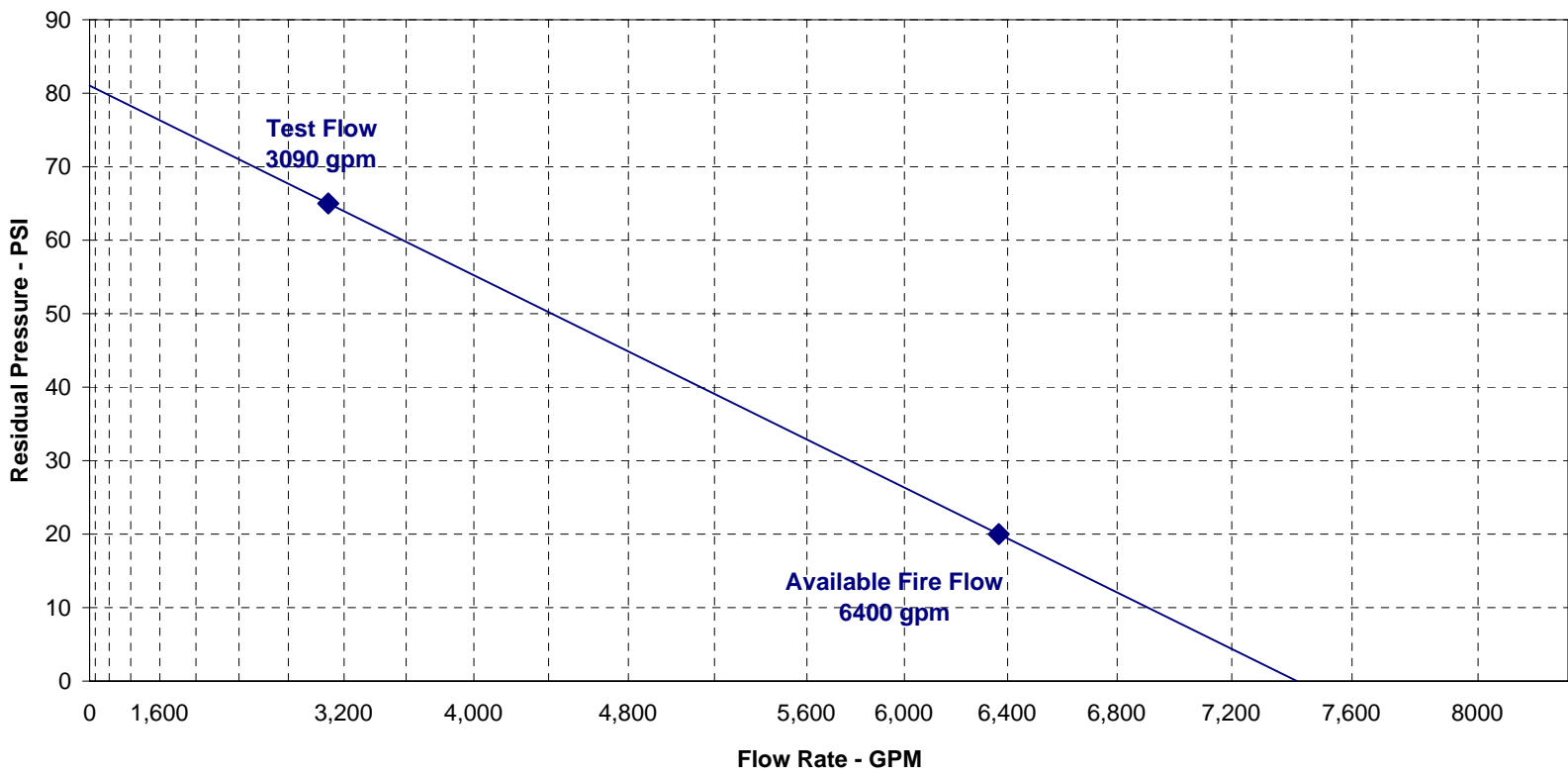


Appendix C

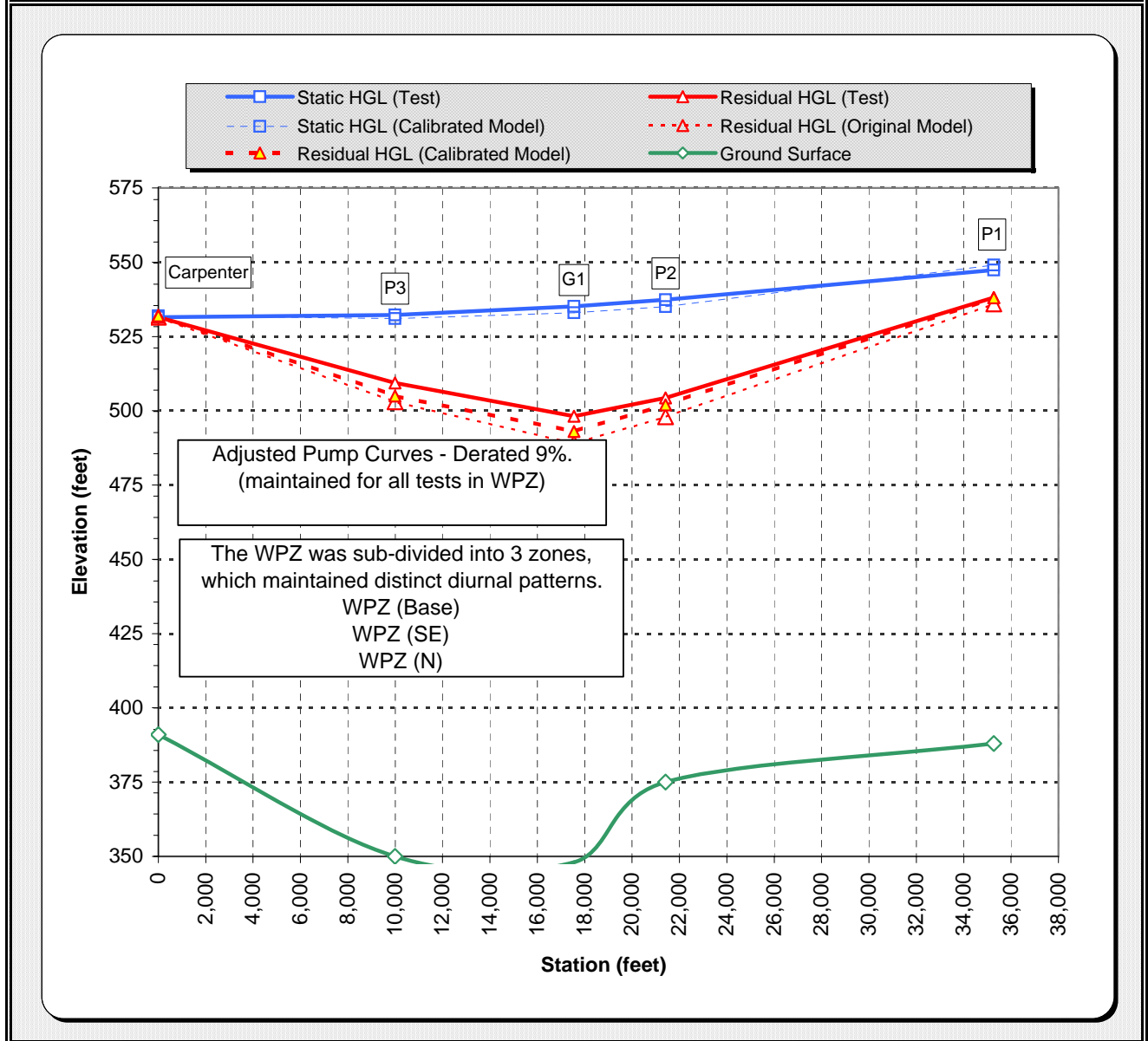
Results of Fireflow

Project Name:	Town of Cary Water Master Plan	Area:	Western	Date of Test:	5-Aug-2008
Test Hydrant Street:	Cary Glen	Map No:	Day 1	Time of Test:	9:58AM
Test No.:	1	AFF at 20 psi:	6,400 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	5412	Flow Hydrant No. 1:	5413		
Static Pressure:	81 psi	Pitot Pressure:		<i>Hydrant Diffusor Flow Equations</i>	
Residual Pressure:	65 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Flow Hydrant No. 2:	5424
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Diffuser Pressure (2.5"):	60 psi
Elevation:		No of Nozzle:	1	Calculated Flow (2.5"):	900 gpm
Test Flow:	3,090 gpm	Hydrant Nozzle Coef.:	0.747	Diffuser Pressure (4"):	31 psi
Test Hydrant Year:	2001	Calculated Flow:		Calculated Flow (4"):	2,190 gpm
		Flow Hydrant Year:			

**Hydrant 5412 at Cary Glen
TOWN OF CARY WATER MASTER PLAN**

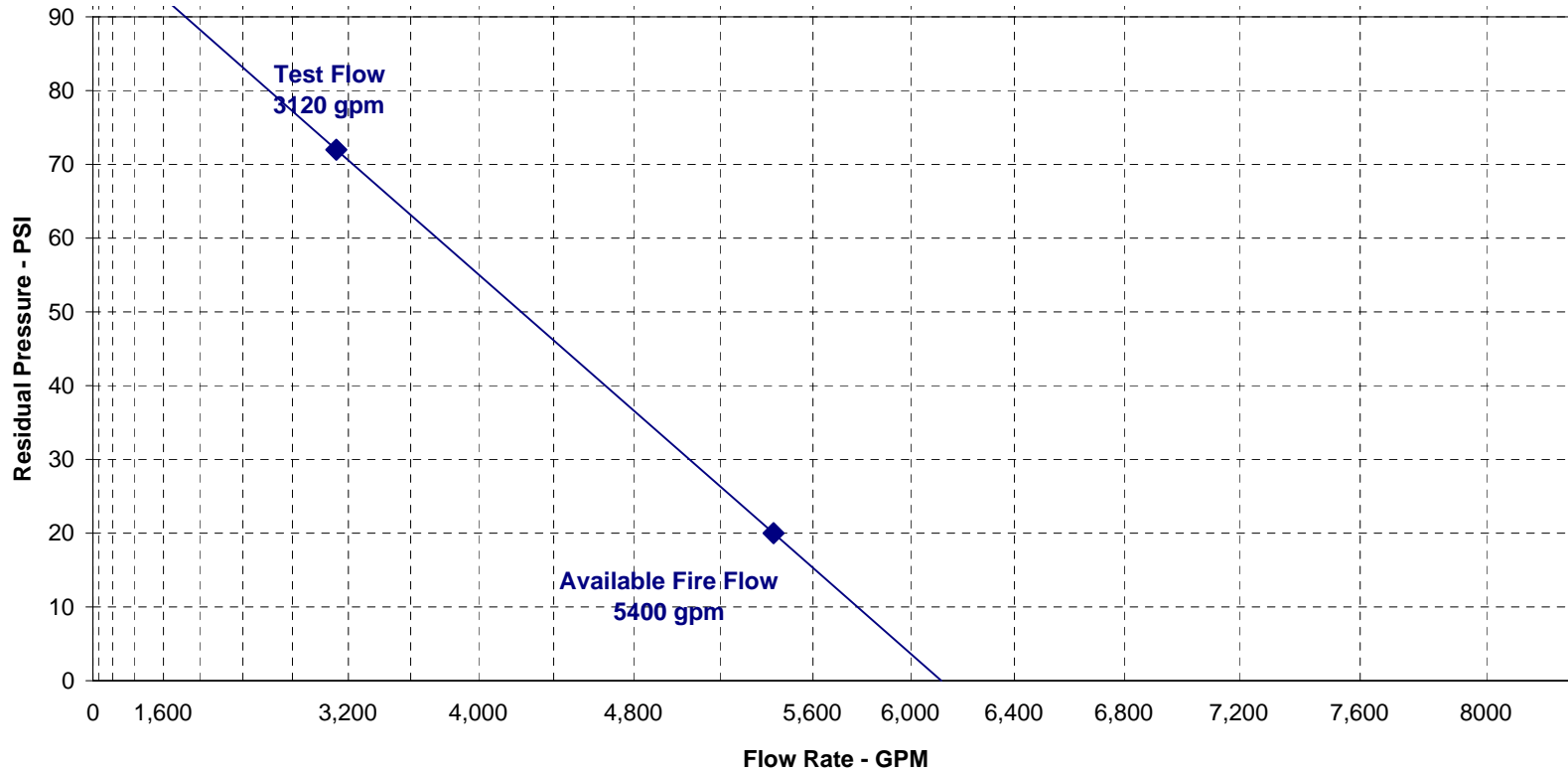


HGL Test #:		1		Zone: Town of Cary Water Master Plan			Date: 8/5/2008		Time: 9:58AM	
Location: Cary Glen							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Carpenter	--	SCADA	--	0	0	391	0	532	0	532
5519	P3	PR07	--	9,997	9,997	350	79	532	69	509
5412	G1	Gauge	--	7,545	17,542	348	81	535	65	498
5730	P2	PR08	--	3,870	21,412	375	70	537	56	504
5187	P1	L4	--	13,860	35,272	388	69	547	65	538
5413	3,090	gpm								

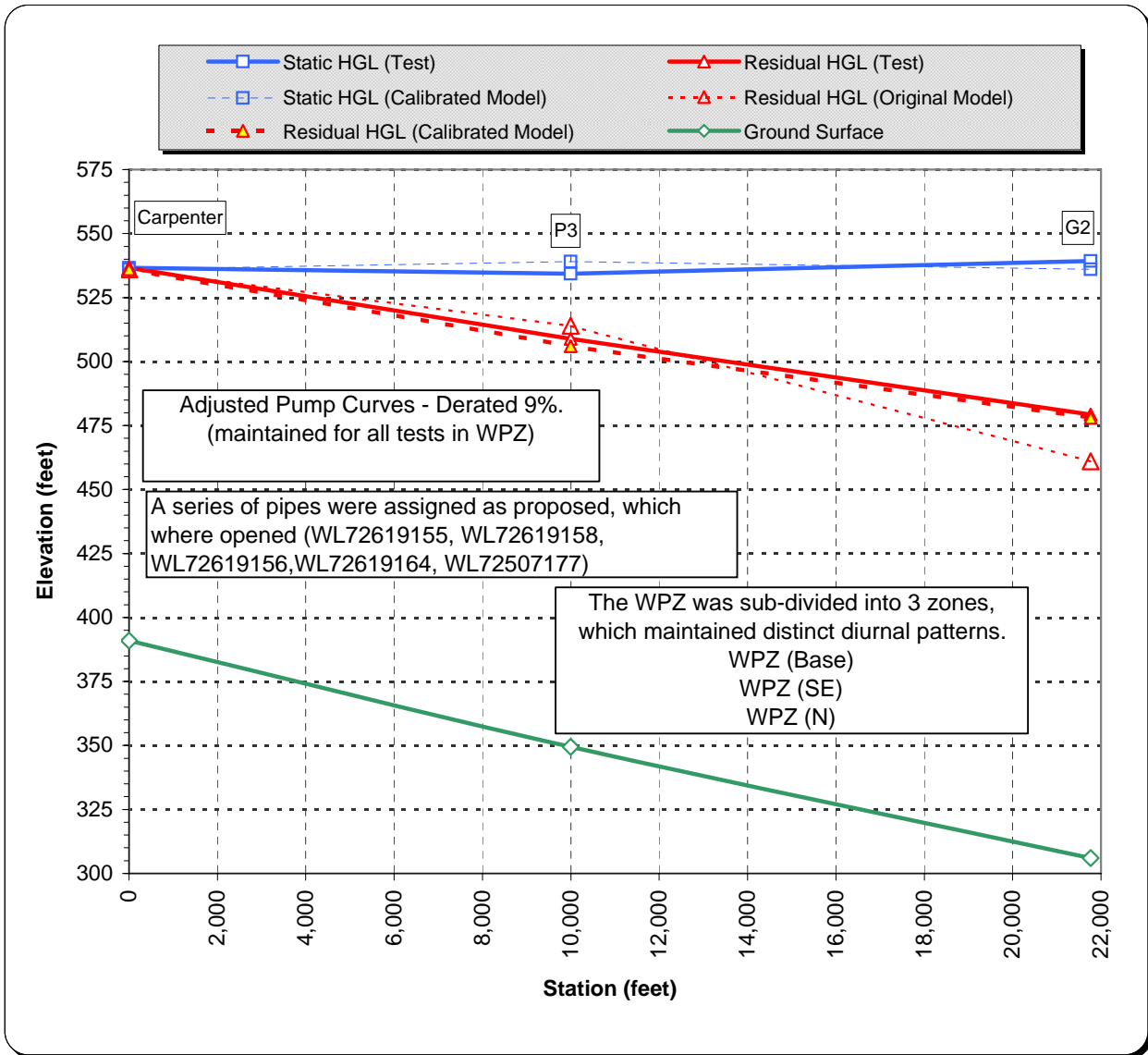


Project Name:	Town of Cary Water Master Plan	Area:	Western	Date of Test:	5-Aug-2008
Test Hydrant Street:	Green Level to Durham	Map No:	Day 1	Time of Test:	11:42AM
Test No.:	2	AFF at 20 psi:	5,400 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	6161	Flow Hydrant No. 1:	6061	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	101 psi	Pitot Pressure:		Flow Hydrant No. 2:	5925
Residual Pressure:	72 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	60 psi
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	900 gpm
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	33 psi
Test Flow:	3,120 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,220 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 6161 at Green Level to Durham
TOWN OF CARY WATER MASTER PLAN**

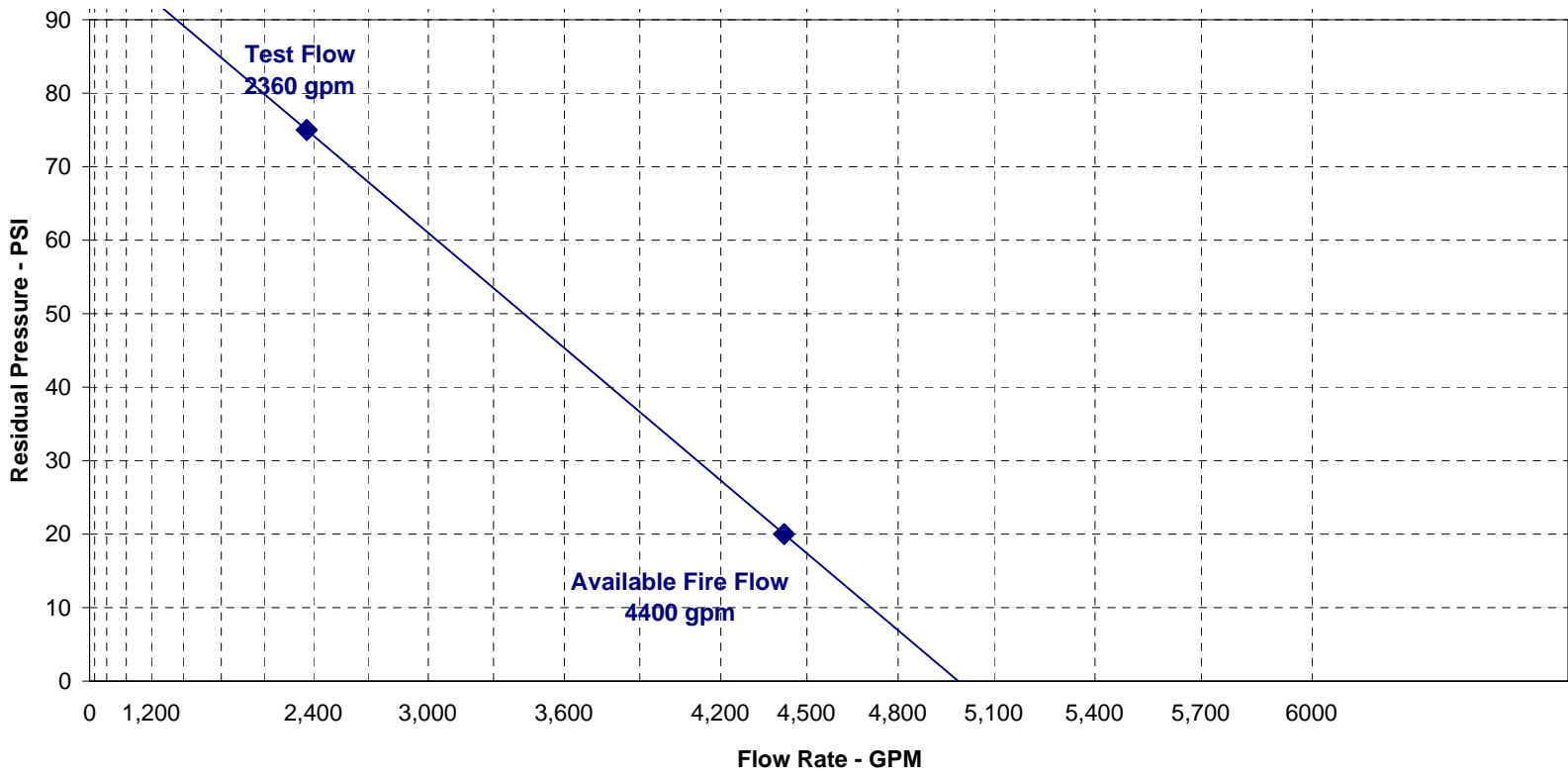


HGL Test #: 2		Zone: Town of Cary Water Master Plan				Date: 8/5/2008		Time: 11:42AM		
Location: Green Level to Durham							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Carpenter	--	SCADA	--	0	0	391	0	537	0	537
5519	P3	PR07	--	9,997	9,997	350	80	534	69	509
6161	G2	Gauge	--	11,770	21,767	306	101	539	75	479
6061	3,120	gpm								

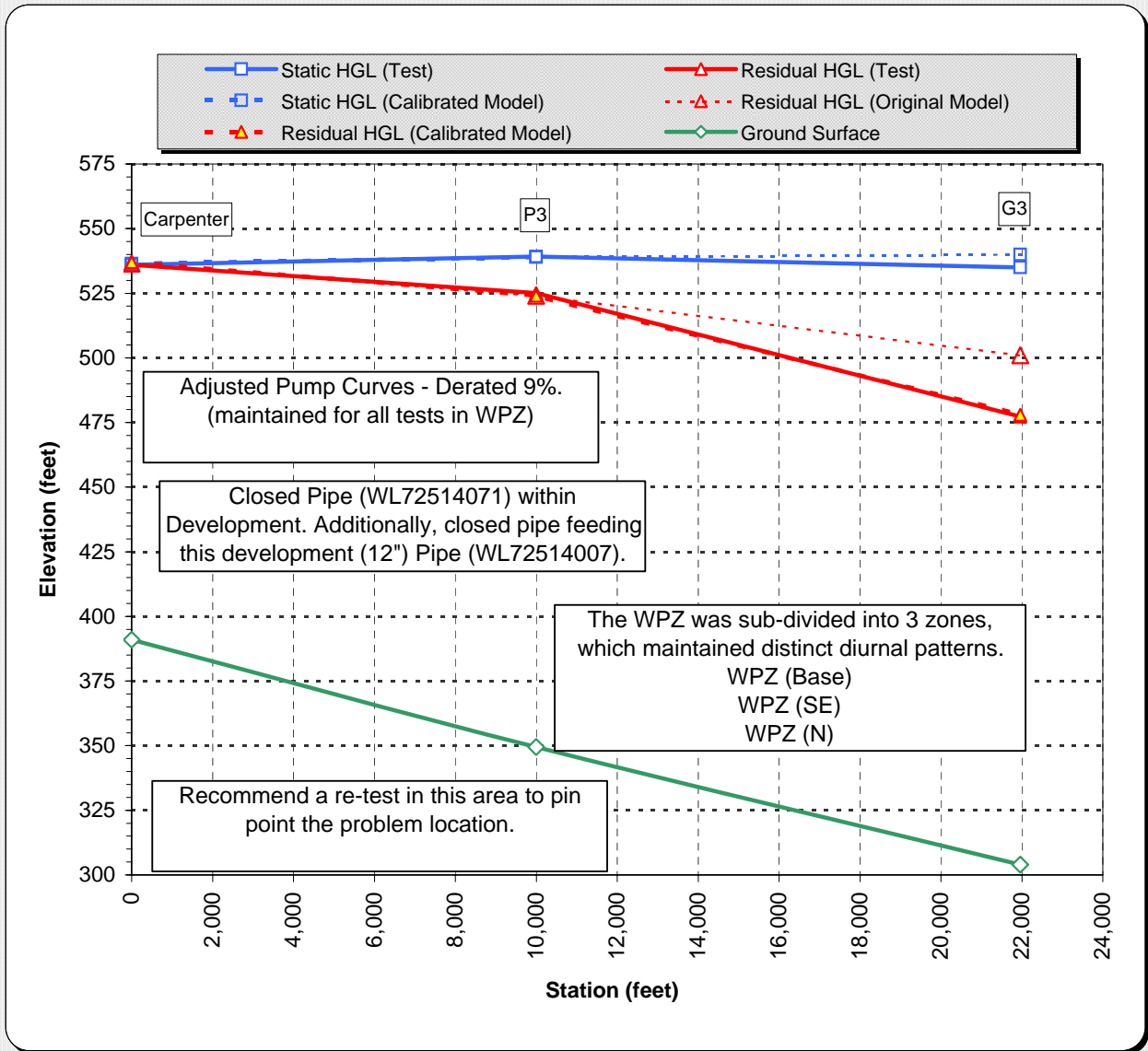


Project Name:	Town of Cary Water Master Plan	Area:	Western	Date of Test:	5-Aug-2008
Test Hydrant Street:	Bosworth	Map No:	Day 1	Time of Test:	11:05AM
Test No.:	3	AFF at 20 psi:	4,400 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	n/a	Flow Hydrant No. 1:	n/a	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	100 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	75 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	47 psi
Test Flow:	2,360 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,360 gpm
Test Hydrant Year:	2005	Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant n/a at Bosworth
TOWN OF CARY WATER MASTER PLAN**

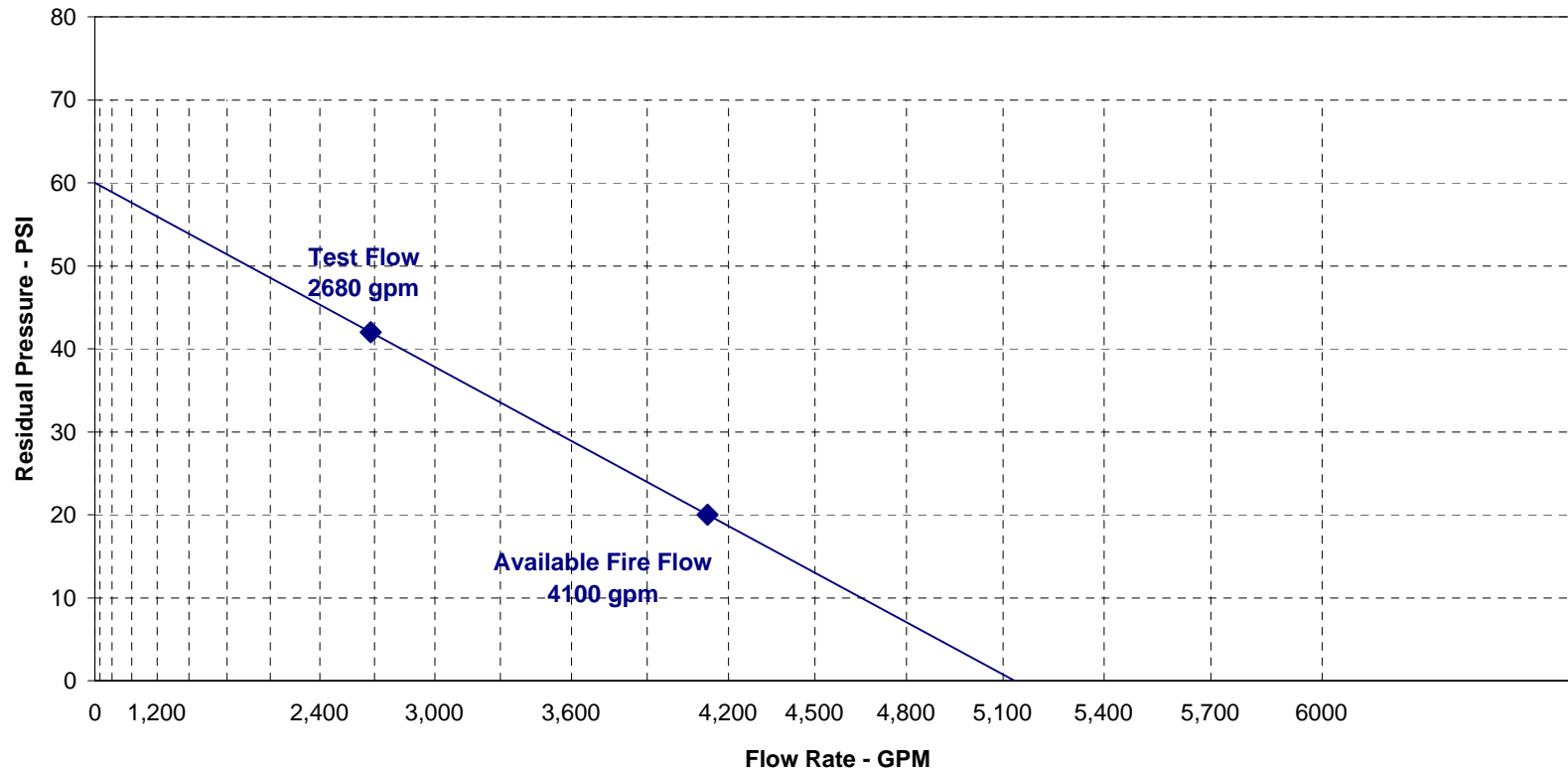


HGL Test #:		3		Zone: Town of Cary Water Master Plan			Date: 8/5/2008		Time: 11:05AM	
Location: <i>Bosworth</i>							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Carpenter	--	SCADA	--	0	0	391	0	536	0	536
5519	P3	PR07	--	9,997	9,997	350	82	539	76	525
n/a	G3	Gauge	--	11,962	21,959	304	100	535	75	477
n/a		2,360	gpm							

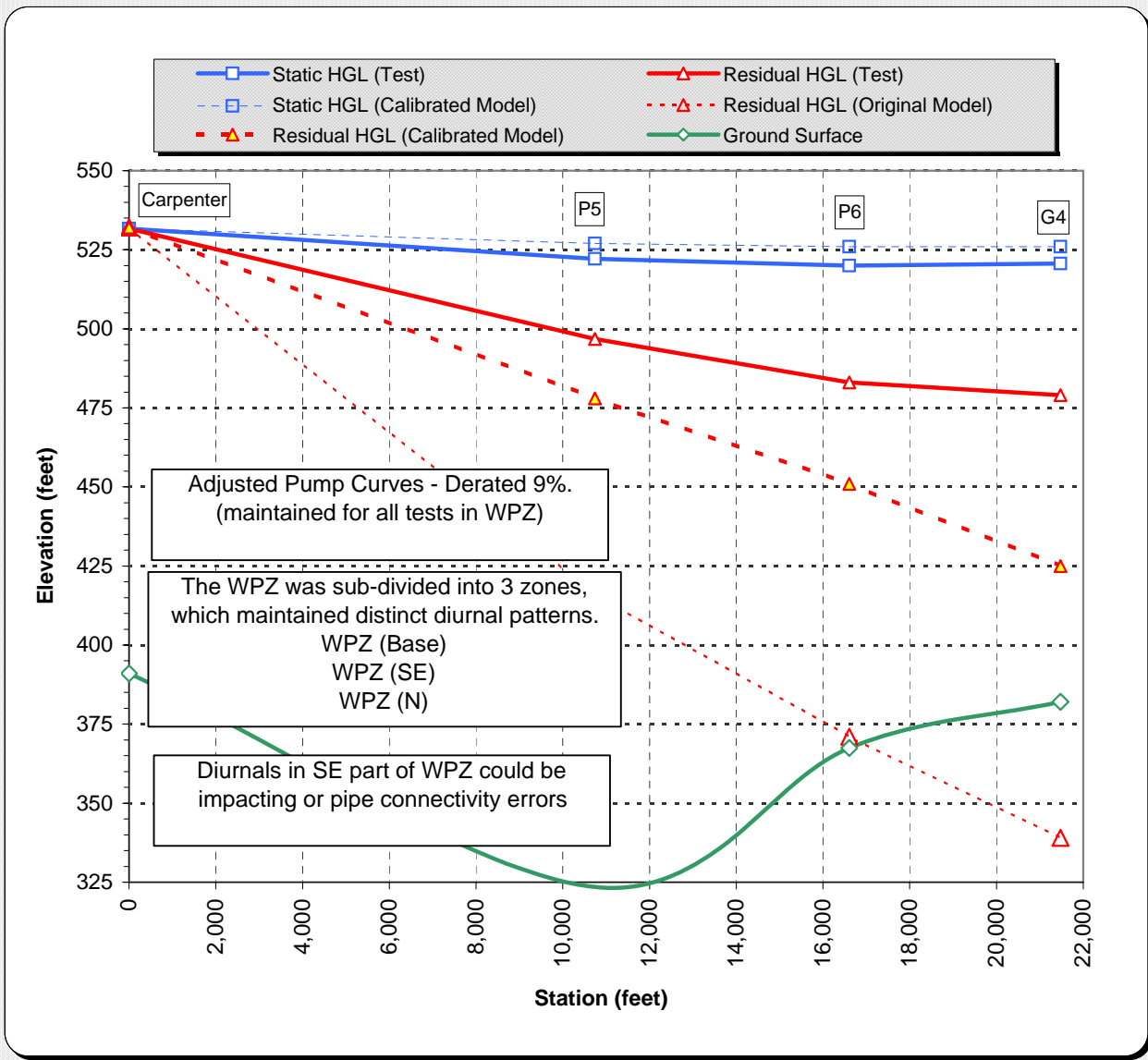


Project Name:	Town of Cary Water Master Plan	Area:	Western	Date of Test:	6-Aug-2008
Test Hydrant Street:	Preston Village & Walcott	Map No:	Day 2	Time of Test:	10:00 AM
Test No.:	4	AFF at 20 psi:	4,100 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	3794	Flow Hydrant No. 1:	3779	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	60 psi	Pitot Pressure:		Flow Hydrant No. 2:	3652
Residual Pressure:	42 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	35 psi
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	800 gpm
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	20 psi
Test Flow:	2,680 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,880 gpm
Test Hydrant Year:	2001	Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 3794 at Preston Village & Walcott
TOWN OF CARY WATER MASTER PLAN**

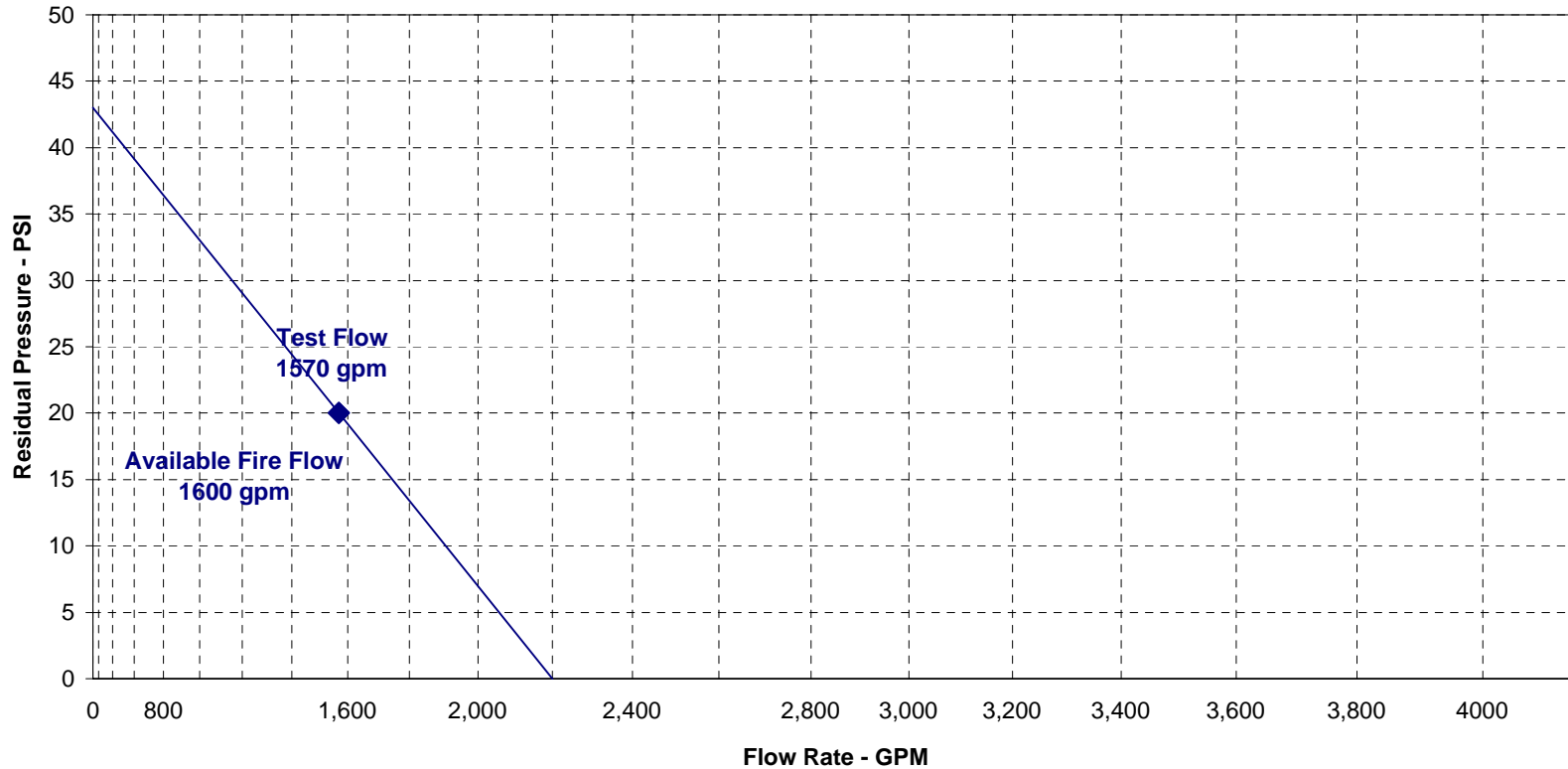


HGL Test #: 4		Zone: Town of Cary Water Master Plan				Date: 8/6/2008		Time: 10:00 AM		
Location: Preston Village & Walcott						—□—		—△—		
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Carpenter	--	SCADA	--	0	0	391	0	532	0	532
4484	P5	PR04	--	10,743	10,743	324	86	522	75	497
3261	P6	PR08	--	5,860	16,603	368	66	520	50	483
3794	G4	Gauge	--	4,874	21,477	382	60	521	42	479
3779	2,680	gpm								

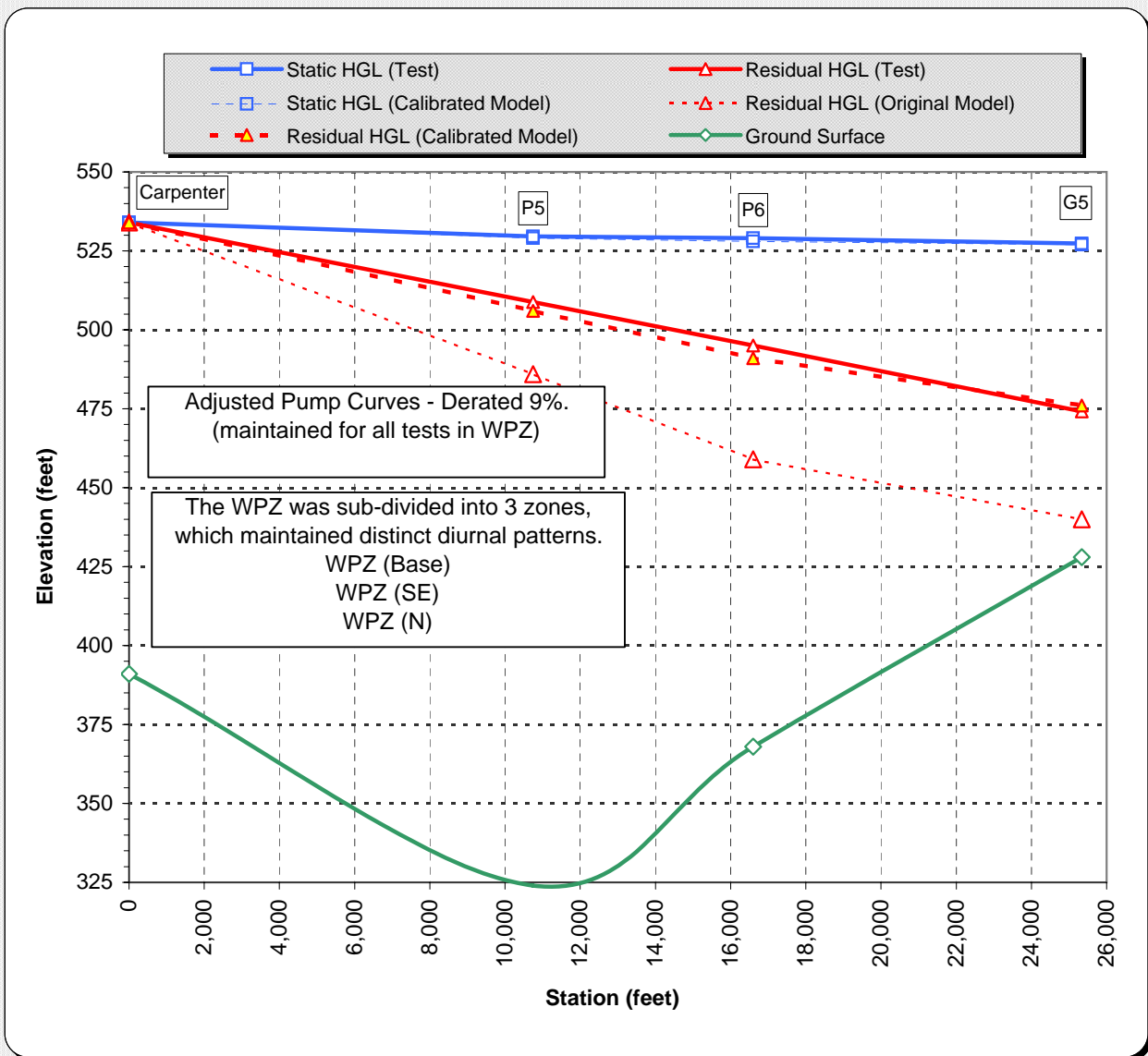


Project Name:	Town of Cary Water Master Plan	Area:	Western	Date of Test:	6-Aug-2008
Test Hydrant Street:	Upchurch & High House	Map No	Day 2	Time of Test:	10:34 AM
Test No.	5	AFF at 20 psi:	1,600 gpm	FG Elevated Tank Level (ft)	
Test Hydrant No.	2672	Flow Hydrant No. 1	3899	FG Standpipe Level (ft)	
Static Pressure	43 psi	Pitot Pressure		<i>Hydrant Diffusor Flow Equations</i>	
Residual Pressure	20 psi	4.5" pitot instructions	<i>(stay between 10-30 psi)</i>	Flow Hydrant No. 2	3652
Main Diameter		Hydrant Nozzle Dia.	4.5 in	Diffuser Pressure (2.5")	
Elevation		No of Nozzle	1	Calculated Flow (2.5")	
Test Flow	1,570 gpm	Hydrant Nozzle Coef.	0.747	Diffuser Pressure (4")	13 psi
Test Hydrant Year:	2001	Calculated Flow		Calculated Flow (4")	1,570 gpm
		Flow Hydrant Year:			

**Hydrant 2672 at Upchurch & High House
TOWN OF CARY WATER MASTER PLAN**

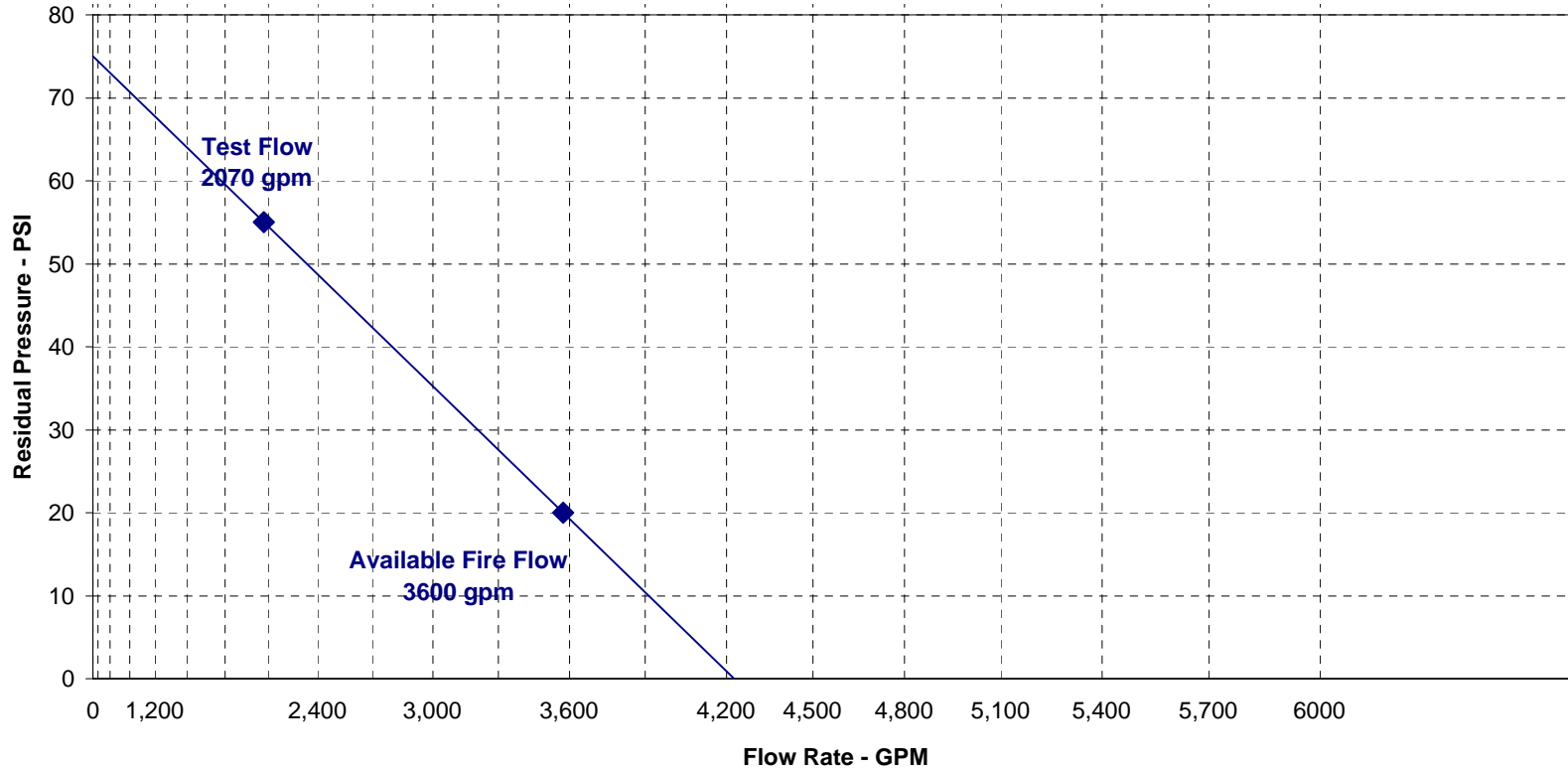


HGL Test #: 5		Zone: Town of Cary Water Master Plan				Date: 8/6/2008		Time: 10:34 AM		
Location: Upchurch & High House						—□—		—△—		
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Carpenter	--	SCADA	--	0	0	391	0	534	0	534
4484	P5	PR04	--	10,743	10,743	324	89	530	80	509
3261	P6	PR08	--	5,860	16,603	368	70	529	55	495
2672	G5	Gauge	--	8,740	25,343	428	43	527	20	474
3899	1,570	gpm								



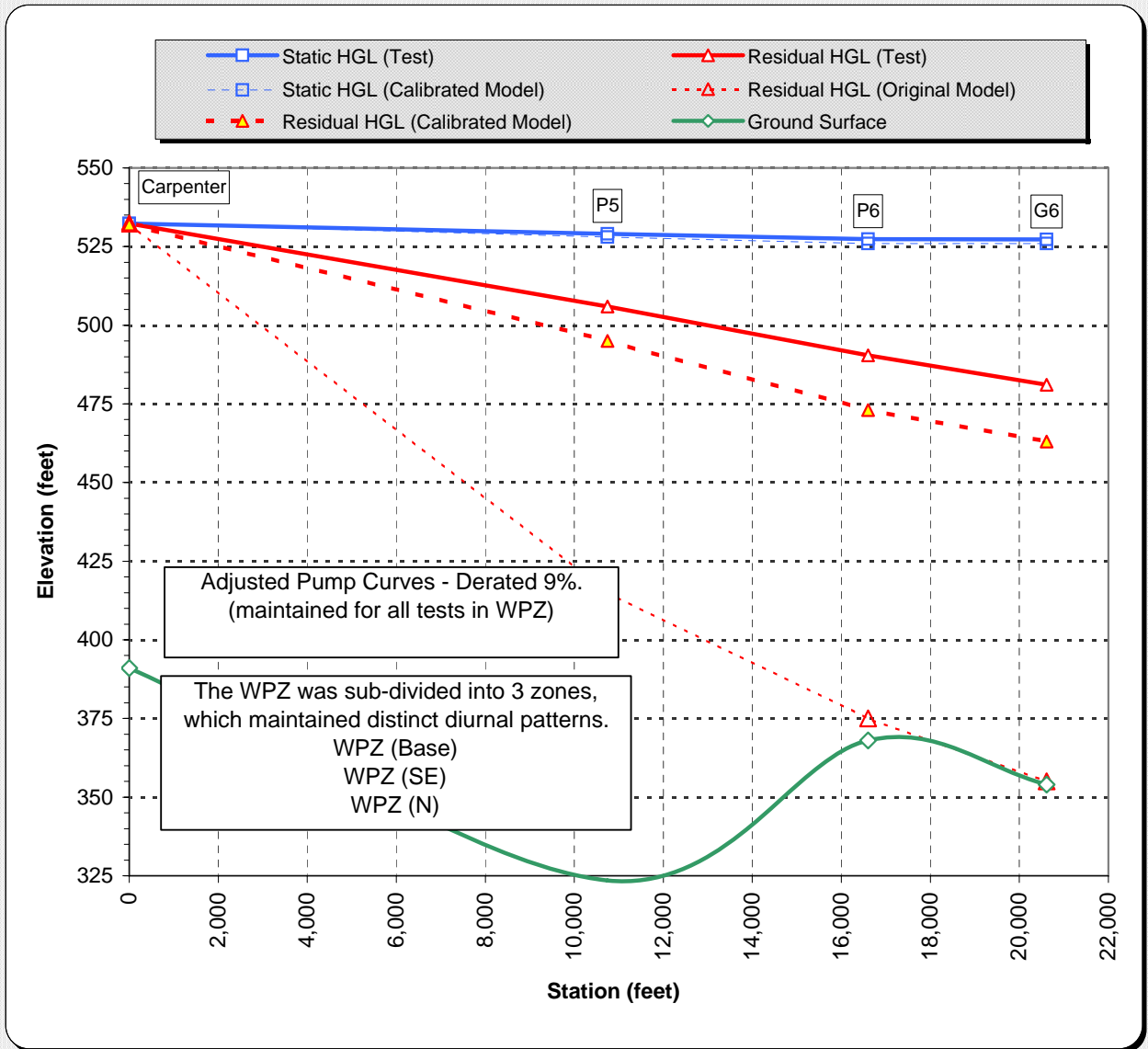
Project Name:	Town of Cary Water Master Plan	Area:	Western	Date of Test:	6-Aug-2008
Test Hydrant Street:	FireCrest	Map No:	Day 2	Time of Test:	10:13 AM
Test No.:	6	AFF at 20 psi:	3,600 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	6138	Flow Hydrant No. 1:	4413	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	75 psi	Pitot Pressure:		Flow Hydrant No. 2:	3652
Residual Pressure:	55 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Main Diameter:		No of Nozzle:	1	Diffuser Pressure (4"):	26 psi
Elevation:		Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,070 gpm
Test Flow:	2,070 gpm	Calculated Flow:			
Test Hydrant Year:	2001	Flow Hydrant Year:			

**Hydrant 6138 at FireCrest
TOWN OF CARY WATER MASTER PLAN**



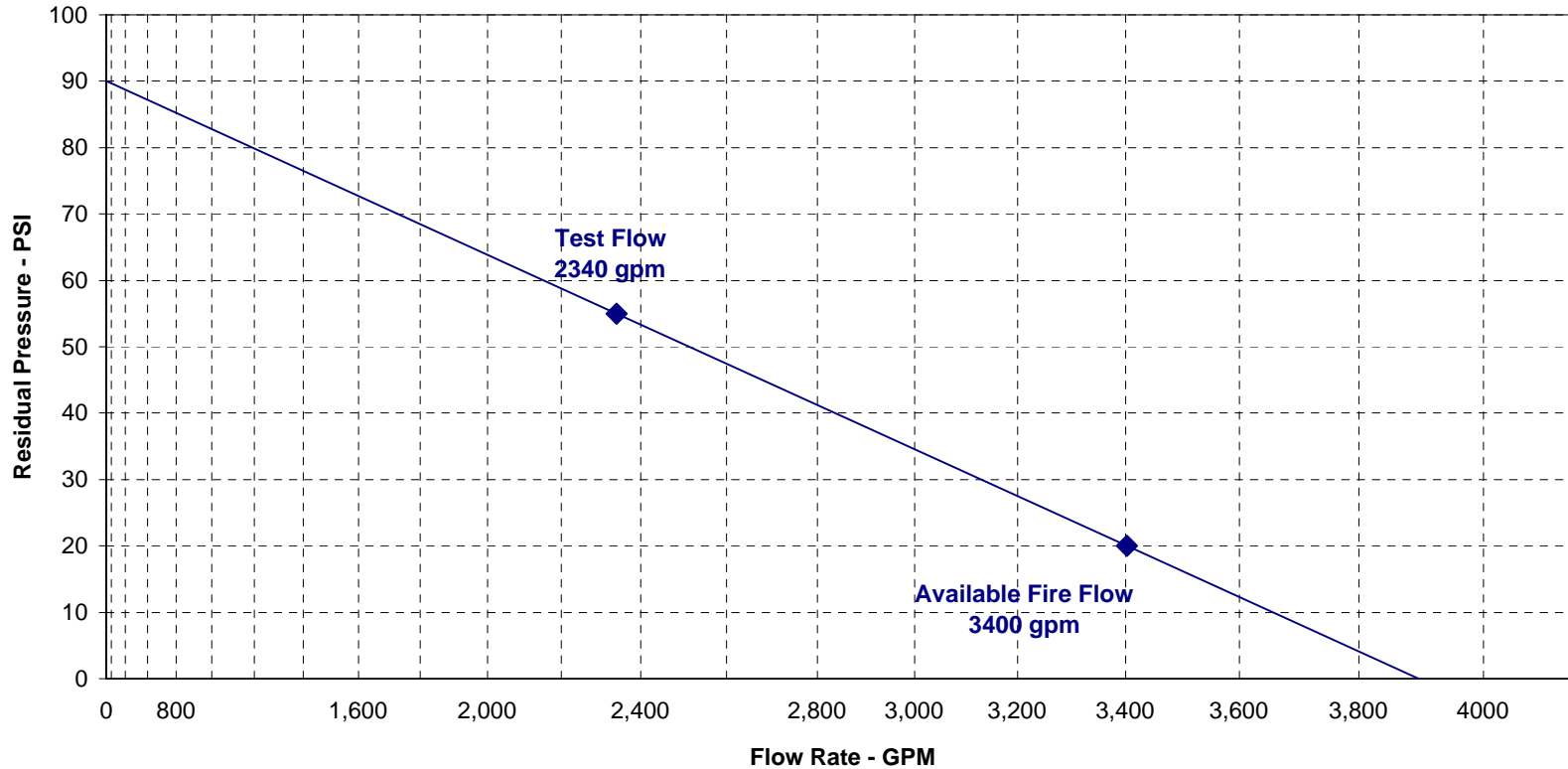
HGL Test #: 6		Zone: Town of Cary Water Master Plan				Date: 8/6/2008		Time: 10:13 AM		
Location: FireCrest							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Carpenter	--	SCADA	--	0	0	391	0	532	0	532
4484	P5	PR04	--	10,743	10,743	324	89	529	79	506
3261	P6	PR08	--	5,860	16,603	368	69	527	53	490
6138	G6	Gauge	--	4,010	20,613	354	75	527	55	481

4413	2,070	gpm								
------	-------	-----	--	--	--	--	--	--	--	--

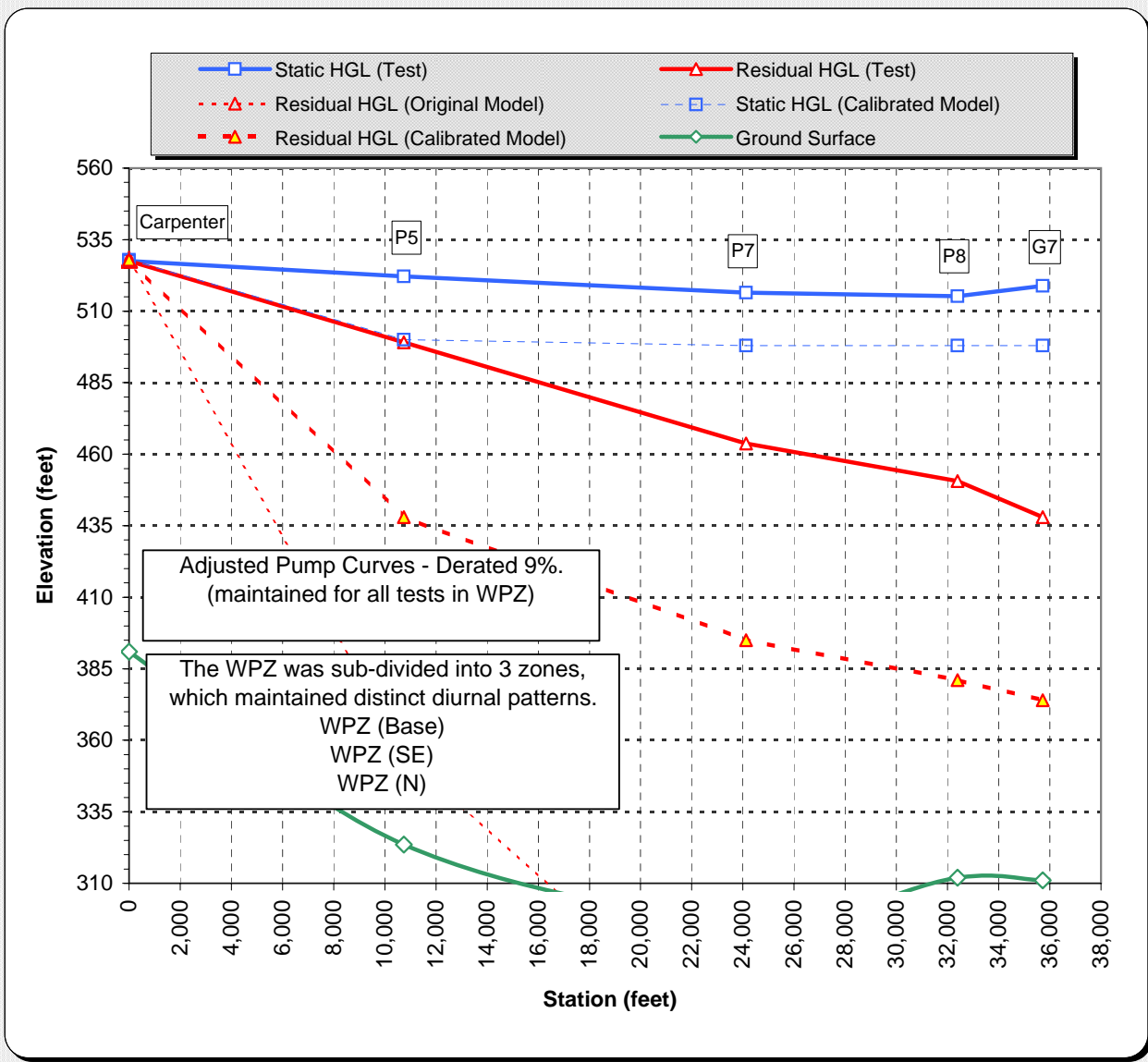


Project Name:	Town of Cary Water Master Plan	Area:	Western	Date of Test:	6-Aug-2008
Test Hydrant Street:	Kit Creek	Map No:	Day 2	Time of Test:	09:05 AM
Test No.:	7	AFF at 20 psi:	3,400 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	5834	Flow Hydrant No. 1:	5833	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	90 psi	Pitot Pressure:		Flow Hydrant No. 2:	3652
Residual Pressure:	55 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	43 psi
Test Flow:	2,340 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,340 gpm
Test Hydrant Year:	2004	Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 5834 at Kit Creek
TOWN OF CARY WATER MASTER PLAN**

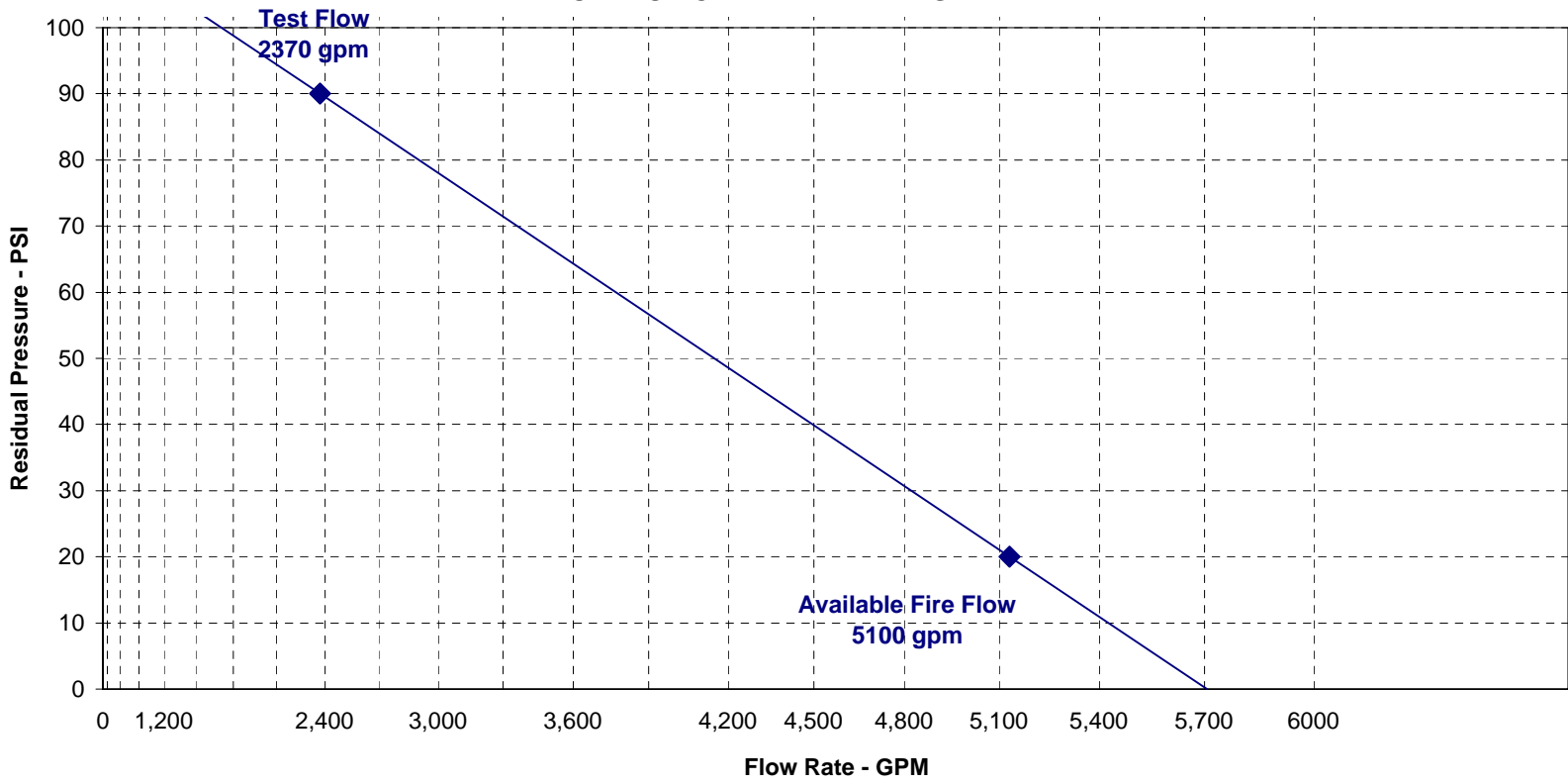


HGL Test #:		7		Zone: Town of Cary Water Master Plan			Date: 8/6/2008		Time: 9:05 AM	
Location: Kit Creek							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Carpenter	--	SCADA	--	0	0	391	0	528	0	528
4484	P5	PR04		10,743	10,743	324	86	522	76	499
2832	P7	L5		13,380	24,123	297	95	516	72	464
5214	P8	PR03		8,270	32,393	312	88	515	60	451
5834	G7	Gauge	--	3,330	35,723	311	90	519	55	438
5833		2,340	gpm							



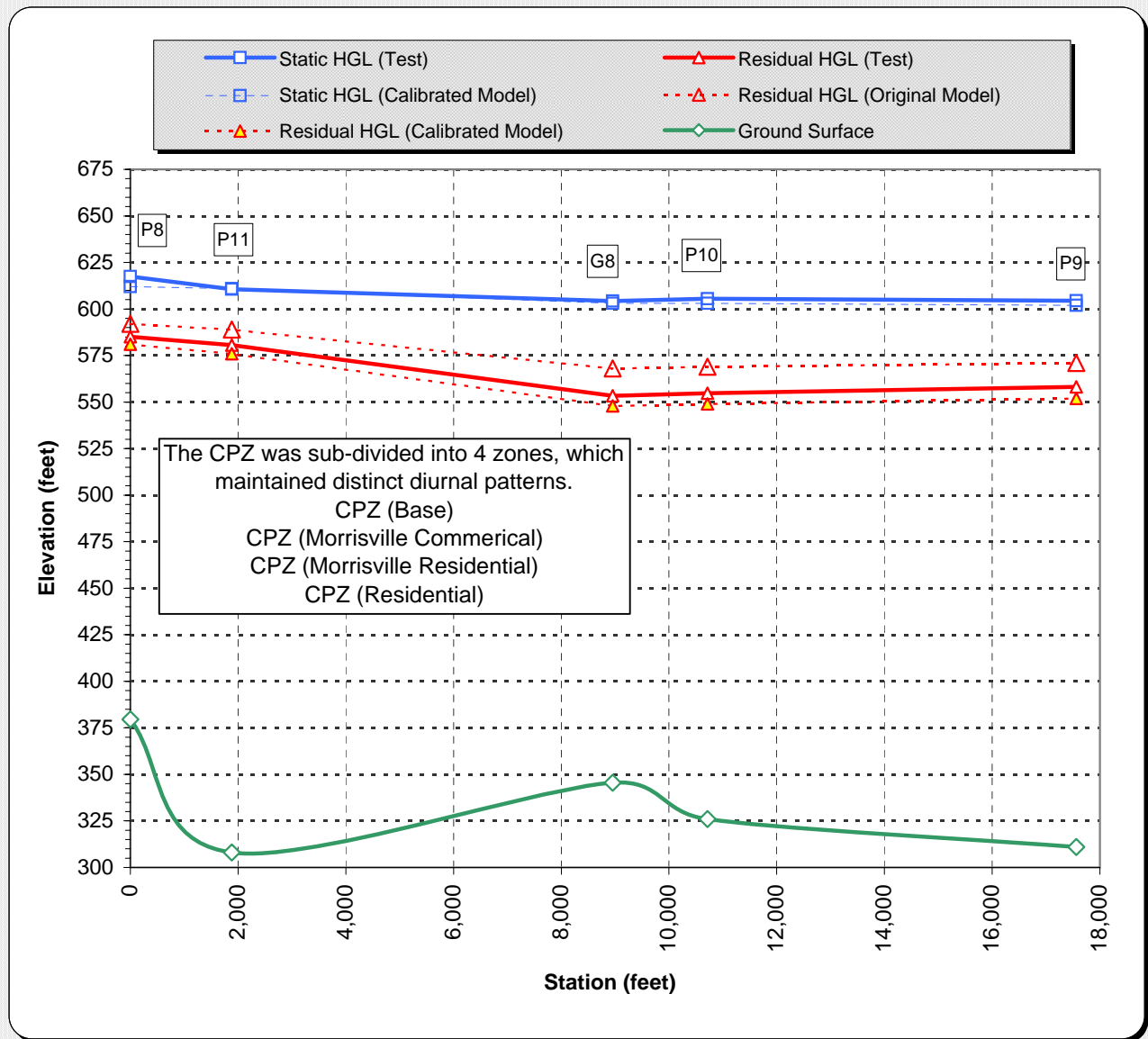
Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	7-Aug-2008
Test Hydrant Street:	Morrisville Pkwy & Davis	Map No:	Day 3	Time of Test:	09:04 AM
Test No.:	8	AFF at 20 psi:	5,100 gpm	FG Elevated Tank Level (ft):	
Test Hydrant No.:		Flow Hydrant No. 1:	M97	FG Standpipe Level (ft):	
Static Pressure:	112 psi	Pitot Pressure:		<i>Hydrant Diffusor Flow Equations</i>	
Residual Pressure:	90 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Flow Hydrant No. 2:	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Diffuser Pressure (2.5"):	
Elevation:		No of Nozzle:	1	Calculated Flow (2.5"):	
Test Flow:	2,370 gpm	Hydrant Nozzle Coef.:	0.747	Diffuser Pressure (4"):	51 psi
Test Hydrant Year:		Calculated Flow:		Calculated Flow (4"):	2,370 gpm
		Flow Hydrant Year:			

**Hydrant at Morrisville Pkwy & Davis
TOWN OF CARY WATER MASTER PLAN**

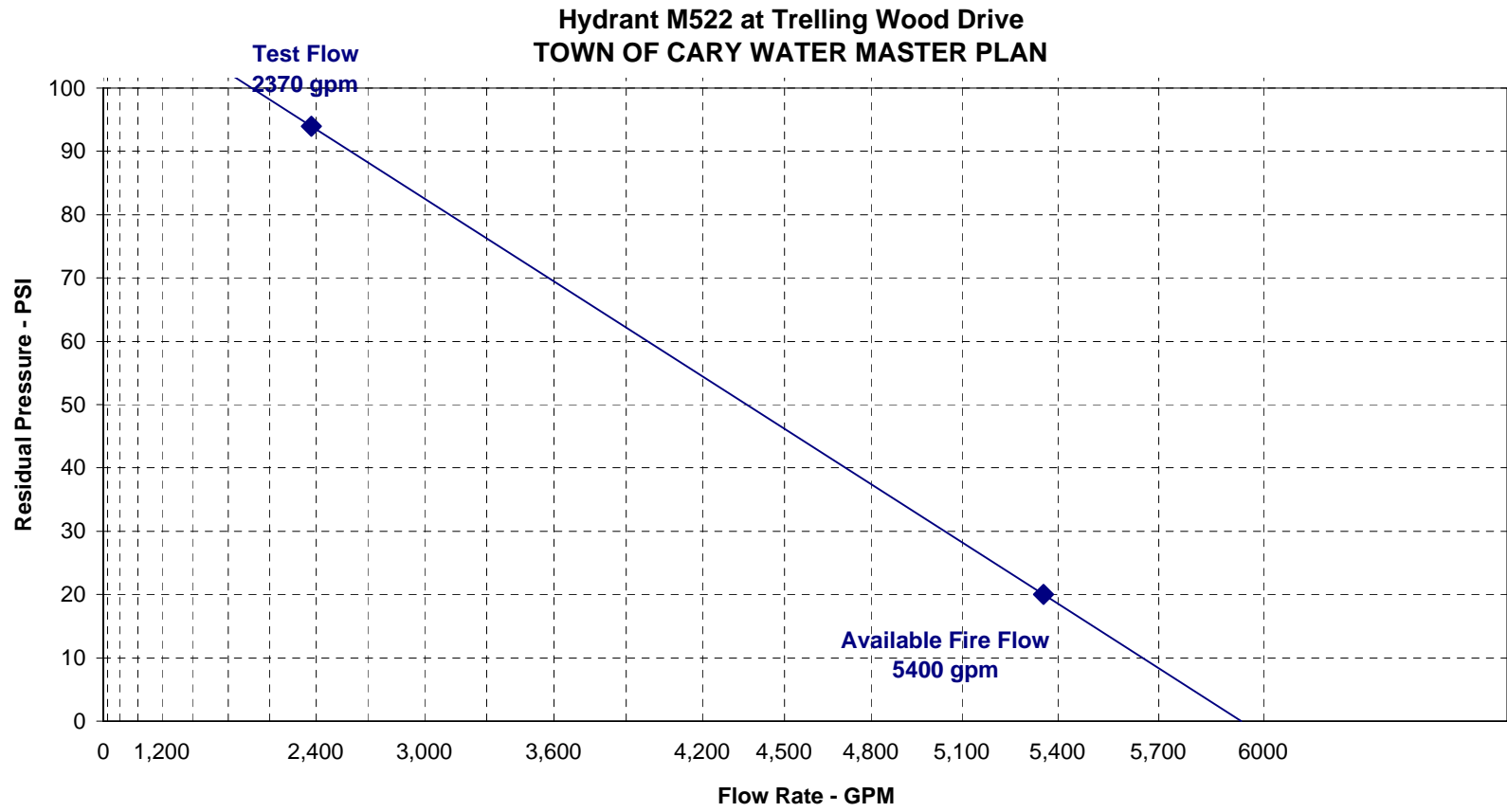


HGL Test #:		8		Zone: Town of Cary Water Master Plan			Date: 8/7/2008		Time: 9:04 AM	
Location: Moorisville Pkwy & Davis							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
M110	P8	L5	--	0	0	380	103	617	89	585
M106	P11	PR06	--	1,882	1,882	308	131	611	118	581
0	G8	Gauge	--	7,070	8,952	346	112	604	90	553
6193	P10	L4	--	1,760	10,712	326	121	606	99	555
M587	P9	PR08	--	6,850	17,562	311	127	604	107	558

M97 2,370 gpm

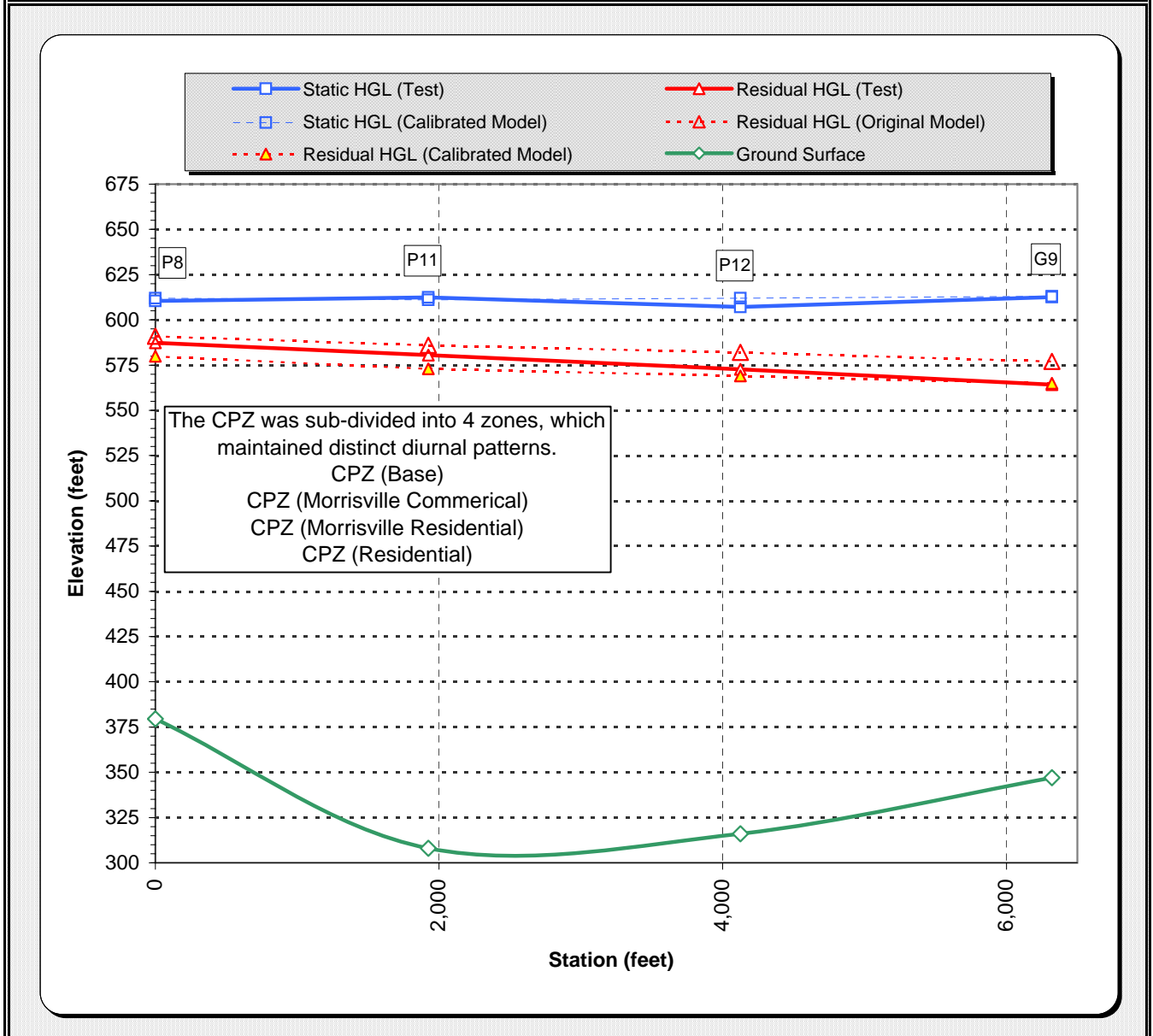


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	7-Aug-2008
Test Hydrant Street:	Trelling Wood Drive	Map No:	Day 3	Time of Test:	09:21 AM
Test No.:	9	AFF at 20 psi:	5,400 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	M522	Flow Hydrant No. 1:	M523	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	115 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	94 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Main Diameter:		No of Nozzle:	1	Diffuser Pressure (4"):	53 psi
Elevation:		Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,370 gpm
Test Flow:	2,370 gpm	Calculated Flow:			
Test Hydrant Year:		Flow Hydrant Year:			



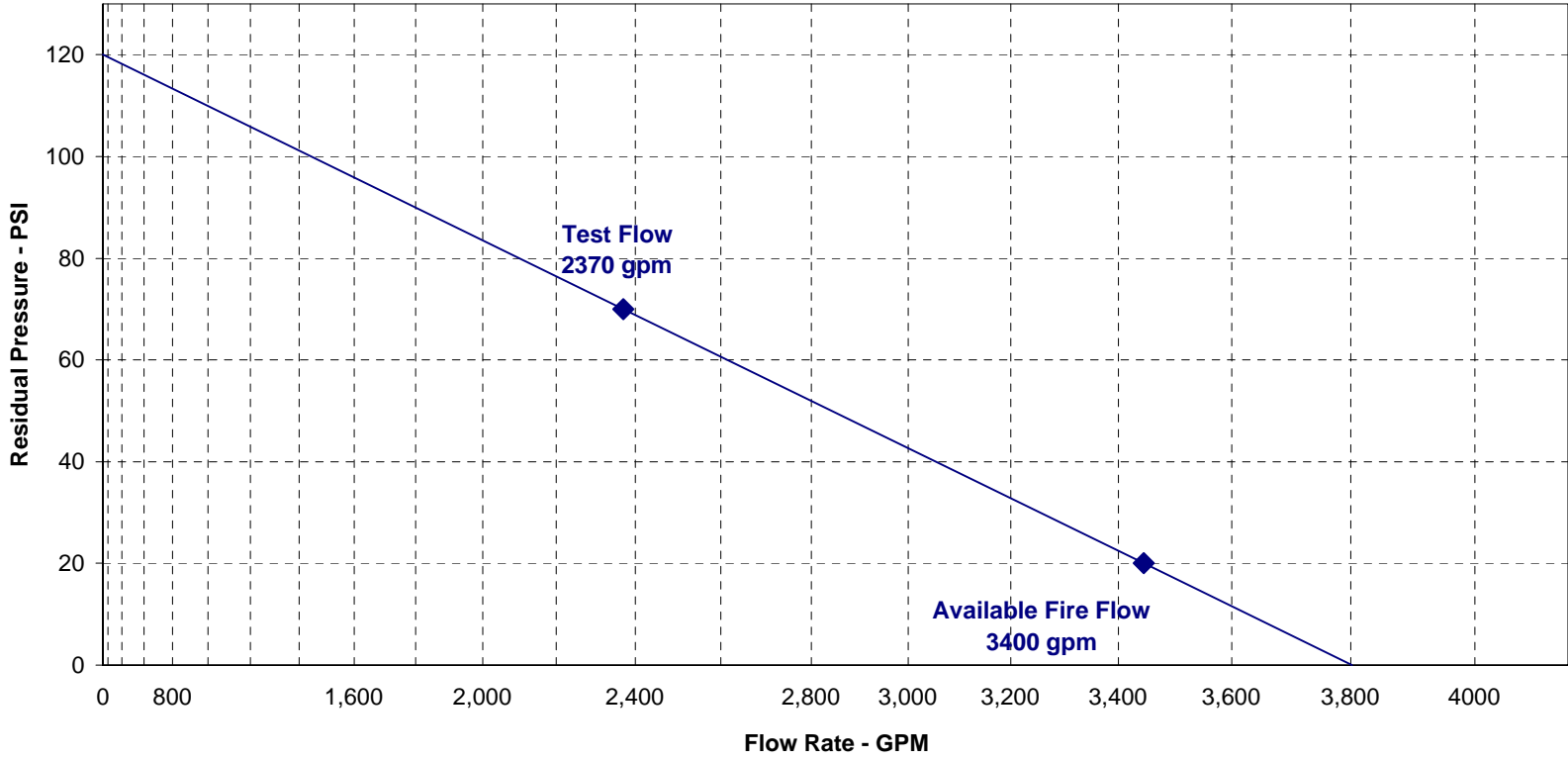
HGL Test #: 9		Zone: Town of Cary Water Master Plan			Date: 8/7/2008		Time: 9:21 AM			
Location: Trelling Wood Drive							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
M110	P8	L5	--	0	0	380	100	611	90	587
M106	P11	PR06	--	1,925	1,925	308	132	612	118	581
M394	P12	PR03	--	2,200	4,125	316	126	607	111	573
M522	G9	Gauge	--	2,196	6,321	347	115	613	94	564

M523 2,370 gpm

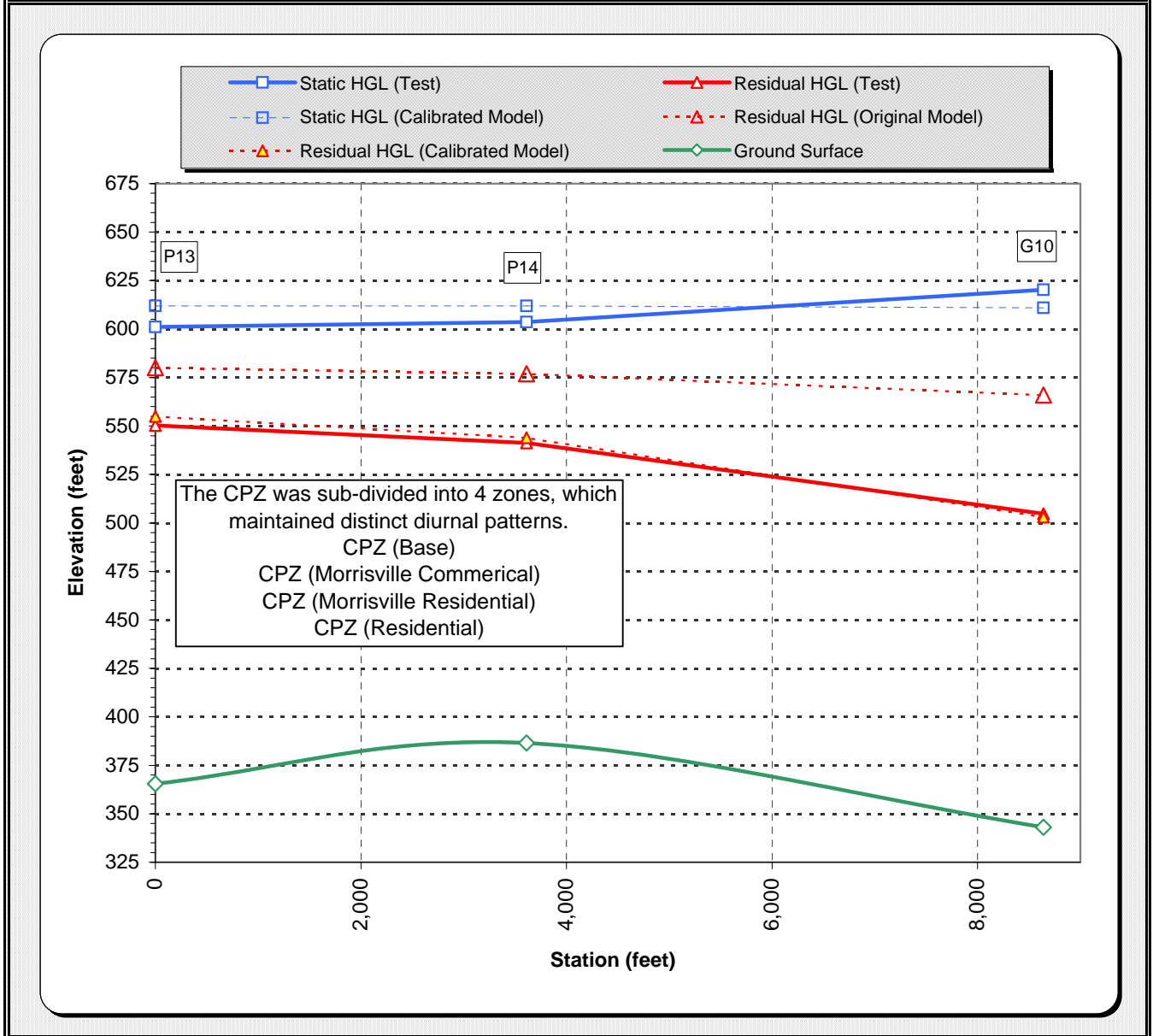


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	7-Aug-2008
Test Hydrant Street:	Parkside Valley	Map No:	Day 3	Time of Test:	10:30 AM
Test No.:	10	AFF at 20 psi:	3,400 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	M997	Flow Hydrant No. 1:	M989	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	120 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	70 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	51 psi
Test Flow:	2,370 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,370 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant M997 at Parkside Valley
TOWN OF CARY WATER MASTER PLAN**

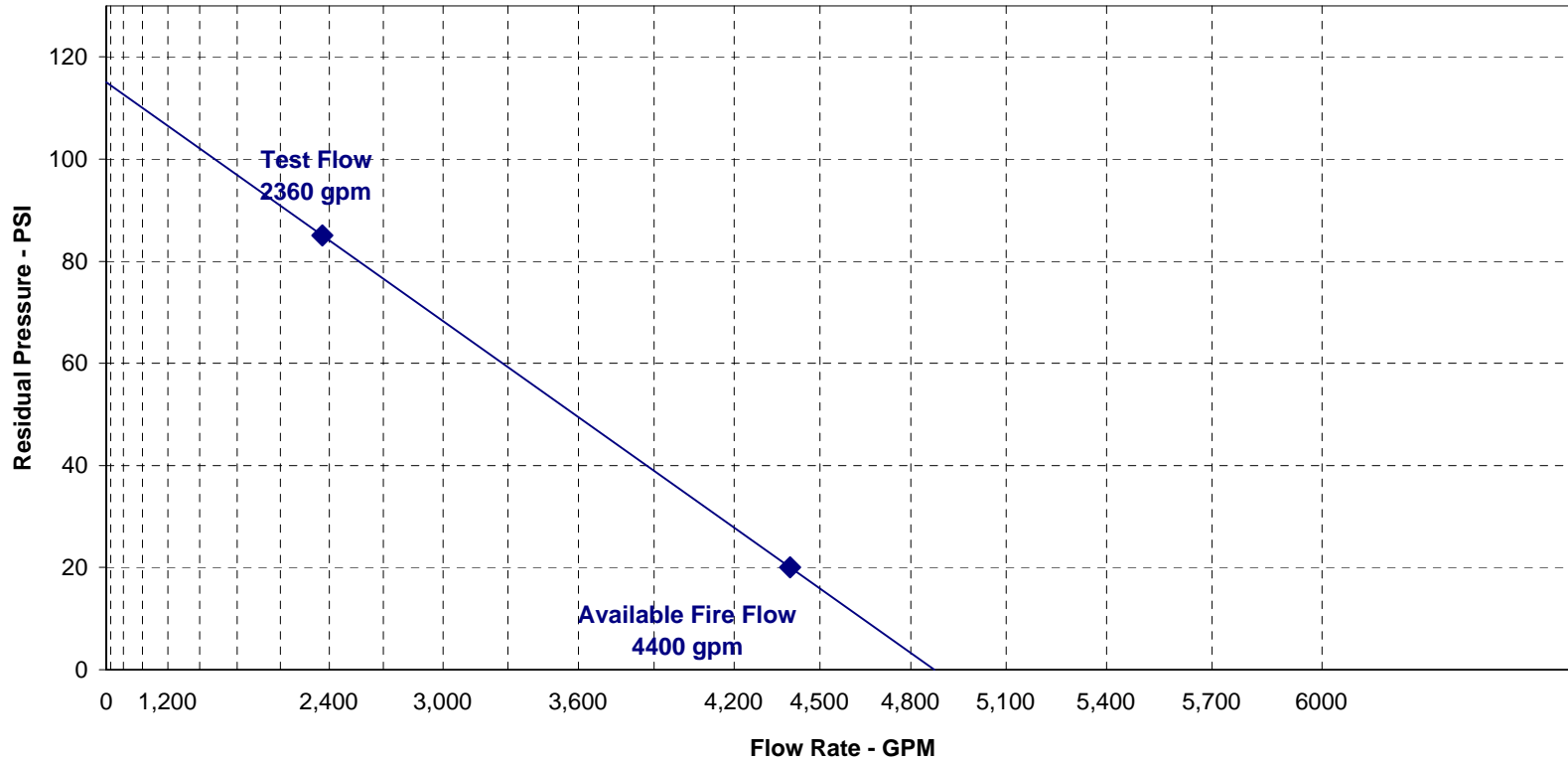


HGL Test #:		10		Zone: Town of Cary Water Master Plan			Date: 8/7/2008		Time: 10:30 AM	
Location: Parkside Valley							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
2430	P13	L4	--	0	0	366	102	601	80	550
M813	P14	L5	--	3,610	3,610	387	94	604	67	541
M997	G10	Gauge	--	5,030	8,640	343	120	620	70	505
M989	2,370	gpm								

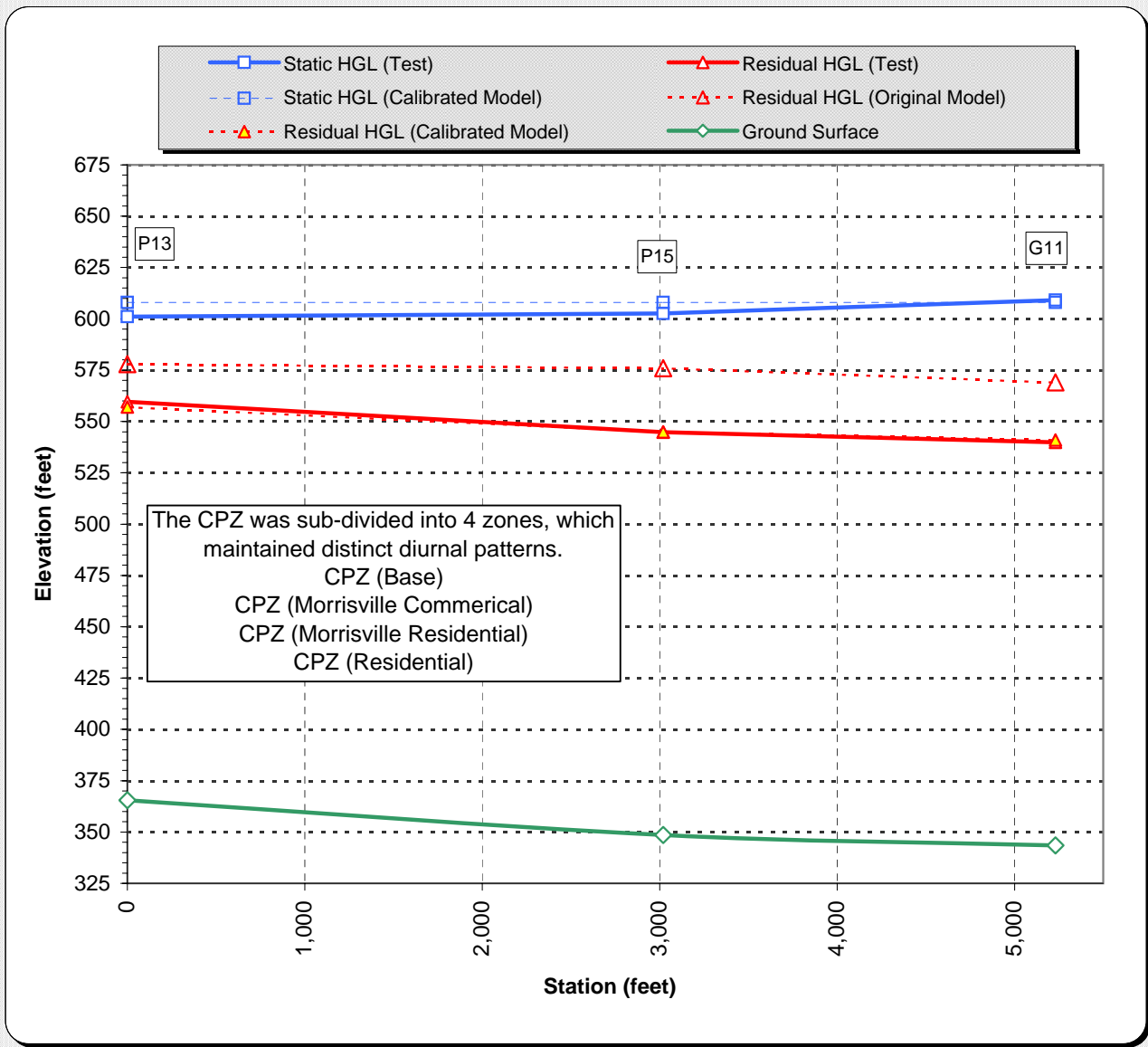


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	7-Aug-2008
Test Hydrant Street:	Downing Glen & Church	Map No:	Day 3	Time of Test:	10:54 AM
Test No.:	11	AFF at 20 psi:	4,400 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	M912	Flow Hydrant No. 1:	M910	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	115 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	85 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Main Diameter:		No of Nozzle:	1	Diffuser Pressure (4"):	47 psi
Elevation:		Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,360 gpm
Test Flow:	2,360 gpm	Calculated Flow:			
Test Hydrant Year:		Flow Hydrant Year:			

**Hydrant M912 at Downing Glen & Church
TOWN OF CARY WATER MASTER PLAN**

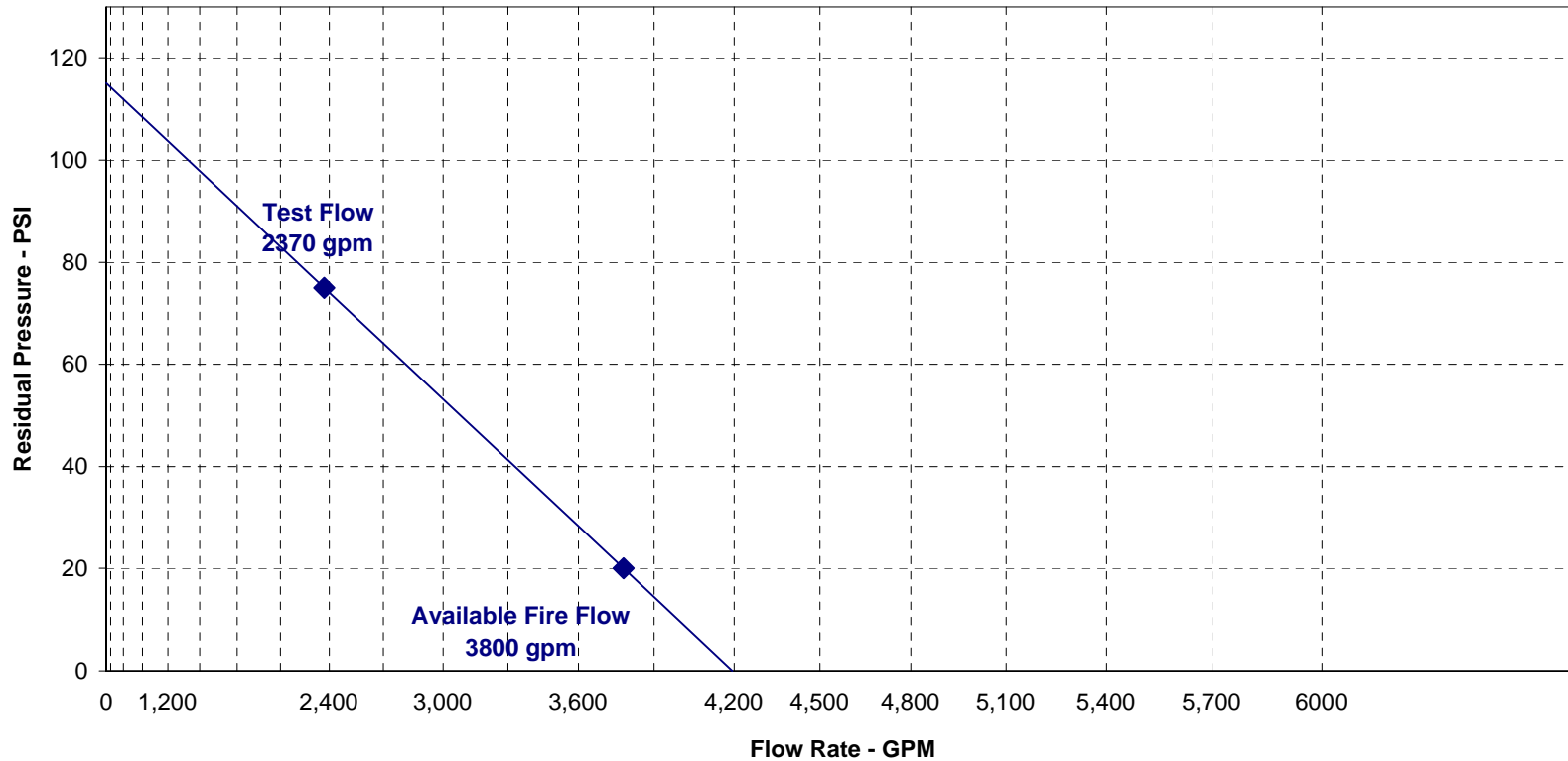


HGL Test #:		11	Zone:				Town of Cary Water Master Plan	Date:	8/7/2008	Time:	10:54 AM
Location:							Downing Glen & Church				
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)	
2430	P13	L4	--	0	0	366	102	601	84	560	
M497	P15	PR08	--	3,020	3,020	349	110	603	85	545	
M912	G11	Gauge	--	2,210	5,230	344	115	609	85	540	
M910	2,360	gpm									

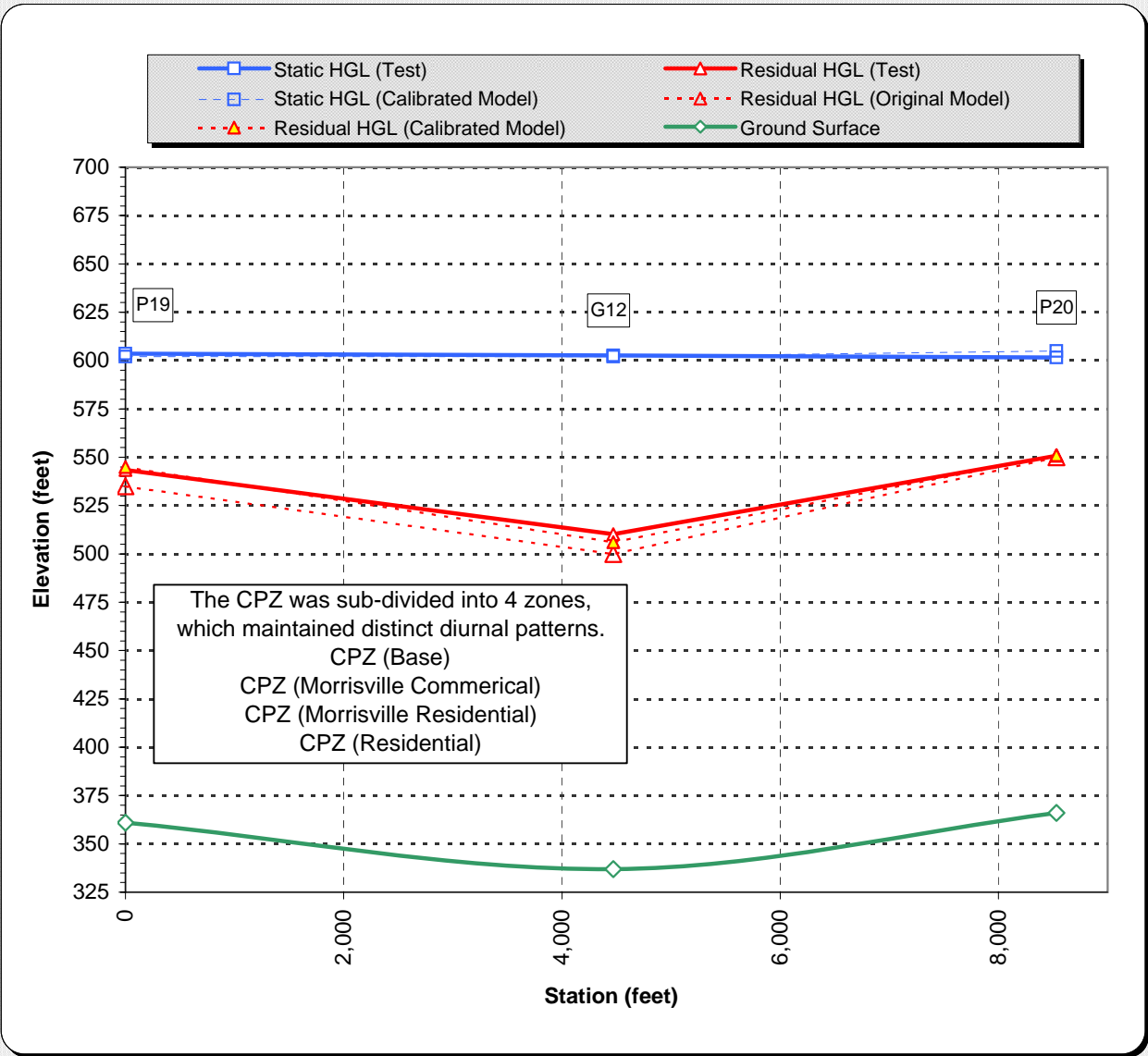


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	6-Aug-2008
Test Hydrant Street:	Paramont Park	Map No:	Day 3	Time of Test:	01:18 PM
Test No.:	12	AFF at 20 psi:	3,800 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	M781	Flow Hydrant No. 1:	M779	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	115 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	75 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Main Diameter:		No of Nozzle:	1	Diffuser Pressure (4"):	55 psi
Elevation:		Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,370 gpm
Test Flow:	2,370 gpm	Calculated Flow:			
Test Hydrant Year:		Flow Hydrant Year:			

**Hydrant M781 at Paramont Park
TOWN OF CARY WATER MASTER PLAN**

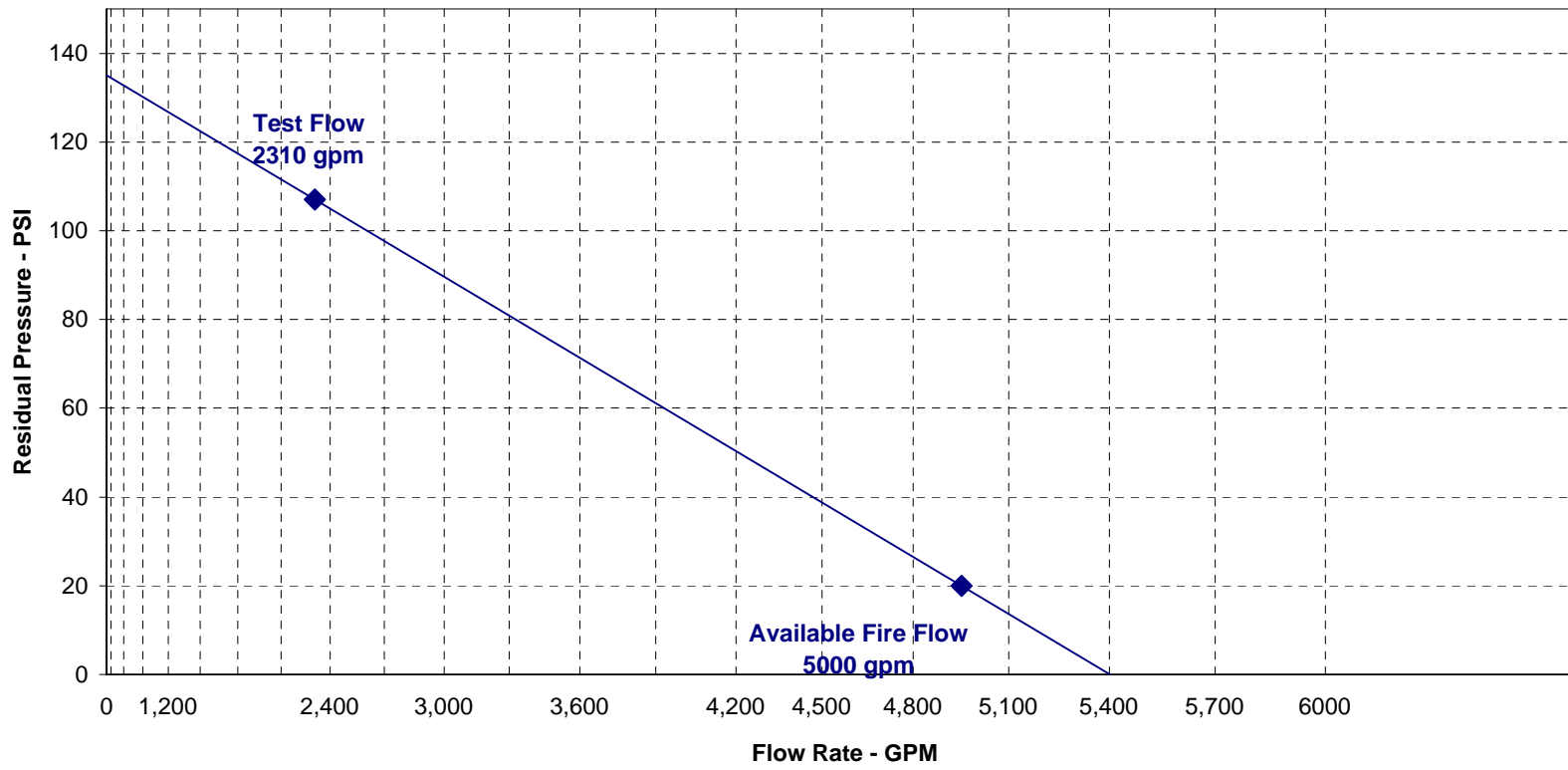


HGL Test #: 12		Zone: Town of Cary Water Master Plan				Date: 8/6/2008		Time: 1:18 PM		
Location: Paramont Park							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
M557	P19	PR03	--	0	0	361	105	604	79	543
M781	G12	Gauge	--	4,470	4,470	337	115	603	75	510
M1372	P20	PR06	--	4,060	8,530	366	102	602	80	551
M779	2,370	gpm								

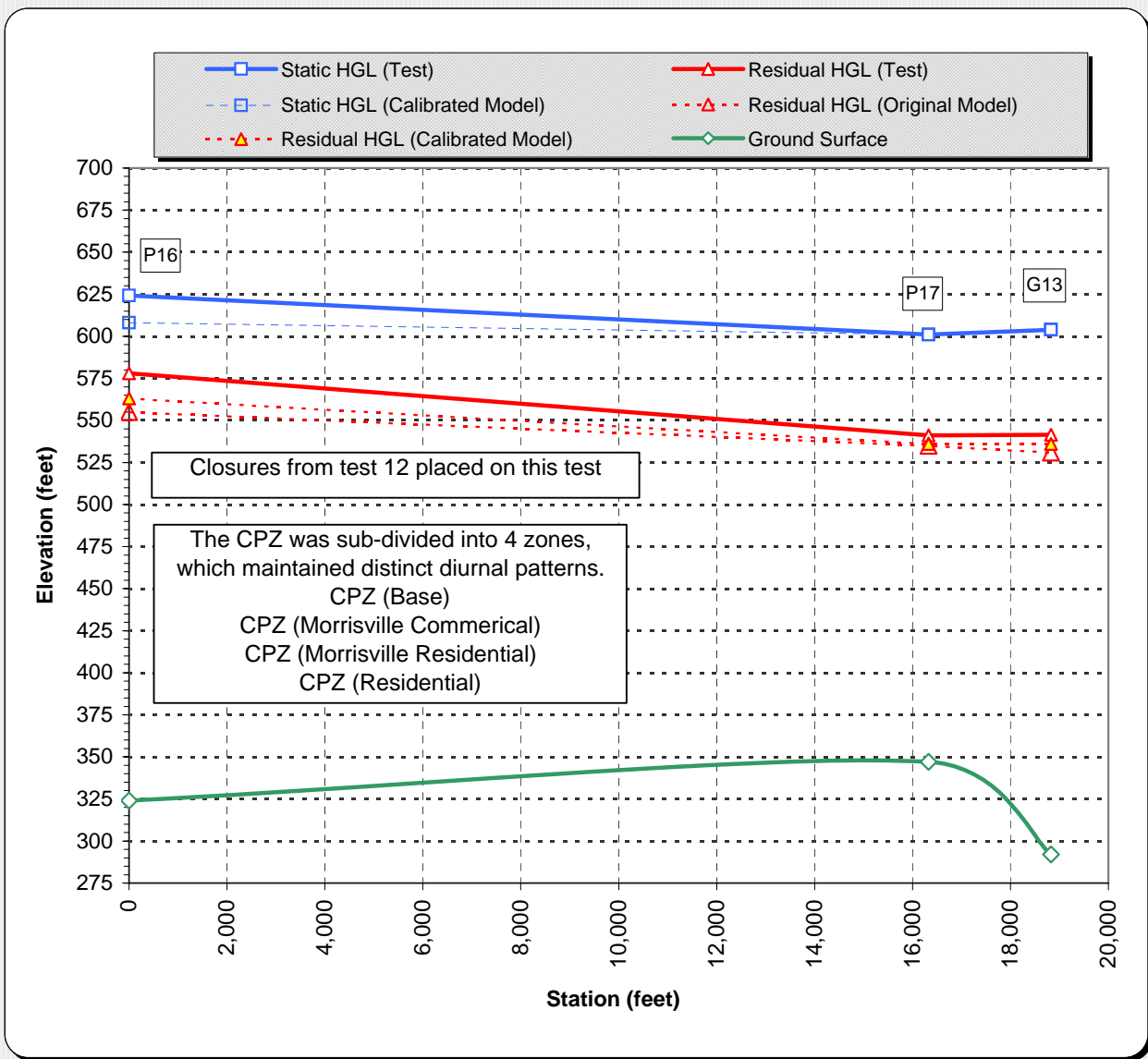


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	6-Aug-2008
Test Hydrant Street:	Airport Blvd.	Map No:	Day 3	Time of Test:	01:09 PM
Test No.:	13	AFF at 20 psi:	5,000 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	M159	Flow Hydrant No. 1:	M514	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	135 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	107 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	39 psi
Test Flow:	2,310 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,310 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant M159 at Airport Blvd.
TOWN OF CARY WATER MASTER PLAN**

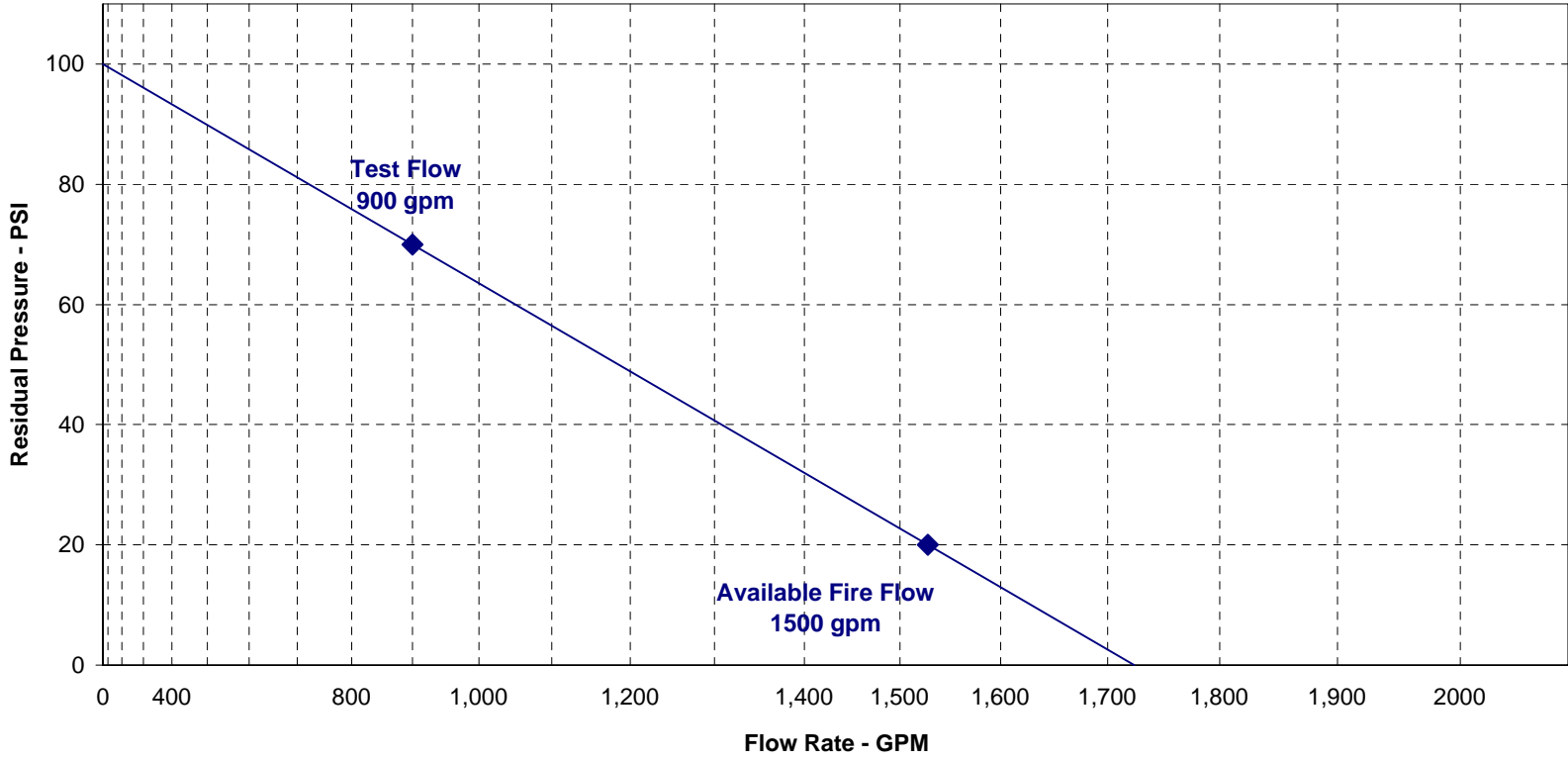


HGL Test #:		13		Zone: Town of Cary Water Master Plan			Date: 8/6/2008		Time: 1:09 PM	
Location: Airport Blvd.							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
M143	P16	L5	--	0	0	324	130	624	110	578
M2187	P17	PR08	--	16,330	16,330	347	110	601	84	541
M159	G13	Gauge	--	2,500	18,830	292	135	604	108	541
M514	2,310	gpm								

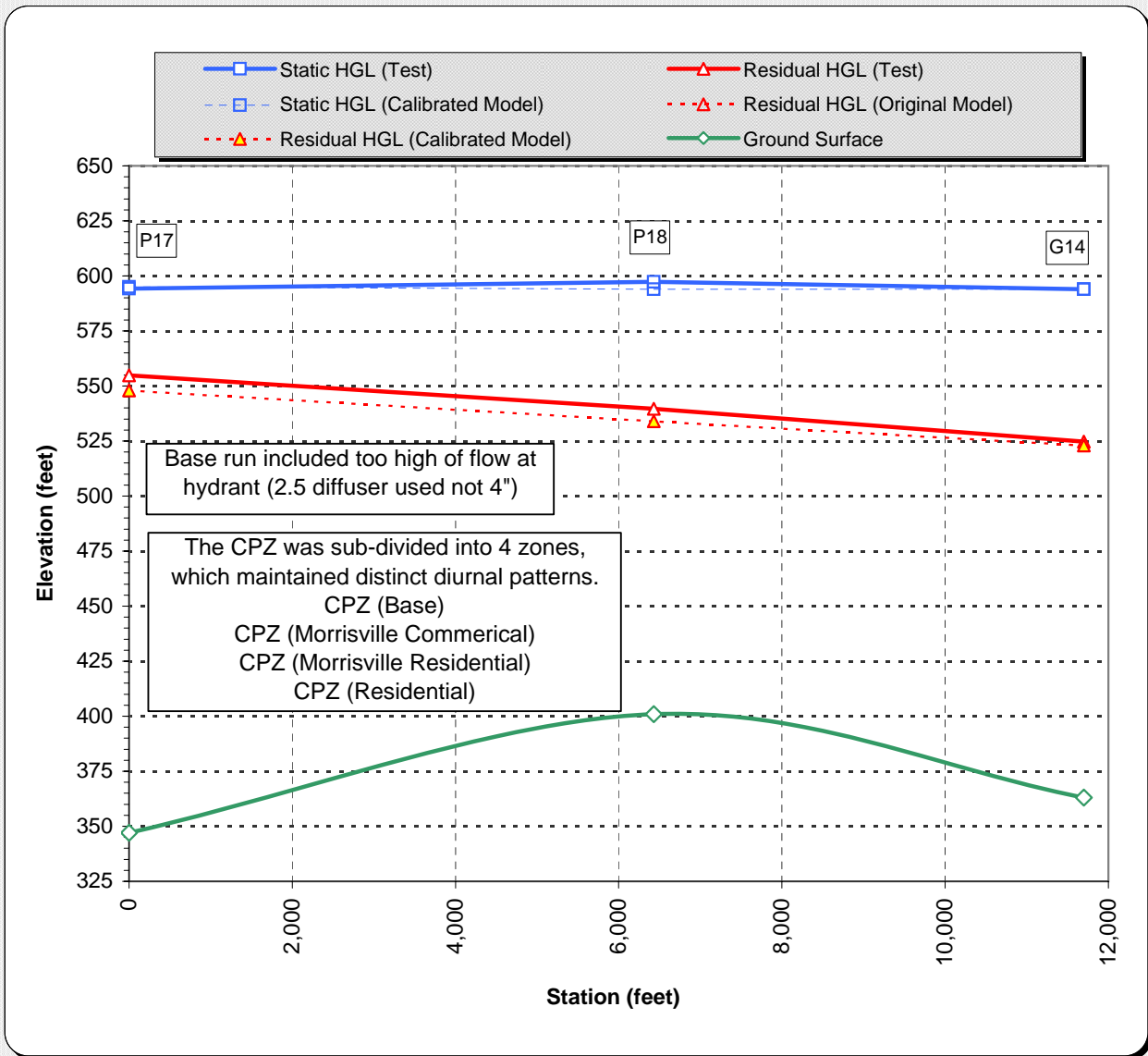


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	6-Aug-2008
Test Hydrant Street:	Kitty Hawk	Map No:	Day 3	Time of Test:	12:36 PM
Test No.:	14	AFF at 20 psi:	1,500 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	2228	Flow Hydrant No. 1:	2229	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	100 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	70 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	60 psi
		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	900 gpm
Main Diameter:		No of Nozzle:	1	Diffuser Pressure (4"):	
Elevation:		Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	
Test Flow:	900 gpm	Calculated Flow:			
Test Hydrant Year:		Flow Hydrant Year:			

**Hydrant 2228 at Kitty Hawk
TOWN OF CARY WATER MASTER PLAN**

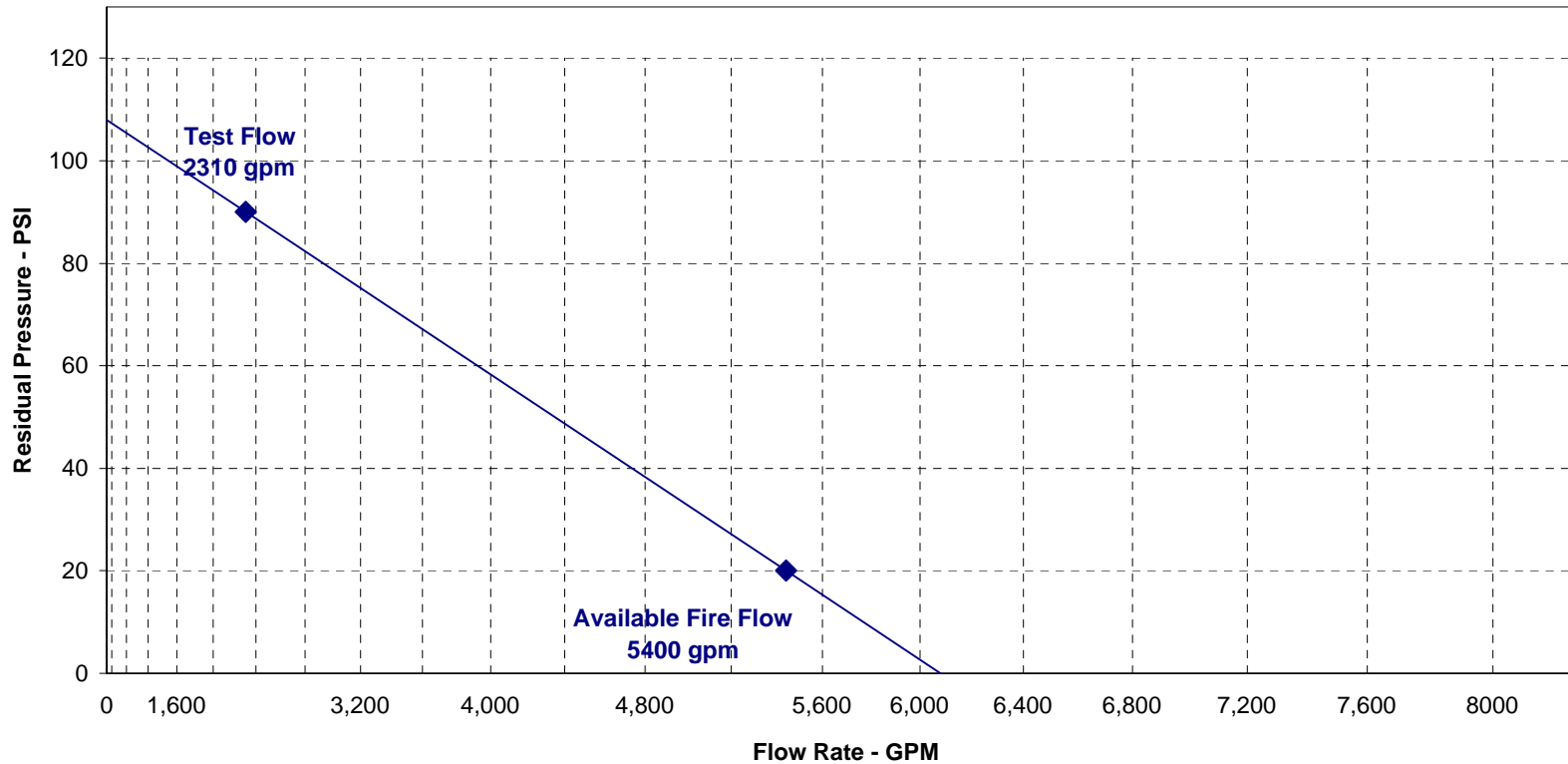


HGL Test #:		14		Zone: Town of Cary Water Master Plan			Date: 8/6/2008		Time: 12:36 PM	
Location: Kitty Hawk							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
M2187	P17	PR08	--	0	0	347	107	594	90	555
2195	P18	L4	--	6,430	6,430	401	85	597	60	540
2228	G14	Gauge	--	5,270	11,700	363	100	594	70	525
2229	900	gpm								

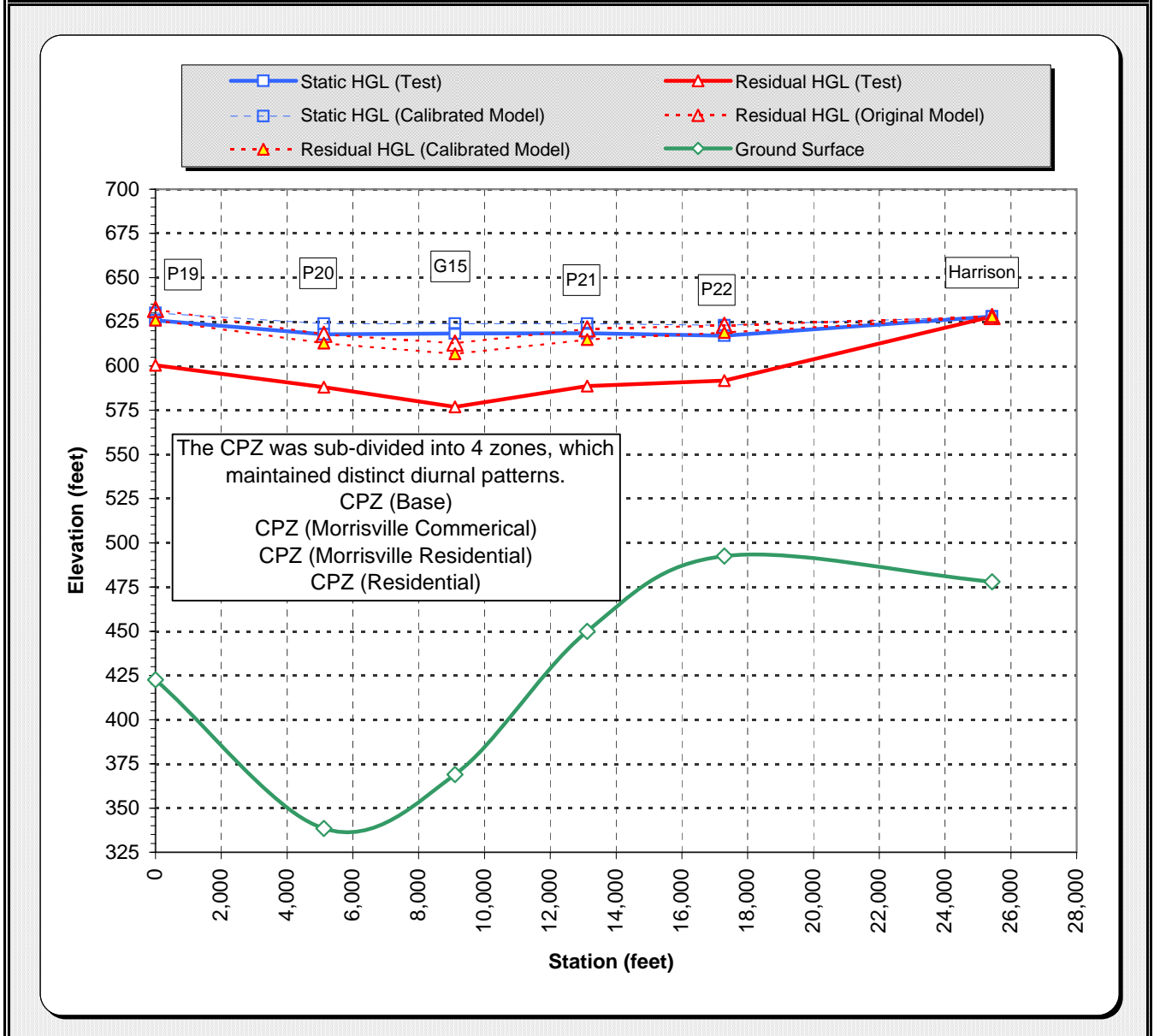


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	7-Aug-2008
Test Hydrant Street:	Weston	Map No:	Day 3	Time of Test:	01:10 PM
Test No.:	15	AFF at 20 psi:	5,400 gpm	FG Elevated Tank Level (ft)	
Test Hydrant No.:	1979	Flow Hydrant No. 1:	1430	FG Standpipe Level (ft)	
Static Pressure:	108 psi	Pitot Pressure:		<i>Hydrant Diffusor Flow Equations</i>	
Residual Pressure:	90 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Flow Hydrant No. 2:	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Diffuser Pressure (2.5"):	
Elevation:		No of Nozzle:	1	Calculated Flow (2.5"):	
Test Flow:	2,310 gpm	Hydrant Nozzle Coef.:	0.747	Diffuser Pressure (4"):	65 psi
Test Hydrant Year:		Calculated Flow:		Calculated Flow (4"):	2,310 gpm
		Flow Hydrant Year:			

**Hydrant 1979 at Weston
TOWN OF CARY WATER MASTER PLAN**

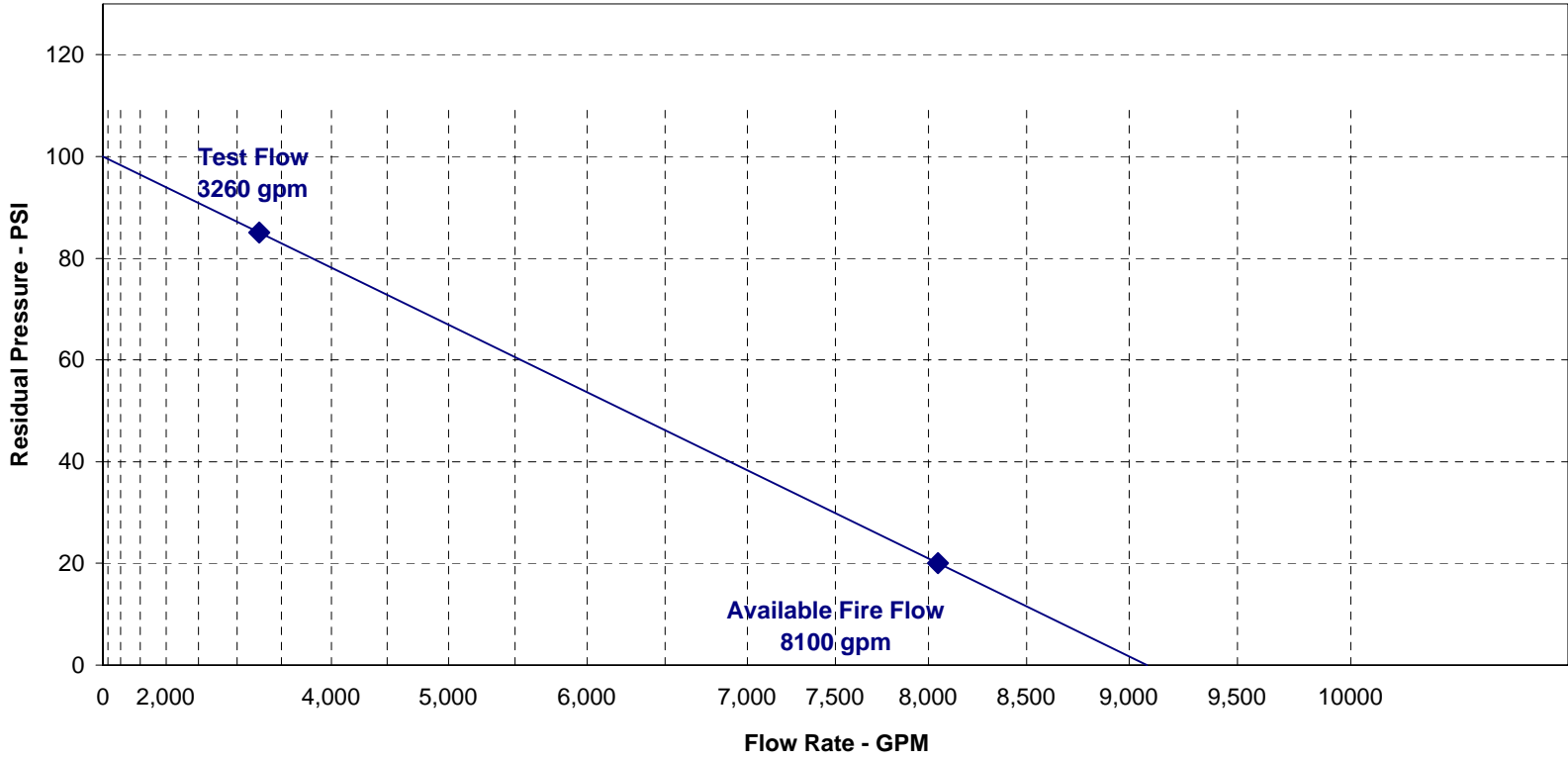


HGL Test #:		15		Zone: Town of Cary Water Master Plan			Date: 8/7/2008		Time: 1:10 PM	
Location: Weston							□		△	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
3278	P19	L4	--	0	0	423	88	626	77	600
2333	P20	PR03	--	5,120	5,120	339	121	618	108	588
1979	G15	Gauge	--	3,980	9,100	369	108	618	90	577
1974	P21	PR04	--	4,020	13,120	450	73	619	60	589
1055	P22	PR08	--	4,170	17,290	493	54	617	43	592
Harrison	STL2	SCADA	--	8,140	25,430	478	0	628	0	628
1430	2,310	gpm								



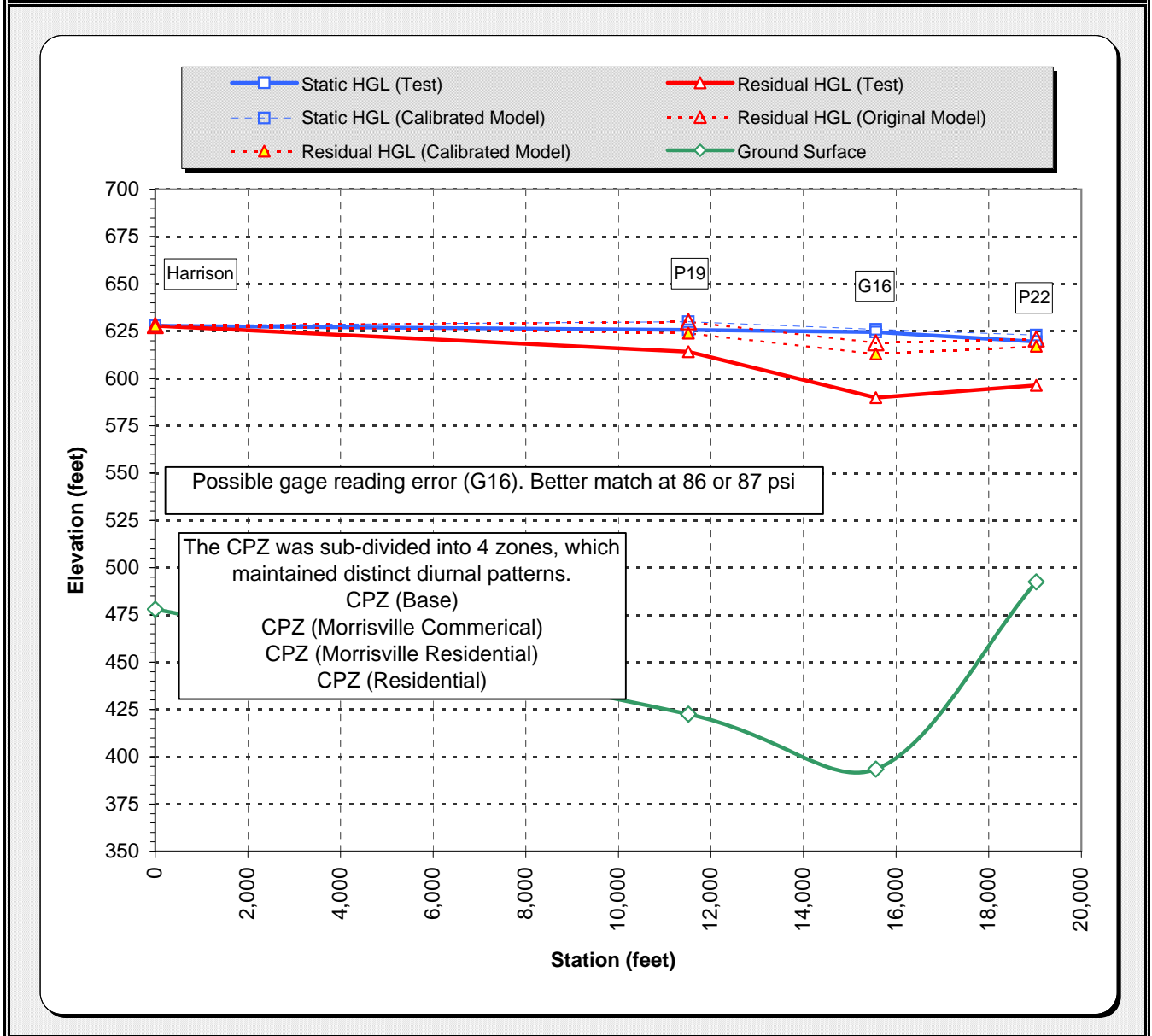
Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	7-Aug-2008
Test Hydrant Street:	Cary Parkway & Norwell	Map No:	Day 3	Time of Test:	1:24PM
Test No.:	16	AFF at 20 psi:	8,100 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	3328	Flow Hydrant No. 1:	2855	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	100 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	85 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	63 psi
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	900 gpm
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	46 psi
Test Flow:	3,260 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,360 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 3328 at Cary Parkway & Norwell
TOWN OF CARY WATER MASTER PLAN**



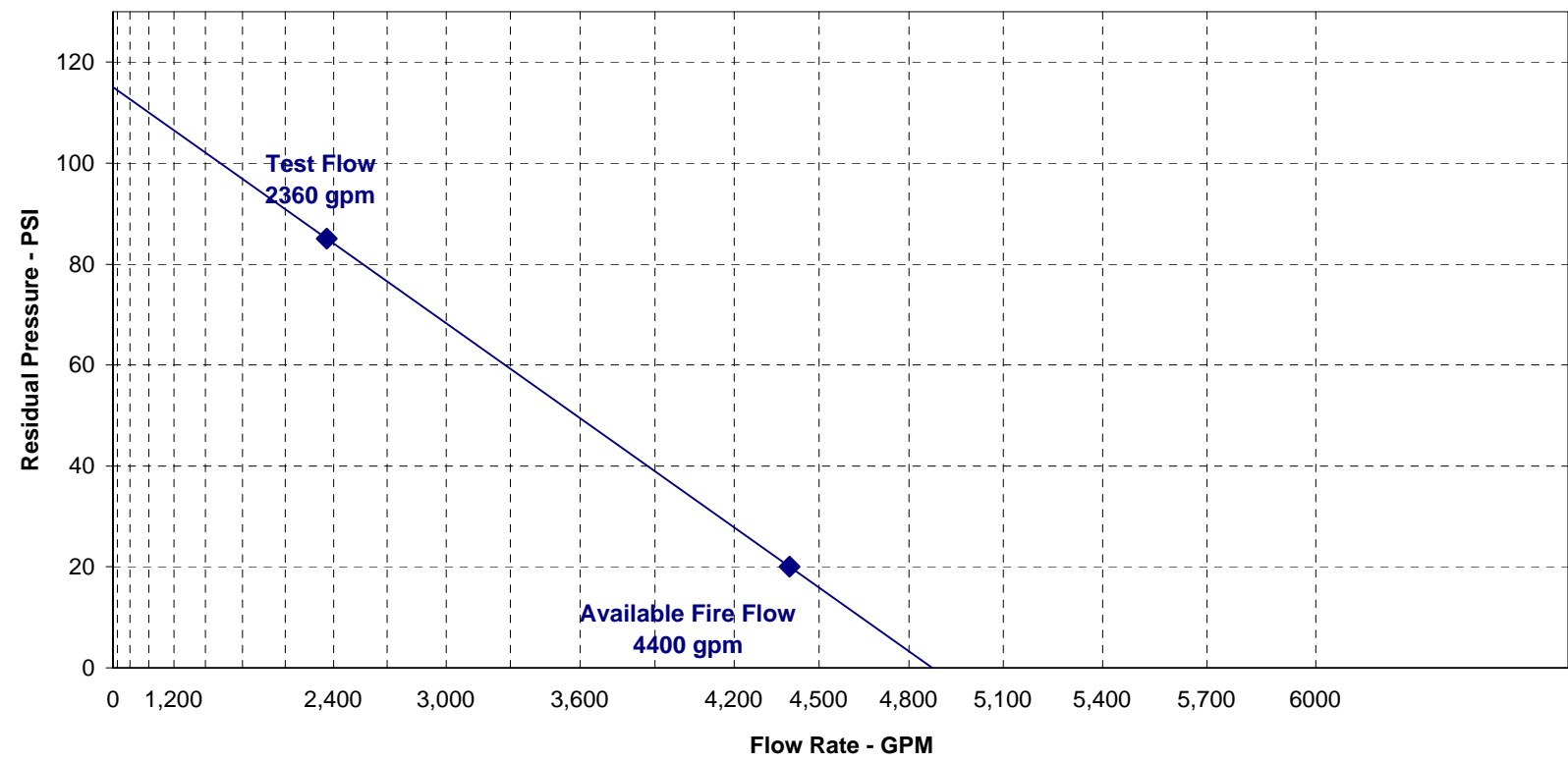
HGL Test #:		16		Zone: Town of Cary Water Master Plan			Date: 8/7/2008		Time: 1:24PM	
Location: Cary Parkway & Norwell							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Harrison	STL2	SCADA	--	0	0	478	0	628	0	628
3278	P19	L4	--	11,515	11,515	423	88	626	83	614
3328	G16	Gauge	--	4,045	15,560	394	100	625	85	590
1055	P22	PR08	--	3,466	19,026	493	55	620	45	596

2855 3,260 gpm



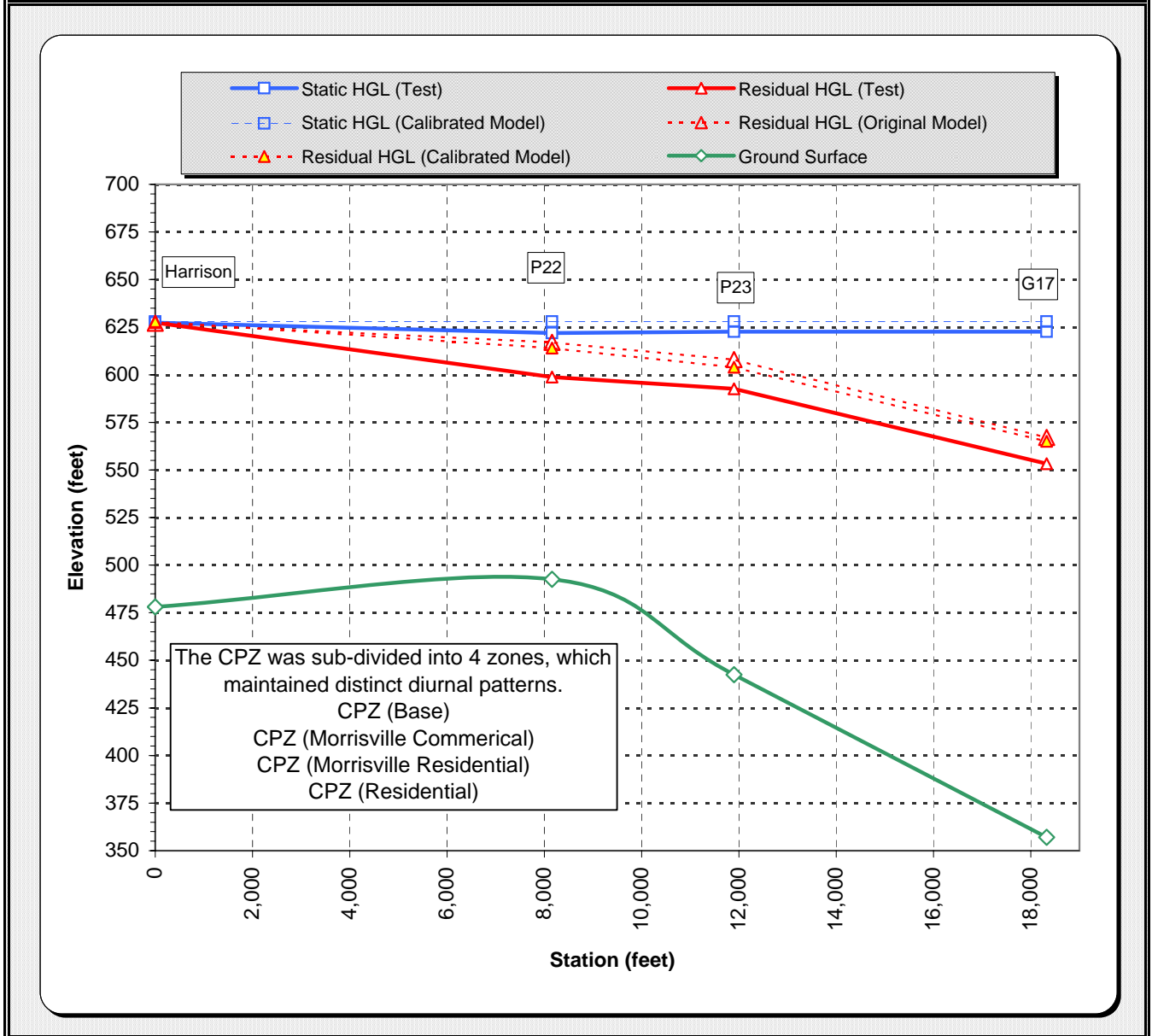
Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	7-Aug-2008
Test Hydrant Street:	SAS	Map No:	Day 3	Time of Test:	12:43 PM
Test No.:	17	AFF at 20 psi:	4,400 gpm	FG Elevated Tank Level (ft):	
Test Hydrant No.:	4529	Flow Hydrant No. 1:	5086	FG Standpipe Level (ft):	
Static Pressure:	115 psi	Pitot Pressure:		<i>Hydrant Diffusor Flow Equations</i>	
Residual Pressure:	85 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Flow Hydrant No. 2:	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Diffuser Pressure (2.5"):	
Elevation:		No of Nozzle:	1	Calculated Flow (2.5"):	
Test Flow:	2,360 gpm	Hydrant Nozzle Coef.:	0.747	Diffuser Pressure (4"):	45 psi
Test Hydrant Year:		Calculated Flow:		Calculated Flow (4"):	2,360 gpm
		Flow Hydrant Year:			

**Hydrant 4529 at SAS
TOWN OF CARY WATER MASTER PLAN**



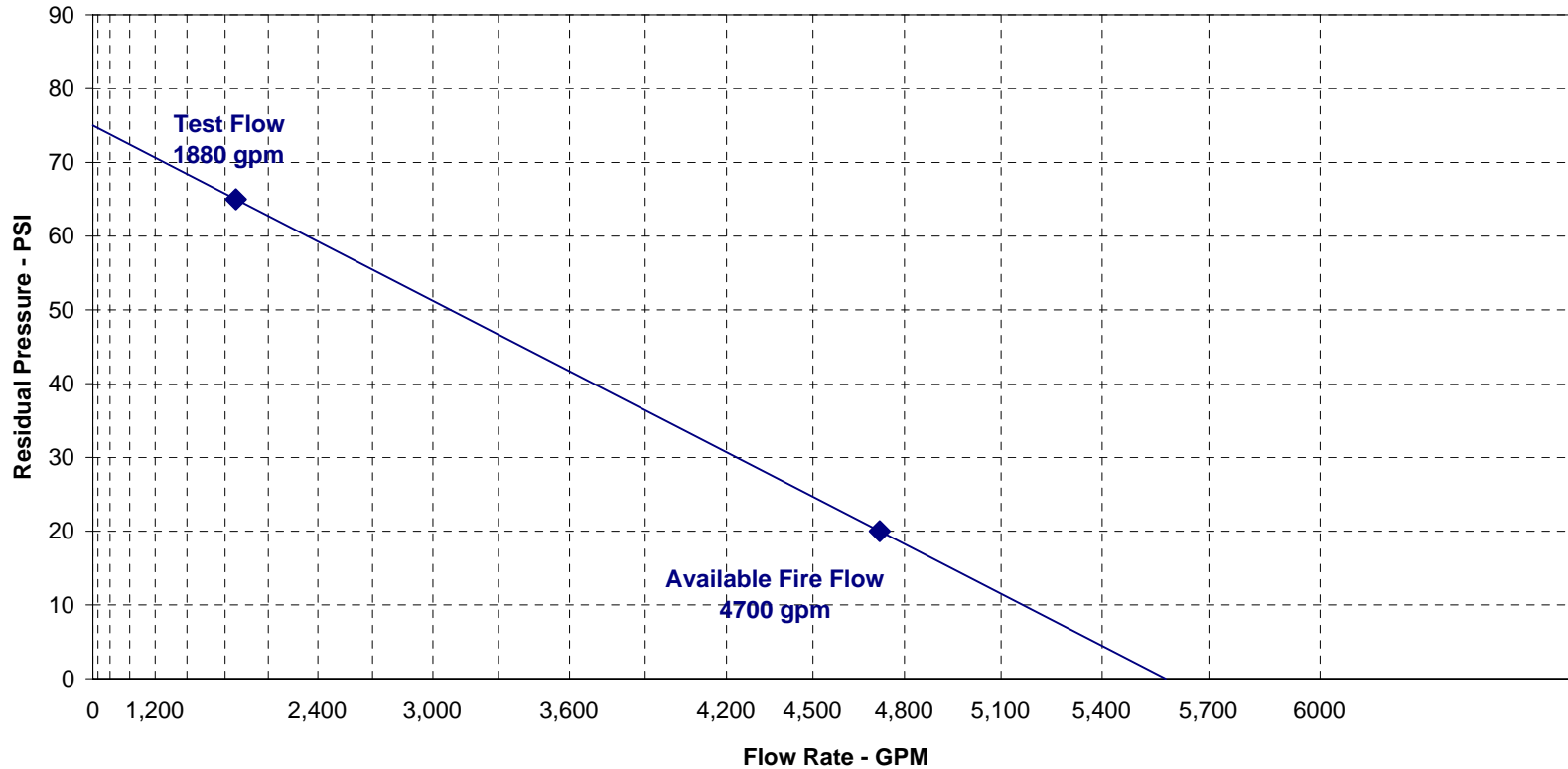
HGL Test #: 17		Zone: Town of Cary Water Master Plan					Date: 8/7/2008		Time: 12:43 PM	
Location: SAS							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Harrison	STL2	SCADA	--	0	0	478	0	627	0	627
1055	P22	PR08	--	8,160	8,160	493	56	622	46	599
3218	P23	PR06	--	3,740	11,900	443	78	623	65	593
4529	G17	Gauge	--	6,425	18,325	357	115	623	85	553

5086 2,360 gpm

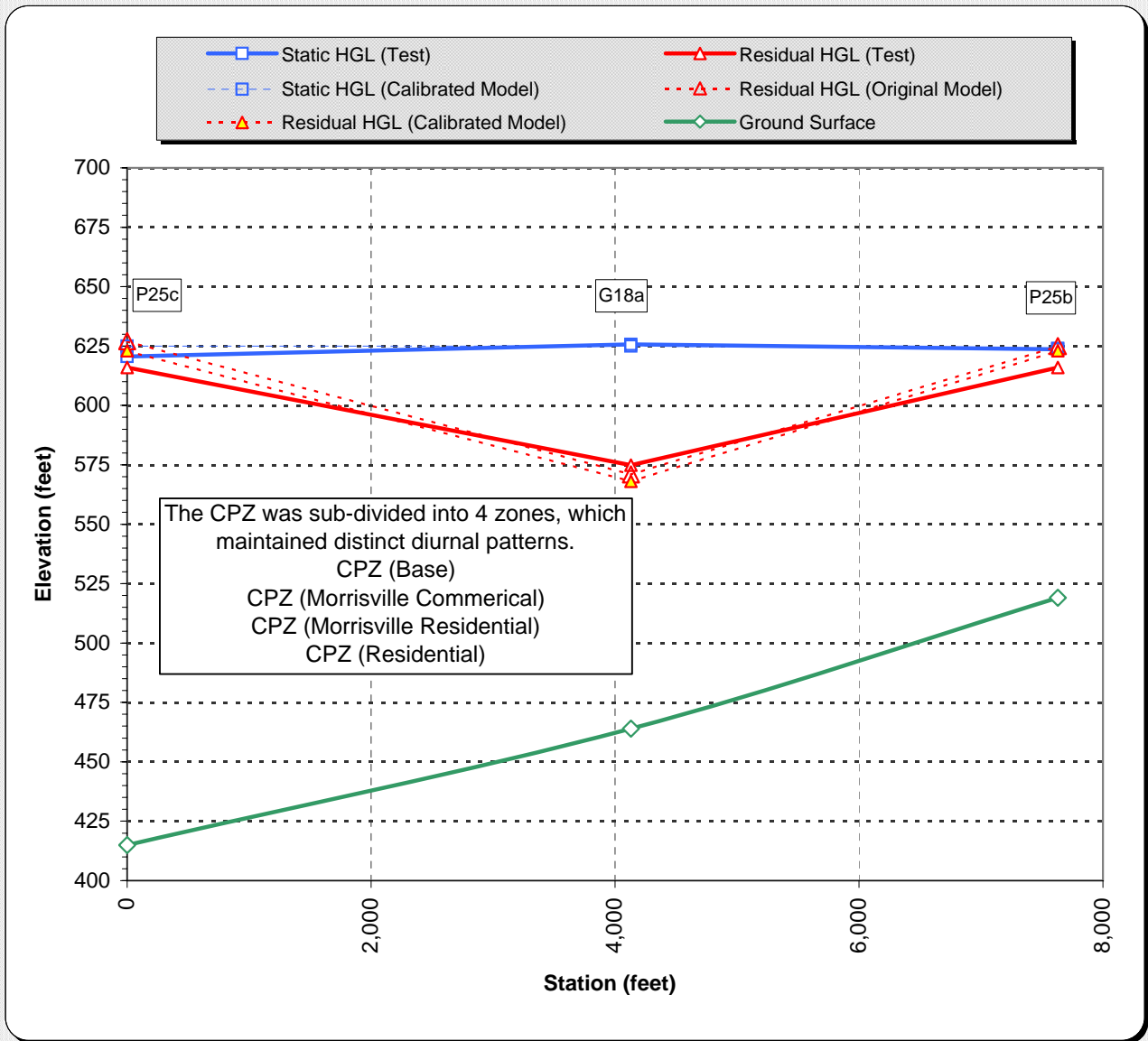


Project Name:	Town of Cary Water Master Plan	Area:	Central	Date of Test:	14-Aug-2008
Test Hydrant Street:	Normandy & Union	Map No:	Day 5	Time of Test:	10:43AM
Test No.:	18b	AFF at 20 psi:	4,700 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	2868	Flow Hydrant No. 1:	121	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	75 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	65 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	20 psi
Test Flow:	1,880 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,880 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 2868 at Normandy & Union
TOWN OF CARY WATER MASTER PLAN**

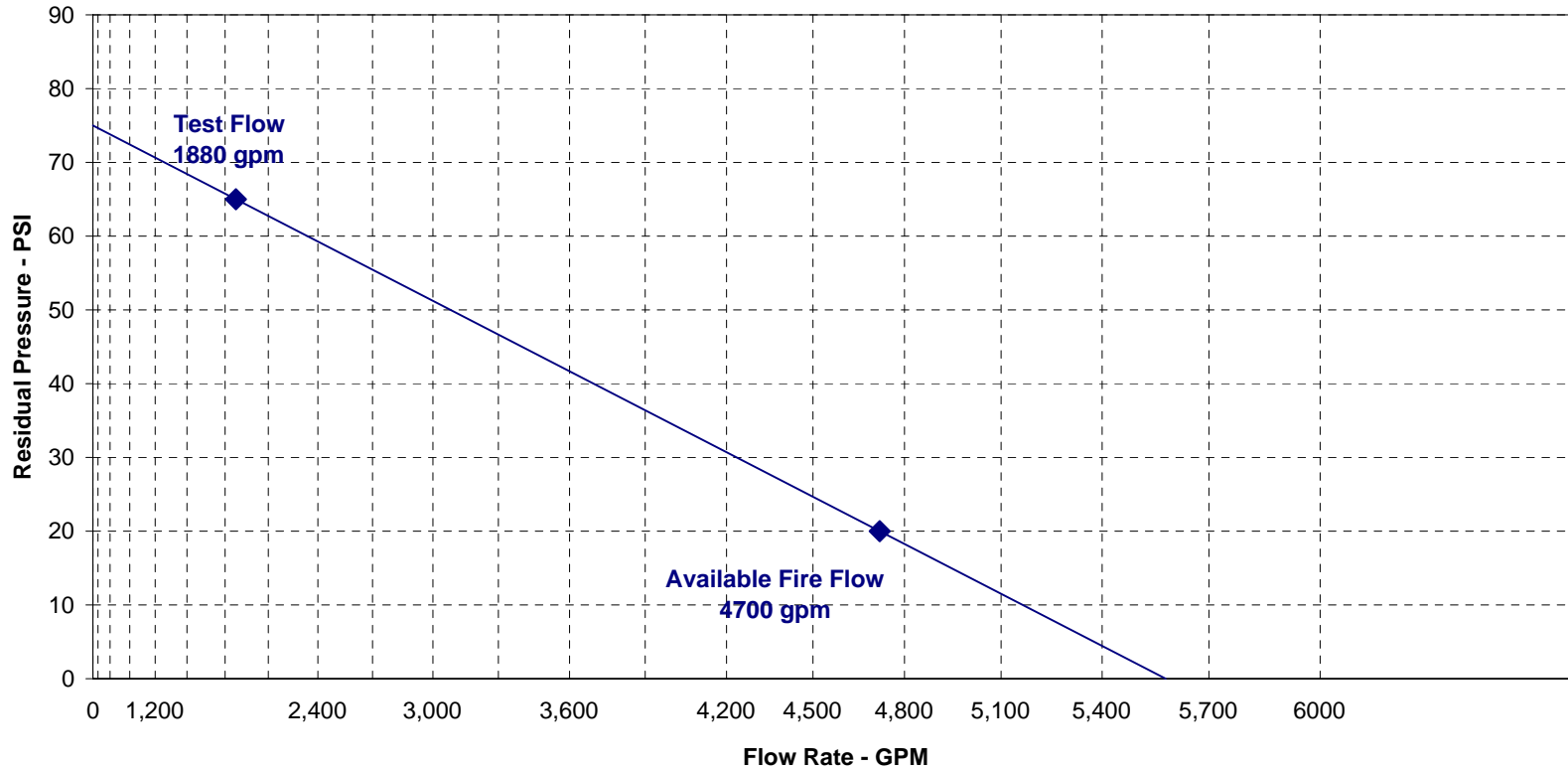


HGL Test #: 18a		Zone: Town of Cary Water Master Plan			Date: 8/14/2008		Time: 12:42PM			
Location: Grifis & Church Parking Lot					—□—		—△—			
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
364	P25c	PR04	--	0	0	415	89	621	87	616
198	G18a	Gauge	--	4,130	4,130	464	70	626	48	575
466	P25b	PR03	--	3,500	7,630	519	45	624	42	616
5324		1,620		gpm						

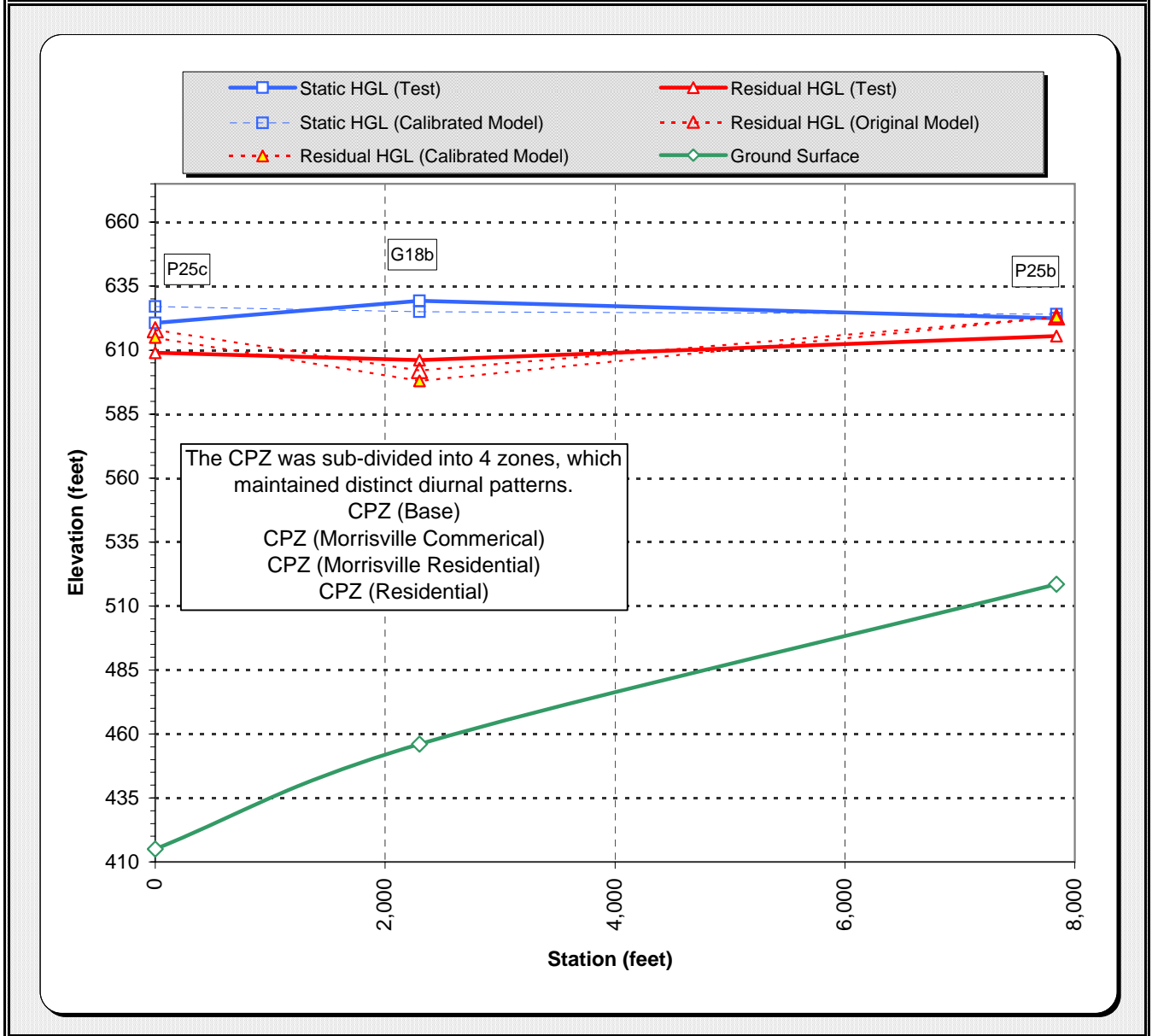


Project Name:	Town of Cary Water Master Plan	Area:	Central	Date of Test:	14-Aug-2008
Test Hydrant Street:	Normandy & Union	Map No:	Day 5	Time of Test:	10:43AM
Test No.:	18b	AFF at 20 psi:	4,700 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	2868	Flow Hydrant No. 1:	121	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	75 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	65 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	20 psi
Test Flow:	1,880 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,880 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 2868 at Normandy & Union
TOWN OF CARY WATER MASTER PLAN**

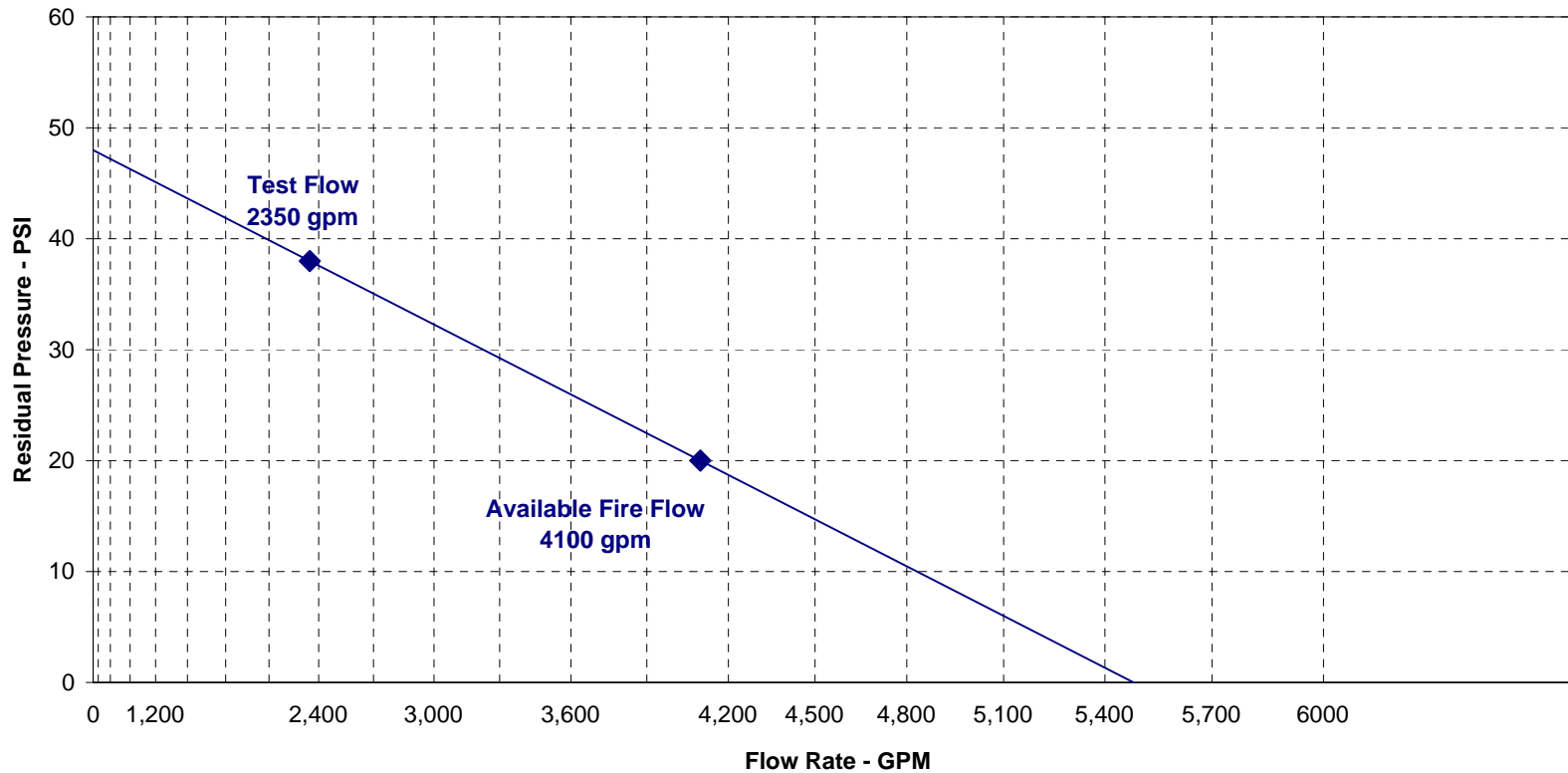


HGL Test #: 18b		Zone: Town of Cary Water Master Plan			Date: 8/14/2008		Time: 10:43AM			
Location: Normandy & Union							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
364	P25c	PR04	--	0	0	415	89	621	84	609
2868	G18b	Gauge	--	2,300	2,300	456	75	629	65	606
466	P25b	PR03	--	5,540	7,840	519	45	622	42	616
121 1,880 gpm										

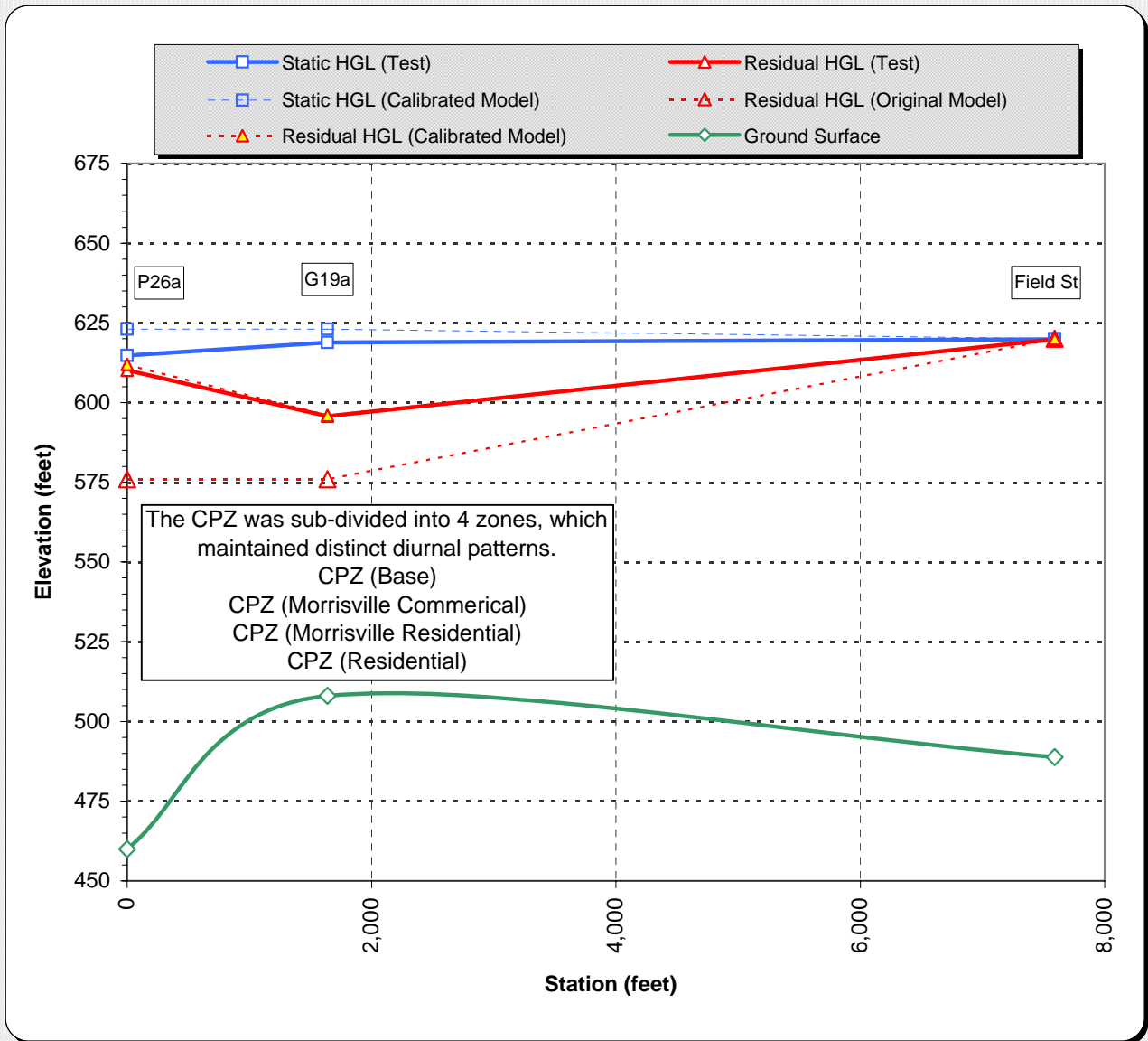


Project Name:	Town of Cary Water Master Plan	Area:	Central	Date of Test:	14-Aug-2008
Test Hydrant Street:	Holtz & Melanie	Map No:	Day 5	Time of Test:	09:55 AM
Test No.:	19a	AFF at 20 psi:	4,100 gpm	FG Elevated Tank Level (ft):	
Test Hydrant No.:	691	Flow Hydrant No. 1:	692	FG Standpipe Level (ft):	
Static Pressure:	48 psi	Pitot Pressure:		<i>Hydrant Diffusor Flow Equations</i>	
Residual Pressure:	38 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Flow Hydrant No. 2:	693
Main Diameter:		Hydrant Nozzle Dia.:	4. in	Diffuser Pressure (2.5"):	32 psi
Elevation:		No of Nozzle:	1	Calculated Flow (2.5"):	780 gpm
Test Flow:	2,350 gpm	Hydrant Nozzle Coef.:	0.747	Diffuser Pressure (4"):	13 psi
Test Hydrant Year:		Calculated Flow:		Calculated Flow (4"):	1,570 gpm
		Flow Hydrant Year:			

**Hydrant 691 at Holtz & Melanie
TOWN OF CARY WATER MASTER PLAN**

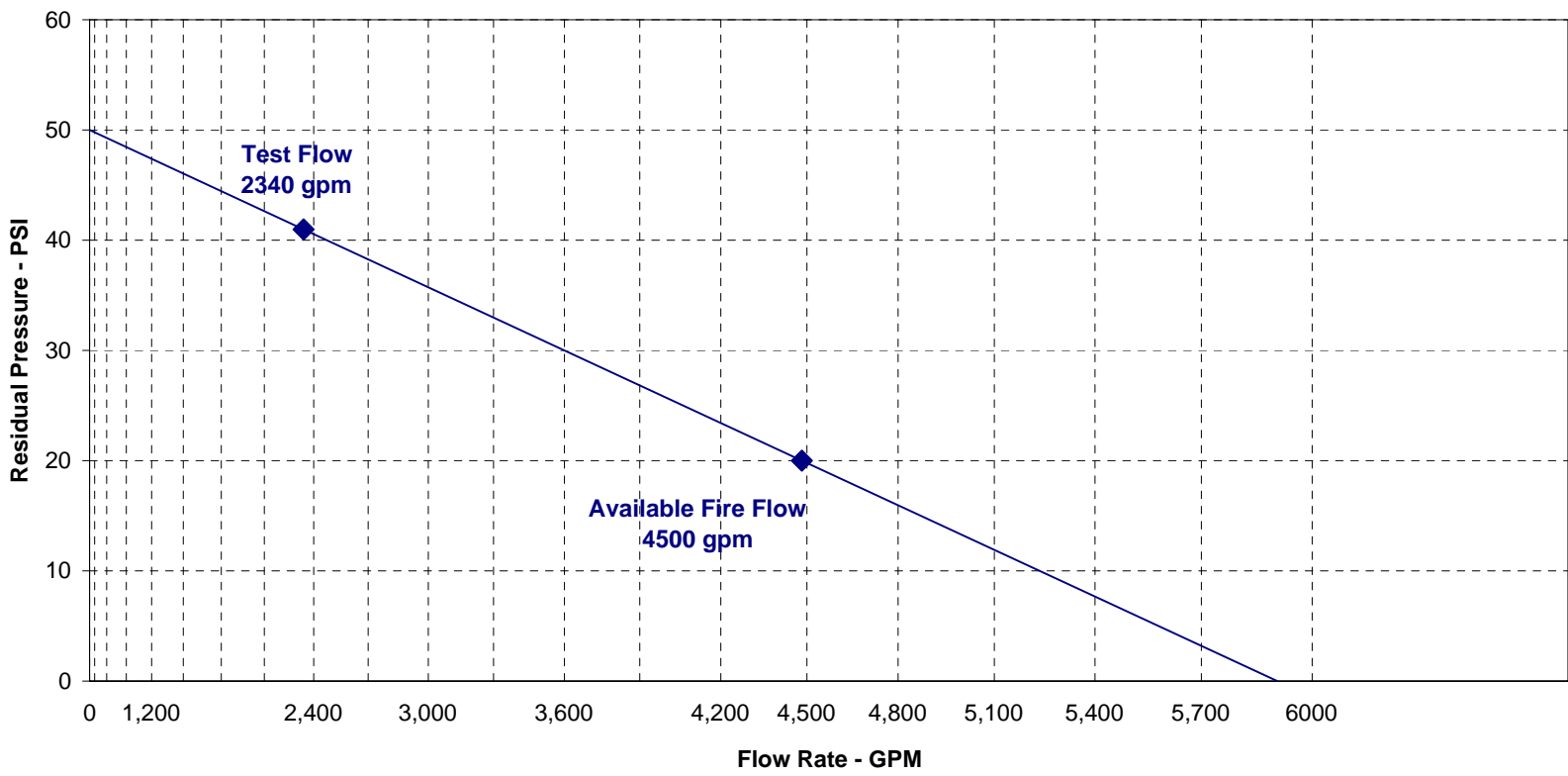


HGL Test #: 19a		Zone: Town of Cary Water Master Plan			Date: 8/14/2008		Time: 9:55 AM			
Location: Holtz & Melanie							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
414	P26a	L5	--	0	0	460	67	615	65	610
691	G19a	Gauge	--	1,640	1,640	508	48	619	38	596
Field St	STL3	SCADA	--	5,950	7,590	489	0	620	0	620
692 2,350 gpm										



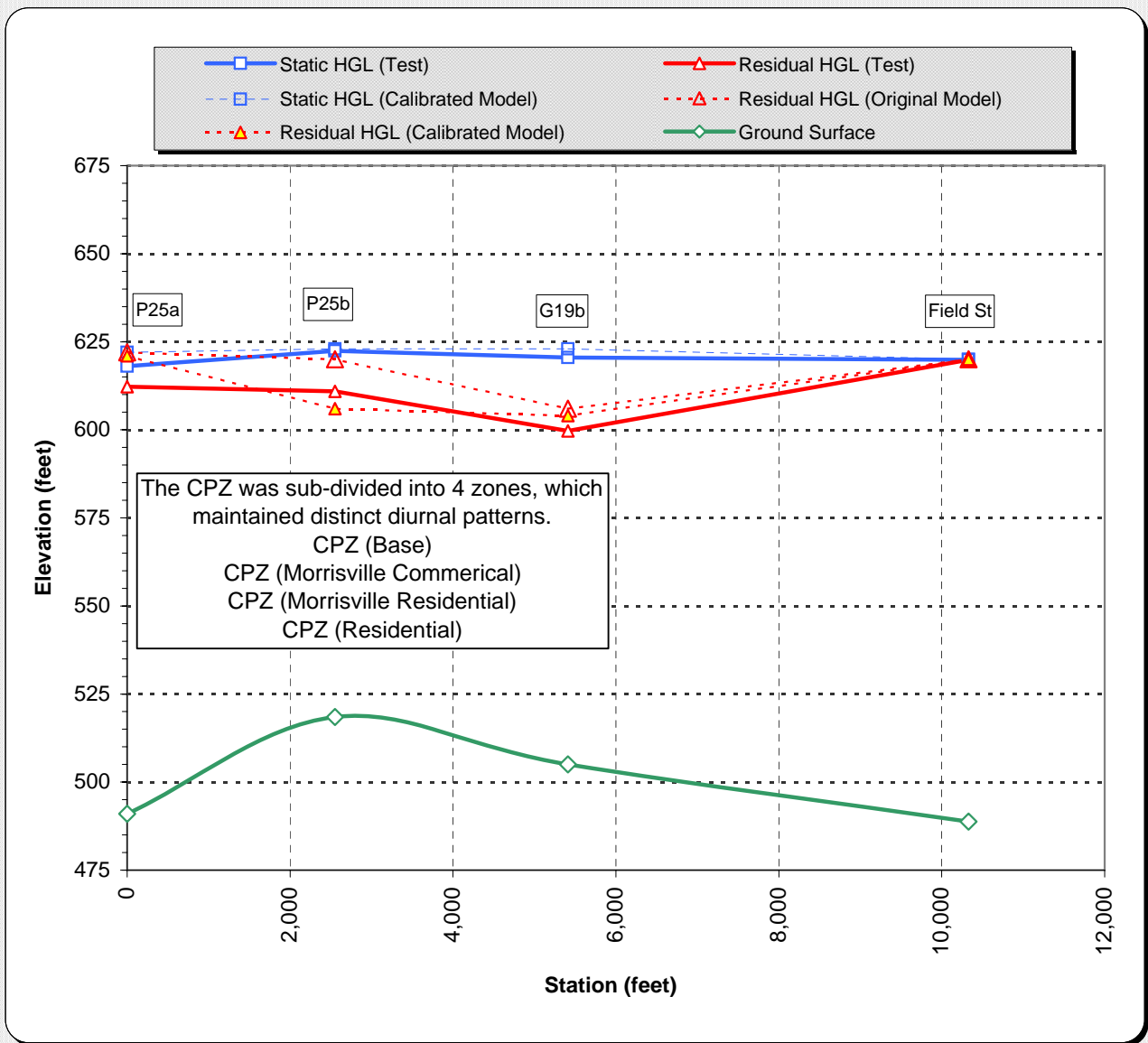
Project Name:	Town of Cary Water Master Plan	Area:	Central	Date of Test:	14-Aug-2008
Test Hydrant Street:	Park & Walker	Map No:	Day 5	Time of Test:	10:16AM
Test No.:	19b	AFF at 20 psi:	4,500 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	452	Flow Hydrant No. 1:	735	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	50 psi	Pitot Pressure:		Flow Hydrant No. 2:	22
Residual Pressure:	41 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	25 psi
Main Diameter:		Hydrant Nozzle Dia.:	4. in	Calculated Flow (2.5"):	720 gpm
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	14 psi
Test Flow:	2,340 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,620 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 452 at Park & Walker
TOWN OF CARY WATER MASTER PLAN**



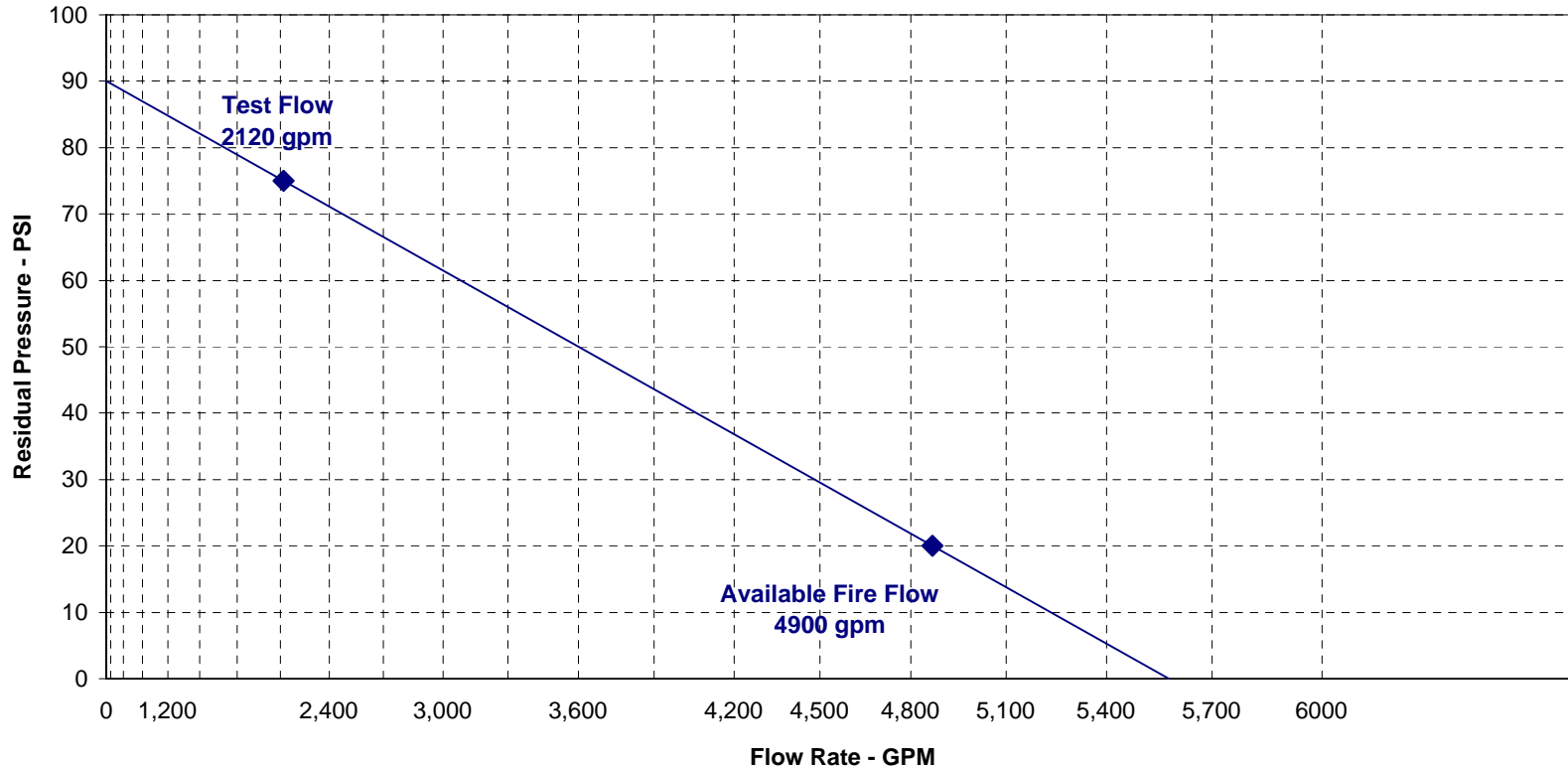
HGL Test #: 19b		Zone: Town of Cary Water Master Plan			Date: 8/14/2008		Time: 10:16AM			
Location: Park & Walker							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
269	P25a	L2	--	0	0	491	55	618	53	612
466	P25b	PR03	--	2,550	2,550	519	45	622	40	611
452	G19b	Gauge	--	2,860	5,410	505	50	621	41	600
Field St	STL3	SCADA	--	4,920	10,330	489	0	620	0	620

735 2,340 gpm

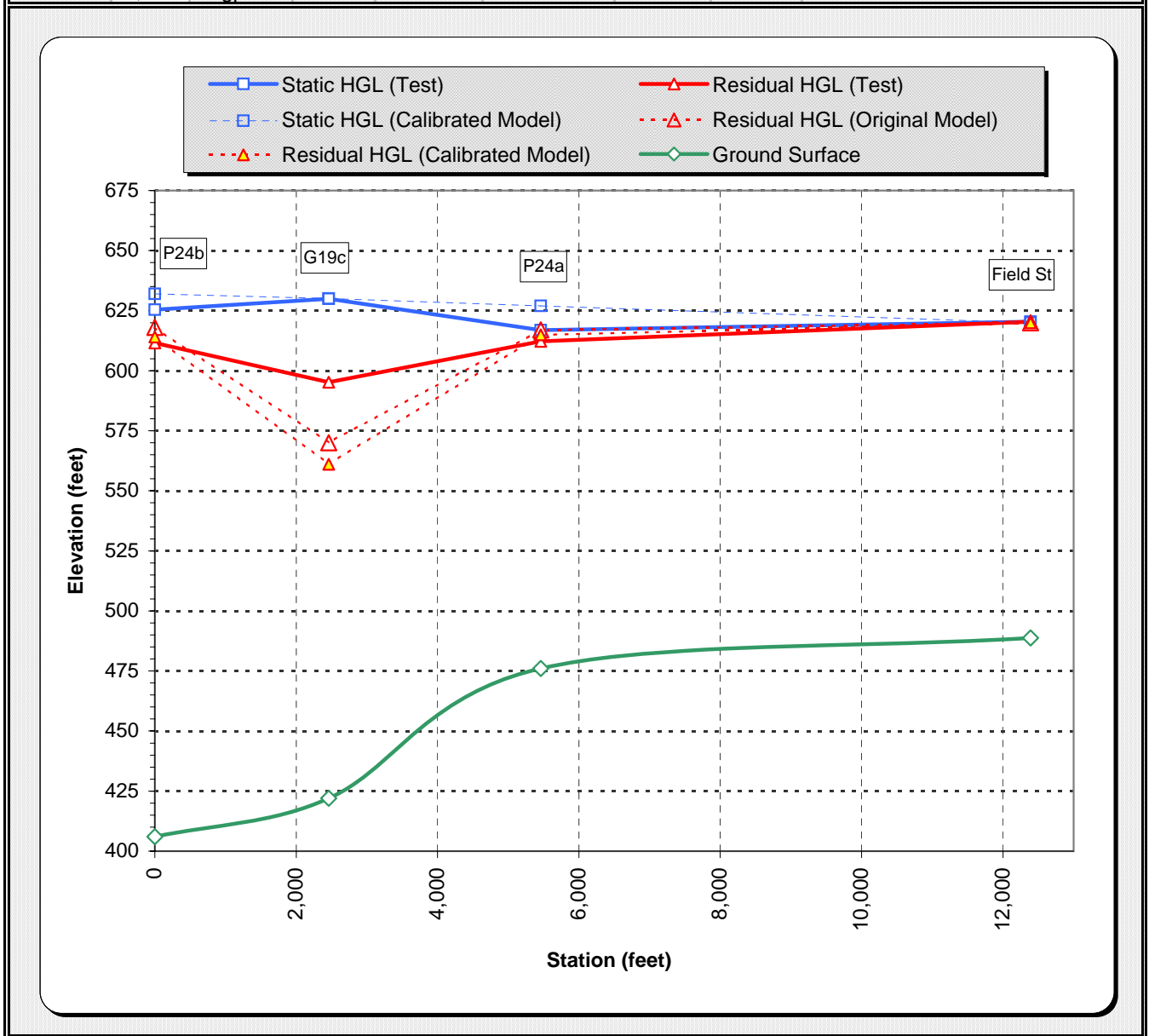


Project Name:	Town of Cary Water Master Plan	Area:	Central	Date of Test:	14-Aug-2008
Test Hydrant Street:	Beech & Madison	Map No:	Day 5	Time of Test:	10:57 AM
Test No.:	19c	AFF at 20 psi:	4,900 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	44	Flow Hydrant No. 1:	296	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	90 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	75 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4. in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	28 psi
Test Flow:	2,120 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,120 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 44 at Beech & Madison
TOWN OF CARY WATER MASTER PLAN**

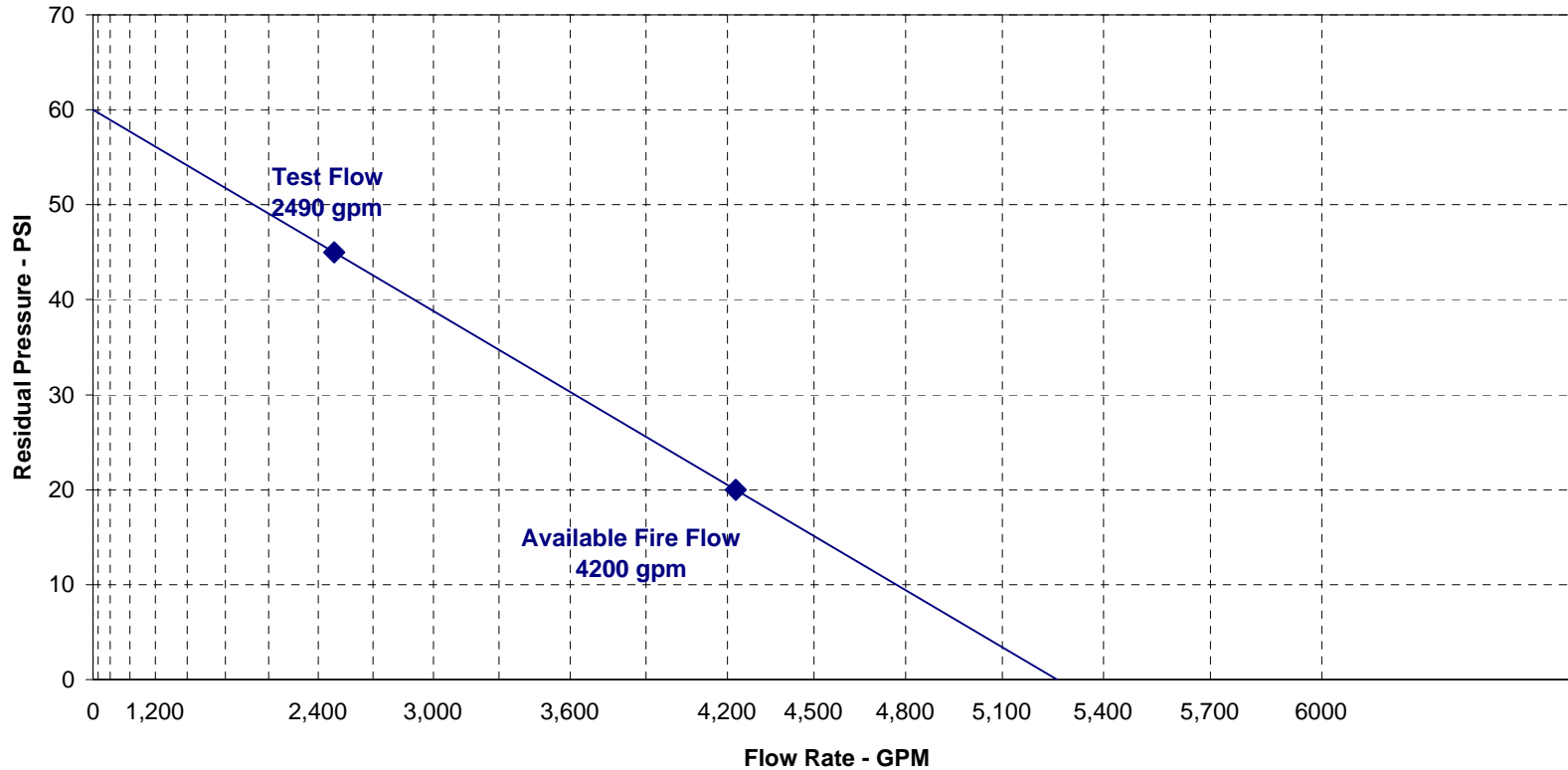


HGL Test #:		19c	Zone:				Town of Cary Water Master Plan	Date:	8/14/2008	Time:		10:57 AM
Location:							Beech & Madison					
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)		
3309	P24b	PR06	--	0	0	406	95	625	89	612		
44	G19c	Gauge	--	2,460	2,460	422	90	630	75	595		
132	P24a	PR07	--	3,000	5,460	476	61	617	59	612		
Field St	STL3	SCADA	--	6,930	12,390	489	0	620	0	620		
296		2,120		gpm								



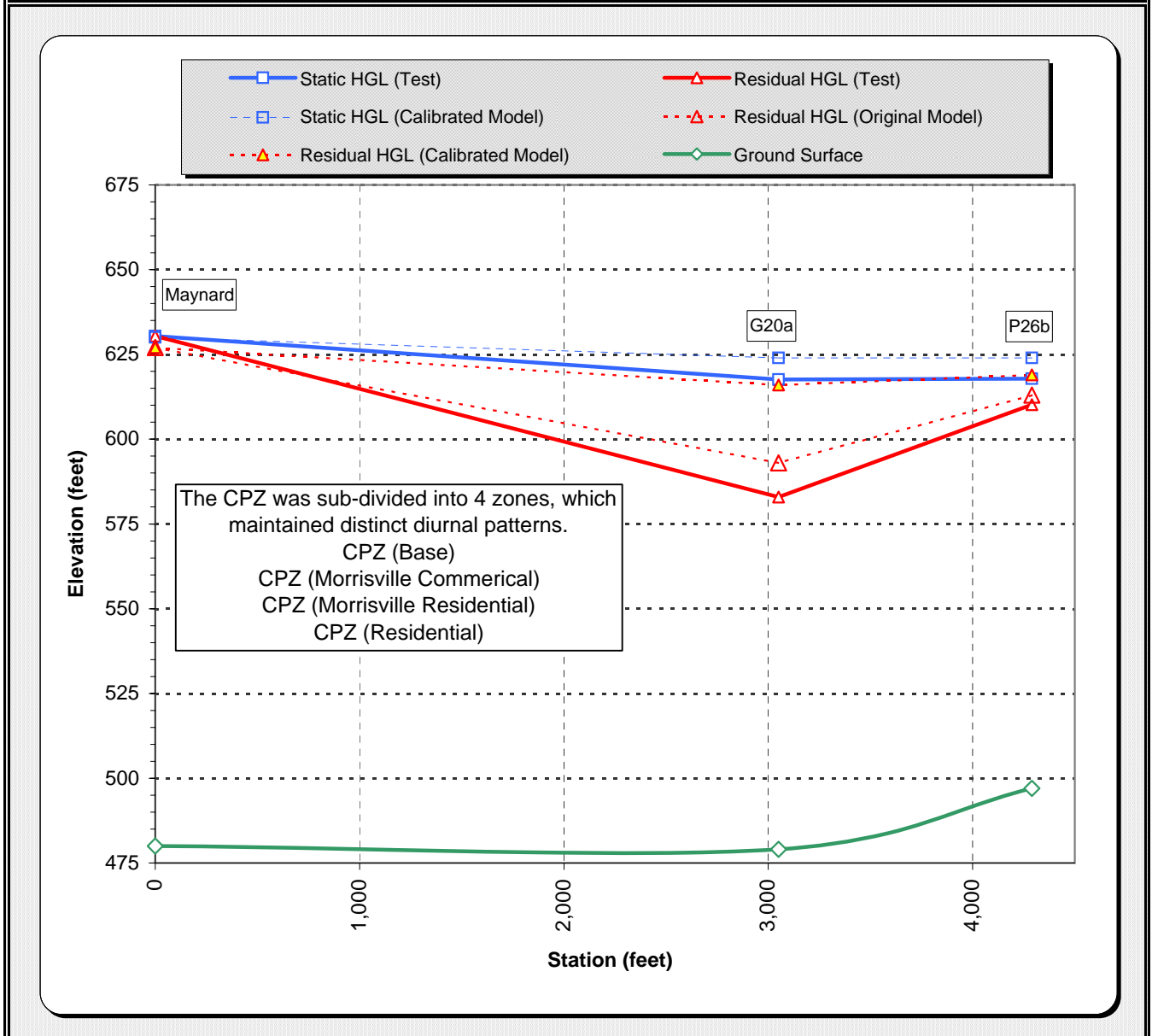
Project Name:	Town of Cary Water Master Plan	Area:	Central	Date of Test:	14-Aug-2008
Test Hydrant Street:	Tanglewood & Walnut	Map No:	Day 5	Time of Test:	12:25 PM
Test No.:	20a	AFF at 20 psi:	4,200 gpm	FG Elevated Tank Level (ft):	
				FG Standpipe Level (ft):	
Test Hydrant No.:	1970	Flow Hydrant No. 1:	565	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	60 psi	Pitot Pressure:		Flow Hydrant No. 2:	3117
Residual Pressure:	45 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	31 psi
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	770 gpm
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	16 psi
Test Flow:	2,490 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,720 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 1970 at Tanglewood & Walnut
TOWN OF CARY WATER MASTER PLAN**



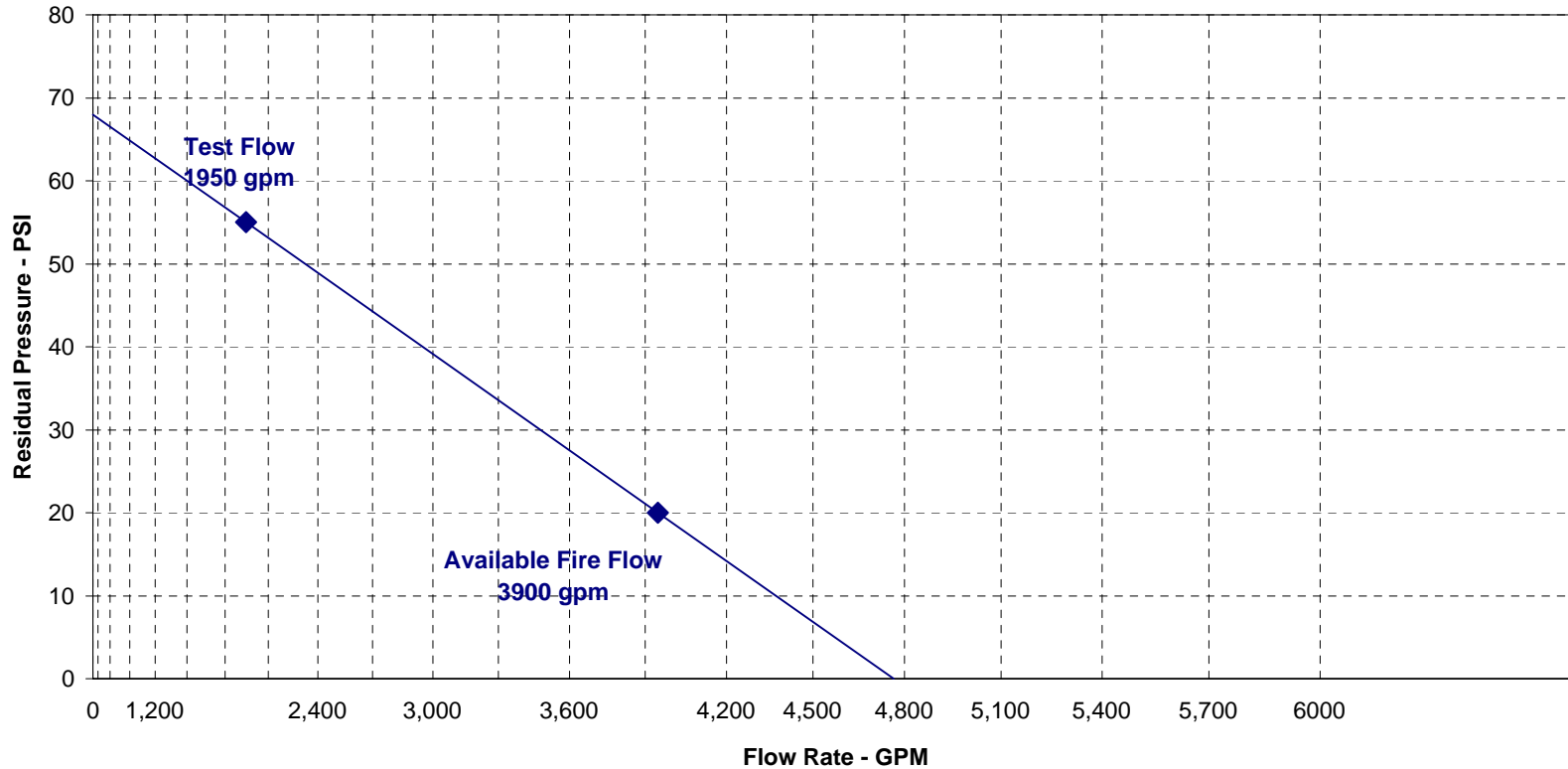
HGL Test #: 20a		Zone: Town of Cary Water Master Plan					Date: 8/14/2008		Time: 12:25 PM	
Location: Tanglewood & Walnut							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Maynard	STL4	SCADA	--	0	0	480	0	630	0	630
1970	G20a	Gauge	--	3,050	3,050	479	60	618	45	583
393	P26b	PR08	--	1,240	4,290	497	52	618	49	610

565 2,490 gpm



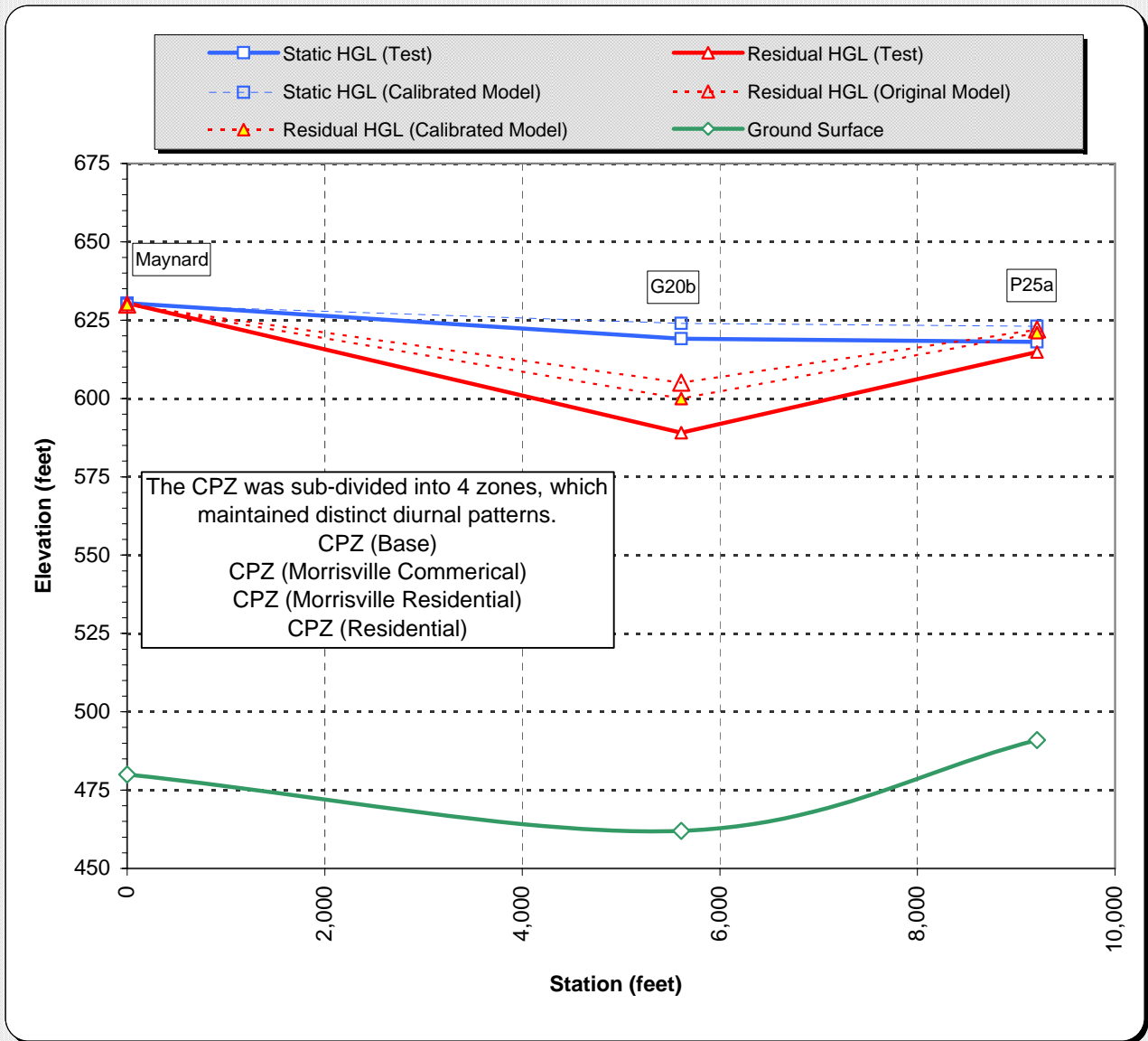
Project Name:	Town of Cary Water Master Plan	Area:	Central	Date of Test:	14-Aug-2008
Test Hydrant Street:	E Cornwall & Ralph	Map No:	Day 5	Time of Test:	12:07PM
Test No.:	20b	AFF at 20 psi:	3,900 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	390	Flow Hydrant No. 1:	394 or 397	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	68 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	55 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	22 psi
Test Flow:	1,950 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,950 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 390 at E Cornwall & Ralph
TOWN OF CARY WATER MASTER PLAN**



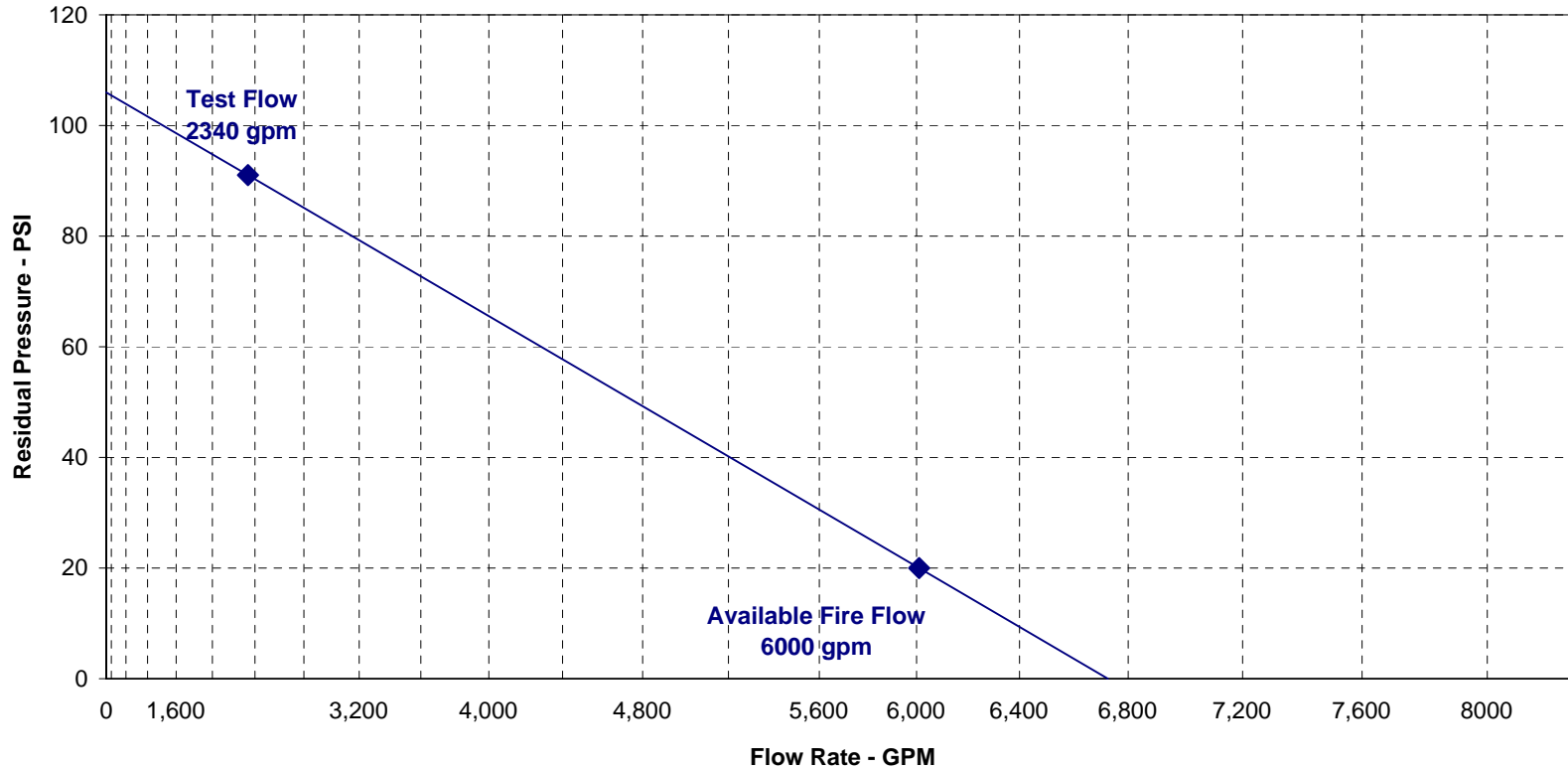
HGL Test #: 20b		Zone: Town of Cary Water Master Plan			Date: 8/14/2008		Time: 12:07PM			
Location: E Cornwall & Ralph							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Maynard	STL4	SCADA	--	0	0	480	0	630	0	630
390	G20b	Gauge	--	5,610	5,610	462	68	619	55	589
269	P25a	L2	--	3,600	9,210	491	55	618	54	615

394 or 397 1,950 gpm

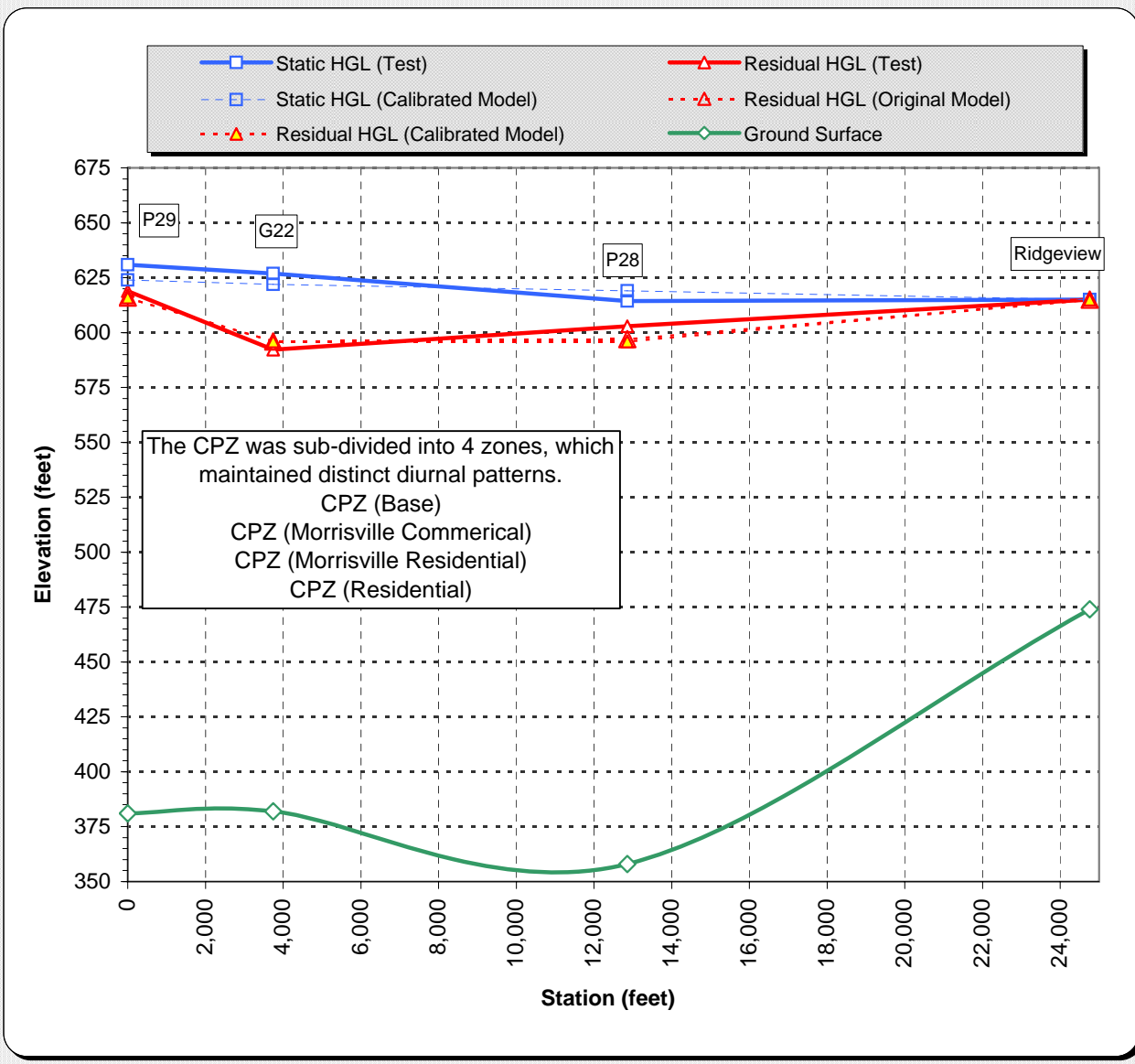


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	12-Aug-2008
Test Hydrant Street:	Lake Pine & Versailles	Map No:	Day 4	Time of Test:	2:23PM
Test No.:	22	AFF at 20 psi:	6,000 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	2689	Flow Hydrant No. 1:	2960	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	106 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	91 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	43 psi
Test Flow:	2,340 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,340 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 2689 at Lake Pine & Versailles
TOWN OF CARY WATER MASTER PLAN**

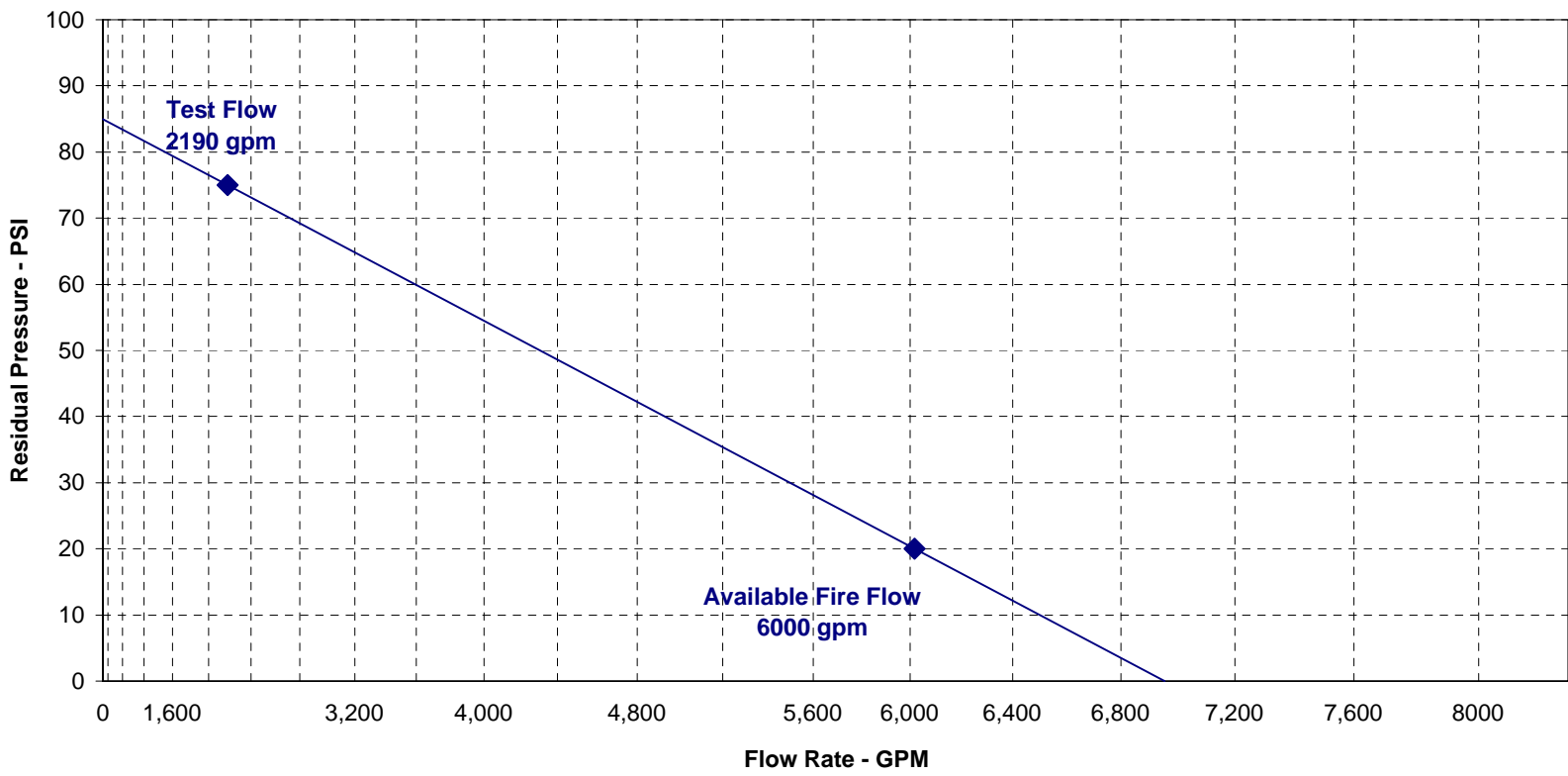


HGL Test #: 22		Zone: Town of Cary Water Master Plan				Date: 8/12/2008	Time: 2:23PM			
Location: Lake Pine & Versailles						—□—		—▲—		
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
879	P29	PR06	--	0	0	381	108	631	103	619
2689	G22	Gauge	--	3,740	3,740	382	106	627	91	592
384	P28	PR04	--	9,120	12,860	358	111	614	106	603
Ridgeview	STL5	SCADA	--	11,900	24,760	474	0	615	0	615
2960		2,340		gpm						

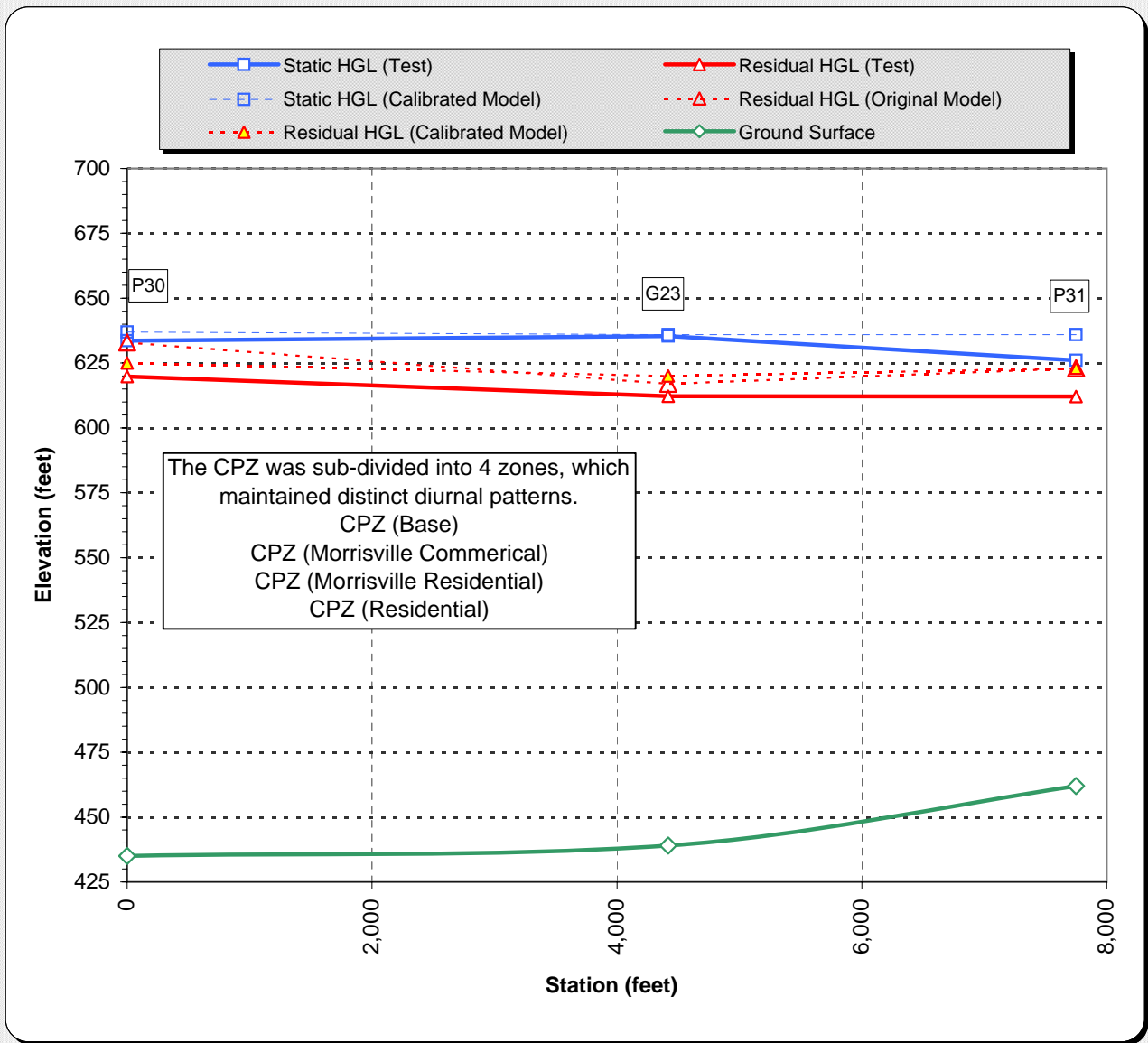


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	12-Aug-2008
Test Hydrant Street:	Old Apex	Map No:	Day 4	Time of Test:	8:45AM
Test No.:	23	AFF at 20 psi:	6,000 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	4207	Flow Hydrant No. 1:	4247	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	85 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	75 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	31 psi
Test Flow:	2,190 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	2,190 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 4207 at Old Apex
TOWN OF CARY WATER MASTER PLAN**

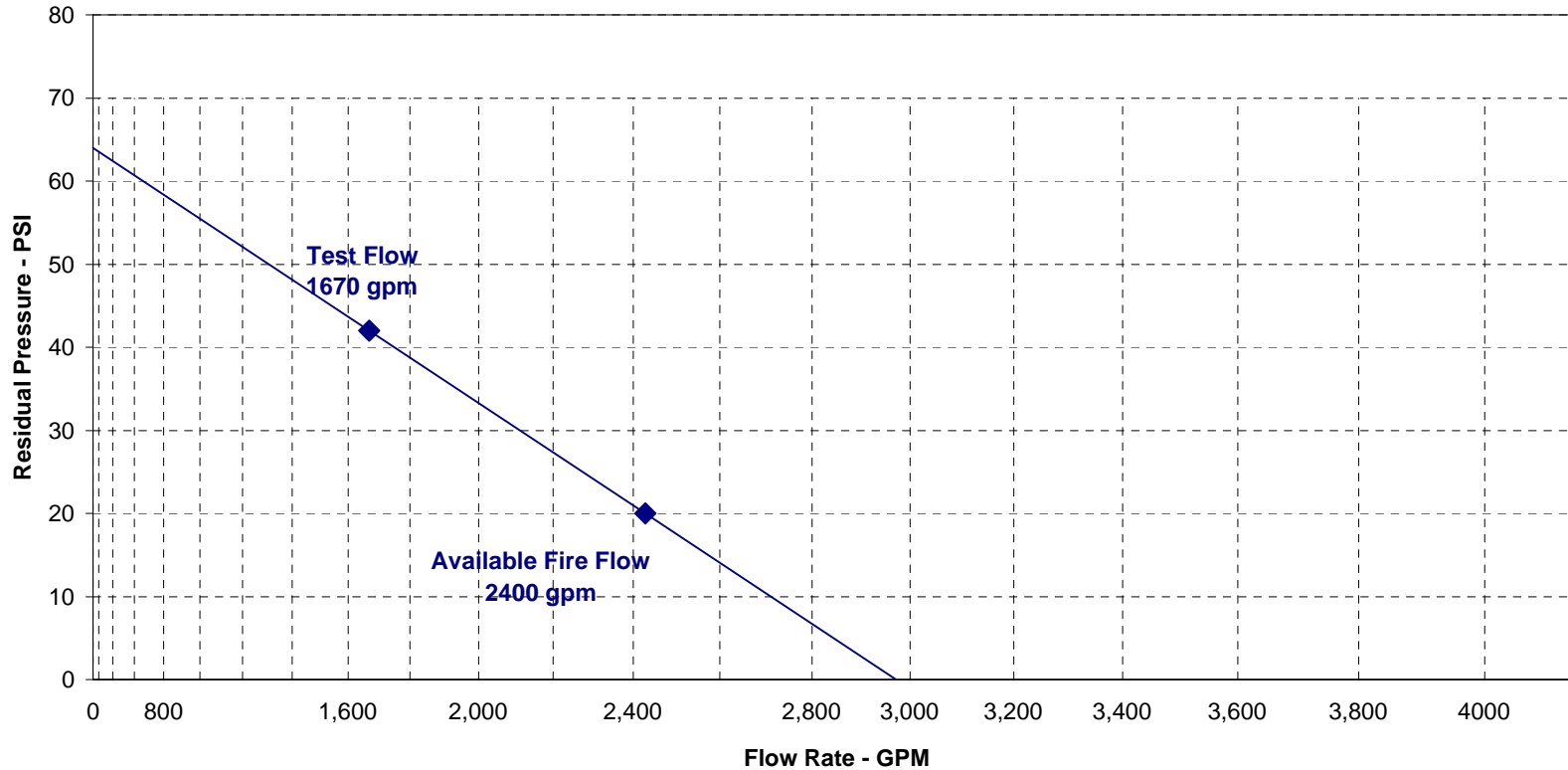


HGL Test #: 23		Zone: Town of Cary Water Master Plan					Date: 8/12/2008		Time: 8:45AM	
Location: Old Apex							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
2014	P30	L4	--	0	0	435	86	634	80	620
4207	G23	Gauge	--	4,420	4,420	439	85	635	75	612
1505	P31	PR04	--	3,330	7,750	462	71	626	65	612
4247		2,190		gpm						

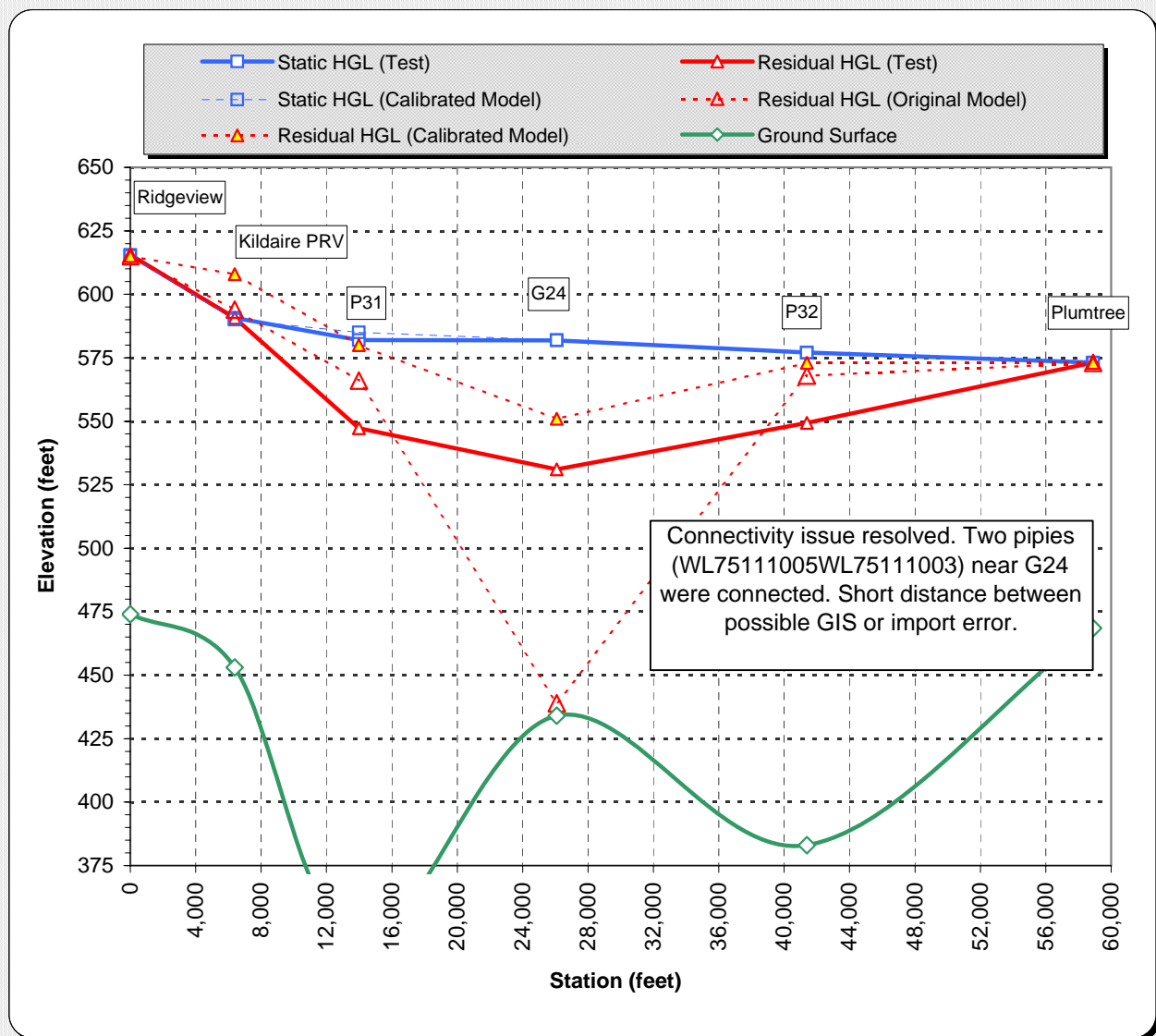


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	12-Aug-2008
Test Hydrant Street:	Hasselwood & Crowi Forest	Map No	Day 4	Time of Test:	3:37PM
Test No.	24	AFF at 20 psi:	2,400 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.	4500	Flow Hydrant No. 1	4508	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure	64 psi	Pitot Pressure		Flow Hydrant No. 2	
Residual Pressure	42 psi	4.5" pitot instructions	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5")	
Main Diameter		Hydrant Nozzle Dia.	4.5 in	Calculated Flow (2.5")	
Elevation		No of Nozzle	1	Diffuser Pressure (4")	15 psi
Test Flow	1,670 gpm	Hydrant Nozzle Coef.	0.747	Calculated Flow (4")	1,670 gpm
Test Hydrant Year:		Calculated Flow			
		Flow Hydrant Year:			

**Hydrant 4500 at Hasselwood & Crowi Forest
TOWN OF CARY WATER MASTER PLAN**

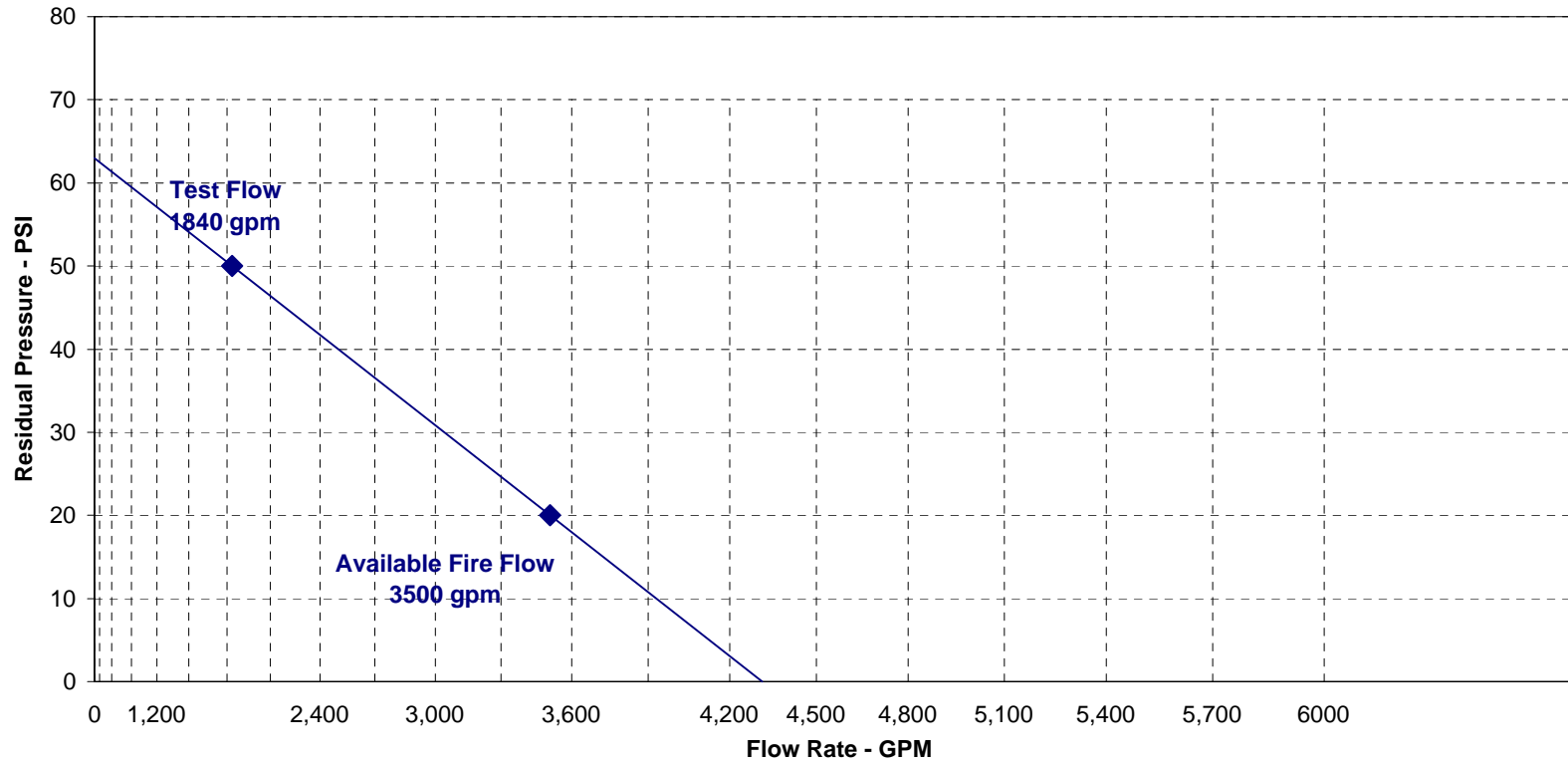


HGL Test #:		24		Zone: Town of Cary Water Master Plan			Date: 8/12/2008		Time: 3:37PM	
Location: Hasselwood & Crowi Forest							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Ridgeview	STL5	SCADA	--	0	0	474	0	615	0	615
Kildaire PRV	SP2	SCADA	--	6,380	6,380	453	60	591	60	591
1001	P31	PR07	--	7,600	13,980	344	103	582	88	547
4500	G24	Gauge	--	12,110	26,090	434	64	582	42	531
3139	P32	PR08	--	15,300	41,390	383	84	577	72	549
Plumtree	STL6	SCADA	--	17,500	58,890	469	0	573	0	573
4508		1,670	gpm							

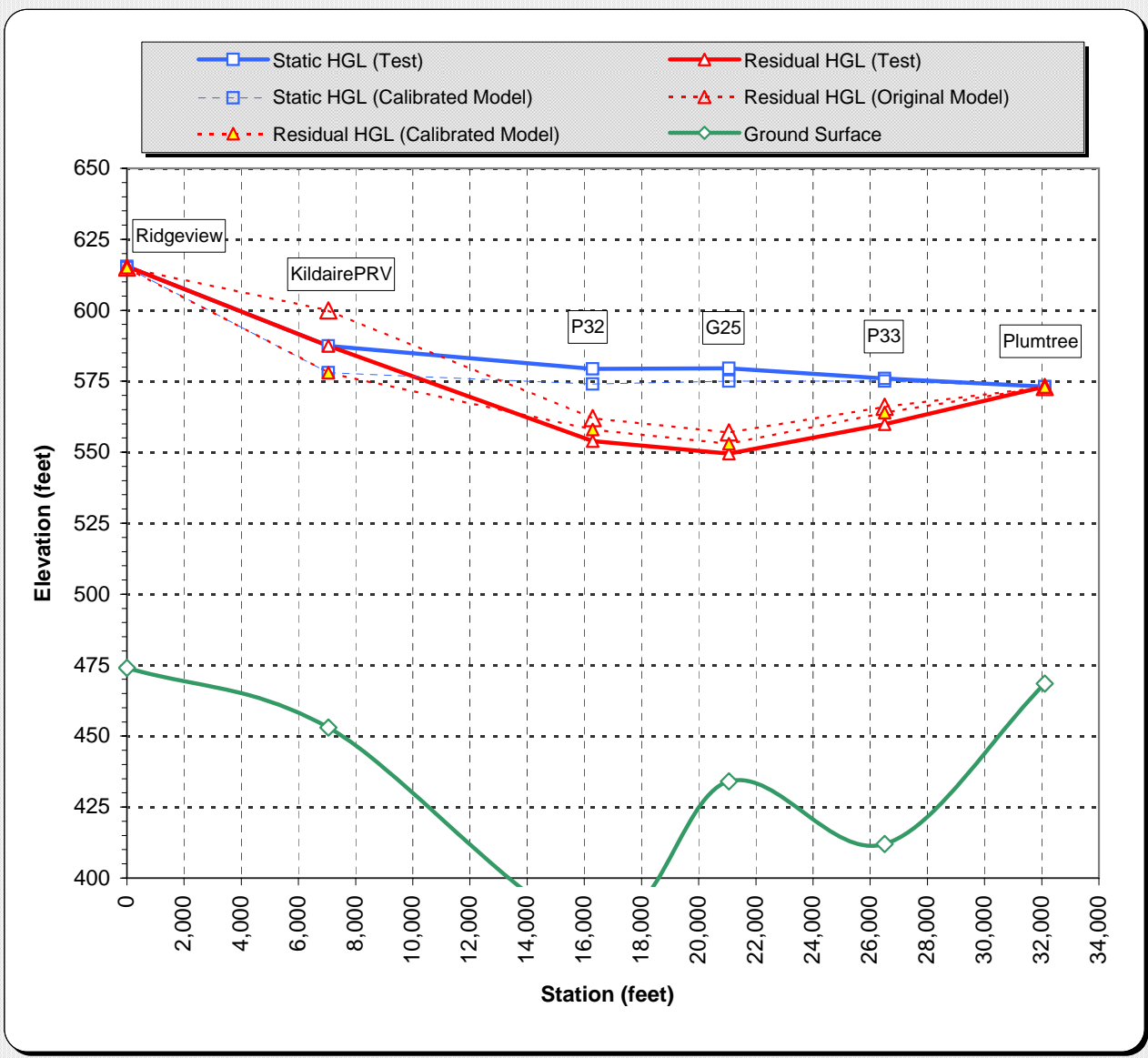


Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	12-Aug-2008
Test Hydrant Street:	Lochhighlands & Piperwood	Map No:	Day 4	Time of Test:	3:19PM
Test No.:	25	AFF at 20 psi:	3,500 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	2384	Flow Hydrant No. 1:	2383	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	63 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	50 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	19 psi
Test Flow:	1,840 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,840 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 2384 at Lochhighlands & Piperwood
TOWN OF CARY WATER MASTER PLAN**

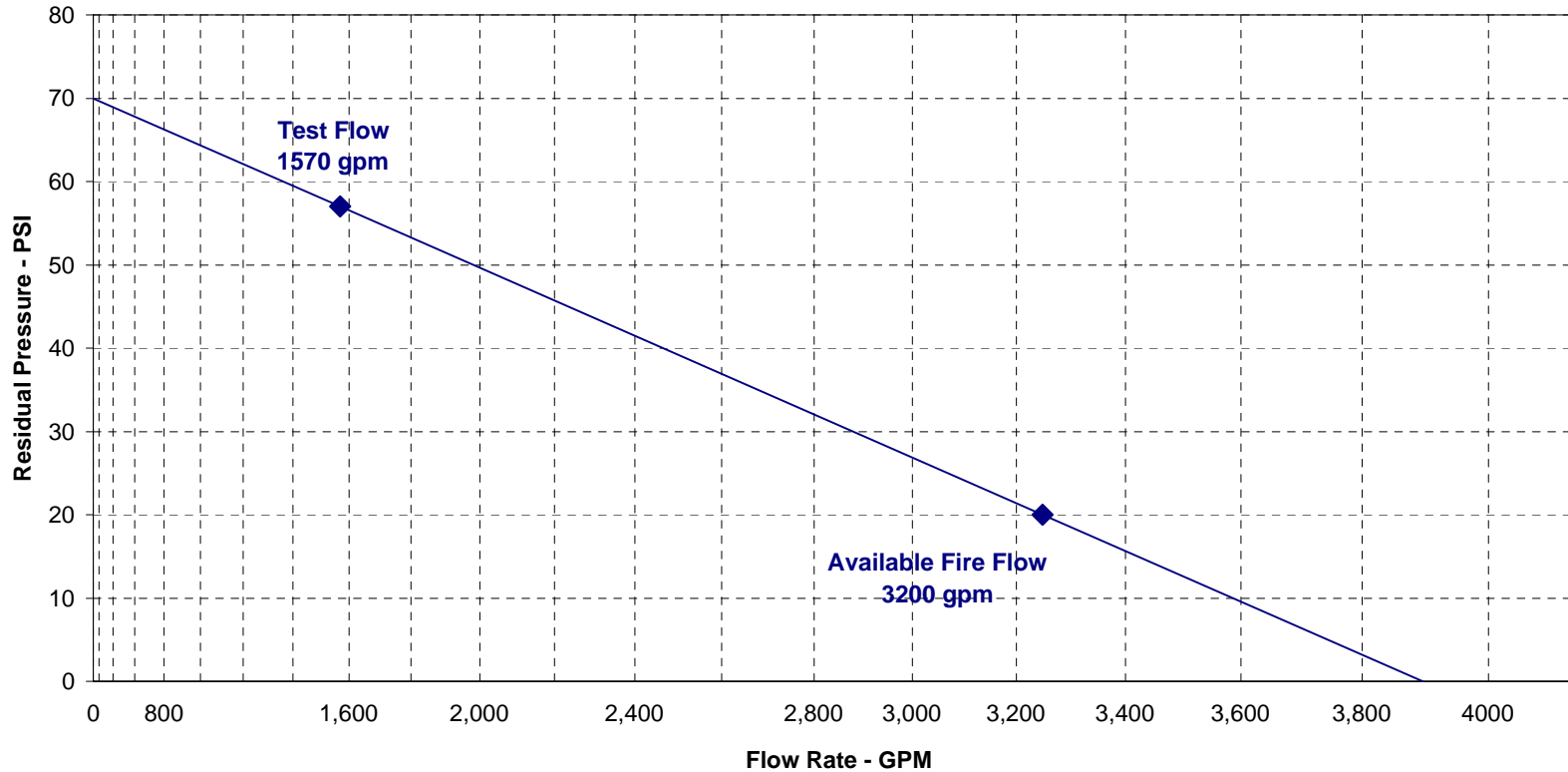


HGL Test #:		25		Zone: Town of Cary Water Master Plan			Date: 8/12/2008		Time: 3:19PM	
Location: Lochhighlands & Piperwood							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Ridgeview	STL5	SCADA	--	0	0	474	0	615	0	615
KildairePRV	SP2	SCADA	--	7,050	7,050	453	58	587	58	587
3139	P32	PR08	--	9,240	16,290	383	85	579	74	554
2384	G25	Gauge	--	4,770	21,060	434	63	580	50	550
2920	P33	L4	--	5,450	26,510	412	71	576	64	560
Plumtree	STL6	SCADA	--	5,600	32,110	469	0	573	0	573
2383	1,840	gpm								



Project Name:	Town of Cary Water Master Plan	Area:		Date of Test:	12-Aug-2008
Test Hydrant Street:	West Lake & Wolfs Bane	Map No:	Day 4	Time of Test:	4:10PM
Test No.:	26	AFF at 20 psi:	3,200 gpm	FG Elevated Tank Level (ft)	
				FG Standpipe Level (ft)	
Test Hydrant No.:	6152	Flow Hydrant No. 1:	6133	<i>Hydrant Diffusor Flow Equations</i>	
Static Pressure:	70 psi	Pitot Pressure:		Flow Hydrant No. 2:	
Residual Pressure:	57 psi	4.5" pitot instructions:	<i>(stay between 10-30 psi)</i>	Diffuser Pressure (2.5"):	
Main Diameter:		Hydrant Nozzle Dia.:	4.5 in	Calculated Flow (2.5"):	
Elevation:		No of Nozzle:	1	Diffuser Pressure (4"):	13 psi
Test Flow:	1,570 gpm	Hydrant Nozzle Coef.:	0.747	Calculated Flow (4"):	1,570 gpm
Test Hydrant Year:		Calculated Flow:			
		Flow Hydrant Year:			

**Hydrant 6152 at West Lake & Wolfs Bane
TOWN OF CARY WATER MASTER PLAN**



HGL Test #: 26		Zone: Town of Cary Water Master Plan					Date: 8/12/2008	Time: 4:10PM		
Location: West Lake & Wolfs Bane							—□—		—△—	
Hydrant (#)	Sta. (#)	Dickson (ID #)	Hyd. (year)	Between Stations (feet)	Cumulative Distance (feet)	Ground Elev. (feet)	Static (psi)	Static HGL (feet)	Residual (psi)	Residual HGL (feet)
Plumtree	STL6	SCADA	--	0	0	469	0	574	0	574
4964	P34	PR04	--	12,210	12,210	471	43	570	34	550
6152	G26	Gauge	--	5,390	17,600	410	70	572	57	542
6133	1,570	gpm								

