

**Rebuttal to Halifax Regional Council Report
and POMAX “Halifax Fire & Emergency
Services Staffing Review” Recommendations**

December 2015

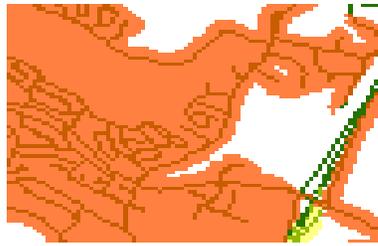
In May of 2015, HRFE was directed by Council to produce a report which would outline a plan to staff all career apparatus with four full-time firefighters and place two staffed aerial trucks in service. Instead, HRFE spent even more taxpayers' money to fund a report to support their agenda and not meet Council's directives. The consulting firm POMAX was hired to "build upon current recommendations and exhaust any and all other options for providing safe and effective fire protection..." In reality, HRFE simply wants to make cuts to the Fire Department and will continue to pay outside firms to produce studies that support their wishes, but not those of Council, HRFE firefighters, and the citizens of Halifax.

Following are some points made by POMAX that should incite the need for further discussion so that Council is not misled.

GIS Modeling:

- POMAX compared their own GIS modeling against AVL data obtained from six HRFE fire trucks, noting that the AVL data sample was small and could not be extrapolated for any areas outside of the urban core. It also should have been mentioned that additional limitations include other impacts on travel such as weather, traffic conditions, and the size of the apparatus, to name a few.
- The report stated that the POMAX GIS results validated the GIS mapping results presented in the Fire Underwriters Survey (FUS) study. As mentioned in the rebuttal to that study, the methods used by both FUS and POMAX do not represent the most accurate depiction of HRFE's capabilities. Both mapping methodologies used polygons to illustrate HRFE's response areas. Although polygons are generated by the software, they are done so at a broader extent than the network lines layer that is also generated. Polygons are more of an "as the crow flies" representation of response. They include parks and land areas where no structures exist, and not necessarily locations where the fire department would typically respond. As can be seen in the images below (and on the following page), which were excerpted from the POMAX study, there are many open space land areas included in what is said to be within the Fire Department's response capabilities:





- Included in this document are maps produced by an IAFF GIS-Specialist, using tested methodology for mapping fire department response capabilities. These maps were created using ArcGIS 10.3 and the most up-to-date road data available. The IAFF analyst used actual roads covered within internationally recognized response time frames to depict HRFE's response capabilities. This methodology has been verified as accurate by various fire departments and governments, and also adopted by some consulting firms.

Deployment:

- POMAX and the HRFE recommend that Station 11, which is currently staffed with career personnel 24/7 be converted to an all-volunteer station. Additionally, it was recommended that Stations 4 and 13 would be converted to E Platoon status, only staffed with career personnel during weekdays and by volunteers on nights and weekends. POMAX has stated that the areas currently covered by these stations would not be impacted by reductions in staffing.

Maps produced by the IAFF GIS-Specialist show that if the proposed options¹ are implemented, they will result in a percentage decrease of 10.5% for 4-minute, first due response on roads within the urban area and a percentage decrease of 24.3% for the initial assembly of a minimum of 15 personnel within 8 minutes, also on roads within the urban area. For a 4-minute, 4-personnel response (2 In/2 Out), there was a percentage increase of 9.1%. **However, this assumes that all engines, quints, and aerials staffed with career personnel are staffed within a minimum of four.**

Furthermore, both the POMAX and IAFF maps assume apparatus are available to respond immediately upon dispatch. In reality, simultaneous and concurrent calls, as

¹ Mapping only examined coverage differences during nights and weekends.

well as factors such as apparatus maintenance and training schedules, may put units out of service or unable to deploy immediately.

Recently, a fire on Maitland Street has demonstrated why maintaining staff on a 24/7 basis at these three stations is essential. The fire began at 2:30 AM; therefore, under the POMAX proposal, Stations 4 and 13 would not have been staffed. Engine 4 was credited with stopping the fire from spreading to nearby structures. Engine 14 was called to cover Station 13, as Engine 13 had originally been dispatched to the fire, but then reassigned en-route. If Station 13's first due area is busy enough that other apparatus are called in to cover, doesn't it seem contrary to common sense to only staff it on weekdays? Additionally, once all units had been dispatched, there were only 2 available suppression apparatus left to cover the rest of the City. This certainly negates POMAX's statement that, "...any assignment of apparatus or deployment of personnel to these stations can be considered surplus to Halifax's fire coverage needs."

Staffing:

- As stated earlier, Council's initial directive to HRFE was to provide the cost of staffing each station with four firefighters. POMAX concurred that, "...firefighters and residents are best served when apparatus are crewed with four career personnel." However, both POMAX and HRFE then try to sell Council on the point that the aerials can be safely staffed with two. HRFE states that a crew of four would be assigned to the aerials, but two of the four personnel would be considered "additional" staff used to fill vacancies. If Council accepts this argument, it would be interesting to see how frequently (or infrequently) these apparatus actually deploy with four.

This poorly conceived aerial staffing plan is supported by the argument that "any fire trucks responding...with less than 4 firefighters respond with other vehicles..." If this is to be the case, then the aerials would basically need to respond in tandem with other suppression apparatus. For instance, if an aerial is placed in Station 2, it would need to respond in conjunction with Engine 2 anytime that engine leaves the station. This is the only way HRFE can ensure the arrival of a minimum of four personnel to any fire occurring within Station 2's first-due area. Otherwise, if Engine 2 is dispatched and another call is received, the aerial would respond with only 2 on board, unable to accomplish anything on scene, perhaps with the exception of size-up. Additionally, in a city the size of Halifax which is undergoing much growth, aerials may be integral to accomplishing rescue and assisting engine crews in suppression efforts. To only deploy 2 aerials, and then understaff them, is quite reckless.

- The POMAX report and HRFE's Report to Council believe that there will be enough volunteers to staff Station 11 full-time and Stations 4 and 13 on nights and weekends. However, as admitted, there has not been any volunteer recruitment within the urban core, due to rules that state volunteers must live within 6 minutes from the station to which they are assigned. It was also revealed that neither POMAX nor HRFE administrators sought any input from citizens. Therefore, how can they be so assured that a sufficient volunteer force could be recruited, in terms of both numbers and abilities? Volunteers should be expected to pass and maintain the same levels of fitness and certifications that career firefighters do. This becomes even more significant when

these recruits will be fighting fires within the urban core, where buildings are likely taller and spaced closer together than they are in the suburban and rural areas. Additionally, if volunteers are to be deployed in the urban area, they should also be held to the same response guidelines as the career units. **Data regarding volunteer response times, as well as the number of volunteers responding to a scene, needs to be collected and analyzed prior to any changes in deployment and staffing in what are currently career stations.**

- HRFE has recently changed protocols for volunteers stating they can respond to an incident without having a company officer. Interesting that this was enacted after the POMAX report was issued. As it currently takes a volunteer approximately 3 years to become a lieutenant, this appears to be a blatant ploy for HRFE to be able to rapidly implement volunteer staffing in the urban core while not ensuring a qualified complement and further risking civilian and firefighter safety.

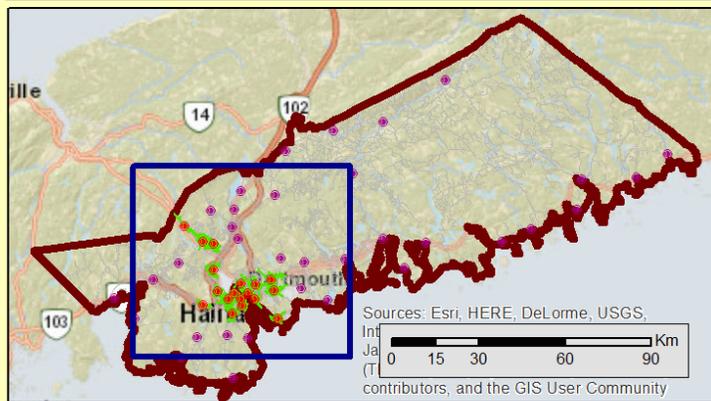
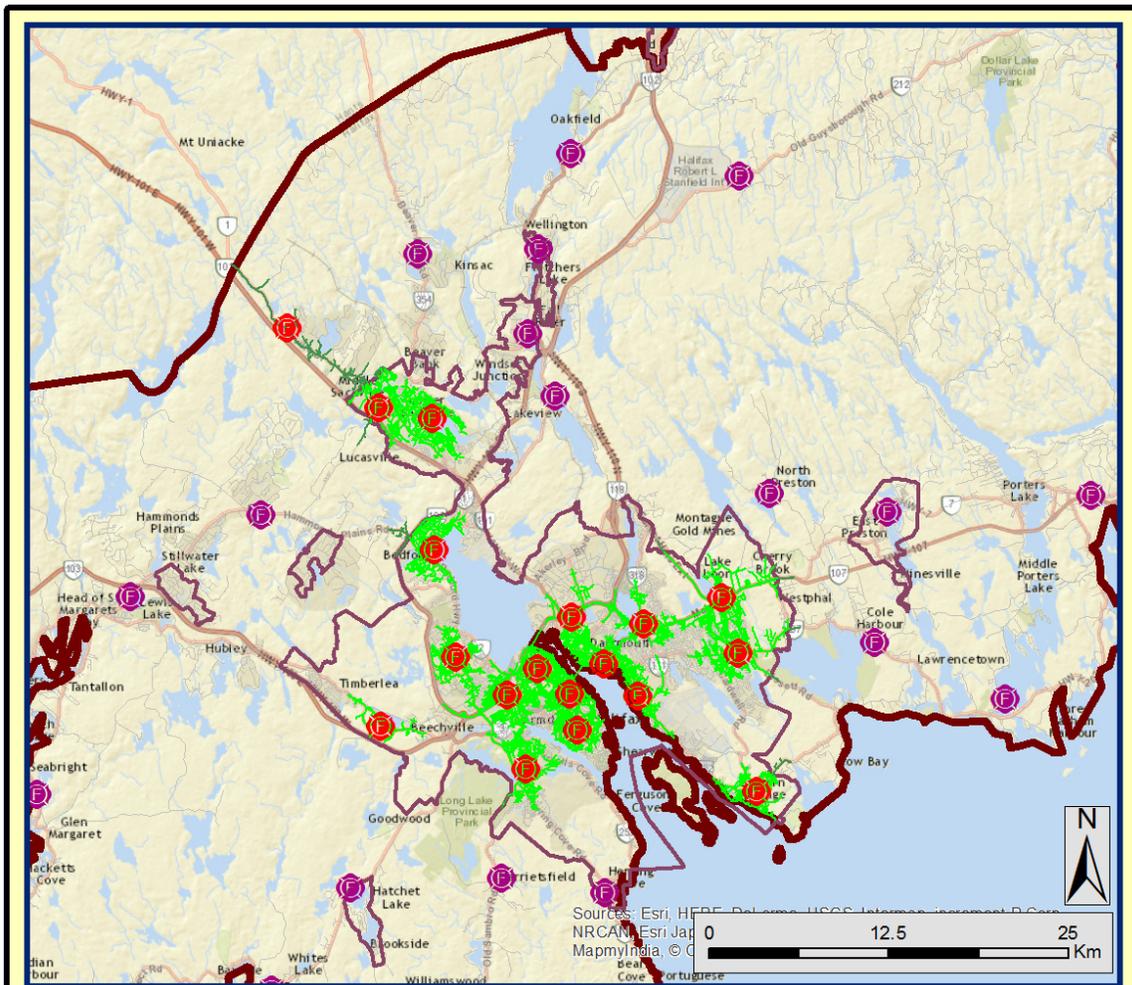
NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*, states that company officers/crew leaders shall be aware at all times of the identity, location, and activity of each member assigned to the company.² Therefore, if volunteers are allowed to self-deploy without a company officer, they then report to the officer on scene. This greatly increases the demand on the duties of that officer who would then be responsible for crews of possibly eight or more. Per HRFE's rules, a lieutenant is only permitted to supervise a maximum of three personnel, including him/herself. Only someone with the rank of captain or higher can supervise larger crews.

- POMAX based their recommendations for alternative staffing models using 413 full-time equivalent (FTE) positions in the HRFE. Recent communication with HRFE firefighters states that the current number is 391, including the 16 new fire academy graduates. One would hope that if being paid \$50,000 to conduct a study, one would at least base those recommendations on facts.

² §4.5.2 (2014).

The recommendations being considered for implementation by Council were mapped using ArcGIS, v. 10.3. The data used allows for traffic to be included in the modeling as to more closely simulate real-world conditions. The traffic feature for the following maps was set to replicate weekday morning traffic within the HRM. Specifically, Thursday morning at 9:00 AM.

Fire department response capabilities were assessed against National Fire Protection Association response time guidelines of 4 and 8 minutes for first-due and full alarm assignments, respectively, as well as international guidelines requiring a minimum of four individuals on scene before interior operations can commence.



Fire Station:

- Career/ Composite
- Volunteer

43.8% of all urban area roads covered within 4 minutes

12.1% of all area roads covered within 4 minutes

Urban Area

Response Area Boundary

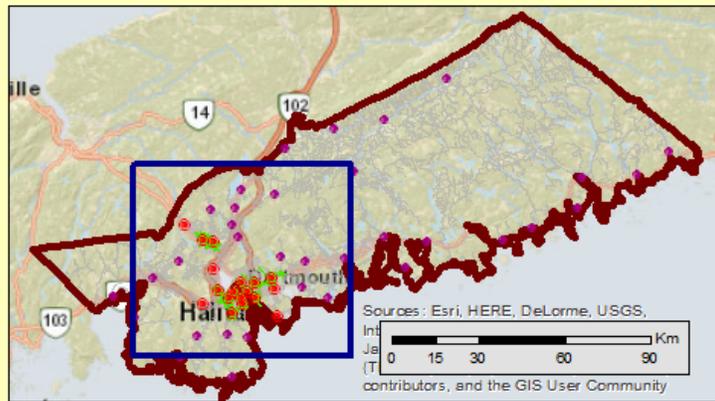
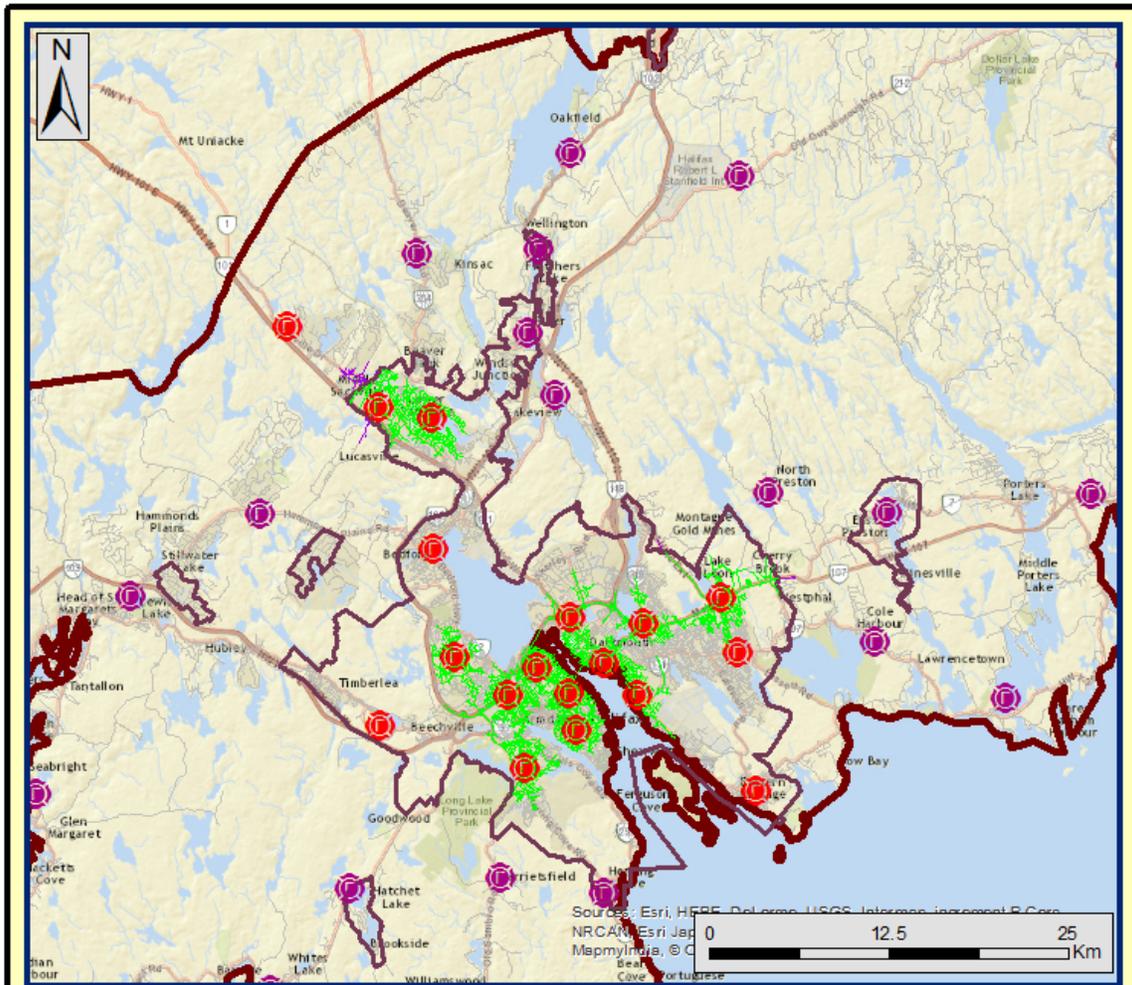
Area Roads

**Assumes all units are available to respond immediately upon dispatch.*

Night Time / Weekend Station Staffing

**Halifax, NS Fire Department
4-minute Response Capabilities*
Current Fire Companies**

Updated: 12/11/2015



Fire Station:

- Career/ Composite
- Volunteer

35.9% of all urban area roads covered within 4 minutes

9.7% of all area roads covered within 4 minutes

- Urban Area
- Response Area Boundary
- Area Roads

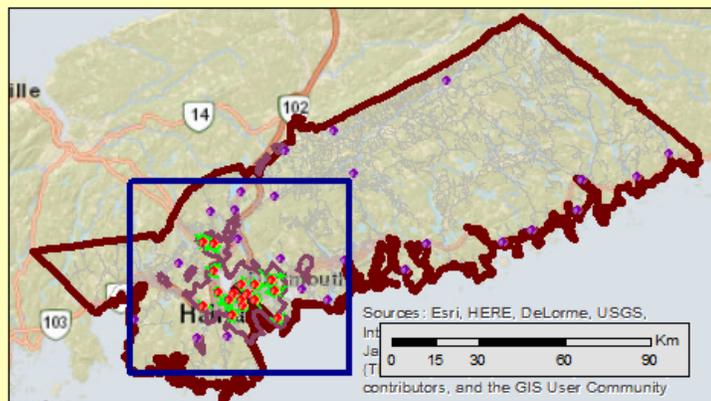
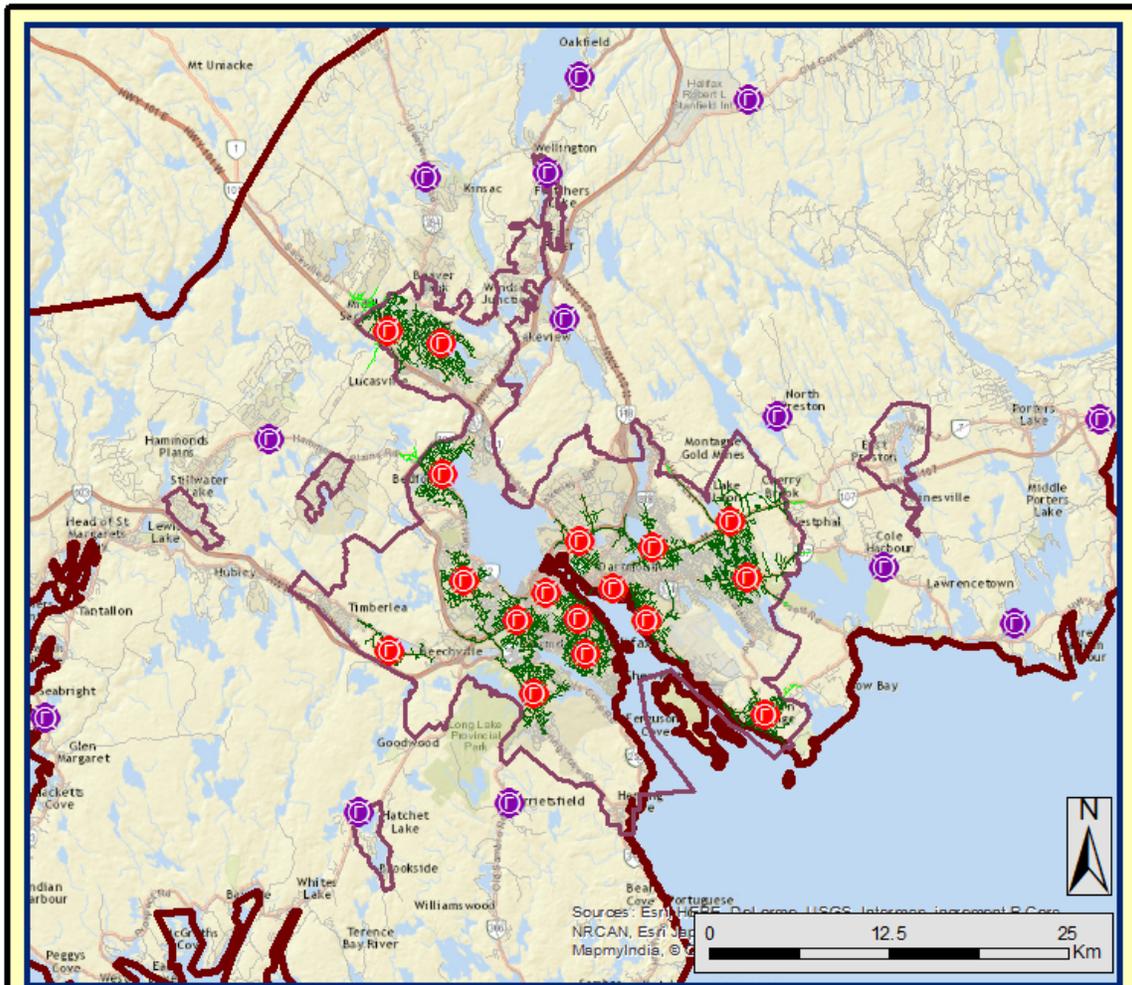
Sources: Esri, HERE, DeLorme, USGS, Intel, Mapbox, Swatch, © contributors, and the GIS User Community

**Assumes all units are available to respond immediately upon dispatch.*

Night Time / Weekend Station Staffing

**Halifax, NS Fire Department
4-minute Response Capabilities*
Current "2 In/2 Out" Assignment**

Updated: 12/8/2015



Fire Station:

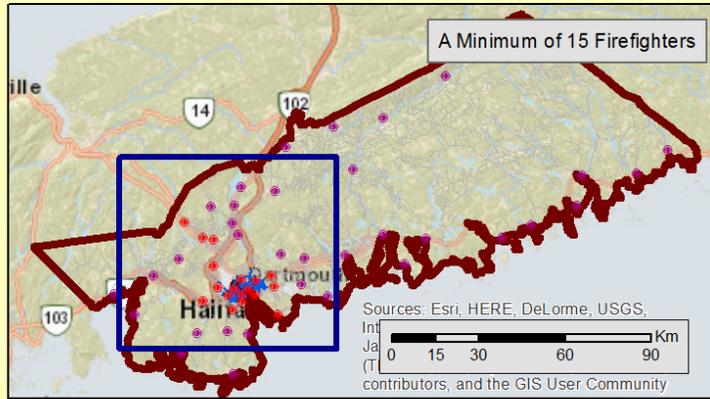
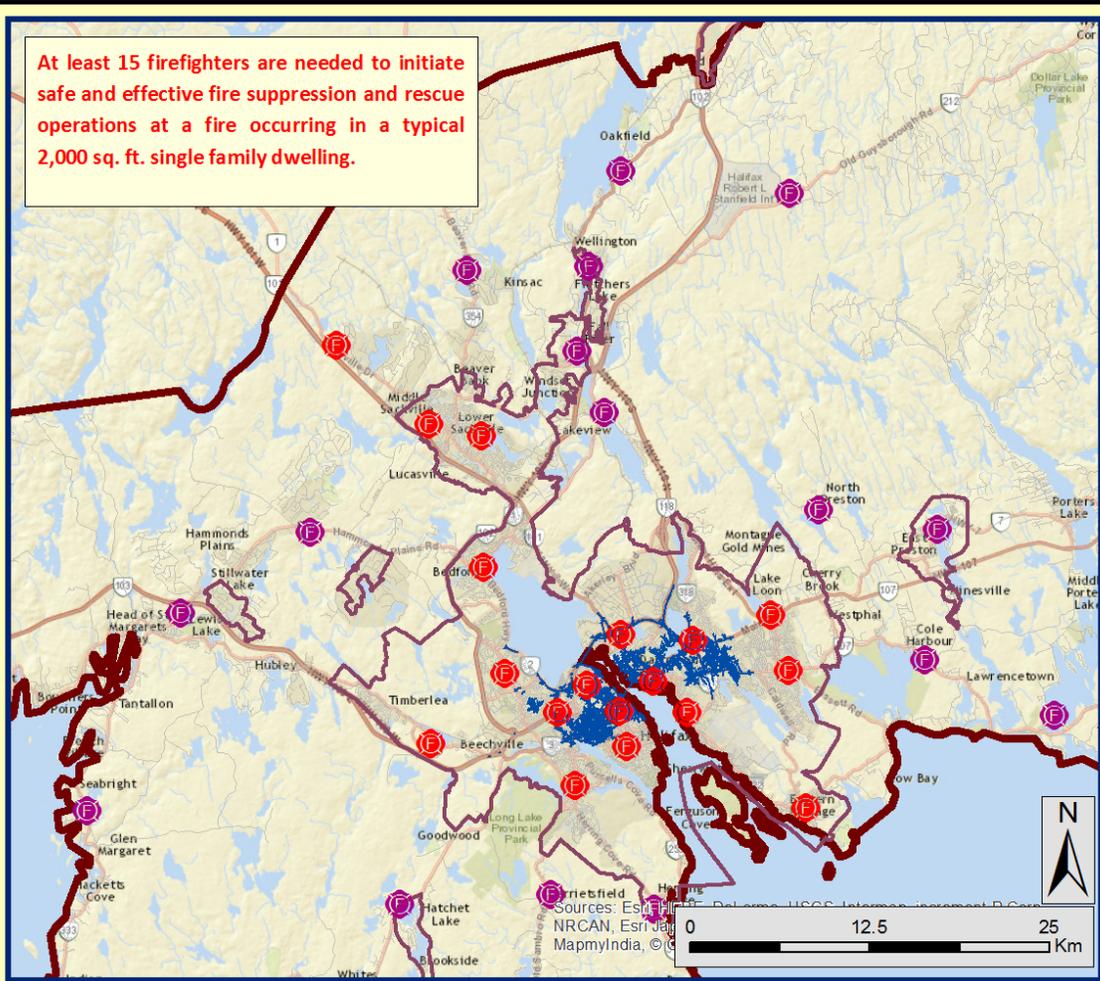
-  Career / Composite
-  Composite / Volunteer
-  39.2% of all urban area roads covered within 4 minutes
-  10.6% of all area roads covered within 4 minutes
-  Urban Area
-  Response Area Boundary
-  Area Roads

**Assumes all units are available to respond immediately upon dispatch.*

Night Time / Weekend Station Staffing

**Halifax, NS Fire Department
4-minute Proposed Response Capabilities*
"2 In/ 2 Out" Assignment***

At least 15 firefighters are needed to initiate safe and effective fire suppression and rescue operations at a fire occurring in a typical 2,000 sq. ft. single family dwelling.



Fire Station:

- Ⓡ Career/ Composite
- Ⓡ Volunteer

14.8% of all urban area roads covered within 8 minutes

3.91% of all area roads covered within 8 minutes

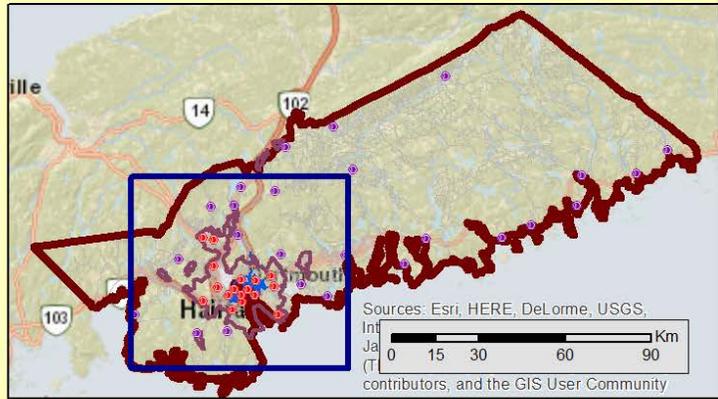
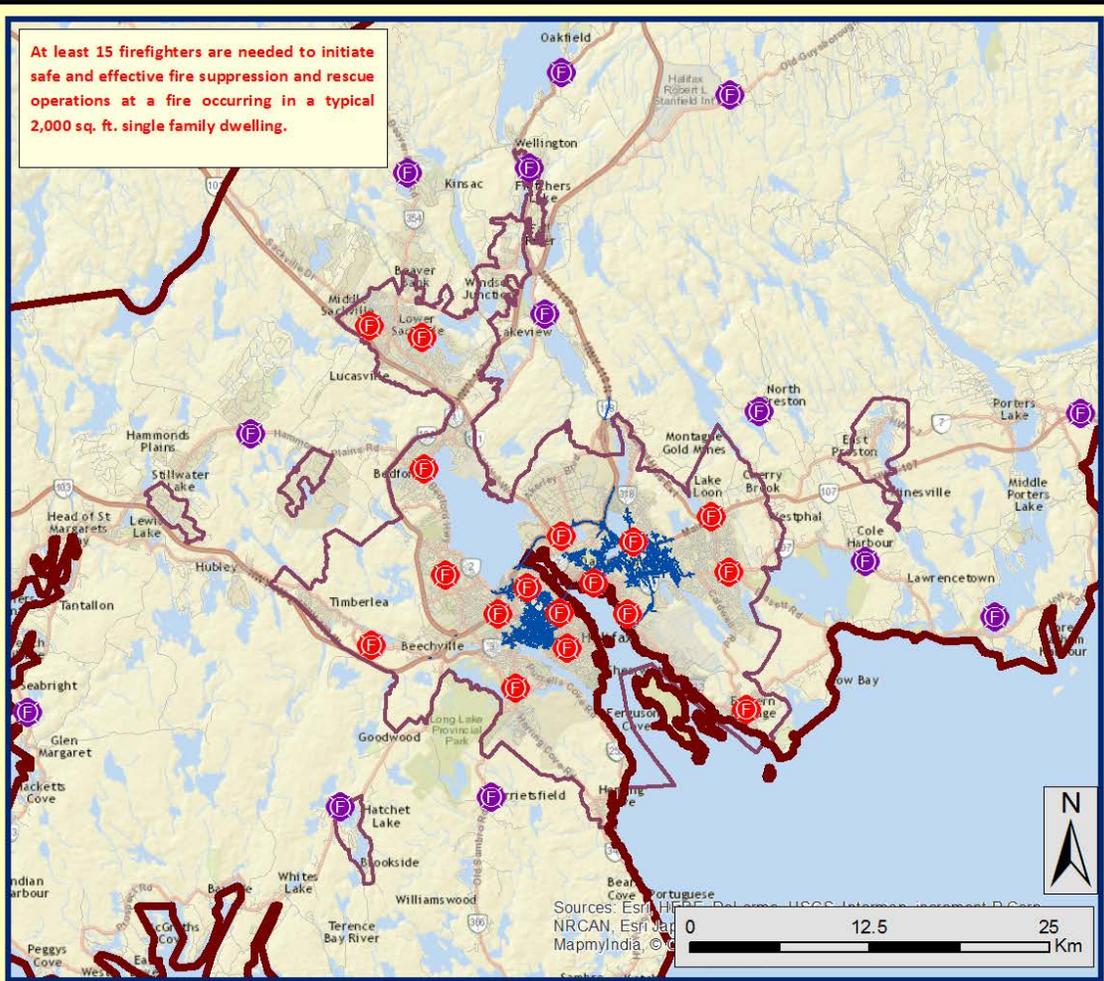
- Urban Area
- Response Area Boundary
- Area Roads

*Assumes all units are available to respond immediately upon dispatch.

Night Time / Weekend Station Staffing

**Halifax, NS Fire Department
8-minute Response Capabilities*
Current NFPA 1710 "Initial Alarm"**

At least 15 firefighters are needed to initiate safe and effective fire suppression and rescue operations at a fire occurring in a typical 2,000 sq. ft. single family dwelling.



Fire Station:

- F Career / Composite
- F Composite / Volunteer

— 11.2% of all urban area roads covered within 8 minutes

— 3.0% of all area roads covered within 8 minutes

- Urban Area
- Response Area Boundary
- Area Roads

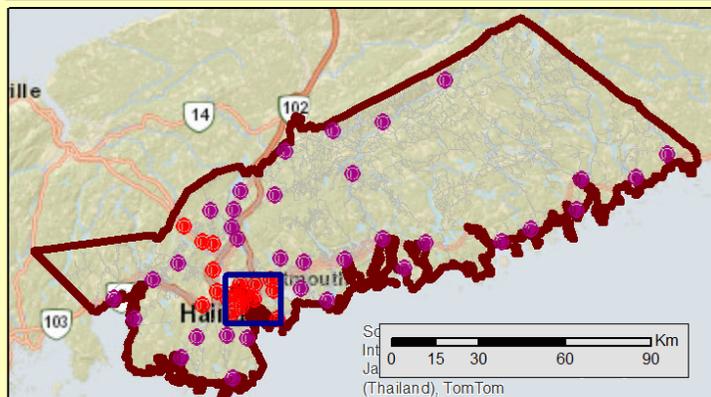
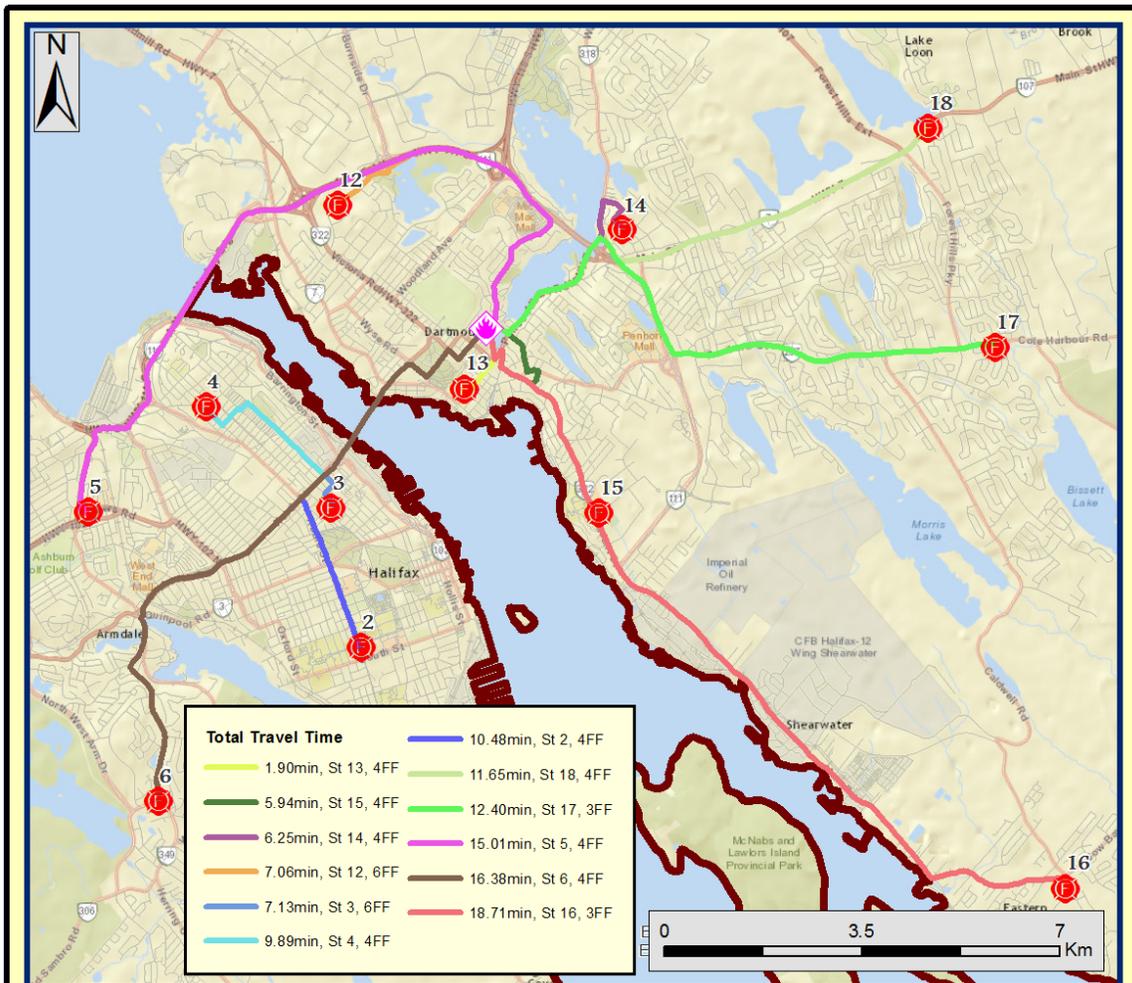
**Assumes all units are available to respond immediately upon dispatch.*

Night Time / Weekend Station Staffing

**Halifax, NS Fire Department
8-minute Response Capabilities*
Proposed NFPA 1710 "Initial Alarm"**

The ArcGIS and Network Analyst software used to predict coverage areas in the preceding maps was also used to predict response times to specific locations, identifying the closest stations and their respective response times, as well as the number of firefighters responding from each station. This was performed on four addresses where HRFE has responded to actual incidents.

Response times, as presented, refer to travel times, and are given in minutes. There is no inclusion of time for call processing, dispatch, and turnout, which typically will add up to two additional minutes to overall response times. Each incident assumes that all staffed apparatus are available for immediate response.

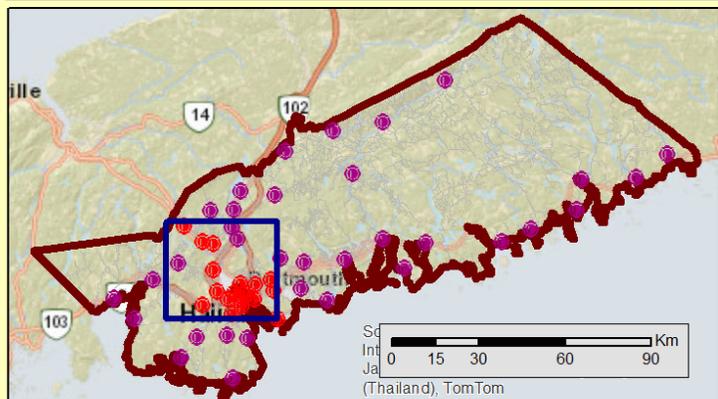
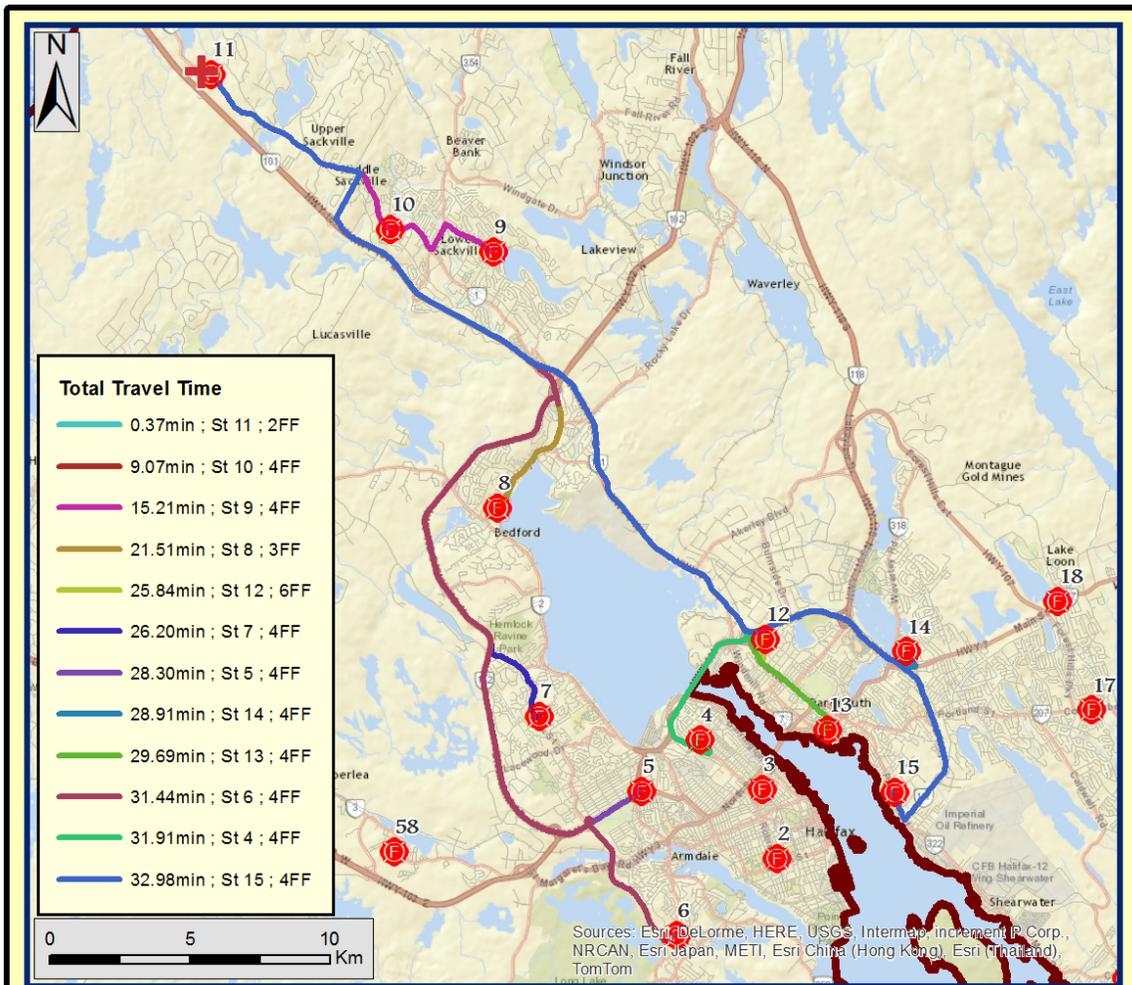


Incident
Fire Station:
 Career/ Composite
 Volunteer
 Area Roads
 Response Area Boundary

**Assumes all units are available to respond immediately upon dispatch.*

Career & Composite Fire Stations Responding

**Halifax, NS Fire Department,
"1 Oak St" Incident Response Capabilities*
Current Fire Companies**



+ Incident

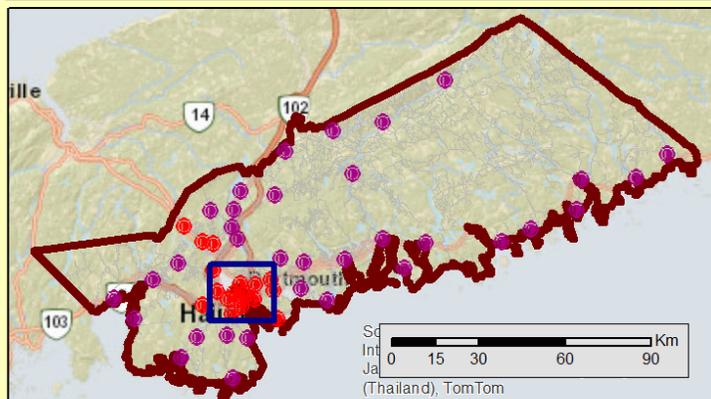
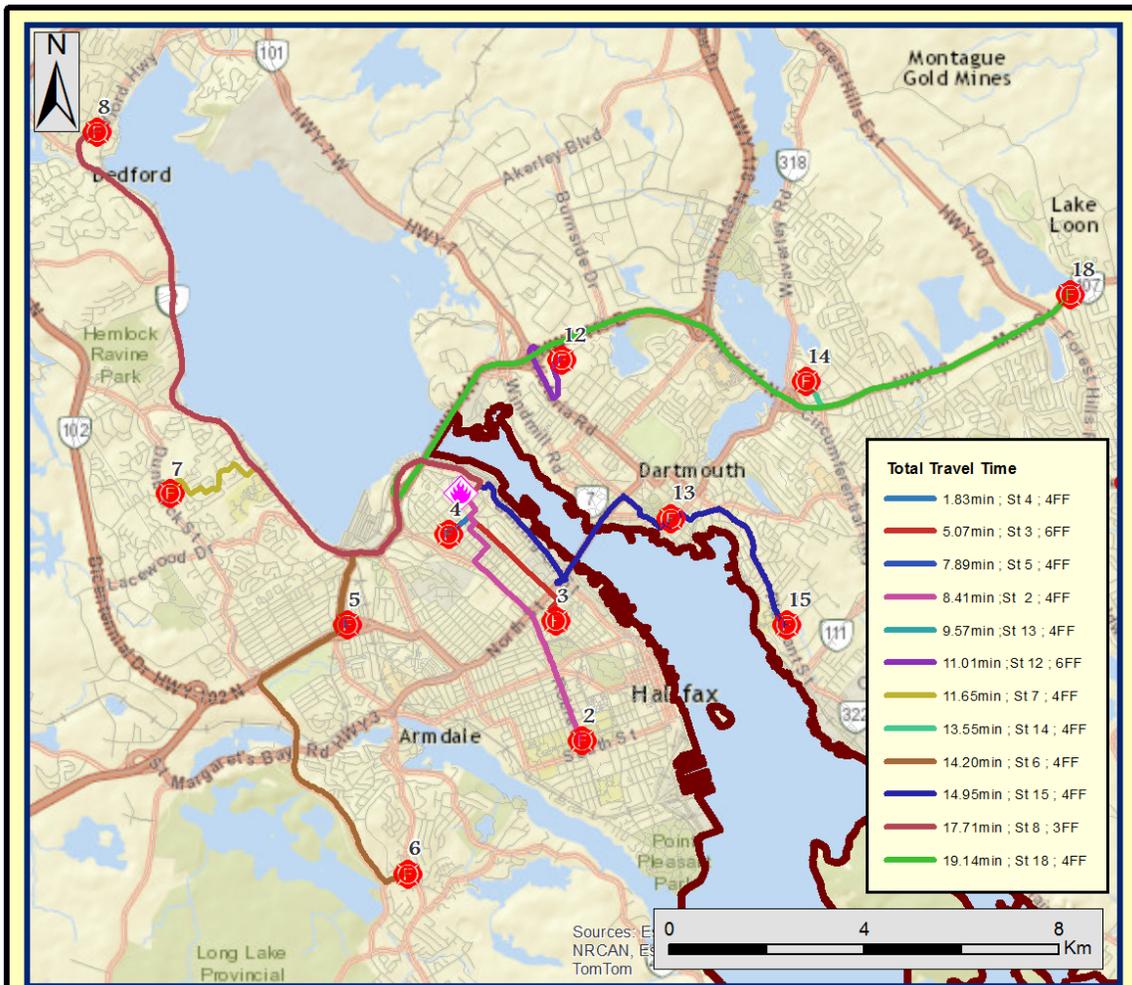
Fire Station:

- Career/ Composite
- Volunteer
- Area Roads
- Response Area Boundary

**Assumes all units are available to respond immediately upon dispatch.*

Career & Composite Fire Stations Responding

**Halifax, NS Fire Department,
"3070 Highway 1" Incident Response Capabilities*
Current Fire Companies**



Incident

Fire Station:

- Career/ Composite
- Volunteer
- Area Roads
- Response Area Boundary

**Assumes all units are available to respond immediately upon dispatch.*

Career & Composite Fire Stations Responding

**Halifax, NS Fire Department,
"3631 Acadia St" Incident Response Capabilities*
Current Fire Companies**

