



City of Cambridge

Executive Department

YI-AN HUANG
City Manager

CMA 2024 #89
IN CITY COUNCIL
April 29, 2024

To the Honorable, the City Council:

In follow up to the Council discussion on Monday, April 8th regarding Policy Orders 1 and 2, I have been working with the Traffic, Parking, and Transportation Department (TPT), the Community Department (CDD), the Law Department, and the Department of Public Works (DPW) and we offer the following additional information as requested to inform the City Council's decisions on potential changes to the timeline of the quick build elements of the Cycling Safety Ordinance.

Regarding Policy Order O-1 of April 8, 2024, requesting draft language for near-term amendments to the Parking and Transportation Demand Management (PTDM) Ordinance and the Zoning Ordinance to allow flexibility for property owners to share off-site parking with nearby uses, if necessary, to mitigate the loss of parking resulting from the installation of separated bicycle facilities due to implementation of the Cycling Safety Ordinance (CSO).

Staff have begun work on developing changes to both the zoning and PTDM ordinances, as requested. We are attaching maps of existing off-street parking facilities in the city. The changes being considered would make it easier for property owners to use those facilities more flexibly as on-street parking loss mitigation. While regulatory changes would likely create more flexibility for both residential and non-residential uses, it is our experience that shared parking in residential buildings is more complicated in practice if the parking facility has not been designed with that goal in mind. The map, therefore, focuses on non-residential projects. Changing the regulations will remove regulatory hurdles. Actual shared parking arrangements will require private agreements among the owners of parking spaces and those wanting to use them.

PTDM: By linking increase in parking with incentives for employees to use sustainable modes of transportation like walking, bicycling, and transit, the PTDM ordinance has been the City's key measure that has allowed development in Cambridge to happen without commensurate increase in traffic and automobile congestion. Any changes to PTDM, therefore, have to be devised with great care to meet the current need to allow mitigation of on street parking loss without resulting in wholesale growth of single occupant vehicles on Cambridge streets.

ZONING: The zoning team has a number of items before them that the City Council has identified as priorities. Rezoning of Central Square was identified as a top priority this year, which we had intended to complete by the end of the calendar year. We understand that due to the critical path nature of the changes



related to accessory parking, these will take priority. We will aim to have language changes for the City Council’s consideration ready in October. We will aim to get Central Square zoning changes to the City Council by the end of the year, but the adoption target would then move to Spring 2025. The Housing Committee has scheduled a public hearing on May 8 to consider zoning strategies to facilitate multi-family housing throughout the city. Further discussion on prioritization and sequencing may be needed after the Housing Committee hearing.

Regarding Policy Order O-2 of April 8, 2024, the Council requested information on potential timelines for quick build implementations based on current and proposed dates and crash data on the Cambridge Street, Main St, and Broadway corridors.

Timelines

Scenario 1: No Change, City Manager exercises 1-year extension for mileage not specifically named in the ordinance, also referred to as “non-special 4” installations.

- The “Special 4” includes Garden Street, Hampshire Street, Broadway, and Cambridge Street. Separated Bike Lane installations are complete on Garden Street and Hampshire Street. The current deadline for the remaining Special 4 (Cambridge Street and Broadway) is May 1, 2026. Due to weather constraints over the winter, this deadline is effectively November 2025.
- The current CSO language allows the City Manager to exercise a one-year extension for non-special 4 mileage, extending the deadline to May 1, 2027. Due to weather constraints over the winter, this deadline is effectively November 2026.

Spring to Fall 2024	Spring to Fall 2025	Spring to Fall 2026
Mt. Auburn St near Aberdeen Ave. Main Street	Cambridge St: Oak St to 2 nd St	Other remaining Mileage*
Developer Installation: Main St: Albany St to Portland St	Broadway: Quincy St to Portland St	
	Main St: Sydney St Extension to Portland St	

* The following street segments from the Bicycle Network Vision are currently under evaluation to determine which will be included in the CSO implementation: Mt Auburn St - Belmont St to Homer Ave (0.10 miles), Mt Auburn St - Aberdeen Ave to Fresh Pond Pkwy (0.78 miles), Huron Ave - 680 Huron Ave to Grove St (0.51 miles), Granite St - Pearl St to Brookline St (0.10 miles), Kirkland St - Oxford St to Scott/Irving St (0.58 miles), Vassar St - Audrey St to Memorial Dr (0.20 miles)

Scenario 2: Extend deadline to November 2027

-This scenario only impacts Quick-Build projects- it does not impact full and partial build projects that are underway or planned.

-This timeline would allow for three-stage implementation on Cambridge Street and Broadway.

-The exact limits and sequencing of the phases could be subject to change due to a variety of factors to improve the overall implementation, react to unexpected opportunities or challenges, and upon additional collaboration with stakeholders.

Spring to Fall 2024	Spring to Fall 2025	Spring to Fall 2026	Spring to Fall 2027
Mt. Auburn St near Aberdeen Ave.	Cambridge St: Oak St to Columbia St	Cambridge St: Columbia St to Cardinal Medeiros Ave	Cambridge St: Cardinal Medeiros Ave to 2 nd St**
Developer Installation: Main St: Albany St to Portland St	Broadway: Portland St to Columbia St	Broadway: Columbia St to Fayette St	Broadway: Fayette St to Quincy St
	Main St: Sydney St Ext to Portland St	Other remaining Mileage*	Other remaining Mileage*
	Aberdeen Ave		

** A short section of Cambridge Street, from Cardinal Medeiros Avenue to Fulkerson Street will eventually be part of the construction of the Grand Junction Path project. Depending on the timing of that project, this section of Cambridge Street may be incorporated into the Grand Junction Path project rather than built out as part of the quick-build project.

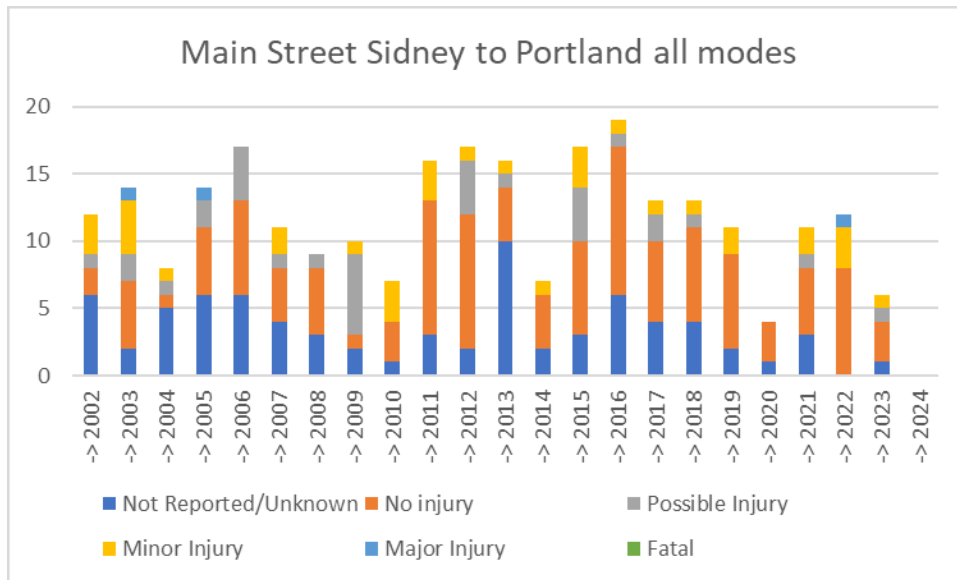
Crash Trends and Severity

Information on crash trends and severity is available in MassDOT's Open Data Crash Portal, "Impact." We have provided a summary of the data since 2002 and filtered by all crashes and crashes just involving cyclists.

Main St: Sidney St to Portland St - Crashes All Modes, Table

Year	Not Reported/ Unknown	No injury	Possible Injury	Minor Injury	Majo r Injur y	Fata l	Totals
2002	6	2	1	3	0	0	12
2003	2	5	2	4	1	0	14
2004	5	1	1	1	0	0	8
2005	6	5	2	0	1	0	14
2006	6	7	4	0	0	0	17
2007	4	4	1	2	0	0	11
2008	3	5	1	0	0	0	9
2009	2	1	6	1	0	0	10
2010	1	3	0	3	0	0	7
2011	3	10	0	3	0	0	16
2012	2	10	4	1	0	0	17
2013	10	4	1	1	0	0	16
2014	2	4	0	1	0	0	7
2015	3	7	4	3	0	0	17
2016	6	11	1	1	0	0	19
2017	4	6	2	1	0	0	13
2018	4	7	1	1	0	0	13
2019	2	7	0	2	0	0	11
2020	1	3	0	0	0	0	4
2021	3	5	1	2	0	0	11
2022	0	8	0	3	1	0	12
2023	1	3	1	1	0	0	6
2024*	0	0	0	0	0	0	0

Main St: Sidney St to Portland St - Crash All Modes, Chart

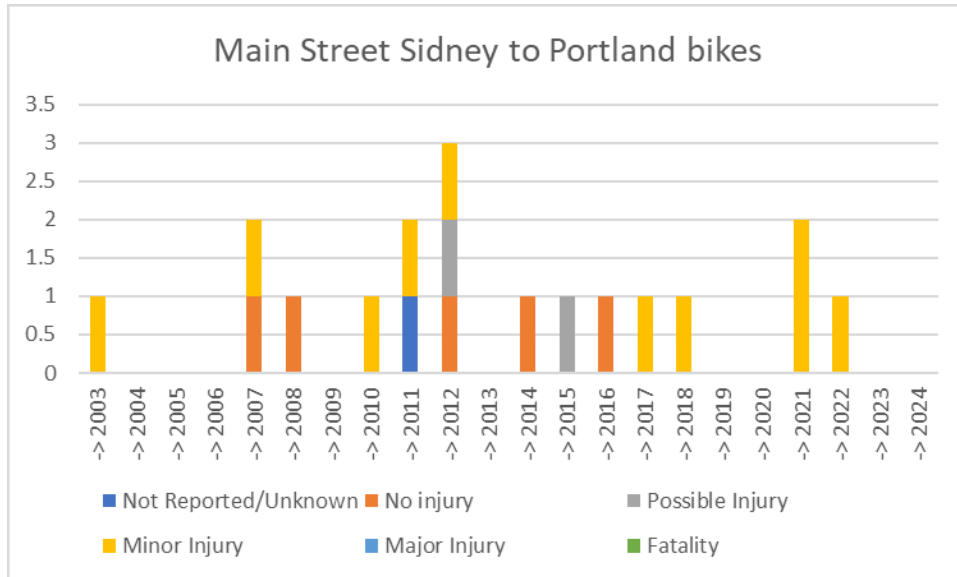


Main St: Sidney St to Portland St - Crashes with Cyclists, Table

Year	Not Reported/ Unknown	No injury	Possible Injury	Minor Injury	Major Injury	Fatalit y	Totals
2003	0	0	0	1	0	0	1
2004	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0
2007	0	1	0	1	0	0	2
2008	0	1	0	0	0	0	1
2009	0	0	0	0	0	0	0
2010	0	0	0	1	0	0	1
2011	1	0	0	1	0	0	2
2012	0	1	1	1	0	0	3
2013	0	0	0	0	0	0	0
2014	0	1	0	0	0	0	1
2015	0	0	1	0	0	0	1
2016	0	1	0	0	0	0	1
2017	0	0	0	1	0	0	1
2018	0	0	0	1	0	0	1
2019	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0
2021	0	0	0	2	0	0	2

2022	0	0	0	1	0	0	1
2023	0	0	0	0	0	0	0
2024*	0	0	0	0	0	0	0

Main St: Sidney St to Portland St - Crash with Cyclists, Chart

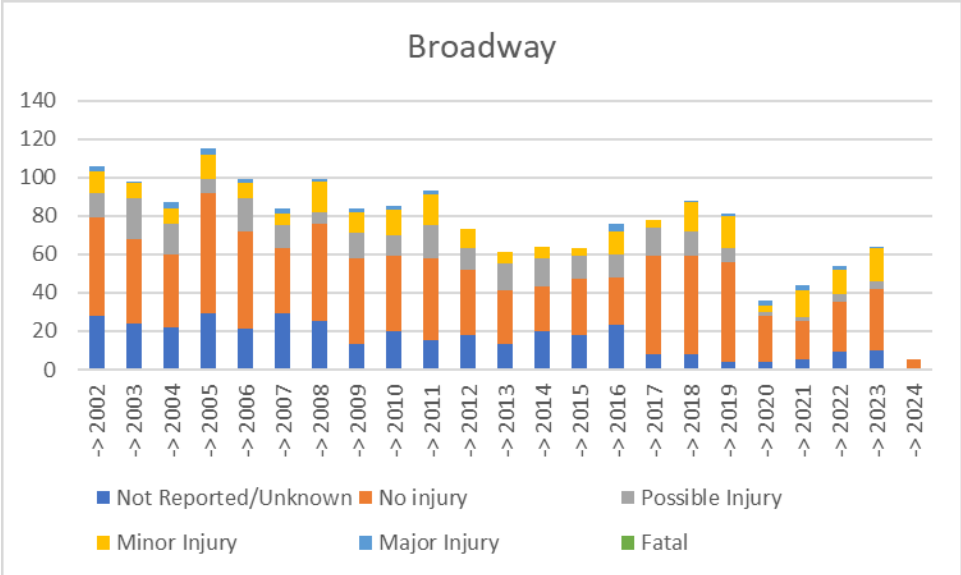


Broadway: Crashes All Modes, Table

Year	Not Reported/ Unknown	No injury	Possible Injury	Minor Injury	Major Injury	Fatal	Totals
2002	28	51	13	11	3	0	106
2003	24	44	21	8	1	0	98
2004	22	38	16	8	3	0	87
2005	29	63	7	13	3	0	115
2006	21	51	17	8	2	0	99
2007	29	34	12	6	3	0	84
2008	25	51	6	16	1	0	99
2009	13	45	13	11	2	0	84
2010	20	39	11	13	2	0	85
2011	15	43	17	16	2	0	93
2012	18	34	11	10	0	0	73
2013	13	28	14	6	0	0	61
2014	20	23	15	6	0	0	64

2015	18	29	12	4	0	0	63
2016	23	25	12	12	4	0	76
2017	8	51	15	4	0	0	78
2018	8	51	13	15	1	0	88
2019	4	52	7	17	1	0	81
2020	4	24	2	3	3	0	36
2021	5	20	2	14	3	0	44
2022	9	26	4	13	2	0	54
2023	10	32	4	17	1	0	64
2024*	0	5	0	0	0	0	5

Broadway: Crashes All Modes, Chart

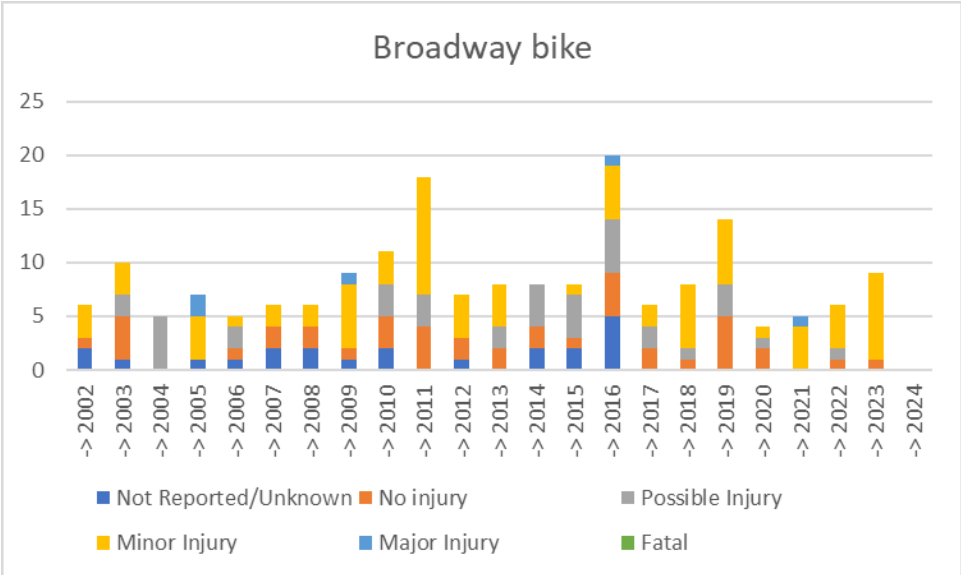


Broadway: Crashes with Cyclists, Table

Year	Not Reported/ Unknown	No injury	Possible Injury	Minor Injury	Major Injury	Fatal	Totals
2002	2	1	0	3	0	0	6
2003	1	4	2	3	0	0	10
2004	0	0	5	0	0	0	5
2005	1	0	0	4	2	0	7
2006	1	1	2	1	0	0	5
2007	2	2	0	2	0	0	6
2008	2	2	0	2	0	0	6

2009	1	1	0	6	1	0	9
2010	2	3	3	3	0	0	11
2011	0	4	3	11	0	0	18
2012	1	2	0	4	0	0	7
2013	0	2	2	4	0	0	8
2014	2	2	4	0	0	0	8
2015	2	1	4	1	0	0	8
2016	5	4	5	5	1	0	20
2017	0	2	2	2	0	0	6
2018	0	1	1	6	0	0	8
2019	0	5	3	6	0	0	14
2020	0	2	1	1	0	0	4
2021	0	0	0	4	1	0	5
2022	0	1	1	4	0	0	6
2023	0	1	0	8	0	0	9
2024*	0	0	0	0	0	0	0

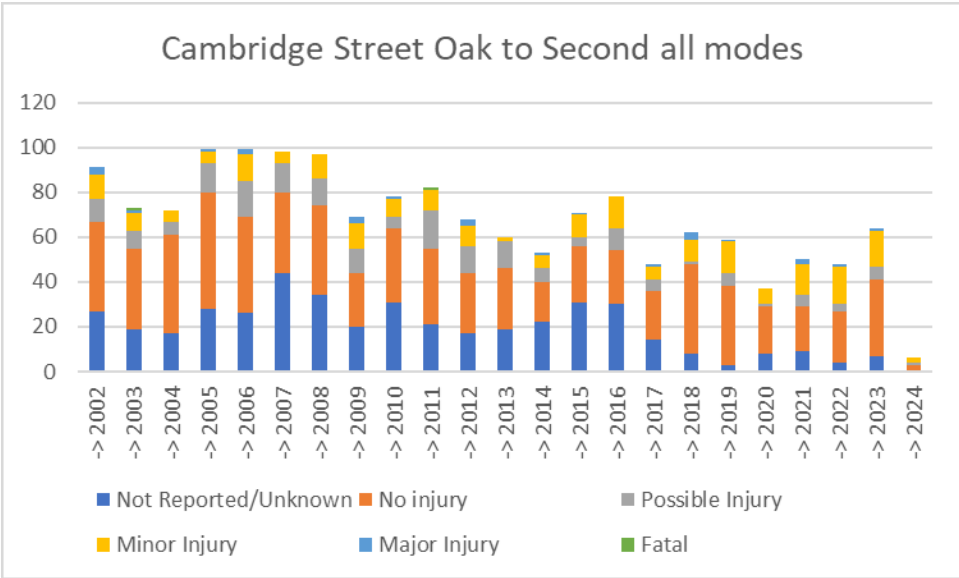
Broadway: Crashes with Cyclists, Chart



Cambridge St: Oak St to Second St - Crashes All Modes, Table

Year	Not Reported/ Unknown	No injury	Possible Injury	Minor Injury	Majo r Injur y	Fata l	Totals
2002	27	40	10	11	3	0	91
2003	19	36	8	8	1	1	73
2004	17	44	6	5	0	0	72
2005	28	52	13	5	1	0	99
2006	26	43	16	12	2	0	99
2007	44	36	13	5	0	0	98
2008	34	40	12	11	0	0	97
2009	20	24	11	11	3	0	69
2010	31	33	5	8	1	0	78
2011	21	34	17	9	0	1	82
2012	17	27	12	9	3	0	68
2013	19	27	12	2	0	0	60
2014	22	18	6	6	1	0	53
2015	31	25	4	10	1	0	71
2016	30	24	10	14	0	0	78
2017	14	22	5	6	1	0	48
2018	8	40	1	10	3	0	62
2019	3	35	6	14	1	0	59
2020	8	21	1	7	0	0	37
2021	9	20	5	14	2	0	50
2022	4	23	3	17	1	0	48
2023	7	34	6	16	1	0	64
2024*	0	3	1	2	0	0	6

Cambridge St: Oak St to Second St - All modes, Chart

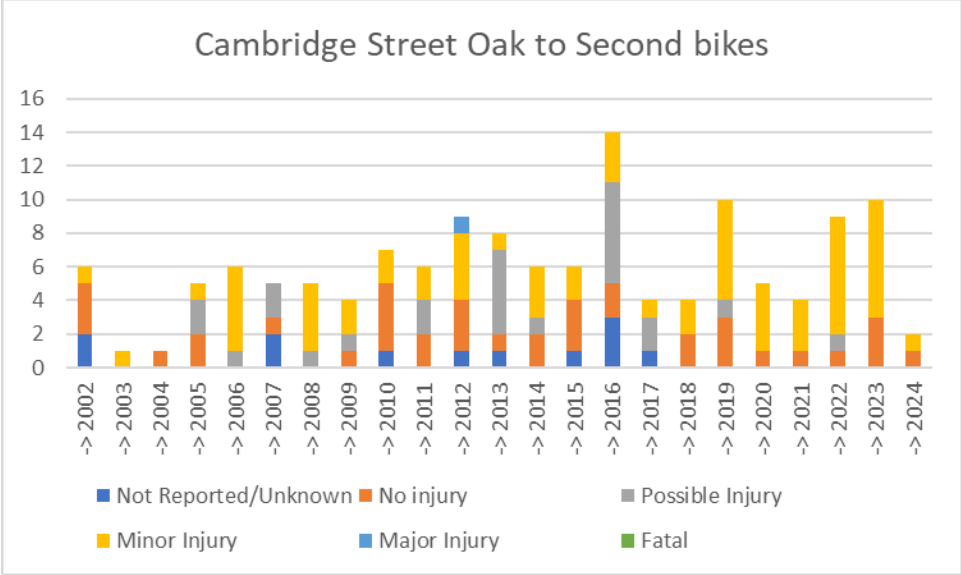


Cambridge St: Oak St to Second St - Crashes with Cyclists, Table

Year	Not Reported/ Unknown	No injury	Possible Injury	Minor Injury	Major Injury	Fatal	Totals
2002	2	3	0	1	0	0	6
2003	0	0	0	1	0	0	1
2004	0	1	0	0	0	0	1
2005	0	2	2	1	0	0	5
2006	0	0	1	5	0	0	6
2007	2	1	2	0	0	0	5
2008	0	0	1	4	0	0	5
2009	0	1	1	2	0	0	4
2010	1	4	0	2	0	0	7
2011	0	2	2	2	0	0	6
2012	1	3	0	4	1	0	9
2013	1	1	5	1	0	0	8
2014	0	2	1	3	0	0	6
2015	1	3	0	2	0	0	6
2016	3	2	6	3	0	0	14
2017	1	0	2	1	0	0	4
2018	0	2	0	2	0	0	4
2019	0	3	1	6	0	0	10
2020	0	1	0	4	0	0	5

2021	0	1	0	3	0	0	4
2022	0	1	1	7	0	0	9
2023	0	3	0	7	0	0	10
2024*	0	1	0	1	0	0	2

Cambridge St: Oak St to Second St - Crashes with Cyclists, Chart



Crash Reports

Streets identified for greater separation within the Cambridge Bicycle Plan were selected based on a number of factors, including crash history, user experiences, connectivity, and more. The Cycling Safety Ordinance seeks to build out the plan's vision within a specified timeframe. While certain crash data were used to identify those streets in a planning context for the Bicycle Plan, crash data is used differently during the design process. Staff read the full description of the crash, information that is only available on the report itself. Detailed crash reports provide a better understanding of the details of a crash than trend data, above. We then make design choices based on this information. For example, if a driver claims to not have seen a pedestrian prior to a collision, we can infer that the crosswalk is in a blind spot and adjust the travel lane and crosswalk to meet at an angle with more visibility.

During the initial design phase of any separated bike lane project, we work closely with the Cambridge Police Department to examine relevant crash reports along the corridor over a 2- to 4-year period. The exact duration of the crash review depends on factors such as sample size and timing related to COVID-19.

For both Cambridge Street and Main Street, because the design process is already underway, we have completed the review of the crash reports and the data is summarized and included below. This information is also provided on the city website for each project. We have not yet begun the design process for the Broadway corridor, so we have not completed the crash report analysis; however, we will review police crash reports for Broadway when that design process begins.

Cambridge Street Crash Summary, Police Crash Reports: Oak St to Second St

Period: January 2021 to December 2023 (3 Years)

Distance: 1.10 miles

Crashes Per Year:

Total Crashes	Injury Crashes (All modes)
156	74
Approx Per Mile Per Year	Approx Per Mile Per Year
47	22

	Number of Crashes	Number of Injury Crashes	Injury Crash (%)	Number of Non-Injury Crashes
Driver & Driver	74	25	34%	49
Driver & Pedestrian	20	18	90%	2
Driver & Cyclist	32	27	84%	5
Driver & Object	30	4	13%	26
Cyclist & Cyclist	0	N/A	N/A	N/A
Cyclist & Pedestrian	0	N/A	N/A	N/A

Main St Crash Summary, Police Crash Reports: Sidney St to Portland St

Period: January 2020 to December 2022 (3 Years)*

Distance: 0.29 miles

Crashes Per Year:

Total Crashes	Injury Crashes (All modes)
15	7
Approx Per Mile Per Year	Approx Per Mile Per Year
27	8

*Include height of COVID-19 pandemic

	Number of Crashes	Number of Injury Crashes	Injury Crash (%)	Number of Non-Injury Crashes
Driver & Driver	15	1	7%	14
Driver & Pedestrian	2	1	50%	1
Driver & Cyclist	7	5	71%	2
Driver & Object	10	0	0%	10
Cyclist & Cyclist	0	N/A	N/A	N/A
Cyclist & Pedestrian	0	N/A	N/A	N/A

As mentioned above, the project specific crash report analysis is primarily used to inform bike lane design. However, additional crash trend information is included in the 2020 Cambridge Bicycle Plan, which also relies on data from the Cambridge Police Department. More information and analysis on how the Bike Network Vision was developed and how corridors were selected for inclusion is available in the Bicycle Plan, available on the Community Development Department's website at:

<https://www.cambridgema.gov/Departments/communitydevelopment/2020bikeplanupdate>. Additional data analysis is also available in CDD's **Bicycling in Cambridge Data Report** issued in 2023. The report can be found at https://www.cambridgema.gov/-/media/Files/CDD/Transportation/Bike/bikereports/20231023bicyclingincambridgedatareport_final.pdf

Very truly yours,

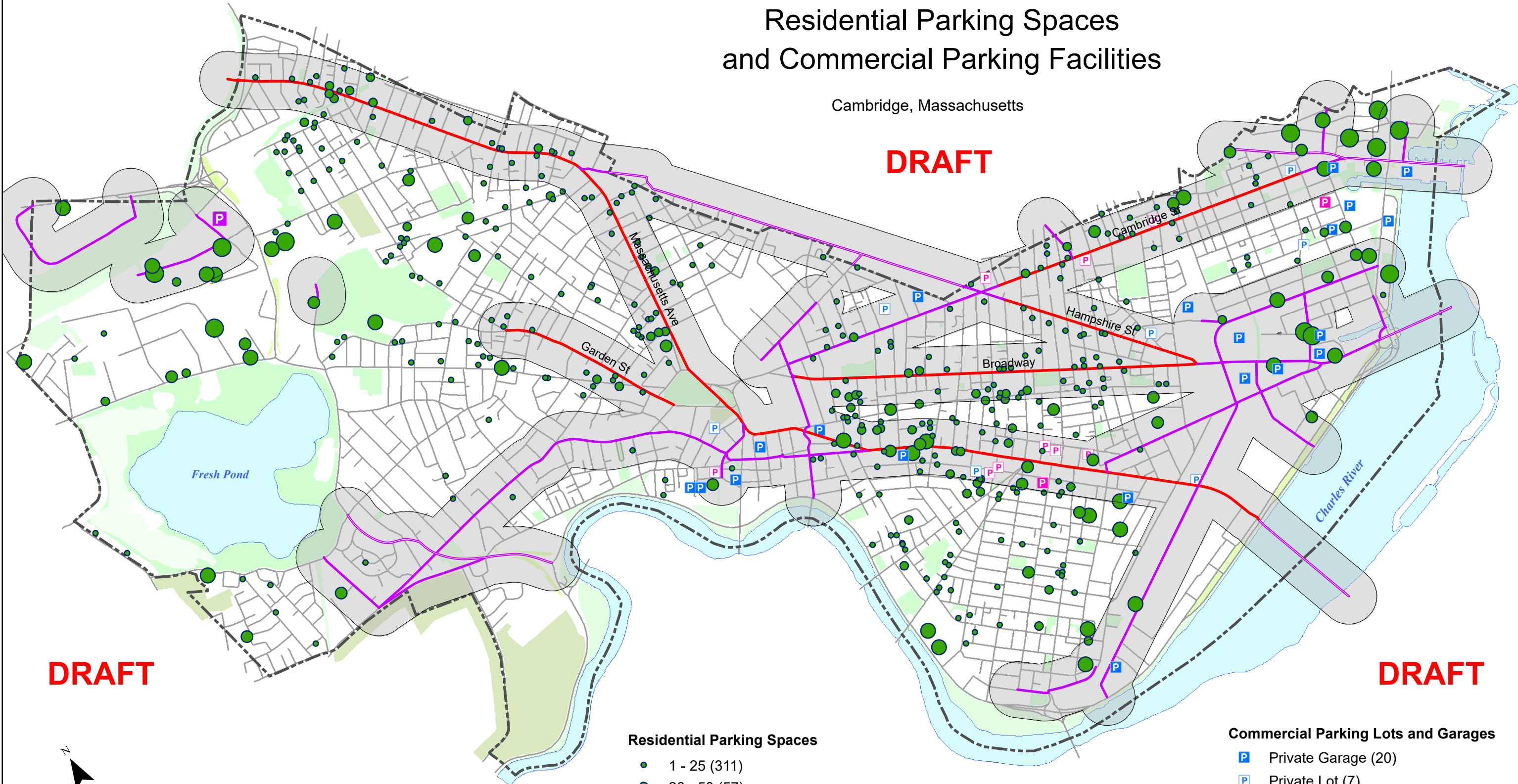


Yi-An Huang
City Manager

CSO Corridors with Registered Residential Parking Spaces and Commercial Parking Facilities

Cambridge, Massachusetts

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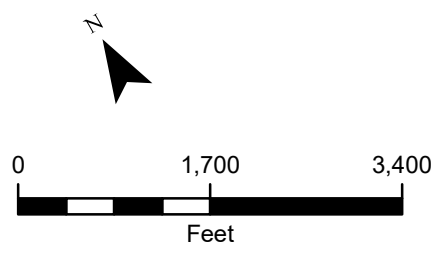
Residential Parking Spaces

- 1 - 25 (311)
- 26 - 50 (57)
- 51 - 100 (29)
- 101 - 300 (31)
- 301 - 559 (12)

Commercial Parking Lots and Garages

- P Private Garage (20)
- P Private Lot (7)
- P Municipal Garage (2)
- P Municipal Lot (9)
- P MBTA Garage at Alewife (1)

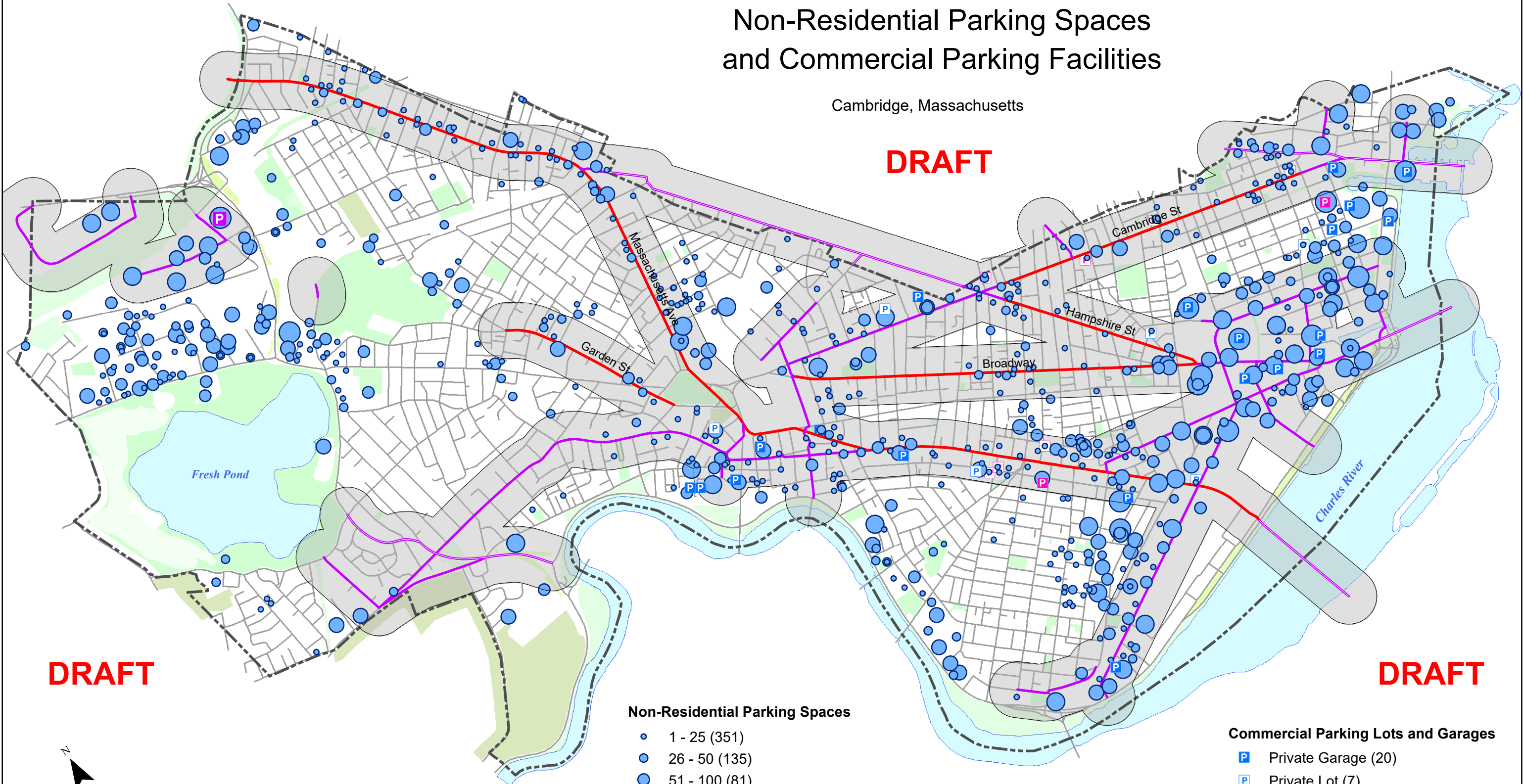
- Streets Named as CSO Corridors
- Bicycle Network Vision Streets
- 500-Foot Buffer



CSO Corridors with Registered Non-Residential Parking Spaces and Commercial Parking Facilities

Cambridge, Massachusetts

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Non-Residential Parking Spaces

- 1 - 25 (351)
- 26 - 50 (135)
- 51 - 100 (81)
- 101 - 300 (80)
- 301 - 750 (46)
- 751 - 2733 (14)

- Streets Named as CSO Corridors
- Bicycle Network Vision Streets
- 500-Foot Buffer

Commercial Parking Lots and Garages

- Private Garage (20)
- Private Lot (7)
- Municipal Garage (2)
- Municipal Lot (9)
- MBTA Garage at Alewife (1)

