

CRASH TRENDS & HIGH-CRASH LOCATIONS

Commission

September 8th, 2016



Mid-Ohio Regional
Planning Commission

Importance of Crash Data Analysis

- Increase awareness
- Identify problem locations
- Access funding

Regional Trends (2011-2015)

- Total number of crashes was 13.9% higher in 2015 compared to 2011.
- Still 455 crashes over the last 5 years resulted in at least one fatality.

CRASH TRENDS BY YEAR, 2011 TO 2015

| YEAR | CRASH STATISTICS | | | | OCCUPANT STATISTICS | | | | | SAFETY METRICS | | |
|-------------------------------|------------------|----------------|-------------------------|---------------|---------------------|------------------|----------------|-------------|-----------------------|----------------|-------|--|
| | Fatal | Injury Crashes | Property Damage Crashes | Total Crashes | Fatalities | Serious Injuries | Minor Injuries | No Injuries | Total People Involved | Injury Rate | EPDO | Fatalities and Serious Injuries per 100,000 population |
| 2011 | 97 | 9,080 | 26,949 | 36,126 | 103 | 886 | 12,260 | 78,549 | 91,798 | 25.40% | 2.87 | 68.87 |
| 2012 | 97 | 9,092 | 27,069 | 36,258 | 106 | 885 | 12,053 | 79,972 | 93,016 | 25.34% | 2.89 | 68.64 |
| 2013 | 81 | 8,783 | 25,583 | 34,447 | 90 | 882 | 11,694 | 75,312 | 87,978 | 25.73% | 2.93 | 66.88 |
| 2014 | 84 | 9,341 | 28,339 | 37,764 | 91 | 803 | 12,377 | 82,039 | 95,310 | 24.96% | 2.75 | 60.96 |
| 2015 | 96 | 10,487 | 30,577 | 41,160 | 108 | 922 | 14,176 | 88,974 | 104,180 | 25.71% | 2.83 | 69.59 |
| 5-Year Total | 455 | 46,783 | 138,517 | 185,755 | 498 | 4,378 | 62,560 | 404,846 | 472,282 | | | |
| Annual Average | 91 | 9,357 | 27,703 | 37,151 | 100 | 876 | 12,512 | 80,969 | 94,456 | 25.4% | 2.85 | 67 |
| Percent Change (2011 to 2015) | -1.0% | 15.5% | 13.5% | 13.9% | 4.9% | 4.1% | 15.6% | 13.3% | 13.5% | 1.2% | -1.7% | 1.1% |

Notes

- Shaded orange cells indicate the year with the highest value for each respective column.
- The Equivalent Property Damage Only (EPDO) index is calculated by the following formula: $[(37.56 \times (\#FatalCrashes + \#SeriousInjuryCrashes)) + (6.55 \times \#MinorInjuryCrashes) + (4.44 \times \#PossibleInjuryCrashes) + \#NoInjuryCrashes] / \#TotalCrashes$.

Crash Fact Sheets (2011-2015)

REGIONAL CRASH FACT SHEETS 2011 - 2015

JULY 2016

REGIONAL CRASH FACT SHEETS
2011 - 2015

CRASH TYPES

While every crash is unique, they are often categorized according to the circumstances of the crash. Categorizing crashes in this way is an important step, as each crash type indicates a particular problem that may be addressed through a targeted engineering, enforcement, or behavioral countermeasure.

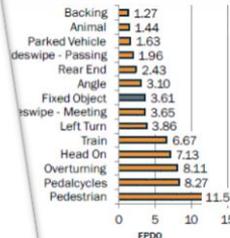
KEY FACTS:

- From 2011 to 2015, there were 59,535 rear-end crashes in Central Ohio, making this the most common crash type. Fortunately, only one percent of rear-end crashes resulted in a fatality or serious injury.
- Although only half as many angle crashes as rear-end crashes occurred, they resulted in many more fatal and serious injury crashes. Fixed-object crashes represented the fourth most frequent crash type, but accounted for the largest share of fatal and serious injury crashes (22 percent).
- Close to 19 percent of reported pedestrian crashes and 11 percent of reported bicycle crashes resulted in a fatality or serious injury.

CRASH TYPE BY FREQUENCY AND SEVERITY

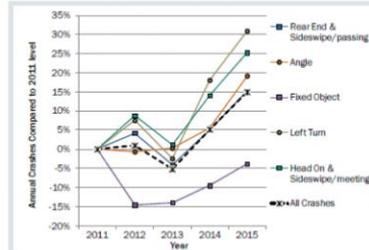
| CRASH TYPE | TOTAL CRASHES | CRASH SEVERITY | | | | FSI RATE |
|-------------------|---------------|----------------|----------------|--------------|-----------|----------|
| | | Fatal | Serious Injury | Minor Injury | No Injury | |
| Rear End | 51,631 | 33 | 480 | 5,053 | 38,170 | 1.0% |
| Angle | 26,104 | 27 | 551 | 3,698 | 18,024 | 2.2% |
| Sideswipe/Passing | 21,563 | 5 | 196 | 1,379 | 18,338 | 0.9% |
| Fixed Object | 16,643 | 102 | 568 | 2,392 | 11,955 | 4.0% |
| Parked Vehicle | 14,362 | 10 | 99 | 561 | 13,156 | 0.8% |
| Left Turn | 8,753 | 23 | 275 | 1,702 | 5,388 | 3.4% |
| Backing | 5,470 | 2 | 12 | 77 | 5,223 | 0.3% |
| Sideswipe/Meeting | 3,213 | 19 | 102 | 454 | 2,182 | 3.8% |
| Pedestrian | 2,473 | 84 | 396 | 1,177 | 229 | 39.4% |
| Other | 2,367 | 4 | 68 | 285 | 1,796 | 3.0% |
| Animal | 1,902 | | 6 | 65 | 1,759 | 0.3% |
| Pedalcycles | 1,225 | 13 | 114 | 612 | 232 | 26.3% |
| Head On | 1,220 | 29 | 110 | 291 | 562 | 22.8% |
| Other Object | 1,118 | | 11 | 57 | 972 | 0.7% |
| Overturning | 604 | 14 | 67 | 178 | 245 | 10.4% |
| Unknown | 259 | 5 | 8 | 94 | 187 | 5.0% |
| Train | 10 | 1 | 3 | 5 | 1 | 10.0% |
| Other Non-Vehicle | 1 | | | 1 | | 0.0% |

Notes:
 * Shaded yellow cells indicate the crash type with the highest value for each respective column.
 * FSI Rate refers to the percentage of crashes resulting in a fatality or serious injury.

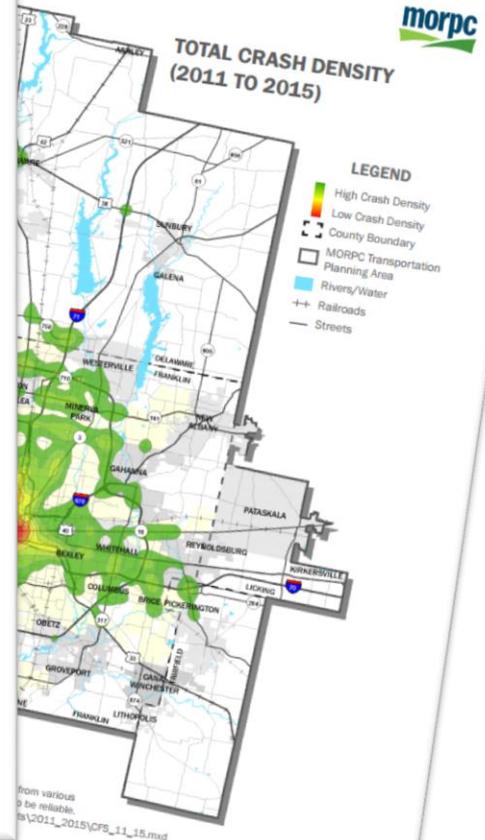


TOP SELECT CRASH TYPES

Calculated by the following formula:
 $(\text{Fatal} + 2 \times \text{SeriousInjuryCrashes} + 3 \times \text{MinorInjuryCrashes}) / \text{TotalCrashes}$



SELECT CRASH TYPE TRENDS, 2011 - 2015



from various
 to be reliable.
 8/15/2011_2015\CFS_11_15.mxd



Top 100 High Crash Locations 2013-2015

| RANK | LOCATION | JURISDICTION | TOTAL CRASHES (FREQ.) | CRASH SEVERITY | | | | | SEVERITY (EPDO) | AVERAGE DAILY TRAFFIC (ADT) | CRASH RATE (MEV RATE) | CRITERIA RANKINGS | | | ANNUAL CRASHES | | | PRIOR RANK | COMMENTS |
|------|---|-----------------|-----------------------|----------------|----------------|--------------|-----------------|-----|-----------------|-----------------------------|-----------------------|-------------------|------|-----|----------------|------|------|------------|---|
| | | | | Fatal Injury | Serious Injury | Minor Injury | Possible Injury | PDO | | | | Freq. | EPDO | MEV | 2013 | 2014 | 2015 | | |
| 1 | Broad St / SR 16 @ James Rd | Columbus | 172 | 1 | 5 | 24 | 22 | 120 | 3.49 | 50,100 | 3.14 | 4 | 16 | 18 | 61 | 48 | 63 | 2 | Safety study completed in 2007 and updated in 2010. No funding identified for design or construction. LED signals and backplates were added in 2018. |
| 2 | E Livingston Ave @ Hamilton Rd / SR 317 | Columbus | 158 | 1 | 3 | 27 | 21 | 106 | 3.33 | 36,500 | 3.95 | 9 | 21 | 8 | 48 | 51 | 59 | 1 | Right turn lanes completed in 2008. Columbus conducted safety study in 2014. LED signals and backplates were added in 2016. ODOT awarded safety funding. Project for improvements is currently in the design phase with construction anticipated in 2018. |
| 3 | Dublin Granville Rd / SR 161 @ Maple Canyon Dr | Columbus | 165 | | 4 | 22 | 20 | 119 | 3.04 | 36,700 | 4.11 | 7 | 36 | 5 | 54 | 59 | 52 | 3 | SR 161 corridor timing changes made in 2011. ODOT awarded safety funding for a corridor access study. Corridor study is currently underway. |
| 4 | Cleveland Ave @ Morse Rd | Columbus | 268 | 2 | 3 | 31 | 33 | 199 | 2.75 | 56,000 | 4.37 | 1 | 53 | 2 | 72 | 106 | 90 | 6 | Phase 2 of Morse Rd project completed in 2010, added turn lanes, signal rephasing. Crashes significantly reduced in 2010 and 2011. The City of Columbus continues to monitor this intersection |
| 5 | Broad St / SR 16 @ Lancaster Ave / Reynoldsburg-New Albany Rd | Columbus | 148 | | 4 | 19 | 22 | 103 | 3.21 | 52,600 | 2.57 | 10 | 26 | 31 | 49 | 34 | 65 | 48 | Signal refurbished in 2007. E Broad Corridor study completed in 2009. No funding identified for design or construction. A funding application is being submitted to MORPC in 2016 for this location. |
| 6 | Oakland Park Ave @ Westerville Rd / SR 3 | ODOT | 110 | 1 | 1 | 8 | 34 | 66 | 3.13 | 26,400 | 3.81 | 27 | 33 | 8 | 40 | 38 | 34 | | |
| 7 | Morse Rd @ Northtowne Blvd / Walford St | Columbus | 127 | | 3 | 18 | 11 | 95 | 2.95 | 40,100 | 2.89 | 16 | 40 | 19 | 50 | 32 | 45 | 5 | Traffic signals along the Morse Rd corridor were retimed in 2014. |
| 8 | Cleveland Ave @ Innis Rd | Franklin County | 94 | | 4 | 8 | 16 | 66 | 3.61 | 29,800 | 2.88 | 46 | 13 | 20 | 23 | 30 | 41 | 25 | |
| 9 | Cleveland Ave @ Dublin Granville Rd / SR 161 | Columbus | 191 | | 2 | 23 | 31 | 135 | 2.61 | 50,200 | 3.47 | 3 | 66 | 12 | 54 | 58 | 79 | 4 | SR 161 corridor timing changes made in 2011. ODOT awarded safety funding for a corridor access study. Corridor study is currently underway. LED signals and backplates were added in 2016. |
| 10 | Hilliard Rome Rd @ Roberts Rd | Columbus | 111 | | 3 | 16 | 12 | 80 | 3.18 | 39,100 | 2.59 | 25 | 29 | 29 | 28 | 43 | 40 | 18 | LED signals and backplates were added in 2016. |
| 11 | S Central Ave / Harrisburg Pike @ W Mound St | Columbus | 97 | | 3 | 15 | 13 | 66 | 3.45 | 32,900 | 2.69 | 45 | 18 | 27 | 29 | 35 | 33 | 9 | Safety study completed in 2014. ODOT awarded safety funding. Project for improvements is currently in design phase with construction anticipated late 2018. |
| 12 | E Main St / US 40 @ McNaughten Rd | Columbus | 148 | | 1 | 26 | 24 | 97 | 2.78 | 52,200 | 2.59 | 10 | 50 | 30 | 39 | 51 | 58 | 24 | ODOT awarded safety funding. Improvement project currently in design phase with construction anticipated in 2018. |
| 13 | E Mound St @ S 3rd St | Columbus | 101 | | 2 | 16 | 16 | 67 | 3.13 | 30,200 | 3.05 | 40 | 34 | 17 | 22 | 38 | 41 | 39 | This intersection will be modified to include a westbound left-turn phase as part of the I-70/I-71 Phase 2C project. Construction is anticipated in late 2016. |
| 14 | Buenos Aires Blvd @ E Dublin Granville Rd / SR 161 | ODOT | 84 | | 3 | 16 | 10 | 55 | 3.77 | 26,000 | 2.95 | 64 | 9 | 18 | 29 | 25 | 30 | 47 | |
| 15 | Frank Rd / SR 104 / Refugee Rd @ Winchester Pike | Columbus | 121 | | 2 | 16 | 15 | 88 | 2.78 | 38,800 | 2.86 | 20 | 52 | 21 | 29 | 33 | 59 | 44 | LED signal heads and westbound right-turn lane was added in 2009. |
| 16 | Felder Rd / Fisher Rd @ Hilliard Rome Rd | Columbus | 120 | | 3 | 16 | 17 | 84 | 3.14 | 46,100 | 2.36 | 23 | 31 | 39 | 33 | 45 | 42 | 15 | Traffic study is complete. ODOT and MORPC funding has been awarded for future years. Project for improvements is currently in design phase. |
| 17 | Alum Creek Dr @ E Livingston Ave / US 33 | Columbus | 121 | | 4 | 13 | 13 | 91 | 3.17 | 47,400 | 2.33 | 20 | 28 | 47 | 40 | 32 | 49 | 40 | Traffic signals to be upgraded to LED in late 2016/early 2017. |
| 18 | Karl Rd @ Morse Rd | Columbus | 146 | | 2 | 23 | 11 | 110 | 2.63 | 49,300 | 2.70 | 12 | 64 | 25 | 41 | 44 | 61 | 14 | Traffic signals along the Morse Rd corridor were retimed in 2014. |
| 19 | E Dublin Granville Rd / SR 161 @ Karl Rd | Columbus | 111 | | 2 | 13 | 21 | 75 | 2.96 | 42,800 | 2.37 | 25 | 38 | 40 | 28 | 36 | 47 | 42 | SR 161 corridor timing changes made in 2011. ODOT awarded safety funding for a corridor access study. Corridor study is currently underway. LED signals and backplates were added in 2016. |
| 20 | Broad St / US 40 @ N Wilson Rd | ODOT | 103 | | 2 | 13 | 20 | 66 | 3.08 | 38,100 | 2.47 | 37 | 35 | 34 | 27 | 40 | 36 | 7 | |
| 21 | Cleveland Ave @ Oakland Park | Columbus | 87 | | 1 | 19 | 8 | 59 | 2.95 | 24,100 | 3.30 | 57 | 39 | 14 | 22 | 28 | 37 | 16 | Minor improvements made in 2013. LED signals and backplates were added in 2016. The City of Columbus continues to monitor this intersection. |
| 22 | Morse Rd @ Westerville Rd / SR 3 | Columbus | 141 | | 5 | 10 | 8 | 118 | 2.89 | 57,900 | 2.22 | 13 | 44 | 56 | 42 | 47 | 52 | 37 | Traffic signals along the Morse Rd corridor were retimed in 2014. |
| 23 | James Rd @ Livingston Ave | Columbus | 106 | | 2 | 9 | 17 | 78 | 2.71 | 35,900 | 2.70 | 32 | 55 | 26 | 21 | 35 | 50 | 21 | LED signal heads installed in 2009. Safety study completed in 2015. ODOT awarded safety funding. Project for improvements will begin construction in 2018. |
| 24 | Gender Rd @ Refugee Rd | Columbus | 167 | | 1 | 19 | 17 | 130 | 2.20 | 36,000 | 4.24 | 5 | 108 | 3 | 56 | 54 | 57 | 19 | Safety study completed in 2008. ODOT approved for safety funding. Project for improvements is currently under construction. |

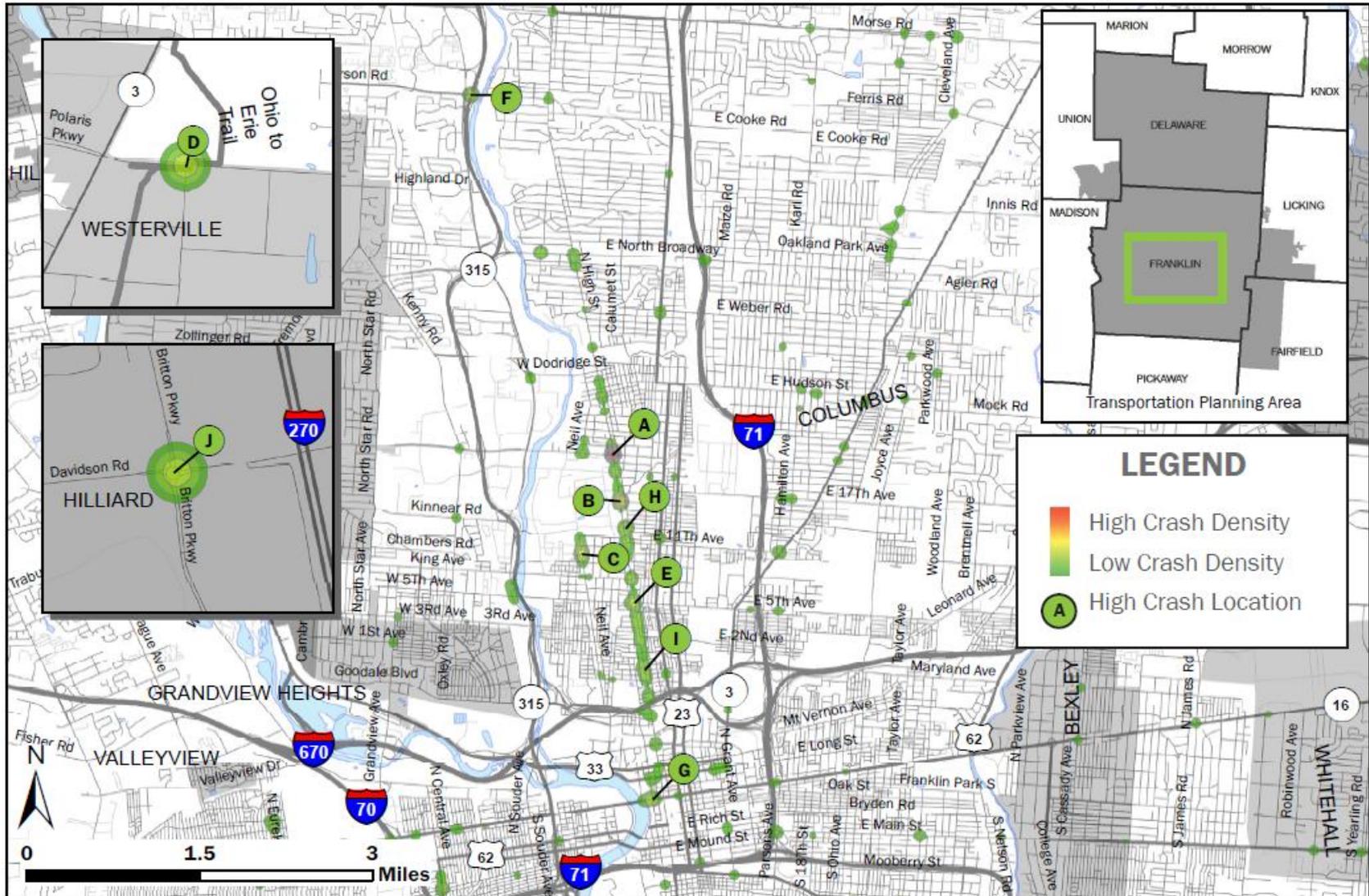


Top Intersections by Jurisdiction 2013-2015

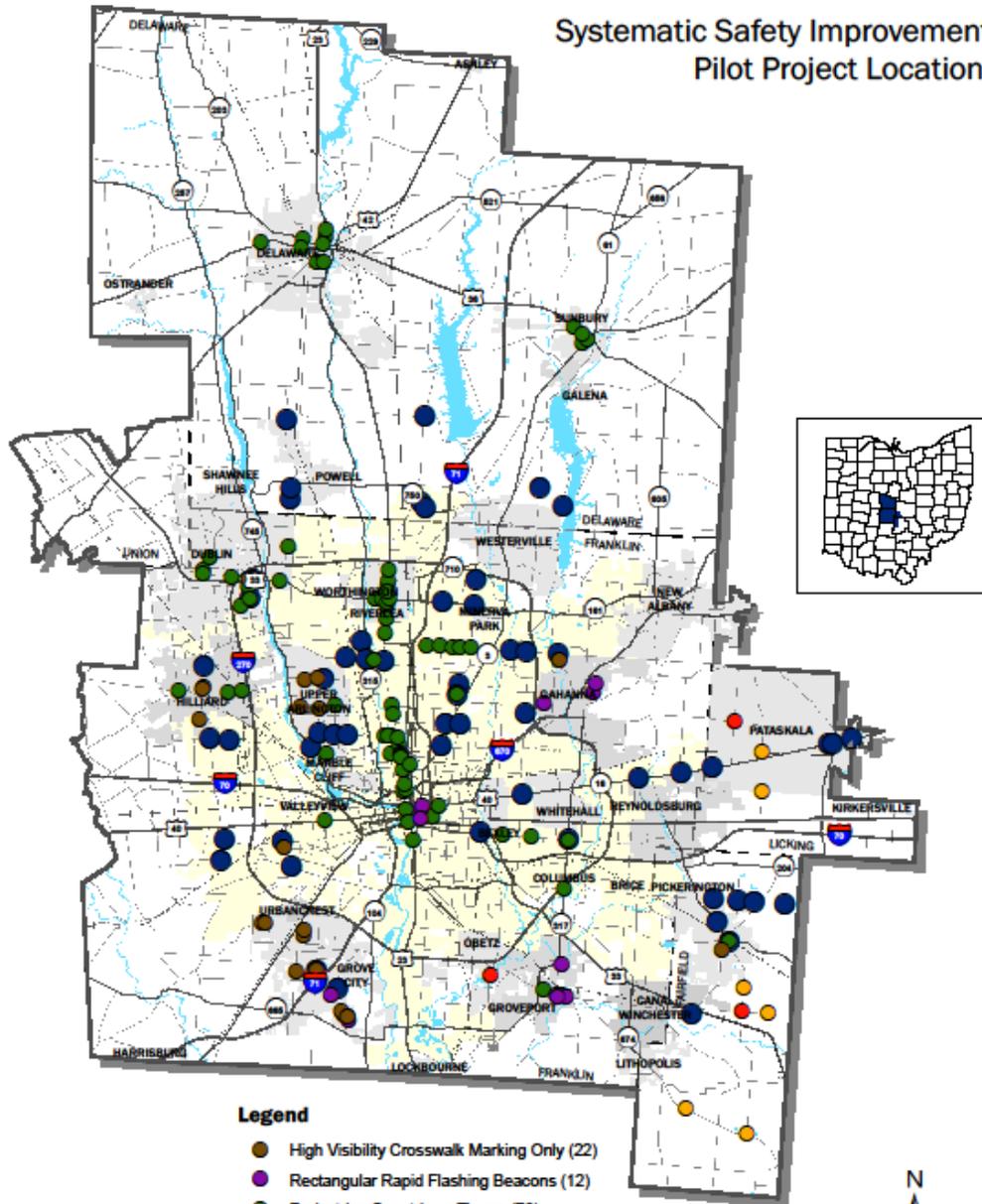
Lists are available for Counties, Cities, and Villages

| JURISDICTION | RANK | LOCATION | TOTAL CRASHES (FREQ.) | CRASH SEVERITY | | | | | SEVERITY (EPDO) | ANNUAL CRASHES | | | TOP 100 |
|------------------|------|--|-----------------------|----------------|----------------|--------------|-----------------|-----|-----------------|----------------|------|------|---------|
| | | | | Fatal Injury | Serious Injury | Minor Injury | Possible Injury | PDO | | 2013 | 2014 | 2015 | |
| BEXLEY | 1 | E Main St @ College Ave | 31 | - | - | 2 | 4 | 25 | 1.80 | 7 | 16 | 8 | - |
| | 2 | E Main St / US 40 @ S Drexel Ave / US 40 | 24 | - | - | 1 | 4 | 19 | 1.80 | 7 | 9 | 8 | - |
| | 3 | E Main St / US 40 @ Pleasant Ridge Ave | 24 | - | - | - | 2 | 22 | 1.29 | 8 | 8 | 8 | - |
| | 4 | E Main St / US 40 @ Euclaire Ave | 24 | - | - | - | 3 | 21 | 1.43 | 3 | 10 | 11 | - |
| | 5 | E Broad St / SR 16 @ N Cassady Ave | 23 | 1 | - | 1 | 6 | 15 | 3.73 | 4 | 8 | 11 | - |
| CANAL WINCHESTER | 1 | Gender Rd / SR 674 @ Winchester Blvd | 39 | - | - | 1 | 6 | 32 | 1.67 | 5 | 20 | 14 | - |
| | 2 | Gender Rd / SR 674 @ W Waterloo St | 24 | - | - | - | 5 | 19 | 1.72 | 6 | 8 | 10 | - |
| | 3 | Gender Rd / SR 674 @ Groveport Pike | 16 | - | - | 1 | 3 | 12 | 1.99 | 8 | 3 | 5 | - |
| | 4 | Gender Rd @ W Walnut St | 8 | - | - | 1 | 2 | 5 | 2.55 | 1 | 3 | 4 | - |
| | 5 | Gender Rd / SR 674 @ Canal St | 8 | - | - | - | 2 | 6 | 1.86 | 2 | 5 | 1 | - |
| COLUMBUS | 1 | Cleveland Ave @ Morse Rd | 268 | 2 | 3 | 31 | 33 | 199 | 2.75 | 72 | 106 | 90 | X |
| | 2 | Cleveland Ave @ Dublin Granville Rd / SR 161 | 191 | - | 2 | 23 | 31 | 135 | 2.61 | 54 | 58 | 79 | X |
| | 3 | Broad St / SR 16 @ James Rd | 172 | 1 | 5 | 24 | 22 | 120 | 3.49 | 61 | 48 | 63 | X |
| | 4 | Brice Rd @ Scarborough Blvd / Tussing Rd | 167 | 1 | - | 14 | 31 | 121 | 2.32 | 35 | 52 | 80 | X |
| | 5 | Refugee Rd @ Gender Rd | 167 | - | 1 | 19 | 17 | 130 | 2.20 | 56 | 54 | 57 | X |
| DELAWARE CITY | 1 | Sandusky St / US 36 @ E William St / US 36 | 100 | - | 3 | 1 | 4 | 92 | 2.29 | 38 | 28 | 34 | X |
| | 2 | Liberty St @ W William St / US 36 | 35 | - | 1 | - | 3 | 31 | 2.34 | 16 | 9 | 10 | - |
| | 3 | Cottswold Dr @ Columbus Pike / US 23 | 33 | - | 1 | - | 7 | 25 | 2.84 | 8 | 16 | 9 | - |
| | 4 | N Henry St @ E William St / US 36 | 32 | - | 1 | 6 | 4 | 21 | 3.61 | 10 | 8 | 14 | - |
| | 5 | Kilbourne Rd / SR 521 @ Sunbury Rd / US 36 | 32 | 1 | 3 | 3 | 7 | 18 | 6.84 | 13 | 8 | 11 | - |
| DUBLIN | 1 | W Bridge St / US 33 @ Frantz Rd / Post Rd | 59 | - | - | 2 | 10 | 47 | 1.77 | 14 | 30 | 15 | - |
| | 2 | Avery-Muirfield Dr @ Perimeter Loop Rd | 55 | - | 2 | 2 | 16 | 35 | 3.53 | 22 | 14 | 19 | - |
| | 3 | Avery-muirfield Dr @ Perimeter Dr | 48 | - | - | 4 | 10 | 34 | 2.18 | 9 | 17 | 22 | - |
| | 4 | E Bridge St @ Riverside Dr / US 33 | 41 | - | - | 1 | 4 | 36 | 1.47 | 15 | 18 | 8 | - |
| | 5 | Bridge St / US 33 @ Corbins Mill Dr | 39 | - | 1 | 1 | 5 | 32 | 2.52 | 19 | 13 | 7 | - |

Top Pedestrian/Bicycle High-Crash Clusters (2011-2015)

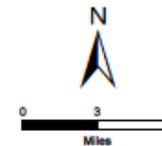


Systematic Safety Improvement Pilot Project Locations



Legend

- High Visibility Crosswalk Marking Only (22)
- Rectangular Rapid Flashing Beacons (12)
- Pedestrian Countdown Timers (78)
- FHWA Signage (8)
- LED Enhanced Stop Signs (3)
- Signal Backplates & LED Signal Heads (56)





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Safety EXPAND MENU

MORPC collects and analyzes crash data to help plan for safer roads. Regional Crash Fact Sheets cover a variety of crash types and related information on fatal crashes, serious crashes, pedestrians, bicyclists, motorcyclists, truck drivers, public transit, rear-end and work zone crashes, and driver behavior trends.

On an annual basis MORPC analyzes **high-crash locations** >> within our Metropolitan Planning Area. This results in a Top 40 High-Crash Location list as well as a Top 10 Pedestrian and Bicycle Location and Corridor List.

News

www.morpc.org/transportation/safety



Mid-Ohio Regional
Planning Commission

KERSTIN CARR

kcarr@morpc.org

111 Liberty Street, Suite 100
Columbus, Ohio 43215

Phone: 614.233.4163

www.morpc.org

