

Install 634 lf of 8" Cured-in-Place Liner from MH 5448-541 to MH 5448-535

Install 566 lf of 8" Cured-in-Place Liner from MH 5448-549 to MH 5448-544

Arkansas River

1234 N. Forest

MH 5448-541
Approx. MH depth = 9.3 ft

12th St. N.

MH 5448-549
Approx. MH depth = 6.5 ft

1213 N. Pearce

MH 5448-538
Approx. MH depth = 6.4 ft

1211 N. Carlos

905 W. 12th

MH 5448-547
Approx. MH depth = 5.5 ft

11th Street North

MH 5448-535
Approx. MH depth = 5.8 ft

1145 N. Carlos

905 W. 11th

MH 5448-544
Approx. MH depth = 7.0 ft

Forest

Pearce

Carlos

Bitting

314'

284'

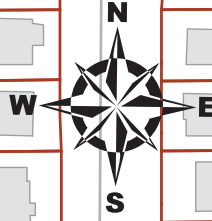
320'

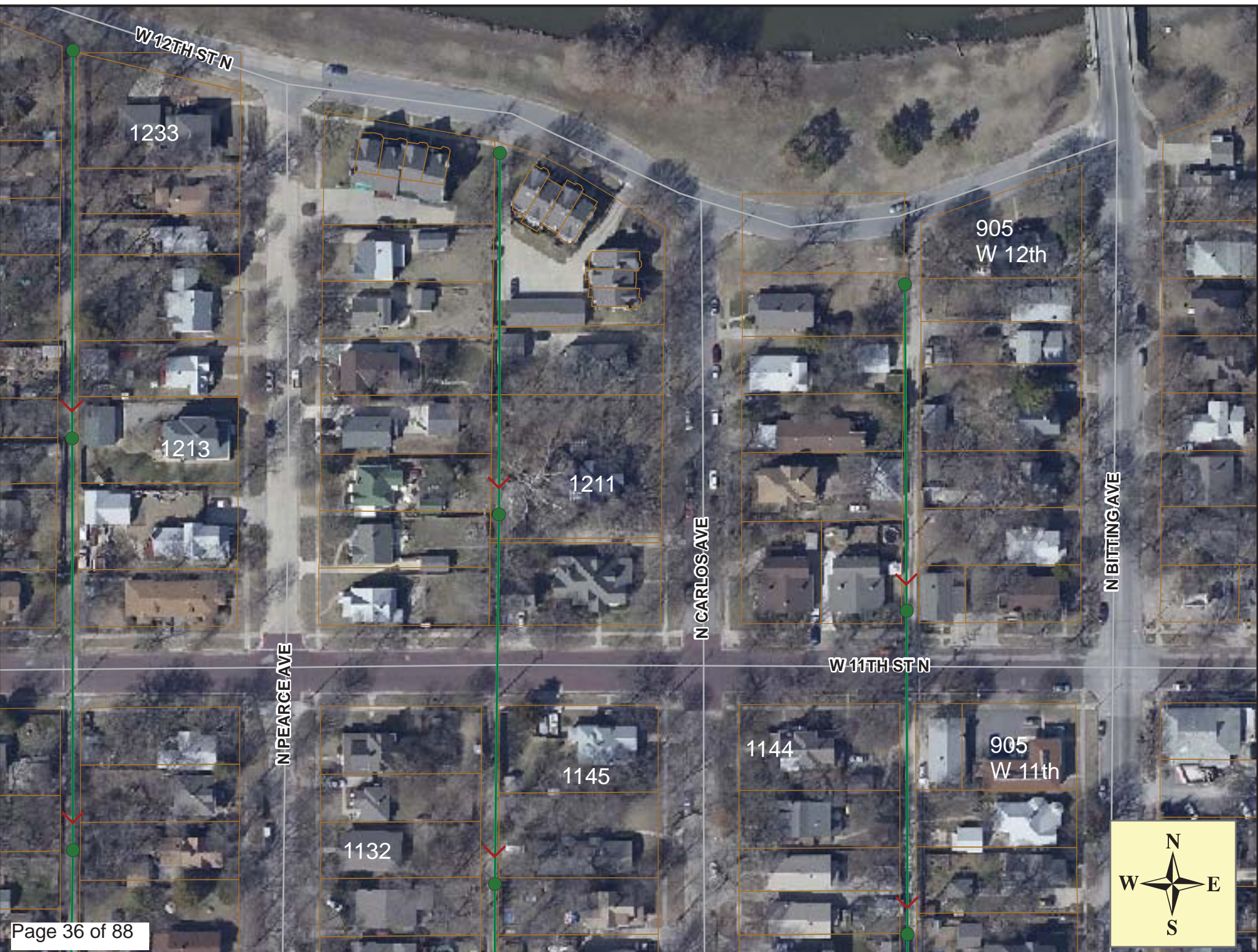
282'

325'

281'

SITE 5





W 12TH ST N

1233

1213

1211

905
W 12th

N PEARCE AVE

N CARLOS AVE

N BITTING AVE

W 11TH ST N

1145

1132

1144

905
W 11th



Television Inspection Master Report

4/25/2011

1:15 PM

US Structure: 5448-541 925 W 12TH ST Date Insp: 4/15/2010 Basin: C03E
 DS Structure: 5448-538 1211 N CARLOS ST Dir Televised: Upstream To Downstream

Pipe Information

Shape: Round Length Status: Project No. : B-234
 Dia/Ht: 8 Material: VCP Index:
 Length: 314.4 Slope: 0.001 Surface:

Inspection Information

Crew: 692 Percent Full: Tape ID: DVD #0569

Obs. #	VTR Counter	Distance	Location	Description	Rating	Obsrvd (gpm)	Ratings			Remain (gpm)
							Est. (gpm)	Struct	Clean	
1		0.0		US Manhole	0	0.000	0	0	0.000	
925 W 12TH										
2		0.6	919 W 12TH	Wye Service	1	0.000	0	0	0.000	
3		7.9	937 W 12 TH / PVC	Break-In Conn	1	0.001	0	0	0.001	
4		10.1	919 W 12 TH / PVC	Break-In Conn	1	0.001	0	0	0.001	
5		24.2	1232 N PEARCE	Wye Service	1	0.000	0	0	0.000	
6		26.9		Sealed Off Wye	1	0.000	0	0	0.000	
7		39.9		Crack-Radial	2	0.002	2	0	0.002	
8		47.4		Crack-Radial	1	0.001	1	0	0.001	
9		51.5		Sealed Off Wye	1	0.000	0	0	0.000	
10		54.1		Sealed Off Wye	1	0.000	0	0	0.000	
11		59.7		Crack-Radial	2	0.002	2	0	0.002	
12		75.0		Crack-Horizontal	1	0.001	1	0	0.001	
13		76.5		Sealed Off Wye	1	0.000	0	0	0.000	
14		79.0		Sealed Off Wye	1	0.000	0	0	0.000	
15		96.0	909 W 12 TH / PVC	Break-In Conn	1	0.001	0	0	0.001	
16		97.1		Crack-Radial	1	0.001	1	0	0.001	
17		99.5		Crack-Radial	2	0.002	2	0	0.002	
18		100.4		Observation Hole	1	0.000	0	0	0.000	
19		103.7	1228 N PEARCE	Wye Service	1	0.000	0	0	0.000	
20		105.9		Sealed Off Wye	1	0.000	0	0	0.000	
21		129.9		Sealed Off Wye	1	0.000	0	0	0.000	
22		133.3		Sealed Off Wye	1	0.000	0	0	0.000	
23		136.9		Crack-Radial	2	0.002	2	0	0.002	
24		153.0	PVC TAP	Break-In Conn	1	0.001	0	0	0.001	
25		157.0		Crack-Radial	2	0.002	2	0	0.002	
26		158.1		Sealed Off Wye	1	0.000	0	0	0.000	
27		159.1		Crack-Radial	2	0.002	2	0	0.002	
28		160.8	1221 N CARLOS	Wye Service	1	0.000	0	0	0.000	
29		178.6	1222 N PEARCE	Break-In Conn	2	0.002	0	0	0.002	
30		179.2		Crack-Radial	3	0.004	5	0	0.004	

Television Inspection Master Report

4/25/2011

1:15 PM

US Structure: 5448-541 925 W 12TH ST Date Insp: 4/15/2010 Basin: C03E
 DS Structure: 5448-538 1211 N CARLOS ST Dir Televised: Upstream To Downstream

31	185.6		Sealed Off Wye	1	0.000	0	0	0.000
32	187.1		Sealed Off Wye	1	0.000	0	0	0.000
33	194.0		Crack-Radial	1	0.001	1	0	0.001
34	201.4		Crack-Radial	1	0.001	1	0	0.001
35	204.4		Observation Hole	1	0.000	0	0	0.000
36	213.0		Sealed Off Wye	1	0.000	0	0	0.000
37	215.5		Sealed Off Wye	1	0.000	0	0	0.000
38	239.3	1218 N PEARCE	Wye Service	1	0.000	0	0	0.000
39	241.4		Crack-Radial	2	0.002	2	0	0.002
40	261.1		Crack-Radial	2	0.002	2	0	0.002
41	263.8		Crack-Radial	1	0.001	1	0	0.001
42	266.8		Sealed Off Wye	1	0.000	0	0	0.000
43	268.7		Crack-Radial	3	0.004	5	0	0.004
44	270.3		Sealed Off Wye	1	0.000	0	0	0.000
45	283.9		Crack-Radial	2	0.002	2	0	0.002
46	287.5	1210 N PEARCE	Break-In Conn	1	0.001	0	0	0.001
47	288.9		Crack-Radial	1	0.001	1	0	0.001
48	290.5	1211 N CARLOS	Break-In Conn	1	0.001	0	0	0.001
49	294.8		Sealed Off Wye	1	0.000	0	0	0.000
50	296.4		Sealed Off Wye	1	0.000	0	0	0.000
51	311.1	BRICK TROUGH	5448-538 DS Manhole	1	0.000	0	0	0.000

Television Inspection Master Report

4/25/2011

1:15 PM

US Structure: 5448-538 1211 N CARLOS ST Date Insp: 4/15/2010 Basin: C03E
 DS Structure: 5448-535 1128 N PEARCE AVE Dir Televised: Upstream To Downstream

Pipe Information

Shape: Round Length Status: Project No. : B-234
 Dia/Ht: 8 Material: VCP Index:
 Length: 321.8 Slope: 0.400 Surface:

Inspection Information

Crew: 692 Percent Full: Tape ID: DVD #0569

Obs. #	VTR Counter	Distance	Location	Description	Rating	Obsrvd (gpm)	Ratings			Remain (gpm)
							Est. (gpm)	Struct	Clean	
1		0.0		US Manhole	1	0.000	0	0	0.000	
1211 N CARLOS										
2		9.7		Crack-Radial	3	0.004	5	0	0.004	
3		11.3		Sealed Off Wye	2	0.000	0	0	0.000	
4		12.2		Crack-Radial	2	0.002	2	0	0.002	
5		13.9	1211 N CARLOS / ROOTS	Wye Service	5	0.000	400	0	0.000	
6		17.5		Crack-Radial	1	0.001	1	0	0.001	
7		22.4		Roots	1	0.002	1	1	0.002	
8		28.6	1206 N PEARCE	Break-In Conn	3	0.004	2	0	0.004	
9		29.7		Crack-Radial	1	0.001	1	0	0.001	
10		37.2		Crack-Radial	3	0.004	5	0	0.004	
11		38.8		Sealed Off Wye	1	0.000	0	0	0.000	
12		39.8		Crack-Radial	2	0.002	2	0	0.002	
13		42.4		Crack-Radial	3	0.004	5	0	0.004	
14		46.3		Sealed Off Wye	1	0.000	0	0	0.000	
15		50.0		Crack-Radial	2	0.002	2	0	0.002	
16		58.1	1202 N PEARCE	Break-In Conn	2	0.002	0	0	0.002	
17		59.7		Crack-Radial	2	0.002	2	0	0.002	
18		61.3	BALL OF ROOTS	Sealed Off Wye	5	0.000	0	0	0.000	
19		62.0		Crack-Radial	3	0.004	5	0	0.004	
20		63.9	1203 N CARLOS	Wye Service	2	0.000	0	0	0.000	
21		81.7		Roots	2	0.004	2	4	0.004	
22		84.3		Roots	2	0.004	2	4	0.004	
23		84.9		Crack-Radial	3	0.004	5	0	0.004	
24		85.9		Sealed Off Wye	4	0.000	0	0	0.000	
25		86.8		Roots	3	0.008	5	8	0.008	
26		88.5		Sealed Off Wye	4	0.000	0	0	0.000	
27		89.2		Roots	2	0.004	2	4	0.004	
28		93.7		Roots	2	0.004	2	4	0.004	

Television Inspection Master Report

4/25/2011

1:15 PM

US Structure:	5448-538	1211 N CARLOS ST	Date Insp:	4/15/2010	Basin:	C03E
DS Structure:	5448-535	1128 N PEARCE AVE	Dir Televised:	Upstream To Downstream		
29	96.4		Roots	2	0.004	2 4 0.004
30	99.1		Roots	1	0.002	1 1 0.002
31	101.4		Roots	1	0.002	1 1 0.002
32	104.0		Roots	2	0.004	2 4 0.004
33	104.7		Observation Hole	1	0.000	0 0 0.000
34	114.0		Roots	1	0.002	1 1 0.002
35	116.2		Roots	2	0.004	2 4 0.004
36	141.4		Crack-Radial	1	0.001	1 0 0.001
37	146.1		Crack-Radial	3	0.004	5 0 0.004
38	151.2		Crack-Radial	2	0.002	2 0 0.002
39	156.1		Crack-Radial	2	0.002	2 0 0.002
40	163.6		Crack-Radial	2	0.002	2 0 0.002
41	166.2		Crack-Radial	2	0.002	2 0 0.002
42	170.9		Crack-Radial	2	0.002	2 0 0.002
43	176.1	1011 W 11TH ST N / CROOKED	Extended Tap	2	0.002	0 0 0.002
44	181.0	1145 N CARLOS	Break-In Conn	2	0.002	0 0 0.002
45	188.5		Crack-Radial	2	0.002	2 0 0.002
46	196.0		Crack-Radial	2	0.002	2 0 0.002
47	200.1		Sealed Off Wye	1	0.000	0 0 0.000
48	202.5		Sealed Off Wye	1	0.000	0 0 0.000
49	203.5		Crack-Radial	2	0.002	2 0 0.002
50	206.2		Crack-Radial	2	0.002	2 0 0.002
51	210.6	1131 N CARLOS	Break-In Conn	1	0.001	0 0 0.001
52	211.2		Observation Hole	2	0.000	0 0 0.000
53	213.5		Crack-Radial	1	0.001	1 0 0.001
54	227.6		Sealed Off Wye	1	0.000	0 0 0.000
55	233.5		Crack-Radial	1	0.001	1 0 0.001
56	236.0		Crack-Radial	2	0.002	2 0 0.002
57	237.5	1138 N PEARCE / ROOTS	Wye Service	3	0.000	2 0 0.000
58	250.0	1138 N PEARCE	Wye Service	1	0.000	0 0 0.000
59	252.3		Sealed Off Wye	1	0.000	0 0 0.000
60	277.8		Sealed Off Wye	1	0.000	0 0 0.000
61	279.8		Sealed Off Wye	1	0.000	0 0 0.000
62	281.0		Crack-Radial	1	0.001	1 0 0.001
63	288.3	1133 N CARLOS / PVC	Break-In Conn	1	0.001	0 0 0.001
64	296.0		Crack-Radial	1	0.001	1 0 0.001
65	303.9		Crack-Radial	2	0.002	2 0 0.002
66	305.9	1132 N PEARCE	Wye Service	1	0.000	0 0 0.000
69	306.3	1133 N CARLOS / BROKEN DOWN	Wye Service	DEBRIS / POSSIBLY AN ABANDONED SERVICE		
68	307.0		Crack-Radial	3	0.004	5 0 0.004
67	317.6	5448-535 DS Manhole		1	0.000	0 0 0.000

MORE ROOTS THAN NOTED ON LOG / BROKEN SEALS ON UNUSED WYES LETTING IN ROOTS

Television Inspection Master Report

4/25/2011

1:16 PM

US Structure: 5448-549 1226 N CARLOS AVE Date Insp: 4/5/2010 Basin: C03E
 DS Structure: 5448-547 920 W 11TH ST Dir Televised: Upstream To Downstream

Pipe Information

Shape: Round Length Status: Project No. : B-233
 Dia/Ht: 8 Material: VCP Index:
 Length: 284.9 Slope: 0.003 Surface:

Inspection Information

Crew: 692 Percent Full: Tape ID: DVD #0569

Obs. #	VTR Counter	Distance	Location	Description	Rating	Obsrvd (gpm)	Ratings			Remain (gpm)
							Est. (gpm)	Struct	Clean	
1		0.0		5448-549 US Manhole						
2		2.0	flush hole?	Wye Service	1	0.000	0	0	0.000	
3		10.2	1226 N CARLOS	Wye Service	1	0.000	0	0	0.000	
4		13.1	905 W 12TH ST N / PVC	Break-In Conn	1	0.001	0	0	0.001	
5		19.9		Crack-Radial	1	0.001	1	0	0.001	
6		24.9		Crack-Horizontal	1	0.001	1	0	0.001	
7		27.5		Crack-Radial	3	0.004	5	0	0.004	
8		30.1		Crack-Radial	1	0.001	1	0	0.001	
9		33.5	1221 N BITTING	Break-In Conn	1	0.001	0	0	0.001	
10		37.4		Broken Pipe	2	0.008	44	0	0.008	
11		39.0		Sealed Off Wye	1	0.000	0	0	0.000	
12		41.5		Sealed Off Wye	1	0.000	0	0	0.000	
13		59.0		Sealed Off Wye	1	0.000	0	0	0.000	
14		60.1	1219 N BITTING / PVC	Break-In Conn	2	0.002	0	0	0.002	
15		62.3		Roots	1	0.002	1	1	0.002	
16		67.3		Roots	1	0.002	1	1	0.002	
17		82.9		Crack-Radial	2	0.002	2	0	0.002	
18		86.1	1224 N CARLOS	Wye Service	1	0.000	0	0	0.000	
19		87.6		Crack-Radial	1	0.001	1	0	0.001	
20		89.2	1217 N BITTING	Wye Service	3	0.000	2	0	0.000	
21		89.7	wye is cracked at PVC service line	Broken Pipe	5	0.060	100	0	0.060	
22		92.6		Crack-Radial	3	0.004	5	0	0.004	
23		111.8		Sealed Off Wye	1	0.000	0	0	0.000	
24		114.3	1217 N BITTING	Wye Service	1	0.000	0	0	0.000	
25		135.5		Crack-Radial	1	0.001	1	0	0.001	
26		136.8		Sealed Off Wye	1	0.000	0	0	0.000	
27		139.5	1217 N BITTING	Wye Service	1	0.000	0	0	0.000	
28		139.5	1220 N CARLOS	Break-In Conn	1	0.001	0	0	0.001	
29		140.4		Observation Hole	2	0.000	0	0	0.000	

Television Inspection Master Report

4/25/2011

1:16 PM

US Structure: 5448-549 1226 N CARLOS AVE Date Insp: 4/5/2010 Basin: C03E
 DS Structure: 5448-547 920 W 11TH ST Dir Televised: Upstream To Downstream

30	142.8		Crack-Radial	2	0.002	2	0	0.002
31	145.2		Crack-Radial	2	0.002	2	0	0.002
32	157.9		Crack-Radial	2	0.002	2	0	0.002
33	160.4	1218 N CARLOS	Wye Service / cracked	3	0.000	2	0	0.000
34	164.3		Sealed Off Wye	1	0.000	0	0	0.000
35	165.3		Crack-Radial	1	0.001	1	0	0.001
36	170.0		Crack-Radial	2	0.002	2	0	0.002
37	172.4		Crack-Radial	2	0.002	2	0	0.002
38	175.1		Crack-Radial	3	0.004	5	0	0.004
39	180.1		Crack-Radial	2	0.002	2	0	0.002
40	183.0		Crack-Radial	2	0.002	2	0	0.002
41	185.3		Crack-Radial	3	0.004	5	0	0.004
42	186.8		Sealed Off Wye	1	0.000	0	0	0.000
43	187.5		Crack-Radial	3	0.004	5	0	0.004
44	189.1	1207 N BITTING	Wye Service	1	0.000	0	0	0.000
45	190.0		Crack-Radial	3	0.004	5	0	0.004
46	192.4		Crack-Radial	2	0.002	2	0	0.002
47	202.7		Crack-Radial	3	0.004	5	0	0.004
48	205.0		Crack-Radial	2	0.002	2	0	0.002
49	209.9		Crack-Radial	3	0.004	5	0	0.004
50	213.0		Sealed Off Wye	1	0.000	0	0	0.000
51	216.5	1205 N BITTING	Wye Service	1	0.000	0	0	0.000
52	217.2		Crack-Radial	2	0.002	2	0	0.002
53	225.0		Crack-Radial	2	0.002	2	0	0.002
54	228.1	920 W 11TH ST N	Break-In Conn	1	0.001	0	0	0.001
55	230.0		Crack-Horizontal	2	0.002	2	0	0.002
56	235.2		Crack-Radial	2	0.002	2	0	0.002
57	236.7		Sealed Off Wye	1	0.000	0	0	0.000
58	237.5		Crack-Radial	2	0.002	2	0	0.002
59	239.2		Sealed Off Wye	1	0.000	0	0	0.000
60	243.8	926 W 11TH ST N	Break-In Conn	1	0.001	0	0	0.001
61	250.1		Crack-Radial	2	0.002	2	0	0.002
62	252.8		Crack-Radial	2	0.002	2	0	0.002
63	255.3		Crack-Radial	2	0.002	2	0	0.002
64	257.8		Crack-Radial	2	0.002	2	0	0.002
65	260.2		Crack-Radial	2	0.002	2	0	0.002
66	261.9		Sealed Off Wye	1	0.000	0	0	0.000
67	262.8		Crack-Radial	2	0.002	2	0	0.002
68	264.4		Sealed Off Wye	1	0.000	0	0	0.000
69	267.6		Crack-Radial	2	0.002	2	0	0.002
70	270.4	1203 N BITTING	Break-In Conn	2	0.002	0	0	0.002
71	275.3		Crack-Radial	2	0.002	2	0	0.002
72	277.9		Crack-Radial	2	0.002	2	0	0.002
73	282.6		5448-547 DS Manhole	1	0.000	0	0	0.000

Television Inspection Master Report

4/25/2011

1:16 PM

US Structure: 5448-547 920 W 11TH ST Date Insp: 4/5/2010 Basin: C03E
 DS Structure: 5448-544 1124 N CARLOS ST Dir Televised: Upstream To Downstream

Pipe Information

Shape: Round Length Status: Project No. : B-233
 Dia/Ht: 8 Material: VCP Index:
 Length: 282.1 Slope: 0.400 Surface:

Inspection Information

Crew: 692 Percent Full: Tape ID: DVD #0569

Obs. #	VTR Counter	Distance	Location	Description	Rating	Obsrvd (gpm)	Ratings			Remain (gpm)
							Est. (gpm)	Struct	Clean	
1		0.0		5448-547 US Manhole						
920 W 1TH ST N										
2		3.0		Crack-Radial	2	0.002	2	0	0.002	
3		4.6		Sealed Off Wye	1	0.000	0	0	0.000	
4		7.1		Sealed Off Wye	1	0.000	0	0	0.000	
5		11.9	910 W 11TH ST N / PVC	Break-In Conn	1	0.001	0	0	0.001	
6		15.3		Crack-Radial	2	0.002	2	0	0.002	
7		22.9		Crack-Radial	2	0.002	2	0	0.002	
8		25.5		Crack-Radial	2	0.002	2	0	0.002	
9		27.8		Crack-Radial	2	0.002	2	0	0.002	
10		30.5		Crack-Radial	2	0.002	2	0	0.002	
11		45.6		Crack-Radial	2	0.002	2	0	0.002	
12		60.5		Roots	1	0.002	1	1	0.002	
13		65.4		Roots	2	0.004	2	4	0.004	
14		67.7		Roots	2	0.004	2	4	0.004	
15		70.6		Roots	2	0.004	2	4	0.004	
16		73.2		Roots	1	0.002	1	1	0.002	
17		75.7		Roots	1	0.002	1	1	0.002	
18		78.3		Roots	2	0.004	2	4	0.004	
19		80.8		Roots	2	0.004	2	4	0.004	
20		83.6	905 W 11TH ST N	Break-In Conn	1	0.001	0	0	0.001	
21		83.6		Roots	2	0.004	2	4	0.004	
22		84.6		Broken Pipe	3	0.010	60	0	0.010	
23		91.1		Observation Hole	1	0.000	0	0	0.000	
24		93.5		Roots	1	0.002	1	1	0.002	
25		98.5		Roots	2	0.004	2	4	0.004	
26		100.3	1144 N CARLOS	ROOTS / Wye Service	3	0.000	2	0	0.000	

Television Inspection Master Report

4/25/2011

1:16 PM

US Structure: 5448-547 920 W 11TH ST Date Insp: 4/5/2010 Basin: C03E
 DS Structure: 5448-544 1124 N CARLOS ST Dir Televised: Upstream To Downstream

27	102.7		Sealed Off Wye	1	0.000	0	0	0.000
28	118.8		Crack-Radial	2	0.002	2	0	0.002
29	121.3		Crack-Radial	2	0.002	2	0	0.002
30	124.1		Crack-Radial	2	0.002	2	0	0.002
31	130.6		Sealed Off Wye	1	0.000	0	0	0.000
32	131.5		Crack-Radial	2	0.002	2	0	0.002
33	132.9	909 W 11TH ST N	Wye Service	1	0.000	0	0	0.000
34	141.2		Crack-Radial	1	0.001	1	0	0.001
35	148.7		Crack-Radial	1	0.001	1	0	0.001
36	150.4		Sealed Off Wye	1	0.000	0	0	0.000
37	151.9		Crack-Radial	2	0.002	2	0	0.002
38	153.0		Sealed Off Wye	1	0.000	0	0	0.000
39	172.0	1140 N CARLOS	Wye Service	1	0.000	0	0	0.000
40	175.8		Wye Service	1	0.000	0	0	0.000
41	184.5		Observation Hole	1	0.000	0	0	0.000
42	198.5		Sealed Off Wye	1	0.000	0	0	0.000
43	200.8	1139 N BITTING	Wye Service	1	0.000	0	0	0.000
44	214.3		Roots	1	0.002	1	1	0.002
45	216.9		Roots	1	0.002	1	1	0.002
46	223.6	1128 N CARLOS	Wye Service / HEAVY ROOTS	4	0.000	60	0	0.000
47	226.0		Sealed Off Wye	1	0.000	0	0	0.000
48	246.6		Wye Service	1	0.000	0	0	0.000
49	247.6	1129 N BITTING / broken off main	Wye Service	5	0.000	400	0	0.000
50	255.0		Crack-Radial	3	0.004	5	0	0.004
51	269.4	1124 N CARLOS / broken off main	Wye Service	5	0.000	400	0	0.000
52	272.0		Sealed Off Wye	1	0.000	0	0	0.000
53	279.7	5448-544 DS Manhole		1	0.000	0	0	0.000
		1124 N CARLOS						