

Tacoma Unreinforced Masonry Inventory Survey Training (app only)

URM WG in Partnership with:

City of Tacoma Planning and Development Services
WA Department of Archeology and Historic Preservation (DAHP)
WA Emergency Management Division (EMD)
Cascadia Region Earthquake Workgroup (CREW)

Other supporting stakeholders:

- City of Tacoma Historic Preservation
- City of Tacoma Emergency Management
- Pierce County Emergency Management



November 15, 2024

Tacoma URM Inventory – Survey Training



The following slides illustrate how to use the Survey123 app that was prepared for a survey of unreinforced masonry (URM buildings) in Tacoma, Washington, on November 15, 2024. The slides are excerpted from the original training presentation.



→ When you open the application, this will be what you see. →


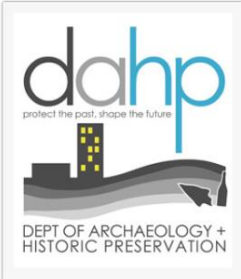

→ You can now begin entering the data. Accuracy is key!

Note: If you do not see “City of Tacoma URM Survey,” please contact our support team in the room.

→ Use the “comments” box at the bottom of the form to share additional information with the data reviewers.

City of Tacoma URM Survey

This survey was developed to assess Unreinforced Masonry Buildings (URM) within WA State by the Department of Archaeology and Historic Preservation in conjunction with the Washington State Military Department's Emergency Management Division and the Inter-Agency WA URM Workgroup.



Date of Evaluation (Current Date)*

11/12/2024

Select the Building Footprint for the building you are surveying.*

1

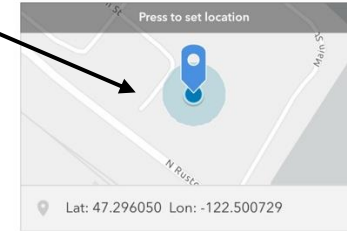
This is what you will see on your phone. To navigate the map, tap on the map to enlarge it and it will pop open a larger map screen.

Date of Evaluation (Current Date)*

11/06/2024

Select the Building Footprint for the building you are surveying.*

Zoom in and drop a point on the building you are surveying. If the building footprint is wrong for what you are seeing, just drop a point in the closest location to where you think the building is.



What is the building address?

This should populate based on the point you selected in the map above.

4924 MAIN ST, Tacoma, WA, 98407

What is the Building Status?

2

Here is the enlarged map that you can use to navigate to your specific area. Tap on the red building you will survey, and a chevron type icon will appear on the building.

3

Once you have selected your building, click on "OK".



4

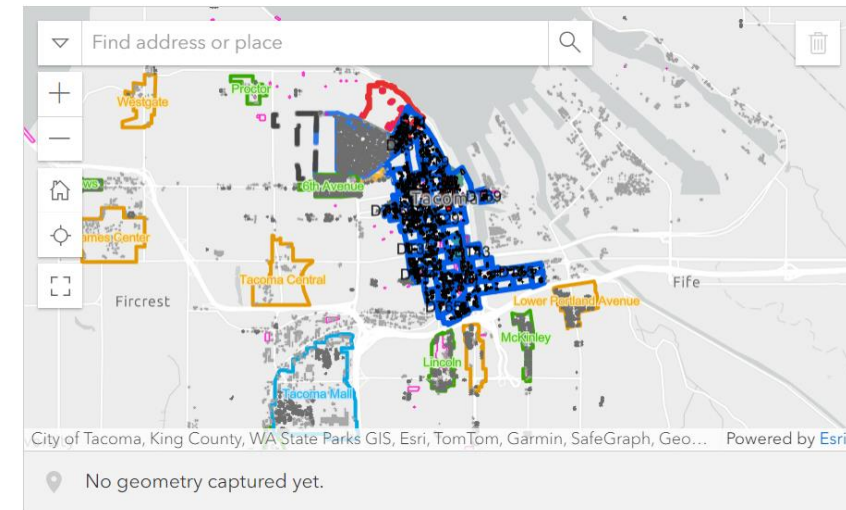
Verify today's date.



Date of Evaluation (Current Date)*

Select the Building Footprint for the building you are surveying.*

Zoom in and drop a point on the building you are surveying. If the building footprint is wrong for what you are seeing, just drop a point in the closest location to where you think the building is.



What is the building address?

This should populate based on the point you selected in the map above.

5

Verify that the complete address populates in the box before proceeding.



6

If the building exists and appears to be a URM building, select “Existing” and continue to the next section.



Note: If any of the other selections are made, no survey needs to be done for this address. You will only provide comments, submit reference photos, and submit an incomplete form. Then, move on to the next assigned address.

What is the building address?

This should populate based on the point you selected in the map above.

What is the Building Status?

Existing

Demolished

Single Family Residence

Unable to Complete Field Survey; additional review is needed

Not URM Building

7

Select the building's occupancy level or select unknown if you are unsure.



8

Select any building uses that apply.



9

Select any emergency uses that apply.



Building Information

Vacant/Underutilized?

Yes, full building Yes, ground floor Yes, upper floors

No Unknown

Building Use
Please check all that apply

Commercial Emergency Public Assembly

Office Government Schools

Residential (Multi-family) Industrial Mixed uses

Other

Emergency Facility
If "Emergency" was answered for the previous questions, please select all that apply.

Hospital Fire Station Police Station

Other

10

Select the building ownership status or select “unknown” if you are unsure.



Building Ownership

Private

Public

Unknown

11

Enter building characteristics values based on your observations or update any pre-populated values if they seem incorrect upon inspection.



Building Characteristics ▾

Year Built

Date Altered (Adjusted Year Built)

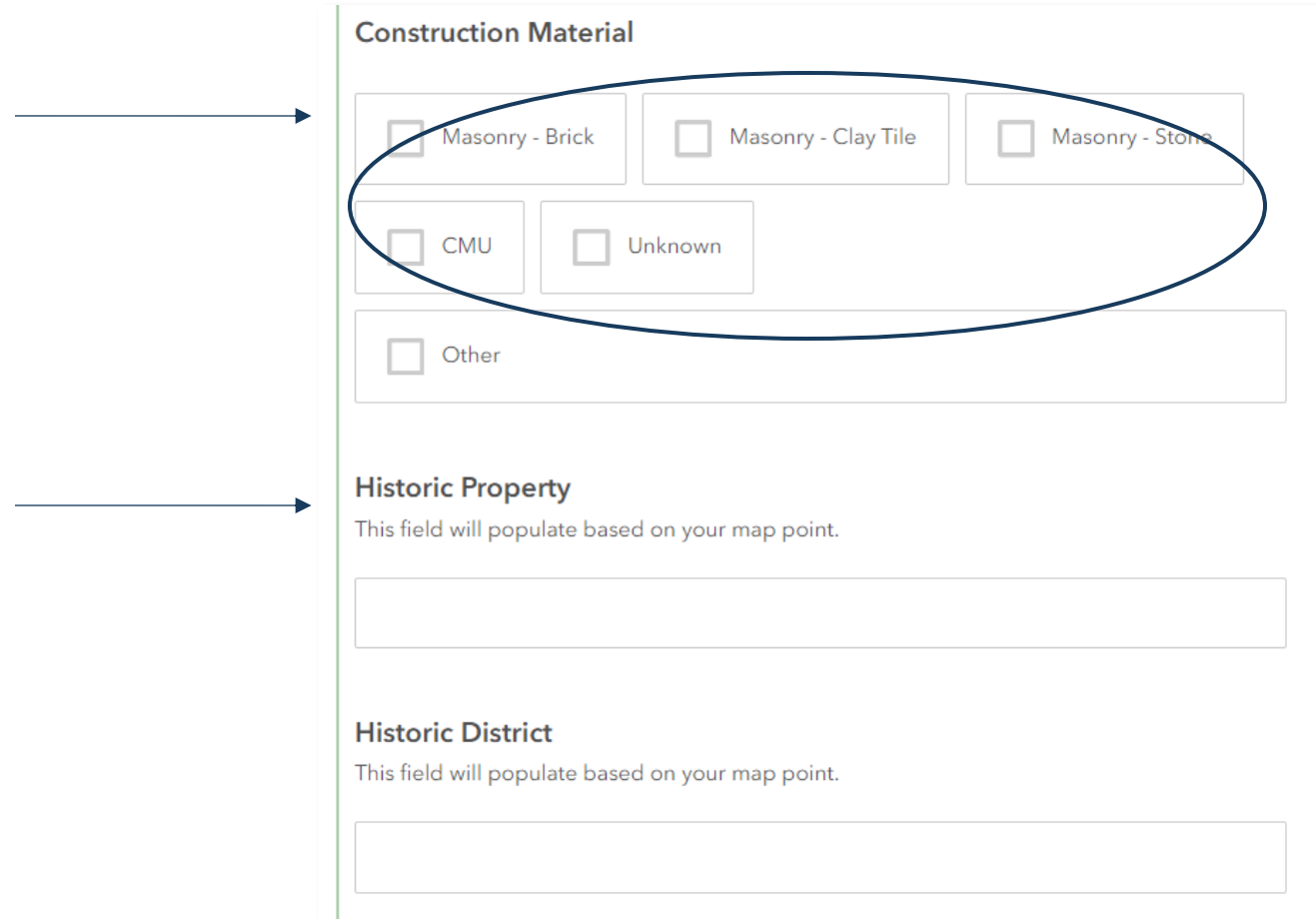
Date Altered (Year Remodeled)

Number of Stories

Square Footage

12 Select all that apply. Refer to handout for construction material photos. Note that URM means brick, clay tile, and/or stone.

13 Historic Property and District may populate based on your map point.



The screenshot shows a survey form with three main sections. The first section, 'Construction Material', contains five checkboxes: 'Masonry - Brick', 'Masonry - Clay Tile', 'Masonry - Stone', 'CMU', and 'Unknown'. These five options are circled in blue. Below them is an 'Other' checkbox. The second section, 'Historic Property', has a text input field and a note: 'This field will populate based on your map point.' The third section, 'Historic District', also has a text input field and a note: 'This field will populate based on your map point.' Two blue arrows point from the text on the left to the 'Construction Material' and 'Historic Property' sections respectively.

14

Refer to the brickwork images to help you identify brickwork and select your response.



Note: Header courses are the most reliable indicator of URM walls.

Architectural Features ▾

Does this building contain brickwork?

Yes No Unknown

Brickwork
Example brickwork images.

Brickwork Details

Header Courses Window arches/stone lintels

If you selected “Yes” or “Unknown” for brickwork...

15 Indicate features that are present.




16 Take photos and add them to the form.




Brickwork Details

Header Courses Window arches/stone lintels


Brickwork image 1
Please take a photo(s) of the brickwork and include it here.

Drop image here or select image 

Brickwork image 2
Please take a photo(s) of the brickwork and include it here.

Drop image here or select image 

Brickwork image 3
Please take a photo(s) of the brickwork and include it here.

Drop image here or select image 

17


Observe the top of the building walls to identify if it has parapets. You may not be able to determine this from street level. If this is the case, select “unknown”.



Does this building have parapets?

Yes No Unknown

Parapets
Parapet example and parapet bracing.



If you selected “Yes” or “Unknown” for parapets...

18

Indicate if parapets are present and /or parapet bracing is present (where visible from public way). If parapet bracing is not visible, please note that in the comments.



19

Take photos and add them to the form.




Parapets Details


Please select all of the elements of parapets included in this building.

Parapets present Parapet bracing present

Parapet Image 1

Drop image here or select image 

Parapet Image 2

Drop image here or select image 

20


Observe the street facing walls and indicate if you see steel bracing of the type shown on the images. Diagonal bracing may be visible behind glass windows on the ground floor. For corner buildings, check both street-facing walls for bracing.



Does the building have bracing?

Yes No Unknown

Bracing
Visible bracing and moment frames.



If you selected “Yes” or “Unknown” for wall bracing...

21 Indicate what kind of wall bracing is present.



22 Take photos and drop them into the form.




Bracing Details

Please select all of the elements of bracing included in this building.


Visible braces Moment frames visible

Other

Bracing Image 1

Drop image here or select image 

Bracing Image 2

Drop image here or select image 

23

Observe all walls and indicate if you see round (or square) steel plates horizontally spaced, as in the example image. It is possible that not all walls may exhibit rosettes. Use the “comments” field to provide additional details.



Rosettes

Example image of Rosettes.



If you selected “Yes” or “Unknown” for rosettes...

24

Indicate on which level rosettes are present. Use “comments” for additional information.



25

Take photos and add them to the form.




Rosettes details

Please select all elements of rosettes included in this building.


Rosettes at the floor/roof Rosettes at the parapet

Other

Rosettes Image 1

Drop image here or select image 

Rosettes Image 2

Drop image here or select image 

26

If the site is relatively level, then the answer will be “No.”



27

If this is a sloping site, indicate if an additional story is exposed due to the sloping ground.

In this example image, the answer is: “Yes”

28

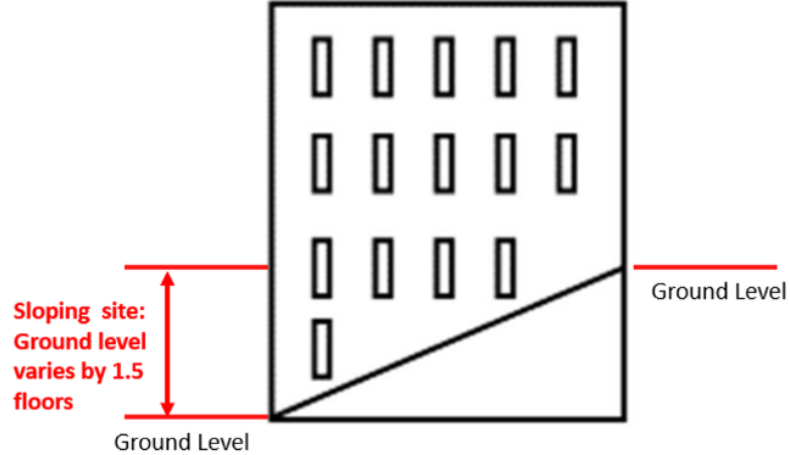
If “Yes” or “Unknown,” upload photos into the form.




Does the building have sloping side offset by one floor or more?

Yes No Unknown


Sloping Site
Example image of a sloping site.



Sloping site image 1

Drop image here or select image 

Sloping site image 2

Drop image here or select image 

29

Observe the street-facing walls and indicate if large glass windows are present at the ground level, as shown in the example image.



Does the building have an open storefront?

Yes No Unknown

Open Storefront

Example image of an open storefront.

30

For corner buildings, observe both street-facing walls and share the percentages for the side with the least ground-level walls.

31

In this example, "Yes" there is an open storefront



If “open storefront” is present, refer to the example image, and indicate approximate length of wall (non-open/window) as a percentage of building length.

If the building is a corner building, or has multiple open storefront walls use the wall with the most windows.

32

Indicate % of wall at the ground floor



33

Indicate % of wall at the 2nd floor



34

Take a photo and drop it into the form.



Open Storefront
Example image of an open storefront.

Ground Level Wall Length
Please provide the length of the ground level wall as a percentage of the total length (see image).

Second Level Wall Length
Please provide the length of the second level wall as a percentage of the total length (see image).

Open Storefront image 1

Drop image here or select image

35

When facing the building, are there immediately adjacent (no gap) buildings next to it? Check both sides of the building. For corner buildings, check for any adjacent buildings.



Does the building have adjacent buildings?

Yes No Unknown

Adjacent building(s)
Example image of adjacent buildings.

***In this example image,
the answer is: "Yes"***

If you selected “Yes” or “Unknown” for adjacent buildings...

36

Indicate where the adjacent buildings are present.

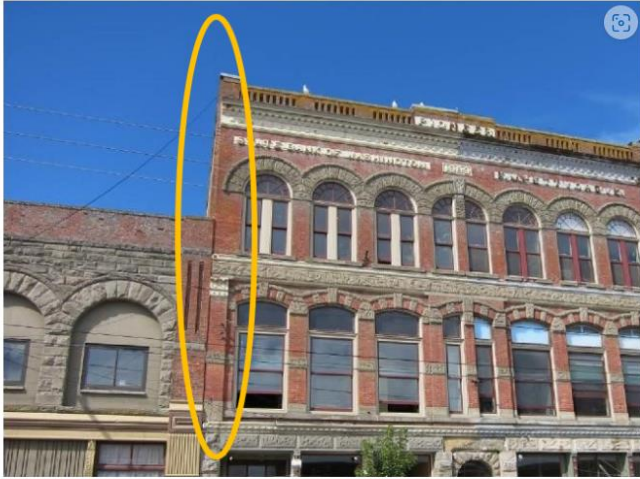


37

Take photos and drop them into the form.




Adjacent building(s)
Example image of adjacent buildings.



Location of adjacent building(s) when viewed from the street.
Please select all that apply.

Adjacent building left Adjacent building right

Adjacent building 1

Drop image here or select image 

38

Indicate the shape of the building's plan layout. Buildings that are not rectangular may be L-shaped or have multiple "wings." You may not be able to observe this feature from the street level by walking around the building. If this is the case, indicate "Unknown".




Building plan details.
What shape is the building when viewed from above.

Rectangular or square Non-rectangular Unknown

Other

Building Plan
Example image of a building plan.

Rectangular or square plan layout



39

Provide additional comments here. If there is anything else you would like reviewers to examine, list that in the comments (e.g., "unsure if roofs have parapets," etc.). For example, if your building list indicates "retrofitted" building, enter it in the comments.

These are general comments. Include anything on the 8 features or beyond that will help reviewers understand the building.

40

Upload photos of each visible side of the building here

41

Review entries carefully and submit before proceeding to the next building

Comments
Please provide any additional information for the reviewer here.

1000

Exterior Building Images

Front of the building
Please provide image(s) of the front side of the building.

Drop image here or select image

Back of the building
Please provide image(s) of the back side of the building.

Drop image here or select image

Left side of the building
Please provide image(s) of the left side of the building.

Drop image here or select image

Right side of the building
Please provide image(s) of the right side of the building.

Drop image here or select image

Please review your application before clicking submit.

Submit