

IX. FUTURE NO BUILD CONDITIONS

IX.1 FUTURE DOMINANT CONTAINER RELATED TRUCK CORRIDORS

Similar to the findings of the existing conditions modeling tasks, under the future conditions without any additional systems, operational or infrastructure improvements (referred to as the “No Build” condition) container related truck flows closely follow the primary, non-parkway traffic corridors. Principal routes anticipated to be heavily utilized for container related truck movements include:

- The New Jersey Turnpike;
- The US Route 1/9 corridor;
- Interstate Routes 78, 80, 278 and 287;
- The West Shore Expressway in Staten Island;
- New Jersey Routes 3, 4, 17, 24, and 440;
- US Route 22.

A further, key element of the container corridors is the access between the port and rail facilities and the regional highways. Designated connector roadways as well as local streets share the latter role.

IX.2 QUANTIFICATION OF CONTAINER RELATED TRUCK VOLUMES

The heaviest container related truck traffic is expected to center along the Portway Phase I corridor, as well as along the highway segments listed in the previous section. The results of the container forecasting task (refer to Section VII) and the warehouse and distribution growth forecasting task (refer to Section VIII) were incorporated into a series of trip tables, which were subsequently assigned to the roadway, network model. Figures IX.1 through IX.4 depict the container related truck flow model results as follows:

- Figure IX.1 - 2025 High Growth with no PIDN – AM Peak
- Figure IX.2 - 2025 High Growth with no PIDN – PM Peak
- Figure IX.3 - 2025 Low Growth with PIDN – AM Peak
- Figure IX.4 - 2025 Low Growth with PIDN – PM Peak

The calibrated Portway Extensions Model shows container related truck volumes in excess of 880 vehicles (both directions combined) on the New Jersey Turnpike between Interchanges 13 and 10 during the morning peak hour under the 2025 High Growth with

no PIDN conditions. As expected, during the PM peak hour the container related truck volumes along the turnpike link are slightly less than during the AM period, with two-way container truck volumes of approximately 650 per hour.

Similar trends, with only slightly lower container related truck volumes would be expected under the 2025 Low Growth with PIDN scenario. During the morning peak hour, the calibrated Portway Extensions Model shows container related truck volumes approaching 600 vehicles (both directions combined) on the New Jersey Turnpike between Interchanges 13 and 10. During the PM peak hour the container related truck volumes along the turnpike link are slightly less than during the AM period, with two-way container truck volumes of approximately 430 vehicles per hour.

IX.3 CONTAINER RELATED TRUCK VS. OTHER FLOWS ON CONTAINER MOVEMENT CORRIDORS

The container traffic must share the roadways with other traffic. As a matter of fact, the container volumes are a very small part of the total traffic volume. Under the 2025 High Growth with no PIDN scenario, the AM peak hour model trip table contains 3,396 container trips out of total of 3,605,124 total trips. The PM peak hour trip table has fewer container and more total traffic resulting in an even lesser proportion of container trips.

However, similar to the existing vehicle flows on the corridors described above (refer to Section VI), the proportion of container traffic is significantly higher. While the proportion of peak hour container related truck volumes vary from corridor to corridor and location to location, they are expected to remain generally in the range of 1 to 1.5 percent of the total traffic volumes.

IX.4 SYSTEM-WIDE TRAVEL CHARACTERISTICS AND PERFORMANCE MEASURES

A regional transportation planning network model is evaluated in terms of the number of vehicle miles and vehicle hours of travel and how these statistics can be improved with recommended system enhancements. The objective is to reduce both, however, it is generally acceptable to reduce the vehicle hours of travel at the expense of slight increase in vehicle miles. Under the 2025 High Growth without PIDN scenario, AM peak hour vehicle miles of travel reported out by the Portway Extensions Model is 36,782,208

of which 154,476 are attributable to container related truck trips. During the PM peak hour the respective statistics are 38,298,388 and 123,660.

Similarly, for the 2025 Low Growth with PIDN scenario, AM peak hour vehicle miles of travel reported out by the Portway Extensions Model is 36,722,836 of which 94,319 are attributable to container related truck trips. During the PM peak hour the respective statistics are 38,251,800 and 75,072.

Volume to Capacity Ratios

The volume to capacity ratio (v/c) is an indication of how much of the roadways ability to carry traffic is being used. A v/c of 1.0 means, theoretically, that the roadway capacity is used up and additional vehicles cannot be accommodated. In actuality, capacity is dependent on numerous parameters and has some flexibility where v/c ratios in excess of 1.0 have been observed in field. However, when the demand volumes exceed capacity, for any length of time, queues are likely to form until the volumes drop below capacity.

Figures IX.5 through IX.8 depict the roadway segments, which would experience container related, truck flows and have volume to capacity ratios in excess of 1.25 as follows:

- Figure IX.5 - 2025 High Growth with no PIDN – AM Peak
- Figure IX.6 - 2025 High Growth with no PIDN – PM Peak
- Figure IX.7 - 2025 Low Growth with PIDN – AM Peak
- Figure IX.8 - 2025 Low Growth with PIDN – PM Peak

As shown on the figures, there are a number of locations that meet both of these screening criteria. Attention was focused upon these locations in the development of system, operational and infrastructure improvement concepts.

Figure IX.1
Future Container Truck Traffic - AM Peak Hour
2025 NB - High Growth With No PIDN

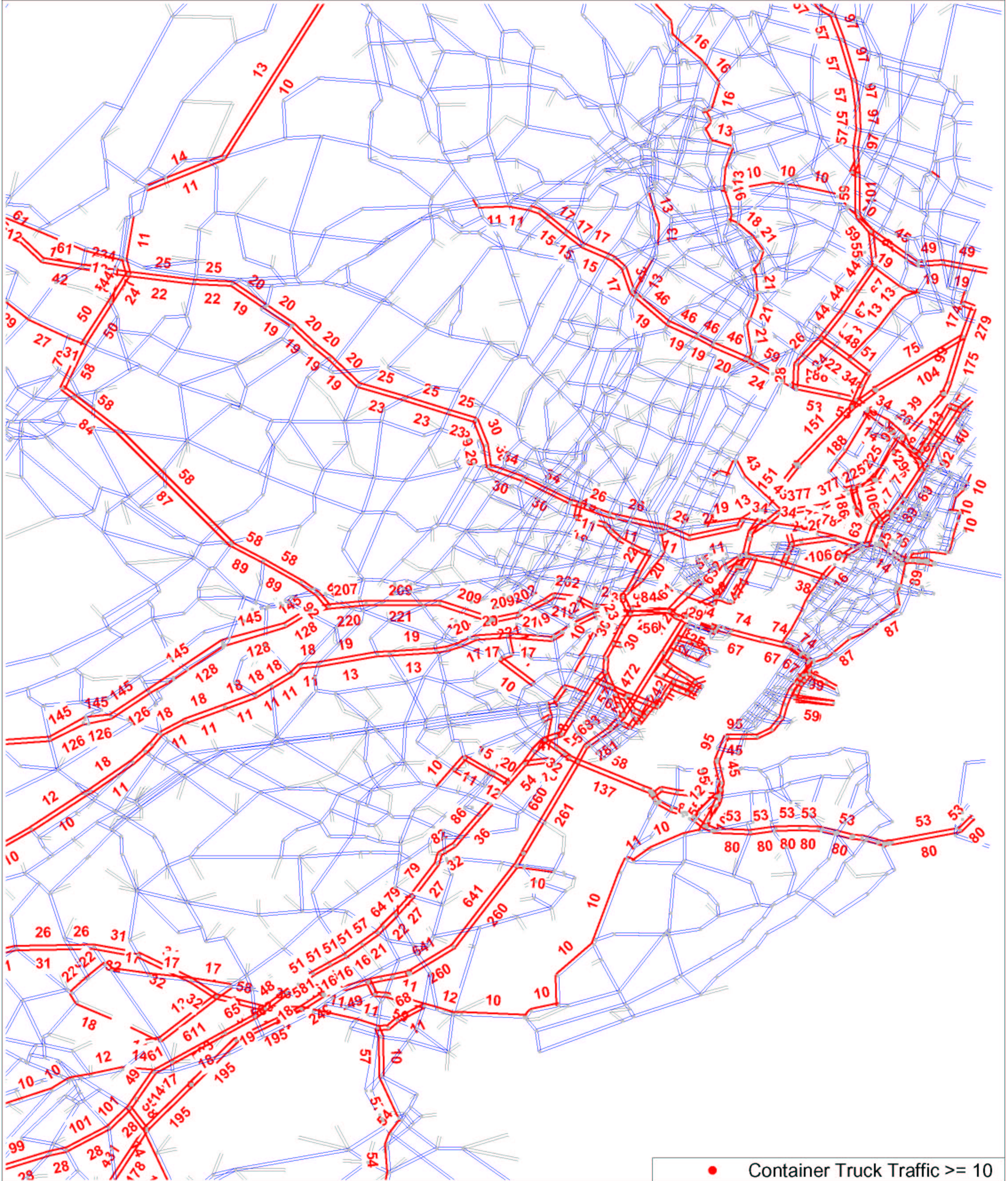


Figure IX.2
Future Container Truck Traffic - PM Peak Hour
2025 NB - High Growth With No PIDN



**Figure IX.3
 Future Container Truck Traffic - AM Peak Hour
 2025 NB - Low Growth With PIDN**

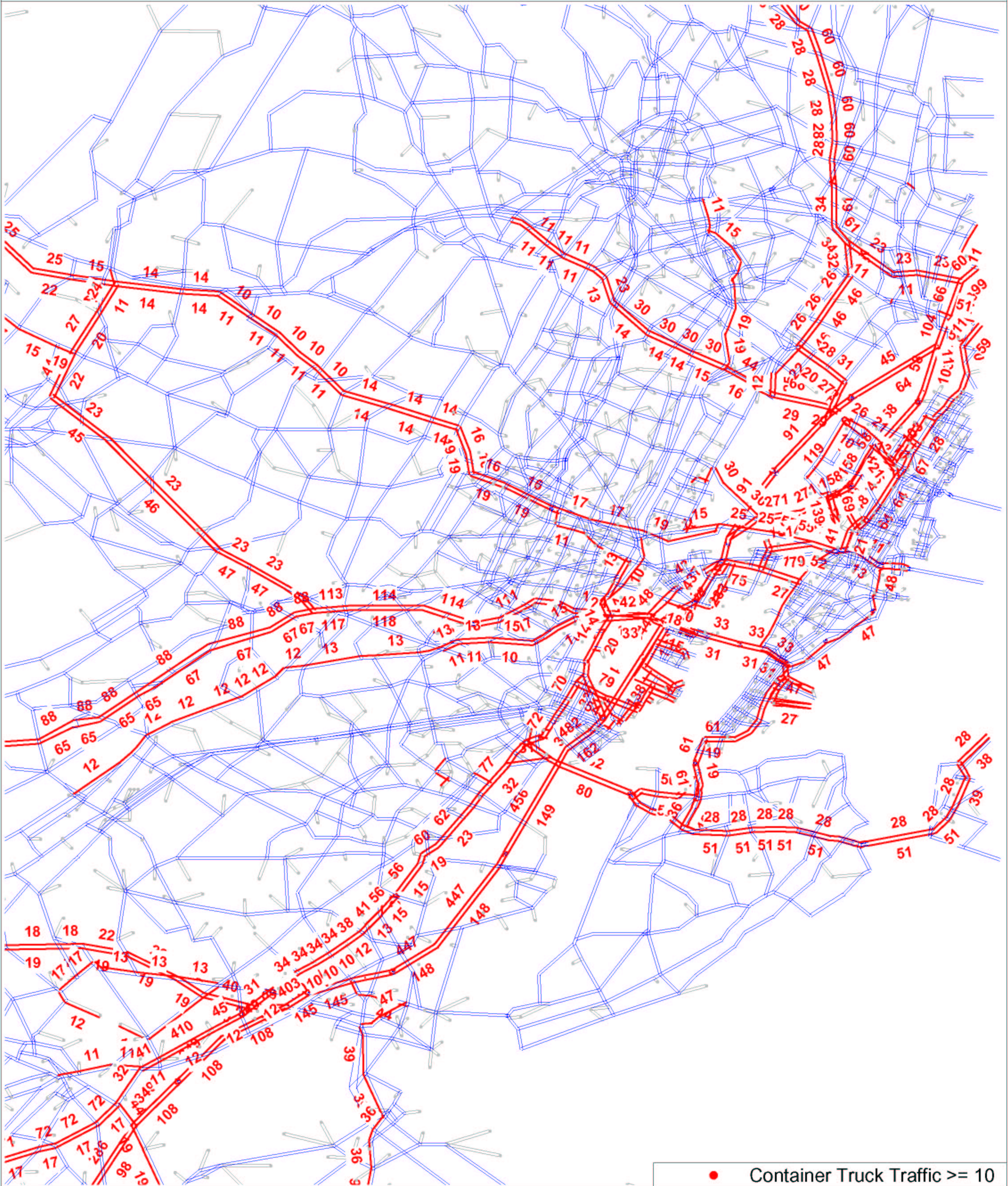
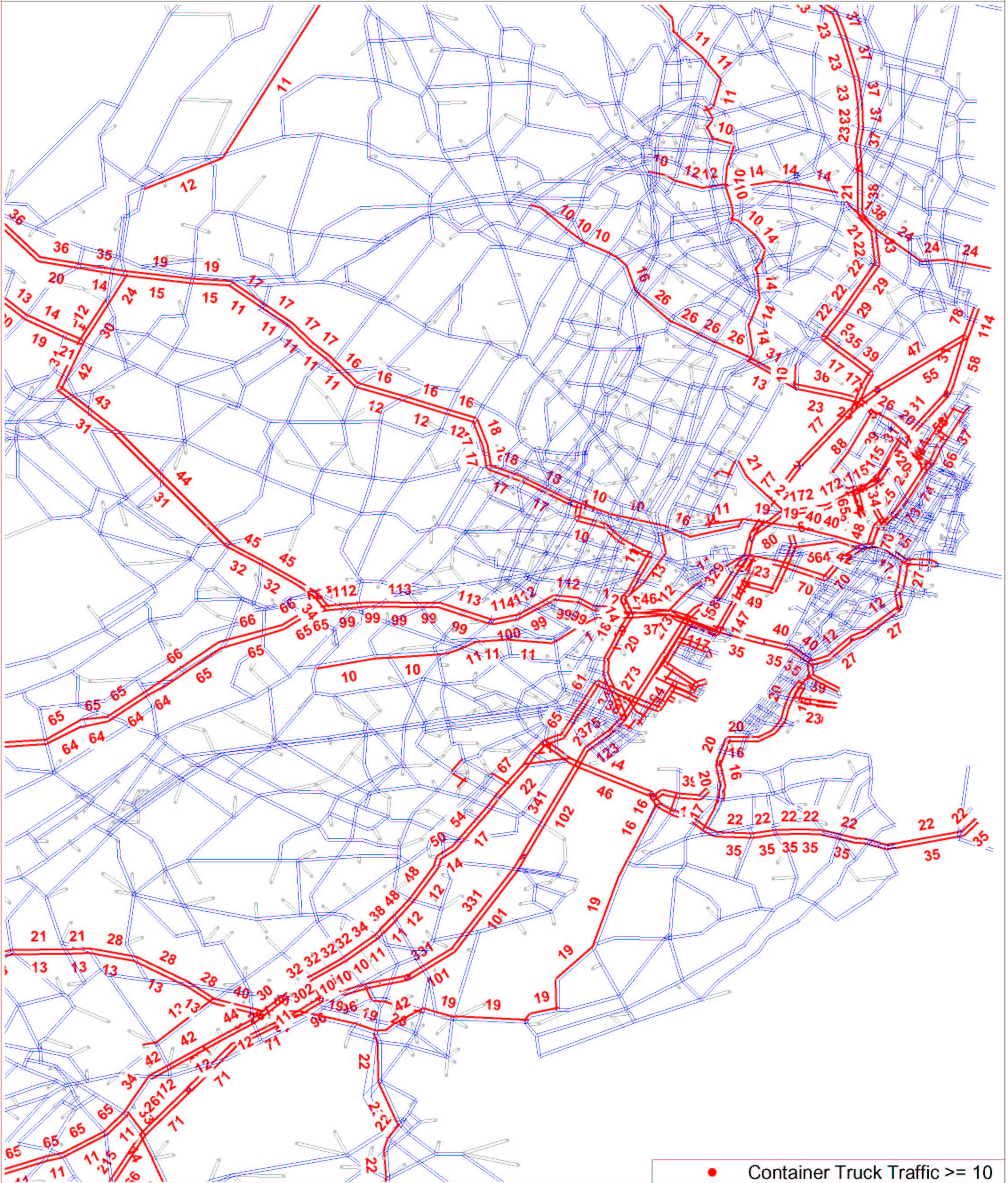
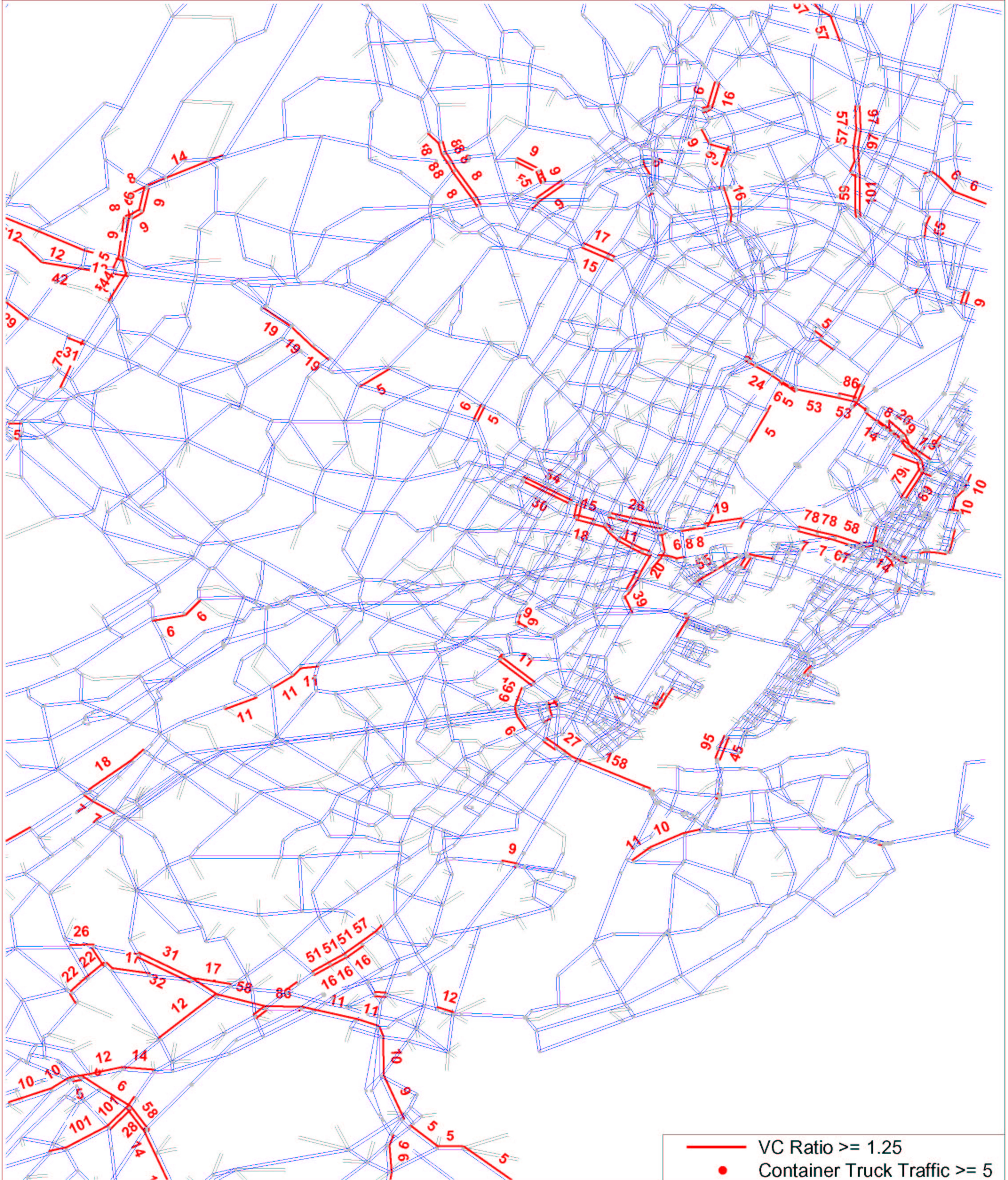


Figure IX.4
Future Container Truck Traffic - PM Peak Hour
2025 NB - Low Growth With PIDN

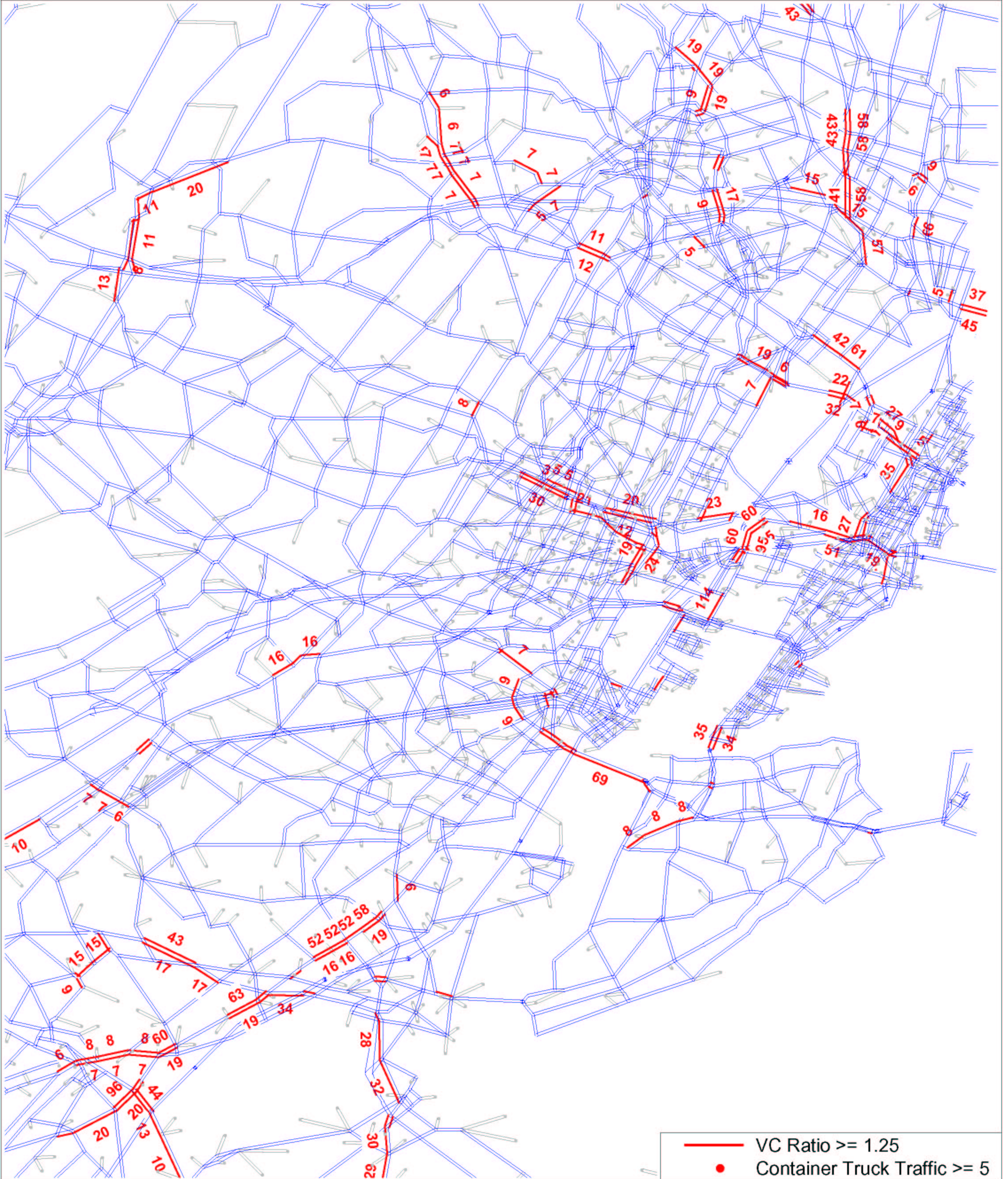


**Figure IX.5
 Container Truck Traffic and VC Ratios - AM Peak Hour
 2025 NB - High Growth With No PIDN**



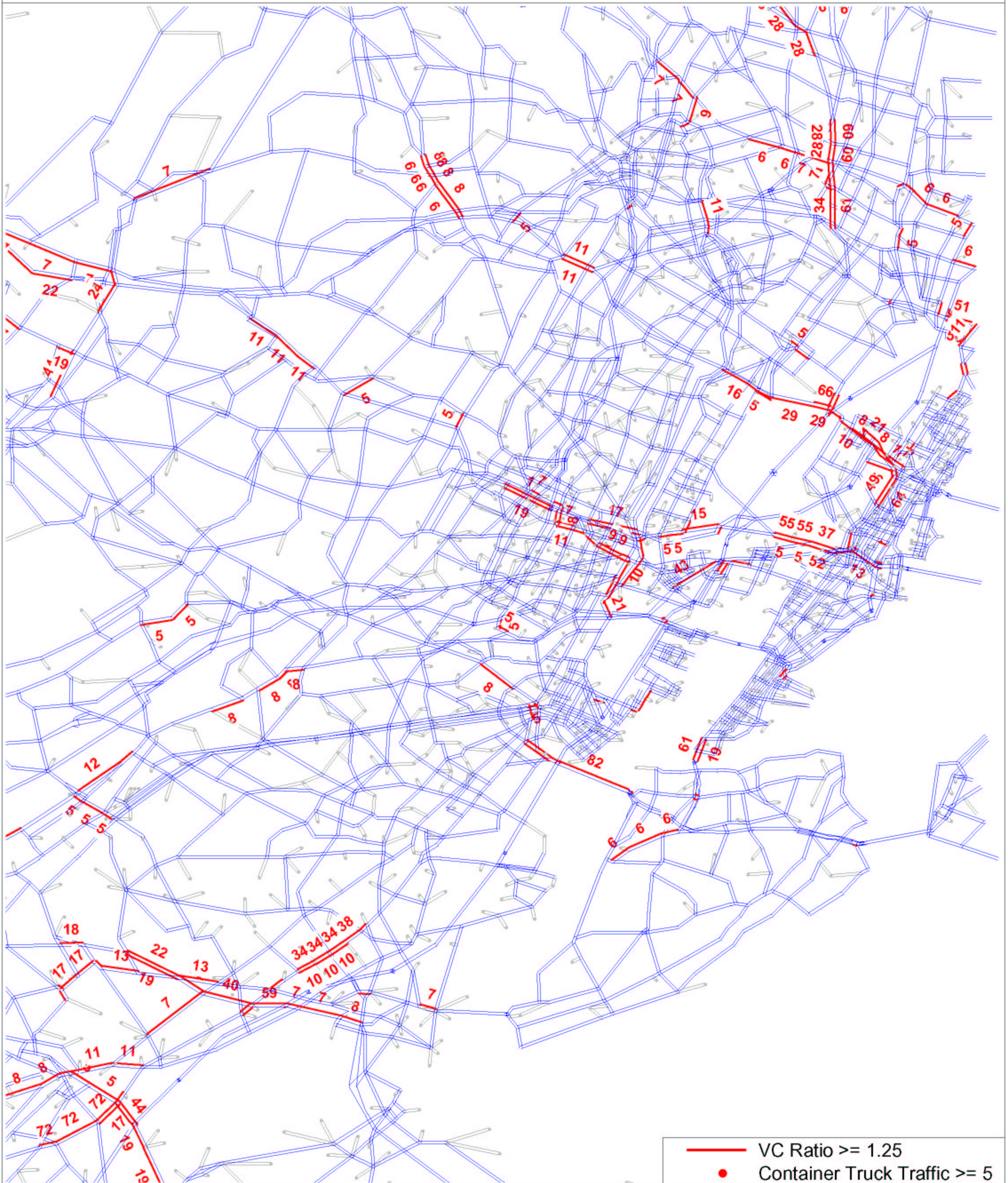
— VC Ratio \geq 1.25
● Container Truck Traffic \geq 5

Figure IX.6
Container Truck Traffic and VC Ratios - PM Peak Hour
2025 NB - High Growth With No PIDN



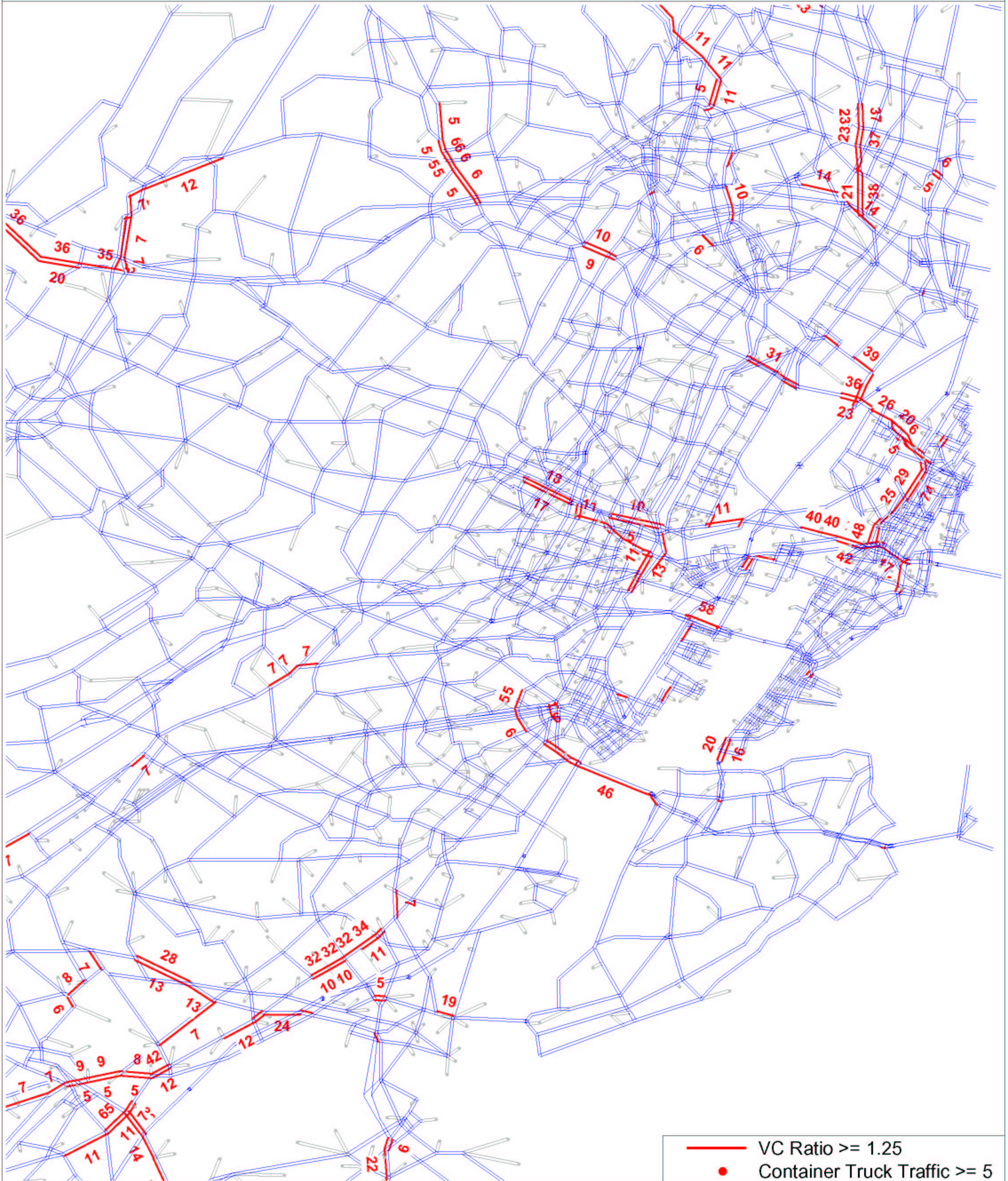
— VC Ratio ≥ 1.25
 • Container Truck Traffic ≥ 5

Figure IX.7
Container Truck Traffic and VC Ratios - AM Peak Hour
2025 NB - Low Growth With PIDN



— VC Ratio ≥ 1.25
 • Container Truck Traffic ≥ 5

Figure IX.8
Container Truck Traffic and VC Ratios - PM Peak Hour
2025 NB - Low Growth With PIDN



— VC Ratio ≥ 1.25
● Container Truck Traffic ≥ 5