STATE OF WASHINGTON
DEPARTMENT OF COMMERCE
1011 Plum Street SE • PO Box 42525 • Olympia, Washington 98504-2525 • 360-725-4000
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To Washington State legislators and the Governor's Office,

Under ESSB 6095 (see attachment), the Department of Commerce (Commerce), in cooperation with the Department of Archaeology and Historic Preservation (DAHP), was required to contract for a seismic study on suspected unreinforced masonry (URM) buildings in Washington state. The results of that effort are attached for review by the Washington State Legislature.

URM buildings contribute to the unique, distinct character of the state's cities and towns. While historic and frequently majestic, URM buildings are prone to partial or complete collapse in the event of an earthquake. Washington's URM buildings suffered extensive damage during earthquakes in 1945, 1969 and 2001. Similar earthquakes around the world have shown just how vulnerable URM building construction can be if left unmitigated. As the state with the second-highest earthquake risk in the country, Washington must identify and validate the number of URM buildings and where they are located to understand the scope of the problem and what may be needed to address it.

Commerce is dedicated to strengthening Washington's communities by ensuring that they are economically prosperous, culturally vibrant and disaster resilient. As our partner on this project, DAHP provided its knowledge and expertise in historic preservation. Together, I believe our unique collaboration has yielded an effective response to the Legislature's request to further understand this issue.

This study's data collection effort yielded a database with a total of 15,200 buildings, of which 3,317 were identified as suspected URM buildings, and 1,176 were confirmed as being URM buildings. An additional 2,241 buildings have an "unknown" URM building status, meaning that they could not be expressly ruled out as potential URM buildings. Of the buildings confirmed to be URM, 170 are emergency facilities, including hospitals and fire stations; and 219 are school facilities.

The results are not inclusive or representative of all buildings in Washington; they merely reflect existing survey and data resources that could be incorporated into this project's database. Such resources included:

- DAHP's Washington Information System for Architectural & Archeological Records Data (WISAARD);
- The city of Seattle's unreinforced masonry (URMs) buildings database;
- The University of Washington and Preservation Green Lab's URM buildings database;
- City and county assessor data;
- Port Townsend pilot survey; and
- Additional datasets from state agencies.

The work to identify, catalog and ultimately remediate the state's URM buildings will continue to be a priority for state government, local governments and the private sector. This project provides the solid foundation upon which additional work can build.

As our team looked at the aggregated data through the lens of life safety and disaster response, we identified key opportunities to strengthen communities and improve the state's disaster resilience. As we

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examined the number of critical facilities with URM construction, especially hospitals and fire stations, the potential for an effective emergency response may be significantly compromised when these services are most needed, following an earthquake. Similarly, the number of URM school buildings identified in this study also gives one pause as these facilities house our state's most precious resources, our children. Moreover, school facilities often serve as emergency shelters within our communities, which may further compound community-based disaster recovery efforts.

We recommend that the survey materials to identify and validate URM buildings developed during this project be shared with stakeholders – including certified local governments, Main Street communities, state and local emergency managers, and county assessors. Additional data can be added to the URM building database should the Legislature seek to continue or expand this effort. Through an iterative process, the robust tools developed during this project can increase the reach and capacity of the URM building database, which can guide the development of effective mitigation strategies.

Commerce is committed to our mission of strengthening communities. We stand ready to assist the Legislature and our partner agencies in addressing the findings of this project and improving our state's overall resilience.

Signed,

Brian Bonlender, director
Department of Commerce

Washington Unreinforced Masonry Building Inventory

Architecture
Planning
Conservation

Washington Department of Commerce | *October 2018*

Architectural
Resources Group

ACKNOWLEDGMENTS

Development of the Washington Unreinforced Masonry Building Inventory drew on the expertise of a wide variety of stakeholders. Key team members are identified below.

Department of Commerce

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Bruce Lund	Managing Director of the Community Assistance and Research Unit
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Kathryn Roger Merlino	University of Washington Center for Preservation and Adaptive Reuse
Bob Freitag	University of Washington Institute of Hazards Mitigation Planning and Research
Ray Cockerham	WABO & Emergency Management, City of Puyallup
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Tim Grisham	Washington Association of County Officials

Consultant Team

Matthew Davis	Architectural Resources Group
Caitlin Cranley	Architectural Resources Group
Bryce Gartrell	The Gartrell Group
Drew Seminara	The Gartrell Group
Kyle Steuck	Degenkolb Engineers

Several additional individuals provided key project support, including Morgan McLemore (GIS Cultural Resource Analyst, DAHP), Kim Gant (Certified Local Government Coordinator, DAHP) and Breanne Durham (Washington Main Street Coordinator, Washington Trust for Historic Preservation).

Architectural
Resources Group

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Executive Summary

Introduction

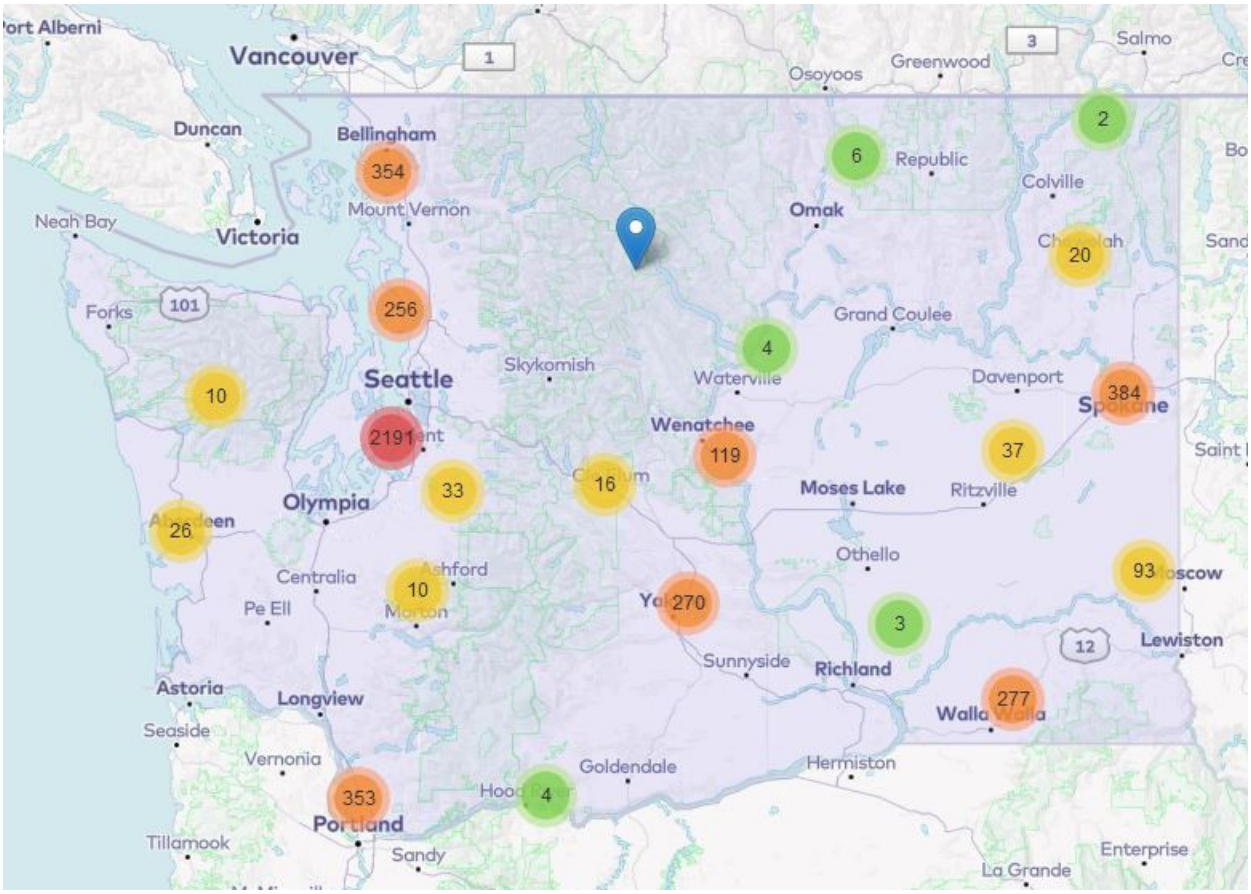
At the close of the 2017-2018 legislative session, the Washington State Legislature directed the Department of Commerce (Commerce), in collaboration with the Department of Archeology and Historic Preservation (DAHP), to initiate an inventory of unreinforced masonry (URM) buildings in Washington State, excluding single-family housing. This undertaking included inventorying and categorizing, to the greatest extent possible, information such as the locations, building attributes (e.g., building use, historic character), and vacancy or underutilization of Washington's URM buildings. Commerce engaged a multi-disciplinary consultant team led by Architectural Resources Group (ARG) to develop the inventory, and convened a multi-agency advisory committee to provide guidance. Additional information on organizations involved in this effort is below in Section 1.

Database Design

The Legislature's directive stipulated that the URM Inventory be produced using existing survey and data sources to the greatest extent possible. Development of both the structure and content of the URM Inventory consequently drew on a variety of data sources. DAHP's Washington Information System for Architectural & Archeological Records Data (WISAARD) and the recently completed City of Seattle URM Survey provided critical baseline data. These sources were supplemented with data from select Main Street communities, certified local governments (CLGs), state assessors and emergency managers. Descriptions of how the URM Inventory is structured and how data was acquired and synthesized are included below in Section 2. Throughout, the strategy for populating the Inventory was to capture all possible URM buildings, eliminating only those that were confirmed to not be of unreinforced masonry construction.

URM Dashboard

A key piece of the URM Inventory is the URM Dashboard, an online mapping interface that enables users to view – at varying levels of detail – the geographic distribution of suspected URM buildings that meet a wide variety of criteria. The dashboard also allows a user to "drill-down" to explore the data in the URM Inventory pertaining to a specific property. The URM Dashboard can be viewed at https://dev.gartrellgroup.com/WashURMViewer/. More information on using the URM Dashboard is included in Section 3.



Screenshot from the Dashboard showing the statewide distribution of identified and suspected URM buildings in the URM Inventory.

Pilot Survey

To supplement initial data collection, the ARG team conducted a focused pilot survey to demonstrate the type of building-specific field survey and permit research that is necessary to transform a given list of "Suspected URM" buildings to one consisting of "Identified URM" buildings. Downtown Port Townsend was selected as the location for the pilot survey due to its preponderance of URM buildings, several of which have undergone structural upgrades. The survey process, which included generation of simple field survey forms, is described below in Section 4.

Findings

Based on a consolidation of available data sources, the inventory includes 4,493 buildings classified as either a *suspected* URM building or an *identified* URM building. Of these, 3,317 buildings have been classified as suspected URM buildings. In general, a building was classified as a "suspected URM" if it:

1. was constructed prior to 1958;
2. has one or more masonry bearing walls that provide the primary support for vertical loads from floors or roofs; and
3. was not constructed as a single family residence.

The URM Inventory also includes 1,176 identified URM buildings, whose URM status has been confirmed based on field survey and related research. (Such buildings are located in Seattle or Port Townsend.)

Of the 4,493 identified or suspected URM buildings:

- 219 are schools
- 395 are publicly owned
- 170 are emergency facilities
- 874 are vacant or underutilized
- 748 are listed on the National Register of Historic Places or the Washington Heritage Register

The URM Inventory includes an additional 2,241 records classified as URM Status = "Unknown." These buildings did not meet the Suspected URM criteria described above, but based on available data, could not be expressly eliminated as potential URM buildings.

More information on these findings, and many more, are compiled below in Section 5. That section also includes a discussion of observed data gaps, such as missing latitude/longitude coordinates for some records.

Data Recommendations

Because this effort necessarily focused on consolidating information from existing data sources, there are undoubtedly URM buildings in Washington that are not yet included in the URM Inventory. As a result, this report concludes with a series of recommendations (including sample field survey materials) regarding how additional data could be collected from a wide variety of sources, including:

- Certified local governments (CLGs)
- Main Street communities
- Office of Superintendent of Public Instruction (OSPI)
- Office of Financial Management (OFM)
- County assessors
- Emergency facilities

The report also includes recommendations regarding how the collected data could be further "cleaned" to enhance its utility and consistency.

Appendices

A series of 11 technical appendices follow the main report. These appendices provide detailed information regarding how the URM Inventory (including the online URM Dashboard) was compiled and how it is structured. The appendices also include reference materials intended to help field surveyors collect URM-related data. The appendices are separated into three categories:

- Appendix A. Database Design
- Appendix B. Field Survey Materials
- Appendix C. Collected Data

1. Introduction

At the close of the 2017-2018 legislative session, the Washington State Legislature directed the Department of Commerce (Commerce), in collaboration with the Department of Archeology and Historic Preservation (DAHP), to initiate an inventory of unreinforced masonry (URM) buildings in Washington State, excluding single-family housing. This undertaking included inventorying and categorizing, to the greatest extent possible, information such as the locations, building attributes (e.g., building use, historic character), and vacancy or underutilization of Washington's URM buildings. The Legislature's directive stipulated that the URM Inventory be produced using existing survey and data sources to the greatest extent possible. Commerce engaged a multi-disciplinary consultant team led by Architectural Resources Group (ARG) to develop the inventory.

This report is required by Section 1009, Chapter 298, Laws of 2018 (2018 supplemental capital budget) (Engrossed Substitute Senate Bill 6095):

> FOR THE DEPARTMENT OF COMMERCE
>
> Seismic Inventory: Unreinforced Masonry Buildings (91000959)
>
> The appropriation in this section is subject to the following conditions and limitations: Funding is provided solely for the department, in cooperation with the department of archaeology and historic preservation, to contract for a seismic study regarding suspected unreinforced masonry buildings in Washington state. The study must include a list and map of suspected unreinforced masonry buildings, excluding single-family housing, and be produced by utilizing existing survey and data sources, including the state's historic resources database, to the greatest extent possible. The study may incorporate random sampling, site visits, and other means to inform the study. The study must identify the number of unreinforced masonry buildings with vacant or underutilized upper floors. The study must be provided to the office of financial management and fiscal committees of the legislature by December 15, 2018.
>
> Appropriation:
>
> | | |
> |---|---|
> | State Building Construction Account—State | $200,000 |
> | Prior Biennia (Expenditures) | $0 |
> | Future Biennia (Projected Costs) | $0 |
> | TOTAL | $200,000 |

Advisory Committee
Prior to engaging the consultant team, Commerce assembled a URM Inventory Advisory Committee to make recommendations and monitor project progress. This committee was composed of representatives from several public agencies and organizations, including:

- American Institute of Architects, Washington
- City of Seattle Planning and Development
- Department of Archeology and Historical Preservation
- Department of Commerce
- Emergency Management Division, Washington State
- Research & Policy Lab, National Trust for Historic Preservation
- Seattle Department of Construction and Inspections
- Seattle Office of Emergency Management
- State Building Code Council
- University of Washington Center for Preservation and Adaptive Reuse
- University of Washington Institute of Hazards Mitigation Planning and Research
- Washington Association of Building Officials
- Washington Association of County Officials

The advisory committee met at key junctures during the project to offer guidance and review draft deliverables.

Steering Committee
Throughout the course of the project, members of the consultant team met biweekly with a Steering Committee composed of select Commerce and DAHP representatives (who also served on the advisory committee) to review project status.

ARG Consultant Team
Architectural Resources Group (ARG), a planning, conservation and architecture firm, led the consultant team. ARG has extensive experience assessing and rehabilitating unreinforced masonry buildings throughout the West Coast. ARG also has experience conducting large-scale, data-heavy property surveys and conditions assessments. ARG was supported by team members Degenkolb Engineers, structural engineers with decades of experience working with unreinforced masonry buildings, and The Gartrell Group, geospatial database and mapping experts with extensive experience working with public clients in the Pacific Northwest.

2. Database Design

2.1 Data Dictionary

Among the key first steps in creating the URM Inventory was development of a "data dictionary" that (1) identified which data fields to include in the inventory and (2) specified how the database values for those fields are defined. The data dictionary was developed through an iterative process that included detailed feedback from the Department of Commerce and the advisory committee. The city of Seattle's recently completed URM survey served as a key reference. The guiding principle throughout was to include as many fields as possible relevant to URM status, without overburdening the database (and future surveyors) with extraneous data fields.

The definitions of several key data fields are summarized below. The full data dictionary is included as Appendix A1. Note that many fields in the URM Inventory currently have incomplete data, but were included because they relate to URM status and seismic performance, and may prove important in future data collection efforts.

Latitude/Longitude

Ultimately, records in the URM Inventory are mapped in the online URM Dashboard according to latitude and longitude data. This spatial data was used instead of parcel numbers for purposes of mapping, so that multiple buildings occupying a single parcel or, alternatively, a single building occupying multiple parcels could still be mapped accurately.

URM Status

"URM Status" is the key field in the inventory, and allows a building to be coded as a suspected URM building, not a URM building, or unknown. In select cases (Seattle and Port Townsend), some buildings were coded as "identified URM" buildings based on survey assessment.

In general, a building was classified as a "suspected URM" if it:

1) was constructed prior to 1958;
2) has one or more masonry bearing walls that provide the primary support for vertical loads from floors or roofs; and
3) was not constructed as a single-family residence (per the Legislature).

Elks Temple Tacoma

Built: 1916

Expected completion of rehabilitation: 2019

Rehabilitation cost: $35 million

Privately Owned

Nationally Register Listed

Public subsidies for rehabilitation: Investment tax credits and special valuation

History
Built in the second Renaissance Revival style, this six-story building was built at the beginning of the 20th century by the Elks fraternal order.

Abandoned for 30 years, the building was built with hollow clay walls, minimally reinforced with shotcrete where necessary.

Following its renovation, the building will host a hotel, ballroom, original site-specific artwork, restaurants, and outdoor gathering spaces and on-site gardens in the Old City Hall Historic District of downtown Tacoma.

Profile courtesy Commerce/DAHP

Assigning URM status within the Inventory thus depended on knowing both a building's construction material and its date of construction. It did not depend, however, on whether the building had undergone any structural remediation since construction. Because seismic upgrades vary widely in approach and extent, an upgraded URM building is still considered a URM building for purposes of this assessment. Only buildings constructed prior to 1958 were included in the URM Inventory, as buildings constructed during and after 1958 were subject to building code requirements that would not have allowed the construction of unreinforced masonry (URM) buildings.

Throughout, the strategy for populating the Inventory was to capture all possible URM buildings, eliminating only those that were confirmed to not be of unreinforced masonry construction. In other words, records classified as URM Status = "Unknown" represent all those buildings that did not meet the Suspected URM criteria described above, but based on available data, could not be expressly eliminated as potential URM buildings.

Construction Material

URM buildings are constructed with brick, stone, or clay tile walls that support the floors and roofs of the building. To accommodate data of varying specificity, this field includes both a general "masonry" value as well as more specific "masonry – brick," "masonry – clay tile," and "masonry – stone" options. The field also includes a concrete masonry unit (CMU) option. While buildings constructed of CMUs are not considered to be unreinforced masonry, this option was included to support potential future study of CMU buildings.

Building Ownership

This field was included to differentiate between privately-owned buildings and those owned by governmental entities, for which there may be different future policy implications.

Building Use

Buildings were categorized by use, with the understanding that different building uses may be treated differently by future policies

regarding URM buildings. The use categories were closely modeled on those used for Seattle's recent URM survey:

- Commercial
- Office
- Residential (multi-family)
- Emergency
- Government
- Industrial
- Public assembly
- Schools
- Other mixed uses

The related "Emergency Facility" field enabled identification of any building that may be especially important in the event of a seismic emergency (e.g., first responders or emergency operations centers).

Vacant/Underutilized
The purpose of this field is to call out buildings that are known to be partially or wholly vacant, either at the ground floor, or upper floors, or both.

Historic Status
Where available, data from the Washington Information System for Architectural & Archeological Records Data *(*WISAARD) database regarding historic status was incorporated into the URM Inventory. This data identifies which buildings are listed on the National Register of Historic Places (or have been formally deemed eligible for listing) or the Washington Heritage Register. In select cases, the data also identifies buildings that are designated locally, though local historic data is not systematically included in WISAARD.

Architectural Features
The Inventory includes a list of architectural features that are either strongly indicative that a building is of URM construction (e.g., brick header courses) or relate to seismic performance (e.g., open storefront). Further discussion of architectural features is included below in the field survey methodology document (Appendix B1).

Site Features
Where available, the Inventory also identified when a building site slopes more than half a story or is known to have the potential for liquefaction and/or landslides, all of which affect building behavior during a seismic event.

Hastings Building
Port Townsend

Built: 1889

Expected completion of rehabilitation: 2022

Rehabilitation cost: $10 million

Privately owned

Nationally Register Listed

Public subsidies for rehabilitation: Investment tax credits and special valuation

History
Built near at the end of the 19th century, the Hastings Building has served as an iconic, multi-use building of historical significance for the local community since its establishment.

The building's main floors have had many tenants over the years, but the upper floors have been vacant since the 1960s.

The building continues to be owned by the original family that constructed it in the 19th century.

The building is currently proposed for use as a hotel and pedestrian ferry terminal.

Profile courtesy Commerce/DAHP

Upgrade Status
For purposes of the URM Inventory, seismic upgrades have been separated into three categories:

- Extensive: Structural upgrades have been performed throughout the building, including new lateral elements such as walls, braced frames, or moment frames; or retrofits conforming with ASCE 41 or IEBC Appendix A1 provisions for URM buildings.
- Bolts-plus (or wall anchors): Structural upgrades have been performed on the building, including all of the following (or substantially similar retrofits): parapet bracing, wall attachments to roof and floors, out-of-plane wall bracing.
- Parapet bracing only: Only the parapets have been braced. Often indicated when the parapet has rosettes or visible braces but no roof or floor anchors are visible.

This field also includes a "Visible, extent unknown" option if the precise level of retrofit cannot readily be ascertained.

Entity Relationship Diagram
An entity relationship diagram (ERD) is intended to illustrate graphically the relationships among database tables and their logical structure. The ERD for the URM Inventory is included below in Appendix A2.

2.2 Data Acquisition

Baseline Data Sources

Washington Information System for Architectural & Archeological Records Data (WISAARD)
Data extracted from WISAARD constituted the baseline data for the URM Inventory. WISAARD is Washington's digital repository for architectural and archeological resources and reports and is managed by the Department of Archeology and Historic Preservation (DAHP). In essence, WISAARD is a compilation of records for all properties in the state that have ever been the focus of an architectural or archeological field survey, or for which baseline data has otherwise been submitted to DAHP.

2. Database Design

WISAARD is Washington's comprehensive statewide property database, especially for older buildings that are more likely to be of unreinforced masonry (URM) construction.

Key baseline data extracted from WISAARD included:

- Parcel number
- Address
- Building name
- Building ownership (public/private)
- Building use
- Year built
- Historic status
- Construction material

City of Seattle
In 2016, the city of Seattle completed a multi-year, citywide survey that ultimately identified 1,146 confirmed unreinforced masonry (URM) buildings. In addition to basic locational and use data, this citywide survey includes extensive data related to URM status, including:

- Architectural features (header courses, parapets, open storefronts, visible bracing)
- Site features (site slope, soil conditions)
- Level of retrofit
- Date of latest retrofit

This expanded data was incorporated into the statewide URM Inventory and was merged with the WISAARD records for Seattle parcels. As a result, within Seattle, the URM Inventory identifies *confirmed* URM buildings, whereas in the rest of the state (with the exception of downtown Port Townsend) the URM Inventory identifies *suspected* URM buildings that have not yet been confirmed.

Additional data regarding vacant and underutilized buildings within Seattle were provided by the Preservation Research & Policy Lab (formerly Preservation Green Lab) at the University of Washington.

Additional information on how the WISAARD and city of Seattle data were incorporated into the URM Inventory is summarized below in Section 2.6.

Outreach and Additional Data Sources
In consultation with the Department of Commerce and DAHP, ARG contacted a wide variety of agencies and organizations around the state to (1) notify them that the URM Inventory effort was underway and (2) ascertain whether they had any data that should be incorporated into the URM Inventory. A comprehensive roster of contacted entities and responses (if any) is included below in Appendix C3. Entities contacted included:

King Street Station Seattle

Built: 1906

Rehabilitation Completed: 2013

Rehabilitation cost: $50 million

Publicly Owned

Nationally Register Listed

History

King Street Station has long served as a central transport hub for Seattleites and those traveling to and from the Pacific Northwest.

Supported by a steel frame, the exterior and interior of the building features red brick with terra cotta, rosettes, and cast stone ornamentation throughout.

The station was purchased in 2008 by the city of Seattle.

King Street Station was one of the first unreinforced masonry buildings to comply with the city's new code for Seismic Rehabilitation of Existing Buildings (ASCE 41).

It presently serves as one of the busiest Amtrak stations in the country.

Profile courtesy Commerce/DAHP

Main Street Communities

ARG worked with the Washington Trust for Historic Preservation to contact the 37 communities that participate in Washington's Main Street program. While no such organizations had URM data at the ready, several expressed an interest in undertaking future survey efforts in their communities to supplement the URM Inventory, including data regarding vacant and underutilized buildings.

Certified Local Governments (CLGs)

ARG worked with DAHP personnel to contact Washington's 72 certified local governments (CLGs), which are communities that have established historic preservation programs meeting federal and state standards. Such governments are typically the most likely to have older building stock, including unreinforced masonry buildings. They are also the most likely to have conducted historic surveys that identify construction material and related characteristics for the older buildings in their locale. For the most part, feedback from CLGs confirmed that any relevant data they had collected had already been incorporated into WISAARD. The cities of Bellingham, Bothell, Everett, and Lacey provided additional URM-specific data that was incorporated into the URM Inventory.

State Assessors

ARG worked with the Washington Association of County Officials (WACO) to contact property assessors from every county in the state. The format of county assessor data varies significantly by county and, in general, did not appear to be in a format that could readily be incorporated into the URM Inventory. In particular, information regarding URM status, seismic upgrade status, and vacancy status, if present at all, tends to be located in free-form notes fields that would need to be individually reviewed to extract the relevant information. That said, data provided by the Garfield County, San Juan County, and Thurston County assessors were incorporated into the URM Inventory. As summarized in Appendix C3, ARG identified additional counties for which the assessor data appears to include both year built and construction material data, which could be cross-referenced with the URM Inventory.

Emergency Managers

ARG worked with Commerce to contact Emergency Managers across the state to determine whether they had data regarding URM emergency facilities (such hospitals, fire stations, or police

stations) in their respective jurisdictions. This effort elicited additional data from Island County, the city of Medina, and the city of Mercer Island that was incorporated into the URM Inventory. As part of this outreach, ARG also contacted the Washington branch of several federal agencies, including the Federal Emergency Management Agency (FEMA), the General Services Administration (GSA), the Army (including the Corps of Engineers), the Navy, and the Air Force. No additional URM data was obtained through this effort.

Port Townsend Pilot Survey
ARG and Degenkolb Engineers completed a pilot survey of a 12-block area in downtown Port Townsend. This undertaking is described in detail in Section 4 below. The results of this survey, which included identification of 30 confirmed URM buildings, were incorporated into the URM Inventory.

Other Data Not Incorporated
Datasets provided by the Washington Office of Superintendent of Public Instruction (OSPI) and Washington State Office of Financial Management (OFM) included basic information regarding the state's public schools and state-owned buildings, respectively. Specifically, the OSPI dataset identifies as many as 1,346 school buildings constructed prior to 1958, and the OFM dataset identifies as many as 1,919 state-owned buildings constructed prior to 1958. These datasets, however, were not incorporated into the URM Inventory. Two primary factors made incorporating the OSPI/OFM data problematic:

1. Neither the OMF nor OSPI datasets has parcel numbers or latitude/longitude data, with locational data limited to addresses in varying formats (including post office boxes, which cannot be mapped). As a result, incorporation is an arduous process that would need to rely on hand-matching the inexact address field with corresponding records in the URM Inventory.
2. Neither the OMF nor OSPI datasets has data regarding construction material. As a result, any records from these datasets that was added to the URM Inventory would simply be coded as "URM Status" = "Unknown."

Instead of devoting substantial time to adding a substantial number of records to the Inventory of unknown URM status, the decision was made to exclude the OSPI and OFM datasets for now, in the hopes that they may be expanded in the future in a manner that makes incorporation into the URM Inventory more feasible and more meaningful.

In particular, the Washington Geological Survey (WGS) is currently working with OSPI and a team of structural engineers to assess the seismic safety of approximately 220 K-12 schools (and five fire stations) statewide that are near a known active fault trace and/or are located in zones at high risk of liquefaction during an earthquake. This effort includes assessments of both the subject buildings and the ground on which they sit. Once completed, the results of these assessments should be incorporated into the URM Inventory.

Kleinberg Building
Ellensburg

Built: 1889

Rehab completed: 2015

Rehabilitation cost: $850k

Privately Owned

Nationally Register Listed

Public subsidies for rehabilitation: Investment tax credits and special valuation

History
A three-story, main street building, the Kleinberg building's ground floor has had many tenants over the years, but its upper floors have been vacant since the 1930s.

The building's rehabilitation from 2012-2015 included tying façade to floors with straps and securing URM walls with epoxy grout.

The building is now home to several businesses on the main floors with the upper levels set aside for apartments.

Profile courtesy Commerce/DAHP

2.3 Data Assessment and Synthesis

The Legislature's directive stipulated that the URM Inventory be produced using existing survey and data sources to the greatest extent possible. Development of both the structure and content of the URM Inventory consequently drew on a variety of data sources. DAHP's Washington Information System for Architectural & Archeological Records Data (WISAARD) and the recently completed city of Seattle URM Survey provided critical baseline data. These sources were supplemented with a combination of city/county assessor data, smaller datasets from particular agencies, and from the Port Townsend pilot survey (see Appendix C3 for a comprehensive list of data sources).

The WISAARD database provides a wealth of property-based information. Great emphasis was placed on extracting a subset of WISAARD records through application of specific search and filtering criteria. The following list highlights several key criteria that were used to identify WISAARD records that were considered for incorporation into the URM Inventory (additional criteria are listed in Appendix C5):

- Property is a building
- Property has an unknown built date or a built date before 1958
- Building was not classified as a single family house, a barn, a bridge, a landscape, a dam/levee, an agricultural feature, or a work of art

Additional data were then incorporated by "crosswalking" supplemental data sources to consolidate relevant information into single building records. For instance, data from the city of Seattle URM survey was blended with select WISAARD data fields (such as historic name and year built), while conversely, buildings deemed suspected URM buildings based on WISAARD data were removed from the Inventory if not found in the city of Seattle URM database. Through this multi-layered approach, development of the Inventory collected the most detailed and reliable available data for each parcel.

Database Population

All datasets that were incorporated initially went through a data integration process known as "Extract, Transform, and Load" (ETL).

Flat-file Datasets

With the exception of WISAARD, all datasets incorporated into the URM Inventory were received in flat-file format (such as CSV or Microsoft Excel). Prior to integration, these records were updated with geocoded coordinates. In its simplest form, geocoding converts text-based locations to spatial coordinates. Every effort was made to use localized geocoding services relevant to particular record sets; however in instances where particular city/county geocoding options were not available, a general geocoder was used. Additional modifications were then made directly to the flat-files, to crosswalk provided values to structures and conventions that aligned with those of the URM Inventory. For example, if a particular record had a construction material of "masonry", it was updated to the integer value of 1 – the assigned value within the URM Inventory's "construction materials" lookup table.

As singular and horizontal datasets, these updated flat-files were extracted "as-is" into temporary tables in the URM Inventory using SQL Server's Import and Export Wizard. In nearly all cases, data fields containing meaningful content ultimately were incorporated. A sample SQL script is provided as the first item in Appendix C4 below.

Relational Datasets

Unlike the aforementioned datasets, the WISAARD dataset was provided in Microsoft Access Database (.mdb) format (with an additional text file (.txt) due to .mdb storage limitations), as a subset of the larger WISAARD database. As a sizeable and robust dataset with a variety of interlinking relationships, the WISAARD ETL process was significantly more complicated than it was for any other incorporated dataset. Appendix C5 enumerates the 55 steps used to perform the entire WISAARD ETL operation. Several of the most important steps are described below for illustrative purposes:

- CREATE temporary table that joins WISAARD tables to obtain LocationID, GISAreaName (county), latitude, and longitude information
- SELECT relevant WISAARD property records that match baseline identifying criteria, such as construction year and construction type
- UPDATE records with stories, parcel number, and building ownership information available in WISAARD dataset
- CREATE temporary table to crosswalk records that have a "masonry-like" designation and specific, relevant WISAARD attributions
- CREATE temporary table for tracking singular properties that have multiple WISAARD records
- DELETE records that appear to be identical building properties
- UPDATE Seattle records that are duplicates of Seattle-URM dataset

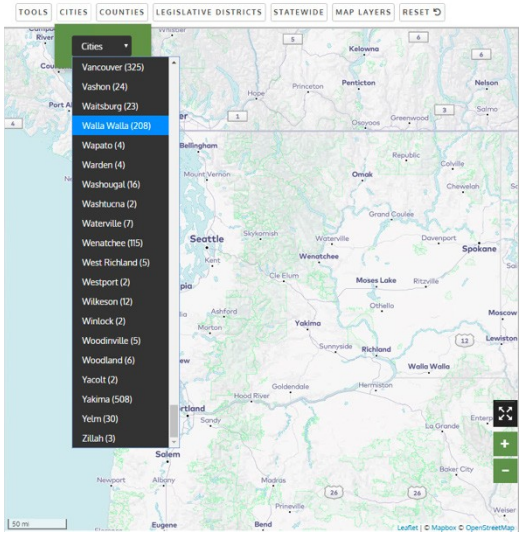
2. Database Design

The entire script is provided as the second item in Appendix C5. It should be noted that while the script specifies the ETL process and highlights the tables from WISAARD that were used, there are several caveats as to why simply "running" the script from a secondary environment will not work:

- The WISAARD dataset provided is a subset of the larger WISAARD database
- The table naming conventions may not match the nomenclature in the original WISAARD database
- The View entitled "vw_DatasharingHPIAddressConstYr" was provided by DAHP
- Lookup tables that are not associated with WISAARD were generated by the URM Inventory team's data base consultant (The Gartrell Group).

3. URM Dashboard

A key piece of the URM Inventory is the URM Dashboard, an online mapping interface that enables users to view – at many different scales – the geographic distribution of suspected URM buildings meeting a wide variety of criteria. As users zoom in or out, the Dashboard automatically clusters buildings based on the scale at which the map is being viewed, allowing users to identify clusters of URM buildings at a variety of scales. The Dashboard also allows a user to "drill-down" to explore the data in the URM Inventory for a specific property. The URM Dashboard is currently being hosted by The Gartrell Group and is accessible at https://dev.gartrellgroup.com/WashURMViewer/



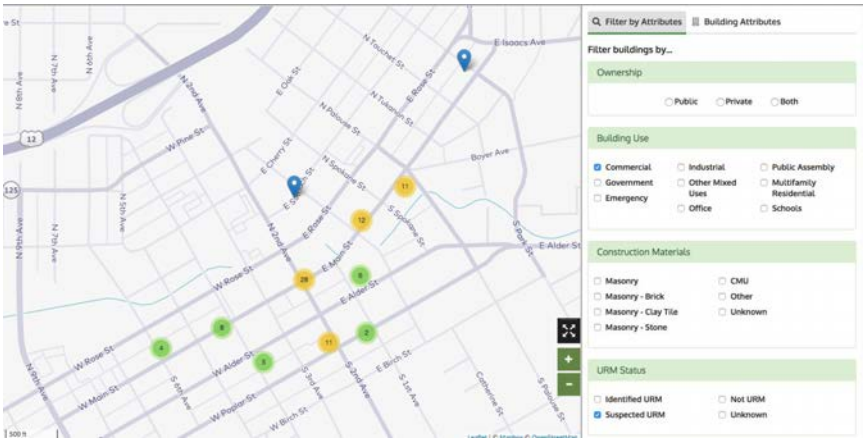
Database Filtering

A key function of the dashboard is the ability to filter records in the URM Inventory based on several building-related attributes. Drop-down menus at the top of the interface enable users to query building records by city, county, legislative districts or statewide. In conjunction with these geographical, jurisdictional, and legislative boundaries, the menu at the right of the dashboard enables users to filter records based on the following building characteristics:

- building ownership (public/private)
- building use
- construction materials
- URM status
- historic status
- construction date
- vacancy and underutilization

Querying operations are cumulative. For example, if a user selects "Walla Walla" from the drop-down list of cities and checks "Commercial" under

3. URM Dashboard

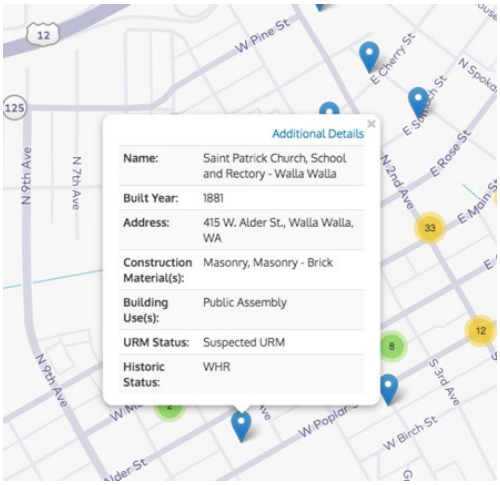


Building Use and "Suspected URM" under *URM Status*, the buildings shown on the map will be limited to commercial buildings in Walla Walla that are suspected URM buildings.

That said, checking multiple options within a single category will produce a different behavior in the dashboard, in that building records need to only match one of the checked values for that category. For example, if a user checks both "commercial" and "school" under *Building Use*, any building that is a school or a commercial building will be displayed.

Building Attributes

The dashboard also enables users to view the data in the URM Inventory for a specific building. When a user clicks on an individual marker (), a pop-up table appears that summarizes key data for that building (name, year built, address, construction material, building use, URM status, and historic status). Markers are either blue or red, with red markers restricted to buildings that have been identified as a URM.



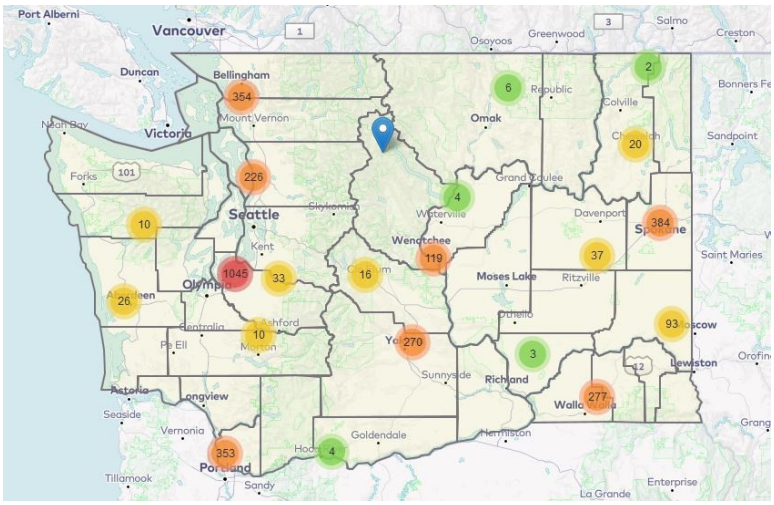
All of the available data for a particular building is accessible by clicking on "Additional Details" at the top of the pop-up table, or by selecting the selecting "Building Attributes" tab in the right-hand menu. Information within this section is collected into four categories:

- ID/Location
- Building Information
- Historic Information
- Building and Site Characteristics

Note that all fields in the URM Inventory are shown on the Building Attributes tab, regardless of whether the information is available for the selected building.

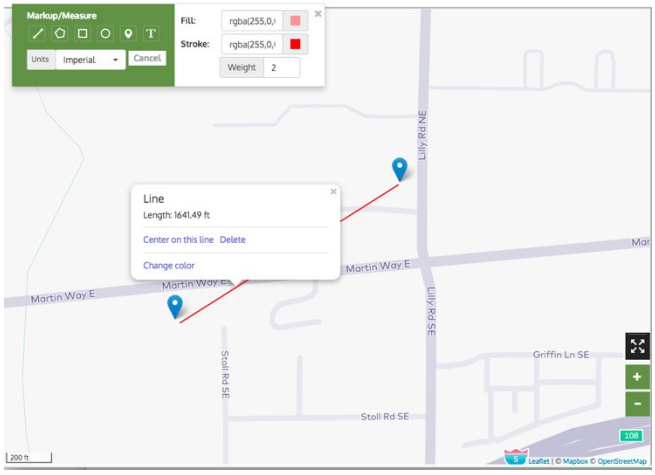
Map Layers

The dashboard also provides users with the ability to change the underlying basemap in the online viewer. Specifically, the dashboard offers three basemap styles, including two map styles and one consisting of aerial imagery. These can be accessed via the “Map Layers” dropdown menu at the top of the dashboard. Within this menu, users also have the option of selecting additional spatial datasets that can aid in visualizing specific boundaries. Currently, the dashboard can show city, county, and legislative district boundaries if selected by the user.



Markup and Measuring

Finally, by using the “Tools” drop-down menu at the top of the dashboard, users can add annotations or measure discrete features on the map. Such markup is purely session-based, meaning that any measurements, shapes, or features drawn are removed when the browser is closed. That said, a marked-up map could be exported (using “print screen” functionality or equivalent) prior to closing, for example if the user wanted to include the map in a presentation.



4. Pilot Survey

In general, the purpose of the URM Inventory is to identify buildings that, based on their date of construction and construction material, are suspected of being URM buildings. To supplement the Inventory, the consultant team conducted a focused pilot survey in order to demonstrate the type of building-specific field survey and permit research that is necessary to transform a given list of "Suspected URM" buildings to one consisting of "Identified URM" buildings. This field survey also enabled the consultant team to "test drive" the field survey materials and revise them prior to assembling the forms included in Appendices B1, B2 and B3.

Due to its preponderance of URM buildings, several of which have undergone structural upgrades, downtown Port Townsend was selected as the location for the pilot survey. Specifically, the survey area encompassed the 53 buildings in the blocks bound by Washington Street on the north, Polk Street on the west, Monroe Street on the east, and Port Townsend Bay on the south. (See Figure 4-1.)

Miller & Burkett Building, 237 Taylor Street

On September 11 and 12, 2018, team members walked the Port Townsend survey area to note and photograph building features to identify buildings that appeared to be of URM construction, as well as those buildings that appeared to have undergone obvious seismic upgrades (for example, rosettes at the floor lines or installation of a visible moment frame). (See Figures 4-2 and 4-3.)

N.D. Hill Building, 639 Water Street

The pilot survey also afforded the opportunity to identify additional building characteristics that in many cases were not called out in the pre-populated Inventory data. For example, the field survey identified a preponderance of open storefronts within downtown Port Townsend. (See Figure 4-4.) The pilot survey team also identified vacant or underutilized buildings or building floors within the survey area.

Following the field survey, ARG and Degenkolb personnel reviewed building permit files that had been assembled by the city of Port Townsend's Development Services Department for the 13 buildings within the survey area that may have undergone some measure of seismic improvement. The purpose of the permit research was to ascertain which "Upgrade Status" to assign to each such property.

The field survey and permit research enabled the survey team to reclassify suspected URM buildings as either "identified" URM buildings or as not URM buildings. The completed survey spreadsheet for the Port Townsend survey area is included as Appendix C3. This data has been incorporated into the URM Inventory, and the spreadsheet can be used as a template for future data collection efforts.

Ultimately, the 53-building pilot survey area was found to include 30 identified URM buildings, 2 suspected URM buildings for which construction material could not be confirmed, and 21 buildings that are not of URM construction. Of the 30 identified URM buildings, 5 have undergone extensive seismic upgrades, while 3 have undergone partial upgrades.

The following color-coded maps further summarize the findings of the Port Townsend pilot survey.

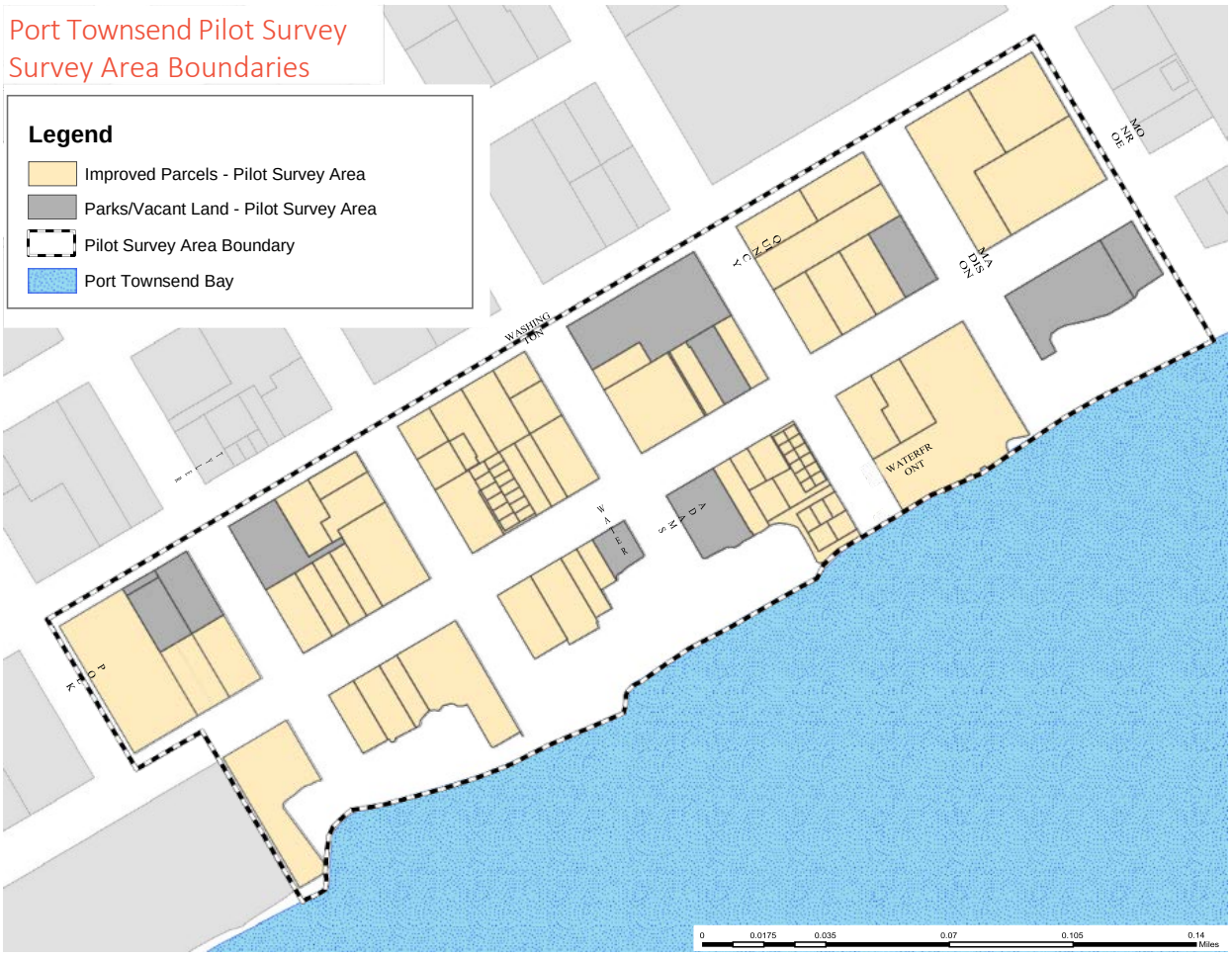


Figure 4-1. The Port Townsend pilot survey area included 53 buildings.

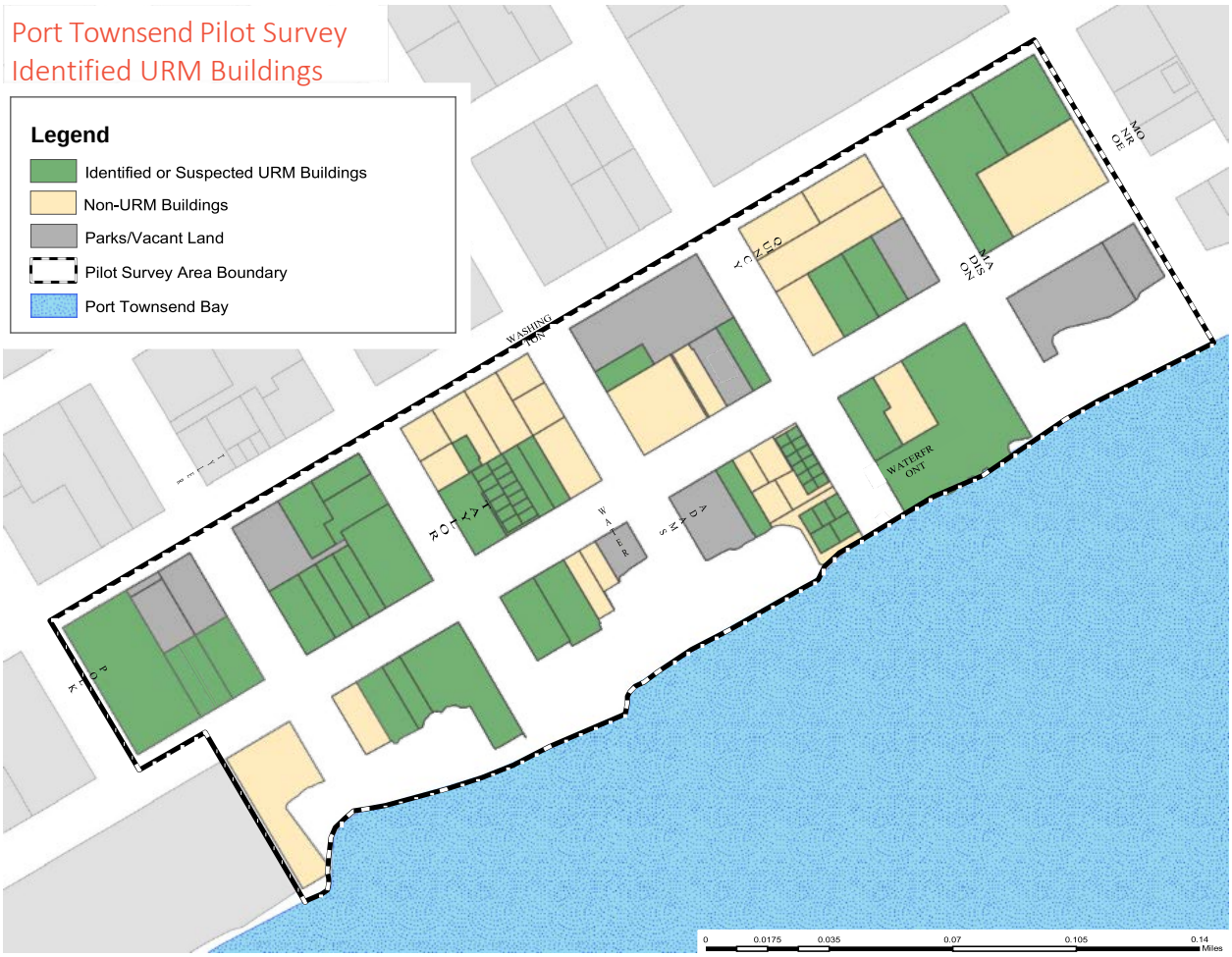


Figure 4-2. The survey area includes 30 identified URM buildings, along with two suspected URM buildings for which construction material could not be confirmed.

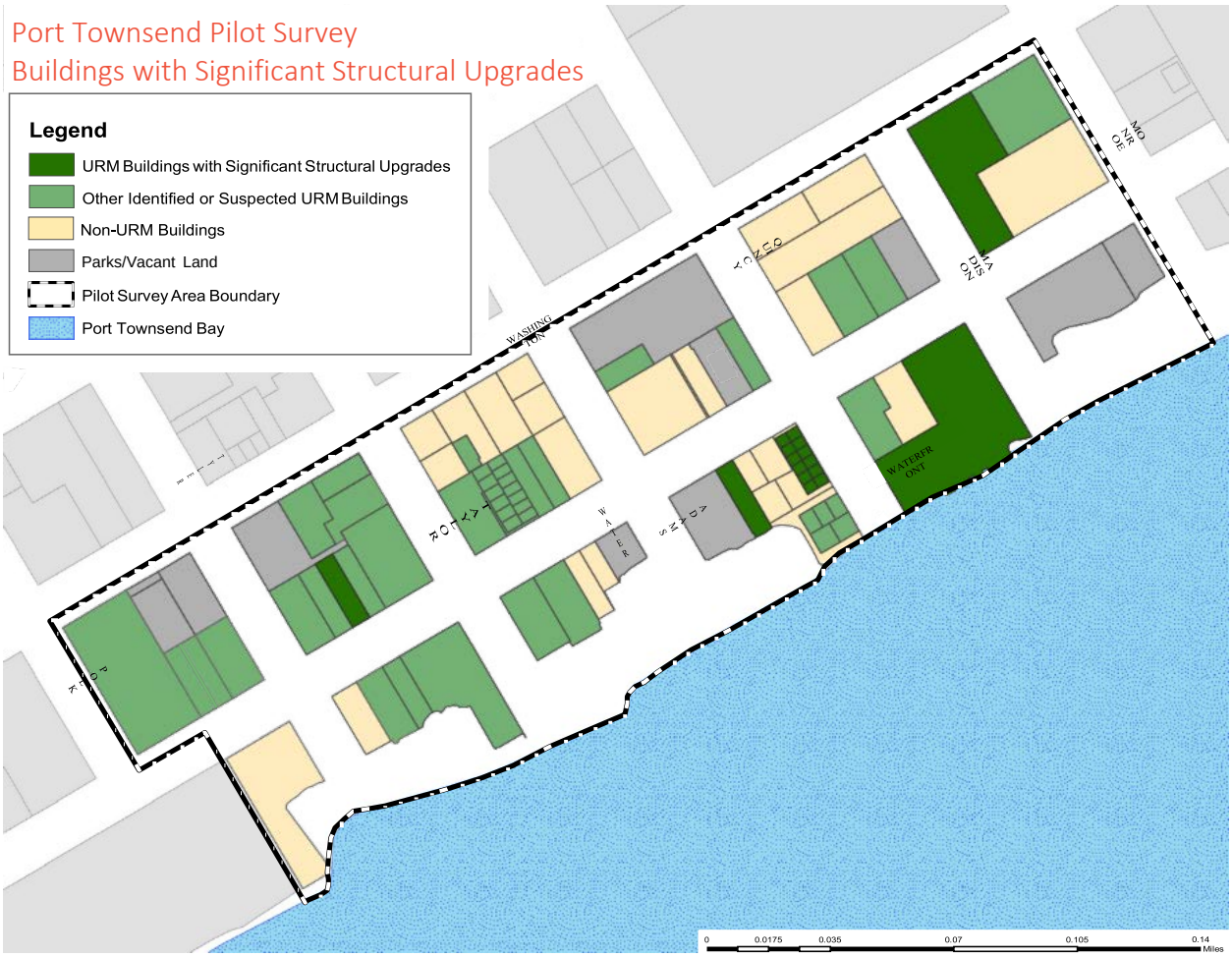


Figure 4-3. Of the 30 identified URM buildings, 5 have undergone extensive seismic upgrades.

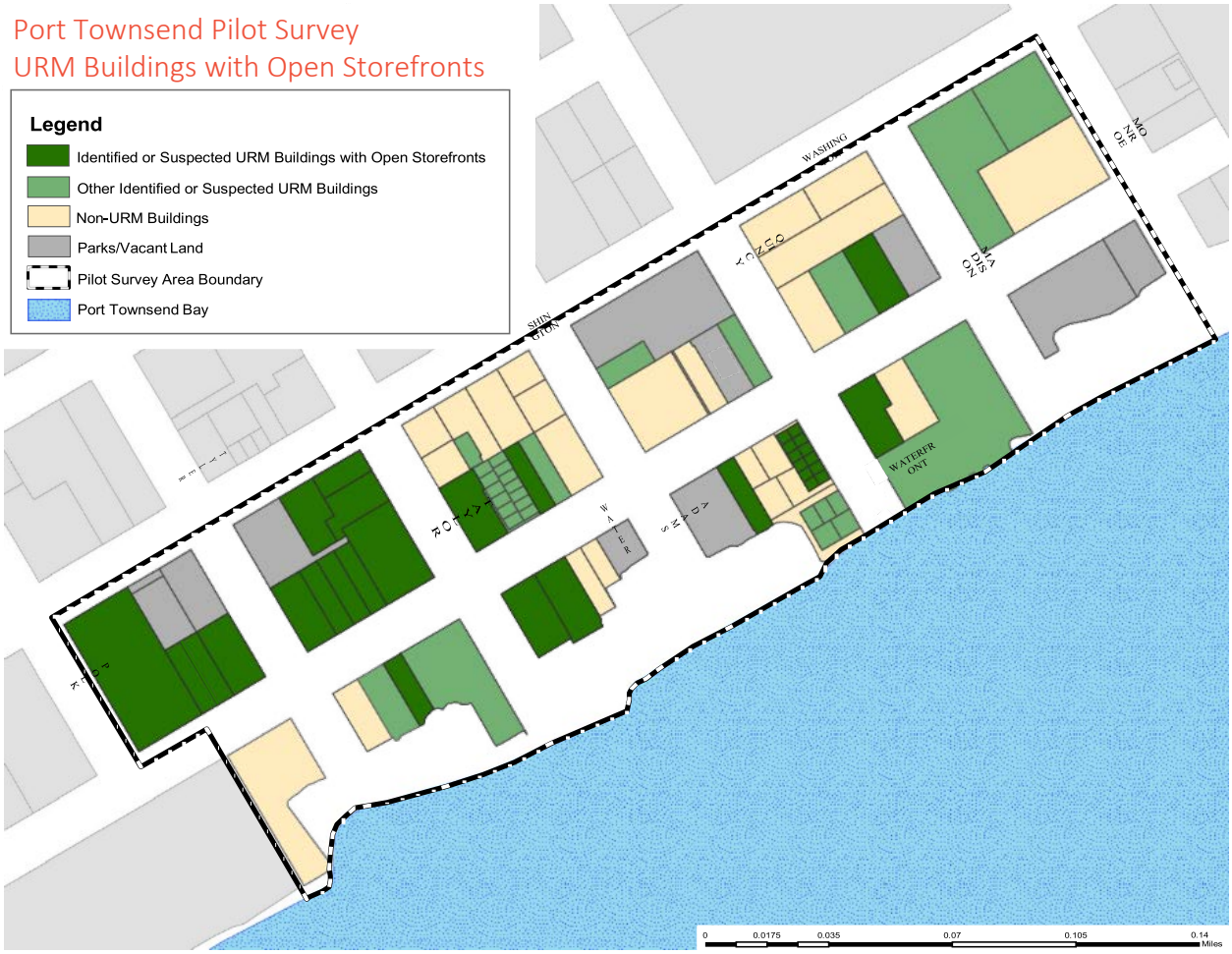


Figure 4-4. Twenty of the URM buildings within the survey area have open storefronts, which could affect the performance of those buildings adversely during a seismic event.

5. Findings

5.1 Key Metrics

The data in the URM Inventory is summarized below with respect to a variety of important metrics. Relevant screenshots of the URM Dashboard are included for illustrative purposes.

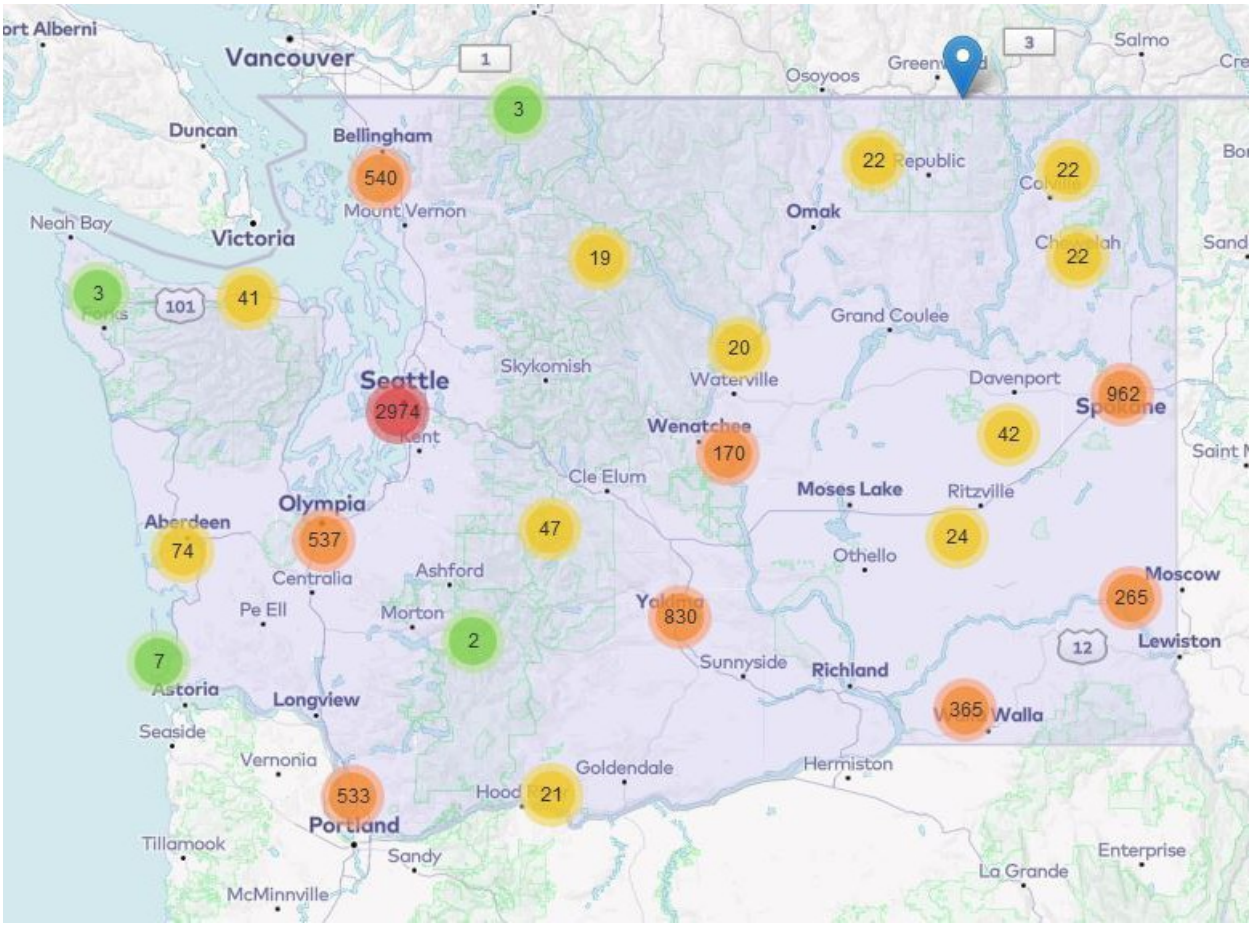
The colors of the aggregate clusters in the maps reflect the relative concentration of buildings, providing a quick visual representation of comparative density:

- Clusters of 10 or fewer buildings are green;
- Clusters of 11 to 100 buildings are yellow;
- Clusters of 101 to 1000 buildings are orange; and
- Clusters of more than 1000 buildings are red.

In addition, we summarize building counts by building use classification in the following table. Note that one building can be counted in more than one row if it includes multiple uses.

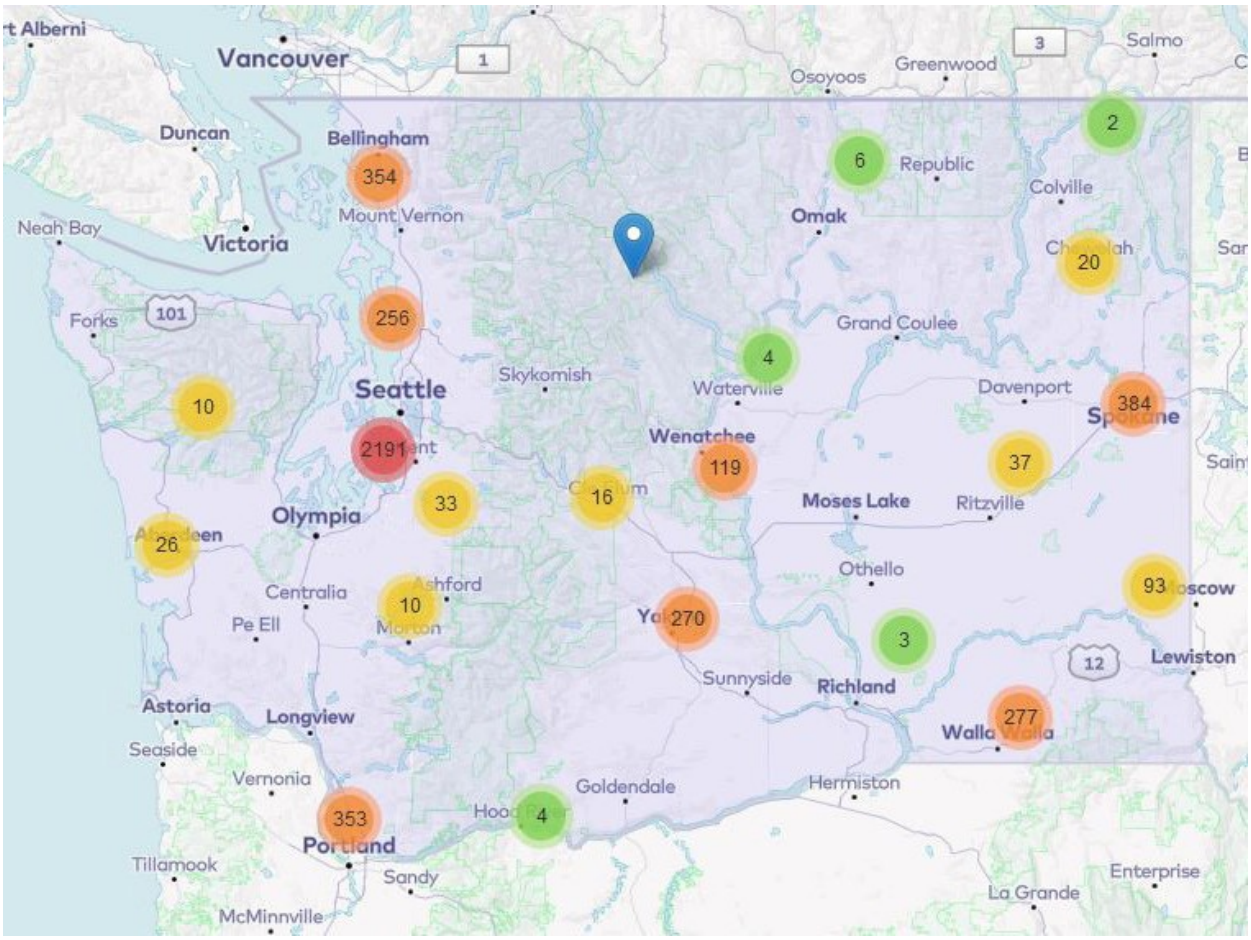
Building Use	Identified URM	Suspected URM	Unknown URM Status	Public	Vacant/ Underutilized
Commercial	710	1,592	241	46	530
Office	242	7	0	11	183
Residential (multi-fam.)	382	317	653	47	289
Emergency	4	166	74	377	3
Government	45	214	169	566	28
Industrial	53	222	693	47	36
Public Assembly	136	245	122	37	105
Schools	76	143	160	110	61
Other Mixed Uses	13	164	133	11	183
Unknown	3	512	75	64	2

All Buildings



A total of 7,739 buildings are in the URM Inventory. (The 193 records that lack latitude/longitude coordinates do not appear on the maps in this chapter.)

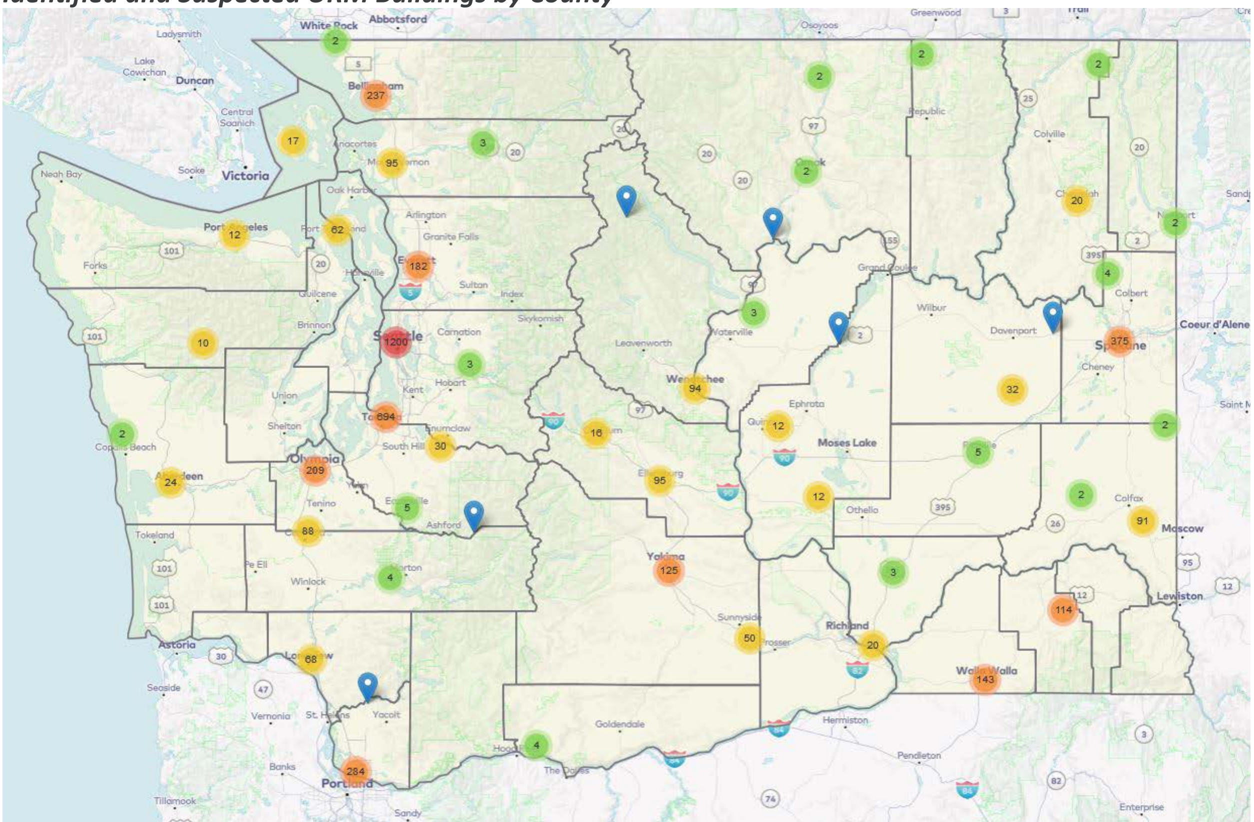
Identified and Suspected URM Buildings



Of the buildings in the Inventory, 4,493 have been classified as “Suspected” or “Identified” URM buildings. These buildings are broken out below by county and legislative district.

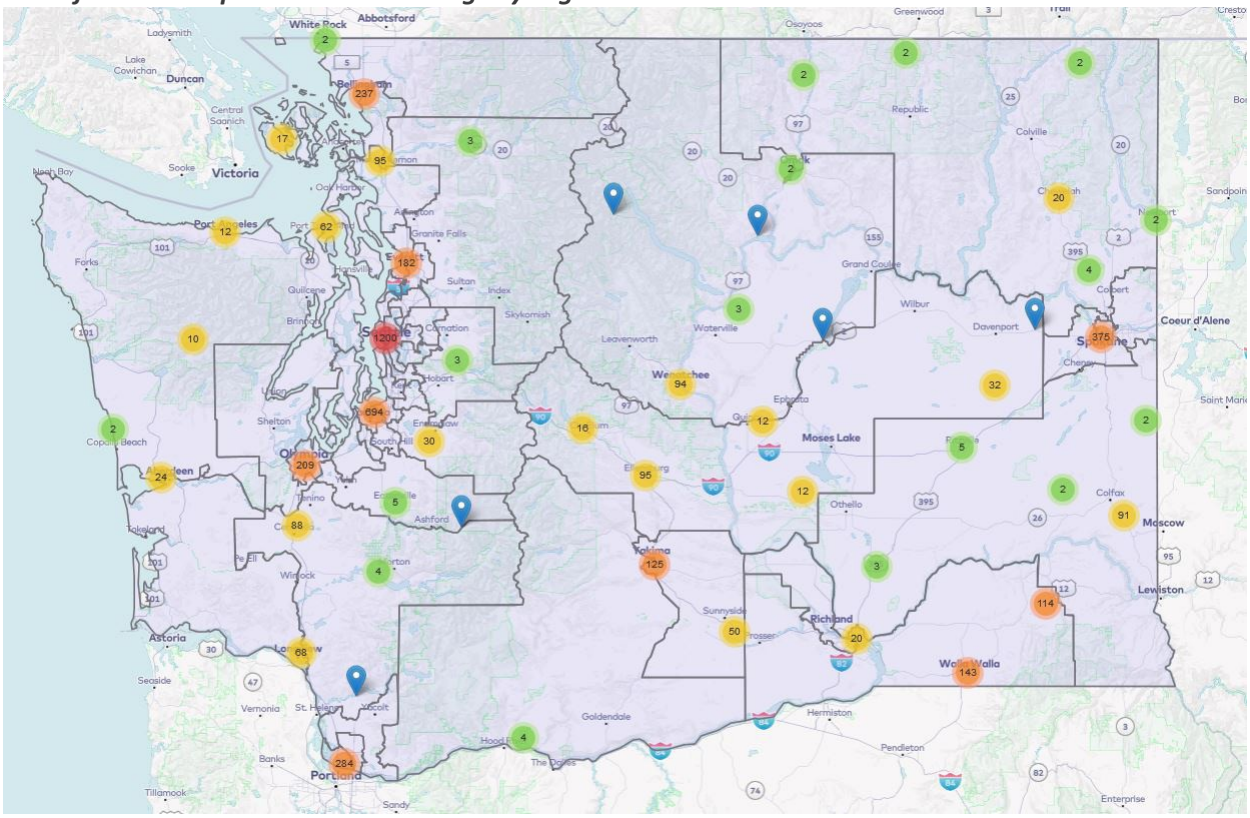
5. Findings

Identified and Suspected URM Buildings by County



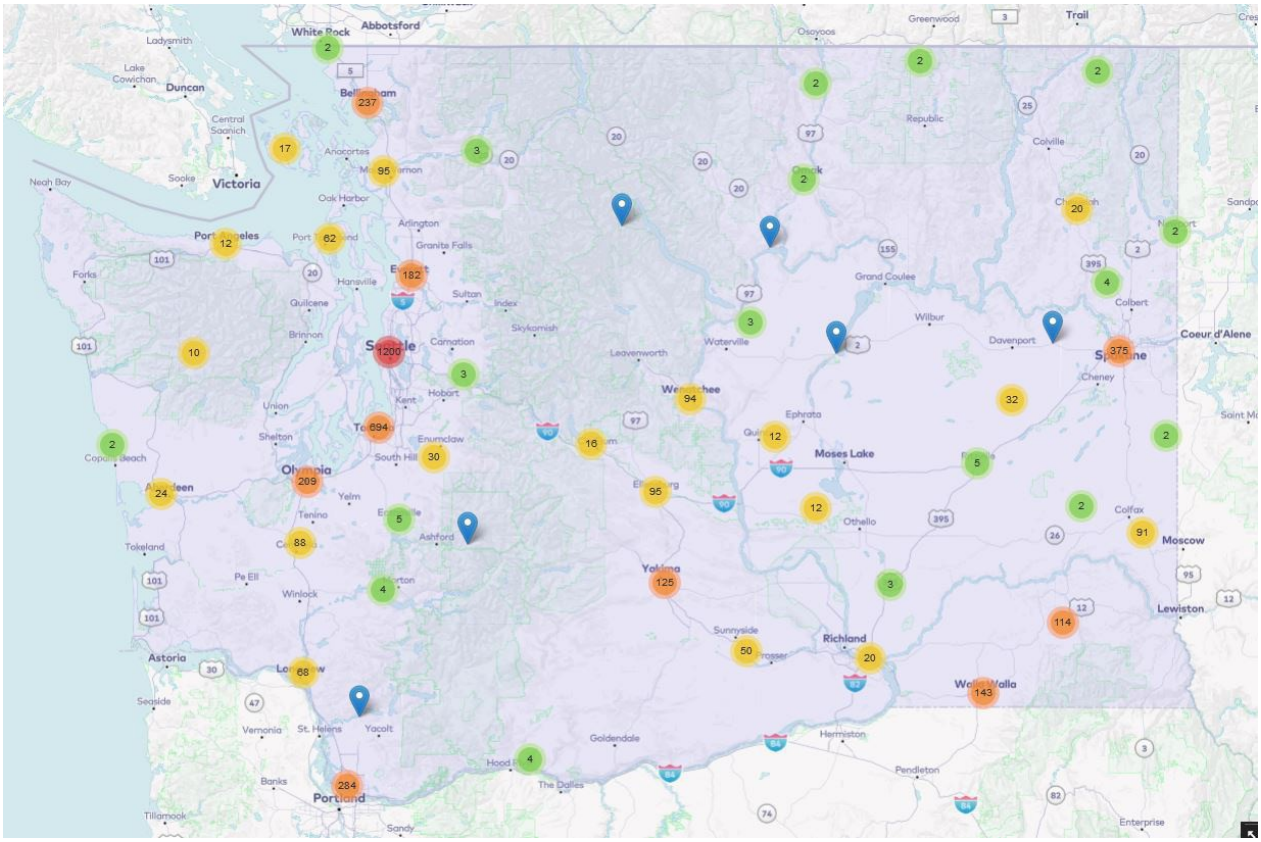
County	Count	County	Count	County	Count
Adams	4	Grays Harbor	20	Pierce	505
Asotin	0	Island	12	San Juan	17
Benton	10	Jefferson	45	Skagit	92
Chelan	90	King	1,271	Skamania	2
Clallam	12	Kitsap	49	Snohomish	182
Clark	249	Kittitas	101	Spokane	343
Columbia	35	Klickitat	2	Stevens	21
Cowlitz	66	Lewis	54	Thurston	213
Douglas	2	Lincoln	29	Wahkiakum	0
Ferry	2	Mason	3	Walla Walla	151
Franklin	9	Okanogan	4	Whatcom	218
Garfield	13	Pacific	0	Whitman	83
Grant	4	Pend Oreille	2	Yakima	154

Identified and Suspected URM Buildings by Legislative District



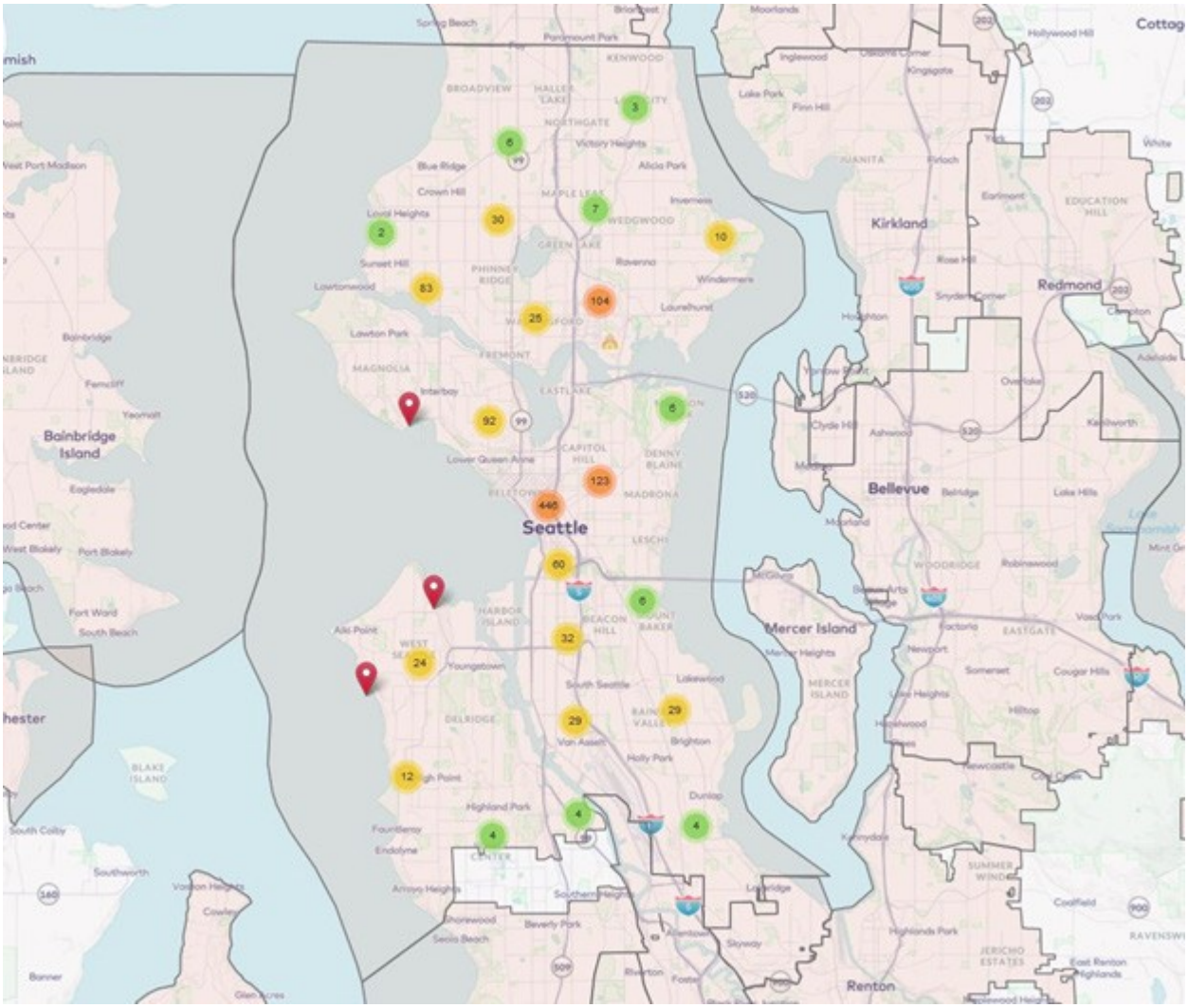
Leg. District	Count	Leg. District	Count	Leg. District	Count
1	34	18	56	35	5
2	17	19	47	36	304
3	293	20	120	37	278
4	10	21	13	38	168
5	6	22	196	39	15
6	64	23	37	40	156
7	37	24	90	41	2
8	8	25	63	42	186
9	168	26	33	43	427
10	19	27	304	44	4
11	72	28	57	45	14
12	101	29	73	46	41
13	167	30	10	47	2
14	107	31	45	48	16
15	70	32	7	49	224
16	212	33	30		
17	3	34	58		

Identified and Suspected URM Buildings by Region



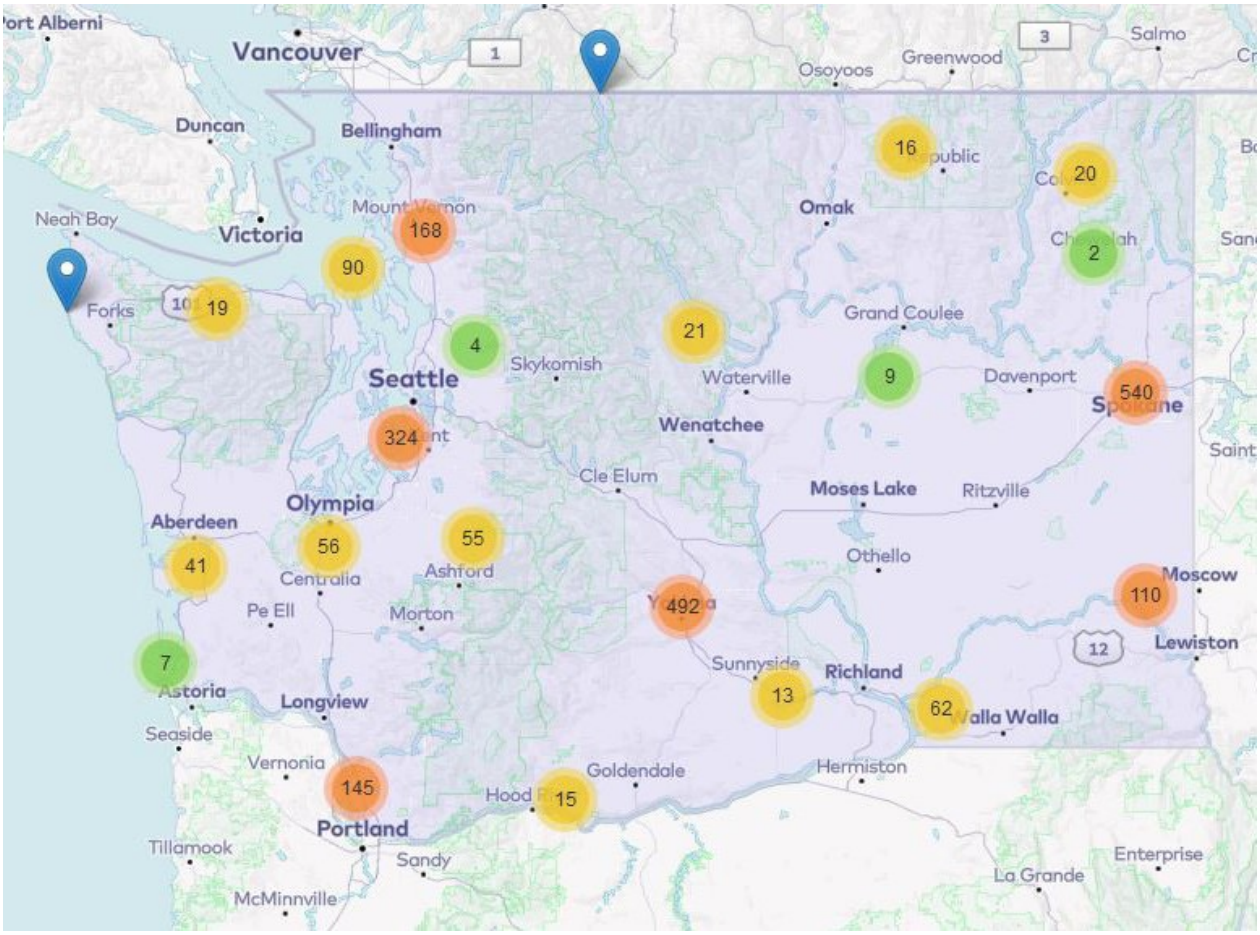
Approximately 63 percent of all buildings in the URM Inventory are west of the Cascades, with the vast majority of these located along the I-5 corridor. The remaining 37 percent of the buildings are east of the Cascades, primarily in the urban centers of Spokane, Walla Walla, Yakima, and the Tri-Cities. The map above shows the distribution of identified and suspected URM buildings, approximately 72 percent of which are west of the Cascades, 28 percent east of the Cascades.

Identified URM Buildings in Seattle



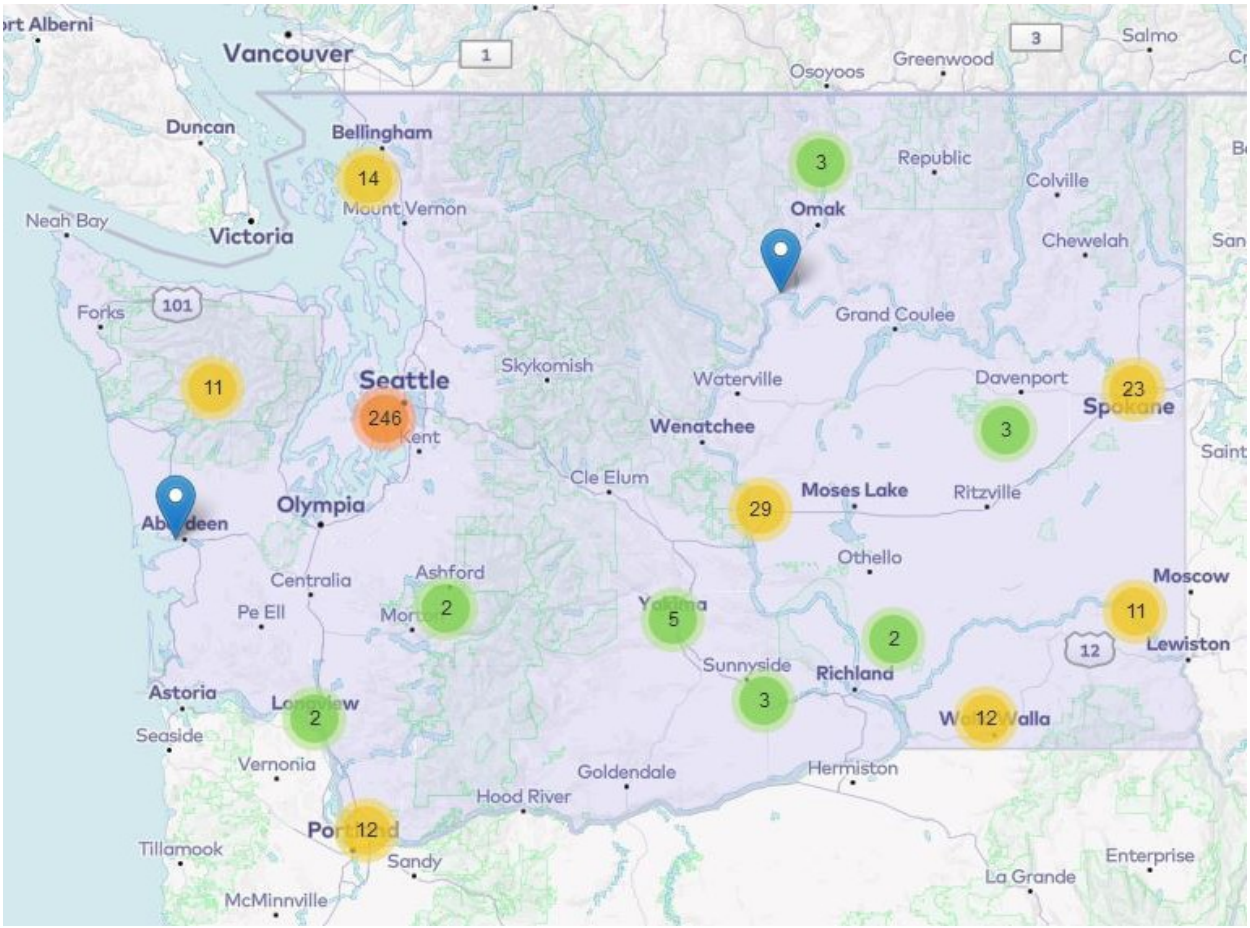
Based on the Seattle URM Survey, 1,144 buildings in Seattle have been classified as “Identified” URM buildings in the statewide URM Inventory.

URM Status = "Unknown"



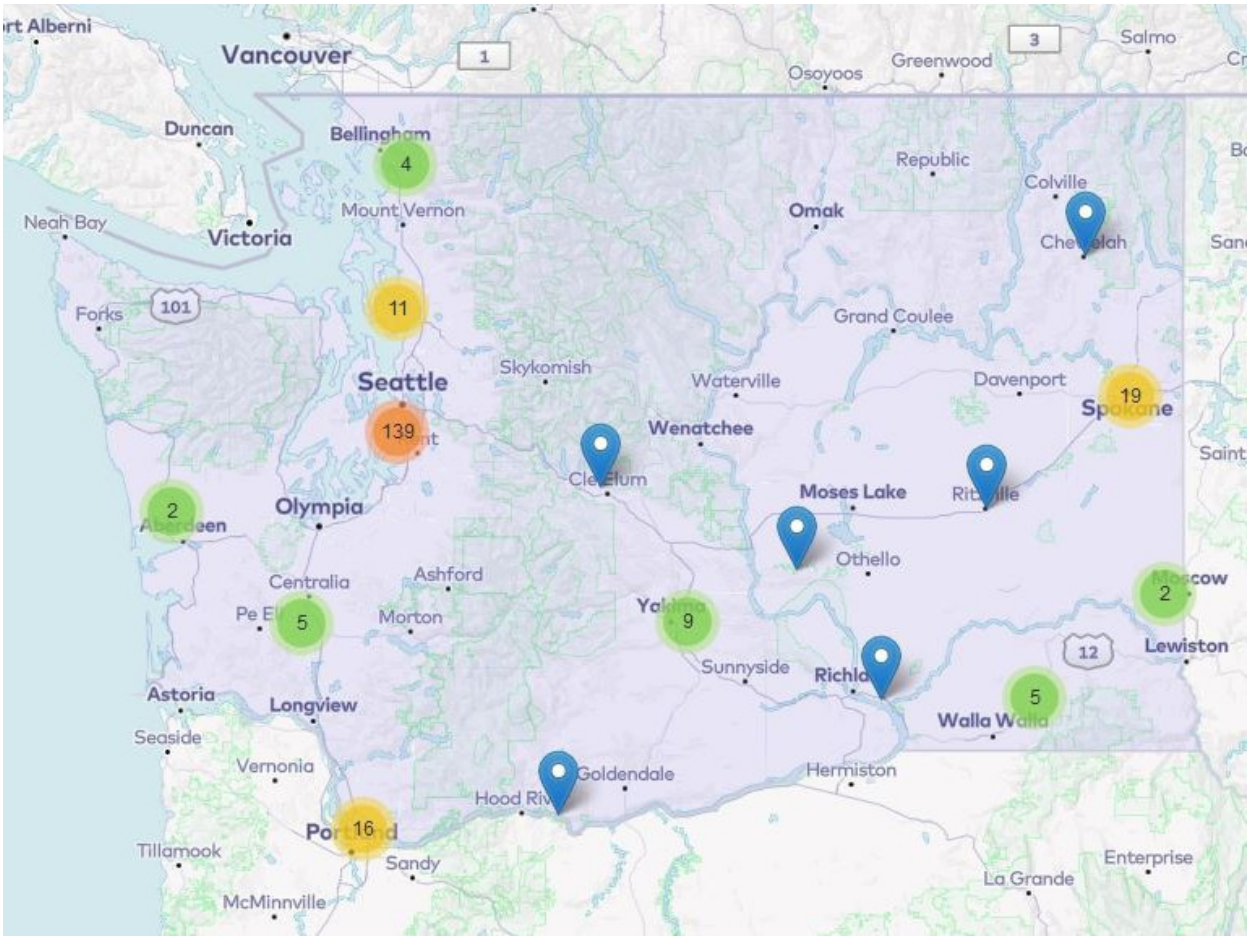
The Inventory includes 2,241 buildings that have been assigned "Unknown" URM status. Of these buildings, 225 have an unknown construction date, and 2,156 have an unknown construction material.

Publicly-owned Identified and Suspected URM Buildings



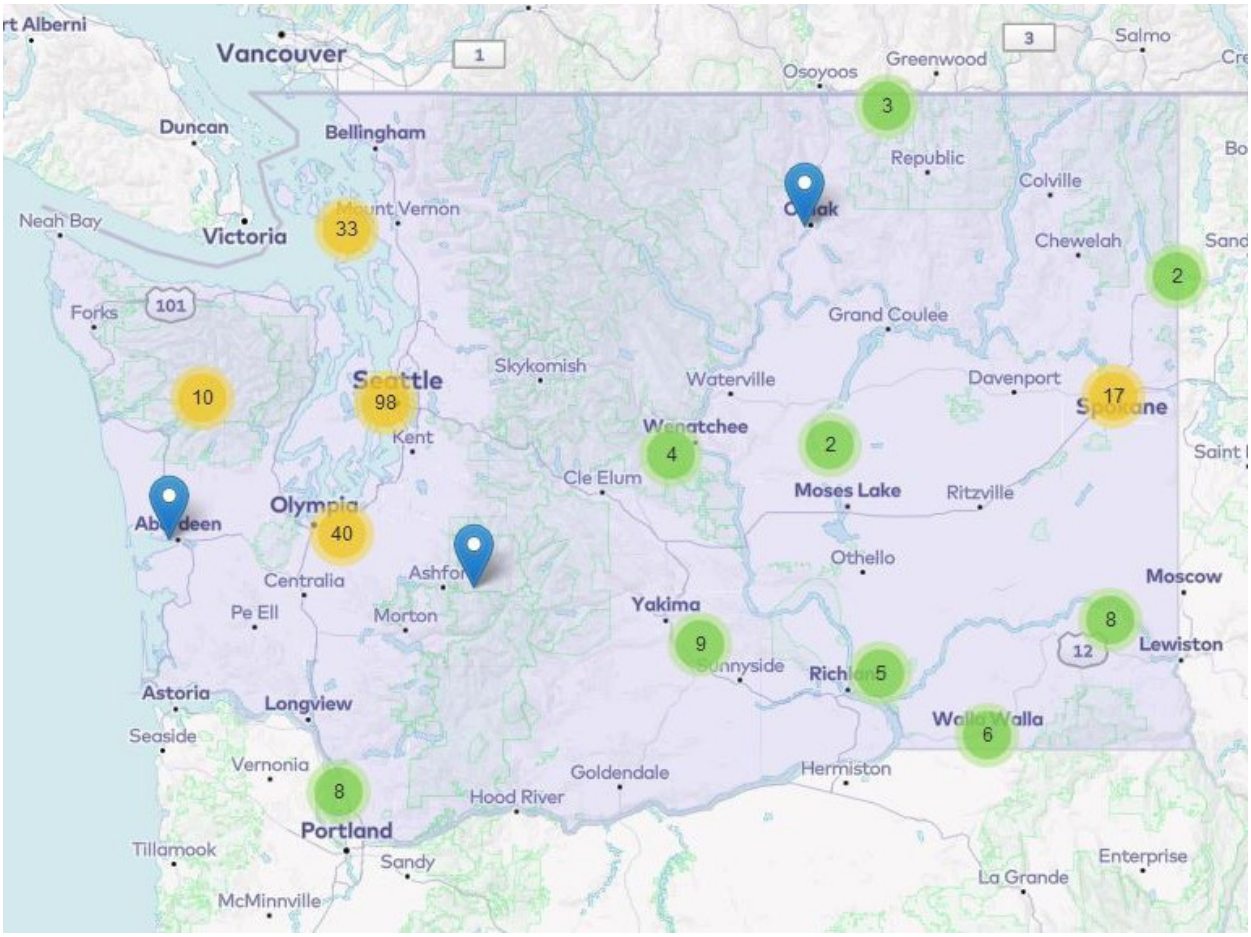
The Inventory includes 844 buildings that have been identified as publicly owned, of which 395 have been classified as Identified or Suspected URM buildings.

Identified and Suspected URM School Buildings



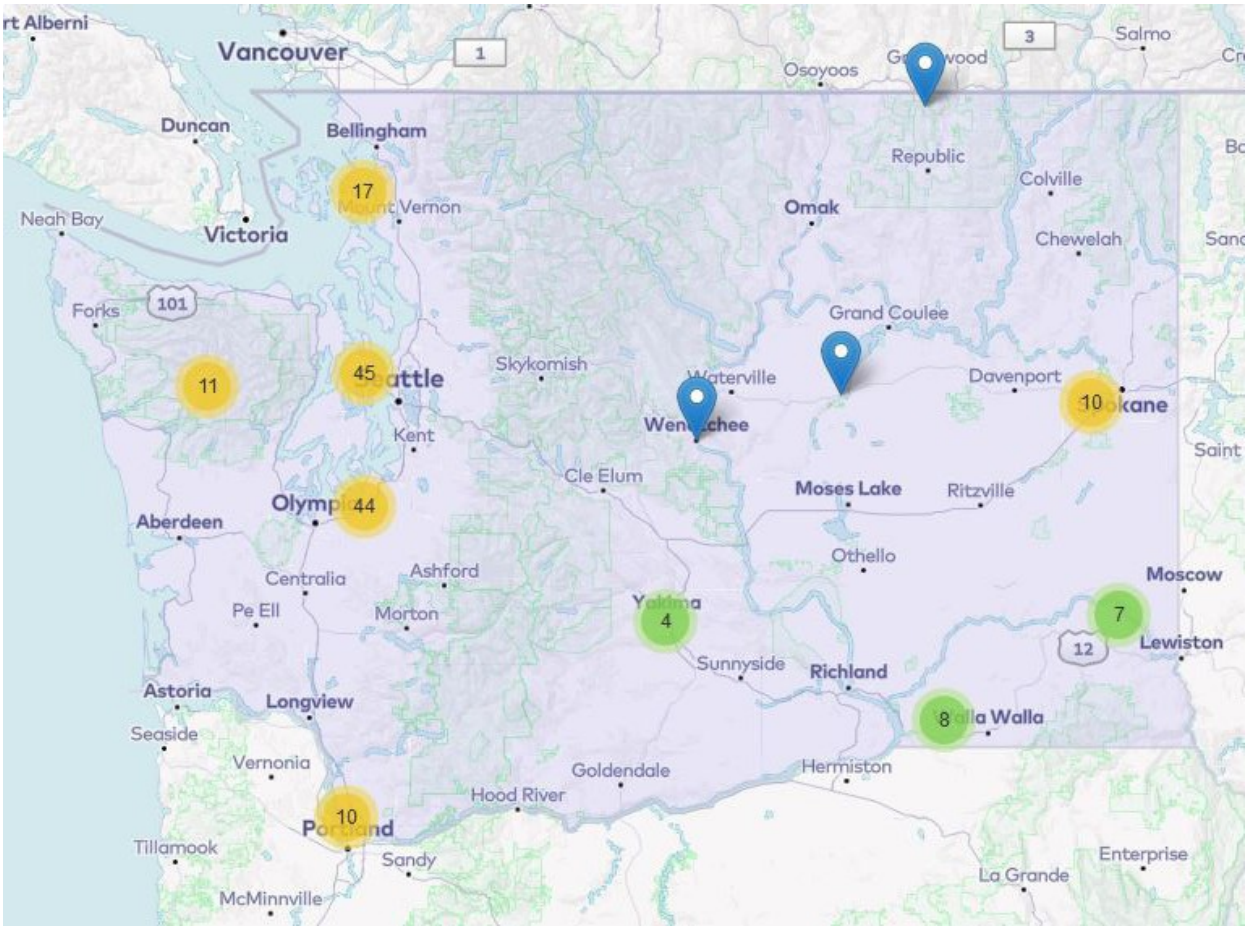
The Inventory includes 387 school buildings. Shown above is the distribution of the 76 that are identified URM buildings, as well as the 143 that have been classified as Identified or Suspected URM buildings.

Identified and Suspected URM Government Buildings



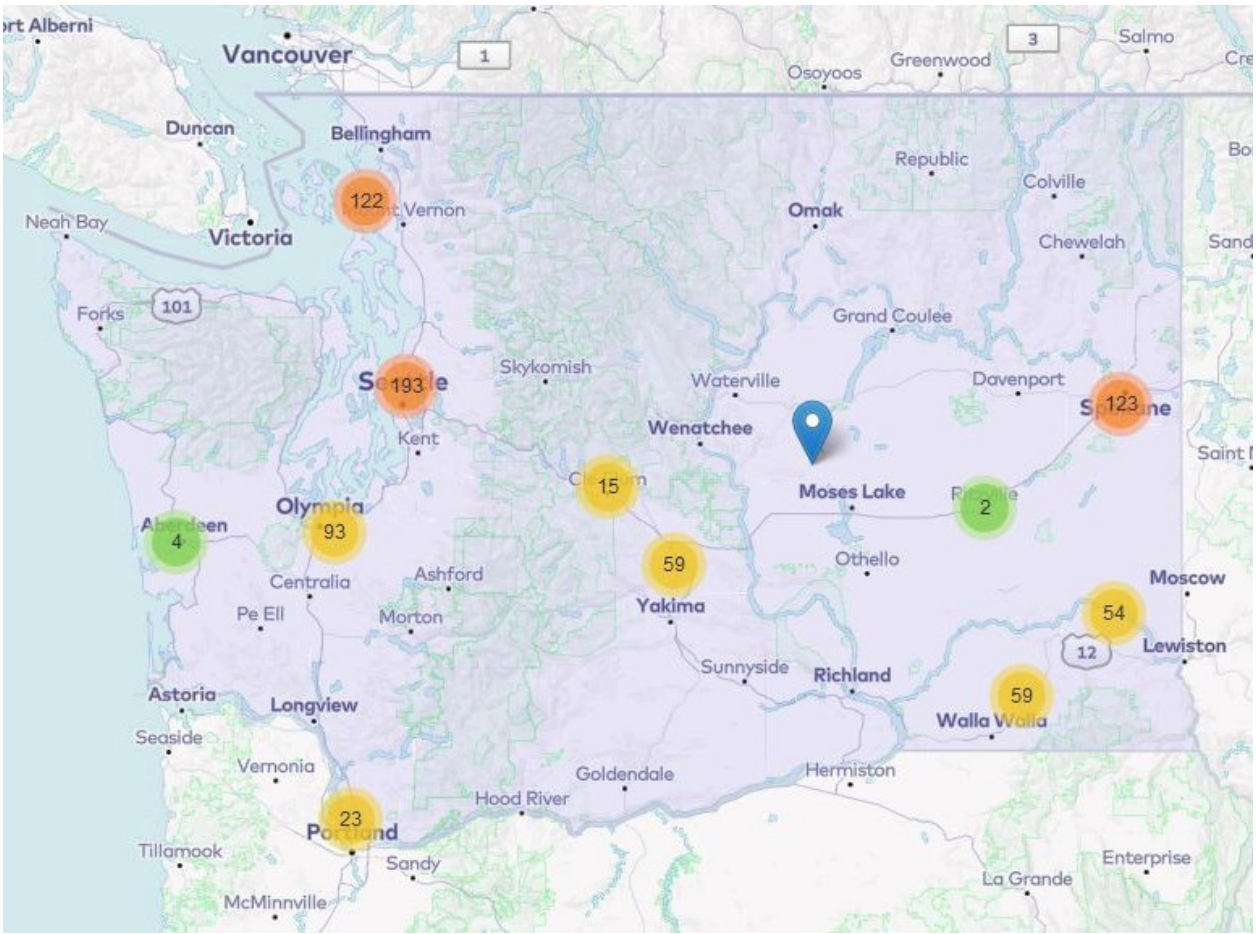
The Inventory includes 729 buildings that have been identified as “Government Building Use.” Shown above is the distribution of the 259 that have been classified as Identified or Suspected URM buildings.

Identified and Suspected URM Emergency Facilities



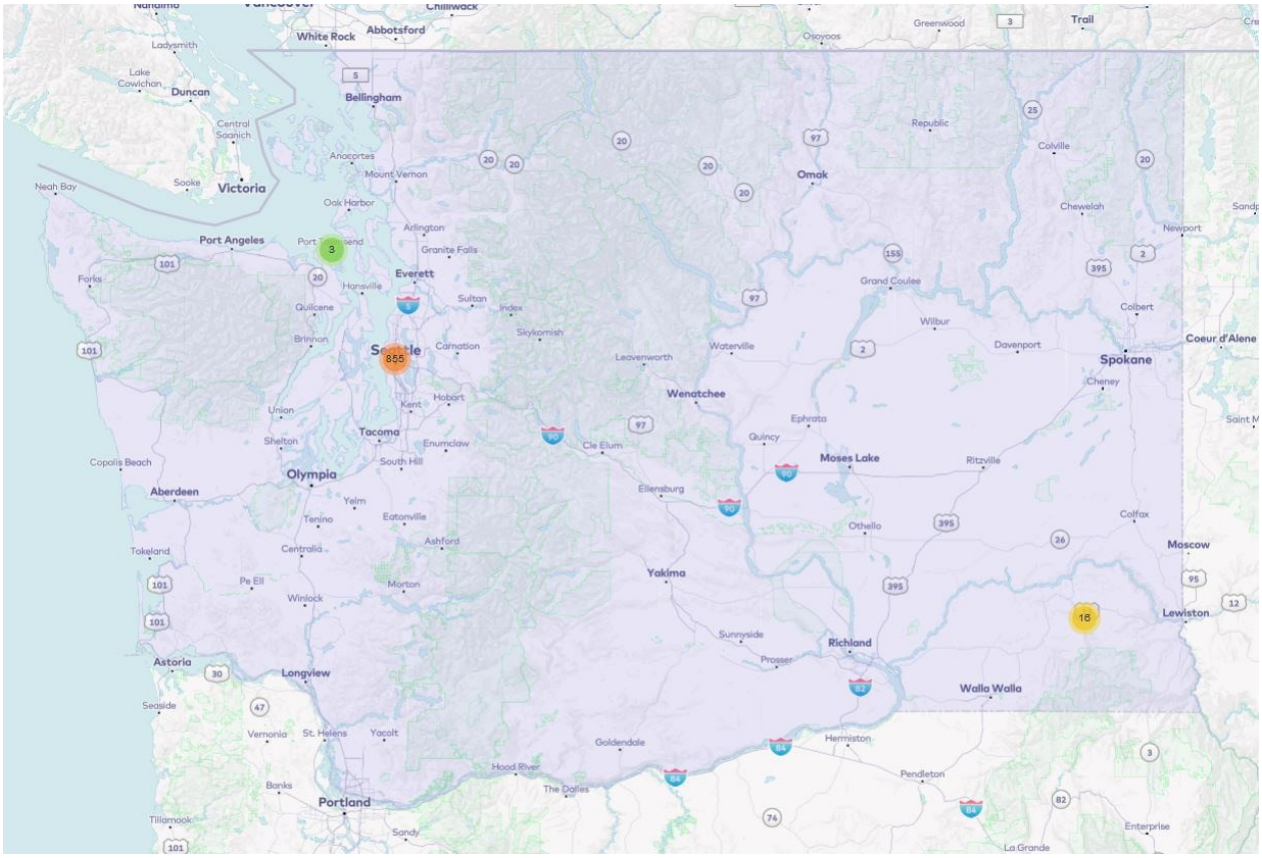
The Inventory includes 510 buildings that have been identified as emergency facilities. Shown above are the 170 that have been classified as Identified or Suspected URM buildings, including 46 hospitals, 4 police stations, 26 fire stations, and 98 “other” buildings (e.g., an emergency operations center, a 911 Dispatch, or a military facility).

Identified and Suspected URM Historic Resources



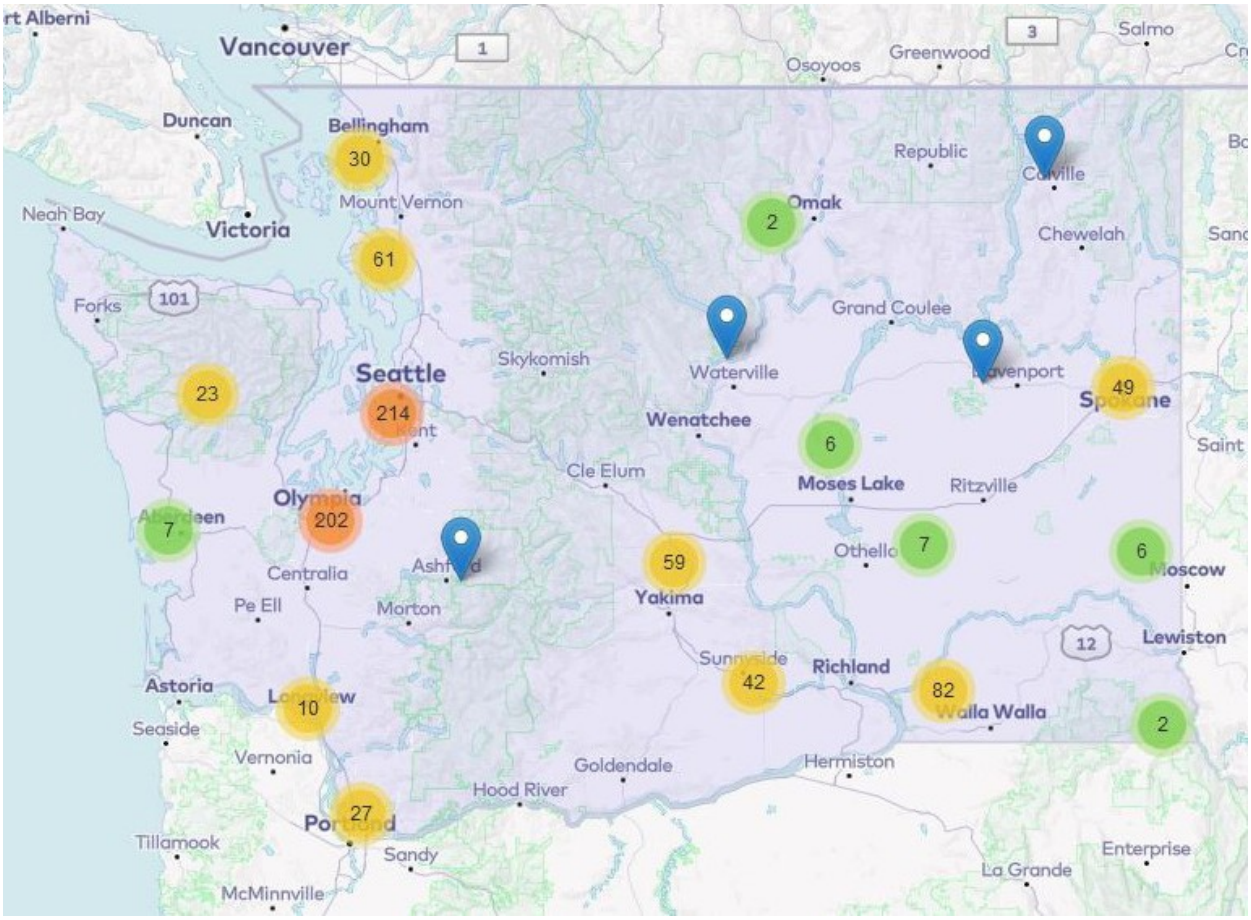
The Inventory includes 1,396 historic buildings that have been listed on the National Register of Historic Places or the Washington Heritage Register. Of these, 748 buildings have been classified as Identified or Suspected URM buildings. The distribution of these 748 is shown in the map above. The Inventory includes an additional 327 identified or suspected URM buildings that have been deemed eligible for the National Register of Historic Places, but have not been formally designated.

Vacant/Underutilized Identified and Suspected URM Buildings



The Inventory includes 874 buildings that have been identified vacant/underutilized or potentially vacant/underutilized. Vacancy information is currently limited to Seattle, Port Townsend, and Garfield County. All but two vacant/underutilized buildings in the Inventory have been classified as an Identified or Suspected URM building.

Pre-1958 Concrete Masonry Unit (CMU) Buildings in Washington



The Inventory includes 1,005 buildings that have been classified as “Not URM” but have been included because they are CMU structures.

5.2 Gap Analysis

Identified gaps or discrepancies in the URM Inventory data are discussed below. Several of these are also addressed in Chapter 6 (Data Recommendations).

Missing or Incorrect Latitude and Longitude Data

As described above in Section 2.1, records in the URM Inventory are mapped in the online URM Dashboard according to latitude and longitude data. Approximately 193 records in the Inventory, including 24 suspected URM buildings, lack latitude/longitude data and are consequently not shown on the Dashboard. The majority of these records (134, or 69 percent) are for buildings located at Joint Base Lewis-McChord. A focused Lewis-McChord survey could be undertaken to associate latitude/longitude data with those records.

There are also instances where there is a discrepancy between the location implied by an address and that specified by the coordinate data. For example, the latitude/longitude data of several records in Downtown Wenatchee appear to be inaccurate, indicating a location one or more blocks distant from the known physical address. Given this, it should be kept in mind that some latitude/longitude coordinates may sometimes be imprecise.

Multiple Buildings on a Single Property

In the WISAARD database, multiple buildings located on a single parcel are typically addressed via a single record that simply aggregates construction material and year built data. In such cases, WISAARD does not correlate a specific construction date with a specific construction material for individual buildings on the subject parcel, complicating the effort to assign URM status appropriately. For purposes of the URM Inventory, these multiple-building records were addressed in the following manner:

- Scenario 1. If one of the building dates was earlier than 1958 or unknown and masonry was among the identified construction materials for the parcel, all buildings on the parcel were classified as Construction Material = “Unknown” and URM Status = “Suspected URM”.
- Scenario 2. If one of the building dates was earlier than 1958 or unknown but masonry was not among the identified construction materials for the parcel, all buildings on the parcel were classified as Construction Material = “Unknown” and URM Status = “Unknown”.
- Scenario 3. If none of the building dates was earlier than 1958, the buildings were not included in the URM Inventory.

While this approach was purposefully designed so as not to undercount Suspected URM buildings, it could in some cases have led to an overcount of Suspected URM buildings, because one pre-1958 building on a parcel could lead to all buildings on that parcel being classified as Suspected URM buildings.

Undercount of Police Stations

The URM Inventory has identified only six police stations statewide that are suspected or identified URM buildings. This is likely a systematic undercount deriving from the fact that the WISAARD database does not allow a property to be identified as a "police station." (The most similar option is "correctional facility," which in most cases likely refers to a prison.)

6. Data Recommendations

This section comprises two types of recommendations regarding the URM Inventory:

- recommendations regarding how the completeness of the collected data could be improved; and
- recommendations regarding additional data that could be collected.

Note that these recommendations are focused on the content and utility of the URM Inventory itself, and should not be confused with broader policy recommendations regarding the regulation of URM buildings.

The URM Inventory, including the online URM Dashboard, will continue to be hosted by The Gartrell Group through 2019. Technical recommendations regarding the future handoff of the URM Inventory and URM Dashboard to a governmental agency are included below in Appendix A3.

6.1 Cleaning Existing Data

Four ways in which the robustness of the existing URM Inventory data could be improved are described below.

Missing Latitude/Longitude Data

As described above in Section 5.2, 193 records in the URM Inventory lack latitude/longitude coordinates, preventing them from being shown on the URM Dashboard. These buildings could be individually investigated to assign appropriate latitude and longitude coordinates.

Upgrade Status for Seattle Buildings

As described above in Section 2.1, the URM Inventory separates seismic upgrades into four classifications:

- Extensive
- Bolts-plus/wall anchors
- Parapet bracing only
- Visible, extent unknown

The city of Seattle URM Survey does not accord with this classification approach. Instead, upgrade status information is separated across two fields: “Retrofit Level” and “Retrofit Standard/Type.” Seattle’s Retrofit Level field takes the following potential values:

- Substantial alteration
- Visible retrofit
- Permitted retrofit
- No visible retrofit

Because these categories do not precisely align with those in the URM Inventory, the Retrofit Level data for Seattle properties has been directly incorporated into the URM Inventory as-is. As a result, the upgrade classifications for Seattle records are slightly different than for all other records in the Inventory. In the future, the Seattle records could be assessed one-by-one to reassign upgrade status data consistent with the remainder of the Inventory. This undertaking will require consulting the “Retrofit Standard/Type” field in the City of Seattle URM Survey. This field is an open-ended field that includes supplemental information (if available) regarding visible or permitted seismic upgrades. The Seattle Retrofit Standard/Type data has been incorporated into the “Upgrade Standard/Code” field in the URM Inventory.

Local Historic District Status
Data in the WISAARD database regarding locally designated historic landmarks and historic districts have been incorporated into the URM Inventory. These data, however, are not comprehensive, as the Department of Archaeology and Historic Preservation (DAHP) does not systematically collect data regarding locally designated historic resources. Generally, the WISAARD database includes information regarding locally designated historic properties and districts only when that information has been shared formally with DAHP. As a result, local historic data in WISAARD is highly partial. Furthermore, in cases where local data is present, the WISAARD database only indicates whether a given property is located within a local historic district; it does not clarify whether or not the property is in fact a contributor to that district. In contrast, the data in WISAARD regarding national and state register districts is more nearly comprehensive and identifies district contributors.

To expand the URM Inventory’s local historic data, effort could be made in the future to coordinate with jurisdictions that have undertaken major local surveys to make sure that data is reflected in the URM Inventory. This could begin with a query to certified local governments (CLGs) and Washington’s Main Street communities to identify past survey efforts.

Multiple WISAARD Records at a Single Location with Different Dates of Construction
Many records in WISAARD have distinct Property ID numbers but otherwise appear to contain largely identical information. This appears to occur primarily with regard to school and university campuses, where all buildings on campus are assigned common values but are, in actuality, separate and distinct buildings. Such WISAARD records that had distinct construction build dates were incorporated into the

URM Inventory as distinct buildings. There may be instances, however, in which the URM Inventory now includes redundant records at a single location. As described in Section 5.2, these buildings may also contribute to an overcount of suspected URM buildings in the Inventory. Further investigation may be warranted to root out these potential duplicates. Such analysis could start by isolating records in the URM Inventory with identical, or nearly identical, latitude/longitude coordinates and/or address. These isolated records could then be compared to Google Maps or the results of a field survey to identify any buildings with multiple records.

6.2 Additional Data Collection

Due to time and budget constraints, development of the URM Inventory necessarily focused on consolidating information from existing data sources, which may in some instances be incomplete, inaccurate or inconsistent. As a result, there are undoubtedly URM buildings in Washington that are not yet included in the URM Inventory. This report closes with a series of recommendations regarding how information pertaining to those additional URM buildings might be captured.

Field Survey Materials

The reference documents and sample survey forms included below in Appendix C have been designed to facilitate the collection of additional data for incorporation into the URM Inventory. These materials are intended to help field surveyors collect relevant information in an efficient, organized manner.

Certified Local Governments (CLGs) and Main Street Communities

Each of Washington's certified local governments (CLGs) and Main Street communities was informed of the URM Inventory effort and solicited for relevant data (see Section 2.3 and Appendix B3).

While a handful of CLGs and Main Street communities responded with data, most did not. As a result, the Department of Commerce may wish to seek ways to encourage these entities to collect URM-specific data for their respective jurisdictions. This could be fostered, for example, through establishment of a micro-grant program under the auspices of DAHP through which CLGs and Main Street communities could apply for funds to offset the cost of survey work.

OSPI and OFM

As described in Section 2.3, datasets provided by the Washington Office of Superintendent of Public Instruction (OSPI) and Washington State Office of Financial Management (OFM), which included basic information regarding the state's public schools and state-owned buildings, were not structured in such a way that they could be incorporated into the URM Inventory without extensive additional data collection. A detailed explanation of how these datasets could be expanded and restructured for such incorporation is include in Appendix B2. For starters, the results of the Washington Geological Survey's assessment of approximately 220 schools (see Section 2.3) should be incorporated into the URM Inventory when available.

County Assessors
Each of Washington's County Assessors was informed of the URM Inventory effort and solicited for relevant data (see Section 2.3 and Appendix B3). County assessor data could serve as an important source of building specific information, such as date of construction and construction material, that is missing for some records in the URM Inventory. County assessor data could also identify entirely new records that need to be added to the URM Inventory. In general, however, county assessor data does not appear to be organized in a manner that enables straightforward integration with the URM Inventory.

Appendix B3 identifies those county assessors that, based on their websites, appear to collect both construction material and year built data:

- Benton
- Douglas
- Franklin
- Grant
- King
- Lincoln
- Mason
- Okanogan
- Pacific
- Skamania
- Spokane
- Whitman
- Yakima

These may be the best locales to contact first if additional consultation with county assessors is desired.

Emergency Facilities
Consideration should be given to coordinating with emergency management officials in the future to complete a survey of URM emergency facilities statewide. As summarized in Appendix B3, such officials from around the state were informed of the URM Inventory effort and solicited for relevant data. In general, responses received indicated that any relevant data such officials possessed had already been incorporated into WISAARD. It is unknown, however, the extent to which emergency facilities have been surveyed.

Rural Locations
Because they are less likely to have been the focus of historic resource surveys, the most rural parts of the state may be underrepresented in the WISAARD database, and thus in the URM Inventory. The following 15 counties, for example, currently have 10 or fewer suspected URM buildings in the URM Inventory:

- Adams
- Asotin
- Benton
- Clallam
- Douglas
- Ferry
- Franklin
- Island
- Klickitat
- Mason
- Okanogan
- Pacific
- Pend Oreille
- Skamania
- Wahkiakum

In a similar vein, 11 state congressional district (districts 4, 5, 8, 17, 30, 32, 35, 41, 44, 45 and 47) currently include 10 or fewer suspected URM buildings in the Inventory.

Systematic outreach to any CLGs, Main Street communities, and emergency managers in these counties and/or congressional districts would be an important first step in identifying whether there may be collections of URM buildings in these localities that have not yet been incorporated into the URM Inventory. Focused survey work could be undertaken where such collections are suspected to exist.

Vacant/Underutilized Buildings

The URM Inventory effort did not identify any entity, or set of entities, that regularly and systematically collect building occupancy data. Furthermore, vacancy status is often not readily apparent even in the process of conducting a field survey. As a result, data regarding vacancy/underutilization in the URM Inventory is highly limited. Assessing vacancy/underutilization statewide will require a large, dedicated survey effort to collect more robust and extensive data.

Geologic Hazard Map

To enhance the utility of the online URM Dashboard, the Department of Commerce could consider adding in the future a base map layer showing the state's geologic hazard zones. Such a layer would enable the URM Inventory data be used to preliminarily identify comparative seismic risk

APPENDICES

Appendix A. Database Design

- A1. Data Dictionary
- A2. Entity Relationship Diagram
- A3. Long-term Management of URM Inventory

Appendix B. Field Survey Materials

- B1. Survey Methodology Handout
- B2. Sample Field Survey Form
- B3. Port Townsend Pilot Survey Spreadsheet

Appendix C. Collected Data

- C1. Outreach Materials
- C2. Collected Data
- C3. Data Log
- C4. Data Migration Scripts and Procedures
- C5. Data Reconciliation

Appendix A1
Data Dictionary

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	FIELD NAME	FIELD VALUES	DEFINITION(S)	COMMENTS
ID/LOCATION	**Unique Identifier**			*Auto-generated when building is added to the database*
	Parcel Number			
	Address			
	City			
	County			
	Legislative District		State Legislative District	
	Latitude			
	Longitude			
BUILDING INFORMATION	**URM Status**	Identified URM	Confirmed based on survey.	*Identified URMs are currently limited to Seattle and downtown Port Townsend.*
		Suspected URM	A building **constructed prior to 1958** with one or more masonry (includes 'Masonry', 'Masonry - Brick', 'Masonry - Clay Tile', 'Masonry - Stone' from the *Construction Material* field) bearing walls that provide the primary support for vertical loads from floors or roofs. **Excludes single family residential.**	*Aligns with Seattle's URM definition with the following two exceptions:* *• Seattle's database reflects buildings constructed prior to 1977* *• Seattle's Database also excludes duplex residential*
		Not URM	Confirmed not URM based on survey.	*• Including this option helps avoid re-visiting possible or suspected buildings that have been cleared by a previous process (e.g. confirmed to be a veneer or infill building).*
		Unknown	A building of unknown construction type or unknown construction date.	***Default** field value if no construction material or construction date can be determined.*
	Date Constructed		Original year built	
	Date Altered		Date of significant modification subsequent to construction (not necessarily seismic related)	
	Construction Material	Masonry	Plain clay brick or clay tile masonry construction of one or more bearing walls that provide the primary support for vertical loads from floors or roofs. **Specifically excludes concrete frame buildings with unreinforced masonry infill or foundations, concrete masonry unit (CMU) buildings, and concrete or steel frame buildings with unreinforced masonry curtain walls.**	*• Seattle's definition excludes CMU (even if unreinforced), and a recent project confirmed that Seattle does not expect to retrofit CMU as part of the URM ordinance. The IEBC does include unreinforced or very lightly reinforced CMU in their definition of URM.*
		Masonry - Brick		*Use when more specific construction material information is available.*
		Masonry - Clay Tile		*Use when more specific construction material information is available.*
		Masonry - Stone		*Use when more specific construction material information is available.*
		CMU	Concrete masonry unit	
		Other		*To be used during field surveys. Buildings coded as "other" are removed from the database.*
		Unknown	A building with an unknown construction type	***Default** field value, if no material can be identified.*
	Stories		Number of floors above grade	
	Square Footage		Gross building square footage	

	FIELD NAME	FIELD VALUES	DEFINITION(S)	COMMENTS
BUILDING INFORMATION, continued	**Building Ownership**	Public	Owned by federal, state or local governmental entity.	
		Private	Not owned by federal, state or local governmental entity.	***Default*** *field value. All buildings assumed 'Private' ownership, unless/until information is gathered otherwise*
	Building Use	C-Commercial	Current building use, as of the date the information was collected.	*These categories are similar to those used as part of the City of Seattle URM survey.*
		O-Office		
		R-Residential (Multi-Family)		
		E-Emergency		
		G-Government		
		I-Industrial		
		P-Public Assembly		
		S-Schools		
		M-Other Mixed Uses		
	Emergency Facility	Hospital		
		Fire Station		
		Police Station		
		Other		*E.g. Emergency Operations Center or 911 Dispatch*
	Vacant/Underutilized	Yes	A building that, at the time of survey, appears to have 50% or more vacancy at the ground floor; and/or 50% or more vacancy at the upper floors.	
		Yes, ground floor	A building that, at the time of survey, appears to have 50% or more vacancy at the ground floor.	
		Yes, upper floor	A building that, at the time of survey, appears to have 50% or more vacancy at the upper floors.	
		Potentially	Building that appears to be 50% or more vacant but survey is inconclusive.	
		No		
		Unknown		***Default*** *field value*
HISTORIC INFORMATION	**Historic Building Name**			
	Historic Status	NRHP/WHR	Listed on the National Register of Historic Places as an individual resource	
		NRHP/WHR District	**Contributor** to a historic district that is listed on the National Register of Historic Places	
		NRHP-eligible	Formally deemed eligible for listing on the National Register of Historic Places	
		WHR	Listed on the Washington Heritage Register as an individual resource	
		WHR District	**Contributor** to a historic district that is listed on the Washington Heritage Register	
		Local	Listed on a local historic register	*Included in those instances where local data is in WISAARD.*
		In Local District	**Located within** a local historic district	*Included in those instances where local data is in WISAARD.*
	Historic District		Name of NRHP and/or local district (if applicable)	*For local districts, this field only identifies whether a property is within a district; it does not identify whether that property is a contributor to the district. For NRHP and WHR districts, this field generally identifies only district contributors.*

	FIELD NAME	FIELD VALUES	DEFINITION(S)	COMMENTS
BUILDING AND SITE CHARACTERISTICS	**Architectural Features**	Header courses		*The presence of header courses and/or rosettes is strongly indicative that a building is a URM. The other fields may prove useful in future use of the database to assess seismic risk.*
		Rosettes @ parapet		
		Rosettes @ floor/roof		
		Parapet bracing		
		Open storefront	ground floor wall is less than 2/3rds the extent of upper-floor walls	
		Party wall		
		Adjacent building height or floor discrepancy		
		Complex footprint		
		Visible braces		
	Site Features	Site Slope	"Yes" if site elevation varies by more than the height of one story	*These are site conditions that can affect building behavior during a seismic event.*
		Soil Liquefaction	"Yes" if identified liquefaction potential	
		Soil Slide Area	"Yes" if identified landslide potential	
	Upgrade Status	Extensive	Structural upgrades have been performed throughout the building, including new lateral elements such as walls, braced frames, or moment frames; *or retrofits conforming with ASCE 41 or IEBC Appendix A1 provisions for URM buildings.*	
		Bolts-plus (or Wall Anchors)	Structural upgrades have been performed on the building, including all of the following (or substantially similar retrofits): parapet bracing; wall attachments to roof and floors; out-of-plane wall bracing.	
		Parapet bracing only	Only the parapets have been braced. Often indicated when the parapet has rosettes or visible braces but no roof or floor anchors are visible.	
		Visible, extent unknown	Upgrades visibly apparent but nature of upgrades unclear.	
		None visible	No structural upgrades have been performed on the building since its original construction, or no signs of retrofit are visible from field survey.	
		Unknown		***Default*** *field value* **,** *if identified as a suspected URM, and no information is available regarding upgrades*
	Upgrade Date		Year of **latest** seismic upgrade, if any	
	Upgrade Standard/Code		The building code, standard, or local ordinance (including year) used to design the seismic retrofit of the structure.	*E.g., "IBC 1997 Existing Building" or "ASCE 41-06."*
	Retrofit Permit Numbers			
	FEMA Score			*See FEMA 154, Rapid Visual Screening for reference*
	Comments			*Open-ended text field*

	FIELD NAME	FIELD VALUES	DEFINITION(S)	COMMENTS
SOURCE	**Data Origin/Source**	Source dataset or agency		
	Source Date		Date information was collected	
	Verification Level	High		***Internal field only, not available to the public.*** *Qualifies degree of confidence in data record. Could be used to assess and visualize data confidence and see if it varies by area, building characteristics, or other variables.*
		Medium		
		Low		
		Unknown		***Default f****ield value*

Appendix A2
Entity Relationship Diagram

Appendix A2. Entity Relationship Diagram

An entity relationship diagram (ERD) is intended to illustrate graphically the relationships among database tables and their logical structure. The ERD for the URM Inventory is presented below. For legibility, it has been broken into four pieces.

The first component – Diagram 1 below – highlights the relationship between the main *Buildings* table and the 18 other tables. The *Buildings* table stores building records with each assigned a primary key (PK). The PK serves as the unique identifier that other tables can relate back to through use of what is called a foreign key (FK) relationship. The FK is, in essence, the original table's PK that lives in any secondary table.

Outside of the main *Buildings* table, any table that begins with *Buildings_xxxx* has a many-to-one relationship with the main Buildings table. In these specific tables, a single building record can exist multiple times. For example, an individual building can have multiple building uses ("Commercial", "Office"). To integrate that information within the URM Inventory, that specific building would appear twice in the *Buildings_BuildingUses* table: one record to capture its 'Commercial' use and another record to capture its 'Office' use.

Tables that do not have the *Buildings_xxxx* nomenclature serve as lookup tables. These associate longer descriptive terms with a unique set of values (most commonly integers and in some cases singular letters). Lookup tables help to ensure data integrity by enforcing consistency in descriptions that, if entered in free form, might recur with troubling discrepancies. Some lookup tables relate directly back to the main *Buildings* table, while others relate directly to *Buildings_xxxx* tables.

For complete review of the first component of the ERD - refer to first diagram in Appendix A2. Entity Relationship Diagram.

Diagrams 2, 3 and 4 below display all tables, their respective column names and their respective data type assignments. These secondary diagrams more closely highlight the relationships between *Buildings_xxxx* tables and specific lookup tables.

Diagram 1: Database Table Relationships based on Primary and Foreign Key Constraints

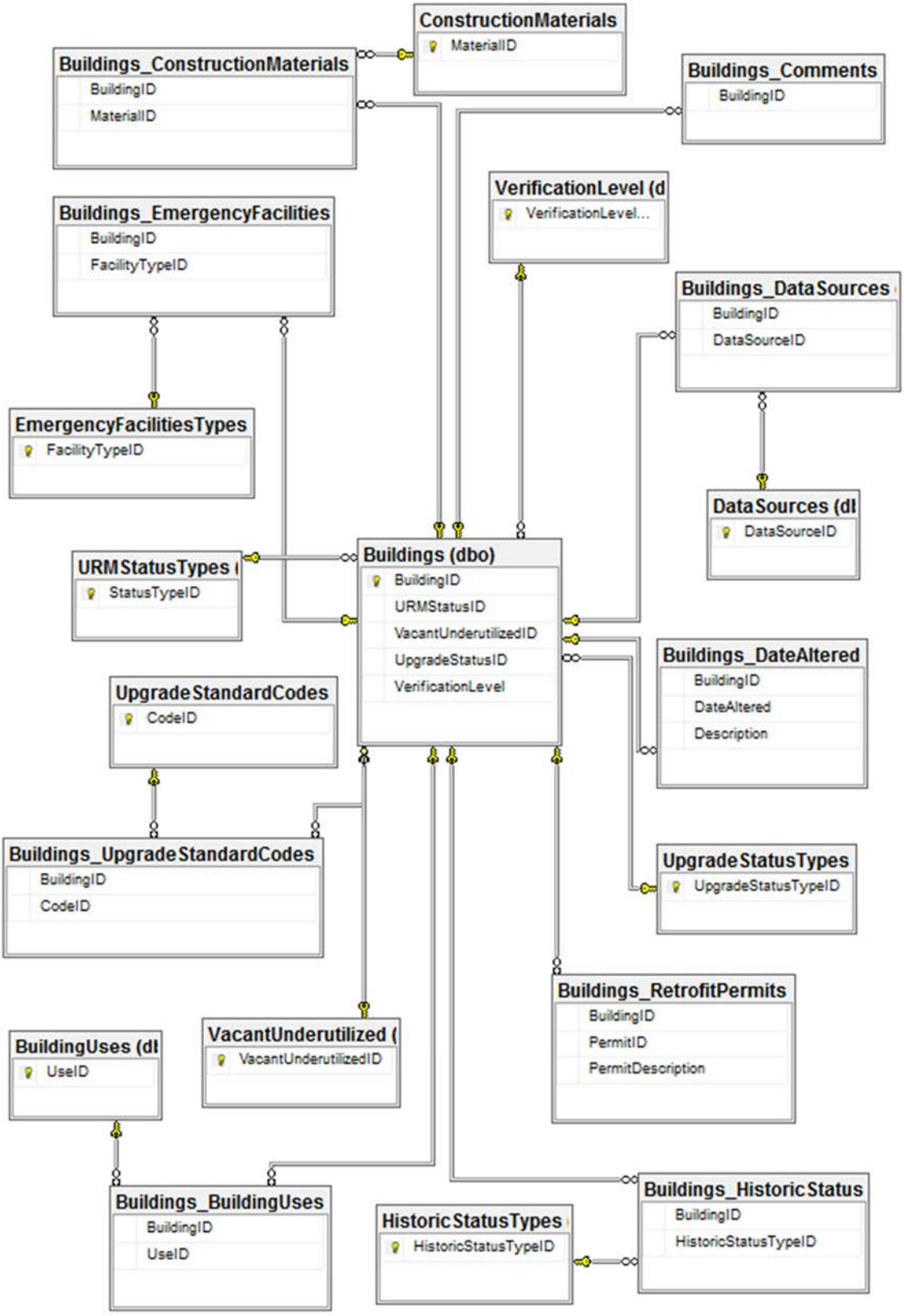


Diagram 2: The main *Buildings* table, associated columns, and data types

Buildings (dbo)

Column Name	Data Type
BuildingID	int
BuildingName	varchar(250)
BuildingOwnership	varchar(15)
Address1	varchar(250)
Address2	varchar(250)
City	varchar(100)
County	varchar(50)
State	varchar(2)
PostalCode	varchar(50)
ParcelNumber	varchar(125)
Latitude	decimal(9, 6)
Longitude	decimal(9, 6)
LegislativeDistrict	smallint
URMStatusID	int
DateConstructed	smallint
Stories	decimal(5, 2)
SquareFootage	decimal(12, 2)
VacantUnderutilizedID	int
UpgradeStatusID	int
UpgradeDate	smallint
HeaderCourses	varchar(15)
RosettesAtParapets	varchar(15)
RosettesAtFloorRoof	varchar(15)
Parapets	varchar(15)
SoftStory	varchar(15)
OpenStorefront	varchar(15)
EstimatedPercentSolidWall	smallint
PartyWall	varchar(15)
AdjacentBuildingHeightFloorDiscrepancy	varchar(50)
ComplexFootprint	varchar(15)
VisibleBraces	varchar(15)
SoilLiquefaction	varchar(15)
SoilSteepSlope	varchar(15)
SoilSlideArea	varchar(15)
FEMAScore	decimal(9, 2)
BuildingFootprint	geography
VerificationLevel	int
Duplicate	bit

Diagram 3: Field names and data types for *Buildings_xxxx* and their associated lookup tables

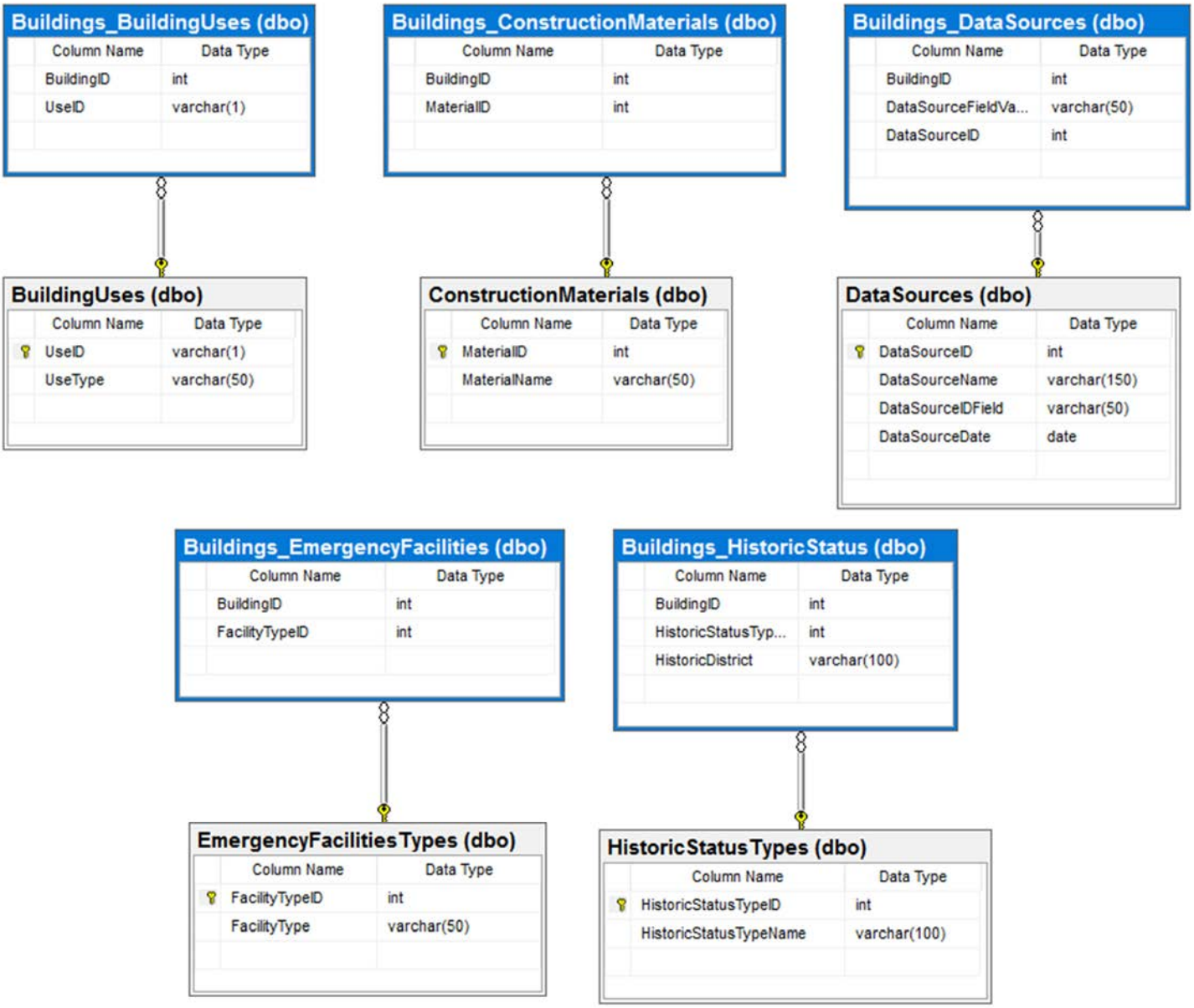
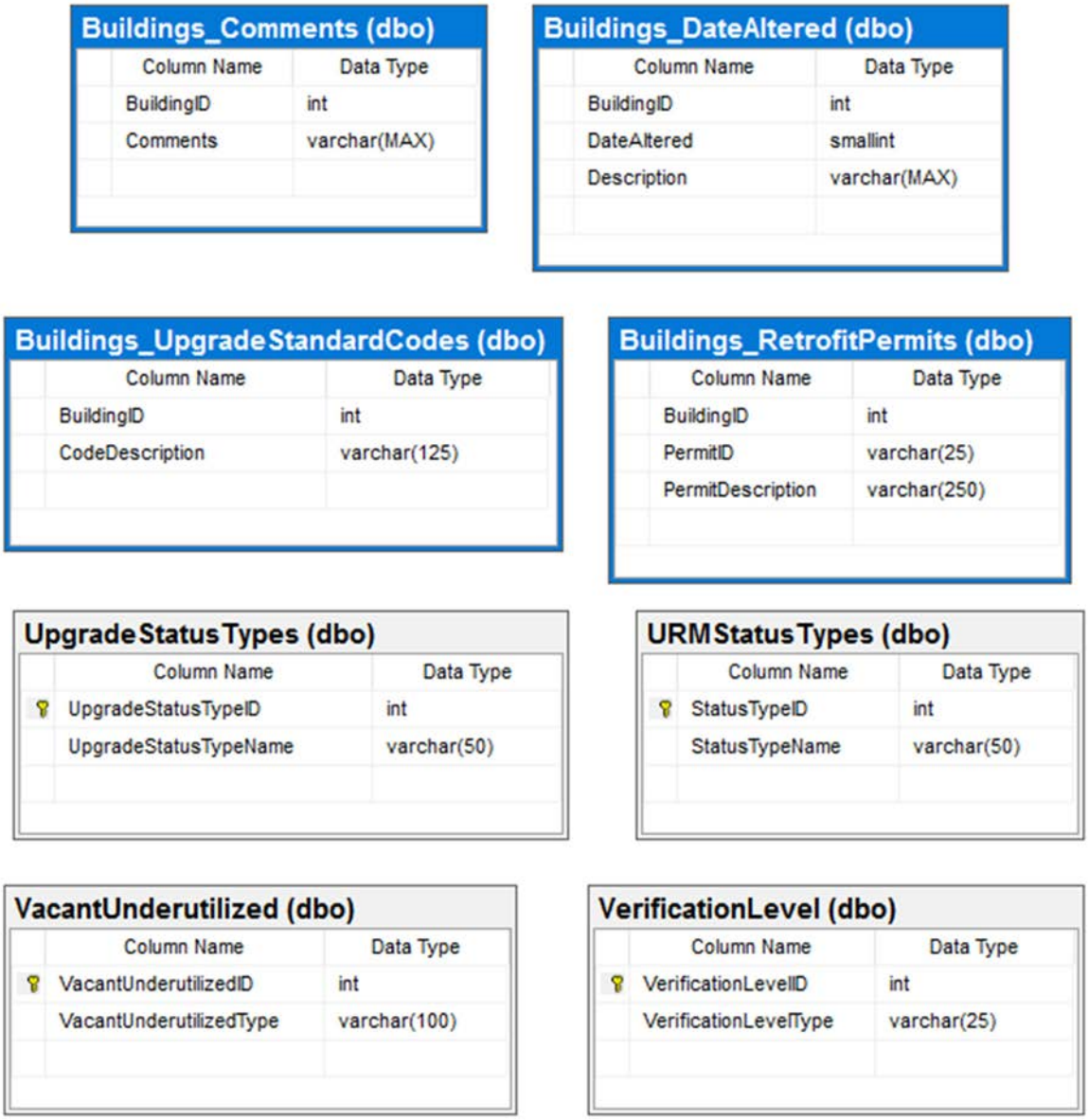


Diagram 4: Additional tables, their respective field names, and data types



Appendix A3
Long-term Management of URM Inventory

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Appendix A3. Long-term Management of URM Inventory

There are several options for how and where the URM Inventory will be deployed, as well as how it will be maintained and by whom. Considerations relevant to the long-term management of the URM Inventory are summarized below. Several of the specific applications cited below use fee-based subscription services that may in some instances be substituted with a no-fee replacement.

The URM Inventory consists of two primary components:

- The database of approximately 7,800 building records, implemented in Microsoft SQL Server 2017 and consuming approximately 30 megabytes of drive space.
- A web-based interactive map viewer (Dashboard), providing a graphical user interface (GUI) through which end users may search and explore details of the URM Inventory records within their locational context.

The Dashboard is a lightweight web application leveraging the capabilities of *Leaflet.js*, the leading open-source JavaScript library for interactive maps. The Dashboard also integrates several other commonly used open-source source libraries including *Bootstrap*, *jQuery*, and *Express*. The Express component serves as a framework to help organize how data (re: building records and related information) are passed from the database to the Dashboard.

The "footprint" of the Dashboard application files themselves is only several megabytes and the server-side requirements for deployment are relatively simple. The deployment server must:

- Have web server software installed and configured to support standard web applications
- Have a JavaScript library called Node.js installed. Through the Node.js installation process, options to install several other standard sub-components are also installed.
- Enable network connections to the SQL Server database. The database can be resident on the same server where the app is deployed or can be on a different server and configured to accept authorized connections through a known user account with 'READ' privileges implemented either via SQL Server Authentication or via Windows Authentication. Currently, the URM DB uses SQL Server Authentication and supports application connections over the standard SQL Server port 1433. Assuming a conventional SQL Server deployment and configuration, similar firewall and network allowances between the web server and a separate database server will provide all needed connectivity for the Dashboard to be able to read and retrieve data from the database.

The deployment sequence for the Dashboard in a new environment consists of:

1. Installing Node.js on the web server.
2. Installing the Dashboard application bundle (file set) within a virtual directory that has been configured via the web server software (e.g. Internet Information Server (IIS) or Apache, as examples).
3. Installing application dependencies (packages) through the use of the Node Package Manager (NPM).
4. Updating of the database connection string stored in the confiig.js file within the application bundle. This should reflect the credentials (login / password) of the READ level account in the URM DB that has been created to support the Dashboard application.

5. Establishing a free account at Mapbox.com and updating the Mapbox user credentials stored in the app.config file. The Dashboard uses cartographic styles enabled through Mapbox.

Once the database and Dashboard have been successfully installed on a single web/database server or on respective servers, long-term maintenance and upkeep should be relatively light work and consist primarily of keeping the operating systems and SQL Server software up-to-date with regard to patches and software updates.

If the Dashboard and database are hosted on separate servers, the following considerations will be relevant:

- Firewall and/or network settings must allow persistent bi-directional traffic (requests and responses) between the web server and the database server on whichever of the database server's ports is configured for use by SQL Server. By default this is port 1433.
- Restricting port traffic to the IP number of the web server or another similar security protocol should not obstruct the proper functioning of the Dashboard.

Currently, the URM Inventory is configured to use the SQL Server Authentication Mode. If the database is re-deployed in a different server environment, the user account (with Database Read permissions) employed by the Dashboard must either be recreated in the new environment or a different account with Read privileges must be created and the data connection string in the Dashboard's config.js file must be updated accordingly.

If the URM Inventory is re-deployed and the Windows Authentication Mode is used instead of the SQL Server Authentication Mode, the connection string settings in the Dashboard's config.js file must be updated accordingly.

The Dashboard is currently published at a relatively obscure web address, but is publicly accessible. If the Dashboard continues to be hosted in its current deployment environment or if it is re-deployed in a location where public (off local network) access remains a possibility, it is recommended that consideration be given to adding a security framework to the Dashboard to assure only authorized users may access and view URM Inventory data. This could be accomplished, for example, by requiring users to enter a username and password to access the Dashboard. This can be an independent framework or could potentially integrate with a State user identity management system. The Dashboard's code is set up to enable this addition with relative ease.

Finally, another modest enhancement that may be of considerable value is to add editing capability to the Dashboard that would permit users with editing privileges to directly edit data records through the Dashboard's interface. This would allow individual building data to be corrected and updated in a manner that would likely be far more efficient and less error prone than performing edits directly within the database tables.

Appendix B1
Survey Methodology Handout

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Appendix B1. Survey Methodology Handout

This guide is intended to help interested parties collect additional survey data for incorporation into Washington State's Unreinforced Masonry (URM) Building Inventory. It is intended to be used by surveyors (including volunteers) to identify buildings to add to the database, or to expand on, confirm, and correct information from other data sources.

1. Identifying Unreinforced Masonry Construction

For the purposes of the URM Inventory, only buildings constructed prior to 1958 will be included in the database. Buildings built during and after 1958 were subject to building code requirements that would not have allowed the construction of unreinforced masonry buildings. The Inventory excludes single family residential structures.

Unreinforced Masonry (URM) buildings are constructed with brick, stone, or clay tile walls that support the floors and roofs of the building. The most common are brick buildings, built from the late 1800s through the 1930s, although some URM construction extended through the 1950s.

URM buildings are supported via their brick walls, which are relatively thick (several layers of brick) and solid (fewer windows than newer frame buildings). Classic clay, or "red", bricks are about 8 inches long by 2-1/2" tall. URMS are typically eight or fewer stories in height, though examples as tall as ten stories do exist.

In URM buildings, some bricks are oriented into the wall to help tie the different layers together, making the narrow end of the brick visible. These are known as header courses, and typically occur every 5-6 courses.

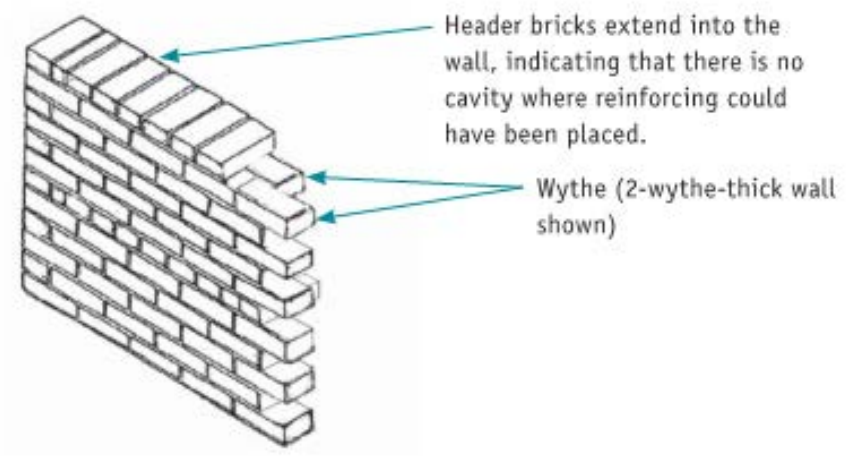
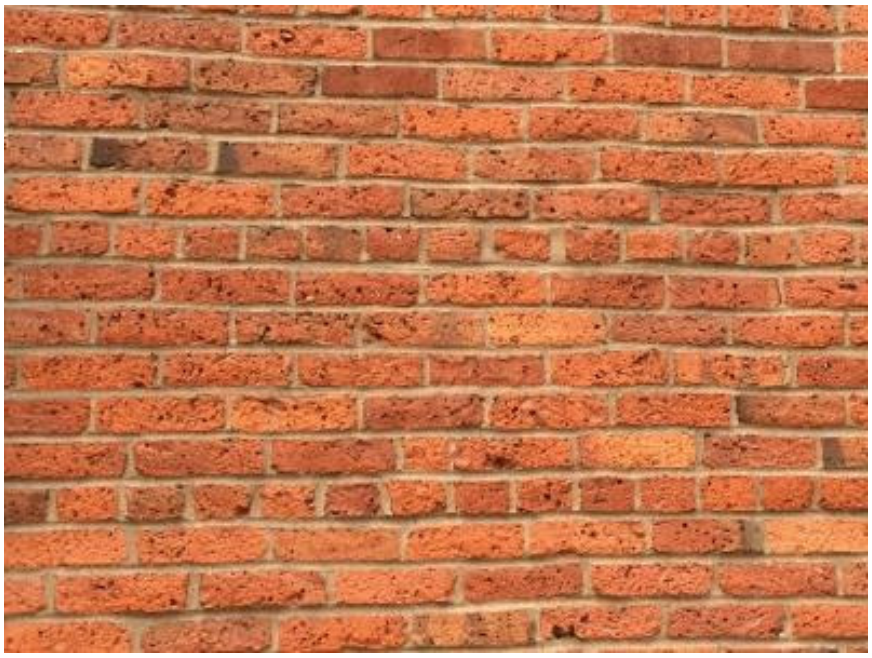


Diagram of Header Courses
(Federal Emergency Management Agency, "Unreinforced Masonry Buildings and Earthquakes: Developing Successful Risk Reduction Programs" (FEMA P-774), October 2009.)



Header Courses

Another identifying feature of URMs are flat arches over windows, which transfer the load from above to the piers between windows (see below). The arches can also be half-circles, however half-circle arches could also indicate brick veneer.

Flat Arch

In some buildings, stone lintels are used instead of flat arches.

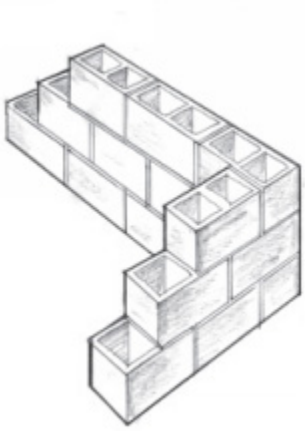
Stone lintels

Not all brick buildings are URMs. Brick facades, or veneers, can be built on a steel or concrete frame that forms the main structure. Look for other identifying features before identifying a building as URM. Often brick veneers can be identified because they do not have header courses, although some veneers have header bricks used in decorative patterns. Some URM buildings also have a veneer course at the front of the building. Examining a building's side or back walls can help distinguish veneers from true brick construction. When in doubt, continue to classify the building as a suspected URM.

Less common types of URM construction include stone and clay tiles. Clay tiles are similar to brick, but may be different sizes and are hollow.

Left: Stone Masonry. Right: Detail of Hollow Clay Tile wall. Blocks are approximately 8"x8".

For purposes of the Washington URM Inventory, buildings constructed of concrete masonry units (CMU or concrete block) are not considered URM buildings. Concrete units are large (typically 8" tall by 16" long) and have a different surface texture than brick or stone.

Left: CMU wall. Right: Diagram of CMU wall from FEMA P-774.

Single-family residences are not included in this database.

The City of Seattle has developed a three-minute video (available at https://www.youtube.com/watch?v=oYxbUyFyKb4) regarding URM identification that summarizes much of this information and may be of use to field surveyors.

2. Gathering Data

Prior to commencing the field survey, surveyors are encouraged to contact the Washington Department of Commerce Research Services to obtain the data that is already in the URM Inventory for their survey area. This data may also be viewed via the online *Washington URM Dashboard*.

In the field, building data can be gathered using single building survey forms (see Appendix B3 for an example) or via a spreadsheet pre-populated with data present in the URM Inventory. The forms and the spreadsheet can be taken into the field as hard copies, or loaded onto an iPad or similar device. Ultimately, any data collected via a single building form should be incorporated into the spreadsheet for the entire survey area.

2.1 Pre-Survey Data Gathering

The following fields should be populated before conducting the survey, based either on the URM Inventory or on other data sources, such as a County Assessor website.

Address

Street address to locate building.

Parcel Number

If not in the URM Inventory data, available via tax assessor records.

Building Name

Use if there is a common name. Not necessary for all buildings.

Date of Construction
If not in the URM Inventory data, available via tax assessor records. This data may also include the date of major modifications and additions (not necessarily structural or seismic retrofits).

Square Footage
If not in URM Inventory data, may be determined from tax assessor information, or estimated from mapping software by multiplying the number of stories by the square footage of a single floor.

Latitude/Longitude
Can be found by clicking on the location of the building in Google Maps. Note: For clarity in the mapping interface, select a point within the building, and not the street in front of the building.

Building Ownership
Identify whether the building is privately or publicly owned. Publicly owned buildings include those owned by a federal, state, county, or city governmental entity.

Historic Status
Confer with the Department of Archeology and Historic Preservation and your local Planning department to identify which properties within the survey area are historic. The "Historic Status" field in the URM Inventory includes the following classifications:

- NRHP/WHR: Listed on the National Register of Historic Places as an individual resource
- NRHP/WHR District: Contributor to a historic district that is listed on the National Register of Historic Places
- NRHP-eligible: Formally deemed eligible for listing on the National Register of Historic Places
- WHR: Listed on the Washington Heritage Register as an individual resource
- Local: Listed on a local historic register
- In Local District: Located within a local historic district

In addition, if a property has been identified as a contributor to a historic district, include the name of the historic district.

2.2 Field Survey Data Gathering
The following fields should be completed during the survey:

Date of Evaluation
Date on which building was examined in the field.

Data Source
The name of the survey effort, e.g. "Olympia Main Street Survey."

Construction Material
Identify whether the building walls are "Masonry – Brick," "Masonry – Clay Tile," or "Masonry – Stone." Select all visible elements, including multiple materials if appropriate. See above for sample images of each material. All other construction materials (such as wood frame) should be coded as "other."

URM Status
Assign a URM status based on the following definitions:

- Suspected URM: A building constructed prior to 1958 with one or more masonry (includes 'Masonry', 'Masonry - Brick', 'Masonry - Clay Tile', 'Masonry - Stone' from the Construction Material field) bearing walls that provide the primary support for vertical loads from floors or roofs.
- Identified URM: A building that, based on survey or related research, is confirmed to be of URM construction. The presence of brick header courses, rosettes, and/or flat arch windows are strongly indicative that the building is a URM building.
- Not URM: Confirmed bearing walls are *not* masonry and/or construction date is after 1958, based on survey or related research. If a building has been previously identified as "Suspected URM" but evidence on the ground demonstrates that the building is of another construction type, select "Not URM."

A building should be categorized as "Identified URM" or "Suspected URM" regardless of whether retrofits are visible. Because seismic upgrades vary widely in approach and extent, an upgraded URM building is still considered a URM building for purposes of this assessment. Additional research may be required to determine URM Status. When in doubt, list the building as "Suspected URM."

Vacant/Underutilized
Select the most appropriate box based on field observation. Look for 'for lease' signs or space that is clearly vacant or is being used for storage. The following are general guidelines for how to define vacancy/underutilization:

- Yes, ground floor: A building that, at the time of survey, appears to have 50% or more vacancy at the ground floor.
- Yes, upper floor: A building that, at the time of survey, appears to have 50% or more vacancy at the upper floors.
- Potentially: Building may be 50% or more vacant but survey is inconclusive.
- No: All floors of the building appear to be 50% or more occupied at the time of survey.

Building Use
Check all that apply:

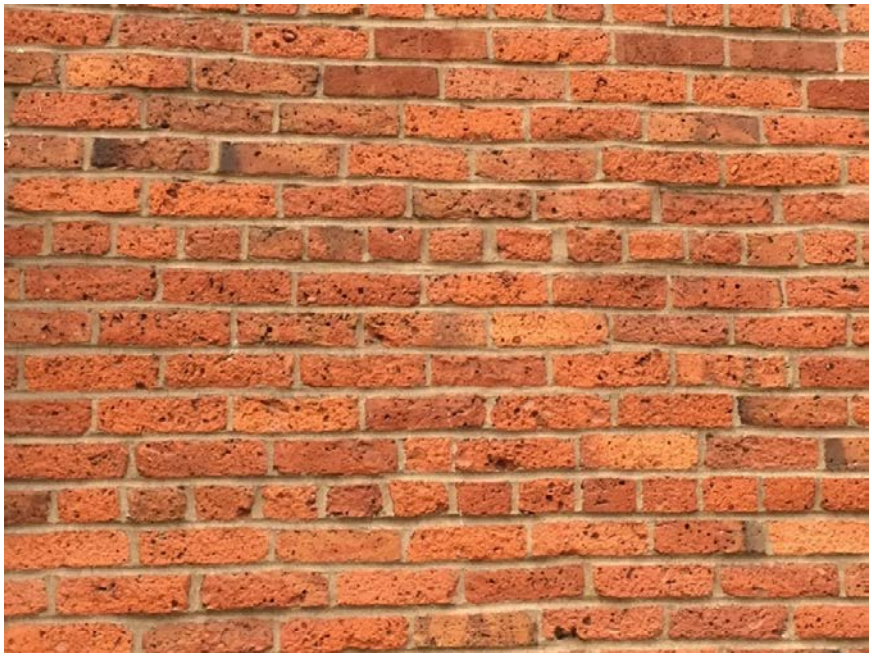
- Commercial
- Office
- Residential (Multi-Family)
- Emergency
- Government
- Industrial
- Public Assembly
- Schools
- Other Mixed Uses

For emergency facilities, note whether the building is a hospital, fire station, police station, or other emergency facility (such as a 911 call center).

Stories
Number of occupiable stories above ground level. For sloping sites, measure from upper ground surface.

Architectural Features

Header Courses: See discussion above.



Parapets: Check this box when one or more parapets, the wall portions that extends above the uppermost roof, are present. Parapets can sometimes be seen from the sides of buildings.

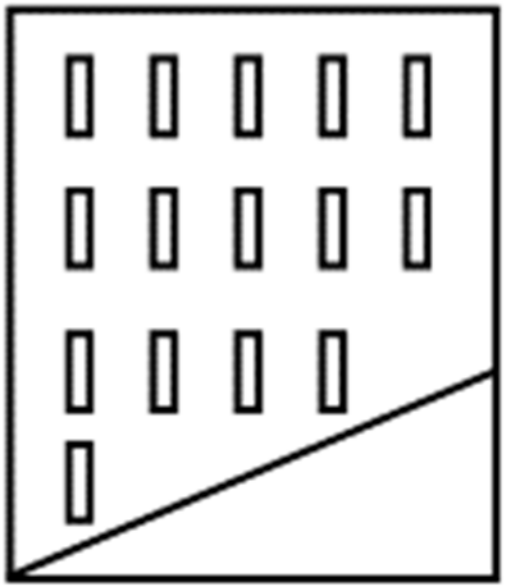
Architectural Features, continued

Visible Braces: Note the presence of steel braces, sometimes visible through windows. The example below is not a URM, but similar features are visible in some URMs.

Rosettes at Floor/Roof; Rosettes @ Parapet: Rosettes are steel plates used to tie a wall to the floor framing. They may be round decorative plates or plain squares with a bolt through the middle.

Architectural Features, continued

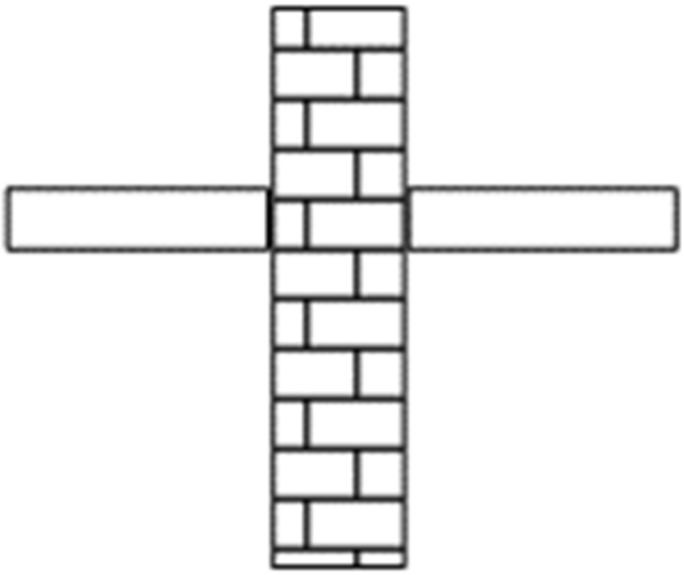
Sloping Site: Check this box where the ground level varies by more than the height of one floor across the width of the building.



Open Storefront: Check this box if one floor has less than 2/3rds of the wall length compared to the upper levels of the building, or if it has less than 10% of the length of the building as solid wall.

Architectural Features, continued

Party Wall: Party walls are single walls shared by two buildings. This feature may not be easy to identify from the exterior, but is sometimes visible through windows or doors at the front of the building.



Adjacent building height or floor offset: Check this box when the building is immediately adjacent to another building with a different or the floors of the two buildings do not align.

Architectural Features, continued

Complex Footprint: Check this box for buildings that are not rectangular (such as L-, T-, or E-shaped) when viewed from above, and the leg of the building extends at least 50% of the overall length of the building. Overhead views from online maps may be used to identify this feature.

2.3 Post-Survey Data Gathering/Assessment

Upgrade Status

While features of structural upgrades (such as bracing) may be visible in the field, additional research is typically necessary to determine precisely what level of upgrades have been completed for a specific building. Surveyors should confer with the local building permit department or planning department to ascertain the best way to review public records related to building retrofits. Ultimately, structural upgrades should be classified according to the following categories:

- Extensive: Structural upgrades have been performed throughout the building, including new lateral elements such as walls, braced frames, or moment frames; or retrofits conforming with ASCE 41 or IEBC Appendix A1 provisions for URM buildings.
- Bolts-plus (or Wall Anchors): Structural upgrades have been performed on the building, including all of the following (or substantially similar retrofits): parapet bracing; wall attachments to roof and floors; and out-of-plane wall bracing.
- Parapet bracing only: Only the parapets have been braced. Often indicated when the parapet has rosettes or visible braces but no roof or floor anchors are visible.
- Visible, extent unknown: Upgrades visibly apparent but nature of upgrades is unclear.
- None visible: No structural upgrades have been performed on the building since its original construction, or no signs of retrofit are visible from field survey.
- Unknown

For reference, consider including any permit numbers associated with the structural upgrades.

Appendix B2
Sample Field Survey Form

Department of Commerce

Building information

Building Name _____

Street Address _____

City _____ County _____

Parcel Number _____

Latitude _____

Longitude _____

Date of Evaluation (Current Date) ___ / ___ / ____

Data Source _____

Building Status:

☐ Existing ☐ Demolished ☐ Single Family Residence

If Demolished or Single Family, do not flill out remainder of form

URM Status

☐ Identified URM ☐ Suspected URM ☐ Not URM ☐ Unknown

Vacant/Underutilized?

☐ Yes, full building ☐ Yes, ground floor ☐ Yes, upper floor

☐ Potentially ☐ No ☐ Unknown

Items below this line, and on the back of the form, are optional. Fill out available information as time permits.

Building Use (Check all that apply)

☐ Commercial ☐ Office ☐ Residential

☐ Emergency ☐ Government ☐ Industrial

☐ Public Assembly ☐ Schools ☐ Other Mixed Uses

Emergency Facility (Check all that apply)

☐ Hospital ☐ Fire Station

☐ Police Station ☐ Other

Building Characteristics

Date Constructed _____

Date Altered _____

Number of Stories _____

Square footage _____

Construction Material (Check all that apply)

☐ Brick

☐ Clay Tile

☐ Stone

☐ CMU

☐ Other

☐ Unknown

Building Ownership:

☐ Public ☐ Private

These items may be easiest to assess after the field survey, and may require additional research to determine

Historic Status

Historic Status _____

Historic District _____

Upgrade Status

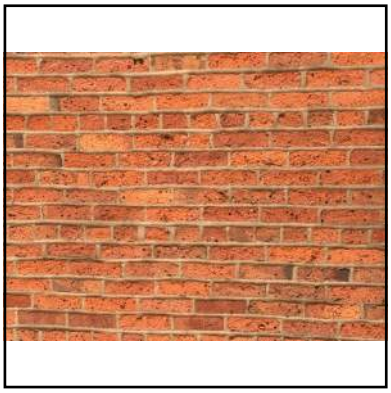
☐ Extensive ☐ Visible, Extent Unknown

☐ Bolts - plus (or wall anchors) ☐ None Visible

☐ Parapet Bracing ☐ Unknown

Department of Commerce

Architectural Features (Check all that apply)

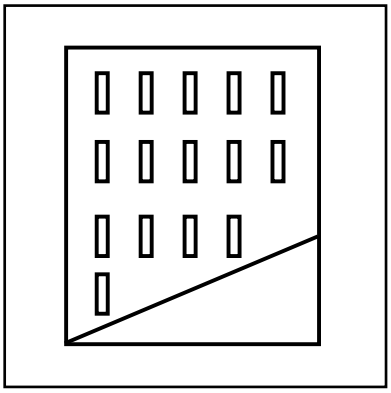


☐ Header Courses

☐ Parapets

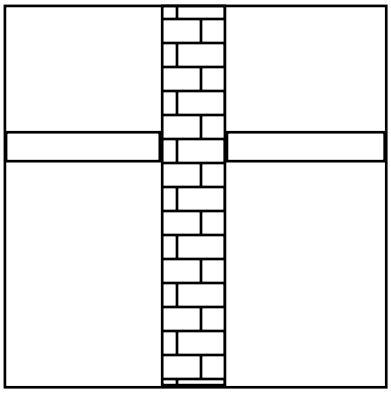
☐ Visible Braces

☐ Rosettes @ Floor/Roof
☐ Rosettes @ Parapet



☐ Sloping Site, offset by 1 floor or more

☐ Open Storefront, less than 2/3 of wall above



☐ Party Wall, floors from two buildings attach to same wall

☐ Adjacent building: height or floor offset

☐ Complex Footprint

Notes

Appendix B3
Port Townsend Pilot Survey Spreadsheet

Architectural
Resources Group

Parcel Number	Address - Number	Address - Street	Building Name	Building Ownership	URM Status	Date Constructed	Date Altered	Construction Material	Stories	Building Use (Check all that apply)										Emergency Facility (Check all that apply)				Architectural Features (Check all that apply)									Vacant/Underutilized
										C-Commercial	O-Office	R-Residential (Multi-Family)	RS-Residential (Single Family)	E-Emergency	G-Government	I-Industrial	P-Public Assembly	S-Schools	M-Other Mixed Uses	Hospital	Fire Station	Police Station	Other	Header Courses	Parapets	Rosettes @ Parapet	Rosettes @ Floor/Roof	Open storefront	Party wall	Adjacent building height or floor discrepancy	Complex footprint	Visible braces	
989704103	225	Adams St		Private	Not URM	1941		Poured Concrete	1										x													
989704207	226	Adams St	Fowler Building/Leader Building	Private	Identified URM	1874		Masonry - Stone	2	x	x																x	x					
989704403	250	Madison St	Port Townsend City Hall and Annex	Public	Identified URM	1891	2005	Masonry - Brick	2						x									x	x	x	x					
989704401	209	Monroe St	American Legion	Private	Not URM	1941		Wood - Balloon Frame	1								x															
989704402	229	Monroe St	PT Athletic Club	Private	Identified URM	1890		Masonry - Brick	2.5	x																				x		
937600001	111	Quincy St	The Waterman and Katz Cannery	Private	Identified URM	1885		Masonry - Brick	2			x												x	x		x					
996700001	181	Quincy St	Waterman and Katz Building	Private	Identified URM	1885		Masonry - Brick	3	x		x												x	x		x	x				x	
989704306	202	Quincy St			Not URM			Wood - Balloon Frame																								
989704303	230	Quincy St	Bread and Roses Bakery	Private	Not URM	1870		Wood - Balloon Frame	2.5																								
989704307	280	Quincy St	Good Templars Hall #1	Private	Not URM	1870		Wood - Balloon Frame	2																								
989700901	129	Taylor St	Admiralty Apartments Building	Private	Identified URM	1928		Masonry - Brick	3			x																				
989704112	230	Taylor St	1st American National Bank	Private	Not URM			Poured Concrete																								
989704002	235	Taylor St	Rose Theatre Building	Private	Suspected URM	1906		Unknown	1	x							x								x			x		x		
949100001	237	Taylor St	Miller & Burkett Building/Elks Building	Private	Identified URM	1889		Masonry - Brick	3	x	x								x					x	x			x		x		
989704111	242	Taylor St	Wihelmine Siebenbaum Bldg	Private	Not URM	1956		Poured Concrete	1	x																						
989704302	609	Washington St		Private	Not URM	1985		Wood - Balloon Frame	1																								
989704102	807	Washington St	W.J. Buhler Service Station	Private	Not URM	1941		Poured Concrete																								
989704107	809	Washington St	Peninsula Motor Company	Private	Not URM	1917		Poured Concrete											x													
989704110	819	Washington St	Cracker Factory	Private	Identified URM			Masonry - Brick	3			x												x	x		x			x			
989704109	823	Washington St		Private	Not URM	1949		CMU	2	x																						
989704003	919	Washington St	Terry Building	Private	Identified URM	1890		Masonry - Brick	3	x														x	x		x	x		x			Potentially
989700601	607	Water St	Bartlett Building/Cotton Building	Public	Identified URM	1888		Masonry - Brick	1						x		x							x								
989700608	627	Water St	Elevated Ice Cream Building	Private	Not URM			Wood - Balloon Frame																								
989704304	630	Water St	Fred Lewis Building	Private	Identified URM	1889		Masonry - Brick	3	x														x	x	x	x	x				Yes, upper floor
989704305	636	Water St	The Franklin House	Private	Identified URM	1886		Masonry - Brick	3	x		x												x								
989700611	639	Water St	N.D. Hill Building	Private	Identified URM	1889		Masonry - Brick	3	x														x	x			x		x		
989704201	702	Water St	Alaska Power Building/Eisenbeis, Stone Block	Private	Identified URM	1884		Masonry - Stone	2	x									x						x							
989700702	711	Water St	Boiler Room	Private	Not URM	1950		CMU	1																							
989700704	715	Water St	Union Cleaners	Private	Not URM	1960		CMU	1																							
989704205	720	Water St	The Green Eyeshade	Private	Not URM	1960		CMU	1																							
989700708	725	Water St	C.F. Clapp Building	Private	Identified URM	1885		Masonry - Brick	2										x					x	x			x		x		
989704206	734	Water St	Seafirst Bank	Private	Not URM	1974			2																							
989704101	804	Water St	Home Smith Insurance	Private	Not URM	1977																										
989704104	810	Water St	First National Bank	Private	Identified URM	1883		Masonry - Brick, Masonry - Stone	2	x									x					x	x		x			x			
989700803	817	Water St	Barthrop Building	Private	Not URM			Wood - Balloon Frame	1																							
989704105	820	Water St	Siebenbaum Building	Private	Identified URM	1903		Masonry - Brick	2	x									x					x				x		x		
989700804	821	Water St	Barthrop Building Addition	Private	Not URM	1932		Poured Concrete	1																							
989700806	825	Water St	Bartlett's Stone Bldg	Private	Identified URM	1881		Masonry - Stone	2	x									x						x			x		x		
933800101	830	Water St	Eisenbeis Building	Private	Identified URM	1873	1889	Masonry - Brick	3	x		x							x					x	x				x	x		
989700808	839	Water St	Hastings Building	Private	Identified URM	1889		Masonry - Brick	3	x														x	x			x		x		Yes, upper floor
989704108	844	Water St	McCurdy Building	Private	Identified URM	1887		Masonry - Brick	2	x														x	x			x	x	x		
989704001	910	Water St	Mount Baker Block	Private	Identified URM	1890		Masonry - Brick, Masonry - Stone	4	x	x													x	x			x		x		
989704005	918	Water St	Fred & Ida Terry Building/Zee Tai Building	Private	Identified URM	1885		Masonry - Brick	2	x														x	x			x		x		
989700903	925	Water St	Sterming Block	Private	Identified URM	1889		Masonry - Brick	2	x														x	x			x		x		
989704007	926	Water St	Phillips Building/Kuhn Building	Private	Identified URM	1890		Masonry - Brick	2	x									x					x	x			x				x	
989700904	929	Water St	The Kellogg Building	Private	Suspected URM	1929		Masonry	2	x																						
989704008	936	Water St	Port Townsend National Bank, Handley & Kelley Building	Private	Identified URM	1889		Masonry - Brick	2	x																		x					
989704013	940	Water St	James and Hastings Building	Private	Identified URM	1889		Masonry - Brick	3	x														x	x			x		x		
989700906	955	Water St	Lighthouse Café Building	Private	Not URM	1950		Wood - Balloon Frame	1	x																						
989701001	1001	Water St		Private	Not URM				2	x																						
989703901	1004	Water St	Captain H.L. Tibbals Building	Private	Identified URM	1889		Masonry - Brick	3	x														x	x			x				
989703903	1014	Water St	State Bank of Washington/Pettygrove Building	Private	Identified URM	1889		Masonry - Brick, Masonry - Stone	3	x		x												x	x			x		x		
989703907	1038	Water St	Kuhn's White Block	Private	Identified URM	1892	1948	Masonry - Brick, Masonry - Stone	2	x		x							x					x	x			x		x		

Parcel Number	Address - Number	Address - Street	Building Name	Square Footage	Historic Status	Historic District	Upgrade Status	Upgrade Date	Upgrade Standard/Code	Retrofit Permit Number(s)	Site Slope	Soil Condition	FEMA Score	Comments	Data Origin/Source	Source Date
989704103	225	Adams St			*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704207	226	Adams St	Fowler Building/Leader Building		*NRHP/WHR District, NRHP/WHR*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704403	250	Madison St	Port Townsend City Hall and Annex		*NRHP/WHR District, NRHP/WHR*	Port Townsend Historic District	Extensive								Port Townsend Pilot Survey	9/11/2018
989704401	209	Monroe St	American Legion		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704402	229	Monroe St	PT Athletic Club		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
937600001	111	Quincy St	The Waterman and Katz Cannery		*NRHP/WHR District*	Port Townsend Historic District	None visible								Port Townsend Pilot Survey	9/11/2018
996700001	181	Quincy St	Waterman and Katz Building		*NRHP/WHR District*	Port Townsend Historic District	Extensive								Port Townsend Pilot Survey	9/11/2018
989704306	202	Quincy St			*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704303	230	Quincy St	Bread and Roses Bakery		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704307	280	Quincy St	Good Templars Hall #1		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700901	129	Taylor St	Admiralty Apartments Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704112	230	Taylor St	1st American National Bank		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704002	235	Taylor St	Rose Theatre Building		*NRHP/WHR District*	Port Townsend Historic District	Unknown				x				Port Townsend Pilot Survey	9/11/2018
949100001	237	Taylor St	Miller & Burkett Building/Elks Building		*NRHP/WHR District*	Port Townsend Historic District	Visible, extent unknown				x				Port Townsend Pilot Survey	9/11/2018
989704111	242	Taylor St	Wihelmine Siebenbaum Bldg		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704302	609	Washington St			*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704102	807	Washington St	W.J. Buhler Service Station		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704107	809	Washington St	Peninsula Motor Company		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704110	819	Washington St	Cracker Factory		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704109	823	Washington St			*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704003	919	Washington St	Terry Building		*NRHP/WHR District*	Port Townsend Historic District	None visible								Port Townsend Pilot Survey	9/11/2018
989700601	607	Water St	Bartlett Building/Cotton Building		*NRHP/WHR District*	Port Townsend Historic District	Extensive								Port Townsend Pilot Survey	9/11/2018
989700608	627	Water St	Elevated Ice Cream Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704304	630	Water St	Fred Lewis Building		*NRHP/WHR District*	Port Townsend Historic District	Visible, extent unknown								Port Townsend Pilot Survey	9/11/2018
989704305	636	Water St	The Franklin House		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700611	639	Water St	N.D. Hill Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704201	702	Water St	Alaska Power Building/Eisenbeis, Stone Block		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700702	711	Water St	Boiler Room		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700704	715	Water St	Union Cleaners		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704205	720	Water St	The Green Eyeshade		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700708	725	Water St	C.F. Clapp Building		*NRHP/WHR District*	Port Townsend Historic District	Extensive								Port Townsend Pilot Survey	9/11/2018
989704206	734	Water St	Seafirst Bank		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704101	804	Water St	Home Smith Insurance		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704104	810	Water St	First National Bank		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700803	817	Water St	Barthrop Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704105	820	Water St	Siebenbaum Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700804	821	Water St	Barthrop Building Addition		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700806	825	Water St	Bartlett's Stone Bldg		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
933800101	830	Water St	Eisenbeis Building		*NRHP/WHR District*	Port Townsend Historic District	Parapet bracing								Port Townsend Pilot Survey	9/11/2018
989700808	839	Water St	Hastings Building		*NRHP/WHR District, WHR*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704108	844	Water St	McCurdy Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704001	910	Water St	Mount Baker Block		*NRHP/WHR District*	Port Townsend Historic District	None visible								Port Townsend Pilot Survey	9/11/2018
989704005	918	Water St	Fred & Ida Terry Building/Zee Tai Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700903	925	Water St	Sterming Block		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704007	926	Water St	Phillips Building/Kuhn Building		*NRHP/WHR District*	Port Townsend Historic District	Extensive								Port Townsend Pilot Survey	9/11/2018
989700904	929	Water St	The Kellogg Building		*NRHP/WHR District*	Port Townsend Historic District	None visible								Port Townsend Pilot Survey	9/11/2018
989704008	936	Water St	Port Townsend National Bank, Handley & Kelley Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989704013	940	Water St	James and Hastings Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989700906	955	Water St	Lighthouse Café Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989701001	1001	Water St			*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989703901	1004	Water St	Captain H.L. Tibbals Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989703903	1014	Water St	State Bank of Washington/Pettygrove Building		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018
989703907	1038	Water St	Kuhn's White Block		*NRHP/WHR District*	Port Townsend Historic District									Port Townsend Pilot Survey	9/11/2018

Appendix C1
Outreach Materials

Appendix C1. Outreach Materials

The following pages consist of representative materials that were distributed to state and local agencies to (1) notify them that the URM Inventory effort was underway and (2) ascertain whether they had any data that should be incorporated into the URM Inventory. Specifically, these materials included a letter from the Department of Commerce introducing the URM Inventory project, and a two-page overview developed by Architectural Resources Group that summarized the types of data that were being collected as part of this effort.

STATE OF WASHINGTON
DEPARTMENT OF COMMERCE
1011 Plum Street SE • PO Box 42525 • Olympia, Washington 98504-2525 • 360-725-4000
www.commerce.wa.gov

To whom this may concern,

The Washington State Department of Commerce, in collaboration with the Department of Archeology and Historic Preservation (DAHP) and Architectural Resources Group (ARG), is seeking your assistance. At the close of the 2017-2018 legislative session, the Washington State Legislature directed the Department of Commerce, in collaboration with DAHP, to initiate an inventory of unreinforced masonry buildings (URMs) in Washington State, excluding single-family housing. This includes inventorying and categorizing to the greatest extent possible information such as the locations, building attributes (e.g., building use, historic character), and vacancy or underutilization of upper floors of Washington State's URMs.

To assist Commerce and DAHP with this extensive effort, we have enlisted the support and expertise of ARG. You have been contacted by ARG because of your potential to assist us in acquiring the above information as part of the URM inventory project. ARG has nearly 40 years of experience assessing and rehabilitating URMs across the West Coast and brings extensive experience conducting large-scale, data-heavy property surveys and conditions assessments. Your contribution of data and/or information is invaluable to this effort.

Should you have any questions regarding this project, please do not hesitate to contact me directly.

Sincerely,

Austin J. Scharff
Dept. of Commerce, Research Services
Project Coordinator
Phone: (360) 725-3126
Email: Austin.Scharff@commerce.wa.gov

Architectural Resources Group

Washington URM Inventory

Data Guide

The Department of Commerce, in collaboration with the Department of Archeology and Historic Preservation (DAHP), is working with Architectural Resources Group (ARG) to develop a comprehensive, statewide inventory of unreinforced masonry buildings (URMs) in Washington State, excluding single-family housing. Several statewide databases are being used to develop the inventory, but we would love to incorporate any additional information you have for your particular locale. ***Thank you for your interest in supporting this important initiative!***

Here is the list of key data fields that we are including in the URM inventory. We don't expect that you will have data in all fields, but we are interested in collecting any data you have. Note that single family residential properties are **excluded** from this data collection effort.

URM Inventory Data Fields

- Parcel Number
- Address/City/County
- Latitude/Longitude
- Building Name
- Building Ownership (public/private)
- Building Use (see below)
- Emergency Facility (hospital/fire station/police station/other emergency facility)
- Vacant/Underutilized? (see below)
- Construction Material (masonry/brick/clay tile/stone/CMU/Other)
- Stories
- Square Footage
- Date Constructed
- Date Altered
- Historic Status
- URM Status (see below)
- Upgrade Status (see below)
- Upgrade Date (date of most recent seismic upgrade)
- Upgrade Standard/Code
- Retrofit Permit Numbers
- Site Slope (percentage)
- Soil Condition
- Architectural Features (see below)
- FEMA Score (FEMA 154, Rapid Visual Screening)

For your reference, additional background is provided below regarding how we are defining the Building Use, URM Status, Vacant/Underutilized, Upgrade Status and Architectural Features data fields.

Building Use

Field Values	These categories are taken from Seattle's citywide URM survey and are based on Federal Emergency Management Agency (FEMA) building use classifications.
C-Commercial	
O-Office	
R-Residential (excluding single family)	
E-Emergency	
G-Government	
I-Industrial	
P-Public Assembly	
S-Schools	
M-Other Mixed Uses	

URM Status

Field Value	*Definition*
Identified URM	Confirmed based on pilot (or other) survey.
Suspected URM	A building constructed prior to 1958 with one or more masonry walls (including 'masonry', 'brick', 'clay tile', and 'stone' from the Construction Material field) that provide the primary support for vertical loads from floors or roofs.
Not URM	Confirmed not URM based on pilot (or other) survey.
Unknown	A building of unknown construction type.

Vacant/Underutilized

Field Value	*Definition*
Yes, ground floor	A building that, at the time of survey, appears to have 50% or more vacancy at the ground floor
Yes, upper floors	A building that, at the time of survey, appears to have 50% or more vacancy at the upper floors
Potentially	Building may be 50% or more vacant but survey is inconclusive
Note: If you have vacant/underutilized data but use a different definition, please provide the data along with your associated definition.	

Upgrade Status

Field Value	*Definition*
Extensive	Structural upgrades have been performed on the building, including new lateral elements such as walls, braced frames, or moment frames.
Bolts-plus / Wall Anchors	Structural upgrades have been performed on the building, including at minimum: Brace parapets; Attach wall to roof; In-plane shear attachments and roof sheathing; ties and cross ties; Attach wall to floor; Out-of-plane wall bracing
Parapet Bracing	Only the parapets have been braced. May be noted when the parapet has rosettes or visible braces but no roof or floor anchors are observed.
None Visible	No signs of retrofit are visible from field survey.
None	No structural upgrades have been performed on the building since its original construction
Unknown	Not known whether building has undergone any structural upgrades

Architectural Features

Header courses	These are all characteristics that can affect a building's seismic risk.
Parapets	
Rosettes @ parapets	
Rosettes @ floor/roof levels	
Soft story	
Open storefront	
Estimated % of solid wall	
Party wall	
Adjacent building height or floor discrepancy	
Complex footprint	
Visible braces	

Appendix C2
Collected Data

Architectural
Resources Group

Appendix C2. Collected Data

The following list of databases were collected during the URM Inventory, and have been provided to the Department of Commerce electronically in conjunction with submittal of the Washington Unreinforced Masonry Building Inventory report. This list is essentially a summary of the full Data Log (Appendix C3).

From Department of Commerce

Seattle Confirmed URM Inventory

UW / Greenlab Survey

Office of the Superintendent for Public Instruction (OSPI) Statewide Building Inventory

OSPI Inventory identifies as many as 1,346 school buildings that were constructed prior to 1958.

- No construction material is available in the OSPI Inventory
- Address' have been manually reconciled with OSPI_Washington_School_Directory; Schools without a street address are highlighted
  - 205 have address that are PO Boxes
  - 91 have no address at all

Recommendations for the OSPI Building Inventory:

- Filter by the following:
  - "Inventory Status" = "Recognized"
  - "Year Constructed" >1958
  - "Area Name" ≠ variations of: "Covered Play"; "Portable"; "Quonset Hut"
- Migration to URM Database:
  - Manually reconcile Addresses to existing URM Inventory entries
  - Building Ownership
    - Public = All records
  - Building Name = "Facility"
  - Building Use = "S-Schools"

OFM Owned Facilities Inventory (2017 FIS)

OFM Inventory identifies as many as 1,919 publicly-owned buildings that were constructed prior to 1958.

- No construction material is available in the OFM data

Recommendations for the OFM Inventory:

- Filter by the following
  - "Year Constructed" >1958
  - "Property Class" ≠ "Residential"
- Migration to URM Database:
  - Manually reconcile Addresses to existing URM Inventory entries
  - Building Ownership
    - Public = All records
  - Building Name = "Agency Common Name"
  - Building Use = "Property Class"
    - O-Office = "Office"
    - G-Government = All records

S-Schools = "Educational" and "Study"
M-Other Mixed Uses = "Special Use"

- Date Altered = "Year Last Major Renovation"

To capture missing multi-family residential

- Filter by the following
  - "Property Class" = “Residential”
  - “Square Feet” < 2,000 sf
- Migration to URM Database:
  - Building Ownership
    - Public = All records
  - Building Name = "Agency Common Name"
  - Building Use = "Property Class"
    - R-Residential (Multi-Family) = “Residential”
  - Date Altered = "Year Last Major Renovation"

2013 Washington State Parcel Database

May include information pertaining to year built, number of stories, foundation type, siding material collected from Assessor databases.

From Outreach

County Assessors

Data provided by Assessor

- Chelan County
- Garfield County
- San Juan County
- Skagit County
- Thurston County

Data downloaded from Assessor Websites

- Douglas County
- King County
- Kitsap County
- Kittitas County
- Spokane County

Certified Local Governments

- Bellingham
- Bothell
- Everett

Main Street Communities

- Wenatchee

Single Entry Responses

- Island County
- City of Lacey

- City of Medina
- City of Mercer Island
- San Juan County

Appendix C3
Data Log

Architectural
Resources Group

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
Provided by Commerce										
City of Seattle	Nancy H. Devine	206-684-3406	nancy.devine@seattle.gov	COM (Austin Scharff)	CLOSED	Yes	List of URMs Identified by Seattle DCI	6/18/2018	Validated list of URM buildings within Seattle City Limits	Yes
WA Office of Financial Management	NA	NA	NA	COM (Austin Scharff)	CLOSED	Yes	Owned Facilities Inventory 2017	6/22/2018	State Owned Building Inventory	No
State Board for Community and Technical Colleges	Wayne Doty	360-704-4382	wdoty@sbctc.edu>	COM (Austin Scharff)	CLOSED	Yes	Community and Technical Colleges Building Inventory	6/25/2018	Sub-set of the OFM Facilities Inventory	N/A
Office of Superintendent of Public Instruction	Scott Black	360-725-6268	NA	COM (Noreen Hoban)	CLOSED	Yes	Building Inventory	6/22/2018	List of School Buildings	No
Office of Superintendent of Public Instruction	Scott Black	360-725-6268		COM (Noreen Hoban)	CLOSED	Yes	School Directory	6/22/2018	Building Addresses Cross referenced into OSPI Building Inventory	No
UW - Preservation Research and Policy Lab	Kathryn Rogers Merlino		krm@uw.edu	COM (Austin Scharff)	CLOSED	Yes	List of URMs Identified by UW and Preservation Greenlab	6/22/2018	Includes Building Vacancy Data	Yes
Washington Geospacial Open Data Portal	NA	NA	NA	TGG (Drew Seminara)	CLOSED	Yes	K12 Schools	6/22/2018	Inventory of geospacial locations for K-12 schools	N/A
DAHP (Department of Archaeology and Historic Preservation)	Morgan McLemore	360.586.3081	Morgan.McLemore@dahp.wa.gov	COM (Austin Scharff)	CLOSED	Yes	WISAARD Database	6/21/2018	Inventory of historic properties	Yes
WA Dept of Veterans Affairs	Michael Kashmar	(360) 725-2171	MikeK@DVA.WA.GOV	ARG (Caitlin Cranley)	07/11/18: Email Exchange clarifying request	Unknown				No
WA Dept of Commerce	Mary Baldwin	360.725.2937	mary.baldwin@commerce.wa.gov	ARG (Caitlin Cranley	08/03/18: M. Baldwin responded, indicating that they were working on a plan to export the information. 08/02/18: ARG sent email checking on status of data 07/20/18: Crosswalk email exchange, noting possible useful fields. 07/09/18: Email Exchange clarifying request	Yes	Web Based Annual Reporting (WBARS)	Not Received		No
Federal										
FEMA Region X	Mark Eberlein		Mark.Eberlein@fema.dhs.gov	ARG (Caitlin Cranley	08/02/18: Science Kilner responded, ccing Cynthia McCoy (Cynthia.Mccoy@fema.dhs.gov), and indicating we should reach out to quinn.butler@mil.wa.gov (EMD), derrick.hiebert@mil.wa.gov (EMD), Tim.Cook@mil.wa.gov (State Hazard Mitigation Officer), and Greg.Griffith@DAHP.WA.GOV (DAHP). 08/02/18: M Eberlein responded, indicating he did not have this data. CC'd Stewart, Jessica M <Jessica.Stewart2@fema.dhs.gov>, Kilner, Science <Science.Kilner@fema.dhs.gov> to see if they do 8/1/2018: Emailed Intro & Data Guide	Unknown				
Army (JBLM)	Donna Turnipseed	253.966.1766	donna.l.turnipseed2.civ@mail.mil	ARG (Caitlin Cranley	8/1/2018: Emailed Intro & Data Guide	Unknown				
Navy (Naval Base Kitsap Bremerton)	Amanda Bennett	360.476.6613	amanda.j.bennett@navy.mil	ARG (Caitlin Cranley	8/1/2018: Emailed Intro & Data Guide	Unknown				
Navy (Naval Station Whidbey Island)	Kendall Campbell	360.257.6780	kendall.campbell1@navy.mil	ARG (Caitlin Cranley	8/1/2018: Emailed Intro & Data Guide	Unknown				
Navy (Naval Station Everett)	Jennifer Sullivan	(425) 304-3464	Jennifer.sullivan@navy.mil	ARG (Caitlin Cranley	8/1/2018: Emailed Intro & Data Guide	Unknown				
Navy (all installations)	Russ Sackett	360.396.0024	russell.h.sackett1@navy.mil	ARG (Caitlin Cranley	8/1/2018: R. Sacket indicated that information not already included in the WISAARD database may not be available outside the Navy. He will do some additional research to find out. 8/1/2018: Emailed Intro & Data Guide	Unknown				
Air Force (Fairchild)	Shawn Woodard		Shawn.woodard.1@us.af.mil	ARG (Caitlin Cranley	8/1/2018: Emailed Intro & Data Guide	Unknown				
GSA	Rebecca Nielsen	253.931.7192	rebecca.nielsen@gsa.gov	ARG (Caitlin Cranley	CLOSED 08/23/18: R. Nielsen responded indicating that the information has been collected, but is considered "Sensitive by Unclassified' and cannot be shared publicaly. 8/1/2018: Emailed Intro & Data Guide	No	None - data is considered "Sensitive by Unclassified' and cannot be shared publicaly.			
US Army Corps of Engineers (Seattle)	Lauren McCroskey	260.764.3538	lauren.l.mccroskey@usace.army.mil	ARG (Caitlin Cranley	8/1/2018: Emailed Intro & Data Guide	Unknown				
State Hazard Mitigation Officer	Tim Cook		Tim.Cook@mil.wa.gov	ARG (Caitlin Cranley	8/2/2018: Emailed Intro & Data Guide	Unknown				
County Assessors										
Adams County	Sherri Brewer	(509)659-3203	sherrib@co.adams.wa.us	ARG (Matt Davis)	CLOSED 07/30/18: Assessor Data did not appear to be available for download from County website. TerraScan Map does not appear to have construction type or year built, but **does list permits** (C.Cranley) 07/20/18: Emailed Intro & Data Guide	No				
Asotin County	Jenny Goin	(509) 243-2016	jgoin@co.asotin.wa.us	ARG (Matt Davis)	CLOSED 07/30/18: Assessor Data did not appear to be available for download from County website. ArcGIS map linked from website appears to have no consistent construction type or year built information. (C.Cranley) 07/20/18: Emailed Intro & Data Guide	No				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
Benton County	Bill Spencer		Bill.Spencer@co.benton.wa.us	ARG (Matt Davis)	07/30/18: Assessor Data did not appear to be available for download from County website. HOWEVER, under Improvement / Building in the parcel details, there **does appear to be construction type and year built** (C.Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe				
Chelan County	Deanna Walter	(509) 667-6365	Deanna.Walter@CO.CHELAN.WA.US	ARG (Matt Davis)	CLOSED 07/24/18: Offered certified data. Noted data is stored with Harris Govern. ARG was directed not to contact vendor. 07/20/18: Emailed Intro & Data Guide	Maybe	Assessor Data	7/25/2018	Export of certified assessment roll (various comma delimited text files); will require a lot of review and consolidation	No
Clallam County	Pamela Rushton	(360) 417-2228	prushton@co.clallam.wa.us	ARG (Matt Davis)	CLOSED 07/30/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type or built date. (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	No				
Clark County	Peter Van Nortwick	(360) 397-2391	peter.vannortwick@clark.wa.gov	ARG (Matt Davis)	CLOSED 07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type or built date. There is a public Records request form here: https://www.clark.wa.gov/councilors/public-records-request (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	No				
Columbia County	Chris Miller	(509) 382-2131	chris_miller@co.columbia.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type. The data **does appear to include built date and use type** (at minimum residential and commercial). (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe				
Cowlitz County	Terry McLaughlin	(360) 577-3010 x02609	mclaughlint@co.cowlitz.wa.us	ARG (Matt Davis)	CLOSED 07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type or year built. There is a Public Records request form here: http://www.co.cowlitz.wa.us/index.aspx?NID=548 (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	No				
Douglas County	Jim Ruud	(509) 745-8866 x6340	jruud@co.douglas.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include construction type, year built, and building use**, under 'Appraisal'.(C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
Ferry County	Rachel Siracuse	(509) 775-5225x1126	assessor@co.ferry.wa.us	ARG (Matt Davis)	CLOSED 08/06/18: Data found in property search does not appear to include construction type or year built. 08/06/18: Email from R. Siracuse confirming that information from TR would need to be paid for. 08/02/18: Email exchange between M. Davis and Thomson Reuters. Thomson Reuters indicated that they did not have the authority to disseminate database information. Each County would have to request the information, and a cost would be incurred. 07/23/18: R. Siracuse offered contact info for software company Thomson Reuters. Noted another 12 or so counties use the same. 07/20/18: Emailed Intro & Data Guide	No				
Franklin County	Steve Marks	(509) 545-3506	smarks@co.franklin.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include construction type, year built, and building use**, under 'Appraisal'.(C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Garfield County	Laura Smith	(509 843-3631	lsmith@co.garfield.wa.us	ARG (Matt Davis)	CLOSED 09/05/18: Assessor sent compiled spreadsheet of identified URM buildings. 07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type or year built. The Data **does appear to indicate ownership public or private**. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Yes	Garfield County URM Data	9/5/2018	List of suspected URMs in Gafield County. Includes CMU and concrete	Yes
Grant County	Melissa McKnight	(509) 754-2011 x2610	mrm@grantcountywa.gov	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include construction type, built date, and building use and building shape**, under 'Appraisal'.(C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Grays Harbor County	Dan Lindgren	(360) 964-1536	dlindgren@co.grays-harbor.wa.us	ARG (Matt Davis)	CLOSED 07/23/18: Email from Grays Harbor directing ARG to county assessors website. 07/20/18: Emailed Intro & Data Guide	No			Dataset lacks construction date and construction material	
Island County	Mary Engle	(360) 678-7850	marye@co.island.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built, and building use**. Data regarding construction type is unclear(C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe				
Jefferson County	Jeff Chapman	(360) 385-9105	jchapman@co.jefferson.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type or year built. The Data **does appear to indicate building use**. (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Unlikely				
King County	John Wilson	(360) 263-7300	john.wilson@kingcounty.gov	ARG (Matt Davis)	07/31/18: **Downloaded 'Assessment Data' from Website.** Property Search appears to include **year built, construction type, building use, and possibly indication of historic status**. Downloaded information doesn't appear to include the information we are looking for. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe	Assessment Data [Downloaded]		EXTR_ ComBldg, EXTR_ ComBldgFeature, and EXTR_ ComBldgSection appear to have year built, construction type, building use, stories, gross sf. There does not immediately appear to be a way to tie Construction type (indicated as a number) to a separate table.	No
Kitsap County	Phil Cook	(360) 337-7160	philcook@co.kitsap.wa.us	ARG (Matt Davis)	07/31/18: **Downloaded Data Files from Website.** Downloaded Data **appears to include year built** in *Comm_Imps.* Parcel Details from the map **appear to indicate building use, and year built**. Does not appear to indicate construction type. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe	Assessment Data [Downloaded]		Tab deliminated txt files	No

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
Kittitas County	Mike Hougardy	(509) 962-7501	mike.hougardy@co.kittitas.wa.us	ARG (Matt Davis)	07/31/18: **Downloaded Data from Website.** Data files **appear to include building use and year built.** Data files do not appear to include Construction Type. Address' appear to be owner, not property. Parcel Details from Map **include slope >30%**, Additional information may be available, but encountered a server error when clicking parcel number. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe	Assessment Data [Downloaded]			No
Klickitat County	Crista Schroder	(509) 773-3715	cristas@klickitatcounty.org	ARG (Matt Davis)	CLOSED 07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type or year built. Public Records Request here: https://www.klickitatcounty.org/165/Public-Records-Requests (C. Cranley) 07/20/18: Emailed Intro & Data Guide	No				
Lewis County	Dianne Dorey	(360) 740-1392	dianne.dorey@lewiscountywa.gov	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built and building use** . Data may include construction type. Public Records request here: https://lewiscountywa.gov/assessor/public-record%E2%80%99s-request (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Lincoln County	Scott Liebing	(509) 725-7011	sliebing@co.lincoln.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built, construction type, and building use,** though appears inconsistent. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Mason County	Melody Peterson	(360) 427-9670 x490	map@co.mason.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built, construction type, and building use**. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Okanogan County	Scott Furman	(509) 422-7190	sfurman@co.okanogan.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built, construction type, and building use**. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Pacific County	Bruce Walker	(360) 875-9300 x2208	brucew@co.pacific.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built, construction type, and building use**. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Pend Oreille County Assessor	James McCroskey	(509) 447-6446	jmccroskey@pendoreille.org	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include construction type, and building use.** Data does not appear to include year built (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe				
San Juan County	John Kulseth	(360) 378-2172	johnk@sanjuanco.com	ARG (Matt Davis)	CLOSED 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	No				
Skagit County	Dave Thomas	(360) 336-9370	davet@co.skagit.wa.us	ARG (Matt Davis)	CLOSED 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe	Assessment Data [Downloaded]	7/24/2018	general data download (numerous "|" delimited text files); will require a lot of review and consolidation	No
Skamania County	Gabe Spencer	(509) 427-3721	spencer@co.skamania.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built, construction type, and building use**. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
Snohomish County	Linda Hjelle	(425) 388-3678	linda.hjelle@snoco.org	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include year built and building use.** Data does not appear to include construction type (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Spokane County	Vicki Horton	(509) 477-5775	vhorton@spokanecounty.org	ARG (Matt Davis)	07/31/18: **Downloaded Data from Website.** *comm_impr_info* **appears to include year built and construction type, and building use**. Parcel Details from map appear to include year built, year remodeled, building type. (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe	Assessment Data [Downloaded]	7/31/2018		No
Stevens County	John Olson	(509) 684-6161 x825	jolson@co.stevens.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does appear to include **year built and building use.** Data does not appear to include construction type (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe				
Thurston County	Steven Drew	(360) 867-2200	drews@co.thurston.wa.us	ARG (Matt Davis)	CLOSED 07/23/18: Data Received 07/20/18: Emailed Intro & Data Guide	Yes	Yes	7/23/2018	parcel #s, Year built, construction type, address	Yes
Wahkiakum County	Bill Coons	(360) 795-3791	coonsb@co.wahkiakum.wa.us	ARG (Matt Davis)	CLOSED 07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does not appear to include construction type or year built. (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	No				
Walla Walla County	Debra Antes	(509) 524-2560	dantes@co.walla-walla.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does appear to include **year built and building use.** Data does not appear to include construction type (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe				
Whatcom County	Keith Willnauer	(360) 778-5050	kwillnau@co.whatcom.wa.us	ARG (Matt Davis)	07/31/18: Assessor Data did not appear to be available for download from County website. Data found in property search does appear to include **year built.** Data does not appear to include construction type or building use. (C. Cranley) 07/23/18: D. Walter indicated that county uses Harris Govern to store data. Accessing that data could incur costs to the County, and would not be available directly to ARG. 07/20/18: Emailed Intro & Data Guide	Maybe				
Whitman County	Joe Reynolds	(509) 397-6220 x225	joer@co.whitman.wa.us	ARG (Matt Davis)	08/01/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include building use, year built, and construction type.** (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Yakima County	Dave Cook	(509) 574-1100	dave.cook@co.yakima.wa.us	ARG (Matt Davis)	08/01/18: Assessor Data did not appear to be available for download from County website. Data found in property search **does appear to include building use, year built, and construction type.** (C. Cranley) 07/20/18: Emailed Intro & Data Guide	Maybe				
Certified Local Governments (CLGS)										
City of Aberdeen	Lisa Scott	360-537-3238	lscott@aberdeenwa.gov		07/30/18: Kim Gant emailed Intro & Data Guide					

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	Kris Koski		kkoski@aberdeenwa.gov		08/10/18: ARG made K. Koski aware that materials would be avaialbe for them to use, pending review and approval from COM. 08/10/18: K. Koski responded indicating that the City has identified a need to inventory the historic downtown, and they would integrate the URM data fields into this effort. 08/08/18: CC'd on email from Derrick Hiebert of the Washington State Emergency Management Division, Washington Military Department Very willing to work with Commerce as they get inventory process underway	No				
City of Anacortes	Bret Lunsford	360-293-1915	bretl@cityofanacortes.org		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Auburn (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Bainbridge Island	Heather Wright	206-780-3711	hwright@bainbridgewa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Battleground (interlocal)	Jacqueline E. Kamp	360-397-2280 ext. 4913	Jacqueline.Kamp@clark.wa.gov		CLG is working on collecting data 07/30/18: Kim Gant emailed Intro & Data Guide	Maybe				
City of Bellingham	Jackie Lync	360-778-8350	jlynch@cob.org		CLOSED 07/30/18: Kim Gant emailed Intro & Data Guide	Yes	List of Suspected URMs	8/20/2018	Assembled from County Assessor data: location, yr built and material data for (1) non-SFR properties (2) constructed before 1945 and (3) with masonry in the Exterior Wall" field.	Yes
City of Black Diamond (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Bothell	Sarah (Church) Desimone	425/806-6404	sarah.desimone@bothellwa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Yes	List of suspected URMs	8/7/2018	Data is focused on URM status	Yes
City of Chehalis	Celest Wilder	360-345-2227	cwilder@ci.chehalis.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide 8/28/18: Matt emailed	Unknown				
City of Cheney	Susan Beeman	509-498-9240	sbeeman@cityofcheney.org		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Cle Elum	Lucy Temple	509-674-2262	lucy@cityofcleelum.com		Lucy is working on collecting data 07/30/18: Kim Gant emailed Intro & Data Guide	Maybe				
City of Colfax	Lynda Kramlich	509-397-3861/ 253-983-7839	records@colfaxwa.org		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of College Place	John Rickard	360-537-3238	JRickard@cpwa.us		07/30/18: Kim Gant emailed Intro & Data Guide	No				
City of Dayton	Trina Cole	509-382-2361	tcole@daytonwa.com		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Des Moines (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Edmonds	Rob Chave	425/771-0220	chave@ci.edmonds.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Ellensburg	Jonathan G. Kesler	509-925-8608	keslerj@ci.ellensburg.wa.us		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	No				
City of Everett	David Stalheim	425/257-8736	dstalheim@everettwa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Yes	Inventory of portion of downtown	7/31/2018	Data is focused on URM status	Yes
City of Gig Harbor	Lindsey Sehmel	253-853-7631	sehmell@cityofgigharbor.net		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Harrington	Amy Foley	509-253-4345	harringtoncity@gmail.com		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Hoquiam	Brian Shay	360-538-3971	bshay@cityofhoquiam.com		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Issaquah (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Kenmore (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Kennewick	Wes Romine	509-585-4558	wes.romine@ci.kennewick.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	No				
City of Kettle Falls	David Keeley	509-738-6821	dkeeley@kettle-falls.com		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Kirkland (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of LaCenter (interlocal)	Jacqueline E. Kamp	360-397-2280 ext. 4913	Jacqueline.Kamp@clark.wa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Lacey	Erin Quinn Valcho	360-413-3557	equinnva@ci.lacey.wa.us		CLOSED 8/1/2018: Erin conferred with City of Lacey buildings inspector, who confirmed the city has one retrofitted URM. ARG asked for more info on that building. 07/30/18: Kim Gant emailed Intro & Data Guide	Yes	Single entry for St. Martin's Old Main	8/2/2018	Incorporated into the Single Entry Database	Yes
City of Lakewood	Jennifer Schreck Courtney Brunell	253-983-7839	schreck_jennifer@yahoo.com cbrunell@cityoflakewood.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Langley	Bridgid Reynolds	360-221-4246 ext. 26	planning@langleywa.org		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Longview	Adam Trimble	360-442-5092	adam.trimble@ci.longview.wa.us		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Lynden	Dave Timmer	360-354-5532	timmerd@lyndenwa.org		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Maple Valley (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Millwood	Christina Janssen	509-924-0960	planning@millwoodwa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Newcastle (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of North Bend (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Olympia	Katie Knight Pruit	360-570-3746	kpruit@ci.olympia.wa.us		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Pasco	Jeff Adams	509-545-3441	adamsj@pasco-wa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	No				
City of Pomeroy	Shaun Martin	509-843-1601	clerk1@pomeroy-wa.com		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Port Townsend	John McDonagh	360-344-3070	jmcdonagh@cityofpt.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Pullman	Pete Dickinson	509-338-3213/ 509-338-3282	Pete.Dickinson@Pullman-Wa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Puyallup	Katie Baker	253-435-3604	Kbaker@ci.puyallup.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Redmond (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Ridgefield (interlocal)	Jacqueline E. Kamp	360-397-2280 ext. 4913	Jacqueline.Kamp@clark.wa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Ritzville	Kristen Hansen	509-659-1930	ritzvilleclerktreas@centurytel.net		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Roslyn	Michelle Geiger	509-649-3105	Planner@ci.roslyn.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Seattle	Sarah Sodt	206-615-1786	sarah.sodt@seattle.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
City of Shelton	Mark Ziegler	360-432-5194	mark.ziegler@sheltonwa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Shoreline (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Skykomish (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Snoqualmie (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Tacoma	Reuben McKnight	253-591-5220	Reuben.mcknight@ci.tacoma.wa.us		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Tumwater	Chuck Denney	360-754-4160	cdenney@ci.tumwater.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Vancouver	Jan Bader	360-487-8606	Jan.Bader@cityofvancouver.us		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Walla Walla	Elizabeth Chamberlain	509-524-4735	echamberlain@wallawallawa.gov		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Washougal (interlocal)	Jacqueline E. Kamp	360-397-2280 ext. 4913	Jacqueline.Kamp@clark.wa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Wenatchee	Glen DeVries	509-888-3200	gdevries@wenatcheewa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Woodinville (interlocal)	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Yacolt (interlocal)	Jacqueline E. Kamp	360-397-2280 ext. 4913	Jacqueline.Kamp@clark.wa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Yakima	Trevor Martin	509-575-6162	trevor.martin@yakimawa.gov		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
City of Yelm	Grant Beck	360-458-8430	grantb@yelmwa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Clark County	Jacqueline E. Kamp	360-397-2280 ext. 4913	Jacqueline.Kamp@clark.wa.gov		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Cowlitz County	Nick Fazio	360-577-3052 ext. 6664	fazion@co.cowlitz.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	No				
King County	Jennifer Meisner	206-477-0384	jennifer.meisner@kingcounty.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Mason County	Michael MacSems	360-427-9670 ext. 571	Mms@co.mason.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Pierce County	Cory Ragan	253-798-2590	cragan@co.pierce.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Snohomish County	Hal Gausman	360-805-6729	hal.gausman@snoco.org		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Spokane City/County	Megan Duvall	509-625-6543	mduvall@spokanecity.org		8/28/18: Matt emailed 07/30/18: Kim Gant emailed Intro & Data Guide	No				
Thurston County	Cami Peterson	360-754-3355 ext. 6348 or 5553	peterscs@co.thurston.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Town of Concrete	Marianne Manville-Ailles	360-855-2121	townplanner@concretewa.gov		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Town of Friday Harbor	Sandy Strehlou	360-622-2037	sstrehlou@fridayharbor.org		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Town of Steilacoom	Jennifer Schreck	360-790-3523	jennifer.schreck@ci.steilacoom.wa.us		07/30/18: Kim Gant emailed Intro & Data Guide	Unknown				
Main Street Communities										
Bainbridge Island Downtown Association	Jerri		jerri@bainbridgedowntown.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Downtown Bellingham Partnership	Alice		director@downtownbellingham.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Downtown Camas Association	Carrie		director@downtowncamas.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Centralia Downtown Association	Jan (vol)		centraliadowntownassociation@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Chehalis Community Renaissance Team	Annalee (pt)		annaleetobey@yahoo.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Historic Downtown Chelan Association	Erin		hdca@nwi.net	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Cle Elum Downtown Association	Amy (vol)		amy@kittitascountychamber.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Colfax Downtown Association	Val (pt)		colfaxdirector@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Coupeville Historic Waterfront Association	Vickie		vchambers2@hotmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Dayton Development Task Force	Melissa (pt)		chamber@historicdayton.com	ARG (Matt Davis)	7/25/18: director is working on occupancy data; should be ready soon c. 07/17/18: Breanne Durham emailed Intro Letter	Yes		Yes	Vacancy and ownership data	Yes
Ellensburg Downtown Association	Molly		director@ellensburgdowntown.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Gig Harbor Downtown Waterfront Alliance	Mary		executivedirector@ghhwa.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Downtown Issaquah Association	Christina (vol)		christinabruning@comcast.net	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Historic Downtown Kennewick Partnership	Dan		dsmith@historickennewick.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Kent Downtown Partnership	Barb		barbaras@kentdowntown.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Langley Main Street Association	Michaleen		mainstreet@whidbey.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Moses Lake Business Association	Brandon		director@mlbacares.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Mount Vernon Downtown Association	Ellen		edmvdt@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Oak Harbor Main Street Association	Matthew		edmainstreet@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Olympia Downtown Association	Todd		tcutts@downtownolympia.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Downtown Pasco Development Authority	Luke		lhallowell@downtownpasco.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Port Townsend Main Street Program	Mari		director@ptmainstreet.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Historic Downtown Prosser Association	Jesalyn		historicdowntownprosser@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Puyallup Main Street Association	Kerry (vol)		director@puyallupmainstreet.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Ridgefield Main Street	Marykay		ridgefieldmainstreet@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Roslyn Downtown Association	Cheri (vol)		cheri@roslyndowntown.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Selah Downtown Association	Whitney		selahdowntownassociation@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Stevenson Downtown Association	Marie		director@stevensonmainstreet.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Vancouver Downtown Association	Steve		director@vdausa.org	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Waterville Main Street Association	Lisa		lisadavies100@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Downtown Walla Walla Foundation	Bonnie		bonnie@downtownwallawalla.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Wenatchee Downtown Association	Linda		linda@wendowntown.org	ARG (Matt Davis)	8/6/2018: director sending ~250 survey forms for downtown Wenatchee; c. 07/17/18: Breanne Durham emailed Intro Letter	Yes	State survey forms -- duplicative with WISAARD	8/7/2018		
Downtown Association of Yakima	Andrew		yakimadowntown@gmail.com	ARG (Matt Davis)	c. 07/17/18: Breanne Durham emailed Intro Letter	Unknown				
Emergency Management										
Washington State Emergency Management Division, Washington Military Department	Robert L. Ezelle	(253) 512-7003	robert.ezelle@mil.wa.gov	COM (John Shilling)		Unknown				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
Washington State Emergency Management Division, Washington Military Department	Gary Urbas		gary.urbas@mil.wa.gov	ARG (Caitlin Cranley	8/1/2018: Emailed Intro & Data Guide	Unknown				
Washington State Emergency Management Division, Washington Military Department	Quinn Butler		quinn.butler@mil.wa.gov	ARG (Caitlin Cranley	CLOSED 08/02/18: Q. Butler responded, noting that WA EMD does not have a list of URMS. Suggested contacting the Geologic Hazards and Landslide Hazard Mapping Program at DNR, Corina Forson (corina.forson@dnr.wa.gov). 8/2/2018: Emailed Intro & Data Guide	No				
Washington State Emergency Management Division, Washington Military Department	Derrick Hiebert		derrick.hiebert@mil.wa.gov	ARG (Caitlin Cranley	CLOSED 08/08/18: D. Hiebert responded, suggesting contact with Kris Koski, the city engineer at City of Aberdeen, and Chuck Wallace, who is the emergency manager for Grays County. They have just completed their hazard mitigation plan and are interested in assessing the seismic vulnerability of historic downtown and subsequently creating incentives for private owners to seismically retrofit. 8/2/2018: Emailed Intro & Data Guide	No				
WA Department of Natural Resources	Corina Forson		corina.forson@dnr.wa.gov	ARG (Caitlin Cranley	8/2/2018: Emailed Intro & Data Guide	Unknown				
Adams County	Jay Weise		jayw@co.adams.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Algona, City of	Sgt. James Schrimpsher		jamess@algonawa.gov	WMD (Robert Ezelle)	07/24/18: Response from Contact indicating City Park restroom were constructed of CMU. C. Cranley responded, noting that the DB would be tracking CMU structures 07/23/18: Emailed Intro & Data Guide	Unknown				
Asotin County	Mark Janowski John Hilderbrand		mjanowski@co.asotin.wa.us jhilderbrand@co.asotin.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Auburn, City of	Jerry Thorson		jthorson@auburnwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Bellingham, City of	Robert Yacht		oem@cob.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Bellevue, City of	Curry Mayer		CMayer@bellevuewa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Benton County	Deanna Davis Brian Calvert		d.davis@bces.wa.gov b.calvert@bces.wa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Bothell, City of	Jennifer Warmke		jennifer.warmke@bothellwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Black Diamond, City of	Kevin Esping		kesping@blackdiamondwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Buckley, City of	Eric Skogen Alan Predmore		eskogen@cityofbuckley.com apredmore@cityofbuckley.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Bucoda, Town of	James Fowler		bucodafire@gmail.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Centralia, City of	Carl Nielsen Stacy Denham		cnielsen@cityofcentralia.com sdenham@cityofcentralia.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Chehalis Tribe	Cal Bray Kelly Edwards Glen Connelly		cbray@chehalistribe.org Kedwards@chehalistribe.org gconnelly@chehalistribe.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Chelan County	Kent Sisson Rich Magnussen Diana Hogan Stan Smoke		kent.sisson@co.chelan.wa.us Rich.Magnussen@co.chelan.wa.us diana.hogan@co.chelan.wa.us Stan.Smoke@co.chelan.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Cheney, City of	Tom Jenkins Olga Montiel		tjenkins@cityofcheney.org omontiel@cityofcheney.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Chinook Indian Nation	Tony Johnson Jennifer Lagergren		office@chinooknation.org office@chinooknation.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Clallam County	Ron Cameron Jamye Wisecup		rcameron@co.clallam.wa.us jwisecup@co.clallam.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Clark County	Scott Johnson Dave Fuller		scott.johnson@clark.wa.gov dave.fuller@clark.wa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Clyde Hill, City of	John Greenwood		johng@clydehill.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Columbia County	Lisa Caldwell		Lisa_Caldwell@co.columbia.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Colville Confederate Tribe	Del Ostenberg Sharlene Zacherle Brian Quill Dustin Best Debra Wulff Randy August		del.ostenberg.ems@colvilletribes.com sharlene.zacherle@colvilletribes.com brian.quill2@colvilletribes.com dustin.best@colvilletribes.com debra.wulff.psd@colvilletribes.com randy.august2@colvilletribes.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Cowlitz County	Ernie Schnabler Lori Hendrickson Lorraine Churchill Jerry Jensen Steve Kutz Aaron Workman Mike Iyall		schnablere@co.cowlitz.wa.us hendricksonl@co.cowlitz.wa.us churchilll@co.cowlitz.wa.us jensenj@co.cowlitz.wa.us skutz.health@cowlitz.org aaronw@cowlitz.org mikenjoan@comcast.net	WMD (Robert Ezelle) WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide 07/23/18: Emailed Intro & Data Guide	Unknown				
Duwamish Tribe	Cindy Williams		cindy@duwamishtribe.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Douglas County	Steve Groseclose Harvey Gjesdal Kevin Morris		sgroseclose@co.douglas.wa.us harveyg@co.douglas.wa.us kmorris@co.douglas.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Ellensburg, City of	John Sinclair		sinclairj@kvfr.org	WMD (Robert Ezelle)	CLOSED	No				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
	Rich Elliott		elliottr@kvfr.org		07/30/18: Response from Robert Doobovsky (Building official, doobovskyr@ci.ellensburg.wa.us), no information available 07/23/18: Emailed Intro & Data Guide					
Everett, City of	Brent Stainer		bstainer@everettwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Federal Way, City of	Ray Gross		ray.gross@cityoffederalway.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Ferry County	Amy Rooker Ray Maycumber		fccivil2@co.ferry.wa.us rmaycumber@co.ferry.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Fife, City of	Pete Fisher		pfisher@cityoffife.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Franklin County	Sean Davis Job Chris Lee Job Jacque Cook Cheryl Evosevich		sdavis@co.franklin.wa.us clee@co.franklin.wa.us jcook@co.franklin.wa.us cevosevich@co.franklin.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Garfield County	John Hirsch Drew Hyer		jhirsch@co.garfield.wa.us dhyer@co.garfield.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Gig Harbor, City of	Kelly Busey		buseyk@cityofgigharbor.net	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Grand Coulee, City of	John Tufts Lorna Pearce		jtufts@gccitywa.org clerkgc@gccitywa.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Grant County	Darrik Gregg Sandi Duffey Matthew P. Klein Kyle Foreman		dgregg@grantcountywa.gov sduffey@grantcountywa.gov mpklein@grantcountywa.gov kforeman@grantcountywa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Grays Harbor County	Charles Wallace Rick Scott		cwallace@co.grays-harbor.wa.us rscott@co.grays-harbor.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Hoh Tribe	Lisa Martinez MelvinJohn		maria959856@yahoo.com e.d@hohtribe-nsn.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Island County	Eric Brooks		e.brooks@co.island.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Yes	List of 3 URMs on Whidbey Island	8/16/2018	3 survey forms from Ebey's Landing National Historic Reserve; Incorporated into *Single Entry Outreach Responses* File	Yes
Issaquah, City of	Brett Heath Brenda V. Bramwell Emily Moon		breth@issaquahwa.gov brendab@issaquahwa.gov EmilyM@issaquahwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Jamestown S'Klallam Tribe	Annette Nesse Matt Adams Bill Riley		anesse@jamestowntribe.org mcadams@jamestowntribe.org briley@jamestowntribe.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Jefferson County	Willie Bence John Crooks John Ebner Keppie Keplinger Jacob Hausdorf		jcdem@co.jefferson.wa.us jcrooks@co.jefferson.wa.us jebner@co.jefferson.wa.us kkeplinger@co.jefferson.wa.us jhausdorf@co.jefferson.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Kalispel Tribe of Indians	Tom Ling Jim Wynecoop Corrie Johnson		tling@kalispeltribe.com jwynecoop@kalispeltribe.com cjohnson@kalispeltribe.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Kent, City of	Matt Morris John Madson Joe Root		mmorris@pugetsoundfire.org jmadson@pugetsoundfire.org jroot@pugetsoundfire.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
King County	Walt Hubbard Jody Miller		walt.hubbard@kingcounty.gov jody.miller@kingcounty.gov	WMD (Robert Ezelle)	07/30/18: Email from J. Rahman indicating she had contacted King County Assessor for information. No data appears to be available from the Mitigation plan. 07/24/18: Response from Janice Rahman (Janice.Rahman@Kingcounty.gov), indicated available dataset from Mitigation plan 07/23/18: Emailed Intro & Data Guide	Maybe				
King County E911	Laura Pitarys		laura.pitarys@kingcounty.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Kirkland, City of	Heather Kelly Tim Day		Hkelly@kirklandwa.gov tday@kirklandwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Kitsap County	Michele Moen Dave Rasmussen Elizabeth Klute		mmoen@co.kitsap.wa.us drasmuss@co.kitsap.wa.us eklute@co.kitsap.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Kittitas County	Gene Dana Clayton Myers Darren Higashiyama		gene.dana@co.kittitas.wa.us clay.myers@co.kittitas.wa.us darren.higashiyama@co.kittitas.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Klickitat County	Jeff King Julie Buck Randi Heinzen		jeffk@klickitatcounty.org julieb@klickitatcounty.org emergencymanagement@klickitatcounty.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Lacey, City of	Phillip White Joe Upton		pwhite@ci.lacey.wa.us jupton@ci.lacey.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Lakewood, City of	John Unfred Christine Badger		Junfred@cityoflakewood.us cbadger@cityoflakewood.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Lake Forest Park, City of	Stephen Sutton		ssutton@ci.lake-forest-park.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Lewis County	Steve Mansfield Jill Kangas		steve.mansfield@lewiscountywa.gov jill.kangas@lewiscountywa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Lincoln County	Wade Magers Kathy Wilcox Denise Liebing		wmagers@co.lincoln.wa.us kwilcox@co.lincoln.wa.us dmliebing@co.lincoln.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Lewis County			DEM@lewiscountywa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
Lower Elwha Klallam	Glen Roggenbuck		glen.roggenbuck@elwha.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Lummi Nation Tribe	Ralph Long Merle Jefferson Travis Brockie Jeremiah Julius		ralphl@lummi-nsn.gov merlej@lummi-nsn.gov Travisb@lummi-nsn.gov Jeremiahj@lummi-nsn.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Makah Tribe	Rickson Kanichy Patty Manuel		rickson.kanichy@makah.com patty.manuel@makah.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Maple Valley, City of	David Johnston		david.johnston@maplevalleywa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Mason County	Ross McDowell Tammi Wright		rmcdowell@co.mason.wa.us tammiw@co.mason.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Medina, City of	Scott Burns		sburns@medina-wa.gov	WMD (Robert Ezelle)	CLOSED 07/23/18: Emailed Intro & Data Guide	Yes	Email with address of one publicly owned URM	7/24/2018	Incorporated into *Single Entry Outreach Responses* file Address, year built and building use for one URM	Yes
Mercer Island, City of	Jennifer Franklin David Jokinen Julie Underwood		jennifer.franklin@mercergov.org David.jokinen@mercergov.org Julie.underwood@mercergov.org	WMD (Robert Ezelle)	CLOSED 07/25/18: Email response from Don Cole (Don.Cole@mercergov.org), indicating that, based on a city-wide inventory, there are no URMs on Mercer Island 07/23/18: Emailed Intro & Data Guide	Yes	Email with location of one publicly owned possible URM	7/25/2018	Building name, year built, construction material, and building use Incorporated into Single Entry Database	Yes
Monroe, City of	Brad Feilberg		bfeilberg@monroewa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Muckleshoot Indian Tribe	Ada McDaniel Susan Starr		Ada.McDaniel@muckleshoot.nsn.us susan.starr@muckleshoot.nsn.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Mukilteo Fire Department	Christopher Alexander		calexander@mukilteowa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Nez Perce Tribe	John Wheaton Rebecca Miles		jwheaton@nezperce.org rebeccam@nezperce.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Nisqually Tribe	Jeff Choke Mary Leitka Jonette DeLaCruz Tom Iyall		choke.jeff@nisqually-nsn.gov Leitka.mary@nisqually-nsn.gov delacruz.jonette@Nisqually-nsn.gov iyall.tom@nisqually-nsn.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Nooksack Indian Tribe	Glenn Yorks Steven Jimmy Rory Gilliland		 rgilliland@nooksack-nsn.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Normandy Park, City of	Dan Yourkoski		dyourkoski@normandyparkwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
North Bend, City of	Mark Rigos Londi Lindell		mrigos@northbendwa.gov llindell@northbendwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Okanogan County	Maurice Goodall Kayla Higbee		em@co.okanogan.wa.us em@co.okanogan.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Pacific County	Scott McDougall		smcdougall@co.pacific.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Pacific, City of	John Calkins		jcalkins@ci.pacific.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Pend Oreille County	JoAnn Boggs		jboggs@pendoreille.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Pierce County	Jim Heishman Lowell Porter Scott Heinze Kyle Bustad		jim.heishman@piercecountywa.gov lowell.porter@piercecountywa.gov scott.heinze@piercecountywa.gov Kyle.Bustad@piercecountywa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Port Gamble S-Klallam Tribe	Kerstin Powell Holly Blanton Sam White		powellk@pgst.nsn.us hollyb@pgst.nsn.us swhite@pgst.nsn.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Puyallup, City	Kirstin Hofmann Misty Ives Rob Androtti Scott Engle		khofmann@ci.puyallup.wa.us mives@pgst.nsn.us robert@ci.puyallup.wa.us scotte@ci.puyallup.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Port Gamble S'Klallam Tribe	Renee Veregge		reneev@pgst.nsn.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Puyallup Tribe	Rory LaDucer		rory.laducer@puyalluptribe.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Quileute Nation Tribe	Kevin Harris Bill Lyon Larry Burtness		kevin.harris@quileutenation.org Bill.lyon@quileutenation.org Larry.burtness@quileutenation.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Quinault Indian Nation Tribe	Christina Breault Mark James Brandi Hannah Eison Lisa Hall		cbreault@quinault.org mark.james@quinault.org Brandi.Eison@quinault.org lhall@quinault.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Redmond , City of	Tommy Smith Pattijean Hooper Debbie Newman Janeen Olson		tfsmith@redmond.gov phooper@redmond.gov danewman@redmond.gov jrolson@redmond.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Renton, City of	Deborah Needham		em@rentonwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Samish Indian Nation	Leslie Eastwood		leastwood@samishtribe.nsn.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
San Juan County	Brendan Cowan Dave Halloran		brendanc@sanjuandem.net daveh@sanjuandem.net	WMD (Robert Ezelle)	07/31/18: B. Cowan indicated that he is working on a project to hire an engineer to do an inventory for the County. 07/24/18: Contact requested coordination email with San Juan County Assessor 07/23/18: Emailed Intro & Data Guide	Yes	List of 13 URMs in San Juan County	7/26/2018	Incorporated into *Single Entry Outreach Responses* Roster of 13 buildings Assessor knows to be URMs; ready for insertion into URM database	
Sauk-Suiattle Indian Tribe	Nils "Buster" Landin Scott Morris Ronda Metcalf Tracy Harrington		nlandin@sauk-suiattle.com smorris@sauk-suiattle.com rmetcalf@sauk-suiattle.com tharrington@sauk-suiattle.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
	Norma Joseph		njoseph@sauk-suiattle.com							
SeaTac, City of	Will Lugo Will Appleton		wlugo@ci.seatac.wa.us wappleton@ci.seatac.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Seattle, City of	Barb Graff Laurel Nelson		barb.graff@seattle.gov laurel.nelson@seattle.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Yes			See Seattle URM Database, above	
Shelton, City of	Tim Mckern Mike Patti		tmckern@cmfe.org mpatti@cmfe.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Shoalwater Bay Tribe	Lee Shipman Robin Souvinir		leshipman@shoalwaterbay-nsn.gov rsouvinir@shoalwaterbay-nsn.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Skagit County	 Douglas ten Hoopen Hans Kahl Vickie Fontaine		dem@co.skagit.wa.us douglasth@co.skagit.wa.us hkahl@co.skagit.wa.us vickief@co.skagit.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Shoreline, City of	Jason McMillan		jmcmillan@shorelinewa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Skamania County	John Carlson		johnc@co.skamania.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Skokomish Tribe	Joseph Vukich Perry Carrington		jvukich@skokomish.org pcarrington@skokomish.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Skykomish, Town of	James Knisley		kcfd50@gmail.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Snohomish County	Jason Biermann Dara Salmon Mark Murphy		jason.biermann@co.snohomish.wa.us dara.salmon@snoco.org mark.murphy@snoco.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Snoqualmie Indian Tribe	Ron Thorson John E. Pennington Gene Fenton		ronald@snoqualmietribe.us john.pennington@SnoqualmieTribe.us alexander@snoqualmietribe.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Snoqualmie, City of	Mark Correira Perry Phipps Bob Larson		firechief@ci.snoqualmie.wa.us pphipps@ci.snoqualmie.wa.us blarson@ci.snoqualmie.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Spokane County	Chandra Fox		cefox@spokanecounty.org	WMD (Robert Ezelle)	CLOSED 07/25/18: Response from Gerry Bozarth 07/23/18: Emailed Intro & Data Guide	No				
Spokane Tribe	Ron Samuels Frank Metlow Jesse Moss II		rons@spokanetribe.com frankm@spokanetribe.com jessemoss@sirpd.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Squaxin Island Tribe	John Taylor Tracey Bogart		jtaylor@squaxin.us tbogart@squaxin.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
State Alert & Warning Center (AWC)			Dutyofficer@mil.wa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Steilacoom Tribe	Danny Marshall		steilacoomtribe@msn.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Stevens County	Jim Caruso		jcaruso@stevenscountywa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Stillaguamish Tribe	Joe Orford Doug Pendergrass		jorford@stillypd.org dpendergrass@stillypd.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Sumner, City of	Brad Moericke Jeff Engel		bradm@sumnerwa.gov jeffe@sumnerwa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Swinomish Tribe	Earl Cowan Jim Sande Lou D'Amelio		ecowan@swinomish.nsn.us jsande@swinomish.nsn.us ldamelio@swinomish.nsn.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Suquamish Tribe	Mike Lasnier Cherrie May Domingo Almirol		mlasnier@suquamish.nsn.us cmay@suquamish.nsn.us dalmirol@suquamish.nsn.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Tacoma, City of	Ute Weber Tory Green		uweber@ci.tacoma.wa.us tgreen@ci.tacoma.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Thurston County	Kurt Hardin Sandy Eccker		hardinka@co.thurston.wa.us ecckers@co.thurston.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Tukwila, City of	Martin Grisham Jay C Wittwer Chris Flores		marty.grisham@tukwilawa.gov jay.wittwer@tukwilawa.gov chris.flores@tukwilawa.gov	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Tulalip Tribe	Ashlynn Danielson Robert Myers Sherman Pruitt		rochellelubbers@tulaliptribes-nsn.gov rmyers@tulaliptribes-nsn.gov spruitt@tulaliptribalpolice.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Tumwater, City of	Jim McGarva Scott LaVielle		jmcgarva@ci.tumwater.wa.us slavielle@ci.tumwater.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Upper Skagit Tribe	Doreen Maloney Rance Sutten Lauren Rich		doreenm@upperskagit.com rances@upperskagit.com laurenr@upperskagit.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Vancouver, City of	Gene Juve Joe Molina		Gene.Juve@cityofvancouver.us joe.molina@cityofvancouver.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Vashon Island	Charles Krimmert Rick Wallace John Cornellson Robert Larsen		ckrimmert@vifr.org rikwall@gmail.com EOC@vashonbeprepared.org rlarsen@vifr.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Wahkiakum County	Beau Renfro Mark Howie		renfrob@co.wahkiakum.wa.us howiem@co.wahkiakum.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Walla Walla County	Liz Jessee Patrick Purcell		LJessee@co.walla-walla.wa.us PPurcell@co.walla-walla.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Wenatchee, City of	Tom Robbins			WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Whatcom County	Wallace Kost John Gargett		WKost@co.whatcom.wa.us jgargett@co.whatcom.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				

Entity	Contact Name	Phone #	Email	Contacted by	Status	Data Available	Data Received (Title)	Date Received	Short Description of Data	Incorporated?
	Chalice Dew-Johnson Frances Burkhar		cdjohnso@co.whatcom.wa.us fburkhar@co.whatcom.wa.us							
Whitman County	Bill Tensfeld Robin Cocking		bill.tensfeld@co.whitman.wa.us robinc@co.whitman.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Woodinville , City of	Budd Backer		eoc@wflsd.org	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Yakama Nation	James Shike Elizabeth Sanchey Theresa Wallahee		james_shike@yakama.com elizabeth_sanchey@yakama.com Theresa_Wallahee@Yakama.com	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				
Yakima County	Tony Miller Horace Ward Jason Clapp		antone.miller@co.yakima.wa.us horace.ward@co.yakima.wa.us jason.clapp@co.yakima.wa.us	WMD (Robert Ezelle)	07/23/18: Emailed Intro & Data Guide	Unknown				

Appendix C4
Data Migration Scripts and Procedures

Architectural
Resources Group

Appendix C4. Data Migration Scripts and Procedures

1. Sample ETL Process for Flat-file datasets

```
USE WA_URM_Buildings
GO

--DELETE
DELETE
FROM Buildings
WHERE BuildingID > 1144
GO

--RESEED RIGHT AFTER SEATTLE DATASET
DBCC CHECKIDENT (
             'Buildings',
             RESEED,
             1144
             );
GO

INSERT INTO Buildings (
     Address1,
     City,
     STATE,
     County,
     ParcelNumber,
     DateConstructed,
     URMStatusID,
     Latitude,
     Longitude
     )
SELECT line_1,
     city,
     STATE,
     County,
     PARCEL_ID2,
     YEAR_BUILT,
     URMStatus,
     lat,
     lng
FROM [ARG_City_County].[dbo].Thurston
GO

INSERT INTO Buildings_DataSources (
     BuildingID,
     DataSourceFieldValue,
     DataSourceID
     )
SELECT BuildingID,
     ParcelNumber AS DataSourceFieldValue,
     4 AS DataSourceID
FROM Buildings
WHERE County = 'Thurston'
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT b.BuildingID,
     t.ConstMat
FROM [ARG_City_County].[dbo].Thurston t
INNER JOIN Buildings b
     ON t.PARCEL_ID2 = b.ParcelNumber
```

```
            AND b.County = 'Thurston'
            AND t.line_1 = b.Address1
            AND t.YEAR_BUILT = b.DateConstructed
GO

INSERT INTO Buildings (
     Address1,
     City,
     STATE,
     PostalCode,
     County,
     ParcelNumber,
     URMStatusID,
     BuildingOwnership,
     Latitude,
     Longitude
     )
SELECT Address,
     City,
     'WA' AS STATE,
     ZIP,
     County,
     Parcel_No,
     [URMStatus],
     [Building Ownership],
     lat,
     lng
FROM [ARG_City_County].[dbo].Everett
GO

INSERT INTO Buildings_DataSources (
     BuildingID,
     DataSourceFieldValue,
     DataSourceID
     )
SELECT b.BuildingID,
     ev.BuildingID AS DataSourceFieldValue,
     5 AS DataSourceID
FROM Buildings b
INNER JOIN [ARG_City_County].[dbo].Everett ev
     ON b.ParcelNumber = ev.Parcel_No
WHERE b.City = 'Everett'
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT b.BuildingID,
     ConstMat
FROM [ARG_City_County].[dbo].Everett e
INNER JOIN Buildings b
     ON e.Parcel_No = b.ParcelNumber
            AND b.City = 'Everett'
GO

INSERT INTO Buildings (
     Address1,
     City,
     STATE,
     PostalCode,
     County,
     ParcelNumber,
     URMStatusID,
     Latitude,
     Longitude
```

```
      )
SELECT Address,
      City,
      'WA' AS STATE,
      PostalCode,
      County,
      [Parcel No#],
      [URM Status],
      Lat,
      Lng
FROM [ARG_City_County].[dbo].Bothell
GO

INSERT INTO Buildings_DataSources (
      BuildingID,
      DataSourceFieldValue,
      DataSourceID
      )
SELECT BuildingID,
      ParcelNumber AS DataSourceFieldValue,
      6 AS DataSourceID
FROM Buildings
WHERE City = 'Bothell'
GO

INSERT INTO Buildings_BuildingUses
SELECT b.BuildingID,
      bthl.[Building Use]
FROM [ARG_City_County].[dbo].Bothell bthl
INNER JOIN Buildings b
      ON bthl.[Parcel No#] = b.ParcelNumber
            AND b.City = 'Bothell'
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT dat.BuildingID,
      ARG_Const_Mat
FROM [ARG_City_County].[dbo].Bothell bthl
INNER JOIN Buildings_DataSources dat
      ON bthl.[Parcel No#] = dat.DataSourceFieldValue
            AND dat.DataSourceID = 6
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT dat.BuildingID,
      ARG_Const_Mat_2
FROM [ARG_City_County].[dbo].Bothell bthl
INNER JOIN Buildings_DataSources dat
      ON bthl.[Parcel No#] = dat.DataSourceFieldValue
            AND dat.DataSourceID = 6
            AND bthl.ARG_Const_Mat_2 IS NOT NULL
GO

INSERT INTO Buildings_Comments
SELECT dat.BuildingID,
      Comments
FROM [ARG_City_County].[dbo].Bothell bthl
INNER JOIN Buildings_DataSources dat
      ON bthl.[Parcel No#] = dat.DataSourceFieldValue
            AND dat.DataSourceID = 6
            AND bthl.Comments IS NOT NULL
GO
```

```
UPDATE b
SET b.Parapets = CASE WHEN UPPER(bthl.[Architectural Features]) LIKE '%PARAPET%'
THEN 'Y' ELSE NULL END,
     b.ComplexFootprint = CASE WHEN UPPER(bthl.[Architectural Features]) LIKE
'%COMPLEX%' THEN 'Y' ELSE NULL END,
     b.OpenStorefront = CASE WHEN UPPER(bthl.[Architectural Features]) LIKE '%OPEN
STORE%' THEN 'Y' ELSE NULL END,
     b.AdjacentBuildingHeightFloorDiscrepancy = CASE WHEN UPPER(bthl.[Architectural
Features]) LIKE '%ADJACENT%' THEN 'Adjacent Height Lower' ELSE NULL END
FROM [ARG_City_County].[dbo].[Bothell] bthl
INNER JOIN WA_URM_Buildings.dbo.Buildings b
     ON bthl.[Parcel No#] = b.ParcelNumber
WHERE b.City = 'Bothell'
GO

INSERT INTO Buildings (
     Address1,
     City,
     STATE,
     County,
     ParcelNumber,
     DateConstructed,
     URMStatusID,
     Latitude,
     Longitude
     )
SELECT Site_Addre,
     'Bellingham' AS City,
     'WA' AS STATE,
     'Whatcom' AS County,
     PARCEL_COD,
     YearBuilt,
     [URM Status],
     Lat,
     Long_
FROM [ARG_City_County].[dbo].Bellingham
GO

INSERT INTO Buildings_DataSources (
     BuildingID,
     DataSourceFieldValue,
     DataSourceID
     )
SELECT b.BuildingID,
     bell.Property_ID AS DataSourceFieldValue,
     7 AS DataSourceID
FROM Buildings b
INNER JOIN [ARG_City_County].[dbo].Bellingham bell
     ON b.ParcelNumber = bell.PARCEL_COD
             AND b.City = 'Bellingham'
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT dat.BuildingID,
     [Construction Material]
FROM [ARG_City_County].[dbo].Bellingham bell
INNER JOIN Buildings_DataSources dat
     ON bell.Property_ID = dat.DataSourceFieldValue
             AND dat.DataSourceID = 7
GO

INSERT INTO Buildings (
```

```
      Address1,
      City,
      STATE,
      County,
      PostalCode,
      ParcelNumber,
      BuildingName,
      SquareFootage,
      Stories,
      DateConstructed,
      URMStatusID,
      Latitude,
      Longitude,
      VacantUnderutilizedID,
      Parapets
      )
SELECT Address,
      City,
      STATE,
      County,
      Postal,
      [Parcel No#],
      [Building Name],
      [Square Footage],
      Stories,
      [Date Constructed],
      [ARG URM Status],
      Y,
      X,
      [Vacant/Underutilized],
      Parapet
FROM [ARG_City_County].[dbo].Garfield
GO

UPDATE b
SET BuildingOwnership = 'Public'
FROM Buildings b
INNER JOIN [ARG_City_County].[dbo].Garfield g
      ON b.ParcelNumber = g.[Parcel No#]
            AND b.County = 'Garfield'
WHERE g.[ARG Building Ownership] IS NOT NULL
GO

INSERT INTO Buildings_DataSources (
      BuildingID,
      DataSourceFieldValue,
      DataSourceID
      )
SELECT BuildingID,
      ParcelNumber AS DataSourceFieldValue,
      8 AS DataSourceID
FROM Buildings
WHERE County = 'Garfield'
GO

INSERT INTO Buildings_BuildingUses
SELECT b.BuildingID,
      [ARG Building Use]
FROM [ARG_City_County].[dbo].Garfield g
INNER JOIN Buildings b
      ON g.[Parcel No#] = b.ParcelNumber
            AND b.County = 'Garfield'
GO
```

```
INSERT INTO Buildings_ConstructionMaterials
SELECT b.BuildingID,
     [ARG Construction Materail]
FROM [ARG_City_County].[dbo].Garfield g
INNER JOIN Buildings b
     ON g.[Parcel No#] = b.ParcelNumber
               AND b.County = 'Garfield'
GO

INSERT INTO Buildings_BuildingUses
SELECT b.BuildingID,
     [ARG Building Use 2]
FROM [ARG_City_County].[dbo].Garfield g
INNER JOIN Buildings b
     ON g.[Parcel No#] = b.ParcelNumber
               AND b.County = 'Garfield'
WHERE [ARG Building Use 2] IS NOT NULL
GO

INSERT INTO Buildings_EmergencyFacilities
SELECT b.BuildingID,
     g.[Emergency Facility]
FROM [ARG_City_County].[dbo].Garfield g
INNER JOIN Buildings b
     ON g.[Parcel No#] = b.ParcelNumber
               AND b.County = 'Garfield'
WHERE g.[Emergency Facility] IS NOT NULL

UPDATE Buildings
SET Duplicate = 1
WHERE BuildingID IN (
               SELECT dat.BuildingID
               FROM Buildings_DataSources dat
               INNER JOIN External_City_County_Dupes dup
                        ON dat.DataSourceFieldValue = dup.NON_WISAARD_ID
                                 AND dat.DataSourceID NOT IN (1, 2, 3)
               WHERE dat.DataSourceID NOT IN (1, 2, 3)
               )
```

2. WISAARD Dataset ETL Process

```
USE WA_URM_Buildings;
GO

--DELETE
DELETE
FROM Buildings
WHERE BuildingID > 1645
GO

--RESEED RIGHT AFTER SEATTLE DATASET
DBCC CHECKIDENT (
             'Buildings',
             RESEED,
             1645
             );
GO

USE WISAARD_Historic_Properties_Updated;
GO

CREATE TABLE #staging_LocationGIS (
     [LocationID] [int] NULL,
     [County] [varchar](50) NULL,
     [X] [decimal](9, 6) NULL,
     [Y] [decimal](9, 6) NULL,
     )
GO

INSERT INTO #staging_LocationGIS
SELECT gis.LocationID,
     area.GISAreaName AS County,
     sl.X,
     sl.Y
FROM [WISAARD_Historic_Properties_Updated].[dbo].[LocationGISArea] gis
INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[GISArea] area
     ON gis.GISAreaID = area.GISAreaID
             AND area.GISAreaTypeID = 2
INNER JOIN spatialLocationID sl
     ON gis.LocationID = sl.LocationID
GO

--INSERT BUILDINGS FROM WISAARD
INSERT INTO [WA_URM_Buildings].[dbo].[Buildings] (
     BuildingName,
     Address1,
     City,
     STATE,
     PostalCode,
     County,
     DateConstructed,
     Latitude,
     Longitude,
     BuildingOwnership
     )
SELECT vw.HistoricName AS BuildingName,
     vw.AddressLine1 AS Address1,
     vw.City,
     'WA' AS STATE,
     vw.ZipCode AS PostalCode,
     g.County AS County,
```

```
	vw.ConstructionYear AS DateConstructed,
	g.Y AS Latitude,
	g.X AS Longitude,
	--need to store PropertyID for now
	vw.PropertyID AS BuildingOwnership
FROM dbo.vw_DatasharingHPIAddressConstYr vw
FULL JOIN #staging_LocationGIS g
	ON vw.LocationID = g.LocationID
WHERE
	-- has PropertyClassificationID = 1 or it's NULL (1 being 'Building') in
Property table
	vw.PropertyID IN (
		SELECT PropertyID
		FROM dbo.Property
		WHERE PropertyClassificationID = 1
			OR PropertyClassificationID IS NULL
		) -- AND has NONE of the Following BuildingUseIDs FROM PropertyUse
table
	AND vw.PropertyID IN (
		SELECT PropertyID
		FROM dbo.PropertyUse
		WHERE BuildingUseID NOT IN (1, 4, 8, 22, 31, 32, 33, 39, 49, 55, 72,
73, 74, 75, 76, 77, 78, 79, 80, 81, 85, 88, 91, 92)
			OR BuildingUseID IS NULL
		) -- AND has a ConstructionYear less than 1958 or NULL in
vw_DatasharingHPI
	AND (
		ConstructionYear < 1958
		OR ConstructionYear IS NULL
		) -- AND has a ConstructionTypeName = 'Built Date'  or NULL in
vw_DatasharingHPI
	AND (
		ConstructionTypeName = 'Built Date'
		OR ConstructionTypeName IS NULL
		) -- AND has a PropertyID that's not duplicated in vw_DatasharingHPI
	AND vw.PropertyID NOT IN (
		SELECT PropertyID
		FROM [WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory]
		WHERE PropertyInventoryID IN (
				SELECT PropertyInventoryID
				FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventoryCharacteristic]
				WHERE PropertyCharacteristicItemID IN (8, 9, 10, 11,
12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32,
33, 34, 35, 36, 37, 74, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98,
199, 207, 209, 210, 212, 213, 263, 264, 265, 266, 267, 271, 272, 276, 284, 285,
309, 314, 316)
				)
		)
	AND vw.PropertyID IN (
		SELECT PropertyID
		FROM dbo.vw_DatasharingHPIAddressConstYr
		GROUP BY PropertyID
		HAVING (COUNT(*) = 1)
		)
GO

USE WA_URM_Buildings;
GO

--UPDATE DataSource WITH PropertyIDs from WISAARD
INSERT INTO Buildings_DataSources (
	BuildingID,
```

```
	DataSourceFieldValue,
	DataSourceID
	)
SELECT BuildingID,
	--this is where we temp stored the PropertyID
	BuildingOwnership AS DataSourceFieldValue,
	--WISAARD ID
	3 AS DataSourceID
FROM Buildings
WHERE BuildingID > 1645
GO

UPDATE Buildings
SET
	--set BuildingOwnership to proper value
	BuildingOwnership = 'Private'
WHERE BuildingID > 1645
	--UPDATE ConstructionMaterials
GO

CREATE TABLE #staging_MasonryKeeps (
	[PropertyID] [int] NULL,
	[PropertyInventoryID] [int] NULL,
	[PropertyCharacteristicItemID] [int] NULL,
	[PropertyCharacteristicItemName] [varchar](255) NULL,
	[PropertyCharacteristicCategoryID] [int] NULL,
	[BuildingID] [int] NOT NULL
	)
GO

--TEMP Table
INSERT INTO #staging_MasonryKeeps
SELECT pi.PropertyID,
	pi.PropertyInventoryID,
	pic.PropertyCharacteristicItemID,
	pci.PropertyCharacteristicItemName,
	pci.PropertyCharacteristicCategoryID,
	pb.BuildingID
FROM [WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory] AS pi
INNER JOIN
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventoryCharacteristic] AS
pic
	ON pi.PropertyInventoryID = pic.PropertyInventoryID
INNER JOIN (
	SELECT PropertyCharacteristicCategoryID,
		PropertyCharacteristicItemID,
		PropertyCharacteristicItemName
	FROM [WISAARD_Historic_Properties_Updated].[dbo].[PropertyCharacteristicItem]
	WHERE (PropertyCharacteristicCategoryID = 6)
		AND (UPPER(PropertyCharacteristicItemName) LIKE '%MASONRY%')
		AND (PropertyCharacteristicItemID <> 202)
		AND (PropertyCharacteristicItemID <> 204)
		OR (UPPER(PropertyCharacteristicItemName) LIKE '%BRICK%')
		OR (PropertyCharacteristicCategoryID = 1)
		AND (PropertyCharacteristicItemID IN (1, 2, 5, 7))
		OR (PropertyCharacteristicItemID = 208)
		OR (PropertyCharacteristicItemName LIKE '%cmu%')
	) AS pci
	ON pic.PropertyCharacteristicItemID = pci.PropertyCharacteristicItemID
INNER JOIN (
	SELECT DataSourceFieldValue AS PropertyID,
		BuildingID
	FROM Buildings_DataSources AS dat
```

```
	WHERE (DataSourceID = 3)
	) AS pb
	ON pb.PropertyID = pi.PropertyID
GO

USE WA_URM_Buildings
GO

--INSERT ConstructionMaterials
INSERT INTO Buildings_ConstructionMaterials
SELECT DISTINCT mk.BuildingID,
	cm.urm_materialid AS MaterialID
FROM #staging_MasonryKeeps mk
INNER JOIN [WA_URM_Buildings].[dbo].[lu_wisaard_to_urm_constructionmaterial] cm
	ON cm.wisaard_propertycharacteristicitemid = mk.propertycharacteristicitemid
GO

--UPDATE Suspected Status
UPDATE Buildings
SET URMStatusID = 2
WHERE BuildingID IN (
		SELECT BuildingID
		FROM #staging_MasonryKeeps
		WHERE PropertyCharacteristicItemID IN (150, 151, 152, 153, 154, 155,
156, 200, 203, 205)
		)
GO

--UPDATE Not URM Status
UPDATE Buildings
SET URMStatusID = 3
WHERE URMStatusID <> 2
	AND BuildingID IN (
		SELECT BuildingID
		FROM #staging_MasonryKeeps
		WHERE PropertyCharacteristicItemID = 159
			OR PropertyCharacteristicItemID = 201
		)
GO

CREATE TABLE #staging_Duplicates (
	[LocationID] [int] NULL,
	[PropertyID] [int] NULL,
	[HistoricName] [varchar](255) NULL,
	[AddressLine1] [varchar](255) NULL,
	[City] [varchar](100) NULL,
	[State] [varchar](2) NULL,
	[ZipCode] [varchar](50) NULL,
	[County] [varchar](100) NULL,
	[ConstructionYear] [smallint] NULL,
	[Latitude] [decimal](9, 6) NULL,
	[Longitude] [decimal](9, 6) NULL,
	)

USE WISAARD_Historic_Properties_Updated;
GO

INSERT INTO #staging_Duplicates
SELECT vw.LocationID,
	vw.PropertyID,
	vw.HistoricName,
	vw.AddressLine1,
	vw.City,
```

```
	'WA' AS STATE,
	vw.ZipCode AS PostalCode,
	gis.County AS County,
	vw.ConstructionYear,
	gis.Y AS Latitude,
	gis.X AS Longitude
FROM dbo.vw_DatasharingHPIAddressConstYr vw
FULL JOIN #staging_LocationGIS gis
	ON vw.LocationID = gis.LocationID
WHERE (
		vw.PropertyID IN (
			SELECT PropertyID
			FROM [WISAARD_Historic_Properties_Updated].[dbo].[Property]
			WHERE (PropertyClassificationID = 1)
				OR (PropertyClassificationID IS NULL)
			)
		)
	AND (
		vw.ConstructionYear < 1958
		OR vw.ConstructionYear IS NULL
		)
	AND (
		vw.ConstructionTypeName = 'Built Date'
		OR vw.ConstructionTypeName IS NULL
		)
	AND vw.PropertyID NOT IN (
		SELECT PropertyID
		FROM [WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory]
		WHERE PropertyInventoryID IN (
				SELECT PropertyInventoryID
				FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventoryCharacteristic]
				WHERE PropertyCharacteristicItemID IN (8, 9, 10, 11,
12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32,
33, 34, 35, 36, 37, 74, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98,
199, 207, 209, 210, 212, 213, 263, 264, 265, 266, 267, 271, 272, 276, 284, 285,
309, 314, 316)
				)
		)
	AND (
		vw.PropertyID IN (
			SELECT PropertyID
			FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyUse]
			WHERE (BuildingUseID NOT IN (1, 4, 8, 22, 31, 32, 33, 39, 49,
55, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 85, 88, 91, 92))
				OR (BuildingUseID IS NULL)
			)
		)
	AND (
		vw.PropertyID IN (
			SELECT PropertyID
			FROM
[WISAARD_Historic_Properties_Updated].[dbo].[vw_DatasharingHPIAddressConstYr]
			GROUP BY PropertyID
			HAVING (COUNT(*) > 1)
			)
		)
GO

--INSERT Duplicate PropertyIDs FROM WISAARD
INSERT INTO [WA_URM_Buildings].[dbo].[Buildings] (
	BuildingName,
```

```
	Address1,
	City,
	STATE,
	PostalCode,
	County,
	DateConstructed,
	Latitude,
	Longitude,
	BuildingOwnership,
	URMStatusID
	)
SELECT vw.HistoricName AS BuildingName,
	vw.AddressLine1 AS Address1,
	vw.City,
	'WA' AS STATE,
	vw.ZipCode AS PostalCode,
	vw.County,
	vw.ConstructionYear AS DateConstructed,
	vw.Latitude,
	vw.Longitude,
	--need to store PropertyID for now
	vw.PropertyID AS BuildingOwnership,
	--we cant relate construction material to a given, specific Property
	2 AS URMStatusID
FROM PropertyInventory pi
INNER JOIN PropertyInventoryCharacteristic pic
	ON pi.propertyinventoryid = pic.propertyinventoryid
INNER JOIN (
	SELECT [propertycharacteristicitemid],
		[propertycharacteristicitemname],
		[PropertyCharacteristicCategoryID]
	FROM PropertyCharacteristicItem
	WHERE (
			PropertyCharacteristicCategoryID = 6
			AND UPPER(PropertyCharacteristicItemName) LIKE '%MASONRY%'
			AND PropertyCharacteristicItemID <> 202
			AND PropertyCharacteristicItemID <> 204
			)
		OR (
			PropertyCharacteristicCategoryID = 6
			AND PropertyCharacteristicItemID = 208
			)
		OR Upper(PropertyCharacteristicItemName) LIKE '%BRICK%'
		OR (
			PropertyCharacteristicCategoryID = 1
			AND PropertyCharacteristicItemID IN (1, 2, 5, 7)
			)
		OR PropertyCharacteristicItemName LIKE '%cmu%'
	) pci
	ON pic.propertycharacteristicitemid = pci.propertycharacteristicitemid
INNER JOIN #staging_Duplicates vw
	ON vw.PropertyID = pi.propertyid
GO

USE WA_URM_Buildings;
GO

-- INSERT Duplicate WISAARD properties in DataSource Table
INSERT INTO Buildings_DataSources (
	BuildingID,
	DataSourceFieldValue,
	DataSourceID
	)
```

```
SELECT BuildingID,
	--this is where we temp stored the PropertyID
	BuildingOwnership AS DataSourceFieldValue,
	--WISAARD ID
	3 AS DataSourceID
FROM Buildings
WHERE BuildingID > 1645
	AND BuildingOwnership <> 'Private'
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT BuildingID,
	7 AS MaterialID
FROM Buildings
WHERE BuildingID > 1645
	AND BuildingOwnership <> 'Private'
GO

UPDATE Buildings
SET
	--set BuildingOwnership to proper value
	BuildingOwnership = 'Private'
WHERE BuildingID > 1645
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT BuildingID,
	7 AS MaterialID
FROM Buildings_DataSources dat
WHERE BuildingID NOT IN (
		--Find WISAARD (BID > 1645) Buildings that have Construction Material
		SELECT DISTINCT BuildingID
		FROM Buildings_ConstructionMaterials
		WHERE BuildingID > 1645
		)
	AND dat.BuildingID > 1645
	--Building has a PropertyID that doesn't have
PropertyInventoryCharacteristicID
	AND dat.DataSourceFieldValue IN (
		SELECT pi.PropertyID
		FROM [WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory]
pi
		WHERE NOT pi.PropertyInventoryID IS NULL
			AND NOT EXISTS (
				SELECT NULL
				FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventoryCharacteristic] pic
				WHERE pi.PropertyInventoryID =
pic.PropertyInventoryID
				)
		)
GO

CREATE TABLE #staging_CladdingStructural ([PropertyID] [int] NOT NULL)

INSERT INTO #staging_CladdingStructural
SELECT pip.propertyid
FROM [WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory] pip
INNER JOIN
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventoryCharacteristic] picc
	ON pip.propertyinventoryid = picc.propertyinventoryid
INNER JOIN (
	SELECT PropertyCharacteristicItemID
```

```
	FROM [WISAARD_Historic_Properties_Updated].[dbo].[propertycharacteristicitem]
	WHERE PropertyCharacteristicItemID BETWEEN 147 AND 214
	) pcii
	ON picc.PropertyCharacteristicItemID = pcii.PropertyCharacteristicItemID
GO

--Isolate PropertyID without Cladding or Structural System information
INSERT INTO Buildings_ConstructionMaterials
SELECT BuildingID,
	7 AS MaterialID
FROM Buildings_DataSources
WHERE BuildingID NOT IN (
		--Find WISAARD (BID > 1645) Buildings that have Construction Material
		SELECT DISTINCT BuildingID
		FROM Buildings_ConstructionMaterials
		WHERE BuildingID > 1645
		)
	AND DataSourceID = 3
	AND
	--Building has a PropertyID that doesn't have a Cladding AND doesn't have a
Structural System info
	DataSourceFieldValue NOT IN (
		SELECT *
		FROM #staging_CladdingStructural
		)
GO

UPDATE Buildings
SET URMStatusID = 2
WHERE BuildingID IN (
		SELECT BuildingID
		FROM Buildings_DataSources dat
		WHERE
			--find Buildings with Only Foundation Attributes and No Other
Masonry Characteristics
			dat.BuildingID IN (
				SELECT BuildingID
				FROM #staging_MasonryKeeps
				WHERE PropertyCharacteristicCategoryID = 1
					AND BuildingID NOT IN (
						SELECT BuildingID
						FROM #staging_MasonryKeeps
						WHERE
PropertyCharacteristicCategoryID > 1
						)
				)
			AND dat.BuildingID > 1645
			AND --Building has a PropertyID that doesn't have a Cladding
AND doesn't have a Structural System info
			dat.DataSourceFieldValue IN (
				SELECT PropertyID
				FROM #staging_MasonryKeeps
				WHERE PropertyID NOT IN (
						SELECT *
						FROM #staging_CladdingStructural
						)
				)
		)
GO

CREATE TABLE #staging_PouredPrecast (
	[HistoricName] [varchar](255) NULL,
	[AddressLine1] [varchar](255) NULL,
```

```
	[City] [varchar](100) NULL,
	[County] [varchar](100) NULL,
	[State] [varchar](2) NULL,
	[ZipCode] [varchar](50) NULL,
	[ConstructionYear] [smallint] NULL,
	[URMStatusID] [smallint] NULL,
	[Latitude] [decimal](9, 6) NULL,
	[Longitude] [decimal](9, 6) NULL,
	[PropertyID] [varchar](50) NULL
	)
GO

USE WISAARD_Historic_Properties_Updated
GO

INSERT INTO #staging_PouredPrecast
SELECT vw.HistoricName,
	vw.AddressLine1,
	vw.City,
	loc.County,
	'WA' AS STATE,
	vw.ZipCode AS PostalCode,
	vw.ConstructionYear,
	4 AS URMStatusID,
	loc.Y AS Latitude,
	loc.X AS Longitude,
	vw.PropertyID
FROM dbo.vw_DatasharingHPIAddressConstYr vw
FULL JOIN #staging_LocationGIS loc
	ON vw.LocationID = loc.LocationID
WHERE (
		vw.PropertyID IN (
			SELECT PropertyID
			FROM [WISAARD_Historic_Properties_Updated].[dbo].[Property]
			WHERE (PropertyClassificationID = 1)
				OR (PropertyClassificationID IS NULL)
			)
		)
	AND (
		vw.PropertyID IN (
			SELECT PropertyID
			FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyUse]
			WHERE (BuildingUseID NOT IN (1, 4, 8, 22, 31, 32, 33, 39, 49,
55, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 85, 88, 91, 92))
				OR (BuildingUseID IS NULL)
			)
		)
	AND (
		(
			(
				vw.ConstructionYear < 1920
				OR vw.ConstructionYear IS NULL
				)
			AND (
				vw.ConstructionTypeName = 'Built Date'
				OR vw.ConstructionTypeName IS NULL
				)
			AND vw.PropertyID IN (
				SELECT PropertyID
				FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory]
				WHERE PropertyInventoryID IN (
```

```
                                                SELECT PropertyInventoryID
                                                FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventoryCharacteristic]
                                                WHERE PropertyCharacteristicItemID
= 202
                                                )
                                        )
                                )
                        OR (
                                (
                                        vw.ConstructionYear < 1930
                                        OR vw.ConstructionYear IS NULL
                                        )
                                AND (
                                        vw.ConstructionTypeName = 'Built Date'
                                        OR vw.ConstructionTypeName IS NULL
                                        )
                                AND vw.PropertyID IN (
                                        SELECT PropertyID
                                        FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory]
                                        WHERE PropertyInventoryID IN (
                                                SELECT PropertyInventoryID
                                                FROM
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventoryCharacteristic]
                                                WHERE PropertyCharacteristicItemID
= 204
                                                )
                                        )
                                )
                        )
        AND (
                        PropertyID NOT IN (
                                SELECT DataSourceFieldValue
                                FROM WA_URM_Buildings.dbo.Buildings_DataSources
                                WHERE DataSourceID = 3
                                )
                        )
GO

USE WA_URM_Buildings
GO

INSERT INTO Buildings (
        BuildingName,
        Address1,
        City,
        County,
        STATE,
        PostalCode,
        DateConstructed,
        URMStatusID,
        Latitude,
        Longitude,
        BuildingOwnership
        )
SELECT *
FROM #staging_PouredPrecast
GO

INSERT INTO Buildings_DataSources (
        BuildingID,
        DataSourceFieldValue,
```

```
	DataSourceID
	)
SELECT BuildingID,
	BuildingOwnership,
	3 AS DataSourceID
FROM Buildings
WHERE BuildingOwnership IN (
		SELECT PropertyID
		FROM #staging_PouredPrecast
		)
GO

INSERT INTO Buildings_ConstructionMaterials
SELECT BuildingID,
	7 AS ConstructionMaterials
FROM Buildings
WHERE BuildingOwnership IN (
		SELECT PropertyID
		FROM #staging_PouredPrecast
		)
GO

UPDATE Buildings
SET BuildingOwnership = 'Private'
WHERE BuildingOwnership IN (
		SELECT PropertyID
		FROM #staging_PouredPrecast
		)
GO

--Begin to find Foundation-like buildings
CREATE TABLE #staging_PropID (
	[PropertyID] [int] NULL,
	[PropertyInventoryID] [int] NULL,
	[BuildingID] INT NULL
	)
GO

INSERT INTO #staging_PropID
SELECT dat.DataSourceFieldValue,
	pii.PropertyInventoryID,
	dat.BuildingID
FROM [WA_URM_Buildings].[dbo].[Buildings_DataSources] dat
INNER JOIN PropertyInventory pii
	ON pii.PropertyID = dat.DataSourceFieldValue
WHERE dat.DataSourceID = 3

GO

CREATE TABLE #staging_Foundation ([PropertyID] [int] NULL)

GO

CREATE TABLE #staging_noSC ([PropertyID] [int] NULL)

GO

USE [WISAARD_Historic_Properties_Updated]
GO

--INSERT Buildings with Foundations of interest into temp
INSERT INTO #staging_Foundation
SELECT DISTINCT pi.PropertyID
```

```
FROM #staging_PropID pi
INNER JOIN PropertyInventoryCharacteristic pic
     ON pic.PropertyInventoryID = pi.PropertyInventoryID
WHERE pic.PropertyCharacteristicItemID IN (1, 2, 5, 7)

GO

WITH pp (PropertyID)
AS (
     SELECT f.PropertyID
     FROM #staging_Foundation f
     INNER JOIN #staging_PropID p
             ON p.PropertyID = f.PropertyID
     INNER JOIN PropertyInventoryCharacteristic pic
             ON pic.PropertyInventoryID = p.PropertyInventoryID
     WHERE (pic.PropertyCharacteristicItemID BETWEEN 147 AND 214)
     ),

--No Structural System or Cladding but Foundation
noSC (PropertyID)
AS (
     SELECT *
     FROM #staging_Foundation
     WHERE PropertyID NOT IN (
                     SELECT *
                     FROM pp
                     )
     )

INSERT INTO #staging_noSC
SELECT * FROM noSC

GO

--DELETE specific Spokane records
DELETE
FROM [WA_URM_Buildings].[dbo].Buildings
WHERE BuildingID IN (
             SELECT propID.BuildingID
             FROM #staging_noSC noSC
             INNER JOIN #staging_PropID propID
                     ON propID.PropertyID = noSC.PropertyID
             INNER JOIN [WA_URM_Buildings].[dbo].Buildings b
                     ON b.BuildingID = propID.BuildingID
             WHERE UPPER(City) LIKE '%SPOKANE%'
             )
GO

--UPDATE remaining
UPDATE [WA_URM_Buildings].[dbo].Buildings
SET URMStatusID = 4
WHERE BuildingID IN (
             SELECT propID.BuildingID
             FROM #staging_noSC noSC
             INNER JOIN #staging_PropID propID
                     ON propID.PropertyID = noSC.PropertyID
             INNER JOIN [WA_URM_Buildings].[dbo].Buildings b
                     ON b.BuildingID = propID.BuildingID
             WHERE UPPER(City) NOT LIKE '%SPOKANE%'
             )
GO

WITH ppp (PropertyID)
```

```
AS (
      SELECT f.PropertyID
      FROM #staging_Foundation f
      INNER JOIN #staging_PropID p
              ON p.PropertyID = f.PropertyID
      INNER JOIN PropertyInventoryCharacteristic pic
              ON pic.PropertyInventoryID = p.PropertyInventoryID
      WHERE (pic.PropertyCharacteristicItemID BETWEEN 147 AND 198)
      ),

--No Structural System available
noSS (PropertyID)
AS (
      SELECT *
      FROM #staging_Foundation
      WHERE PropertyID NOT IN (
                        SELECT *
                        FROM ppp
                        )
      )
--DELETE records
DELETE
FROM [WA_URM_Buildings].[dbo].Buildings
WHERE BuildingID IN (
                SELECT propID.BuildingID
                FROM noSS
                INNER JOIN #staging_PropID propID
                        ON propID.PropertyID = noSS.PropertyID
                INNER JOIN [WA_URM_Buildings].[dbo].Buildings b
                        ON b.BuildingID = propID.BuildingID
                )

USE WA_URM_Buildings
GO

--INSERT Complex Building (Non Square/Rectangle)
UPDATE Buildings
SET ComplexFootprint = 'Yes'
WHERE BuildingID IN (
                SELECT buildingid
                FROM buildings_datasources
                WHERE datasourcefieldvalue IN (
                                SELECT pip.propertyid
                                FROM
[WISAARD_Historic_Properties_Updated].[dbo].[propertyinventory] pip
                                INNER JOIN
[WISAARD_Historic_Properties_Updated].[dbo].[propertyinventorycharacteristic] picc
                                        ON pip.propertyinventoryid =
picc.propertyinventoryid
                                INNER JOIN (
                                        SELECT propertycharacteristicitemid
                                        FROM
[WISAARD_Historic_Properties_Updated].[dbo].[propertycharacteristicitem]
                                        WHERE propertycharacteristiccategoryid = 7
                                                AND propertycharacteristicitemid
NOT IN (226, 229)
                                        ) pcii
                                        ON picc.propertycharacteristicitemid =
pcii.propertycharacteristicitemid
                                )
                        AND buildingid > 1645
                )
GO
```

```
--INSERT Parapet
UPDATE Buildings
SET Parapets = 'Yes'
WHERE BuildingID IN (
             SELECT buildingid
             FROM buildings_datasources
             WHERE datasourcefieldvalue IN (
                              SELECT pip.propertyid
                              FROM
[WISAARD_Historic_Properties_Updated].[dbo].[propertyinventory] pip
                              INNER JOIN
[WISAARD_Historic_Properties_Updated].[dbo].[propertyinventorycharacteristic] picc
                                       ON pip.propertyinventoryid =
picc.propertyinventoryid
                              INNER JOIN (
                                       SELECT propertycharacteristicitemid
                                       FROM
[WISAARD_Historic_Properties_Updated].[dbo].[propertycharacteristicitem]
                                       WHERE propertycharacteristiccategoryid = 108
                                       ) pcii
                                       ON picc.propertycharacteristicitemid =
pcii.propertycharacteristicitemid
                                       )
                     AND buildingid > 1645
             )
GO

--DELETE WISAARD Records that are now deemed irrelevant
DELETE
FROM Buildings
WHERE BuildingID > 1645
     AND BuildingID NOT IN (
             SELECT BuildingID
             FROM Buildings_ConstructionMaterials
             WHERE BuildingID > 1645
             )
     OR (
             UPPER(BuildingName) LIKE '% BRIDGE%'
             AND UPPER(BuildingName) NOT LIKE '%BRIDGE STREET%'
             )
     OR UPPER(BuildingName) LIKE '% BARN%'
     OR UPPER(BuildingName) = 'BARN'
     OR UPPER(BuildingName) LIKE '%DEMOLISHED%'
     OR UPPER(BuildingName) LIKE '%REMOVED%'
GO

--MORE Duplicates
DELETE
FROM Buildings
WHERE BuildingID > 1645
     AND BuildingID NOT IN (
             SELECT MIN(BuildingID)
             FROM Buildings
             GROUP BY BuildingName,
                      Address1,
                      City,
                      County,
                      DateConstructed
             )
GO

WITH cte
```

```
AS (
	SELECT BuildingName,
		Address1,
		City,
		County,
		row_number() OVER (
			PARTITION BY BuildingName,
			Address1,
			City,
			County ORDER BY DateConstructed ASC
			) AS [rn]
	FROM Buildings
	WHERE BuildingID > 1645
		AND Upper(City) = 'SEATTLE'
	)
DELETE
FROM cte
WHERE [rn] > 1
GO

--INSERT BuildingUses
INSERT INTO Buildings_BuildingUses
SELECT DISTINCT bd.buildingId,
	f.URM_UseID AS UseID
FROM [WISAARD_Historic_Properties_Updated].[dbo].[propertyuse] c
INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[buildinguse] d
	ON c.buildinguseid = d.buildinguseid
INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[buildingusecategory] e
	ON d.buildingusecategoryid = e.buildingusecategoryid
INNER JOIN lu_WISAARD_to_URM_BuildingUseType f
	ON e.buildingusecategoryname = f.WISAARD_buildingusecategoryname
INNER JOIN Buildings_DataSources bd
	ON bd.datasourcefieldvalue = c.propertyid
WHERE c.propertyid IN (
		SELECT b.datasourcefieldvalue
		FROM buildings a
		INNER JOIN Buildings_DataSources b
			ON a.buildingid = b.buildingid
		WHERE b.datasourceID = 3
		)
	AND BuildingID > 1645
GO

--INSERT EmergencyFacilities Types (Government, Health, or Otherwise)
INSERT INTO Buildings_EmergencyFacilities
SELECT dat.BuildingID,
	FacilityTypeID = CASE WHEN wub.BuildingUseID BETWEEN 60 AND 64 THEN 1 WHEN
wub.BuildingUseID BETWEEN 20 AND 26 THEN 4 WHEN wub.BuildingUseID = 50 THEN 2 END
FROM Buildings_DataSources dat
INNER JOIN Buildings_BuildingUses bu
	ON bu.BuildingID = dat.BuildingID
		AND DataSourceID = 3
INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[PropertyUse] pu
	ON pu.PropertyID = dat.DataSourceFieldValue
INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[BuildingUse] wub
	ON wub.BuildingUseID = pu.BuildingUseID
WHERE wub.BuildingUseID IN (20, 21, 22, 23, 24, 25, 26, 50, 60, 61, 62, 63, 64)
	AND dat.BuildingID > 1645

--INSERT LocalStatus from WISAARD Provided Lookup
INSERT INTO Buildings_HistoricStatus
SELECT dat.BuildingID,
	hs.HistoricStatusTypeID AS HistoricStatusTypeID,
```

```
      lu.[Historic District] AS HistoricDistrict
FROM lu_LocalStatus_from_WISAARD lu
INNER JOIN Buildings_DataSources dat
      ON dat.DataSourceFieldValue = lu.PropertyID
            AND dat.DataSourceID = 3
INNER JOIN HistoricStatusTypes hs
      ON hs.HistoricStatusTypeName = lu.[Historic Status]
GO

--INSERT Status via PropertyInventory and Eligilibity
INSERT INTO Buildings_HistoricStatus
SELECT dat.BuildingID,
      hs.HistoricStatusID AS HistoricStatusTypeID,
      NULL AS HistoricDistrict
FROM Buildings_DataSources dat
INNER JOIN (
      SELECT pi.PropertyID,
            lu.HistoricStatusID
      FROM [WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory] pi
      INNER JOIN lu_EligibilityWISAARD_to_HistoricStatus lu
            ON lu.EligibilityID = pi.DeterminationEligibilityID
      WHERE pi.DeterminationEligibilityID IN (2, 3, 6, 7, 8, 9, 13)
      ) hs
      ON dat.DataSourceFieldValue = hs.PropertyID
WHERE dat.DataSourceID = 3
GO

--INSERT National Historic Status via ResourceResourceResource
INSERT INTO Buildings_HistoricStatus
SELECT BuildingID,
      2 AS HistoricStatusTypeID,
      DistrictName AS HistoricDistrict
FROM Buildings_DataSources dat
INNER JOIN (
      SELECT rd.DistrictName,
            p.PropertyID
      FROM [WISAARD_Historic_Properties_Updated].[dbo].[ResourceResourceResource]
rrr
      INNER JOIN
[WISAARD_Historic_Properties_Updated].[dbo].[ResourceResourceDistrict] rrd
            ON rrr.RelatedResourceID = rrd.ResourceID
      INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[ResourceDistrict] rd
            ON rd.DistrictID = rrd.DistrictID
      INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[Property] p
            ON p.ResourceID = rrd.ResourceID
      WHERE rrr.ResourceRelationshipTypeID IS NOT NULL
      ) dist
      ON dist.PropertyID = dat.DataSourceFieldValue
            AND dat.DataSourceID = 3
WHERE dat.DataSourceID = 3
      AND PropertyID IS NOT NULL
GO

--INSERT National Historic Status via ResourceRegister
INSERT INTO Buildings_HistoricStatus (
      BuildingID,
      HistoricStatusTypeID
      )
SELECT dat.BuildingID,
      HistoricStatusID = CASE WHEN rt.RegisterTypeID IN (1, 4) THEN 1 WHEN
rt.RegisterTypeID IN (2, 3) THEN 4 WHEN rt.RegisterTypeID = 5 THEN 4 ELSE NULL END
FROM [WISAARD_Historic_Properties_Updated].[dbo].Resource r
INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[ResourceRegister] rr
```

```
     ON r.ResourceID = rr.ResourceID
INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].RegisterType rt
     ON rr.RegisterTypeID = rt.RegisterTypeID
INNER JOIN spatialLocationID sl
     ON sl.LocationID = r.LocationID
INNER JOIN Buildings_DataSources dat
     ON dat.DataSourceFieldValue = sl.locationIDs_PropertyID
             AND dat.DataSourceID = 3
WHERE dat.DataSourceID = 3
     AND rt.RegisterTypeID BETWEEN 1 AND 5
GO

--DELETE Duplicate HistoricStatusIDs
WITH cte
AS (
     SELECT BuildingID,
             HistoricStatusTypeID,
             HistoricDistrict,
             row_number() OVER (
                     PARTITION BY BuildingID,
                     HistoricStatusTypeID,
                     HistoricDistrict ORDER BY BuildingID
                     ) AS [rn]
     FROM Buildings_HistoricStatus
     )
DELETE
FROM cte
WHERE [rn] > 1
GO

--UPDATE Stories and ParcelNumbers
UPDATE b
SET b.Stories = j.StoryCount,
     b.ParcelNumber = j.TaxParcel_No
FROM Buildings b
INNER JOIN (
     SELECT BuildingID,
             DataSourceFieldValue,
             p.TaxParcel_No,
             pi.StoryCount
     FROM Buildings_DataSources dat
     INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[Property] p
             ON p.PropertyID = dat.DataSourceFieldValue
     INNER JOIN [WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory] pi
             ON pi.PropertyID = dat.DataSourceFieldValue
     WHERE dat.DataSourceID = 3
     ) j
     ON b.BuildingID = j.BuildingID
WHERE b.BuildingID > 1645
GO

--update ownership
UPDATE Buildings
SET BuildingOwnership = 'Public'
WHERE BuildingID IN (
             SELECT b.BuildingID
             FROM Buildings B
             INNER JOIN Buildings_DataSources dat
                     ON dat.BuildingID = b.BuildingID
                             AND dat.DataSourceID = 3
             INNER JOIN
[WISAARD_Historic_Properties_Updated].[dbo].[PropertyInventory] pi
                     ON dat.DataSourceFieldValue = pi.PropertyID
```

```
                INNER JOIN Buildings_BuildingUses bu
                        ON bu.BuildingID = b.BuildingID
                WHERE b.BuildingID > 1645
                        AND UPPER(BUILDINGNAME) <> 'OLD CITY HALL - TACOMA'
                        AND (
                                UPPER(BUILDINGNAME) LIKE '%STATE OF WASHINGTON%'
                                OR UPPER(BUILDINGNAME) LIKE '%WASHINGTON STATE
DEPARTMENT%'
                                OR UPPER(BUILDINGNAME) LIKE '%WASHINGTON DEPARTMENT
OF %'
                                OR UPPER(BUILDINGNAME) LIKE '%UNIVERSITY OF
WASHINGTON%'
                                OR UPPER(BUILDINGNAME) LIKE '%WASHINGTON STATE
UNIVERSITY%'
                                OR UPPER(BUILDINGNAME) LIKE '%COMMUNITY COLLEGE%'
                                OR UPPER(BUILDINGNAME) LIKE '%CITY OF %'
                                OR UPPER(BUILDINGNAME) LIKE '%TOWN OF %'
                                OR UPPER(BUILDINGNAME) LIKE '%GENERAL SERVICES
ADMINISTRATION%'
                                OR UPPER(BUILDINGNAME) LIKE '%U.S. COAST GUARD%'
                                OR UPPER(BUILDINGNAME) LIKE '%U.S. NAVY%'
                                OR UPPER(BUILDINGNAME) LIKE '%U.S. ARMY%'
                                OR UPPER(BUILDINGNAME) LIKE '%U.S. MARINES%'
                                OR UPPER(BUILDINGNAME) LIKE '%U.S. AIR FORCE%'
                                OR UPPER(BUILDINGNAME) LIKE '%ARMY CORPS OF
ENGINEERS%'
                                OR UPPER(BUILDINGNAME) LIKE '%CITY HALL%'
                                OR UPPER(OWNERNAME) LIKE '%U.S. SPACE FORCE%'
                                OR UPPER(OWNERNAME) LIKE '%STATE OF WASHINGTON%'
                                OR UPPER(OWNERNAME) LIKE '%WASHINGTON STATE
DEPARTMENT%'
                                OR UPPER(OWNERNAME) LIKE '%UNIVERSITY OF
WASHINGTON%'
                                OR UPPER(OWNERNAME) LIKE '%WASHINGTON STATE
UNIVERSITY%'
                                OR UPPER(OWNERNAME) LIKE '%COMMUNITY COLLEGE%'
                                OR UPPER(OWNERNAME) LIKE '%CITY OF %'
                                OR UPPER(OWNERNAME) LIKE '%TOWN OF %'
                                OR UPPER(OWNERNAME) LIKE '%GENERAL SERVICES
ADMINISTRATION%'
                                OR UPPER(OWNERNAME) LIKE '%U.S. COAST GUARD%'
                                OR UPPER(OWNERNAME) LIKE '%U.S. NAVY%'
                                OR UPPER(OWNERNAME) LIKE '%U.S. ARMY%'
                                OR UPPER(OWNERNAME) LIKE '%U.S. MARINES%'
                                OR UPPER(OWNERNAME) LIKE '%U.S. AIR FORCE%'
                                OR UPPER(OWNERNAME) LIKE '%ARMY CORPS OF ENGINEERS%'
                                OR UPPER(OWNERNAME) LIKE '%U.S. SPACE FORCE%'
                                OR UPPER(OWNERNAME) LIKE '%UNITED STATES OF
AMERICA%'
                                OR UPPER(OWNERNAME) = 'USA'
                                OR UPPER(OWNERNAME) LIKE '%WASHINGTON DEPARTMENT OF
%'
                                OR UPPER(OWNERNAME) LIKE '%WASHINGTON ARMY NATIONAL
GUARD%'
                                OR bu.UseID = 'G'
                                )
                )
GO

--UPDATE Duplicate Field Between WISAARD and Seattle
UPDATE Buildings
SET Duplicate = 1
WHERE BuildingID IN (
```

```
                SELECT b.BuildingID
                FROM Seattle_Duplicate_Import d
                INNER JOIN Buildings b
                        ON b.Address1 = d.Address1
                                AND b.Latitude = d.Latitude
                                AND b.Longitude = d.Longitude
                )
        AND BuildingID > 1645
GO

UPDATE Buildings
SET Duplicate = 1
WHERE BuildingID IN (
                SELECT b.BuildingID
                FROM Seattle_Duplicate_Import_2 d2
                INNER JOIN Buildings b
                        ON b.Address1 = d2.Address1
                                AND b.Latitude = d2.Latitude
                                AND b.Longitude = d2.Longitude
                WHERE d2.[Combine?] = 'Yes'
                )
        AND BuildingID > 1645
GO

--Delete Suspected or Unknown Buildings from Seattle
DELETE
FROM Buildings
WHERE (
                UPPER(City) = 'Seattle'
                OR (
                        City IS NULL
                        AND Address1 LIKE '%SEATTLE%'
                        )
                )
        AND BuildingID > 1645
        AND URMStatusID IN (2, 4)
GO

--DELETE ONE OFFS
DELETE
FROM Buildings
WHERE (
                BuildingName = 'Rose Theatre'
                AND DateConstructed = 1907
                AND Upper(City) = 'PORT TOWNSEND'
                )
        OR (
                BuildingName = 'P.T Cyclery'
                AND DateConstructed = 1906
                AND Upper(City) = 'PORT TOWNSEND'
                )
        OR (
                BuildingName = 'Alley Building'
                AND Upper(City) = 'PORT TOWNSEND'
                )
        OR (
                BuildingName = 'Del-Teet Furniture'
                AND Upper(City) = 'SEATTLE'
                )
```

Appendix C5
Data Reconciliation

Architectural
Resources Group

Appendix C5. Data Reconciliation

The following list outlines criteria used to identify WISAARD records that were considered for incorporation into the URM Inventory:

- Property is a building
- Has an unknown built date or a built date less than 1958
- Building did not *exclusively* identify as
    - Agriculture/Subsistence - Agricultural Field
    - Agriculture/Subsistence - Drainage
    - Agriculture/Subsistence - Irrigation Facility
    - Defense - Battle Site
    - Domestic - Single Family House
    - Domestic - Secondary Structure
    - Domestic - Village Site
    - Funerary - Cemetery
    - Government - Dam/Levee
    - Government - Irrigation Water Conveyance
    - Industry/Processing/Extraction - Waterworks
    - Landscape - Conservation Area
    - Landscape - Forest
    - Landscape - Garden
    - Landscape - Natural Feature
    - Landscape - Park
    - Landscape - Parking Lot
    - Landscape - Plaza
    - Landscape - Street Furniture/Object
    - Landscape - Unoccupied Land
    - Recreation and Culture - Monument/Marker
    - Recreation and Culture - Outdoor Recreation
    - Recreation and Culture - Work of Art
    - Religion - Ceremonial Site
- Did not have any of the following property characteristics
    - Barn
    - Barn - Bank
    - Barn - Bow Truss
    - Barn - Broken Gable
    - Barn - Centric/Round
    - Barn - Dutch
    - Barn - Dutch Gambrel
    - Barn - English Gambrel
    - Barn - Gable-on-Hip
    - Barn - Gable/English
    - Barn - Gothic Arch
    - Barn - Hip
    - Barn - Quonset Hut
    - Barn - Salt Box
    - Barn - Shed
    - Barn - Side Gable/English

- Barn - Western/Monitor
- Bridge
- Bridge - Arch
- Bridge - Bascule
- Bridge - Cable Stayed
- Bridge - Concrete Box Girder
- Bridge - Concrete Girder
- Bridge - Floating
- Bridge - Howe Truss
- Bridge - Lift
- Bridge - Parker Truss
- Bridge - Petit Truss
- Bridge - Pony Truss
- Bridge - Pratt Truss
- Bridge - Pre-stressed Concrete
- Bridge - Slab
- Bridge - Steel Cantilever Truss
- Bridge - Steel Girder
- Bridge - Suspension
- Bridge - Swing
- Bridge - Warren Truss
- Commercial - A-Frame
- Commercial - Geodesic Dome
- Commercial - Signage
- Geodesic Dome
- Landscape - Garden
- Landscape - Park
- Landscape - Plaza
- Log
- Metal - Steel
- Silo - Stave (Concrete)
- Single Dwelling
- Single Dwelling - American Foursquare
- Single Dwelling - Bungalow
- Single Dwelling - Cross Gable
- Single Dwelling - Gable Front and Wing
- Single Dwelling - Gable Fronter/Homestead House
- Single Dwelling - I House
- Single Dwelling - Ranch
- Single Dwelling - Side Gable
- Single Dwelling - Split Entry
- Single Dwelling - Split Level
- Single Dwelling - Workingmans Foursquare
- Single Dwelling - WWII Era Cottage
- Wood - Balloon Frame
- Wood - Braced Frame
- Wood - Platform Frame
- Wood - Post and Beam

ETL Process for WISAARD Records

Records from the Washington Information System for Architectural & Archaeological Records Data (WISAARD) were incorporated into the URM Inventory via a data integration process known as "Extract, Transform, and Load" (ETL). Given the size and complexity of the WISAARD dataset, the requisite ETL process was quite elaborate. The 55 steps needed to perform the entire WISAARD ETL operation are detailed below.

WISAARD dataset abbreviation: WIS
URM database abbreviation: URM

1. **CREATE** temporary [URM.staging_LocationGIS] table that joins [WIS.LocationGISArea] and [WIS.GISArea] tables to obtain *LocationID, GISAreaName* (County), *Latitude,* and *Longitude* information

2. **SELECT** relevant WIS property records that match the following criteria
    a. Property only exists as a single record (once) within database
    b. *PropertyClassification* that "Unknown" or a "Building"
    c. *BuildingUse* is "Unknown" or *BuildingUse* does not fit any of the following designations:
        i. Agriculture/Subsistence - Agricultural Field
        ii. Agriculture/Subsistence - Drainage
        iii. Agriculture/Subsistence - Irrigation Facility
        iv. Defense - Battle Site
        v. Domestic - Single Family House
        vi. Domestic - Secondary Structure
        vii. Domestic - Village Site
        viii. Funerary - Cemetery
        ix. Government - Dam/Levee
        x. Government - Irrigation Water Conveyance
        xi. Industry/Processing/Extraction - Waterworks
        xii. Landscape - Conservation Area
        xiii. Landscape - Forest
        xiv. Landscape - Garden
        xv. Landscape - Natural Feature
        xvi. Landscape - Park
        xvii. Landscape - Parking Lot
        xviii. Landscape - Plaza
        xix. Landscape - Street Furniture/Object
        xx. Landscape - Unoccupied Land
        xxi. Recreation and Culture - Monument/Marker
        xxii. Recreation and Culture - Outdoor Recreation
        xxiii. Recreation and Culture - Work of Art
        xxiv. Religion - Ceremonial Site
    d. *ConstructionYear* is "Unknown" or earlier than 1958
    e. *ConstructionTypeName* is "Unknown" or equal to "Built Date"
    f. *PropertyCharacteristicItem* does not fit any of the following designations:
        i. Barn
        ii. Barn - Bank
        iii. Barn - Bow Truss

iv. Barn - Broken Gable
v. Barn - Centric/Round
vi. Barn - Dutch
vii. Barn - Dutch Gambrel
viii. Barn - English Gambrel
ix. Barn - Gable-on-Hip
x. Barn - Gable/English
xi. Barn - Gothic Arch
xii. Barn - Hip
xiii. Barn - Quonset Hut
xiv. Barn - Salt Box
xv. Barn - Shed
xvi. Barn - Side Gable/English
xvii. Barn - Western/Monitor
xviii. Bridge
xix. Bridge - Arch
xx. Bridge - Bascule
xxi. Bridge - Cable Stayed
xxii. Bridge - Concrete Box Girder
xxiii. Bridge - Concrete Girder
xxiv. Bridge - Floating
xxv. Bridge - Howe Truss
xxvi. Bridge - Lift
xxvii. Bridge - Parker Truss
xxviii. Bridge - Petit Truss
xxix. Bridge - Pony Truss
xxx. Bridge - Pratt Truss
xxxi. Bridge - Pre-stressed Concrete
xxxii. Bridge - Slab
xxxiii. Bridge - Steel Cantilever Truss
xxxiv. Bridge - Steel Girder
xxxv. Bridge - Suspension
xxxvi. Bridge - Swing
xxxvii. Bridge - Warren Truss
xxxviii. Commercial - A-Frame
xxxix. Commercial - Geodesic Dome
xl. Commercial - Signage
xli. Geodesic Dome
xlii. Landscape - Garden
xliii. Landscape - Park
xliv. Landscape - Plaza
xlv. Log
xlvi. Metal - Steel
xlvii. Silo - Stave (Concrete)
xlviii. Single Dwelling
xlix. Single Dwelling - American Foursquare
l. Single Dwelling - Bungalow
li. Single Dwelling - Cross Gable

lii. Single Dwelling - Gable Front and Wing
liii. Single Dwelling - Gable Fronter/Homestead House
liv. Single Dwelling - I House
lv. Single Dwelling - Ranch
lvi. Single Dwelling - Side Gable
lvii. Single Dwelling - Split Entry
lviii. Single Dwelling - Split Level
lix. Single Dwelling - Workingmans Foursquare
lx. Single Dwelling - WWII Era Cottage
lxi. Wood - Balloon Frame
lxii. Wood - Braced Frame
lxiii. Wood - Platform Frame
lxiv. Wood - Post and Beam

3. **JOIN** records from #2 with [URM.staging_LocationGIS] and [WA.vw_DatasharingHPIAddressConstYr] (this is a database View – not a table – one that was provided by DAHP)

4. **INSERT** into [URM.Buildings] joined/selected records with relevant information from #3

5. **INSERT** into [URM.Buildings_DataSources] records from [URM.Buildings] and add relevant *DataSourceID* . [URM.DataSources] shows that all WIS records should be assigned a value of 3.

6. **CREATE** temporary [URM.staging_MasonryKeeps] table to crosswalk [URM.Buildings] records that have a "masonry-like" designation and specific, relevant WIS attributions

7. **INSERT** into [URM.staging_MasonryKeeps] current [URM.Buildings] records that fit the one of the following WIS designations:
    a. Record has a defined "Structural System" and it contains the word "Masonry" in the *PropertyCharacterisiticItem* description but cannot include "Poured Concrete" or "Precast Concrete"
    b. Record has the word "Brick" somewhere within its *PropertyCharacteristicItem* description
    c. Record has a defined "Foundation" type and fits within one of the following *PropertyCharacterisiticItem* descriptors:
        i. Brick
        ii. Concrete – Block
        iii. Parged
        iv. Stone
    d. Record has a "Mixed" *PropertyCharacteristicItem* description
    e. Record contains the word "CMU" within its *PropertyCharacteristicItem* description

8. **INSERT** into [URM.Buildings_ConstructionMaterials] records from [URM.staging_MasonryKeeps] and their respective *MaterialID* based on a lookup table

9. **UPDATE** [URM.Buildings] *URMStatusID* values
    a. Set *URMStatusID* = 2, if WIS *PropertyCharacteristicItem* descriptor is one of the following:
        i. Brick
        ii. Brick - Clinker
        iii. Brick - Common Bond

iv. Brick - English Bond
v. Brick - Flemish
vi. Brick - Roman
vii. Brick - Stretcher Bond
viii. Masonry - Brick
ix. Masonry - Hollow Clay Tile
x. Masonry – Stone

b. Set *URMStatusID* = 3, if WIS *PropertyCharacteristicItem* descriptor is not already set to 2 and is one of the following:
   i. Concrete - Block (cmu)
   ii. Masonry - Concrete Block

10. **CREATE** temporary table [URM.staging_Duplicates] for tracking singular properties that have multiple WIS records

11. **SELECT** relevant WIS records that abide by the same constraints/rules defined in #2 – but look specifically for properties that appear more than once (different records, but same property).
    a. When there are duplicate records for a single property - WIS is not setup to relate a given *ConstructionYear* to a given *PropertyCharacteristicItem*, so these records must be treated differently

12. **INSERT** selected records form #11 into [URM.staging_Duplicates]

13. **JOIN** records from #12 with [URM.staging_LocationGIS] and [WA.vw_DatasharingHPIAddressConstYr] (this is a database View – not a table – one that was provided by DAHP)

14. **INSERT** into [URM.Buildings] joined/selected records with relevant information from #13

15. **INSERT** into [URM.Buildings_DataSources] recent records from [URM.staging_Duplicates] and add the relevant *DataSourceID* .

16. **INSERT** into [URM.Buildings_ConstructionMaterials] - records from [URM.staging_Duplicates] with a *MaterialID* of 7 (“Unknown”)

17. **INSERT** into [URM.Buildings_ConstructionMaterials] – WIS records in [URM.Buildings] that don’t have *PropertyInventoryCharacteristics* with a *MaterialID* of 7 (“Unknown”)

18. **CREATE** a temporary [URM.staging_CladdingStructural] table for storing WIS records that have a “Cladding” or “Structural System”

19. **INSERT** into [URM.staging_CladdingStructural] properties where WIS *PropertyCharacteristicItemIDs* fall between 147 and 214

20. **INSERT** into [URM.Buildings_ConstructionMaterials] – *BuildingID*s from [URM.Buildings] with a *MaterialID* of 7 (“Unknown”) where
    a. The *BuildingID* currently does not exist in [URM.Buildings_ConstructionMaterials] AND
    b. The property is not found in the [URM.staging_CladdingStructural]

21. **CREATE** a temporary [URM.staging_PouredPrecast] table for specific poured and precast concrete masonry properties from WIS

22. **INSERT** into [URM.staging_PouredPrecast] WIS properties that fit one of the two constraints:
    a. WIS *ConstructionYear* is earlier than 1920 or Unknown AND has a WIS *PropertyCharacteristicItem* descriptor of "Masonry – Poured Concrete"
    b. WIS *ConstructionYear* is earlier than 1930 or Unknown AND has a WIS *PropertyCharacteristicItem* descriptor of "Masonry – Precast Concrete"

23. **DELETE** records from [URM.staging_PouredPrecast] that do not fit the following criteria:
    a. Already exists in [URM.Buildings]
    b. WIS *PropertyClassification* that "Unknown" or a "Building"
    c. WIS *BuildingUse* is "Unknown" or WIS *BuildingUse* does not fit any of the following designations
        i. Agriculture/Subsistence - Agricultural Field
        ii. Agriculture/Subsistence - Drainage
        iii. Agriculture/Subsistence - Irrigation Facility
        iv. Defense - Battle Site
        v. Domestic - Single Family House
        vi. Domestic - Village Site
        vii. Funerary - Cemetery
        viii. Government - Dam/Levee
        ix. Government - Irrigation Water Conveyance
        x. Industry/Processing/Extraction - Waterworks
        xi. Landscape - Conservation Area
        xii. Landscape - Forest
        xiii. Landscape - Garden
        xiv. Landscape - Natural Feature
        xv. Landscape - Park
        xvi. Landscape - Parking Lot
        xvii. Landscape - Plaza
        xviii. Landscape - Street Furniture/Object
        xix. Landscape - Unoccupied Land
        xx. Recreation and Culture - Monument/Marker
        xxi. Recreation and Culture - Outdoor Recreation
        xxii. Recreation and Culture - Work of Art
        xxiii. Religion - Ceremonial Site

24. **INSERT** remaining [URM.staging_PouredPrecast] into [URM.Buildings] and [URM.Buildings_DataSources]

25. **INSERT** [URM.staging_PouredPrecast] into [URM.Buidlings_ConstructionMaterials] with a *MaterialID* of 7

26. **CREATE** [URM.staging_PropID] table

27. **INSERT** all WIS records currently in [URM.Buildings] into [URM.staging_PropID]

28. **CREATE** [URM.staging_Foundation] and [URM.staging_noSC] temp tables

29. **INSERT** into [URM.staging_Foundation] all WIS records that have one of the following 'Foundation' Property Characteristics
    a. Brick
    b. Concrete – Block
    c. Parged
    d. Stone

30. **SELECT** and **INSERT** all WIS Property that do not a 'Structural System' AND do not have a 'Cladding' Property Characteristic into [URM.staging_noSC]

31. **DELETE** all records from [URM.Buildings] where UPPER(City) LIKE '%SPOKANE%' that are included in [URM.staging_noSC]

32. **UPDATE** WIS records in [URM.Buildings] that are in [URM.staging_noSC] that haven't been already been deleted (namely, Spokane records) to URMStatusID of 4 (Unknown)

33. **SELECT** and **INSERT** all WIS Property that do not have a 'Structural System' Property Characteristic into [URM.staging_noSS]

34. **DELETE** all WIS records from [URM.Buildings] that are included in [URM.staging_noSS]

35. **SELECT** WIS records that currently exist in [URM.Buildings] that have a WIS *PropertyCharacteristicCategory* descriptor of "Plan" AND does not have one of the following WIS *PropertyCharacteristicItem* descriptors
    a. Rectangle
    b. Square

36. **UPDATE** [URM.Buildings] records that fit the criteria defined in #26 by setting *ComplexFootprint* to 'Yes'

37. **SELECT** WIS records that currently exist in [URM.Buildings] that have a WIS *PropertyCharacteristicItem* descriptor that equals "Flat with parapet"

38. **UPDATE** [URM.Buildings] records that fit the criteria defined in #28 by setting *Parapets* to 'Yes'

39. **DELETE** [URM.Buildings] records that have a *BuildingName* that fit one of the following queries:
    a. UPPER(BuildingName) LIKE '% BRIDGE%' AND UPPER(BuildingName) NOT LIKE '%BRIDGE STREET%'
    b. UPPER(BuildingName) LIKE '% BARN%'
    c. UPPER(BuildingName) LIKE 'BARN'
    d. UPPER(BuildingName) LIKE '% DEMOLISHED%'
    e. UPPER(BuildingName) LIKE '% REMOVED%'

40. **DELETE** [URM.Buildings] records that appear to be identical building properties based on <u>all</u> of the following fields being identical
    a. *BuildingName*

b. *Address1*
c. *City*
d. *County*
e. *DateConstructed*

41. **SELECT** WIS *BuildingUseCategory* attributes for current WIS records in [URM.Buildings]

42. **JOIN** selected records from #32 to lookup table that matches with URM/data dictionary schema

43. **INSERT** selected records from #33 into [URM.Buildings_BuildingUses]

44. **SELECT** WIS records that currently exist in [URM.Buildings] that fit one of the following criteria:
    a. HealthCare
        i. Health Care - Clinic
        ii. Health Care - Hospital
        iii. Health Care - Medical Business/Office
        iv. Health Care - Resort
        v. Health Care – Sanitarium
    b. Defense
        i. Defense - Air Facility
        ii. Defense - Arms Storage
        iii. Defense - Battle Site
        iv. Defense - Coast Guard Facility
        v. Defense - Fortification
        vi. Defense - Military Facility
        vii. Defense - Naval Facility
    c. Fire Station
        i. Government – Fire Station

45. **INSERT** records that fit the criteria from #35 into [URM.Buildings_EmergencyFacilities]

46. **INSERT** into [URM.Buildings_HistoricStatus] - Local Historic District Status data (excel/csv) provided from DAHP that match WIS records in [URM.Buildings]

47. **SELECT** WIS records in [URM.Buildings] that have a WIS *DeterminationEligibility* that fit one of the following:
    a. Determined Eligible - NPS
    b. Determined Eligible
    c. Heritage Barn Register
    d. Local Register
    e. National Landmark
    f. National Register
    g. State Register

48. **INSERT** records from #38 into [URM.Buildings_HistoricStatus] that are cross-walked with an internal lookup table

49. **DELETE** duplicate records in [URM.Buildings_HistoricStatus]

50. **UPDATE** [URM.Buildings] - set *Stories* to the *StoryCount* value in [WIS.PropertyInventory]

51. **UPDATE** [URM.Buildings], set *ParcelNumber* to the *TaxParcel_No* value in [WIS.Property]

52. **UPDATE** [URM.Buildings], set *BuildingOwnership* to "Public" where records match one of the following criteria:
    a. UPPER(BUILDINGNAME) LIKE '%STATE OF WASHINGTON%'
    b. UPPER(BUILDINGNAME) LIKE '%WASHINGTON STATE DEPARTMENT%'
    c. UPPER(BUILDINGNAME) LIKE '%WASHINGTON DEPARTMENT OF %'
    d. UPPER(BUILDINGNAME) LIKE '%UNIVERSITY OF WASHINGTON%'
    e. UPPER(BUILDINGNAME) LIKE '%WASHINGTON STATE UNIVERSITY%'
    f. UPPER(BUILDINGNAME) LIKE '%COMMUNITY COLLEGE%'
    g. UPPER(BUILDINGNAME) LIKE '%CITY OF %'
    h. UPPER(BUILDINGNAME) LIKE '%TOWN OF %'
    i. UPPER(BUILDINGNAME) LIKE '%GENERAL SERVICES ADMINISTRATION%'
    j. UPPER(BUILDINGNAME) LIKE '%U.S. COAST GUARD%'
    k. UPPER(BUILDINGNAME) LIKE '%U.S. NAVY%'
    l. UPPER(BUILDINGNAME) LIKE '%U.S. ARMY%'
    m. UPPER(BUILDINGNAME) LIKE '%U.S. MARINES%'
    n. UPPER(BUILDINGNAME) LIKE '%U.S. AIR FORCE%'
    o. UPPER(BUILDINGNAME) LIKE '%ARMY CORPS OF ENGINEERS%'
    p. UPPER(BUILDINGNAME) LIKE '%CITY HALL%'
    q. UPPER(OWNERNAME) LIKE '%U.S. SPACE FORCE%'
    r. UPPER(OWNERNAME) LIKE '%STATE OF WASHINGTON%'
    s. UPPER(OWNERNAME) LIKE '%WASHINGTON STATE DEPARTMENT%'
    t. UPPER(OWNERNAME) LIKE '%UNIVERSITY OF WASHINGTON%'
    u. UPPER(OWNERNAME) LIKE '%WASHINGTON STATE UNIVERSITY%'
    v. UPPER(OWNERNAME) LIKE '%COMMUNITY COLLEGE%'
    w. UPPER(OWNERNAME) LIKE '%CITY OF %'
    x. UPPER(OWNERNAME) LIKE '%TOWN OF %'
    y. UPPER(OWNERNAME) LIKE '%GENERAL SERVICES ADMINISTRATION%'
    z. UPPER(OWNERNAME) LIKE '%U.S. COAST GUARD%'
    aa. UPPER(OWNERNAME) LIKE '%U.S. NAVY%'
    bb. UPPER(OWNERNAME) LIKE '%U.S. ARMY%'
    cc. UPPER(OWNERNAME) LIKE '%U.S. MARINES%'
    dd. UPPER(OWNERNAME) LIKE '%U.S. AIR FORCE%'
    ee. UPPER(OWNERNAME) LIKE '%ARMY CORPS OF ENGINEERS%'
    ff. UPPER(OWNERNAME) LIKE '%U.S. SPACE FORCE%'
    gg. UPPER(OWNERNAME) LIKE '%UNITED STATES OF AMERICA%'
    hh. UPPER(OWNERNAME) = 'USA'
    ii. UPPER(OWNERNAME) LIKE '%WASHINGTON DEPARTMENT OF %'
    jj. UPPER(OWNERNAME) LIKE '%WASHINGTON ARMY NATIONAL GUARD%'
    kk. *BuildingUseID* = 'G'

53. **UPDATE** Seattle records that are duplicates of Seattle_URM dataset

54. **DELETE** all WIS related records in [URM.Buildings] that have one of the following criteria:
    a. UPPER(City) = 'SEATTLE'

b. (City IS NULL AND Address1 LIKE '%SEATTLE%')

55. **DELETE** WIS one-offs from [URM.Buildings]

Duplicates Across Datasets

Outside of duplicates in Seattle (which were removed completely from the database), duplicates identified after the de-duping process were assigned a “Duplicate” value of 1 within the URM Inventory. Therefore, results displayed in the Washington URM Dashboard (Viewer), total counts, and other relevant statistics presented in this document do not include any URM Inventory record with a “Duplicate” value of 1.

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