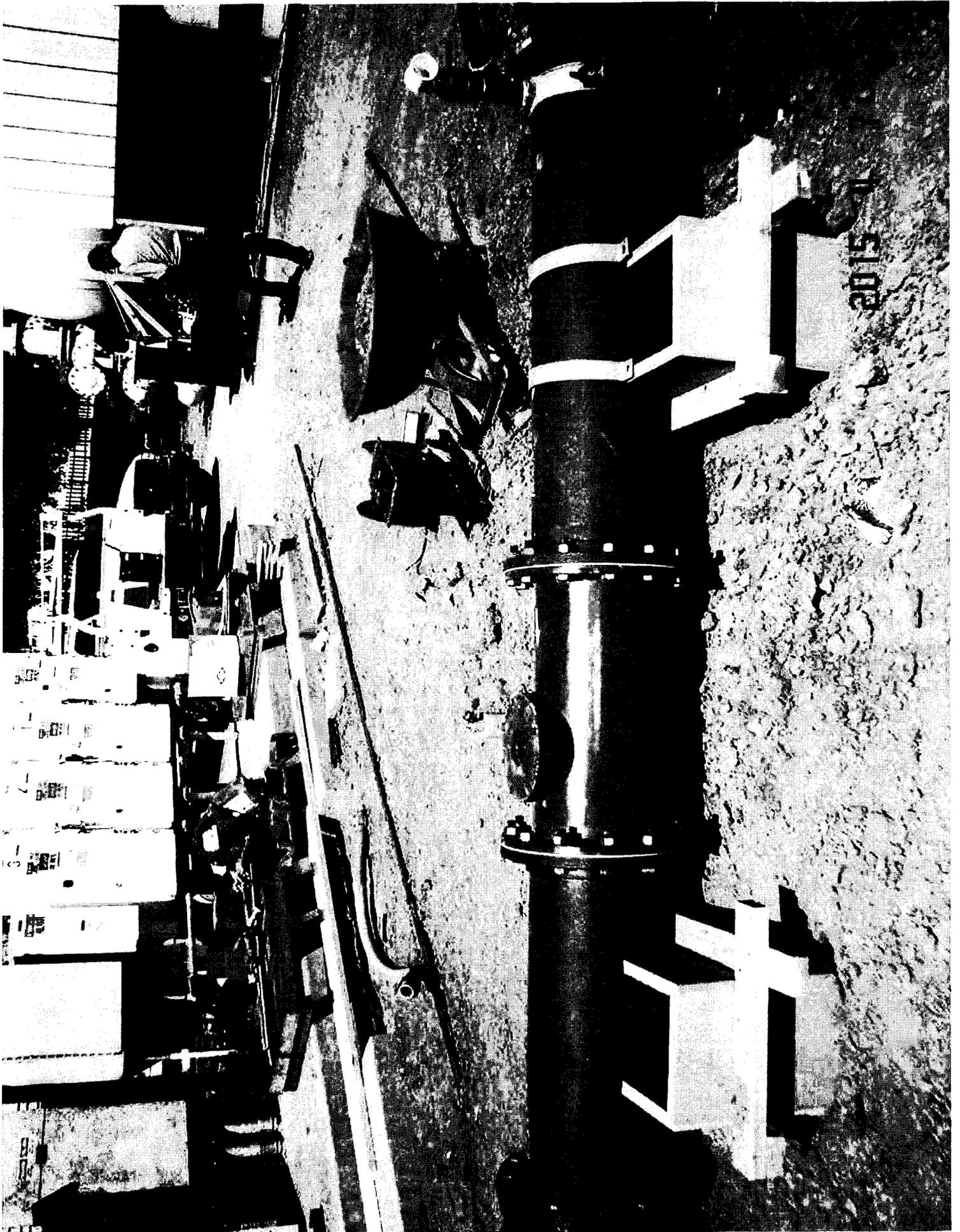


December 2008

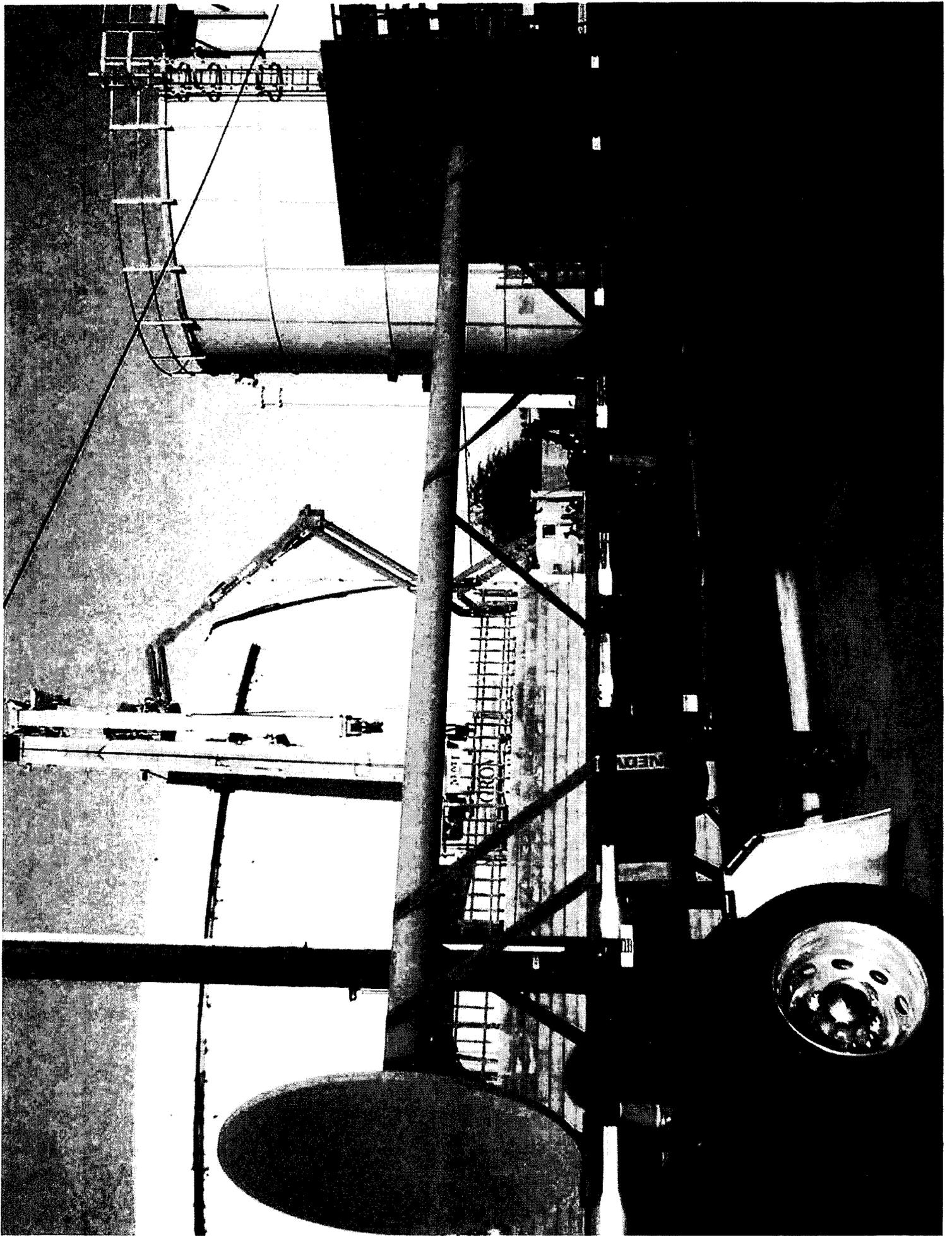
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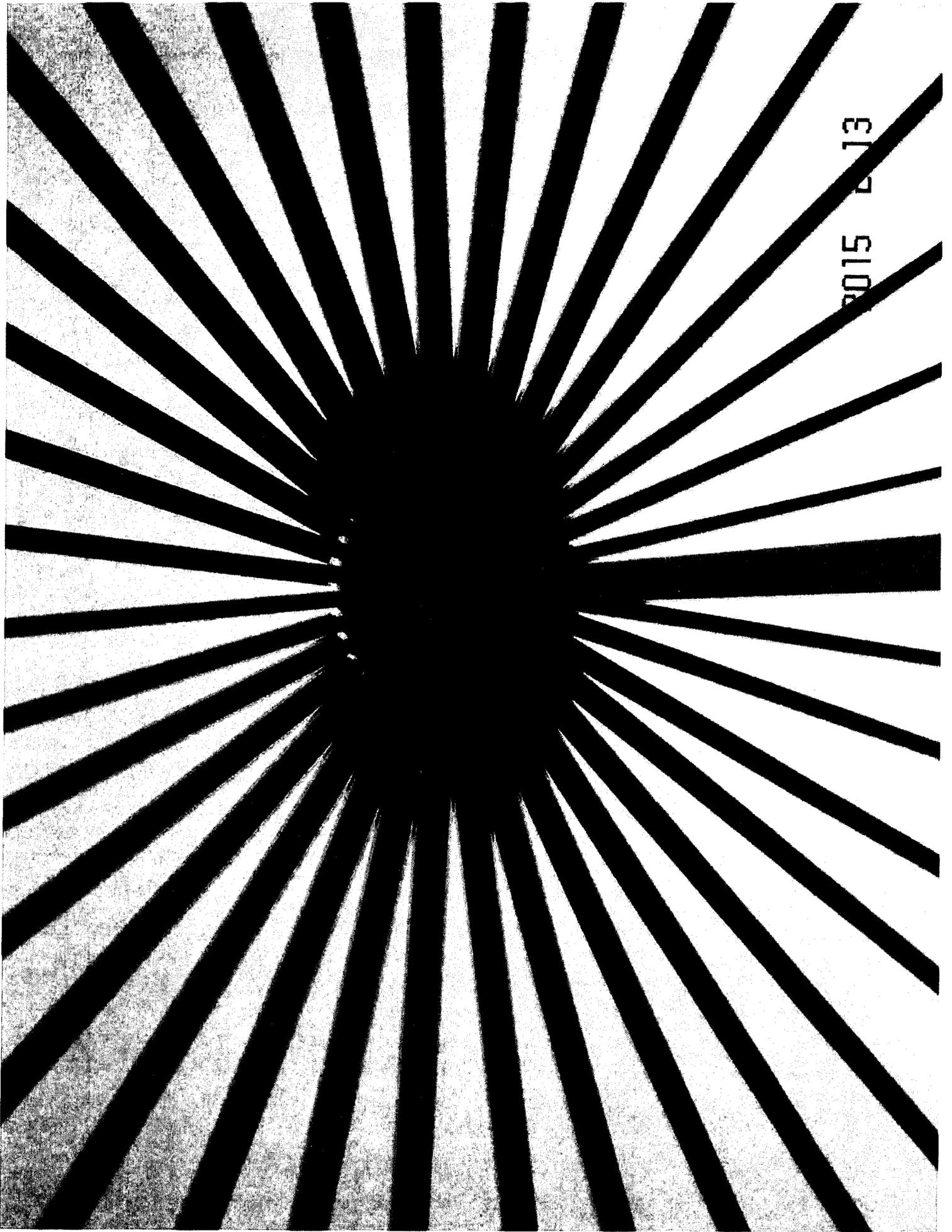












9015 213



Ray Murrieta Arizona Water Company - Pinal Valley 11-009 220 E. 2nd Street Casa Grande, AZ85222	Project: Drinking Water Analysis Project Number: 11-009	Reported: 04/21/15 14:12
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Analyte

Cottonwood Tank (Cottonwood Tank) (5041750-01) Drinking Water (Grab) Sampled: 04/20/15 08:25 Received: 04/20/15 14:45

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5D0571	04/20/15 16:55	04/20/15 16:55	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0571	04/20/15 16:55	04/20/15 16:55	SM 9223B	

Volatile Organic Compounds

1,1,1-Trichloroethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,1,2-Trichloroethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,1-Dichloroethene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2,4-Trichlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2-Dichlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2-Dichloroethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2-Dichloropropane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,4-Dichlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Benzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Bromodichloromethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Bromoform	0.0030	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Carbon tetrachloride	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Chlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Chloroform	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
cis-1,2-Dichloroethylene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Dibromochloromethane	0.0015	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Dichloromethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Ethylbenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
m,p-Xylene	0.0006	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
o-Xylene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Styrene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Tetrachloroethene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Toluene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Total THMs	0.0045	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
trans-1,2-Dichloroethene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Trichloroethene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Vinyl chloride	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Xylenes (total)	0.0006	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: 1,2-Dichlorobenzene-d4		100 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: 4-Bromofluorobenzene		90 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: Pentafluorobenzene		95 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	

Legend Technical Services of Arizona, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Barbara Frank

Client Services Representative

Phone Number: (602) 324-6100

Ray Murrieta
Arizona Water Company - Pinal Valley 11-009
220 E. 2nd Street
Casa Grande, AZ85222

Project: Drinking Water Analysis
Project Number: 11-009

Reported:
04/21/15 14:12

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Accreditations: AZ(PHX)0004, AZ(TUC)0004, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.
All samples were analyzed on a "wet" basis unless designated as "dry weight".

Chain of Custody indicates special only do not report to ADEQ - BF

Notified Regina and Ray of the absent Total Coliform via email on 04/21/15. BF

Notes and Definitions

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ray Murrieta
 Arizona Water Company - Pinal Valley 11-009
 220 E. 2nd Street
 Casa Grande, AZ85222

Project: Drinking Water Analysis
 Project Number: 11-009

Reported:
 04/21/15 14:12

Laboratory Sample ID:
 5611750

CHAIN OF CUSTODY RECORD



17631 N. 25th Avenue • Phoenix, AZ 85023 • (502) 324-6100 • Fax (502) 324-6101
 4585 S. Palo Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Please Print Clearly

CLIENT INFORMATION	
Client Name ARIZONA WATER CO.	Address 220 E 2nd ST
City CASA GRANDE	State Zip AZ 85122
Phone (520) 836-8785	Fax (520) 836-2850
Project Name COTTONWOOD TANK	Project Number WA-1-5170
Contact RAY MURRIETA	P.O. No.
Fax Results <input type="checkbox"/>	OC Report <input type="checkbox"/> EDD <input type="checkbox"/>
Email Results <input checked="" type="checkbox"/>	Special Detection Limits <input type="checkbox"/>

SAMPLE TYPE CODES	TURN AROUND TIME		Laboratory Authorization Required for Rush	Composite	Grab	Sample Type	Compliance	No. of Containers	pH <input checked="" type="checkbox"/> (Lab Use Only)	REQUESTED ANALYSES	LAB NO.
	DW=Drinking Water WW=Wastewater SW=Surface Water G=Groundwater O=Other	S=Soil/Solid T=Travel Blank F=Food G=Sludge/Solids									
Client's	Date	Time	Sample Location								
	4/20/15	8:25AM	COTTONWOOD TANK					1			
	4/20/15	8:25AM	COTTONWOOD TANK					3			
RUSH											

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: **SPECIAL - DO NOT REPORT TO A.D. EQ. COTTONWOOD TANK - Cl2 - 1.7 mg/l**

SAMPLE CONDITION UPON RECEIPT (Lab Use)	
No. of Containers	4 5500 r. copper
Temperature	2.0°C
Custody Seals	Y (N)
Seals Intact	Y N
Preserved	Y N

RELINQUISHED BY		SAMPLES RECEIVED BY	
Signature <i>Scott H. Johnson</i>	Date 4/20/15	Signature <i>JESUS MANRIQUEZ</i>	Date 4/20/15
Printed Name SCOTT H. JOHNSON	Time 1:00PM	Signature <i>J. Manriquez</i>	Time 1:30
Signature <i>J. Manriquez</i>	Date 4/20/15	Signature <i>M. Manriquez</i>	Date 4/20/15
Printed Name JESUS MANRIQUEZ	Time 1:45	Signature <i>M. Manriquez</i>	Time 1:45
Signature	Date	Signature	Date
Printed Name	Time	Printed Name	Time

**CORRECTION MADE
 BY CLIENT OR COURIER
 PRIOR TO SAMPLE RECEIPT
 AT LEGEND**

FORM GEN-170 (05/06)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ray Murrieta
Arizona Water Company - Pinal Valley 11-009
220 E. 2nd Street
Casa Grande, AZ85222

Project: Drinking Water Analysis
Project Number: 11-009

Reported:
04/21/15 14:12

RUSH NOTICE

W.O. #: 5041750

*** Only verbal or preliminary results can be guaranteed on RUSHES

****If sample(s) does not come in on day indicated by client, RUSH may not be available.

Company: Az Water - PV Phone: 602 2942146

Contact: Begina Lynde

Prelim Due Date: _____ Final Due Date: _____

Analysis: 524 Coliform

Number of Samples: 1 Date Samples Expected****: 4/20/15

Matrix: DW Expiration Date: _____

Supervisor Approval _____ Inorganics: _____ Specifics: _____

Metals: _____ Specifics: _____

Micro: 38 4/20/15 Specifics: _____

SOC: _____ Specifics: _____

VOC: 30 4/20/15 Specifics: _____

Sub1: _____ Specifics: _____

Sub2: _____ Specifics: _____

Comments: 24 hr

COST: _____

Project Manager: Burb

RUSH Initiator: _____

FORM GEN-086 2 (02/15)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Regina Lynde
 Arizona Water Company
 3805 N. Black Canyon Hwy
 Phoenix, AZ85015

Project: Specials
 Project Number: Cottonwood Tank and Booster WA-1-5170 4/15/2015

Reported:
 04/20/15 16:54

Analyte

Sample #1 (Cottonwood Booster) (5041407-01) Drinking Water (Grab) Sampled: 04/15/15 09:00 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #2 (Cottonwood Booster) (5041407-02) Drinking Water (Grab) Sampled: 04/15/15 10:08 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #3 (Cottonwood Booster) (5041407-03) Drinking Water (Grab) Sampled: 04/15/15 10:45 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #4 (Cottonwood Booster) (5041407-04) Drinking Water (Grab) Sampled: 04/15/15 09:05 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #5 (Cottonwood Booster) (5041407-05) Drinking Water (Grab) Sampled: 04/15/15 10:20 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Legend Technical Services of Arizona, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Barbara Frank

Client Services Representative

Phone Number: (602) 324-6100

Page 1 of 3

Regina Lynde
Arizona Water Company
3805 N. Black Canyon Hwy
Phoenix, AZ85015

Project: Specials
Project Number: Cottonwood Tank and Booster WA-1-5170 4/15/2015

Reported:
04/20/15 16:54

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Accreditations: AZ(PHX)0004, AZ(TUC)0004, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.

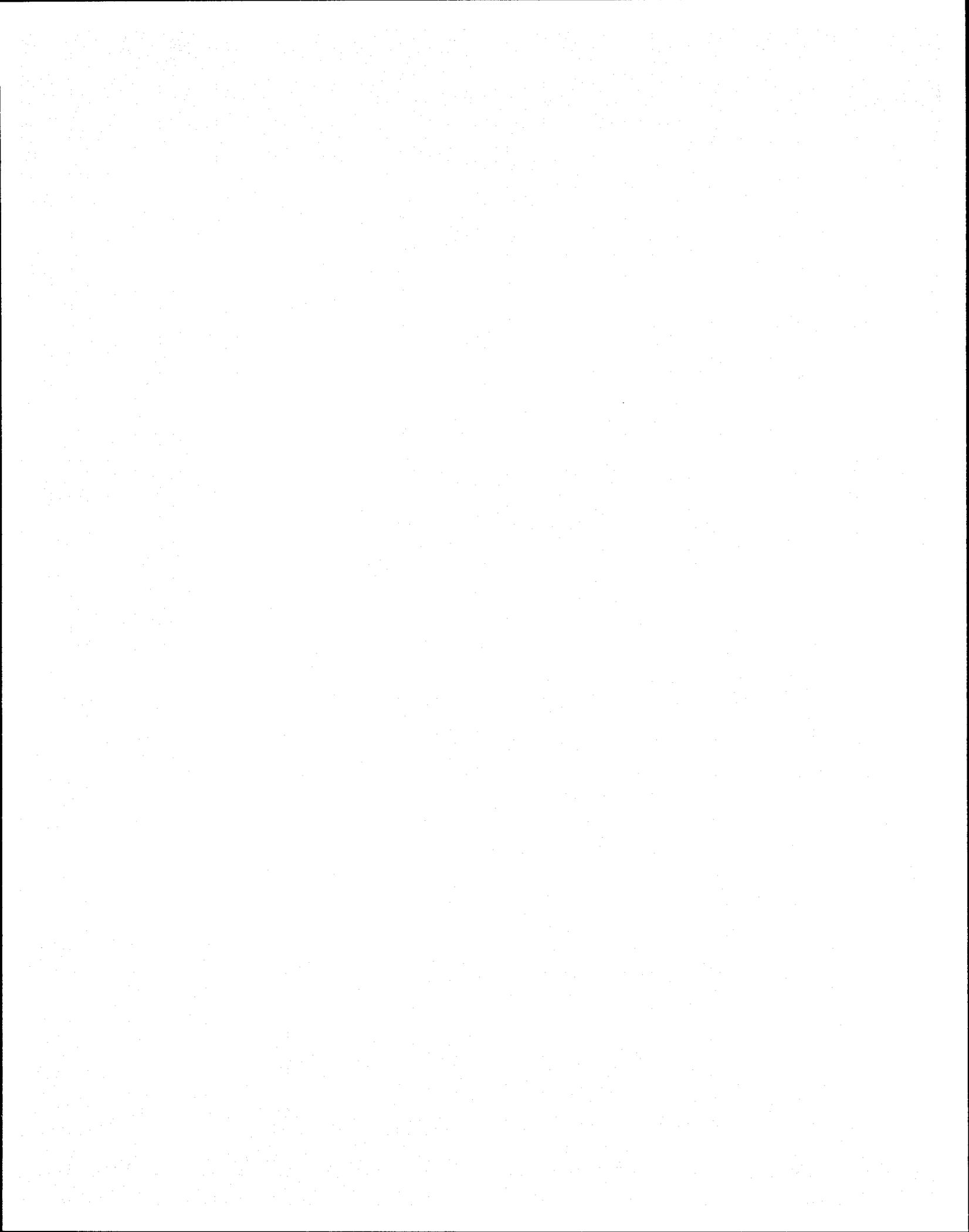
All samples were analyzed on a "wet" basis unless designated as "dry weight".

Chain of Custody indicates special only do not report to ADEQ- BF

Notified Scott of the absent results on 04/16/15.BF

Notes and Definitions

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

April 27, 2015

Engineering Review Desk
Arizona Department of Environmental Quality
1110 W Washington St, 5th Floor
Phoenix, Az 85007

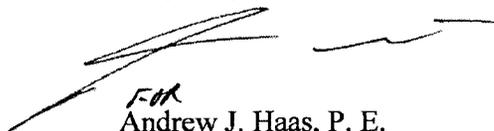
Re: Engineer's Certificate of Completion for Cottonwood Booster Pumps
AWC W.A. No. 1-5170
ADEQ File No. 20140228

Dear Engineering Review Desk:

Enclosed is the Engineer's Certificate of Completion for the above-referenced project along with a copy of the Approval to Construct, the pressure, chlorination, bacteriological test data, and As Built Drawing.

If you have any questions concerning this construction, please call or write at your convenience.

Very truly yours,



AJH
Andrew J. Haas, P. E.
Chief Engineer

afh
Enclosures

E-MAIL: engineering@azwater.com

ENGINEER'S CERTIFICATE OF COMPLETION AND FINAL INSPECTION "ECC"

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) - WATER QUALITY DIVISION 5/01

ADEQ FILE NO.: 20140228 → DRINKING WATER DESIGN

COUNTY: Pinal

(New separate form now used for WASTEWATER DESIGN)

OWNER: ARIZONA WATER COMPANY

If separate Drinking Water & Wastewater Approvals to Construct were issued, separate ECCs required

Project Name: Cottonwood Booster Pumps

(as shown on Approval to Construct)

W.A. No. 1-5170 SYSTEM No. 11-009

Project Description: Replace three booster pumps, suction and discharge piping with 13 LF of 12-inch, 20 LF of 14-inch, 32 LF of 16-inch, and 11 LF of 24-inch DIP, remove the top 4-foot and replace the roof of the tank.

The suction header was extended with 54 LF of 14-inch DIP and the discharge header was extended with 13 LF of 12-inch DIP for future use. Work only included rehabilitation of existing facilities, therefore O & M Manual is not required.

(as shown on Approval to Construct, unless completed project differed, in which case describe in detail)

I, James T. Wilson, a Professional Engineer registered in the State of Arizona, have inspected the construction of the above described project, and certify that *(check all applicable boxes, complete applicable blanks):*

ITEMS 1) THRU 4) MUST BE COMPLETED

- 1) The work on this project was completed on April 22, 2015 (date).
- 2) On April 22, 2015 a final construction inspection was conducted by MYSELF [*←check one→*] under MY DIRECT SUPERVISION by Scott Johnson (print name).
- 3) The materials utilized and the installation and construction of those materials and equipment are in conformance with the approved plans and specifications.
- 4) All provisions listed in the ADEQ Approval to Construct for this project, a copy of which I have attached to this certificate, have been fully satisfied or exceptions are listed on the reverse side of this certificate.
- 5) All construction and preoperational tests (infiltration, exfiltration, pressure, deflection, chlorination, bacti, etc.) [*circle types performed*] were properly conducted, met ADEQ requirements, and are represented in attachments to this Certificate. The total number of pages of test results attached is 7.

EITHER 6A) or 6B) MUST BE CHECKED

- 6A) Any deviation from the approved plans and the ADEQ Certificate of Approval to Construct have been noted on the attached "As-Built" plans (as stipulated in the Approval to Construct provisions) prepared and sealed pursuant to A.R.S. § 32-125 on 5/8/15 (date). Of the total 7 sheets of "As-Built" plans attached, deviations from the approved plans are shown on sheets numbered 3-5. All deviations from the approved plans comply with the ADEQ minimum design and construction standards contained in statute, rule, bulletin or referenced codes, and with the key elements of the approved plans.
- 6B) The completed project did not deviate from the plans which received the Approval to Construct.

EITHER 7A) or 7B) MUST BE CHECKED

- 7A) This project did not require the preparation of an Operation and Maintenance Manual.
(the only projects which do NOT require an O&M manual are gravity-only sewage collection systems, single-family residence septic systems, and drinking water distribution projects that include no source, storage, or pressurization facilities).
- 7B) A FINAL Operation and Maintenance Manual has been prepared for this project and a copy is attached. This manual meets all ADEQ minimum design and construction standards contained in statute, rule, bulletin, referenced codes, the key elements of the approved plans, and, if applicable, with Attachment B of the September 10, 1994 Engineering Advisory for Individual Alternate Systems.

EITHER 8A) or 8B) MUST BE CHECKED

- 8A) Review of this project for Approval of Construction issuance does not require a fee because this project involves only drinking water, not wastewater.
- 8B) In accordance with A.A.C. R18-9-103 Schedule B, a check in the amount of \$_____ is attached as initial fee for review of the submitted and other information for issuance of an Approval of Construction.

ADDITIONAL INFORMATION

↓ ENGINEER'S SEAL per AAC R4-30-304.B ↓

- 9) Other, see additional information on reverse side.

Engineer Address PO Box 29006, Phoenix, AZ 85038-9006

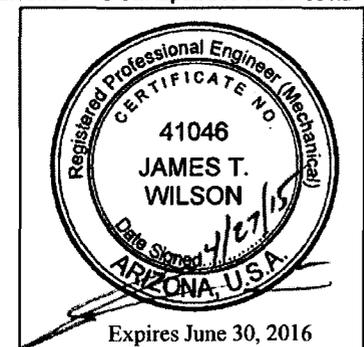
Phone 602-240-6860

AZ DEPARTMENT OF ENVIRONMENTAL QUALITY ACCEPTANCE

EMPLOYEE SIGNATURE

(PRINTED NAME)

DATE



Expires June 30, 2016



**ENGINEERING REVIEW SECTION
DATA REQUIRED WITH ECC**

4-2-15

Instructions

Please complete the test data and submit this form with the Engineers Certificate of Completion. An Approval of Construction cannot be issued without the data identified below in accordance with Arizona Administrative Code (A.A.C.) R18-5-508(C). Please attach all supplemental information and calculations to this form.

DATA

1.

PRESSURE TEST DATA	
Indicate Segment Tested	COTTONWOOD BOOSTER 14" BYPASS LINE
Pressure and Leakage Test Results (Pass/Fail)	PASS
Date Tested	4-2-15
Time Started	8:30 AM
Time Finished	10:30 AM
Pipe Diameter	14"
Footage Tested	54 LF
Allowable Leakage	0.15 IZ
Leakage Observed	0
Pressure at Test Point	205 PSI
Employee Observing the Test (Please Print Legibly)	SCOTT H. JOHNSON
Signature of Employee Observing the Test	<i>Scott H. Johnson</i>

2.

DISINFECTION SAMPLING					
Initial Sampling (Minimum 50 ppm available chlorine)	Date	4-13-15			
	Time	12:30 PM			
	ppm Cl ₂	200 ppm			
After 24 Hours Detention Time (Minimum 10 ppm free chlorine)	Date	4-15-15			
	Time	7:20 AM			
	ppm Cl ₂	200 ppm			
After Sufficient Flushing (Water is clear and system Cl ₂ residual is measured)	Date	4-15-15			
	Time	10:20 AM			
	ppm Cl ₂	1.5			
Bacteriological Sampling(s):	Date	4-15-15			
	Time	10:20 AM			
	Attached (Y/N)	Y			
	Yes/No	Yes/No	Yes/No	Yes/No	

3.

Certification		Professional Seal As per A.A.C. R18-507(B)(1) 41046 JAMES T. WILSON Date signed 4/27/15 EXPIRES 6/30/16
I, <u>SCOTT H. JOHNSON</u> , certify that I have inspected the work performed and have found it to be satisfactory and in accordance with Arizona Administrative Code, Arizona Engineering Bulletins, and the approved specifications. <u><i>Scott H. Johnson</i></u> <u>4-22-15</u> Authorized Person's Signature Date		

ENGINEERING REVIEW SECTION DATA REQUIRED WITH ECC

4-1-15

INSTRUCTIONS

Please complete the test data and submit this form with the Engineers Certificate of Completion. An Approval of Construction cannot be issued without the data identified below in accordance with Arizona Administrative Code (A.A.C.) R18-5-508(C). Please attach all supplemental information and calculations to this form.

DATA

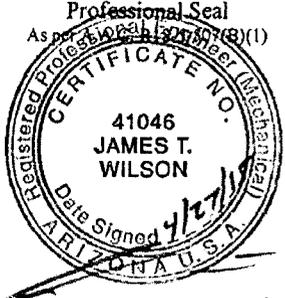
1.

PRESSURE TEST DATA		Indicate Segment Tested	COTTONWOOD BOOSTER NUMBER 2
Pressure and Leakage Test Results (Pass/Fail)			PASS
Date Tested			4-1-15
Time Started			1:30pm
Time Finished			3:30pm
Pipe Diameter			12"
Footage Tested			130F
Allowable Leakage			0.0312
Leakage Observed			0
Pressure at Test Point			205psf
Employee Observing the Test (Please Print Legibly)			
Signature of Employee Observing the Test			

2.

DISINFECTION SAMPLING		Date	4-13-15			
Initial Sampling (Minimum 50 ppm available chlorine)	Date	4-13-15				
	Time	12:30pm				
After 24 Hours Detention Time (Minimum 10 ppm free chlorine)	ppm Cl ₂	200ppm				
	Date	4-15-15				
After Sufficient Flushing (Water is clear and system Cl ₂ residual is measured)	Time	7:20AM				
	ppm Cl ₂	200ppm				
Bacteriological Sampling(s):	Date	4-15-15				
	Time	10:08AM				
Attached (Y/N)	ppm Cl ₂	1.4				
	Y					
	(Yes/No)	Yes/No	Yes/No	Yes/No	Yes/No	

3.

Certification		Professional Seal
I, <u>Scott H. Wilson</u> , certify that I have inspected the work performed and have found it to be satisfactory and in accordance with Arizona Administrative Code, Arizona Engineering Bulletins, and the approved specifications.		
Authorized Persons Signature	Date	
<u>Scott H. Wilson</u>	<u>4-22-15</u>	

3-9-15

NSIP

Please complete the test data and submit this form with the Engineers Certificate of Completion. An Approval of Construction cannot be issued without the data identified below in accordance with Arizona Administrative Code (A.A.C.) R18-5-508(C). Please attach all supplemental information and calculations to this form.

DATA

1.

PRESSURE TEST DATA			
Indicate Segment Tested	Cottonwood Booster UNDER Ground PIPE		
Pressure and Leakage Test Results (Pass/Fail)	PASS	PASS	PASS
Date Tested	3/9/15	3/9/15	3/9/15
Time Started	1:00pm	1:00pm	1:00pm
Time Finished	3:00pm	3:00pm	3:00pm
Pipe Diameter	24"	12"	14"
Footage Tested	27LF	17LF	21LF
Allowable Leakage	0.1296	0.0408	0.0588
Leakage Observed	0	0	0
Pressure at Test Point	205PSI	205PSI	205PSI
Employee Observing the Test (Please Print Legibly)	Scott H. Johnson		
Signature of Employee Observing the Test	<i>Scott H. Johnson</i>		

2.

DISINFECTION SAMPLING			
Initial Sampling (Minimum 50 ppm available chlorine)	Date	4-13-15	4-13-15
	Time	12:30pm	12:30pm
	ppm Cl ₂	200ppm	200ppm
After 24 Hours Detention Time (Minimum 10 ppm free chlorine)	Date	4-15-15	4-15-15
	Time	7:20AM	7:20AM
	ppm Cl ₂	200ppm	200ppm
After Sufficient Flushing (Water is clear and system Cl ₂ residual is measured)	Date	4-15-15	4-15-15
	Time	9:05AM	9:05AM
	ppm Cl ₂	1.5	1.5
Bacteriological Sampling(s):	Date	4-15-15	4-15-15
	Time	9:05AM	9:05AM
	Attached (Y/N)	Y	Y
	(Yes/No)	(Yes/No)	(Yes/No)

3.

Certification		Professional Seal
I, <u>Scott H. Johnson</u> , certify that I have inspected the work performed and have found it to be satisfactory and in accordance with Arizona Administrative Code, Arizona Engineering Bulletins, and the approved specifications.		
Authorized Persons Signature	Date	
<i>Scott H. Johnson</i>	3-22-15	

ENGINEERING REVIEW SECTION DATA REQUIRED WITH ECC

3-19-15

INSPECTION

Please complete the test data and submit this form with the Engineers Certificate of Completion. An Approval of Construction cannot be issued without the data identified below in accordance with Arizona Administrative Code (A.A.C.) R18-5-508(C). Please attach all supplemental information and calculations to this form.

DATA

1.

PRESSURE TEST DATA			
Indicate Segment Tested	COTTONWOOD BOMETER UNDER GROUND PIPE		
Pressure and Leakage Test Results (Pass/Fail)	PASS	PASS	PASS
Date Tested	3-19-15	3-19-15	3-19-15
Time Started	8:30AM	8:30AM	8:30AM
Time Finished	10:30AM	10:30AM	10:30AM
Pipe Diameter	16"	12"	14"
Footage Tested	50LF	7LF	7LF
Allowable Leakage	0.16	0.0168	0.0196
Leakage Observed	0	0	0
Pressure at Test Point	205PSI	205PSI	205PSI
Employee Observing the Test (Please Print Legibly)	SCOTT H. JOHNSON		
Signature of Employee Observing the Test	<i>Scott H. Johnson</i>		

2.

DISINFECTION SAMPLING			
Initial Sampling (Minimum 50 ppm available chlorine)	Date	4-13-15	4-13-15
	Time	12:30pm	12:30pm
	ppm Cl ₂	200ppm	200ppm
After 24 Hours Detention Time (Minimum 10 ppm free chlorine)	Date	4-15-15	4-15-15
	Time	7:20AM	7:20AM
	ppm Cl ₂	210ppm	200ppm
After Sufficient Flushing (Water is clear and system Cl ₂ residual is measured)	Date	4-15-15	4-15-15
	Time	9:05AM	9:05AM
	ppm Cl ₂	1.5	1.5
Bacteriological Sampling(s):	Date	4-15-15	4-15-15
	Time	9:05AM	9:05AM
	Attached (Y/N)	Y	Y
	Yes/No	Yes/No	Yes/No

3.

Certification I, <u>SCOTT H. JOHNSON</u> , certify that I have inspected the work performed and have found it to be satisfactory and in accordance with Arizona Administrative Code, Arizona Engineering Bulletins, and the approved specifications. <u>Scott H. Johnson</u> Authorized Persons Signature		Professional Seal As per A.A.C. R18-5-507(B)(1) 41046 JAMES T. WILSON Date signed 4/27/15 ARIZONA U.S.A.
<u>3-19-15</u> Date		

EXPIRES 6/30/16

ENGINEERING REVIEW SECTION DATA REQUIRED WITH ECC

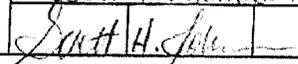
4-6-15

INSTR. 110

Please complete the test data and submit this form with the Engineers Certificate of Completion. An Approval of Construction cannot be issued without the data identified below in accordance with Arizona Administrative Code (A.A.C.) R18-5-508(C). Please attach all supplemental information and calculations to this form.

DATA

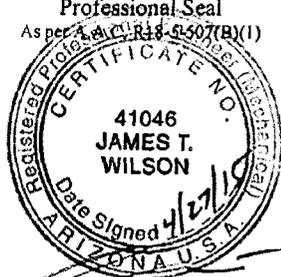
1.

PRESSURE TEST DATA			
	Indicate Segment Tested	COTTONWOOD BOOSTER NUMBER 1-3	
	Pressure and Leakage Test Results (Pass/Fail)	PASS	PASS
	Date Tested	4-6-15	4-6-15
	Time Started	10:30am	10:30am
	Time Finished	12:30pm	12:30pm
	Pipe Diameter	12"	12"
	Footage Tested	13LF	13LF
	Allowable Leakage	0.0312	0.0312
	Leakage Observed	0	0
	Pressure at Test Point	200PSI	200PSI
	Employee Observing the Test (Please Print Legibly)	SCOTT M. JOHNSON	
	Signature of Employee Observing the Test		

2.

DISINFECTION SAMPLING			
Initial Sampling (Minimum 50 ppm available chlorine)	Date	4-13-15	4-13-15
	Time	12:30pm	12:30pm
	ppm Cl ₂	200ppm	200ppm
After 24 Hours Detention Time (Minimum 10 ppm free chlorine)	Date	4-15-15	4-15-15
	Time	7:20AM	7:20AM
	ppm Cl ₂	200ppm	200ppm
After Sufficient Flushing (Water is clear and system Cl ₂ residual is measured)	Date	4-15-15	4-15-15
	Time	9:00AM	10:45AM
	ppm Cl ₂	1.4	1.5
Bacteriological Sampling(s):	Date	4-15-15	4-15-15
	Time	9:00AM	10:45AM
	Attached (Y/N)	Y	Y
		Yes/No	Yes/No

3.

<p>Certification</p> <p>I, <u>SCOTT M. JOHNSON</u>, certify that I have inspected the work performed and have found it to be satisfactory and in accordance with Arizona Administrative Code, Arizona Engineering Bulletins, and the approved specifications.</p> <p><u>Scott M. Johnson</u> <u>4-6-15</u> Authorized Persons Signature Date</p>	<p>Professional Seal As per A.A.C. R18-5-507(B)(1)</p>  <p><i>EXPIRES 6/30/16</i></p>
---	--

COPY

Ray Murrieta Arizona Water Company - Pinal Valley 11-009 220 E. 2nd Street Casa Grande, AZ85222	Project: Drinking Water Analysis Project Number: 11-009	Reported: 04/21/15 14:12
--	--	-----------------------------

Analyte
Cottonwood Tank (Cottonwood Tank) (5041750-01) Drinking Water (Grab) Sampled: 04/20/15 08:25 Received: 04/20/15 14:45

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----	-------	----------	-------	----------	----------	--------	-------

Legend Technical Services of Arizona, Inc.

Microbiology

E. coli	Absent		P/A	1	B5D0571	04/20/15 16:55	04/20/15 16:55	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0571	04/20/15 16:55	04/20/15 16:55	SM 9223B	

Volatile Organic Compounds

1,1,1-Trichloroethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,1,2-Trichloroethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,1-Dichloroethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2,4-Trichlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2-Dichlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2-Dichloroethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,2-Dichloropropane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
1,4-Dichlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Benzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Bromodichloromethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Bromoform	0.0030	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Carbon tetrachloride	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Chlorobenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Chloroform	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
cis-1,2-Dichloroethylene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Dibromochloromethane	0.0015	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Dichloromethane	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Ethylbenzene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
m,p-Xylene	0.0006	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
o-Xylene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Styrene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Tetrachloroethene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Toluene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Total THMs	0.0045	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
trans-1,2-Dichloroethene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Trichloroethene	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Vinyl chloride	<0.0005	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Xylenes (total)	0.0006	0.0005	mg/L	1	B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: 1,2-Dichlorobenzene-d4		100 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: 1,2-Dichloroethane-d4		100 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: 4-Bromofluorobenzene		90 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	
Surrogate: Pentafluorobenzene		95 %	70-130		B5D0560	04/20/15 16:15	04/20/15 16:34	EPA 524.2	

Legend Technical Services of Arizona, Inc.

Barbara Frank
Client Services Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Phone Number: (602) 324-6100

Ray Murrieta
Arizona Water Company - Pinal Valley 11-009
220 E. 2nd Street
Casa Grande, AZ85222

Project: Drinking Water Analysis
Project Number: 11-009

Reported:
04/21/15 14:12

Sample Condition Upon Receipt:

Temperature: 2.00 C

All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.

QA/QC Criteria: All analyses met method requirements unless otherwise qualified.

Accreditations: AZ(PHX)0004, AZ(TUC)0004, AIHA#102982, CDC ELITE Member.

Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.

Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.
All samples were analyzed on a "wet" basis unless designated as "dry weight".

Chain of Custody indicates special only do not report to ADEQ- BF

Notified Regina and Ray of the absent Total Coliform via email on 04/21/15. BF

Notes and Definitions

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ray Murrieta
 Arizona Water Company - Pinal Valley 11-009
 220 E. 2nd Street
 Casa Grande, AZ85222

Project: Drinking Water Analysis
 Project Number: 11-009

Reported:
 04/21/15 14:12

Lab Sample ID:
 5041750

CHAIN OF CUSTODY RECORD



17631 N 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
 4586 S Palo Verde Rd. Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page 1 of 1

Please Print Clearly

CLIENT INFORMATION

Client Name: ARIZONA WATER CO. Address: 220 E 2ND ST City: CASA GRANDE State: AZ Zip: 85122 Phone: (520) 836-8785
 Project Name: COTONWOOD TANK Project Number: WA-1-5170 Contact: RAY MURRIETA P.O. No.: Fax Results: Email Results: GC Report: EOD:
 Number of Email Addresses: 836-2850 Special Detection Limits:

SAMPLE TYPE CODES		TURN AROUND TIME				REQUESTED ANALYSES						
DW=Drinking Water	SW=Surface Water	Laboratory Authorization Required for Rush										
WW=Wastewater	GW=Groundwater	<input type="checkbox"/> Standard 7-10 Day <input checked="" type="checkbox"/> Other: RUSH										
TS=Travel Blank	GS=Sludge/Sediments	Client's	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Use Only)	LAB NO.
		COTONWOOD TANK	4/20/15	8:25AM	COTONWOOD TANK					1	X	
		COTONWOOD TANK	4/20/15	8:25AM	COTONWOOD TANK					3	✓	
RUSH												

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: SPECIAL - DO NOT REPORT TO A.D. EQ. COTONWOOD TANK - Cl₂ - 1.7 mg/L

SAMPLE CONDITION UPON RECEIPT (Lab Use)

No. of Containers	4	4/20/15
Temperature	20°C	
Custody Seals	Y (N)	
Seals Intact	Y (N)	
Preserved	Y (N)	

RELINQUISHED BY			SAMPLES RECEIVED BY		
Signature: Scott H. Johnson	Date: 4/20/15	Time: 1:05PM	Signature: Jesus Ramirez	Date: 4/20/15	Time: 1:30
Printed Name: SCOTT H. JOHNSON			Signature: M. Wong	Date: 4/20/15	Time: 1:45
Signature: Jesus Ramirez	Date: 4/20/15	Time: 1:45	Printed Name: M. Wong		
Signature: M. Wong	Date: 4/20/15	Time: 1:45	Printed Name: M. Wong		

CORRECTION MADE BY CLIENT OR COURIER PRIOR TO SAMPLE RECEIPT AT LEGEND

FORM GEN-170 (05/06)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Ray Murrieta
Arizona Water Company - Pinal Valley 11-009
220 E. 2nd Street
Casa Grande, AZ85222

Project: Drinking Water Analysis
Project Number: 11-009

Reported:
04/21/15 14:12

RUSH NOTICE

W.O. #: 8041750

*** Only verbal or preliminary results can be guaranteed on RUSHES

****If sample(s) does not come in on day indicated by client, RUSH may not be available.

Company: Az. Water - PV Phone: 602 2942146

Contact: Regina Lynde

Prelim Due Date: _____ Final Due Date: _____

Analysis: 524 Coliform

Number of Samples: 1 Date Samples Expected****: 4/20/15

Matrix: DW Expiration Date: _____

Supervisor Approval _____

Inorganics: _____	Specifics: _____
Metals: _____	Specifics: _____
Micro: <u>38 4/20/15</u>	Specifics: _____
SOC: _____	Specifics: _____
VOC: <u>3 4/20/15</u>	Specifics: _____
Sub1: _____	Specifics: _____
Sub2: _____	Specifics: _____

Comments: 24 hr

COST: _____ Project Manager: Baib
RUSH Initiator: _____

FORM GEN-086 2 (02/15)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Regina Lynde
 Arizona Water Company
 3805 N. Black Canyon Hwy
 Phoenix, AZ85015

Project: Specials
 Project Number: Cottonwood Tank and Booster WA-1-5170 4/15/2015

Reported:
 04/20/15 16:54

Analyte

Sample #1 (Cottonwood Booster) (5041407-01) Drinking Water (Grab) Sampled: 04/15/15 09:00 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #2 (Cottonwood Booster) (5041407-02) Drinking Water (Grab) Sampled: 04/15/15 10:08 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #3 (Cottonwood Booster) (5041407-03) Drinking Water (Grab) Sampled: 04/15/15 10:45 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #4 (Cottonwood Booster) (5041407-04) Drinking Water (Grab) Sampled: 04/15/15 09:05 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Sample #5 (Cottonwood Booster) (5041407-05) Drinking Water (Grab) Sampled: 04/15/15 10:20 Received: 04/15/15 14:20

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	
Total Coliforms	Absent		P/A	1	B5D0451	04/15/15 17:10	04/15/15 17:10	SM 9223B	

Legend Technical Services of Arizona, Inc.

Barbara Frank

Client Services Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Phone Number: (602) 324-6100

Regina Lynde
 Arizona Water Company
 3805 N. Black Canyon Hwy
 Phoenix, AZ 85015

Project: Specials
 Project Number: Cottonwood Tank and Booster WA-1-5170 4/15/2015

Reported:
 04/20/15 16:54

Laboratory Sample ID
 5041467

CHAIN OF CUSTODY RECORD



17831 N. 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
 4585 S. Pake Verde Rd, Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

www.legend-ts.com
 Page 1 of 1

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CLIENT INFORMATION

Client Name: ARIZONA WATER CO. Address: 220 E. 2ND ST City: CASA GRANDE State: AZ Zip: 85122 Phone: (520) 836-8785 Fax: (520) 836-2850
 Project Name: COTTONWOOD TANK & BOOSTER Project Number: WA-1-5170 Contact: RAY MURRIETA P.O. No.: Fax Results: QC Report: EDD: Special Detection Limits:

SAMPLE TYPE CODES		TURN AROUND TIME		LABORATORY AUTHORIZATION		REQUESTED ANALYSES														
DW-Drinking Water	S-Salt/Solids	Laboratory Authorization Required for Rush		Composite	Grab	Sample Type	Compliance	No. of Containers	pH / (Last Use Only)	/										
WW-Wastewater	T-Travel Blank	<input type="checkbox"/> Standard 7-10 Day <input type="checkbox"/> Other _____																		
SW-Surface Water	F-Food	Client's	Date	Time	Sample Location	Grab	Sample Type	Compliance	No. of Containers	pH / (Last Use Only)										
D-Drinking Water	G-Sludge/Biosolids	SAMPLE #1	4/15/15	9:00AM	COTTONWOOD BOOSTER	Y	DN	1	1	X										
O-Other		SAMPLE #2	4/15/15	10:00AM	COTTONWOOD BOOSTER	Y	DN	1	1	X										
		SAMPLE #3	4/15/15	10:45AM	COTTONWOOD BOOSTER	Y	DN	1	1	X										
		SAMPLE #4	4/15/15	9:45AM	COTTONWOOD BOOSTER	Y	DN	1	1	X										
		SAMPLE #5	4/15/15	10:20AM	COTTONWOOD BOOSTER	Y	DN	1	1	X										

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION
 Comments / Special Instructions: SPECIAL DO NOT REPORT TO A.D.E.Q. SAMPLE #1-C12-1.4 SAMPLE #2-C12-1.4 SAMPLE #3 C12-1.4 SAMPLE #4 C12-1.5 SAMPLE #5 C12-1.5

SAMPLE CONDITION UPON RECEIPT (Lab Use)

No. of Containers	5
Temperature	20°C
Custody Seals	Y (N)
Seals Intact	Y N
Preserved	(Y) N

RELINQUISHED BY				SAMPLES RECEIVED BY			
Signature	Scott H. Dow	Date	4/15/15	Signature	Debra Gibson	Date	4/15/15
Printed Name	Scott H. Dow	Time	1:35	Signature	Debra Gibson	Date	4/15/15
Signature	Debra Gibson	Date	4/15/15	Signature	Mitchell	Date	4/15/15
Printed Name	Debra Gibson	Time	2:20	Signature	Mitchell	Date	4/15/15
Signature		Date		Signature		Date	
Printed Name		Time		Signature		Date	

WHITE-LAB YELLOW-CLIENT

FORM GEN-170 (05/06)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF APPROVAL TO CONSTRUCT
WATER FACILITIES**

Page 1 Of 1

ADEQ File No: 20140228	LTF No: 61087
System Name: Az Water Co-Casa Grande	System Number: 11-009
Project Owner: Arizona Water Company	
Address: P O Box 29006, Phoenix , AZ 85038	
Project Location: Casa Grande	County: Pinal
Description: REPLACE THREE BOOSTER PUMPS, SUCTION AND DISCHARGE PIPINGS WITH 13 LF OF 12-INCH, 20 LF OF 14-INCH, 32-LF OF 16-INCH, AND 11-LF OF 24-INCH DIP, REMOVE THE TOP 4-FOOT AND REPLACE THE ROOF OF THE TANK .	

Approval to construct the above-described facilities as represented in the approved documents on file with the Arizona Department of Environmental Quality is hereby given subject to provisions 1 through 1 continued on page 1 through 1

1. This project must be constructed in accordance with all applicable laws, including Title 49, Chapter 2, Article 9 of the Arizona Revised Statutes and Title 18, Chapter 5, Article 5 of the Arizona Administrative Code.
2. Upon completion of construction, the engineer shall fill out the Engineer's Certificate of Completion and forward it to the Central Regional Office located in Phoenix. If all requirements have been completed, that unit will issue a Certificate of Approval of Construction. R18-5-507(B), Ariz. Admin.Code. At the project owner's request, the Department **may** conduct the final inspection required pursuant to R18-5-507(B); such a request must be made in writing in accordance with the time requirements of R18-5-507(C), Ariz. Admin. Code.
3. This certificate will be void if construction has not started within one year after the Certificate of Approval to Construct is issued, there is a halt in construction of more than one year, or construction is not completed within three years of the approval date. Upon receipt of a written request for an extension of time, the Department may grant an extension of time; an extension of time must be in writing. R18-5-505(E), Ariz. Admin. Code.
4. Operation of a newly constructed facility shall not begin until a Certificate of Approval of Construction has been issued by the Department. R18-5-507(A), Ariz. Admin. Code.

Reviewed by: TF1

By: David Burchard 10/21/14
Date
David Burchard
Water Quality Division

cc: File No : 20140228
Regional Office: Central
Owner: Arizona Water Company
County Health Department: Pinal
Engineer: Arizona Water Company
Planning and Zoning/Az Corp. Commission
Engineering Review Database - Etr021

FILE COPY

1-5170



PV-0077
SHEET 4 OF 7

ARIZONA WATER COMPANY
3805 N. BLACK CANYON HWY., POST OFFICE BOX 29008
PHOENIX, ARIZONA 85028-9008
(602) 242-6980

REPAIR AND REHAUSATE THE EX. BOOSTER PUMP STATION WATER RESERVOIR AND REPLACE THE EX. ROOSTER PUMP STATION AND DISCHARGE PIPING AT THE COTTONWOOD LAKE WATER FACILITY SITE

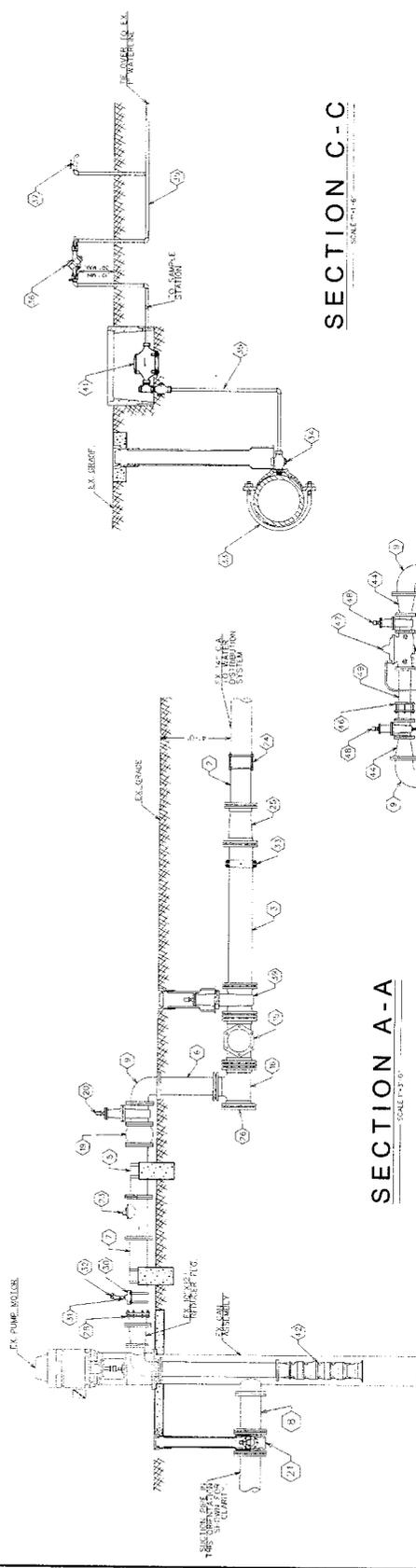
1/23/21 SHEET 0077

SECTIONS/DETAILS

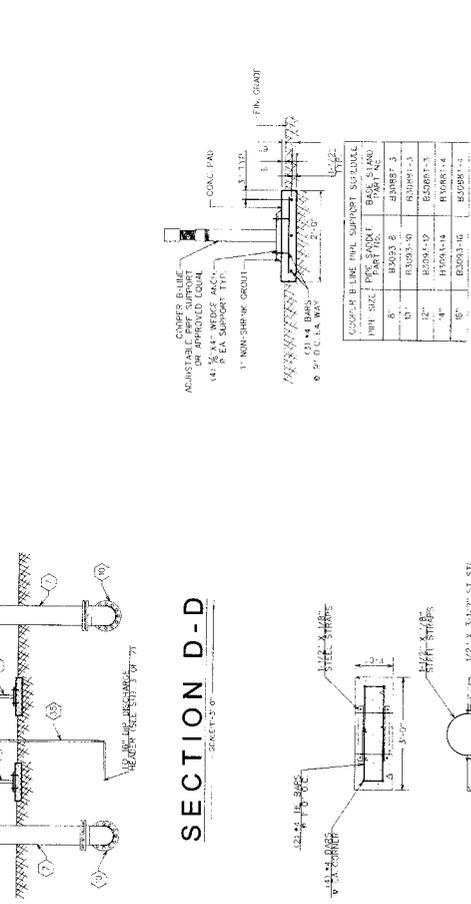
DATE	BY	DESCRIPTION
4/7/2014	BMP	AS SHOWN
04/03	MM	1/4 SEC. 21, 1.6 S. R. 6 E.
1-5170	1431	PINAL VALLEY

The addition shown to be installed in accordance with the Arizona Water Company Standard Specifications on the and the Arizona Department of Environmental Quality.

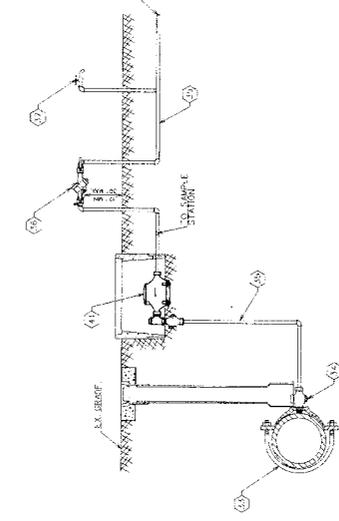
283-1100
800-535-5117



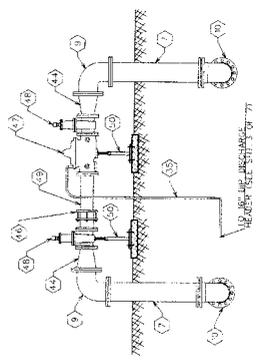
SECTION A-A
SCALE: 1/4" = 1'-0"



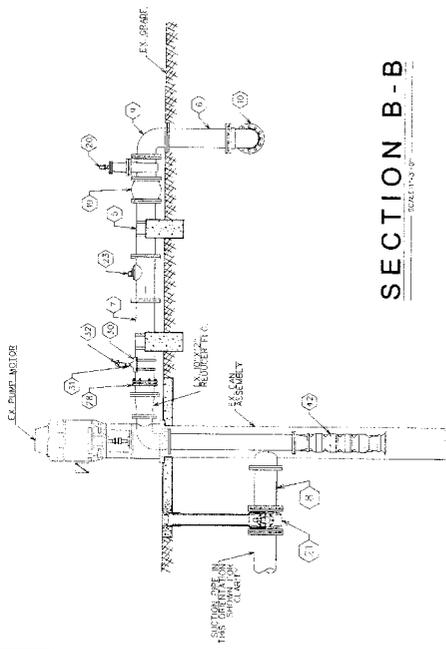
SECTION B-B
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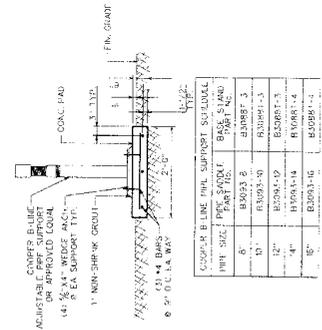
SECTION C-C
SCALE: 1/4" = 1'-0"



SECTION D-D
SCALE: 1/4" = 1'-0"



PIPE SUPPORT A
SCALE: 1/4" = 1'-0"



PIPE SUPPORT B
SCALE: 1/4" = 1'-0"

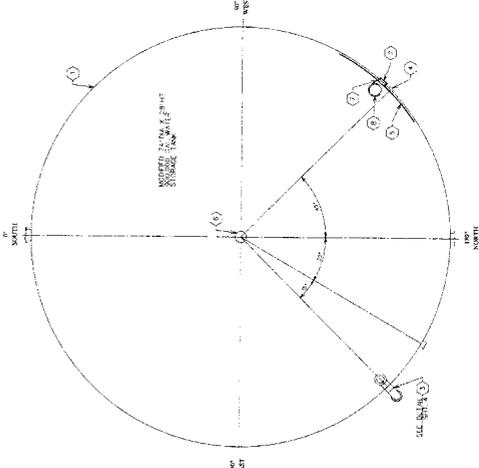
COMP. & BLK. PIPE SUPPORT SUBASSEMBLY	PIPE SIZE	PART NO.	QTY.
6" BUMPERS	6"	BUMPS-6	2
8" BUMPERS	8"	BUMPS-8	2
12" BUMPERS	12"	BUMPS-12	2
16" BUMPERS	16"	BUMPS-16	2
20" BUMPERS	20"	BUMPS-20	2

ARIZONA WATER COMPANY
3905 N BLACK CANYON HWY., POST OFFICE BOX 25006
PHOENIX, ARIZONA 85038-0006
(602) 240-6860

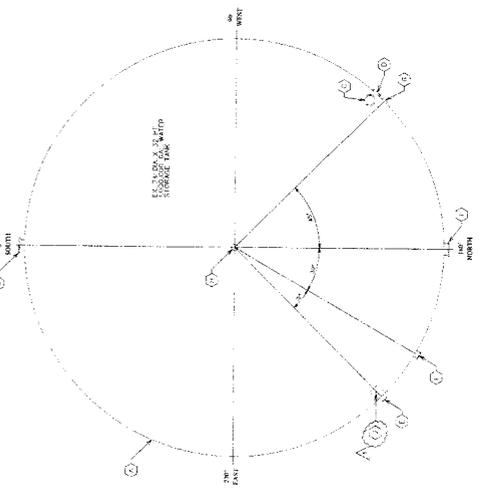
PROJECT NO. 2500
PROJECT NAME: REPAIR AND REHABILITATE THE EX. 1,000,000 GAL. WATER STORAGE RESERVOIR AND REPLACE THE BOTTOM RING AND BOTTOM PIPELINE AT THE COTTONWOOD LAKE WATER FLOW SITE
DATE: 4/7/2014
BY: BWP
CHECKED BY: AS SHOWN
SCALE: 0/400
PROJECT LOCATION: PINAL VALLEY
SHEET NO.: 1-5170
DATE: 1/23/14

SPECIFICATION FOR MODIFIED STEEL WATER STORAGE TANK

1. Tank shall conform to AWWA Specifications (AWWA) with exceptions noted below.
2. 1/2" minimum thickness.
3. Minimum 24" diameter steel pipe, fabricated with 30,000 minimum tensile strength and 30,000 minimum yield strength. All pipe shall be galvanized steel. All pipe shall be galvanized steel. All pipe shall be galvanized steel.
4. Overlap joint shall be the same diameter as the pipe and shall include a minimum of 3" overlap. Pipe connection shall be full penetration butt joint.
5. Minimum 24 inch diameter manhole shall be provided on the east. The manhole cover shall be the same size as the manhole. The manhole cover shall be the same size as the manhole. The manhole cover shall be the same size as the manhole.
6. Inside ladder height shall be 10 feet.
7. All steel shall be galvanized in accordance with Arizona Department of Health Services Engineering Manual No. 10 (see below) and shall be painted with epoxy.
8. Minimum Tank Capacity - 1,000,000 Gal. (1,000,000 GAL. EFFICIENT CAPACITY)
9. The storage tank shall be constructed with the 100 year flood peak and the tank shall be galvanized steel.
10. The manhole shall be constructed with the 100 year flood peak and the manhole shall be galvanized steel.
11. Tank shall be galvanized in accordance with AWWA Specification 10.8 and shall be painted with epoxy.



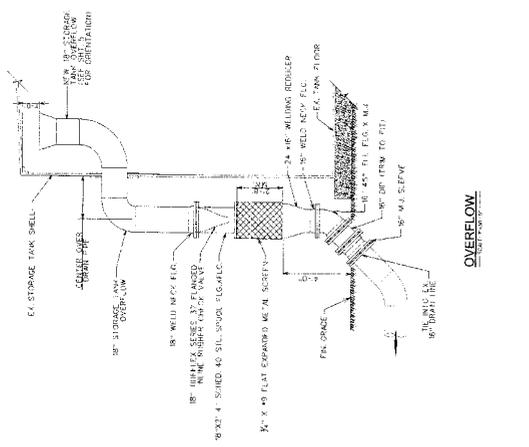
NEW TANK ORIENTATION PLAN



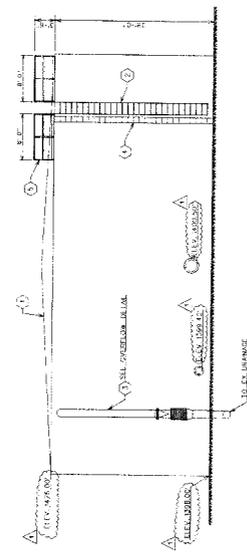
EXISTING TANK ORIENTATION PLAN

NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
1	NEW FITTINGS	1	COMPR	
2	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
3	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
4	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
5	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
6	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
7	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
8	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
9	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	
10	NEW 24" DIA. GALV. STEEL PIPE	1	COMPR	

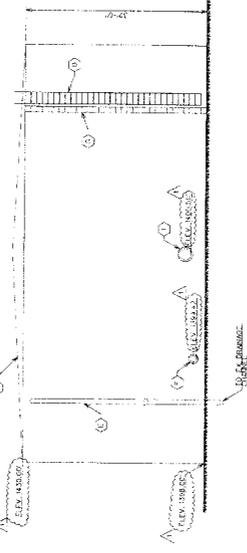
NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
1	EXISTING FITTINGS	1	COMPR	
2	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
3	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
4	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
5	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
6	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
7	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
8	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
9	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	
10	EXISTING 24" DIA. GALV. STEEL PIPE	1	COMPR	



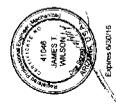
OVERFLOW



NEW TANK ELEVATION

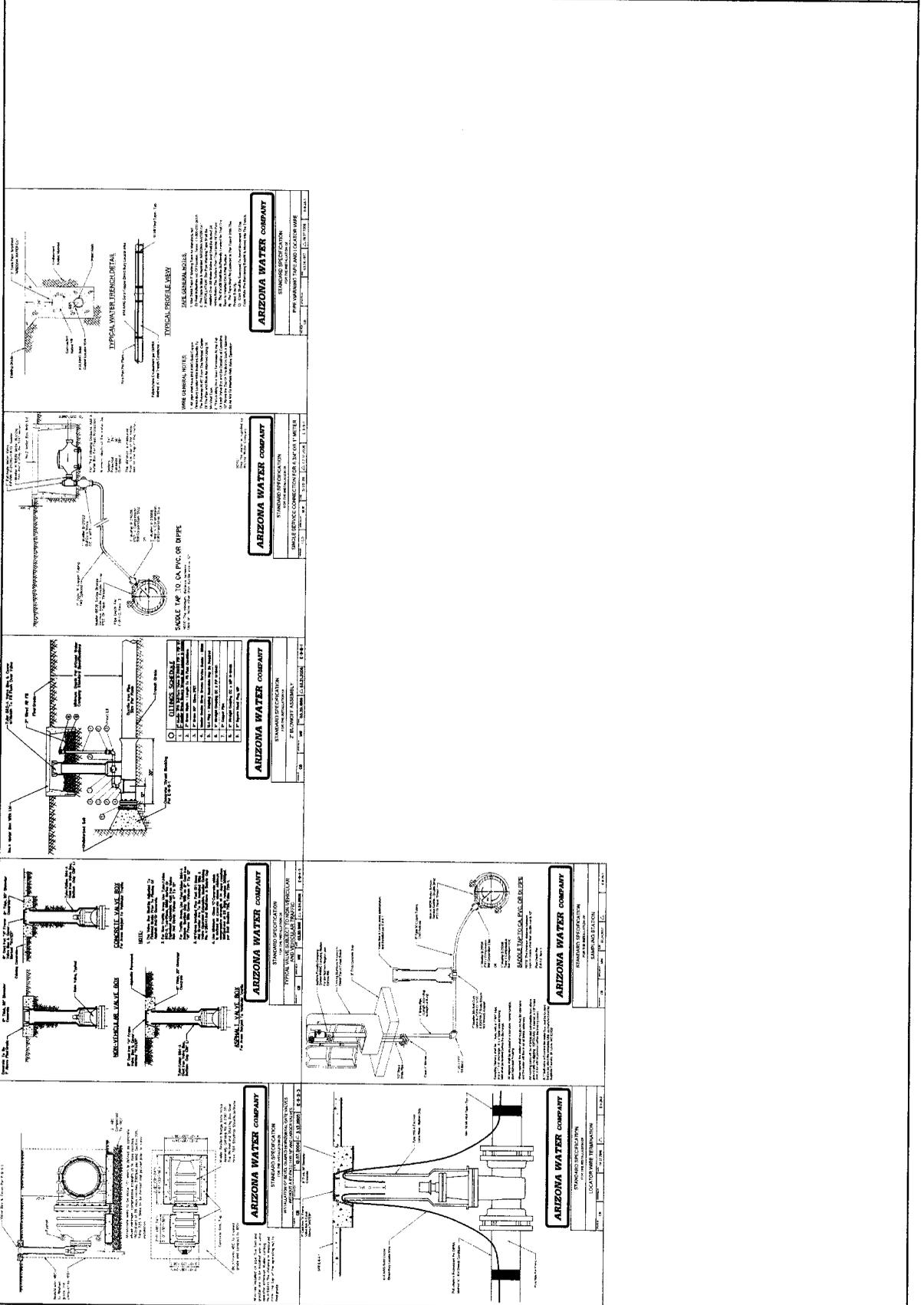


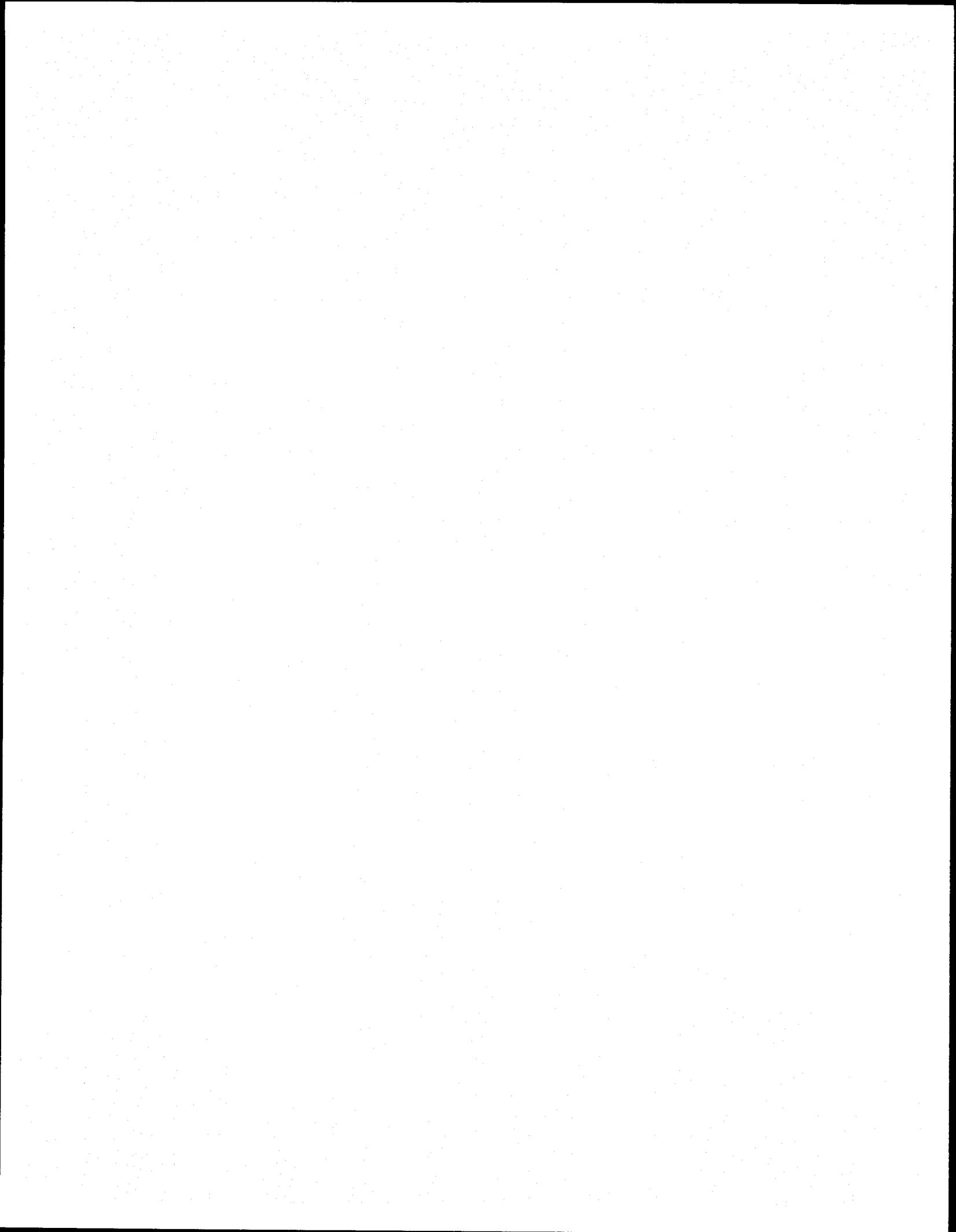
EXISTING TANK ELEVATION



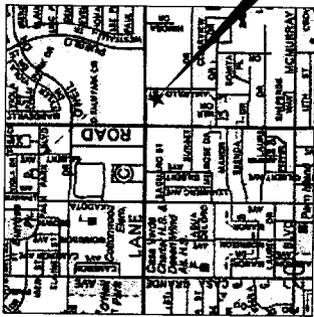
ARIZONA WATER COMPANY
3805 N. BLACK CANYON HWY. POST OFFICE BOX 29006
PHOENIX, ARIZONA 85038-9006
(602) 240-8860

PROJECT NO.:	1431
PROJECT NAME:	REPAIR AND REHABILITATE THE EX. 1,000,000 GAL. WATER STORAGE RESERVOIR AND REPLACE THE EX. ROOSTER PUMP STATION AND RISER PIPING AT THE COTTONWOOD LAKE WATER FACILITY SITE.
DATE:	4/7/2014
BY:	AS SHOWN
SCALE:	AS SHOWN
PROJECT LOCATION:	PINAL VALLEY NM TA SEC. 21, T. 8, S. R. 6 E.
PROJECT NO.:	1431
PROJECT NAME:	REPAIR AND REHABILITATE THE EX. 1,000,000 GAL. WATER STORAGE RESERVOIR AND REPLACE THE EX. ROOSTER PUMP STATION AND RISER PIPING AT THE COTTONWOOD LAKE WATER FACILITY SITE.
DATE:	4/7/2014
BY:	AS SHOWN
SCALE:	AS SHOWN
PROJECT LOCATION:	PINAL VALLEY NM TA SEC. 21, T. 8, S. R. 6 E.
PROJECT NO.:	1431



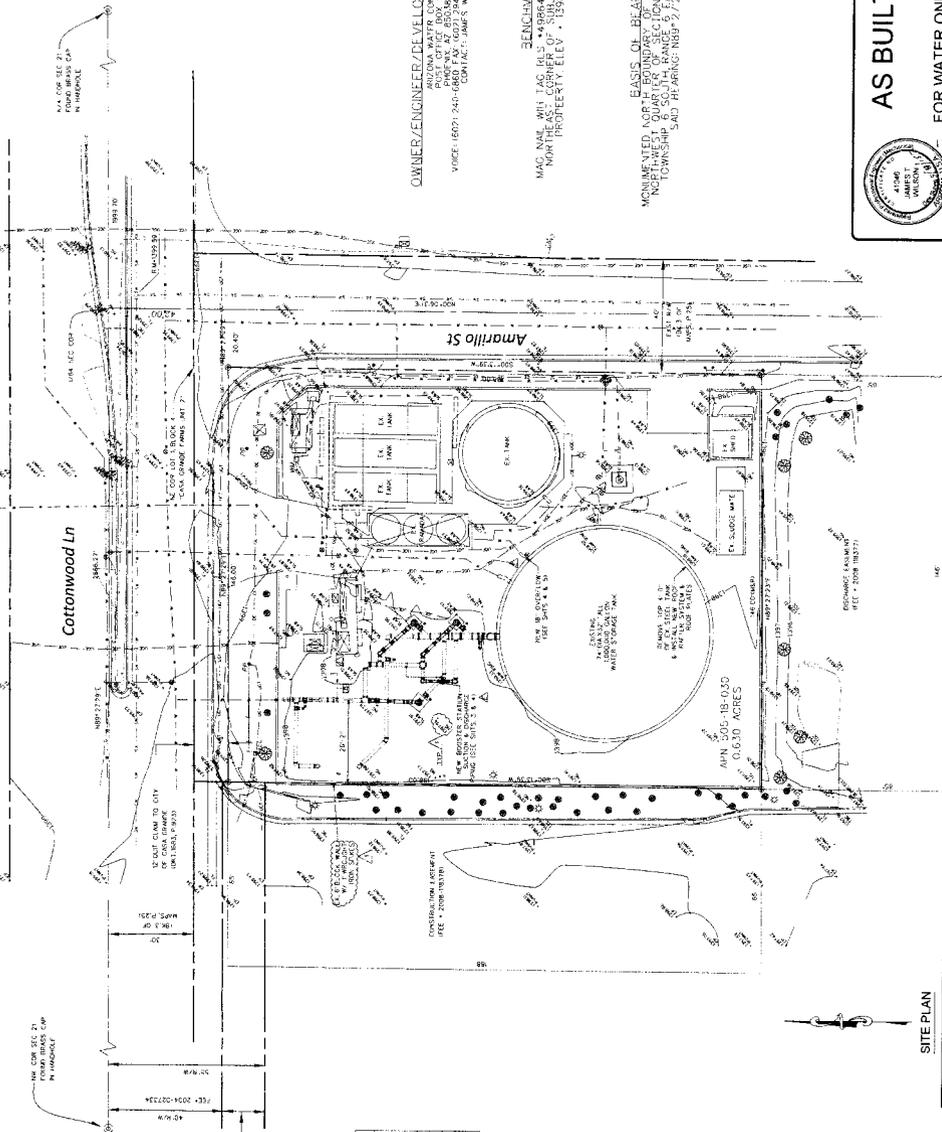


REPAIR AND REHABILITATE THE EX. 1,000,000 GAL. WATER STORAGE RESERVOIR AND REPLACE THE EX. BOOSTER PUMP STATION SUCTION AND DISCHARGE PIPING AT THE COTTONWOOD LANE WATER FACILITY SITED IN CASA GRANDE, AZ NW1/4 SEC. 21, T. 6 S., R. 6 E. OF THE G. & S. R. B. & M.



VICINITY MAP

PROJECT LOCATION



SHT. No.	DWG. No.	DESCRIPTION	PREPARED BY
1	PV-0077	SITE PLAN	AWC
2	PV-0077	DEMOLITION PLAN	AWC
3	PV-0077	BOOSTER STATION PLAN	AWC
4	PV-0077	SECTION CUTS	AWC
5	PV-0077	ELEVATION	AWC
6	PV-0077	AWC DETAILS	AWC
7	PV-0077	AWC DETAILS	AWC

LEGEND

- ⊙ 1/2 REBAR PROPERTY CORNER
- LIGHT/POWER POLES
- ⊖ EX. WATER METER BOX
- ⊕ EX. FIRE HYDRANT
- NEW WATER VALVE
- ⊖ EX. WATER VALVE
- ⊙ SINKER MANHOLE
- STREET CENTERLINE/MAINTENANCE LINE
- RIGHT OF WAY LINE
- PROPERTY LINE
- NEW WATER LINE
- EX. WATER LINE
- EX. SEWER LINE
- EX. UNDERGROUND ELECTRIC
- EX. OVERHEAD ELECTRIC
- EX. UNDERGROUND NAT. GAS
- EX. UNDERGROUND TELEPHONE



SITE PLAN

AS BUILT
FOR WATER ONLY

REVISER BY BWP ON 4/27/15 PER AS BUILT.

ARIZONA WATER COMPANY
3805 N. BLACK CANYON HWY. POST OFFICE BOX 23006
PHOENIX, ARIZONA 85038-9006
(602) 240-6860

REPAIR AND REHABILITATE THE EX. 1,000,000 GAL. WATER STORAGE RESERVOIR AND REPLACE THE EX. BOOSTER PUMP STATION SUCTION AND DISCHARGE PIPING AT THE COTTONWOOD LANE WATER FACILITY SITE

SITE PLAN

PROJECT SHEET DATE: 4/7/2014
DRAWN BY: BWP
CHECKED BY: AS SHOWN
DATE: 4/7/2014

0403
NM 1/4 SEC. 21, T. 6 S., R. 6 E.
PINAL VALLEY

1:5170

The installer agrees to be released and hold harmless the Arizona Department of Environmental Quality
in accordance with the Arizona Water Infrastructure Act
AS 45-1001

REVISER BY BWP ON 4/27/15 PER AS BUILT.
REVISER BY BWP ON 4/27/15 PER AS BUILT.

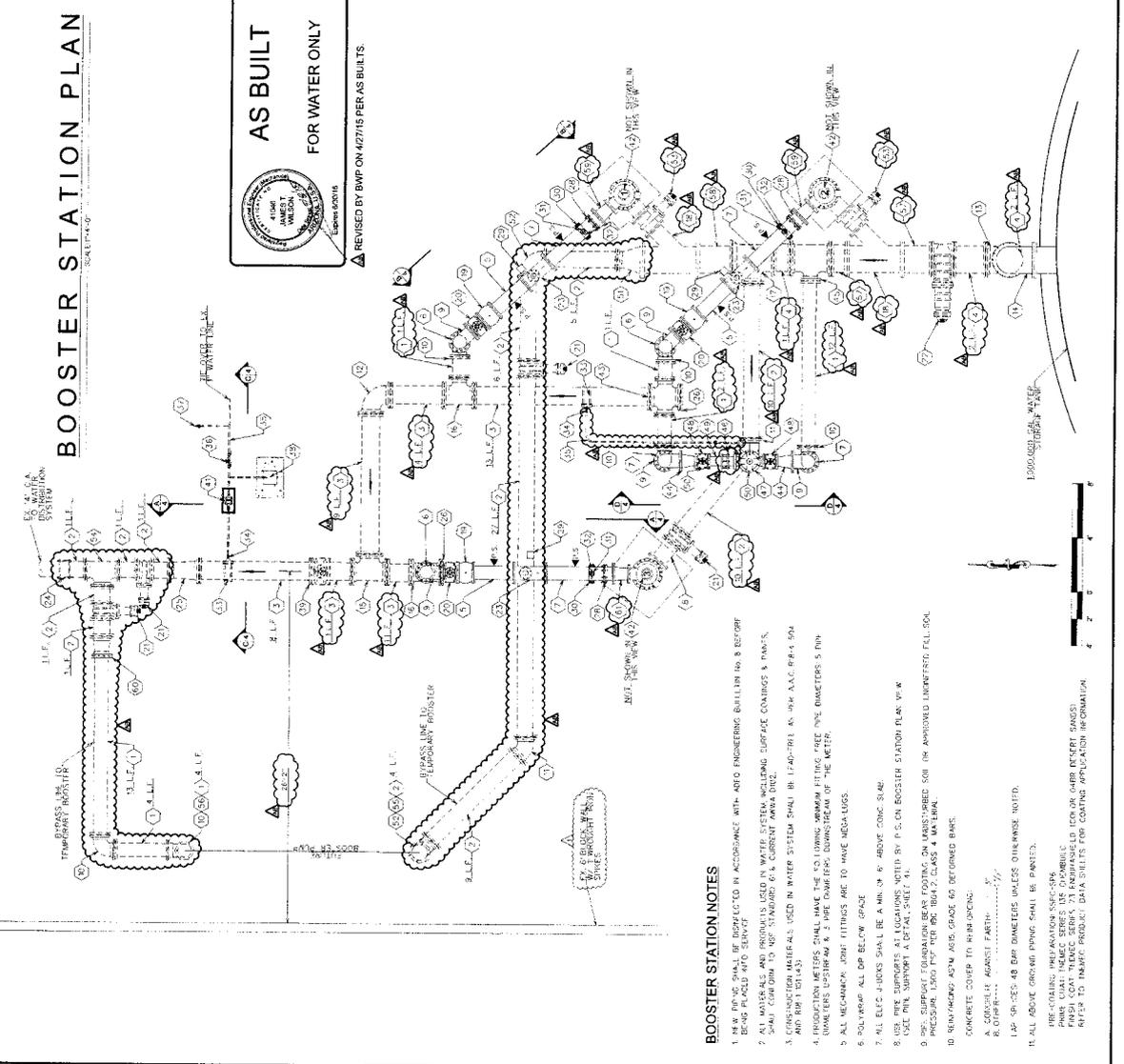
OWNER/ENGINEER/DEVELOPER
ARIZONA WATER COMPANY
POST OFFICE BOX 23006
PHOENIX, ARIZONA 85038-9006
VOICE: (602) 241-4660 FAX: (602) 241-2468
CONTACT: JIM S. WILSON

BENCHMARK
MAG. NAIL WITH TAG IN S. CORNER
NORTH-EAST CORNER OF SURVEY
PROPERTY ELEV. = 1596.76

MONUMENTED CORNER BOUNDARY OF THE
UNDIVIDED 1/4 SECTION 21, T. 6 S., R. 6 E.,
NORTH-EAST CORNER OF SURVEY
TOWNSHIP 6 SOUTH, RANGE 6 EAST,
SAYD HEARING: N89-7/25-L

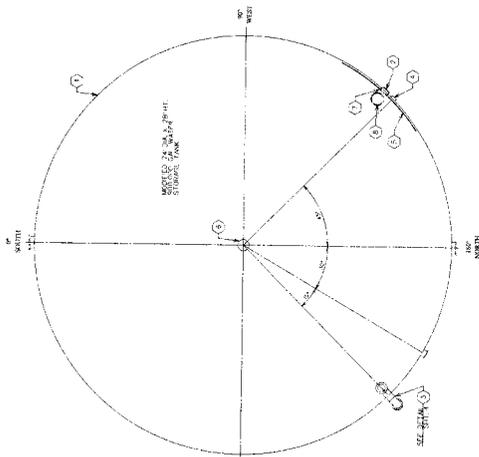
ITEMS SCHEDULE

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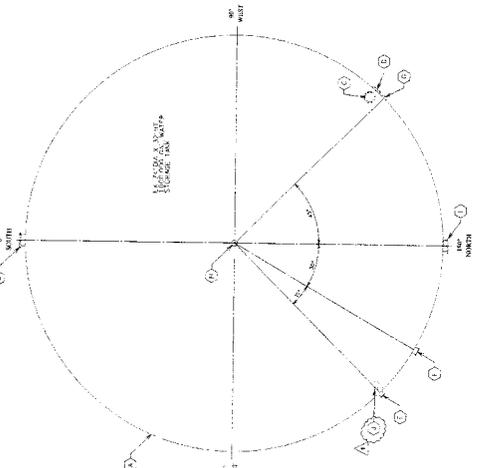


SPECIFICATION FOR MODIFIED STEEL WATER STORAGE TANK

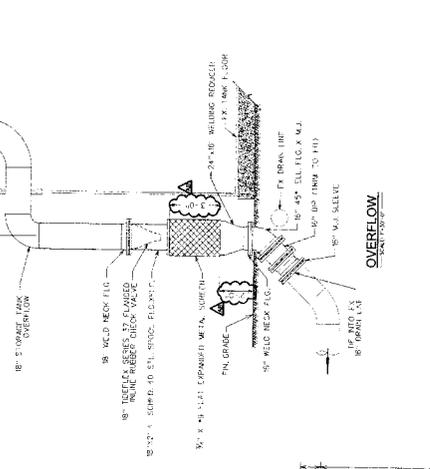
1. Tank dimensions to meet specifications of the Arizona Water Company.
2. Minimum of 2" diameter steel structural steel members shall be used.
3. Minimum of 2" diameter steel structural steel members shall be used. The tank shall be located on a 24" diameter steel support structure at the center of the tank to provide access to the floor plate.
4. Concrete shall be used for the base, diameter shall be 24" and height shall be 24". The concrete shall be placed in a single lift and shall be finished with a smooth surface.
5. Minimum of 2" diameter steel structural steel members shall be used. The tank shall be located on a 24" diameter steel support structure at the center of the tank to provide access to the floor plate.
6. Inside ladder shall be located at the east side.
7. Finished tank shall be installed in accordance with Arizona Department of Health Services Engineering Report No. 8 before being placed into service.
8. Modified Tank Capacity: 1,000,000 GAL. (17,400,000 LITERS) (4,500,000 GALLONS)
9. The storage tank shall be constructed within the 10th year flood plain and the 100 year water depth to 100' from the tank.
10. The tank shall be constructed in accordance with the Arizona Water Company Specifications 010-02, 010-03, 010-04, 010-05, 010-06, 010-07, 010-08, 010-09, 010-10, 010-11, 010-12, 010-13, 010-14, 010-15, 010-16, 010-17, 010-18, 010-19, 010-20, 010-21, 010-22, 010-23, 010-24, 010-25, 010-26, 010-27, 010-28, 010-29, 010-30, 010-31, 010-32, 010-33, 010-34, 010-35, 010-36, 010-37, 010-38, 010-39, 010-40, 010-41, 010-42, 010-43, 010-44, 010-45, 010-46, 010-47, 010-48, 010-49, 010-50, 010-51, 010-52, 010-53, 010-54, 010-55, 010-56, 010-57, 010-58, 010-59, 010-60, 010-61, 010-62, 010-63, 010-64, 010-65, 010-66, 010-67, 010-68, 010-69, 010-70, 010-71, 010-72, 010-73, 010-74, 010-75, 010-76, 010-77, 010-78, 010-79, 010-80, 010-81, 010-82, 010-83, 010-84, 010-85, 010-86, 010-87, 010-88, 010-89, 010-90, 010-91, 010-92, 010-93, 010-94, 010-95, 010-96, 010-97, 010-98, 010-99, 010-100.



NEW TANK ORIENTATION PLAN



EXISTING TANK ORIENTATION PLAN

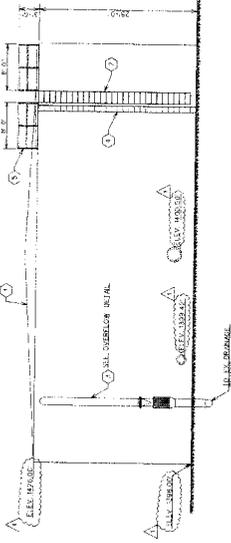


AS BUILT
FOR WATER ONLY

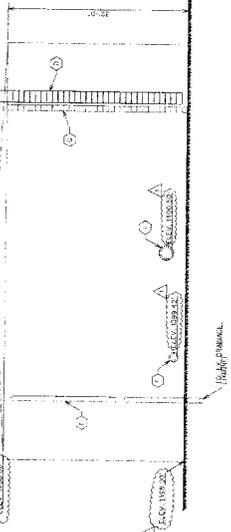
DATE: 04/17/18
 BY: JAMES WELLS
 CHECKED BY: JAMES WELLS

REVISIONS BY BWP ON 04/17/18 PER AS BUILT IS.

NO.	DESCRIPTION	DATE	BY	CHECKED
1	ISSUED FOR PERMIT	04/17/18	JAMES WELLS	JAMES WELLS
2	ISSUED FOR PERMIT	04/17/18	JAMES WELLS	JAMES WELLS
3	ISSUED FOR PERMIT	04/17/18	JAMES WELLS	JAMES WELLS
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9	ISSUED FOR PERMIT	04/17/18	JAMES WELLS	JAMES WELLS
10	ISSUED FOR PERMIT	04/17/18	JAMES WELLS	JAMES WELLS



NEW TANK ELEVATION



EXISTING TANK ELEVATION

ARIZONA WATER COMPANY
 3805 N. BLACK CANYON HWY. POST OFFICE BOX 25096
 PHOENIX, ARIZONA 85028-0005
 (602) 240-8900

REPAIRS AND REHABILITATE THE EX. 1000 GAL. WATER STORAGE RESERVOIR AND
 REPLACE THE EX. ROSSER HUB AND BRUSH AND INSURANCE PIPING
 AT THE COTTONWOOD LANE WATER FACILITY SITE
 PROJECT SHEET 0000
 AMC DETAILS

DATE: 04/20/14
 DRAWN BY: BWP
 CHECKED BY: JAW
 AS SHOWN

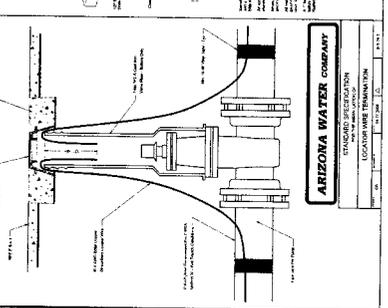
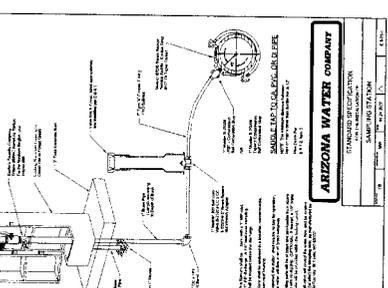
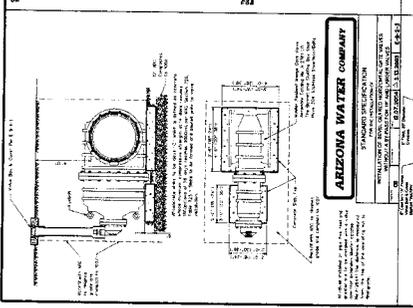
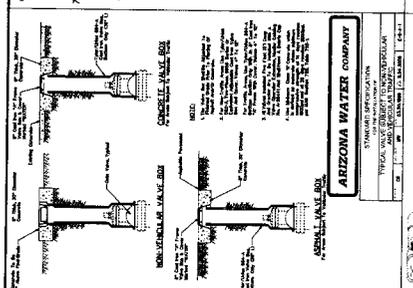
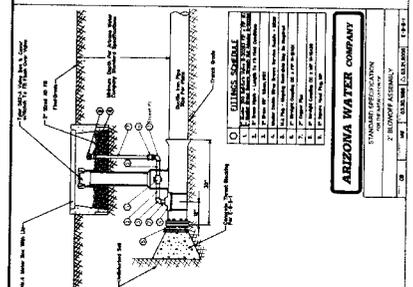
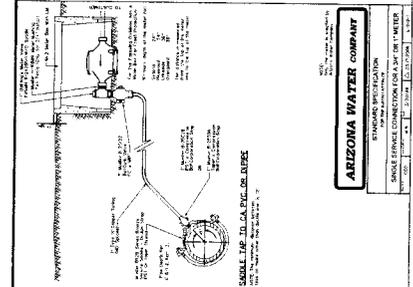
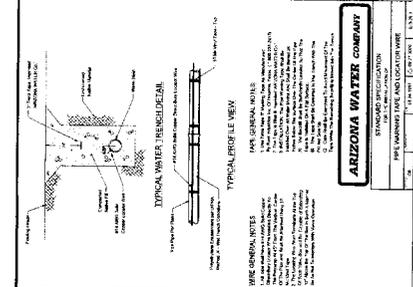
1-5170
 1431

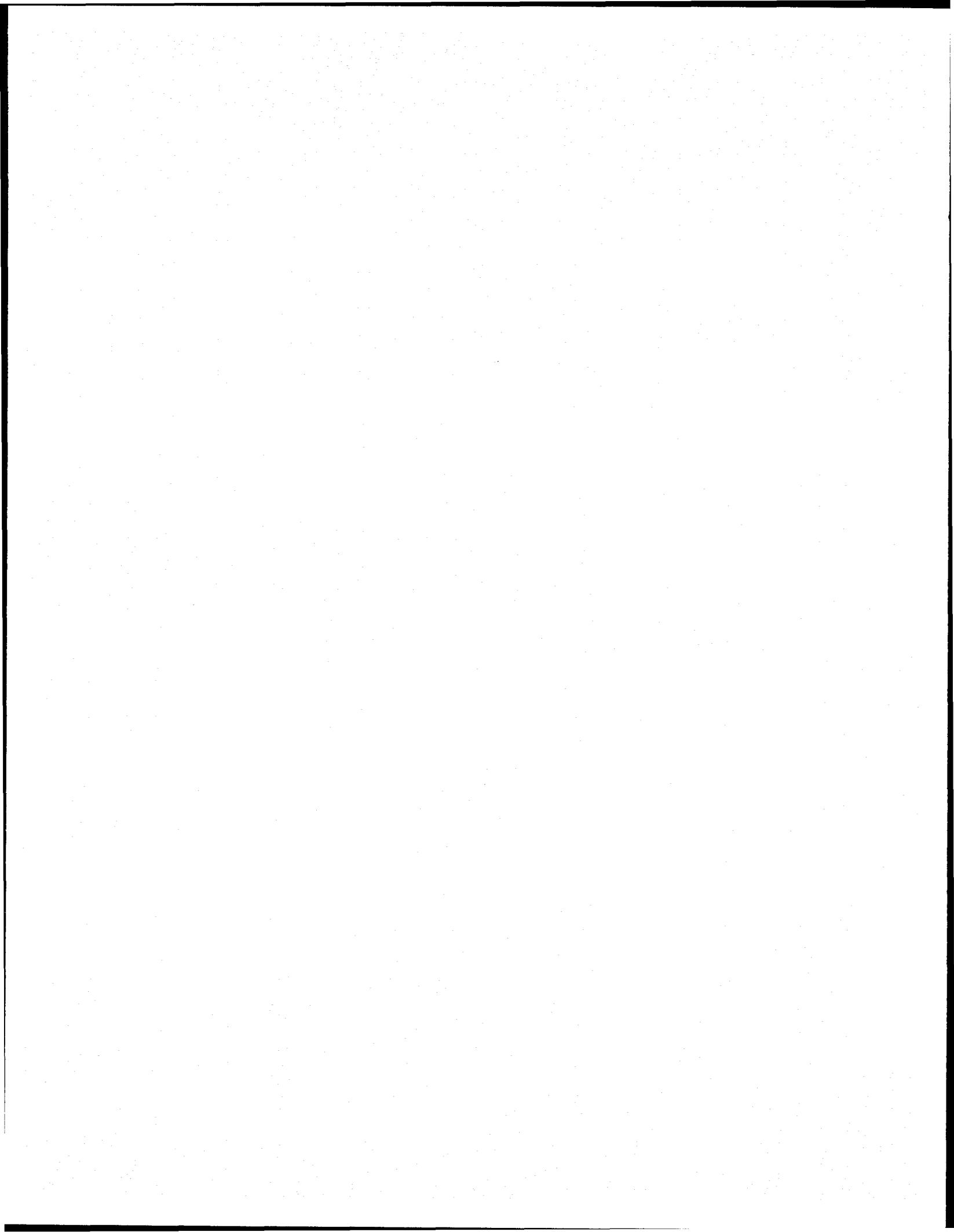
THIS INFORMATION IS TO BE KEPT IN CONFIDENCE AND NOT TO BE DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN PERMISSION OF ARIZONA WATER COMPANY. COMPANY POLICY IS TO PROTECT ALL INFORMATION OF A TECHNICAL NATURE.
 THE INFORMATION SHOWN IS TO BE KEPT IN CONFIDENCE AND NOT TO BE DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN PERMISSION OF ARIZONA WATER COMPANY. COMPANY POLICY IS TO PROTECT ALL INFORMATION OF A TECHNICAL NATURE.

REVISIONS
 REVISION NO. 1
 REVISION DESCRIPTION
 REVISION DATE



REVISOR: JAMES WILSON
 DATE: 04/20/14







ARIZONA WATER COMPANY

CONSTRUCTION
PLACED IN SERVICE
NOTICE

WORK AUTHORIZATION
NO.: 1-5170

DIVISION: PV/CG

DATE PLACED IN SERVICE: 7 | 23 | 2015

CONTRACT NO:

FOR PURPOSES OF *MODIFIED ACCELERATED COST RECOVERY SYSTEM*, AN ASSET IS "PLACED IN SERVICE" WHEN IT IS IN A CONDITION OR STATE OF READINESS AND AVAILABILITY FOR A SPECIFICALLY ASSIGNED FUNCTION, WHETHER IT BE FOR USE IN A TRADE OR BUSINESS, OR FOR THE PRODUCTION OF INCOME.

I CERTIFY THAT THE ASSET(S) CONSTRUCTED PURSUANT TO THE PROVISIONS OF THE ABOVE-REFERENCED WORK AUTHORIZATION ARE READY FOR SERVICE AS OF THE DATE SHOWN ABOVE.

A handwritten signature in black ink, appearing to be "J. White".

Division Manager or Operations Superintendent
(signature)

7-31-15

Date

SUBMIT ORIGINAL TO ACCOUNTING DEPARTMENT

A-1-3-1
FKS 11/24/11

Western Group Rate Case

Exhibit FKS-1

5171 Cottonwood & Peart

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5171
P.E. NUMBER:
BUDGET ITEM NO.: B-1
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 120 DAYS
TAX CODE: 0403	

DESCRIPTION OF WORK:

Replace 2,640 linear feet of old, deteriorated and failing 12-inch water main with 12-inch ductile iron water main, on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system. Construct in accordance with attached drawings and/or Arizona Water Company specifications.

FACTORS JUSTIFYING WORK:

APPROVED 2014 BUDGET ITEM (\$275,000)

In the past water loss in the Pinal Valley water system has exceeded 10%. Currently water loss is at approximately 8%, or 34,000,000 gallons per month. This water main is frequently repaired by the servicemen. The existing water mains and services scheduled for replacement has 3 recorded leaks in the past two years. Replacement of the old water main in this area will mitigate the need for further repairs; helping to reduce water loss in the Pinal Valley water system. Continued use of this water main is critical to move water toward the north west part of the Pinal Valley water system.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	<i>James Wilson</i>	5/6/14
LABOR	8,700	REVIEWED FOR ESMT/ROW VERIFICATION:	
CONTRACT PORTION	0	<i>Charles Briggs</i>	05-07-2014
OVERHEAD	957	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 9,657	<i>MJ Mendez</i>	5/7/14
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	<i>Fredrick Schneider</i>	5-7-14
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	<i>Joseph Harris</i>	5/8/14
NET COMPANY CASH REQUIRED	\$ 9,657	AUTHORIZED BY PRESIDENT:	
		<i>William M Garfield</i>	5-9-2014

COMMENTS:

RELEASE TO DESIGN ONLY

CONSTRUCTION RELEASE:



2014 BUDGET

AFH

ARIZONA WATER COMPANY

W.A. NUMBER: 1-5171
 P.E. NUMBER:
 BUDGET ITEM NO.: B-1
 SHEET NO.: 2 of 2

WORK AUTHORIZATION - DETAIL SHEET

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER

PROJECT DESCRIPTION
 Replace 2,640 linear feet of old, deteriorated and failing 12-inch water main with 12-inch ductile iron water main, on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL	
	SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345				
	SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345				
	SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345				
	SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				

TOTAL CONTRACT WORK \$ -

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL	
		SERVICE CONNECTIONS: DOUBLE-LONG	345			
		SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345				
	SERVICE CONNECTIONS: SINGLE-SHORT	345				
	METERS	346				

TOTAL MATERIALS \$ -

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Engineering Design	343	40	\$ 75.00	\$ 3,000
	TESTING FEE	343	1	\$ 500.00	500
	PERMIT FEE	343	1	1,500.00	1,500
	SURVEY FEE	343	1	1,500.00	1,500
	FIELD INSPECTION	343	40	55.00	2,200
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345				
INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				

TOTAL LABOR \$ 8,700

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 8,700

OVERHEAD 957

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 9,657

AFH

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5171
P.E. NUMBER:
BUDGET ITEM NO.: B-1
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 150 DAYS
TAX CODE: 0403	

DESCRIPTION OF WORK:

Replace 2,840 linear feet of old, deteriorated and failing 12-inch water main with 2,850 linear feet of 12-inch ductile iron water main on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system. Construct in accordance with attached drawings and/or Arizona Water Company specifications.

FACTORS JUSTIFYING WORK:

APPROVED 2014 BUDGET ITEM (\$275,000)
Water loss in the Pinal Valley water system has approached 10% and is currently at approximately 8%. This water main is frequently repaired by the servicemen. The existing water mains and services scheduled for replacement have 3 recorded leaks in the past two years. Replacement of the failing water main in this area mitigates the need for further repairs; helping to reduce water loss in the Pinal Valley water system. Begin construction in 2014 and complete construction in 2015.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	<i>James Wilson</i> 10/24/14	10/1/14
LABOR	5,700	REVIEWED FOR ESMT/BOW VERIFICATION:	
CONTRACT PORTION	84,865	<i>Charles Briggs</i>	10-01-2014
OVERHEAD	9,962	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 100,527	<i>Andy Haas</i> AFH 10-27-14	10-1-14
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	<i>Fredrick Schneider</i> 10-27-14	10-20-2014
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	<i>Joseph Harris</i>	10/21/14
NET COMPANY CASH REQUIRED	\$ 100,527	AUTHORIZED BY PRESIDENT:	
		<i>William M Garfield</i>	10-21-2014

COMMENTS:

Transfer \$100,000 from WA 1-5170 (Cottonwood Tank Repair) to fund this project.
2014 RTC Construction Amount: \$100,000
2015 Anticipated Construction Budget Amount: \$300,000
Total Project Cost: \$400,000

CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION
Authorized by **FRED SCHNEIDER**
Date 10/27/14

AFH

ARIZONA WATER COMPANY

WORK AUTHORIZATION - DETAIL SHEET

W A NUMBER: 1-5171
 P.E. NUMBER:
 BUDGET ITEM NO. B-1
 SHEET NO.: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER
	343	12-inch Ductile Iron Water Main	2,840 LF	1984 WA 2-9303

PROJECT DESCRIPTION
 Replace 2,840 linear feet of old, deteriorated and failing 12-inch water main with 2,850 linear feet of 12-inch ductile iron water main on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system.

	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
C O N T R A C T W O R K	Install 12" DIP with polywrap and related fittings complete	343	700	\$ 103.00	\$ 72,100
	Install 12" x 8" MJ Tee, 8" MJ GV	343	0	3,360.00	
	Install 8" DIP and tie in to existing 8" with related fittings	343	0	218.00	
	Abandon existing 12" gate valve	343	0	400.00	
	Install 12" vertical realignment	343	1	6,600.00	6,600
	Tie new 12" DIP to existing 12" DIP with related fittings	343	0	8,000.00	
	Cut and plug 12" DIP to be abandoned in place	343	0	1,600.00	
	Install air release valve	343	0	3,100.00	
	Performance and Payment Bond	343	1	5,665.00	5,665
	Contractors Tax	343	1	500.00	500
	SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345			
SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				
TOTAL CONTRACT WORK					\$ 84,865

M A T E R I A L S					
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
SERVICE CONNECTIONS: SINGLE-SHORT	345				
METERS	346				
TOTAL MATERIALS					\$ -

L A B O R	Engineering Design and Project Management	343	20	\$ 75.00	\$ 1,500
	TESTING FEE	343	1	\$ 500.00	500
	PERMIT FEE				
	SURVEY FEE	343	1	1,500.00	1,500
	FIELD INSPECTION	343	40	55.00	2,200
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345			
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				
TOTAL LABOR					\$ 5,700
SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR					\$ 90,565
OVERHEAD					9,962
TOTAL					\$ 100,527

REFUNDABLE PORTION NON-REFUNDABLE PORTION COST ESTIMATE

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5171
 P.E. NUMBER:
 BUDGET ITEM NO.: 1-5171
 SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 150 DAYS
TAX CODE: 0403	

DESCRIPTION OF WORK:

Complete construction of 2,850 linear feet of 12-inch ductile iron water main to replace 2,840 linear feet of old, deteriorated and failing 12-inch water main with on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system.

FACTORS JUSTIFYING WORK:

APPROVED 2015 BUDGET ITEM (\$220,000)
 Water loss in the Pinal Valley water system has approached 10% and is currently at approximately 8%. This water main is frequently repaired by the servicemen. The existing water main being replaced has 3 recorded leaks in the past two years. Replacing the water main in this area will reduce service disruptions and mitigate the need for further repairs; helping to reduce water loss in the Pinal Valley water system. Construction began in 2014 and is scheduled for completion in May 2015.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	James Wilson gw 2/18/15	2/18/15
LABOR	5,700	REVIEWED FOR ESM/TROW VERIFICATION:	
CONTRACT PORTION	189,795	Charles Briggs CB 02-18-2015	02-09-2015
OVERHEAD	23,500	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 218,995	Andy Haas AH 2-20-15	2-9-15
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider FS 2-20-15	2-9-15
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris	2/16/15
NET COMPANY CASH REQUIRED	\$ 218,995	AUTHORIZED BY PRESIDENT:	
		William Garfield WJ 2-18-2015	2-18-2015

COMMENTS:

2014 Construction Expenditures: \$275,000
 2015 Construction Expenditures: \$219,000
 Total Project Cost: \$494,000

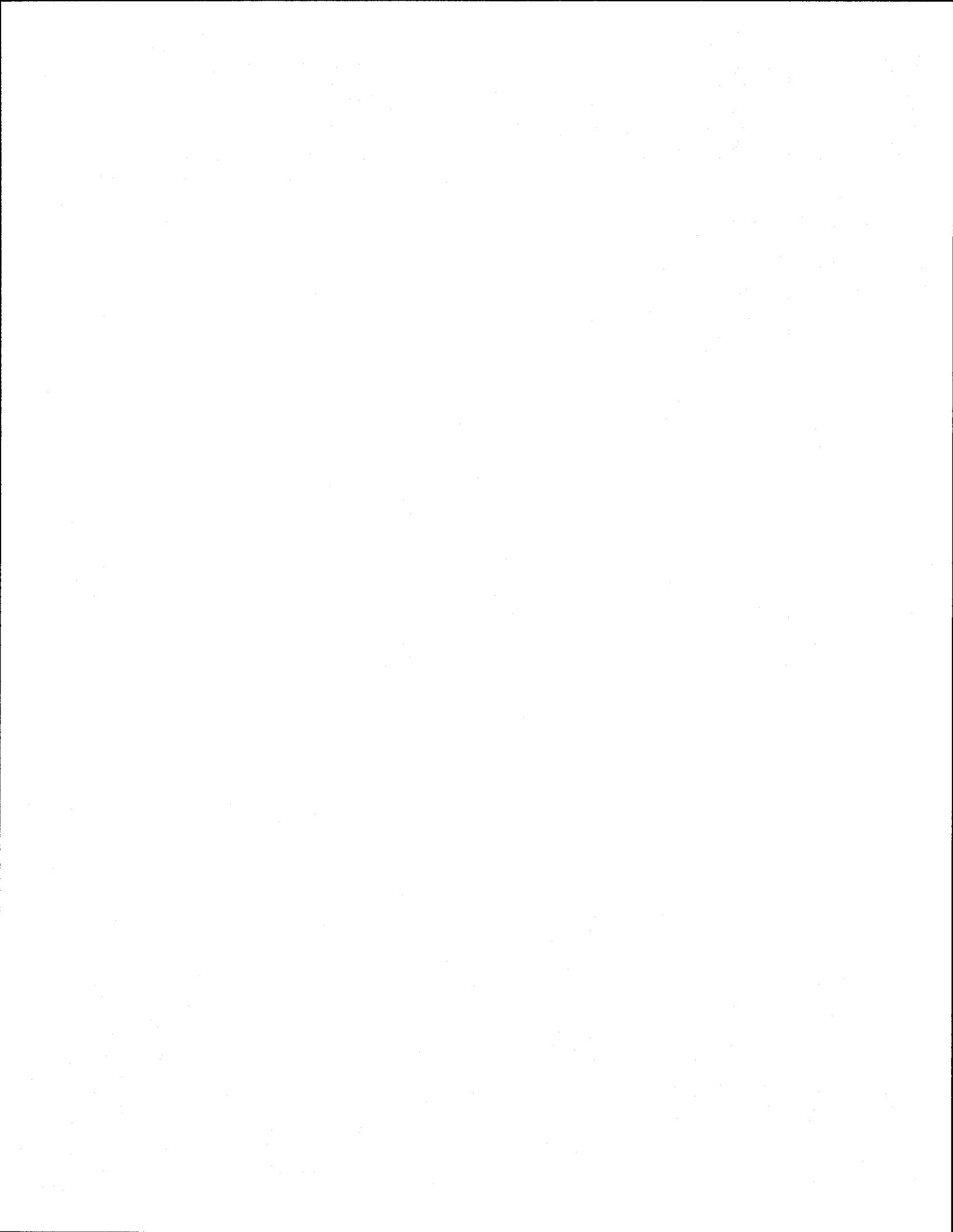
CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION

Authorized by FRED SCHNEIDER
 Date 2/18/15

2015 RE-RELEASE

AFH





ARIZONA WATER COMPANY

PRECONSTRUCTION CONFERENCE OUTLINE

DATE: 1-6-15 TIME: CONTRACTOR: FELIX DIVISION:

W.A. NUMBER JOB DESCRIPTION: COTTONWOOD BPS

NAME	COMPANY	TITLE	PHONE NUMBERS
Ed Radwanski	AZ WATER	Construction Crew	
Scott H. Spang	AZ WATER	SERVICEMAN	520-705-9758
Jason Evarnato	Felix	Project Manager	602-463-3547
Jesse Madrid	AZ Water Co.	Operations Superintendent	520-705-7289
Richard Schaal	AZ Water Co	Serviceman	520 705 8265



ARIZONA WATER COMPANY

PRECONSTRUCTION CONFERENCE OUTLINE

12. Notes

✓ WELDING INSPECTION

✓ E-MERIL JETSON FOR ALUMINUM PERMISSIBILITY

14104 DISCHARGE / LOW SUBSTION / FAIL TO RUN

✓ 1 - WIC MAX FOR COMMISSIONING OF JUMP HOISTERS
GAGE SPRINKLE IS COATING INSPECTION.

COATING ACTION IS ITCOMICED

SCOMB ALSO COPY OF SCHEMATIC



ARIZONA WATER COMPANY

PRECONSTRUCTION CONFERENCE OUTLINE

1. Contractors Bid Proposal
 - A. Proposal/Contract dated NOV 18 2014
 - B. Prior to bidding as well as prior to construction Contractor has walked this project site and understands the nature, scope and requirements of the work to be performed.
 - C. Any changes required which the Contractor feels he should be reimbursed over and above the contract price, must be submitted in writing prior to installation.
2. Construction Schedule
 - A. Agree that the project will be completed with in the days called for on the proposal.
 - B. Definition of a day is a calendar day.
 - C. A work day is 8 hours. 5 DAYS A WEEK 10 MA DAYS
 - D. Stress importance of finishing the job in a timely manner.
 - E. It was agreed that construction will start on 1/5/14.
A commencement was signed and given to the contractor.
 - F. Contractor must request in writing for time extensions or any reason. All requests must be submitted to the Casa Grande Office. SW FAX OFFICE
3. Inspection
 - A. The Company's inspectors will be: SCOTT
 - B. Contractor will request inspections a MINIMUM of 24 hours in advance
 - C. Inspector WILL NOT aid in the neither construction nor offer advice as to how the work should be performed. Inspector will only indicate that the job does or does not meet Arizona Water Company's Specifications. Arizona Water Company personnel are the ONLY personnel authorized to turn off an existing valve.



ARIZONA WATER COMPANY

PRECONSTRUCTION CONFERENCE OUTLINE

4. Permits

NOT REQUIRED	RECEIVED	REQUIRED	WILL BE PROVIDED BY ENG. DEPT	DOCUMENT / FORM
<input checked="" type="checkbox"/>				Maricopa County/ADOT / Railroad Permit
<input checked="" type="checkbox"/>				City of Casa Grande / Coolidge
<input type="checkbox"/>		<input checked="" type="checkbox"/>		Pinal County <i>POST CONTRACT</i>
<input type="checkbox"/>				Pima County
<input type="checkbox"/>				Other

A. All construction will be subject to State, County, City and any other jurisdictions permits.

B. Permit will be obtained by FLIX.

C. Contractor must have a copy of permit on the job site at ALL times.

~~D.~~ Traffic control will be required as outlined on the permit and traffic control plan.

E. If compaction tests are required, cost will be paid by CO. If the test fails to meet the required compaction the contractor will correct the problem and pay for the retest.

~~F.~~ Construction costs will not be paid or accepted until proof of regulatory agency satisfaction (example) must have ROW inspector sign off on ROW work.

G. Contractor is not to store materials in the right of way.

H. CONTRACTOR IS NOT TO ENCROACH ON PRIVATE PROPERTY UNDER ANY CIRCUMSTANCES. WITH OUT WRITTEN APPROVAL (i.e.) EASEMENT.

I. Work performed in easements MUST remain within the boundaries of the easements.



ARIZONA WATER COMPANY

PRECONSTRUCTION CONFERENCE OUTLINE

5. Staking

- A. Contact person _____ Staking will be provided by _____
- B. Surveyor will be paid by _____ and phone: _____

6. Utility Conflicts "Blue Stake"

- A. The location of utilities shall be the responsibility of the contractor.
- B. Contractor shall be responsible for any damage to any utility including Arizona Water Company's.
- C. Contractor must exercise extreme caution when digging around utilities.

7. Pressure Test

- A. Make sure test is holding before calling inspector.
- B. Pressure test shall be performed, after giving 24 hour notice prior to test, per Arizona Water Company's Construction Specifications E-8-1.

Leakage test will be for a period of (2) two hours at 200 plus or minus 5 PSI at the point of lowest elevation; leakage may not exceed 0.1 Gallons per hour per (1) one thousand feet (1000') of pipe per inch of Diameter.

- C. Inspectors will only be available during Arizona Water Company business hours,

- D. Arizona Water Company reserves the right to require a second pressure tests after all other utilities are installed.
- E. Chlorine solution will be required for disinfection. Only NSF approved containers will be used for disinfection.

8. Payments

- F. All invoices **MUST** be itemized.



ARIZONA WATER COMPANY

PRECONSTRUCTION CONFERENCE OUTLINE

- G. Arizona Water Company will only make payment for items installed based on the contract prices.
- H. Counts of items billed for **MUST** be field verified with Arizona Water Company's Inspector and Contractors representative **PRIOR** to submitting an invoice for payment.
- I. Change orders must be submitted on a separate invoice.
- J. Contractor will require MONTHLY PAYMENTS partial payments. 80% - 20%.
9. Construction Crew
- A. Contractor will be using a 3 man crew.
- B. Superintendent for the project SEAN WYNNE JEANES EVANNEAU
1. Contact Number _____
- C. Forman for Project JILLIAN WILSON
1. Contact Number 623 687 8281
- D. Construction crew is expected to behave in a professional manner.
- E. Must have an English speaking person with authority on the job site.

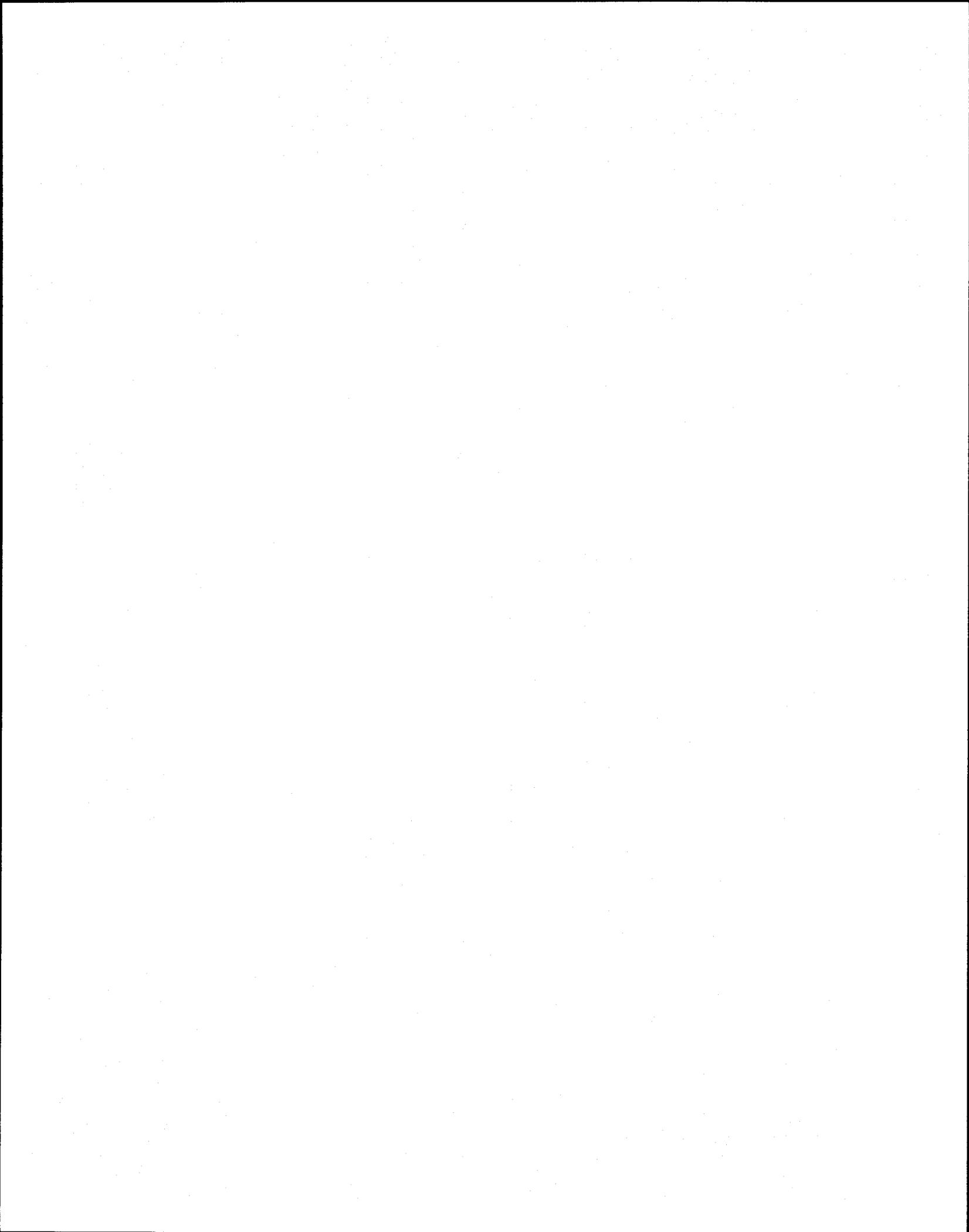


ARIZONA WATER COMPANY

PRECONSTRUCTION CONFERENCE OUTLINE

10. General Construction

- A. All work will be performed as per Arizona Water Company's General Conditions of Contract, Construction Specifications, and Construction Specification Drawings.
- B. Water for compaction, dust control, will be purchased by the contractor.
- C. Clean up is subject to approval of ADOT, County, City, Arizona Water Company and property owners.
- D. All new mains will be filled, tested, and flushed through a jumper meter with an approved reduced pressure backflow preventer water will be provided by Arizona Water Company. 4" meter or larger will be Mandatory for subdivisions that will need fire protection due to construction of homes. Use of fire hydrants will only be allowed for fire protection.
- E. Contractor **WILL** comply with all the requirements of his Permit for De Minimus Discharge and plan for Best Management Practices.
- F. Will Contractor be screening or importing bedding and shade material? *ABC*



CDP-14-01249

CITY OF CASA GRANDE, ARIZONA

DEVELOPMENT SERVICES

510 East Florence Blvd. 85122

Office (520-421-8630)

Inspection Line (520-421-8684)



E14B - ROW Use New Construction- Private Utilities

Issued Date: 10/15/2014

Telephone PIN: 171359

Expires: 5/17/2015

Parcel

Address: 0 SW QUADRANT , CITYWIDE
Casa Grande, AZ 85122

Legal: DUMMY PARCEL FOR CE CASES AND CITY WIDE

Parcel Number: 888-88-032-7

Zoning:

Owners/Parties

Primary

Name: Arizona Water Company

Address: 220 E 2nd St
Casa Grande, AZ 85122

Phone: (520)
836-8785

Contractors

Primary

Sub-Contractors

Project Description

Description of Work: Replace 2,840 LF of 12-inch main with 2,850 LF of 12-inch DIP water main on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system.

Number of Civil Plan Sheets for DC Review E14B ROW Use New Construction 7

What is the private utility? No
Utility Franchise No

Number of Civil Plan Sheets for PW Review E14B ROW Use New Construction 7

ROW Work Type No

Larry S. Peterson
10/15/14

Review Comments/Conditions

1. Public Works Inspector must be notified within 72hrs prior to start of work. Contact Public Works Inspector Lupe Vidal at (520) 450-2627 or LVidal@casagrandeaz.gov
For work in the alley, coordinate with the Sanitation Department, (520) 421-8646.
2. The Contractor is responsible for ensuring that the safety of the work site and the public is maintained. OSHA safety and Arizona Blue Stake Laws shall apply to all construction activities.
3. All improvements shall be constructed to MAG Specifications and Details, unless modified by the special conditions of this permit.
4. All approved trench work inside public Right-of-Way and Easements shall be either 1 sack concrete slurry or shall have compaction testing. Final asphalt course shall match the existing pavement section, unless specified by the City Engineer.
5. Compaction and materials testing, as directed by the City Engineer or his authorized representative, shall be conducted at the Contractor's expense. Results shall be submitted to the City Engineering Inspector.
7. All work shall conform to approved plans.
8. This permit, along with approved construction, traffic control & safety plans, shall be kept on site at all times. Additional traffic control for vehicular or pedestrian traffic may be required by the Public Works Inspector.
9. The City of Casa Grande reserves the right to suspend and/or modify the conditions of this permit should field conditions warrant. This shall include improper or inadequate construction techniques or a safety hazard on the work site, or to the public. The Contractor agrees to hold the City harmless for any delays in construction.
10. The Contractor shall call the Engineering Division 421-8625 prior to any backfill, and also for a final inspection and acceptance of the work at the completion of the permitted work. The permit number should be used with this call. The Contractor shall warrant all improvements for one year after the acceptance date. Failure to get a final inspection and acceptance of the work will extend the warranty period indefinitely.
11. If any of the conditions of this permit are not met the permit is void.
12. Need to re-route water line around traffic light foundation at the Southwest corner of Cottonwood and Arizola.

CDP- 14-01249



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

RIGHT OF WAY USE-NEW CONSTRUCTION PERMIT – PRIVATE UTILITIES APPLICATION

(Permit authorizing private utilities and entrances to be constructed within public right of way)
(Electronic Version Available at: <http://casagrandeaz.us/dept/planning/building-division/engineering-permits/>
email applications to DCPermits@casagrandeaz.gov)

Please indicate the type of Right of Way work being permitted:

Utility New Construction Driveway Entrance
 Utility Franchise Yes No

1. **PROJECT LOCATION:** Cottonwood Lane between Peart Rd and Arizola Rd

(Indicate closest intersecting streets or alleys)

2. **DESCRIPTION OF WORK:** Replace approx 3,870 LF of 12 inch DIP waterline with approx 4,007 LF of 12 inch DIP

3. **STREET CLOSURE REQUIRED (Not including alleys)** Yes Dates _____ No

4. **APPLICANT/CLIENT INFORMATION:**

Name Arizona Water Company
Address 220 E 2nd Street City Casa Grande State AZ Zip Code 85122
Phone 520-836-8485 Fax 520-836-2850 Email Address kpakka@azwater.com

5. **CONTRACTOR PERFORMING WORK:**

Name _____
Address _____ City _____ State _____ Zip Code _____
Phone _____ Fax _____ Email Address _____

Applicants may receive clarification regarding the specific steps included in processing this application as well as information regarding any code, regulation or policy relevant to the processing of this application by contacting one of the following review Engineers:

Larry Petersen – lpetersen@casagrandeaz.gov, 520-421-8630, Ext. 3320
Cesar Adamos – cadamos@casagrandeaz.gov, 520-421-8630, Ext. 3019

CITY INTAKE:

Date Accepted & Logged In: 9/19/14 Intake Staff: LH
Fee Receipt # _____ Expiration Date: 5/12/15
Assigned DC Engineer: Larry Petersen Assigned PW Inspector: LOPE VIDAL
Engineer's Approval: Larry Petersen Date: 10/15/14
Inspected & Accepted by: _____ Date: _____



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

RIGHT OF WAY USE NEW CONSTRUCTION PERMIT- APPLICATION INTAKE CHECKLIST

Applicant _____ Engineer _____

1. **Site Plan illustrating the following:** _____
 - a. The area of the right of way to be affected
 - b. The location of any existing right of way improvements (i.e. sidewalk, curb, pavement)
2. **Civil Plans** (required for new construction; 1 set with initial submittal; 3 sets once approved for signature; requires City of Casa Grande signature format, see attachment) _____
3. **Stormwater Pollution Prevention Plan (SWPPP)** – required if more than (1) acre will be disturbed, may be waived if a SWPPP was submitted with the Site Development permit for the project _____
4. **Line Item Cost Estimate** (signed by contractor, not required for franchisee) _____
5. **Traffic Control Plan** (if applicable) _____
6. **Road Closure Plan which shall address the following notification requirements**
 - a) Contact the Development Center with specific Road Closure dates at (520) 421-8630 or by email at DCPermits@casagrandeaz.gov
 - b) The following Departments must be notified at least 5 days prior to start of work:
 - Sanitation: Greg Garcia – Ggarcia@casagrandeaz.gov
 - Police: Michael Brashier – MikeB@casagrandeaz.gov
 - GIS: Jamie White – Jwhite@casagrandeaz.gov
 - c) Road closure must be advertised in the Casa Grande Dispatch Newspaper for 5 days prior to start of work. You may either fax your ad to (520) 836-0343, call their office at (520) 836-3111 or by email at legals@trivalleycentral.com

FEES DUE AT TIME OF SUBMITTAL:

- Review Fees: \$30 plus \$247.50 per Civil Plan page
- Public Works Inspection Fee: 4% of Construction Costs

N/A FRANCHISE AGREEMENT

APPLICANT ACKNOWLEDGEMENT OF RESPONSIBILITIES:

The signature(s) hereby certify that the statements made by myself and constituting part of this application are true and correct. I am fully aware that any misrepresentation of any information on this application may be grounds for denial of this application. I agree that if this request is issued on the representations made in this submittal, and any approval or subsequently issued building permit(s) or other type of permit(s) may be revoked without notice if there is a breach of representations.

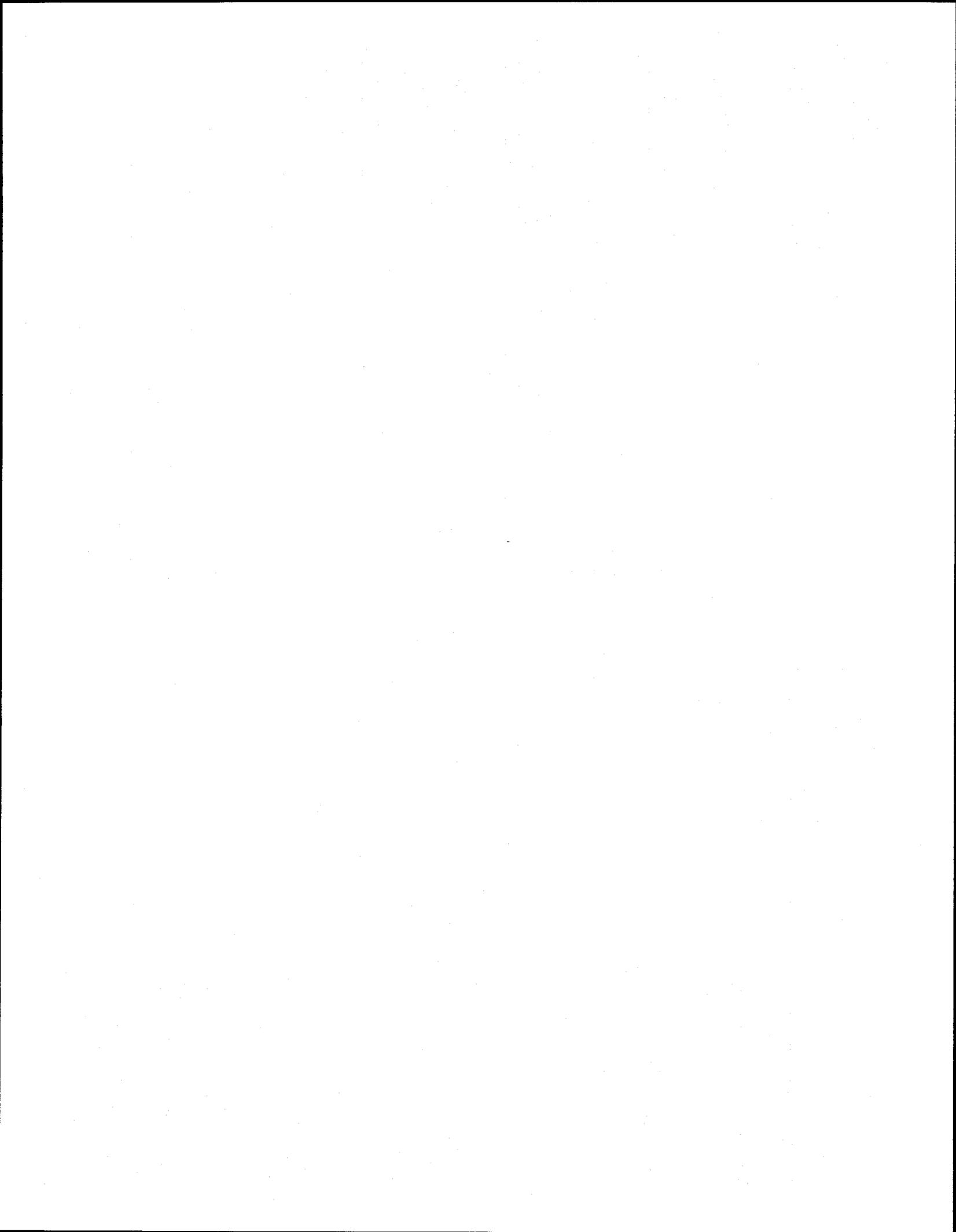
Kevin Pakka (agent) 9-30-14
Signature of Applicant Date

Kevin Pakka 836-8785 kpakka@azwater.com
Contact Person Phone/Email

REGULATORY BILL OF RIGHTS – REVIEW TIMEFRAMES

Completeness & Substantive Review Time Frames¹

Administrative Completeness Review (CR) ²	Substantive Review (SR) Stage ³			
	Staff Decision or Review Letter on Initial Submittal ⁴	Staff Decision or Review Letter on 1 st Resubmittal ^{5,6}	Staff Decision based upon 2 nd Resubmittal (Approve or Deny)	Over-All Timeframe ⁷
2 days	30 days	30 days	30 days	62 days



CDP-14-01249

**CITY OF CASA GRANDE, ARIZONA
DEVELOPMENT SERVICES**

510 East Florence Blvd. 85122
Office (520-421-8630)

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E14B - ROW Use New Construction- Private Utilities

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Telephone PIN: 171359

Expires: 5/17/2015

Parcel

Address: 0 SW QUADRANT , CITYWIDE
Casa Grande, AZ 85122

Legal: DUMMY PARCEL FOR CE CASES AND CITY WIDE

Parcel Number: 888-88-032-7

Zoning:

Owners/Parties

Primary

Name: Arizona Water Company

Address: 220 E 2nd St
Casa Grande, AZ 85122

Phone: (520)
836-8785

Contractors

Primary

Sub-Contractors

Project Description

Description of Work: Replace 2,840 LF of 12-inch main with 2,850 LF of 12-inch DIP water main on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system.

Number of Civil Plan Sheets for DC Review E14B ROW Use New Construction 7

What is the private utility? No
Utility Franchise No

Number of Civil Plan Sheets for PW Review E14B ROW Use New Construction 7

ROW Work Type No

Larry S. Peterson
10/15/14

Review Comments/Conditions

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For work in the alley, coordinate with the Sanitation Department, (520) 421-8646.
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3. All improvements shall be constructed to MAG Specifications and Details, unless modified by the special conditions of this permit.
4. All approved trench work inside public Right-of-Way and Easements shall be either 1 sack concrete slurry or shall have compaction testing. Final asphalt course shall match the existing pavement section, unless specified by the City Engineer.
5. Compaction and materials testing, as directed by the City Engineer or his authorized representative, shall be conducted at the Contractor's expense. Results shall be submitted to the City Engineering Inspector.
7. All work shall conform to approved plans.
8. This permit, along with approved construction, traffic control & safety plans, shall be kept on site at all times. Additional traffic control for vehicular or pedestrian traffic may be required by the Public Works Inspector.
9. The City of Casa Grande reserves the right to suspend and/or modify the conditions of this permit should field conditions warrant. This shall include improper or inadequate construction techniques or a safety hazard on the work site, or to the public. The Contractor agrees to hold the City harmless for any delays in construction.
10. The Contractor shall call the Engineering Division 421-8625 prior to any backfill, and also for a final inspection and acceptance of the work at the completion of the permitted work. The permit number should be used with this call. The Contractor shall warrant all improvements for one year after the acceptance date. Failure to get a final inspection and acceptance of the work will extend the warranty period indefinitely.
11. If any of the conditions of this permit are not met the permit is void.
12. Need to re-route water line around traffic light foundation at the Southwest corner of Cottonwood and Arizola.

CDP- 14-01249



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

RIGHT OF WAY USE-NEW CONSTRUCTION PERMIT – PRIVATE UTILITIES APPLICATION

(Permit authorizing private utilities and entrances to be constructed within public right of way)
(Electronic Version Available at: <http://casagrandeaz.us/dept/planning/building-division/engineering-permits/>
email applications to DCPermits@casagrandeaz.gov)

Please indicate the type of Right of Way work being permitted:

Utility New Construction Driveway Entrance
Utility Franchise Yes No

1. PROJECT LOCATION: Cottonwood Lane between Peart Rd and Arizola Rd

(Indicate closest intersecting streets or alleys)

2. DESCRIPTION OF WORK: Replace approx 3,870 LF of 12 inch DIP waterline with approx 4,007 LF of 12 inch DIP

3. STREET CLOSURE REQUIRED (Not including alleys) Yes Dates _____ No

4. APPLICANT/CLIENT INFORMATION:

Name Arizona Water Company
Address 220 E 2nd Street City Casa Grande State AZ Zip Code 85122
Phone 520-836-8485 Fax 520-836-2850 Email Address kpakka@azwater.com

5. CONTRACTOR PERFORMING WORK:

Name _____
Address _____ City _____ State _____ Zip Code _____
Phone _____ Fax _____ Email Address _____

Applicants may receive clarification regarding the specific steps included in processing this application as well as information regarding any code, regulation or policy relevant to the processing of this application by contacting one of the following review Engineers:

Larry Petersen – lpetersen@casagrandeaz.gov, 520-421-8630, Ext. 3320
Cesar Adamos – cadamos@casagrandeaz.gov, 520-421-8630, Ext. 3019

CITY INTAKE:	
Date Accepted & Logged In: <u>9/19/14</u>	Intake Staff: <u>LH</u>
Fee Receipt # _____	Expiration Date: <u>5/13/15</u>
Assigned DC Engineer: <u>Larry Petersen</u>	Assigned PW Inspector: <u>LOPE VIDAL</u>
Engineer's Approval: <u>Larry E. Petersen</u>	Date: <u>10/13/14</u>
Inspected & Accepted by: _____	Date: _____



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

RIGHT OF WAY USE NEW CONSTRUCTION PERMIT- APPLICATION INTAKE CHECKLIST

- Applicant _____ Engineer _____
1. **Site Plan illustrating the following:** _____
 - a. The area of the right of way to be affected
 - b. The location of any existing right of way improvements (i.e. sidewalk, curb, pavement)
 2. **Civil Plans** (required for new construction; 1 set with initial submittal; 3 sets once approved for signature; requires City of Casa Grande signature format, see attachment) _____
 3. **Stormwater Pollution Prevention Plan (SWPPP)** – required if more than (1) acre will be disturbed, may be waived if a SWPPP was submitted with the Site Development permit for the project _____
 4. **Line Item Cost Estimate** (signed by contractor, not required for franchisee) _____
 5. **Traffic Control Plan** (if applicable) _____
 6. **Road Closure Plan which shall address the following notification requirements**
 - a) Contact the Development Center with specific Road Closure dates at (520) 421-8630 or by email at DCPermits@casagrandeaz.gov
 - b) The following Departments must be notified at least 5 days prior to start of work:
 - Sanitation: Greg Garcia – Ggarcia@casagrandeaz.gov
 - Police: Michael Brashier – MikeB@casagrandeaz.gov
 - GIS: Jamie White – Jwhite@casagrandeaz.gov
 - c) Road closure must be advertised in the Casa Grande Dispatch Newspaper for 5 days prior to start of work. You may either fax your ad to (520) 836-0343, call their office at (520) 836-3111 or by email at legals@trivalleycentral.com

FEES DUE AT TIME OF SUBMITTAL:

- Review Fees: \$30 plus \$247.50 per Civil Plan page
- Public Works Inspection Fee: 4% of Construction Costs

N/A FRANCHISE AGREEMENT

APPLICANT ACKNOWLEDGEMENT OF RESPONSIBILITIES:

The signature(s) hereby certify that the statements made by myself and constituting part of this application are true and correct. I am fully aware that any misrepresentation of any information on this application may be grounds for denial of this application. I agree that if this request is issued on the representations made in this submittal, and any approval or subsequently issued building permit(s) or other type of permit(s) may be revoked without notice if there is a breach of representations.

Kevin Pakka (agent) 9-30-14
Signature of Applicant Date

Kevin Pakka 836-8785 kpakka@azwater.com
Contact Person Phone/Email

REGULATORY BILL OF RIGHTS – REVIEW TIMEFRAMES
Completeness & Substantive Review Time Frames¹

Administrative Completeness Review (CR) ²	Substantive Review (SR) Stage ³			
	Staff Decision or Review Letter on Initial Submittal ⁴	Staff Decision or Review Letter on 1 st Resubmittal ^{5,6}	Staff Decision based upon 2 nd Resubmittal (Approve or Deny)	Over-All Timeframe ⁷
2 days	30 days	30 days	30 days	62 days



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

¹All times are maximum timeframes in business days (Mon-Fri.; excluding City Holidays). Shorter review times will be accomplished where possible.

²Completeness Review timeframes are calculated from date of application submittal to date of acceptance or rejection of the application as administratively complete.

³Substantive Review timeframes are calculated from date of acceptance of application for Substantive Review, or upon receipt of re-submittal of revised plans/reports, to the date of issuance of a comprehensive review letter, or final administrative decision.

⁴ Review of initial submittal limited to determination of compliance with ordinances, codes, regulations or policy relevant to the specific permit or project application. The review comments on the initial submittal may be amended to address code/policy requirements that City staff failed to include in the 1st comprehensive review document.

⁵ Issuance of a review letter regarding resubmittal only allowed if applicant consents to extend review timeframe to resolve remaining code/policy compliance issues. Said extension shall not exceed 50% of the over-all timeframe.

⁶ Review of resubmittal shall be limited to:

- a) Addressing 1st review comments that the applicant failed to adequately address in their resubmittal; or
- b) Addressing new review issues arising from modifications the applicant has made to the design and/or technical reports.

⁷Over-All Review timeframe is the sum of the Completeness, Initial & Resubmittal Substantive Review timeframes and does not include any time involved in review of the 2nd Resubmittal. An administrative decision will be made on the permit/project application prior to the end of the Over-All Review timeframe unless the applicant and the City agree to review of a 2nd Resubmittal.

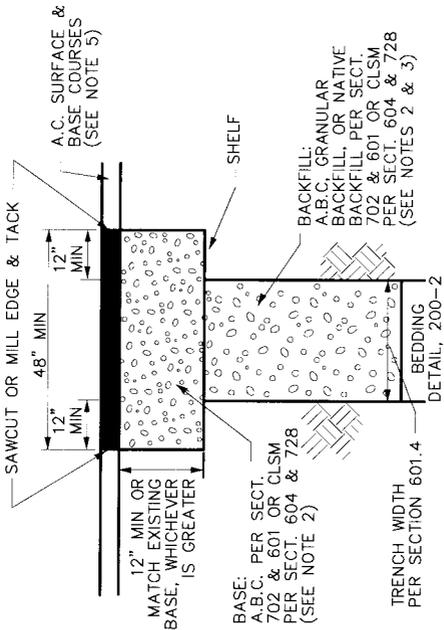
In accordance with the Regulatory Bill of Rights (ARS 9-835) the City of Casa Grande will typically make an administrative decision on each permit application after one (1) comprehensive staff review. However, from time to time a 2nd review is necessary to resolve code/policy compliance issues associated with a permit. In accordance with ARS 9-835.I., by mutual agreement, the applicant and the City may engage in a 2nd review of an application as long as said 2nd review does not exceed the over-all time frame by 50%. The specific 1st and 2nd and over-all review timeframes for this application are provided above. Applicants may sign below, consenting to a 2nd review if necessary, within the stated prescribed timeframe.

Your consent is not required at time of application submittal. Applicants who do not sign below will be contacted by City staff if a 2nd review is determined to be necessary prior to making an administrative decision on this application. Applications denied after the completion of the review cycle are eligible for re-application to address the code/policy deficiencies which were the basis for the application denial with the payment of a fee equal to 25% of original application fee amount. Said re-application shall occur within 90 days of the application denial.

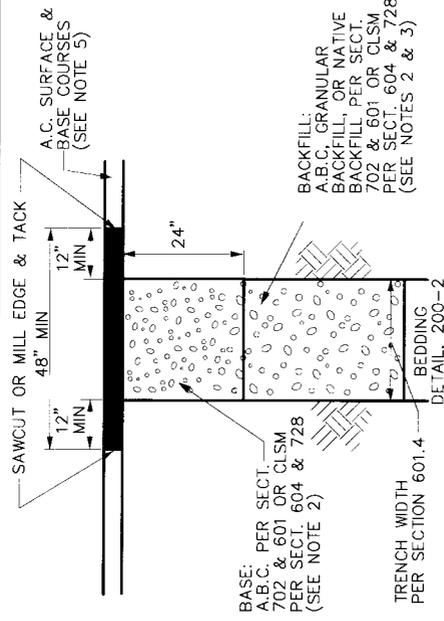
I hereby consent to a 2nd review of my application, if necessary, prior to making a final administrative decision.

Tim Casper
Applicant

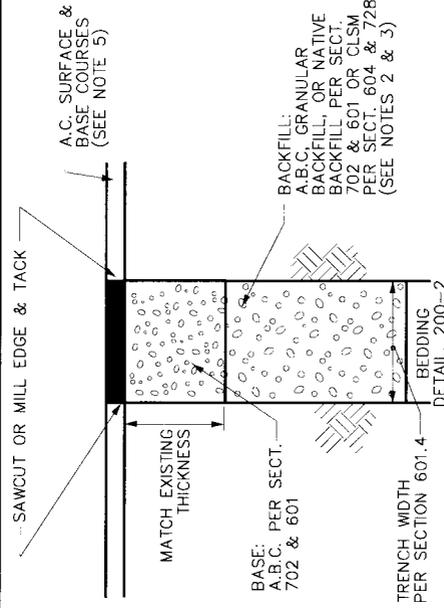
REQUIRED SIGNATURE BLOCK FORMAT



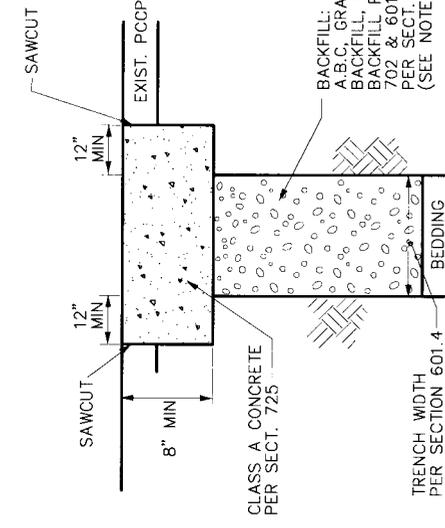
"T TOP" TRENCH REPAIR



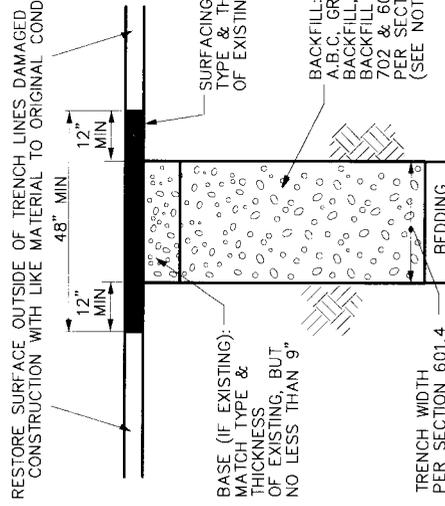
TYPE "A" TRENCH REPAIR



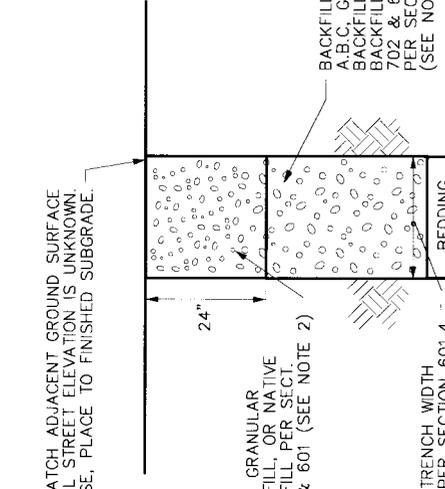
TYPE "B" TRENCH REPAIR



TYPE "C" TRENCH REPAIR



TYPE "D" TRENCH REPAIR



TYPE "E" TRENCH REPAIR

NOTES:

1. PAVEMENT MATCHING AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336.
2. TYPE OF BACKFILL AND BASE (IF APPLICABLE) SHALL BE AS NOTED HEREIN UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS. IF NOT SPECIFIED, CLSM SHALL BE 1/2-SACK PER SECTIONS 604 AND 728.
3. TRENCHES LESS THAN 24" WIDE SHALL BE BACKFILLED FROM TOP OF BEDDING TO BOTTOM OF SURFACING MATERIALS WITH 1/2-SACK CLSM PER SECTIONS 604 AND 728.
4. BASE, BACKFILL, BEDDING AND FOUNDATION COMPACTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH SECTION 601.
5. ASPHALT CONCRETE SURFACE AND BASE COURSES SHALL COMPLY WITH SECTION 336.2.4.1 UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
6. USE TYPE "A" FOR LONGITUDINAL TRENCH REPAIR AND USE "T-TOP" FOR TRANSVERSE TRENCH REPAIR (SEE DETAIL 200-2) UNLESS OTHERWISE SPECIFIED IN CONTRACT DOCUMENTS.
7. PROVIDE MINIMUM 12" WIDE SHELF AS SHOWN IN "T-TOP" TRENCH REPAIR AT ENDS OF TRENCH IS NOT PARALLEL TO A STREET OR GOES THROUGH AN INTERSECTION.
8. USE "T-TOP" PAVEMENT REPLACEMENT WHERE A TRENCH IS NOT PARALLEL TO A STREET OR GOES THROUGH AN INTERSECTION.
9. SEE DETAIL 200-2 FOR REMNANT PAVEMENT REMOVAL REQUIREMENTS.
10. EXPOSED COPPER OR POLYETHYLENE WATER PIPE UP TO 2" IN DIAMETER IN TRENCHES TO BE BACKFILLED WITH CLSM SHALL BE WRAPPED WITH MINIMUM 3/4" THICK PREFORMED PIPE-COVERING FOAM INSULATION BEFORE PLACING CLSM.

DETAIL NO.

200-1



STANDARD DETAIL
ENGLISH

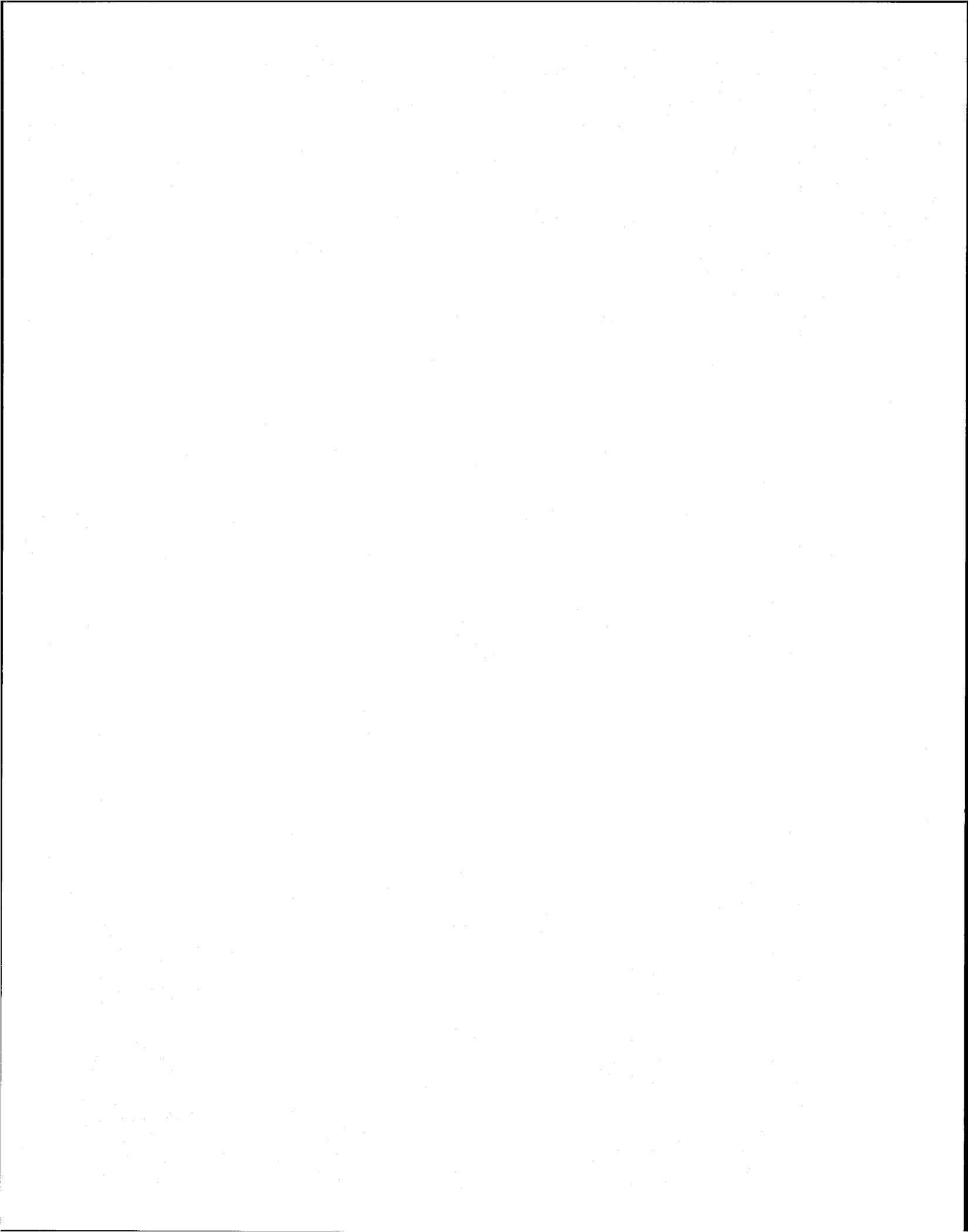
BACKFILL, PAVEMENT
AND SURFACE REPLACEMENT

REVISED

01-01-2010

200-1

DETAIL NO.



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

October 24, 2014

Mr. Devin Anderson
DWA Construction Company, LLC
P. O. Box 12788
Casa Grande, AZ 85130

Re: Cottonwood Lane Replacement

PROJECT: Cottonwood Lane	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
P. E. NO.:	W A NO.: 1-5171

Dear Mr. Anderson:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on October 27, 2014, DWA Construction Company, LLC acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's

E-MAIL: MAIL@AZWATER.COM

Mr. Devin Anderson
DWA Construction Company, LLC

October 24, 2014

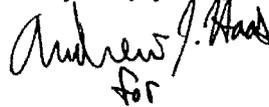
Page 2

ability to terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

If you have any questions, please call me at this office.

Very truly yours,



for

James T. Wilson, P. E.
Senior Engineer
jwilson@azwater.com

afh
Enclosure



ARIZONA WATER COMPANY

Pinal Valley - Casa Grande
220 E 2nd Street Casa Grande Az. 85122
520-836-8785

PROPOSAL/CONTRACT

CONTRACTOR: <i>DWA Construction Co LLC</i>	SYSTEM: <i>PV</i>
ADDRESS: <i>PO Box 12788</i>	W.A. No(s): <i>1-5171</i>
CITY ST ZIP: <i>Casa Grande Az 85130</i>	BID DUE DATE: <i>September 23, 2014</i>

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an independent prime contractor.

- Contractor certifies that it has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract.
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work.
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-5061 B.6.), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. Contractor retains full liability and obligation to pay the Contracting Tax and will defend and indemnify the Company against any demand or obligation to pay the Contracting Tax.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 120 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project Invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS: *2 Progress payments and one final payment DA*

Each tie over not to exceed 4 hours in duration

CONTRACTOR	PROPOSAL/CONTRACT ACCEPTED:
<i>DWA Construction Co LLC</i>	ARIZONA WATER COMPANY
By: <i>Devin Anderson</i>	By: <i>Fredrick K. Schneider</i>
Print Name: <i>Devin Anderson</i>	Print Name: Fredrick K. Schneider, PE
Title: <i>Manager</i>	Title: Vice President - Engineering
Date: <i>9-23-14</i>	Date: <i>10-27-2014</i>



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Devin Anderson
DWA Construction Company, LLC
P. O. Box 12788
Casa Grande, AZ 85130

DATE: 10/27/14
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5171

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Replace approx. 2,840 LF of 12-inch DIP with approx. 2,850 LF of 12-inch DIP along Cottonwood Lane between Peart and Arizola in Casa Grande, AZ.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED: Yes No

TOTAL DAYS
ALLOWED: 130

COMPLETION
DATE: 3/16/15

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY
Company

DWA CONSTRUCTION COMPANY, LLC
Contractor (type name)

By Judson K. Steward
Title Vice President - Engineering

By _____
Title _____



ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

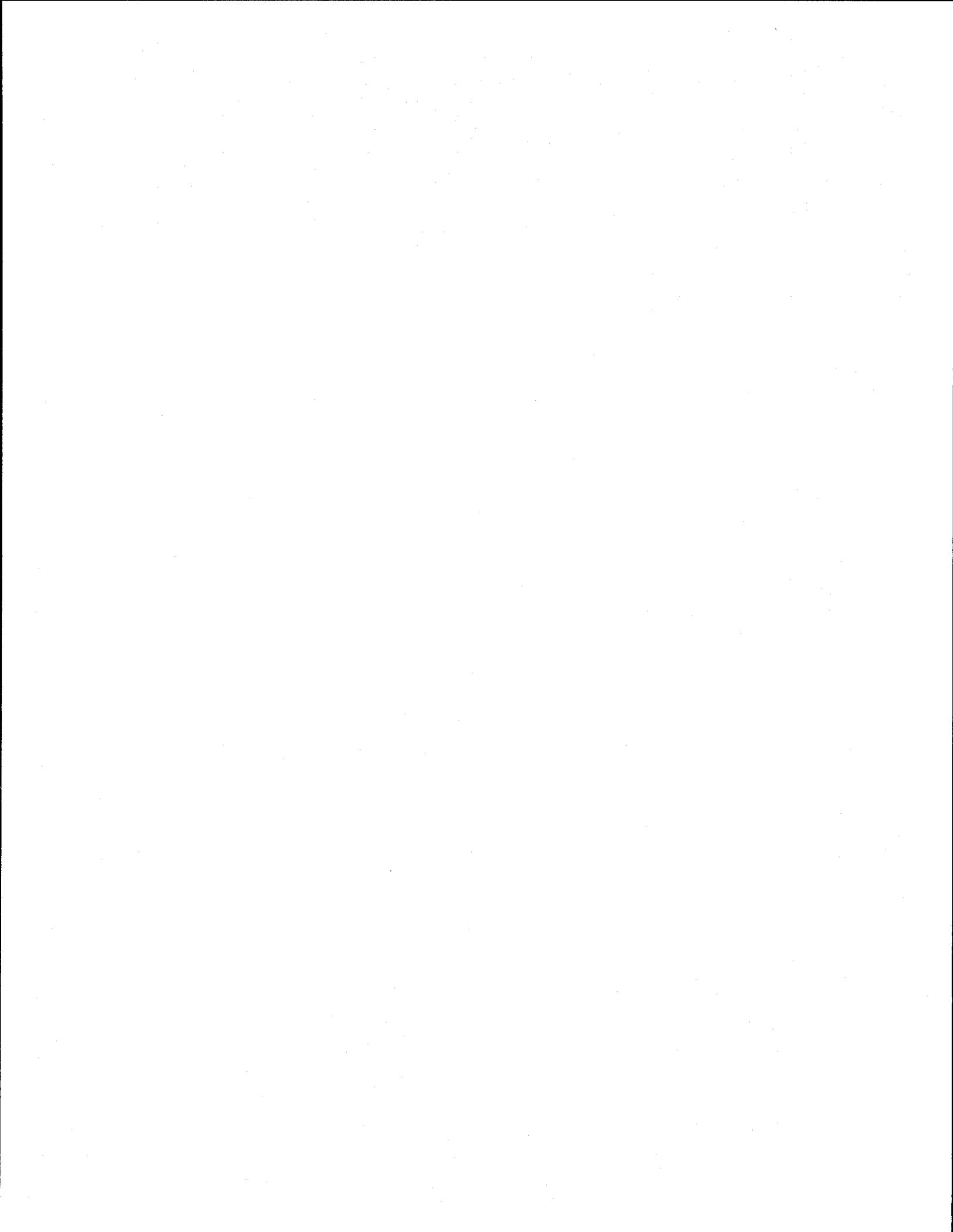
CONSTRUCTION SPECIFICATIONS: E-8-1

STANDARD SPECIFICATION DRAWINGS: E-9-1

**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

ASH
10-27-14

A copy of this entire Spec Book was sent out with *DWA Construction* Proposal
package for *1-5171 Cottonwood Lane 10/27/14* *ASH*



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

October 24, 2014

Mr. Devin Anderson
DWA Construction Company, LLC
P. O. Box 12788
Casa Grande, AZ 85130

Re: Cottonwood Lane Replacement

PROJECT: Cottonwood Lane	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
P.E. NO.:	WA NO.: 1-5171

Dear Mr. Anderson:

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E-MAIL: MAIL@AZWATER.COM

Mr. Devin Anderson
DWA Construction Company, LLC

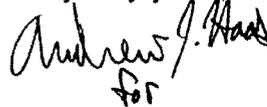
October 24, 2014
Page 2

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If you have any questions, please call me at this office.

Very truly yours,



for
James T. Wilson, P. E.
Senior Engineer
jwilson@azwater.com

afh
Enclosure



ARIZONA WATER COMPANY

Pinal Valley - Casa Grande
220 E 2nd Street Casa Grande Az. 85122
520-836-8785

PROPOSAL/CONTRACT

CONTRACTOR: <i>DWA Construction Co LLC</i>	SYSTEM: <i>PV</i>
ADDRESS: <i>PO Box 12788</i>	W.A. No(s): <i>1-5171</i>
CITY ST ZIP: <i>Casa Grande Az 85130</i>	BID DUE DATE: <i>September 23, 2014</i>

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- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract.
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
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- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 120 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS: *2 Progress payments and one final payment DA*

Each tie over not to exceed 4 hours in duration

CONTRACTOR	PROPOSAL/CONTRACT ACCEPTED:
<i>DWA Construction Co LLC</i>	ARIZONA WATER COMPANY
By: <i>Dennis Andersen</i>	By: <i>Fredrick K. Schneider</i>
Print Name: <i>Dennis Andersen</i>	Print Name: Fredrick K. Schneider, PE
Title: <i>Manager</i>	Title: Vice President - Engineering
Date: <i>9-23-14</i>	Date: <i>10-27-2014</i>



ARIZONA WATER COMPANY

Pinal Valley - Casa Grande
220 E 2nd Street Casa Grande Az. 85122
520-836-8785

PROPOSAL/CONTRACT

CONTRACTOR: <u>DWA Construction Co LLC</u>		SYSTEM: PV
AZ CONTRACTOR LICENSE NO: <u>227278</u>	CLASSIFICATION: <u>A</u>	W.A. No(s): 1-5171
ADDRESS: <u>PO Box 12782</u>		BID DUE DATE: September 23, 2014
CITY ST ZIP <u>Casa Grande AZ 85130</u>		BID BOND REQUIRED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

DESCRIPTION OF PROJECT: Replace approx 2,840 LF of 12 inch DIP with approx 2,850 LF of 12 inch DIP along Cottonwood Lane between Peart and Arizola in Casa Grande AZ in a portion of the SW 1/4 SEC.15, T 6 S , R 6 E per AWC specifications and General Conditions of Contract per DWG # PV-0080

	QUANTITY	UNIT PRICE		TOTAL COST	
		LABOR	MATERIALS	LABOR	MATERIALS
1-2. MATERIALS EXEMPT FROM CONTRACTING TAX (per Paragraph 6)					
Install 12 inch DIP w/ polywrap and related fitting complete	2,850 LF	23.00	80.00	65,550	228,000
Install 12" X 8" MJ TEE . 8" MJ GV	1	500	2860	500	2860
Install 8 inch DIP and tie in to existing 8" with related fittings	20 LF	72.00	140.00	1,560	2,800
Abandon existing 12 inch gate valve	3	150	250	450	750
Install 12 inch vertical realignment	1	4800	4800	1,800	4,800
Tie new 12 inch DIP to existing 12 inch DIP w/related fittings complete	2	2200	5800	4400	11,600
Cut and plug 12 inch DIP to be abandoned in place	2	500	1,100	1,000	2,200
3. Total Labor to Install Exempt Materials (add the amounts in column 1)				3	75,260
4. Total Exempt Materials (add the amounts in column 2)					253,010
5-6. NON-EXEMPT MATERIALS					
Install air release valve	2	1,200	1,900	2,400	3,800
7. Total Labor to Install Non-Exempt Materials (add the amounts in column 5)				7	2,400
8. Total Non-Exempt Materials (add the amounts in column 6)					8 3,800
9. Subtotal A (add lines 3, 7 and 8)					9 81,460
10. Contracting Tax Base (multiply the amount on line 9 by 0.65)				10	52,949
11. Applicable Contracting Tax Rate				11	10.7
12. Contracting Tax (multiply the amount on line 10 by line 11)					12 5,665
13. Subtotal B (add lines 4, 9 and 12)					13 340,135
14. 100% Performance and Payment Bonds Cost					14 4,900
15. Estimated Total Cost (add lines 13 and 14)					15 345,035

NOTE: The Estimated Total Cost includes all labor and materials for backfill, pavement replacement, chip seal, and traffic control necessary for the Project.



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Devin Anderson
DWA Construction Company, LLC
P. O. Box 12788
Casa Grande, AZ 85130

DATE: 10/27/14
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5171

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Replace approx. 2,840 LF of 12-inch DIP with approx. 2,850 LF of 12-inch DIP along Cottonwood Lane between Peart and Arizola in Casa Grande, AZ.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED:

Yes No

TOTAL DAYS
ALLOWED:

130

COMPLETION
DATE:

3/6/15

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY
Company

DWA CONSTRUCTION COMPANY, LLC
Contractor (type name)

By 
Title Vice President - Engineering

By _____
Title _____

AFH

AFH



ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

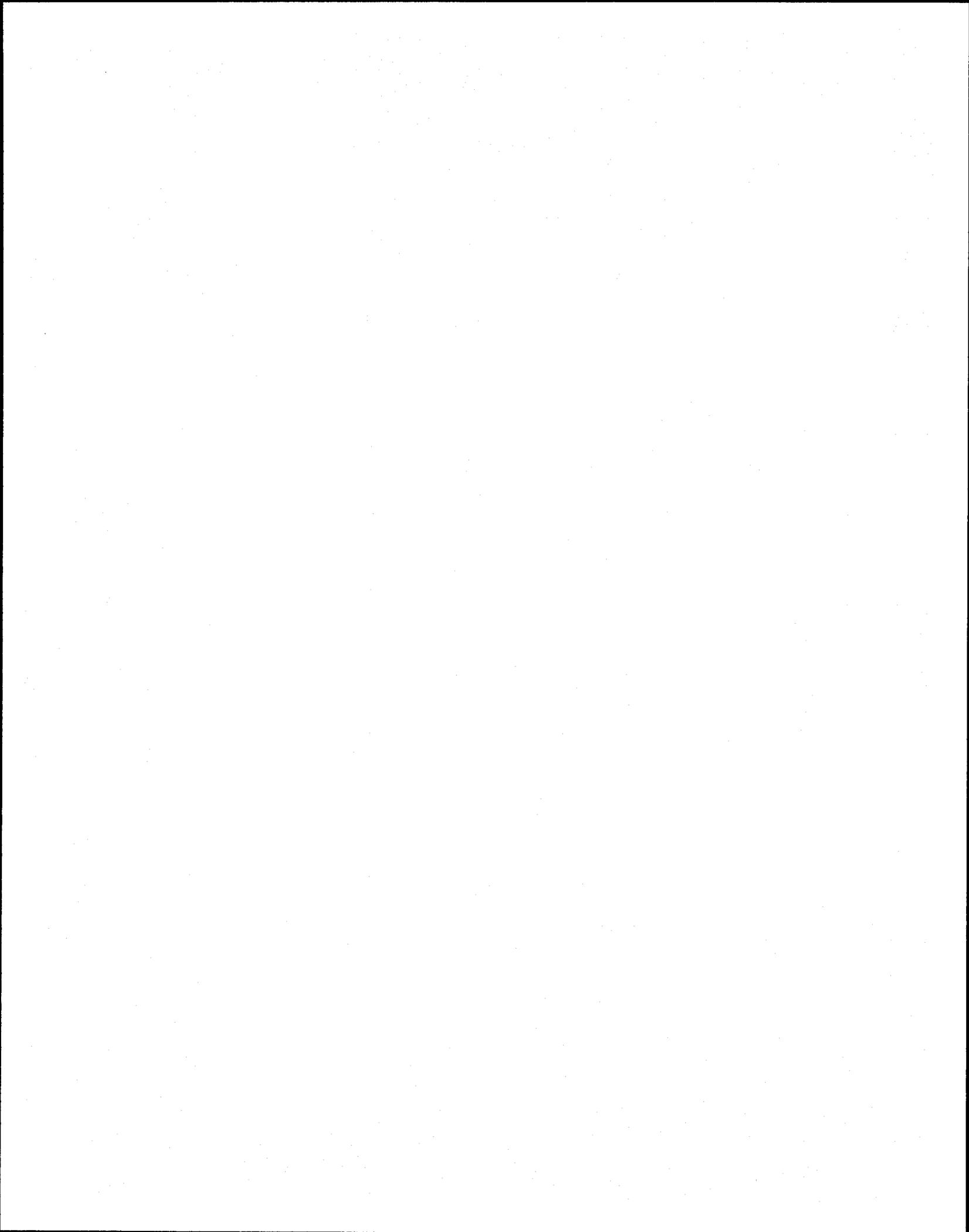
CONSTRUCTION SPECIFICATIONS: E-8-1

STANDARD SPECIFICATION DRAWINGS: E-9-1

**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

*ASH
10-27-14*

A copy of this entire Spec Book was sent out with *DWA Construction* Proposal
package for *1-5171 Cottonwood Lane 10/27/14* *ASH*



AGREEMENT FOR GENERAL ENGINEERING SERVICES BETWEEN ARIZONA WATER COMPANY AND BLACK MOUNTAIN SURVEYING

TASK ORDER AUTHORIZATION

Black Mountain Surveying Project Number 14090

AWC Project Number Surveying Construction Staking for Cottonwood Lane Water Main Replacement – Casa Grande, AZ.

Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Effective Date of Authorization December 1, 2014

Upon execution of this Task Order, and effective as of the date shown above, the parties agree that Black Mountain Surveying shall perform the following services:

SCOPE OF SERVICES

As per the attached "Scope of Services" per the attached "Exhibit A". **NOTE: Authorization to commence will be given verbally by Division Manager (Ray Murrieta or in his absence, Roy Freeman, Operations Superintendent).**

COMPENSATION

As per the attached "Land Survey Proposal" Exhibits "A" and "B" dated November 24, 2014

GENERAL TERMS AND CONDITIONS

Surveying's services shall be governed by the Master Agreement dated January 25, 2011 together with this Task Order and any Exhibits attached hereto.

The services performed within this Task Order shall commence on or about 11-30-14, and shall be complete on or before _____.

Black Mountain Surveying's Representative in charge of the services is Dale Mattingly, who may be contacted at 623-266-0402 and dale@blackmountainsurveying.com. Client's Representative in charge of the services is Charles Briggs, who may be contacted at 602-240-6860 and cbriggs@azwater.com.

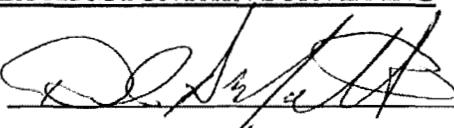
ARIZONA WATER COMPANY

By 

Title REAL PROPERTY SPECIALIST

Date 12-09-2014

BLACK MOUNTAIN SURVEYING

By 

Title Owner/Operator

Date 12/3/14

"Exhibit A"



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402
E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

Land Survey Proposal

November 24, 2014

Charles Briggs
Real property Specialist
Arizona Water Company
PO Box 29006
Phoenix, Az. 85038

Dear Charles,

Black Mountain Surveying is pleased to present you with this proposal for land surveying services requested on the following Project:

"Cottonwood Lane Water Main Replacement" located near Casa Grande, AZ.

It is understood that the client listed above wishes to have certain land surveying construction staking services performed on the above referenced project. It is also understood that cost is of concern with this project. All the efforts listed on the attached "Exhibit A" may not be required therefor items which are required as listed will be billed based on the hourly amounts shown on the attached "Exhibit B" fee schedule. Black Mountain Surveying total hourly amount to be billed for surveying and mapping services on this project as outlined on the attached "Exhibit A" shall not exceed \$3,200.00

Sincerely,

A handwritten signature in black ink, appearing to read "Dale A. Mattingly". The signature is written in a cursive style with a large, stylized initial "D".

Dale A. Mattingly R.L.S.
Senior in charge

"Exhibit A"

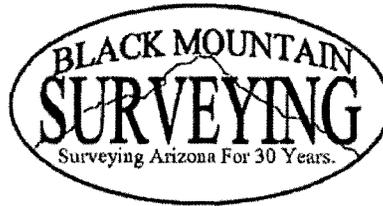
Scope of Services

Staking services for Cottonwood Lane Water Main Replacement, located in Casa Grande, AZ.

The purpose of this scope is to outline the survey staking services requested on the above referenced project;

- Attend (1) pre-construction meeting.
- (1st trip) Provide staking services to locate the following new water main features, 90 degree bends, tees, air releaf valves, watervalves, tie-in locations and dip locations. These items will be staked on a 10' offset at the request of the contractor. Per the contractor no main line staking will be required.
- (2nd trip) Perform as-built measurement for the 1st water main dip at Arizola Ave.
- (3rd trip) Perform as-built measurement for the 2nd water main dip at Arizola Ave.
- (4th trip) Perform as-built measurement for the water main dip at Peart Ave.
- (5th trip) Perform final as-built measurement for the remaining surface features of the new water main replacement.
- Provide site "as-built" information in the way of a "X, Y & Z coordinate file with point descriptors.

A 48 hours notice is required for all staking request. All staking is one time.



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402

E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

"EXHIBIT B"

2014 RATE SCHEDULE

EFFECTIVE January 1st, 2014 – December 31st, 2014

	<u>HOURLY RATE</u>
• PRINCIPLE	\$110.00
• REGISTERED LAND SURVEYOR	\$100.00
• 1 MAN GPS FIELD CREW	\$65.00
• 2 MAN CONVENTIONAL SURVEY FIELD CREW	\$85.00
• DRAFT TECHNICIAN	\$55.00

REIMBURSABLES FOR PRINTING AND DELIVERIES WILL BE BILLED AT COST.

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, ARIZONA 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6878 • WWW.AZWATER.COM

February 3, 2011

Mr. Dale Mattingly
President
Black Mountain Surveying
17308 W. Woodrow Lane
Surprise, Arizona 85388

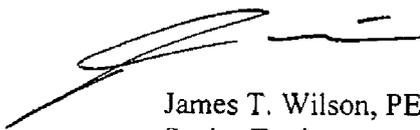
Re: Various Projects

Dear Mr. Mattingly:

Enclosed is your copy of the Master Agreement for ongoing consulting, which has been accepted by Arizona Water Company (the "Company").

If you have any questions, please call me at this office.

Very truly yours,



James T. Wilson, PE
Senior Engineer
engineering@azwater.com

afh
Enclosure

E-MAIL: mail@azwater.com

**MASTER AGREEMENT
FOR ONGOING CONSULTING AND ENGINEERING SERVICES
BETWEEN ARIZONA WATER COMPANY
AND BLACK MOUNTAIN SURVEYING**

THIS AGREEMENT is made and entered into on this 25 day of January, 2011, by and between Arizona Water Company, an Arizona corporation, hereinafter referred to as "Client," and BLACK MOUNTAIN SURVEYING, a Trade Name hereinafter referred to as "Consultant."

RECITALS:

WHEREAS, Client desires that from time to time Consultant furnish Client certain consulting services;

WHEREAS, Consultant has available and offers to provide personnel and facilities necessary to perform the services desired under this Agreement;

NOW, THEREFORE, Client and Consultant agree as follows:

I. DESCRIPTION OF PROJECT

Services to be provided shall be as described in written task orders made pursuant to and referencing this Agreement; the form of such task order is attached hereto as Exhibit A.

II. SCOPE OF CONSULTANT SERVICES

Consultant agrees to perform those basic services described in separate written task order(s) signed by Client and Consultant (the "Services"). This Agreement provides the terms, obligations and conditions which shall control all work under such task orders(s). The printed terms and conditions, if any, contained on the reverse side(s) of an accepted task order shall not apply to services provided under this Agreement. Unless modified in writing by both parties, duties of Consultant shall not exceed those service specifically described in each task order. Any work authorized by Client prior to the issuance of a written task order must be authorized in writing and any services then performed by Consultant will be presumed to have been completed under the terms of this Agreement.

III. RESPONSIBILITIES OF CLIENT

In addition to payment for the Services performed under this Agreement, Client shall:

1. Assist and cooperate with Consultant in any manner necessary and within its ability to facilitate Consultant's performance under this Agreement.

2. Designate in writing a person to act as Client's representative with respect to this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define Client's policies, make decisions and execute documents on Client's behalf.

3. Furnish Consultant with all technical data in Client's possession including, but not limited to, maps, surveys, drawings, soils or geotechnical reports, and any other information required by or useful to, Consultant in performance of the Services under this Agreement. Consultant shall be entitled to rely upon the information supplied by Client.

4. Notify Consultant of any known or potential health or safety hazards existing at or near the project site.

5. Provide access to and/or obtain permission for Consultant to enter upon all projects whether or not owned by Client, as required to perform and complete the Services.

IV. AMERICANS WITH DISABILITIES ACT

Any other provision of this Agreement to the contrary notwithstanding, unless otherwise specified in the Scope of Services, Client's contractors shall have sole responsibility as between Client and Consultant for compliance with the Americans With Disabilities Act ("ADA") 42 U.S.C. 12101 et. Seq. and the related regulations. Consultant shall provide client with applicable ADA criteria which maybe required.

V. AUTHORIZATION AND COMPLETION

In signing this Agreement, Client grants Consultant specific authorization to proceed with work as described in Scope of Work and under the terms of this Agreement.

VI. COMPENSATION

For the Services described in each task order, Client agrees to pay, and Consultant agrees to accept the total compensation in accordance with compensation terms included in the task order. Where Consultant has provided Client with a breakdown of the total compensation into subtasks, such breakdowns are estimates only. Consultant may re-allocate compensation between tasks, provided total compensation is not exceeded without the written approval of Client. Time charges shall be in accordance with the Hourly Rate Schedule contained in Exhibit B. The rate schedule may be revised annually by mutual written Agreement. Annual revisions to the Hourly Rate Schedule shall be submitted prior to the date that they take effect. Compensation shall be billed monthly in summary form. Payment to Consultant is due upon presentation of invoice to Client.

As long as Consultant has not defaulted under this Agreement, Client shall pay Consultant within 30 days of the date of Consultant's invoices for services performed and reimbursable expenses incurred under this Agreement. Client may contest any portion of any such invoice, amounts questioned or contested shall be identified and notice given to Consultant within 15 days of the date of the invoice. Any portion of any invoice not contested shall be deemed to be accepted and approved for payment and shall be paid to Consultant within 30 days of the date of the invoice. The Consultant agrees to cooperate with Client in a mutual effort to resolve promptly any contested portions of the Consultant's invoices.

In the event any uncontested portions of any invoice are not paid within 30 days of the date of Consultant's invoice, interest on the unpaid balance shall accrue beginning with the 31st day at the maximum interest rate permitted by law, and Consultant shall have the right to suspend work per Article XV, Suspension of Work.

VII. RESPONSIBILITY OF CONSULTANT

A. Standard of Care Professional Services

Subject to the limitations inherent in the agreed scope of work as to the degree of care, amount of time and expenses to be incurred, and subject to any other limitations contained in this Agreement, Consultant shall perform its Services in accordance with generally accepted standards and practices customarily utilized by competent engineering firms in effect at the time Consultant's Services are rendered. Consultant does not expressly or impliedly warrant or guarantee its Services.

B. Reliance upon Information Provided by Others

If Consultant's performance of services hereunder requires Consultant to rely on information provided by other parties (excepting Consultant's subcontractors), Consultant shall not independently verify the validity, completeness, or accuracy of such information unless otherwise expressly engaged to do so in writing by Client.

C. Consultant's Opinion of Costs

Client acknowledges that construction cost estimates, financial analyses and feasibility projections are subject to many influences including, but not limited to, price of labor and materials, unknown or latent conditions of existing equipment or structures, and time or quality of performance by third parties. Client acknowledges that such influences may not be precisely forecasted and are beyond the control of Consultant and that actual costs incurred may vary substantially from the estimates prepared by Consultant. Consultant does not warrant or guarantee the accuracy of construction or development cost estimates.

D. Construction Phase Services

1. Consultant's Activities at Construction Site. The presence of Consultant's personnel at a construction site, whether as on-site representative, resident engineer, construction manager, or otherwise, does not make Consultant responsible for those duties that belong to Client and/or construction contractors or others, and does not relieve construction contractors or others of their obligations, duties, and responsibilities, including, but not limited to, construction methods, means, techniques, sequences, and procedures necessary for completing all portions of the construction work in accordance with the contract documents, any health or safety programs and precautions required by such construction work, and any compliance with applicable laws and regulations. Any inspection or observation of the contractor's work is solely for the purpose of determining that the work is generally proceeding in conformance with the intent of the project specifications and contract documents. Except for its own Contractors, Consultant makes no warranty or guarantee with respect to the performance of a contractor. Consultant has no authority to exercise control over any construction contractor in connection with their work or health or safety programs and

precautions. Except to protect Consultant's own personnel and except as may be expressly required elsewhere in the scope of services, Consultant has no duty to inspect, observe, correct, or report on health or safety deficiencies of the construction contractor.

2. Shop Drawing and Submittal Review. If required by Consultant's Scope of Services, Consultant shall review shop drawings or other contractor submittals for general conformance with the intent of the contract documents. Except for its own Contractors, Consultant shall not be required to verify dimensions, to engineer contractor's shop drawings or submittals, nor to coordinate shop drawings or other submittals with other shop drawings or submittals provided by contractor.

3. Record Drawings. Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Except for its own Contractors, Consultant is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

VIII. ASSIGNMENT OF TASKS TO AFFILIATES

If the authorized scope of work requires professional services to be performed in a jurisdiction in which Consultant renders professional services solely through a locally registered engineering affiliate for purposed of compliance with professional licensing requirements in that jurisdiction, Consultant may, in its discretion, upon notice to Client, assign its contractual rights and obligations with respect to such services to such locally registered engineering affiliate.

IX. ASBESTOS / HAZARDOUS MATERIALS

Consultant and Consultant's subcontractors shall have no responsibility for the discovery, handling, removal, or disposal of or exposure of persons to asbestos or hazardous or toxic materials that are present in any form at the Project site. Professional services related to or in any way connected with the investigation, detection, abatement, replacement, use, specification, or removal of products, materials, or processes containing asbestos or hazardous or toxic materials are beyond the scope of this Agreement. Client shall be solely responsible for notifying all appropriate governmental agencies, including the potentially effected public, of the existence of any hazardous or toxic materials located on or at the project site any any time.

In the event Consultant encounters asbestos or hazardous materials at the jobsite, Consultant may, at its option and without liability for damages, suspend the performance of services on the Project until such time as Client and Consultant mutually agree on an amendment to this Agreement to address the issue, or Client retains another specialist consultant or contractor to identify, classify, abate and/or remove the asbestos and/or hazardous materials.

X. CONSULTANT'S WORK PRODUCT

A. Scope

Consultant's work product which is prepared solely for the purposes of this Agreement, including, but not limited to, drawings, test results, recommendations and technical specifications, whether in hard copy or electronic form, shall become the property of Client when Consultant has been fully compensated as set forth herein. Consultant may keep copies of all work product(s) for its records.

Consultant and Client recognize that Consultant's work product submitted in performance of this Agreement is intended only for the project described in this Agreement. Client's alteration of Consultant's work product or its use by Client for any other purpose shall be at Client's sole risk, and Client shall hold harmless and indemnify Consultant against all losses, damages, costs and expense, including attorneys' fees, arising out of or related to any such alteration or unauthorized use.

B. Electronic Copies

If requested, solely as an aid and accommodation to Client, Consultant may provide copies of its work product documents in computer-readable media ("electronic copies," "CADD"). These documents will duplicate the documents provided as work product, but will not bear the signature and professional seals of the registered professionals responsible for the work. Client is cautioned that the accuracy of electronic copies and CADD documents may be compromised by electronic media degradation, errors in format translation, file corruption, printing errors and incompatibilities, operator inexperience and file modification. Consultant will maintain the original copy, which shall serve as the official, archived record of the electronic and CADD documents. Client agrees to hold harmless, indemnify and defend Consultant from any claims arising out of or relating to any change or alteration of electronic copies and CADD documents authorized by the Client, Client's personnel, or Client's Contractor's.

XI. INDEMNIFICATION

A. Indemnification of Client

Consultant agrees to indemnify and hold Client harmless from and against any liability to the extent arising out of the negligent errors or negligent omissions of Consultant, its agents, employees, or representatives, in the performance of Consultant's duties under this Agreement.

B. Consequential Damages.

Regardless of any other term of this Agreement, in no event shall either party be responsible or liable to the other for any incidental, consequential, or other indirect damages.

XII. CONSULTANT'S INSURANCE

Consultant shall procure and maintain the following minimum insurance:

1. Commercial general liability insurance, including personal injury liability, blanket contractual liability and broad-form property damage liability coverage. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

2. Automobile bodily injury and property damage liability insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

3. Statutory workers' compensation and employer's liability insurance as required by state law.

4. Professional liability insurance. The policy limit shall be not less than \$1,000,000.

Client shall be named as additional insured on policies 1 and 2 above. Upon execution of this Agreement, Consultant will provide a certificate of insurance to Client. Consultant will keep the certificate current at all times while this Agreement is in effect. The Consultant will provide a 30-day written notice in the event the above policies are cancelled.

XIII. CONFIDENTIALITY

Consultant agrees it will maintain the confidentiality of all material it receives from Client which Client has clearly identified as "Confidential" and will not disclose, distribute, or publish to any third party such confidential information without the prior permission of Client. Notwithstanding the foregoing, Consultant shall have no confidentiality obligation with respect to information that:

1) becomes generally available to the public other than as a result of disclosure by Consultant or its agents or employees;

2) was available to Consultant prior to its disclosure by Client;

3) becomes available to Consultant from a third party who is not, to the knowledge of Consultant, bound to retain such information in confidence.

In the event Consultant is compelled by subpoena, court order, or administrative order to disclose any confidential information, Consultant shall promptly notify Client and shall cooperate with Client prior to disclosure so that Client may take necessary actions to protect such confidential information from disclosure.

XIV. SUBCONTRACTS

Consultant shall be entitled, to the extent determined appropriate by Consultant, to subcontract any portion of the services to be performed under this Agreement.

XV. SUSPENSION OF WORK

Work under this Agreement may be suspended as follows:

1. By Client. By written notice to Consultant, Client may suspend all or a portion of the Work under this Agreement if unforeseen circumstances beyond Client's control make normal progress of the Work impracticable. Consultant shall be compensated for its reasonable expenses resulting from such suspension including mobilization and demobilization. If suspension is greater than 90 days, then Consultant shall have the right to terminate this Agreement in accordance with Article IVI, Termination of Work.

2. By Consultant. By written notice to Client, Consultant may suspend the Work if Consultant reasonably determines that working conditions at the Site (outside Consultant's control) are unsafe, or in violation of applicable laws, or in the event Client has not made timely payment in accordance with Article VI, Compensation, or for other circumstances not caused by Consultant that are interfering with the normal progress of the Work. Consultant's suspension of Work hereunder shall be without prejudice to any other remedy of Consultant at law or equity.

XVI. TERMINATION OF WORK

A. This Agreement may be terminated by Client as follows: (1) for its convenience on 15 days' notice to Consultant, or (2) for cause, if Consultant materially breaches this Agreement through no fault of Client and Consultant neither cures such material breach nor makes reasonable progress toward cure within 15 days after Client has given written notice of the alleged breach to Consultant.

B. This Agreement may be terminated by Consultant as follows: (1) for cause, if Client materially breaches this Agreement through no fault of Consultant and Client neither cures such material breach nor makes reasonable progress toward cure within 15 days after Consultant has given written notice of the alleged breach to Client, or (2) upon five days' notice if work under this Agreement has been suspended by either Client or Consultant for more than 90 days in the aggregate.

C. Payment upon Termination

In the event of termination, Consultant shall perform such additional work as is reasonably necessary for the orderly closing of the Work. Consultant shall be compensated for all work performed prior to the effective date of termination, plus work required for the orderly closing of the Work, including: (1) authorized work performed up to the termination date plus termination expenses, including all labor and expenses, at Consultant's standard billing rates, directly attributable to termination; (2) all efforts necessary to document the work completed or in progress; and (3) any termination reports requested by Client.

XVII. ASSIGNMENT

This Agreement is binding on the heirs, successors, and assigns of the parties hereto. Except as otherwise set forth under Article VIII, Assignment of Tasks to Affiliates, this Agreement may not be assigned by Client or Consultant without prior, written consent of the other.

XVIII. NO BENEFIT FOR THIRD PARTIES

The services to be performed by Consultant are intended solely for the benefit of Client, and no benefit is conferred on, nor contractual relationship established with any person or entity not a party to this Agreement. No such person or entity shall be entitled to rely on Consultant's services, opinions, recommendations, plans, or specifications without the express written consent of Consultant. No right to assert a claim against the Consultant, its officers, employees, agents, or consultants shall accrue to the construction Contractor or to any subcontractor, supplier, manufacturer, lender, insurer, surety, or any other third party as a result of this Agreement or the performance or nonperformance of the Consultant's services hereunder.

XIX. FORCE MAJEURE

Consultant shall not be responsible for delays caused by circumstances beyond their reasonable control, including, but not limited to (1) strikes, lockouts, work slowdowns or stoppages, or accidents, (2) acts of God, (3) failure of Client to furnish timely information or to approve or disapprove Consultant's instruments of service promptly, and (4) faulty performance or nonperformance by Client, Client's independent consultants or contractors, or governmental agencies. Consultant shall not be liable for damages arising out of any such delay, nor shall the Consultant or Client be deemed to be in breach of this Agreement as a result thereof.

XX. INTEGRATION

This Agreement represents the entire understanding of Client and Consultant as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. This Agreement may not be modified or altered except in writing signed by both parties. Any purchase order issued by Client, whether or not signed by Consultant, and any terms and conditions contained in such purchase order which are inconsistent with this Agreement shall be of no force and effect.

XXI. SEVERABILITY

If any part of this Agreement is found unenforceable under applicable laws, such part shall be inoperative, null, and void insofar as it conflicts with said laws, but the remainder of this Agreement shall be in full force and effect.

XXI. CHOICE OF LAW/JURISDICTION

This Agreement shall be administered and interpreted under the laws of the State of Arizona. Jurisdiction of litigation arising from the Agreement shall be in the State of Arizona.

XXIII. ATTORNEYS' FEES

In the event either party commences legal proceedings against the other, then the prevailing party shall, in addition to any other recovery, be entitled to recover its reasonable attorneys' fees and all other costs of such proceeding.

XXIV. NOTICES

All notices required under this Agreement shall be delivered by personal delivery or first class mail and shall be addressed to the following persons:

Mr. Dale Mattingly
President
Black Mountain Surveying
17308 W. Woodrow Lane
Surprise, Arizona 85388

Mr. Fred Schneider
Vice President - Engineering
Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038

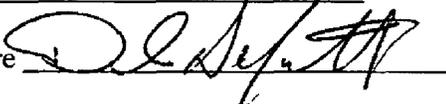
Notice shall be effective upon delivery to the above addresses. Project related instructions may be delivered by electronic mail. Either party may notify the other that a new person has been designated by it to receive notices, or that the address for the delivery of such notices has been changed, provided that, until such time as the other party receives such notice in the manner provided for herein, any notice addressed to the previously-designated person and/or delivered to the previously-designated address shall be effective.

XXV AUTHORIZATION

The persons executing this Agreement on behalf of the parties hereto represent and warrant that the parties have all legal authority and authorization necessary to enter into this Agreement, and that such persons have been duly authorized to execute this Agreement on their behalf.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

BLACK MOUNTAIN SURVEYING

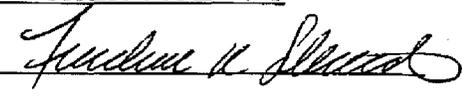
Signature 

Printed Name Dale Mattingly

Title President

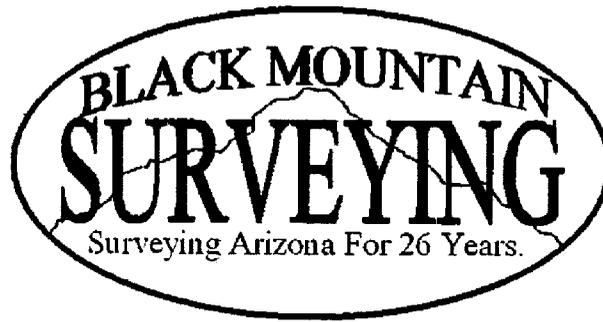
Federal Tax ID number: 56-2500086

ARIZONA WATER COMPANY

Signature 

Printed Name Mr. Fred Schneider

Title Vice-President - Engineering



17308 West Woodrow Lane. Surprise Az. 85388-7784 Phone: 623-266-0402 Fax: 623-266-0402

E-mail: dale@blackmountainsurveying.com www.blackmountainsurveying.com

“EXHIBIT B”

2011 RATE SCHEDULE

EFFECTIVE January 1st, 2011 – December 31st, 2011

	<u>HOURLY RATE</u>
• PRINCIPLE	\$95.00
• REGISTERED LAND SURVEYOR	\$90.00
• 1 MAN GPS FIELD CREW	\$65.00
• 2 MAN CONVENTIONAL SURVEY FIELD CREW	\$80.00
• DRAFT TECHNICIAN	\$55.00

REIMBURSABLES FOR PRINTING AND DELIVERIES WILL BE BILLED AT COST.

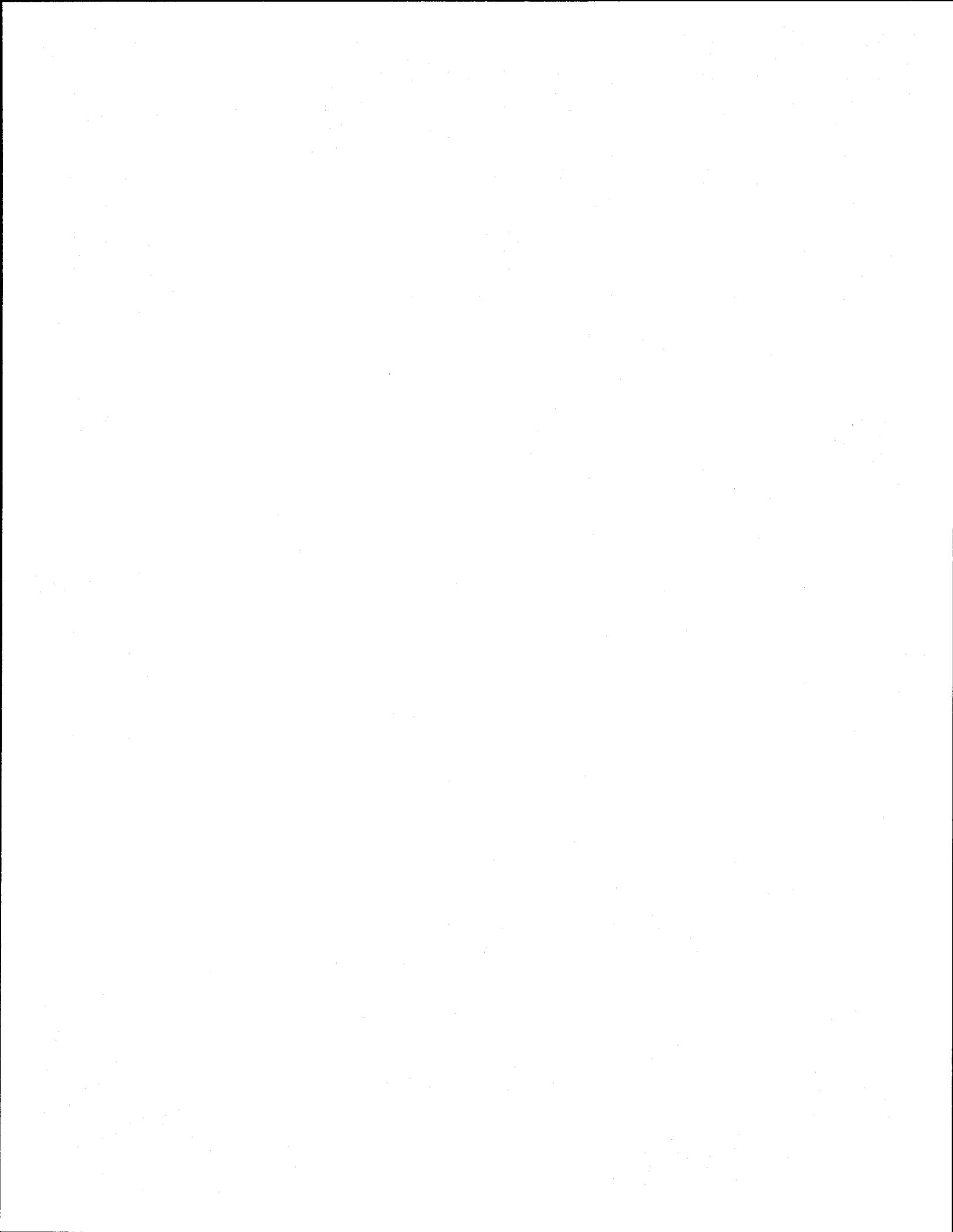
IMPORTANT

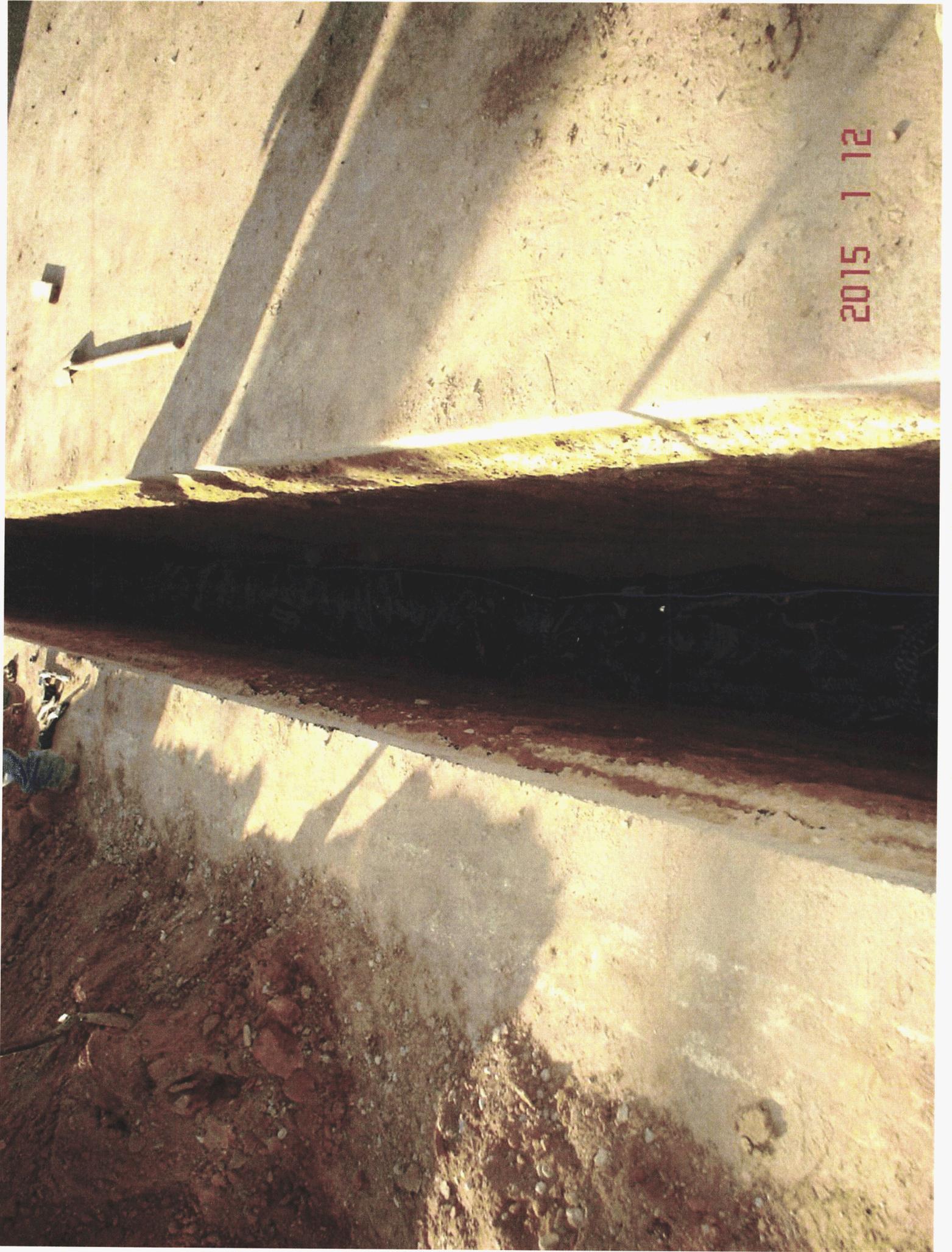
If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.





2015 1 12

2015 1 12 5102



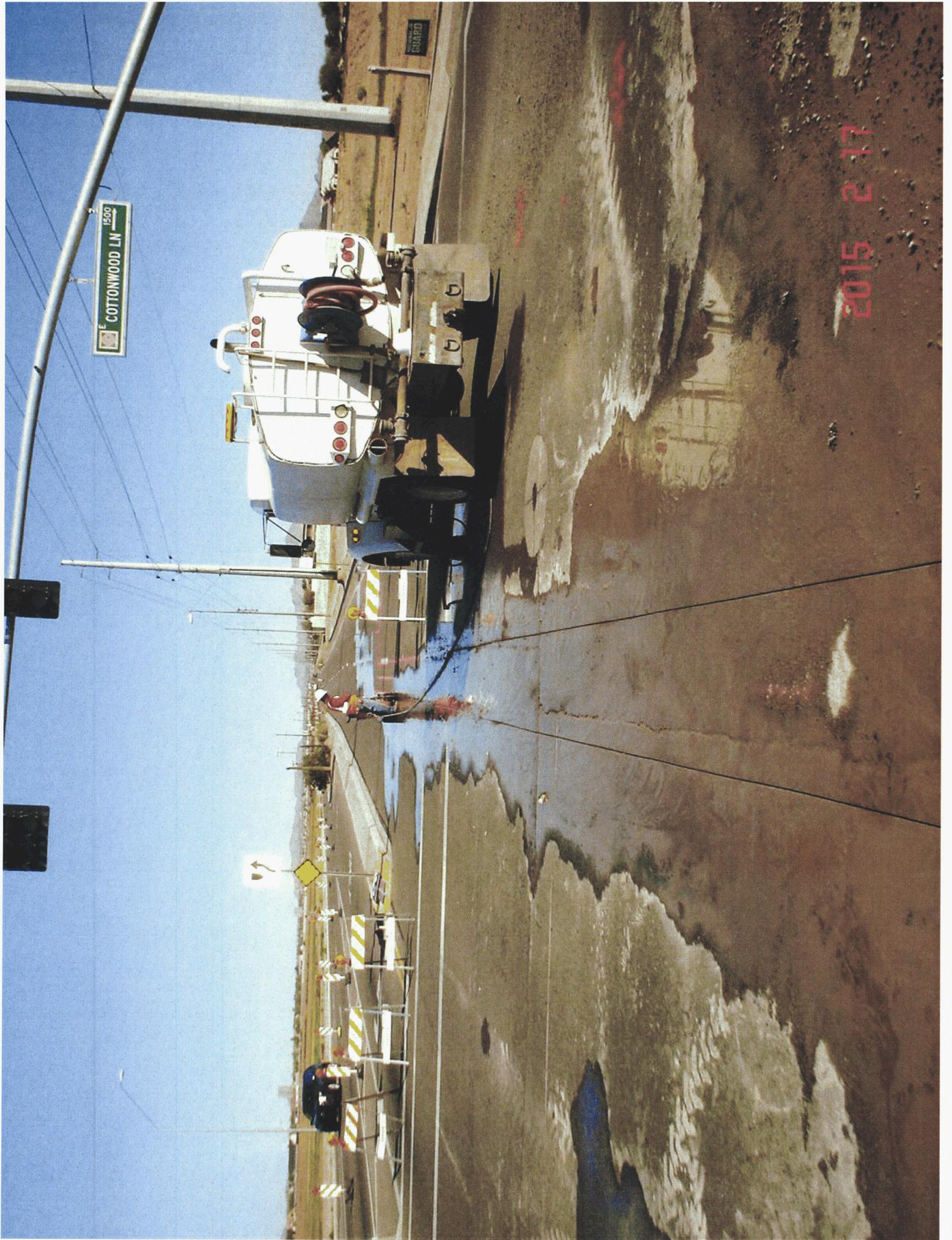
USDA PROTECT
REPAIR ANY DAMAGE
WARNING
CORROSION PROTECTOR
REPAIR ANY DAMAGE
EPCON CORROSION PROTECTOR
008 LBS
NORTH TOWN
Use for 10-12
O-201





2014 12 18





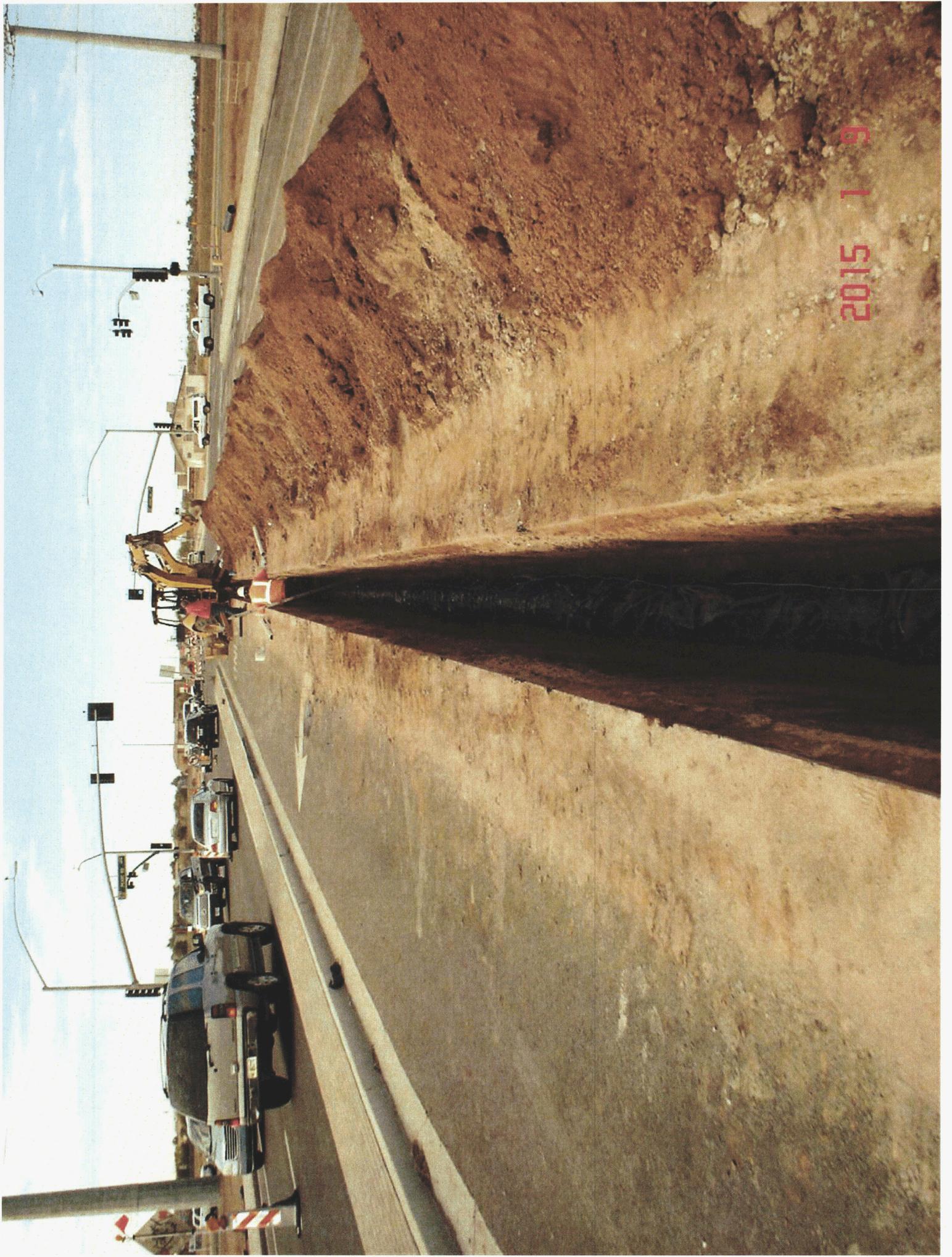


16-21-1102



16-21-1102

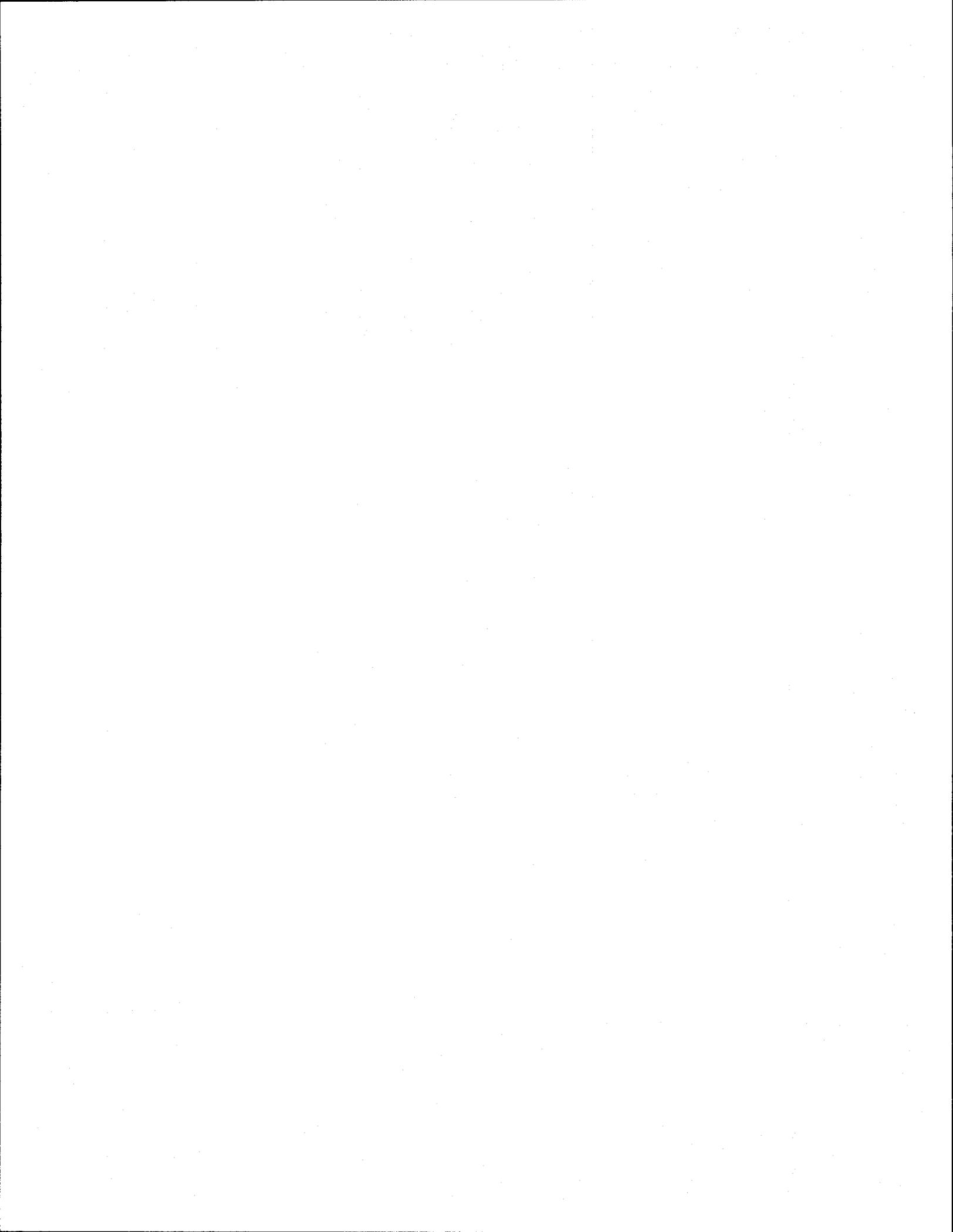




2015 1 9



2015 4 9



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

March 30, 2015

Ms. Linda Harris
City of Casa Grande
Development Center
510 E. Florence Boulevard
Casa Grande, AZ 85122

Re: Approval of Construction

Dear Ms. Harris:

Enclosed is the Engineer's Certificate of Completion for the above-referenced project along with a copy of the Approval to Construct, the pressure, chlorination, bacteriological test data, and As Built Drawing.

If you have any questions concerning this construction, please call or write at your convenience.

Very truly yours,



Andrew J. Haas, P. E.
Chief Engineer

afh
Enclosures

E-MAIL: mail@azwater.com

ENGINEER'S CERTIFICATE OF COMPLETION AND FINAL INSPECTION "ECC"
CITY OF CASA GRANDE - WATER QUALITY DIVISION

ADEQ FILE NO.: CDP-14-01249 → X DRINKING WATER DESIGN <i>(New separate form now used for WASTEWATER DESIGN)</i> <small>If separate Drinking Water & Wastewater Approvals to Construct were issued, separate ECCs required</small>	COUNTY: Pinal OWNER: ARIZONA WATER COMPANY
--	---

Project Name: Cottonwood Lane and Peart Road *(as shown on Approval to Construct)*

W.A. NO.1-5171	SYSTEM NO.11-009
Project Description: Replace 2,840 LF of 12-inch main with 2,850 LF of 12-inch DIP water main on Cottonwood Lane from Arizola Road to Peart in the Pinal Valley water system. The water main alignment on Arizona Road was moved to the West to avoid conflicts with existing utilities <p align="right"><i>(as shown on Approval to Construct, unless completed project differed, in which case describe in detail)</i></p>	

I, James T. Wilson, a Professional Engineer registered in the State of Arizona, have inspected the construction of the above described project, and certify that *(check all applicable boxes, complete applicable blanks):*

ITEMS 1) THRU 4) MUST BE COMPLETED

- 1) The work on this project was completed on March 3, 2015 (date).
- 2) On March 3, 2015 a final construction inspection was conducted by MYSELF [*←check one→*] under MY DIRECT SUPERVISION by Scott Johnson (print name).
- 3) The materials utilized and the installation and construction of those materials and equipment are in conformance with the approved plans and specifications.
- 4) All provisions listed in the ADEQ Approval to Construct for this project, a copy of which I have attached to this certificate, have been fully satisfied or exceptions are listed on the reverse side of this certificate.
- 5) All construction and preoperational tests (infiltration, exfiltration, pressure, deflection, chlorination, bacti, etc.) [*circle types performed*] were properly conducted, met ADEQ requirements, and are represented in attachments to this Certificate. The total number of pages of test results attached is .

EITHER 6A) or 6B) MUST BE CHECKED

- 6A) Any deviation from the approved plans and the ADEQ Certificate of Approval to Construct have been noted on the attached "As-Built" plans (as stipulated in the Approval to Construct provisions) prepared and sealed pursuant to A.R.S. § 32-125 on 3/27/15 (date). Of the total 7 sheets of "As-Built" plans attached, deviations from the approved plans are shown on sheets numbered 5 OF 7. All deviations from the approved plans comply with the ADEQ minimum design and construction standards contained in statute, rule, bulletin or referenced codes, and with the key elements of the approved plans.
- 6B) The completed project did not deviate from the plans which received the Approval to Construct.

EITHER 7A) or 7B) MUST BE CHECKED

- 7A) This project did not require the preparation of an Operation and Maintenance Manual.
(the only projects which do NOT require an O&M manual are gravity-only sewage collection systems, single-family residence septic systems, and drinking water distribution projects that include no source, storage, or pressurization facilities).
- 7B) A FINAL Operation and Maintenance Manual has been prepared for this project and a copy is attached. This manual meets all ADEQ minimum design and construction standards contained in statute, rule, bulletin, referenced codes, the key elements of the approved plans, and, if applicable, with Attachment B of the September 10, 1994 Engineering Advisory for Individual Alternate Systems.

EITHER 8A) or 8B) MUST BE CHECKED

- 8A) Review of this project for Approval of Construction issuance does not require a fee because this project involves only drinking water, not wastewater.
- 8B) In accordance with A.A.C. R18-9-103 Schedule B, a check in the amount of \$ is attached as initial fee for review of the submitted and other information for issuance of an Approval of Construction.
- 9) Other, see additional information on reverse side.

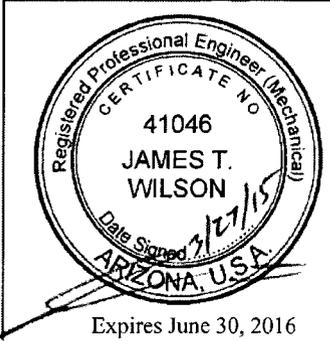
ADDITIONAL INFORMATION

↓ ENGINEER'S SEAL per AAC R4-30-304.B ↓

Engineer Address PO Box 29006, Phoenix, AZ 85038-9006

 Phone 602-240-6860

AZ DEPARTMENT OF ENVIRONMENTAL QUALITY ACCEPTANCE

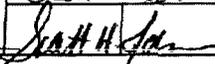


 EMPLOYEE SIGNATURE (PRINTED NAME) DATE

Please complete the test data and submit this form with the Engineers Certificate of Completion. An Approval of Construction cannot be issued without the data identified below in accordance with Arizona Administrative Code (A.A.C.) R18-5-508(C). Please attach all supplemental information and calculations to this form.

DATA

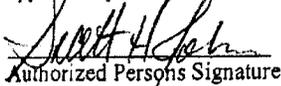
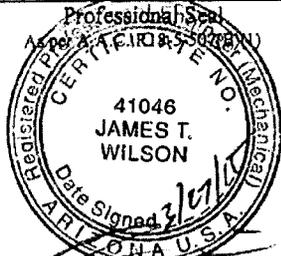
1.

PRESSURE TEST DATA			
Indicate Segment Tested	WINDFLOWER TO PI	PI	PI
Pressure and Leakage Test Results (Pass/Fail)	PASS	PASS	PASS
Date Tested	1-16-15	2-23-15	2-25-15
Time Started	9:45AM	1:20pm	9:50AM
Time Finished	11:45AM	3:20pm	11:50AM
Pipe Diameter	12"	12"	12"
Footage Tested	1820LF	833LF	130LF
Allowable Leakage	4.368	1.9992	0.312
Leakage Observed	0	0	0
Pressure at Test Point	205.0PSI	210PSI	205PSI
Employee Observing the Test (Please Print Legibly)	SCOTT H. JONKSON		
Signature of Employee Observing the Test			

2.

DISINFECTION SAMPLING				
Initial Sampling (Minimum 50 ppm available chlorine)	Date	2-25-15	2-25-15	2-25-15
	Time	9:00AM	9:00AM	9:00AM
	ppm Cl ₂	200ppm	200ppm	200ppm
After 24 Hours Detention Time (Minimum 10 ppm free chlorine)	Date	2-26-15	2-26-15	2-26-15
	Time	9:05AM	9:05AM	9:05AM
	ppm Cl ₂	200ppm	200ppm	200ppm
After Sufficient Flushing (Water is clear and system Cl ₂ residual is measured)	Date	2/27/15	2/27/15	2/27/15
	Time	10:25AM	10:25AM	10:25AM
	ppm Cl ₂	1.2	1.2	1.2
Bacteriological Sampling(s):	Date	2/27/15	2/27/15	2/27/15
	Time	10:25AM	10:25AM	10:25AM
	Attached (Y/N)	Y	Y	Y
		(Yes/No)	(Yes/No)	(Yes/No)

3.

<p>Certification</p> <p>I, <u>SCOTT H. JONKSON</u>, certify that I have inspected the work performed and have found it to be satisfactory and in accordance with Arizona Administrative Code, Arizona Engineering Bulletins, and the approved specifications.</p> <p> <u>3-3-15</u> Authorized Persons Signature Date</p>	<p>Professional Seal</p>  <p>41046 JAMES T. WILSON</p> <p>Date signed <u>3/17/15</u></p> <p>EXPIRES 6/30/16</p>
---	--

Regina Lynde
 Arizona Water Company
 3805 N. Black Canyon Hwy
 Phoenix, AZ 85015

Project: Specials
 Project Number: Cottonwood Lane WA-5171 2/27/2015

Reported:
 03/03/15 17:28

5022416

CHAIN OF CUSTODY RECORD

LEGEND
 Technical Services, Inc.
 www.legend-group.com

17631 N. 25th Avenue • Phoenix, AZ 85023 • (602) 324-6100 • Fax (602) 324-6101
 4565 S. Palo Verde Rd. Ste 423 • Tucson, AZ 85714 • (520) 327-1234 • Fax (520) 327-0518

Page 1 of 1

Please Print Clearly

CLIENT INFORMATION	
Client Name ARIZONA WATER CO.	Address 220 E 2 ND ST
City CASAGRANDE	State AZ
Zip 85122	Phone (520) 836-8785
Project Number WA-1-5171	Fac. No. 836-8785
Contact RAY MURKITA	OC Report <input type="checkbox"/> EOD <input type="checkbox"/>
	Special Detection Limits <input type="checkbox"/>

SAMPLE TYPE CODES	TURN AROUND TIME			Composite	Grab	Sample Type	Compliance	No. of Containers	Pres. (Lab Use Only)	REQUESTED ANALYSES	
	DW-Drinking Water	S-Solid	T-Travel Blank							Lab No.	NO
DW-Drinking Water S-Solid T-Travel Blank WW-Wastewater F-Food SW-Surface Water G-Sk. spp./Biosolids GW-Groundwater O-Other	Laboratory Authorization Required for Rush <input type="checkbox"/> Standard 10 - 15 Day <input type="checkbox"/> Other										
Client's Sample Identification	Date	Time	Sample Location								
COTTONWOOD #1	2/27/15	10:25am	COTTONWOOD #1					1	X		01
COTTONWOOD #2	2/27/15	10:15am	COTTONWOOD #2					1	X		02

TO ENSURE COMPLETION OF ANALYSIS, SAMPLES MUST BE RECEIVED AT LEAST 3 HOURS PRIOR TO THE HOLD TIME EXPIRATION

Comments / Special Instructions: SPECIAL DO NOT REPORT TO A.D.E.G. C12-12 COTTONWOOD #1 C12-12 COTTONWOOD #2

SAMPLE CONDITION UPON RECEIPT (Lab Use)	
No. of Containers	2
Temperature	3.9°C
Custody Seals	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
Seals Intact	Y <input type="checkbox"/> N <input type="checkbox"/>
Preserved	<input checked="" type="checkbox"/> N <input type="checkbox"/>

WHITE-LAB YELLOW-CLIENT

RELINQUISHED BY			SAMPLES RECEIVED BY		
①	Signature: <i>Scott H. Johnson</i>	Date: 2-27-15	Signature: <i>Harv Ortiz</i>	Date: 2-27-15	
	Printed Name: SCOTT H. JOHNSON	Time: 11:00am	Printed Name: Harv Ortiz	Time: 1313	
②	Signature: <i>Harv Ortiz</i>	Date: 2-27-15	Signature: <i>Harv Ortiz</i>	Date: 2/27/15	
	Printed Name: Harv Ortiz	Time: 1440	Printed Name: Harv Ortiz	Time: 1440	
③	Signature: _____	Date: _____	Signature: _____	Date: _____	
	Printed Name: _____	Time: _____	Printed Name: _____	Time: _____	

FORM GEN-178 (05/06)

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Regina Lynde Arizona Water Company 3805 N. Black Canyon Hwy Phoenix, AZ85015	Project: Specials Project Number: Cottonwood Lane WA-5171 2/27/2015	Reported: 03/03/15 17:28
---	--	-----------------------------

Analyte
Cottonwood #1 (Cottonwood #1) (5022440-01) Drinking Water (Grab) Sampled: 02/27/15 10:25 Received: 02/27/15 14:40

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli	Absent	P/A	1	B5C0014	02/27/15 17:15	02/27/15 17:15	SM 9223B		
Total Coliforms	Absent	P/A	1	B5C0014	02/27/15 17:15	02/27/15 17:15	SM 9223B		

Cottonwood #2 (Cottonwood #2) (5022440-02) Drinking Water (Grab) Sampled: 02/27/15 10:50 Received: 02/27/15 14:40

Analyte	Result	PQL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Legend Technical Services of Arizona, Inc.									

Microbiology

E. coli	Absent	P/A	1	B5C0014	02/27/15 17:15	02/27/15 17:15	SM 9223B		
Total Coliforms	Absent	P/A	1	B5C0014	02/27/15 17:15	02/27/15 17:15	SM 9223B		

Sample Condition Upon Receipt:

Temperature: 3.90 C
 All samples were received in acceptable condition unless noted otherwise in the case narrative.

Case Narrative:

Holding Times: All holding times were met unless otherwise qualified.
QA/QC Criteria: All analyses met method requirements unless otherwise qualified.
Accreditations: AZ(PHX)0004, AZ(TUC)0004, AIHA#102982, CDC ELITE Member.
 Accreditation is applicable only to the test methods specified on each scope of accreditation held by LEGEND.
Comments: There were no problems encountered during the processing of the samples, unless otherwise noted.
 All samples were analyzed on a "wet" basis unless designated as "dry weight".
 Chain of Custody indicates special only do not report to ADEQ - BF

Notes and Definitions

Legend Technical Services of Arizona, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Barbara Frank
 Client Services Representative

Phone Number: (602) 324-6100

CDP-14-01249

CITY OF CASA GRANDE, ARIZONA

DEVELOPMENT SERVICES
510 East Florence Blvd. 85122
Office (520-421-8630)

Inspection Line (520-421-8684)



E14B - ROW Use New Construction- Private Utilities

Issued Date: 10/15/2014

Telephone PIN: 171359

Expires: 5/17/2015

Parcel

Address: 0 SW QUADRANT , CITYWIDE
Casa Grande, AZ 85122
Legal: DUMMY PARCEL FOR CE CASES AND CITY WIDE
Parcel Number: 888-88-032-7

Zoning:

Owners/Parties

Primary

Name: Arizona Water Company
Address: 220 E 2nd St
Casa Grande, AZ 85122

Phone: (520)
836-8785

Contractors

Primary

Sub-Contractors

Project Description

Description of Work: Replace 2,840 LF of 12-inch main with 2,850 LF of 12-inch DIP water main on Cottonwood Lane from Arizola Road to Peart Road in the Pinal Valley water system.

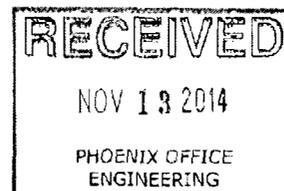
Number of Civil Plan Sheets for DC Review E14B ROW Use New Construction 7

Number of Civil Plan Sheets for PW Review E14B ROW Use New Construction 7

What is the private utility? No
Utility Franchise No

ROW Work Type No

Larry S. Peterson
10/15/14



Review Comments/Conditions

1. Public Works Inspector must be notified within 72hrs prior to start of work. Contact Public Works Inspector Lupe Vidal at (520) 450-2627 or LVidal@casagrandeaz.gov
For work in the alley, coordinate with the Sanitation Department, (520) 421-8646.
2. The Contractor is responsible for ensuring that the safety of the work site and the public is maintained. OSHA safety and Arizona Blue Stake Laws shall apply to all construction activities.
3. All improvements shall be constructed to MAG Specifications and Details, unless modified by the special conditions of this permit.
4. All approved trench work inside public Right-of-Way and Easements shall be either 1 sack concrete slurry or shall have compaction testing. Final asphalt course shall match the existing pavement section, unless specified by the City Engineer.
5. Compaction and materials testing, as directed by the City Engineer or his authorized representative, shall be conducted at the Contractor's expense. Results shall be submitted to the City Engineering Inspector.
7. All work shall conform to approved plans.
8. This permit, along with approved construction, traffic control & safety plans, shall be kept on site at all times. Additional traffic control for vehicular or pedestrian traffic may be required by the Public Works Inspector.
9. The City of Casa Grande reserves the right to suspend and/or modify the conditions of this permit should field conditions warrant. This shall include improper or inadequate construction techniques or a safety hazard on the work site, or to the public. The Contractor agrees to hold the City harmless for any delays in construction.
10. The Contractor shall call the Engineering Division 421-8625 prior to any backfill, and also for a final inspection and acceptance of the work at the completion of the permitted work. The permit number should be used with this call. The Contractor shall warrant all improvements for one year after the acceptance date. Failure to get a final inspection and acceptance of the work will extend the warranty period indefinitely.
11. If any of the conditions of this permit are not met the permit is void.
12. Need to re-route water line around traffic light foundation at the Southwest corner of Cottonwood and Arizola.



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

RIGHT OF WAY USE-NEW CONSTRUCTION PERMIT – PRIVATE UTILITIES APPLICATION

(Permit authorizing private utilities and entrances to be constructed within public right of way)
(Electronic Version Available at: <http://casagrandeaz.us/dept/planning/building-division/engineering-permits/>
email applications to DCPermits@casagrandeaz.gov)

Please indicate the type of Right of Way work being permitted:

Utility New Construction Driveway Entrance
 Utility Franchise Yes No

1. PROJECT LOCATION: Cottonwood Lane between Peart Rd and Arizola Rd

(Indicate closest intersecting streets or alleys)

2. DESCRIPTION OF WORK: Replace approx 3,870 LF of 12 inch DIP waterline with approx 4,007 LF of 12 inch DIP

3. STREET CLOSURE REQUIRED (Not including alleys) Yes Dates _____ No

4. APPLICANT/CLIENT INFORMATION:

Name Arizona Water Company
Address 220 E 2nd Street City Casa Grande State AZ Zip Code 85122
Phone 520-836-8485 Fax 520-836-2850 Email Address kpakka@azwater.com

5. CONTRACTOR PERFORMING WORK:

Name _____
Address _____ City _____ State _____ Zip Code _____
Phone _____ Fax _____ Email Address _____

Applicants may receive clarification regarding the specific steps included in processing this application as well as information regarding any code, regulation or policy relevant to the processing of this application by contacting one of the following review Engineers:

- Larry Petersen – lpetersen@casagrandeaz.gov, 520-421-8630, Ext. 3320
- Cesar Adamos – cadamos@casagrandeaz.gov, 520-421-8630, Ext. 3019

CITY INTAKE:

Date Accepted & Logged In: 9/17/14 Intake Staff: LEH
Fee Receipt # _____ Expiration Date: 5/12/15
Assigned DC Engineer: _____ Assigned PW Inspector: LOPE VIDAL
Engineer's Approval: [Signature] Date: 10/13/14
Inspected & Accepted by: _____ Date: _____



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

RIGHT OF WAY USE NEW CONSTRUCTION PERMIT- APPLICATION INTAKE CHECKLIST

- Applicant _____ Engineer _____
1. **Site Plan illustrating the following:** _____
 - a. The area of the right of way to be affected
 - b. The location of any existing right of way improvements (i.e. sidewalk, curb, pavement)

 2. **Civil Plans** (required for new construction; 1 set with initial submittal; 3 sets once approved for signature; requires City of Casa Grande signature format, see attachment) _____

 3. **Stormwater Pollution Prevention Plan (SWPPP)** – required if more than (1) acre will be disturbed, may be waived if a SWPPP was submitted with the Site Development permit for the project _____

 4. **Line Item Cost Estimate** (signed by contractor, not required for franchisee) _____

 5. **Traffic Control Plan** (if applicable) _____

 6. **Road Closure Plan which shall address the following notification requirements**
 - a) Contact the Development Center with specific Road Closure dates at (520) 421-8630 or by email at DCPermits@casagrandeaz.gov
 - b) The following Departments must be notified at least 5 days prior to start of work:
 - Sanitation: Greg Garcia – Ggarcia@casagrandeaz.gov
 - Police: Michael Brashier – MikeB@casagrandeaz.gov
 - GIS: Jamie White – Jwhite@casagrandeaz.gov
 - c) Road closure must be advertised in the Casa Grande Dispatch Newspaper for 5 days prior to start of work. You may either fax your ad to (520) 836-0343, call their office at (520) 836-3111 or by email at legals@trivalleycentral.com

FEES DUE AT TIME OF SUBMITTAL:

- Review Fees: \$30 plus \$247.50 per Civil Plan page
- Public Works Inspection Fee: 4% of Construction Costs

N/A FRANCHISE AGREEMENT

APPLICANT ACKNOWLEDGEMENT OF RESPONSIBILITIES:

The signature(s) hereby certify that the statements made by myself and constituting part of this application are true and correct. I am fully aware that any misrepresentation of any information on this application may be grounds for denial of this application. I agree that if this request is issued on the representations made in this submittal, and any approval or subsequently issued building permit(s) or other type of permit(s) may be revoked without notice if there is a breach of representations.

Kevin Pakka (agent) 9-30-14
Signature of Applicant Date

Kevin Pakka 836-8785 kpakka@azwater.com
Contact Person Phone/Email

REGULATORY BILL OF RIGHTS – REVIEW TIMEFRAMES
Completeness & Substantive Review Time Frames¹

Administrative Completeness Review (CR) ²	Substantive Review (SR) Stage ³			
	Staff Decision or Review Letter on Initial Submittal ⁴	Staff Decision or Review Letter on 1 st Resubmittal ^{5, 6}	Staff Decision based upon 2 nd Resubmittal (Approve or Deny)	Over-All Timeframe ⁷
2 days	30 days	30 days	30 days	62 days



City of Casa Grande, Planning & Development Dept., 510 E. Florence Blvd, Casa Grande, AZ 85122

¹All times are maximum timeframes in business days (Mon-Fri.; excluding City Holidays). Shorter review times will be accomplished where possible.

²Completeness Review timeframes are calculated from date of application submittal to date of acceptance or rejection of the application as administratively complete.

³Substantive Review timeframes are calculated from date of acceptance of application for Substantive Review, or upon receipt of re-submittal of revised plans/reports, to the date of issuance of a comprehensive review letter, or final administrative decision.

⁴ Review of initial submittal limited to determination of compliance with ordinances, codes, regulations or policy relevant to the specific permit or project application. The review comments on the initial submittal may be amended to address code/policy requirements that City staff failed to include in the 1st comprehensive review document.

⁵ Issuance of a review letter regarding resubmittal only allowed if applicant consents to extend review timeframe to resolve remaining code/policy compliance issues. Said extension shall not exceed 50% of the over-all timeframe.

⁶ Review of resubmittal shall be limited to:
a) Addressing 1st review comments that the applicant failed to adequately address in their resubmittal; or
b) Addressing new review issues arising from modifications the applicant has made to the design and/or technical reports.

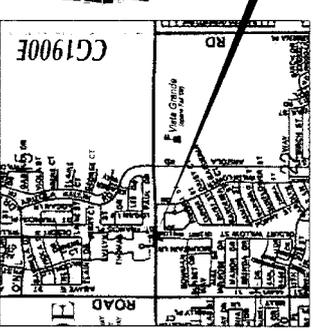
⁷Over-All Review timeframe is the sum of the Completeness, Initial & Resubmittal Substantive Review timeframes and does not include any time involved in review of the 2nd Resubmittal. An administrative decision will be made on the permit/project application prior to the end of the Over-All Review timeframe unless the applicant and the City agree to review of a 2nd Resubmittal.

In accordance with the Regulatory Bill of Rights (ARS 9-835) the City of Casa Grande will typically make an administrative decision on each permit application after one (1) comprehensive staff review. However, from time to time a 2nd review is necessary to resolve code/policy compliance issues associated with a permit. In accordance with ARS 9-835.I., by mutual agreement, the applicant and the City may engage in a 2nd review of an application as long as said 2nd review does not exceed the over-all time frame by 50%. The specific 1st and 2nd and over-all review timeframes for this application are provided above. Applicants may sign below, consenting to a 2nd review if necessary, within the stated prescribed timeframe. Your consent is not required at time of application submittal. Applicants who do not sign below will be contacted by City staff if a 2nd review is determined to be necessary prior to making an administrative decision on this application. Applications denied after the completion of the review cycle are eligible for re-application to address the code/policy deficiencies which were the basis for the application denial with the payment of a fee equal to 25% of original application fee amount. Said re-application shall occur within 90 days of the application denial.

I hereby consent to a 2nd review of my application, if necessary, prior to making a final administrative decision.

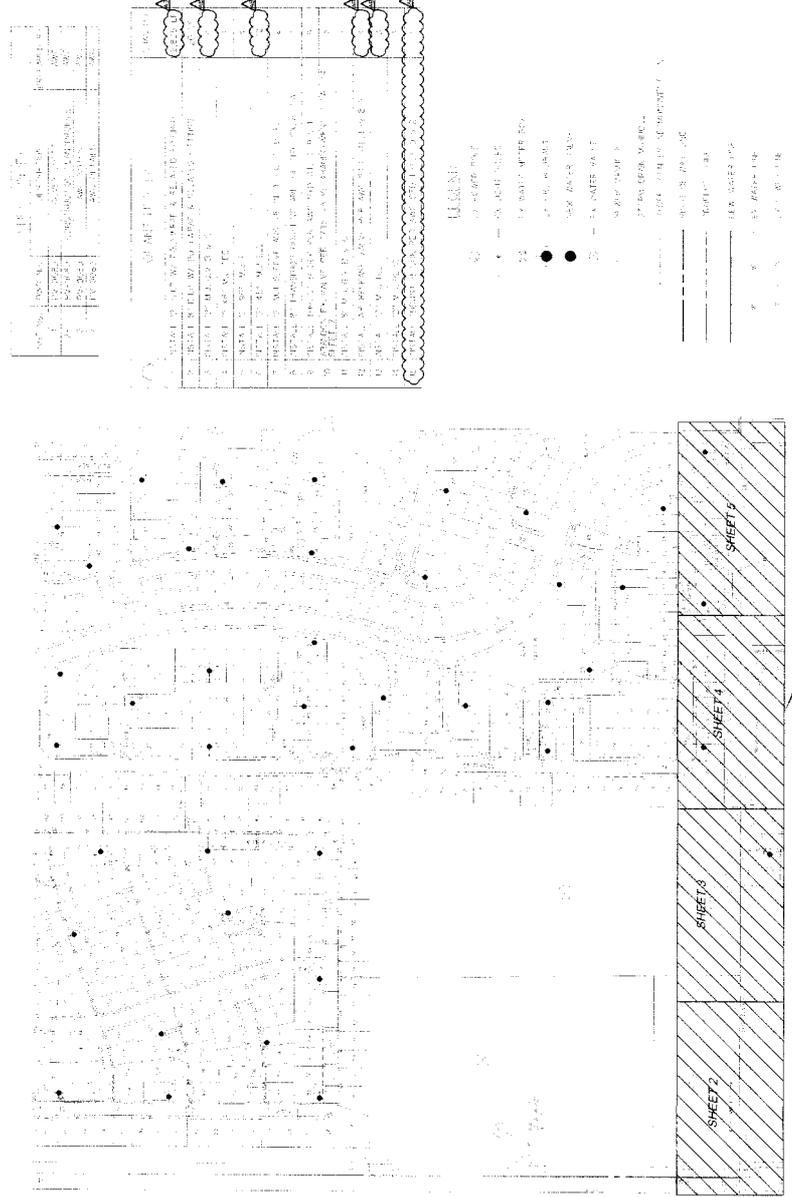
Timothy August
Applicant

REQUIRED SIGNATURE BLOCK FORMAT



VICINITY MAP

REPLACE 2,800 LF OF FAILING 12" DIP WATER LINE WITH 2,825 LF OF 12" DIP ALONG COTTONWOOD LANE BETWEEN PEART ROAD AND ARIZOLA ROAD LOCATED IN THE SW1/4 SEC. 15, T. 6 S., R. 6 E. OF THE G. & S. R. B. & M.



AS BUILT FOR WATER ONLY

FOR WATER ONLY

REVISOR: BWP ON 3/19/15 PER AS BUILT

PROJECT LOCATION

CITY OF CASA GRANDE PLAN APPROVAL

DATE: _____ EXPUNCTION DATE: _____
 THE CITY ENGINEER'S REVIEW AND APPROVAL OF THIS PLAN IS LIMITED TO THE TECHNICAL ASPECTS OF THE DESIGN AND DOES NOT CONSTITUTE AN ENDORSEMENT OF THE PROJECT OR A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

CITY OF CASA GRANDE PLAN APPROVAL

DATE: _____ EXPUNCTION DATE: _____
 THE CITY ENGINEER'S REVIEW AND APPROVAL OF THIS PLAN IS LIMITED TO THE TECHNICAL ASPECTS OF THE DESIGN AND DOES NOT CONSTITUTE AN ENDORSEMENT OF THE PROJECT OR A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

TAS BUILT CERTIFICATION

ACCEPTED BY: _____ DATE: _____
 CITY ENGINEER/DIRECTOR

CITY NUMBER: _____

ARIZONA WATER COMPANY
 3908 N. BLACK CANYON HWY. POST OFFICE BOX 29006
 PHOENIX, ARIZONA 85028-0006
 (602) 242-6888

COVER SHEET

REPLACE 2,800 LF OF FAILING 12" DIP WATER LINE WITH 2,825 LF OF 12" DIP ALONG COTTONWOOD LANE BETWEEN PEART ROAD AND ARIZOLA ROAD

SW 1/4 SEC. 15, T. 6 S., R. 6 E.
 PINAL VALLEY
 1407

5/23/2014 AS SHOWN

DESIGNED BY BWP ON 3/19/15 PER AS BUILT

REVISOR: BWP ON 3/19/15 PER AS BUILT

PV-0080 SHEET 1 OF 7

ARIZONA WATER COMPANY
3805 N. BLACK CANYON HWY. POST OFFICE BOX 29008
PHOENIX, ARIZONA 85028-0008
(602) 240-9880

REVISIONS:
NO. 1: ADD COTTONWOOD LANE BETWEEN PEART ROAD AND COTTONWOOD ROAD
NO. 2: REVISE PER COMMENTS

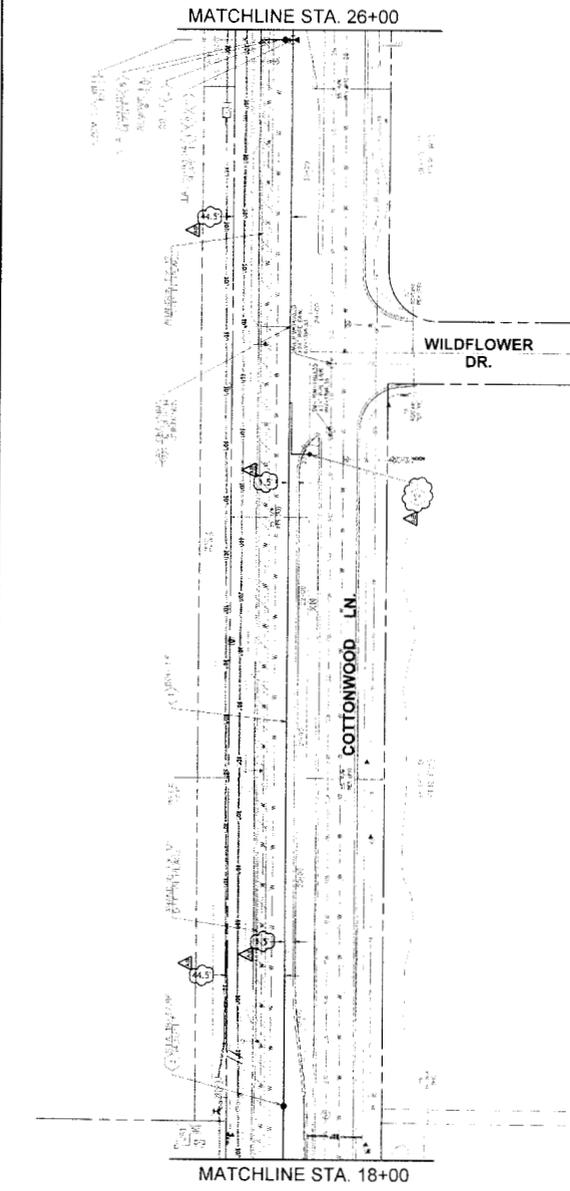
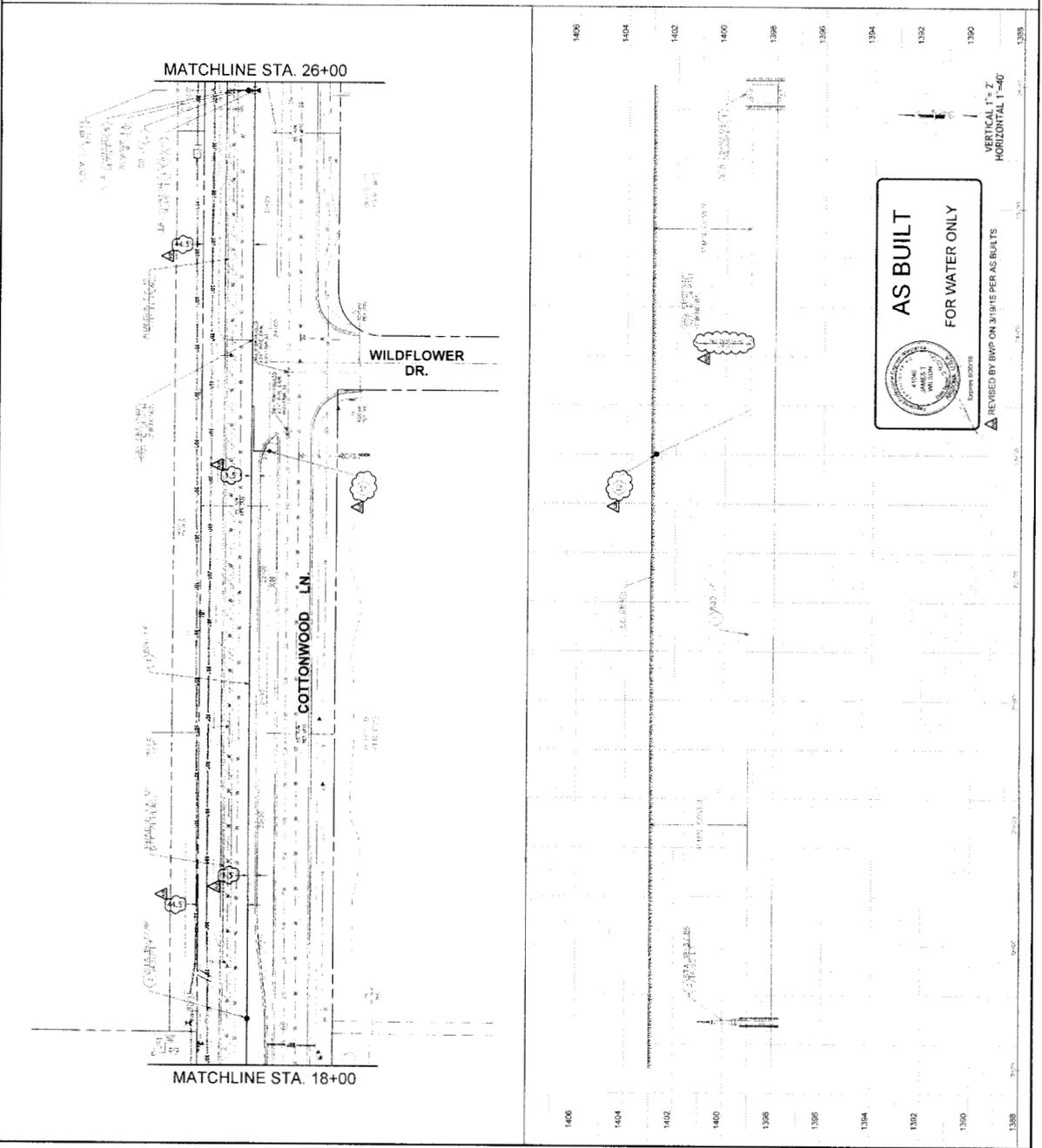
CONSTRUCTION PLAN/PROFILE	DATE	BY
AS SHOWN	5/23/2014	SW/1A SEC. 15, T. 6 S., R. 6 E.
AS SHOWN	0408	FINAL VALLEY
1-5171	1407	

DESIGNED BY BWP ON 3/19/15 PER AS BUILTS
CHECKED BY BWP ON 4/23/14 PER CITY OF PHOENIX
CITY ENGINEER COMMENTS:
APPROVED FOR THE CITY OF PHOENIX
DATE: 4/23/14
BY: [Signature]

CONSTRUCTION PLAN

LEGEND:
 - 1" = 10' (Vertical Curve)
 - 1" = 10' (Horizontal Curve)
 - 1" = 10' (Slope)
 - 1" = 10' (Elevation)
 - 1" = 10' (Stationing)

NOTES:
 1. ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.
 2. ALL ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL UNLESS OTHERWISE NOTED.
 3. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF PHOENIX STANDARD SPECIFICATIONS FOR ROAD AND UTILITY CONSTRUCTION.
 4. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND UTILITY CONSTRUCTION.
 5. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF WATER RESOURCES STANDARD SPECIFICATIONS FOR WATER CONSTRUCTION.
 6. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY STANDARD SPECIFICATIONS FOR ENVIRONMENTAL CONSTRUCTION.
 7. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF AGRICULTURE STANDARD SPECIFICATIONS FOR AGRICULTURAL CONSTRUCTION.
 8. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF HEALTH SERVICES STANDARD SPECIFICATIONS FOR HEALTH SERVICES CONSTRUCTION.
 9. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF LABOR STANDARDS STANDARD SPECIFICATIONS FOR LABOR STANDARDS CONSTRUCTION.
 10. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF REVENUE STANDARD SPECIFICATIONS FOR REVENUE CONSTRUCTION.
 11. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF TREASURY STANDARD SPECIFICATIONS FOR TREASURY CONSTRUCTION.
 12. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF EDUCATION STANDARD SPECIFICATIONS FOR EDUCATION CONSTRUCTION.
 13. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF CORRECTIONS STANDARD SPECIFICATIONS FOR CORRECTIONS CONSTRUCTION.
 14. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF PUBLIC SAFETY STANDARD SPECIFICATIONS FOR PUBLIC SAFETY CONSTRUCTION.
 15. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF JUSTICE STANDARD SPECIFICATIONS FOR JUSTICE CONSTRUCTION.
 16. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF HEALTH SERVICES STANDARD SPECIFICATIONS FOR HEALTH SERVICES CONSTRUCTION.
 17. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF LABOR STANDARDS STANDARD SPECIFICATIONS FOR LABOR STANDARDS CONSTRUCTION.
 18. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF REVENUE STANDARD SPECIFICATIONS FOR REVENUE CONSTRUCTION.
 19. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF TREASURY STANDARD SPECIFICATIONS FOR TREASURY CONSTRUCTION.
 20. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF EDUCATION STANDARD SPECIFICATIONS FOR EDUCATION CONSTRUCTION.
 21. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF CORRECTIONS STANDARD SPECIFICATIONS FOR CORRECTIONS CONSTRUCTION.
 22. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF PUBLIC SAFETY STANDARD SPECIFICATIONS FOR PUBLIC SAFETY CONSTRUCTION.
 23. THE PROPOSED CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ARIZONA DEPARTMENT OF JUSTICE STANDARD SPECIFICATIONS FOR JUSTICE CONSTRUCTION.

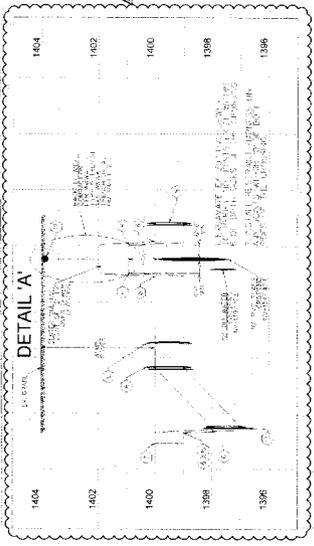
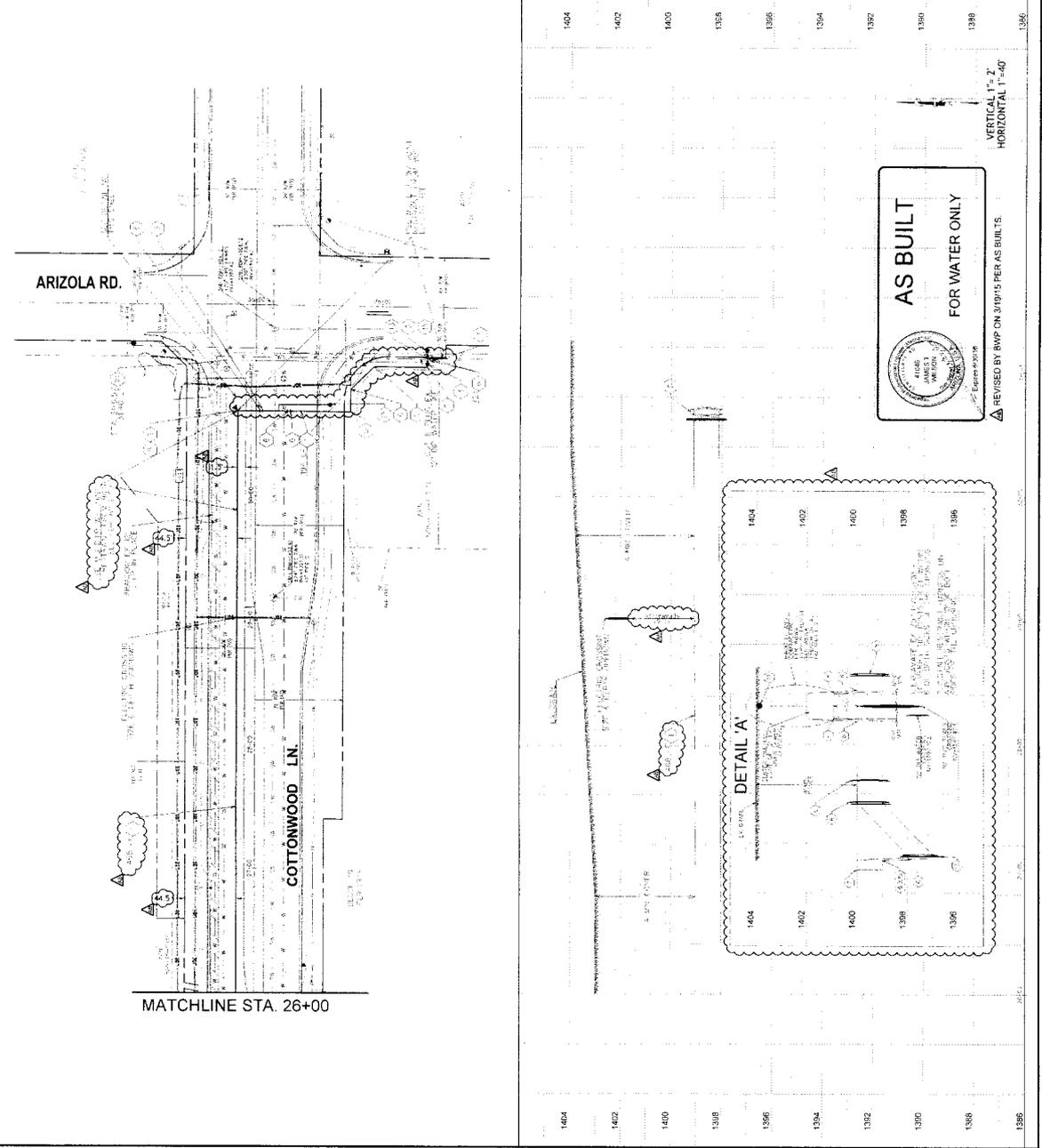


ARIZONA WATER COMPANY 3605 N. BLACK CANYON HWY. POST OFFICE BOX 29006 PHOENIX, ARIZONA 85096-9006 602.240.2800		CONSTRUCTION PLAN PROFILE ALONG COTTONWOOD LANE BETWEEN PENNANT ROAD AND ARIZOLA ROAD STATIONING: 1400+00 TO 1404+00	
1-5171 PINAL VALLEY SW 1/4 SEC. 16, T. 6 S., R. 6 E. 0409 AS SHOWN 5/23/2014 BWP	263-1100 1:800 STAKE IT THE REGISTRAR SHALL BE ADVISED IN ADVANCE WITH THE RECORDING COMPANY FOR ANY COMMENTS REVISIONS BY BWP ON 3/19/15 PER AS BUILTS APPROVED BY BWP ON 3/19/15 PER AS BUILTS		

PV-0080
SHEET 5 OF 7

CONSTRUCTION PLAN
 4" = 100'
 0' 20' 40'

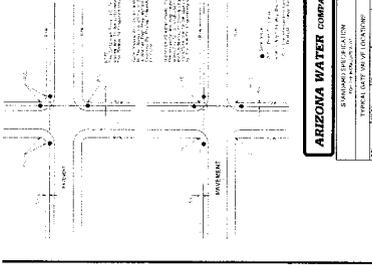
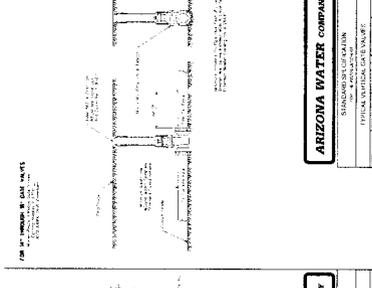
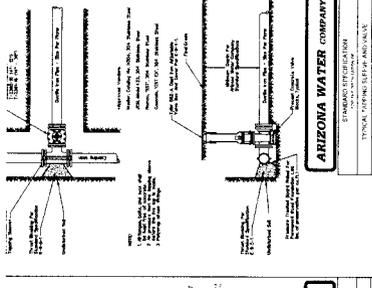
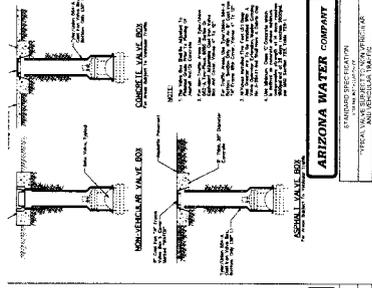
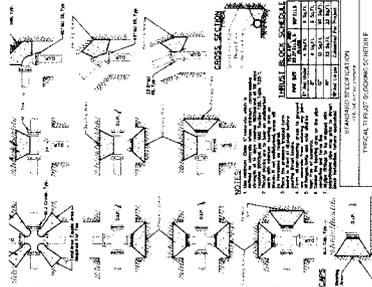
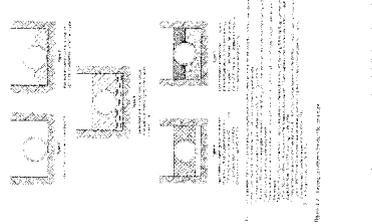
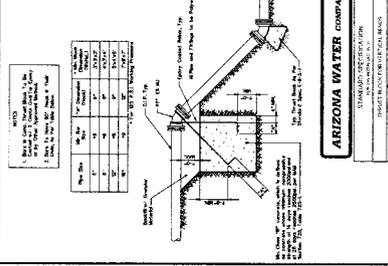
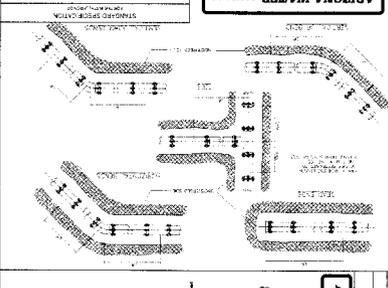
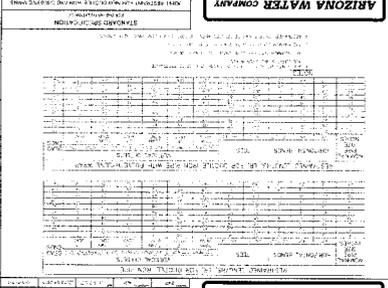
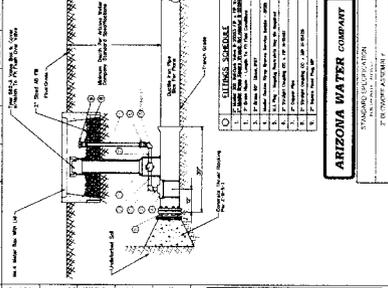
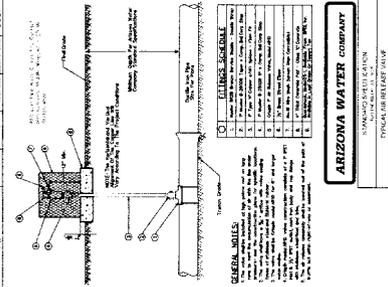
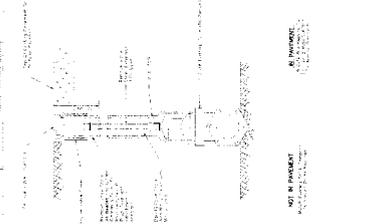
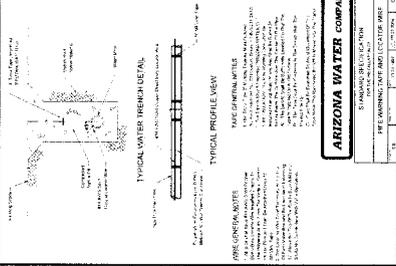
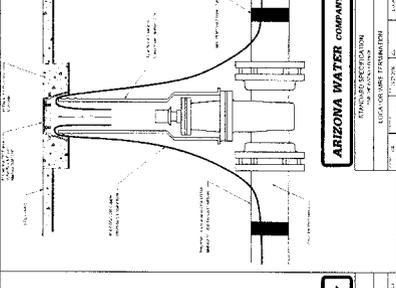
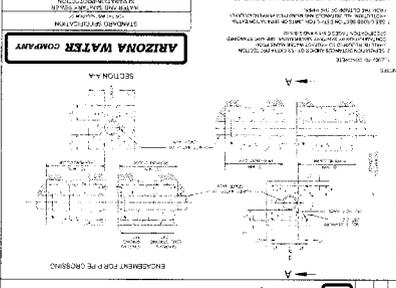
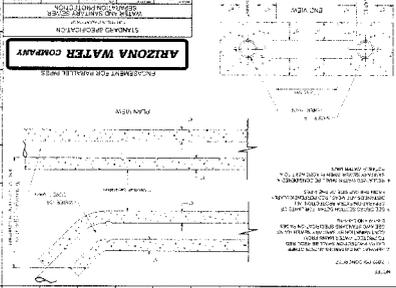
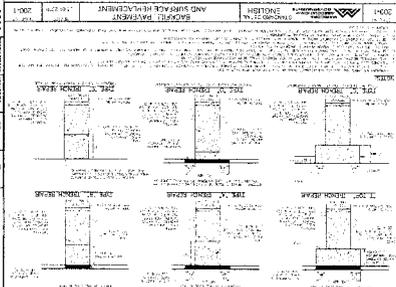
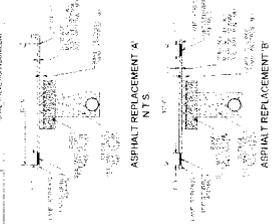
1. ALL EXISTING UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
 2. ALL NEW UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF PHOENIX STANDARDS AND SPECIFICATIONS.
 3. ALL NEW UTILITIES SHALL BE INSTALLED AT A MINIMUM DEPTH OF 48" BELOW FINISHED GRADE.
 4. ALL NEW UTILITIES SHALL BE INSTALLED WITH A MINIMUM COVER OF 18" BELOW FINISHED GRADE.
 5. ALL NEW UTILITIES SHALL BE INSTALLED WITH A MINIMUM COVER OF 18" BELOW FINISHED GRADE.
 6. ALL NEW UTILITIES SHALL BE INSTALLED WITH A MINIMUM COVER OF 18" BELOW FINISHED GRADE.
 7. ALL NEW UTILITIES SHALL BE INSTALLED WITH A MINIMUM COVER OF 18" BELOW FINISHED GRADE.
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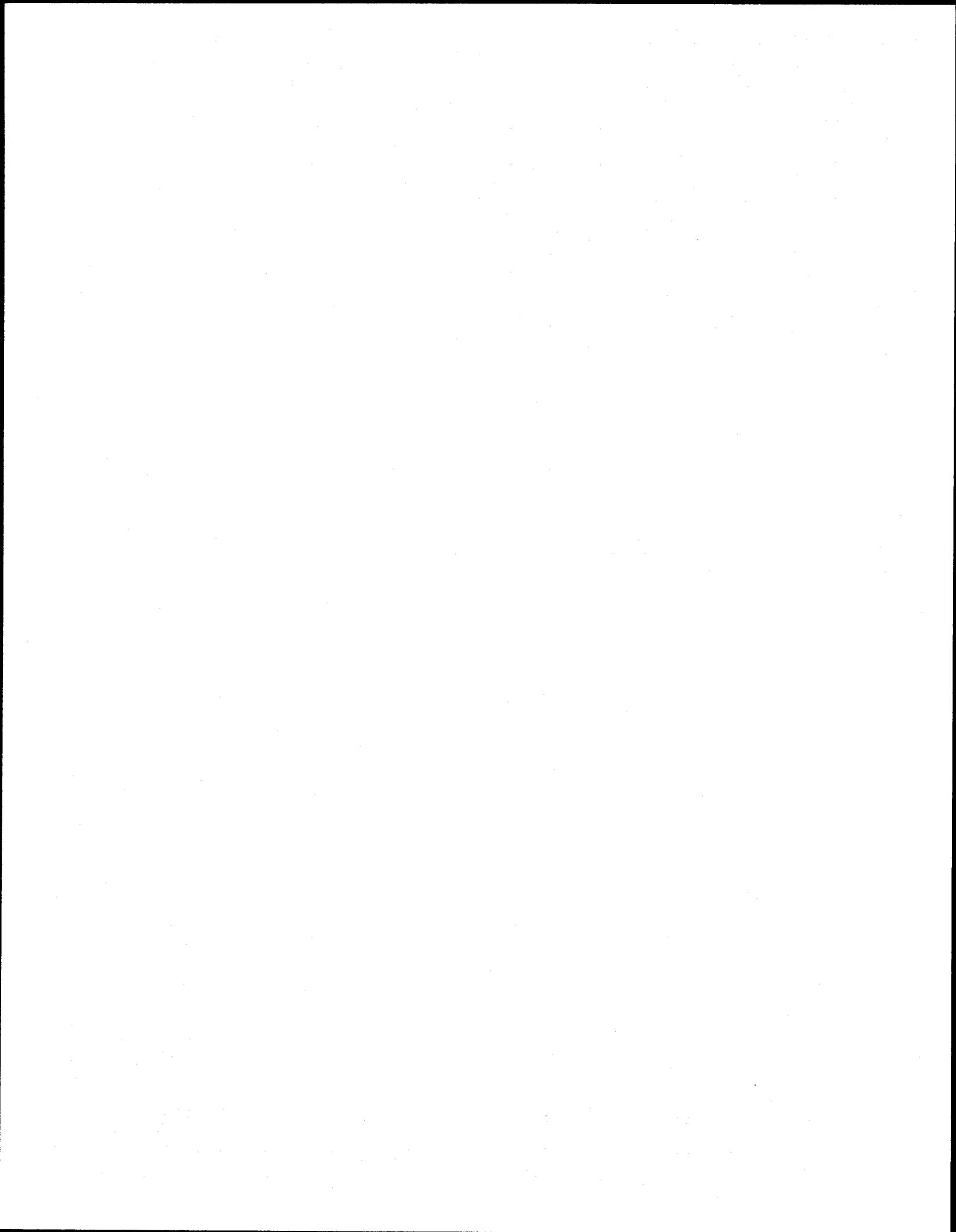


ARIZONA WATER COMPANY
 3925 N. BLACK CANYON HIGHWAY, POST OFFICE BOX 20008
 PHOENIX, ARIZONA 85068-9008
 (602) 240-0990
 1407 PINAL VALLEY SW 1/4 SEC. 15, T. 6 S., R. 6 E. 9/23/2014 AS SHOWN BWP

DESIGNED BY BWP 04/19/18 PER AS.B.175
 CHECKED BY BWP 04/19/18 PER AS.B.175
 263-1100
 ENGINEERED QUALITY
 THE DESIGNER'S RESPONSIBILITY IS TO THE CLIENT AND NOT TO THE CITY OF PINAL VALLEY.
 CITY OF PINAL VALLEY
 1407 PINAL VALLEY SW 1/4 SEC. 15, T. 6 S., R. 6 E. 9/23/2014 AS SHOWN BWP

AS BUILT FOR WATER ONLY







APPROVAL OF CONSTRUCTION

Project Description: Replace 2,840 L.F. of 12" main with 2,850 L.F. of 12-inch DIP water main on Cottonwood Lane from Arizola Rd to Peart in the Pinal Valley water system.

Location: _____ Cottonwood Lane between Peart Rd and Arizola Rd _____

Project Owner: _____ Arizona Water Company _____

Address: _____ 220 E. 2nd St, Casa Grande, AZ 85122 _____

The City of Casa Grande hereby issues an Approval of Construction for the above-described facility based on the following provisions of Arizona Administrative Code (A.A.C.) R18-5-507 et seq.

On 10/14/2014, The City of Casa Grande issued a Certificate of Approval to Construct for the referenced project.

On March 27, 2015 James T. Wilson, P.E., certified the following:

- A final construction inspection was conducted on March 3, 2015;
- The referenced project was constructed according to the as-built plans and specifications and ADEQ's Certificate of Approval to Construct;
- Water system pressure and leakage tests were conducted on March 3 2015, and the results were within the allowable leakage rates; and
- The applicant has the right to appeal this AOC Permit. Appeal information is on reverse side of this Permit.

Microbiological samples were collected on March 3, 2015 and analyzed on March 3, 2015 by Legend Technical Services, Inc., ADHS License No. AZ0004. The sample results were negative for total coliform.

This Approval of Construction authorizes the owner to begin operating the above-described facilities as represented in the approved plan on file with the ADEQ. Be advised that A.A.C. R18-5-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

PWS No.: 11-0099

Terrence S McKeon, PE
City Engineer

4.6.15
Date Approved



RIGHT TO APPEAL INFORMATION

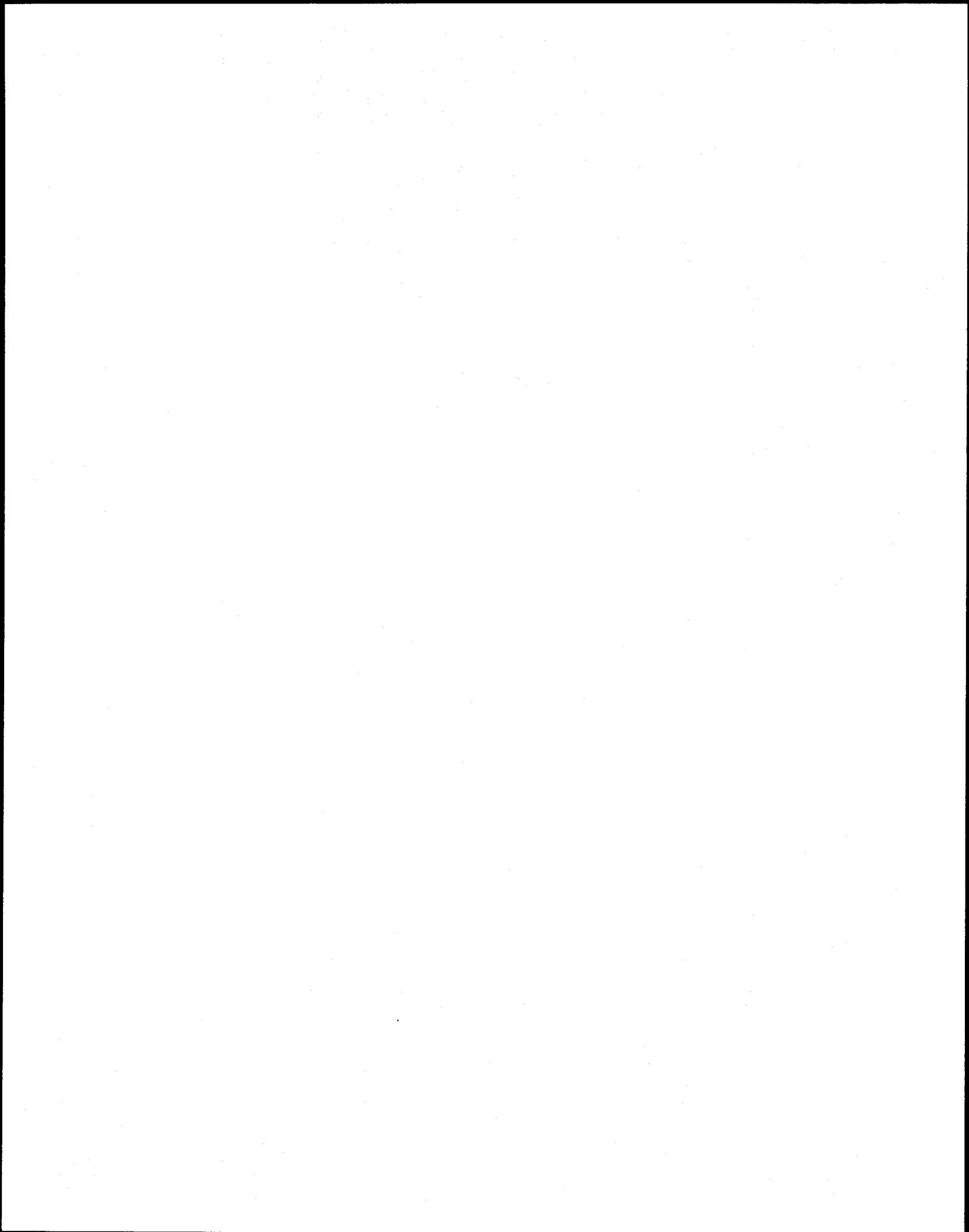
The City of Casa Grande's review of this application was subject to the requirements of the licensing time frames ("LTF") statute under Arizona Revised Statutes ("A.R.S.") § 41-1072 through § 41-1079 and the LTF rules under Arizona Administrative Code ("A.A.C.") R18-1-501 through R18-1-525. This Notice is being issued within the overall time frame for your application.

The City of Casa Grande hereby approves your application for Approval of Construction Drinking Water Facilities under A.R.S. § 49-351. Your copy of the Approval of Construction Permit is on the reverse side of this Right to Appeal Information sheet.

This decision is an appealable agency action under A.R.S. § 41-1092. You have a right to request a hearing and file an appeal under A.R.S. § 41-1092.03(B). You must file a written Request for Hearing or Notice of Appeal within **30 days** of your receipt of this Notice. A Request for Hearing or Notice of Appeal is filed when it is received by ADEQ's Hearing Administrator as follows:

Office of Administrative Counsel
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, AZ 85007

The Request for Hearing or Notice of Appeal shall identify the party, the party's address, the agency and the action being appealed and shall contain a concise statement of the reasons for the appeal. Upon proper filing of a Request for Hearing or Notice of Appeal, ADEQ will serve a Notice of Hearing on all parties to the appeal. If you file a timely Request for Hearing or Notice of Appeal you have a right to request an informal settlement conference with ADEQ under A.R.S. § 41-1092.06. This request must be made in writing no later than **20 days** before a scheduled hearing and must be filed with the Hearing Administrator at the above address.





ARIZONA WATER COMPANY

CONSTRUCTION
PLACED IN SERVICE
NOTICE

WORK AUTHORIZATION NO.: 1-5171

DIVISION: CG/PV

DATE PLACED IN SERVICE: 4 | 15 | 15

CONTRACT NO: _____

FOR PURPOSES OF MODIFIED ACCELERATED COST RECOVERY SYSTEM, AN ASSET IS "PLACED IN SERVICE" WHEN IT IS IN A CONDITION OR STATE OF READINESS AND AVAILABILITY FOR A SPECIFICALLY ASSIGNED FUNCTION, WHETHER IT BE FOR USE IN A TRADE OR BUSINESS, OR FOR THE PRODUCTION OF INCOME.

I CERTIFY THAT THE ASSET(S) CONSTRUCTED PURSUANT TO THE PROVISIONS OF THE ABOVE-REFERENCED WORK AUTHORIZATION ARE READY FOR SERVICE AS OF THE DATE SHOWN ABOVE.

[Signature]
Division Manager or Operations Superintendent
(signature)

5-11-15
Date

STAMP: ORIGINAL ACCOUNTING DEPARTMENT

A-1-3-1
FKS 11/24/11

Western Group Rate Case

Exhibit FKS-1

5173 Electrical

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5173
 P.E. NUMBER:
 BUDGET ITEM NO.: B-1
 SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY/WT	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: RAY MURRIETA	WORK TO BE FINISHED BY: WITHIN 180 DAYS
TAX CODE: 0489 CG / 2550 WT	

DESCRIPTION OF WORK:

Relocate motor saver displays, well timers, and other operator controls from the interior of 480V panels to panel exterior doors. Repair starter reset plungers. Install shielding over exposed conductors and isolation switches for 120V panels at various sites throughout the Pinal Valley Division water systems. Construct in accordance with attached drawings and/or Arizona Water Company specifications.

FACTORS JUSTIFYING WORK:

APPROVED 2014 BUDGET ITEM (\$15,000):
 Controls necessary for regular operation and maintenance of well, tank, and booster stations are located inside 480V and 120V electrical control panels. The electrical control panels must be energized to log operating parameters, record error codes and make operational adjustments. The Company's Energy Control Program ~~does not allow~~ ^{From} employees to enter energized panels. This requires the use of outside electrical contractors to perform this routine work. The proposed panel modifications will allow Company operators access to system controls reducing dependency on outside contractors and system down time.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	<i>[Signature]</i> Richard Hacker	07-22-2014
LABOR	4,400	REVIEWED FOR ESMT/ROW VERIFICATION:	
CONTRACT PORTION	5,600	<i>[Signature]</i> Charles Briggs	07-22-2014
OVERHEAD	1,100	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 11,100	<i>[Signature]</i> James Wilson	7/22/14
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	<i>[Signature]</i> Fredrick Schneider	7-25-14
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	<i>[Signature]</i> Joseph Harris	7/31/14
NET COMPANY CASH REQUIRED	\$ 11,100	AUTHORIZED BY PRESIDENT:	
		<i>[Signature]</i> William Garfield	8-4-2014

COMMENTS:

CONSTRUCTION RELEASE:

2014 BUDGET

ARIZONA WATER COMPANY
WORK AUTHORIZATION - DETAIL SHEET

W.A. NUMBER: 1-5173
P.E. NUMBER:
BUDGET ITEM NO.: B-1
SHEET NO.: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER

PROJECT DESCRIPTION:
Relocate motor saver displays, well timers, and other operator controls from the interior of 480V panels to panel exterior doors. Repair starter reset plungers. Install shielding over exposed conductors and isolation switches for 120V panels at various sites throughout the Pinal Valley Division water systems.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Panel Inspections	325	1	\$ 5,000.00	\$ 5,000
	Contracting Tax	325	1	300.00	300
	Performance and Payment bond	325	1	300.00	300
	SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345			
SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345				
SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				

TOTAL CONTRACT WORK \$ 5,600

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
SERVICE CONNECTIONS: SINGLE-SHORT	345				
METERS	346				

TOTAL MATERIALS \$ -

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Project Management	325	48	\$ 50.00	\$ 2,400
	TESTING FEE				
	PERMIT FEE				
	SURVEY FEE				
	FIELD INSPECTION	325	40	50.00	2,000
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345				
INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				

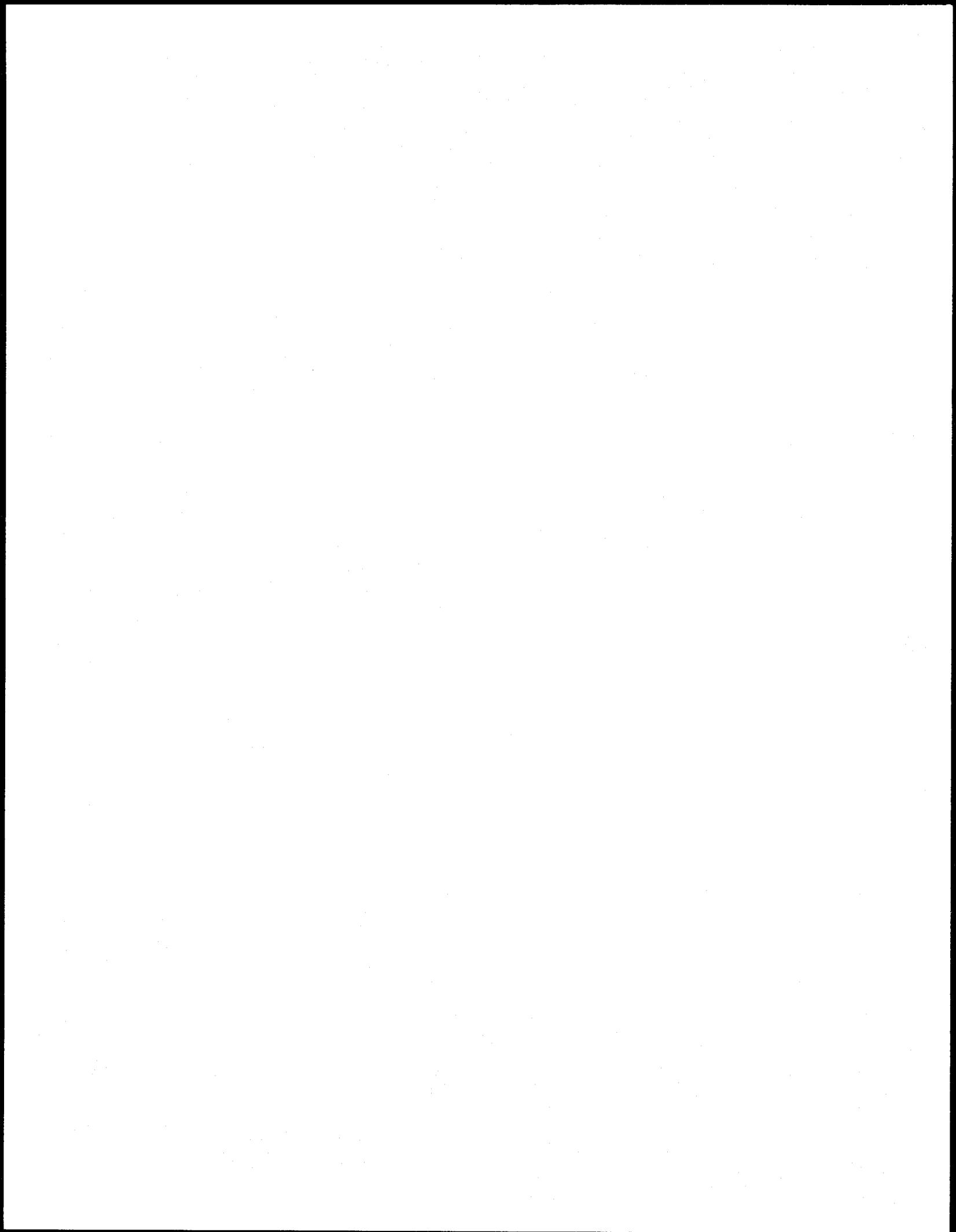
TOTAL LABOR \$ 4,400

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 10,000

OVERHEAD 1,100

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 11,100

AFH



ARIZONA WATER COMPANY WORK AUTHORIZATION

W.A. NUMBER: 1-5173
 P.E. NUMBER:
 BUDGET ITEM NO.: B-1
 SHEET NO.: 1 of 2

SYSTEM: PVT/TG/ST/CLA	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: MARIO MENDEZ	WORK TO BE FINISHED BY: WITHIN 60 DAYS
TAX CODE: 0489	

DESCRIPTION OF WORK

Relocate motor saver displays and other operational controls from the interior of 480V and 240V panels to panel exterior doors, repair starter reset plungers, install shielding over exposed conductors and install isolation switches for 120V panels and equipment at various sites throughout the Pinal Valley, Tierra Grande, Stanfield and Coolidge Airport water systems.

FACTORS JUSTIFYING WORK:

APPROVED 2014 BUDGET ITEM (\$15,000):
 Controls necessary for regular operation and maintenance of well, tank, and booster stations are located inside 480V and 240V electrical control panels. Company operators must energize electrical control panels to log operating parameters, record error codes and make operational adjustments. The Company's Energy Control Program does not allow employees to enter energized panels. This requires the use of outside electrical contractors to perform this routine work. The proposed panel modifications will allow Company operators access to system controls reducing dependency on outside contractors and system down time.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	<i>M. Mendez</i> Mario Mendez	10/23/14
LABOR	4,400	REVIEWED FOR ESTIMATE/ROW VERIFICATION:	
CONTRACT PORTION	107,600	<i>Charles Briggs</i> Charles Briggs	10-23-2014
OVERHEAD	13,400	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 125,400	<i>James Wilson</i> James Wilson	10/24/14
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	<i>Fredrick Schneider</i> Fredrick Schneider	10-24-14
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	<i>Joseph Harris</i> Joseph Harris	10/27/14
NET COMPANY CASH REQUIRED	\$ 125,400	AUTHORIZED BY PRESIDENT:	
		<i>William M. Garfield</i> William Garfield	10-28-14

COMMENTS:

Transfer funds (\$110,400) from WA 1-5254 Well Nos. 32 and 33 Nitrate removal facilities to fund the overage of this project.

CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION
 Authorized by: FRED SCHNEIDER
 Date: 10/29/14

AFH

ARIZONA WATER COMPANY

WORK AUTHORIZATION - DETAIL SHEET

W.A. NUMBER: 1-5173
 P.E. NUMBER:
 BUDGET ITEM NO.:
 SHEET NO.: B-1
 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER

PROJECT DESCRIPTION

Relocate motor saver displays and other operational controls from the interior of 480V and 240V panels to panel exterior doors, repair starter reset plungers, install shielding over exposed conductors and install isolation switches for 120V panels and equipment at various sites throughout the Pinal Valley, Tierra Grande, Stanfield and Coolidge Airport water systems.

	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
C O N T R A C T W O R K	Provide and Install Terminal Covers	325	1	\$ 8,000.00	\$ 8,000
	Provide and Install Motor Saver Displays	325	46	1,000.00	46,000
	Provide and Install Cla-Val Solenoid Disconnect Switch	325	44	400.00	17,600
	Provide and Install Oil Drip Solenoid Disconnect Switch	325	20	400.00	8,000
	Provide and Install Sand Separator Solenoid Disconnect Switch	325	4	400.00	1,600
	Provide and Install Exhaust Fan Disconnect Switch	325	19	400.00	7,600
	Provide and Install Push Button Resets	325	3	200.00	600
	Provide and Install 777 Motor Saver	325	1	1,200.00	1,200
	Provide material and labor to perform additional scope of work at all sites	325	1	1,000.00	1,000
	Contracting Tax	325	1	8,000.00	8,000
	100% Performance and Payment Bond	325	1	8,000.00	8,000
	SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345			

TOTAL CONTRACT WORK \$ 107,600

M A T E R I A L S					
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
SERVICE CONNECTIONS: SINGLE-SHORT	345				
METERS	346				

TOTAL MATERIALS \$ -

L A B O R	Engineering and Project Management	325	40	\$ 55.00	\$ 2,200
	TESTING FEE				
	PERMIT FEE				
	SURVEY FEE				
	FIELD INSPECTION	325	40	55.00	2,200
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				

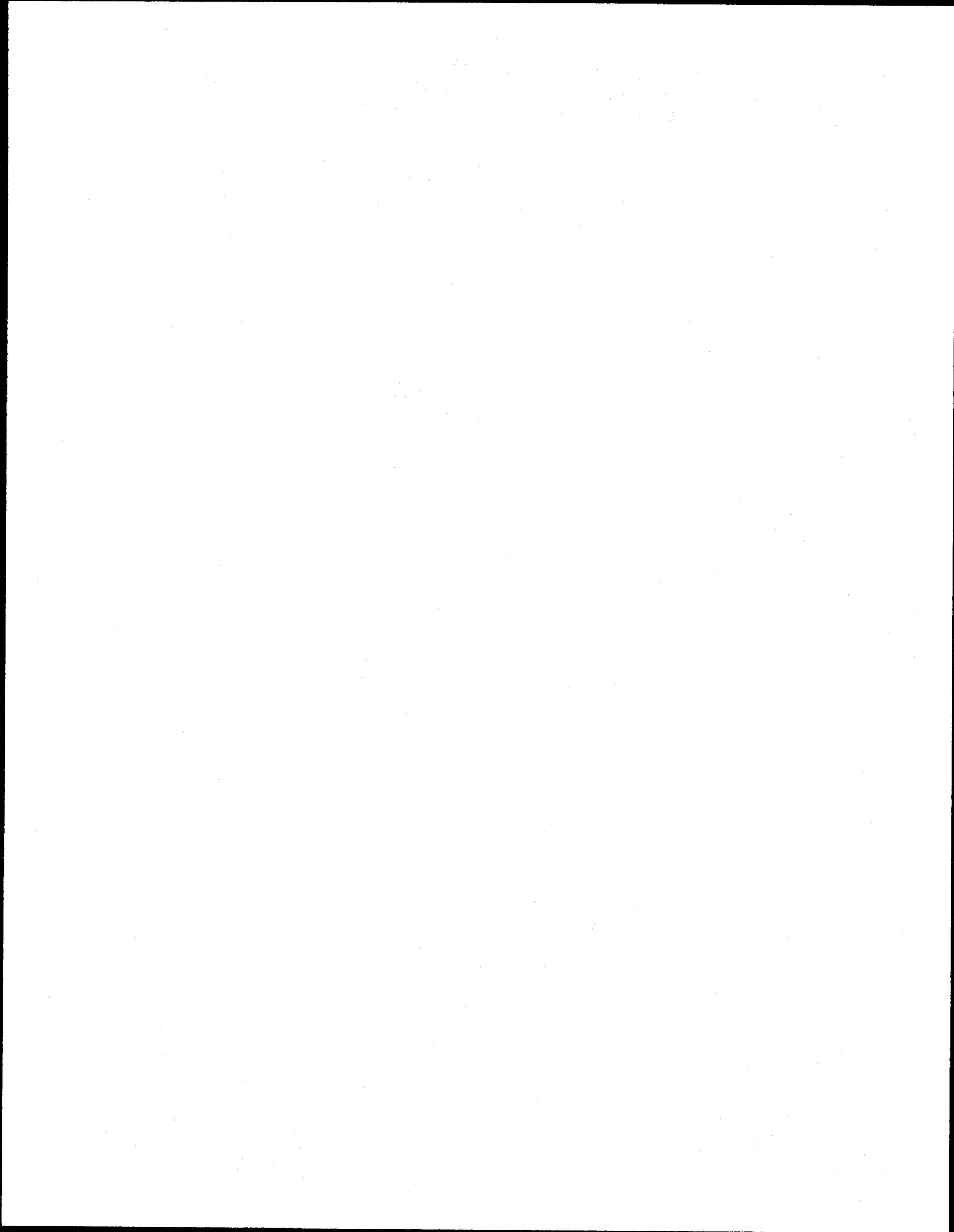
TOTAL LABOR \$ 4,400

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 112,000

OVERHEAD 13,400

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 125,400

AFH



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

July 21, 2014

Mr. John Haukeli
Keller Electrical Industries, Inc.
1881 E. University Drive
Phoenix, AZ 85034

Re: WA 1-5173 Pinal Valley and White Tank Electrical Panel Inspections

PROJECT: Electrical Panel Inspections	
SYSTEM Pinal Valley/White Tank	
CONTRACT NO.:	
P.E. NO.	W.A. NO: 1-5173

Dear Mr. Haukeh:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on August 8, 2014, Keller Electrical Industries, Inc. acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's

E-MAIL: MAIL@AZWATER.COM

Mr. John Haukeli
Keller Electrical Industries, Inc.

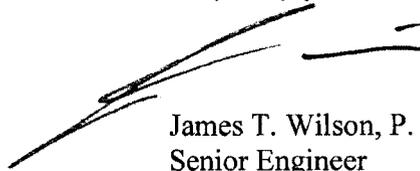
July 21, 2014
Page 2

ability to terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

If you have any questions, please call me at this office.

Very truly yours,



James T. Wilson, P. E.
Senior Engineer
engineering@azwater.com

afh
Enclosure



ARIZONA WATER COMPANY

Pinal Valley & White Tank
220 E. 2nd Street, Casa Grande, AZ - 520-836-8785

PROPOSAL/CONTRACT

CONTRACTOR: KELLER ELECTRIC INDUSTRIES, INC.	SYSTEM: PINAL VALLEY & WT
ADDRESS: 1881 E. UNIVERSITY DRIVE	WA No(s): 1-5173
CITY ST ZIP: PHOENIX, AZ 85034	BID DUE DATE: June 5, 2014

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an independent prime contractor.

- Contractor certifies that it has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work.
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-5061 B.6), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. Contractor retains full liability and obligation to pay the Contracting Tax and will defend and indemnify the Company against any demand or obligation to pay the Contracting Tax.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 160 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS:

CONTRACTOR KELLER ELECTRICAL INDUSTRIES, INC.	PROPOSAL/CONTRACT ACCEPTED: ARIZONA WATER COMPANY
By:	By:
Print Name: John Haukeli	Print Name: Fredrick K. Schneider, PE
Title: Service Manager	Title: Vice President - Engineering
Date: June 4, 2014	Date: 8-8-2014

AFH

ASH



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. John Haukeli
Keller Electrical Industries, Inc.
1881 E. University Drive
Phoenix, AZ 85034

DATE: 8/14/14
DIVISION: CASA GRANDE
SYSTEM: PVWT
W.A.: 1-5173

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Electrical panel inspections at Coolidge, Casa Grande,
Stanfield, Ajo and White Tank.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED: Yes No

TOTAL DAYS
ALLOWED: 170

COMPLETION
DATE: 11/29/15

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY
Company

KELLER ELECTRICAL INDUSTRIES, INC.
Contractor (type name)

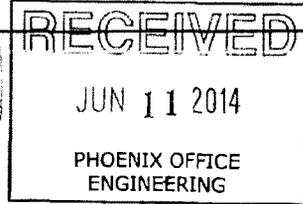
By *Julian A. Belmont*
Title Vice President - Engineering

By _____
Title _____

AFH

THE AMERICAN INSTITUTE OF ARCHITECTS

AIA Document A310
Bid Bond



KNOW ALL MEN BY THESE PRESENTS, THAT WE Keller Electrical Industries, Inc.

1881 E. University Drive, Phoenix, AZ 85034

as Principal, hereinafter called the Principal, and Platte River Insurance Company

2121 N. California Blvd., Suite 300, Walnut Creek, CA 94596

a corporation duly organized under the laws of the State of NE

as Surety, hereinafter called the Surety, are held and firmly bound unto Arizona Water Company

3805 N. Black Canyon Highway, Phoenix, AZ 85015

as Oblige, hereinafter called the Oblige, in the sum of Ten Percent of Amount Bid

Dollars (\$ 10%),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for Coolidge, Casa Grande, Stanfield, Ajo and White Tank Electrical Panel Inspections; W.A. No.: 1-5173

NOW, THEREFORE, if the Oblige shall accept the bid of the Principal and the Principal shall enter into a Contract with the Oblige in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and materials furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Oblige the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Oblige may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 5th day of June, 2014

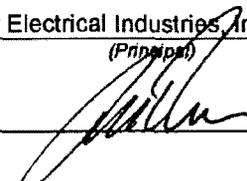

(Witness)

Keller Electrical Industries, Inc.

(Principal)

(Seal)

By:



VP/CFO

(Title)



Susan Shin

(Witness)

Platte River Insurance Company

(Surety)

(Seal)

By:



Attorney-in-Fact Keith W. Newell

(Title)

FILE COPY

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Los Angeles

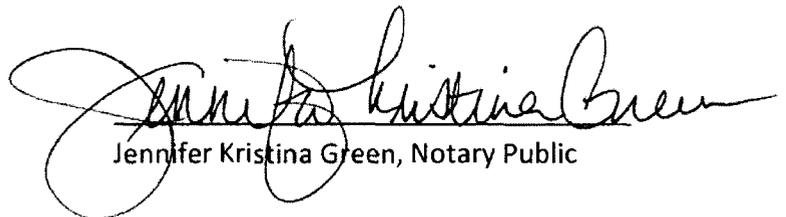
Bond No.: N/A

On June 5, 2014 before me, **Jennifer Kristina Green, Notary Public**, personally appeared Keith W. Newell, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.




Jennifer Kristina Green, Notary Public

PLATTE RIVER INSURANCE COMPANY
POWER OF ATTORNEY

41304131

KNOW ALL MEN BY THESE PRESENTS, That the PLATTE RIVER INSURANCE COMPANY, a corporation of the State of Nebraska, having its principal offices in the City of Middleton, Wisconsin, does make, constitute and appoint

-----KEITH W NEWELL; JENNIFER K. GREEN-----

its true and lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf, as surety, and as its act and deed, any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of

-----ALL WRITTEN INSTRUMENTS IN AN AMOUNT NOT TO EXCEED \$20,000,000-----

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of PLATTE RIVER INSURANCE COMPANY at a meeting duly called and held on the 8th day of January, 2002.

“RESOLVED, that the President, and Vice-President, the Secretary or Treasurer, acting individually or otherwise, be and they hereby are granted the power and authorization to appoint by a Power of Attorney for the purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, one or more vice-presidents, assistant secretaries and attorney(s)-in-fact, each appointee to have the powers and duties usual to such offices to the business of the company; the signature of such officers and the seal of the Corporation may be affixed to such power of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Corporation in the future with respect to any bond or undertaking or other writing obligatory in the nature thereof to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any of said officers, at any time.”

In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.

In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner – Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

IN WITNESS WHEREOF, the PLATTE RIVER INSURANCE COMPANY has caused these presents to be signed by its officer undersigned and its corporate seal to be hereto affixed duly attested, this 8th day of January, 2014.

Attest:

Richard W. Allen III

Richard W. Allen III
President
Surety & Fidelity Operations



PLATTE RIVER INSURANCE COMPANY

Stephen J. Sills

Stephen J. Sills
CEO & President

STATE OF WISCONSIN } S.S.:
COUNTY OF DANE

On the 8th day of January, 2014 before me personally came Stephen J. Sills, to me known, who being by me duly sworn, did depose and say: that he resides in the County of New York, State of New York; that he is President of PLATTE RIVER INSURANCE COMPANY, the corporation described herein and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that he signed his name thereto by like order.



Daniel W. Krueger

Daniel W. Krueger
Notary Public, Dane Co., WI
My Commission Is Permanent

STATE OF WISCONSIN } S.S.:
COUNTY OF DANE

CERTIFICATE

I, the undersigned, duly elected to the office stated below, now the incumbent in PLATTE RIVER INSURANCE COMPANY, a Nebraska Corporation, authorized to make this certificate, DO HEREBY CERTIFY that the foregoing attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at the City of Middleton, State of Wisconsin this 5th day of June, 2014



Alan S. Ogilvie

Alan S. Ogilvie
Secretary

THIS DOCUMENT IS NOT VALID UNLESS PRINTED ON GREEN SHADED BACKGROUND WITH A RED SERIAL NUMBER IN THE UPPER RIGHT HAND CORNER. IF YOU HAVE ANY QUESTIONS CONCERNING THE AUTHENTICITY OF THIS DOCUMENT CALL, 800-475-4450. PR-POA (Rev. 11-13)

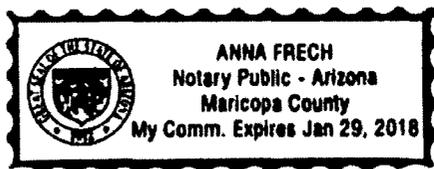
NOTARIAL ACKNOWLEDGEMENT

STATE OF ARIZONA)

COUNTY OF MARICOPA)

This instrument was acknowledged before me on this 9th day of June

20 14, by Jim W. Everson, Vice President/CFO



(Notary Seal)



NOTARY PUBLIC

Description of document this notarial certificate is being attached to:	
Type/Title	Bid Bond No. 41304131
Date of Doc	June 5 th , 2014
Number of Pages	3
Add'l Signers (other than those named in the notarial certificate.)	Kim Rivera



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/17/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lovitt & Touche' Inc - Phoenix 602-956-2250 P. O. Box 64985 Phoenix AZ 85082	CONTACT NAME: Betsy Fillicelli	
	PHONE (A/C, No, Ext): 602-385-7096	FAX (A/C, No): 602-956-2258
E-MAIL ADDRESS: bfillicelli@lovitt-touche.com		
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A: Amerisure Partners Insurance Compan		
INSURER B: Federal Insurance Company		20281
INSURER C: Amerisure Insurance Company		
INSURER D:		
INSURER E:		
INSURER F:		

COVERAGES **CERTIFICATE NUMBER:** 68562688 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDSUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
C	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	Y Y	CPP20762010301	1/1/2014	1/1/2015	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COM/OP AGG \$2,000,000 \$
C	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> Camp & Coll <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input checked="" type="checkbox"/> \$1,000 Deds	Y Y	CA20762000301	1/1/2014	1/1/2015	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
C	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS MADE DED <input checked="" type="checkbox"/> RETENTION \$0	Y Y	CU20762020302	1/1/2014	1/1/2015	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000 \$
A A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory In NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y N/A	WC2073705 WC2073706	1/1/2014 1/1/2014	1/1/2015 1/1/2015	WC STATU- TORY LIMITS <input type="checkbox"/> OTH- ER AZ / NV E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
B C	Crime/Fidelity Leased/Rented Equip		82116997 CPP207620103	1/1/2014 1/1/2014	1/1/2015 1/1/2015	Crime Limit \$250,000 L/R Eqpt Limit \$100,000 Ded. L/R Eqpt \$1,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Certificate Holder and others are additional insureds as respects general liability, automobile liability and umbrella liability if required in a written contract. Waiver of Subrogation applies to the general liability, automobile liability, umbrella liability and workers compensation if required in a written contract. The general liability insurance is primary and certificate holder's insurance is non-contributory if required by written contract.

CERTIFICATE HOLDER

Arizona Water Company
 Casa Grande Well No. 25 Job No.1-5123
 3805 N Black Canyon Highway
 Phoenix AZ 85015-5351

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2010 ACORD CORPORATION. All rights reserved.



ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

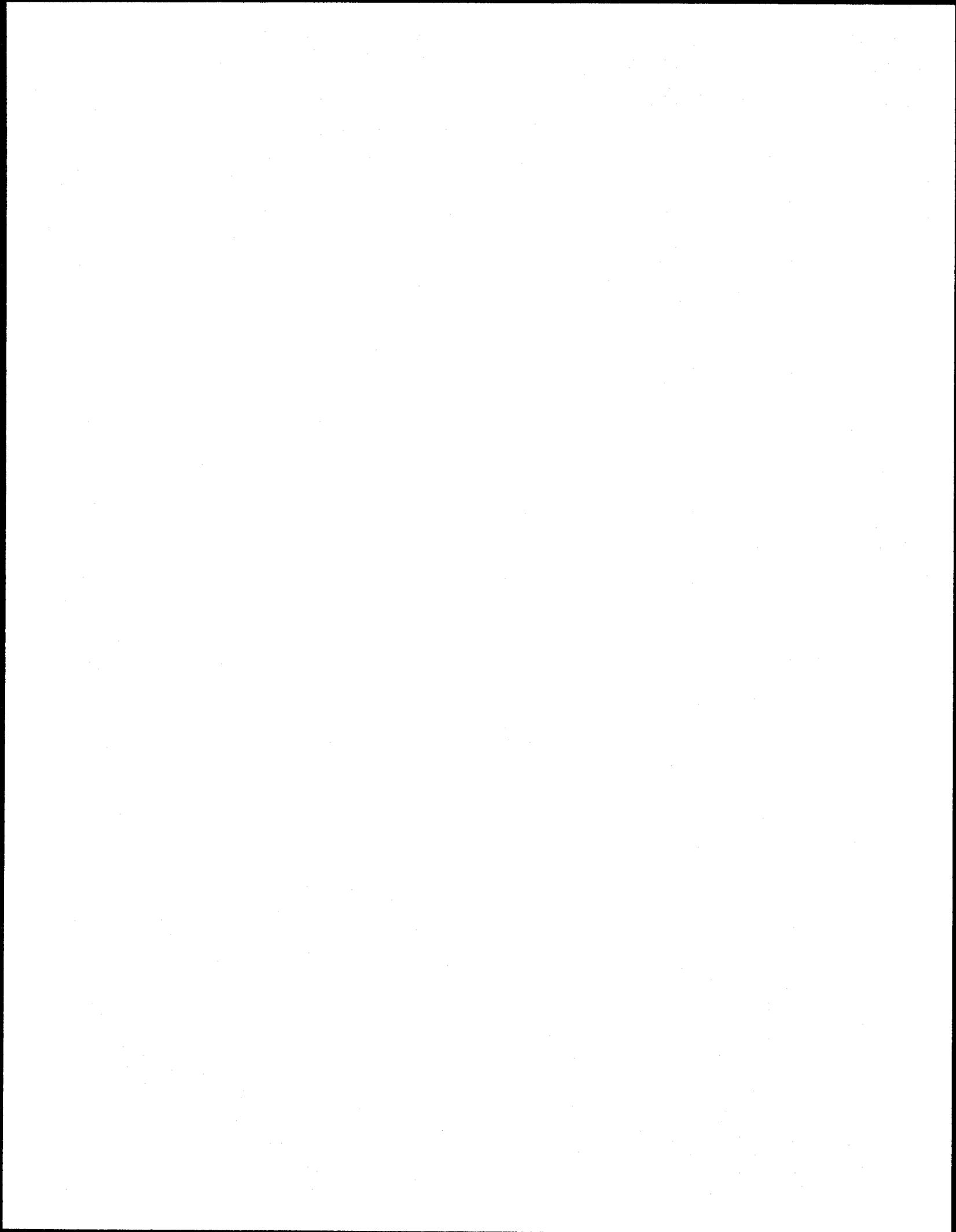
CONSTRUCTION SPECIFICATIONS: E-8-1

STANDARD SPECIFICATION DRAWINGS: E-9-1

**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

gw 1/22/14

A copy of this entire Spec Book was sent out with *Kelle Electrical* Proposal
package for *1-5173 Electrical Panel* on *8/12/14*



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

October 28, 2014

Mr. Joseph Miller
Ludvik Electric
1020 E. University Drive
Phoenix, AZ 85034

Re: Pinal Valley, Stanfield, Tierra Grande and Coolidge Airport

PROJECT: Electrical Panels	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
P.E. NO.:	W.A. NO. 1-5173

Dear Mr. Miller:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on 11/21/14, Ludvik Electric acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's ability to

E-MAIL: MAIL@AZWATER.COM

Mr. Joseph Miller
Ludvik Electric

October 28, 2014
Page 2

terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

If you have any questions, please call me at this office.

Very truly yours,



Mario L. Mendez, E. I. T.
Engineer
mmendez@azwater.com

afh
Enclosure



ARIZONA WATER COMPANY

Pinal Valley
220 E. 2nd Street

PROPOSAL/CONTRACT

CONTRACTOR: LUDVIK ELECTRIC	SYSTEM: PV/ST/TG/CLA
ADDRESS: 1020 E. UNIVERSITY DRIVE	WA No(s): 1-5173
CITY ST ZIP: PHOENIX, AZ 85034	BID DUE DATE: October 24, 2014

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an independent prime contractor.

- Contractor certifies that it has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-5061 B.6.), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. Contractor retains full liability and obligation to pay the Contracting Tax and will defend and indemnify the Company against any demand or obligation to pay the Contracting Tax.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 90 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS:

See Special Conditions dated 10/9/2014.

CONTRACTOR LUDVIK ELECTRIC	PROPOSAL/CONTRACT ACCEPTED: ARIZONA WATER COMPANY
By: <i>Joseph F. Miller</i>	By: <i>Fredrick K. Schneider, PE</i>
Print Name: Joseph F. Miller	Print Name: Fredrick K. Schneider, PE Joseph D. HADJID
Title: V.P. AZ Operations	Title: Vice President - Engineering VP-TRLOSUA
Date: 10-24-2014	Date: 10/2/14

AFH



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Joseph Miller
Ludvik Electric
1020 E. University Drive
Phoenix, AZ 85034

DATE: 11/10/14
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5173

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Install motor saver with displays, relocate operational controls from the interior of electrical panels to panel exterior doors, install isolation switches for 12-V electrical equipment at various sites throughout the Pinal Valley Stanfield Tierra Grande and Coolidge Airport water system.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED: Yes No

TOTAL DAYS
ALLOWED: 50

COMPLETION
DATE: 12/30/14

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY
Company

LUDVIK ELECTRIC
Contractor (type name)

By Joseph D. Harris
Title Vice President - Engineering VP-Treasurer

By _____
Title _____

ARIZONA WATER COMPANY

CASA GRANDE DIVISION: PINAL VALLEY, STANFIELD, TIERRA GRANDE AND COOLIDGE AIRPORT WATER SYSTEMS Electrical Panel Improvements SPECIAL CONDITIONS 10/9/2014

Background

In an effort to improve operational efficiency and reduce costs, Arizona Water Company ("Company") is undertaking a company-wide electrical panel improvement program that allows plant operations to continue safely unimpeded with as little lost time as possible. The Company currently contracts local electrical contractors to adjust operational controls inside electrical panels when electrical equipment fails. Therefore, Company engineers inspected electrical panels and equipment at sites in the Pinal Valley, Stanfield, Tierra Grande and Coolidge Airport water systems to determine which sites have operational controls inside electrical panels. Furthermore, Company engineers determined that electrical terminals within certain panels are exposed and must be covered to prevent accidental shock. Company engineers also identified the need to de-energize certain electrical components so Company operators can perform maintenance on these components. Included below, are the locations of all sites in the Pinal Valley, Stanfield, Tierra Grande and Coolidge Airport water systems included in the scope of work for this project.

Facility Information

Coolidge Well No. 7 Site

Site Location: 125 W. Northern Rd, Coolidge, AZ 85128

Existing Site Facilities: One motor saver in a well control panel, two motor savers in two separate booster control panels, one oil drip and one Cla-Val.

Facilities to be furnished and installed: Three Motor Saver Displays, one Oil Drip Solenoid Disconnect Switch, and one Cla-Val Solenoid Disconnect Switch.

Vah Ki Inn BPS Site

Site Location: On the intersection of California Avenue and Vah Ki Inn Road, Coolidge, AZ 85128

Existing Site Facilities: One booster pump motor starter in a booster pump control panel and one Cla-Val.

Facilities to be furnished and installed: One Push Button Reset and one Cla-Val Solenoid Disconnect Switch.

Valley Farms Well Nos. 1 and 2 Site

Site Location: 10804 E. Vah Ki Inn Road, Valley Farms, AZ 85191

Existing Site Facilities: Four Cla-Vals.

Facilities to be furnished and installed: Four Cla-Val Solenoid Disconnect Switches.

Coolidge Airport Well No. 1 Site

Site Location: 6300 N. Coolidge Airport Road, Florence, AZ 85132

Existing Site Facilities: One level control panel, one compressor starter in a compressor control panel, one oil drip and two Cla-Vals.

Facilities to be furnished and installed: Terminal Covers, One Push Button Reset, one Oil Drip Solenoid Disconnect Switch and two Cla-Val Solenoid Disconnect Switches.

Coolidge Airport Well No. 2 Site

Site Location: 6300 N. Coolidge Airport Road, Florence, AZ 85132

Existing Site Facilities: One motor saver and two Hand/Off/Auto (HOA) switches in a well control panel.

Facilities to be furnished and installed: One Motor Saver Display.

Additional scope of work: Contractor will remove HOA switches from well control panel and permanently cover openings with painted steel plates.

La Palma Road BPS Site

Site Location: 2500' south of Bartlett Road on La Palma Road, Coolidge, AZ 85128

Coolidge Well Nos. 9 and 10 and Pancake Tank Site

Site Location: 1100' east of Arizona Boulevard and 3800' north of Hwy 87, Coolidge, AZ 85128

Existing Site Facilities: One motor saver in a nitrate control panel, two motor savers in two separate well control panels, four Cla-Vals and two sand separators.

Facilities to be furnished and installed: Three Motor Saver Displays, four Cla-Val Solenoid Disconnect Switches and two Sand Separator Solenoid Disconnect Switches.

Casa Grande ("CG") Office

Site Location: 220 E. 2nd Street, Casa Grande, AZ 85122

Existing Site Facilities: Ten chart recorders and one air compressor.

Additional scope of work: Contractor will remove chart recorders from wall and restore wall to a condition acceptable to Company. Contractor will repair air compressor reset function and replace any necessary components to restore reset function to air compressor.

Mission Royale CG Well No. 29 Site

Site Location: 2346 E. Santiago Trail, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

Mission Royale CG Well No. 33 Site

Site Location: 2602 E. Hancock, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

Mission Royale CG Well No. 32 Site

Site Location: 2578 E. Santa Yanez, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

Tanger BPS Site

Site Location: 11302 Jimmie Kerr Boulevard, Casa Grande, AZ 85122

Existing Site Facilities: Four motor savers in four separate booster control panels, one starter in a compressor starter panel, two Cla-Vals and one on/off switch on a booster control panel door.

Facilities to be furnished and installed: Four Motor Saver Displays, one Push Button Reset and two Cla-Val Solenoid Disconnect Switches.

Additional scope of work: Contractor will provide and install a new on/off switch for booster pump no. 1.

Arizona City Water Campus

Site Location: 1500' east of Kashmir Road on Heather Drive, Arizona City, AZ 85123

Existing Site Facilities: Two Cla-Vals.

Facilities to be furnished and installed: Two Cla-Val Solenoid Disconnect Switches.

Tierra Grande Well Nos. 1 and 3 Site

Site Location: Northwest corner of 11 Mile Road and Arizona Western Boulevard, Casa Grande, AZ 85194.

Existing Site Facilities: One Warrick probe control panel, one radio panel, three motor savers in three separate booster control panels, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: Terminal Covers, three Motor Saver Displays, one Oil Drip Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

Arizona City Well No. 28 Site

Site Location: Northwest corner of Lamb Road and Battaglia Drive, Casa Grande, AZ 85193

Existing site facilities: One turbidity meter panel, one motor saver in a well starter panel, one oil drip, two Cla-Vals and one exhaust fan.

Facilities to be furnished and installed: Terminal Covers, one Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, two Cla-Val Solenoid Disconnect Switches and one Exhaust Fan Disconnect Switch.

North Park Tank Site

Site Location: 1300' north of Camdon Road along Cox Road, Casa Grande, AZ 85194

Existing site facilities: One radio panel.
Facilities to be furnished and installed: Terminal Covers.

Pinal Ave. BPS Site

Site Location: 420 W. Centennial Boulevard, Casa Grande, AZ 85122

Table Top Well No. 3 Site

Site Location: 1000' North of Hwy 84 and 200' east of Baylor Way, Stanfield, AZ 85172.

Existing Site Facilities: One motor saver in a well control panel, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

Casa Grande Mountain Tank Site

Site Location: GPS Coordinates: N 32° 49' 58.2" and W 111° 43' 27.2"

Existing Site Facilities: One radio panel.

Facilities to be furnished and installed: Terminal Covers.

Stanfield Tank Site

Site Location: 36781 W. Apache Drive, Stanfield, AZ 85172

Existing Site Facilities: One motor saver in a well control panel, two motor savers in a booster pump control panel, three Cla-Vals and one exhaust fan.

Facilities to be furnished and installed: Three Motor Saver Displays, three Cla-Val Solenoid Disconnect Switches and one Exhaust Fan Disconnect Switch.

Casa Grande Well No. 27 Site

Site Location: 400' west of Evans Road on McCartney Road, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, four Cla-Vals and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, four Cla-Val Solenoid Disconnect Switches and one Exhaust Fan Disconnect Switch.

Casa Grande Well No. 10 Site

Site Location: 1520 N. Trekell Road, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Disconnect Switch and one Exhaust Fan Disconnect Switch.

Burgess Tank Site

Site Location: GPS Coordinates: N 32° 54' 03.6" and W 111° 46' 19.1"

Existing Site Facilities: One Warrick probe control panel.

Facilities to be furnished and installed: Terminal Covers.

Cottonwood Lane Tank and BPS Site

Site Location: 1147 Cottonwood Lane, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, three motor savers in three separate booster pump control panels.

Facilities to be furnished and installed: Four Motor Saver Displays and one 777 Motor Saver.

Hennes Tank and BPS Site

Site Location: 1300 N. Hennes Road, Casa Grande, AZ 85122

Existing Site Facilities: One turbidity meter panel, one motor saver display in a well control panel, three motor saver displays in three separate booster control panels, one oil drip, four Cla-Vals and one exhaust fan.

Facilities to be furnished and installed: Terminal Covers, four Motor Saver Displays, one Oil Drip Solenoid Disconnect Switch, four Cla-Val Solenoid Disconnect Switches and one Exhaust Fan Disconnect Switch.

Scott Drive Tank and BPS Site

Site Location: 10038 N. Scott Drive, Casa Grande, AZ 85122

Existing Site Facilities: One control panel and four motor savers in four separate booster control panels.

Facilities to be furnished and installed: Terminal Covers and four Motor Saver Displays.

Tamaron CG Well No. 31 Site

Site Location: 1697 E. Elaine Court, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 17 Site

Site Location: 1628 N. Peart Road, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 26 Site

Site Location: 300' east of Logan Lane on Paul Drive, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 23 Site

Site Location: 1553 N. Arizola Road, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 20 Site

Site Location: 1503 N. Arizola Road, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 25 Site

Site Location: 1455 N. Arizola Road, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 24 Site

Site Location: 823 N. Arizola, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, two Cla-Val, one sand separator and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, two Cla-Val Solenoid Disconnect Switches, one Sand Separator Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 21 Site

Site Location: 1000' east of Peart Road and 600' north of Florence Boulevard, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val, one sand separator and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch, one Sand Separator Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

CG Well No. 30 Site

Site Location: 1882 E. Florence Boulevard, Casa Grande, AZ 85122

Existing Site Facilities: One motor saver in a well control panel, one oil drip, one Cla-Val, and one exhaust fan.

Facilities to be furnished and installed: One Motor Saver Display, one Oil Drip Solenoid Disconnect Switch, one Cla-Val Solenoid Disconnect Switch and one Exhaust Fan Disconnect Switch.

General Scope of Work

1. Contractor will relocate existing electrical operational controls that are currently only accessible by opening electrical enclosures and exposing 120V, 240V and 480V circuitry. Contractor will either relocate controls to the exterior of electrical panel or, in the case of panels with interior panel doors, to the face of the interior panel door.
2. The Contractor will furnish and install all displays in accordance with the following:
 - For panels with interior panel doors, displays will be installed on the face of the interior panel
 - For panels located outside of a building and with only an exterior door, displays will be installed on the face of the exterior panel. All displays installed in this manner will require a weather proof box cover with a hinged door to provide weather protection.
3. The Contractor will furnish and install the prescribed equipment per the Company's EI&C Guidelines Technical Specifications and per the following descriptions:
 - Terminal covers - Furnish and install 1/8" Plexiglas® Acrylic sheet in existing panels to cover all electrical terminals and wires. The Contractor must ensure the installed acrylic sheets prevent workers from accidentally contacting live electrical components while maintaining access to non-electrified operational controls.
 - Motor Saver Display - Provide and install SymCom RM-1000 Motor Saver display. Contractor to cut-out well control panel cover or interior panel door to accommodate motor saver display and ensure display is accessible from outside of well control panel or interior well control panel door. Contractor will provide and install communications module, if required.
 - Backspin Timer - Provide a timer that prevents the well pump motor from starting during the set time after well pump motor shuts-off. Contractor to cut-out well control panel cover or interior panel door to accommodate Backspin Timer and ensure it is accessible from outside of well control panel or interior well control panel door. Contractor to provide a weatherproof box cover enclosure with hinged door for Backspin Timers installed on panel's exterior for electrical panels not located inside a building.
 - Soft Start Display - Provide and install a remote display for existing soft starter model. Contractor to cut-out electrical panel cover or interior panel door to accommodate soft start display and ensure display is accessible from outside of electrical panel or interior panel door.
 - 777 Motor Saver- Provide and install a SymCom 777-P2 Series Motor Saver.
 - Cla-Val Control Solenoid Disconnect Switch - Provide and install isolation switch per the Company's EI&C Design Guidelines Technical Specifications ("E&IC Specs") to energize and de-energize Cla-Val Solenoid.
 - Exhaust Fan Disconnect Switch- Contractor will provide and install an isolation switch per the Company's EI&C Design Guidelines Technical Specifications ("E&IC Specs") to energize and de-energize the specified exhaust fan.
 - Warrick Probe Disconnect Switch - Provide and install isolation switch per the Company's E&IC Specs to energize and de-energize Warrick probes.

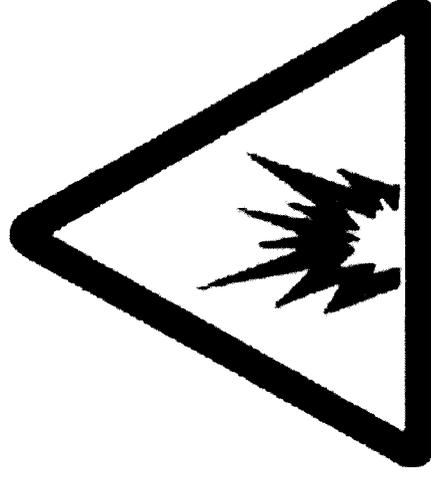
- Flow Switch Disconnect Switch - Provide and install isolation switch per the Company's E&IC Specs to energize and de-energize flow switches.
 - Oil Drip Solenoid Disconnect Switch- Provide and install isolation switch per the Company's E&IC spec to energize and de-energize well's oil drip solenoid.
 - Sand Separator Solenoid Disconnect Switch- Provide and install isolation switch per AWC E&IC spec to energize and de-energize on-site sand separator solenoid.
 - Motor Thermal Overload - Contractor will provide and install a 3-phase 480V adjustable motor thermal overload protector for motors, where specified. Contractor will provide new contactors for motor thermal overloads, where required. The Contractor will install the overload protector in series with any new or existing motor saver on the circuit to provide redundant protection. Contractor will provide and install a Push Button Reset for each new Motor Thermal Overload installed.
 - Push Button Reset - Provide and install plunger-style push button that, when operated, depresses the reset button of each motor thermal overload. Contractor to cut-out control panel cover or interior panel door to accommodate the Push Button Reset and ensure the Push Button Reset is accessible from outside of the control panel or interior control panel door. Contractor will install digital resets where mechanical button resets are not appropriate.
 - Main Disconnect - Contractor will install a main disconnect switch and appropriately sized housing to completely energize and de-energize entire site. Contractor will appropriately size all required fuses and breakers. Contractor will provide an electrical one-line schematic and, if underground conduit is used, a conduit schematic drawing for new installations, signed and sealed by a registered Professional Engineer.
4. Contractor will verify at all sites that the Main Disconnect switch de-energizes entire site
 5. Contractor will program all Motor Savers with the specified horse power rating and provide the programming sheet used.
 6. Contractor will label all electrical panels on-site with a "Warning: Arc Flash and Shock Hazard" and their corresponding voltage.

Special Conditions

1. Please contact Jesse Madrid at the Casa Grande office to coordinate any site visits.
2. Bids are due by **October 24, 2014 AT 2:00 PM** at the following address:
Arizona Water Company
Attn: Mario Mendez
3805 North Black Canyon Highway
Phoenix, AZ 85015
3. See attached supplemental electrical specifications.

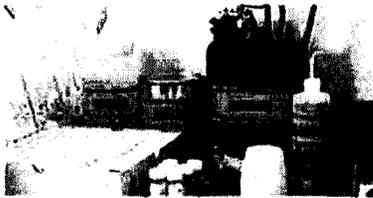
Arc Flash And Shock Hazard Appropriate PPE Required

**Do not operate controls or open covers
without appropriate personal protection
equipment.
Failure to comply may result in injury or
death!**



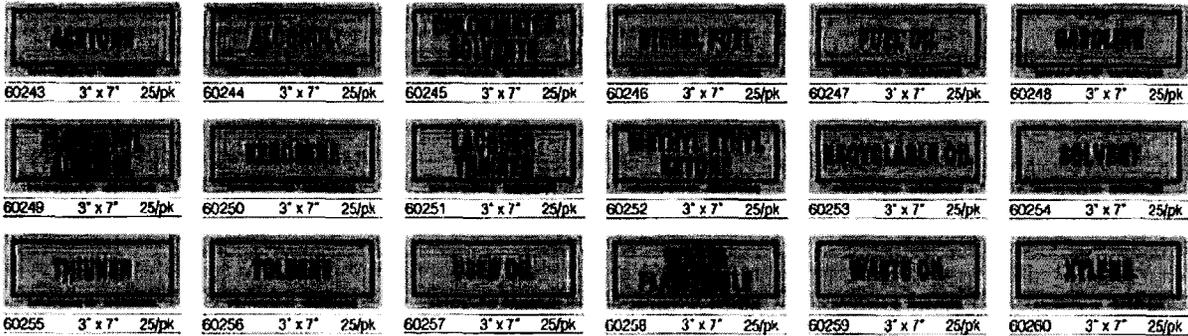
Refer to NFPA 70E for minimum PPE requirements.

■ BRADY. #101950 Y435262



Container Labels

- Boldly pre-printed labels leave no doubt as to the contents of containers
- Self-adhesive polyester labels are constructed from laminated polyester
- Chemically resistant for longer label life



Hard Hat Emblems

- Self-sticking and card-mounted
- B-946 indoor/outdoor vinyl film
- (4) 2" diameter labels per card

Catalog #	Description	Qty
45331	2" Dia. Hard Hat Emblem	4
49581	2" Dia. Hard Hat Emblem	4
49554	2" Dia. Hard Hat Emblem	4



B-997 Silver Reflective Hard Hat Stripes

- (50) 1-1/4" x 5" stripes per package

Catalog #	Description	Qty.
95229	1-1/4" x 5" stripes	50

Mr. Ouch Labels

- National Electrical Manufacturers Association (NEMA) recommends use of "Mr. Ouch" labels on transformers in public
- Meets NEMA Standard and Underwriters Laboratory Performance Standard #969
- Made from B-927 tamper-resistant film



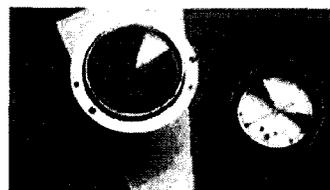
Catalog #	Description	Qty
46347	8" x 4-1/2" Mr. Ouch Label	1



Voltage Labels

- Orange markers meet ASME (ANSI) Standard ZG3.22
 - Style A: (1) 2-1/4" x 9" Marker Per Card
 - Style B: (4) 1-1/8" x 4-1/8" Markers Per Card
 - Style C: (18) 1/2" x 2-1/4" Markers Per Card

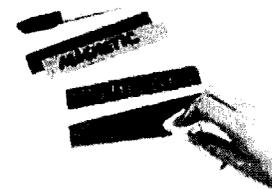
Legend	Style A	Style B	Style C
120 Volts	44104	44204	44304
120/208 Volts	44169	44269	44369
240 Volts	44110	44210	44310
277/480 Volts	44180	44280	44380
480 Volts	44115	44215	44315
Single Phase	44129	44229	44329
Three Phase	44131	44231	44331



Gauge Marking Labels

- Color code your gauges to easily identify acceptable or dangerous levels.
- Transparent, adhesive polyester label sheets
- Standard Package: one 9" x 10" sheet

Catalog #	Description	Color	Qty.
30697	9"x10" sheet	Red	1
30698	9"x10" sheet	Green	1
30699	9"x10" sheet	Yellow	1



Write-On Magnetic Labels

- Re-useable labels with a water-soluble pen that wipes off with a wet cloth
- For a permanent label, use our permanent marking pen (87052)

Catalog #	Size	Color
66957	1" x 50'	Blue
66958	1" x 60'	Green
66959	1" x 50'	Orange
66960	1" x 50'	Red
66961	1" x 50'	White
66962	1" x 50'	Yellow

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

1/1/2015 DATE (MM/DD/YYYY) 7/16/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 8110 E Union Avenue Suite 700 Denver CO 80237 (303) 414-6000	CONTACT NAME:	
	PHONE (A/C, No, Ext):	FAX (A/C, No):
	E-MAIL ADDRESS:	
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED 1075479 Ludyk Electric Company Attn: Rich Giles 3900 South Teller St. Lakewood, CO 80235	INSURER A : The Charter Oak Fire Insurance Company	25615
	INSURER B : Travelers Property Casualty Co of America	25674
	INSURER C : Farmington Casualty Company	41483
	INSURER D : Greenwich Insurance Company	22322
	INSURER E :	
	INSURER F :	

COVERAGES [UDEL01] CERTIFICATE NUMBER: 12459301 REVISION NUMBER: XXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADOL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER	Y	N	DTC08C614875PHX	1/1/2014	1/1/2015	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Per occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/PROP AGG \$ 2,000,000 \$
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	Y	N	DT8101175R57ITL	1/1/2014	1/1/2015	COMBINED SINGLE LIMIT (Per accident) \$ 1,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX \$ XXXXXXXX
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	Y	N	DTSMCUP8C614875TIL	1/1/2014	1/1/2015	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 \$ XXXXXXXX
C	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) if yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	DTKUB4D16919014	8/1/2014	8/1/2015	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER EL EACH ACCIDENT \$ 1,000,000 EL DISEASE - EA EMPLOYEE \$ 1,000,000 EL DISEASE - POLICY LIMIT \$ 1,000,000
D	Professional/Pollution	Y	N	CPL7420355	7/1/2014	7/1/2015	\$2,000,000 Professional \$2,000,000 Pollution \$25,000 SIR

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: WA No. 1-5024, Pinal Valley, Arizona Water Company is additional insured as respects General, Auto, Excess and Pollution Liability if required by written contract per policy terms and conditions. General Liability coverage is primary.

CERTIFICATE HOLDER

CANCELLATION

<p>RECEIVED</p> <p>JUL 21, 2014</p> <p>Arizona Water CO Casa Grande - NOM</p>	<p>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</p> <p>AUTHORIZED REPRESENTATIVE</p> <p><i>Charles M. McDaniel</i></p>
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ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

CONSTRUCTION SPECIFICATIONS: E-8-1

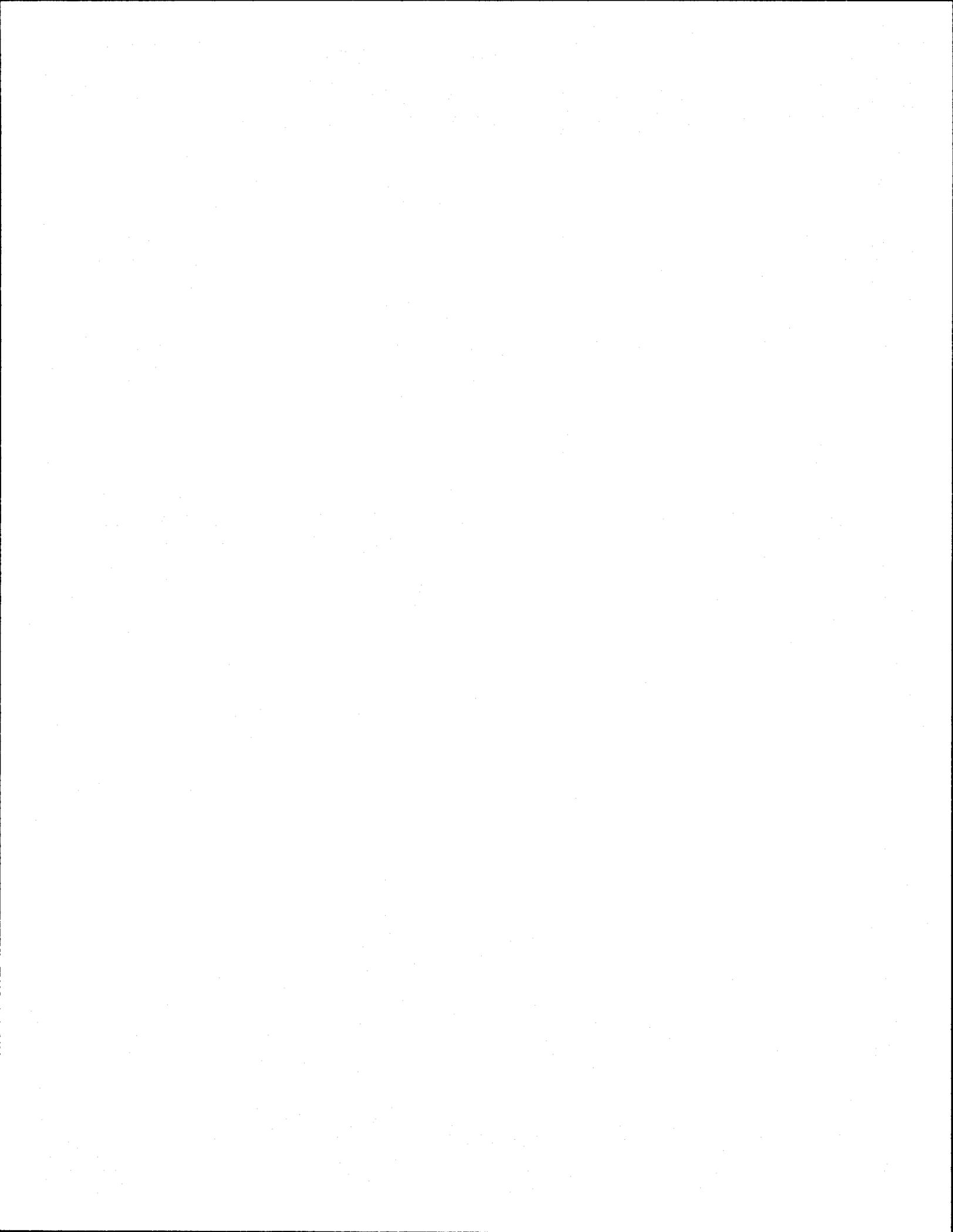
STANDARD SPECIFICATION DRAWINGS: E-9-1

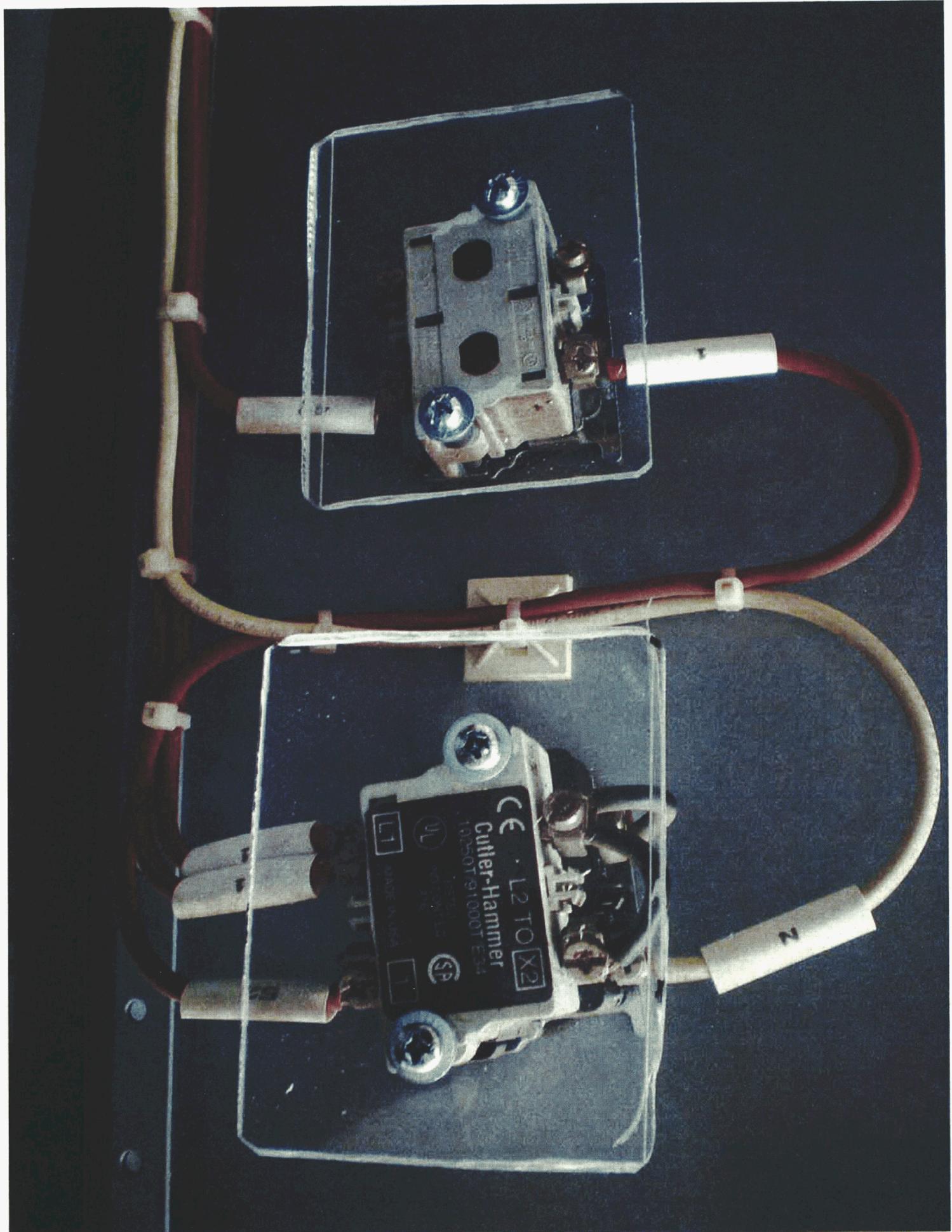
**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

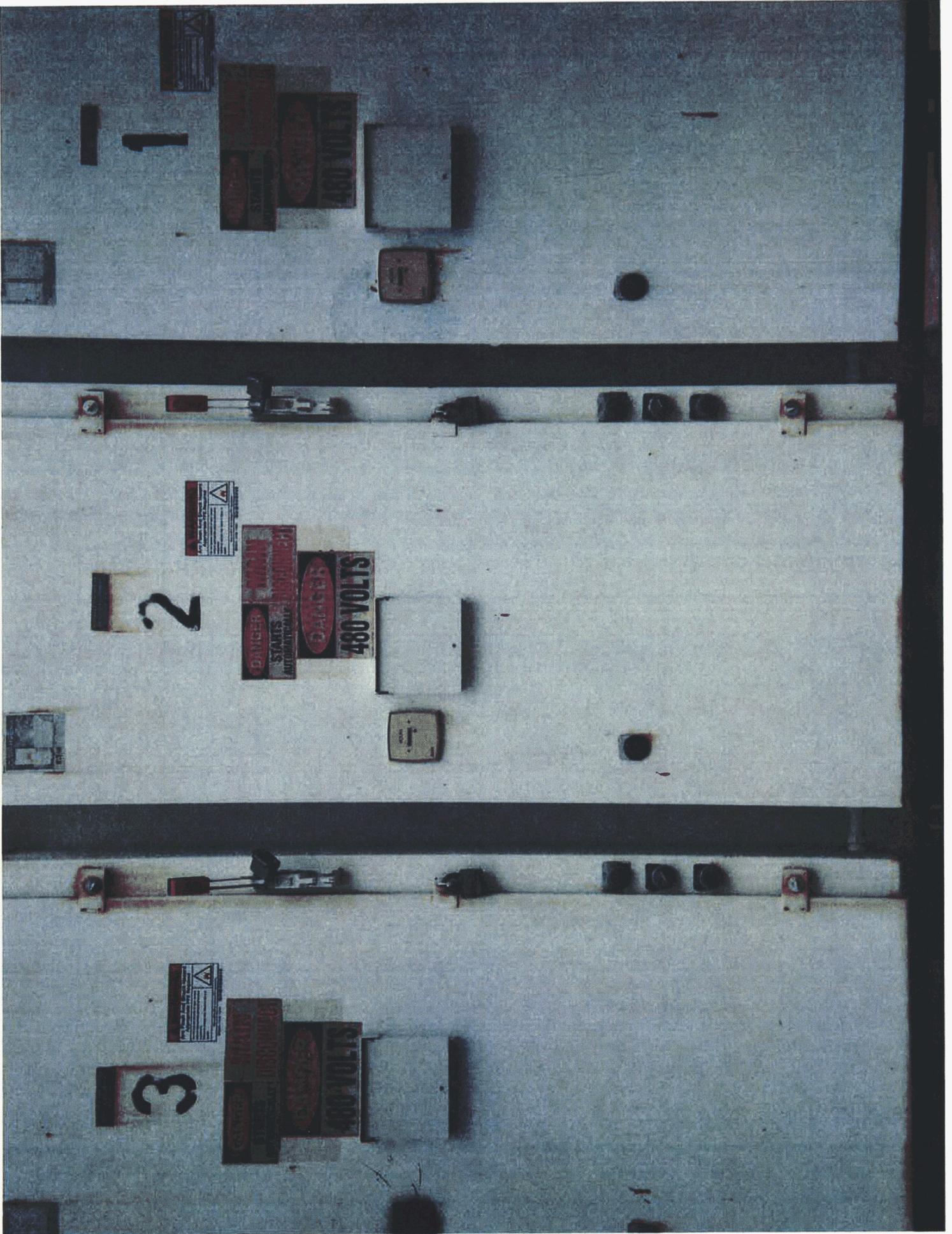
MZM
11/7/14

A copy of this entire Spec Book was sent out with Ludvik Electric
package for 1-5173 Pinal Valley Electrical Panels on Proposal

Mlodny







1

480 VOLTS



2



DANGER 480 VOLTS

480 VOLTS



3



480 VOLTS





Handwritten note or label with illegible text.



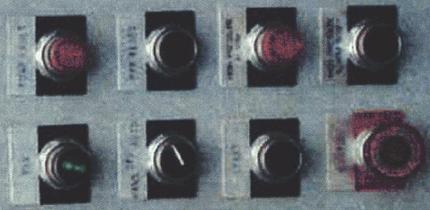
480 VOLTS



WATER



WATER ON OFF



▲ DANGER
High Voltage
Do not touch
any exposed
parts of the
equipment
when the
power is on.



Color-Hunter
Hemipress
Power of Line 6
PumpSaver

Model: 633-12000
Serial: 123456789
Date: 12/15/2010
Warranty: 3 Years

1. Check the power supply voltage before using the device.
2. Do not use the device in a wet or damp environment.
3. Do not touch the device with wet hands.
4. Do not use the device near flammable or explosive materials.
5. Do not use the device near children or pets.
6. Do not use the device near electrical equipment.
7. Do not use the device near high voltage lines.
8. Do not use the device near magnetic fields.
9. Do not use the device near strong electromagnetic interference.
10. Do not use the device near radio frequency signals.

Color-Hunter
Hemipress
Power of Line 6
PumpSaver

Model: 633-12000
Serial: 123456789
Date: 12/15/2010
Warranty: 3 Years

⚠ DANGER

⚡
Warning: High Voltage
Do not touch the device
or the wires when it is
powered on. The device
can be damaged by
static electricity.

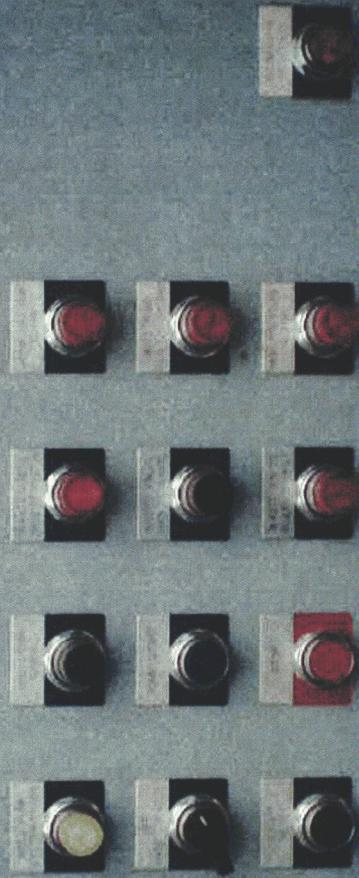
Color-Hunter
Hemipress
Power of Line 6
PumpSaver

Model: 633-12000
Serial: 123456789
Date: 12/15/2010
Warranty: 3 Years

ESAMUOP

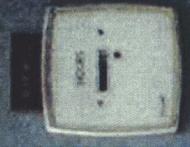
WARNING
Arc Flash And Shock Hazard
Appropriate PPE Required
See Nameplate For Details
SAFETY INFORMATION
READ AND UNDERSTAND ALL SAFETY INFORMATION BEFORE OPERATING THIS EQUIPMENT.
SAFETY INFORMATION
READ AND UNDERSTAND ALL SAFETY INFORMATION BEFORE OPERATING THIS EQUIPMENT.

480 VOLTS



⚠ DANGER
Electrical Shock Hazard
Read and understand all safety information before operating this equipment.
SAFETY INFORMATION
READ AND UNDERSTAND ALL SAFETY INFORMATION BEFORE OPERATING THIS EQUIPMENT.

KEC
KELLER EQUIPMENT COMPANY
MICHIGAN, U.S.A.



200A# REDUCED VOLTAGE STARTER

400 VOLTS



WVTF



WVTF ON OFF





TRANSFER
PUMP P101

480 VOLTS
DANGER
STARTS
AUTOMATICALLY

DECANT
PUMP P101

480 VOLTS
DANGER
STARTS
AUTOMATICALLY

120 VOLTS

WARNING

**CABINET CONTAINS
MULTIPLE SOURCES
OF POWER**



HAZARDOUS CHEMICAL PRECAUTIONS LOCATED IN MSDS FOR THIS REAGENT

FOR USE - **REAGENTS**

TO MANUFACTURE FOR WELLS BEFORE BACKWASH



**EMERGENCY
SHUT-OFF**

MAIN DISCONNECT

WARNING
Arc Flash And Shock Hazard
Appropriate PPE Required
No one is authorized to open covers
unless they have received appropriate
training and are wearing appropriate
PPE. Failure to comply may result in injury or
death.
SEE INSTRUCTIONS FOR PROPER PPE
REQUIREMENTS

DANGER HIGH VOLTAGE

DANGER STARTS AUTOMATICALLY 480 VOLTS

1000S

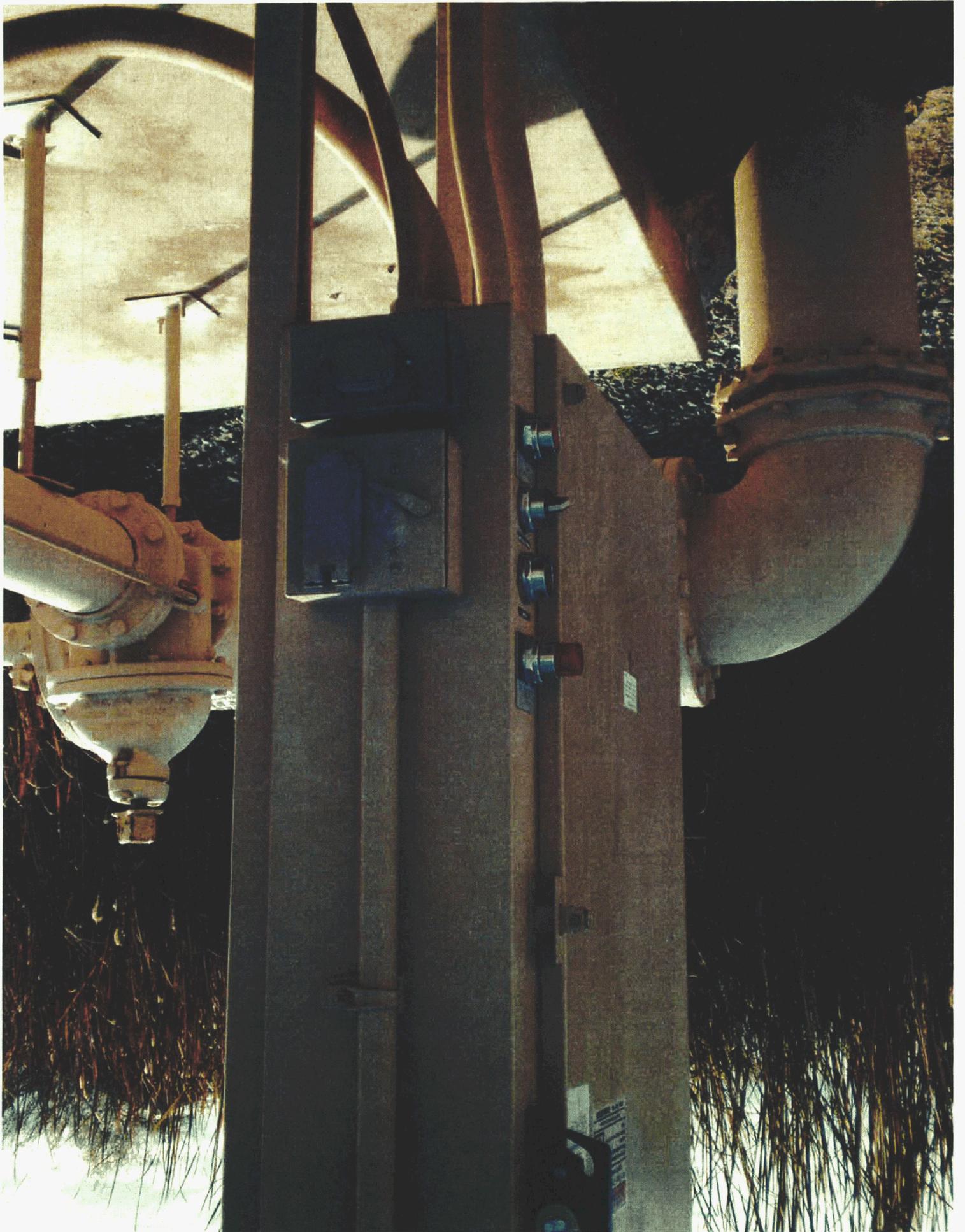
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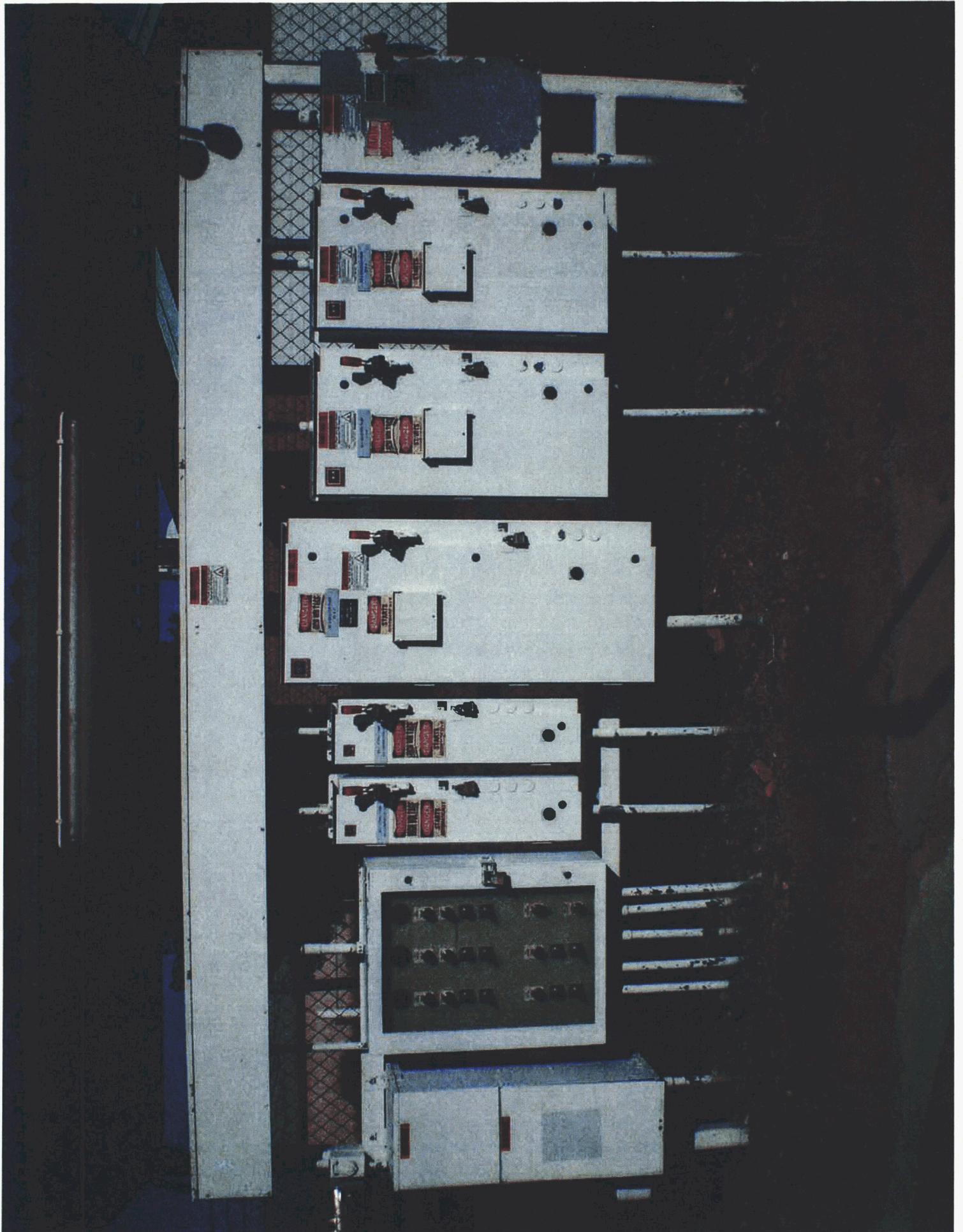
1000S

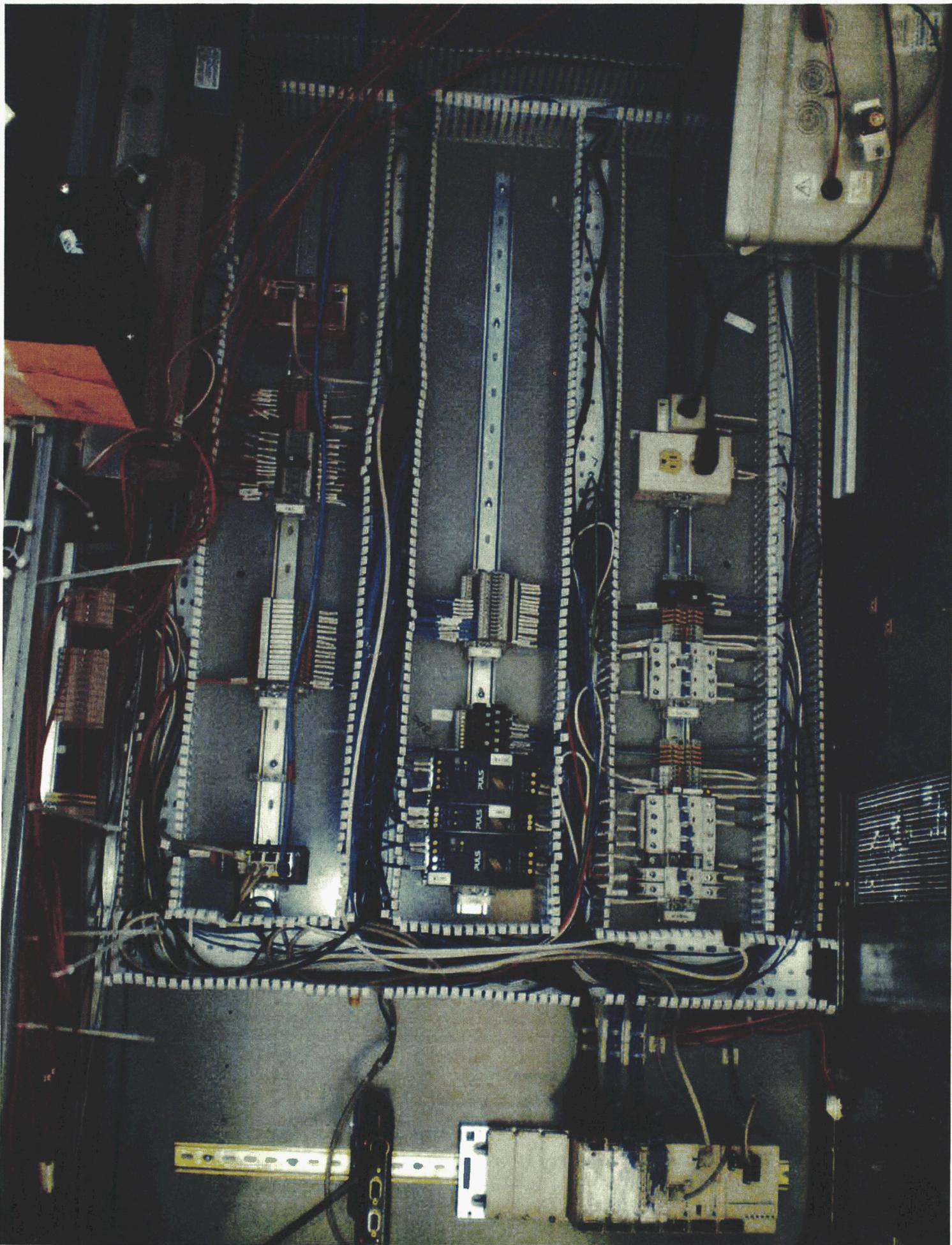
WATER

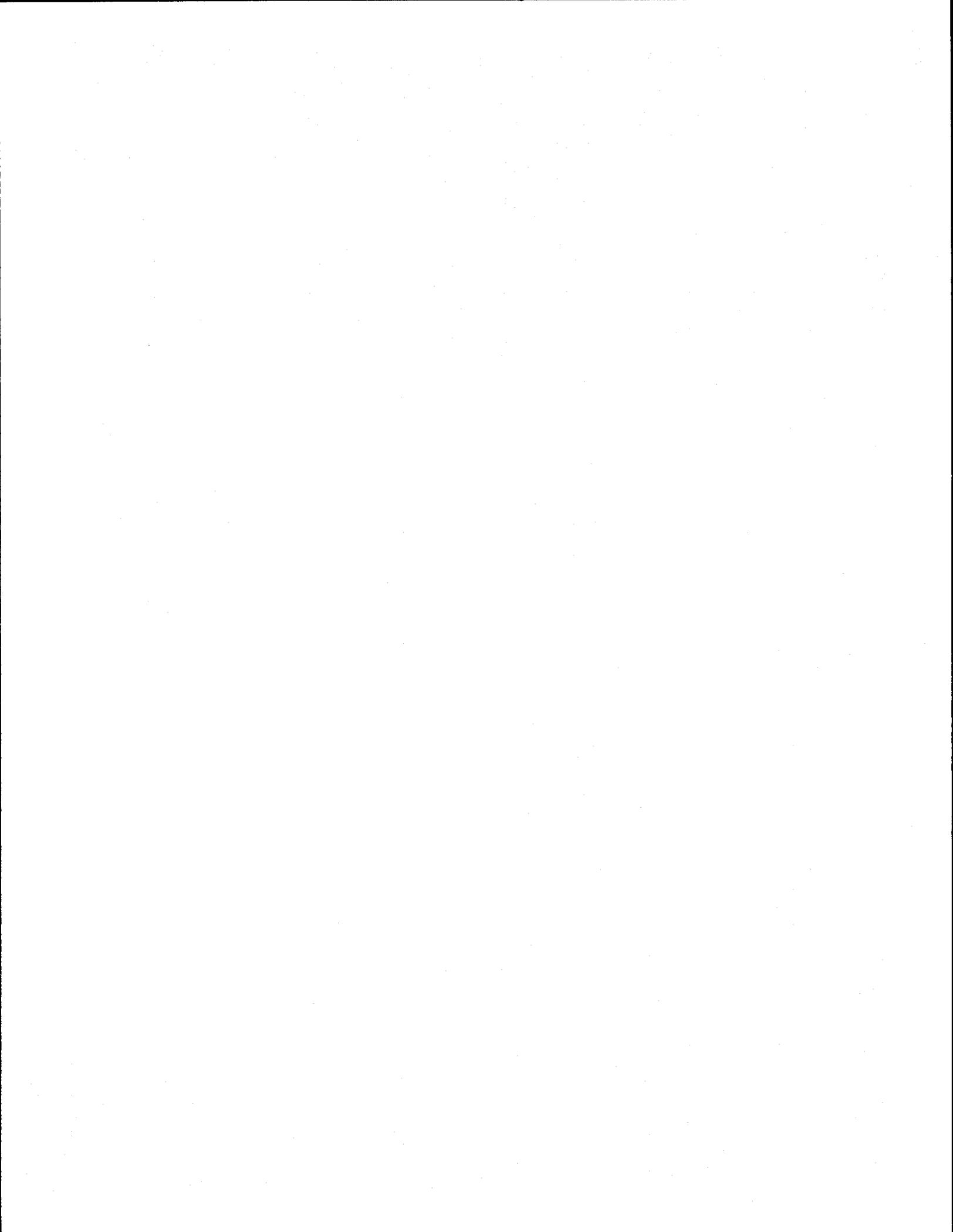
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ARIZONA WATER COMPANY

CONSTRUCTION
PLACED IN SERVICE
NOTICE

WORK AUTHORIZATION NO.: 1-5173

DIVISION: PV/CG

DATE PLACED IN SERVICE: 12/31/14

CONTRACT NO:

FOR PURPOSES OF MODIFIED ACCELERATED COST RECOVERY SYSTEM, AN ASSET IS "PLACED IN SERVICE" WHEN IT IS IN A CONDITION OR STATE OF READINESS AND AVAILABILITY FOR A SPECIFICALLY ASSIGNED FUNCTION, WHETHER IT BE FOR USE IN A TRADE OR BUSINESS, OR FOR THE PRODUCTION OF INCOME.

I CERTIFY THAT THE ASSET(S) CONSTRUCTED PURSUANT TO THE PROVISIONS OF THE ABOVE-REFERENCED WORK AUTHORIZATION ARE READY FOR SERVICE AS OF THE DATE SHOWN ABOVE.

[Signature]
Division Manager or Operations Superintendent
(signature)

1-9-15
Date

A-1-3-1
FKS 11/24/11



ARIZONA WATER COMPANY

PROJECT CLOSE-OUT NOTICE

PROJECT CLOSE-OUT DATE:	12-31-14	DIVISION/ SYSTEM:	PV/CG
		WORK AUTHORIZATION NUMBER:	1-5173
THE FOLLOWING RECORD REQUIREMENTS ARE ATTACHED:			
1. W.A. FINAL COMPLETION CHECKLIST			
2. FINAL AUTHORIZATION TO BILL HAS BEEN SENT TO PHOENIX ON _____			
<small>PREPARED BY</small>			

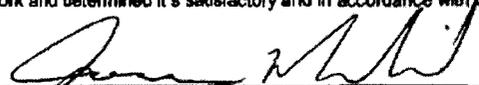
WA FINAL COMPLETION CHECK LIST

- FACILITIES RECORDS
 - Valve Records – Main & Blow-off
 - Fire Hydrant Records – Include Flow Test Data
- ABANDONED FACILITIES
 - Property Disposal Report (PDR)
 - Voided Valve Records
 - Voided Fire Hydrant Records
- COMPLETION DOCUMENTS
 - Public Fire Hydrants Installation Request (E-3-23)
 - Notice of Fire Hydrant Installation (E-5-5)
 - Permits Acquired By Division Office
 - Bill Of Sale (E-3-38-3)
 - Final Acceptance of Facilities Letter (E-3-36-5)
- ON-SITE PHOTOGRAPHS
 - To Show All New Installations At Completion Of W.A.

IF NO ATB IS REQUIRED

- ADEQ DATA REQUIRED WITH ECC APPLICATION
 - NOTE: "Footage Tested" to match total pipe installed ("343" ONLY)
- AS-BUILT DRAWING
 - Label Cover Sheet "AS BUILT"
 - Pipe footage and size to be listed on AS-BUILT cover sheet ("343" ONLY)
 - Printed name of AS-BUILT preparer
 - ONLY Changes to original construction drawing to be marked in red on AS-BUILTs,
 - NOTE: Include any additional Air Release Valves
- FORMS
 - Well Record (E-5-7)
 - Storage Tank Record (E-5-8)
 - Booster Pump Record (E-5-9)
 - Hydropneumatic Tank Record (E-5-10)
- OPERATIONS & MAINTENANCE MANUALS
 - Electric S.E.S. & M.C.C.
 - S.C.A.D.A./Controls
 - Treatment Facilities
- AOC (Approval of Construction)
 - Placed in Service Notice
 - Daily Progress Reports

I certify that construction on the above Work Authorization is complete and for which all materials have been accounted. I further certify that I have inspected the work and determined it is satisfactory and in accordance with Company specifications.


 Division Manager, Operations Superintendent, or Project Engineer (signature)

1-9-15
 Date of Notice

ARIZONA WATER COMPANY - CIVIL ENGINEERING DEPARTMENT - PROJECT CLOSE-OUT WORK AUTHORIZATION

TO: ACCOUNTING DEPARTMENT (ACCOUNTANT II)
 CC: ENGINEERING DEPARTMENT (ENG. SEC.)

Western Group Rate Case

Exhibit FKS-1

5251 PV 33 Pump

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5251
P.E. NUMBER:
BUDGET ITEM NO.: Special No. 49
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: RAY MURRIETA	WORK TO BE FINISHED BY: WITHIN 30 DAYS
TAX CODE:	

DESCRIPTION OF WORK:
Pull and replace the pump, column pipe, tube and shaft, and lower the pump 100 feet at Pinal Valley Well No. 33. Construct in accordance with ~~attached drawings and/or~~ Arizona Water Company specifications.

FACTORS JUSTIFYING WORK:
Well No. 33 recently lost all production, dropping from approximately 1300 gpm to 0 gpm. Company engineers determined three joints of column pipe have split and 16 additional joints of column pipe are severely corroded, nearing the end of their service life, and require replacement. 28 joints of oil tube and shaft have severe corrosion on the tube, threads, and butt joint, and bearings that are out of tolerance. The well casing is approximately 90% plugged and requires brushing to restore specific capacity prior to returning the well to service. Company engineers will evaluate the condition of the casing, after brushing, and determine if acid washing the casing is required. Additionally, the nitrate concentration in Well No. 33 is more than 9 mg/L and approaching the U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) of 10 mg/L. Company Engineers recommend lowering the pump 100 feet to mitigate the increasing nitrate level and allow the Company to continue to provide a safe, adequate and reliable drinking water supply to the Pinal Valley water system. Well No. 33 must be repaired as soon as possible to provide sufficient supply to meet water distribution system demand.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	James Wilson <i>gw 10/4/14</i>	9/26/14
LABOR	4,800	REVIEWED FOR ESM/TROW VERIFICATION:	
CONTRACT PORTION	165,770	Charles Briggs	09-29-2014
OVERHEAD	20,500	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 191,070	Andy Haas	9-26-14
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider <i>10-14-14</i>	9-26-2014
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris	9/27/14
NET COMPANY CASH REQUIRED	\$ 191,070	SPECIAL ITEM EXCEEDING \$10,000; AUTHORIZED BY PRESIDENT:	
COMMENTS:		William Garfield	9-29-2014
		SPECIAL ITEM EXCEEDING \$10,000; AUTHORIZED BY CHAIRMAN:	
		APPROVED VIA FAX M. L. Whitehead	10/02/2014
<p>Transfer \$30,000 from WA 1-5018 (Cottonwood and Peart); \$100,000 from WA 1-5168 (Hwy 84 Valve Replacement); and \$60,000 from WA 1-5170 (Cottonwood Tank Repair) to fund this project.</p>		<p>RELEASED TO CONSTRUCTION Authorized by <u>FRED SCHNEIDER</u> Date <u>10/19/14</u></p>	

AFH

ARIZONA WATER COMPANY
WORK AUTHORIZATION - DETAIL SHEET

W.A NUMBER: 1-5251
P.E NUMBER:
BUDGET ITEM NO.: Special No. 49
SHEET NO.: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A NUMBER
	325	Fairbanks 14M7000 5-stage pump	1	2007 1-4392
	325	10-inch Column,	24	
	325	3" Tube, 1-15/16" Shaft	33	

PROJECT DESCRIPTION
Pull and replace the pump, column pipe, tube and shaft, and lower the pump 100 feet at Pinal Valley Well No. 33.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Labor to pull and replace pump	325	1	\$ 19,575.00	\$ 19,575
	Provide and install Goulds 12CHC 10-stage pump	325	1	12,300.00	12,300
	Provide and install 1/4" stainless steel air line	325	840	2.09	1,756
	Provide and install 1-1/4" PVC sounding line	325	840	0.50	420
	Provide and install 300 HP 460V VHS motor	325	1	22,119.00	22,119
	Miscellaneous materials	325	1	450.00	450
	Provide and install 10"x20' column	325	24	1,200.00	28,800
	Provide and install 3"x1-15/16" x 20' tube and shaft	325	33	800.00	26,400
	Video Well	325	3	850.00	2,550
Brush and Bail Well	325	40	235.00	9,400	
Acid Wash Casing	325	1	35,000.00	35,000	
Performance and payment bond	325	1	1,500.00	1,500	
Contracting tax	325	1	5,500.00	5,500	
SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345				
SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345				
SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345				
SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				

TOTAL CONTRACT WORK \$ 165,770

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
	SERVICE CONNECTIONS: SINGLE-SHORT	345			
	METERS	346			

TOTAL MATERIALS \$ -

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Engineering Design and Project Management	325	40	\$ 65.00	\$ 2,600
	TESTING FEE				
	PERMIT FEE				
	SURVEY FEE				
	FIELD INSPECTION	325	40	55.00	2,200
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345			

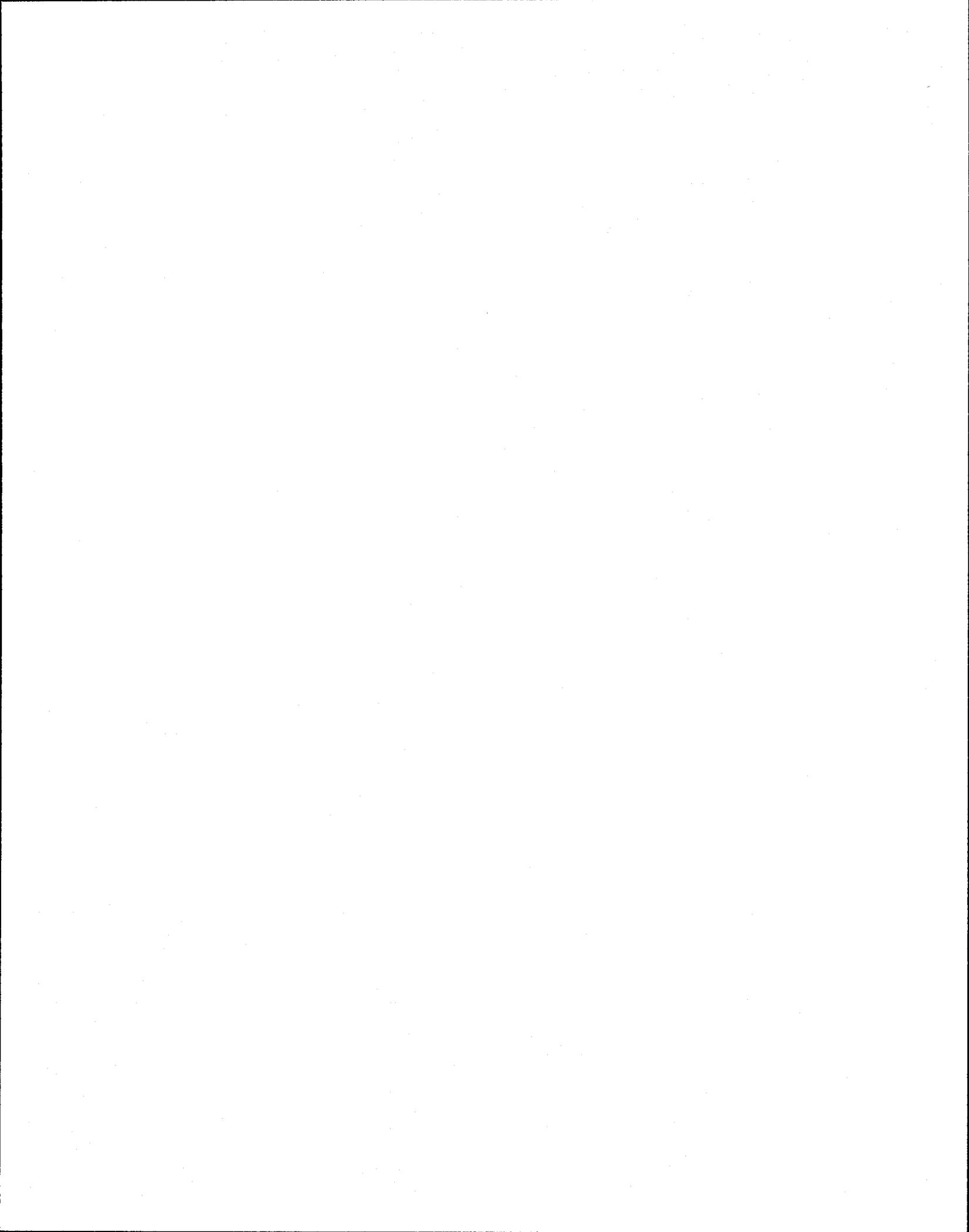
TOTAL LABOR \$ 4,800

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 170,570

OVERHEAD 20,500

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 191,070

AFH



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

October 9, 2014

Mr. Gabe Tregaskes
Weber Water Resources, LLC
16825 S. Weber Drive
Chandler, AZ 85226

Re: Pinal Valley Well No. 33 Pump Replacement

PROJECT: PV Well No. 33	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
P.E. NO.:	W.A. NO.: 1-5251

Dear Mr. Tregaskes:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on October 14, 2014, Weber Water Resources, LLC acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's

E-MAIL: MAIL@AZWATER.COM

Mr. Gabe Tregaskes
Weber Water Resources, LLC

October 9, 2014
Page 2

ability to terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

If you have any questions, please call me at this office.

Very truly yours,

James T. Wilson, P. E.
Senior Engineer
jwilson@azwater.com

afh
Enclosure



ARIZONA WATER COMPANY

Pinal Valley - Casa Grande
220 E. 2nd Street
Casa Grande, AZ 85122 PH: 520-836-8785

PROPOSAL/CONTRACT

CONTRACTOR: WEBER WATER RESOURCES, LLC	SYSTEM: PINAL VALLEY
ADDRESS: 16825 S. WEBER DRIVE	WA No(s): 1-5251
CITY ST ZIP: CHANDLER, AZ 85226	BID DUE DATE: October 3, 2014

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an Independent prime contractor.

- Contractor certifies that it has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract.
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work.
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-5061 B.6.), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. Contractor retains full liability and obligation to pay the Contracting Tax and will defend and indemnify the Company against any demand or obligation to pay the Contracting Tax.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project Invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 45 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS:

See attached Equipment Specifications dated October 2, 2015.

CONTRACTOR	PROPOSAL/CONTRACT ACCEPTED:
WEBER WATER RESOURCES, LLC	ARIZONA WATER COMPANY
By: <i>Mabe Treguskes</i>	By: <i>Fredrick K. Schneider</i>
Print Name: Mabe Treguskes	Print Name: Fredrick K. Schneider, PE
Title: Senior Project Manager	Title: Vice President - Engineering
Date: 10/3/14	Date: 10-14-2014

AFH



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Gabe Tregaskes
Weber Water Resources, LLC
16825 S. Weber Drive
Chandler, AZ 85226

DATE: 10/14/14
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5251

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Pull and replace the pump and motor as Pinal Valley Well No. 33.

PERFORMANCE AND
PAYMENT BONDS
REQUIRED: Yes No

TOTAL DAYS
ALLOWED: 55

COMPLETION
DATE: 12/8/14

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY
Company

WEBER WATER RESOURCES, LLC
Contractor (type name)

By *Judith K. Schmidt*
Title Vice President - Engineering

By _____
Title _____



ARIZONA WATER COMPANY

SPECIFICATIONS

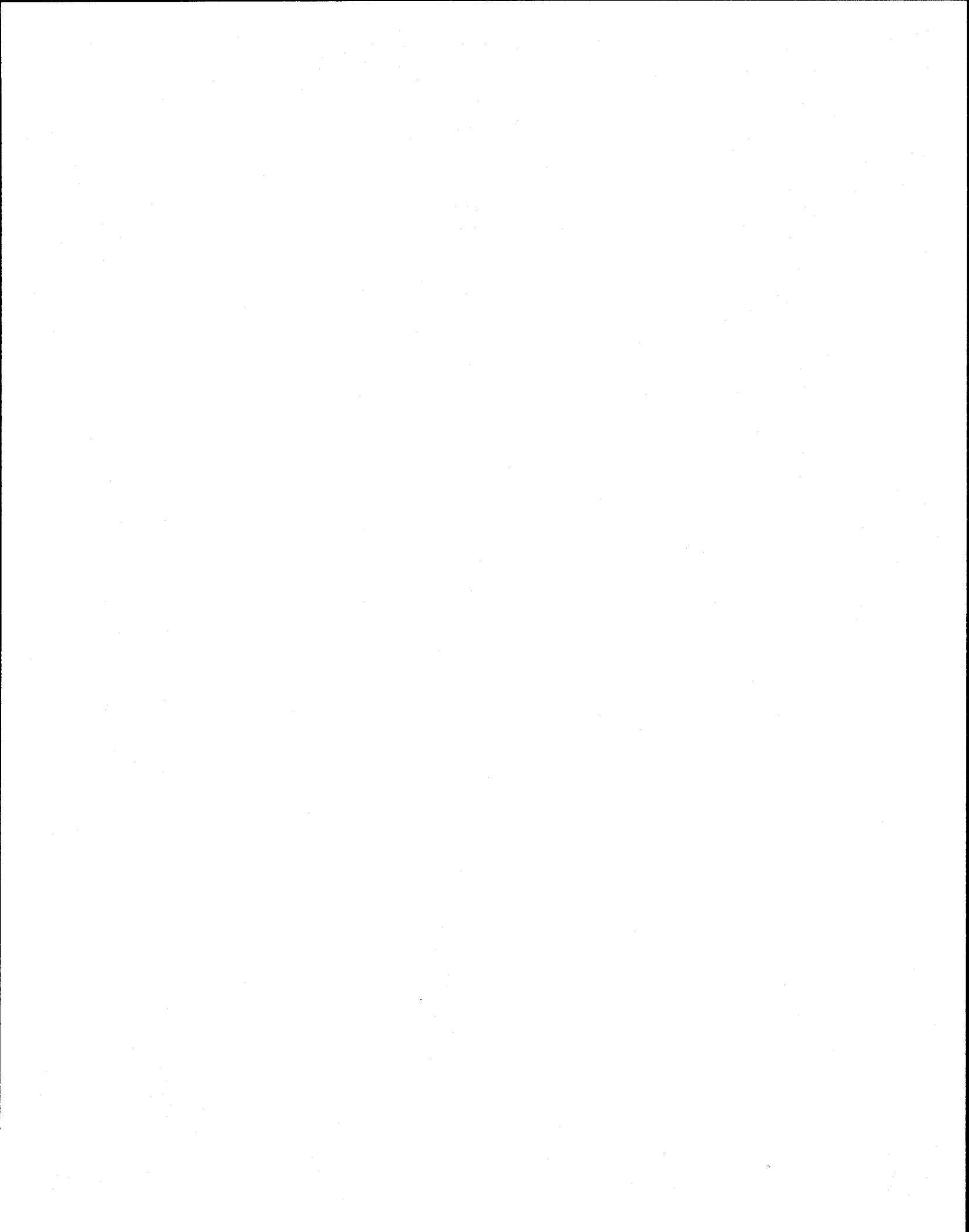
GENERAL CONDITIONS OF CONTRACT: E-4-1

CONSTRUCTION SPECIFICATIONS: E-8-1

STANDARD SPECIFICATION DRAWINGS: E-9-1

**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

A copy of this entire Spec Book was sent out with *Weber Water Resources* Proposal package for *1-5251 Pinal Valley well #33* on *10/14/14* *CA*



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

December 15, 2014

Mr. Don Hanson
Clear Creek Associates
6155 E. Indian School Road, Suite 200
Scottsdale, AZ 85251

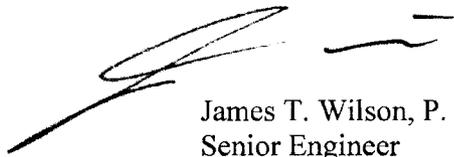
Re: Water Quality Well Evaluation at Casa Grande Well No. 33

Dear Mr. Hanson:

Enclosed is your original of the Agreement for Consulting Services for the above referenced project, which has been accepted by Arizona Water Company.

If you have any questions, please call me at this office.

Very truly yours,



James T. Wilson, P. E.
Senior Engineer
engineering@azwater.com

afh
Enclosure

E-MAIL: mail@azwater.com

**AGREEMENT FOR CONSULTING SERVICES BETWEEN
ARIZONA WATER COMPANY AND
CLEAR CREEK ASSOCIATES, PLC**

THIS AGREEMENT is made and entered into on this 15TH day of December 2014 by and between Arizona Water Company, an Arizona corporation, hereinafter referred to as "Company," and Clear Creek Associates, a Professional limited liability company hereinafter referred to as "Consultant".

RECITALS

WHEREAS, Company is authorized to and desires to retain Consultant to provide engineering design, post design and sampling services for Water Quality Well Evaluation for Casa Grande Well No. 33 ("Project").

WHEREAS, Consultant is agreeable to providing personnel and facilities necessary to perform the desired services within Company's required time; and

WHEREAS, Company desires to retain Consultant to perform the services in the manner, at the time, and for the compensation set forth herein;

NOW, THEREFORE, Company and Consultant agree as follows:

1. **Description of Project**

Company and Consultant agree that Project is as described in Exhibit A, hereto, incorporated by reference herein and entitled "Scope of Work," dated October 31, 2014. If, during the course of Project, Company and Consultant agree to changes in Project, such changes shall be effective only after being incorporated in this Agreement by written amendment, signed by representative of Company and Consultant.

2. **Scope of Consultant Services**

Consultant agrees to perform those services described hereafter. Unless modified in writing by both parties, duties of Consultant shall not be construed to exceed those services specifically set forth herein.

a. **Basic Services:** Consultant agrees to perform those services described in the Scope of Work (the "Services"). Any tasks not specifically described in the Scope of Work will be Additional Services. Consultant will not perform any tasks identified in Exhibit A until Company notifies Consultant in writing to begin.

b. **Additional Services:** Company shall pay Consultant all fees and costs incurred in performing Additional Services provided the services were authorized by Company in writing. Unless otherwise agreed in writing, Additional Services shall be

compensated in accordance with Consultant's standard billing rates at the time the Additional Services are performed.

c. Litigation Assistance: Unless specifically stated therein, the Scope of Work does not include assistance to support, prepare, document, bring, defend or assist in litigation undertaken or defended by Company. All such services required or requested of the Consultant by Company or any third party (except claims between Company and Consultant) will be reimbursed at Consultant's applicable rates for such litigation services.

3. Responsibilities of Company

In addition to payment for the Services performed under this Agreement, Company shall:

a. Assist and cooperate with Consultant in any manner necessary and within its ability to facilitate Consultant's performance under this Agreement.

b. Designate in writing a person to act as Company's representative with respect to this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define Company's policies, make decisions and execute documents on Company's behalf.

c. Furnish Consultant with all technical data in Company's possession including, but not limited to, maps, surveys, drawings, soils or geotechnical reports and any other information required by or useful to Consultant in performance of the Services under this Agreement.

d. Notify Consultant of any known or potential health or safety hazards existing at or near the project site.

e. Provide access to and/or obtain permission for Consultant to enter upon project related property during normal business hours, whether or not owned by Company, as required to perform and complete the Services.

4. Americans with Disabilities Act

Any other provision of this Agreement to the contrary notwithstanding, unless otherwise specified in the Scope of Services, Company's contractors shall have sole responsibility as between Company and Consultant for compliance with the Americans With Disabilities Act ("ADA") 42 U.S.C. 12101 et. Seq. and the related regulations. Consultant shall provide Company with applicable ADA criteria, which may be required.

5. Authorization and Completion

In signing this Agreement Company grants Consultant specific authorization to proceed with work as described in Scope of Work and under the terms of this Agreement.

6. Compensation

a. Amount: For the Services described in Exhibit A, Company agrees to pay, and Consultant agrees to accept compensation in accordance with Exhibit B, attached hereto and incorporated herein. Where Consultant has provided Company with a breakdown of the total compensation into subtasks, such breakdowns are estimates only. Consultant may reallocate compensation between tasks, provided total compensation is not exceeded without the prior written approval of Company.

b. Payment: As long as Consultant has not defaulted under this Agreement, Company shall pay Consultant within thirty (30) days of the date of Consultant's invoices for services performed and reimbursable expenses incurred under this Agreement. If Company has reason to question or contest any portion of any such invoice, amounts questioned or contested shall be identified and notice given to Consultant within thirty (30) days of the date of the invoice. Any portion of any invoice not contested shall be deemed to be accepted and approved for payment and shall be paid to Consultant within thirty (30) days of the date of the invoice. Company agrees to cooperate with Consultant in a mutual effort to resolve promptly any contested portions of Consultant's invoices.

In the event any uncontested portions of any invoice are not paid within thirty (30) days of the date of Consultant's invoice, interest on the unpaid balance shall accrue beginning with the 31st day at the rate of 1.5% per month, and Consultant shall have the right to suspend work per Article XV, Suspension of Work.

7. Responsibility of Consultant

a. Standard of Care Professional Services: Subject to the limitations inherent in the agreed scope of work as to the degree of care, amount of time and expenses to be incurred, and subject to any other limitations contained in this Agreement, Consultant shall perform the Services and any Additional Services in accordance with generally accepted standards and practices customarily utilized by competent engineering firms in effect at the time Services and any Additional Services are rendered. Consultant does not expressly or impliedly warrant or guarantee its Services.

b. Reliance upon Information Provided by Others: If Consultant's performance of services hereunder requires Consultant to rely on information provided by other parties (excepting Consultant's subcontractors), Consultant shall not independently verify the validity, completeness, or accuracy of such information unless otherwise expressly engaged to do so in writing by Company.

c. Consultant's Opinion of Costs: Company acknowledges that construction cost estimates, financial analyses and feasibility projections are subject to many influences including, but not limited to, price of labor and materials, unknown or latent conditions of existing equipment or structures, and time or quality of performance by third parties. Company acknowledges that such influences may not be precisely forecasted and are beyond the control of Consultant and that actual costs incurred may vary substantially from the estimates prepared by Consultant. Consultant does not warrant or guarantee the accuracy of construction or development cost estimates, however, Consultant agrees to exercise its best Professional Judgment in rendering its opinions.

d. Construction Phase Services

i. Consultant's Activities at Construction Site: The presence of Consultant's personnel at a construction site, whether as on-site representative, resident engineer, construction manager, or otherwise, does not make Consultant responsible for those duties that belong to Company and/or construction contractors or others, and does not relieve construction contractors or others of their obligations, duties, and responsibilities, including, but not limited to, construction methods, means, techniques, sequences, and procedures necessary for completing all portions of the construction work in accordance with the contract documents, any health or safety programs and precautions required by such construction work, and any compliance with applicable laws and regulations. Any inspection or observation of the contractor's work is for the purpose of determining that the work is proceeding in conformance with the intent of the project specifications and contract documents. Consultant has no authority to exercise control over any construction contractor in connection with their work or health or safety programs and precautions. Except to protect Consultant's own personnel and except as may be expressly required elsewhere in the Scope of Work, Consultant has no duty to inspect, observe, correct, or report on health or safety deficiencies of the construction contractor.

ii. Shop Drawing and Submittal Review: If required by Consultant's Scope of Services, Consultant shall review shop drawings or other contractor submittals for general conformance with the intent of the contract documents. Except for services completed under direct contract to Consultant, Consultant shall not be required to verify dimensions, to engineer contractor's shop drawings or submittals, nor to coordinate shop drawings or other submittals with other shop drawings or submittals provided by contractor.

iii. Record Drawings: Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Except for services completed under direct contract to Consultant, Consultant is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

e. Scope of Work: Before preparing the scope of work, Consultant specifically acknowledges and agrees that it has inspected and familiarized itself with Company's site. The Consultant has received, or had the opportunity to inquire about and/or request all relevant information concerning the Scope of Work from Company or any other source Consultant deems necessary. The Scope of Work has been prepared by the Consultant and to the best of its knowledge includes all applicable work required to successfully complete services for Water Quality Well Evaluation for Casa Grande Well No. 33 ("Project").

8. Asbestos/Hazardous Material

Consultant and Consultant's subcontractors shall have no responsibility for the discovery, handling, removal, or disposal of, or exposure of persons to asbestos or hazardous or toxic materials that are present in any form at the Project site. Professional services related to or in any way connected with the investigation, detection, abatement, replacement, use, specification, or removal of products, materials, or processes containing asbestos or hazardous or toxic materials are beyond the scope of this Agreement.

In the event Consultant encounters asbestos or hazardous materials at the jobsite, Consultant may, at its option and without liability for damages, suspend the performance of services on the Project until such time as Company and Consultant mutually agree on an amendment to this Agreement to address the issue, or Company retains another specialist consultant or contractor to identify, classify, abate and/or remove the asbestos and/or hazardous materials.

9. Consultant's Work Product

a. Scope: Consultant's work product which is prepared solely for the purposes of this Agreement, including, but not limited to, drawings, test results, recommendations and technical specifications, whether in hard copy or electronic form, shall become the property of Company when Consultant has been fully compensated as set forth herein. Consultant may keep copies of all work product(s) for its records.

Consultant and Company recognize that Consultant's work product submitted in performance of this Agreement is intended only for the project described in this Agreement. Company's alteration of Consultant's work product or its use by Company for any other purpose shall be at Company's sole risk.

b. Electronic Copies: If requested, solely as an aid and accommodation to Company, Consultant may provide copies of its work product documents in computer-readable media ("electronic copies", "CADD"). These documents will duplicate the documents provided as work product, but will not bear the signature and professional seals of the registered professionals responsible for the work. Company is cautioned that the accuracy of electronic copies and CADD documents may be compromised by electronic media degradation, errors in format translation, file corruption, printing errors and incompatibilities, operator inexperience and file modification. Consultant will maintain

the original copy, which shall serve as the official, archived record of the electronic and CADD documents.

10. Indemnification

a. The Consultant shall indemnify the Company against, and save and hold it harmless from, any and all liability, claims, demands, loss, actions, causes of action, expense, penalties, fines, assessments, damages and costs of every kind and nature for injury to or death of any and all persons, including, without limitation, employees or representatives of the Company or of the Consultant or of any subcontractor, or any other person or persons, and for damage, destruction or loss, consequential or otherwise, to or of any and all property, real or personal, including, without limitation, property of the Company or of the Consultant or of any subcontractor, or of any other person or persons, and the violation of any law, ordinance, rule, regulation, standard, or order resulting from, or in any manner arising out of, or in connection with, the performance of the work under the Contract, howsoever same may be caused, including, without limitation, the Company's active or passive negligence. The Consultant shall also, upon request by the Company, and at no expense to the Company, defend the Company in any and all suits, concerning such injury to or death of any and all persons, and concerning such damage, destruction or loss, consequential or otherwise, to or of any and all property, real or personal, including, without limitation, suits by employees or representatives of the Company or of the Consultant or of any subcontractor, or any other person or persons, or concerning any court or administrative proceeding concerning the violation of any law, ordinance, rule, regulation, standard, or order. Excluded from this paragraph are only those injuries to or deaths of persons and damage, destruction or loss, to or of property arising from the sole negligence or willful misconduct of the Company.

b. Consultant shall indemnify the Company against, and save and hold it harmless from, any and all liability, claims, demands, damages, costs, expenses and attorney's fees, suffered or incurred on account of any breach of any obligation, covenant or other provision of this contract, including without limitation, breach of the indemnity provisions of subsection A of this Section 10.

c. Consultant further agrees to defend, indemnify and hold harmless the Company, its directors, officers, employees, and agents, from and against any and all costs, damages, claims, expenses, violations, notices of violations, penalties, liens, assessments, and liabilities of every kind and nature, foreseeable or unforeseeable, directly or indirectly, arising from any release, removal, generation, use, storage or disposal on, under, around, or from the site of any material, substance, or waste, hazardous or nonhazardous, including, without limitation, drilling fluids, mud, cuttings and development and test water howsoever same may be caused, including, without limitation, the Company's active or passive negligence.

11. Consultant's Insurance

Consultant shall procure and maintain the following minimum insurance:

a. Commercial general liability insurance, including personal injury liability, blanket contractual liability and broad-form property damage liability coverage. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

b. Automobile bodily injury and property damage liability insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

c. Statutory workers' compensation and employer's liability insurance as required by state law.

d. Professional liability insurance. The policy limit shall be not less than \$1,000,000.

Consultant shall either require each of its subconsultants to procure and to maintain the insurance specified in this section or insure its subconsultants in the Consultant's own policy, in like amounts.

Company shall be named as additional insured on policies a and b above. Upon execution of this Agreement, Consultant will provide a certificate of insurance to Company. Consultant will keep the certificate current at all times while this Agreement is in effect. The Consultant will provide a 30-day written notice in the event the above policies are cancelled.

12. Confidentiality

Consultant agrees it will maintain the confidentiality of all material it receives from Company and will not disclose, distribute, or publish to any third party such information without the prior permission of Company. Notwithstanding the foregoing, Consultant shall have no confidentiality obligation with respect to information that:

a. becomes generally available to the public other than as a result of disclosure by Consultant or its agents or employees;

b. was available to Consultant prior to its disclosure by Company;

c. becomes available to Consultant from a third party who is not, to the knowledge of Consultant, bound to retain such information in confidence.

In the event Consultant is compelled by subpoena, court order, or administrative order to disclose any confidential information, Consultant shall promptly notify Company

and shall cooperate with Company prior to disclosure so that Company may take necessary actions to protect such confidential information from disclosure.

13. Subcontracts

Consultant shall be entitled, to the extent determined appropriate by Consultant, to subcontract any portion of the services to be performed under this Agreement.

14. Suspension of Work

Work under this Agreement may be suspended as follows:

a. By Company: By written notice to Consultant, Company may suspend all or a portion of the Work under this Agreement if unforeseen circumstances beyond Company's control make normal progress of the Work impracticable.

b. By Consultant: By written notice to Company, Consultant may suspend the work if Consultant reasonably determines that working conditions at the Site (outside Consultant's control) are unsafe, or in violation of applicable laws, or in the event Company has not made timely payment in accordance with Article VI, compensation.

15. Termination of Work

a. This Agreement may be terminated by Company as follows: (1) for its convenience on thirty (30) days' notice to Consultant, or (2) for cause, if Consultant materially breaches this Agreement through no fault of Company and Consultant neither cures such material breach nor makes reasonable progress toward cure within fifteen (15) days after Company has given written notice of the alleged breach to Consultant.

b. This Agreement may be terminated by Consultant as follows: (1) for cause, if Company materially breaches this Agreement through no fault of Consultant and Company neither cures such material breach nor makes reasonable progress toward cure within thirty (30) days after Consultant has given written notice of the alleged breach to Company.

c. Payment upon Termination: In the event of termination, Consultant shall perform such additional work as is reasonably necessary for the orderly closing of the work. Consultant shall be compensated for all work performed prior to the effective date of termination, plus work required for the orderly closing of the work, including: (1) authorized work performed up to the termination date plus termination expenses, including all labor and expenses, at Consultant's standard billing rates, directly attributable to termination; (2) all efforts necessary to document the work completed or in progress; and (3) any termination reports requested by Company.

16. Assignment

This Agreement is binding on the heirs, successors, and assigns of the parties hereto. Except as otherwise set forth under Article VIII, Assignment of Tasks to Affiliates, this Agreement may not be assigned by Company or Consultant without prior, written consent of the other.

17. No Benefit for Third Parties

The services to be performed by Consultant are intended solely for the benefit of Company, and no benefit is conferred on, nor contractual relationship established with any person or entity not a party to this Agreement. No such person or entity shall be entitled to rely on Consultant's services, opinions, recommendations, plans, or specifications without the express written consent of Consultant. No right to assert a claim against the Consultant, its officers, employees, agents, or consultants shall accrue to the construction Contractor or to any subcontractor, supplier, manufacturer, lender, insurer, surety, or any other third party as a result of this Agreement or the performance or nonperformance of the Consultant's services hereunder.

18. Force Majeure

Consultant and Company shall not be responsible for delays caused by circumstances beyond their reasonable control, including, but not limited to: (1) strikes, lockouts, work slowdowns or stoppages, or accidents; (2) acts of God; (3) failure of Company to furnish timely information or to approve or disapprove Consultant's instruments of service promptly; and (4) faulty performance or nonperformance by Consultant or Company, Company's or Consultant independent consultants or contractors, or governmental agencies. Consultant and Company shall not be liable for damages arising out of any such delay, nor shall the Consultant or Company be deemed to be in breach of this Agreement as a result thereof.

19. Integration

This Agreement represents the entire understanding of Company and Consultant as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. This Agreement may not be modified or altered except in writing signed by both parties.

20. Severability

If any part of this Agreement is found unenforceable under applicable laws, such part shall be inoperative, null, and void insofar as it conflicts with said laws, but the remainder of this Agreement shall be in full force and effect.

21. Choice of Law/Jurisdiction

This Agreement shall be administered and interpreted under the laws of the State of Arizona. Jurisdiction of litigation arising from the Agreement shall be in The State of Arizona.

22. Attorneys' Fees

In the event any claim, controversy, or legal action arises under this Agreement, the prevailing party shall be entitled to recover from the other party all attorneys' fees, costs, expenses and other fees incurred by the prevailing party.

23. Notice Provisions

Notices concerning this Agreement shall be in writing and sent by certified mail or by courier (such as Federal Express), or by hand-delivery addressed as follows:

To the Company: Arizona Water Company
3805 North Black Canyon Highway
Phoenix, AZ 85015-5351
Attention: President

or

Arizona Water Company
Post Office Box 29006
Phoenix, AZ 85038-9006
Attention: President

To Consultant: Clear Creek Associates, PLC
6155 E. Indian School Road, Suite 200
Scottsdale, AZ 85251
Attention: President

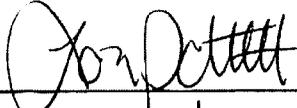
Either party may change its address for purposes of this Section by giving written notice of such change of address to the other party.

24. Authorization

The persons executing this Agreement on behalf of the parties hereto represent and warrant that the parties have all legal authority and authorization necessary to enter into this Agreement, and that such persons have been duly authorized to execute this Agreement on their behalf.

IN WITNESS WHEREOF, each of the parties hereto has caused this instrument to be executed by their respective duly authorized officers as of the date first written above.

CLEAR CREEK ASSOCIATES
a Professional limited liability company

By: 
Its: Principal

ARIZONA WATER COMPANY,
an Arizona corporation *AV*

By: 
Its: VP-Engineering

AKH

EXHIBIT A



*Practical Solutions
In Groundwater Science*

6155 East Indian School Rd.
Suite 200
Scottsdale, Arizona 85251
480-659-7131 office
480-659-7143 fax
www.clearcreekassociates.com

October 31, 2014

James Wilson, PE
Senior Engineer
Arizona Water Company
3805 N. Black Canyon Hwy
Phoenix, AZ 85015-5351

Water Quality Well Evaluation AWC Casa Grande Well No. 33

Dear James:

Clear Creek Associates (Clear Creek) is pleased to present this Scope of Work and Cost Estimate (SOW) to Arizona Water Company (AWC) for hydrologic support services to provide field oversight and data analysis for a water quality evaluation of AWC's Casa Grande Well #33. This well has elevated nitrate concentrations and AWC would like to evaluate whether a packer could be installed in the well to mitigate the nitrate issue. In general, the work consists of conducting static and dynamic spinner logs to evaluate the well's flow profile followed by the collection of depth-specific groundwater samples for laboratory analysis. Once the work is complete, we will prepare a Technical Memorandum (TM) summarizing our findings, conclusions and recommendations. Additionally, Clear Creek will provide training to AWC staff during completion of the field activities.

BACKGROUND

Casa Grande Well No. 33

The Casa Grande Well No. 33, also known as the Mission Royale Well #33 (ADWR Well No. 55-212523) is located in Township 6 South, Range 6 East, in the northeast $\frac{1}{4}$ (10 acre) of the southwest $\frac{1}{4}$ (40 acre) of the northeast $\frac{1}{4}$ (160 acre) of Section 251 (D [06-06] 25ACA). This well is also located in the Eloy sub-basin of the Pinal AMA and is permitted as a non-exempt service area well. The subject well was completed on April 4, 2007 to a total depth of 1,000 feet, by Arizona Beeman Drilling. The ADWR Well Registry Database indicated the following information for the Casa Grande Well No. 33:



October 31, 2014
James Wilson, PE
Arizona Water Company
Page 2

Casing:	0 to 520 ft 18 3/4 inch, 680 to 700 ft and 980 to 1000 18 5/8 inch
Screen:	520 to 680 ft, 700 to 980 ft Full Flo louvered 0.070 slot
Maximum Pump Capacity:	800 gpm
Maximum Annual Volume:	1,290 AFY
Authorized Use of Groundwater:	Service Area Right 56-001307.0000
Static Water Level:	270 ft bls (2007)

SCOPE OF WORK

The following scope of work outlines the approach and summarizes the tasks needed to complete the scope of work. Attachment A provides a breakdown of our anticipated costs to complete the project.

TASK 1.0 PROJECT STARTUP/COORDINATION/DATA REVIEW

Clear Creek will coordinate with AWC, AWC's pump contractor, the geophysical logger and the analytical laboratory for completion of the work. We will obtain sample bottles prior to the work and deliver the samples to the lab (Legend) once the samples have been collected. Since nitrate has a 48 hour hold time, it is preferential that the work not be completed on a Friday. This task also includes general communication and technical and financial management of the project as well. We understand that a static spinner log has already been completed. We will review that data prior to conducting the remaining onsite field work.

TASK 2.0 SPINNER LOGGING, ZONAL SAMPLING, AND TESTING OVERSIGHT/TRAINING

Clear Creek will oversee the constant rate pumping and record and document water levels as the well is being pumped. Clear Creek personnel will remain on-site throughout the day to ensure that the proper discharge rate is maintained, collect water level data, and to monitor the point of discharge. The dynamic spinner logging and depth-specific sampling will be conducted when the water level drawdown and field water quality parameters have stabilized to achieve reasonable hydrologic stability within the well and to purge the well of stagnate water so that representative groundwater samples may be collected from selected depth intervals. Interval-specific (zonal) water samples will be collected under dynamic conditions from up to six (6) selected depths in the well (sampling depths based on the results of the spinner log analysis). Samples will be submitted to an AWC approved analytical laboratory (Legend) and analyzed for nitrate (NO₃-N), fluoride (F), chromium (Cr), arsenic (As), and total dissolved solids (TDS). The water samples will also be analyzed for the common anions and cations: calcium,



October 31, 2014
James Wilson, PE
Arizona Water Company
Page 3

magnesium, sodium, potassium, alkalinity, sulfate, and chloride, which will enable us to conduct an ion balance for QA/QC purposes. Additionally, composite samples will be collected at the start of pumping and at the conclusion of zonal sampling. These two samples will be analyzed for a larger suite of analytes as listed below.

CONSTITUENTS		
Antimony	Lead	Sulfate
Arsenic	Magnesium	Sulfide, Total
Arsenic III	Magnesium Hardness as CaCO3	Total Alkalinity as CaCO3
Arsenic V	Manganese	Total Hardness as CaCO3
Cadmium	Molybdenum	Total Phosphorous
Calcium	Phosphate	Total Suspended Solids
Calcium Hardness as CaCO3	Selenium	Turbidity
Chromium	Silica, Total	Uranium
Iron	Silicon	Vanadium

For cost estimation purposes, it is assumed that the pumping hydraulics of the well will stabilize within 2 hours after starting the pump. We anticipate that the dynamic spinner logging and zonal sampling can be completed in one day. This timeframe does not include any pre-purging which may need to be done to purge nitrate from the well that has accumulated while the well has been out of production. We understand that the well will be purged for at least 8 hours the day before testing is to commence. Clear Creek will not oversee any pre-purging.

The dynamic spinner log data enable Clear Creek to estimate the water production that is being contributed from various depth intervals within the well. Clear Creek field staff will oversee the dynamic spinner log surveys. During the pumping period, Clear Creek personnel will periodically record water-level measurements and water quality field parameters, including electrical conductivity, sand content, pH, and temperature of the discharge water.

AWC has requested that they be present during spinner logging and zonal sampling and that Clear Creek provide training on the application of these tools for well evaluation. To accommodate this, Clear Creek will also have a senior or principal hydrogeologist on site to explain the technology and interpretation of results.



October 31, 2014
James Wilson, PE
Arizona Water Company
Page 4

The dynamic spinner log analysis and interval-specific water sample results will enable Clear Creek to assess the potential impact of structural well modification on the future water production (pumping rate) and water quality from the well.

Since a temporary test pump is being used for the work, step rate testing should also be conducted and we will collect samples at the different rates. We anticipate collecting samples at three different pumping rates and these samples will be analyzed for the larger suite on constituents listed in the table above. We anticipate that the well will be pumped at each rate for a period not less than 1.5 hours prior to sample collection. Field personnel will also monitor and record the electrical conductivity, sand content, pH, and temperature during each step. We have assumed that all analytical laboratory charges will be direct to AWC, therefore, costs for those services have not been included in this SOW.

Collection of variable rate samples will allow us to determine if there are changes in water quality at different pumping rates.

TASK 3.0 DATA ANALYSIS AND WELL EVALUATION TECHNICAL MEMORANDUM

Clear Creek will evaluate the static and dynamic spinner log results which will be plotted and analyzed. Production intervals within the screened section will be determined, and both percent (%) production and gallons per minute (gpm) will be calculated for each interval. Additionally, the depth specific sample analytical results will be evaluated. Since each zonal sample is a composite of all water entering the well from below the sample point, mass balance calculations will be completed to determine the actual water quality at each interval.

All work will be summarized in tables and figures that will be presented in the Well Evaluation TM. The TM will present options related to potential nitrate reduction through the installation of a packer along with estimated impacts to the well's overall efficiency. Prior to preparation of the draft TM, Clear Creek will meet with AWC staff to review and the results and discuss options. The recommended alternative will be included in the TM. The TM will be prepared in draft format for review and comment. Costs for two draft hard copies and a .pdf electronic version are included. Once comments have been received, the reports will be finalized and sealed by an Arizona-Registered Geologist. Two (2) copies of the final report have been included.



October 31, 2014
James Wilson, PE
Arizona Water Company
Page 5

COST ESTIMATE

Our estimated cost to complete this scope of work is \$12,924 based on assumptions outlined above. The cost estimate is summarized by task in Attachment A. Our estimate includes Clear Creek Associates labor and miscellaneous expenses (listed collectively in the table as Direct Costs). A schedule of hourly billing rates and equipment rates is provided in Attachment B. We have assumed that AWC will issue its own contract.

SCHEDULE

Clear Creek will begin work on this project immediately. Field work is scheduled to take place on November 3rd and 4th. Analytical laboratory analysis will be requested on a standard two week turnaround time unless otherwise requested by AWC. Our analysis will be completed within one week of receipt of the analytical results

We appreciate this opportunity to provide professional water resources services to Arizona Water Company. If you have any questions, please call me at 480-659-7131.

Sincerely,

Clear Creek Associates, PLC

A handwritten signature in black ink, appearing to read "Don P. Hanson", written over a horizontal line.

Don P. Hanson, R.G.
Principal Hydrogeologist

Cc: Marvin Glotfelty, R.G. - CCA

Attachment A – Cost Estimate
Attachment B – Schedule of Hourly Billing Rates and Fees

ATTACHMENT A PROJECT COST ESTIMATE



Arizona Water Company

Water Quality Well Evaluation, Casa Grande Well No. 33 (aka Mission Royale #33)

Task	Principal Hydrogeologist \$ 190 per hour		Senior Project Hydrogeologist \$ 150 per hour		Staff II Hydrologist \$ 188 per hour		Clerical \$ 65 per hour		Other Direct Costs	Clear Creek Associates Cost	Subcontractor Costs	TOTAL COST	
	Hrs	Cost	Hrs	Cost	Hrs	Cost	Hrs	Cost				Hrs	Cost
1.0 Project Startup/Coordination/Data Review	6	\$ 1,140	0	\$ -	6	\$ 648	2	\$ 130	\$ 0	\$ 1,918	\$ 0.00	14	\$ 1,918
2.0 Spinner Logging and Zonal Sampling Oversight	16	\$ 3,040	0	\$ -	20	\$ 2,160	0	\$ -	\$ 600	\$ 5,800	\$ 0.00	36	\$ 5,800
3.0 Data Analysis, Meeting, and Well Evaluation TM	8	\$ 1,520	0	\$ -	32	\$ 3,456	2	\$ 130	\$ 100	\$ 5,206	\$ 0.00	42	\$ 5,206
TOTAL	30	\$ 5,700	0	\$ -	58	\$ 6,264	4	\$ 260	\$ 700	\$ 12,924	\$ -	92	\$ 12,924

Notes:



Exhibit B
Clear Creek Associates, PLC
Schedule of Hourly Billing Rates and Fees

Position	Hourly Billing Rate
Principal Hydrologist/Geologist	\$190.00
Senior Associate Hydrologist/Geologist	\$182.00
Senior Hydrologist/Geologist	\$165.00
Sr. Project Hydrologist/Geologist	\$150.00
Project Hydrologist/Geologist	\$130.00
Staff II Hydrologist/Geologist	\$108.00
Staff I Hydrologist/Geologist	\$95.00
Technician II	\$80.00
Technician I	\$70.00
Clerical	\$65.00

Notes: Effective through December 31, 2014

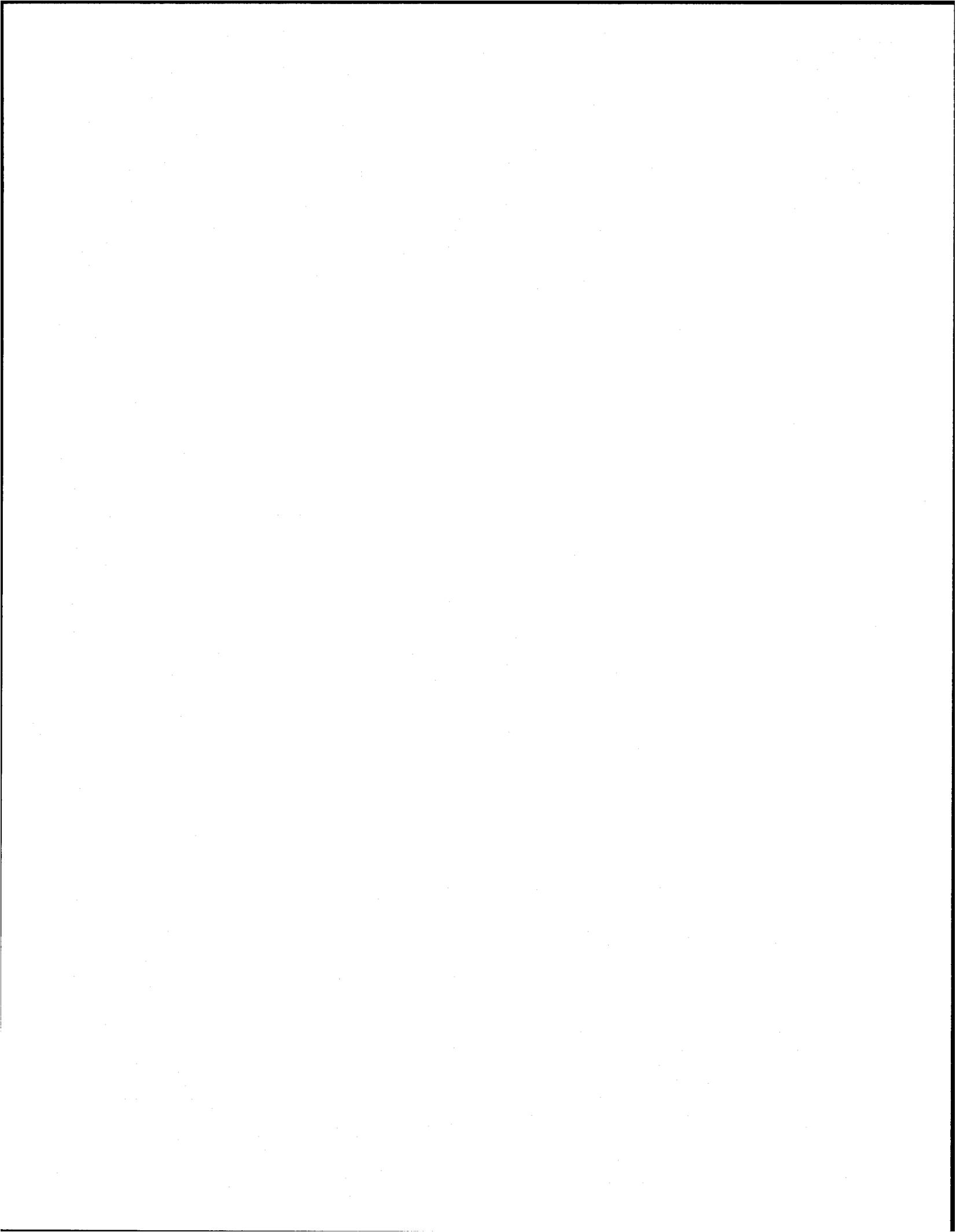
Hourly base rate ranges are revised annually to reflect changes in the cost of doing business.
Hourly rates for Expert Testimony negotiated separately.

Schedule of Hourly Billing Rates and Fees (Continued)

FIELD EQUIPMENT		
Identification	Per Day	Per Week
Water Level Indicator (<500 ft)	\$50	\$200
Water Level Indicator (500-1000 ft)	\$75	\$300
Water Level Indicator (>1000 ft)	\$100	\$400
pH/EC/Temperature Meter	\$25	\$100
Bailer, Teflon or SS	\$30/ea.	\$30/ea.
Bailer, Disposable	\$25/ea.	\$25/ea.
Camera (video)	\$25	\$100
Camera (digital)	\$10	\$40
Cellular Telephone (local)	\$10	\$40
Cellular Telephone (out-of-town)	\$15	\$60
Computer, Field	\$25	\$100
Flow Meter	\$30	\$120
Vacuum Pump (Air Sampling)	\$40	\$160
GPS	\$15	\$60
Pressure Transducer and Data Logger	\$150	\$600
Additional Transducer	\$50	\$250
Drilling Fluid Filter Press	\$12	\$48
Brunton Compass	\$12	\$48
Chromium Test Kit	\$16	\$64
Distance Measuring Wheel	\$6	\$24
Arsenic Test Kit	\$8/ea.	\$8/ea.
Field Truck (100 miles/day included, \$0.65 per mile thereafter)	\$95	\$380

MISCELLANEOUS EXPENSES		
Identification	Unit	Unit Cost
Black and White Photocopies	Page	\$0.10
Color Photocopies	Page	\$1.00
Color Printing	Page	\$1.00
Automobile Mileage	Mile	Current federal rate
Color Graphics – Bond	Square Foot	\$1.45
Color Graphics – Vellum	Square Foot	\$1.85
Color Graphics – Film	Square Foot	\$2.85
Independent Contract Consultant	Hourly	\$75.00
Subcontractor and Other Expenses		Cost plus 15%

Effective through December 31, 2014





ARIZONA WATER COMPANY

WELL RECORD

System: Pinal Valley	Map Reference (e.g. Site Name): Mission Royale 33	Well No. PV No. 33
----------------------	---	--------------------

THIS SECTION TO BE COMPLETED BY A.W.C.

WELL PROFILE DATA

insert data



ARIZONA WATER COMPANY

WELL RECORD

System: Pinal Valley	Map Reference (e.g. Site Name): Mission Royale 33	Well No. PV No. 33
----------------------	---	--------------------

THIS SECTION TO BE COMPLETED BY AWC

PUMP TEST DATA		
Test Pump By: Ken Elliott	Data Tested: 11/17/2014	
Static Level (feet): 290.25	Dynamic Level (feet):	Pump Level (feet): 357.88
Pump G.P.M.: 1300	Test Duration (hours): 23.50 Hrs.	
Remarks:		
Test pump: American Turbine 12H150 12 Stage		
US Motor 400 Hp		

THIS SECTION TO BE COMPLETED BY AWC

PUMP DESIGN DATA			
Design: G.P.M. @	T.D.H.(feet)	Static Level (feet):	Dynamic Level (feet):
Designed By:		Date Designed:	
Remarks:			



ARIZONA WATER COMPANY

WELL RECORD

System: Pinal Valley	Map Reference (e.g. Site Name): Mission Royale 33	Well No. PV No. 33
-------------------------	--	-----------------------

THIS SECTION TO BE COMPLETED BY AWC OR CONTRACTOR

COLUMN PIPE DATA		
Column Tread O.D. (inch): 10"	Length (feet):	Thread Type: 8 Round
Threads Per Inch: 10	Thread Direction:	
Supplier: Peerless	Date Installed: 1/19/2014	
Remarks:		

THIS SECTION TO BE COMPLETED BY AWC OR CONTRACTOR

OIL TUBE DATA		
Oil Tube Thread I.D. (inch): 3"	Threads Per Inch: 10	Thread Direction: RH
Supplier:	Date Installed: 1/19/2014	
Remarks:		

THIS SECTION TO BE COMPLETED BY AWC OR CONTRACTOR

SHAFT DATA		
Shaft Thread O.D. (inch): 1 15/16"	Threads Per Inch: 10	Thread Direction:
Supplier:	Date Installed: 1/19/2014	
Remarks: 72 1/4" Length		



ARIZONA WATER COMPANY

WELL RECORD

System: Pinal Valley	Map Reference (e.g. Site Name): Mission Royale 33	Well No. PV No. 33
----------------------	---	--------------------

THIS SECTION TO BE COMPLETED BY AWC OR CONTRACTOR

POWER SUPPLY DATA				
XFMR Type (e.g. Delta, Open Delta, Delta-Wye):	XFMR Size (KVA):	Underground or Overhead Service:		
Service Size (Amps):	Disconnect Size (Amps):	Volts:	Phase:	Wires:
Power Provider:		Date Installed:		
Remarks:				
N/A				

THIS SECTION TO BE COMPLETED BY AWC OR CONTRACTOR

CONTROL / STARTER PANEL DATA			
Manufacturer:		Catalog No.:	
Motor Voltage:	Max. H.P.:	Nema Size:	Nema Enclosure:
Supplier:		Date Installed:	
<input type="checkbox"/> Soft Start With Electronic Overloads	<input type="checkbox"/> Reduced Voltage Contractor	Reduced Voltage XFMR Type:	<input type="checkbox"/> Reactance <input type="checkbox"/> Auto Transformer
Reduced Volt. XFMR H.P.:	<input type="checkbox"/> Voltage Phase Imbalance Protection	<input type="checkbox"/> Current Phase Imbalance Protection	
Voltage Phase Imbalance Protection Manuf. & Mod.:		Current Phase Imbalance Protection Manuf. & Mod.:	
Wire Size to Motor:		<input type="checkbox"/> Parallel Conduits	
Flush Valve Timer (Minutes Max.):		Backspin Timer (Minutes Max.):	
Shut Down Timer (Minutes Max.):		Controlled By:	
Remarks:			
N/A			



ARIZONA WATER COMPANY

WELL RECORD

System: Pinal Valley	Map Reference (e.g. Site Name): Mission Royale 33	Well No. PV No. 33
----------------------	---	--------------------

PHOTOGRAPHS ARE TO BE TAKEN BY AWC

SERVICE ENTRANCE SECTION PHOTOGRAPHS

insert photos

N/A

PHOTOGRAPHS ARE TO BE TAKEN BY AWC

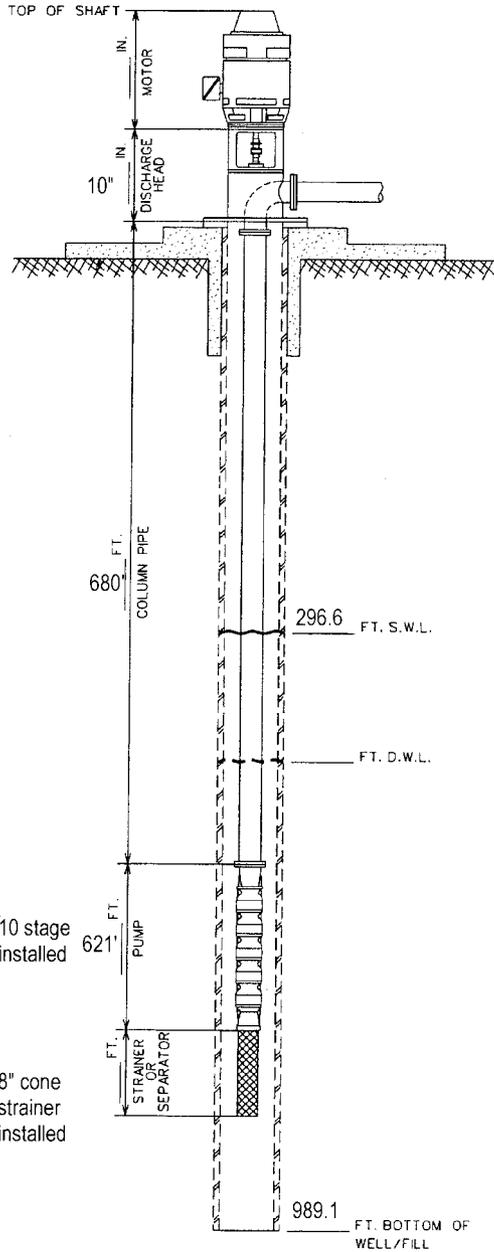
CONTROLS / STARTER PANEL PHOTOGRAPHS

insert photos

N/A



VERTICAL TURBINE AS-BUILT



DATE: 1/19/2014

INSPECTOR _____

WA NO. 1-5251

STATIC 296.6 FT DYNAMIC _____ FT PUMP DISCHARGE _____ GPM

STATIC PRESSURE _____ PSI DYNAMIC PRESSURE _____ PSI

MOTOR

H. P. 300 MFGR US

R. P. M. 1785 SIZE _____

PHASE / CYCLE / VOLTS 3 / / 460

DISCHARGE HEAD

TYPE Goulds SIZE 10" x _____

MECHANICAL SEAL

TYPE _____ SIZE _____

COLUMN ASSEMBLY

PIPE SIZE 10"

PIPE WALL 8 Round

SHAFT SIZE 1 15/16"

TUBE SIZE 3"

AIR LINE SIZE / MATERIAL 1/4" / SS

SOUNDING LINE SIZE / MATERIAL 1" / PVC Sch 40

CHEMICAL LINE SIZE / MATERIAL _____ / _____

BOWL ASSEMBLY

MODEL Goulds

NO. OF STAGES 10

SERIAL NO. R145885

STRAINER XX YES / NO SAND SEPARATOR YES / NO XX

NOTES: 8" Cone Strainer SS

Company: azwater
 Name: Well 33
 Date: 8/8/2014



Pump:

Size: E12HC (10 stage)
 Type: VERT. TURB. ENCLOSED
 Synch speed: 1800 rpm
 Curve: CVE12HC4P6CY
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1770 rpm
 Dia: 9.66 in
 Impeller: E12HC (1/16)
 Ns: 2400
 Nss: 5700
 Suction: ---
 Discharge: ---
 Bowl size: 11.6 in
 Max lateral: 0.94 in
 Thrust K factor: 8.1 lb/ft

Search Criteria:

Flow: 1400 US gpm Head: 629 ft

Fluid:

Water
 SG: 1
 Viscosity: 1.105 cP
 NPSHa: ---
 Temperature: 60 °F
 Vapor pressure: 0.2563 psi a
 Atm pressure: 14.7 psi a

Motor:

Standard: NEMA
 Enclosure: WPI
 Sizing criteria: Max Power on Design Curve
 Size: 300 hp
 Speed: 1800
 Frame: 447

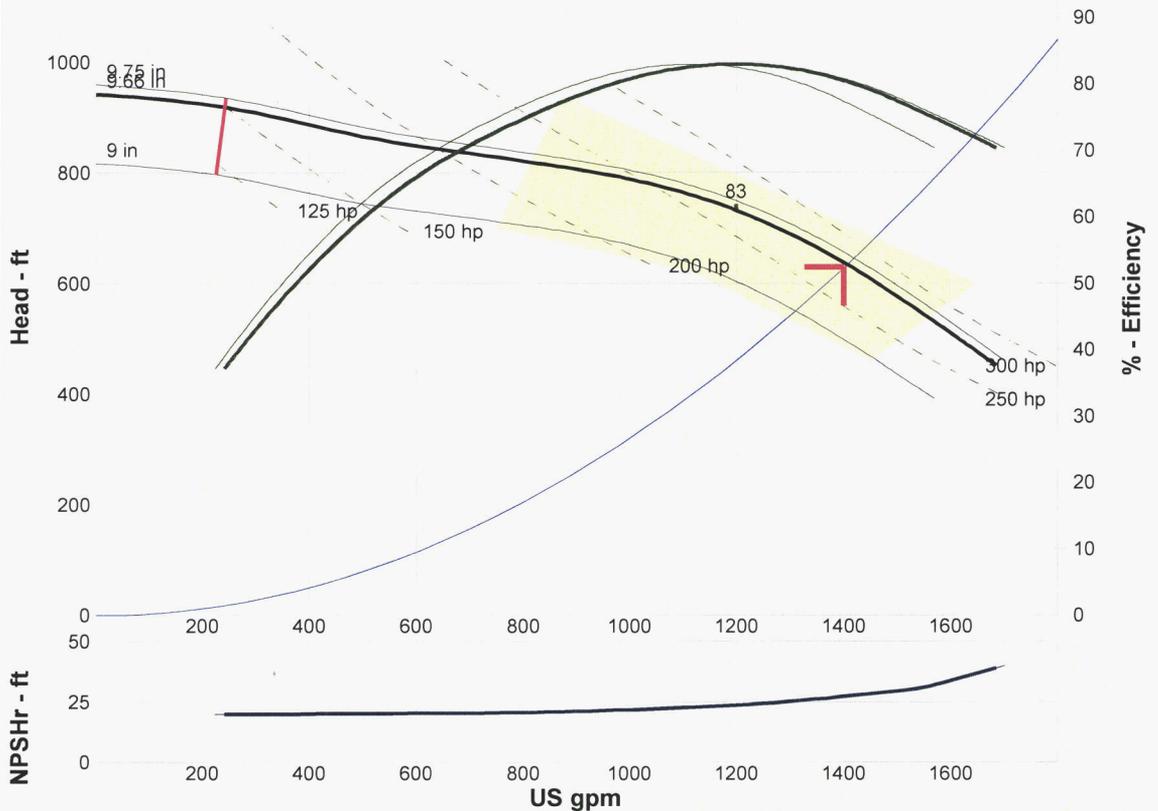
Pump Limits:

Temperature: 180 °F
 Pressure: 330 psi g
 Sphere size: 0.63 in
 Power: 417 hp
 Eye area: 15.5 in²

Pump Selection Warnings:

Pump shutoff dP exceeds limit for the pump.

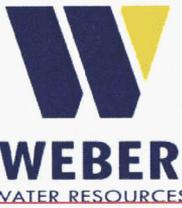
---- Data Point ----	
Flow:	1400 US gpm
Head:	636 ft
Eff:	80.3%
Power:	279 hp
NPSHr:	27.5 ft
---- Design Curve ----	
Shutoff head:	942 ft
Shutoff dP:	408 psi
Min flow:	240 US gpm
BEP:	83% @ 1199 US gpm
NOL power:	281 hp @ 1440 US gpm
-- Max Curve --	
Max power:	289 hp @ 1453 US gpm



UNLESS OTHERWISE SPECIFIED: [1] PUMP LIMITS AND PERFORMANCE BASED ON STANDARD MATERIALS. [2] PERFORMANCE SHOWN AS TYPICAL, CONTACT FACTORY FOR GUARANTEED PERFORMANCE. [3] NPSHR AT 1ST STAGE IMPELLER CENTERLINE.

Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
1680	1770	455	70.6	273	38.8
1400	1770	636	80.3	279	27.5
1120	1770	756	82.4	259	23.1
840	1770	815	76.2	227	21.1
560	1770	856	63.3	190	20.6



WATER WELL VIDEO REPORT

Weber Water Resources, LLC

Contractor License No.: AZ. KA-146267, KB-01-146265, L-11-146266
 16825 S Weber Dr. Chandler, AZ. 85226
 Phone: 480-961-1141 Fax: 480-961-0290 Web: www.WeberWaterResources.com

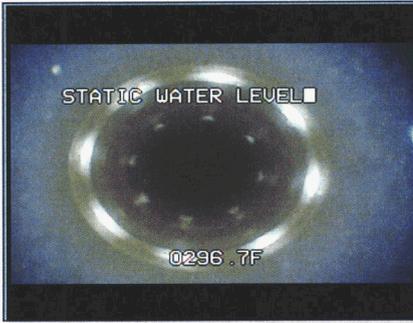
Client: Arizona Water Company Survey Date: October 14, 2014
 Address: Hwy 287 and 110 Florence Blvd Invoice: 1014141 Run: 1
 City: Casa Grande State: _____ Zip: _____ Well Name: Mission Royal #33
 Requested By: Gabe Tregaskes P.O.: _____ Well Owner: Arizona Water Company
 Copy To: _____ Camera: Laval R-2000 Color Camera
 Reason For Survey: Post Brushing Zero Datum: Top Of Casing
 Location: Hwy 287 and 110 Florence Blvd/Hacienda Blvd
 Field: Central Arizona Depth: 989.1 Vehicle: 95
 County: _____ Country: _____ Type Perfs: Horizontal louvers
 Perf Intervals: 700
 1st Csg I.D.: 18 in. Csg Weight: _____ From: 0 ft. To: 989.1 ft. 2nd Csg I.D.: _____ Csg Weight: _____ From: _____ To: _____
 I.D Reference: Measured Casing Buildup: Light, Increasing W/ Depth S.W.L.: 296.6 ft. P.W.L.: _____ Pump Depth: _____
 Operator: Brian Wheeler Latitude: _____ Longitude: _____ Section: _____ Range: _____ Township: _____
 Other Information: _____

WELLBORE SNAPSHOTS	DEPTHS (Downview-Feet)	WELLBORE / CASING INFORMATION
	296.7	Down view of casing
	703.3	Side view of casing
	749.6	Side view of casing
	799.6	Side view of casing
	881.8	Side view of casing
	927.5	Side view of casing
	945.5	Side view of casing
	961.8	Side view of casing
	989.2	Down view of casing
		Water is cloudy and dirty
		Louvers seen at 700'
		Light to medium buildup in perforations

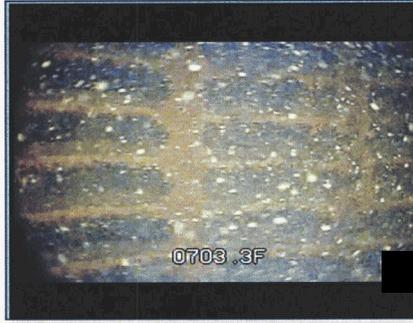
Notes:

WELLBORE SNAPSHOT(S)

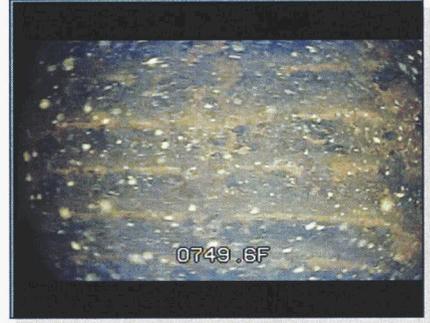
Depth: 296.7 Feet



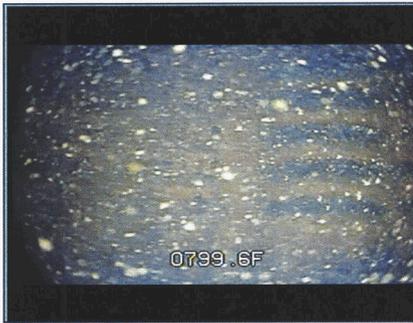
Depth: 703.3 Feet



Depth: 749.6 Feet



Depth: 799.6 Feet



Depth: 881.8 Feet



Depth: 927.5 Feet



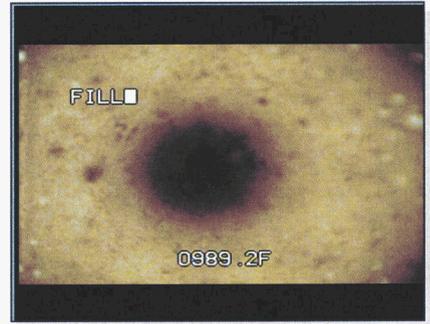
Depth: 945.5 Feet

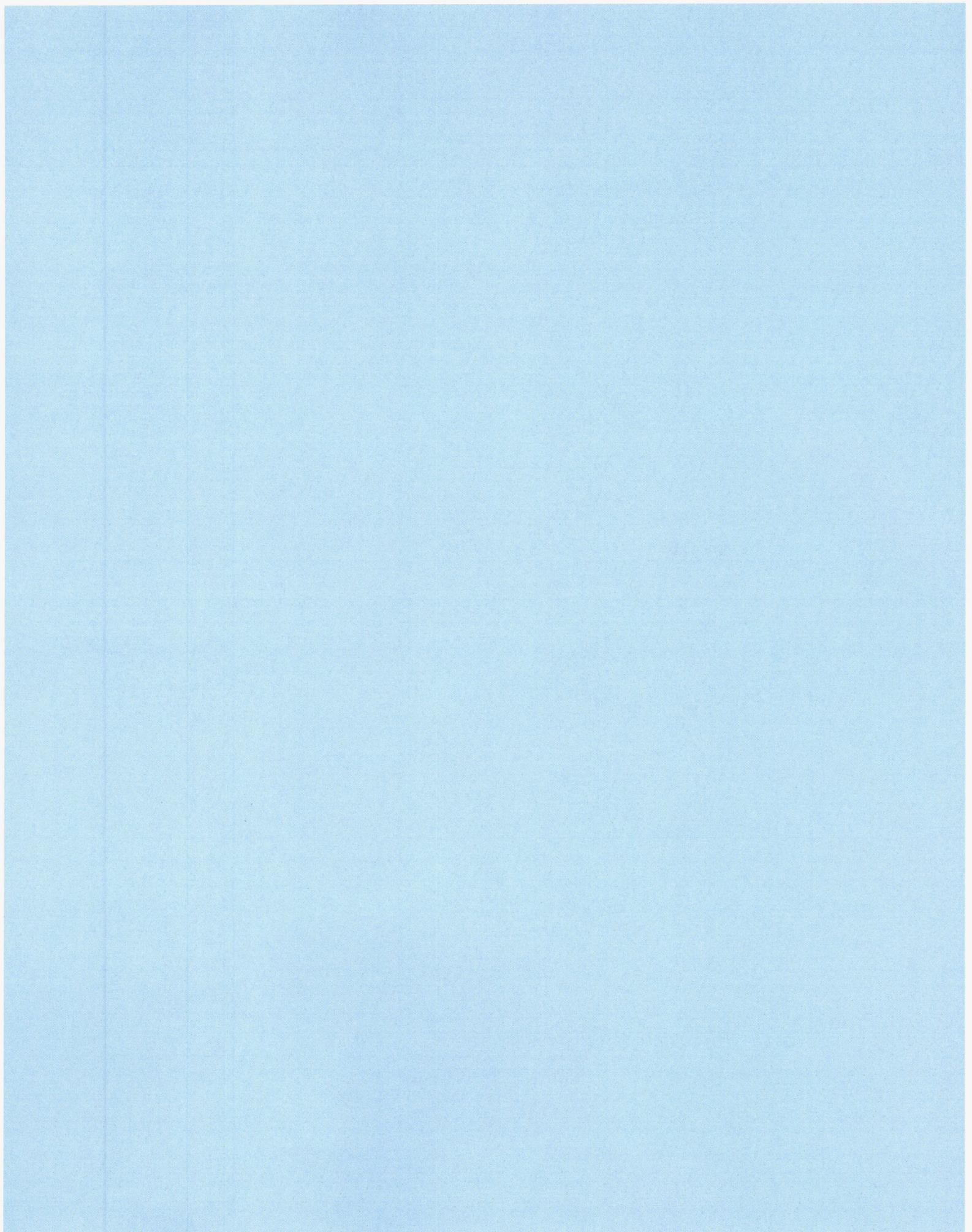


Depth: 961.8 Feet



Depth: 989.2 Feet

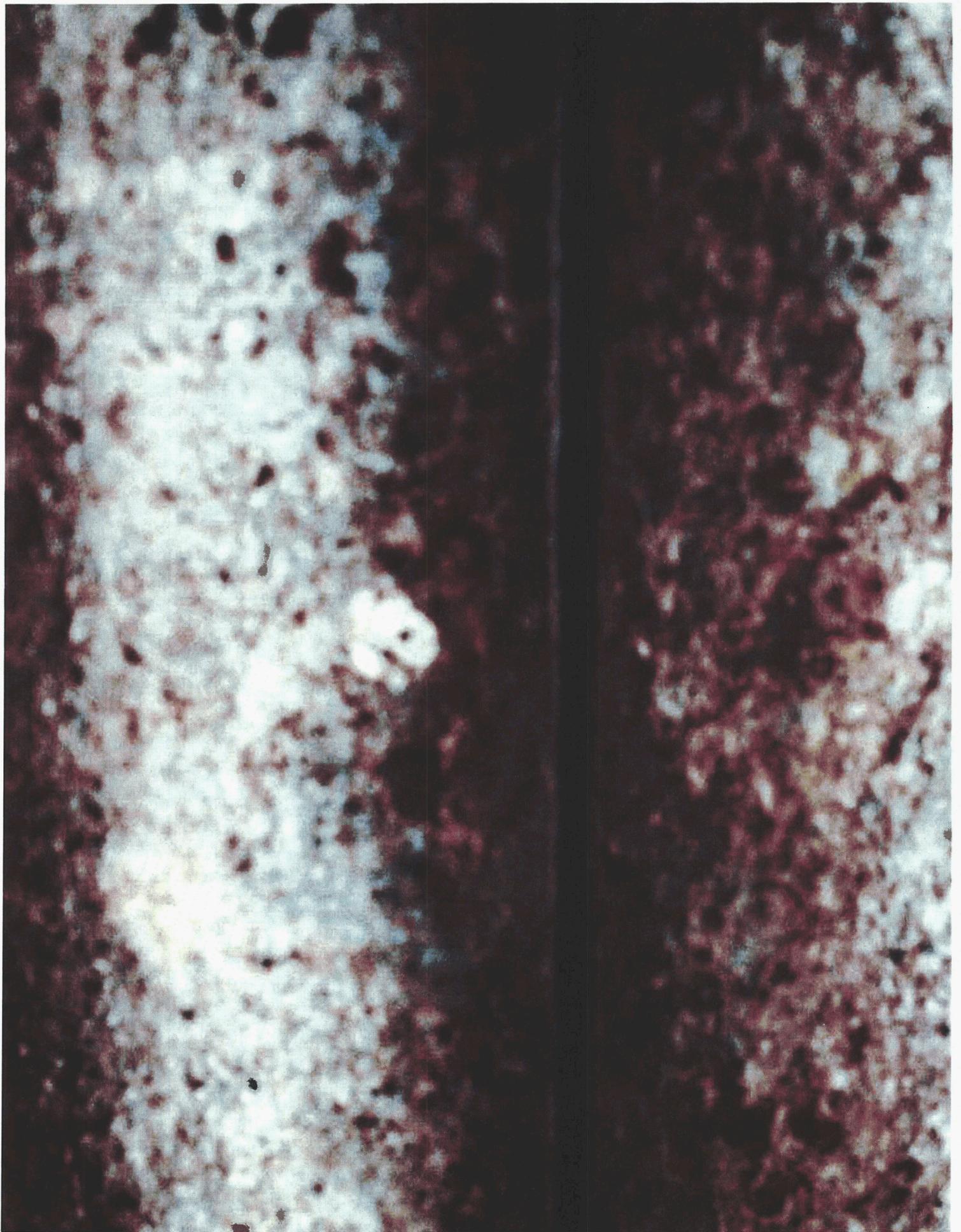


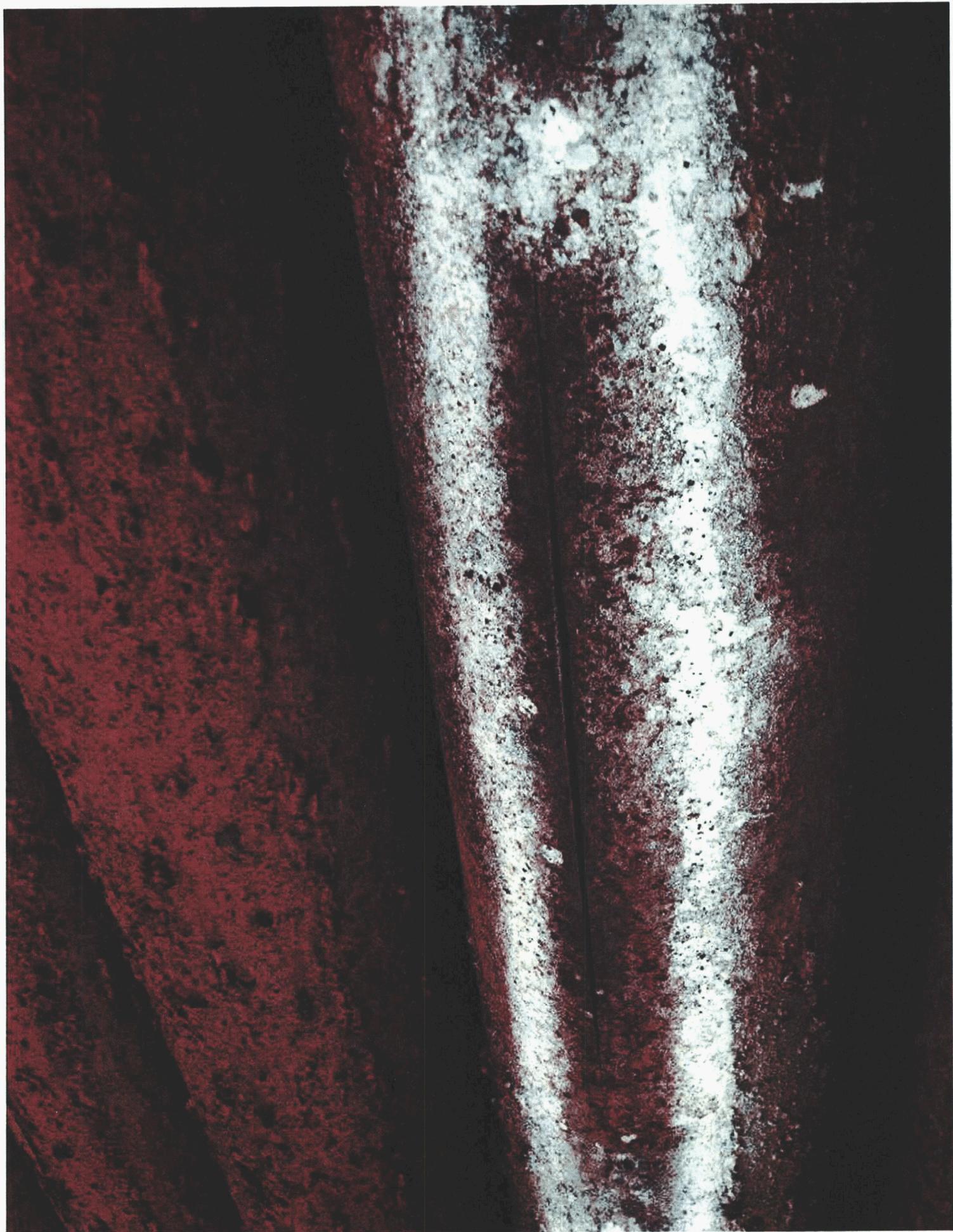




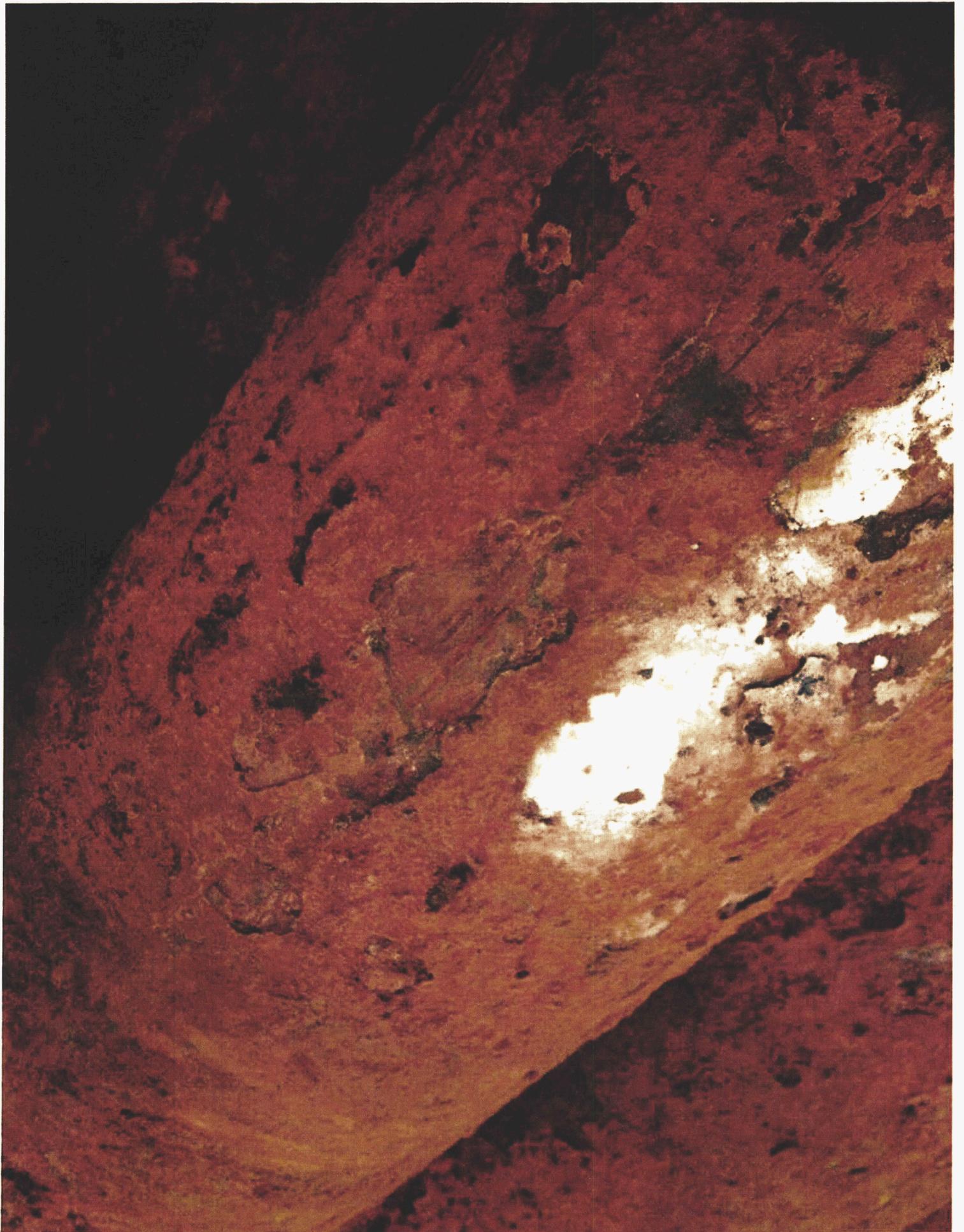










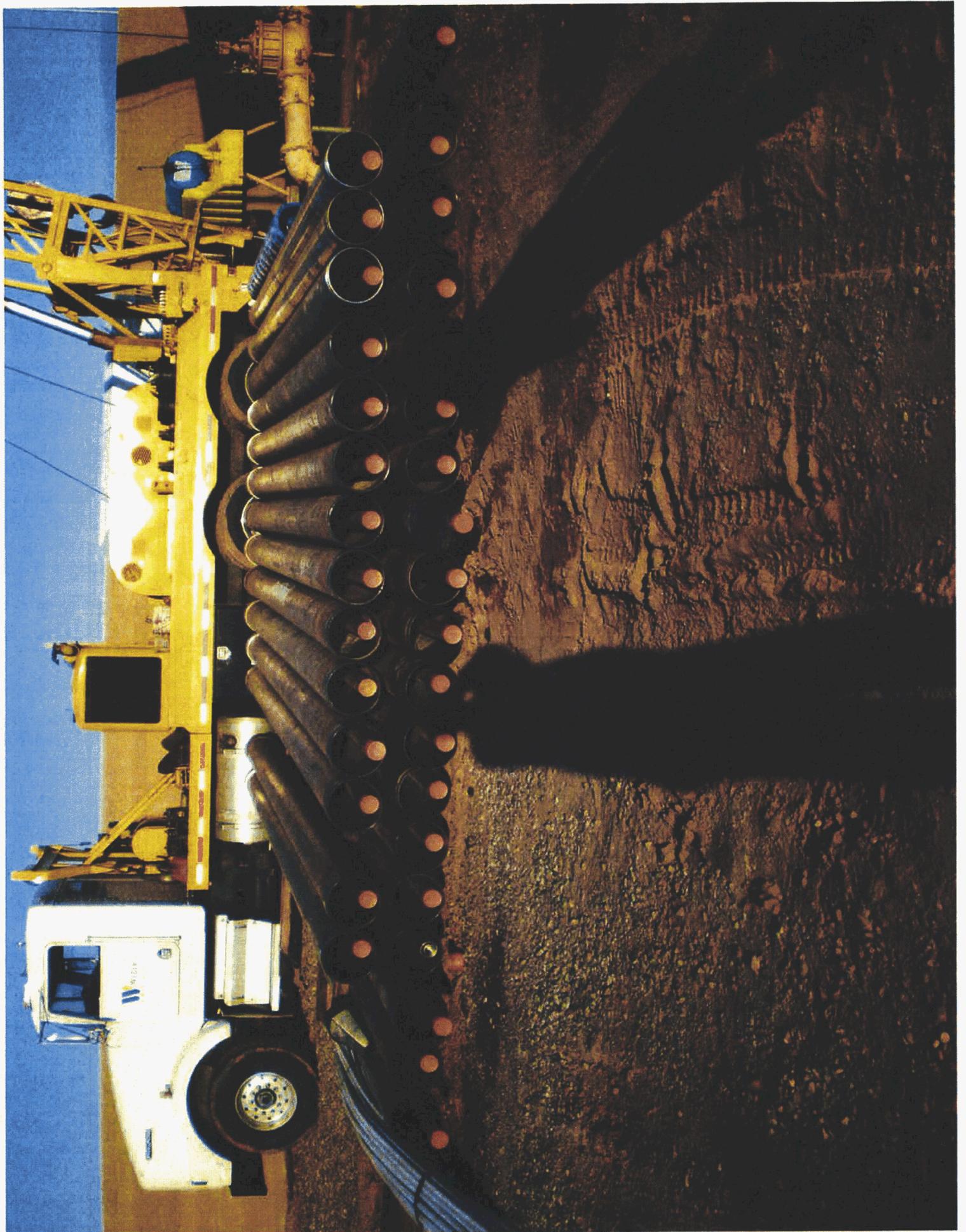


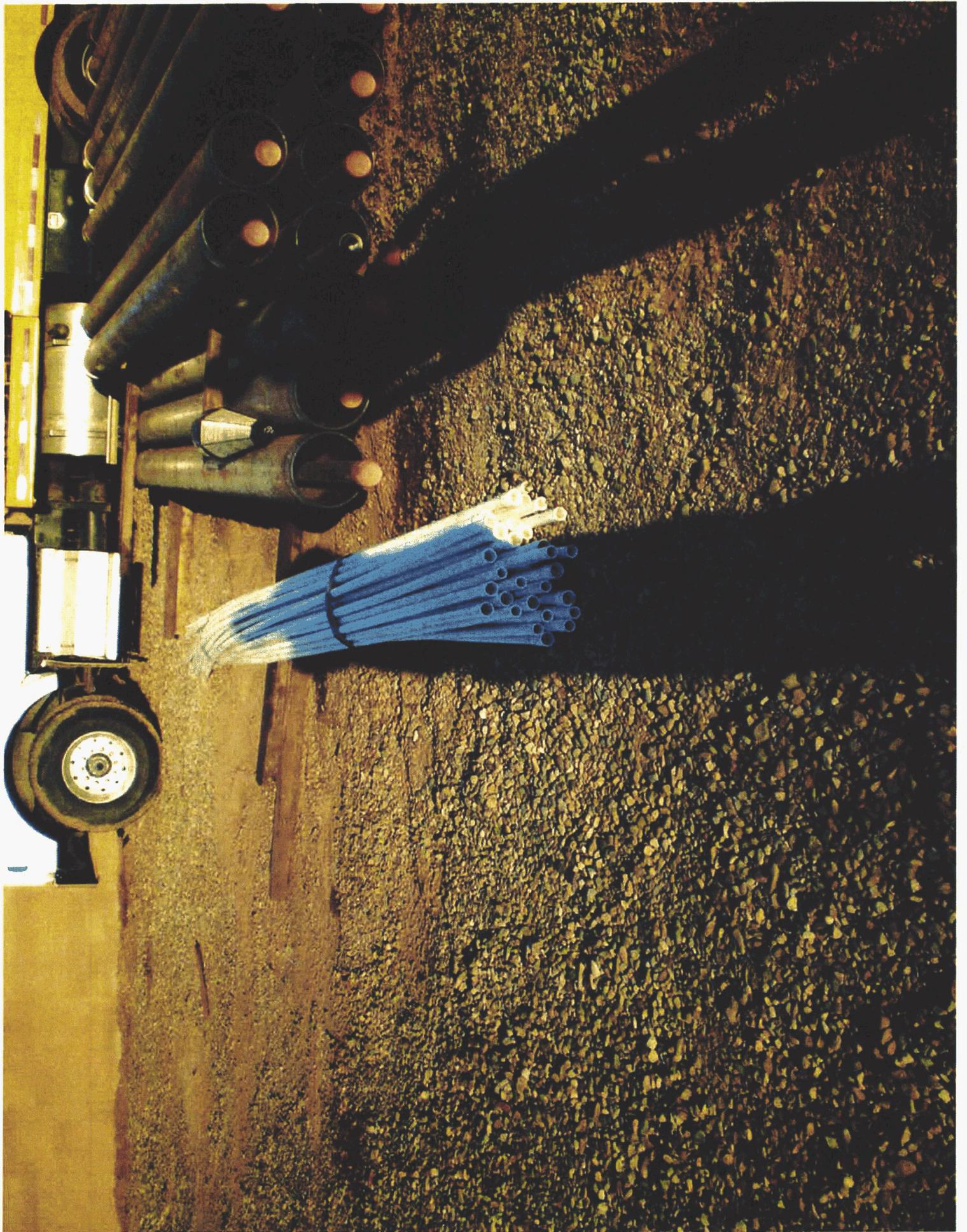














GOULDS WATER TECHNOLOGY
XYLEM INC LUBBOCK, TEXAS

ROTATION

MODEL 120HC-10STG 0/1

CAP

HEAD

LUBBOCK

SERIAL NO.

TRIMMER TRIM 8.5625

SIZE

MARKINGS

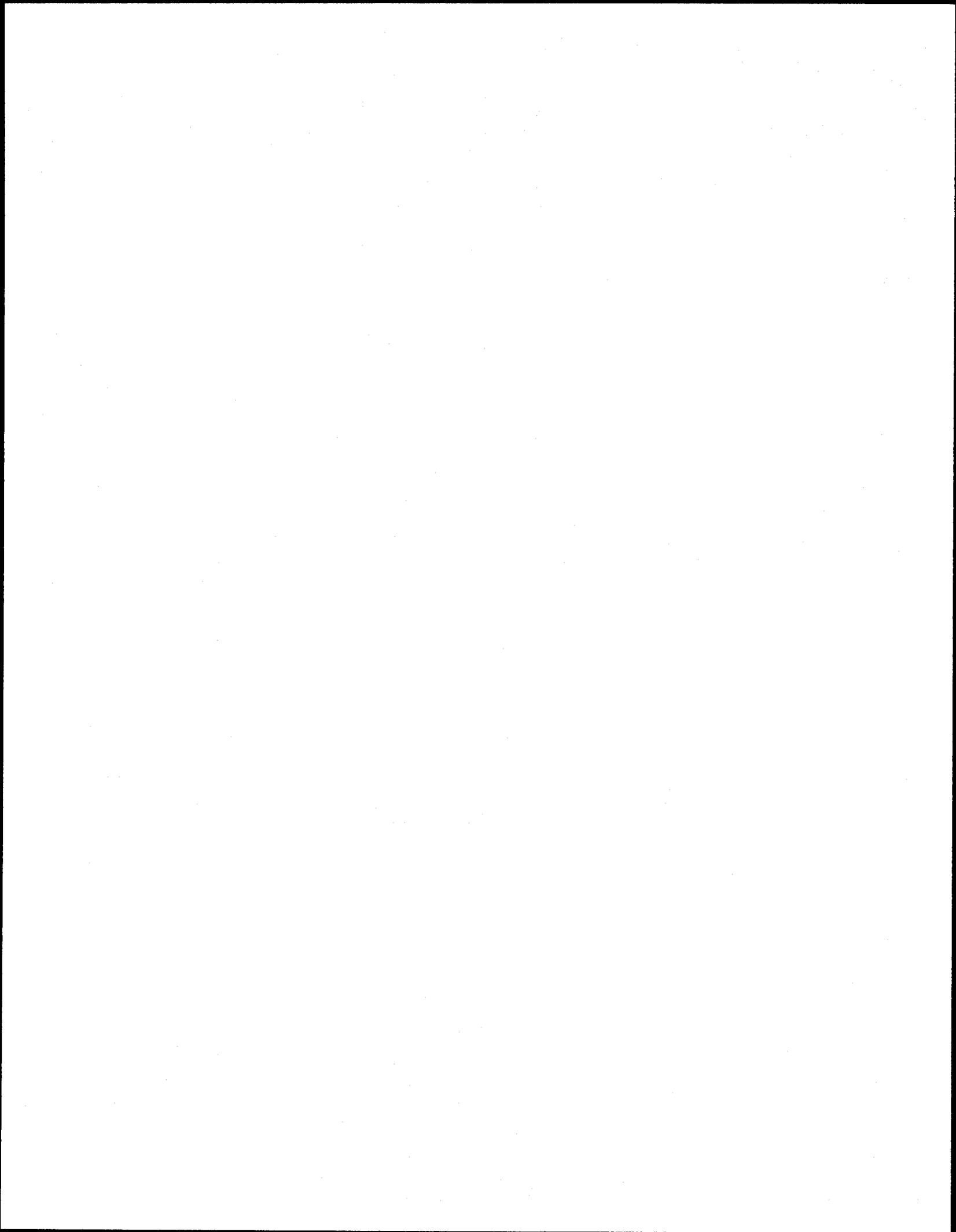
NO. STAGES

20080816

DATE

50-200816

IND





ARIZONA WATER COMPANY

CONSTRUCTION
PLACED IN SERVICE
NOTICE

WORK AUTHORIZATION NO.: 1-5251

DIVISION: Pinal Valley

DATE PLACED IN SERVICE: 1/22/15

CONTRACT NO:

FOR PURPOSES OF MODIFIED ACCELERATED COST RECOVERY SYSTEM, AN ASSET IS "PLACED IN SERVICE" WHEN IT IS IN A CONDITION OR STATE OF READINESS AND AVAILABILITY FOR A SPECIFICALLY ASSIGNED FUNCTION, WHETHER IT BE FOR USE IN A TRADE OR BUSINESS, OR FOR THE PRODUCTION OF INCOME.

I CERTIFY THAT THE ASSET(S) CONSTRUCTED PURSUANT TO THE PROVISIONS OF THE ABOVE-REFERENCED WORK AUTHORIZATION ARE READY FOR SERVICE AS OF THE DATE SHOWN ABOVE.

[Signature]
Division Manager or Operations Superintendent
(signature)

1-22-15
Date

A-1-3-1
FKS 11/24/11



ARIZONA WATER COMPANY

PROJECT CLOSE-OUT NOTICE

PROJECT CLOSE-OUT DATE:	1-22-15	DIVISION/SYSTEM:	Pinal Valley
		WORK AUTHORIZATION NUMBER:	1-5251
THE FOLLOWING RECORD REQUIREMENTS ARE ATTACHED:			
1. W.A. FINAL COMPLETION CHECKLIST			<i>[Signature]</i>
2. FINAL AUTHORIZATION TO BILL HAS BEEN SENT TO PHOENIX ON _____			Date

WA FINAL COMPLETION CHECK LIST

- FACILITIES RECORDS
 - Valve Records – Main & Blow-off
 - Fire Hydrant Records – Include Flow Test Data
- ABANDONED FACILITIES
 - Property Disposal Report (PDR)
 - Voided Valve Records
 - Voided Fire Hydrant Records
- COMPLETION DOCUMENTS
 - Public Fire Hydrants Installation Request (E-3-23)
 - Notice of Fire Hydrant Installation (E-5-5)
 - Permits Acquired By Division Office
 - Bill Of Sale (E-3-38-3)
 - Final Acceptance of Facilities Letter (E-3-36-5)
- ON-SITE PHOTOGRAPHS
 - To Show All New Installations At Completion Of W.A.

IF NO ATB IS REQUIRED

- ADEQ DATA REQUIRED WITH ECC APPLICATION
 - NOTE: "Footage Tested" to match total pipe installed ("343" ONLY)
- AS-BUILT DRAWING
 - Label Cover Sheet "AS BUILT"
 - Pipe footage and size to be listed on AS-BUILT cover sheet ("343" ONLY)
 - Printed name of AS-BUILT preparer
 - ONLY Changes to original construction drawing to be marked in red on AS-BUILTs,
 - NOTE: Include any additional Air Release Valves
- FORMS
 - Well Record (E-5-7)
 - Storage Tank Record (E-5-8)
 - Booster Pump Record (E-5-9)
 - Hydropneumatic Tank Record (E-5-10)
- OPERATIONS & MAINTENANCE MANUALS
 - Electric S.E.S. & M.C.C.
 - S.C.A.D.A./Controls
 - Treatment Facilities
- AOC (Approval of Construction)
 - Placed In Service Notice
 - Daily Progress Reports

I certify that construction on the above Work Authorization is complete and for which all materials have been accounted. I further certify that I have inspected the work and determined it a satisfactory and in accordance with Company specifications.

[Signature]
 Division Manager, Operations Superintendent, or Project Engineer (signature)

1-22-15
 Date of Notice

TO: ACCOUNTING DEPARTMENT (ACCOUNTANT II)
 CC: ENGINEERING DEPARTMENT (ENG. SEC.)

Western Group Rate Case

Exhibit FKS-1

5260 PV Well No. 29

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5260
P.E. NUMBER:
BUDGET ITEM NO.: Special No. 57
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: RAY MURRIETA	WORK TO BE FINISHED BY: WITHIN 90 DAYS
TAX CODE: 0437	

DESCRIPTION OF WORK:

Replace ~~failed~~^{leaking} sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility.

FACTORS JUSTIFYING WORK:

The sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility ~~failed~~ developed a leak. Company engineers determined it is not feasible to repair the chemical tank and replacement is required. The chlorine tank is critical to the operation of the well and arsenic removal facility and must be replaced.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	<i>Andrew J. Haas</i> Andrew Haas ASH 10-22-14	10-16-14
LABOR	5,800	REVIEWED FOR ESMT ROW VERIFICATION:	
CONTRACT PORTION	16,486	<i>Charles Briggs</i> Charles Briggs CB 10-22-2014	10-21-2014
OVERHEAD	2,700	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 24,986	<i>James Wilson</i> James Wilson JW 10/22/14	10/16/14
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	<i>Fredrick Schneider</i> Fredrick Schneider FS 10-23-14	10-17-14
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	<i>Joseph Harris</i> Joseph Harris	10/17/14
NET COMPANY CASH REQUIRED	\$ 24,986	SPECIAL ITEM EXCEEDING \$10,000; AUTHORIZED BY PRESIDENT:	
		<i>William M. Garfield</i> William Garfield	10-17-2014
		SPECIAL ITEM EXCEEDING \$10,000; AUTHORIZED BY CHAIRMAN:	
		APPROVED VIA FAX M. L. Whitehead	10/22/2014

COMMENTS:

Transfer \$15,000 from WA 1-4913 (Heness ARF) and transfer \$10,000 from WA 1-5123 (CG Well No. 25) to fund this project.

CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION
Authorized by FRED SCHNEIDER
Date 10/23/14

AFH

ARIZONA WATER COMPANY
WORK AUTHORIZATION - DETAIL SHEET

W.A. NUMBER: 1-5260
 P.E. NUMBER:
 BUDGET ITEM NO.: Special No. 57
 SHEET NO.: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER
		332	Chlorine Tank	1

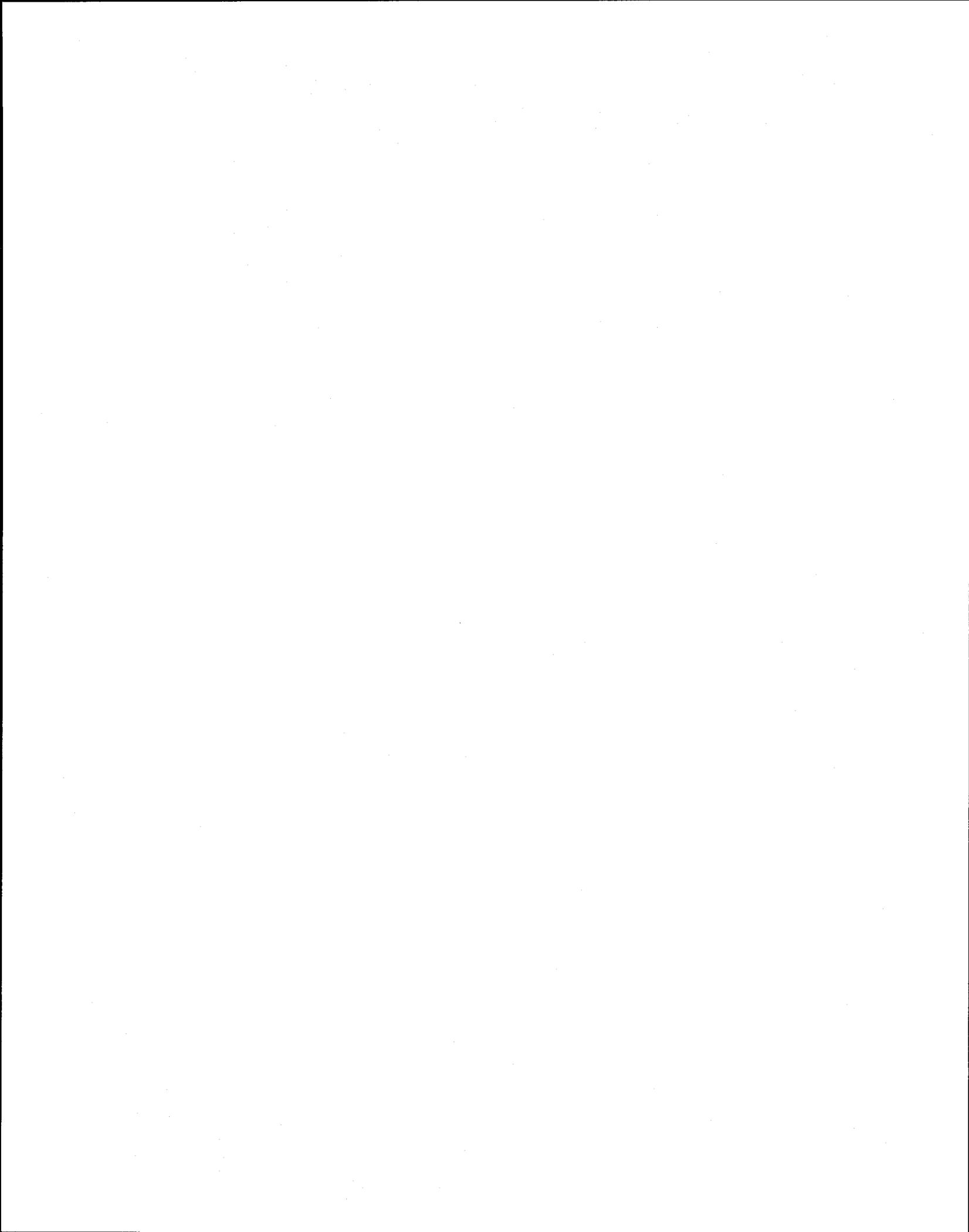
PROJECT DESCRIPTION
 Replace failed sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	550 Gallon HDLPE Tank	332	1	\$ 6,006.98	\$ 6,007
	PVC Pipe and Fittings	332	1	500.00	500
	Labor and Equipment to Replace Chlorine Tank	332	1	9,115.12	9,115
	Contracting Tax	332	1	114.00	114
	100% Performance and Payment Bonds	332	1	750.00	750
SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345				
SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345				
SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345				
SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				
TOTAL CONTRACT WORK					\$ 16,486

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
	SERVICE CONNECTIONS: SINGLE-SHORT	345			
	METERS	346			
TOTAL MATERIALS					\$ -

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Project Management	332	20	\$ 50.00	\$ 1,000
	Start Up and Testing	332	16	50.00	800
	TESTING FEE				
	PERMIT FEE				
	SURVEY FEE				
	FIELD INSPECTION	332	80	50.00	4,000
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				
TOTAL LABOR					\$ 5,800
SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR					\$ 22,286
OVERHEAD					2,700
TOTAL					\$ 24,986

AFH



ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5260
P.E. NUMBER:
BUDGET ITEM NO.: Special No. 17
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: RAY MURRIETA	WORK TO BE FINISHED BY: WITHIN 90 DAYS
TAX CODE: 0437	

DESCRIPTION OF WORK:

Replace leaking sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility.

FACTORS JUSTIFYING WORK:

The sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility failed and developed a leak. Company engineers determined it is not feasible to repair the chemical tank and replacement is required. The chlorine tank is critical to the operation of the well and arsenic removal facility and must be replaced. This project was released to construction on October 23, 2014, however, the work could not be completed due to availability of the replacement chemical tank.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	<i>James Wilson gw 4/29/15</i>	4/21/15
LABOR	5,800	REVIEWED FOR ESMT/ROW VERIFICATION:	
CONTRACT PORTION	16,486	<i>Charles Briggs CB 04-29-2015</i>	04-22-2015
OVERHEAD	2,700	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 24,986	<i>Andrew Haas ASH 4-20-15</i>	4-22-15
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	<i>Fredrick Schneider 5-2-15</i>	4-27-2015
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	<i>Joseph Harris</i>	4/27/15
NET COMPANY CASH REQUIRED	\$ 24,986	SPECIAL ITEM EXCEEDING \$10,000, AUTHORIZED BY PRESIDENT:	
		<i>William M Garfield</i>	4-28-2015

COMMENTS:
We have been using temporary "TOTE" for on-site chlorine.
JS

Transfer \$24,986 from WA 1-5306 (Stanfield BPS) to fund this project.
NO MONIES spent in 2014.
JS

SPECIAL ITEM EXCEEDING \$10,000, AUTHORIZED BY CHAIRMAN:
APPROVED VIA FAX
M. L. Whitehead
4/29/2015

CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION

Authorized by FRED SCHNEIDER
Date 4/29/15

2015 RERELEASE

AFH

ARIZONA WATER COMPANY

WORK AUTHORIZATION - DETAIL SHEET

W.A NUMBER: 1-5260
 P.E NUMBER:
 BUDGET ITEM NO: Special No. 17
 SHEET NO: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER
	332	Chlorine Tank	1	1-3765

PROJECT DESCRIPTION
 Replace leaking sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	550 Gallon HDLPE Tank	332	1	\$ 6,006.98	\$ 6,007
	PVC Pipe and Fittings	332	1	500.00	500
	Labor and Equipment to Replace Chlorine Tank	332	1	9,115.12	9,115
	Contracting Tax	332	1	114.00	114
	100% Performance and Payment Bonds	332	1	750.00	750
	SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345			
SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345				
SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				

TOTAL CONTRACT WORK \$ 16,486

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
SERVICE CONNECTIONS: SINGLE-SHORT	345				
METERS	346				

TOTAL MATERIALS \$ -

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Project Management	332	20	\$ 50.00	\$ 1,000
	Start Up and Testing	332	16	50.00	800
	TESTING FEE				
	PERMIT FEE				
	SURVEY FEE				
	FIELD INSPECTION	332	80	50.00	4,000
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				

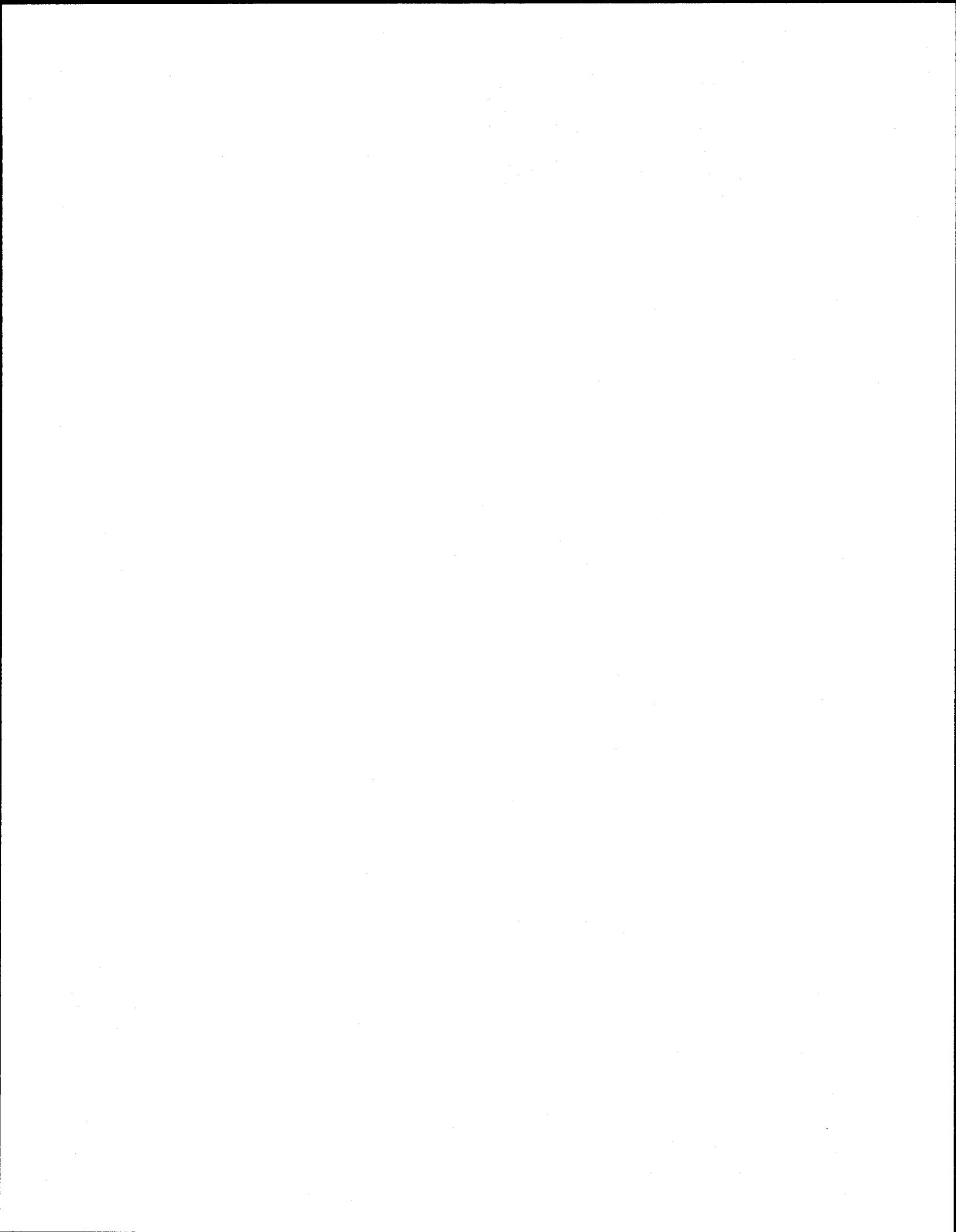
TOTAL LABOR \$ 5,800

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 22,286

OVERHEAD 2,700

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 24,986

AFH





ARIZONA WATER COMPANY

CONTRACT CHANGE ORDER

CONTRACTOR: MGC Contractors, Inc. 4110 East Elwood Street Phoenix, AZ 85040	DATE: October 30, 2014 W.A. NO.: 1-5260 On Call Services	CONTRACT DATE: March 27, 2012 CHANGE ORDER NO.: 38
DESCRIPTION OF WORK: Replace leaking sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility.	APPLICABLE C. O. COST: \$ 16,486.00 ORIGINAL CONTRACT AMOUNT: \$ 250,000.00 SUM OF ALL CHANGE ORDERS TO DATE: \$ 206,712.00	
REASON FOR ADDITIONAL WORK: The sodium hypochlorite chlorine tank at Pinal Valley Well No. 29 Arsenic Removal Facility developed a leak. Company engineers determined it is not feasible to repair the chemical tank and replacement is required. The chlorine tank is critical to the operation of the well and arsenic removal facility and must be replaced.	APPROVAL LEVEL REQ'D: (CIRCLE ALL THAT APPLY) (BASED ON SUM) Mjr & Eng. VP Eng VP Tres & Pres Up to \$10,000 or 10% whichever is less Up to \$100,000 or 20% whichever is less greater than \$100,000 or 20%	
BASIS OF PAYMENT: <input type="checkbox"/> In accordance with rates contained in Contractor's Proposal/Contract dated: <input checked="" type="checkbox"/> In accordance with material prices, labor and equipment rates shown on Proposal dated: August 29, 2014 <input type="checkbox"/> Lump Sum Price (including taxes) of: (Include supporting documentation) \$ <input type="checkbox"/> Other:		

Contractor is hereby authorized to proceed with the work as described above. The Company will pay for the above-described work as indicated above.

Contractor agrees, as an independent contractor, to perform the above-described work in accordance with the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings ("General Conditions of Contract") and related construction drawings which, were provided with the original Proposal/Contract and supplemented herein, and agrees that all provisions of said General Conditions of Contract dated as of April 2004, including any subsequent amendments thereto, and related construction drawings, apply to work covered under this Contract Change Order.

Work Authorization Approval for additional funds required

YES NO (circle one) If yes, attach applicable form & proof of payment for outside funded work.

Division Superintendent/Manager

Project Engineer/Project Manager

AWC Vice President - Engineering

MGC CONTRACTORS, INC.

Contractor: (Name)

By: Contractor's Representative Signature

Name: (Printed)

It's: (Title or Position)

CHANGE ORDER AUTHORIZATION OVER \$100,000 OR 20% OF THE CONTRACT NOT VALID WITHOUT SIGNATURES BELOW

AWC Vice President and Treasurer
AWC President

CONTRACTOR'S INVOICE APPROVED BY:

Date Work Started

Date Work Completed

Company's Representative Overseeing the Work (signature)

DISTRIBUTION:

Original to Person Authorizing Work and, when completed, to Accounting Dept. with approved invoice for the work with supporting documentation. Copy to Contractor. Copy to Project Engineer.

Labor and Material Releases Required:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Releases Received and Approved By:		
Company's Authorized Signature		



Change Order No. 039
MGC CO - 039
Well 29 Chlorine Tank Replacement

TO: Arizona Water Company
3805 N. Black Canyon Hwy.
Phoenix, AZ 85015
ATTN: Kevin Pakka

JOB NAME: AZ Water On-Call Services Agreement Date: 29-Aug-2014

REFERENCE: Per Kevin Pakka

MGC JOB NO. 12-249 AWC Project No: On-Call Services

We have reviewed the requirements of: Per Kevin Pakka
as it pertains to the work of our Contract.

In Compliance with the terms of our Contract Agreement, we agree to perform the changed work for:

Additional Amount of \$16,486

Deductive Amount of _____

No Change in Contract Amount

This pricing is based on the following conditions:

_____ Quotation is valid for 30 days. Lack of direction concerning this work by that date will require re-evaluation of the work change.

_____ Calendar days extension of Contract time is required.

_____ Exclusions or conditions that vary from our Contract Agreement are as follows:
This proposal includes the cost to replace the Chlorine tank located at Well 29 in Casa Grande. This proposal does not include emptying or cleaning of the existing tank.

Complete pricing breakdown for our work is attached for your review.

Signature: 

Date: 29-Aug-2014

Submitted By: Nick Patterson

Title: Project Manager

**CHANGE ORDER WORKSHEET
MGC CONTRACTORS, INC.**

MGC CO - 039

DATE : 29-Aug-2014
MGC Job No: 12-249
PREPARED BY: NP

DESCRIPTION OF WORK PERFORMED:

This proposal includes all labor and equipment necessary to replace one (1) chlorine tank located at Well 29 in Casa Grande. The tank will be replaced with a Snyder 550 gallon HDLPE Captor Tank designed specifically for Sodium Hypochlorite. Tank dimensions will be 76" Dia. by 65" tall with a 18" manway. All necessary PVC pipe to disconnect and reconnect the tank are included. This proposal does not include draining or cleaning of the existing tank.

COST ANALYSIS:

Labor

Position	Unit	Quantity	Labor Cost		Position Total
			Unit	Total	
Project Manager	HR	4.0	\$104.42	\$417.68	\$417.68
Superintendent	HR	8.0	\$79.93	\$639.44	\$639.44
Project Engineer	HR	0.0	\$64.38	\$0.00	\$0.00
Concrete Forman	HR	0.0	\$62.58	\$0.00	\$0.00
Excavation Foreman	HR	0.0	\$59.13	\$0.00	\$0.00
Pipe Forman	HR	16.0	\$59.00	\$944.00	\$944.00
Journeyman Carpenter	HR	0.0	\$45.42	\$0.00	\$0.00
Apprentice Carpenter	HR	0.0	\$42.92	\$0.00	\$0.00
Finisher	HR	0.0	\$38.53	\$0.00	\$0.00
Pipefitter	HR	16.0	\$39.78	\$636.48	\$636.48
Teamster	HR	0.0	\$36.05	\$0.00	\$0.00
Operator	HR	8.0	\$36.05	\$288.40	\$288.40
Laborer	HR	32.0	\$34.79	\$1,113.28	\$1,113.28
				Total Labor Cost	\$4,039.28

Equipment

Item	Unit	Quantity	Equipment		Item Total
			Unit	Total	
Pickup Truck	HR	28.0	\$37.78	\$1,057.84	\$1,057.84
22 Ton Boom Truck	HR	8.0	\$150.00	\$1,200.00	\$1,200.00
Water Truck	HR	0.0	\$89.07	\$0.00	\$0.00
Volvo L90 Front End Loader	HR	0.0	\$117.00	\$0.00	\$0.00
Volvo L110 Front End Loader	HR	0.0	\$134.40	\$0.00	\$0.00
Cat 420 Backhoe	HR	0.0	\$122.75	\$0.00	\$0.00
Hitachi 450 Excavator	HR	0.0	\$233.00	\$0.00	\$0.00
Cat 315 CL Excavator	HR	0.0	\$179.00	\$0.00	\$0.00
Link Belt 110 Ton Crane	HR	0.0	\$138.00	\$0.00	\$0.00
Sky Trak Ext Forklift	HR	0.0	\$50.00	\$0.00	\$0.00
Rammex P35K Trench Compactor	HR	0.0	\$53.50	\$0.00	\$0.00
Wacker	HR	0.0	\$26.00	\$0.00	\$0.00
Safety Equipment	HR	4.0	\$25.00	\$100.00	\$100.00
				Total Equipment Cost	\$2,357.84

Materials

Item	Unit	Quantity	Material		Item Total
			Unit	Total	
Snyder 550 gal. HDLPE Captor Tank	EA	1	\$6,006.98	\$6,006.98	\$6,006.98
Misc. PVC Pipe and Fittings	LS	1	\$500.00	\$500.00	\$500.00
			\$0.00	\$0.00	\$0.00
			\$0.00	\$0.00	\$0.00
			\$0.00	\$0.00	\$0.00
			\$0.00	\$0.00	\$0.00
				Total Material Cost	\$6,506.98

Subcontractors

Company	Description of Work to be Performed (Supporting Information Attached)	Item Total
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
Total Subcontractor Cost		\$0.00
TOTAL		\$12,904.10

Western Group Rate Case

Exhibit FKS-1

5296 PV Well No. 19

ARIZONA WATER COMPANY
WORK AUTHORIZATION

WA NUMBER: 1-5296
P.E. NUMBER:
BUDGET ITEM NO.: 1-5296
SHEET NO: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: JAMES WILSON	WORK TO BE FINISHED BY: WITHIN 60 DAYS
TAX CODE: 0403	

DESCRIPTION OF WORK:

Pull the pump, video inspect the well, and replace the National M14HC 5-stage pump, 1/4-inch stainless steel air line and 1-inch PVC sounding line at Well No. 19 in the Pinal Valley water system. Replace 600 feet of 10-inch column pipe. Prior to reinstalling the new pump, company engineers will inspect the existing oil tube and line shaft and replace failed components. Company engineers anticipate brushing and bailing the well prior to retuning the well to service.

FACTORS JUSTIFYING WORK:

APPROVED 2015 BUDGET ITEM (\$125,000)
Production from Well No. 19 recently decreased from approximately 1,650 gpm to 1,300 gpm. The pump and equipment in this well have been in service for approximately 7 years and have reached the end of their useful life. Company engineers determined the pump and related pumping equipment require replacement. Well No. 19 is critical to meeting peak water demands and necessary to continue to provide a safe, adequate and reliable drinking water supply to the Pinal Valley water system.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	James Wilson gw 4/29/15	4/24/15
LABOR	4,900	REVIEWED FOR ESTIMATE VERIFICATION:	
CONTRACT PORTION	92,439	Charles Briggs CB 04-29-2015	04-24-2015
OVERHEAD	11,700	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 109,039	Andrew J. Haas AJH 4-30-15	4-27-15
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	Fredrick Schneider FS 5-2-15	4-27-15
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	Joseph Harris	4/28/15
NET COMPANY CASH REQUIRED	\$ 109,039	AUTHORIZED BY PRESIDENT:	
		William M. Garfield	4-29-15

COMMENTS:

CONSTRUCTION RELEASE:

RELEASED TO CONSTRUCTION
Authorized by FRED SCHNEIDER
Date 4/29/15

2015 BUDGET

ARIZONA WATER COMPANY

W A NUMBER: 1-5296

WORK AUTHORIZATION - DETAIL SHEET

P E NUMBER:

BUDGET ITEM NO: 1-5296

SHEET NO: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W A NUMBER
	325	National M14HC 5-stage pump	1	2008
	325	10-inch column pipe	600	2008
	325	1/4-inch stainless steel air line	600	2008
	325	3/4-inch PVC sounding line	600	2008

PROJECT DESCRIPTION

Pull the pump, video inspect the well, and replace the National M14HC 5-stage pump, 1/4-inch stainless steel air line and 1-inch PVC sounding line at Well No. 19 in the Pinal Valley water system. Replace 600 feet of 10-inch column pipe. Prior to reinstalling the new pump, company engineers will inspect the existing oil tube and line shaft and replace failed components. Company engineers anticipate brushing and bailing the well prior to retuning the well to service.

C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Labor to pull and replace pump	325	1	\$ 6,375.00	\$ 6,375
	Provide and install National M14HC 5-stage pump	325	1	9,123.00	9,123
	Provide and install 10"x20' seamless taper thread column pipe	325	30	1,220.00	36,600
	Provide and install 3"x1-15/16" tube and shaft	325	20	831.40	16,628
	Provide and install 3/4" PVC line	325	1	203.00	203
	Provide and install 1/4" stainless steel air line with gauge and valve	325	1	1,542.00	1,542
	Video Well	325	2	850.00	1,700
	Miscellaneous materials	325	1	350.00	350
	Brush and bail well	325	40	205.00	8,200
	Rebuild 300 HP motor	325	1	10,000.00	10,000
	Performance and payment bond	325	1	\$ 233.00	233
	Contracting tax	325	1	1,485.00	1,485
	SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345			

TOTAL CONTRACT WORK \$ 92,439

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
	SERVICE CONNECTIONS: SINGLE-SHORT	345			
	METERS	346			

TOTAL MATERIALS \$ -

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Project Management and Engineering Design	325	40	\$ 55.00	\$ 2,200
	TESTING FEE	325	1	\$ 500.00	500
	PERMIT FEE				
	SURVEY FEE				
	FIELD INSPECTION	325	40	55.00	2,200
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345			
	INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345			

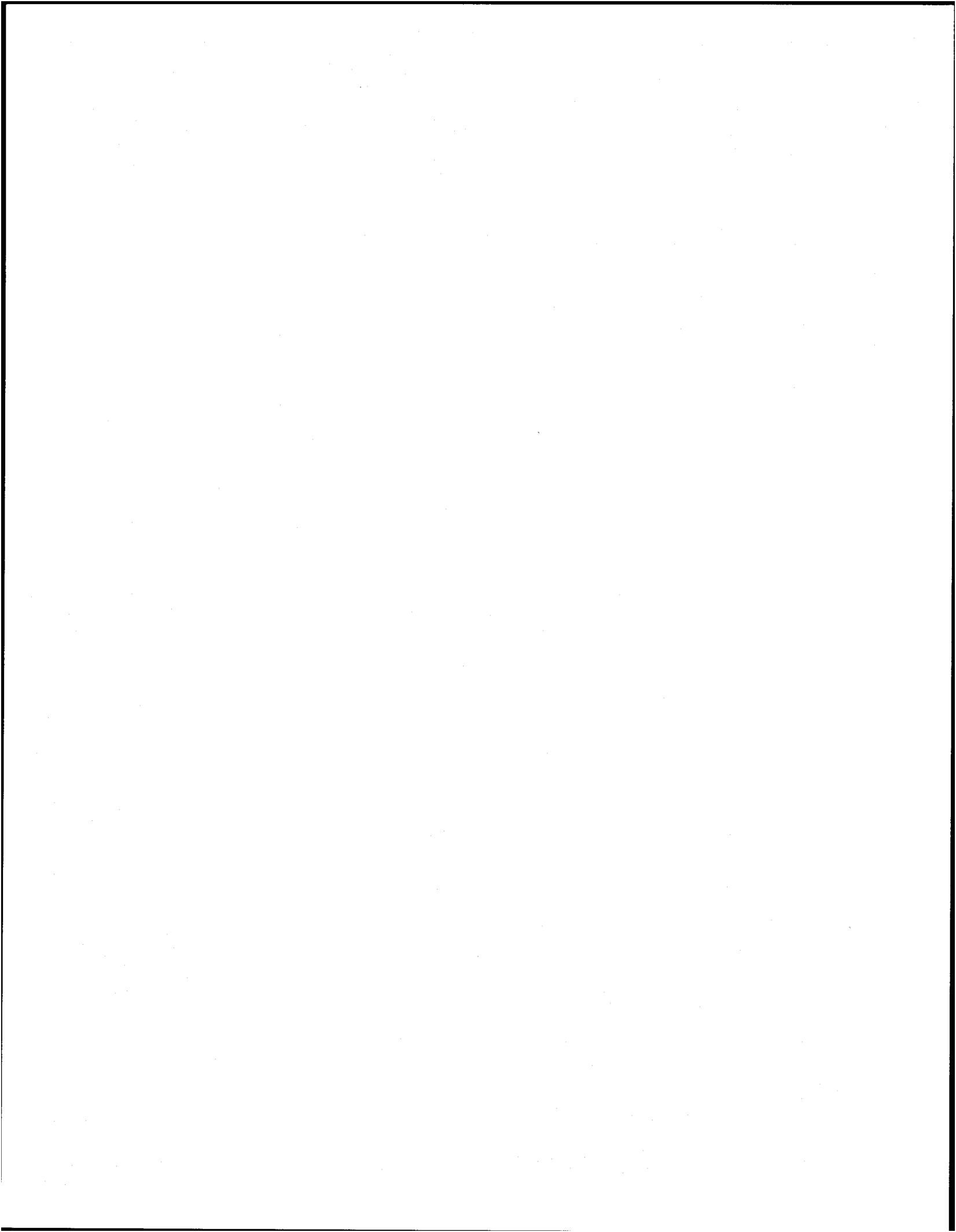
TOTAL LABOR \$ 4,900

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR \$ 97,339

OVERHEAD 11,700

TOTAL REFUNDABLE PORTION NON-REFUNDABLE PORTION **COST ESTIMATE** \$ 109,039

AFH



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

April 29, 2015

Mr. Martin Weber
Weber Water Resources, LLC
16825 S. Weber Drive
Chandler, Az 85226

Re: Pull and replace pump at Henness Well No. 19

PROJECT: Henness Well No. 19	
SYSTEM: Pinal Valley	
CONTRACT NO.:	
P.E. NO.:	W.A. NO.: 1-5296

Dear Mr. Martin Weber:

Enclosed is your copy of the Proposal/Contract for the above-referenced project, which has been accepted by Arizona Water Company (the "Company"). The project shall be constructed in accordance with the Company's *General Conditions of Contract, the Specifications and the Drawings* which were included with the Company's previously provided Proposal/Contract, copies of which are being provided again and attached herewith.

Also enclosed are two copies of the Commencement Notice for the above-referenced project. Please sign one of the copies and return it to my attention retaining the other for your records.

As provided in paragraph 4 of the Company's Proposal/Contract executed by the Company on May 4, 2015, Weber Water Resources, LLC acknowledged that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work. In addition, as provided in paragraph 44 of the Company's General Conditions of Contract, the 100% Performance and Payment Bonds must be provided within ten (10) calendar days of the date of the Commencement Notice. Failure to provide an acceptable 100% Performance and Payment Bond does not limit the Company's

E-MAIL: MAIL@AZWATER.COM

Mr. Martin Weber
Weber Water Resources, LLC

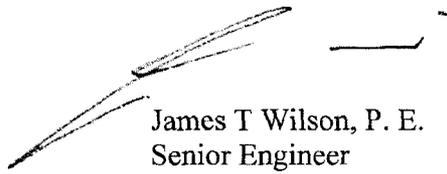
April 29, 2015
Page 2

ability to terminate the Proposal/Contract or seek restitution for damages that the Company may have or will incur.

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting. In addition, please provide the required Performance and Payment Bonds to the Company promptly so that the contracted work can be completed within the contract's timeline.

If you have any questions, please call me at this office.

Very truly yours,



James T Wilson, P. E.
Senior Engineer
engineering@azwater.com

af
Enclosure



ARIZONA WATER COMPANY

Pinal Valley - Casa Grande
220 E. 2nd Street

PROPOSAL/CONTRACT

CONTRACTOR: WEBER WATER RESOURCES, LLC	SYSTEM: PINAL VALLEY
ADDRESS: 16825 S. WEBER DRIVE	WA No(s): 1-5296
CITY ST ZIP: CHANDLER, AZ 85226	BID DUE DATE: October 17, 2014

CONTRACTOR SUBMITS this PROPOSAL/CONTRACT to ARIZONA WATER COMPANY, an Arizona corporation (the "Company"), to perform the work and complete the project described on Page 2 (the "Project"), as an independent prime contractor.

- Contractor certifies that it has a complete copy of, and has read, understands and accepts, the Company's General Conditions of Contract, and the Company's Construction Specifications and Standard Specification Drawings, (the "Specifications"), all of which are attached hereto. Contractor has examined the specific plans and related construction drawings for the Project (the "Drawings"), copies of which are also attached hereto. The General Conditions of Contract, Specifications and Drawings are incorporated into this Proposal/Contract. Contractor affirms that all work and materials to be furnished or purchased for the Project will be in strict conformance with the General Conditions of Contract, Specifications and Drawings.
- Contractor represents and warrants that it has satisfied and complied with the provisions of Section 6, Contractor Understands Work and Working Conditions, of the General Conditions of Contract prior to submitting this Proposal/Contract.
- Contractor represents that this Proposal/Contract is fair and honest in all respects, is submitted in good faith and is not submitted in collusion with any other company, entity or person.
- Contractor acknowledges that one hundred percent (100%) Performance and Payment Bonds are required and must be provided to the Company prior to the commencement of work.
- Prior to the commencement of work, Contractor will submit to the Company a list of all materials to be used in the Project. The materials list will include the manufacturer, part number, price and quantity included in this Proposal/Contract.
- Contractor will furnish all labor, tools, equipment and materials required to complete the Project according to the General Conditions of Contract, Specifications and Drawings. No materials purchased by Contractor to be incorporated into the Project are subject to tax at the time of purchase and Contractor will not charge the Company for any such tax. Contractor will pay the applicable transaction privilege tax (the "Contracting Tax") on the Project after Contractor receives payment of the final Project invoice from the Company. The cost of materials incorporated into the Project which are exempt by Arizona Revised State Statutes ("A.R.S.") from the Contracting Tax, for example, pipes or valves having a diameter of four (4) inches or larger, including equipment, fittings and any other related part that is used in operating the pipes or valves (A.R.S. §42-5061 B.6.), will not be included in the total cost of the labor and materials upon which the Contracting Tax is computed. Contractor retains full liability and obligation to pay the Contracting Tax and will defend and indemnify the Company against any demand or obligation to pay the Contracting Tax.
- Contractor will maintain detailed accounting records of all materials purchased and incorporated into the Project. Such records will include all supporting original vendor invoices for all materials purchased. Following completion of the Project, Contractor will submit an itemized accounting to the Company which will include all supporting original vendor invoices and satisfactory evidence of payment thereof. The Company will not pay Contractor for materials not actually incorporated into the Project, and the disposition of such materials will remain Contractor's responsibility.
- The Estimated Total Cost of the Project, shown on Page 2, is based on estimated labor and material quantities to be furnished. It includes an estimate of the Contracting Tax and the cost of the required Performance and Payment Bonds. Contractor will not cancel, modify or withdraw this Proposal/Contract during a ninety-day (90) period commencing on the Bid Due Date. The Company may accept this Proposal/Contract by signing and mailing, or otherwise delivering, a copy hereof to Contractor during such ninety-day (90) period. If the Company does not accept this Proposal/Contract during such ninety-day (90) period, Contractor may cancel this Proposal/Contract by giving written notice of cancellation to the Company.
- Prior to the commencement of work, Contractor will provide the Company with a detailed construction schedule, in either Gantt or CPM form, identifying all tasks to be performed from the date of the written Commencement Notice through completion of the Project, including testing, training of Company Personnel and final Project Invoicing. Contractor will provide the Company with a copy of such construction schedule documenting the progress of work on the Project at least monthly.
- Contractor will not commence work on the Project until the Company gives Contractor a written Commencement Notice. Contractor will complete the Project within 45 calendar days after the Commencement Notice is issued.
- Following the Company's written notice of satisfactory completion of the Project, and upon receipt of the final Project invoice from Contractor, the Company shall pay Contractor the actual total cost of the Project, which will be calculated as shown on Page 2, except that actual labor and material quantities installed/constructed will be substituted for the estimated labor and materials quantities and the Contracting Tax will be recalculated based on such actual labor and materials quantities.
- The amount of applicable liquidated damages for Contractor's failure to deliver or perform within the time limit shown in Paragraph 10 may be deducted from the Company's payment of the final Project invoice. This provision shall not limit the Company's ability to terminate this Proposal/Contract for Contractor's unsatisfactory performance or failure to perform as provided in the General Conditions of Contract, Specifications or Drawings, or in this Proposal/Contract.

SPECIAL CONDITIONS:

CONTRACTOR WEBER WATER RESOURCES, LLC	PROPOSAL/CONTRACT ACCEPTED: ARIZONA WATER COMPANY
By:	By:
Print Name: Gregory Weber	Print Name: Fredrick K. Schneider, PE
Title: CW	Title: Vice President - Engineering
Date: 10/16/14	Date: 5-4-2015

AFH



ARIZONA WATER COMPANY

**COMMENCEMENT
NOTICE**

CONTRACTOR:

Mr. Martin Weber
Weber Water Resources, LLC
16825 S. Weber Drive
Chandler, Az 85226

DATE: 5/7/15
DIVISION: CASA GRANDE
SYSTEM: PINAL VALLEY
W.A.: 1-5296

THIS IS YOUR NOTICE TO PROCEED WITH THE FOLLOWING PROJECT(S):

DESCRIPTION OF WORK:

Pull and replace the pump at Henness Well No. 19

PERFORMANCE AND
PAYMENT BONDS
REQUIRED: Yes No

TOTAL DAYS
ALLOWED: 55

COMPLETION
DATE: 7/1/15

Prior to the start of construction, please call Ray Murrieta, Division Manager at 520-836-8785 to schedule a pre-construction meeting.

ARIZONA WATER COMPANY
Company

WEBER WATER RESOURCES, LLC
Contractor (type name)

By *Judith K. Smith*
Title Vice President- Engineering

By _____
Title _____



ARIZONA WATER COMPANY

SPECIFICATIONS

GENERAL CONDITIONS OF CONTRACT: E-4-1

CONSTRUCTION SPECIFICATIONS: E-8-1

STANDARD SPECIFICATION DRAWINGS: E-9-1

*gaw
4/29/15*

**2007 EDITION WITH 2010 REVISIONS;
2012 GENERAL CONDITIONS OF CONTRACT**

A copy of this entire Spec Book was sent out with *weber water resources, LLC* Proposal package for *WA 1-5296*

*on 5/7/15
att*

Western Group Rate Case

Exhibit FKS-1

5299 Coolidge 9 & 10 Nitrate

ARIZONA WATER COMPANY
WORK AUTHORIZATION

W.A. NUMBER: 1-5299
P.E. NUMBER:
BUDGET ITEM NO.: 1-5299
SHEET NO.: 1 of 2

SYSTEM: PINAL VALLEY	RETENTION REQUIRED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
DIVISION: CASA GRANDE	WORK TO START BY: UPON AUTHORIZATION
RESPONSIBLE PERSON: RAY MURRIETA	WORK TO BE FINISHED BY: WITHIN 60 DAYS
TAX CODE: 2102	

DESCRIPTION OF WORK:

Construct approximately 90 lf of 8-foot tall chain link fence at Well No. 10 and an all weather access road across easement 2454 and around Well Nos. 9, 10 and the Coolidge Nitrate Removal Facility.

FACTORS JUSTIFYING WORK:

APPROVED 2015 BUDGET ITEM (\$20,000)
Company employees access Wells No. 9 and 10 daily using existing dirt roads on neighboring property to the south. Traveling the existing dirt roads during dry conditions creates excessive dust. After heavy rain the existing dirt roads are flooded. Rain saturates the soil creating muddy conditions with limited access to the site. Constructing this road provides direct all weather access to the site from Arizona Boulevard.

COST ESTIMATE		AUTHORIZATION	DATE
COST OF WORK:		PREPARED BY:	
MATERIAL	0	<i>James Wilson</i>	2/23/15
LABOR	4,100	REVIEWED FOR ESTIMATE/ROW VERIFICATION:	
CONTRACT PORTION	5,000	<i>Charles Briggs</i>	02-24-2015
OVERHEAD	1,100	REVIEWED BY:	
TOTAL AUTHORIZED EXPENDITURES CHARGEABLE TO THIS W.A.	\$ 10,200	<i>Mario Mendez</i>	2/25/15
FUNDS RECEIVED:		APPROVED BY ENGINEERING:	
CONTRIBUTIONS RECEIVED	0	<i>Fredrick Schneider</i>	2-25-15
REFUNDABLE ADVANCES RECEIVED	0	APPROVED BY FINANCE:	
TOTAL CONTRIBUTIONS/ADVANCES	0	<i>Joseph Harris</i>	2/27/15
NET COMPANY CASH REQUIRED	\$ 10,200	AUTHORIZED BY PRESIDENT:	
		<i>William Garfield</i>	3-2-2015

COMMENTS:

RELEASE TO DESIGN ONLY

CONSTRUCTION RELEASE:



2015 BUDGET

ARIZONA WATER COMPANY
WORK AUTHORIZATION - DETAIL SHEET

W.A. NUMBER: 1-5299
P.E. NUMBER:
BUDGET ITEM NO.: 1-5299
SHEET NO.: 2 of 2

RETIREMENT PROPERTY UNITS	PLANT PROPERTY ACCOUNT	UNIT DESCRIPTION	QUANTITY	YEAR INSTALLED AND W.A. NUMBER

PROJECT DESCRIPTION:
Construct approximately 90 lf of 8-foot tall chain link fence at Well No. 10 and an all weather access road across easement 2454 and around Well Nos. 9, 10 and the Coolidge Nitrate Removal Facility.

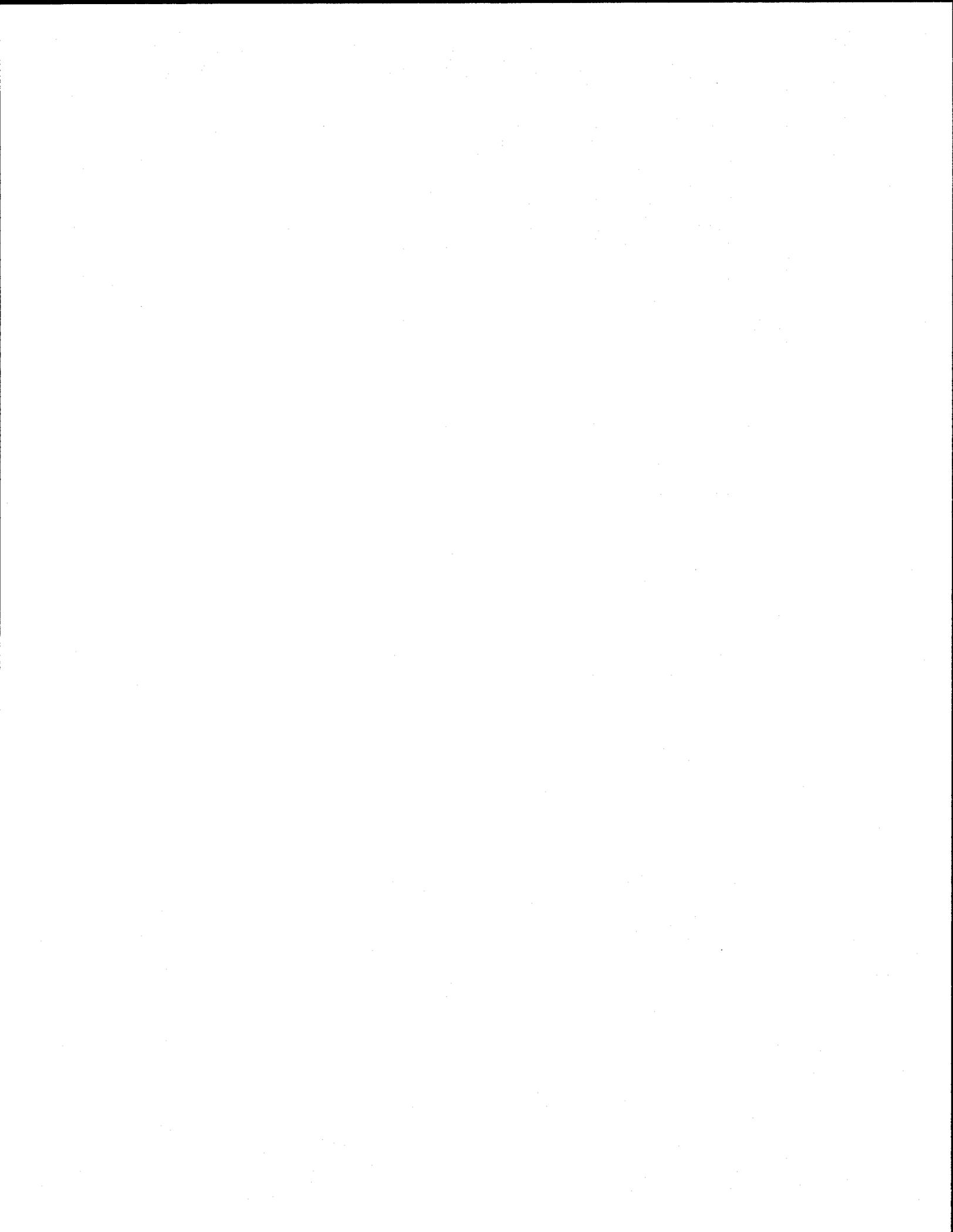
C O N T R A C T W O R K	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Geotechnical Investigation	321	1	\$ 5,000.00	\$ 5,000
	SERVICE CONNECTIONS COMPLETE: DOUBLE-LONG	345			
	SERVICE CONNECTIONS COMPLETE: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS COMPLETE: SINGLE-LONG	345			
SERVICE CONNECTIONS COMPLETE: SINGLE-SHORT	345				
TOTAL CONTRACT WORK				\$ 5,000	

M A T E R I A L S	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	SERVICE CONNECTIONS: DOUBLE-LONG	345			
	SERVICE CONNECTIONS: DOUBLE-SHORT	345			
	SERVICE CONNECTIONS: SINGLE-LONG	345			
SERVICE CONNECTIONS: SINGLE-SHORT	345				
METERS	346				
TOTAL MATERIALS				\$ -	

L A B O R	DESCRIPTION	PLANT PROP ACCT	QUANTITY	UNIT COST	TOTAL
	Engineering design and project management	321	20	\$ 65.00	\$ 1,300
	TESTING FEE				
	PERMIT FEE				
	SURVEY FEE	321	1	1,700.00	1,700
	FIELD INSPECTION	321	20	55.00	1,100
	INSTALL SERVICE CONNECTIONS: DOUBLE-LONG	345			
INSTALL SERVICE CONNECTIONS: DOUBLE-SHORT	345				
INSTALL SERVICE CONNECTIONS: SINGLE-LONG	345				
INSTALL SERVICE CONNECTIONS: SINGLE-SHORT	345				
TOTAL LABOR				\$ 4,100	

SUBTOTAL - CONTRACT WORK, MATERIALS, AND LABOR				\$ 9,100
OVERHEAD				1,100
TOTAL	REFUNDABLE PORTION <input type="checkbox"/>	NON-REFUNDABLE PORTION <input type="checkbox"/>	COST ESTIMATE	\$ 10,200

AFH



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

September 17, 2014

Mr. Bruce Loose
Alta Land Survey, Inc.
5930 E. Pima Street, Suite 1300
Tucson, AZ 85712

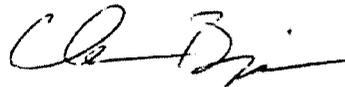
Re: Easement Boundary and Topographic Survey Coolidge, AZ.

Dear Mr. Loose:

Attached is a copy of the Task Order for the above referenced project. Please sign and return it to my attention.

If you have any questions, please call me at this office.

Very truly yours,



Charles Briggs
Real Property Specialist
engineering@azwater.com

afh
Enclosure

E-MAIL: mail@azwater.com

AGREEMENT FOR GENERAL ENGINEERING SERVICES BETWEEN ARIZONA WATER COMPANY AND ALTA LAND SURVEY, INC.

TASK ORDER AUTHORIZATION

ALTA Land Survey, Inc. Project Number 15-019

AWC Project Number Stake an Easement for APN 209-10-005 in Coolidge, AZ.

Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038-9006

Effective Date of Authorization April 8, 2015

Upon execution of this Task Order, and effective as of the date shown above, the parties agree that ALTA Land Survey, Inc. shall perform the following services:

SCOPE OF SERVICES

As per the attached "Exhibit A". **NOTE: Authorization to commence will be given verbally by Division Manager (Ray Murrieta, or in his absence, Kevin Pakka, Ops Superintendent).**

COMPENSATION

As per the attached "Scope of Services" dated April 8, 2015.

GENERAL TERMS AND CONDITIONS

ALTA Land Survey's services shall be governed by the Master Agreement dated June 17, 2011 together with this Task Order and any Exhibits attached hereto.

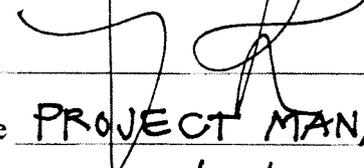
The services performed within this Task Order shall commence on or about April 13, 2015, and shall be complete on or before April 15, 2015.

ALTA Land Survey's Representative in charge of the services is Bruce Loose, who may be contacted at 520-398-6651 and bloose@alta-land.com. Client's Representative in charge of the services is Charles Briggs, who may be contacted at 602-240-6860 and cbriggs@azwater.com.

ARIZONA WATER COMPANY

By 
Title REAL PROPERTY SPECIALIST
Date APRIL 8, 2015

ALTA LAND SURVEY, INC.

By 
Title PROJECT MANAGER
Date 4/13/15



5930 E. Pima Street #130
Tucson, AZ 85712
(520) 398-6651

April 8, 2015

Charles Briggs
Real Property Specialist
Arizona Water Company
P.O. Box 29006
Phoenix, AZ 85038-9006

RE: - Coolidge Easement

Dear Charles:

ALTA Land Survey, Inc. is pleased to provide you with the following proposal to Stake an Easement for APN 209-10-005 as shown on Arizona Water Company, "Easement Location Drawing" dated 02-19-2015.. The following is the **Scope of Services**:

1. Calc. Easement
2. Stake Easement using both whisksers and lath

The cost to perform the above referenced work is **\$1,100.00**.

We appreciate the opportunity to provide you with this proposal and we look forward to hearing from you.

Sincerely,

Bruce Loose
Project Manager

CB
04-08-2015

BL
4/13/15

ALTA Land Survey, Inc. will provide the following **Deliverables**:

- 1 Adobe PDF file of the survey in its entirety at a scale not smaller than 1 inch = 20 feet.
- Upon review and acceptance of the Initial Survey - provide 1 compact disc with the following:
 1. Digital drawing file of the survey in its entirety in One AutoCAD Version 2007 or earlier DWG file. No native Civil3D files or files with xrefs will be accepted.
 2. All color digital photographs of the survey.
 3. Copies of any additional documentation used during the course of the survey above and beyond the information provided with the RFP documentaion.

The survey will begin on or before Wednesday, February 4, 2015 and provide Deliverables for review by Wednesday, February 11, 2015

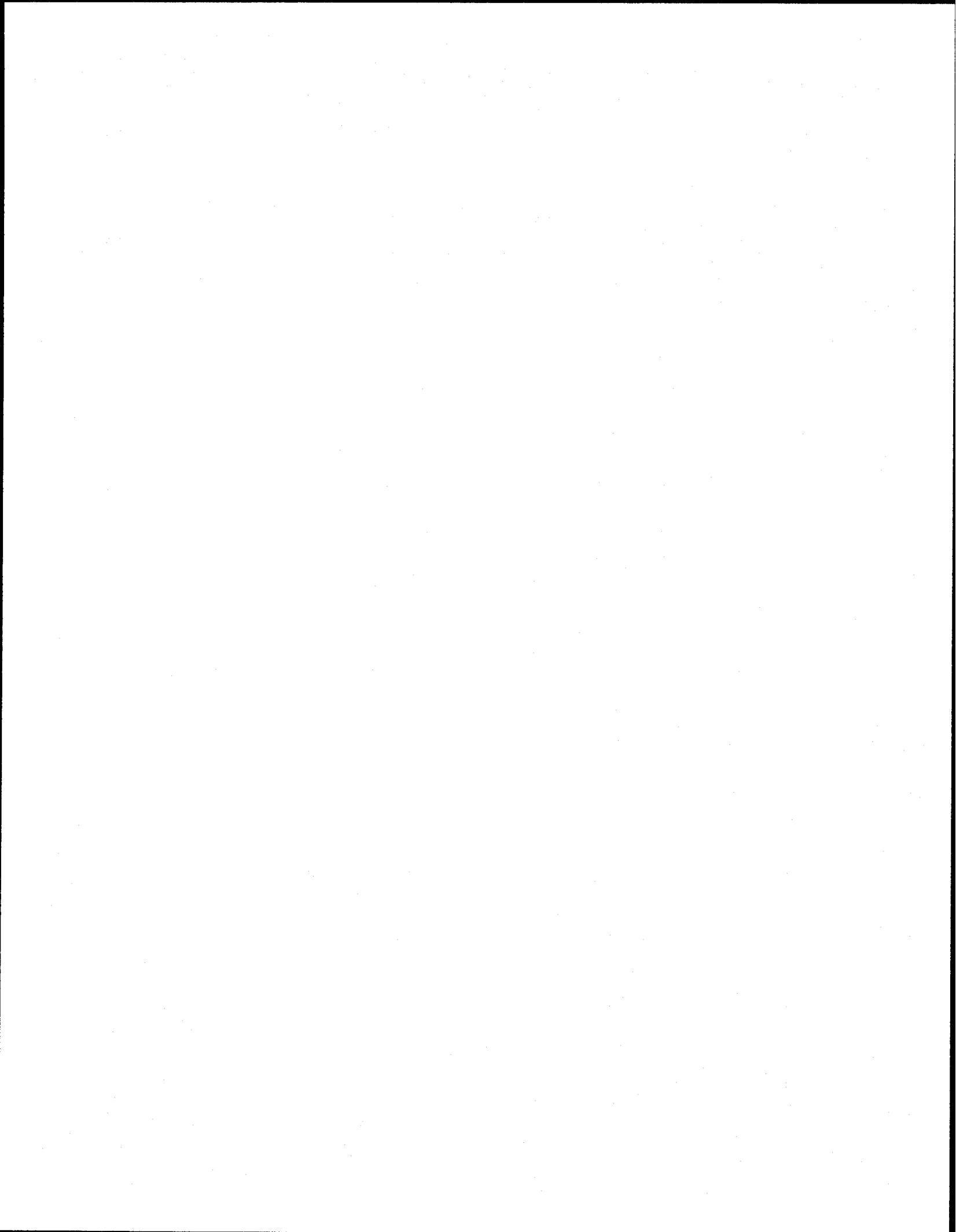
The cost to perform the above referenced work is **\$1,650.00**.

We appreciate the opportunity to provide you with this proposal and we look forward to hearing from you.

Sincerely,

Bruce Loose
Project Manager

CB
1-28-15



ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, ARIZONA 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

June 30, 2011

Mr. Donald J. Loose
ALTA Land Survey, Inc.
209 N. Huachuca Boulevard
Huachuca City, Arizona 85616

Dear Mr. Loose:

Enclosed is your copy of the Master Agreement for ongoing consulting, which has been accepted by Arizona Water Company (the "Company").

If you have any questions, please call me at this office.

Very truly yours,



Mike Loggins
Engineer
engineering@azwater.com

afh
Enclosure

E-MAIL: mail@azwater.com

W:\01-AGREEMENTS, DRAFTS, LTRS & DOCS\MASTER AGREEMENTS\ALTA LAND SURVEY\EXECUTED ALTA LAND SURVEY MASTER CONSULTING AGREEMENT\CVR LTR.DOCX
MRL.AFH 9:23 AM 6/30/11

11/10/10
FKS:afh
E-3-11-8

**MASTER AGREEMENT
FOR ONGOING CONSULTING AND ENGINEERING SERVICES
BETWEEN ARIZONA WATER COMPANY
AND ALTA LAND SURVEY**

THIS AGREEMENT is made and entered into on this 17th day of June, 2011, by and between Arizona Water Company, an Arizona corporation, hereinafter referred to as "Client," and ALTA LAND SURVEY, an Arizona corporation hereinafter referred to as "Consultant."

RECITALS:

WHEREAS, Client desires that from time to time Consultant furnish Client certain consulting services;

WHEREAS, Consultant has available and offers to provide personnel and facilities necessary to perform the services desired under this Agreement;

NOW, THEREFORE, Client and Consultant agree as follows:

I. DESCRIPTION OF PROJECT

Services to be provided shall be as described in written task orders made pursuant to and referencing this Agreement; the form of such task order is attached hereto as Exhibit A.

II. SCOPE OF CONSULTANT SERVICES

Consultant agrees to perform those basic services described in separate written task order(s) signed by Client and Consultant (the "Services"). This Agreement provides the terms, obligations and conditions which shall control all work under such task orders(s). The printed terms and conditions, if any, contained on the reverse side(s) of an accepted task order shall not apply to services provided under this Agreement. Unless modified in writing by both parties, duties of Consultant shall not exceed those service specifically described in each task order. Any work authorized by Client prior to the issuance of a written task order must be authorized in writing and any services then performed by Consultant will be presumed to have been completed under the terms of this Agreement.

III. RESPONSIBILITIES OF CLIENT

In addition to payment for the Services performed under this Agreement, Client shall:

1. Assist and cooperate with Consultant in any manner necessary and within its ability to facilitate Consultant's performance under this Agreement.

2. Designate in writing a person to act as Client's representative with respect to this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define Client's policies, make decisions and execute documents on Client's behalf.

3. Furnish Consultant with all technical data in Client's possession including, but not limited to, maps, surveys, drawings, soils or geotechnical reports, and any other information required by or useful to, Consultant in performance of the Services under this Agreement. Consultant shall be entitled to rely upon the information supplied by Client.

4. Notify Consultant of any known or potential health or safety hazards existing at or near the project site.

5. Provide access to and/or obtain permission for Consultant to enter upon all projects whether or not owned by Client, as required to perform and complete the Services.

IV. AMERICANS WITH DISABILITIES ACT

Any other provision of this Agreement to the contrary notwithstanding, unless otherwise specified in the Scope of Services, Client's contractors shall have sole responsibility as between Client and Consultant for compliance with the Americans With Disabilities Act ("ADA") 42 U.S.C. 12101 et. Seq. and the related regulations. Consultant shall provide client with applicable ADA criteria which maybe required.

V. AUTHORIZATION AND COMPLETION

In signing this Agreement, Client grants Consultant specific authorization to proceed with work as described in Scope of Work and under the terms of this Agreement.

VI. COMPENSATION

For the Services described in each task order, Client agrees to pay, and Consultant agrees to accept the total compensation in accordance with compensation terms included in the task order. Where Consultant has provided Client with a breakdown of the total compensation into subtasks, such breakdowns are estimates only. Consultant may re-allocate compensation between tasks, provided total compensation is not exceeded without the written approval of Client. Time charges shall be in accordance with the Hourly Rate Schedule contained in Exhibit B. The rate schedule may be revised annually by mutual written Agreement. Annual revisions to the Hourly Rate Schedule shall be submitted prior to the date that they take effect. Compensation shall be billed monthly in summary form. Payment to Consultant is due upon presentation of invoice to Client.

As long as Consultant has not defaulted under this Agreement, Client shall pay Consultant within 30 days of the date of Consultant's invoices for services performed and reimbursable expenses incurred under this Agreement. Client may contest any portion of any such invoice, amounts questioned or contested shall be identified and notice given to Consultant within 15 days of the date of the invoice. Any portion of any invoice not contested shall be deemed to be accepted and approved for payment and shall be paid to Consultant within 30 days of the date of the invoice. The Consultant agrees to cooperate with Client in a mutual effort to resolve promptly any contested portions of the Consultant's invoices.

In the event any uncontested portions of any invoice are not paid within 30 days of the date of Consultant's invoice, interest on the unpaid balance shall accrue beginning with the 31st day at the maximum interest rate permitted by law, and Consultant shall have the right to suspend work per Article XV, Suspension of Work.

VII. RESPONSIBILITY OF CONSULTANT

A. Standard of Care Professional Services

Subject to the limitations inherent in the agreed scope of work as to the degree of care, amount of time and expenses to be incurred, and subject to any other limitations contained in this Agreement, Consultant shall perform its Services in accordance with generally accepted standards and practices customarily utilized by competent engineering firms in effect at the time Consultant's Services are rendered. Consultant does not expressly or impliedly warrant or guarantee its Services.

B. Reliance upon Information Provided by Others

If Consultant's performance of services hereunder requires Consultant to rely on information provided by other parties (excepting Consultant's subcontractors), Consultant shall not independently verify the validity, completeness, or accuracy of such information unless otherwise expressly engaged to do so in writing by Client.

C. Consultant's Opinion of Costs

Client acknowledges that construction cost estimates, financial analyses and feasibility projections are subject to many influences including, but not limited to, price of labor and materials, unknown or latent conditions of existing equipment or structures, and time or quality of performance by third parties. Client acknowledges that such influences may not be precisely forecasted and are beyond the control of Consultant and that actual costs incurred may vary substantially from the estimates prepared by Consultant. Consultant does not warrant or guarantee the accuracy of construction or development cost estimates.

D. Construction Phase Services

1. Consultant's Activities at Construction Site. The presence of Consultant's personnel at a construction site, whether as on-site representative, resident engineer, construction manager, or otherwise, does not make Consultant responsible for those duties that belong to Client and/or construction contractors or others, and does not relieve construction contractors or others of their obligations, duties, and responsibilities, including, but not limited to, construction methods, means, techniques, sequences, and procedures necessary for completing all portions of the construction work in accordance with the contract documents, any health or safety programs and precautions required by such construction work, and any compliance with applicable laws and regulations. Any inspection or observation of the contractor's work is solely for the purpose of determining that the work is generally proceeding in conformance with the intent of the project specifications and contract documents. Except for its own Contractors, Consultant makes no warranty or guarantee with respect to the performance of a contractor. Consultant has no authority to exercise control over any construction contractor in connection with their work or health or safety programs and

precautions. Except to protect Consultant's own personnel and except as may be expressly required elsewhere in the scope of services, Consultant has no duty to inspect, observe, correct, or report on health or safety deficiencies of the construction contractor.

2. Shop Drawing and Submittal Review. If required by Consultant's Scope of Services, Consultant shall review shop drawings or other contractor submittals for general conformance with the intent of the contract documents. Except for its own Contractors, Consultant shall not be required to verify dimensions, to engineer contractor's shop drawings or submittals, nor to coordinate shop drawings or other submittals with other shop drawings or submittals provided by contractor.

3. Record Drawings. Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Except for its own Contractors, Consultant is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

VIII. ASSIGNMENT OF TASKS TO AFFILIATES

If the authorized scope of work requires professional services to be performed in a jurisdiction in which Consultant renders professional services solely through a locally registered engineering affiliate for purposed of compliance with professional licensing requirements in that jurisdiction, Consultant may, in its discretion, upon notice to Client, assign its contractual rights and obligations with respect to such services to such locally registered engineering affiliate.

IX. ASBESTOS / HAZARDOUS MATERIALS

Consultant and Consultant's subcontractors shall have no responsibility for the discovery, handling, removal, or disposal of or exposure of persons to asbestos or hazardous or toxic materials that are present in any form at the Project site. Professional services related to or in any way connected with the investigation, detection, abatement, replacement, use, specification, or removal of products, materials, or processes containing asbestos or hazardous or toxic materials are beyond the scope of this Agreement. Client shall be solely responsible for notifying all appropriate governmental agencies, including the potentially effected public, of the existence of any hazardous or toxic materials located on or at the project site any any time.

In the event Consultant encounters asbestos or hazardous materials at the jobsite, Consultant may, at its option and without liability for damages, suspend the performance of services on the Project until such time as Client and Consultant mutually agree on an amendment to this Agreement to address the issue, or Client retains another specialist consultant or contractor to identify, classify, abate and/or remove the asbestos and/or hazardous materials.

X. CONSULTANT'S WORK PRODUCT

A. Scope

Consultant's work product which is prepared solely for the purposes of this Agreement, including, but not limited to, drawings, test results, recommendations and technical specifications, whether in hard copy or electronic form, shall become the property of Client when Consultant has been fully compensated as set forth herein. Consultant may keep copies of all work product(s) for its records.

Consultant and Client recognize that Consultant's work product submitted in performance of this Agreement is intended only for the project described in this Agreement. Client's alteration of Consultant's work product or its use by Client for any other purpose shall be at Client's sole risk, and Client shall hold harmless and indemnify Consultant against all losses, damages, costs and expense, including attorneys' fees, arising out of or related to any such alteration or unauthorized use.

B. Electronic Copies

If requested, solely as an aid and accommodation to Client, Consultant may provide copies of its work product documents in computer-readable media ("electronic copies," "CADD"). These documents will duplicate the documents provided as work product, but will not bear the signature and professional seals of the registered professionals responsible for the work. Client is cautioned that the accuracy of electronic copies and CADD documents may be compromised by electronic media degradation, errors in format translation, file corruption, printing errors and incompatibilities, operator inexperience and file modification. Consultant will maintain the original copy, which shall serve as the official, archived record of the electronic and CADD documents. Client agrees to hold harmless, indemnify and defend Consultant from any claims arising out of or relating to any change or alteration of electronic copies and CADD documents authorized by the Client, Client's personnel, or Client's Contractor's.

XI. INDEMNIFICATION

A. Indemnification of Client

Consultant agrees to indemnify and hold Client harmless from and against any liability to the extent arising out of the negligent errors or negligent omissions of Consultant, its agents, employees, or representatives, in the performance of Consultant's duties under this Agreement.

B. Consequential Damages.

Regardless of any other term of this Agreement, in no event shall either party be responsible or liable to the other for any incidental, consequential, or other indirect damages.

XII. CONSULTANT'S INSURANCE

Consultant shall procure and maintain the following minimum insurance:

1. Commercial general liability insurance, including personal injury liability, blanket contractual liability and broad-form property damage liability coverage. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

2. Automobile bodily injury and property damage liability insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.

3. Statutory workers' compensation and employer's liability insurance as required by state law.

4. Professional liability insurance. The policy limit shall be not less than \$1,000,000.

Client shall be named as additional insured on policies 1 and 2 above. Upon execution of this Agreement, Consultant will provide a certificate of insurance to Client. Consultant will keep the certificate current at all times while this Agreement is in effect. The Consultant will provide a 30-day written notice in the event the above policies are cancelled.

XIII. CONFIDENTIALITY

Consultant agrees it will maintain the confidentiality of all material it receives from Client which Client has clearly identified as "Confidential" and will not disclose, distribute, or publish to any third party such confidential information without the prior permission of Client. Notwithstanding the foregoing, Consultant shall have no confidentiality obligation with respect to information that:

1) becomes generally available to the public other than as a result of disclosure by Consultant or its agents or employees;

2) was available to Consultant prior to its disclosure by Client;

3) becomes available to Consultant from a third party who is not, to the knowledge of Consultant, bound to retain such information in confidence.

In the event Consultant is compelled by subpoena, court order, or administrative order to disclose any confidential information, Consultant shall promptly notify Client and shall cooperate with Client prior to disclosure so that Client may take necessary actions to protect such confidential information from disclosure.

XIV. SUBCONTRACTS

Consultant shall be entitled, to the extent determined appropriate by Consultant, to subcontract any portion of the services to be performed under this Agreement.

XV. SUSPENSION OF WORK

Work under this Agreement may be suspended as follows:

1. By Client. By written notice to Consultant, Client may suspend all or a portion of the Work under this Agreement if unforeseen circumstances beyond Client's control make normal progress of the Work impracticable. Consultant shall be compensated for its reasonable expenses resulting from such suspension including mobilization and demobilization. If suspension is greater than 90 days, then Consultant shall have the right to terminate this Agreement in accordance with Article IVI, Termination of Work.

2. By Consultant. By written notice to Client, Consultant may suspend the Work if Consultant reasonably determines that working conditions at the Site (outside Consultant's control) are unsafe, or in violation of applicable laws, or in the event Client has not made timely payment in accordance with Article VI, Compensation, or for other circumstances not caused by Consultant that are interfering with the normal progress of the Work. Consultant's suspension of Work hereunder shall be without prejudice to any other remedy of Consultant at law or equity.

XVI. TERMINATION OF WORK

A. This Agreement may be terminated by Client as follows: (1) for its convenience on 15 days' notice to Consultant, or (2) for cause, if Consultant materially breaches this Agreement through no fault of Client and Consultant neither cures such material breach nor makes reasonable progress toward cure within 15 days after Client has given written notice of the alleged breach to Consultant.

B. This Agreement may be terminated by Consultant as follows: (1) for cause, if Client materially breaches this Agreement through no fault of Consultant and Client neither cures such material breach nor makes reasonable progress toward cure within 15 days after Consultant has given written notice of the alleged breach to Client, or (2) upon five days' notice if work under this Agreement has been suspended by either Client or Consultant for more than 90 days in the aggregate.

C. Payment upon Termination

In the event of termination, Consultant shall perform such additional work as is reasonably necessary for the orderly closing of the Work. Consultant shall be compensated for all work performed prior to the effective date of termination, plus work required for the orderly closing of the Work, including: (1) authorized work performed up to the termination date plus termination expenses, including all labor and expenses, at Consultant's standard billing rates, directly attributable to termination; (2) all efforts necessary to document the work completed or in progress; and (3) any termination reports requested by Client.

XVII. ASSIGNMENT

This Agreement is binding on the heirs, successors, and assigns of the parties hereto. Except as otherwise set forth under Article VIII, Assignment of Tasks to Affiliates, this Agreement may not be assigned by Client or Consultant without prior, written consent of the other.

XVIII. NO BENEFIT FOR THIRD PARTIES

The services to be performed by Consultant are intended solely for the benefit of Client, and no benefit is conferred on, nor contractual relationship established with any person or entity not a party to this Agreement. No such person or entity shall be entitled to rely on Consultant's services, opinions, recommendations, plans, or specifications without the express written consent of Consultant. No right to assert a claim against the Consultant, its officers, employees, agents, or consultants shall accrue to the construction Contractor or to any subcontractor, supplier, manufacturer, lender, insurer, surety, or any other third party as a result of this Agreement or the performance or nonperformance of the Consultant's services hereunder.

XIX. FORCE MAJEURE

Consultant shall not be responsible for delays caused by circumstances beyond their reasonable control, including, but not limited to (1) strikes, lockouts, work slowdowns or stoppages, or accidents, (2) acts of God, (3) failure of Client to furnish timely information or to approve or disapprove Consultant's instruments of service promptly, and (4) faulty performance or nonperformance by Client, Client's independent consultants or contractors, or governmental agencies. Consultant shall not be liable for damages arising out of any such delay, nor shall the Consultant or Client be deemed to be in breach of this Agreement as a result thereof.

XX. INTEGRATION

This Agreement represents the entire understanding of Client and Consultant as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. This Agreement may not be modified or altered except in writing signed by both parties. Any purchase order issued by Client, whether or not signed by Consultant, and any terms and conditions contained in such purchase order which are inconsistent with this Agreement shall be of no force and effect.

XXI. SEVERABILITY

If any part of this Agreement is found unenforceable under applicable laws, such part shall be inoperative, null, and void insofar as it conflicts with said laws, but the remainder of this Agreement shall be in full force and effect.

XXI. CHOICE OF LAW/JURISDICTION

This Agreement shall be administered and interpreted under the laws of the State of Arizona. Jurisdiction of litigation arising from the Agreement shall be in the State of Arizona.

XXIII. ATTORNEYS' FEES

In the event either party commences legal proceedings against the other, then the prevailing party shall, in addition to any other recovery, be entitled to recover its reasonable attorneys' fees and all other costs of such proceeding.

XXIV. NOTICES

All notices required under this Agreement shall be delivered by personal delivery or first class mail and shall be addressed to the following persons:

Mr. Donald J. Loose
President
ALTA Land Survey, Inc.
209 N. Huachuca Boulevard
Huachuca City, Arizona 85616

Mr. Fred Schneider
Vice President - Engineering
Arizona Water Company
P.O. Box 29006
Phoenix, Arizona 85038

Notice shall be effective upon delivery to the above addresses. Project related instructions may be delivered by electronic mail. Either party may notify the other that a new person has been designated by it to receive notices, or that the address for the delivery of such notices has been changed, provided that, until such time as the other party receives such notice in the manner provided for herein, any notice addressed to the previously-designated person and/or delivered to the previously-designated address shall be effective.

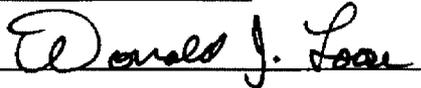
XXV AUTHORIZATION

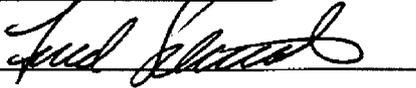
The persons executing this Agreement on behalf of the parties hereto represent and warrant that the parties have all legal authority and authorization necessary to enter into this Agreement, and that such persons have been duly authorized to execute this Agreement on their behalf.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first above written.

ALTA LAND SURVEY, INC.

ARIZONA WATER COMPANY

Signature 

Signature 

Printed Name Donald J. Loose

Printed Name Mr. Fred Schneider

Title President

Title Vice-President - Engineering

Federal Tax ID number: 32-0329099

ATTACHMENT B



ALTA LAND SURVEY, INC.
Surveying ~ Drafting ~ Construction Staking

209 N. Huachuca Blvd., Huachuca City, AZ 85616 Ph. (520) 456-9400

Hourly Rates

August 15, 2011

2 Man Survey Crew	\$150.HR.
Cad Drafting Calculations Research	\$65/HR.
Licensed Surveyor Review	\$95/HR.
Administrative	\$40/HR.

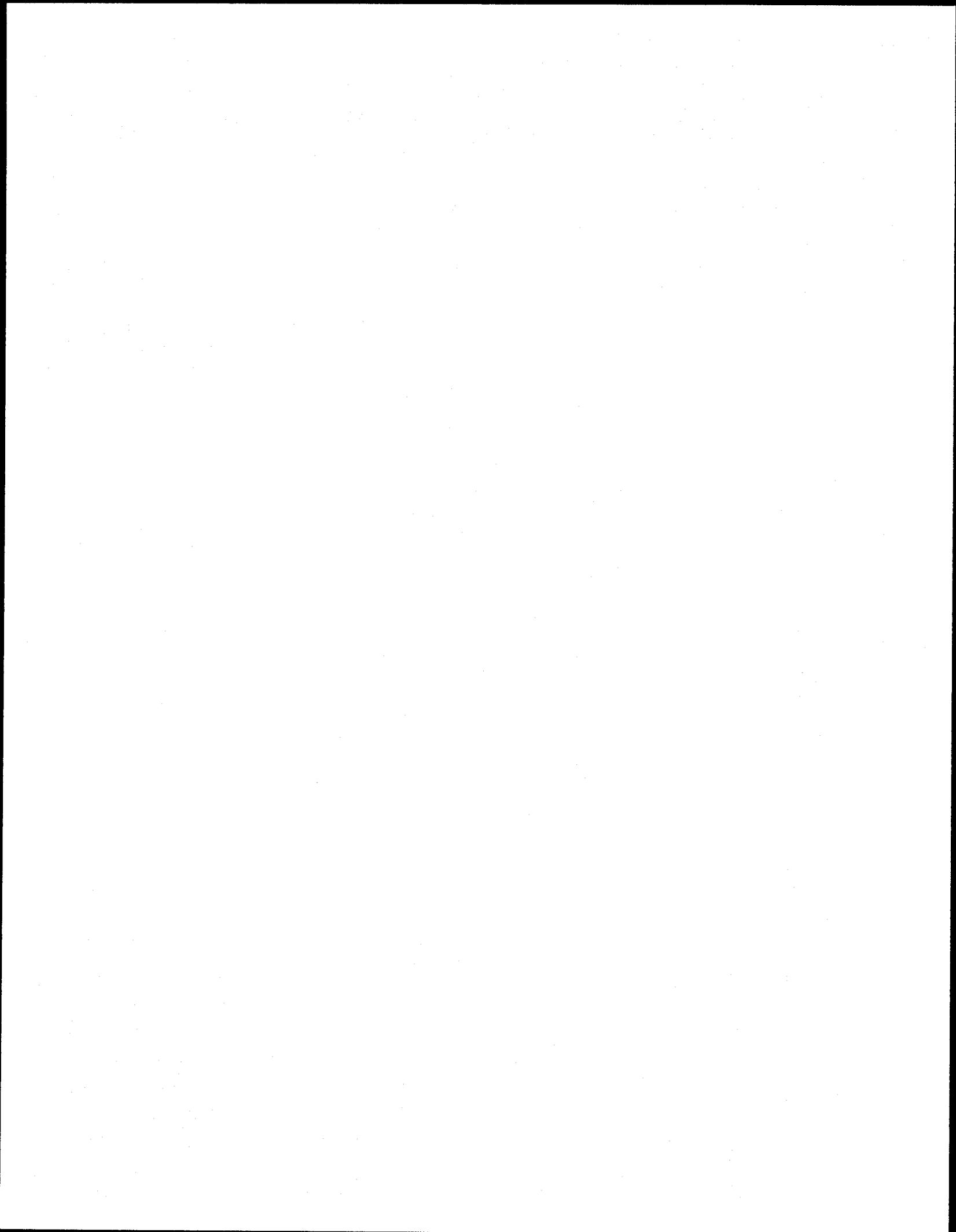


EXHIBIT A
Scope of Services

EASEMENT BOUNDARY and TOPOGRAPHIC SURVEY/STAKING
OF

Arizona Water Company's 15-foot Ingress/Egress Easement
Across APN 209-10-005
Northwest quarter of Section 10, Township 5 South, Range 8 East
of the G.&S.R.B.&M., Coolidge, Pinal County, Arizona.

DESCRIPTION

The purpose of the survey is to: complete an Easement Boundary and Topographic survey of Arizona Water Company's 15-foot Ingress/Egress Easement located in Coolidge, Arizona and to stake the limits of the easement with lath and whisker as depicted on Exhibit B and how the existing features relate to its location within, around, above, and below the Company's Easement including, but not limited to and where applicable:

All structures, improvements, edges of pavement, unimproved or dirt roads, railroad tracks, spurs, ballast, roadbeds, trestles, rails, ties, bridges, abutments, pylons, beams, trusses, signs, switches, signals, curb, gutter, scuppers, sidewalks, driveways, fences, gates, walls, hand rails, guardrails, posts, poles, mailboxes, stoops, steps, eaves, trees, shrubs, landscape, hardscape, mounds, piles, debris, manholes, vaults, guy lines, cross-members,, overhangs, meters, meter boxes, transformers, cabinets, buildings, shelters, sheds, enclosures, pipe culverts, box culverts, storm drains, wing walls, basins, ditches, flumes, chutes, troughs, sluices, spillways, streams, washes, channels, canals, trenches, dykes, dams, diversions, all pipes, tubes, ducts, drains, hoses, conduits, wires, cables, and cords of every kind whether suspended, span, cross, are attached or affixed to any of the features described herein or not and are encountered during the course of the survey.

EXECUTION

- Locate, identify, and plot all utility blue stake markings within the bounds of the survey.
- Generate topography with 1 foot intervals. Elevation references shall be based on a known local permanent monument with the vertical datum based on NAVD88.
- Identify adjacent property owners and indicate Name, Parcel Number, and Recording Information on the survey.
- Drawing scale will not be smaller than 1 inch = 20 feet.
- Include a Basis of Bearing with a minimum of two (2) controlling monuments or reference markers.
- Include a North Arrow
- Include a Vicinity Map.
- Include the Cadastral location of the survey.
- Take color digital photographs of the survey.

EXHIBIT A
Scope of Services

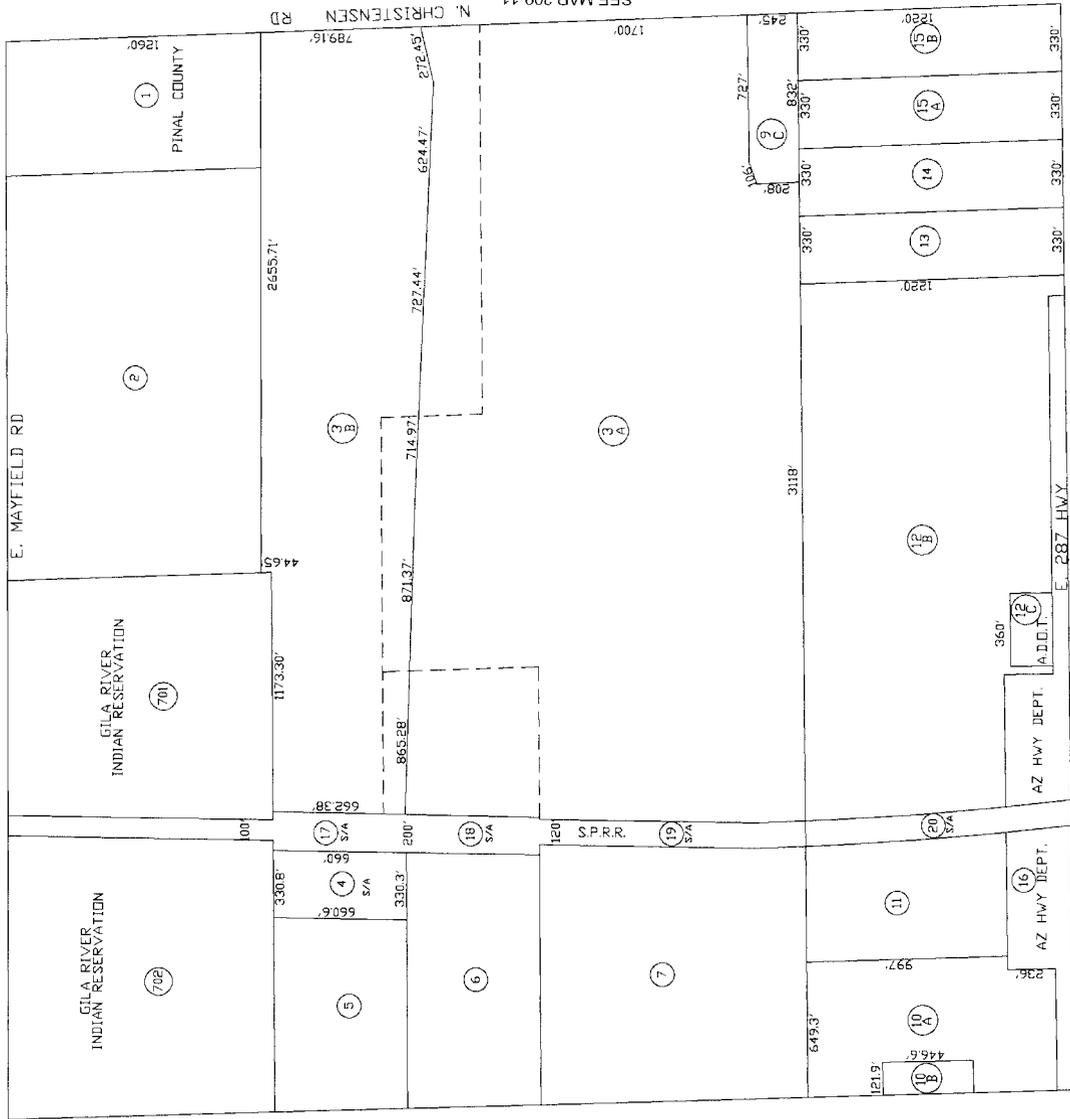
DELIVERABLES

- 1 Adobe PDF file of the survey in its entirety at a scale not smaller than 1 inch = 20 feet.
- Upon review and acceptance of the Initial Survey provide 1 compact disc with the following:
 - ✓ Digital drawing file of the survey in its entirety in One AutoCAD Version 2007 or earlier DWG file. No native Civil3D files or files with xrefs will be accepted.
 - ✓ All color digital photographs of the survey
 - ✓ Copies of any additional documentation used during the course of the survey above and beyond the information provided with the RFP documentation.

SEC. 10 TN.5S RG.8E

209-10

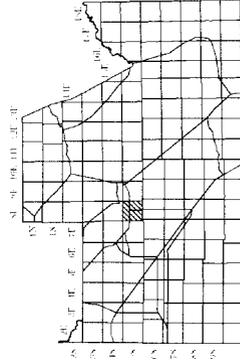
SEE MAP 209-04



SEE MAP 209-09 N. ARIZONA BLVD.

SEE BOOK 203

LOCATION MAP



VICINITY MAP

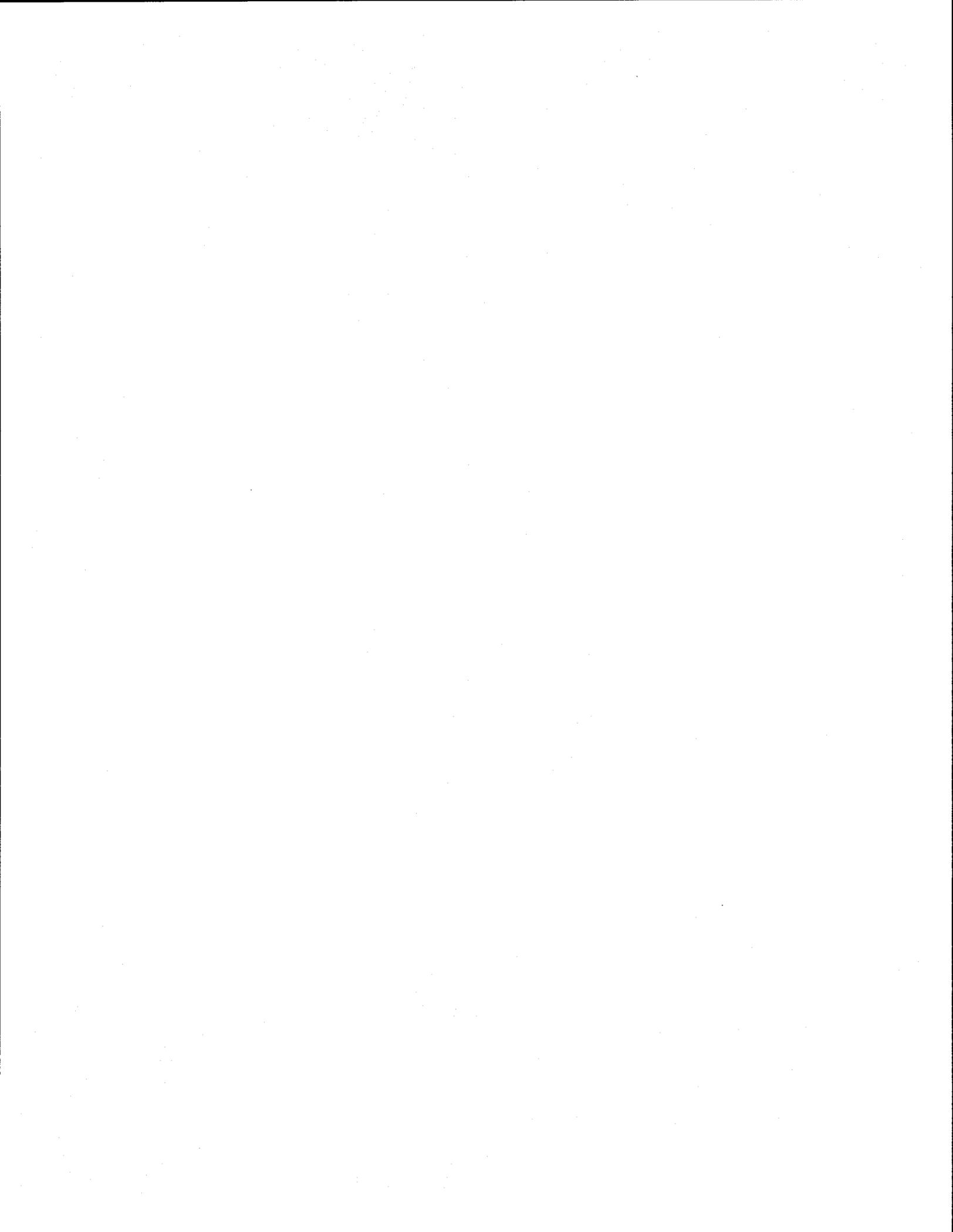
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

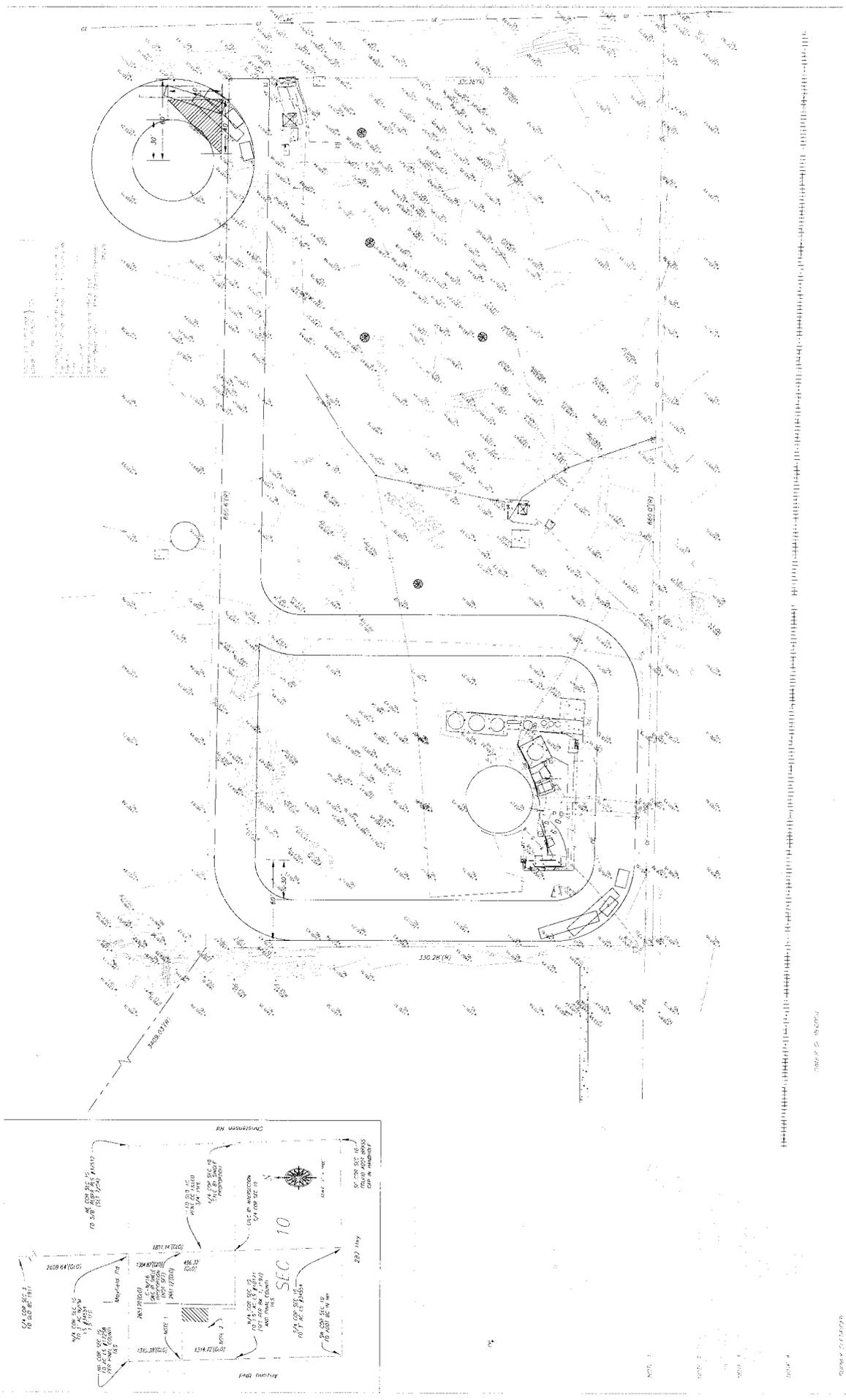


4-16-2009
UPDATED BY CC

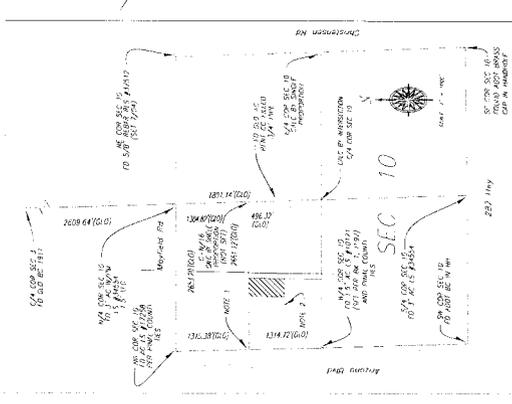
THIS MAP IS FOR VALUATION PURPOSES ONLY.
THIS OFFICE WILL NOT ASSUME LIABILITY FOR
REPRESENTATION OR MEASUREMENTS OR AGRAC
SURVEYS & SURVEYOR MAPS ARE ON FILE
WITH THE PINAL COUNTY RECORDS OFFICE.

PINAL COUNTY ASSESSORS MAP





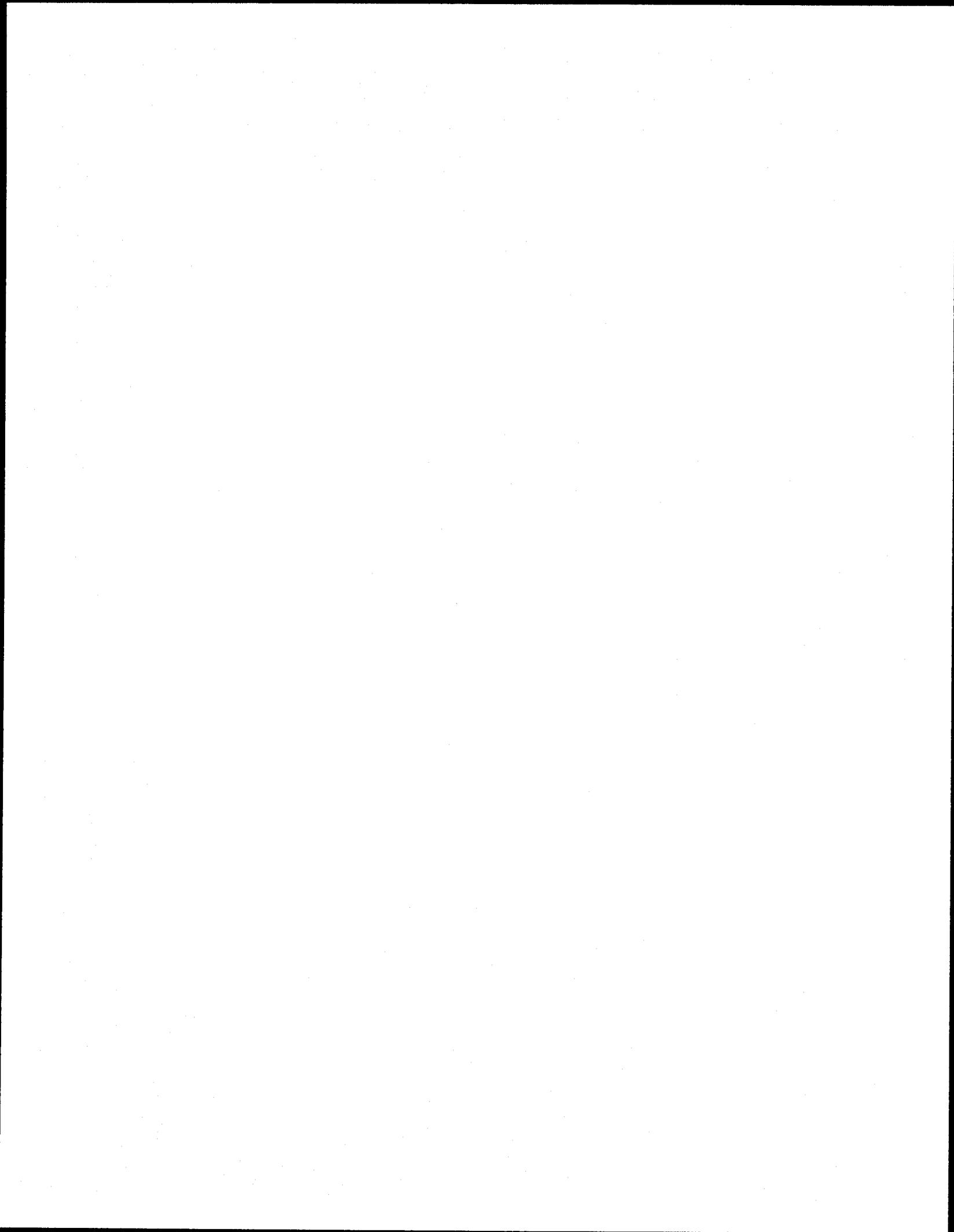
1. All elevations are in feet above mean sea level.
 2. Contour interval is 5 feet.
 3. Spot elevations are shown at 1-foot intervals.
 4. Elevation of benchmark is 100.00 feet.
 5. All measurements are in feet and inches.
 6. All bearings are in degrees, minutes and seconds.
 7. All distances are in feet and inches.
 8. All angles are in degrees, minutes and seconds.
 9. All bearings and distances are given to the nearest 0.01 feet.
 10. All bearings and distances are given to the nearest 0.01 seconds.

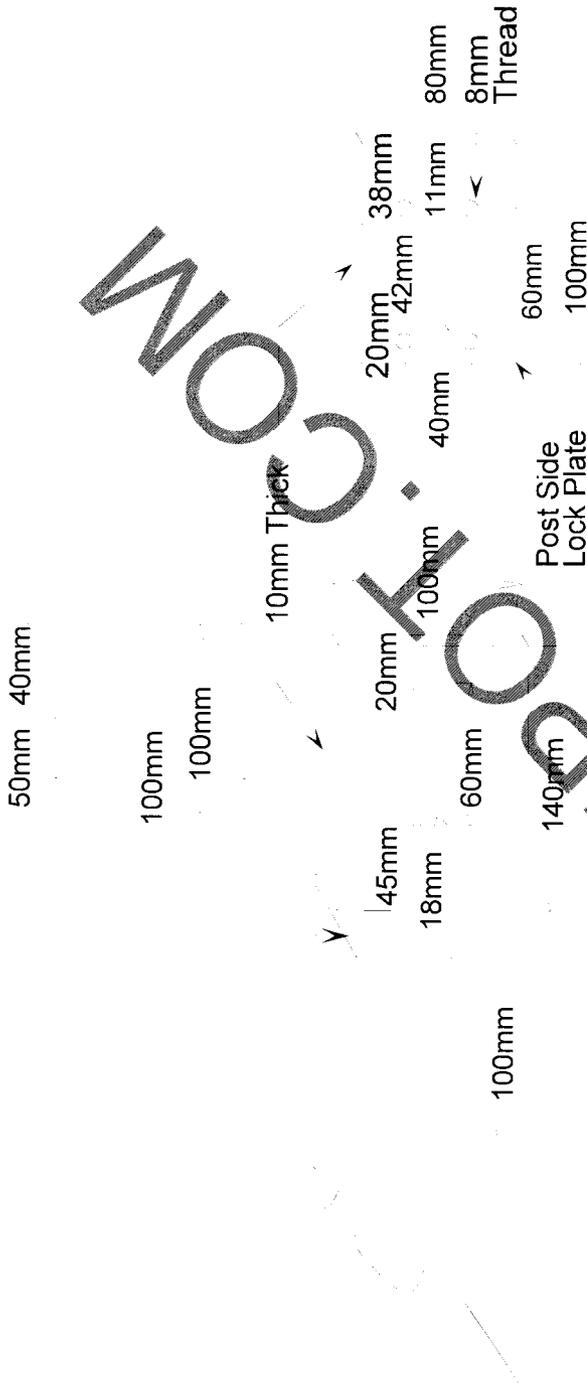


HAUSEN

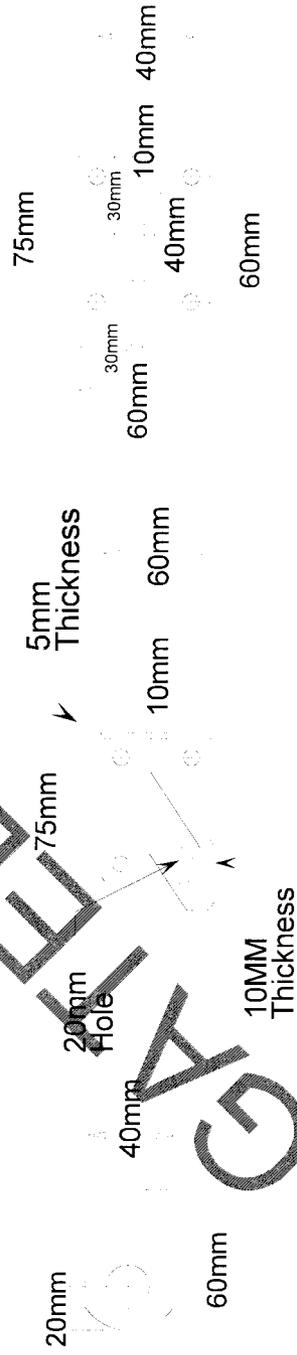
U.S.S. SURVEY
 1000 222-1787 - 24 HOURS
 1000 222-1787 - 24 HOURS
 1000 222-1787 - 24 HOURS
 1000 222-1787 - 24 HOURS

TOPOGRAPHIC SURVEY
 SHEET OF

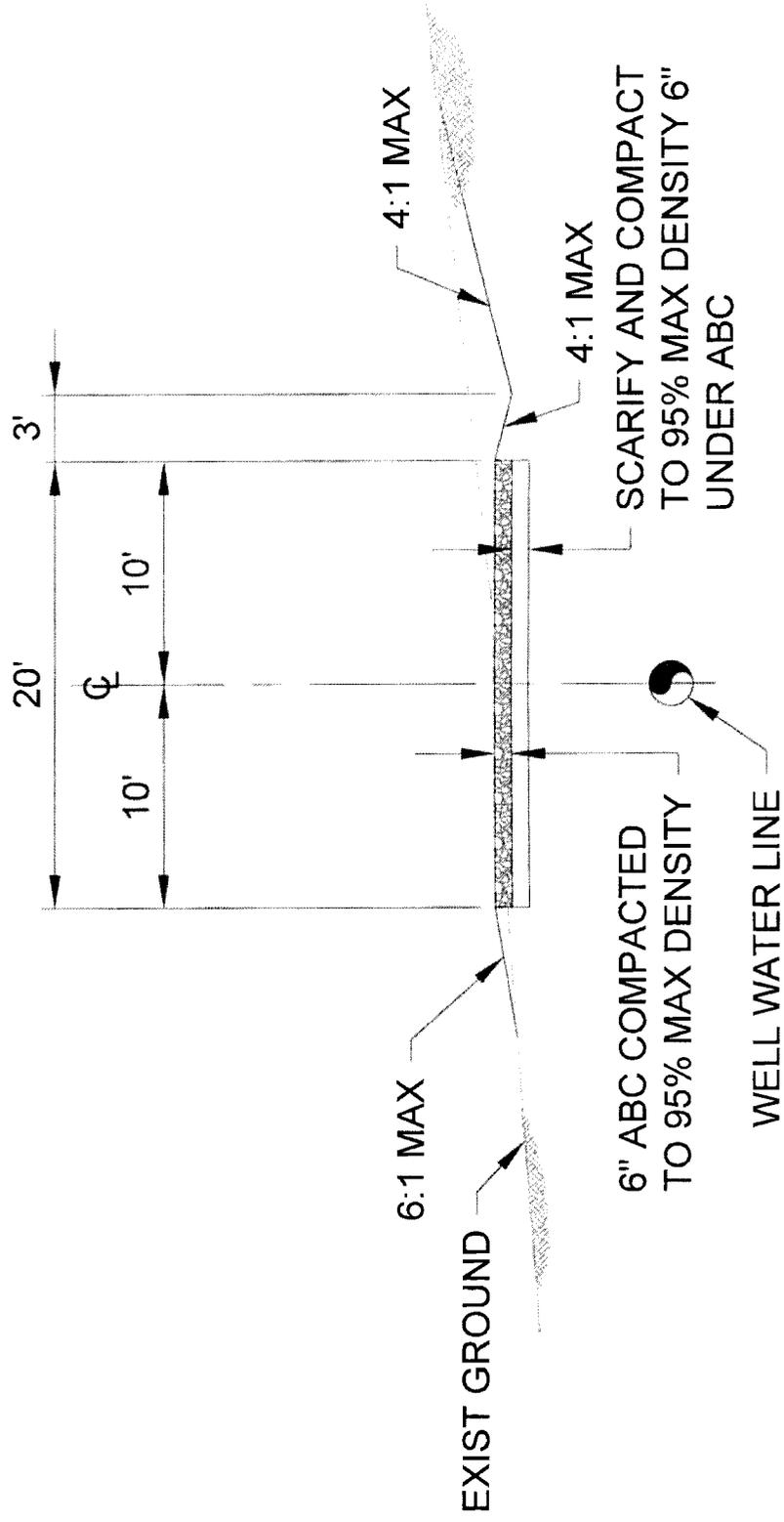


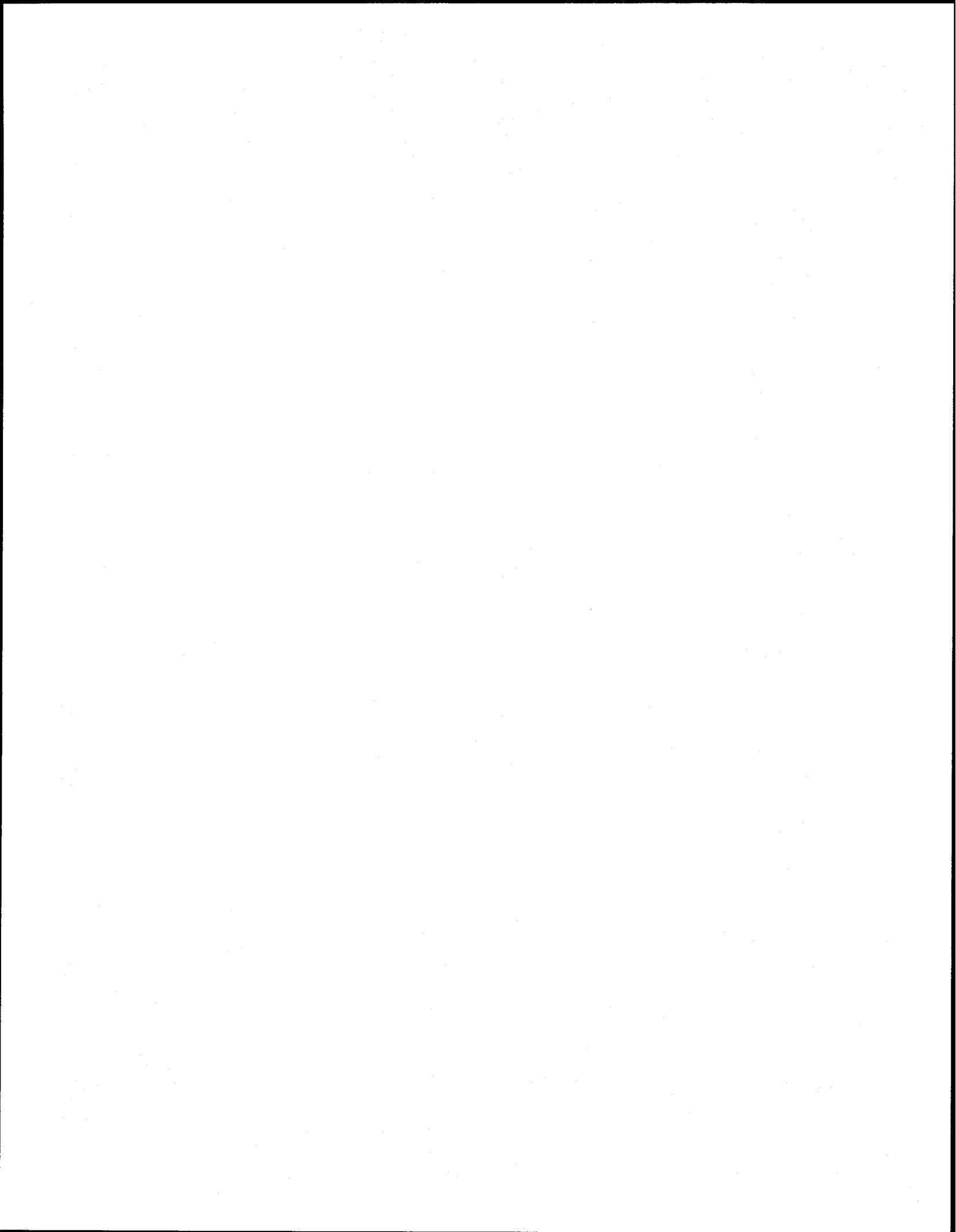


Lock Insert



Page	Square Barrier Gate	Date	Rev. #
1	Lock Detail		
DRAWING BY: Ken Martini			
Date: 02-23-2013 SCALE: NA			

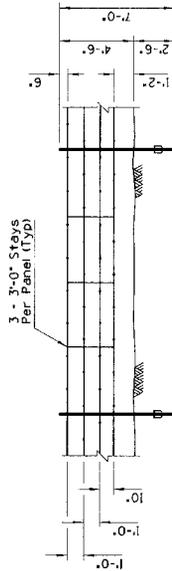
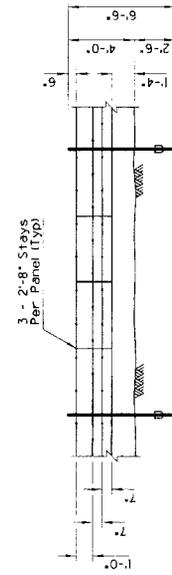
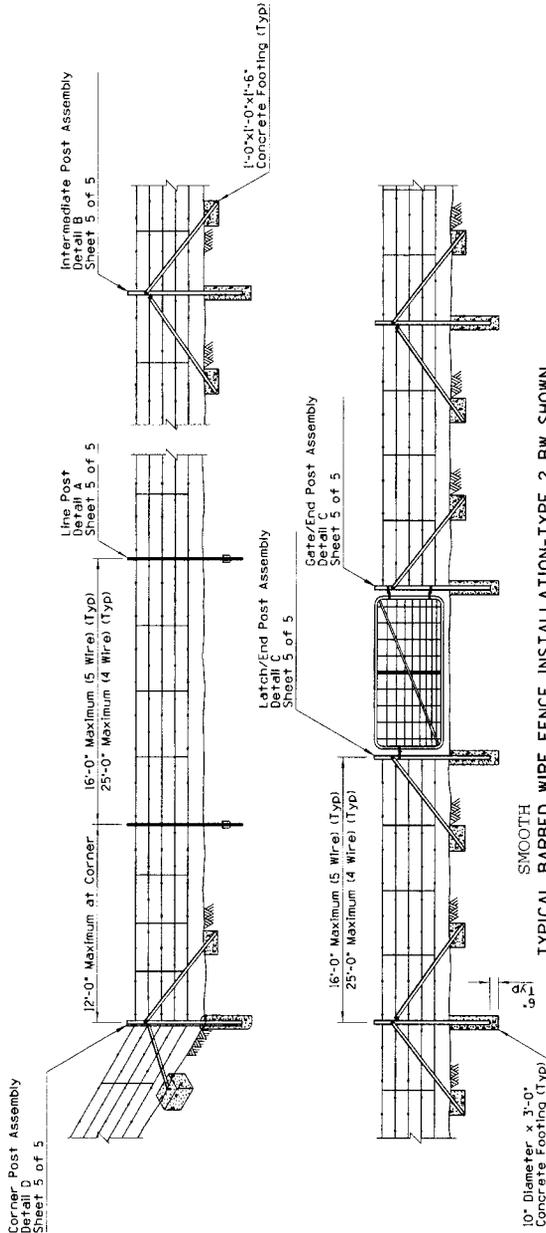




1	REVISED GENERAL NOTE 1	DATE	BY
2		7/05	
3			
4			

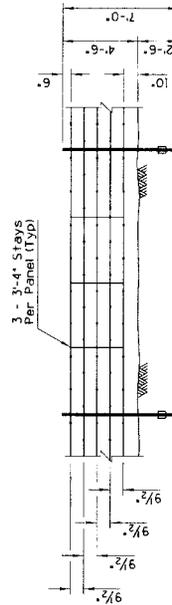
GENERAL NOTES

1. Intermediate Post Assemblies shall be located as shown and at intervals not to exceed 650, or midway between all braced posts.
2. For game fence the bottom wire shall be barless.
3. The stays on game fence shall have their ends turned up to prevent injuries to game.



TYPE 1 BARBED WIRE (BW) (4 WIRE)

BARBED WIRE GAME FENCE (GF)



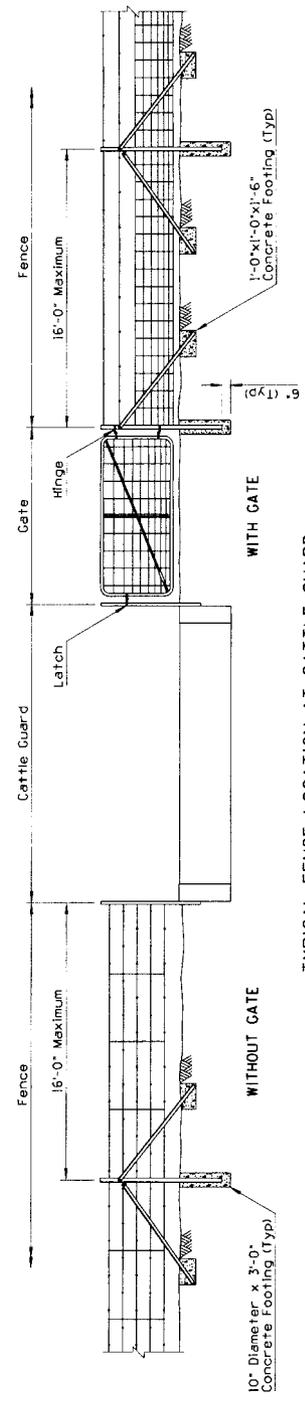
TYPE 2 BARBED WIRE (BW) (5 WIRE)

APPROVED FOR DESIGN	STATE OF ARIZONA DEPARTMENT OF TRANSPORTATION ROADWAY STANDARD DRAWINGS	REV. 7/05
APPROVED FOR ESTIMATION	FENCE BARBED WIRE	FORMING NO. C-12-10
	①	Sheet 2 of 5

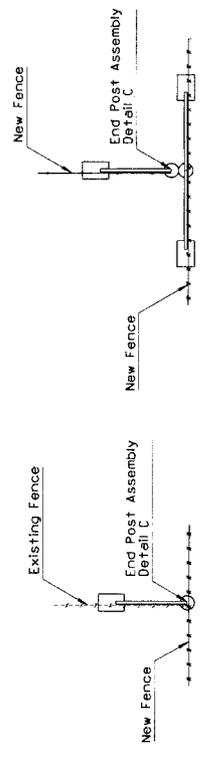
3
3
3

GENERAL NOTES

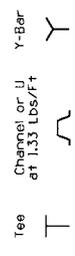
1. Post assemblies shall consist of an upright angle of $2\frac{1}{2} \times 2\frac{1}{2} \times \frac{1}{4}$ at 4:10 lbs./ft. and brace angles of $2 \times 2 \times \frac{1}{4}$ at 3:9 lbs./ft.



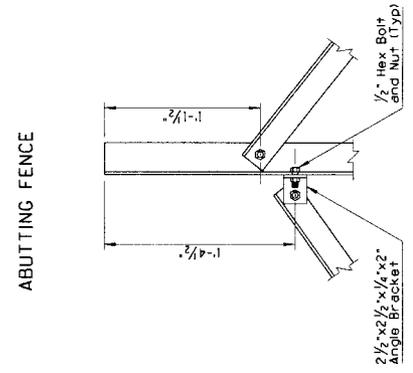
TYPICAL FENCE LOCATION AT CATTLE GUARD



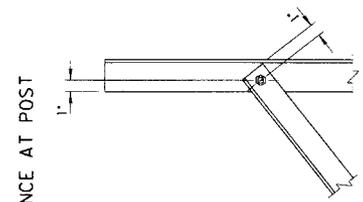
ABUTTING FENCE AT POST



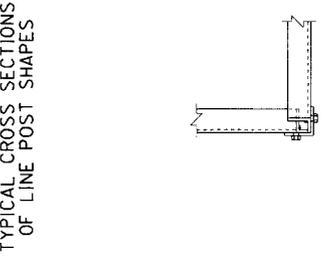
TYPICAL CROSS SECTIONS OF LINE POST SHAPES



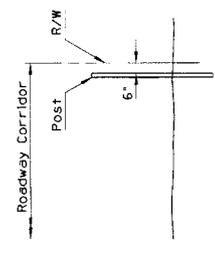
INTERMEDIATE POST ASSEMBLY



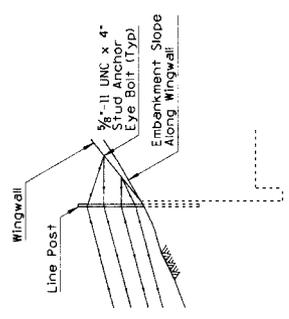
END POST ASSEMBLY



CORNER POST ASSEMBLY

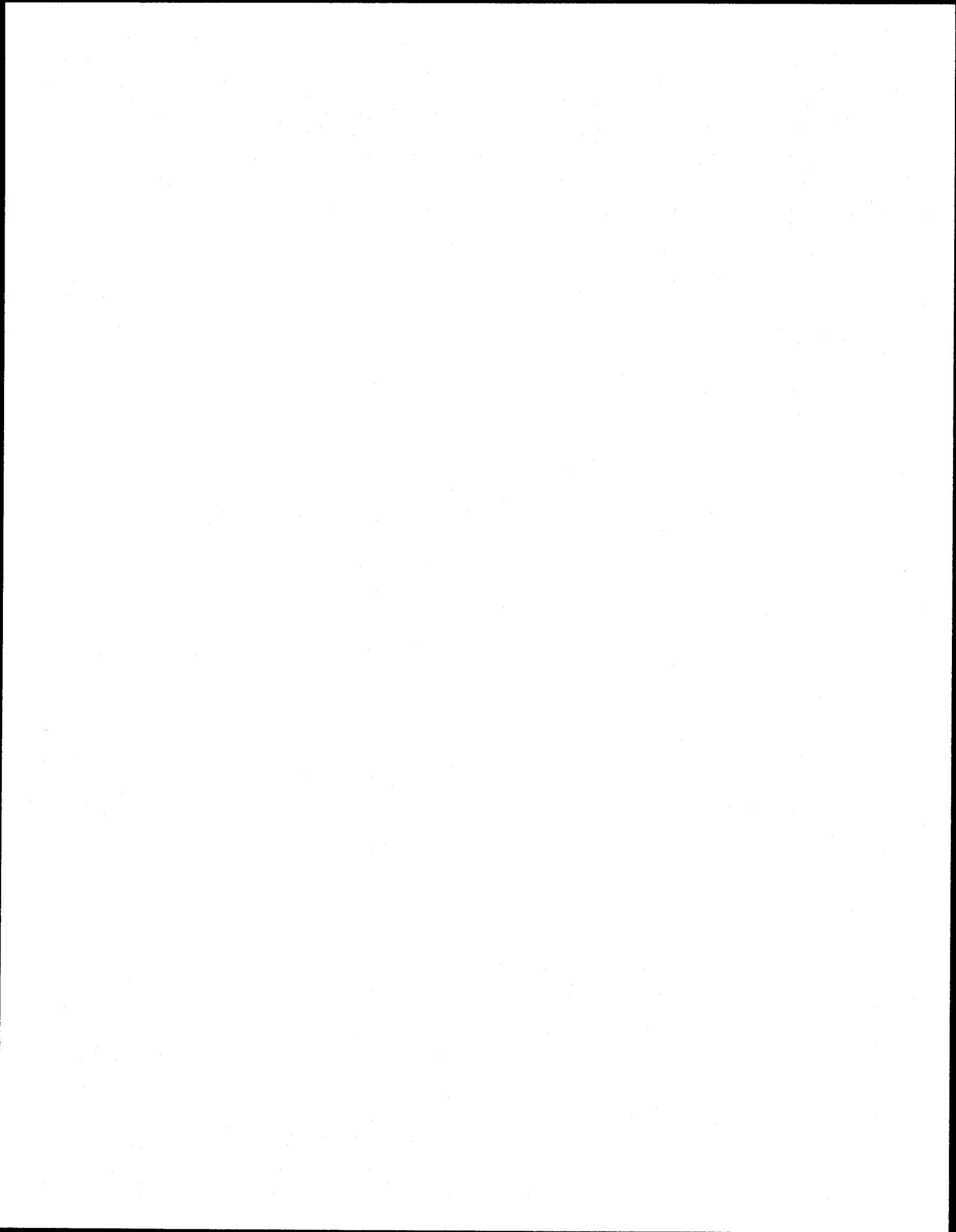


TYPICAL FENCE LOCATION

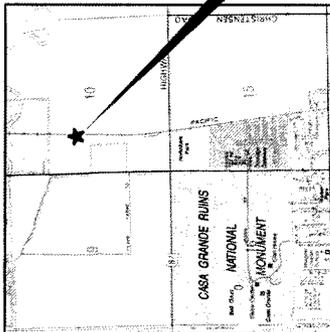


DETAIL E
FENCE CONNECTION TO WINGWALL

APPROVED FOR DESIGN	REV.	STATE OF ARIZONA	7/94
<i>Walter J. ...</i>		DEPARTMENT OF TRANSPORTATION	
APPROVED FOR DISTRIBUTION		ROADWAY STANDARD DRAWINGS	
<i>...</i>		FENCE	MISCELLANEOUS DETAILS
			C-12.10
			Sheet 5 of 5



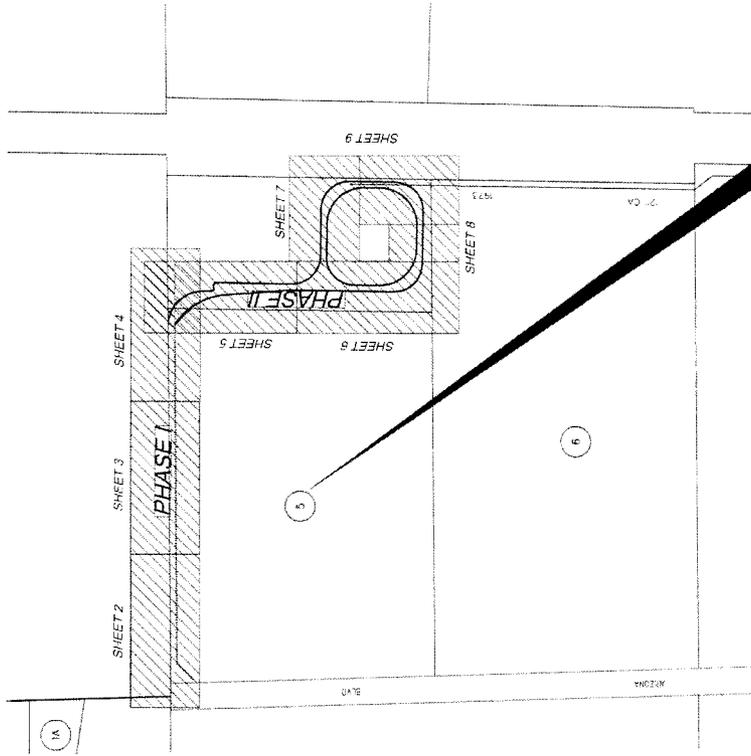
CONSTRUCT ACCESS ROAD TO WELL NOS. 9, 10 AND THE COOLIDGE NITRATE PLANT LOCATED WITHIN THE SW 1/4 SEC. 10, T. 5 S., R. 8 E. OF THE G. & S. R. B. & M.



VICINITY MAP

CONSTRUCTION NOTES:

1. All work and materials shall conform to current County Health Department Standards and Regulations, Arizona Water Company Specifications and standards, and all applicable State and Federal Specifications and standards.
2. Developer shall obtain a Final County Right of Way Use Permit prior to any work.
3. Prior to construction, the appropriate agencies will be notified as required.
4. All backfill, compaction, and testing shall be per current County, City, State, and Arizona Water Company Standards and specifications.
5. All trench excavation shall be 16 inches & all water lines 12" and greater are to have 48 inches of minimum cover over the top of pipe to high ground, unless otherwise specified on the construction drawings.
6. All trench excavation shall be finished to finish grade prior to completion of construction. (If located outside government section, greater levels with finished grade but allow 6" max above finished grade.)
7. All trench excavation shall be finished to finish grade and tested in accordance with Arizona Water Company's Specifications.
8. All water lines are to be disinfected per ADEQ Engineering Bulletin No. 8.
9. Air release valves are required at water system high points per Arizona Water Company Specifications.
10. Water Agency's responsibility to uncover existing water lines being connected to and to verify the location, depth and size of pipe before any construction begins.
11. All construction shall be performed to the knowledge of the inspector or his representative is liable for removal and replacement of the contractor's expense.
12. All construction shall be performed in accordance with the National Sanitation Foundation Standards 60 and 61.
13. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
14. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
15. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
16. Water valves shall be spaced not more than 500 feet in commercial districts.
17. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
18. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
19. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
20. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
21. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
22. No trench to be left open/uncovered after working hours unless properly fenced and guarded.
23. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
24. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
25. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.
26. All construction shall be set a minimum of 2 feet on the customer's property and 40 ft in the right of way.



SHEET INDEX

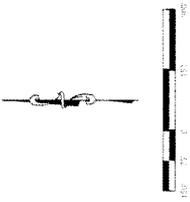
SHEET NO.	DWG. NO.	DESCRIPTION	PREPARED BY
1	PV-0091	COVER SHEET	AMC
2-3	PV-0091	CONSTRUCTION PLAN	AMC
4	PV-0091	AMC NOTES	AMC
5	PV-0091	AMC DETAILS	AMC

QUANTITIES LIST

NO.	DESCRIPTION	QUANTITY
1	5" ABC COMPACTED TO 95%	788 CY
2	SCAFFOLD AND COMPACT TO 95% INSIDE ABC	788 CY
3	FEEL & COMPACT TO 95% PER MAC 771	57 CY
4	SLABT CONCRETE 12" THICK CLASS B PER MAC 771	22 SY
5	SLABT CONCRETE 12" THICK CLASS B PER MAC 771	22 SY
6	PLACE AND FINISH FABRIC CLASS B PER MAC 771	148 SY
7	PLACE AND FINISH FABRIC CLASS B PER MAC 771	24 SY
8	INSTALL STEEL FIBER REINFORCING MATCH EXISTING	652 LF
9	CONCRETE CURING	1 EA

LEGEND

- - MOVEMENTS FOUND AS NOTED
- - UTILITY POLES
- - EX. WATER METER BOX
- - EX. S.E. INGRANT
- - NEW WATER VALVE
- - EX. WATER VALVE
- - SHEET CENTERLINE/PERMANENT LINE
- - PROPERTY LINE
- - NEW WATER LINE
- - EX. WATER LINE
- - IS. ADDRESS/ACCESS FACILITY
- - EX. OVERHEAD ELECTRIC
- - EX. UNDERGROUND 110V AC
- - EX. UNDERGROUND
- - COULIDGE LINE MANHOLE
- - COURTYARD LINE UNDER
- - TOP OF SLOPE
- - EX. APPROX. AREA
- - EX. COMPLETE AREA
- - NEW ACCESS ROAD (BY AED)



OWNER/ENGINEER/DEVELOPER
 ARIZONA WATER COMPANY
 1809 N. BLACK CANYON HWY.
 PHOENIX, AZ 85028-9004
 PHONE: 602.240.3440
 FAX: 602.240.3440

BENCHMARK
 ELEVATIONS ARE BASED ON N.T.S.
 ARIZONA WATER COMPANY
 1809 N. BLACK CANYON HWY.
 PHOENIX, AZ 85028-9004
 PHONE: 602.240.3440
 FAX: 602.240.3440

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