

A Profile of Truck Impacts

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Boston Region Metropolitan Planning Organization

Background

- **Examine how, where, and to what extent trucks affect the region's transportation system.**
- **Improve capabilities to conduct freight planning and analyze projects & programs for freight benefits.**

What is a Truck?



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Data Resources

- **MassDOT Truck Counts**
- **Turnpike Toll Collection Reports**
- **MPO Truck Model**
- **RMV Crash Records**

Daily Truck Trips by Movement Type

- Vast majority of truck trips are wholly within the MPO region

Movement Type	% of Truck Trips	# Daily Truck Trips
Internal	66%	540,000
Through	23%	185,000
Outbound	6%	46,000
Inbound	5%	44,000
Total	100%	815,000

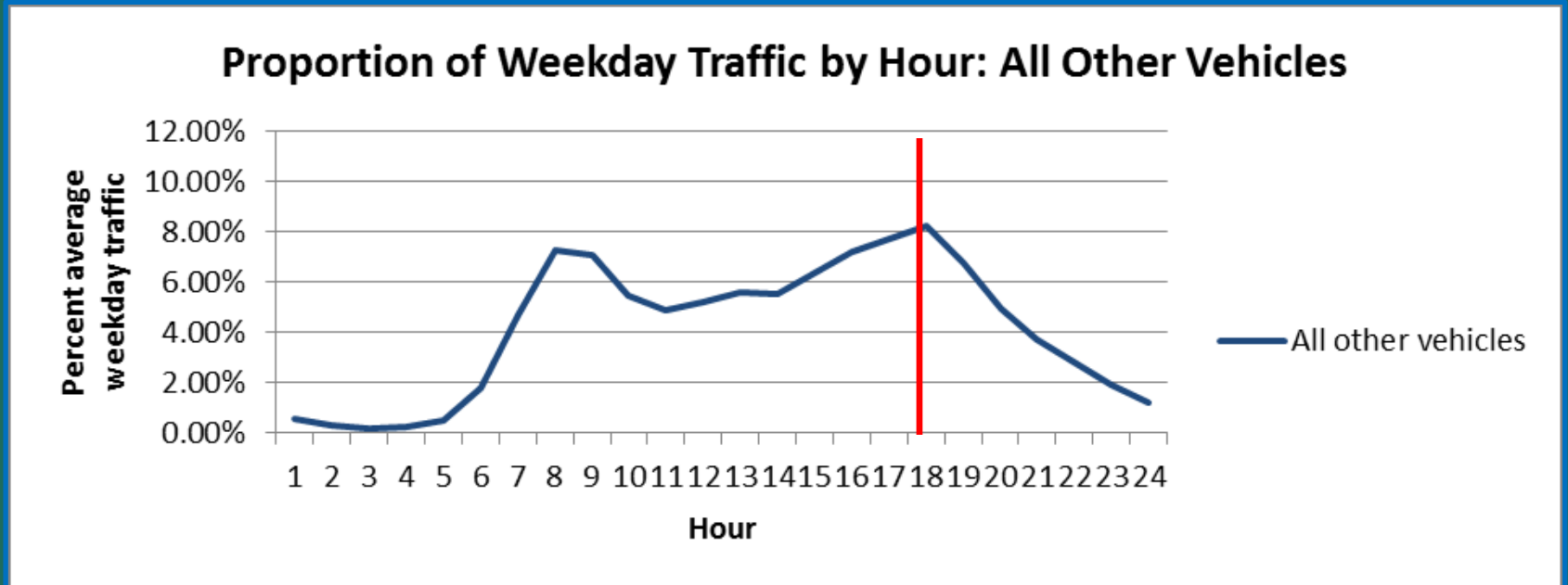
Daily VMT by Vehicle Type

- About 8.6% of weekday VMT by trucks

Vehicle Type	Weekday VMT	% of Weekday VMT
Commercial Truck	5,781,000	8.2%
HAZMAT Cargo	271,000	0.4%
All Other	64,658,000	91.4%
Total	70,710,000	100%

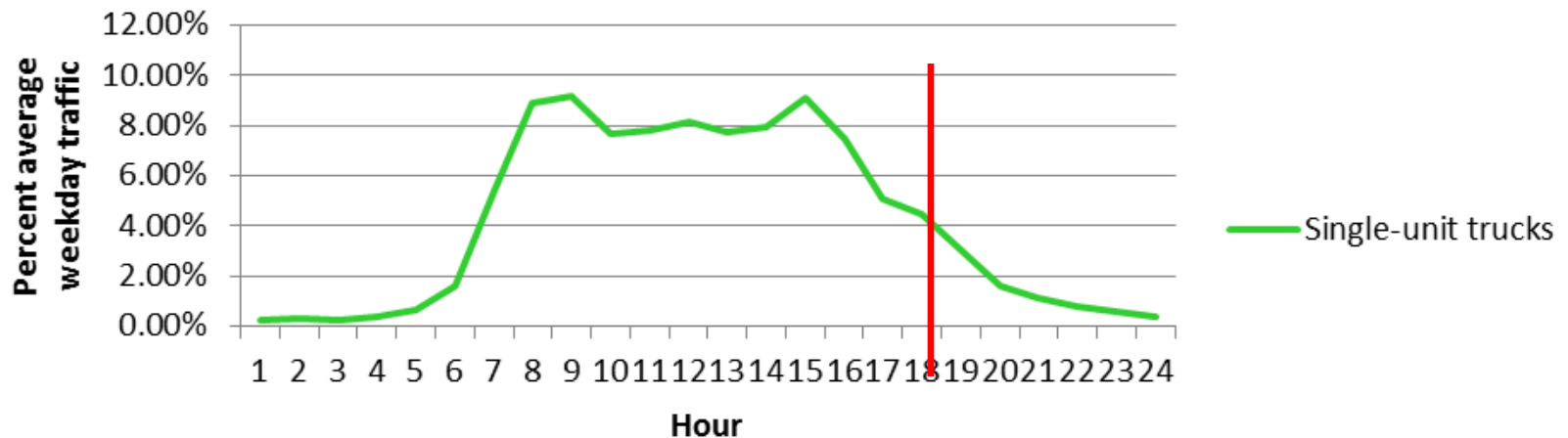
Proportion of Weekday Traffic by Hour

- Non-truck vehicles peak near 5:15 PM



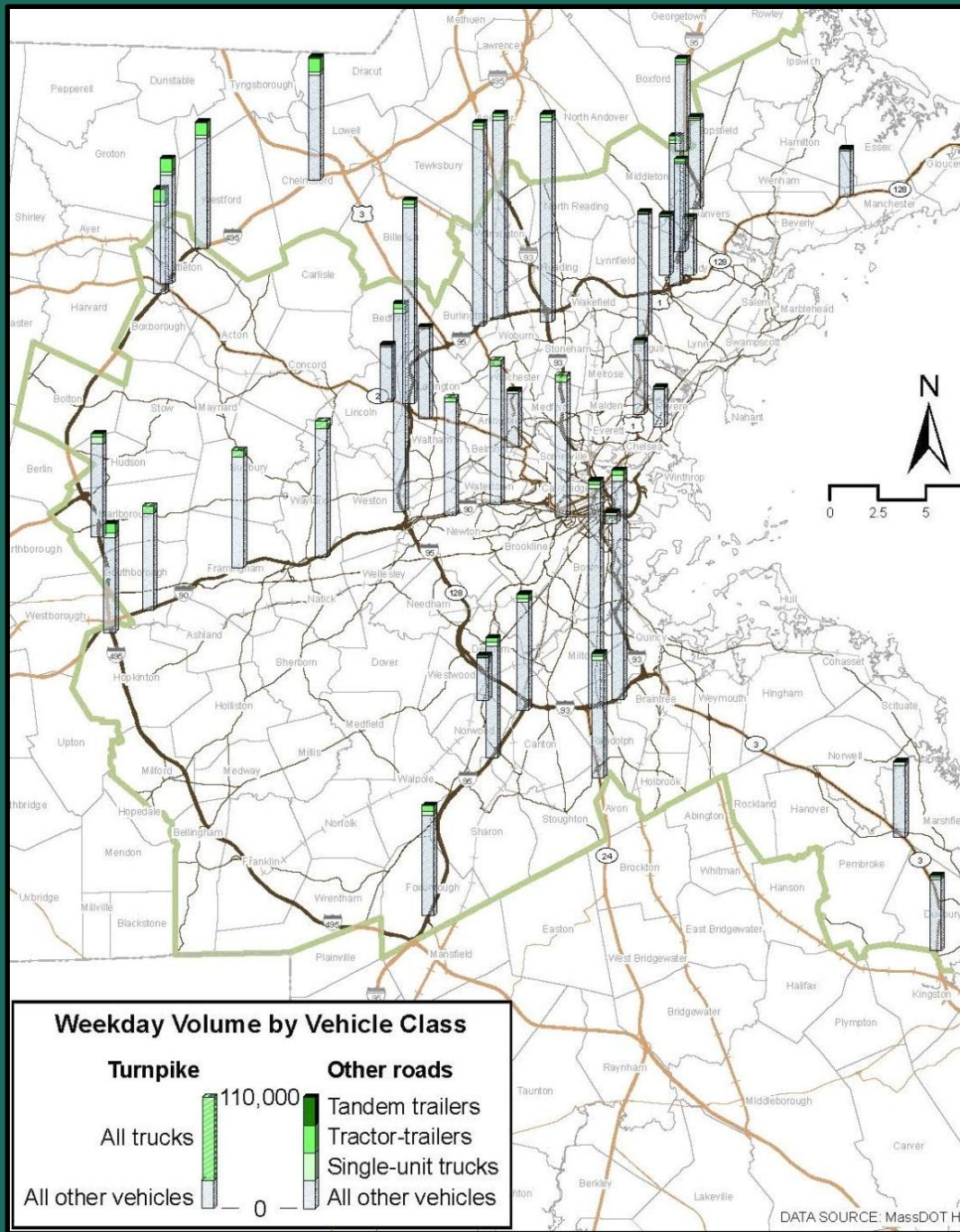
- Single-unit truck peak near 3:00 PM

Proportion of Weekday Traffic by Hour: Single-Unit Trucks



Express Highway Truck Counts

Count Location	Weekday Trucks	% of Traffic
I-495, Chelmsford	18,000	14.9%
I-495, Littleton	16,700	13.6%
I-90, just west of I-495	10,800	11.6%
I-90, just east of I-495	7,200	7.0%
I-90, just west of 128	7,500	5.5%
I-90, just east of 128	4,300	3.7%
I-95, north of I-90, Weston	10,400	5.1%
I-93, south of I-95, Woburn	7,700	3.8%



Truck Travel Patterns from I-84 East

- 81% of trucks entering I-90 from I-84 east travel to these 4 exits

From I-84 East To:	Avg. Daily Trucks	% of All Trucks
I-290, Worcester	1,350	36%
I-495, Westborough	844	23%
I-95, Weston	493	13%
Beyond I-95 (urban core)	326	9%

Truck Crashes

- From 2006–08, trucks were involved in 10,834 of 177,891 reported crashes.

Vehicle Type Involved	% of Crashes	% of Fatal	% of Injurious
Trucks	6.1%	7.9%	4.1%
All Other Vehicles	93.9%	92.1%	95.9%

- **Top crash locations - interchanges**

Location	Truck-Involved Crashes	Truck EPDO
I-90 at I-95, Weston/Newton	71	143
I-90 at 1-495, Westborough	66	102
1-93 at I-95, Woburn	63	140

- **Top crash locations - arterial intersections**

Location	Truck-Involved Crashes	Truck EPDO
Mass Ave. at Mass Ave. Connector, Boston	19	31
Williams St. at Spruce St., Chelsea	12	24
Williams St. at Broadway, Chelsea	11	19

- **Top crash locations - rotaries**

Location	Truck-Involved Crashes	Truck EPDO
Wellington Circle, Medford	50	86
Sweetser Circle (Route 16 at Route 99), Everett	23	51
Kosciuszko Circle (Columbia Rd. east of I-93), Boston	14	14

