

UNIVERSITY *of* WASHINGTON

# URM IMPROVEMENTS

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# URM IMPROVEMENTS OVERVIEW

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- UW inventoried the Seattle Campus buildings based on a number of criteria:
  - Damage Potential Index, Life Safety Hazard Index as well as Critical Facilities Index.
- UW collaboration/dialogue since 2008 with the City of Seattle regarding the unreinforced masonry (URM) issue, policy development, and associated historical resources.
  - Memorandum of Understanding (MOU) with Seattle Department of Construction & Inspections. Limited to the execution of seismic upgrades and systems impacted directly by the work.
- Currently in third biennium of State-funded phases, the first phase started 2017



# PROJECT GOALS

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- **Improve Life-safety** by reducing the risk of injury from collapse of unreinforced masonry (URM) bearing walls.
- Seismic retrofit work will **reduce adverse effects on University operations** in a seismic event.
- **Preserve the design integrity** of the campus historical structures.



# URM IMPROVEMENTS OVERVIEW

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- 25 UW Seattle Campus buildings have been identified for inclusion in the program
- Twelve buildings have been completed in first three phases:
  - ✓ Smith Hall, Savery Hall, Gowen Hall, Music Building, Thomson Hall, Lewis Hall, Communications, Eagleson Hall, Mary Gates Hall, Johnson Hall, Portage Bay, and the Power Plant.



# URM IMPROVEMENTS OVERVIEW

## Campus Locations



# URM IMPROVEMENTS OVERVIEW

## Types of Corrections by Building

Building	Load Bearing Corrections	Façade Corrections	Parapet Corrections
Art Building			
Communications			✓
Eagleson Hall	✓		✓
Edmundson Pavilion			
Gowen Hall		✓	✓
Hall Health			
Harris Hydraulics			
Hutchinson Hall			
Jacobsen Observatory			
Johnson Hall			✓
Lewis Hall	✓		
Mary Gates Hall			✓

Building	Load Bearing Corrections	Façade Corrections	Parapet Corrections
Miller Hall			
Music Building	✓	✓	✓
Oceanography			
Plant Operations			
Portage Bay Bldg.			✓
Power Plant			✓
Raitt Hall			
Savery Hall			✓
Smith Hall		✓	✓
Suzzallo Library			
Thomson Hall			✓

Gray shading indicates work at each building.

✓ indicates work completed.



# PROJECT INFORMATION

- The work is delivered via a Design-Build process.
- Steps involve: scoping, funding, design, permitting, program relocation, and construction.
- Construction began in 17-19 biennium funding cycle.
- Currently in design with Hutchinson Hall for construction during 23-25 biennium.
- Scoping complete for all buildings.



# TYPES OF WORK

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- > Targeted improvements:
  - Load bearing work.
  - Masonry façade stabilization.
  - Unreinforced masonry (URM) parapet bracing.





# Example scoping document

## HALL HEALTH - SITE CONTEXT



# HALL HEALTH

UW Seismic - Phase 3 Scoping Document

Degenkolb - DAS

2/20/2019

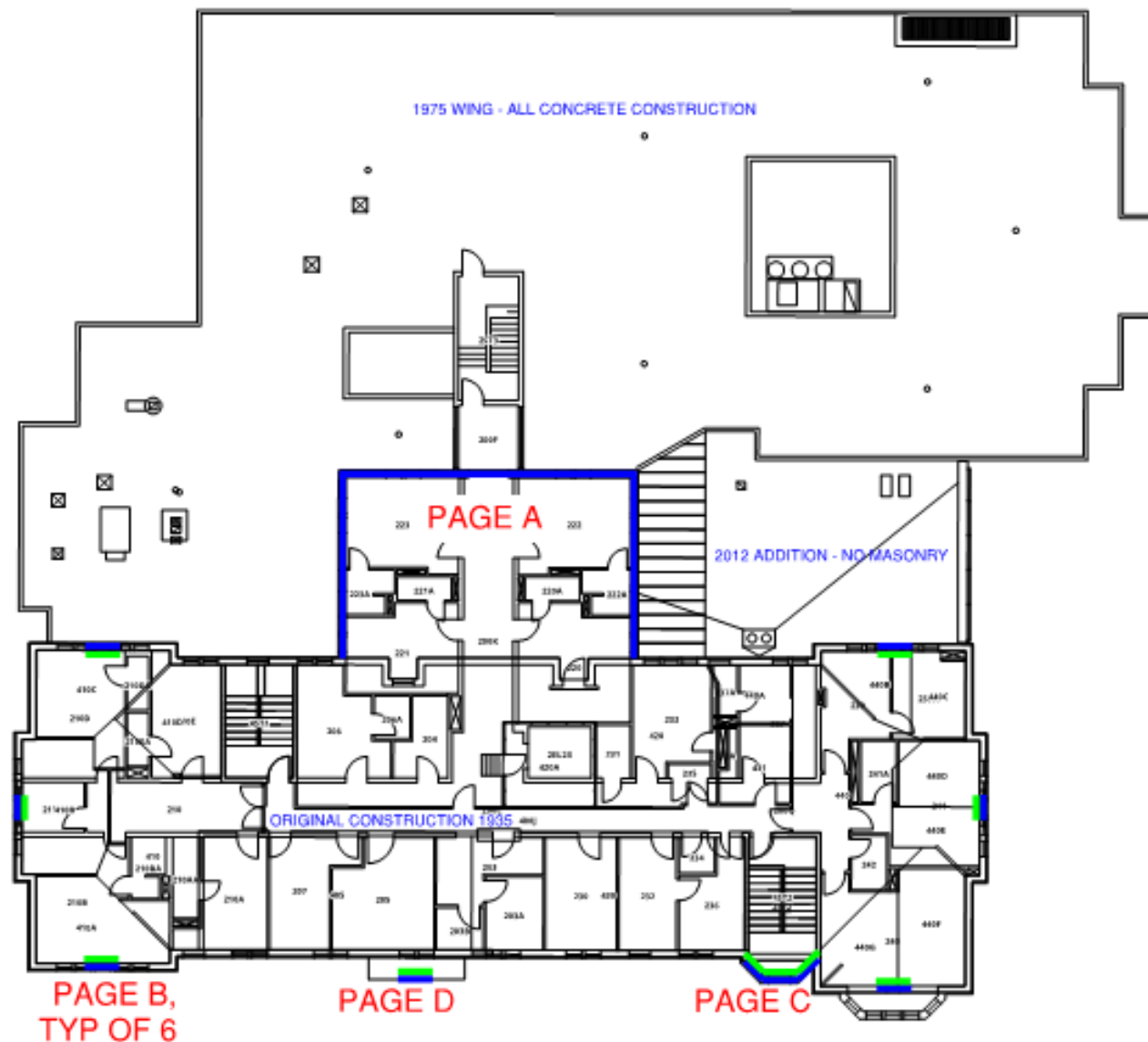
North Wing: Year Built 1975

South Wing: Year Built 1935

Addition: Year Built 2012

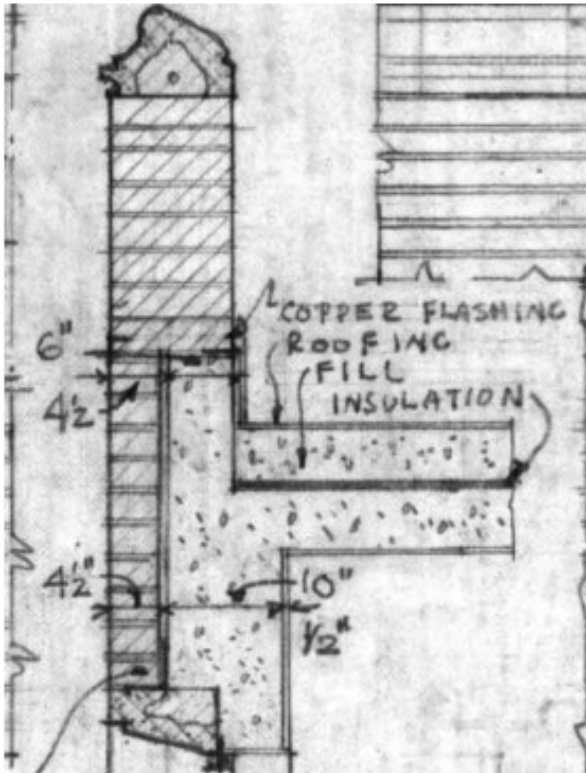
## LEGEND:

- ← EGRESS
- PARAPET
- BEARING WALL
- ADDED SCOPE
- ELIMINATED SCOPE
- ..... SCOPE TBD

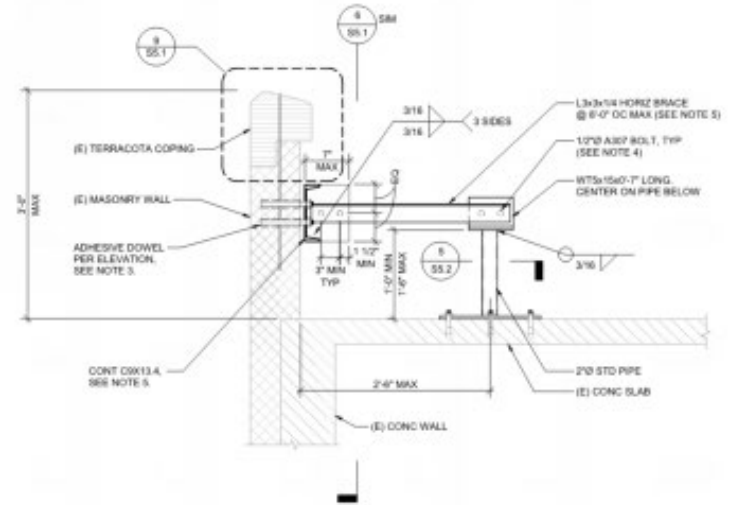


# DETAILS FOR CONDITION A

SCOPE:  
1. PARAPET IS UNBRACED



SECTION OF PARAPET



4 PARAPET BRACING DETAIL  
1" = 1'-0"

SAMPLE DETAIL - POWER  
PLANT 4/S5.2



PHOTO OF PARAPET

# DETAILS FOR CONDITION D

SCOPE:

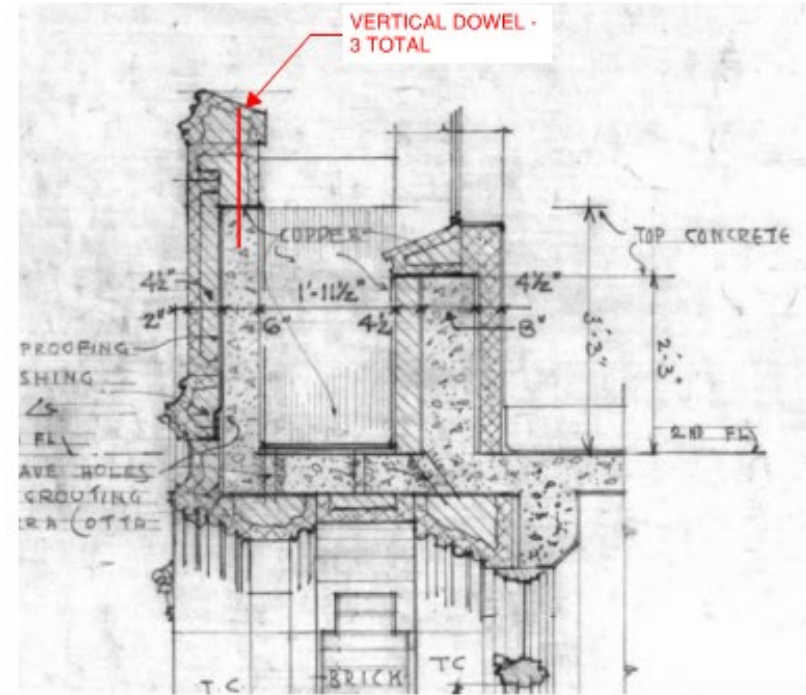
- 1. PARAPET OVER ENTRY IS UNBRACED.



PHOTO OF ENTRANCE



PHOTO OF ENTRANCE



SECTION OF ENTRANCE



# Eagleson Hall – URM Interior Steel Bracing

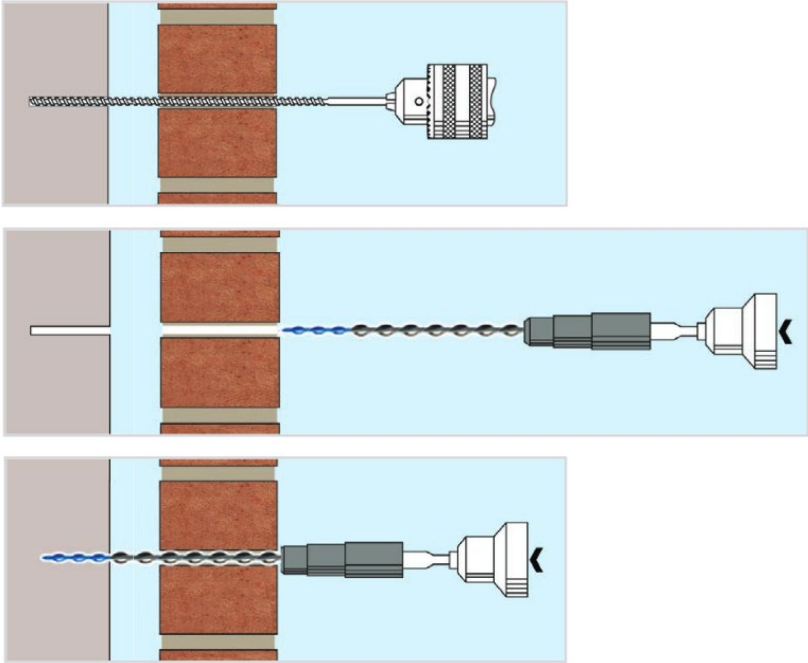
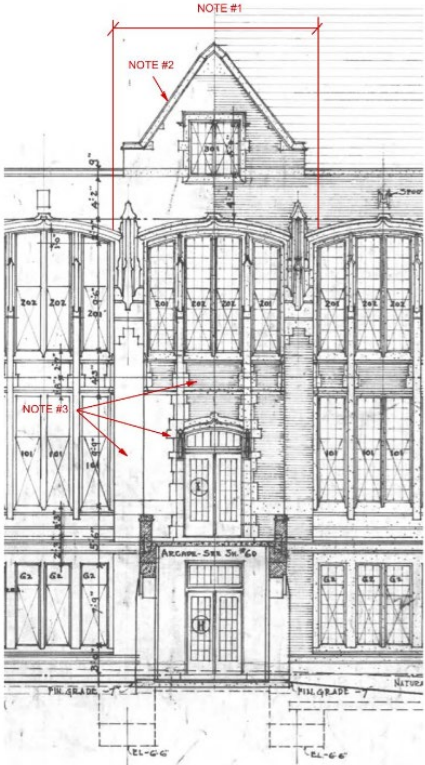


# Eagleson Hall – Load Bearing Revisions



# MASONRY FAÇADE CORRECTIONS

Masonry veneer anchorage points are inspected and improved as needed. Minimal to no visual impact.



Helical Anchors  
(recently used on Lewis Hall)

