REQUEST FOR PROPOSAL

City of Dublin, Ohio

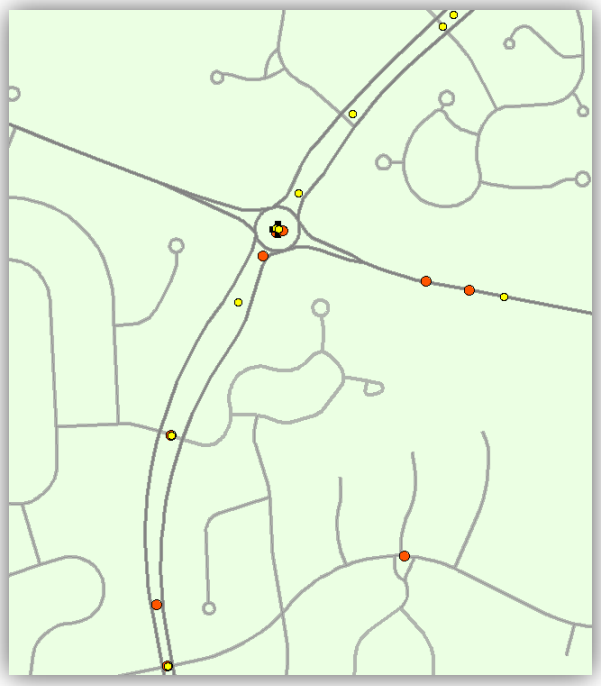
Division of Engineering

Crash Location Refinement and Analysis Enhancement

EXECUTIVE SUMMARY

The City of Dublin is requesting proposals to refine existing graphical crash data and provide enhanced reporting summaries on the citywide three year crash statistics. The study will be funded by the City of Dublin.

As such, the City would like to hire the professional services of a consulting firm to refine existing graphical crash data and provide enhanced reporting summaries. The City of Dublin, Division of Engineering is hereby requesting a PROPOSAL from selected, multi-disciplined, professional engineering consulting firms. The majority of the design professionals involved with the project must be located in Central Ohio. The selected firm will provide the professional engineering services for this project in accordance with the Project Description and Scope of Services described below.



Crash Analysis Program

City of Dublin

1.0 PROJECT DESCRIPTION

1.1 The data refinement shall include three-years of crash history. The consultant shall adjust graphical crash locations from single centerline mapping to a centerline in each direction for divided roadways.

1.2 The consultant shall provide a process for mapping new crash data onto the updated linear based referencing system (LBRS) system, working from the existing system the City has in place. The consultant will train City staff on the process.

1.3 The consultant shall review the existing three-year reporting summaries and citywide count data to provide enhanced reports. The consultant will train City staff to run these reports in future years.

1.4 A detailed project schedule is required with submission of proposal. The project schedule must include dates for key tasks and the overall completion date. The consultant must demonstrate the ability to meet their proposed schedule.

1.5 The consultant will provide written project status updates on a weekly basis via e-mail.

1.6 Meetings:

- Project kickoff meeting
- Interactive review with the City is anticipated with a maximum of four (4) meetings with the City to obtain refined crash locations and updated mapping process
- Three (3) additional interactive meetings are anticipated to obtain enhanced reports and report processing

2.0 CRASH LOCATION REFINEMENT

2.1 Existing Mapping. The existing crashes are mapped in ArcGIS to a linear referencing system (LRS), generally using a single centerline to define a roadway, starting with a zero value at the south or west end of a route. Crashes are located either by street address or, more commonly, their distance away from an intersection. The mapped dataset contains roughly 800 crashes per year. About 50 of these crashes per year are located based on street address, while the balance is located based on their distance from an intersection along the LRS.

2.2 Existing Dataset. The existing crash records are maintained in an Access database. The database includes a record for each unit involved in the crash. The mapping carries only the record the officer assigns as unit-one in the field. All of the fields associated with unit-one are carried to the mapping. Data processing occurs once per month.

2.3 Three-Year History Mapping Update. The consultant shall transfer three-years of crash history from the existing mapping system to the updated LBRS

centerlines, providing a location snapped to the LBRS centerline and associated with an NFLID and a new LBRS milepost. For existing single centerline LRS routes that change to divided LBRS routes (cardinal and non-cardinal), the crash must be located to the LBRS centerline nearest the actual crash location. The LBRS centerline file will be provided by the City. All data fields must be maintained. The consultant shall provide this information to the City as a file geodatabase, point feature class compatible with ArcGIS 10.3.

2.4 Mapping Process Update. The consultant shall provide a process for the City to map new crash data to the LBRS centerlines. The process must be based on the existing database and mapping formats. The consultant will train City staff to conduct the mapping process for future months.

3.0 ANALYSIS ENHANCEMENT

3.1 Existing Summary Maps. Each month, citywide maps are generated displaying public property crash locations from one month of data and for the year-to-date data. After each calendar year of data has been processed, maps are generated displaying the three-year frequency and crash rate of intersection crashes and the three-year segment crash rate. The intersection crash frequencies are also displayed on maps distinguishing higher and lower intersection controls. See attachments for examples.

3.2 Existing Tabular Summaries. Along with the three-year summary maps, tabular reports are produced annually from the Access database. These reports include three-year intersection summaries by crash type, crash severity, bicycle/pedestrian involvement, a snapshot of yearly crash totals, and an intersection summary ranking intersections by combining these factors along with the crash rate. See attachments for examples.

3.3 Analysis Enhancement. The City is looking to improve on these existing maps and reports. The consultant should determine additional relevant information from crash data and traffic counts to develop clear, concise graphics and/or datasheets that identify dangerous trends and patterns that could be reduced or reversed. For example, a map could be developed that indicates trending by something more than the crash frequency. A minimum of three (3) enhancements should be included in the proposal. The consultant shall provide a process for the City to reproduce these reports in future years. The process must be based on the existing database and use software available to or compatible with City owned software programs. The consultant will train City staff to produce the reports for future years.

4.0 TECHNICAL REQUIREMENTS

4.1 The crash history transfer files must be compatible with ArcGIS 10.3.

4.2 Individual crash records for each involved unit are and must continue to be stored in Microsoft Access.

4.3 In addition to the software above, the following programs are also available to the City for potential reporting purposes:

- Microsoft Office Word, Excel, PowerPoint, Publisher, Visio
- Adobe Illustrator
- AutoCAD 2014

5.0 TIME OF COMPLETION

5.1 The Consultant affirms that time is of the essence regarding the execution of this project and furthermore accepts the City's commitment to meet the following timeframes.

- November 6, 2015: Three-year history mapping update to be delivered
- December 4, 2015: Mapping process update to be delivered with training for City staff
- March 11, 2016: Analysis enhancement to be delivered with training for City staff

Therefore, the Consultant commits to work with the City to perform their professional engineering services expeditiously.

5.2 Failure of the Consultant to comply with the above-established deadlines will jeopardize consideration of the Consultant for providing professional engineering services on future City projects and may be used as cause to reject future proposals submitted by the Consultant to the City.

6.0 PROPOSAL CONTENT

Evaluation of the Proposals and ultimate selection of the consultant shall be based on the following criteria:

6.1 Firm and Individual Qualifications

- The competence of the firm to perform the required services as indicated by its background and experience on similar projects. Consultant should list and describe no more than five (5) projects that best demonstrate their experience on similar projects and additionally provide the Estimated Construction Cost and the Final Construction Cost of each project.
- Technical qualification, training, education, and experience of the offerer's principals and key technical personnel who would be assigned to perform the work. Resumes shall only be included in the Proposal for those individuals who will actually be involved in

the project and assisting in the performance of the work. No other resumes shall be included.

- Name and experience of principal responsible for the work.
- Name and experience of project manager who would be responsible for managing the project for the Consultant and would be the primary contact with the City during the progress of the work.
- Name and experience of engineers and/or technicians who would be assisting in the performance of the work.
- Name and experience of key personnel from all subconsultants who would be assisting in the design and completion of this project.

6.2 Capacity to Perform the Work

- Consultant's statement of understanding of and approach to the Scope of Services and other requirements relating to performance of their work. The project understanding and approach needs to cover all elements through final design.
- The capacity of the firm to perform the required services competently and expeditiously to meet proposed schedules as indicated by the firm's size and availability of necessary personnel, subconsultant(s) availability, current workload, and equipment and facilities.

6.3 Time of Completion

- The demonstrated commitment of the firm to perform the work expeditiously and without delay.
- The ability of the firm to meet the Time of Completion as outlined in Section 5.1.

6.4 Compensation

- All professional services will be provided on cost plus fixed fee. Fees for additional items, as requested and authorized, will be established separately. The proposed cost plus fixed fee will be based on completion dates outlined in Section 5.1. Failure to submit fee proposal may cause the City to reject Proposal for this project.

6.5 References

- Quality, responsiveness, timeliness, and cost of work previously performed and completed for the City or other municipalities.
- Completeness of thoroughness of work performed. Accuracy of previous estimates of professional fees and estimated construction costs relative to final construction costs.

- Capabilities of key technical personnel who are assigned to perform and complete the work.
- Capabilities of key technical personnel from all subconsultants who are assigned to perform and complete the work.
- The ability of the consulting firm to meet schedules and deadlines.
- The ability of the consulting firm to control costs and meets budgets.
- Overall communication and cooperation of the consulting firm and its principals and key technical personnel with the client.

7.0 PROPOSAL REQUIREMENTS

7.1 Responding firms shall include in their Proposals all the information that is requested in Section 6, Proposal Content. Firms are encouraged to provide any additional information they feel will further demonstrate the firm's qualifications and abilities to acceptably complete this project but are hereby instructed to limit such additional information to that which is directly relevant to the services being requested.

7.2 The Proposal shall not exceed twenty-five (25) pages. Any superfluous information included not relevant to the services being requested only lengthens the review of a Proposal and could certainly detract from the true merits of the Proposal. Two (2) copies shall be submitted.

7.3 Electronic submissions will be accepted. The submission must be compatible with Adobe Acrobat, in a single file, and be formatted to print on standard office paper sizes. No pages shall be larger than 11x17. Fax submissions will not be accepted.

7.4 All material submitted in accordance with this RFP becomes property of the City and will not be returned.

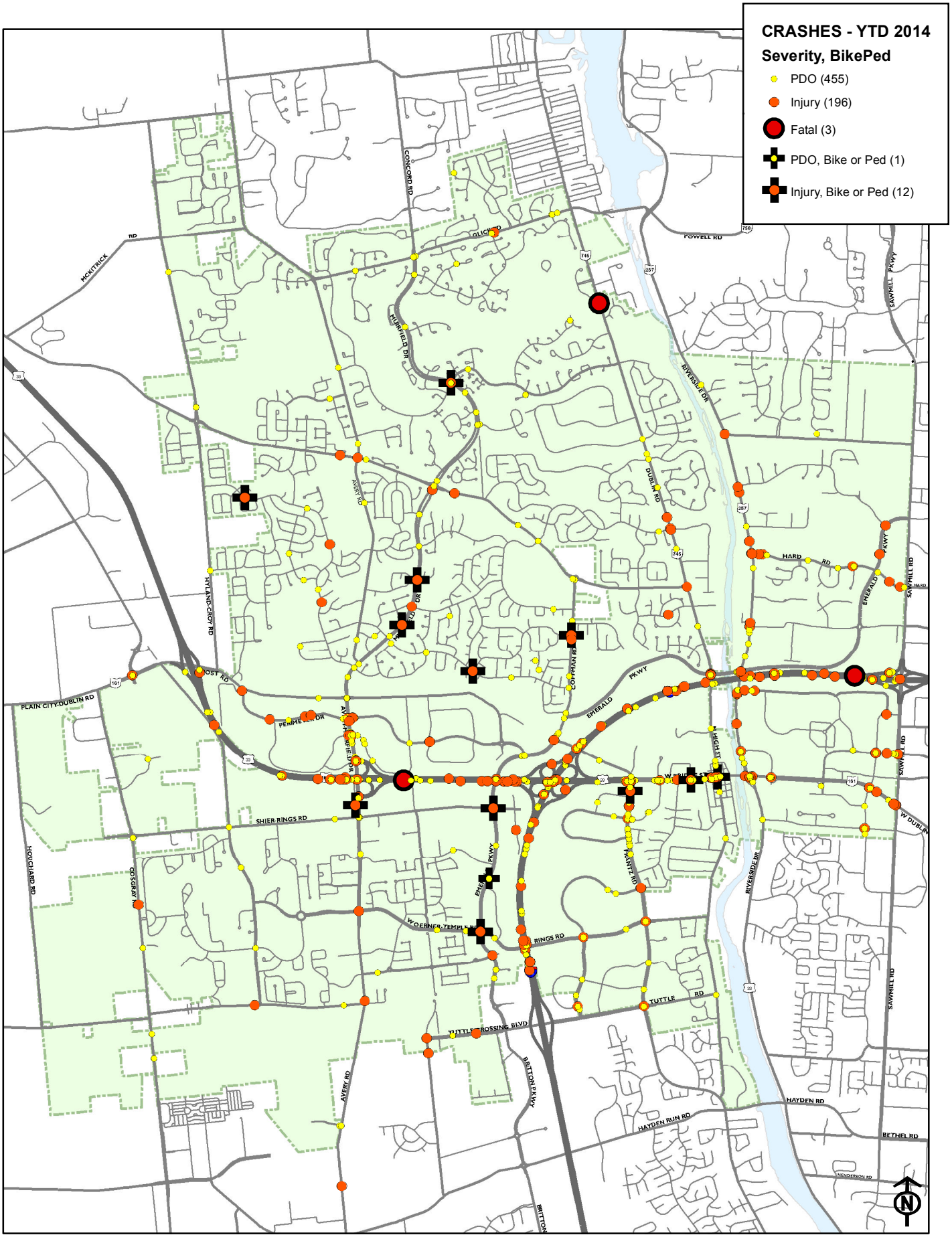
If you have any questions regarding this RFP, please contact Tina Wawszkiewicz, PE, (614) 410-4636; twawszkiewicz@dublin.oh.us. Any other contact with City personnel related to this RFP, prior to the formal selection of the Consultant, is expressly prohibited without the consent of the City's Project Manager.

The Proposal should be submitted to the following address no later than 4:00 PM on August 11, 2015. Proposals received after this deadline will NOT be considered.

Consultants should submit their Proposal to:

Tina Wawszkiewicz, P.E.
City of Dublin, Ohio
Division of Engineering
5800 Shier Rings Road
Dublin, OH 43016

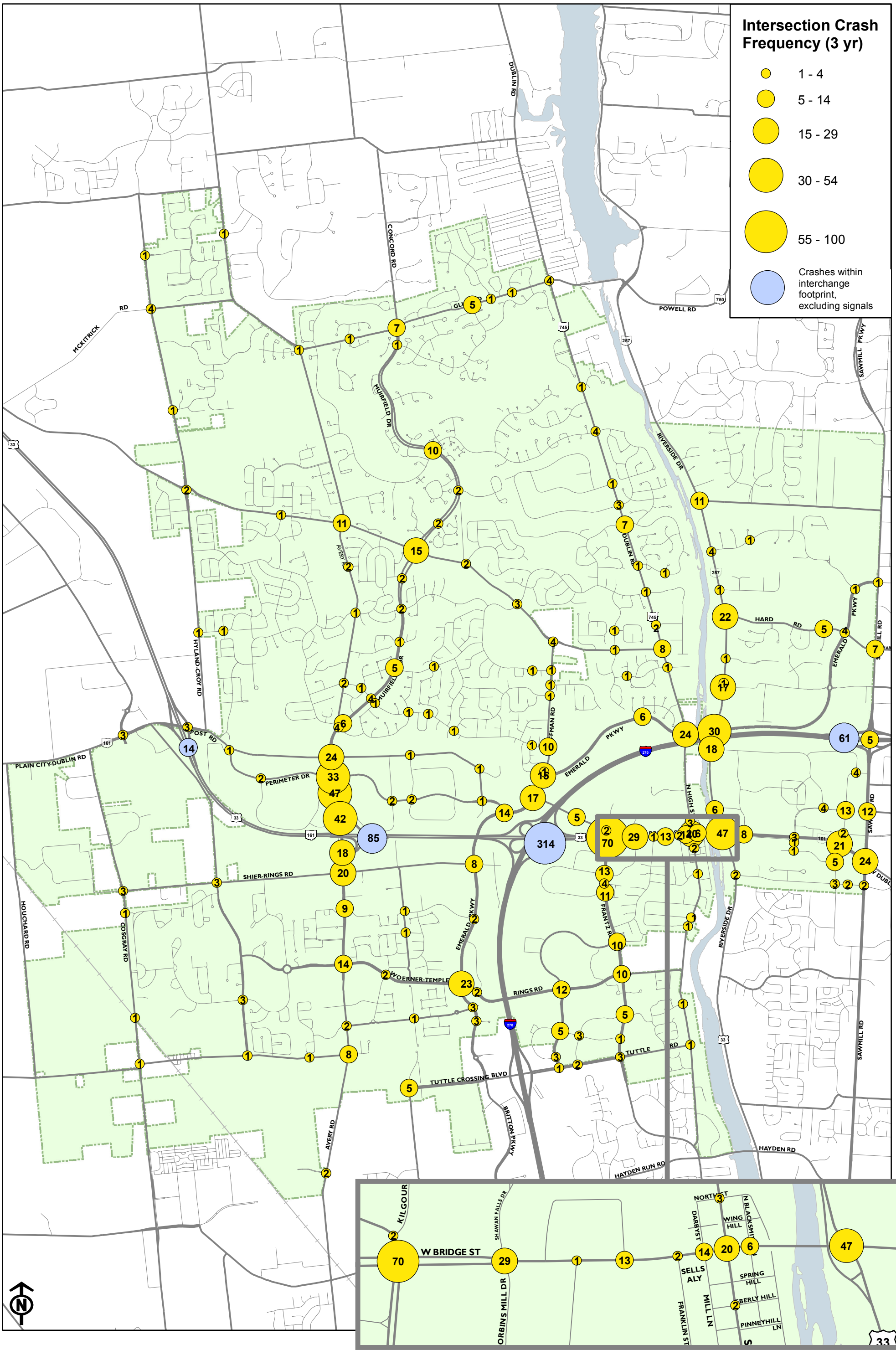
October 2014 Crashes



Year to Date Crashes
January 1, 2014 through October 31, 2014

4,500 Feet

City of Dublin

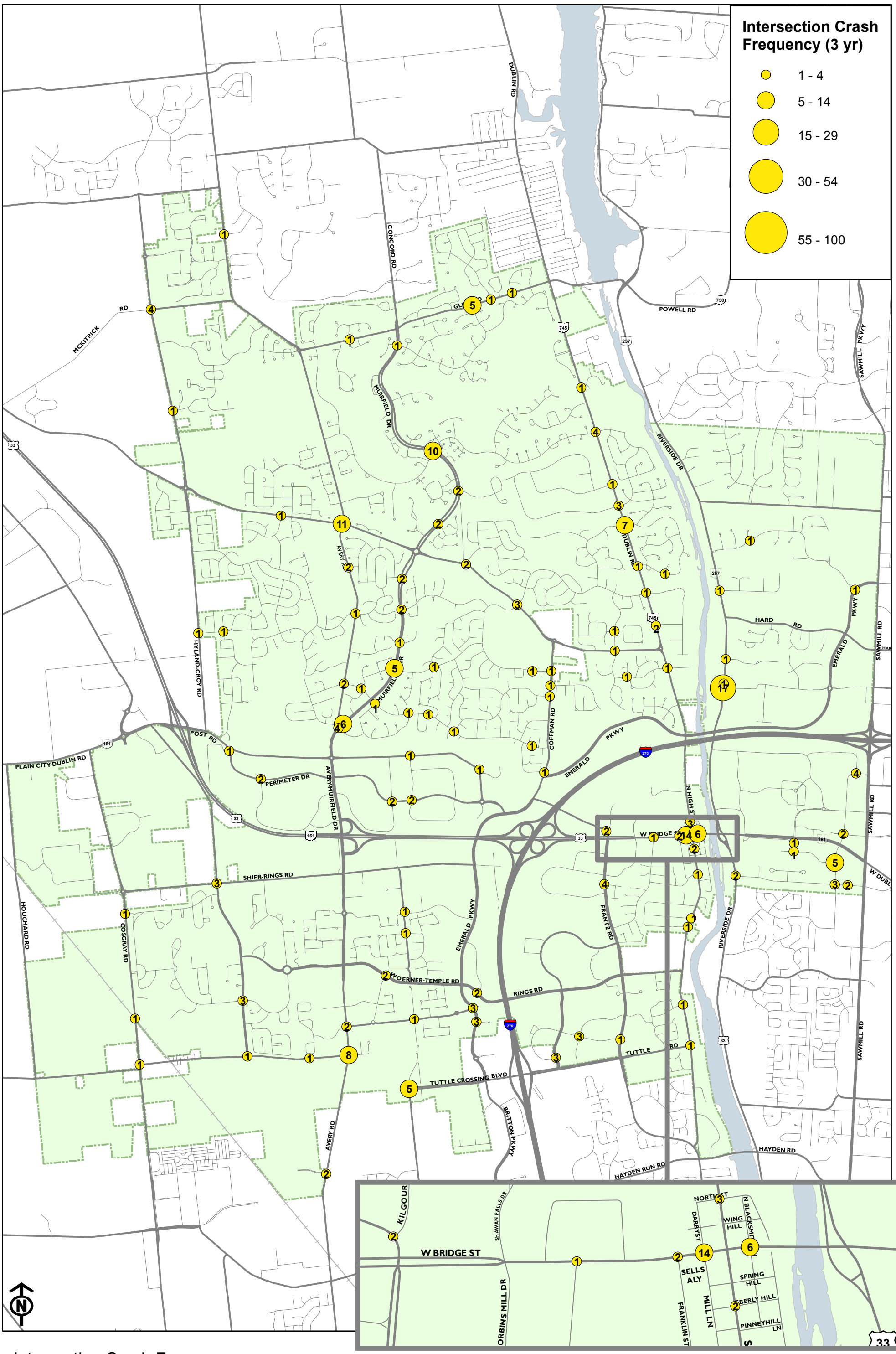


Intersection Crash Frequency
Jan. 1, 2012 through Dec. 31, 2014

City of Dublin

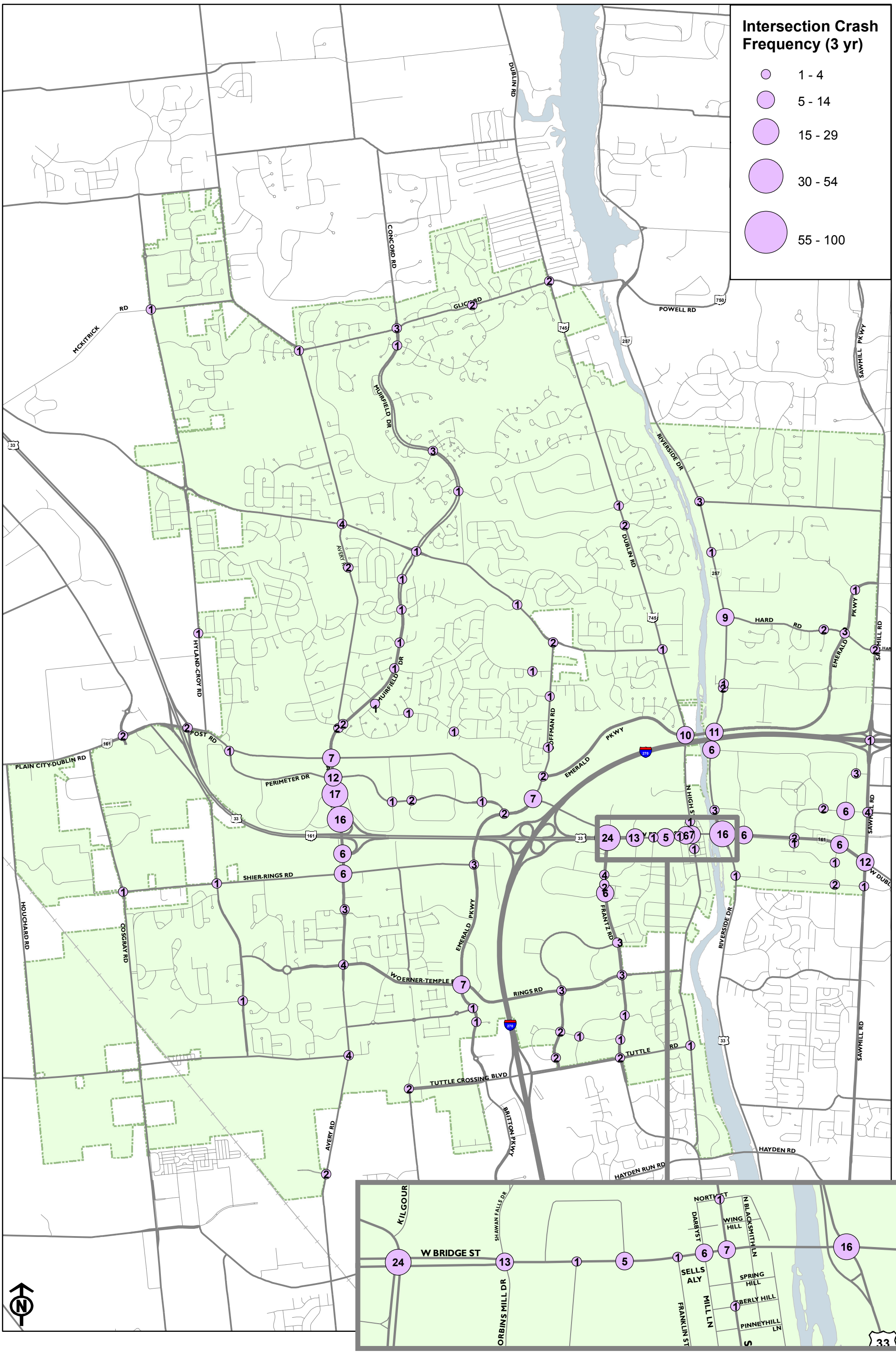
Intersection Crash Frequency
Jan. 1, 2012 through Dec. 31, 2014
Intersections with Heightened Control (Traffic Signal, Roundabout, or Ramps)

City of Dublin



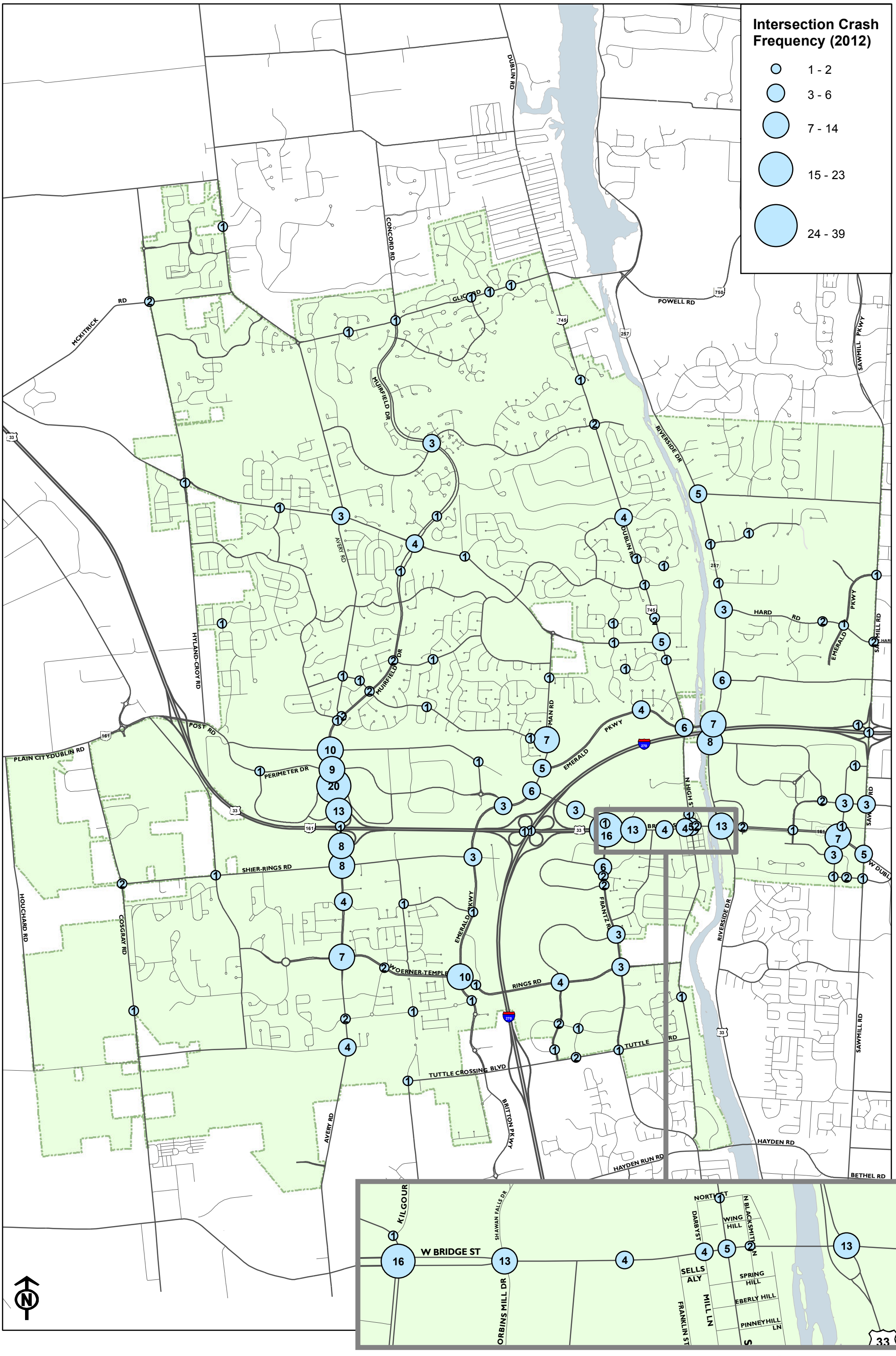
Intersection Crash Frequency
Jan. 1, 2012 through Dec. 31, 2014
Intersections with Lower Control (Stop Signs)

City of Dublin



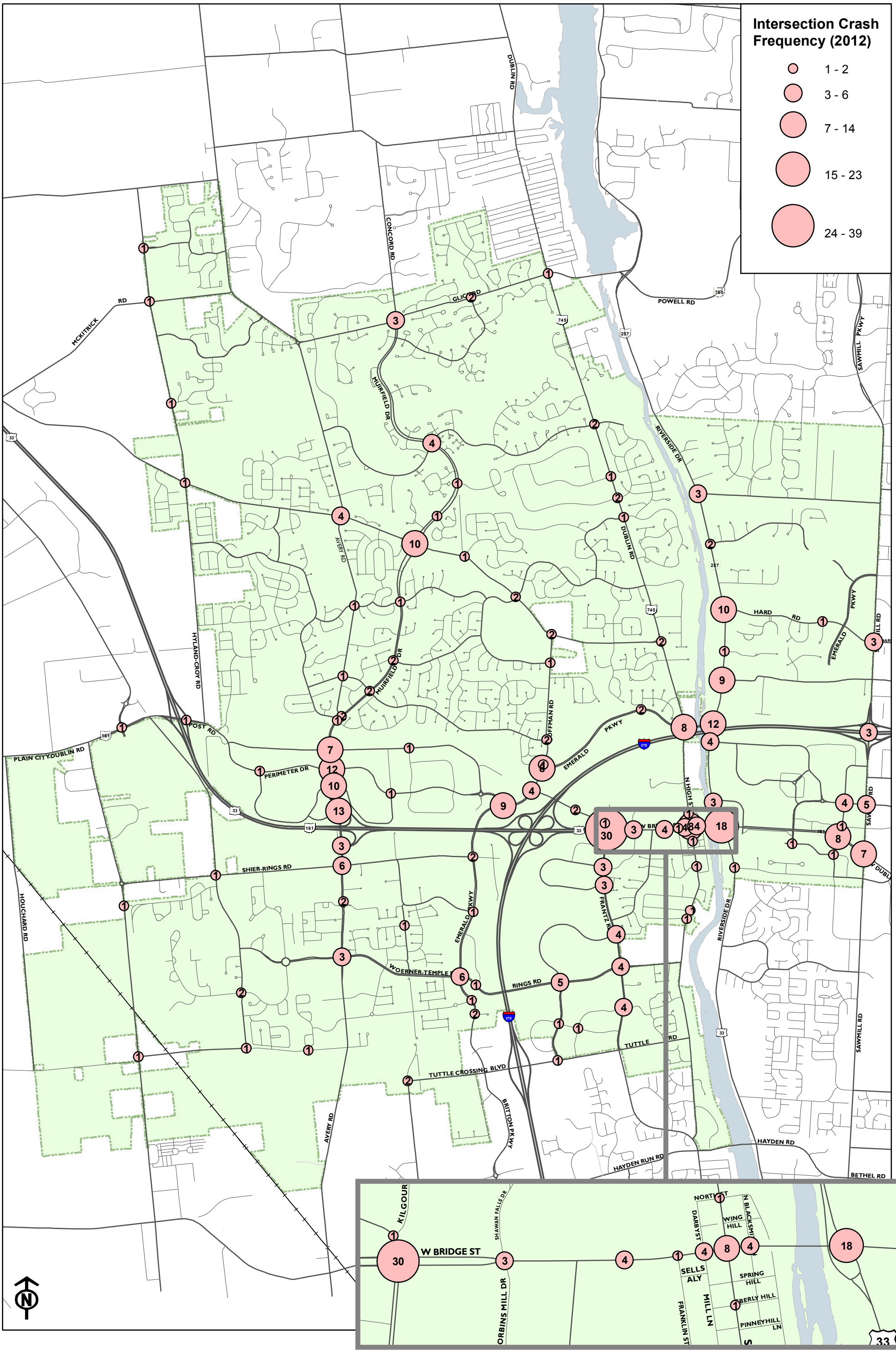
Intersection Crash Frequency
Year 2014

City of Dublin



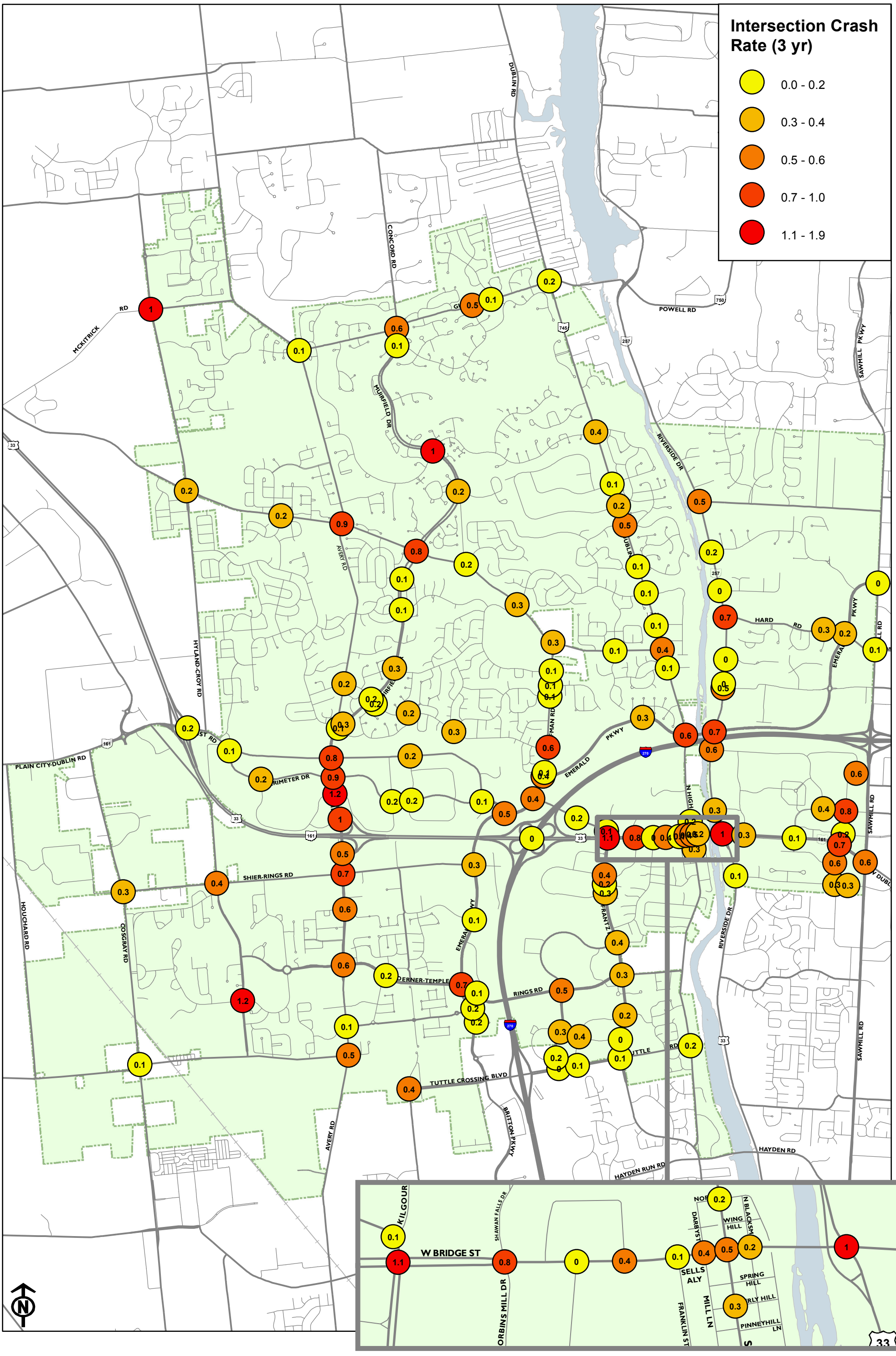
Intersection Crash Frequency
Year 2013

City of Dublin



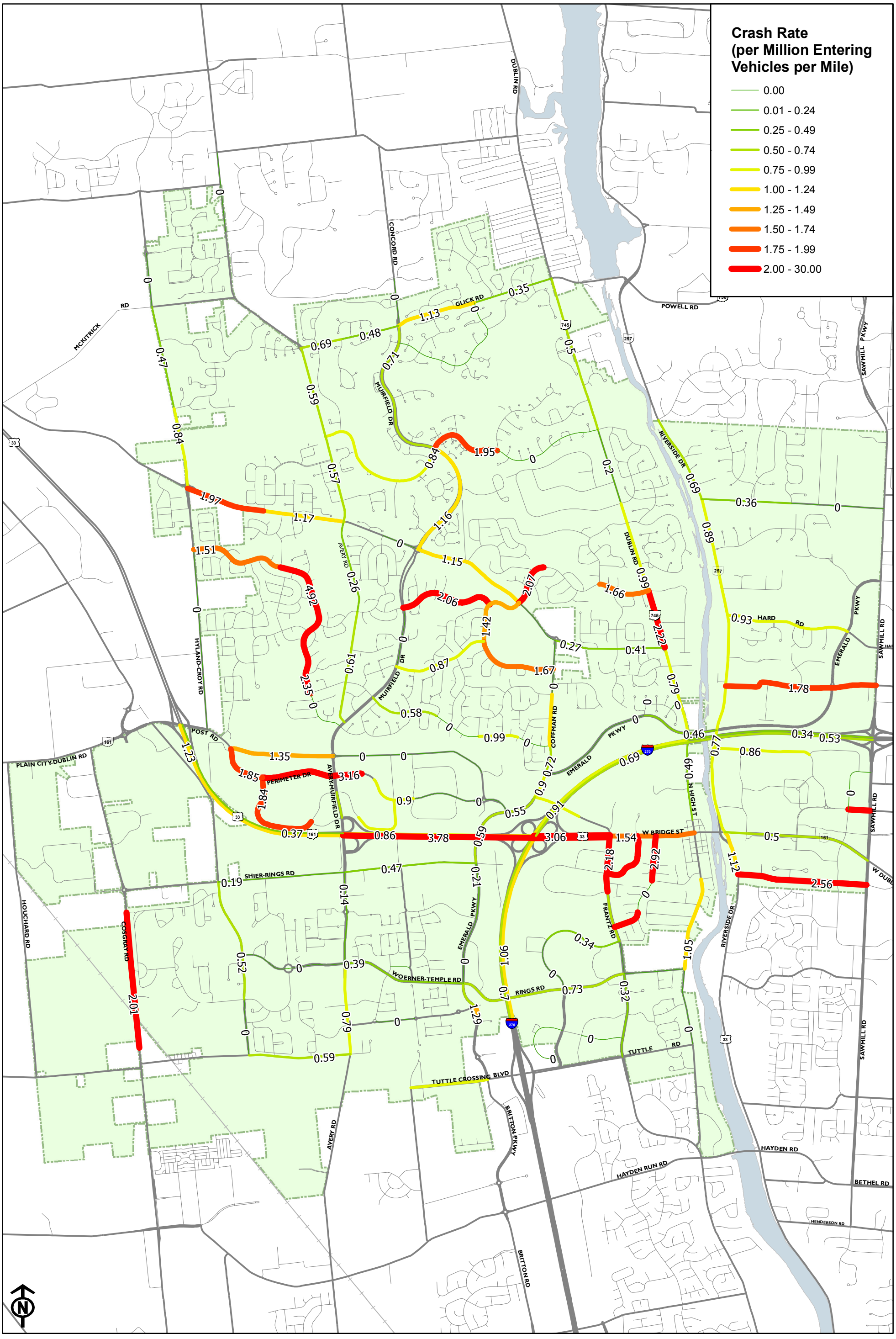
Intersection Crash Frequency
Year 2012

City of Dublin



Intersection Crash Rates
Jan. 1, 2012 through Dec. 31, 2014

City of Dublin



Segment Crash Rates (Locations where counts are avaliable)
Jan. 1, 2012 through Dec. 31, 2014

City of Dublin

Intersection Prioritization

1/1/2012 through 12/31/2014

Points*	Intersection Name	Ped/Bike Crashes	Crashes	Severity Ratio	Crash Rate
135	US 33/SR 161 & Post Rd/Frantz Rd		70	0.23	1.07
123	Avery-Muirfield Dr & Perimeter Loop Rd/Hos		47	0.28	1.23
106	Avery-Muirfield Dr & Perimeter Dr	1	33	0.36	0.89
104	SR 161/Bridge St & US 33/Riverside Dr		47	0.11	1.04
103	Avery-Muirfield Dr & 33WB Ramp		42	0.24	0.97
91	Memorial Dr & Muirfield Dr	1	10	0.40	1.02
89	Emerald Pkwy & Woerner-Temple Rd	1	23	0.39	0.73
89	Brand Rd & Muirfield Dr	2	15	0.27	0.80
89	Bridge St & Corbins Mill Dr	1	29	0.21	0.78
86	Emerald Pkwy & Riverside Dr		30	0.43	0.68
79	Hyland-Croy Rd & McKitrick Rd		4	0.50	1.00
79	Ballantrae Pl & Eiterman Rd		3	0.33	1.19
78	Hard Rd & Riverside Dr		22	0.45	0.66
76	Dublin Center Dr & W Dublin-Granville Rd		21	0.43	0.67
74	Adventure Dr & Tara Hill Dr	1	1	1.00	0.26
72	Avery Rd & Tara Hill Dr	1	2	1.00	0.20
71	Brand Rd & Bristol Pkwy	1	2	1.00	0.19
71	Dublin Center Dr & Village Pkwy		13	0.38	0.77
69	Dublin Rd & Emerald Pkwy		24	0.29	0.61
69	Bright Rd & Riverside Dr		17	0.53	0.51
68	Sawmill Rd & W Dublin-Granville Rd		25	0.28	0.58
68	Avery-Muirfield Dr & Post Rd		24	0.13	0.75
68	Avery Rd & Brand Rd		11	0.27	0.86
65	Adventure Dr & Coffman Rd	1	1	1.00	0.09
64	Bridge St & High St	1	20	0.20	0.48
63	Cardinal Pl & Emerald Pkwy		6	0.83	0.31
63	Avery Rd & Shier-Rings Rd		20	0.15	0.71

**Points equation: Number of Crashes + 10x PedorBike Crashes + 50x Severity Ratio + 50x Crash Rate*

Points*	Intersection Name	Ped/Bike Crashes	Crashes	Severity Ratio	Crash Rate
62	Banker Dr & Dublin Center Dr		2	1.00	0.20
62	Coffman Rd & Tara Hill Dr	1	10	0.20	0.63
61	Riverside Dr & Tuller Rd		18	0.28	0.58
61	Carnoustie Dr & Glick Rd		5	0.60	0.51
60	Perimeter Dr & Discovery Blvd		2	1.00	0.16
60	Claddaugh Ln & Hard Rd	1	5	0.60	0.30
60	Brand Rd & Dublin Rd		9	0.56	0.46
57	Frantz Rd & Rings Rd	1	10	0.40	0.34
57	Avery Rd & Woerner-Temple Rd		14	0.29	0.57
56	Perimeter Dr & Post Rd		1	1.00	0.09
55	Bradenton Ave & Parkcenter Ave		3	0.67	0.38
55	Paul Blazer Pkwy & Rings Rd		12	0.33	0.52
54	Post Rd & OCLC	1	5	0.60	0.19
54	Bridge St & Darby St/Mill Ln		14	0.36	0.44
54	Coffman Rd & Shannon Park Dr		1	1.00	0.06
54	Riverside Dr & Summit View Rd		11	0.36	0.49
53	Avery Rd & Cara Rd		8	0.38	0.53
53	Emerald Pkwy & Shier-Rings Rd	1	8	0.38	0.33
53	Orchard Crest Ct & Riverside Dr		1	1.00	0.03
53	Bridge St & Monterey Dr		1	1.00	0.03
52	Emerald Pkwy & Saltergate Rd		1	1.00	0.03
52	Paul Blazer Pkwy & Tuttle Crossing Blvd		1	1.00	0.03
51	Dublin Center Dr & Krier Dr		3	0.67	0.30
51	Avery Rd & 33EB Ramp		18	0.11	0.55
51	Emerald Pkwy & Perimeter Dr		14	0.21	0.52
50	Emerald Pkwy & Post Rd		17	0.24	0.42
49	Frantz Rd & Longbranch Dr		10	0.40	0.38
48	Dublin Rd & Amberleigh Way/Ashford Rd		3	0.67	0.24
47	Bridge St & High School Rd	1	13	0.08	0.40
46	Dublin Center Dr & Tuller Rd		4	0.25	0.60

**Points equation: Number of Crashes + 10x PedorBike Crashes + 50x Severity Ratio + 50x Crash Rate*

Points*	Intersection Name	Ped/Bike Crashes	Crashes	Severity Ratio	Crash Rate
46	Bradenton Ave & Frantz Rd	1	5	0.40	0.21
44	Dublin Center Dr & Marcy Ln		5	0.20	0.57
43	Murifield Dr & Glick Rd		7	0.14	0.58
43	Avery Rd & Tuswell Dr/Innovation Dr		9	0.11	0.56
41	Frantz Rd & Metro Pl S		11	0.27	0.34
41	Corbins Mill Dr & Frantz Rd		13	0.15	0.41
41	Eiterman Rd & Shier-Rings Rd		3	0.33	0.43
41	Dublin Rd & Donegal Cliffs Dr/Windwood Dr		7	0.14	0.54
41	Emerald Pkwy & Hard Rd		4	0.50	0.23
40	Emerald Pkwy & Coffman Rd		15	0.07	0.44
39	Blazer Pkwy & Parkcenter Ave/Parkcenter Cr		5	0.40	0.27
37	Perimeter Dr & Hospital Dr		2	0.50	0.20
37	Riverside Dr & Wayandotte Woods Blvd		4	0.50	0.16
37	Dale Dr & W Dublin-Granville Rd		8	0.25	0.33
37	Tuttle Crossing Blvd & Wilcox Rd		5	0.20	0.43
36	Dale Dr & Riverside Dr		6	0.33	0.26
36	Muirfield Dr & Tara Hill Dr	1	4	0.25	0.18
35	Perimeter Dr & Holt Rd/Perimeter Loop Rd		2	0.50	0.17
35	Norn St & Woerner-Temple Rd		2	0.50	0.15
34	Cormorant Dr & Dunabbey Lp		2	0.50	0.15
34	Dublinshire Dr & Muirfield Dr		2	0.50	0.14
33	Bridge St & Blacksmith Ln		6	0.33	0.20
32	Parkwood Pl & Woerner-Temple Rd		2	0.50	0.11
31	Emerald Pkwy & Innovation Dr		2	0.50	0.09
31	Mojave St & Muirfield Dr		5	0.20	0.33
31	Martin Rd & Riverside Dr		2	0.50	0.08
31	Bradenton Ave & Tuttle Crossing Blvd		2	0.50	0.08
30	Bridge St & Franklin St		2	0.50	0.07
29	Post Rd & 33WB Ramp		3	0.33	0.18
28	Gentry Ln & Parkcenter Cr		3	0.33	0.17

**Points equation: Number of Crashes + 10x PedorBike Crashes + 50x Severity Ratio + 50x Crash Rate*

Points*	Intersection Name	Ped/Bike Crashes	Crashes	Severity Ratio	Crash Rate
28	Emerald Pkwy & Rings Rd		3	0.33	0.16
26	Shamrock Blvd & W Dublin-Granville Rd		3	0.33	0.13
24	Frantz Rd & Tuttle Crossing Blvd		3	0.33	0.08
21	Hard Rd & Sawmill Rd		7	0.14	0.14
	Commerce Pkwy & Perimeter Dr		1		0.06
	Bonanza Ln & Pensworthy Dr		1		
	Riverside Dr & Tonti Dr		1		0.04
	Northcliff Blvd & Wilcox Rd		1	1.00	
	Frantz Rd & Parkcenter Ave		1		0.04
	Marston Ln & Park Mill Dr		1	1.00	
	Avery Rd & Waynford Dr	1	1		
	Dunleary Dr & Wicklow Ct		1		
	Avery Rd & Jacana Dr		2	0.50	
	Dublin Rd & Bellaire Ave/Brandonway Dr		1		0.05
	Dublin Rd & Dunleary Dr		1		0.07
	Brand Rd & Brandonway Dr		3		0.27
	Dublin Rd & Tuttle Rd		1		0.16
	Federated Blvd & Sawmill Rd		12	0.33	
	Dublin Rd & Limerick Ln		2		0.13
	Edinburgh Rd & Frantz Rd		4		0.16
	S High St & Waterford Dr		1	1.00	
	Emerald Pkwy & Wayandotte Woods Blvd		1	1.00	
	Cosgray Rd & Rings Rd		1		0.11
	Dublin Rd & Longview Dr		1		
	Innovation Dr & Wilcox Rd		1		
	Marcy Ln & Martin Rd		2		0.28
	Martin Rd & Sawmill Rd		2		
	Post Rd & Kilgour Pl		2		0.06
	Brand Rd & Hyland-Croy Rd		2		0.21
	Shamrock Blvd & Sharp Ln		1		

**Points equation: Number of Crashes + 10x PedorBike Crashes + 50x Severity Ratio + 50x Crash Rate*

Points*	Intersection Name	Ped/Bike Crashes	Crashes	Severity Ratio	Crash Rate
	Chaddington Dr & Rosegate Pl		1	1.00	
	Earlington Pkwy & Fenian Ct		1		
	Coffman Rd & Earlington Pkwy		1		0.08
	Earlsford Dr & Sells Mill Dr	1	1	1.00	
	Hanna Hills Dr & Riverside Dr		1		0.03
	Brigids Close Dr & Muirfield Dr	1	1	1.00	
	Brand Rd & Coffman Rd		4		0.31
	Hyland-Croy Rd & Park Mill Dr		1		
	Coventry Woods Dr & Crosshaven Ln		1		
	Silver Rose Ct & Wayandotte Woods Blvd		1		
	Glenbarr Pl & Muirfield Dr		2		
	Hopewell St & Tara Hill Dr		1		
	Crossgate Dr & Muirfield Dr		2		0.22
	Fallen Timbers Dr & Tara Hill Dr		1		0.16
	Dublin Rd & River Forest Rd		1		0.09
	Dublin Rd & Memorial Dr		3		0.28
	Hyland-Croy Rd & Tuscany Dr		1		
	Dublin Rd & Glick Rd		4		0.19
	Din Eidyn Dr & Glick Rd		1		0.10
	Glick Rd & Muirkirk Dr		1	1.00	
	Shamrock Blvd & Village Pkwy		4		0.35
	Cosgray Rd & Larne Dr		1		
	Hyland-Croy Rd & Glacier Ridge Blvd		1	1.00	
	Rings Rd & Eiterman Rd		1	1.00	
	Post Rd & Industrial Pkwy		3	0.67	
	Cosgray Rd & CSX Railroad		1		
	Brand Rd & Westbury Dr		1		0.21
	270NB & 33EB		1		0.01
	Browning Ct & Chaddington Dr		1		0.05
	Carnoustie Dr & Locherbie Ct		1		0.13

**Points equation: Number of Crashes + 10x PedorBike Crashes + 50x Severity Ratio + 50x Crash Rate*

Points*	Intersection Name	Ped/Bike Crashes	Crashes	Severity Ratio	Crash Rate
	Caithness Dr & Glick Rd		1	1.00	
	Avery Rd & Glick Rd		1		0.14
	Avery Rd & Cramer's Crossing Dr		2		0.14
	Emerald Pkwy & Glendon Ct		3		0.16
	Rings Rd & Wilcox Rd		1		
	Dublin Rd & Hertford Ln		1		
	Dublin Rd & Grandview Dr		1		
	Dublin Rd & Glenaire Dr		1		
	Jerome Rd & Ross Ave		1		
	Cosgray Rd & Shier-Rings Rd		3		0.35
	Coffman Rd & Forest Run Dr		1		0.08
	Eberly Hill & S High St		2		0.25
	Brand Rd & Coventry Woods Dr		1		0.09
	Avery Rd & Avondale Woods Blvd		2		
	270SB to 33EB & 33EB		1		
	North St & N High St		3		0.17
	Commerce Pkwy & Post Rd		1		
	Discovery Blvd & Post Rd		1		0.21
	Gullway Bay Dr & Tara Hill Dr	1	1	1.00	
	270WB & Sawmill		5	0.20	
	Sawmill Rd to 270WB & Sawmill Rd S to 270		1	1.00	
	Avery-Muirfield Dr & Tullymore Dr		4		0.15
	Avery Rd & Avery-Muirfield Dr		6		0.26
	Raymond Dr & Tara Hill Dr		1	1.00	
	Fallen Timbers Dr & Tara Hill Dr		1		0.21
	Shamrock Blvd & Stoneridge Ln		1		

Citywide Average Intersection Crash Rate: **0.34**

**Points equation: Number of Crashes + 10x PedorBike Crashes + 50x Severity Ratio + 50x Crash Rate*

Intersection Crash Summary by Type

1/1/2012 through 12/31/2014

Crashes	*Intersection*	Angle	Rear-End	Head-On	Backing	Sideswipe	Other
70	US 33/SR 161 & Post Rd/Frantz Rd	14%	73%	3%		6%	4%
47	Avery-Muirfield Dr & Perimeter Loop Rd/Hos	38%	53%	2%	2%	2%	
47	SR 161/Bridge St & US 33/Riverside Dr	17%	64%			15%	2%
42	Avery-Muirfield Dr & 33WB Ramp	14%	60%			17%	10%
33	Avery-Muirfield Dr & Perimeter Dr	30%	52%		3%	12%	3%
30	Emerald Pkwy & Riverside Dr	37%	40%	3%		17%	3%
29	Bridge St & Corbins Mill Dr	17%	72%			7%	3%
24	Avery-Muirfield Dr & Post Rd	33%	42%			21%	4%
24	Sawmill Rd & W Dublin-Granville Rd	4%	92%			4%	
24	Dublin Rd & Emerald Pkwy	38%	46%			8%	8%
23	Emerald Pkwy & Woerner-Temple Rd	52%	26%	4%		4%	13%
22	Hard Rd & Riverside Dr	41%	41%			14%	5%
21	Dublin Center Dr & W Dublin-Granville Rd	33%	48%			14%	5%
20	Bridge St & High St	35%	40%			20%	5%
20	Avery Rd & Shier-Rings Rd	35%	60%				5%
18	Avery Rd & 33EB Ramp	11%	72%	6%		6%	6%
18	Riverside Dr & Tuller Rd	28%	67%				6%
17	Bright Rd & Riverside Dr	41%	35%			12%	12%
17	Emerald Pkwy & Post Rd	29%	47%			18%	6%
15	Brand Rd & Muirfield Dr	27%	40%			13%	20%
15	Emerald Pkwy & Coffman Rd	40%	47%			13%	
14	Emerald Pkwy & Perimeter Dr	21%	57%		7%	7%	7%
14	Bridge St & Darby St/Mill Ln	79%	14%		7%		
14	Avery Rd & Woerner-Temple Rd	64%	36%				
13	Corbins Mill Dr & Frantz Rd	23%	46%			23%	8%
13	Bridge St & High School Rd	8%	69%			15%	8%
13	Dublin Center Dr & Village Pkwy	31%	62%			8%	
12	Paul Blazer Pkwy & Rings Rd	33%	50%	8%	8%		
12	Federated Blvd & Sawmill Rd	17%	75%			8%	

Crashes	*Intersection*	Angle	Rear-End	Head-On	Backing	Sideswipe	Other
11	Riverside Dr & Summit View Rd	27%	55%			9%	9%
11	Frantz Rd & Metro Pl S		91%			9%	
11	Avery Rd & Brand Rd	64%	18%			9%	9%
10	Frantz Rd & Rings Rd	80%	20%				
10	Coffman Rd & Tara Hill Dr	30%	40%			20%	10%
10	Frantz Rd & Longbranch Dr	10%	80%			10%	
10	Memorial Dr & Muirfield Dr	70%	10%				20%
9	Avery Rd & Tuswell Dr/Innovation Dr	33%	11%			33%	22%
8	Avery Rd & Cara Rd	38%	63%				
8	Brand Rd & Dublin Rd		63%				38%
8	Dale Dr & W Dublin-Granville Rd	38%	63%				
8	Emerald Pkwy & Shier-Rings Rd	50%	25%				25%
7	Murifield Dr & Glick Rd	57%	43%				
7	Hard Rd & Sawmill Rd		71%	14%		14%	
7	Dublin Rd & Donegal Cliffs Dr/Windwood Dr	43%	57%				
6	Bridge St & Blacksmith Ln	67%	17%			17%	
6	Avery Rd & Avery-Muirfield Dr	33%	50%				17%
6	Cardinal Pl & Emerald Pkwy	67%	17%				17%
6	Dale Dr & Riverside Dr	17%	67%			17%	
5	Blazer Pkwy & Parkcenter Ave/Parkcenter Cr	100%					
5	Mojave St & Muirfield Dr	80%	20%				
5	Tuttle Crossing Blvd & Wilcox Rd	60%	20%				20%
5	Bradenton Ave & Frantz Rd	60%					40%
5	Dublin Center Dr & Marcy Ln	100%					
5	Post Rd & OCLC	60%	20%				20%
5	270WB & Sawmill		100%				
5	Carnoustie Dr & Glick Rd	20%	60%				20%
5	Claddaugh Ln & Hard Rd		60%				40%
4	Hyland-Croy Rd & McKitrick Rd	25%		25%	25%		25%
4	Dublin Center Dr & Tuller Rd	50%		25%			25%
4	Dublin Rd & Memorial Dr	75%	25%				
4	Shamrock Blvd & Village Pkwy	25%	25%				50%

Crashes	*Intersection*	Angle	Rear-End	Head-On	Backing	Sideswipe	Other
4	Edinburgh Rd & Frantz Rd		100%				
4	Dublin Rd & Glick Rd		75%			25%	
4	Emerald Pkwy & Hard Rd	25%	75%				
4	Brand Rd & Coffman Rd	25%	50%				25%
4	Muirfield Dr & Tara Hill Dr	25%	50%				25%
4	Avery-Muirfield Dr & Tullymore Dr	25%	75%				
4	Riverside Dr & Wayandotte Woods Blvd	75%	25%				
3	Eiterman Rd & Shier-Rings Rd	67%					33%
3	Shamrock Blvd & W Dublin-Granville Rd	67%				33%	
3	Ballantrae Pl & Eiterman Rd	100%					
3	Post Rd & Industrial Pkwy	33%	67%				
3	Bradenton Ave & Parkcenter Ave	100%					
3	Dublin Center Dr & Krier Dr	67%	33%				
3	Brand Rd & Brandonway Dr	67%	33%				
3	Frantz Rd & Tuttle Crossing Blvd		67%				33%
3	North St & N High St	67%	33%				
3	Emerald Pkwy & Rings Rd	67%	33%				
3	Post Rd & 33WB Ramp		100%				
3	Gentry Ln & Parkcenter Cr	100%					
3	Emerald Pkwy & Glendon Ct	67%	33%				
3	Dublin Rd & Amberleigh Way/Ashford Rd	33%					67%
3	Cosgray Rd & Shier-Rings Rd	33%	33%				33%
2	Emerald Pkwy & Innovation Dr		100%				
2	Norn St & Woerner-Temple Rd	50%					50%
2	Dublin Rd & Limerick Ln		100%				
2	Martin Rd & Sawmill Rd	50%	50%				
2	Marcy Ln & Martin Rd	100%					
2	Bridge St & Franklin St	100%					
2	Perimeter Dr & Discovery Blvd	100%					
2	Avery Rd & Cramer's Crossing Dr	100%					
2	Perimeter Dr & Holt Rd/Perimeter Loop Rd	100%					
2	Brand Rd & Hyland-Croy Rd	50%	50%				

Crashes	*Intersection*	Angle	Rear-End	Head-On	Backing	Sideswipe	Other
2	Cormorant Dr & Dunabbey Lp	50%					50%
2	Parkwood Pl & Woerner-Temple Rd	100%					
2	Dublinshire Dr & Muirfield Dr	100%					
2	Avery Rd & Jacana Dr	100%					
2	Martin Rd & Riverside Dr	50%		50%			
2	Crossgate Dr & Muirfield Dr	50%				50%	
2	Glenbarr Pl & Muirfield Dr	100%					
2	Avery Rd & Tara Hill Dr	50%					50%
2	Bradenton Ave & Tuttle Crossing Blvd	50%					50%
2	Brand Rd & Bristol Pkwy	50%				50%	
2	Avery Rd & Avondale Woods Blvd						100%
2	Banker Dr & Dublin Center Dr	100%					
2	Post Rd & Kilgour Pl		50%				50%
2	Eberly Hill & S High St	100%					
2	Perimeter Dr & Hospital Dr	100%					
1	Frantz Rd & Parkcenter Ave		100%				
1	Northcliff Blvd & Wilcox Rd	100%					
1	Dublin Rd & Dunleary Dr	100%					
1	Marston Ln & Park Mill Dr	100%					
1	Dublin Rd & Bellaire Ave/Brandonway Dr				100%		
1	Avery Rd & Waynford Dr	100%					
1	Emerald Pkwy & Wayandotte Woods Blvd	100%					
1	S High St & Waterford Dr						100%
1	Dublin Rd & Longview Dr	100%					
1	Dunleary Dr & Wicklow Ct	100%					
1	Paul Blazer Pkwy & Tuttle Crossing Blvd		100%				
1	Cosgray Rd & Rings Rd	100%					
1	Innovation Dr & Wilcox Rd						100%
1	Dublin Rd & Tuttle Rd						100%
1	Emerald Pkwy & Saltergate Rd		100%				
1	Coventry Woods Dr & Crosshaven Ln						100%
1	Shamrock Blvd & Sharp Ln	100%					

Crashes	*Intersection*	Angle	Rear-End	Head-On	Backing	Sideswipe	Other
1	Adventure Dr & Coffman Rd						100%
1	Hopewell St & Tara Hill Dr						100%
1	Coffman Rd & Forest Run Dr	100%					
1	Orchard Crest Ct & Riverside Dr		100%				
1	Chaddington Dr & Rosegate Pl						100%
1	Earlington Pkwy & Fenian Ct		100%				
1	Coffman Rd & Earlington Pkwy		100%				
1	Earlsford Dr & Sells Mill Dr						100%
1	Hanna Hills Dr & Riverside Dr					100%	
1	Fallen Timbers Dr & Tara Hill Dr	100%					
1	Hyland-Croy Rd & Park Mill Dr		100%				
1	Raymond Dr & Tara Hill Dr	100%					
1	Silver Rose Ct & Wayandotte Woods Blvd						100%
1	Brand Rd & Westbury Dr		100%				
1	Dublin Rd & River Forest Rd						100%
1	Hyland-Croy Rd & Tuscany Dr	100%					
1	Din Eidyn Dr & Glick Rd	100%					
1	Glick Rd & Muirkirk Dr	100%					
1	Cosgray Rd & Larne Dr	100%					
1	Hyland-Croy Rd & Glacier Ridge Blvd						100%
1	Rings Rd & Eiterman Rd						100%
1	Cosgray Rd & CSX Railroad		100%				
1	Brigids Close Dr & Muirfield Dr	100%					
1	Shamrock Blvd & Stoneridge Ln						100%
1	Bonanza Ln & Pensworthy Dr					100%	
1	Commerce Pkwy & Perimeter Dr		100%				
1	Brand Rd & Coventry Woods Dr	100%					
1	Browning Ct & Chaddington Dr				100%		
1	Carnoustie Dr & Locherbie Ct	100%					
1	Caithness Dr & Glick Rd		100%				
1	Avery Rd & Glick Rd	100%					
1	Rings Rd & Wilcox Rd						100%

Crashes	*Intersection*	Angle	Rear-End	Head-On	Backing	Sideswipe	Other
1	Dublin Rd & Hertford Ln						100%
1	Dublin Rd & Grandview Dr	100%					
1	Fallen Timbers Dr & Tara Hill Dr					100%	
1	Jerome Rd & Ross Ave	100%					
1	Riverside Dr & Tonti Dr					100%	
1	270NB & 33EB		100%				
1	270SB to 33EB & 33EB		100%				
1	Bridge St & Monterey Dr		100%				
1	Coffman Rd & Shannon Park Dr		100%				
1	Commerce Pkwy & Post Rd	100%					
1	Discovery Blvd & Post Rd				100%		
1	Perimeter Dr & Post Rd	100%					
1	Gullway Bay Dr & Tara Hill Dr						100%
1	Sawmill Rd to 270WB & Sawmill Rd S to 270		100%				
1	Adventure Dr & Tara Hill Dr						100%
1	Dublin Rd & Glenaire Dr		100%				

Intersection Severity Ratio Summary

1/1/2012 through 12/31/2014

Crashes	*Severity Ratio*	*Intersection*
70	0.23	US 33/SR 161 & Post Rd/Frantz Rd
47	0.28	Avery-Muirfield Dr & Perimeter Loop Rd/Hospital Dr
47	0.11	SR 161/Bridge St & US 33/Riverside Dr
42	0.24	Avery-Muirfield Dr & 33WB Ramp
33	0.36 **	Avery-Muirfield Dr & Perimeter Dr
30	0.43 **	Emerald Pkwy & Riverside Dr
29	0.21	Bridge St & Corbins Mill Dr
24	0.13	Avery-Muirfield Dr & Post Rd
24	0.25	Sawmill Rd & W Dublin-Granville Rd
24	0.29	Dublin Rd & Emerald Pkwy
23	0.39 **	Emerald Pkwy & Woerner-Temple Rd
22	0.45 **	Hard Rd & Riverside Dr
21	0.43 **	Dublin Center Dr & W Dublin-Granville Rd
20	0.20	Bridge St & High St
20	0.15	Avery Rd & Shier-Rings Rd
18	0.11	Avery Rd & 33EB Ramp
18	0.28	Riverside Dr & Tuller Rd
17	0.53 **	Bright Rd & Riverside Dr
17	0.24	Emerald Pkwy & Post Rd
15	0.27	Brand Rd & Muirfield Dr
15	0.07	Emerald Pkwy & Coffman Rd
14	0.21	Emerald Pkwy & Perimeter Dr
14	0.36 **	Bridge St & Darby St/Mill Ln
14	0.29	Avery Rd & Woerner-Temple Rd
13	0.15	Corbins Mill Dr & Frantz Rd
13	0.08	Bridge St & High School Rd
13	0.38 **	Dublin Center Dr & Village Pkwy
12	0.33	Paul Blazer Pkwy & Rings Rd
12	0.33	Federated Blvd & Sawmill Rd
11	0.36 **	Riverside Dr & Summit View Rd
11	0.27	Frantz Rd & Metro Pl S
11	0.27	Avery Rd & Brand Rd

*** Severity rate greater than 0.35.*

Crashes	*Severity Ratio*	*Intersection*
10	0.40 **	Frantz Rd & Rings Rd
10	0.20	Coffman Rd & Tara Hill Dr
10	0.40 **	Frantz Rd & Longbranch Dr
10	0.40 **	Memorial Dr & Muirfield Dr
9	0.11	Avery Rd & Tuswell Dr/Innovation Dr
8	0.38 **	Avery Rd & Cara Rd
8	0.63 **	Brand Rd & Dublin Rd
8	0.25	Dale Dr & W Dublin-Granville Rd
8	0.38 **	Emerald Pkwy & Shier-Rings Rd
7	0.14	Murifield Dr & Glick Rd
7	0.14	Hard Rd & Sawmill Rd
7	0.14	Dublin Rd & Donegal Cliffs Dr/Windwood Dr
6	0.33	Bridge St & Blacksmith Ln
6		Avery Rd & Avery-Muirfield Dr
6	0.83 **	Cardinal Pl & Emerald Pkwy
6	0.33	Dale Dr & Riverside Dr
5	0.40 **	Blazer Pkwy & Parkcenter Ave/Parkcenter Cr
5	0.20	Mojave St & Muirfield Dr
5	0.20	Tuttle Crossing Blvd & Wilcox Rd
5	0.40 **	Bradenton Ave & Frantz Rd
5	0.20	Dublin Center Dr & Marcy Ln
5	0.60 **	Post Rd & OCLC
5	0.20	270WB & Sawmill
5	0.60 **	Carnoustie Dr & Glick Rd
5	0.60 **	Claddaugh Ln & Hard Rd
4	0.50 **	Hyland-Croy Rd & McKitrick Rd
4	0.25	Dublin Center Dr & Tuller Rd
4		Dublin Rd & Memorial Dr
4		Shamrock Blvd & Village Pkwy
4		Edinburgh Rd & Frantz Rd
4		Dublin Rd & Glick Rd
4	0.50 **	Emerald Pkwy & Hard Rd
4		Brand Rd & Coffman Rd
4	0.25	Muirfield Dr & Tara Hill Dr
4		Avery-Muirfield Dr & Tullymore Dr

*** Severity rate greater than 0.35.*

Crashes	*Severity Ratio*	*Intersection*
4	0.50 **	Riverside Dr & Wayandotte Woods Blvd
3	0.33	Eiterman Rd & Shier-Rings Rd
3	0.33	Shamrock Blvd & W Dublin-Granville Rd
3	0.33	Ballantrae Pl & Eiterman Rd
3	0.67 **	Post Rd & Industrial Pkwy
3	0.67 **	Bradenton Ave & Parkcenter Ave
3	0.67 **	Dublin Center Dr & Krier Dr
3		Brand Rd & Brandonway Dr
3	0.33	Frantz Rd & Tuttle Crossing Blvd
3		North St & N High St
3	0.33	Emerald Pkwy & Rings Rd
3	0.33	Post Rd & 33WB Ramp
3	0.33	Gentry Ln & Parkcenter Cr
3		Emerald Pkwy & Glendon Ct
3	0.67 **	Dublin Rd & Amberleigh Way/Ashford Rd
3		Cosgray Rd & Shier-Rings Rd
2	0.50 **	Emerald Pkwy & Innovation Dr
2	0.50 **	Norn St & Woerner-Temple Rd
2		Dublin Rd & Limerick Ln
2		Martin Rd & Sawmill Rd
2		Marcy Ln & Martin Rd
2	0.50 **	Bridge St & Franklin St
2	1.00 **	Perimeter Dr & Discovery Blvd
2		Avery Rd & Cramer's Crossing Dr
2	0.50 **	Perimeter Dr & Holt Rd/Perimeter Loop Rd
2		Brand Rd & Hyland-Croy Rd
2	0.50 **	Cormorant Dr & Dunabbey Lp
2	0.50 **	Parkwood Pl & Woerner-Temple Rd
2	0.50 **	Dublinshire Dr & Muirfield Dr
2	0.50 **	Avery Rd & Jacana Dr
2	0.50 **	Martin Rd & Riverside Dr
2		Crossgate Dr & Muirfield Dr
2		Glenbarr Pl & Muirfield Dr
2	1.00 **	Avery Rd & Tara Hill Dr
2	0.50 **	Bradenton Ave & Tuttle Crossing Blvd

*** Severity rate greater than 0.35.*

Crashes	*Severity Ratio*	*Intersection*
2	1.00 **	Brand Rd & Bristol Pkwy
2		Avery Rd & Avondale Woods Blvd
2	1.00 **	Banker Dr & Dublin Center Dr
2		Post Rd & Kilgour Pl
2		Eberly Hill & S High St
2	0.50 **	Perimeter Dr & Hospital Dr
1		Frantz Rd & Parkcenter Ave
1	1.00 **	Northcliff Blvd & Wilcox Rd
1		Dublin Rd & Dunleary Dr
1	1.00 **	Marston Ln & Park Mill Dr
1		Dublin Rd & Bellaire Ave/Brandonway Dr
1		Avery Rd & Waynford Dr
1	1.00 **	Emerald Pkwy & Wayandotte Woods Blvd
1	1.00 **	S High St & Waterford Dr
1		Dublin Rd & Longview Dr
1		Dunleary Dr & Wicklow Ct
1	1.00 **	Paul Blazer Pkwy & Tuttle Crossing Blvd
1		Cosgray Rd & Rings Rd
1		Innovation Dr & Wilcox Rd
1		Dublin Rd & Tuttle Rd
1	1.00 **	Emerald Pkwy & Saltergate Rd
1		Coventry Woods Dr & Crosshaven Ln
1		Shamrock Blvd & Sharp Ln
1	1.00 **	Adventure Dr & Coffman Rd
1		Hopewell St & Tara Hill Dr
1		Coffman Rd & Forest Run Dr
1	1.00 **	Orchard Crest Ct & Riverside Dr
1	1.00 **	Chaddington Dr & Rosegate Pl
1		Earlington Pkwy & Fenian Ct
1		Coffman Rd & Earlington Pkwy
1	1.00 **	Earlsford Dr & Sells Mill Dr
1		Hanna Hills Dr & Riverside Dr
1		Fallen Timbers Dr & Tara Hill Dr
1		Hyland-Croy Rd & Park Mill Dr
1	1.00 **	Raymond Dr & Tara Hill Dr

*** Severity rate greater than 0.35.*

Crashes	*Severity Ratio*	*Intersection*
1		Silver Rose Ct & Wayandotte Woods Blvd
1		Brand Rd & Westbury Dr
1		Dublin Rd & River Forest Rd
1		Hyland-Croy Rd & Tuscany Dr
1		Din Eidyn Dr & Glick Rd
1	1.00 **	Glick Rd & Muirkirk Dr
1		Cosgray Rd & Larne Dr
1	1.00 **	Hyland-Croy Rd & Glacier Ridge Blvd
1	1.00 **	Rings Rd & Eiterman Rd
1		Cosgray Rd & CSX Railroad
1	1.00 **	Brigids Close Dr & Muirfield Dr
1		Shamrock Blvd & Stoneridge Ln
1		Bonanza Ln & Pensworthy Dr
1		Commerce Pkwy & Perimeter Dr
1		Brand Rd & Coventry Woods Dr
1		Browning Ct & Chaddington Dr
1		Carnoustie Dr & Locherbie Ct
1	1.00 **	Caithness Dr & Glick Rd
1		Avery Rd & Glick Rd
1		Rings Rd & Wilcox Rd
1		Dublin Rd & Hertford Ln
1		Dublin Rd & Grandview Dr
1		Fallen Timbers Dr & Tara Hill Dr
1		Jerome Rd & Ross Ave
1		Riverside Dr & Tonti Dr
1		270NB & 33EB
1		270SB to 33EB & 33EB
1	1.00 **	Bridge St & Monterey Dr
1	1.00 **	Coffman Rd & Shannon Park Dr
1		Commerce Pkwy & Post Rd
1		Discovery Blvd & Post Rd
1	1.00 **	Perimeter Dr & Post Rd
1	1.00 **	Gullway Bay Dr & Tara Hill Dr
1	1.00 **	Sawmill Rd to 270WB & Sawmill Rd S to 270WB
1	1.00 **	Adventure Dr & Tara Hill Dr

*** Severity rate greater than 0.35.*

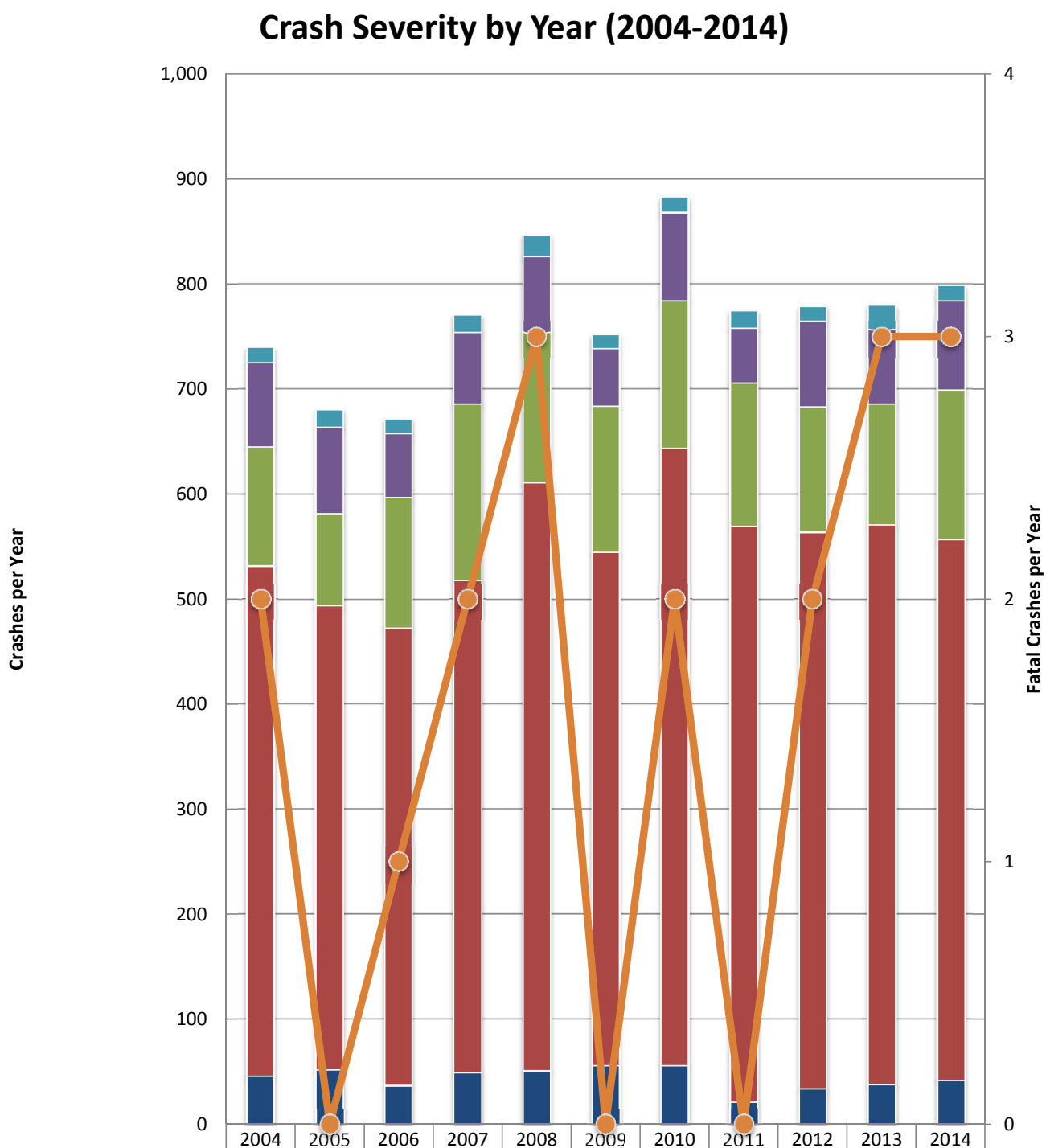
Crashes	*Severity Ratio*	*Intersection*
1		Dublin Rd & Glenaire Dr

*** Severity rate greater than 0.35.*

Intersection Ped and Bike Related Crash Summary

1/1/2012 through 12/21/2014

Ped/Bike Crashes	*Intersection Name*
2	Brand Rd & Muirfield Dr
1	Adventure Dr & Coffman Rd
1	Adventure Dr & Tara Hill Dr
1	Avery Rd & Tara Hill Dr
1	Avery Rd & Waynford Dr
1	Avery-Muirfield Dr & Perimeter Dr
1	Bradenton Ave & Frantz Rd
1	Brand Rd & Bristol Pkwy
1	Bridge St & Corbins Mill Dr
1	Bridge St & High School Rd
1	Bridge St & High St
1	Brigids Close Dr & Muirfield Dr
1	Claddaugh Ln & Hard Rd
1	Coffman Rd & Tara Hill Dr
1	Earlsford Dr & Sells Mill Dr
1	Emerald Pkwy & Shier-Rings Rd
1	Emerald Pkwy & Woerner-Temple Rd
1	Frantz Rd & Rings Rd
1	Gullway Bay Dr & Tara Hill Dr
1	Memorial Dr & Muirfield Dr
1	Muirfield Dr & Tara Hill Dr
1	Post Rd & OCLC
23	***Total***



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Incapacitating	15	17	14	17	21	13	15	17	14	23	15
Non-Incapacitating	80	82	61	68	72	55	84	52	82	71	85
Possible Injury	113	88	124	168	143	139	140	136	119	115	142
No Injury	486	442	436	469	560	489	588	549	530	533	515
Unknown	46	52	37	49	51	56	56	21	34	38	42
Fatal	2	0	1	2	3	0	2	0	2	3	3

Severity by Year

Intersection or Segment	Fatal	Injury	PDO	Unknown	Total	Severity
2012						
Segment	1	128	279	15	423	0.32
Intersection	1	95	257	5	358	0.27
Sum	2	223	536	20	**781**	0.30
2013						
Segment	3	113	301		417	0.28
Intersection		100	266		366	0.27
Sum	3	213	567		**783**	0.28
2014						
Segment	3	136	297		436	0.32
Intersection		116	250		366	0.32
Sum	3	252	547		**802**	0.32
Totals	8	688	1650	20	2366	

Citywide Severity 0.30