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Information Item 2
Transportation Standing Committee
November 23, 2023

TO: Chair and Members of the Transportation Standing Committee

Original Signed

SUBMITTED BY: Cathie O'Toole, Chief Administrative Officer

DATE: September 22, 2023

SUBJECT: **Options to Address Quality of Life Concerns on Downtown Truck Routes**

INFORMATION REPORT

ORIGIN

On January 29, 2019, the following motion of Regional Council was put and passed:

"THAT Halifax Regional Council request a staff report regarding opportunities and challenges for addressing quality of life concerns for residents living and working along truck routes from the Mackay Bridge on Barrington, Hollis, and Lower Water to the Port of Halifax, including but not limited to improving paving standards, complete street design, signal timing, and time of day restrictions, and including consultation with residents and port stakeholders."

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Truck Routes By-Law T-400 "No person shall drive a truck on any highway in the Municipality except as permitted by this by-law".

Halifax Regional Municipality Charter s. 322 (1) The Council may design, lay out, open, expand, construct, maintain, improve, alter, repair, light, water, clean, and clear streets in the Municipality.

BACKGROUND

Downtown Halifax enjoys a vibrant mix of land uses, with many residences, offices, shops, and amenities all within easy walking distance of each other. However, large trucks are prevalent in this area for several reasons, and these can have various impacts on the quality of life for residents.

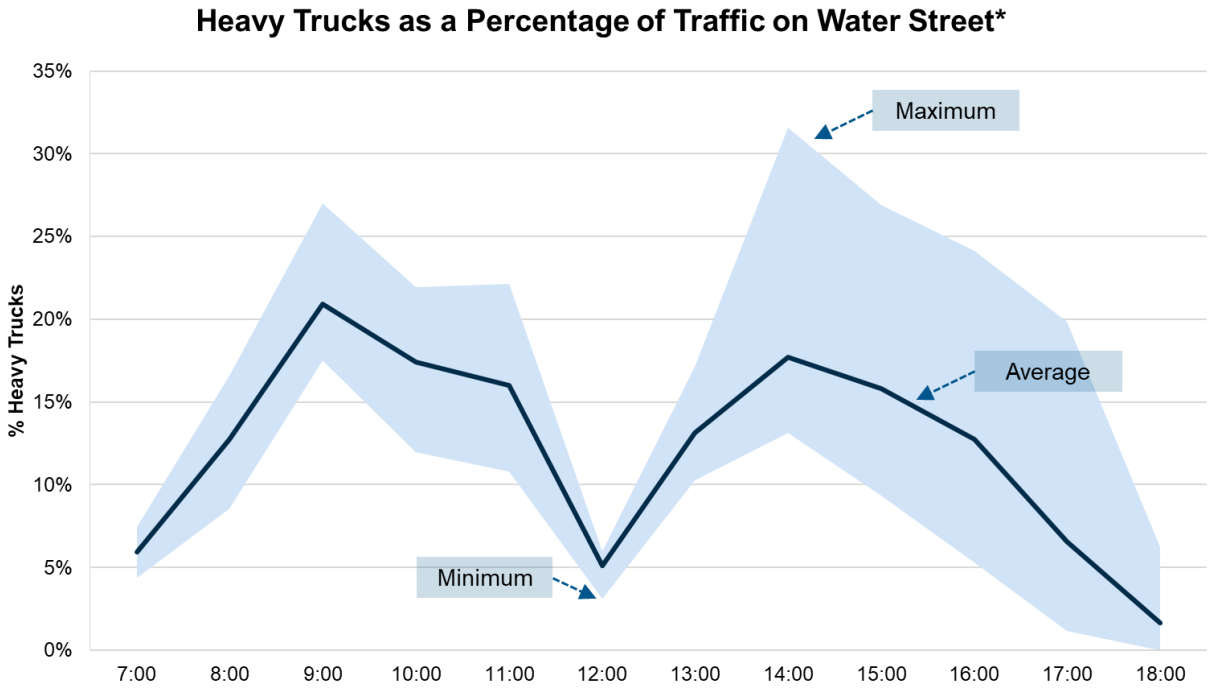
Port Related Traffic

A significant portion of the economy in Halifax is derived from shipping activity at the Port of Halifax. Lower Water Street, Hollis Street, and Barrington Street (north of Cogswell Street) are the most direct route between the South End Container Terminal, the MacKay Bridge, and Highway 111, and as such are currently vital to supporting this economic activity.

The location of the South End Container Terminal just south of the downtown core results in a significant amount of heavy truck traffic on downtown streets. An average of 500 trucks per day travel northbound on Lower Water Street (varies between 400 – 700), comprising 8% - 20% of daytime total traffic depending on the time of day.

Vehicle Type	Water Street		Hollis Street	
	Volume	%	Volume	%
Cars	4,393	76%	3,814	81%
Light Trucks	682	12%	467	10%
Heavy Trucks	503	9%	321	7%
Buses	102	2%	70	1%
Bicycles	72	1%	34	1%
TOTAL	**5,753**		**682**	

Daily Traffic Volume by Vehicle Type



**This graph illustrates the average of data collected in Summer 2023 (2 days in June, 1 day in July and 3 days in August)*

Hourly Truck Distribution on Lower Water Street

The Port has plans to implement a rail shuttle solution by 2026 that will shift approximately 75% of existing goods moving in and out of the South End Container Terminal from truck to rail. Recent shifts in port operations have reduced truck volumes at the South End Terminal, which can be attributed to fluctuations in port business and a move of some operations from the South End Terminal to Fairview Cove. Projections from the Port of Halifax indicate that this migration of operations to Fairview Cove could reduce truck volumes downtown by as much as 36% over the next few years, even before the rail shuttle solution is operational.

Urban Servicing
Unrelated to the port, urban goods delivery and waste management are also vital components of the downtown economy. During the day, trucks providing these services can impede other traffic and compete with residents and customers for curbside access. If they carry out their activities at night or early in the morning, they can generate disturbance through noise.

Online shopping and pandemic dining limitations have led to the explosive growth of food and courier delivery services. The increasing commercial and residential activity in downtown Halifax has been accompanied by a corresponding increase of these services as well.

While this diversity of functions leads to a healthy economy and a vibrant walkable downtown core, the conflicts between different types of uses can also present some unique quality of life challenges for residents, workers, and people using active transportation.

Impacts to Quality of Life Along Truck Routes

Pedestrian/cyclist safety, noise, and emissions have been identified as the main quality of life issues along downtown truck routes:

- Large commercial vehicles pose **safety concerns** for vulnerable road users (people walking, cycling, and using various personal mobility devices). Heavy trucks have tall cabs, large blind spots, and limited direct vision, which can result in poor visibility for drivers. Larger vehicles also take more time to decelerate when avoiding a roadway conflict. Combined, these factors increase not only the risk of a collision, but its potential severity with respect to vulnerable road users. Reducing conflicts between vehicles and vulnerable users and modifying vehicle technology to improve safety factors can help increase quality of life along downtown truck routes.

- Trucks generate excessive **noise** that can impact short term welfare (e.g., sleep disturbance) and may also have long term health consequences. Their larger, more powerful engines create more noise when accelerating, and their air brakes are also louder than standard brakes. Truck noise can also stem from engine braking, but this should not be an urban issue as it is prohibited in areas posted 50km/hr or less by the Nova Scotia *Motor Vehicle Act* (unless required by an emergency).

- Roadway surface irregularities (e.g., potholes) also contribute to **noise** issues along truck routes. Large vehicles hitting these cause louder noises than regular vehicles. Heavy vehicles also accelerate road deterioration, producing the irregularities which in turn result in noise.

- Trucks are needed to service large residential and commercial buildings in the downtown, and these can be noisy activities (loading doors slamming, bins tipping, workers talking, etc.), especially when they take place at night.

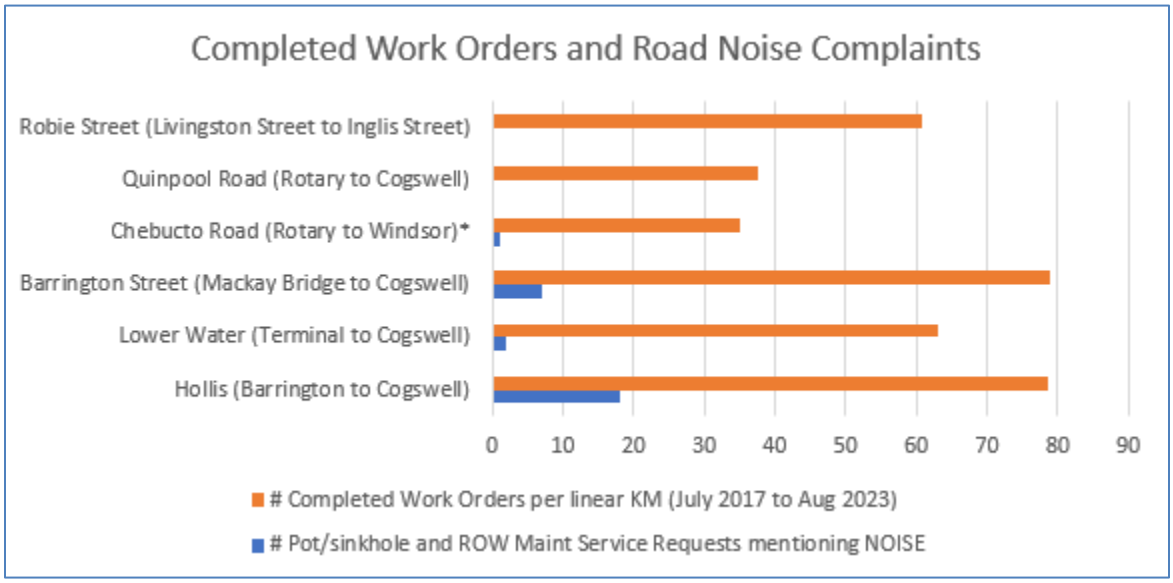
- Most large commercial vehicles run on diesel engines which can impact **air quality**. The Canadian Centre for Occupational Health and Safety states that diesel exhaust fumes can have serious short-term and long-term health impacts[1]. The high street walls along downtown streets may exacerbate acute air pollution issues by trapping particulate matter in narrow street canyons where air cannot circulate to dilute pollutants. However, diesel engine technology is constantly improving and emissions from vehicles are generally becoming cleaner with newer models. As fleets get updated, these emissions will become less of a hazard. Still, reducing these emissions—by reducing traffic or changing technology—may improve quality of life along downtown truck routes.

Resident Complaints
Resident noise complaints related to reported potholes and road surface irregularities on five full time truck routes abutting residential land uses were reviewed from July 2017 to August 2023. These were compared against the number of completed work orders (per linear kilometer) for road repairs in that same period.

[1] https://www.ccohs.ca/oshanswers/chemicals/diesel_exhaust.html

Hollis Street received the most noise complaints in that period and had the most work orders completed (tied with Barrington Street).

By comparison, other full time urban truck routes abutting residential uses (e.g., Quinpool Road, Chebucto Road) received fewer noise complaints and had fewer work orders completed.



Completed Work Orders and Road Noise Complaints

Relevant HRM Initiatives

There are multiple HRM projects and programs that are relevant to these issues, which aim to improve the quality of life related to truck routes:

- *HRM Truck Route By-law T-400* regulates trucks over 3,000 kg travelling on streets and highways. The by-law establishes two types of truck routes: daytime truck routes and full-time truck routes. Trucks must drive only on these routes, unless they are making a local delivery, in which case they can travel by the "most direct accessible connection between the nearest truck route and the delivery point." While the by-law may aim to mitigate truck impact by separating truck traffic from residential land uses, this is not always feasible. Hollis Street and Lower Water Street are notable examples -- designated as full-time truck routes despite their proximity to residents and heavy pedestrian volumes. While both container terminals (South End and Fairview Cove) are only open to trucks during the day, these streets also serve as the routes for oversized loads which typically travel outside of daytime hours to minimize conflict with other traffic. These are also the main routes into downtown for trucks servicing downtown businesses.

- *Cogswell District Redevelopment* - The redevelopment of the Cogswell Interchange into the *Cogswell District* will improve quality of life along this truck route by significantly enhancing the pedestrian realm. Better pedestrian crossings at Upper Water, Barrington, Hollis, and Lower Water streets will improve pedestrian access and safety; continuous treed boulevards will add comfort to sidewalks; and a fully separated bi-directional bikeway from Historic Properties to the Barrington Greenway will separate vulnerable road users from vehicle traffic and fill a critical gap in what may one day become a continuous waterfront (or water-view) open space connection between Point Pleasant Park and Halifax's north end.

- *Barrington Greenway Extension* - The multi-use pathway on Barrington Street north of Nora Bernard Street, (formerly Cornwallis Street) was extended in 2019 from North Street to Devonshire Avenue. This has improved pedestrian safety along the busy truck route between downtown and

the MacKay Bridge through the inclusion of a planted buffer between the path and roadway. The project also included fewer, but wider lanes to create more space for safer travel of large vehicles. Extension of this path further northward is being considered as part of the "Africville AT Connections" functional planning project.

- *Water Street Functional Plan* - Functional planning for Upper and Lower Water Street is currently ongoing. The plan will identify a future vision for the corridor that better accommodates transit and improves the pedestrian realm by eliminating sidewalk pinch points and refreshing aging streetscape assets. The significant presence of heavy truck traffic on Water Street has been a key challenge in the planning and design process. A tactical bikeway was installed in 2020, and further interim improvements are being considered for 2024.

- *Downtown Bikeways* - Approved functional plans are being implemented to fully protect bicycle lanes on Hollis Street, Lower Water Street, Terminal Road, and George Street. The addition of physical barriers to increase comfort and safety for cyclists has also made the sidewalks more comfortable with their buffering effect.

Port-Related Initiatives

According to the Port Authority, both the South End and Fairview Cove terminals have strict operating hours for trucks (8 AM - 12 PM, 1 PM – 4 PM). Depending on volumes, terminals sometimes open at 7AM and may work through lunch and close at 5 PM. There are no truck operations on weekends.

Beyond the day-to-day operations, the Government of Canada is contributing funding for two key projects in HRM through the National Trade Corridors Fund:

- Improvements to the Windsor Street Exchange to alleviate a transportation network bottleneck and improve truck access to the Fairview Cove Container Terminal; and

- The addition of a rail shuttle that will move goods by train between the South End and Fairview Cove Container Terminals, which is estimated to reduce approximately 75% of current container trucks from downtown streets.

In addition, CN has expanded capacity at their Intermodal Ramp in Moncton allowing containers that would have normally travelled to and through Halifax by truck to be moved by rail to and from the Port of Halifax, further reducing truck moves between Moncton and Halifax, including through the downtown core.

A harbour infill/ pyritic slate disposal site opened at the South End Container Terminal in 2022. While this site receives about 100 trucks per day, which travel through downtown streets, much of the material originates from construction projects in downtown Halifax. This supports the downtown construction industry while reducing the distance (and greenhouse gas emissions) associated with trucking to other sites. In the future, it will also allow for port expansion.

DISCUSSION

Potential Opportunities to Improve Quality of Life Along Halifax Truck Routes

This section explores a range of initiatives identified by the Transportation Standing Committee as potential opportunities to improve the quality of life for those living or using active modes of transportation along HRM's downtown truck routes and provides information on their potential application in HRM.

Complete Streets Design

A) Pedestrian & Cyclist Safety

There have been no reported pedestrian/ truck collisions along the downtown truck routes that are the subject of this report dating back to 2015. However, large vehicles still pose a safety risk to vulnerable road users. Various programs and projects are underway in this regard. Recently implemented projects including the Hollis, Lower Water, and Terminal Road tactical protected bikeways have increased separation between vulnerable road users and traffic. The Water Street functional planning study is considering further pedestrian, cyclist, and transit improvements such as widened sidewalks, narrower vehicle lanes, and streetscaping (trees, furnishings) to reduce speed and improve pedestrian experience and safety.

> *Quality of life along Halifax's downtown truck routes can be improved by continuing HRM's increased focus on pedestrian safety to improve the experience of people walking, rolling, and bicycling on these streets.*

B) Vehicle Rightsizing[2]

According to a guide published by the National Association of City Transportation Officials (NACTO)[3], of which Halifax is an international member city, large vehicles can result in unsafe conditions on urban roadways. Designing roadway geometry to accommodate large vehicles results in wider lane widths and large turning radii that can encourage higher operating speeds. This can be dangerous for vulnerable road users. Large vehicles also tend to have reduced visibility, so improved direct vision (i.e., the driver's direct line of sight, not mirrors or backup cameras) helps improve safety. Direct vision can be improved with cab-over truck designs, teardrop or peep windows, and sloped hoods.

Many streets in HRM must be designed to accommodate the turning movements of larger fleet vehicles (e.g., the Pierce Aerial fire truck). Using a Complete Streets approach means that it may be acceptable for a local street design to allow for such vehicles to use the whole roadway to complete turns; but this may not be an acceptable approach for the design of busier streets (i.e., if turns must stay in their lane a wider roadway may be required). Guidance on the appropriate selection of 'design vehicles' and 'control vehicles' is to be considered in phase II of the review of the Municipal Design Guidelines, which should be initiated in within a year, pending staff availability.

Many North American cities are undertaking efforts to 'right size' their vehicle fleets, particularly in downtown areas where space tends to be more constrained. Halifax could consider a policy for rightsizing the municipal fleet that preferentially procures smaller vehicles with tighter turn radii and better direct vision. This could be done alongside other HalifACT 2050 recommendations, including the electrification of transportation. Considerations would need to include whether capacity/ performance can be achieved with smaller vehicles; the extent to which larger vehicles with multiple attachments are currently used instead of using several smaller vehicles; adherence to industry standards (i.e., National Fire Protection Association); and cost of purchase and maintenance.

> *Quality of life along Halifax's downtown truck routes could potentially be improved by considering a policy to "right size" fleet vehicles. This may have some limited impact on these streets if they were subjected to any redesign (i.e., through consideration of a smaller design vehicle potentially resulting in tighter curb radii and shorter pedestrian crossings, for example).*

Pavement Solutions

A) Pavement Materials

Most municipal roads are surfaced with hot-mix asphaltic concrete (asphalt). This treatment is beneficial for its cost, availability, durability, flexibility, and recyclability. While there are other pavement materials and

[2] This discussion is specific to trucks and is not intended to apply to transit buses, which generally have very good visibility and sightlines.
[3] https://nacto.org/optimizing-large-vehicles/

strategies that can reduce vehicle noise, they are generally used on high-speed roadways where noise from tires is louder and more prevalent. Alternative pavement treatments can increase cost, have not been proven to be effective in winter cities, and may have limited impact on urban streets with significant amounts of buried and surface structures (manholes, covers, etc.) that also experience frequent cutting and patching.

> *Changing the type of material used to pave downtown truck routes **does not** appear to present an immediate opportunity to improve the quality of life along these corridors.*

B) Reactive Maintenance

Reactive maintenance activities like crack sealing and pothole patching aim to repair localised defects before more costly repairs are required. Urban streets are especially susceptible to such defects as they contain several types of ironworks (e.g., manhole, valve & catch basin covers) which make pavements susceptible to potholes and settlement around covers. They are also exposed to frequent pavement cuts and patching (e.g., for service lateral installation, utility work) which add roughness and contribute to noise, especially when driven over by large vehicles. Current service standards for potholes are:

Priority 1 (P1) Potholes - depth greater than 8cm
- Arterial/ Major Collector – 7 business days
- Minor Collector – 14 business days
- Local - 30 business days.

Priority 2 (P2) Potholes - less than 8cm depth
- 12 months to repair

Downtown Halifax truck routes that are the subject of this report are already classified as Arterial/Major Collectors and receive HRM's highest levels of service. HRM typically meets its service standard targets during normal operations. However, P1 potholes may become overdue for repair due to operational demands (volume of potholes reported; staff or equipment limitations). Several other asphalt patching items also have a 12 to 18-month standard for repair; it is possible that these and P2 potholes are contributing to noise issues on downtown truck routes, though this has not been verified.

> *There is potential that improving service standards for reactive maintenance on downtown truck routes could improve quality of life on these corridors. Additional resources would be required as well as the participation of Halifax Water (responsible for sewer and water structures in the road).*

C) Preventative Maintenance

This consists of regular application of various surface treatments to extend pavement life and is the foundation of any good roadway asset management program (including HRM's). In addition to increased noise, inadequate pavement maintenance results in higher vehicle maintenance costs (frames, suspensions, tires, etc.) of private, transit, and commercial vehicles; reduced network safety and accessibility; and potentially greater environmental impacts.

These impacts are not just limited to specific truck routes but apply to the entire network. To maintain HRM streets, road condition data is collected every two years (surface distress and roughness) to inform an evidence-based approach to the application of strategies. A recent report to Council resulted in approval of a number of recommendations about the Level of Service (LOS) for the HRM Street Network.

There is potential to have a higher LOS threshold for truck routes in residential areas if funding is available. This would translate into more routine preventative maintenance initiatives to maintain the Pavement Quality Index (PQI) at a higher threshold which should reduce pothole formation and would help reduce jarring noises (provided there was proper ironworks maintenance).

A higher LOS on truck routes intersecting with dense residential land uses could be one way to address quality of life issues on downtown truck routes. However, given current pressures on funding for roadway rehabilitation (construction cost inflation, additional inventory due to provincial road transfer, complete streets, taxation targets, etc.) it will be challenging to meet existing approved LOS targets. Until these can be met, improving them may be impractical.

Traffic Signal Timing

Traffic signal timing impacts truck operation and could influence quality of life concerns on truck routes. Signal timing can influence vehicle speeds, which are an important factor in pedestrian comfort and safety. Signal timing also impacts vehicle flow, which can influence the amount of stopping and starting required – this can be particularly relevant to heavy truck traffic, which can generate considerable noise when braking and accelerating from a stop.

The signalized intersections on Hollis Street are already coordinated and operate using a traffic signal progression that allows for continuous traffic flow. Depending on the time of day, the 'green wave' speeds may change. For example, on weekday mornings, off-peak timing for Hollis Street is 42 km/h giving a 34 second green band.

HRM's Traffic Authority currently considers quality of life on downtown truck routes as a consideration when developing traffic signal timing plans for downtown intersections; therefore, updated signal timing has limited potential for further improvements.

Time of Day Restrictions

A) Truck Routes

As noted above, the downtown truck routes are all designated as *Full Time Truck Routes* under By-law T400. An amendment to the by-law could change their designation to *Daytime Truck Routes*, which *could* have the potential to reduce truck traffic during evening and overnight periods; however, there drawbacks to doing this.

A change to daytime-only truck routes would have limited port impacts as both terminals presently have strict daytime only operating hours for trucks. Further, there are resulting drawbacks to this change, including: creation of a disjointed full-time truck route network in the downtown core; diversion of trucks to other full-time truck routes in the area (e.g., Sackville and Prince Streets) shifting potential problems from one area to another; and creating challenges for the movement of oversized loads which cannot be moved through the downtown during the day and rely on these routes and police escort to be moved overnight.

The designation of existing downtown truck routes as daytime-only routes would have limited potential to improve quality of life and would shift current challenges to other streets.

B) Loading & Deliveries

At present, loading and deliveries are effectively constrained to the hours of 7 AM to 9:30 PM Monday to Friday, 8 AM to 7 PM Saturday, and 9 AM to 7 PM Sunday and holidays under HRM's Noise By-law. Despite this a review of non-road related noise complaints received by HRM between January 2017 and September 2020, revealed that all the ones related to trucks were due to waste collection, construction, and building noise taking place before 7 AM or after 11 PM.

While complaints have been generated by these activities taking place at night, they generate other concerns when they take place during the day. If noise reduction protocols could maintain liveability, allowing and/or encouraging waste removal, loading, courier, and other servicing functions to occur at night or earlier in the morning could have some quality-of-life improvements for dense mixed-use areas.

Off-Peak Delivery (OPD) reduces pressure on high demand curbsides, increases opportunities for daytime customer parking, reduces truck encroachment on sidewalks, bicycle, and vehicle lanes, and is more

efficient for trucking companies, reducing GHG emissions and congestion[4]. In Paris, the City Plan supports OPD by those holding the "*Certibruit*" label which confirms respect of noise standards using various tactics such as having trained staff, quiet engines, electric vehicles, or loading areas with acoustic treatments.

Consultation with local waste removal companies and contractors has revealed that some would prefer servicing the downtown area at night or earlier in the morning to avoid traffic congestion and gain easier access to high demand curbsides. Some already risk noise by-law violations (as evidenced by the complaints received) to do their jobs more easily.

Restricting access times (to either day or night) would remove flexibility and potentially impact businesses. Off hours receivers would need to provide delivery companies with access or incur staffing costs.

HRM has attempted a form of OPD on a small scale on side streets off Spring Garden Road where loading activity is restricted to the morning hours, and curbside spaces become available for short term parking after 11AM. This encourages deliveries to be completed before lunchtime and the increase in pedestrian activity that occurs in the afternoon. An additional full-time enforcement officer has been dedicated to this area to ensure compliance. If such changes were applied more broadly, additional enforcement would be required to deter activity outside of approved hours.

HRM staff are undertaking research to inform a curbside management policy which may ultimately require a by-law to regulate several activities. OPD could be one of the considerations.

> *As the proportion of downtown truck traffic shifts from being port-oriented towards being primarily related to urban freight delivery and servicing, enabling (or requiring) off-peak deliveries may hold potential for improving the quality of life on downtown streets rather than restricting it to daytime-only.*

Other Potential Strategies

A) Deliveries by Electric Vehicles (EV) Only

As mentioned above, requiring deliveries to be carried out by quieter vehicles such as EVs may have potentially positive impacts on quality of life, particularly if these were combined with OPD. However, HRM would not have the authority to limit delivery vehicles by type.

B) Micro-Logistics Hub

As an alternative to instituting mandatory requirements, some cities (Montreal, Calgary, Vancouver) are supporting e-delivery pilot projects. These often involve working with the private sector to implement "micro-hubs"[5] where larger vehicles drop off goods and then e-bikes do the "last mile" of delivery within the core. Coupled with AAA bike networks, such initiatives may be attractive to for their potential to bypass congestion and facilitate curbside access. This approach to urban goods delivery may also arrive on its own, as a market response to increasing curbside access challenges.

Delivery E-Bike in Halifax, 2023

[4] Modeling the Impacts of Off-Peak Delivery in the Greater Toronto and Hamilton Area (sagepub.com)
[5] https://www.pembina.org/reports/delivering-last-mile-solutions-june-2019.pdf

HRM could assess the impact that a micro-logistics hub(s) would have on the quality-of-life challenges in dense mixed-use centres and identify what role the municipality could play in such an initiative.

C) Diesel Emission Regulation

Oregon state legislators recently passed a bill regulating diesel engines in commercial vehicles. Affecting the state's three most urbanized counties, the bill provides a timeline by which vehicle owners must replace older, heavy-emission diesel engines in their trucks. By 2029, all medium-duty diesel trucks must run an engine from 2010 or newer, and all heavy-duty diesel trucks must run an engine from 2007 or newer. The bill is designed primarily to reduce harmful emissions.

In Canada, the authority to regulate engine emissions lies with Environment Canada and Transport Canada. All on-road engines and most off-road engines are regulated by Environment Canada, whose authority comes from the Canadian Environmental Protection Act, 1999 (CEPA). Regulations exist for heavy-duty vehicles and their greenhouse gas emissions, as well as levels of sulphur in diesel fuel. These regulations limit the amount of greenhouse gas emissions that large vehicles manufactured after 2014 may emit and limit the sulphur content of all diesel fuel imported and used in Canada. More stringent regulations will come into effect for engines manufactured after 2020. Furthermore, it is expected that most large car manufacturing countries will cease to manufacture traditional ICE (internal combustion engines) by 2040, so fuelling large vehicles with green energy is an increasingly real possibility in the not to distant future.

It is not within HRM's authority to regulate emissions, however various environmental laws coupled with technology improvements appear to be addressing air quality issues already.

D) Land Use and Building Standards

Trucks have been travelling along downtown routes for decades. Previous zoning constrained residential uses in downtown Halifax for many years, but now the Municipality encourages an energetic downtown full of residents, workers, and pedestrians. Conflicts can be expected when new residents move in along existing truck routes. TransLink, the Metro Vancouver regional transportation authority recommends that existing goods movement corridors seeing new medium - high density development should have policy in place to encourage incorporation of noise mitigation (2017 Regional Goods Movement Strategy). However, the City of Vancouver is the only municipality in Canada allowed the authority to adopt its own building code and the *Halifax Charter* does not currently enable the HRM to do the same.

The National Building Code (NBC) addresses sound proofing in the internal assemblies (walls and floors) that separate residential suites from each other and from other occupancies in the same building. The requirements for exterior walls and windows mostly concentrate on energy efficiency, and the location of a building has no impact on the sound proofing requirements.

Recommending building code changes to improve the quality of life on downtown truck routes is not a practical solution as they would not change older buildings, need solid justification, and most new projects incorporate noise abatement voluntarily (i.e., curtain wall systems and cladding attached by standoffs).

Conclusion

While port-related truck traffic is expected to decrease over the short to medium term on downtown streets, non-port truck traffic will remain and likely increase with the continued intensification of mixed-use development in Downtown Halifax and other centres. These impacts are related to an area's servicing needs, and while they are an expected consequence of high-density, mixed-use zoning, such impacts could potentially be mitigated. Several options for mitigating these impacts have been explored in this report and could be advanced for further consideration by Council:

- Continuing to employ a “complete streets” approach to improve pedestrian and bicyclist safety and comfort along downtown truck routes.

- Explore an administrative order with respect to rightsizing fleet and/ or contractor vehicles.

- Apply a higher service standard for reactive maintenance on downtown truck routes than on other roads.

- Carry out more routine preventative maintenance to maintain the Pavement Quality Index (PQI) at a higher threshold on downtown truck routes.

- Develop a curbside management administrative order with supporting noise by-law amendments encouraging and regulating Off-Peak Delivery in dense mixed-use centres.

- Assess the impact that a micro-logistics hub(s) would have on the challenges in dense mixed-use centres and identify what role the municipality could play in such an initiative.

FINANCIAL IMPLICATIONS

Several options for further review have been identified. Should Council direct staff to pursue any of these, staff time will be required and possibly consulting budgets. Additional financial impacts of any initiatives that may be recommended in the future, would be described in a future Council report(s).

RISK CONSIDERATION

Risks associated with the recommendations of this report rate low.

COMMUNITY ENGAGEMENT

No public engagement was carried out specifically for this report.

Stakeholder consultations were held in February of 2019 in support of work being undertaken to address a Council report request on *Noise Management and Mitigation in Downtown Areas.* A key point made by downtown businesses (hotel industry and Business Improvement Districts specifically) was that early morning construction site preparation (e.g., trucks arriving, workers yelling) before the permitted 7AM start time, is a problem for residents & hotel guests.

Engagement related to other projects mentioned in this report (i.e., Lower Water Street Functional Plan; Imagine Spring Garden, Windsor Street Exchange) has also been carried out. Related to Lower Water Street, staff received 140 comments about the impacts of trucks on the quality of life including concerns about noise, pollution, pavement impact, pedestrian/ cyclist safety, and negative impact on patios (related to noise and exhaust).

The Port of Halifax was engaged and provided the information related to their operations.

311 service requests were reviewed to understand the nature and volume of noise complaints related to trucks and truck routes downtown.

ENVIRONMENTAL IMPLICATIONS

Any policies or initiatives that support vehicle right-sizing and support electrification of fleet or other vehicles, would result in positive environmental implications and reduced greenhouse gas emissions.

Research suggests that not adequately maintaining the pavement network results in environmental impacts such as increased fuel consumption; increased GHG emissions and energy use.

ATTACHMENTS

None.

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

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