**Supplemental Table 2: Property-level Variables used in Predicting Probability of Housing Code Violations**

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| **Variable Name** | **Type** | **Description** | **Dates** (month/year) |
| Assessed Value | Continuous ($) | Value of property | 2019 |
| Bedrooms | Count | Number of bedrooms | 2019 |
| Building Permits | Count | Applications and approved building permits | 1/16 - 5/19 |
| Building Size | Continuous (sq. ft.) | Size of building | 2019 |
| Calls for Service | Count | Non-emergency calls for city services such as reporting potholes or illegal dumping (similar to 311) | 8/16 - 9/19 |
| Census Block Group | Categorical | Geographical unit used by the U.S. Census Bureau | 2017 |
| Housing Inspection Status | Yes/No | Whether a housing inspection was completed at a property | 8/15 - 9/19 |
| Certificate of Habitability Violations | Count | Number of home inspection violations | 8/15 - 9/19 |
| Current Use | Categorical | Land use code; restricted to residential or mixed-use structures | 2019 |
| Fire Incidents | Count | Fire-related 911 calls | 8/16 - 6/19 |
| Foreclosure Sales | Continuous ($) | Selling price of foreclosures | 9/04 - 11/17 |
| Vacant and Foreclosed Properties | Count | Number of foreclosures and vacancies | 1/12 - 7/19 |
| Fuel Type | Categorical | Type of fuel system: oil, gas, electrical, or coal/wood | 2019 |
| Full Bathrooms | Count | Number of washrooms with a sink, toilet, and shower/tub | 2019 |
| Heat Type | Categorical | Type of heat system: hydronic, electric, radiant, or central | 2019 |
| Home Sales | Count | Number of property sales | 9/04 - 6/19 |
| Home Sales ($) | Continuous ($) | Price of property sales | 9/04 - 6/19 |
| Land Size | Continuous (acres) | Size of land parcel | 2019 |
| Municipal Violations | Count | Municipal violations, broken down by type | 12/11 - 6/19 |
| Municipal Violation Fines | Continuous ($) | Fine totals | 12/11 - 6/19 |
| Opportunity Zones | Categorical | Low-income areas that encourage economic investment | 2018 |
| Owner Occupied | Categorical | Indicator of whether owner occupies property (yes/no) | 2019 |
| Parcel ID | Identifier | Unique property code | 2019 |
| Police Incidents | Count | Police incidents and arrests | 12/10 - 6/19 |
| Rat Baiting | Yes/No | Whether a rodent trap was set by city | 7/17 - 7/19 |
| Tax Deed\* | Continuous ($) | Properties with unpaid taxes, owned by the government | 1/10 - 3/19 |
| Year Built | Continuous (years) | Year the property was built | 2019 |

Note: Data from the Health and Human Services Department were not included due to data privacy concerns.