New Jersey's Red Light Running Program

Case Study - Newark

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CITY OF NEWARK
T & S
DIV. OF TRAFFIC & SIGNALS

Outline

- Background on NJ's & Newark's Program
- What does the Data tell us?
- Post-Program
- Lessons Learned
- Food for Thought

NJ RLR Program

- 5-Yr Pilot Program legislated in 2008
- NJDOT to administer the program
- 83 Intersections in 25 Municipalities
- NJDOT developed an Application Process
  - Crash, Volume, Citation Data
- Annual Report to the Legislature

Newark RLR Program

- 1st Municipality with approved locations Dec. 2009
- 19 Intersections with 46 camera approaches
- 2 intersections with 5 years of data; 10 intersections with 4 years of data; 14 intersections with 3 years of data
- 40-83% reduction in All Crashes
- 33-83% reduction in Rear-End Crashes
- 50-100% reduction in Right-Angle Crashes

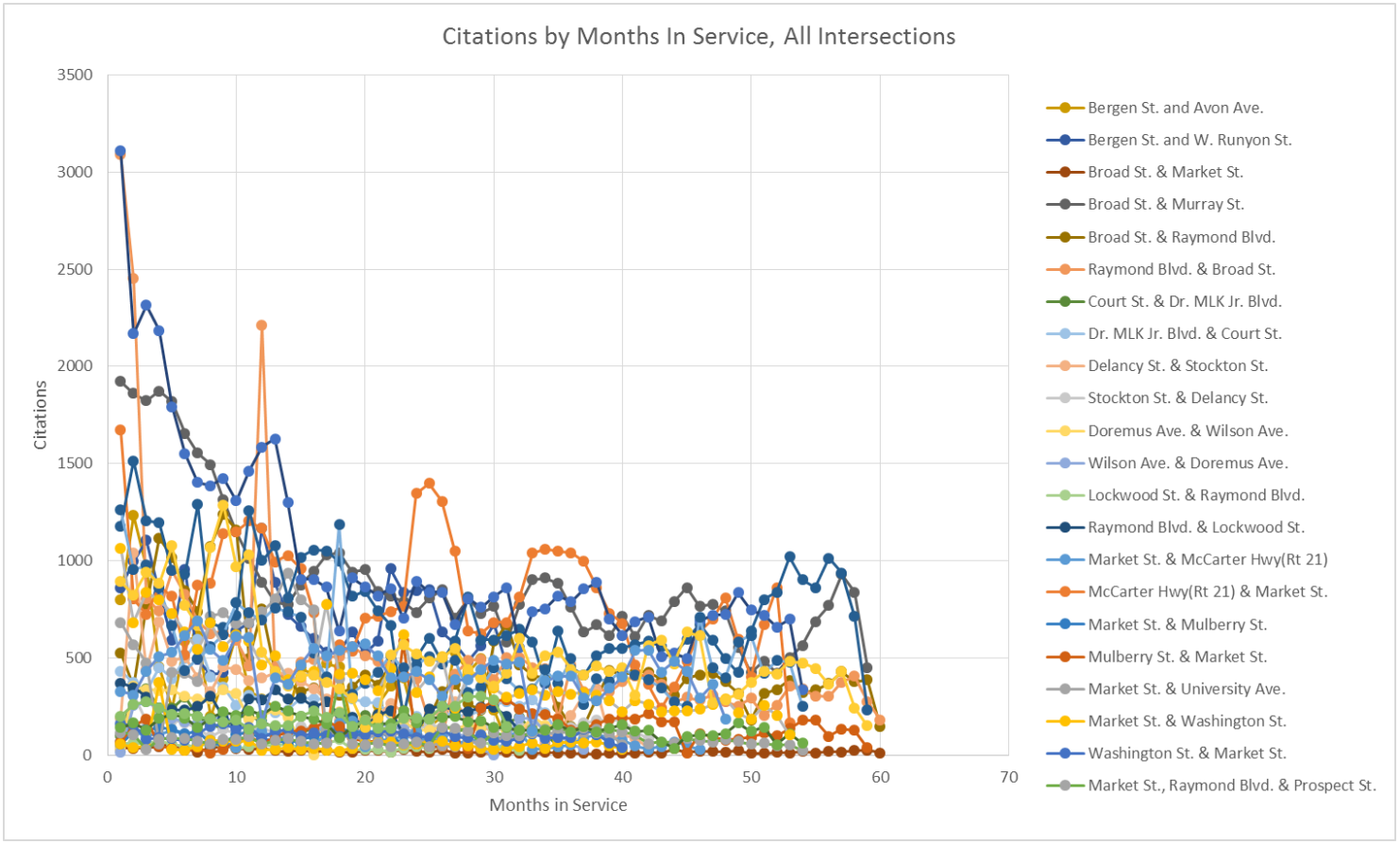
Post-NJ RLR Program

- Program ended Dec. 2014
- No Legislative action to continue the Program
- No Legislative report issued in 2014 or 2015 (5 year summary)
- Newark cameras remained active for 5 months after program ended (no violations issued, but 116% increase in RLR violations in first 3 months)

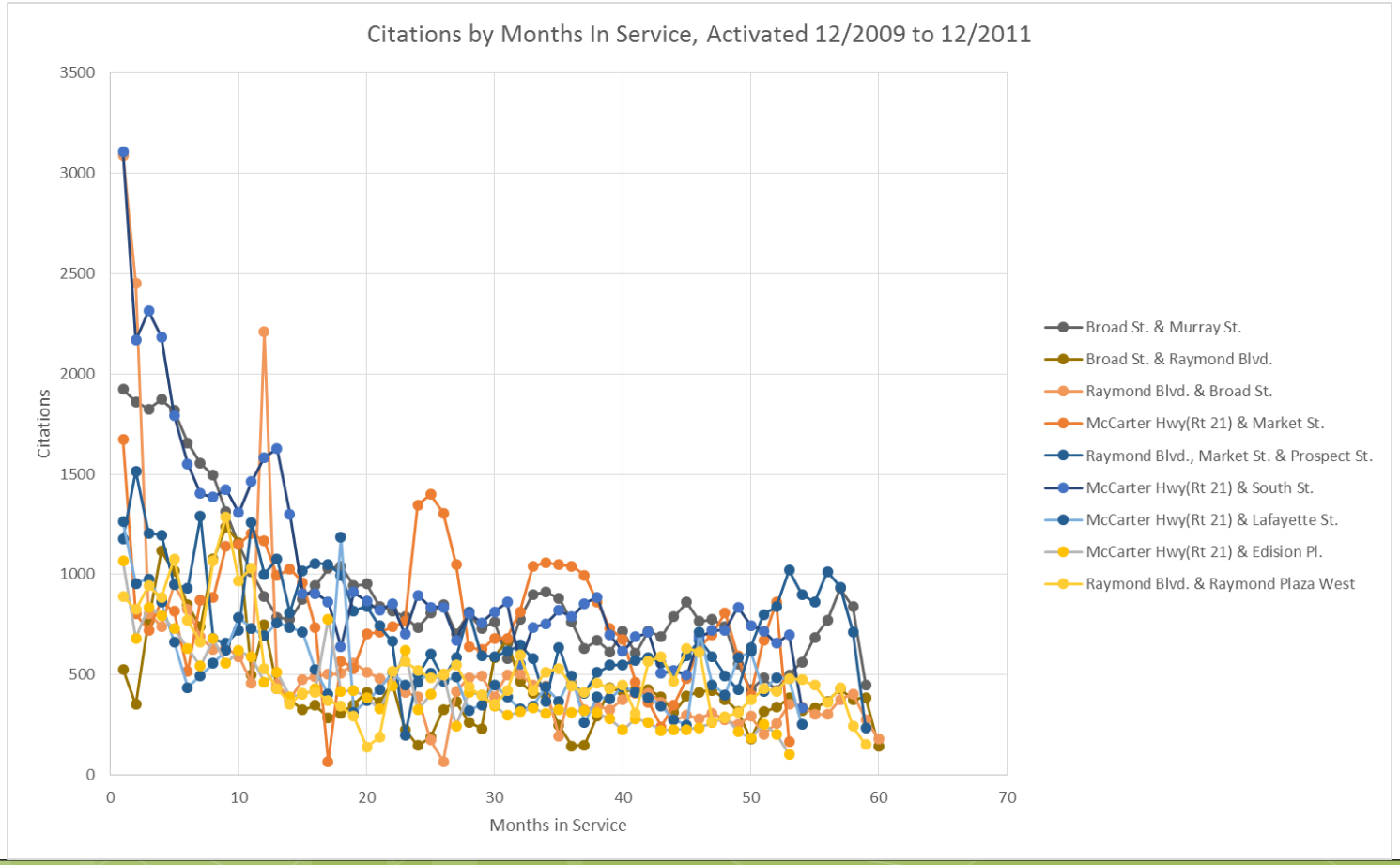
Newark RLR Program

	2010												2011												2012												2013											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bergen St. and Avon Ave.																														799	1233	969	454	241	585	614	199	395	620	327	291	245	207	449	413	472	453	147
Bergen St. and W. Runyon St.																														862	996	1106	834	590	956	491	412	424	640	677	1169	887	722	661	600	529	524	636
Broad St. & Market St.	34	35	36	44	54	30	17	37	47	36	29	36	23	19	25	17	23	15	14	23	24	16	28	20	13	27	12	12	14	9	13	11	7	13	12	9	10	5	9	9	10	15	10	33	13	21	18	17
Broad St. & Murray St.		1923	1861	1824	1873	1819	1656	1553	1494	1312	1148	1012	891	787	775	875	944	1030	1042	943	953	841	819	789	735	808	850	706	805	729	765	582	777	901	911	883	761	632	671	613	716	608	719	689	788	861	766	776
Broad St. & Raymond Blvd.	527	352	769	1117	1017	848	739	1075	1238	1159	499	751	432	378	325	348	286	309	349	414	361	461	228	147	188	327	366	263	232	586	673	466	409	397	248	146	150	295	435	415	427	426	390	310	395	413	422	377
Raymond Blvd. & Broad St.	3091	2452	805	742	949	827	690	626	634	590	460	2210	455	376	476	492	503	507	560	513	481	458	414	391	175	67	416	486	493	390	500	503	450	444	192	464	327	342	326	377	409	410	364	274	297	282	308	274
Court St. & Dr. MLK Jr. Blvd.																										100	322	341	241	240	300	199	157	137	196	203	175	138	98	113	139	105	101	95	204	167	144	142
Dr. MLK Jr. Blvd. & Court St.																										433	372	329	450	394	495	594	404	349	258	310	286	218	233	291	290	285	326	290	274	270	209	188
Delancy St. & Stockton St.																			191	1038	438	686	483	503	398	326	452	441	382	397	422	421	381	342	289	179	191	178	199	266	221	139	214	206	274	194	140	131
Stockton St. & Delancy St.																			33	308	173	159	176	168	137	94	133	112	121	146	109	105	147	136	161	146	118	107	106	150	170	133	155	144	140	151	153	132
Doremus Ave. & Wilson Ave.																								29	355	338	333	336	302	288	290	336	316	184	201	234	194	79	0	188	222	170	155	200	217	180	125	129
Wilson Ave. & Doremus Ave.																								17	255	273	241	189	173	163	178	202	164	135	92	115	114	107	95	170	128	97	145	160	150	132	119	79
Lockwood St. & Raymond Blvd.																												60	61	58	76	54	44	49	53	49	37	42	53	46	60	34	61	60	79	32	27
Raymond Blvd. & Lockwood St.																												371	348	299	240	234	232	251	304	192	154	291	285	335	288	294	249	274	212	196	144
Market St. & McCarter Hwy(Rt 21)															67	117	100	105	128	108	58	75	70	39	118	124	83	92	51	49	108	164	175	45	84	76	100	119	46	91	58	74	80	86	93	126	29	37
McCarter Hwy(Rt 21) & Market St.								1673	803	724	867	817	517	874	884	1141	1150	1205	1167	995	1027	960	734	67	568	533	704	712	738	766	1346	1399	1306	1051	638	625	682	683	815	1039	1061	1049	1041	996	863	730	678	462
Market St. & Mulberry St.																																						56	122	131	142	135	109	124	53	59	107	115
Mulberry St. & Market St.		69	150	186	47	35	24	37	12	29	74	98	61	92	123	125	140	175	147	89	69	69	52	586	58	45	42	66	35	242	279	285	237	213	207	185	129	142	157	187	194	185	215	171	171	10	111	93
Market St. & University Ave.																					683	570	475	57	426	420	377	716	733	675	679	736	802	938	800	745	133	92	96	80	112	107	114	73	63	49	43	65
Market St. & Washington St.																					57	40	44	373	27	26	44	75	73	70	72	25	28	39	28	36	25	21	36	60	67	69	54	56	67	71	46	49
Washington St. & Market St.																					160	155	82	90	84	75	111	148	160	135	143	87	122	132	99	112	100	96	103	105	117	124	111	91	91	131	94	90
Market St., Raymond Blvd. & Prospect St.							116	105	28	83	90	84	72	56	79	83	94	57	75	85	71	59	62	394	58	54	64	45	56	69	44	144	139	123	60	116	99	98	114	131	139	120	137	115	131	120	104	58
Raymond Blvd., Market St. & Prospect St.		1177	1515	1206	1196	950	930	1289	680	656	720	1258	1001	1078	809	1018	1056	1052	996	818	842	744	667	198	497	602	481	585	814	593	592	616	648	582	368	637	450	410	512	548	549	570	586	560	517	594	673	590
McCarter Hwy(Rt 21) & South St.							3109	2169	2314	2185	1793	1551	1403	1386	1425	1309	1463	1584	1627	1302	905	905	865	638	912	866	820	856	703	895	838	838	672	805	760	815	861	554	737	753	820	789	855	888	698	616	688	711
South St. & McCarter Hwy(Rt 21)							142	165	130	188	210	191	141	191	222	204	228	204	253	226	200	184	162	90	147	148	157	162	229	164	187	195	197	171	176	141	142	126	132	126	158	119	146	120	139	156	123	128
McCarter Hwy(Rt 21) & Lafayette St.							1262	955	978	862	665	436	495	557	622	784	733	693	759	736	711	525	402	1185	313	371	427	512	449	463	508	469	489	323	350	451	391	330	343	438	369	495	262	391	379	441	411	387
McCarter Hwy(Rt 21) & Edision Pl.								1066	683	838	797	729	632	543	679	557	621	588	463	512	390	402	430	778	415	422	386	330	445	622	324	403	505	244	412	400	345	298	315	334	309	326	314	323	310	279	224	281
Raymond Blvd. & Raymond Plaza West		892	825	943	884	1078	770	665	1067	1287	968	1032	530	431	355	408	413	373	342	293	141	189	516	567	522	483	501	551	438	398	353	420	600	422	513	531	442	412	459	429	448	306	565	592	469	632	614	268
Raymond Plaza West & Raymond Blvd.													327	308	432	507	529	615	691	542	487	610	605	168	396	365	465	549	512	538	557	571	510	397	401	429	390	305	387	386	442	489	470	479	122	383	406	406
Washington St. and Central Ave.																														201	259	276	243	209	214	199	185	170	180	134	161	150	151	201	227	194	217	146

Newark RLR Program



Newark RLR Program



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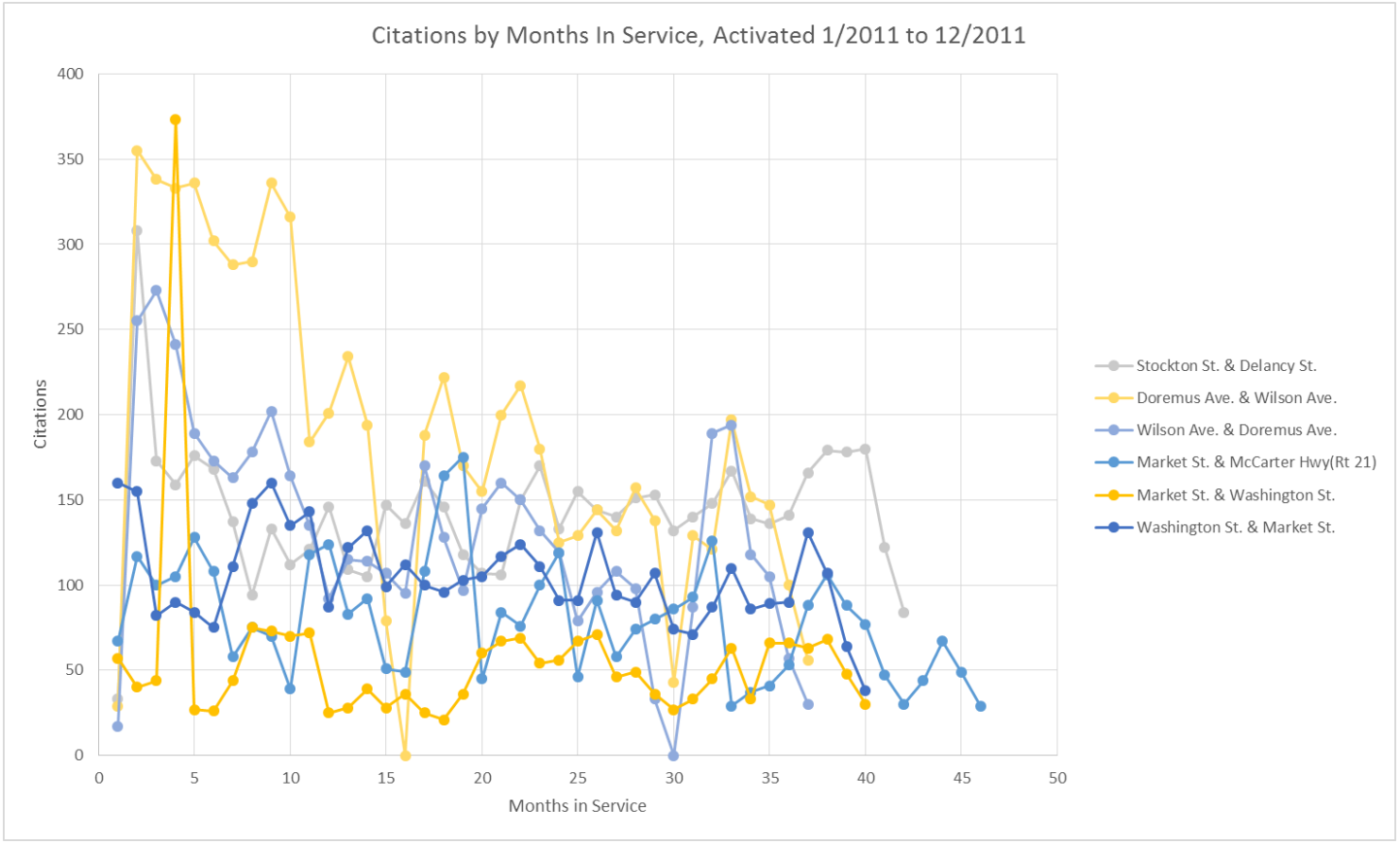

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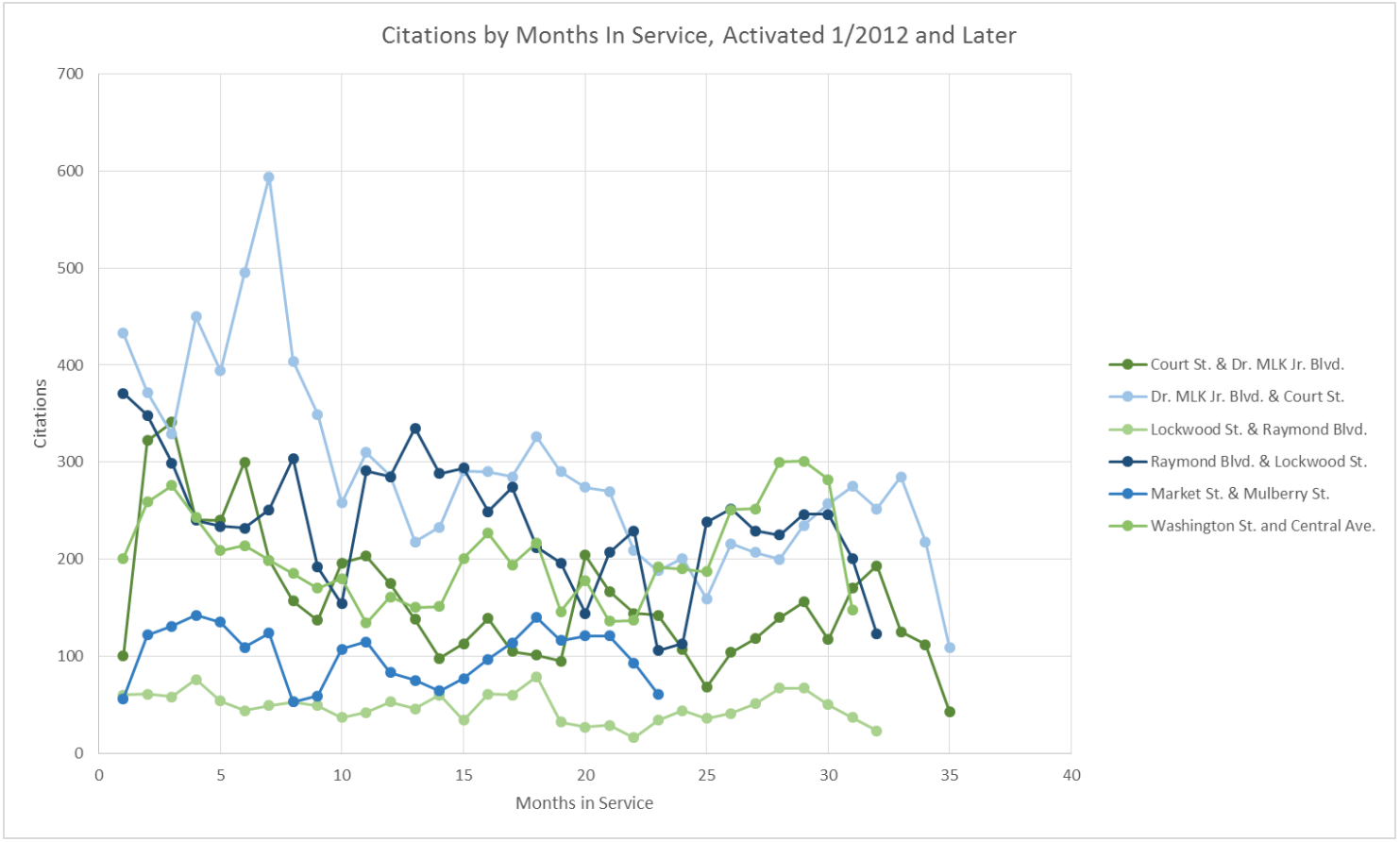

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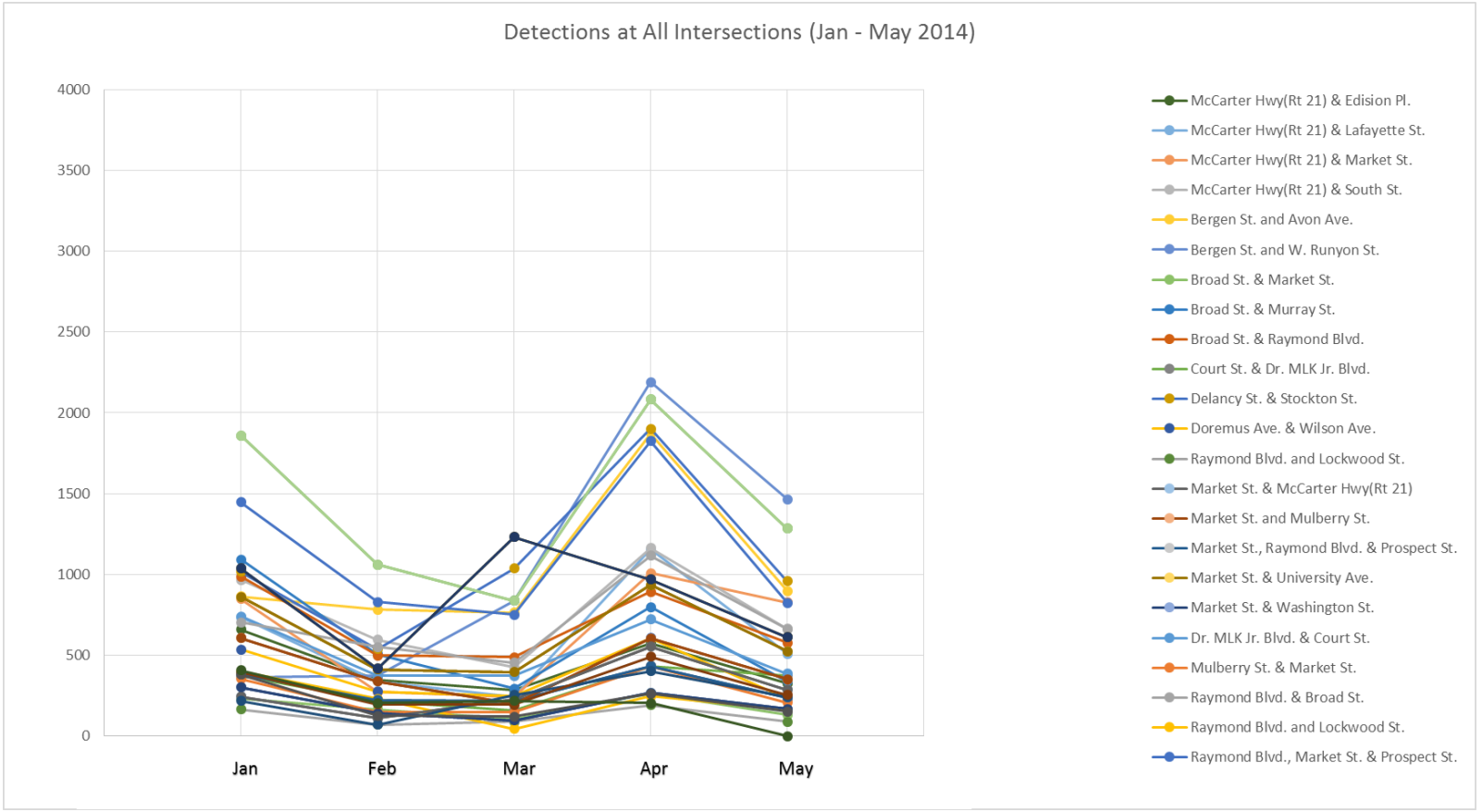

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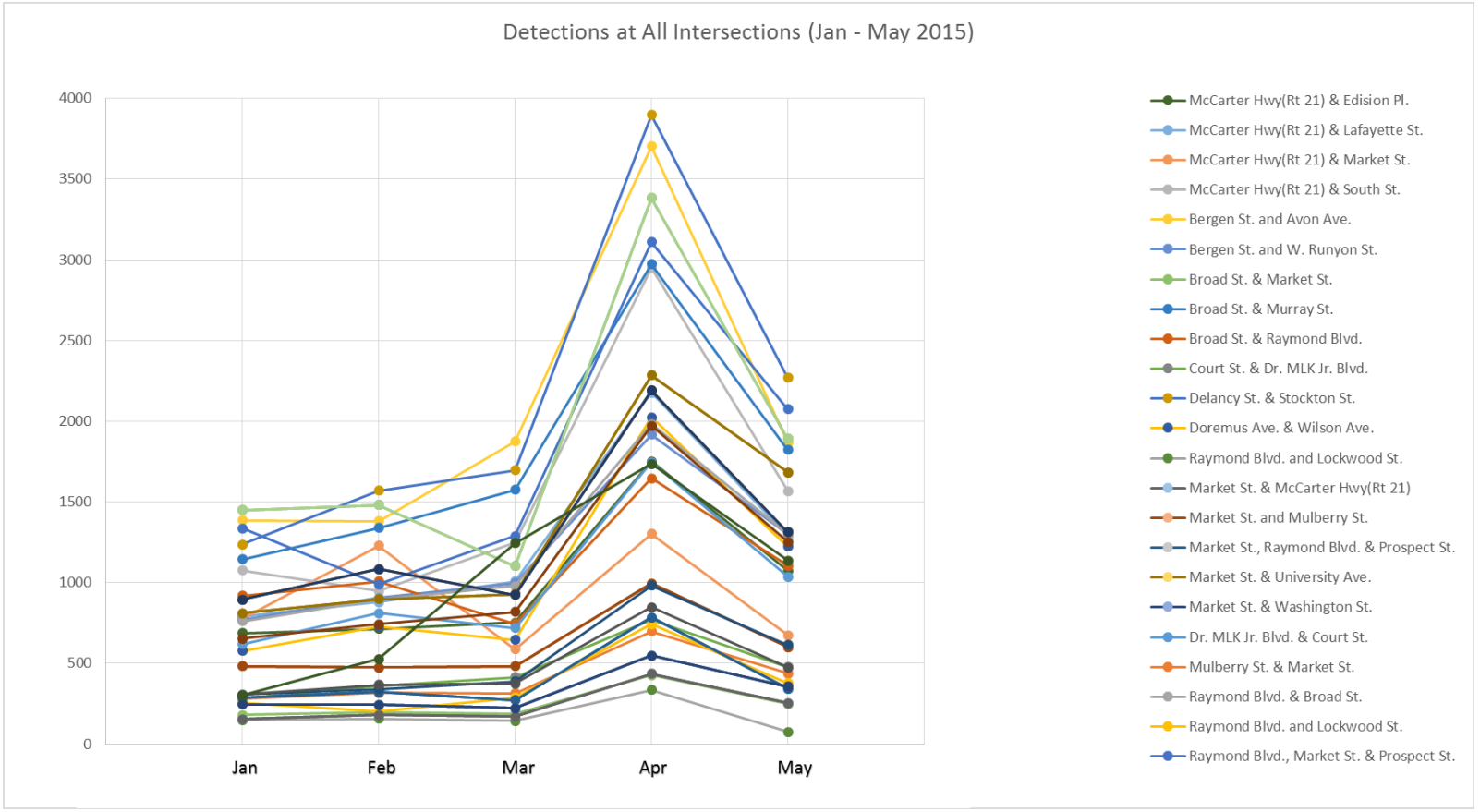

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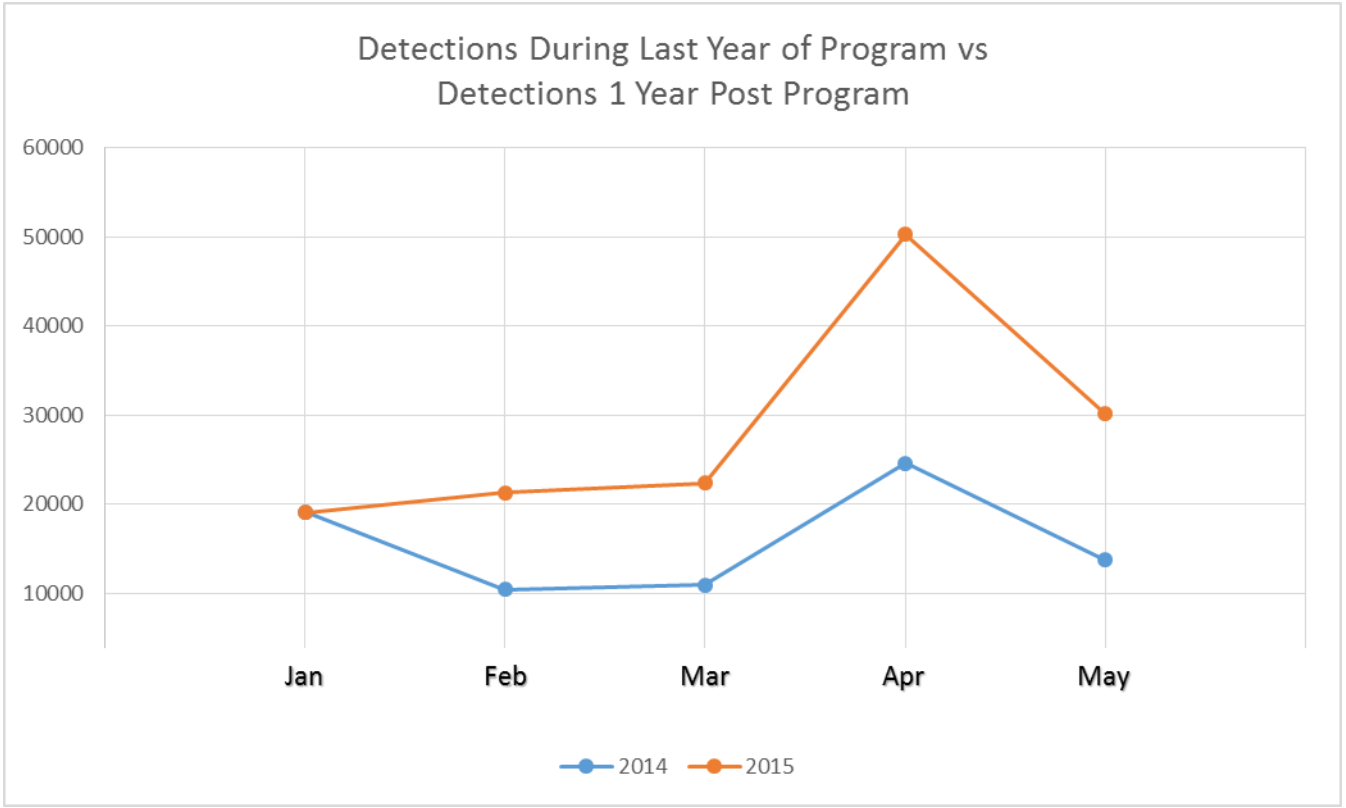

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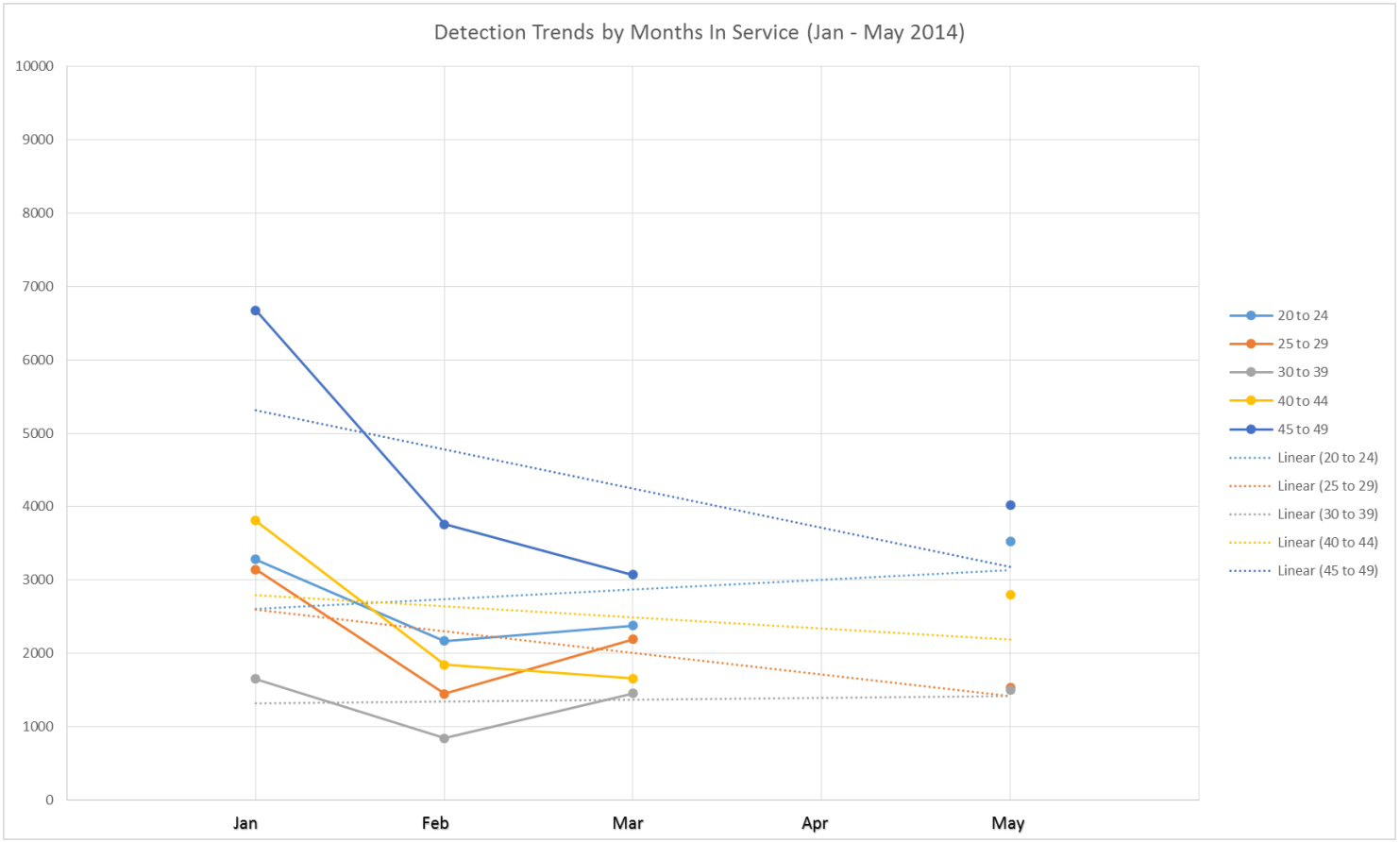

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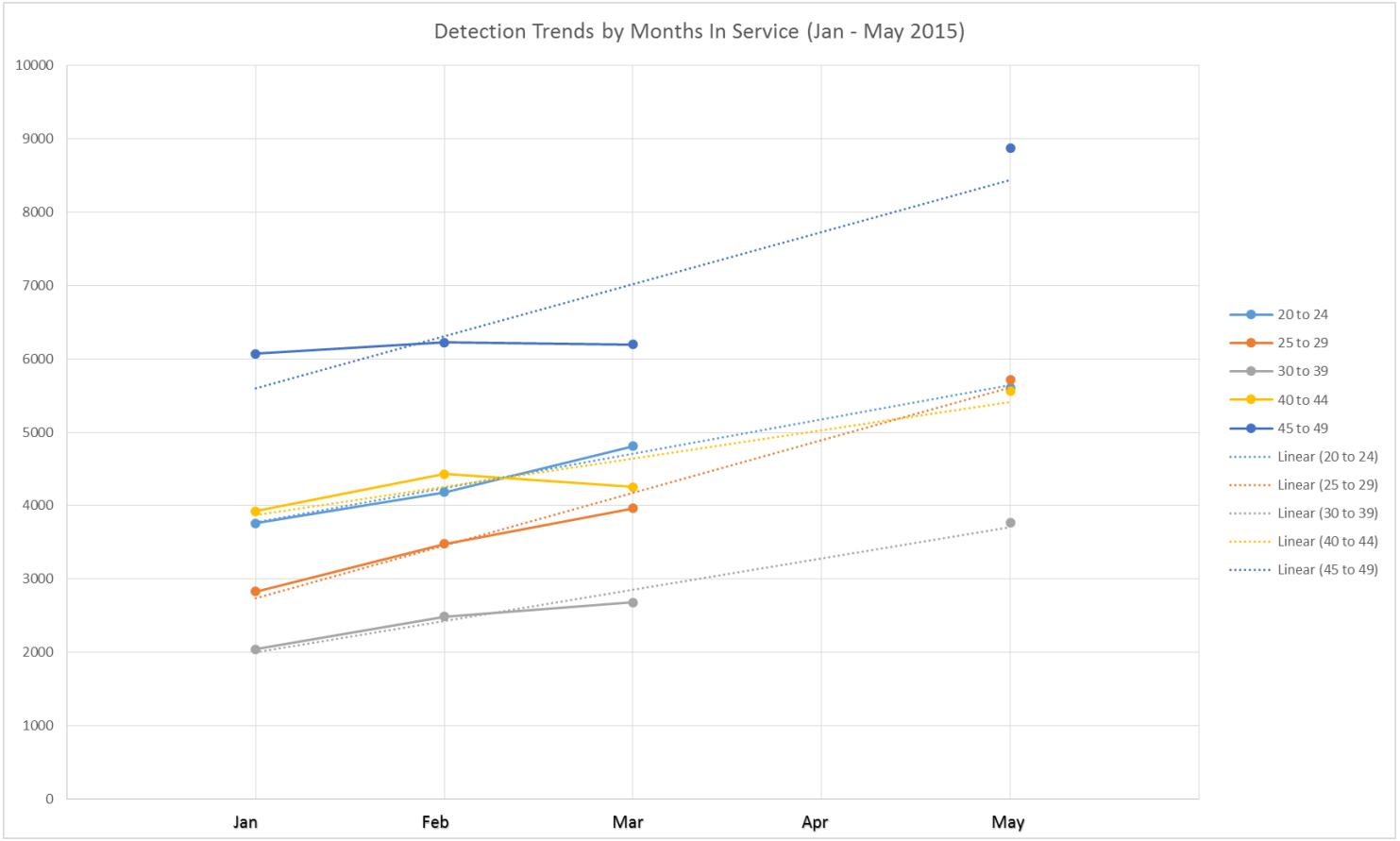

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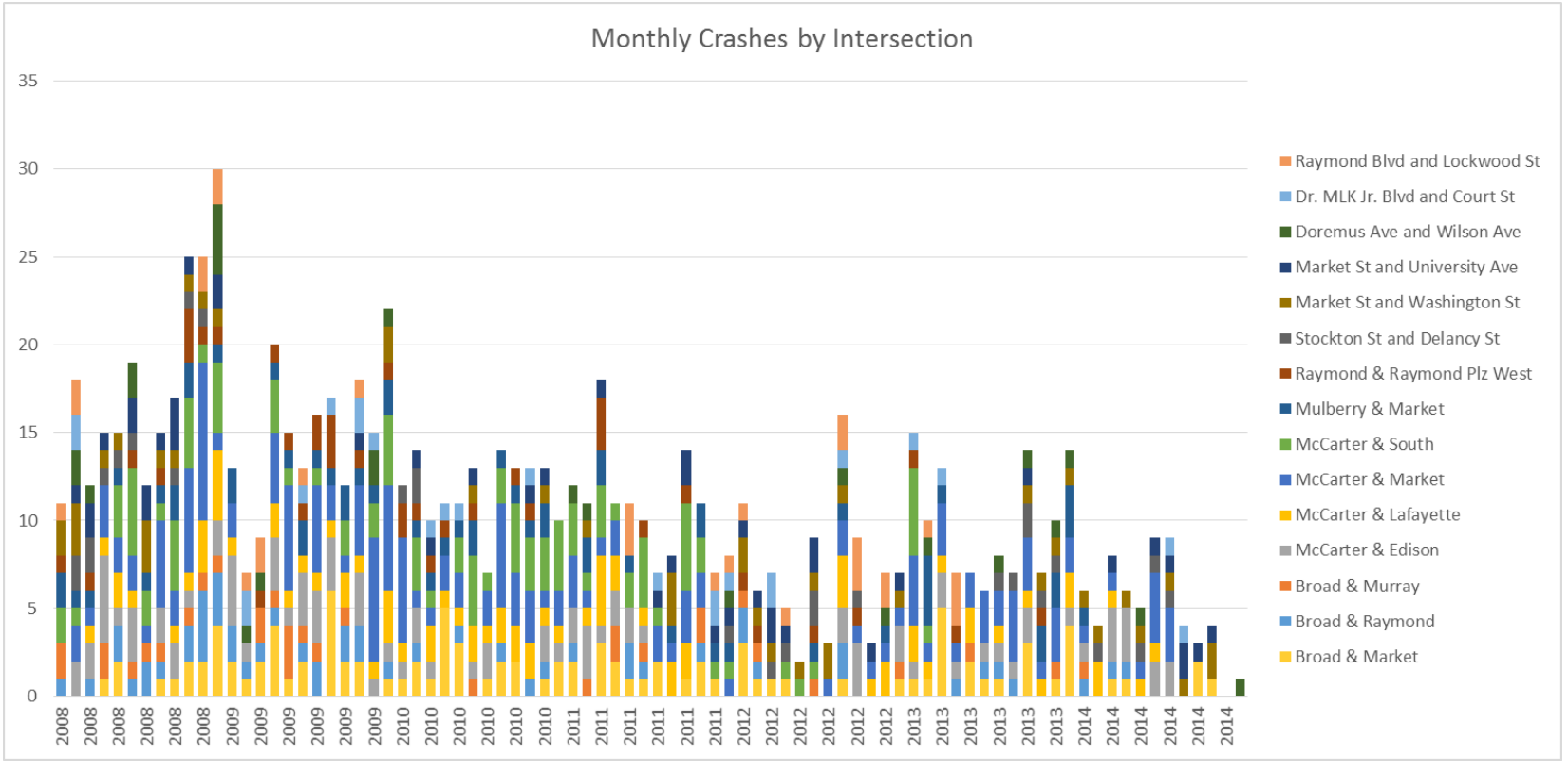

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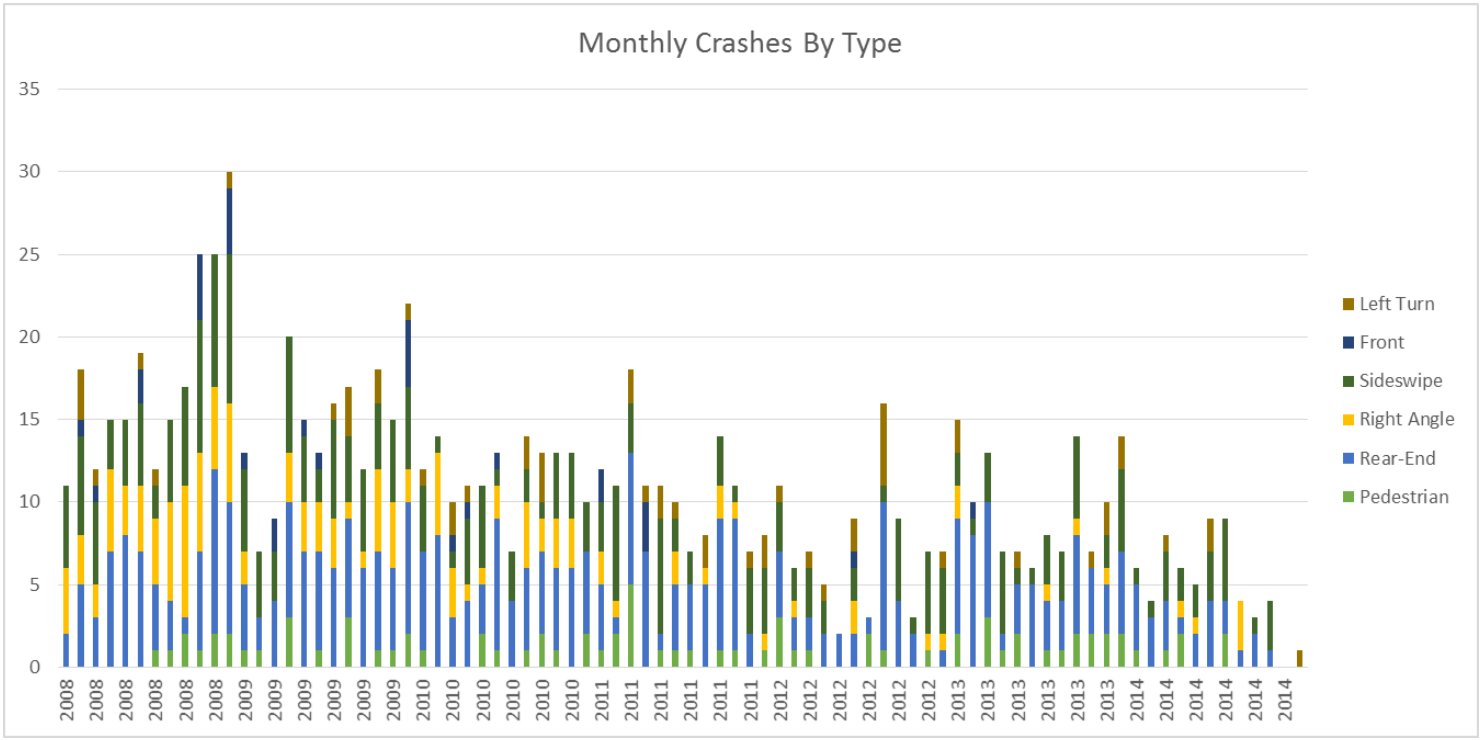

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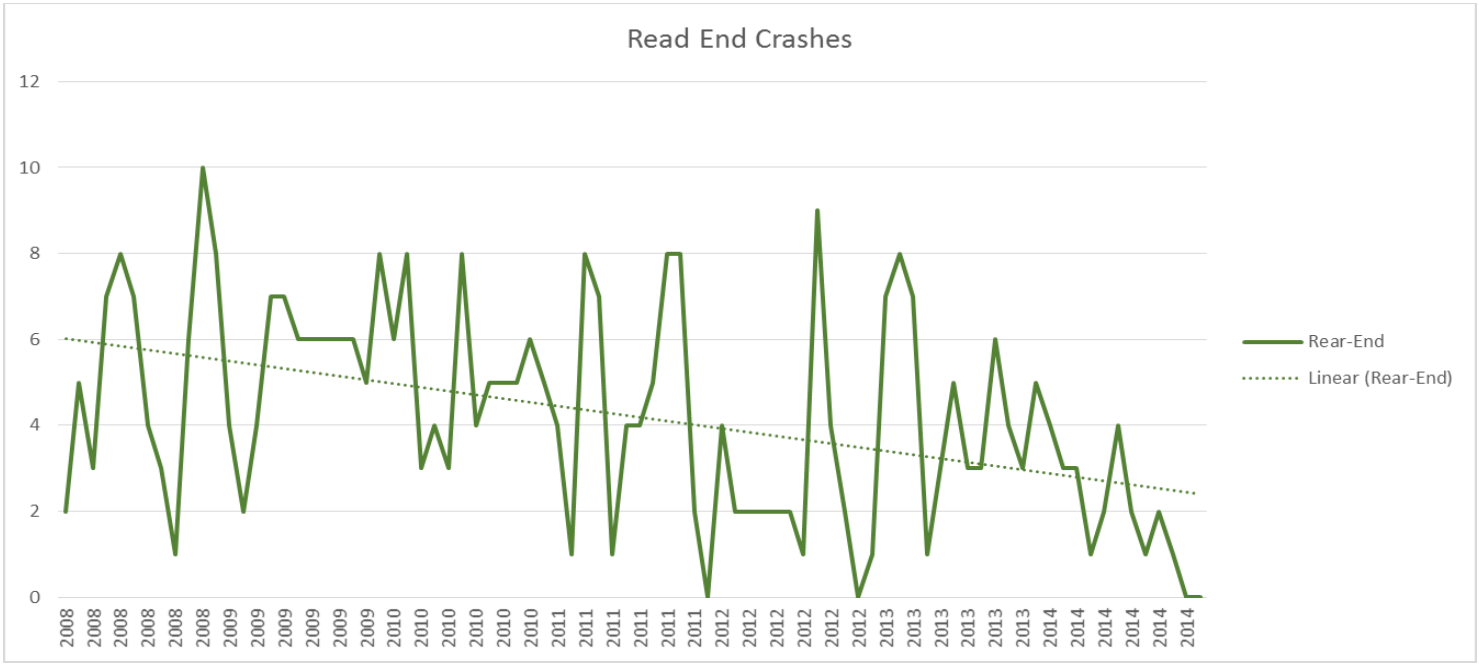

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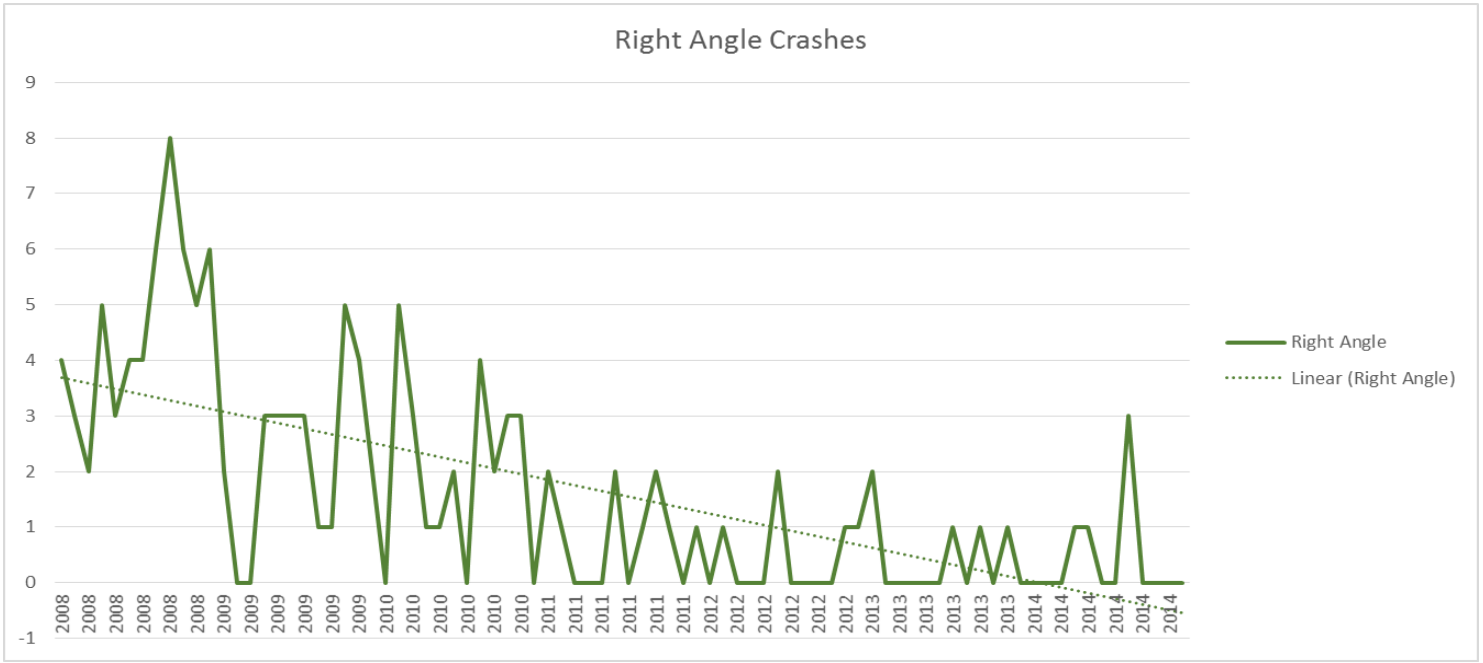

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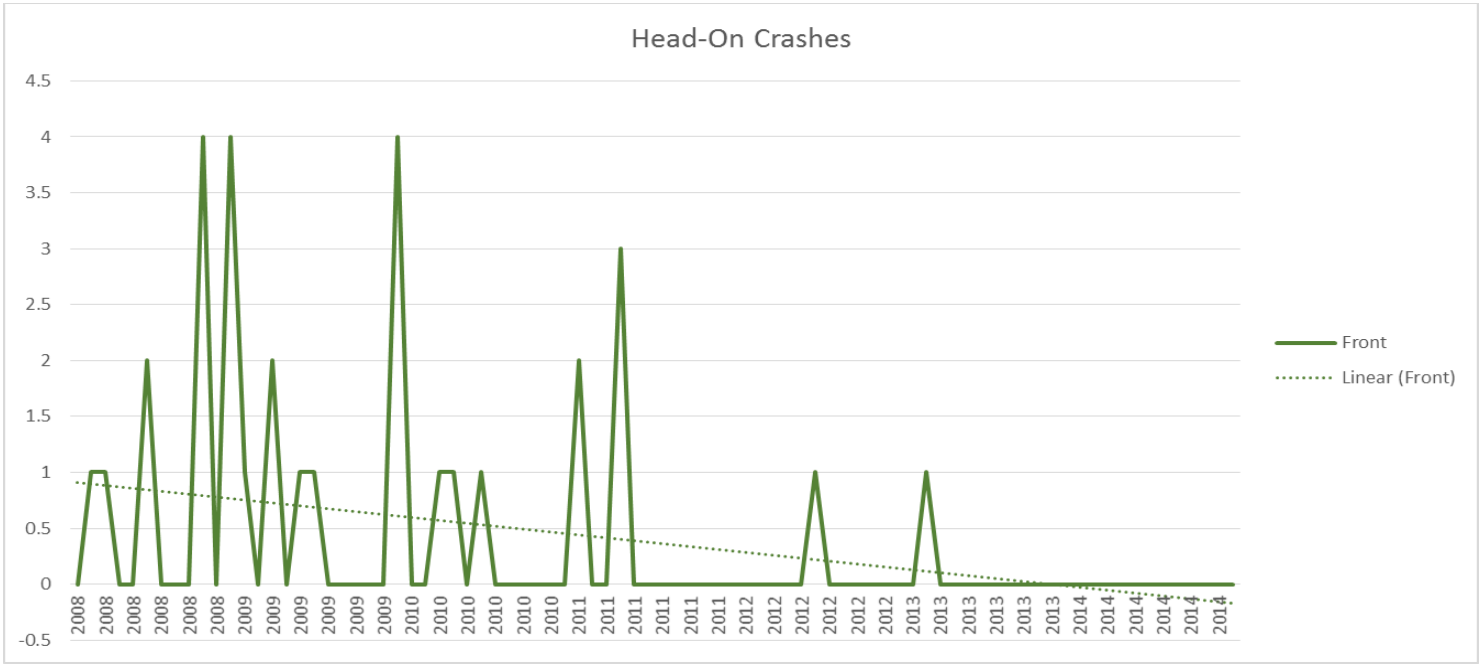

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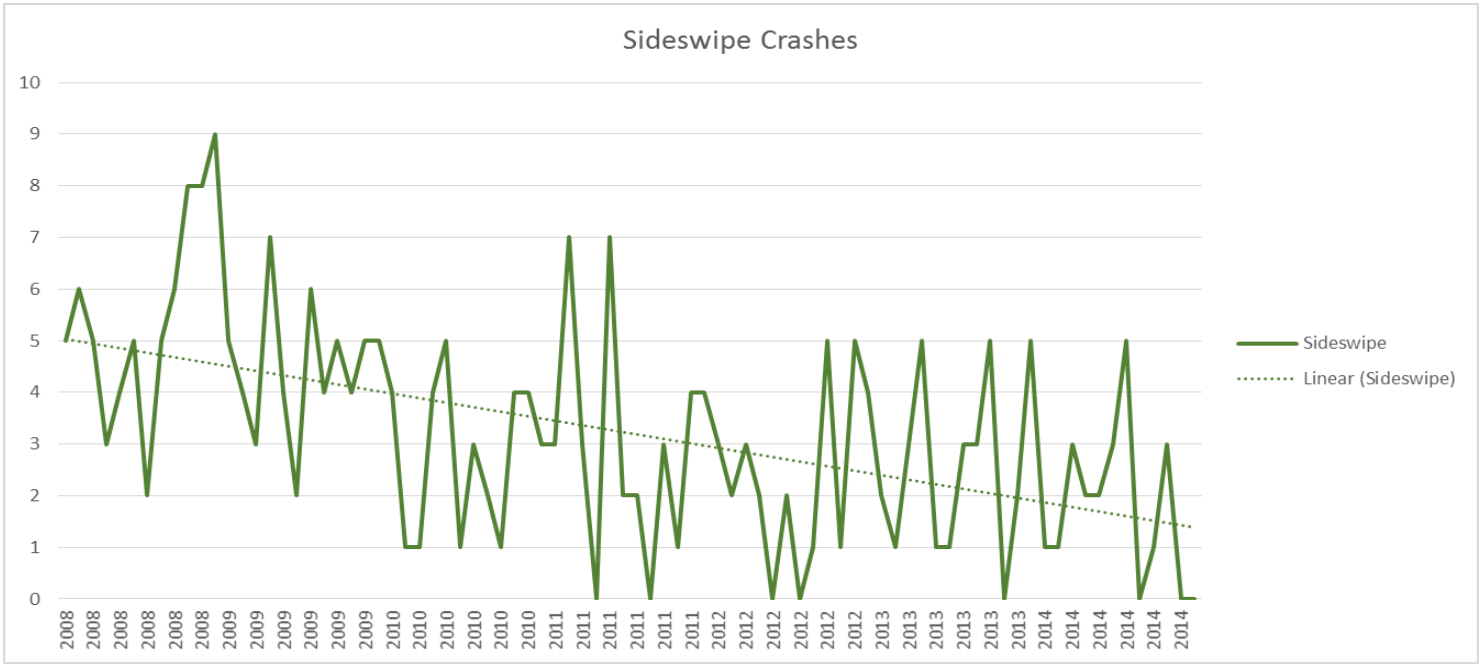

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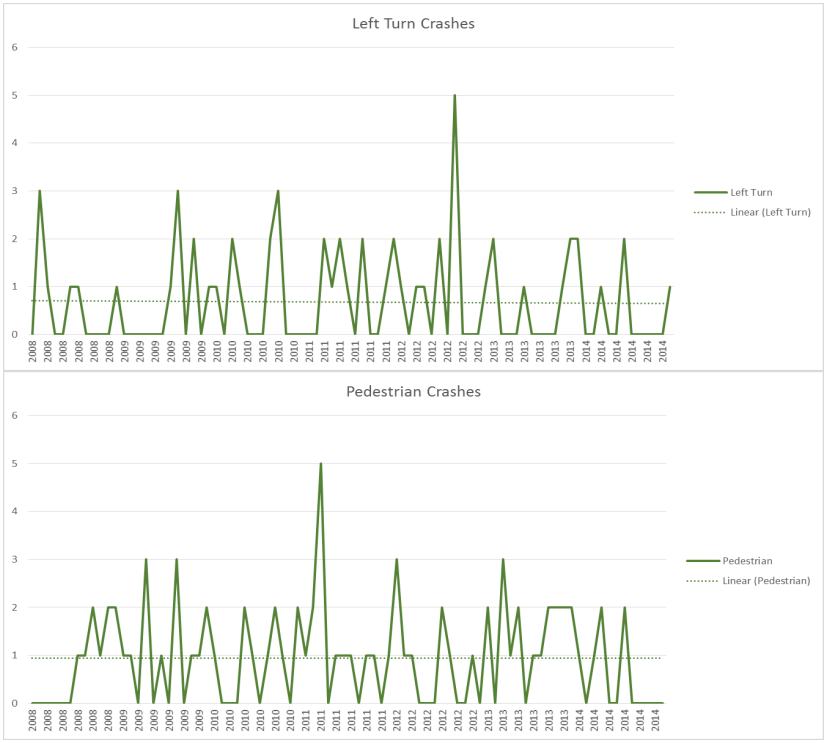

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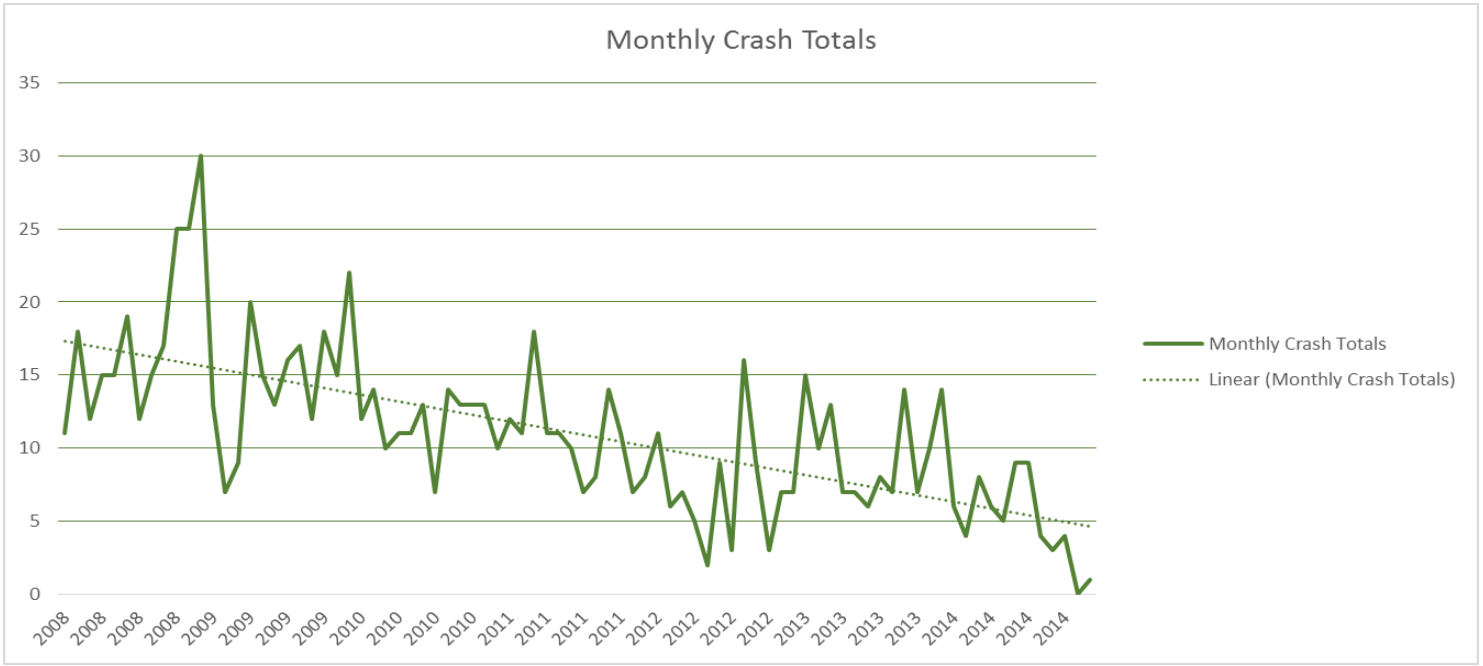

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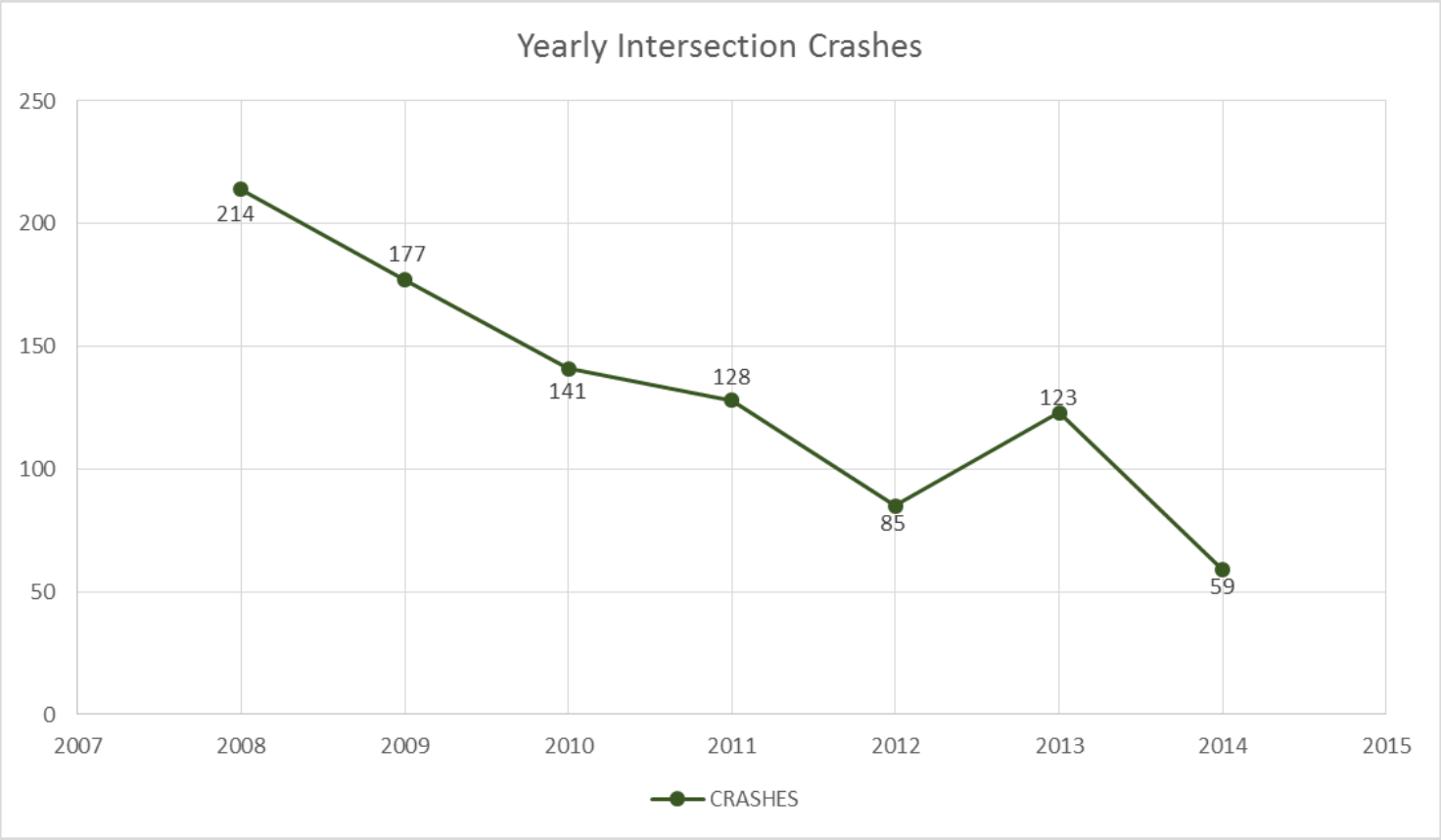


Newark RLR Program

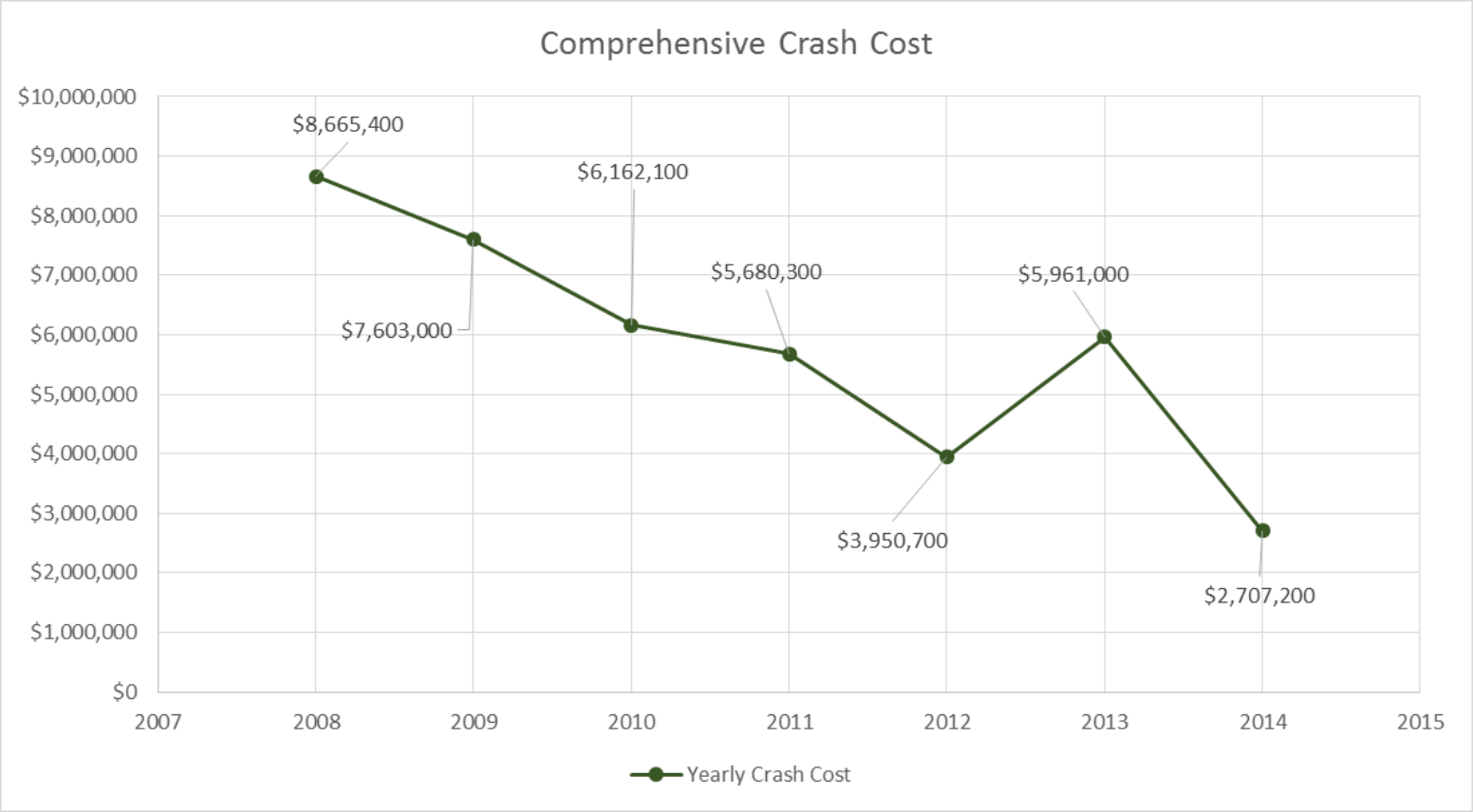
Exhibit A-2: Crash Cost Estimates by Crash Type

Crash Type	Human Capital Crash Costs	Comprehensive Crash Costs
Rear End – Signalized Intersection	$16,700	$26,700
Rear End – Unsignalized Intersection	$10,900	$13,200
Sideswipe/Overtaking	$17,600	$34,000
Angle – Signalized Intersection	$24,300	$47,300
Angle – Unsignalized Intersection	$29,700	$61,100
Pedestrian/Bike at an Intersection	$72,800	$158,900
Pedestrian/Bike Non-Intersection	$107,800	$287,900
Head-On – Signalized Intersection	$15,600	$24,100
Head-On – Unsignalized Intersection	$24,100	$47,500
Fixed Object	$39,600	$94,700
Other/Undefined	$24,400	$55,100

Source: Crash Cost Estimates by Maximum Police-Reported Injury Severity within Selected Crash Geometries, FHWA - HRT - 05-051, October 2005.

*Based on Highway Safety Manual,1st Edition, Vol. 1, Table 4A-2

Newark RLR Program



*Based on Highway Safety Manual,1st Edition, Vol. 1, Table 4A-2

NJ RLR Program

- Documented positive safety results in Newark
- Similar results from around the State at other locations
- NJ's experience similar to those around the country
- Support from both law enforcement & the traffic engineering community as a viable safety tool

NJ Lessons Learned

- Dedicated DOT Staff
- 1 Central Unit for Administration
- Locations established under the SMS (crash priority)
- Specific citation in Statute
- Analysis of crashes beyond RA, RE (pedestrian, left-turn)
- Consistent criteria (ex: intersection area of influence)

Food for Thought

- Use of Technology for Enforcement Absent Law Enforcement Personnel
- Public Understanding & Acceptance
- Champions & Legislative Support
- Revenue Generation

Contact Information

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