

2011 TOP CRASH LOCATIONS REPORT



SEPTEMBER 2013

massDOT
Massachusetts Department of Transportation
Leading the Nation in Transportation Excellence



Deval L. Patrick, Governor
Richard A. Davey, Secretary & CEO
Frank DePaola, Administrator



Dear Reader:

Enclosed is MassDOT Highway Division's edition of the 2011 *Top Crash Locations Report*, which may be used for a first brush tool to evaluate top crash intersection locations and top crash pedestrian and bicycle locations in order to improve the safety of our roadway system. This report, like last year's report, focuses on intersection locations and is based on crashes entered into the Registry of Motor Vehicles' Crash Data System (CDS). The 2011 Report contains the identification of top bicycle-motor vehicle and pedestrian-motor vehicle crash locations. This information is at <http://services.massdot.state.ma.us/maptemplate/TopCrashLocations/> or by contacting your Regional Planning Agency and MassDOT Highway District Traffic Engineer.

This dataset may be used as a first brush screening tool to evaluate locations and make changes to improve the safety of our roadway system. The 2011 *Top Crash Locations Report* is one of the tools for the Statewide Highway Safety Improvement Program (HSIP) to identify safety projects using a data-driven process.

Please note that this report is based only on crash records that have been entered into the statewide crash system and have been geocoded to a specific location. Although Massachusetts General Laws Chapter 90 § 26 and 29 require drivers and police departments to file crash reports that exceed specific thresholds, this is not always the case. Furthermore, not all crashes submitted to the Registry of Motor Vehicles get entered into the crash system. Improving the crash reporting system and the quality of the data will help to focus resources where they are most needed.

In an effort to reduce injury and fatal crashes, MassDOT, in cooperation with a variety of public and private stakeholders, is in the process of updating the Massachusetts Strategic Highway Safety Plan (SHSP). To view the new updated 2013 SHSP, download a copy of the plan or to learn more about it, go to the [MassDOT Highway Division Traffic Engineering and Safety website](#). The Safety Plan identifies the State's key safety needs and can be used to guide investment decisions to achieve significant reductions in highway fatalities and serious injuries on all public roads based upon a data-driven process.

I am convinced that we can make great strides in improving safety on Massachusetts roadways for all users. If you have questions, please contact Neil Boudreau, State Traffic Engineer, at (857) 368-9655.

Sincerely,

Frank DePaola, P.E.
Administrator

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TOP HIGH CRASH LOCATIONS REPORT

Top 200 Intersection Locations 2009-2011

Top Pedestrian Locations 2002-2011

Top Bicycle Locations 2002-2011

Introduction

MassDOT Highway Division obtains crash data from the MassDOT Registry of Motor Vehicles (RMV) Division and uses it for a number of purposes. The primary function is to provide a foundation for developing safety improvement projects. The Top High Crash Locations Report is one of the tools used in this process. Previously, MassDOT Highway Division, with assistance from Central Transportation Planning Staff (CTPS), produced a Top 1000 Highway Crash Locations Report which included all types of locations (interchanges, intersections and rotaries). Five years ago, MassDOT Highway Division developed a new report type where the locations identified were crash clusters at intersections (no grade separated locations, no locations with weaving sections and no intersections that a part of a rotary or interchange system). Beginning four years ago, the report also included the top bicycle and pedestrian clusters. This year, MassDOT Highway Division has also prepared a Top High Crash Locations Report which includes the top 200 high crash intersection locations using crash data from 2009-2011 and also includes the weighted (by crash severity) highest frequency bicycle-motor vehicle and pedestrian-motor vehicle crash locations for 2002-2011.

The RMV obtains crash data from State and local police reports and from motor vehicle operators (motorists) who are involved in crashes. The RMV Crash Records Section collects, enters and maintains crash data records, which are the source of the MassDOT Highway Division crash data.

To produce this high crash locations listing, MassDOT Highway Division, with the assistance of Geonetics, Inc., has developed an automated procedure for processing, standardizing, matching and aggregating the crash data by geographical location using Geographic Information System (GIS) tools and procedures.

Generally, the geocoding rate (the rate at which crashes can be located to a specific geographical point) for crashes between 2009 and 2011 is over 93%. However, the geocoding rate is not uniform for all crashes or for all types of crash locations. Some crashes may be more difficult to geocode because of multiple intersections between the same roadway names within a community, mis-entry of location information on the crash report form or a host of other reasons.

The number of crashes contained within the RMV crash system has changed dramatically due to a shift in data entry. Generally the crash system is comprised of crash reports from police and operators (drivers). The number of operator reports entered into the statewide crash system has declined dramatically. The table below illustrates the change in data entry at the RMV.

Reporting Entity	2005	2006	2007	2008	2009	2010	2011
Local police	102,698	94,602	95,400	93,649	92,819	94,457	104,200
Other police	353	201	153	198	123	154	129
State police	14,935	14,524	14,608	15,822	15,519	16,882	16,280
Operator	40,098	40,533	34,348	26,715	9,303	4,148	22
TOTAL	158,084	149,860	144,509	136,384	117,764	115,641	120,631

Furthermore, the reporting levels of some communities have changed dramatically between the old reporting format (pre-2002) and the new format and as communities move from submitting on paper to submitting electronically (details on reporting level by community are available upon request). Obviously, these reporting changes significantly impact the results of the Top High Crash Locations Report.

Crashes reported as occurring in off-street parking lots, garages, shopping center parking lots, etc. are generally excluded if submitted as paper reports to RMV. However, if submitted electronically there is currently no systematic process for excluding them from being entered, automatically geocoded and therefore included in the crash clusters. As a result, several locations may have been identified as top crash locations even though the majority of crashes occurred on private property. Therefore, it is critical that this list only be used as a first brush approach. More detailed analysis of the specific crashes would be required.

Due to the many difficulties in obtaining precise, useable crash location data and many issues involved in variations in crash reporting rates by some jurisdictions, this report should be used as a general purpose screening tool rather than as a precise listing of crash frequencies by individual locations. Furthermore, because of the spatial nature of the crash clusters, it is imperative to view the crash clusters spatially and not just rely on the tabular naming convention to understand the crash cluster locations.

Methodology – Intersection Locations

The intersection crash cluster analysis method, developed by Geonetics for MassDOT, is a comprehensive method designed to locate crash clusters. At the heart of the method is a 25 meter (82 ft.) fixed search distance around each crash. In basic terms, this radius controls how far the application will search for adjacent crashes. Using a 25 meter radius, the analysis method found nearby crashes and merged their areas together, thus creating clusters. If two distinct clusters are found to share a common crash, the two clusters are merged into a single cluster. This method of search-and-merge results in a set of many distinct clusters of different sizes and shapes. The application then stores these clusters to the GIS output file, along with the count of crashes within the cluster. The clusters were then ranked by the number of Equivalent Property Damage Only (EPDO) crashes contained within their boundaries. As in previous Top Crash Lists, fatal crashes are weighted by 10, injury crashes are weighted by 5 and property damage only or non-reported is weighted by 1. These are the same weights that were used to generate the previous Top 1000 High Crash Locations Report using crash data from the previous crash system.

The crashes were then named based on the highest functional classification roadway within the cluster, followed by the roadway with the second highest functional classification. In instances where there were two roadways with the identical classification, the first street name selected was the street with the longest segment contained within the cluster. Some cluster naming was modified to insert the name of a private way or site drive, rather than leaving it as unnamed. Note that the area encompassing the crash cluster may cover a larger area than just the intersection so it is critical to view these spatially.

The module to automatically determine whether the location was an intersection, rotary, interchange or other type of facility has not yet been developed. Therefore, a review of each location was required to make that determination. Generally, a location was determined to be an "intersection" if the cluster did not contain roadways with grade separation (interchange) nor weaving sections (rotaries or ramps). Intersections located at the ends of off-ramps or traffic circles/rotaries were generally not included. The clusters were reviewed in descending EPDO order until 200 locations were obtained. A sample of the top 2 ranked intersection locations is included in this report to illustrate the concept of the intersection clustering. A shapefile of the crash clusters is available upon request. The actual crash clusters can also be viewed on the interactive maps at <http://services.massdot.state.ma.us/maptemplate/TopCrashLocations>

The above method was used to develop the top 200 intersection crash locations for crashes occurring during the three year period from 2009 to 2011. As with previous editions, the crash location analysis has been scored over a three-year period. By using crash experience over the three-year period, anomalies in the individual years of data tend to be reduced.

Methodology – Pedestrian and Bicycle Locations

Similar to previous years, the top locations where reported collisions occurred between pedestrians and motor vehicles and bicycles and motor vehicles have been identified. The crash cluster analysis methodology for both the top pedestrian and the top bicycle crashes is similar to the top intersection location methodology in that it uses a fixed meter search distance (for both pedestrian and bicycle crashes it is 100 meters (328 ft.) compared to 25 meters for intersection locations) to merge crash clusters together. Crashes involving collisions between motor vehicles and pedestrians or bicycles were identified by using the non-motorist type code within the CDS database (which may yield different results from using most harmful event, first harmful event, or sequence of events data fields). Furthermore, the methodology uses the Equivalent Property Damage Only (EPDO) weighting to rank the clusters. However, because of the relatively small number of reported pedestrian and bicycle crashes in the crash data file, the clustering analysis used crashes from the ten year period from 2002-2011, instead of the three year analysis for intersection locations. Additionally, due to the larger geographic area encompassed by both the pedestrian and the bicycle crash clusters, it was difficult to name them so they were left unnamed but can be viewed spatially. The top 10 ranked pedestrian crash locations and the top 10 bicycle crash locations are included in this report. The actual crash clusters can be viewed on the interactive maps at <http://services.massdot.state.ma.us/maptemplate/TopCrashLocations>

For further information, please contact Neil Boudreau, State Traffic Engineer, Traffic Engineering and Safety Section, MassDOT Highway Division, 10 Park Plaza, Room 7210, Boston, MA 02116, phone (857) 368-9655.

NOTICE

It should be noted that the Top 200 High Crash Intersection Locations Report was compiled under the authority of United States Code Title 23, Section 148, Highway Safety Improvement Program, sponsored by the Federal Highway Administration. The compilation of such information is, therefore, subject to the limitations of Section 148 (g) (4) which states:

“Discovery and admission into evidence of certain reports, surveys, and information - Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section, shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in such reports, surveys, schedules, lists or other data.”

2009-2011 STATEWIDE TOP 200 INTERSECTION CRASH LIST

Rank	Town	RPA	MassDOT District	Street 1	Route 1	Street 2	Route 2	Total Crashes	EPDO Crashes	Fatal Crashes	Injury Crashes	PDO & Non Reported Crashes
1	HOLYOKE	PVPC	2	HOLYOKE STREET		HOLYOKE MALL AT INGLESIDE		198	314	0	29	169
2	LOWELL	NMCOG	4	VETERANS OF FOREIGN WARS HIGHWAY	113	VARNUM AVENUE		165	313	0	37	128
3	BROCKTON	OCPC	5	PLEASANT STREET	27	WEST STREET		97	249	0	38	59
4	LOWELL	NMCOG	4	BRIDGE STREET	38	VETERANS OF FOREIGN WARS HIGHWAY		112	248	0	34	78
5	WEYMOUTH	MAPC	6	MAIN STREET	18	MIDDLE STREET		131	247	0	29	102
6	RAYNHAM	SRPEDD	5	ROUTE 44	44	ORCHARD STREET		94	246	0	38	56
7	FALL RIVER	SRPEDD	5	PLYMOUTH AVENUE	81	RODMAN STREET		105	237	0	33	72
8	WORCESTER	CMRPC	3	CHANDLER STREET	122	MURRAY AVENUE		90	226	0	34	56
9	SOMERVILLE	MAPC	4	MYSTIC AVENUE	38	FELLSWAY	28	91	214	3	24	64
10	LOWELL	NMCOG	4	MIDDLESEX STREET		WOOD STREET		117	205	0	22	95
11	MILTON	MAPC	6	RANDOLPH AVENUE		CHICKATAWBUT ROAD		67	203	0	34	33
12	CONCORD,LINCOLN	MAPC	4	CONCORD TURNPIKE (CROSBY'S CORNER)	2	CAMBRIDGE TURNPIKE	2	96	200	0	26	70
13	LOWELL	NMCOG	4	PLAIN STREET		CHELMSFORD STREET	110	104	196	0	23	81
14	WALTHAM	MAPC	4	LEXINGTON STREET		TRAPELO ROAD		104	188	0	21	83
15	FRAMINGHAM	MAPC	3	CONCORD STREET	126	WAVERLEY STREET	135	78	182	0	26	52
16	NEW BEDFORD	SRPEDD	5	ALFRED BESSETTE MEMORIAL HIGHWAY	140	KEMPTON STREET	6	61	181	0	30	31
17	LOWELL	NMCOG	4	THORNDIKE STREET	3A	HIGHLAND STREET		80	180	0	25	55
18	MARLBOROUGH	MAPC	3	EAST MAIN STREET	20	CURTIS AVENUE		130	174	0	11	119
19	BROCKTON	OCPC	5	ASH STREET		WEST ELM STREET		60	172	0	28	32
20	WORCESTER	CMRPC	3	HIGHLAND STREET	9	HARVARD STREET		69	169	0	25	44
21	AGAWAM	PVPC	2	SOUTH END BRIDGE	5			65	165	0	25	40
22	CHICOPEE	PVPC	2	MEMORIAL DRIVE	33	PENDLETON AVENUE		55	163	0	27	28
23	LYNN	MAPC	4	WESTERN AVENUE	107	FRANKLIN STREET		77	161	0	21	56
23	NATICK	MAPC	3	WORCESTER STREET	9	OLD NORTH MAIN STREET		117	161	0	11	106
25	WELLESLEY	MAPC	6	WORCESTER STREET (WELLESLEY FIRE STATION HEADQUARTER)	9	WASHINGTON STREET (BY PROXIMITY)		116	160	0	11	105
26	BOSTON	MAPC	6	MORTON STREET	203	HARVARD STREET		47	159	0	28	19
27	WORCESTER	CMRPC	3	PARK AVENUE	9	PLEASANT STREET		82	158	0	19	63
28	WEYMOUTH	MAPC	6	WASHINGTON STREET	53	MAIN STREET	18	91	155	0	16	75
28	WORCESTER	CMRPC	3	LINCOLN STREET	70	MARSH AVENUE		63	155	0	23	40
30	SUTTON	CMRPC	3	WORCESTER PROVIDENCE TURNPIKE	146	BOSTON ROAD		74	154	0	20	54
30	WALTHAM	MAPC	4	MAIN STREET	20	LYMAN STREET		73	154	1	18	54
32	LOWELL	NMCOG	4	CHURCH STREET	110	APPLETON STREET		69	153	0	21	48
33	PEABODY	MAPC	4	NEWBURY STREET (JUGHANDLE)	1			64	152	0	22	42
34	SWANSEA	SRPEDD	5	MARKET STREET	136	GRAND ARMY OF THE REPUBLIC HIGHWAY	6	63	151	0	22	41
35	LOWELL	NMCOG	4	VETERANS OF FOREIGN WARS HIGHWAY		AIKEN STREET		61	149	0	22	39
35	BROCKTON	OCPC	5	NORTH MAIN STREET		HOWARD STREET		61	149	0	22	39
37	LYNN	MAPC	4	WESTERN AVENUE	107	CHESTNUT STREET	129A	72	148	0	19	53
38	FRAMINGHAM	MAPC	3	WORCESTER ROAD	9	TEMPLE STREET		66	146	0	20	46
39	SEKONK	SRPEDD	5	FALL RIVER AVENUE	6	COMMERCE WAY		89	145	0	14	75
39	WESTFIELD	PVPC	2	EAST MAIN STREET	20	LITTLE RIVER ROAD	187	53	145	0	23	30
41	FALL RIVER	SRPEDD	5	PLEASANT STREET		QUEQUECHAN STREET		60	144	0	21	39
41	CHICOPEE	PVPC	2	BROADWAY		CHURCH STREET		68	144	0	19	49
43	BROCKTON	OCPC	5	BELMONT STREET	123	MANLEY STREET		54	142	0	22	32
44	WORCESTER	CMRPC	3	SOUTHBRIDGE STREET		HAMMOND STREET		67	139	0	18	49
44	WEYMOUTH	MAPC	6	WASHINGTON STREET	53	MIDDLE STREET		71	139	0	17	54
44	WELLESLEY	MAPC	6	WASHINGTON STREET	16	WORCESTER STREET		95	139	0	11	84
47	HOLYOKE	PVPC	2	MAIN STREET	116	CABOT STREET		57	138	1	18	38
48	RANDOLPH	MAPC	6	NORTH MAIN STREET	28	WARREN STREET	139	73	137	0	16	57
48	MANSFIELD	SRPEDD	5	ROUTE 140	140	SCHOOL STREET		69	137	0	17	52
50	FALL RIVER	SRPEDD	5	BEDFORD STREET		TROY STREET		48	136	0	22	26
50	BELLINGHAM	MAPC	3	HARTFORD AVENUE	126	STALLBROOK MARKETPLACE		92	136	0	11	81
52	SWAMPSCOTT	MAPC	4	PARADISE ROAD	1A	SWAMPSCOTT MALL		43	135	0	23	20
52	HAVERHILL	MVPC	4	LAFAYETTE SQUARE	97	BROADWAY		87	135	0	12	75
54	WORCESTER	CMRPC	3	MAIN STREET	9	PARK AVENUE		50	134	0	21	29

2009-2011 STATEWIDE TOP 200 INTERSECTION CRASH LIST

Rank	Town	RPA	MassDOT District	Street 1	Route 1	Street 2	Route 2	Total Crashes	EPDO Crashes	Fatal Crashes	Injury Crashes	PDO & Non Reported Crashes
54	FRAMINGHAM	MAPC	3	WAVERLEY STREET	135	BEAVER STREET		66	134	0	17	49
54	WORCESTER	CMRPC	3	MAIN STREET		MILL STREET	12	53	134	1	18	34
57	BROCKTON	OCPC	5	WEST ELM STREET		NEWBURY STREET		45	133	0	22	23
58	WALTHAM	MAPC	4	LEXINGTON STREET		BEAVER STREET		48	132	0	21	27
59	HOLYOKE	PVPC	2	CHERRY STREET	202	SOLDIERS HOME ROAD		54	131	1	17	36
60	WORCESTER	CMRPC	3	GRAFTON STREET	122	HAMILTON STREET		61	129	0	17	44
61	FRAMINGHAM	MAPC	3	WORCESTER ROAD	9	CALIFORNIA AVENUE		55	128	1	16	38
61	WEYMOUTH	MAPC	6	MAIN STREET	18	PARK AVENUE		80	128	0	12	68
61	WEYMOUTH	MAPC	6	MAIN STREET	18	WINTER STREET		60	128	0	17	43
61	BROCKTON	OCPC	5	MAIN STREET		LEGION PARKWAY	123	48	128	0	20	28
65	CHELSEA	MAPC	6	REVERE BEACH PARKWAY	16	GARFIELD AVENUE		63	127	0	16	47
66	CAMBRIDGE	MAPC	6	MASSACHUSETTS AVENUE	2A	VASSAR STREET		41	126	1	19	21
66	QUINCY	MAPC	6	SOUTHERN ARTERY	3A	CODDINGTON STREET		66	126	0	15	51
68	BRIDGEWATER	OCPC	5	BROAD STREET	18	MAIN STREET	28	57	125	0	17	40
68	WORCESTER	CMRPC	3	BELMONT STREET	9	LINCOLN STREET		73	125	0	13	60
68	TEWKSBURY	NMCOG	4	MAIN STREET	38	CLARK ROAD		73	125	0	13	60
71	SEEKONK	SRPEDD	5	TAUNTON AVENUE	44	FALL RIVER AVENUE	114A	72	124	0	13	59
72	LYNN	MAPC	4	WESTERN AVENUE	107	BAYVIEW AVENUE		63	123	0	15	48
72	LOWELL	NMCOG	4	NESMITH STREET	38	ANDOVER STREET	110	59	123	0	16	43
72	NORTHBOROUGH	CMRPC	3	WEST MAIN STREET	20	SOUTH STREET	135	95	123	0	7	88
72	MILFORD	MAPC	3	EAST MAIN STREET	16	QUARRY SQUARE SHOPPING CENTER		83	123	0	10	73
72	CONCORD	MAPC	4	CONCORD TURNPIKE	2	MAIN STREET	62	55	123	0	17	38
72	LYNN	MAPC	4	BROADWAY		EUCLID AVENUE		51	123	0	18	33
78	HAVERHILL	MVPC	4	BRIDGE STREET	125	WATER STREET	113	78	122	0	11	67
79	MILFORD	MAPC	3	MEDWAY ROAD	109	KMART SHOPPING PLAZA		85	121	0	9	76
80	FRAMINGHAM	MAPC	3	CONCORD STREET	126	UNION AVENUE		60	120	0	15	45
81	SALEM	MAPC	4	WASHINGTON STREET	114	CANAL STREET		59	119	0	15	44
81	LOWELL	NMCOG	4	WESTFORD STREET	3A	WILDER STREET		59	119	0	15	44
81	FRAMINGHAM	MAPC	3	WORCESTER ROAD	9	COCHITUATE ROAD	30	39	119	0	20	19
84	BRAINTREE	MAPC	6	GRANITE STREET	37	FRANKLIN STREET		42	118	0	19	23
84	WALPOLE	MAPC	5	PROVIDENCE TURNPIKE	1	HIGH PLAIN STREET	27	54	118	0	16	38
84	WORCESTER	CMRPC	3	BELMONT STREET	9	PLANTATION STREET		54	118	0	16	38
87	STOUGHTON	MAPC_OCPC	5	WASHINGTON STREET	138	CENTRAL STREET		69	117	0	12	57
88	HAVERHILL	MVPC	4	MAIN STREET	125	WINTER STREET	97	60	116	0	14	46
89	SHREWSBURY	CMRPC	3	BOSTON TURNPIKE	9	SOUTH QUINSIGAMOND AVENUE		67	115	0	12	55
89	SHREWSBURY	CMRPC	3	BOSTON TURNPIKE	9	SOUTH STREET		71	115	0	11	60
89	BOSTON	MAPC	6	CHARLES GATE WEST		COMMONWEALTH AVENUE	2	39	115	0	19	20
89	GARDNER	MRPC	3	PEARSON BOULEVARD		ELM STREET		83	115	0	8	75
93	BROCKTON	OCPC	5	CENTRE STREET	123	PLYMOUTH STREET		42	114	0	18	24
93	FALMOUTH	CCC	5	TEATICKET HIGHWAY	28	FALMOUTH MALL		62	114	0	13	49
93	NATICK	MAPC	3	SPEEN STREET		CLOVERLEAF MARKETPLACE SHOPPING CENTER		82	114	0	8	74
93	WORCESTER	CMRPC	3	GRAFTON STREET	122	PLANTATION STREET		42	114	0	18	24
97	WALTHAM	MAPC	4	MAIN STREET	20	WESTON STREET		77	113	0	9	68
97	WORCESTER	CMRPC	3	HIGHLAND STREET	9	MAIN STREET		53	113	0	15	38
97	WORCESTER	CMRPC	3	GRAFTON STREET	122	MENDON STREET		41	113	0	18	23
97	WOBURN	MAPC	4	MONTVALE AVENUE		ALBANY STREET		65	113	0	12	53
101	QUINCY	MAPC	6	HONORABLE THOMAS S BURGIN PARKWAY		CENTRE STREET		48	112	0	16	32
101	LYNN	MAPC	4	WESTERN AVENUE	107	PARK STREET		48	112	0	16	32
101	DENNIS	CCC	5	EAST WEST DENNIS ROAD		PATRIOT SQUARE (BY ADDRESS)		84	112	0	7	77
101	TAUNTON	SRPEDD	5	COUNTY STREET	140	HART STREET		48	112	0	16	32
105	ARLINGTON	MAPC	4	MASSACHUSETTS AVENUE	3	MYSTIC STREET	3	59	111	0	13	46
105	SWANSEA	SRPEDD	5	GRAND ARMY OF THE REPUBLIC HIGHWAY	6	SWANSEA MALL DRIVE		47	111	0	16	31
107	DEDHAM	MAPC	6	BOSTON PROVIDENCE TURNPIKE	1A	ELM STREET		50	110	0	15	35
107	WEYMOUTH	MAPC	6	BRIDGE STREET	3A	EVANS STREET		50	110	0	15	35

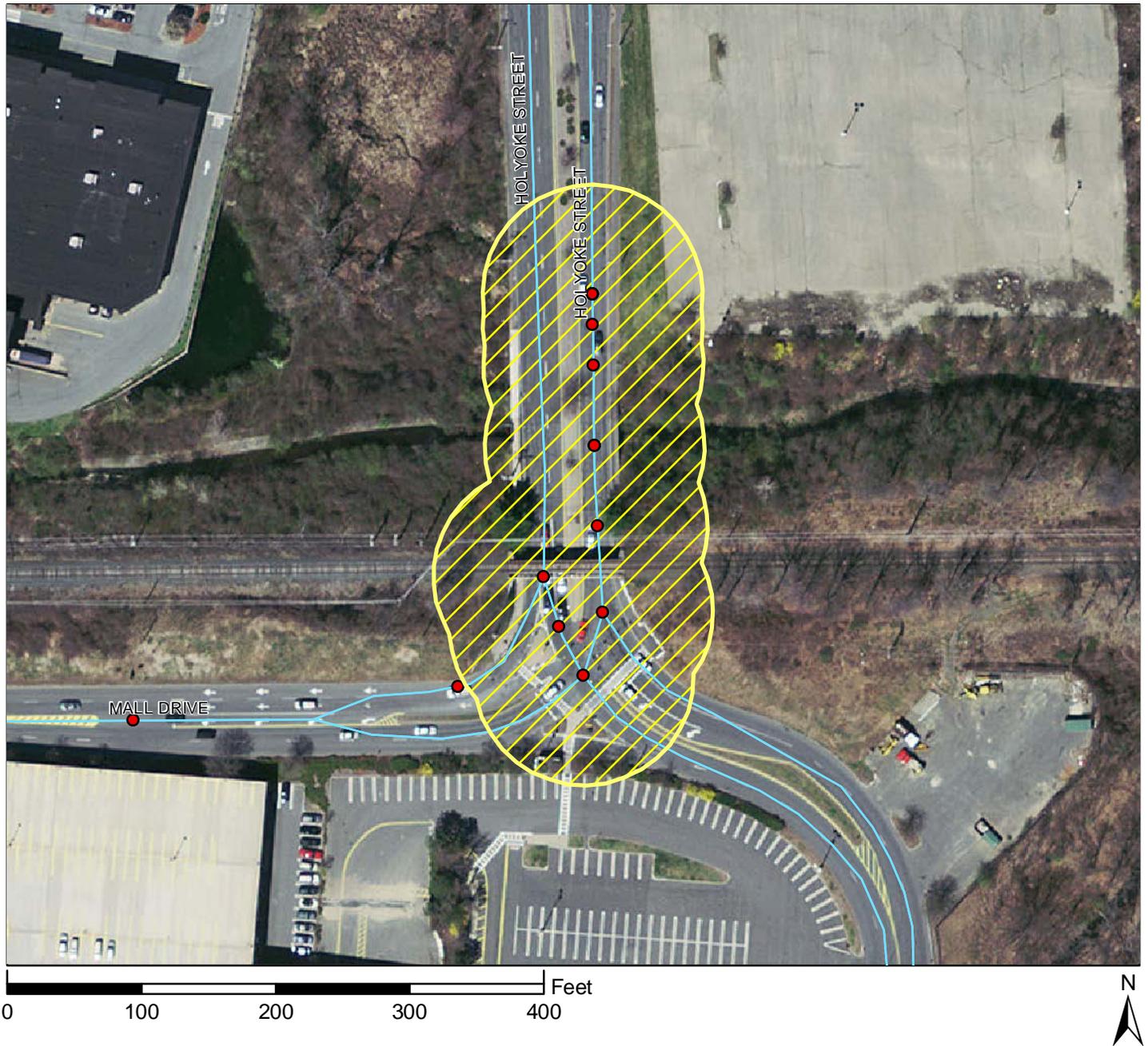
2009-2011 STATEWIDE TOP 200 INTERSECTION CRASH LIST

Rank	Town	RPA	MassDOT District	Street 1	Route 1	Street 2	Route 2	Total Crashes	EPDO Crashes	Fatal Crashes	Injury Crashes	PDO & Non Reported Crashes
107	BROCKTON	OCPC	5	PLEASANT STREET	27	WARREN AVENUE		42	110	0	17	25
110	LOWELL	NMCOG	4	PAWTUCKET BOULEVARD	113	ROURKE BRIDGE		53	109	0	14	39
110	WORCESTER	CMRPC	3	MADISON STREET	122	GREEN STREET (KELLEY SQUARE)	122A	69	109	0	10	59
110	CAMBRIDGE	MAPC	6	MASSACHUSETTS AVENUE	2A	ALEWIFE BROOK PARKWAY	3	45	109	0	16	29
113	MIDDLEBOROUGH	SRPEDD	5	SOUTH MAIN STREET	105	EAST GROVE STREET	28	68	108	0	10	58
113	TAUNTON	SRPEDD	5	HON. GORDON M OWEN RIVERWAY		WILLIAMS STREET		44	108	0	16	28
113	SHREWSBURY	CMRPC	3	HARTFORD TURNPIKE	20	GRAFFTON STREET		56	108	0	13	43
113	LOWELL	NMCOG	4	SCHOOL STREET		BRANCH STREET		44	108	0	16	28
113	WEYMOUTH	MAPC	6	MAIN STREET	18	PLEASANT SHOPS PLAZA		60	108	0	12	48
113	HOLYOKE	PVPC	2	BEECH STREET	202	WEST FRANKLIN STREET		48	108	0	15	33
113	BOSTON	MAPC	6	MASSACHUSETTS AVENUE		MELNEA CASS BOULEVARD		39	108	1	15	23
120	BROCKTON	OCPC	5	WARREN AVENUE		FOREST AVENUE		39	107	0	17	22
120	BROCKTON	OCPC	5	PLEASANT STREET	27	NORTH ASH STREET		39	107	0	17	22
122	HOLBROOK	MAPC	5	SOUTH FRANKLIN STREET	37	UNION STREET	139	42	106	0	16	26
122	BROCKTON	OCPC	5	WARREN AVENUE	123	WEST ELM STREET		34	106	0	18	16
122	ABINGTON	OCPC	5	CENTER AVENUE	123	PLYMOUTH STREET	58	54	106	0	13	41
122	DARTMOUTH	SRPEDD	5	FAUNCE CORNER MALL ROAD		CROSS ROAD		38	106	0	17	21
126	BROCKTON	OCPC	5	NORTH MONTELLO STREET	28	HOWARD STREET	37	33	105	0	18	15
126	WORCESTER	CMRPC	3	BELMONT STREET	9	LAKE AVENUE NORTH		49	105	0	14	35
126	WALTHAM	MAPC	4	LEXINGTON STREET		TOTTEN POND ROAD		65	105	0	10	55
126	ATTLEBORO	SRPEDD	5	WASHINGTON STREET	1	MOBIL GAS STATION/CAR WASH		41	105	0	16	25
126	SOMERVILLE	MAPC	4	SOMERVILLE AVENUE		BOW STREET		33	105	0	18	15
126	LOWELL	NMCOG	4	FATHER MORISSETTE BOULEVARD		CABOT STREET		37	105	0	17	20
126	NATICK	MAPC	3	WORCESTER STREET	9	OAK STREET		69	105	0	9	60
126	CHARLTON	CMRPC	3	STURBRIDGE ROAD	20	BROOKFIELD ROAD	31	57	105	0	12	45
126	LEOMINSTER	MRPC	3	NORTH MAIN STREET	12	NELSON STREET		65	105	0	10	55
135	NORTHAMPTON	PVPC	2	MAIN STREET	9	KING STREET	5	60	104	0	11	49
136	LOWELL	NMCOG	4	BRIDGE STREET	38	WEST THIRD STREET		51	103	0	13	38
136	WESTFIELD	PVPC	2	NORTH ELM STREET	202	HARVARD STREET		35	103	0	17	18
136	SOMERSET	SRPEDD	5	GRAND ARMY OF THE REPUBLIC HIGHWAY	6	RIVERSIDE AVENUE	103	47	103	0	14	33
136	WORCESTER	CMRPC	3	LINCOLN STREET	70	COUNTRY CLUB BOULEVARD		51	103	0	13	38
136	FALL RIVER	SRPEDD	5	BROADWAY	138	COLUMBIA STREET		59	103	0	11	48
141	ATTLEBORO	SRPEDD	5	HIGHLAND AVENUE	123	WASHINGTON STREET	1	62	102	0	10	52
141	BROCKTON	OCPC	5	NORTH MONTELLO STREET	28	LIVINGSTON ROAD		30	102	0	18	12
141	SEEKONK	SRPEDD	5	FALL RIVER AVENUE	114A	COUNTY STREET		58	102	0	11	47
141	CHELSEA	MAPC	6	BROADWAY		FIFTH STREET		50	102	0	13	37
141	WEYMOUTH	MAPC	6	UNION STREET		PLEASANT STREET		62	102	0	10	52
141	HOLYOKE	PVPC	2	MAPLE STREET		DWIGHT STREET		38	102	0	16	22
141	HANOVER	MAPC	5	COLUMBIA ROAD	53	BROADWAY		38	102	0	16	22
141	LYNN	MAPC	4	BOSTON STREET	129	FORD STREET		58	102	0	11	47
149	WORCESTER	CMRPC	3	HIGHLAND STREET	9	LANCASTER STREET		53	101	0	12	41
149	LOWELL	NMCOG	4	PAWTUCKET STREET		SCHOOL STREET		44	101	1	12	31
149	WORCESTER	CMRPC	3	PARK AVENUE	9	HIGHLAND STREET		57	101	0	11	46
149	CHELSEA	MAPC	6	REVERE BEACH PARKWAY	16	WASHINGTON AVENUE		39	101	2	11	26
149	WHITMAN	OCPC	5	BEDFORD STREET	18	TEMPLE STREET	27	69	101	0	8	61
154	WESTFIELD	PVPC	2	NORTH ELM STREET	202	NOTRE DAME STREET		48	100	0	13	35
154	WEYMOUTH	MAPC	6	MAIN STREET	18	COLUMBIAN STREET		48	100	0	13	35
154	QUINCY	MAPC	6	HONORABLE THOMAS S BURGIN PARKWAY		GRANITE STREET		60	100	0	10	50
154	FALL RIVER	SRPEDD	5	PRESIDENT AVENUE	6	CVS PLAZA		56	100	0	11	45
154	MANSFIELD	SRPEDD	5	ROUTE 140	140	CHAUNCY STREET		44	100	0	14	30
154	FRAMINGHAM	MAPC	3	COCHITUATE ROAD	30	SPEEN STREET		44	100	0	14	30
154	LUDLOW	PVPC	2	CENTER STREET	21	CHERRY STREET		52	100	0	12	40
154	WORCESTER	CMRPC	3	PROVIDENCE STREET	122A	MILLBURY STREET		44	100	0	14	30
154	BROCKTON	OCPC	5	OAK STREET		BELAIR STREET		32	100	0	17	15

2009-2011 STATEWIDE TOP 200 INTERSECTION CRASH LIST

Rank	Town	RPA	MassDOT District	Street 1	Route 1	Street 2	Route 2	Total Crashes	EPDO Crashes	Fatal Crashes	Injury Crashes	PDO & Non Reported Crashes
163	PEMBROKE	MAPC_OCPC	5	CHURCH STREET	139	OLD OAK STREET		59	99	0	10	49
163	WHITMAN	OCPC	5	BEDFORD STREET	18	AUBURN STREET	14	55	99	0	11	44
163	BROCKTON	OCPC	5	BELMONT STREET	123	PEARL STREET		43	99	0	14	29
163	PITTSFIELD	BRPC	1	LINDEN STREET		SEYMOUR STREET		39	99	0	15	24
167	LEXINGTON	MAPC	4	BEDFORD STREET	4	HARRINGTON ROAD		46	98	0	13	33
167	QUINCY	MAPC	6	SOUTHERN ARTERY	3A	MCGRATH HIGHWAY		46	98	0	13	33
167	HOLBROOK	MAPC	5	WEYMOUTH STREET		PINE STREET		30	98	0	17	13
167	HOLYOKE	PVPC	2	WESTFIELD ROAD	202	HOMESTEAD AVENUE		50	98	0	12	38
171	HOLYOKE	PVPC	2	BEECH STREET	202	APPLETON STREET	141	37	97	0	15	22
171	STOUGHTON	MAPC_OCPC	5	CANTON STREET	27	SCHOOL STREET		39	97	2	10	27
171	LAWRENCE	MVPC	4	BROADWAY	28	CANAL STREET		49	97	0	12	37
171	LYNN	MAPC	4	WESTERN AVENUE	107	EASTERN AVENUE		57	97	0	10	47
171	NEWTON	MAPC	6	COMMONWEALTH AVENUE	30	WASHINGTON STREET	16	29	97	0	17	12
171	BROCKTON	OCPC	5	EAST ASHLAND STREET		NORTH QUINCY STREET		33	97	0	16	17
171	CHICOPEE	PVPC	2	GRANBY ROAD		MONTGOMERY STREET		53	97	0	11	42
171	OXFORD	CMRPC	3	MAIN STREET	12	SUTTON AVENUE		53	97	0	11	42
179	HOLYOKE	PVPC	2	MAPLE STREET		RESNIC BOULEVARD		44	96	0	13	31
179	WEYMOUTH	MAPC	6	WASHINGTON STREET	53	BROAD STREET		52	96	0	11	41
179	RANDOLPH	MAPC	6	NORTH MAIN STREET	28	SUDBURY FARMS PLAZA		52	96	0	11	41
179	BRAINTREE	MAPC	6	GRANITE STREET	37	COMMON STREET		44	96	0	13	31
179	WRENTHAM	MAPC	5	SOUTH STREET	1A	PREMIUM OUTLET BOULEVARD		48	96	0	12	36
179	QUINCY	MAPC	6	WATER STREET		FEDERAL AVENUE		40	96	0	14	26
179	LYNN	MAPC	4	WESTERN AVENUE	107	LAWTON AVENUE		40	96	0	14	26
179	WORCESTER	CMRPC	3	CHANDLER STREET	122	PIEDMONT STREET		35	96	1	13	21
179	FALL RIVER	SRPEDD	5	SOUTH MAIN STREET	138	GLOBE STREET		56	96	0	10	46
188	HOLYOKE	PVPC	2	HIGH STREET		CABOT STREET		39	95	0	14	25
188	FALL RIVER	SRPEDD	5	CENTRAL STREET		DAVOL STREET		47	95	0	12	35
188	WELLESLEY_NEWTON	MAPC	6	WASHINGTON STREET	16	RIVER STREET		67	95	0	7	60
188	MIDDLEBOROUGH	SRPEDD	5	SOUTH MAIN STREET	105	PROSPECT STREET		39	95	0	14	25
188	QUINCY	MAPC	6	HANCOCK STREET		SAVILLE AVENUE		51	95	0	11	40
188	WEYMOUTH	MAPC	6	MIDDLE STREET		WINTER STREET		59	95	0	9	50
194	ACTON	MAPC	3	MASSACHUSETTS AVENUE	2	TAYLOR ROAD		38	94	0	14	24
194	WILBRAHAM	PVPC	2	BOSTON ROAD	20	STONY HILL ROAD		62	94	0	8	54
194	QUINCY	MAPC	6	SCHOOL STREET		HANCOCK STREET		54	94	0	10	44
194	TAUNTON	SRPEDD	5	WASHINGTON STREET	140	HODGES AVENUE		38	94	0	14	24
194	WOBURN	MAPC	4	MAIN STREET	38	WINN STREET		54	94	0	10	44
199	LYNN	MAPC	4	WESTERN AVENUE	107	CLEVELAND STREET		41	93	0	13	28
199	WORCESTER	CMRPC	3	MADISON STREET	122	KELLEY SQUARE (BY ADDRESS)		37	93	0	14	23
199	LOWELL	NMCOG	4	MERRIMACK STREET		CENTRAL STREET		53	93	0	10	43
199	WILMINGTON	MAPC	4	MAIN STREET	38	RICHMOND ROAD	129	53	93	0	10	43
203	BOSTON	MAPC	6	BEACON STREET		CHARLES GATE EAST		36	92	0	14	22
203	NEW BEDFORD	SRPEDD	5	COUNTY STREET		MILL STREET	6	44	92	0	12	32
203	BROCKTON	OCPC	5	NORTH MAIN STREET		EAST ASHLAND STREET		36	92	0	14	22
203	LEOMINSTER	MRPC	3	NORTH MAIN STREET	12	HAMILTON STREET		52	92	0	10	42

Top Crash Intersections 2009-2011



RANK

1

HOLYOKE

HOLYOKE STREET
HOLYOKE MALL AT INGLESIDE

MassDOT District 2

RPA PVPC

EPDO 314

Number of Fatal Crashes 0

Number of Injury Crashes 29

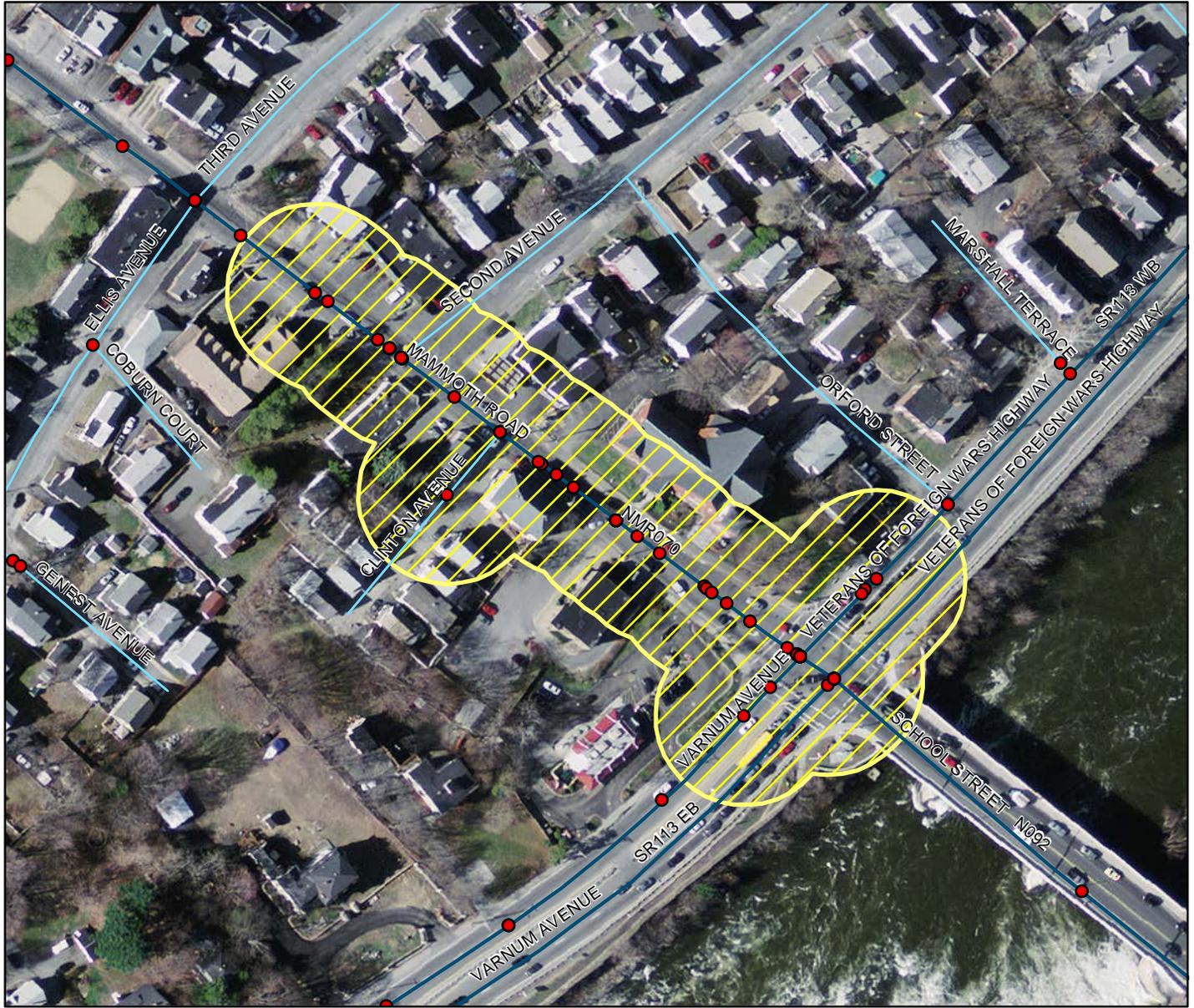
Number of Non-Injury Crashes 169

Total Crashes 198

Legend

- Crash Locations 2009-2011
- ~ Local Roads
- ~ All Functional Classification Except Local Roads
- Top Crash Intersections

Top Crash Intersections 2009-2011



0 130 260 390 520 Feet



RANK

2

LOWELL

VETERANS OF FOREIGN WARS HIGHWAY
VARNUM AVENUE

MassDOT District 4

RPA NMCOG

EPDO 313

Number of Fatal Crashes 0

Number of Injury Crashes 37

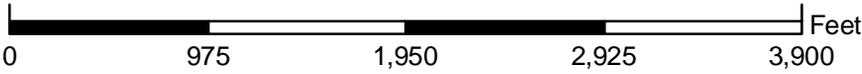
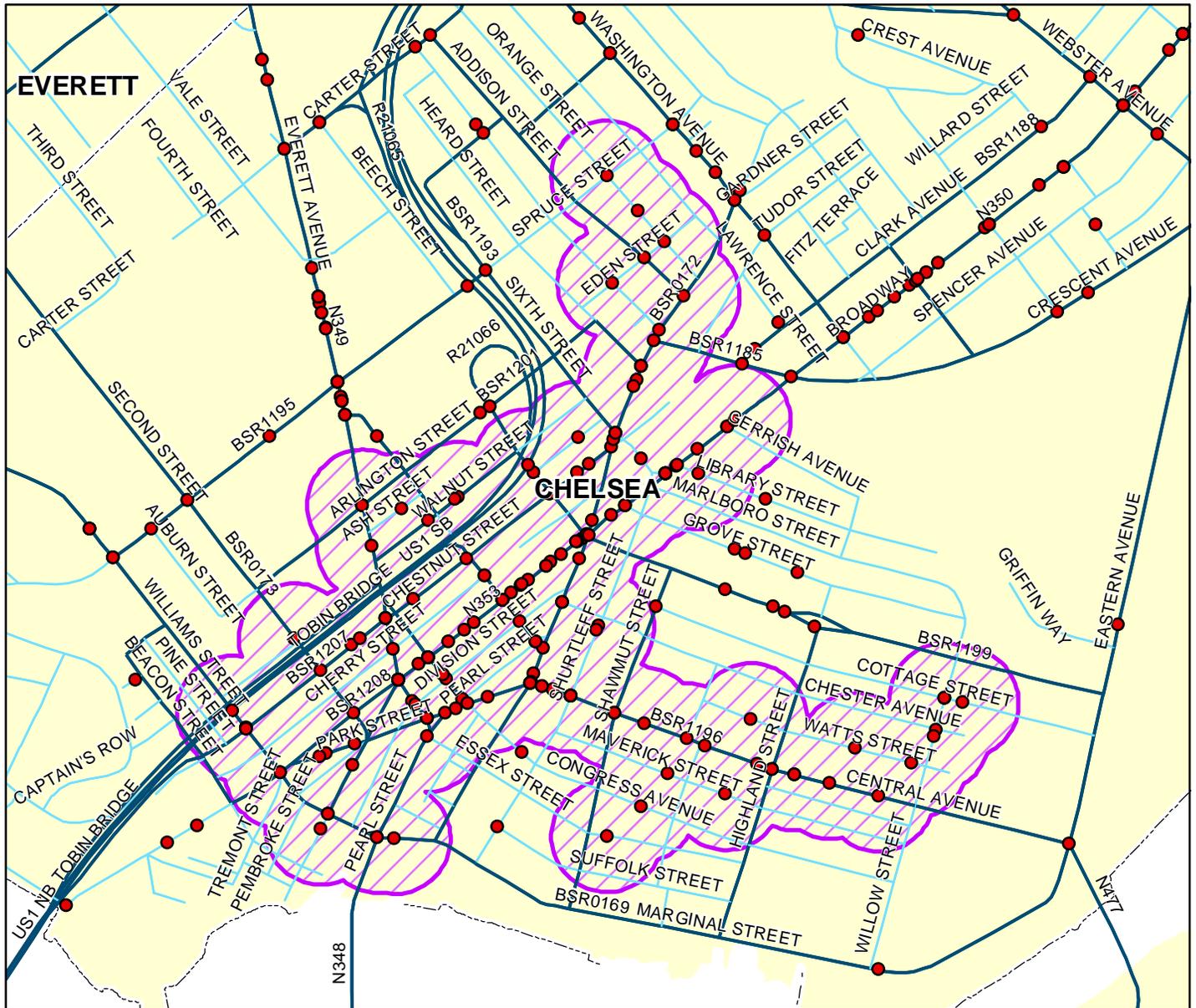
Number of Non-Injury Crashes 128

Total Crashes 165

Legend

- Crash Locations 2009-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Crash Intersections

Top Pedestrian Crash Cluster 2002-2011



RANK

1

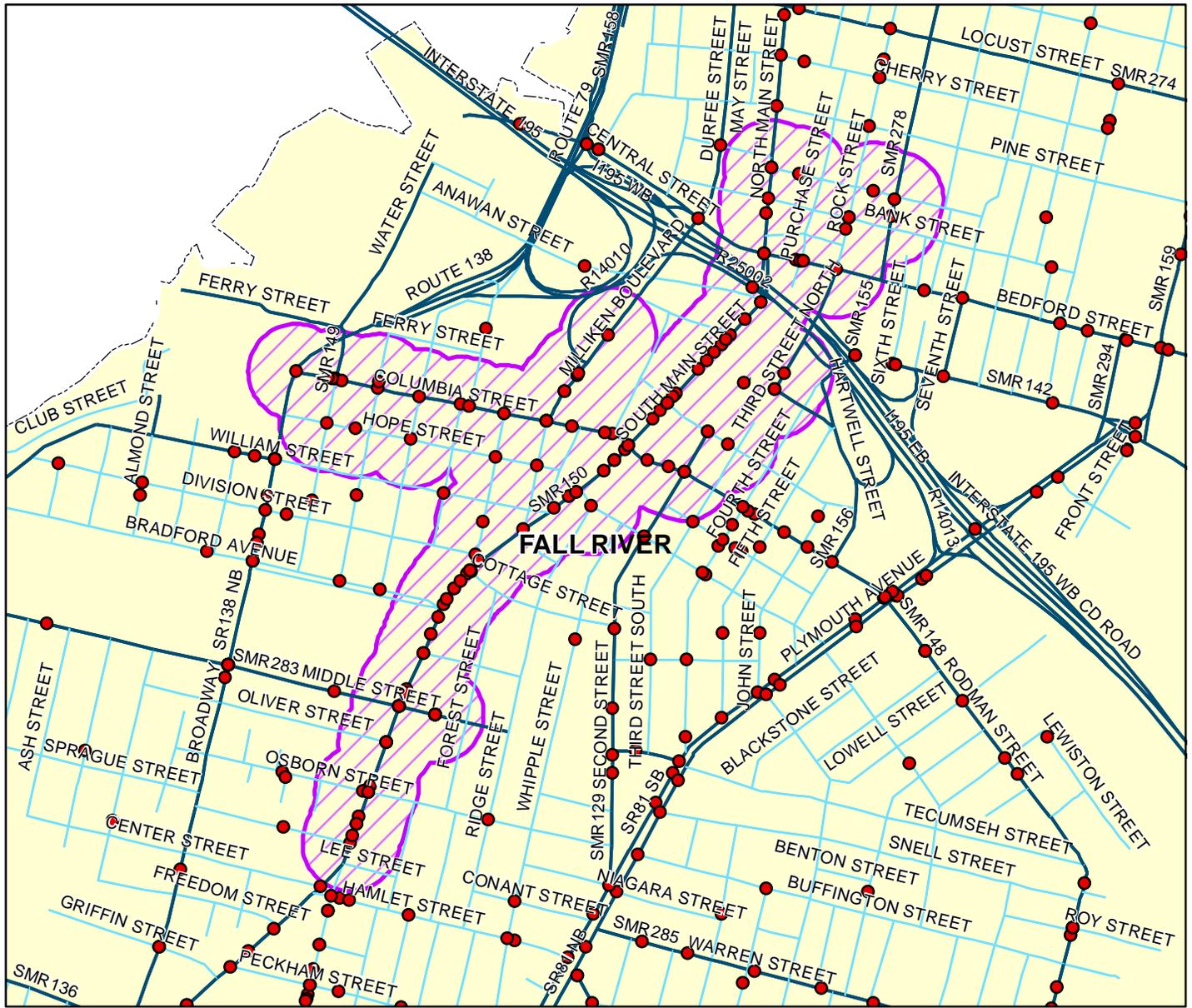
CHELSEA

RPA MAPC	
EPDO 832	
Number of Fatal Pedestrian Crashes	1
Number of Injury Pedestrian Crashes	154
Number of Non-Injury Pedestrian Crashes	52
Total Pedestrian Crashes	207

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK

2

FALL RIVER

RPA SRPEDD

EPDO 554

Number of Fatal Pedestrian Crashes 0

Number of Injury Pedestrian Crashes 103

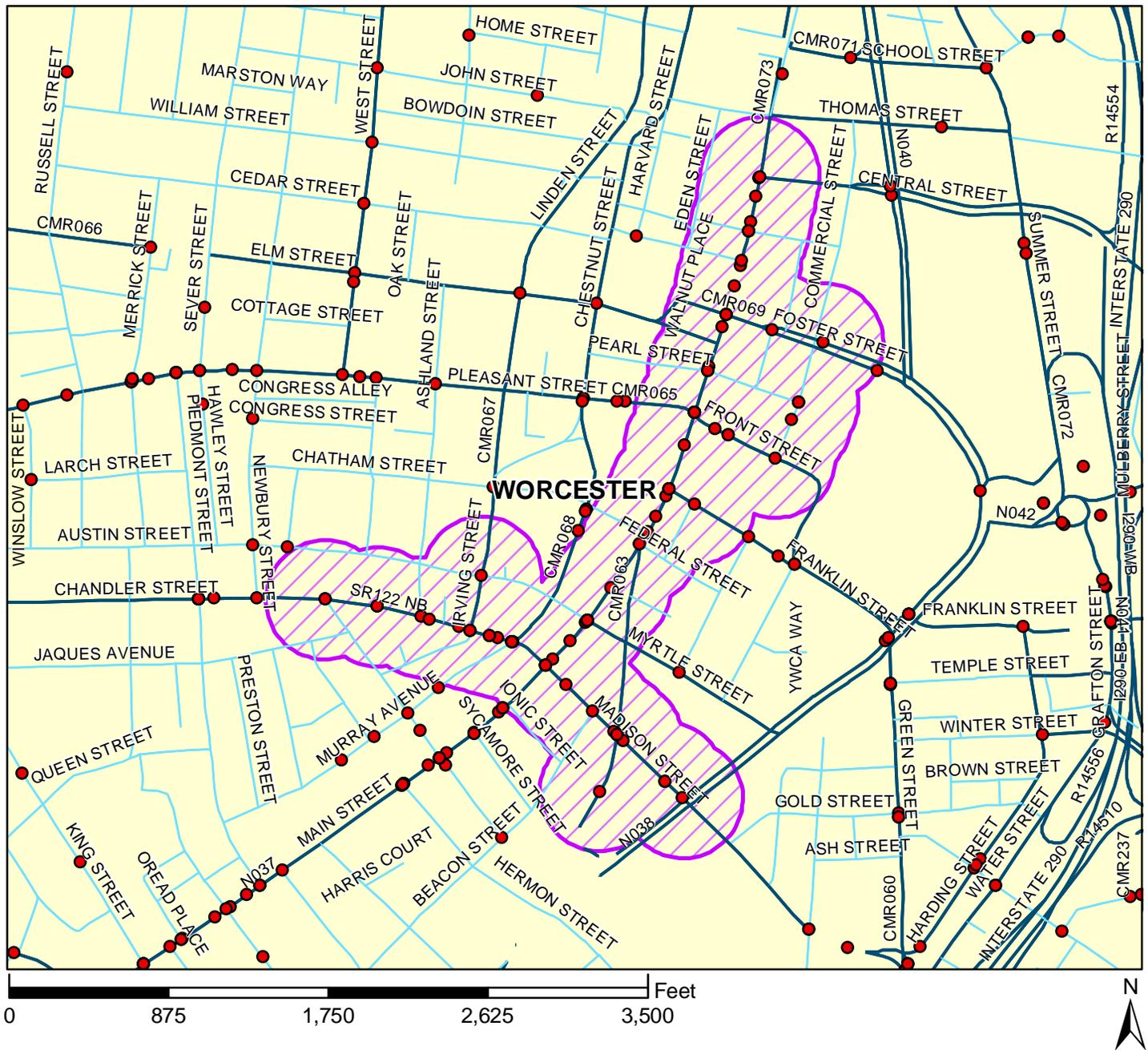
Number of Non-Injury Pedestrian Crashes 39

Total Pedestrian Crashes 142

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK

3

WORCESTER

RPA CMRPC

EPDO 419

Number of Fatal Pedestrian Crashes 0

Number of Injury Pedestrian Crashes 79

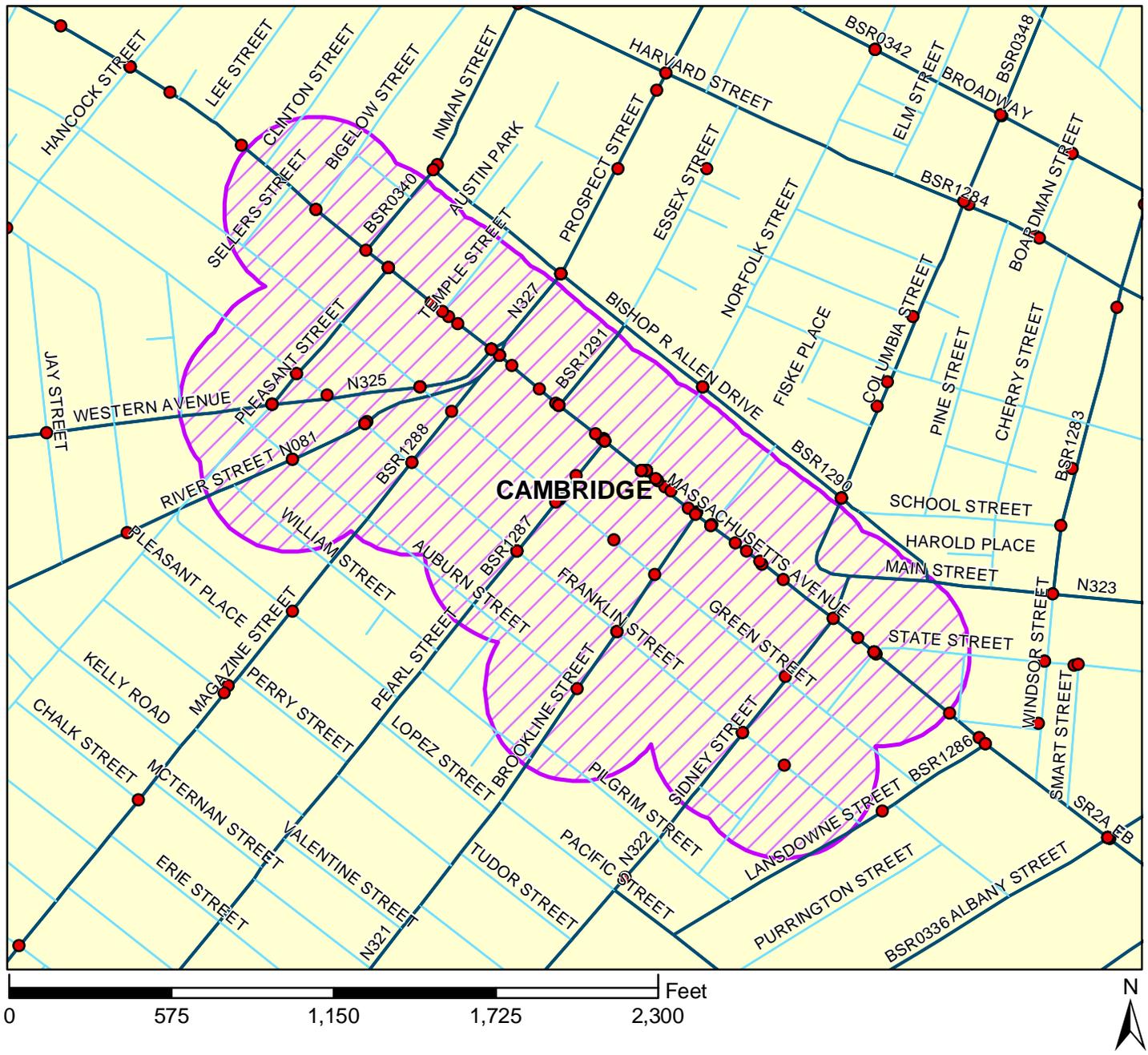
Number of Non-Injury Pedestrian Crashes 24

Total Pedestrian Crashes 103

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK
4

CAMBRIDGE

RPA MAPC

EPDO 380

Number of Fatal Pedestrian Crashes 3

Number of Injury Pedestrian Crashes 58

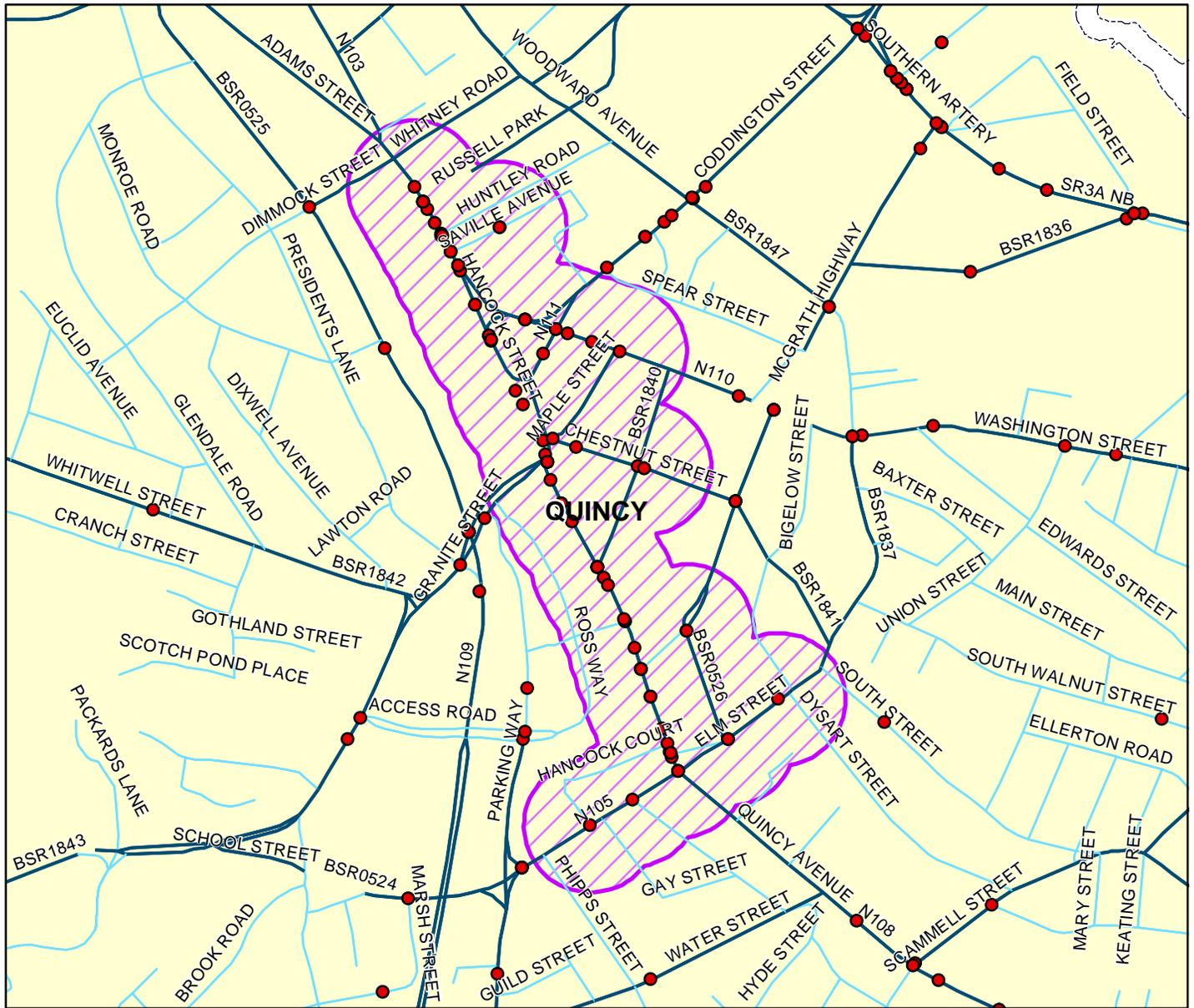
Number of Non-Injury Pedestrian Crashes 60

Total Pedestrian Crashes 121

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK

5

QUINCY

RPA MAPC

EPDO 311

Number of Fatal Pedestrian Crashes 1

Number of Injury Pedestrian Crashes 54

Number of Non-Injury Pedestrian Crashes 31

Total Pedestrian Crashes 86

Legend

● Pedestrian Crash Locations 2002-2011

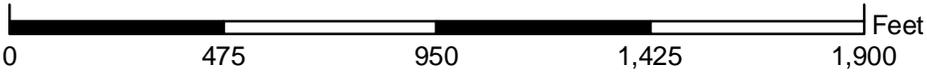
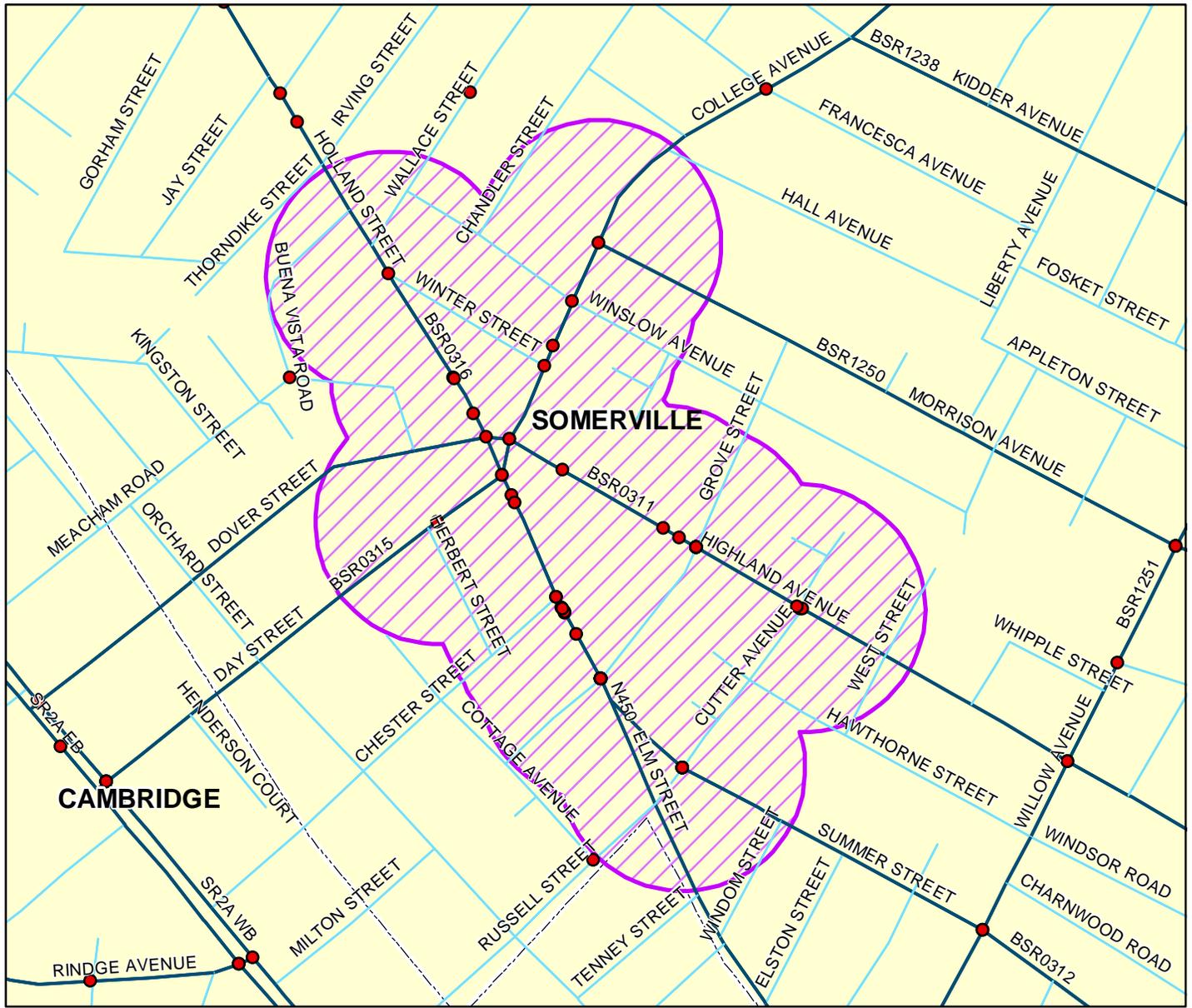
Local Roads

All Functional Classification Except Local Roads

Top Pedestrian Crash Cluster

Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK

6

SOMERVILLE, CAMBRIDGE

RPA MAPC

EPDO 249

Number of Fatal Pedestrian Crashes 1

Number of Injury Pedestrian Crashes 46

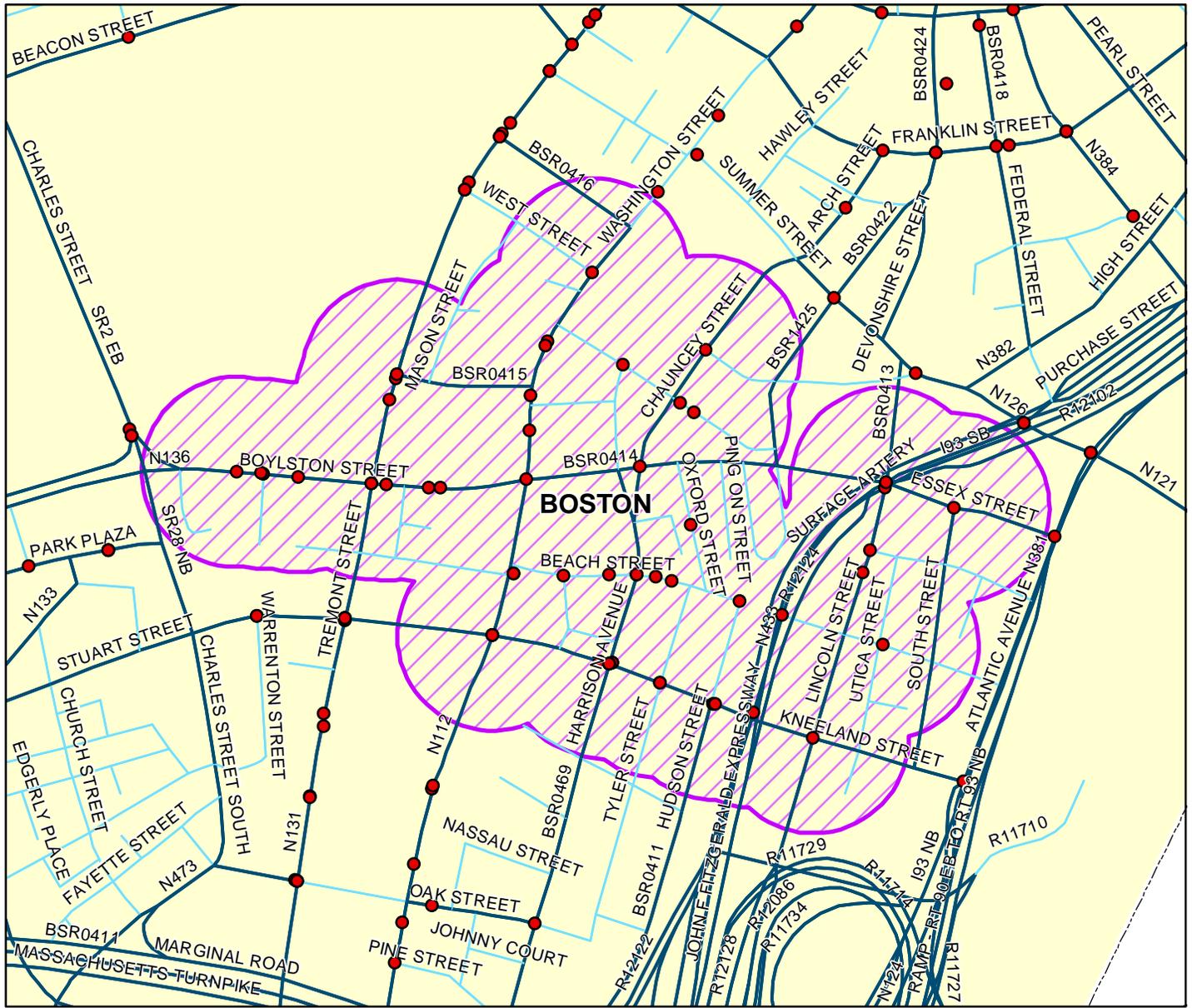
Number of Non-Injury Pedestrian Crashes 9

Total Pedestrian Crashes 56

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK

7

BOSTON

RPA MAPC

EPDO 218

Number of Fatal Pedestrian Crashes 2

Number of Injury Pedestrian Crashes 36

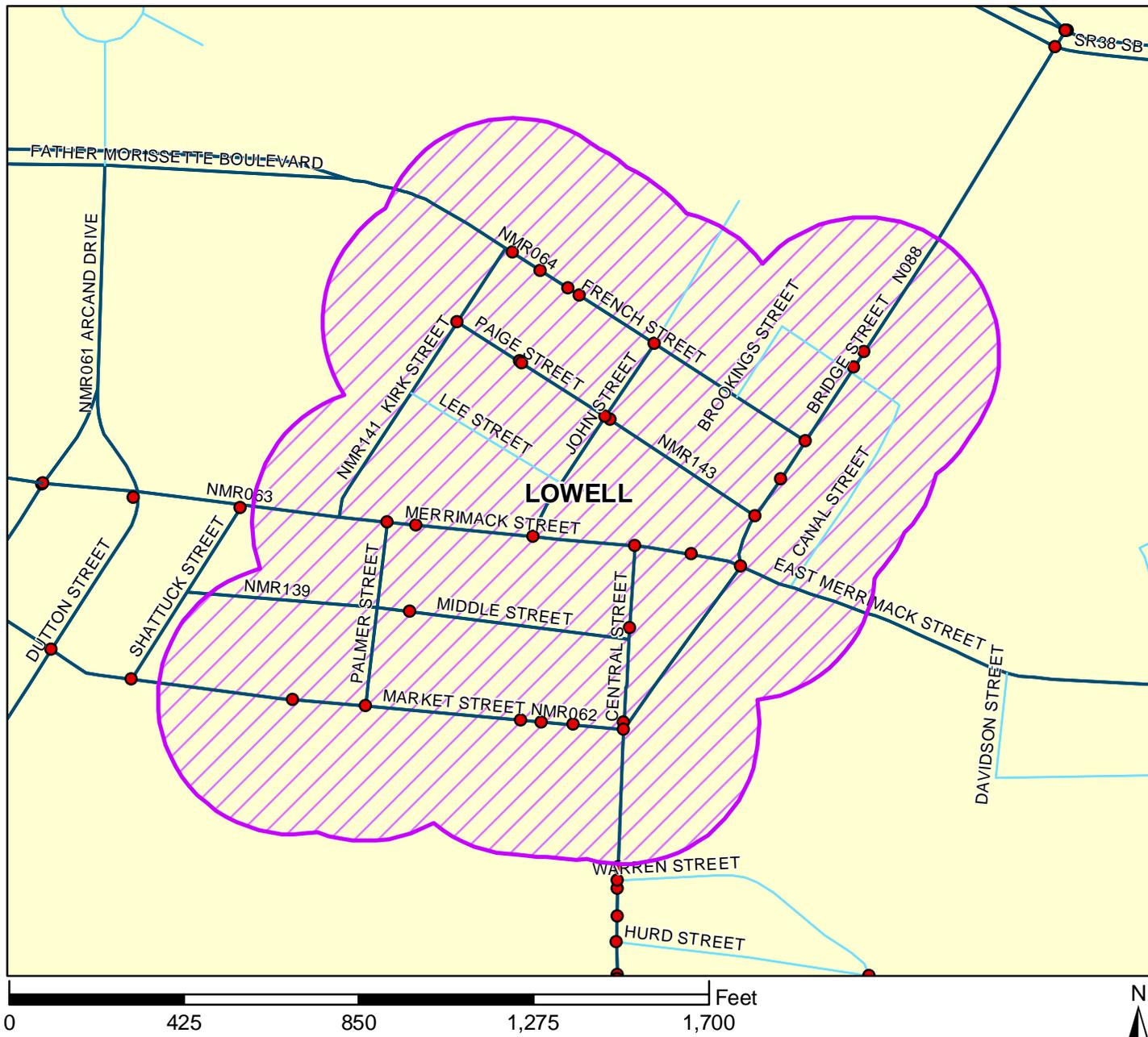
Number of Non-Injury Pedestrian Crashes 18

Total Pedestrian Crashes 56

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK
8

LOWELL

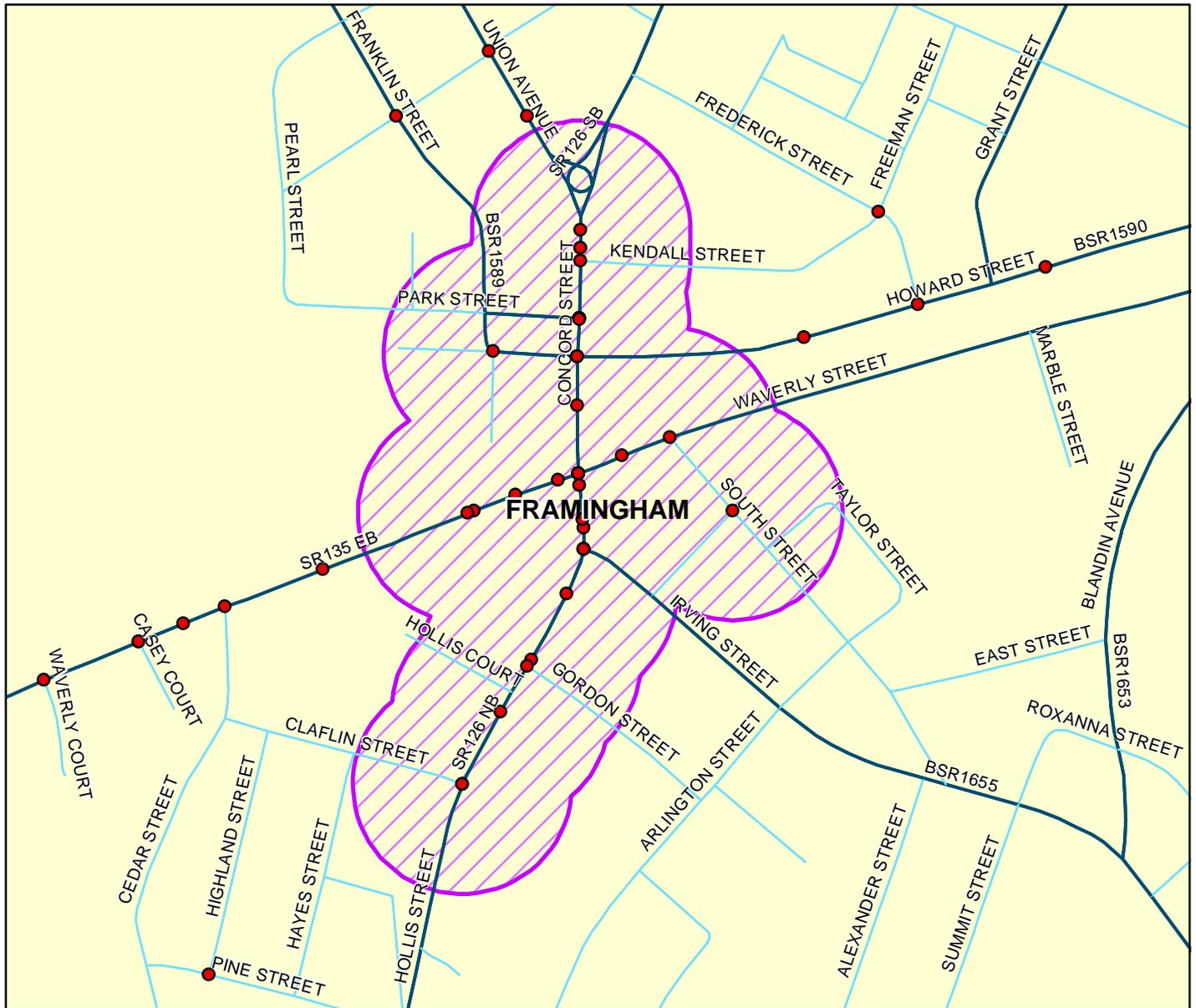
RPA NMCOG
EPDO 207

Number of Fatal Pedestrian Crashes	0
Number of Injury Pedestrian Crashes	37
Number of Non-Injury Pedestrian Crashes	22
Total Pedestrian Crashes	59

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK

9

FRAMINGHAM

RPA MAPC

EPDO 205

Number of Fatal Pedestrian Crashes 1

Number of Injury Pedestrian Crashes 38

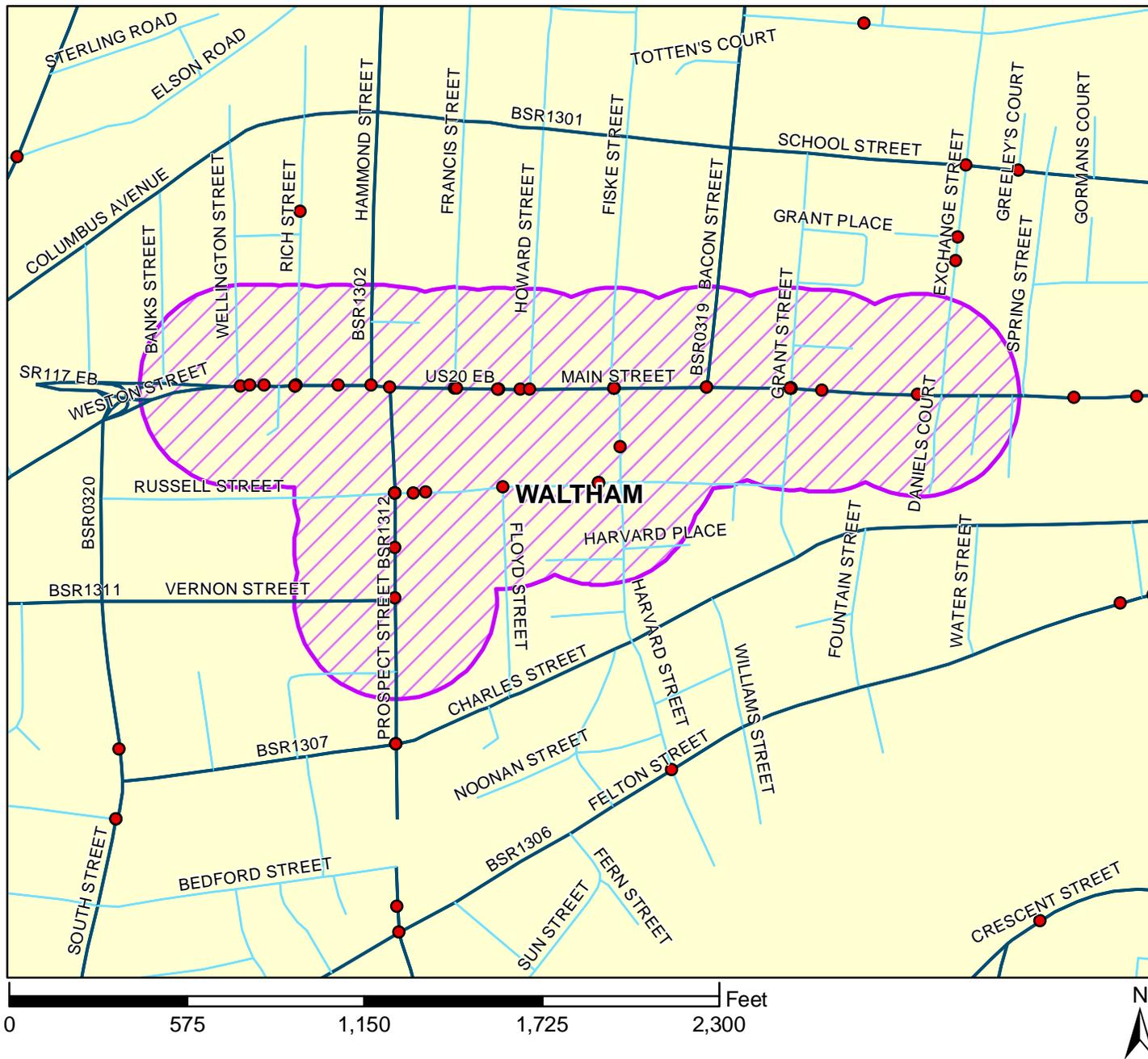
Number of Non-Injury Pedestrian Crashes 5

Total Pedestrian Crashes 44

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Pedestrian Crash Cluster 2002-2011



RANK
10

WALTHAM

RPA MAPC

EPDO 199

Number of Fatal Pedestrian Crashes 0

Number of Injury Pedestrian Crashes 37

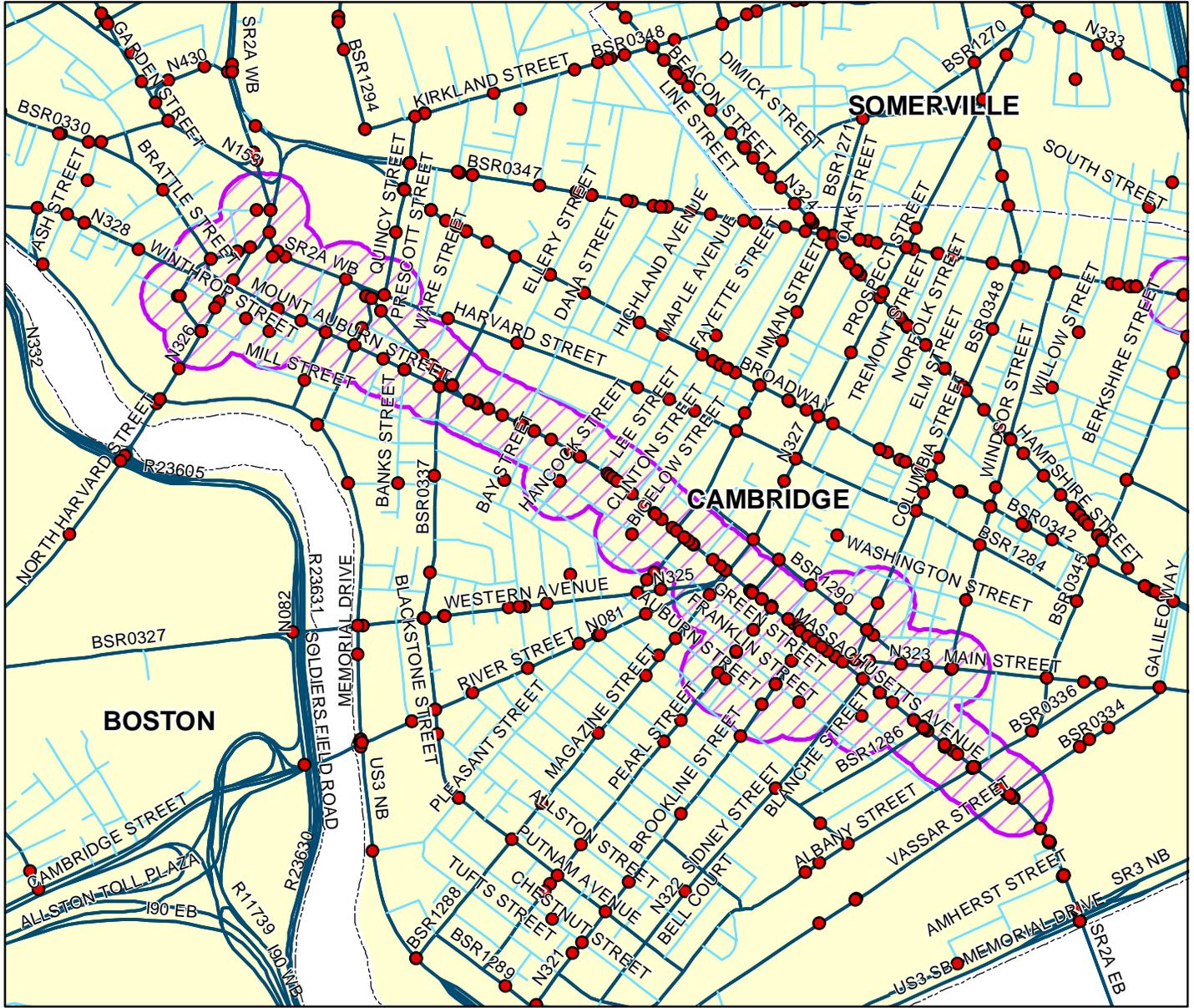
Number of Non-Injury Pedestrian Crashes 14

Total Pedestrian Crashes 51

Legend

- Pedestrian Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK

1

CAMBRIDGE

RPA MAPC

EPDO 936

Number of Fatal Bicycle Crashes 2

Number of Injury Bicycle Crashes 163

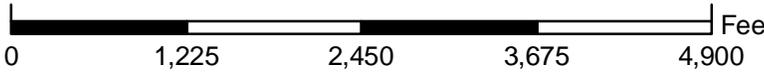
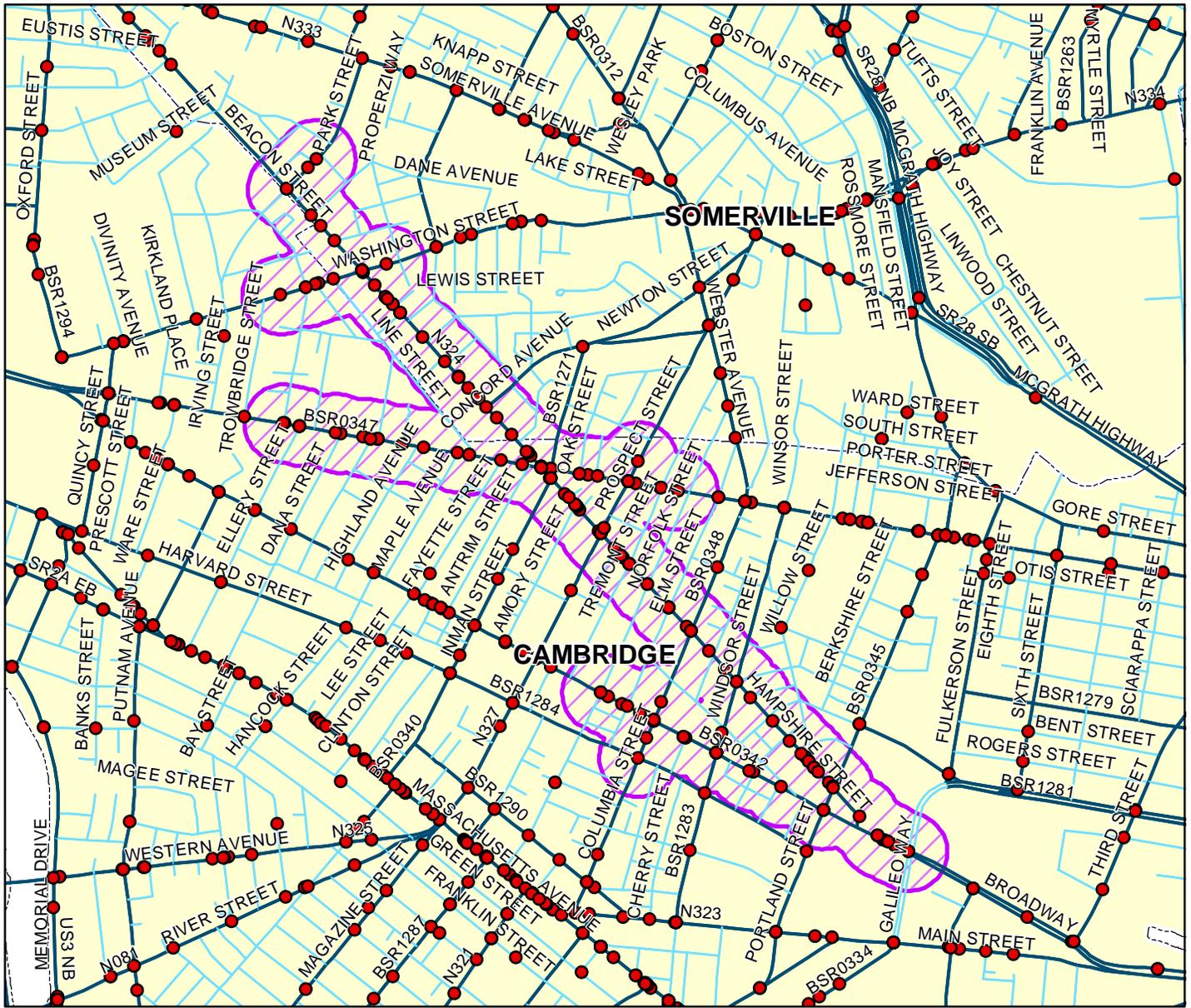
Number of Non-Injury Bicycle Crashes 101

Total Bicycle Crashes 266

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK

2

CAMBRIDGE, SOMERVILLE

RPA MAPC

EPDO 783

Number of Fatal Bicycle Crashes 0

Number of Injury Bicycle Crashes 141

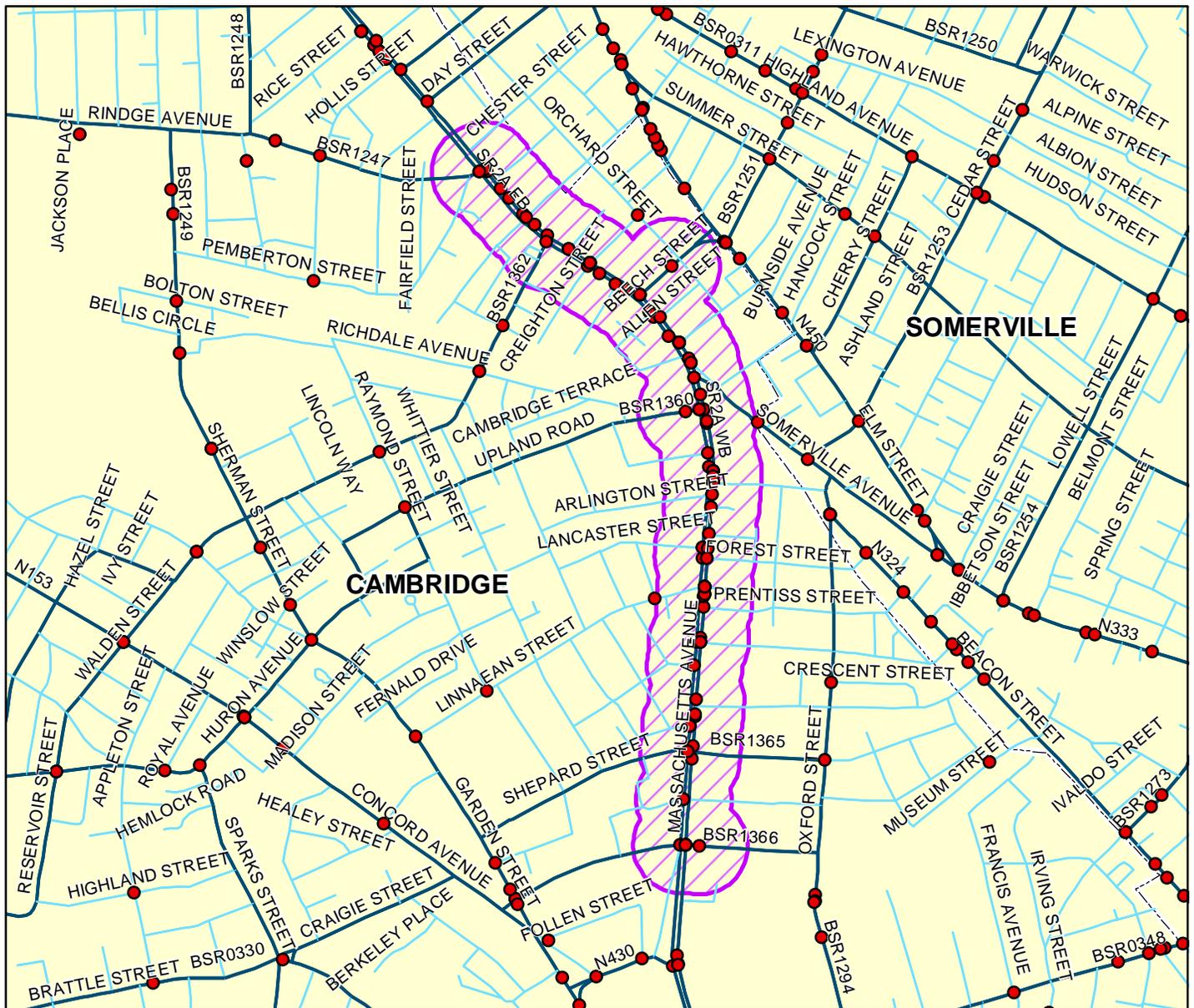
Number of Non-Injury Bicycle Crashes 78

Total Bicycle Crashes 219

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK
3

CAMBRIDGE, SOMERVILLE

RPA MAPC

EPDO 413

Number of Fatal Bicycle Crashes 0

Number of Injury Bicycle Crashes 75

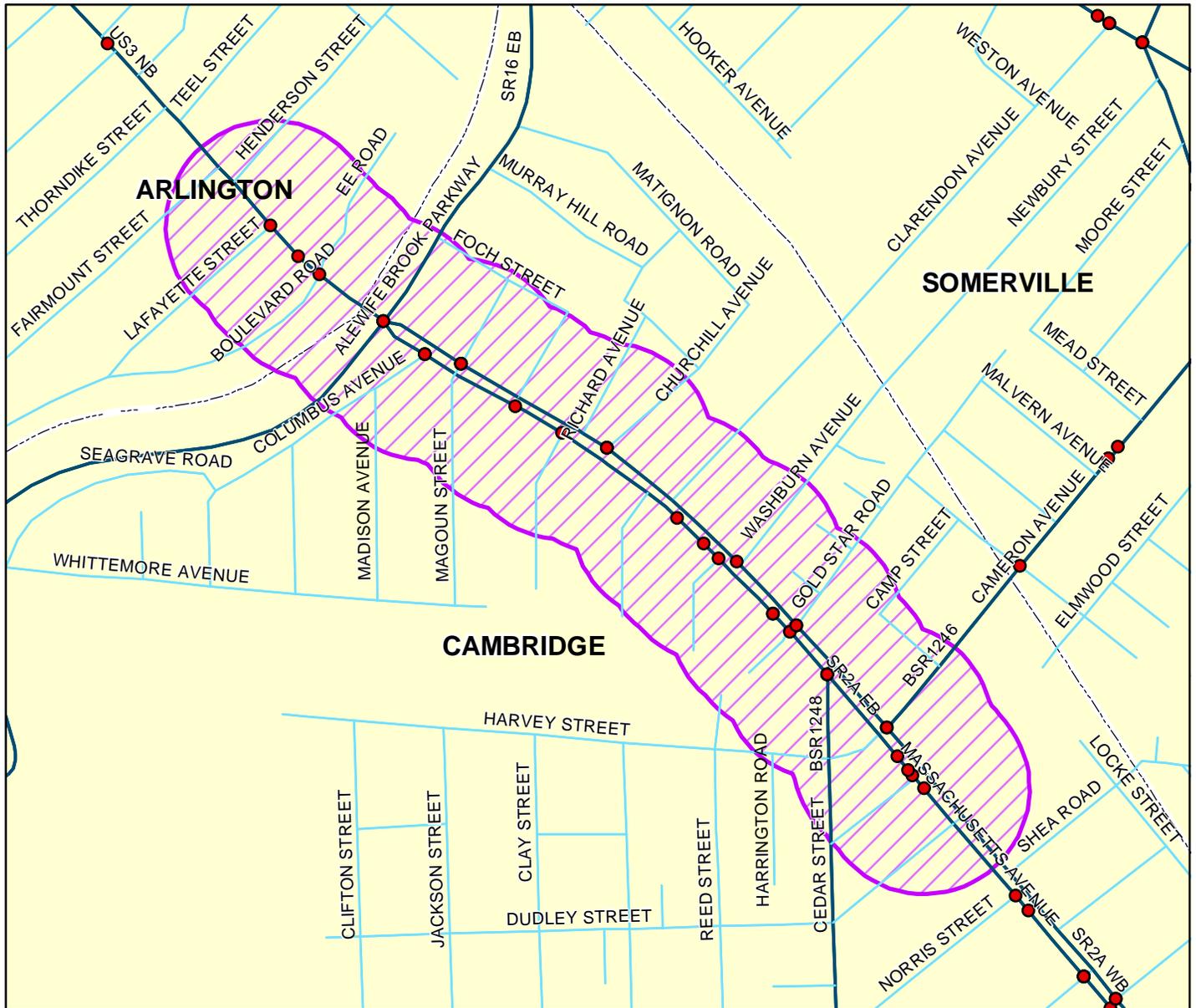
Number of Non-Injury Bicycle Crashes 38

Total Bicycle Crashes 113

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK

4

CAMBRIDGE, ARLINGTON

RPA MAPC

EPDO 139

Number of Fatal Bicycle Crashes 0

Number of Injury Bicycle Crashes 26

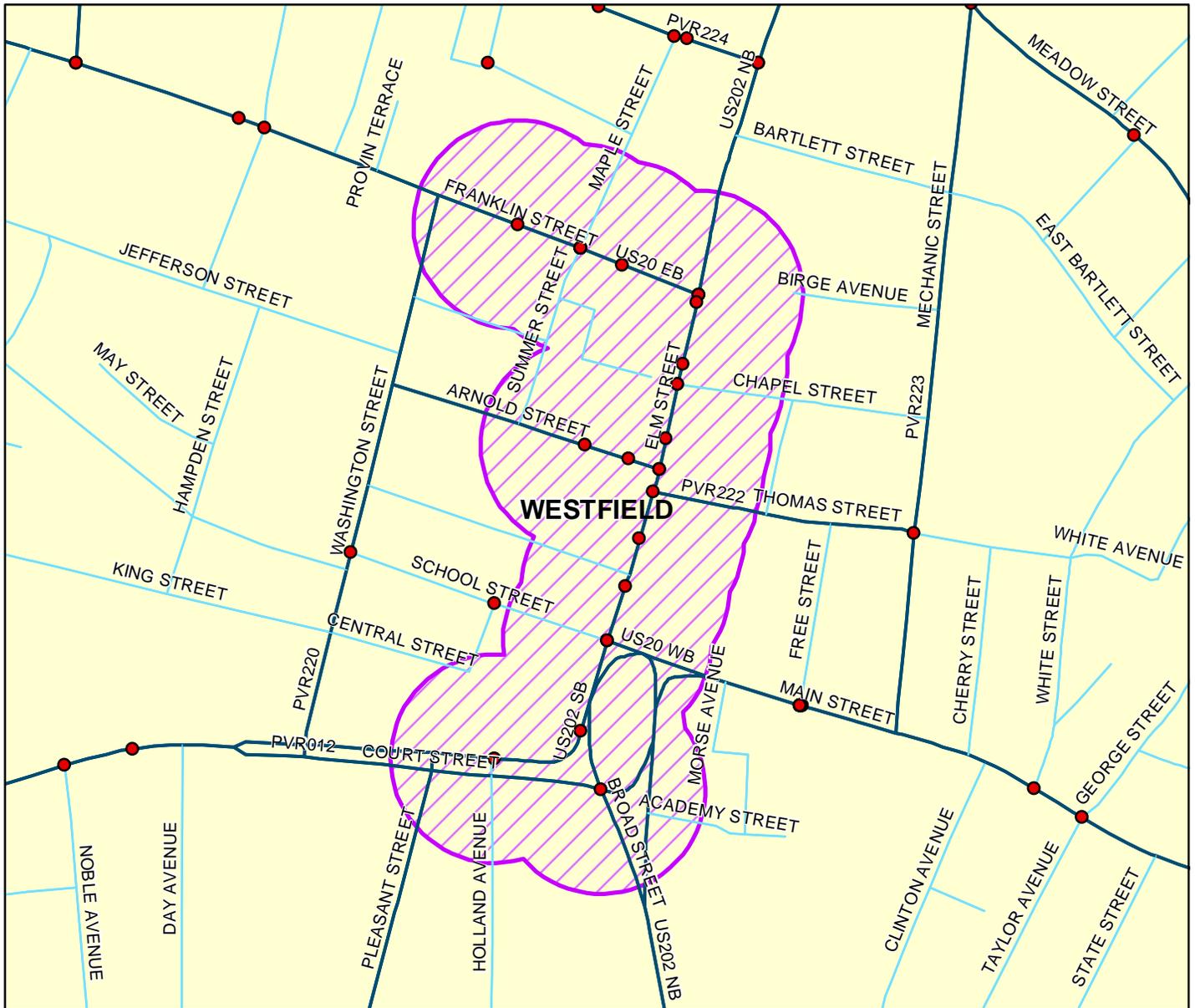
Number of Non-Injury Bicycle Crashes 9

Total Bicycle Crashes 35

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK
5

WESTFIELD

RPA PVPC

EPDO 119

Number of Fatal Bicycle Crashes 0

Number of Injury Bicycle Crashes 23

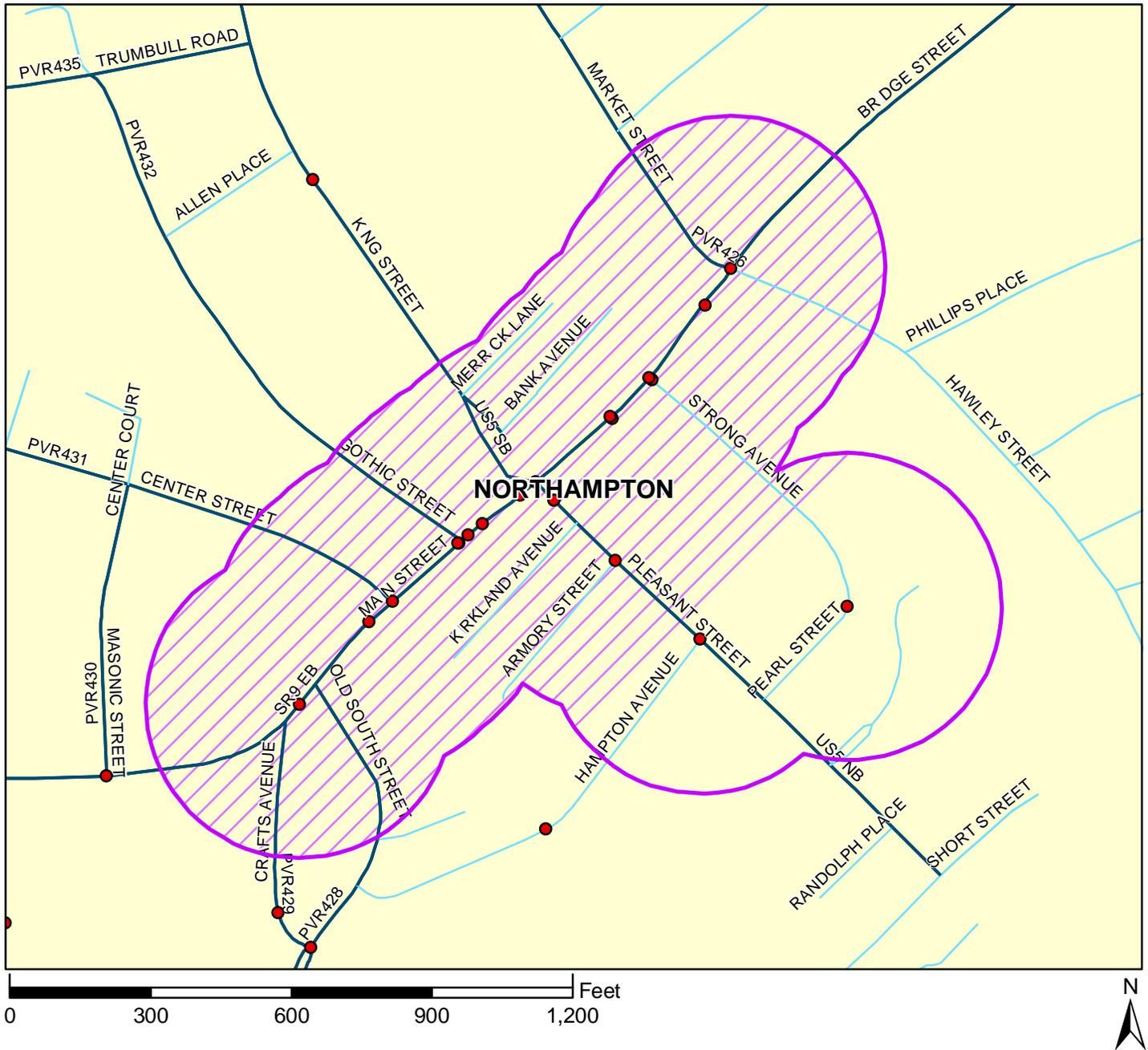
Number of Non-Injury Bicycle Crashes 4

Total Bicycle Crashes 27

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK
6

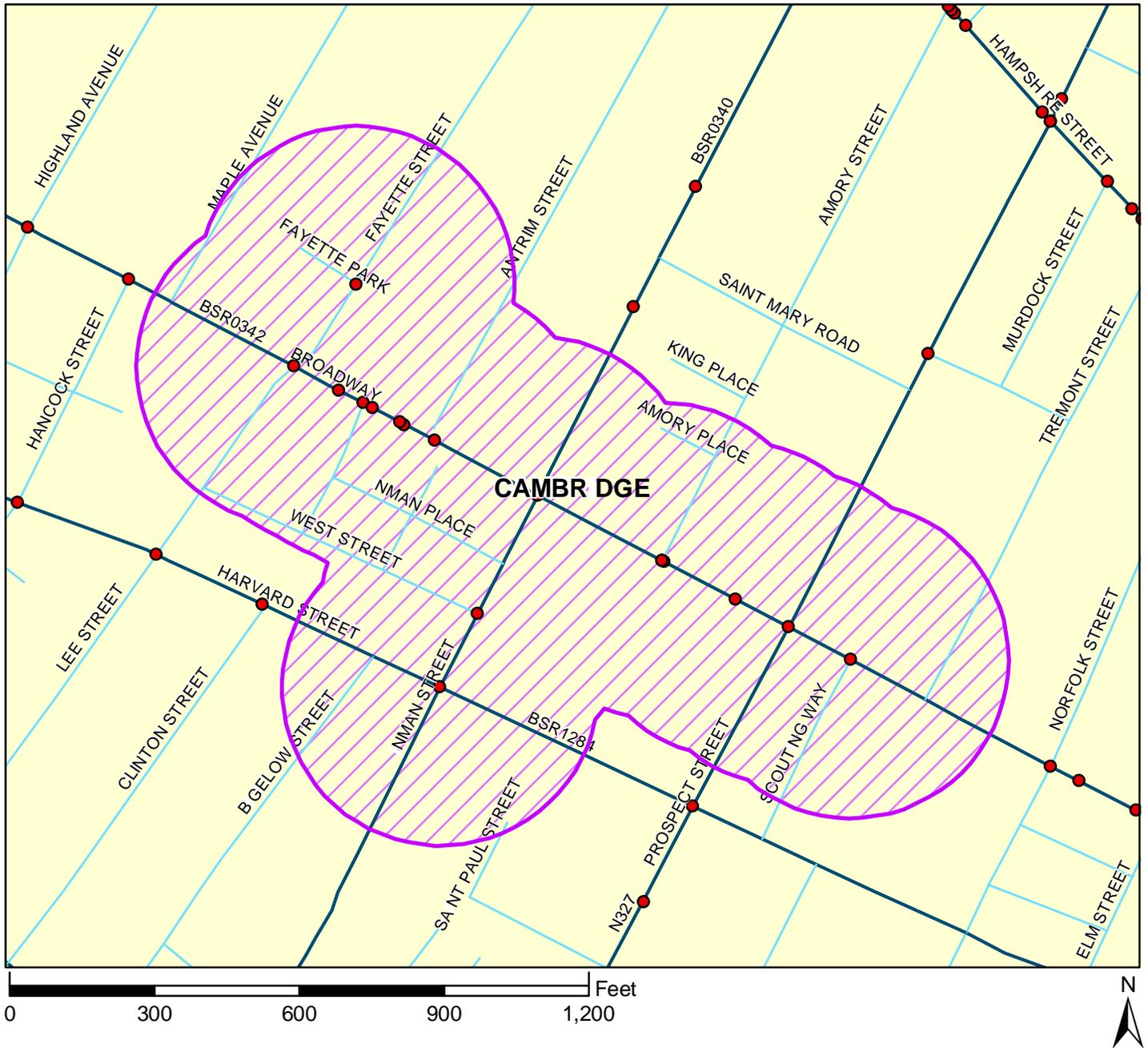
NORTHAMPTON

RPA PVPC
 EPDO 105
 Number of Fatal Bicycle Crashes 0
 Number of Injury Bicycle Crashes 20
 Number of Non-Injury Bicycle Crashes 5
 Total Bicycle Crashes 25

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK
7

CAMBRIDGE

RPA MAPC

EPDO 98

Number of Fatal Bicycle Crashes 0

Number of Injury Bicycle Crashes 16

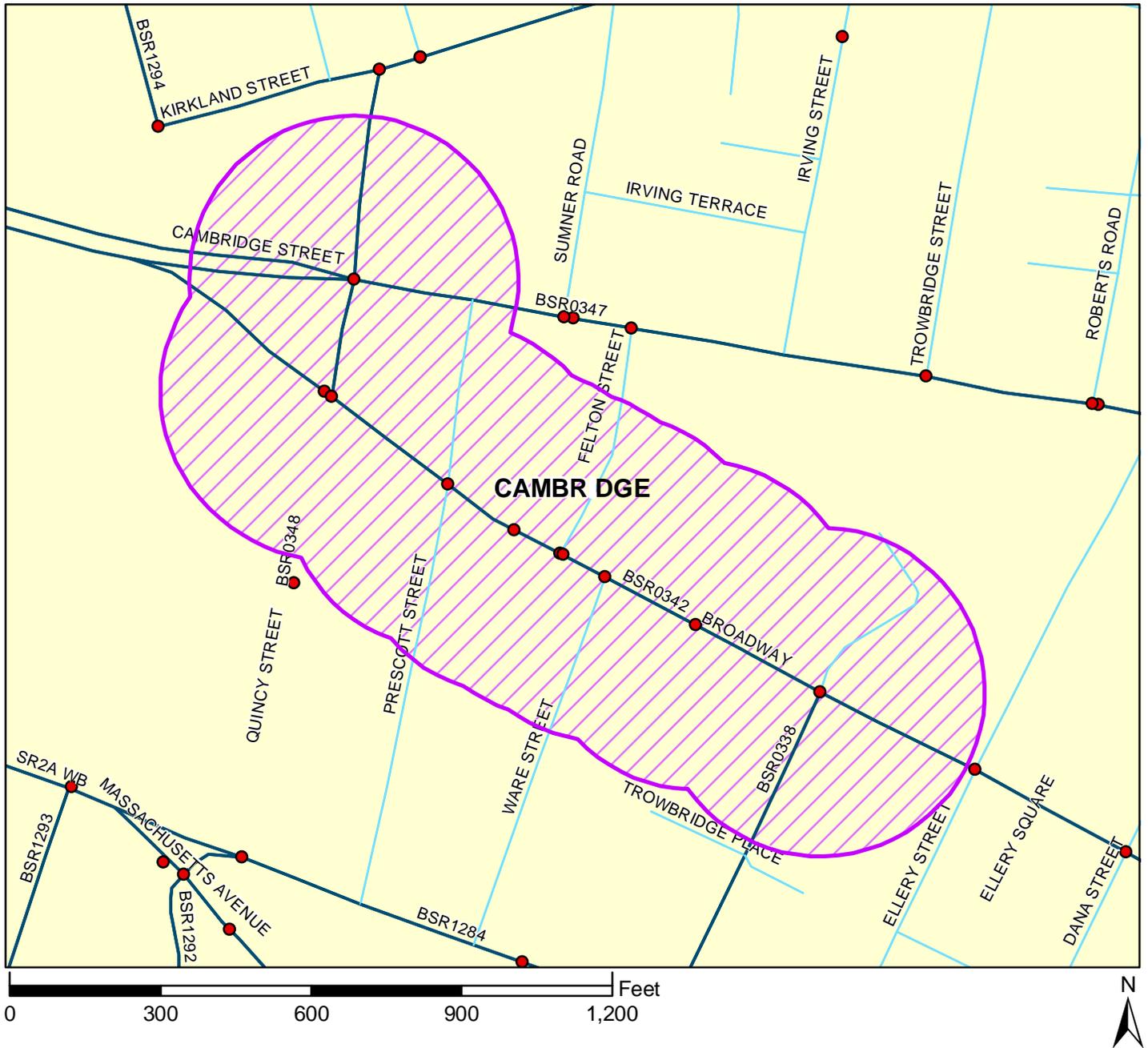
Number of Non-Injury Bicycle Crashes 18

Total Bicycle Crashes 34

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK

8

CAMBRIDGE

RPA MAPC

EPDO 97

Number of Fatal Bicycle Crashes 0

Number of Injury Bicycle Crashes 17

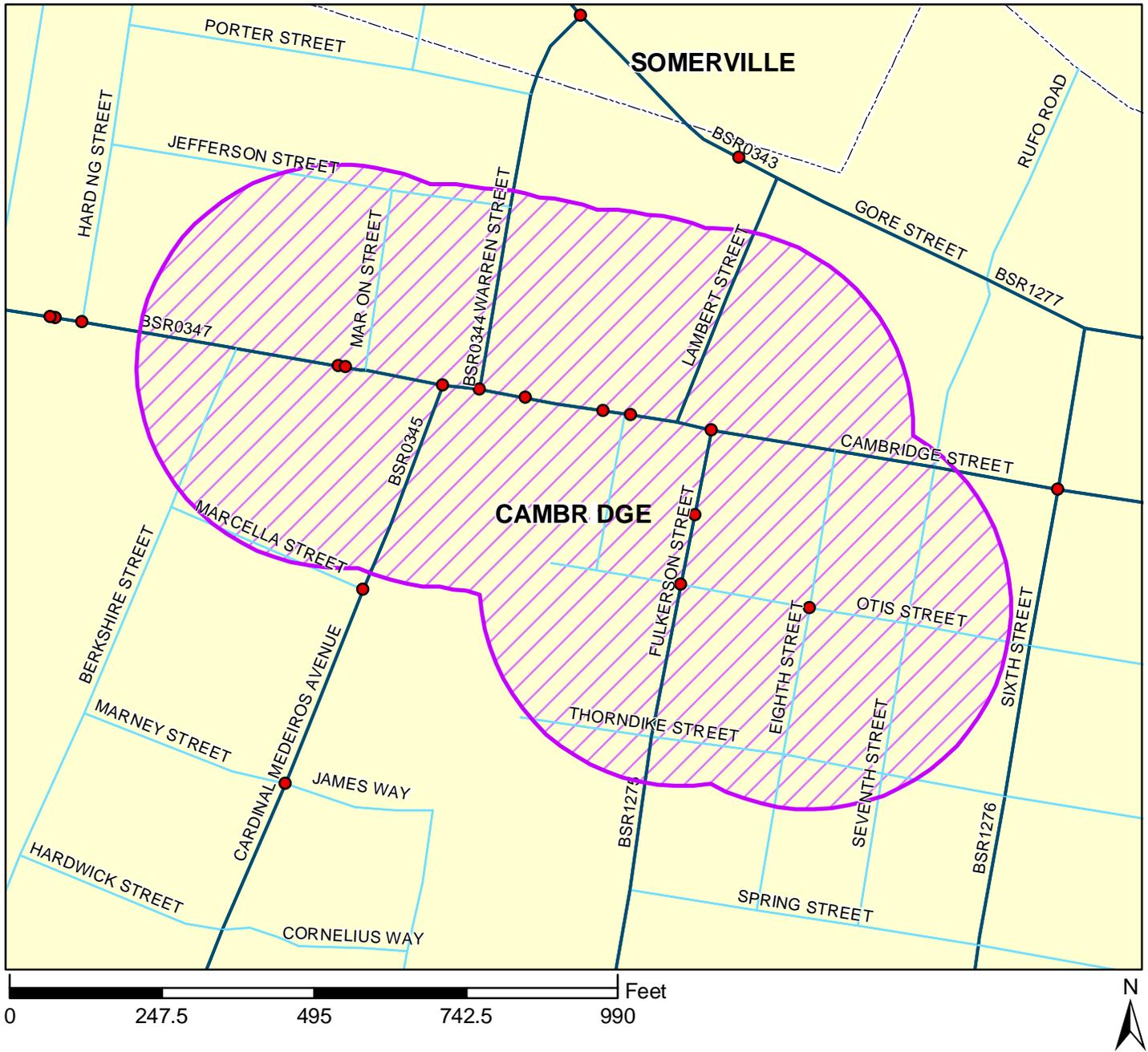
Number of Non-Injury Bicycle Crashes 12

Total Bicycle Crashes 29

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK
9

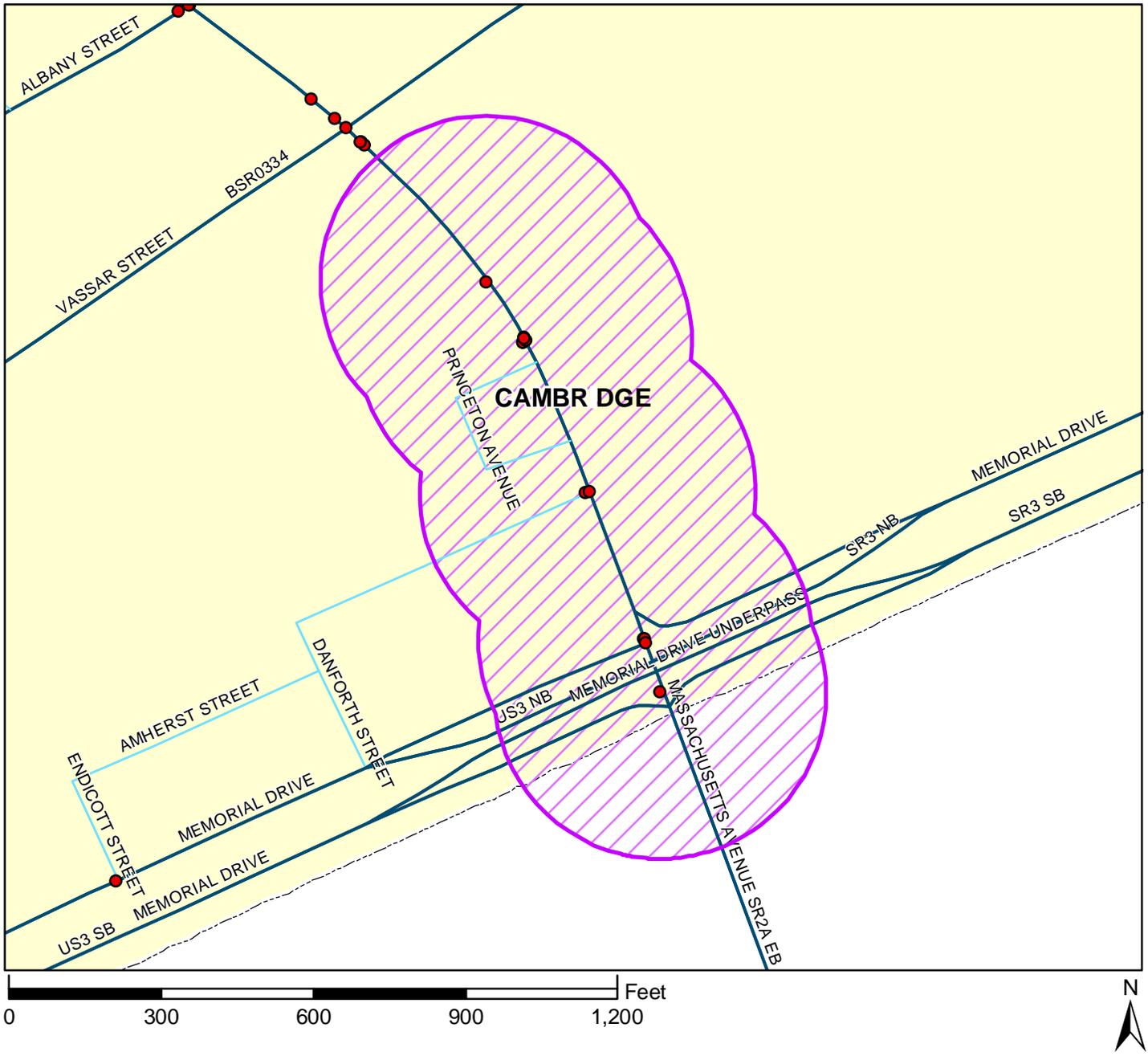
CAMBRIDGE

RPA MAPC
 EPDO 89
 Number of Fatal Bicycle Crashes 0
 Number of Injury Bicycle Crashes 16
 Number of Non-Injury Bicycle Crashes 9
 Total Bicycle Crashes 25

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary

Top Bicycle Crash Cluster 2002-2011



RANK
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CAMBRIDGE

RPA MAPC

EPDO 86

Number of Fatal Bicycle Crashes 0

Number of Injury Bicycle Crashes 15

Number of Non-Injury Bicycle Crashes 11

Total Bicycle Crashes 26

Legend

- Bicycle Crash Locations 2002-2011
- Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary