



Excavation Permits for Policy Insights

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Street Permit Excavations

- Breadth
- Depth
- Spatial resolution

Considerations

- Longitudinal
- Spatial
- Per utility

Street Permit Excavations

- Breadth
 - 5 boroughs
 - 1991-current (since 2022 locational data unavailable)
 - 162 categories (half emergency)
- Depth
 - Unique codes and linkage to affiliated permits
- Temporal resolution
 - Day-level but may not match excavation
- Spatial resolution
 - Block-level
 - No lane or length info

OFT Code: 242920 225420 243020

LION Dataset: 6 digit unique Street code for every road with Geometry

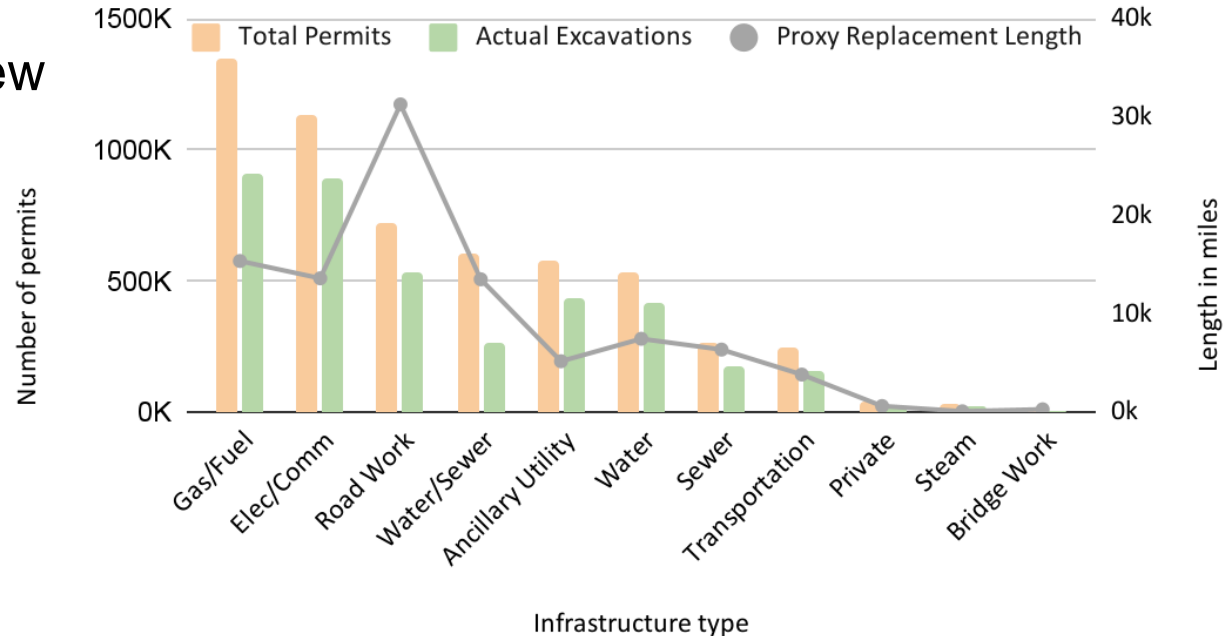


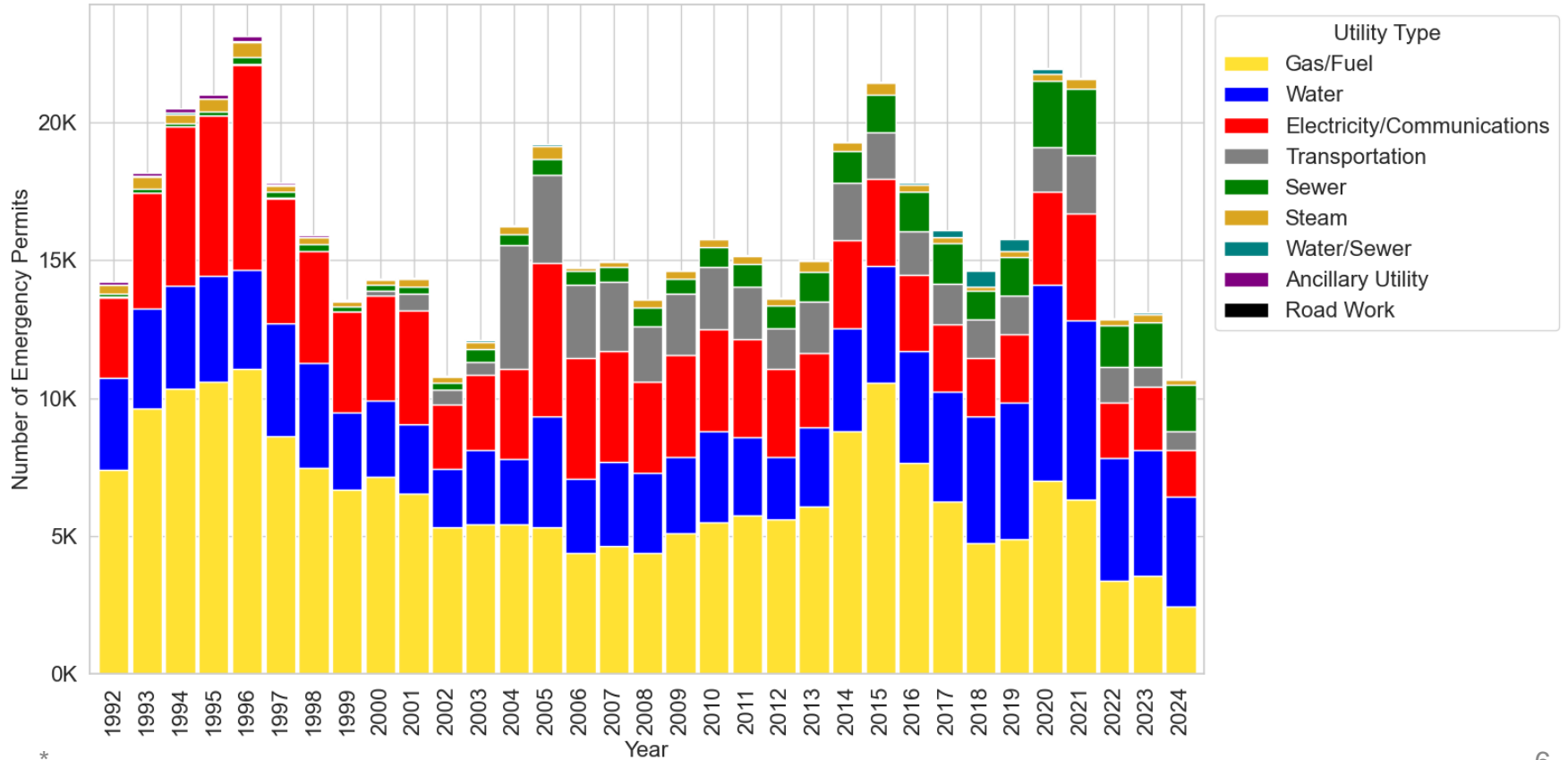
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On street between From street and To Street is permit geometry

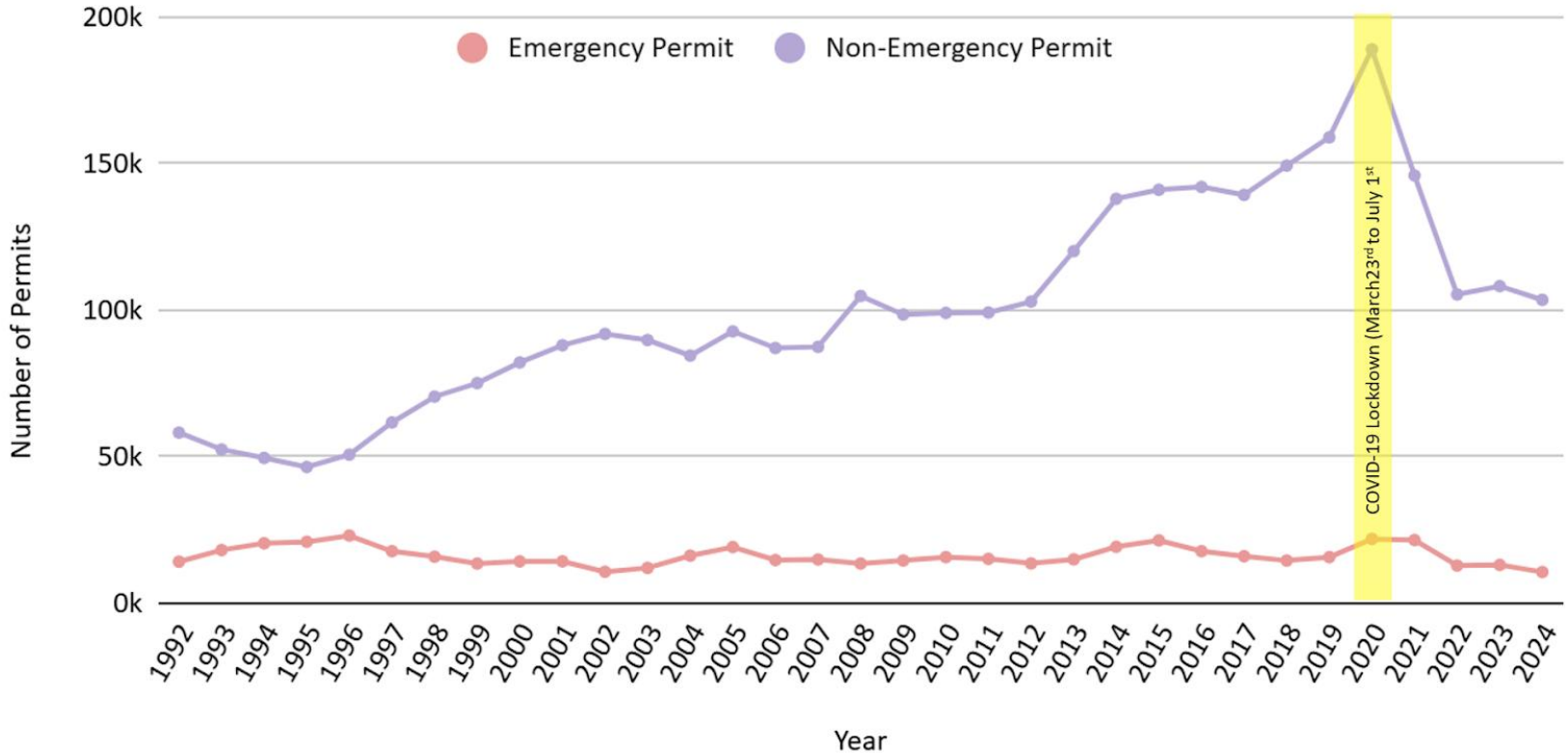
Basic Facts 1992-24

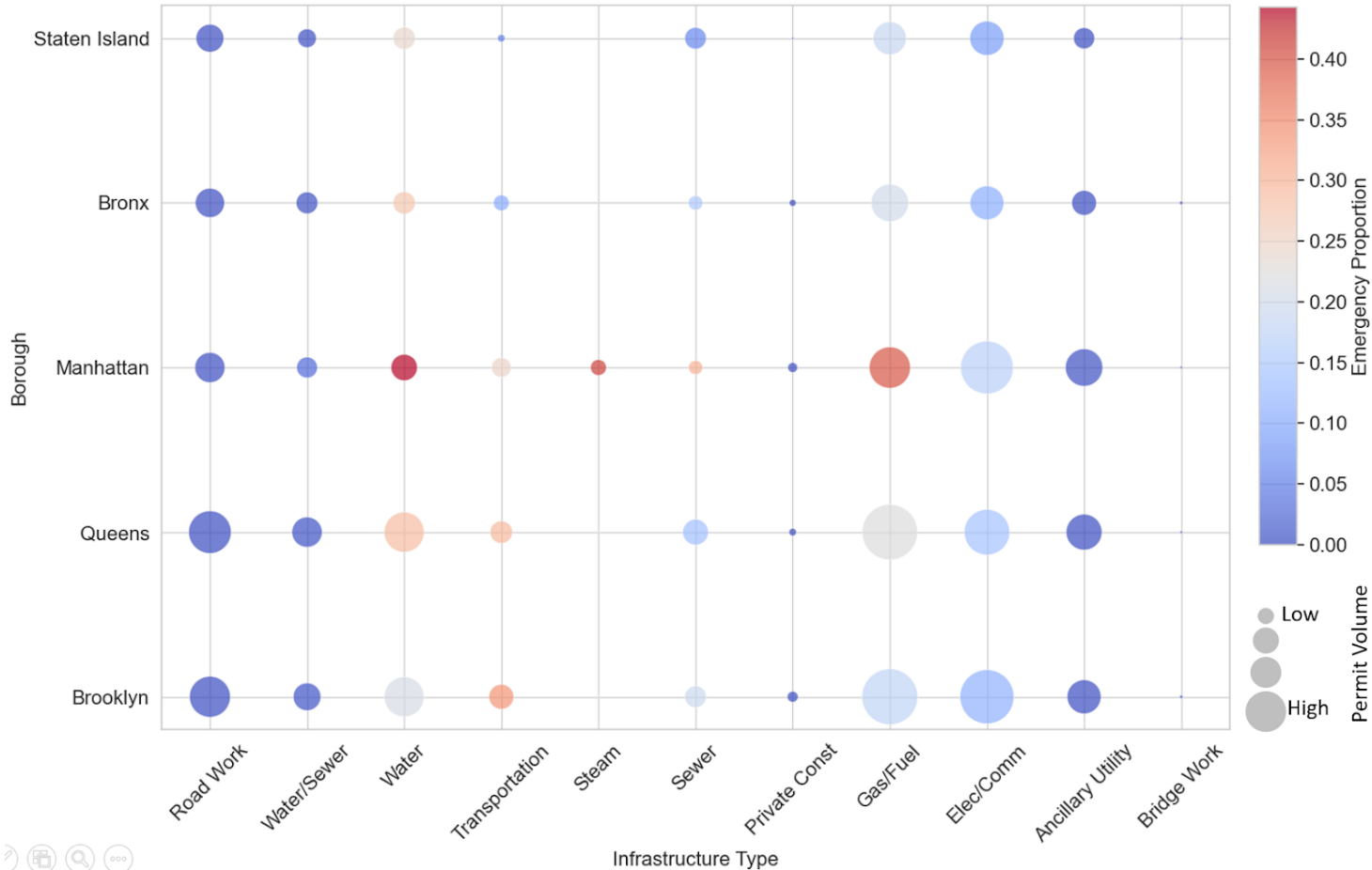
- 12 mil. permits
- 6.3 mil. street/sidewalk
- 3.4 mil. executed as new or maintenance
- 100k excavations/yr



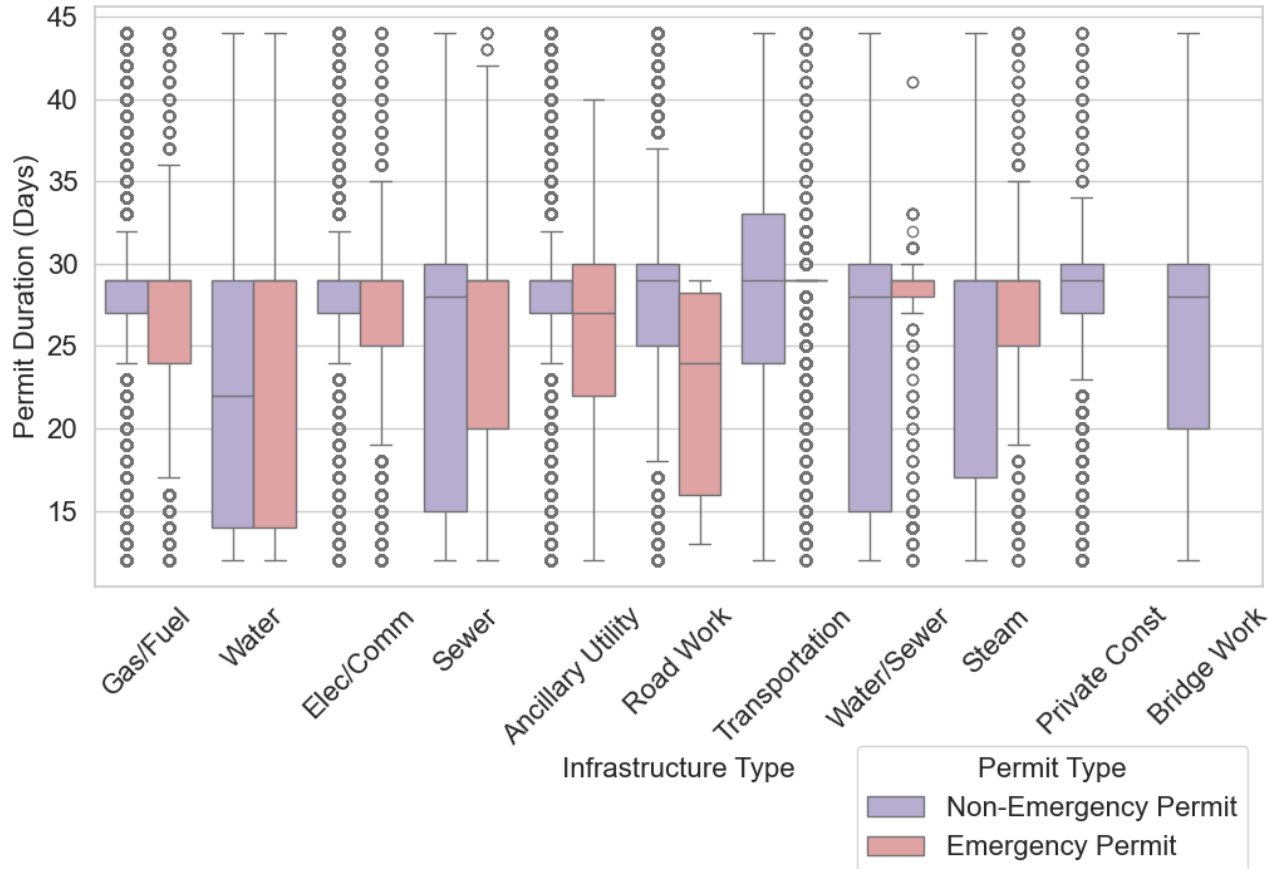


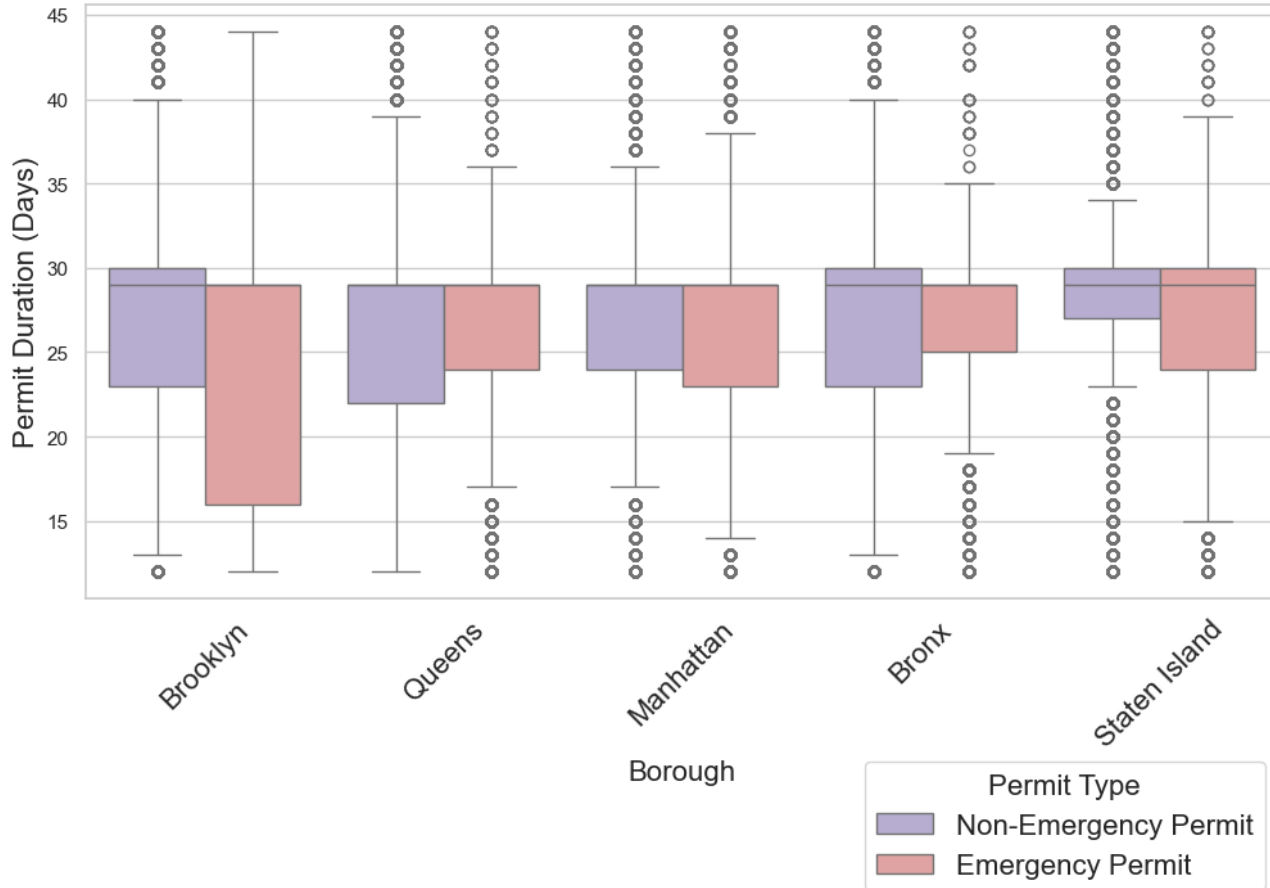
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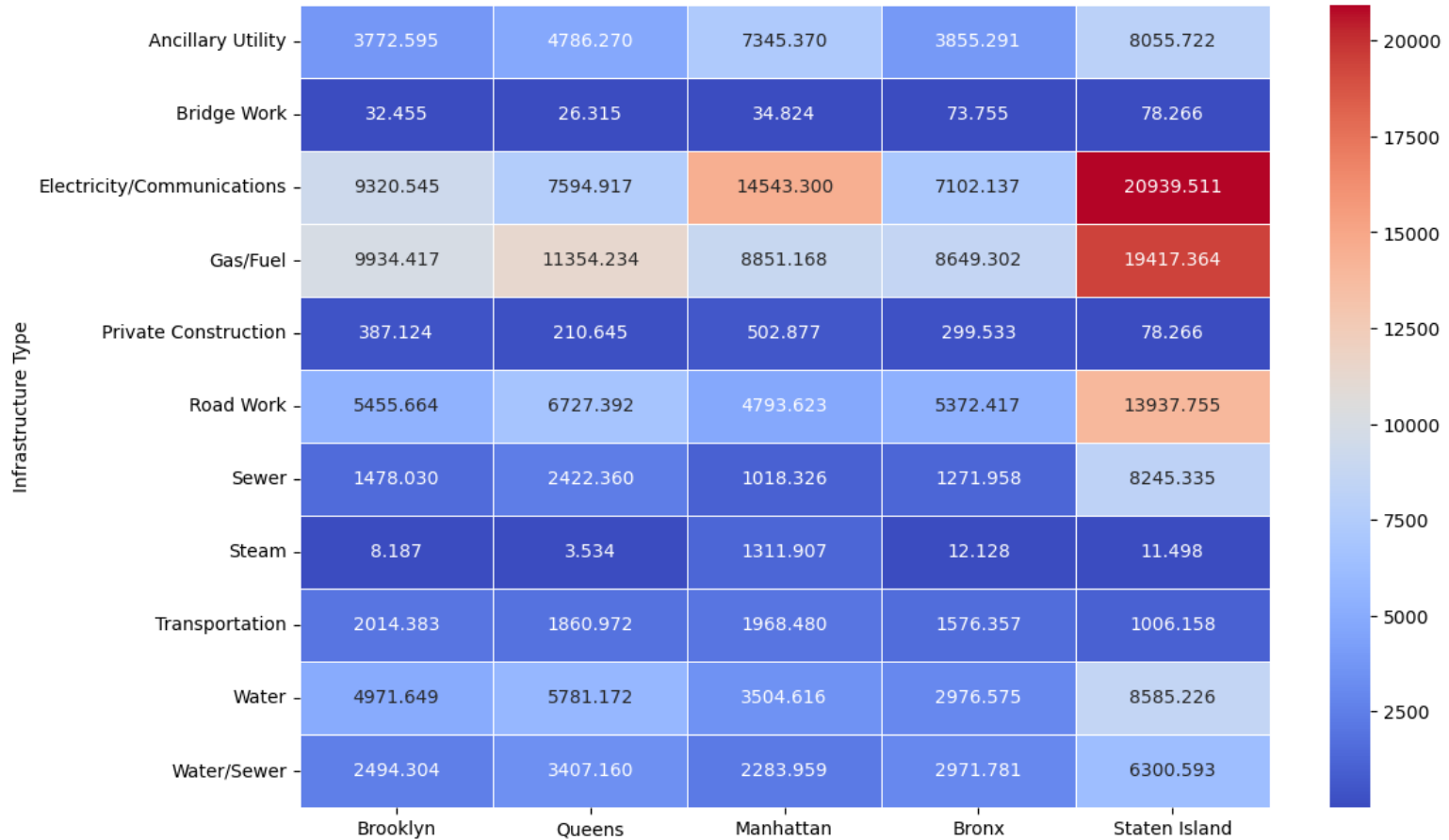


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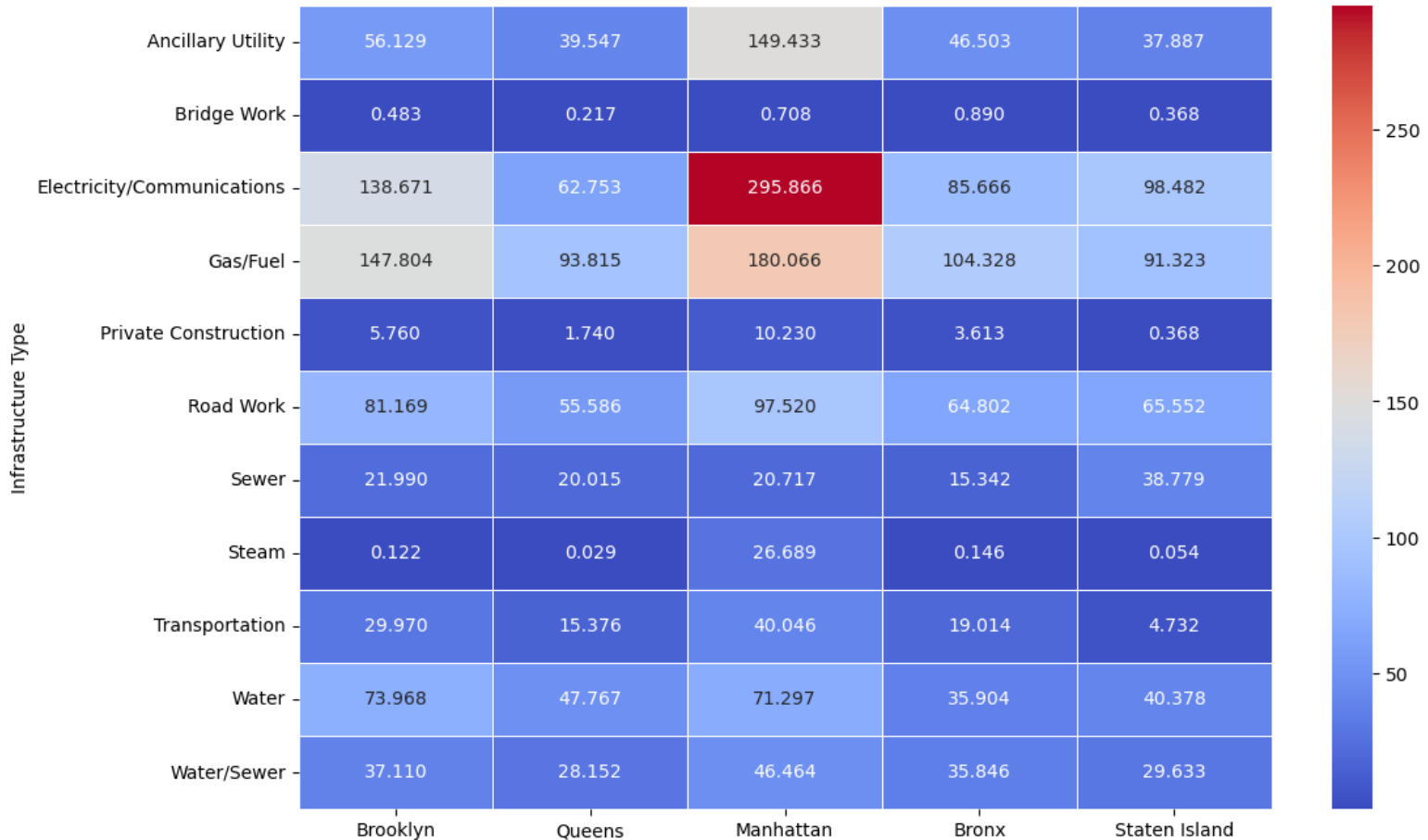


Equity Considerations per 100k Residents



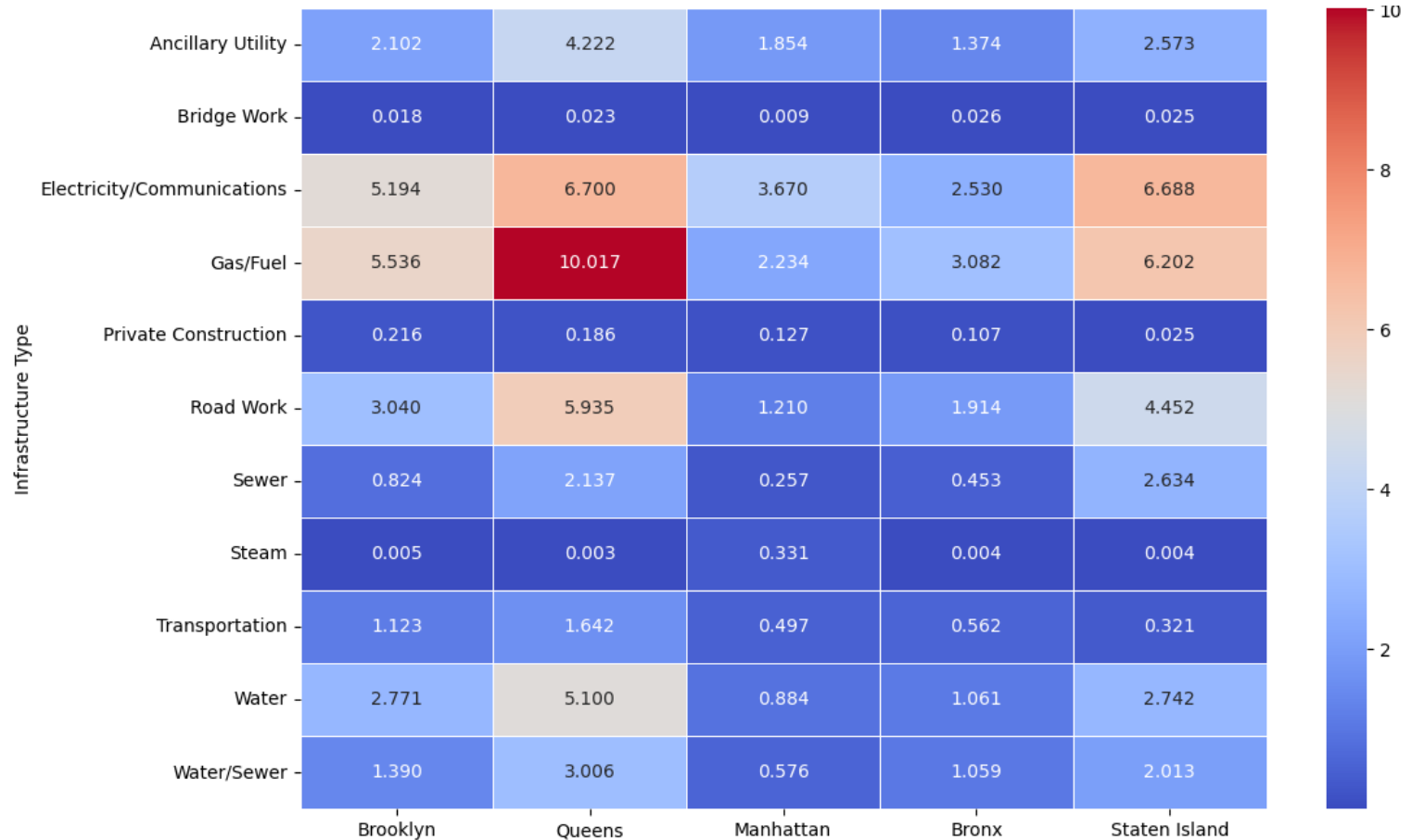
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Equity Considerations per Road Mile

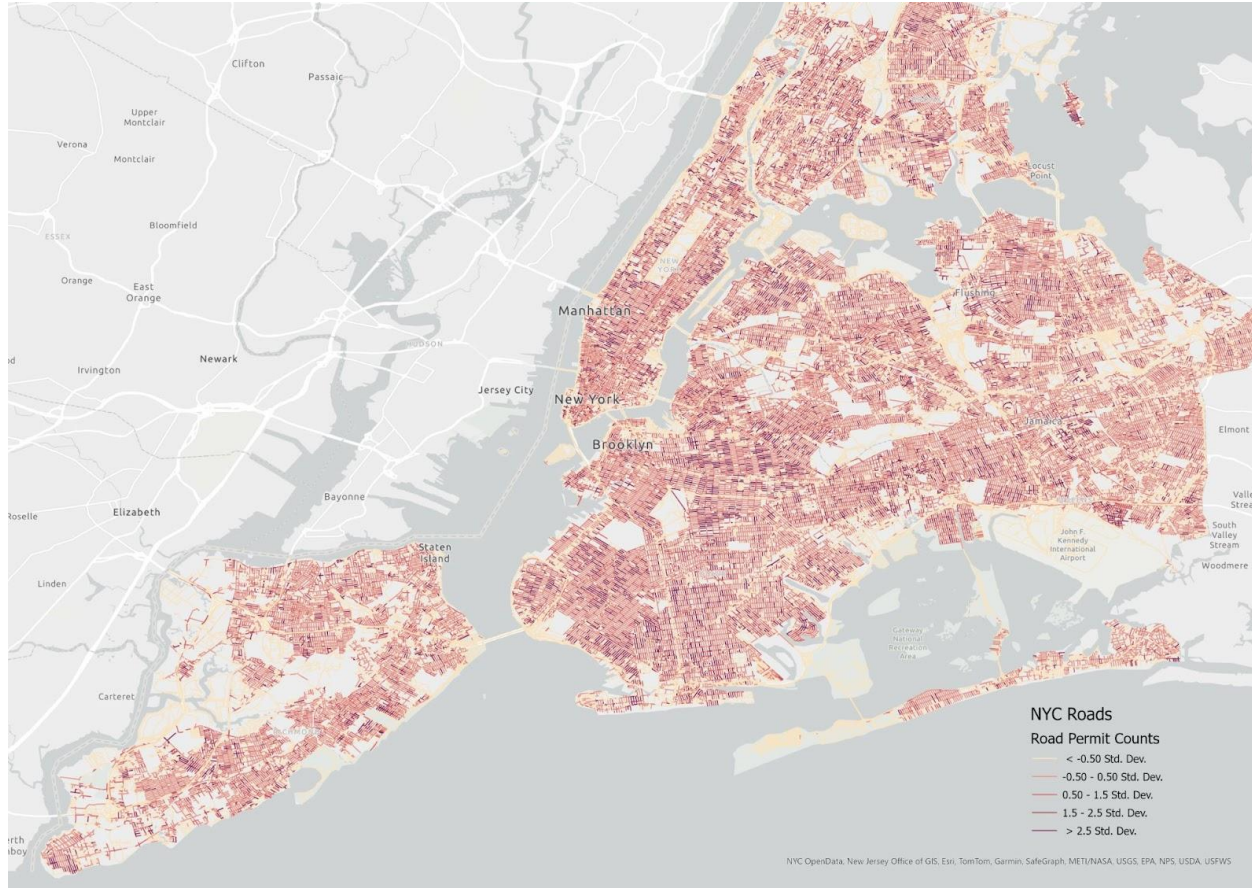


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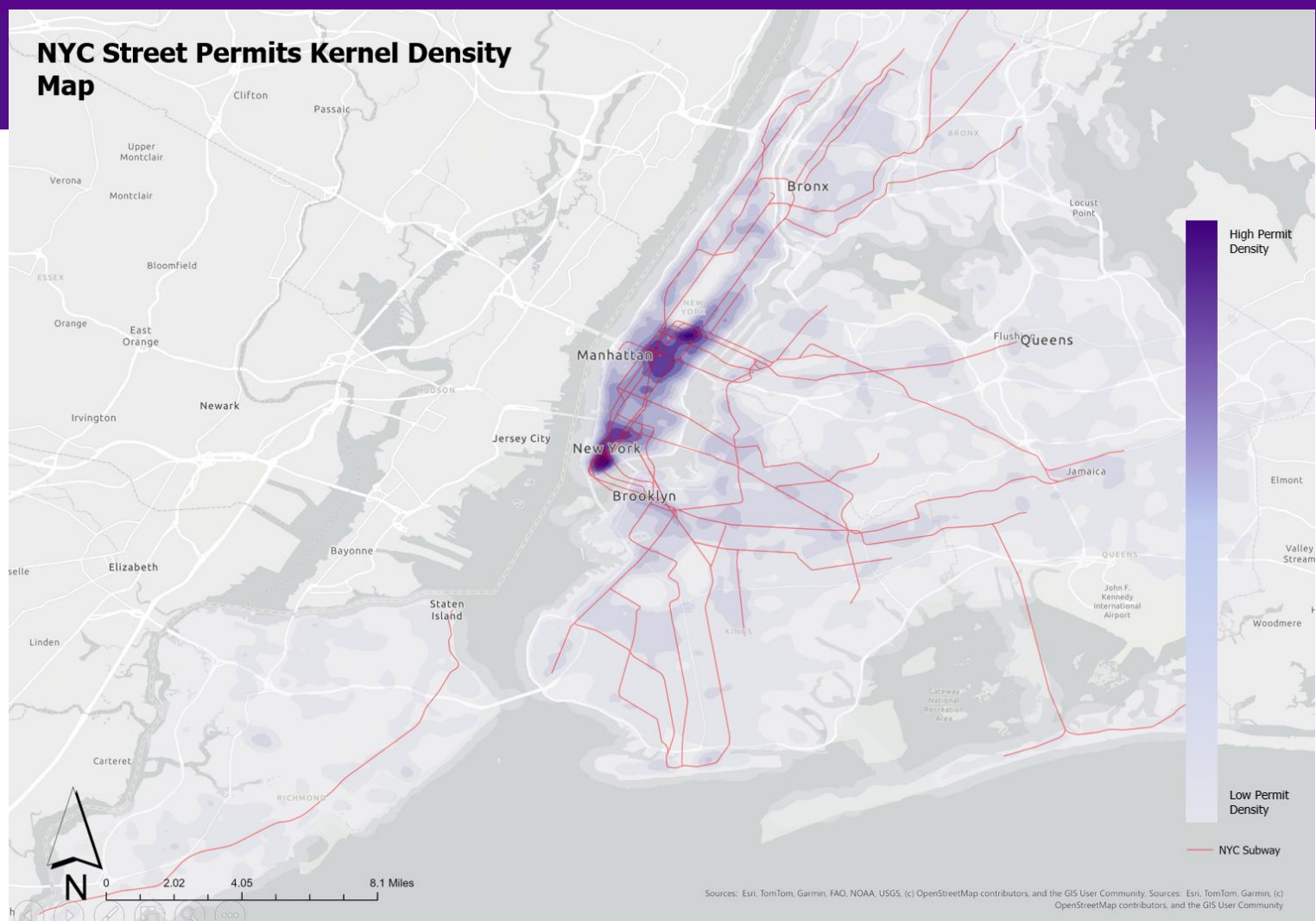
Equity Considerations per (Road Mile x 100k Residents)



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NYC Street Permits Kernel Density Map



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Other Active Research

- Remote Sensing Optimization for Urban Areas
- Subsurface Utility Data Mapping and Management
- Novel Universal Steel Connection Using Advanced Manufacturing

Thank you

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