

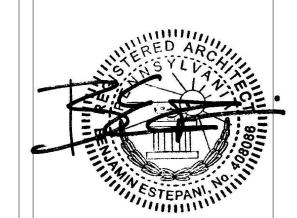


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Project+ Front St Renovation 305 N Front St Philadelphia, PA 19106

Structural Engineer+ Leake Engineering LLC 101 W Eagle Rd, #189 Havertown, PA 19083 Ph: 215.645.4437

FOR PHC REVIEW



SD PLANS TO OWNER 10.16.21 REVISED SD PLANS TO OWNER EXTERIOR ELEV TO OWNER 11.04.21 REVISED PLANS & ELEVS TO OWNER PROGRESS SET TO OWNER

> 11.30.21 REVISED PLANS + FRONT ELEV TO OWNER 01.03.22 SET TO PHC 01.11.22

> > SET TO PHC

SET TO PHC

02.07.22

03.04.22

03.04.22

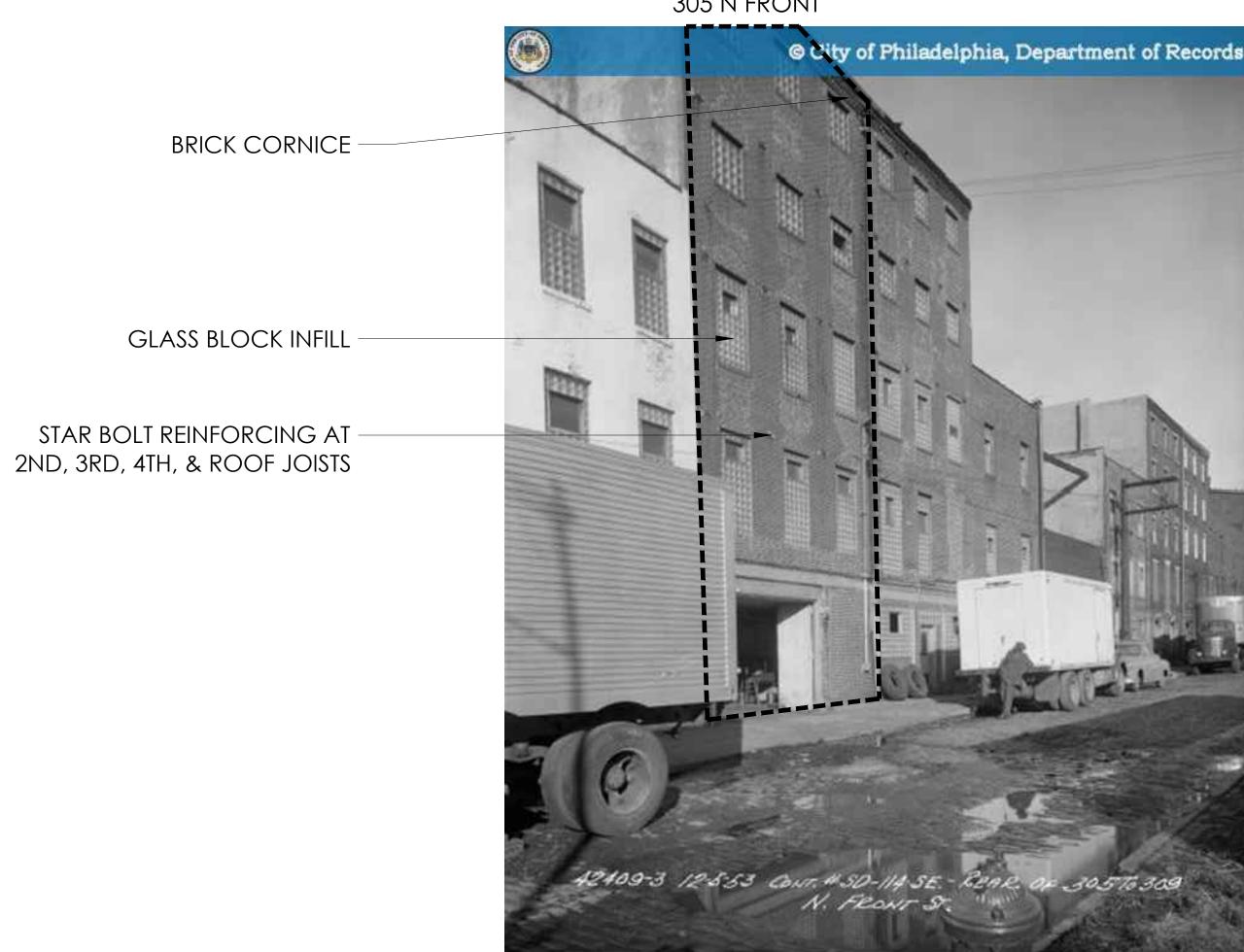
Revisions+

Drawn by

Title+

COVERSHEET & SITE PLAN

305 N FRONT



STONE LINTEL

FLUSH W/ BRICK

6 OVER 6 DOUBLE

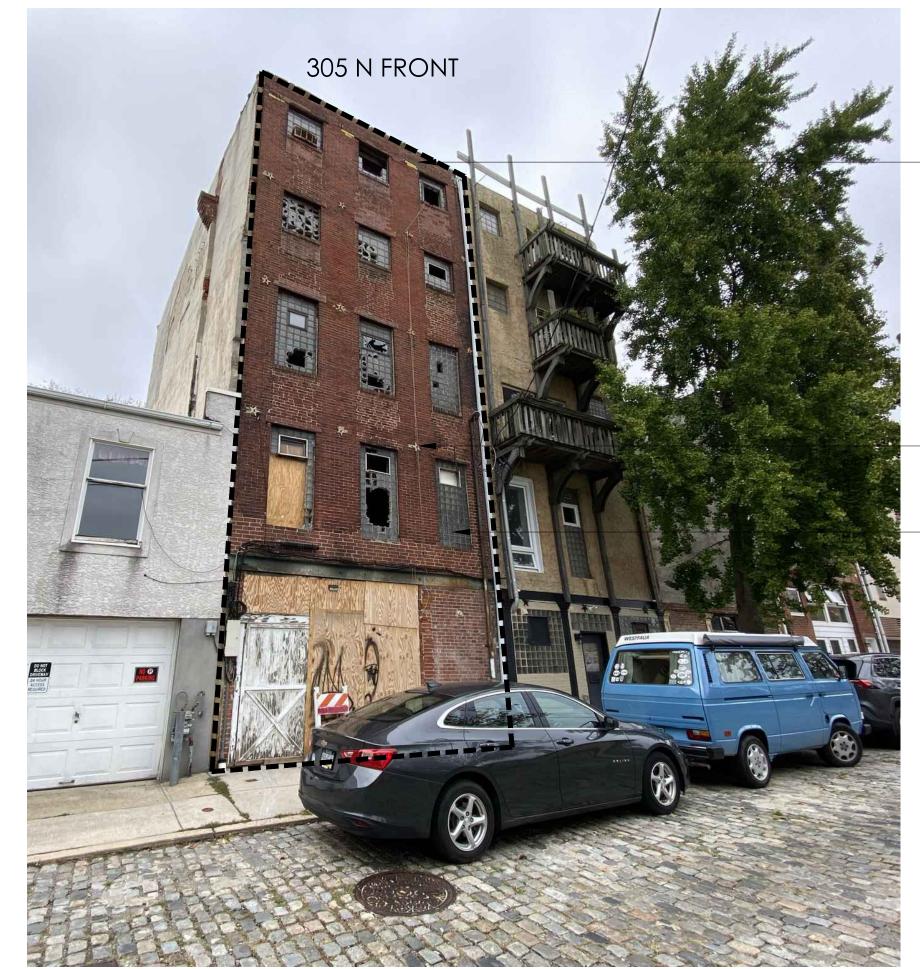
HUNG WINDOWS

PROUD OF BRICK

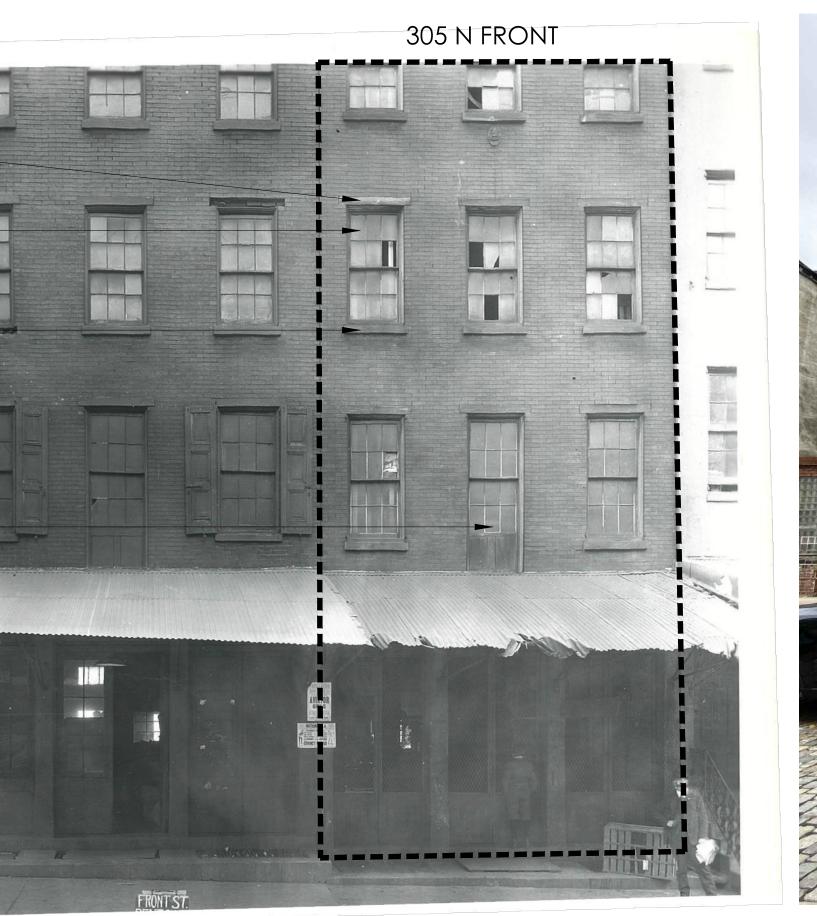
SILL FLUSH W/ FLOOR

STONE SILL

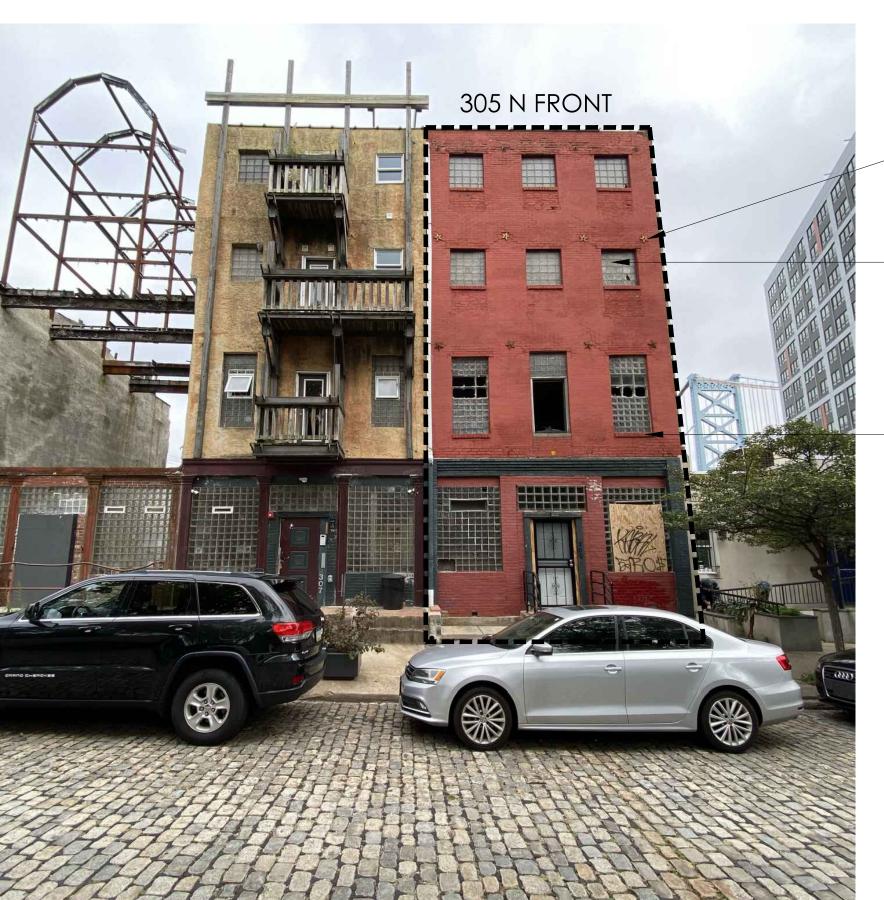
REAR ELEVATION (1953)



REAR ELEVATION (2021)



FRONT ELEVATION (1919)



FRONT ELEVATION (2021)

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EX BRICK CORNICE REMOVED

- STAR BOLT REINFORCING

GLASS BLOCK & BRICK

MASONRY OPENINGS

- STAR BOLT REINFORCING AT

GLASS BLOCK & BRICK

MASONRY OPENINGS

INFILL AT EXISTING

EXISTING SILLS AND

LINTELS REMOVED

FLOORS 3RD, 4TH, ROOF JOISTS

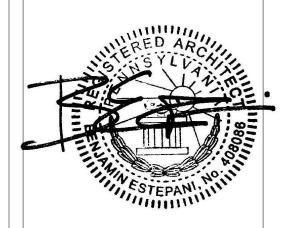
INFILL AT EXISTING

AT 2ND, 3RD, 4TH, ROOF JOISTS

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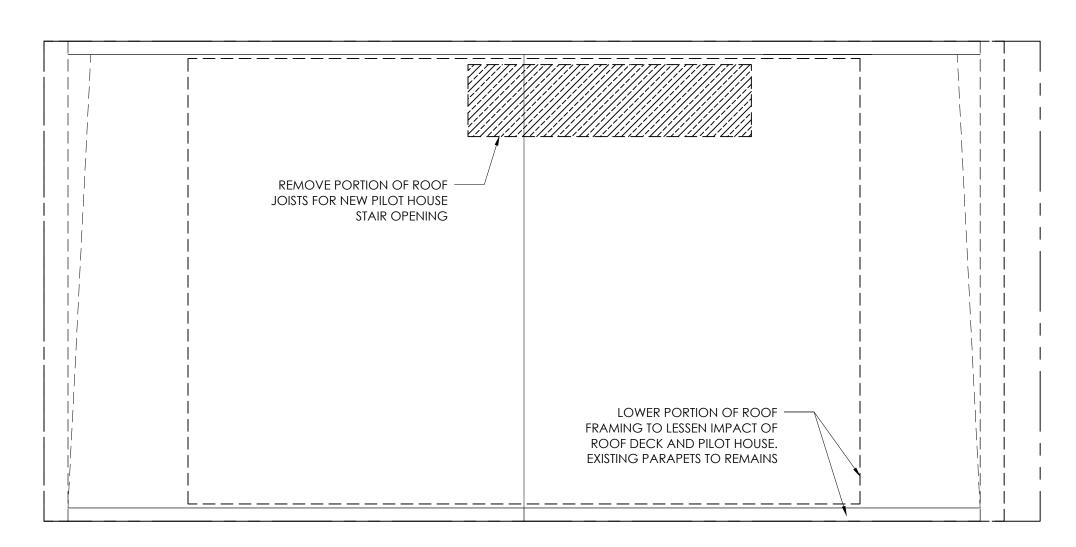
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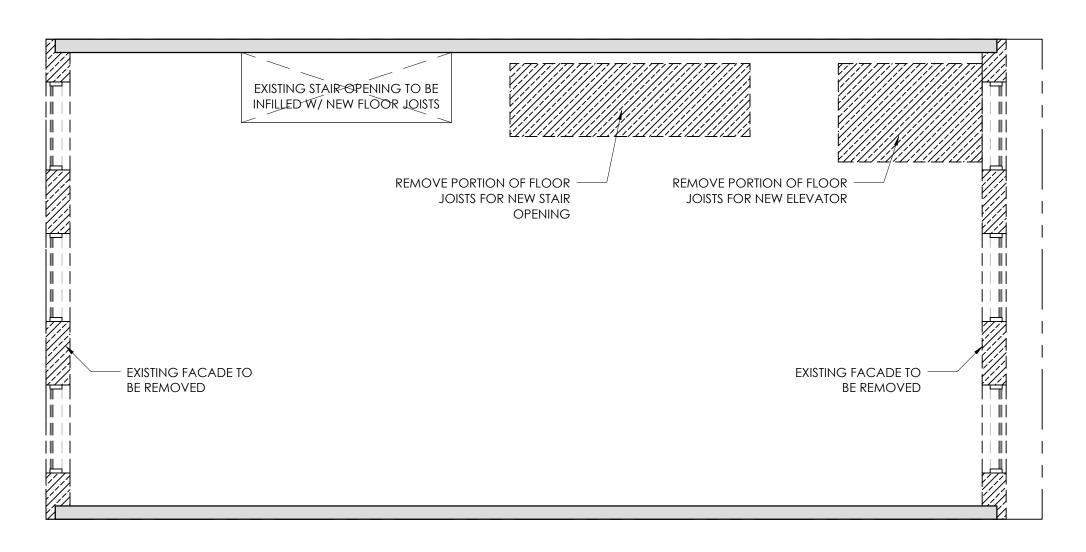
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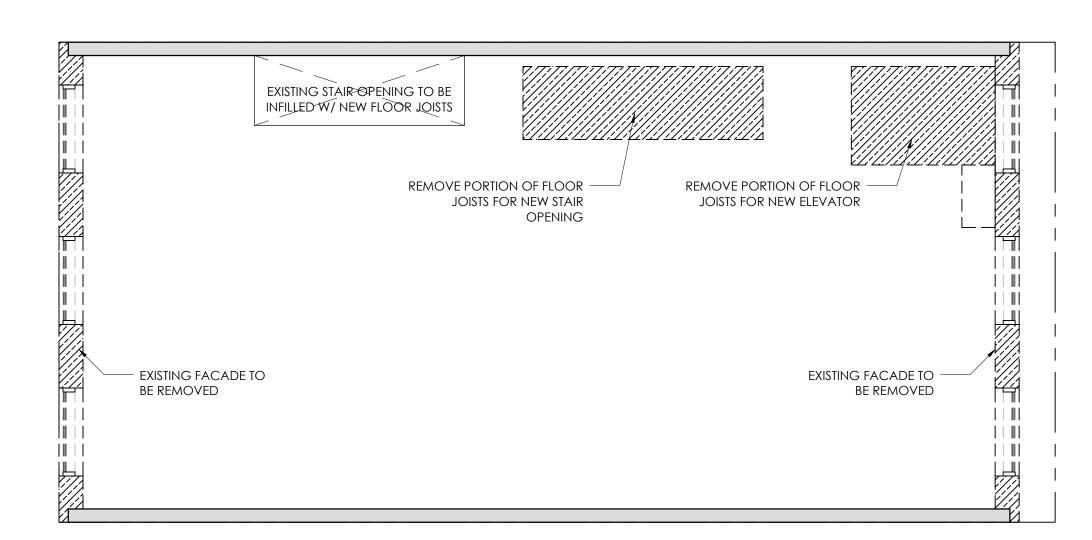
SITE PHOTOS



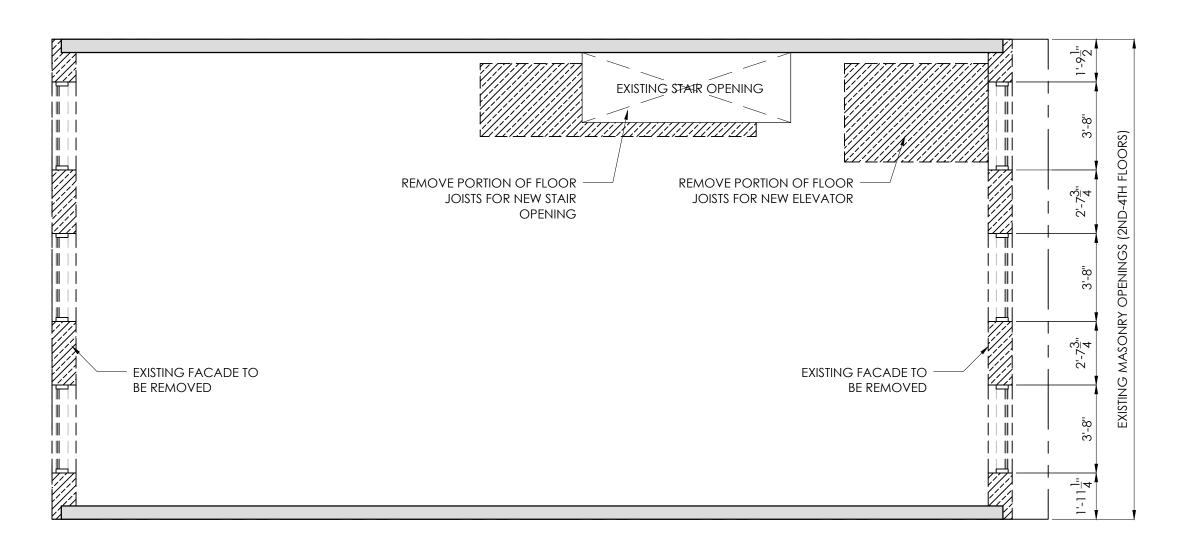
5 EXISTING ROOF PLAN A-100 SCALE: 1/4"=1'-0"



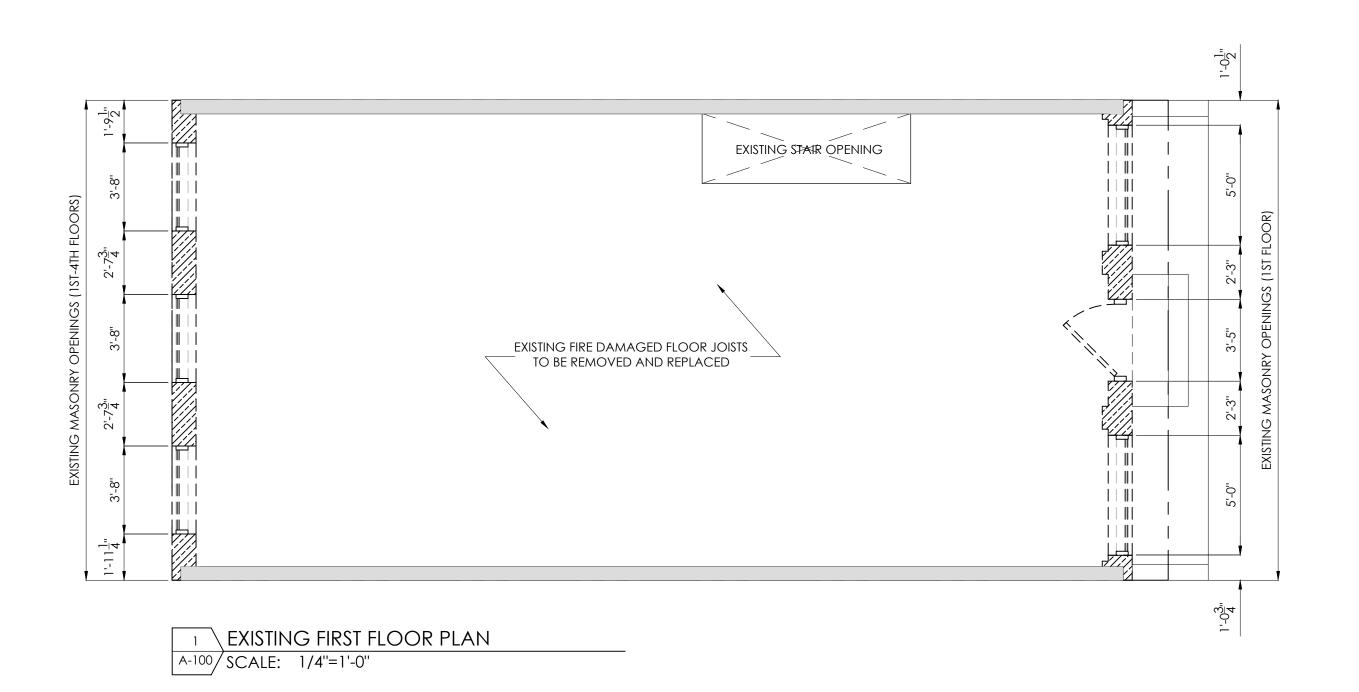
4 EXISTING FOURTH FLOOR PLAN
A-100 SCALE: 1/4"=1'-0"



3 EXISTING THIRD FLOOR PLAN
A-100 SCALE: 1/4"=1'-0"



2 EXISTING SECOND FLOOR PLAN
A-100 SCALE: 1/4"=1'-0"





B EXISTING BASEMENT PLAN

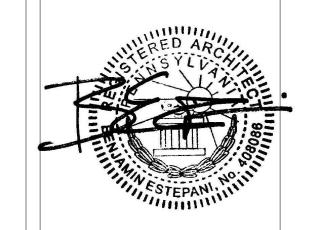
A-100 SCALE: 1/4"=1'-0"

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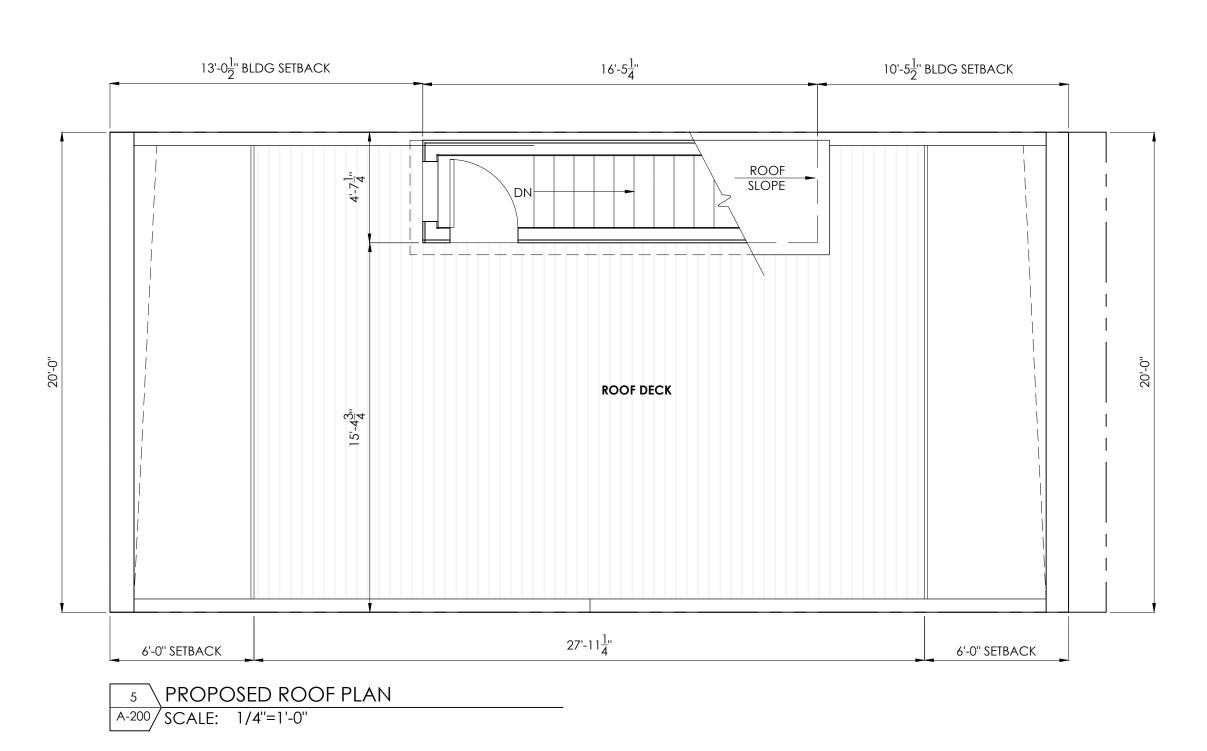
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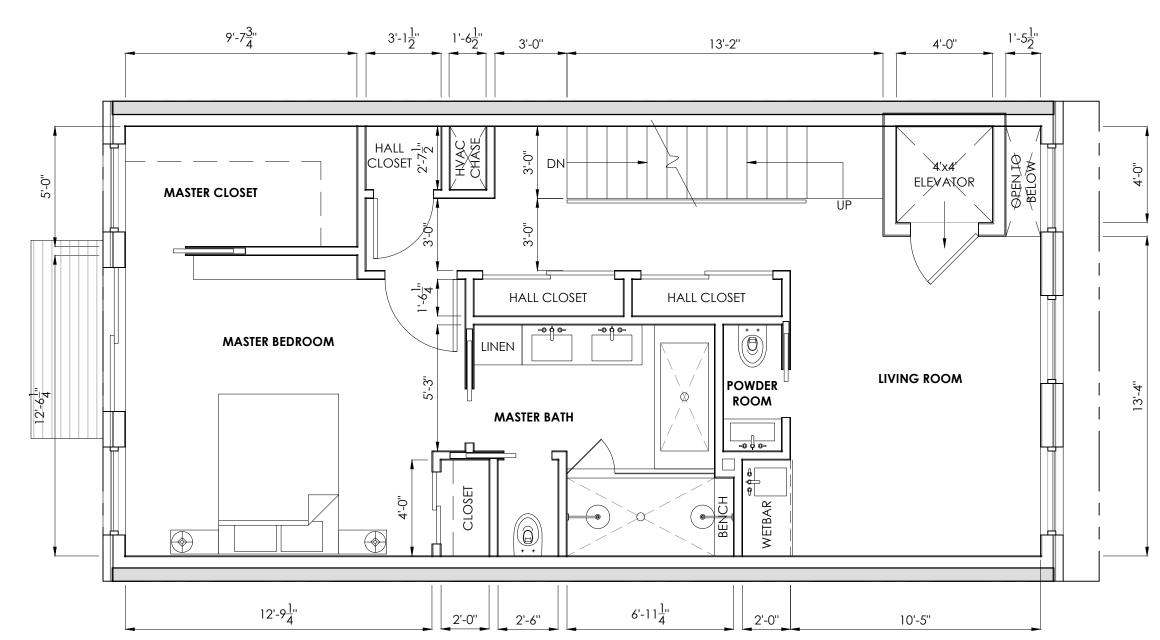
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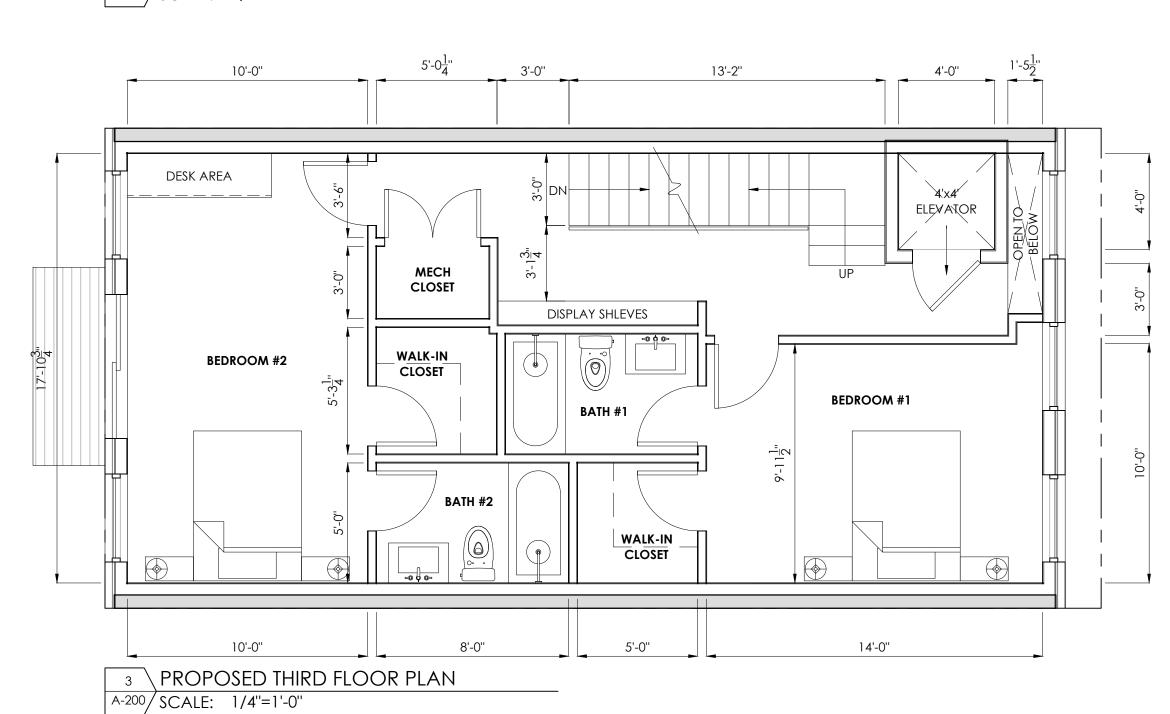
DEMOLITION PLANS

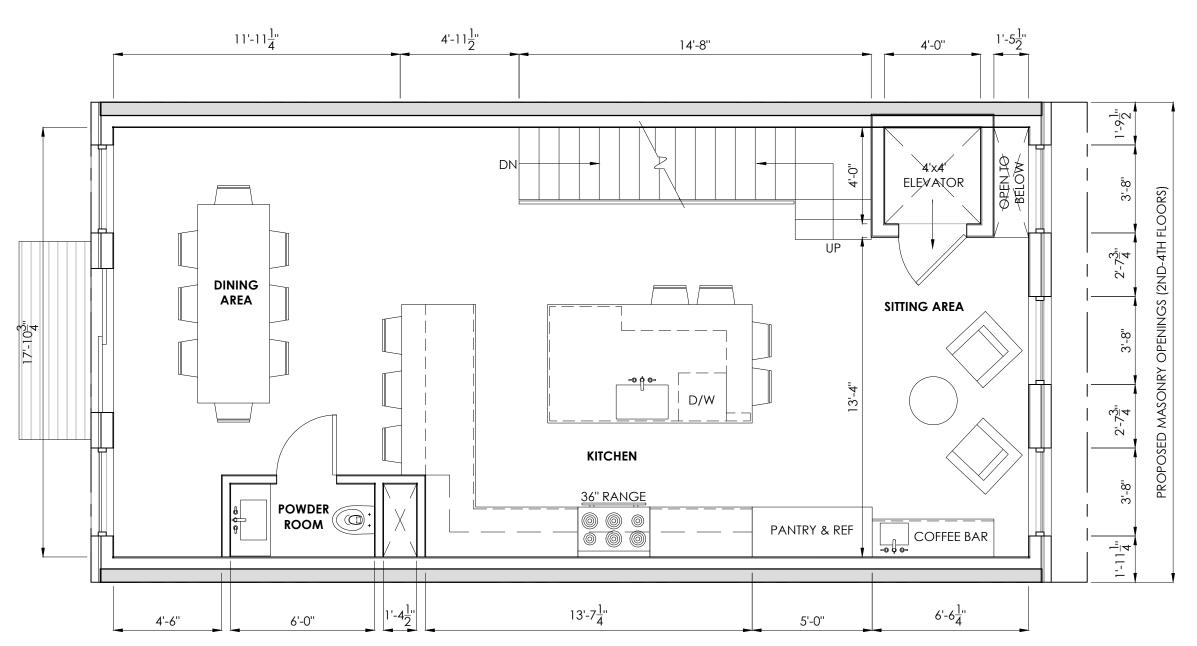




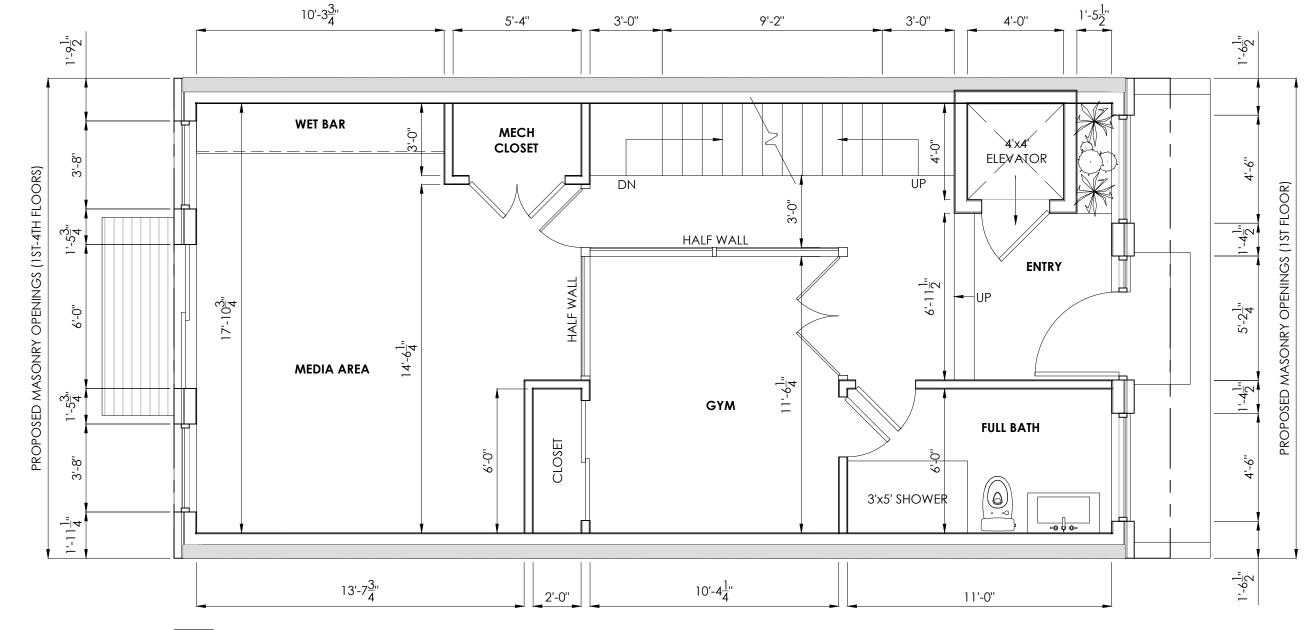


4 PRPOSED FOURTH FLOOR PLAN
A-200 SCALE: 1/4"=1'-0"



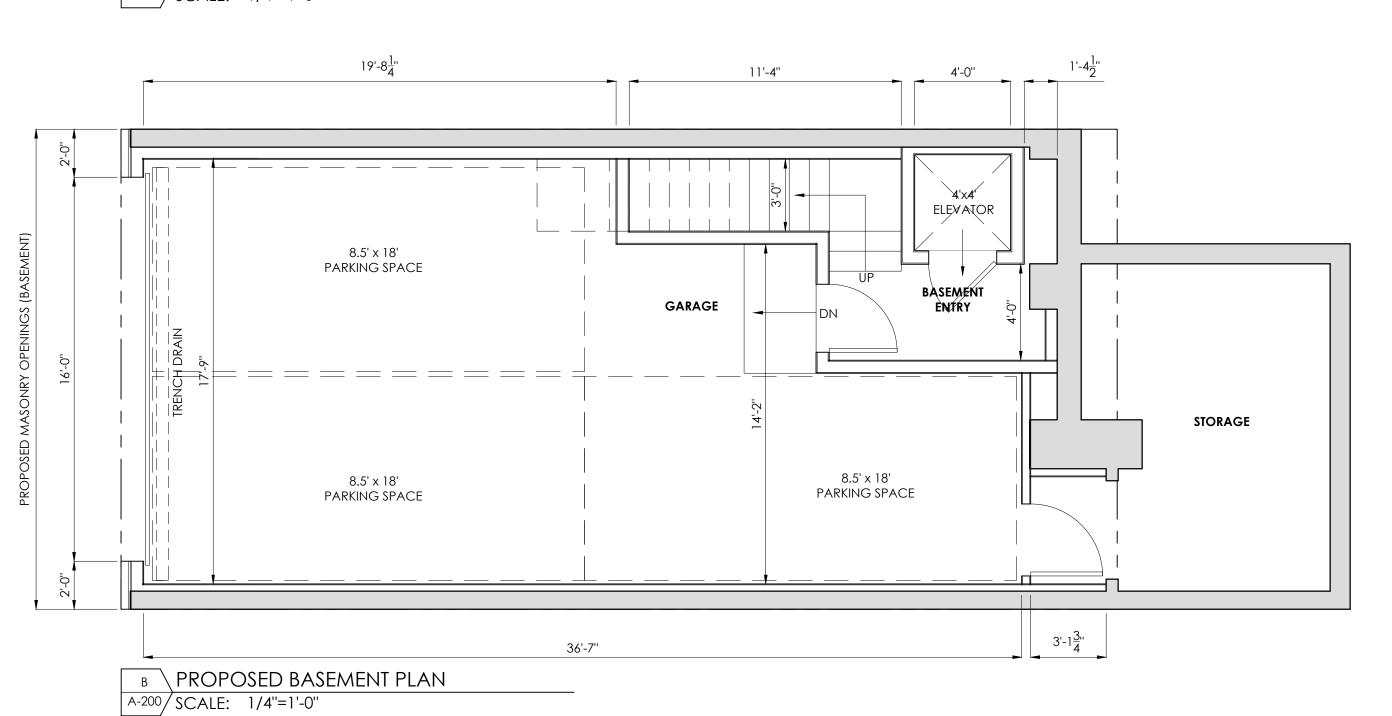


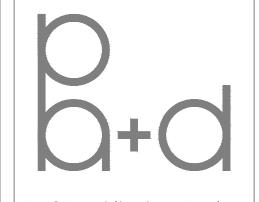
2 PROPOSED SECOND FLOOR PLAN A-200 SCALE: 1/4"=1'-0"



PROPOSED FIRST FLOOR PLAN

A-200 SCALE: 1/4"=1'-0"



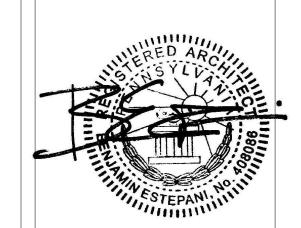


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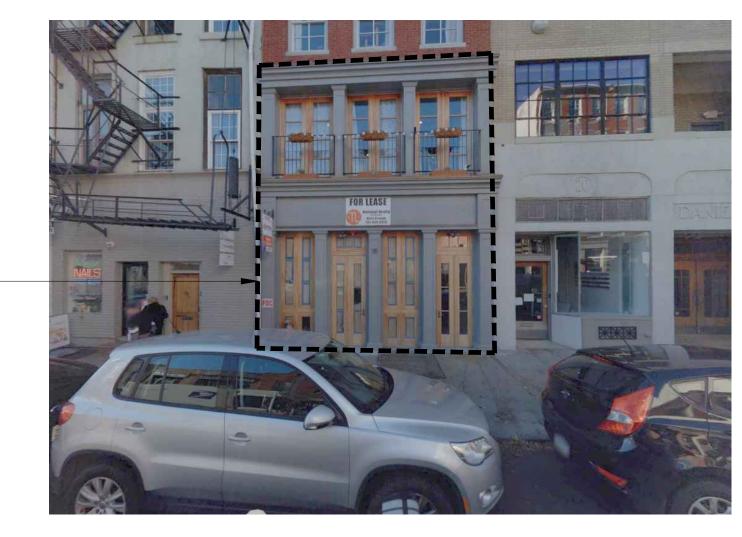
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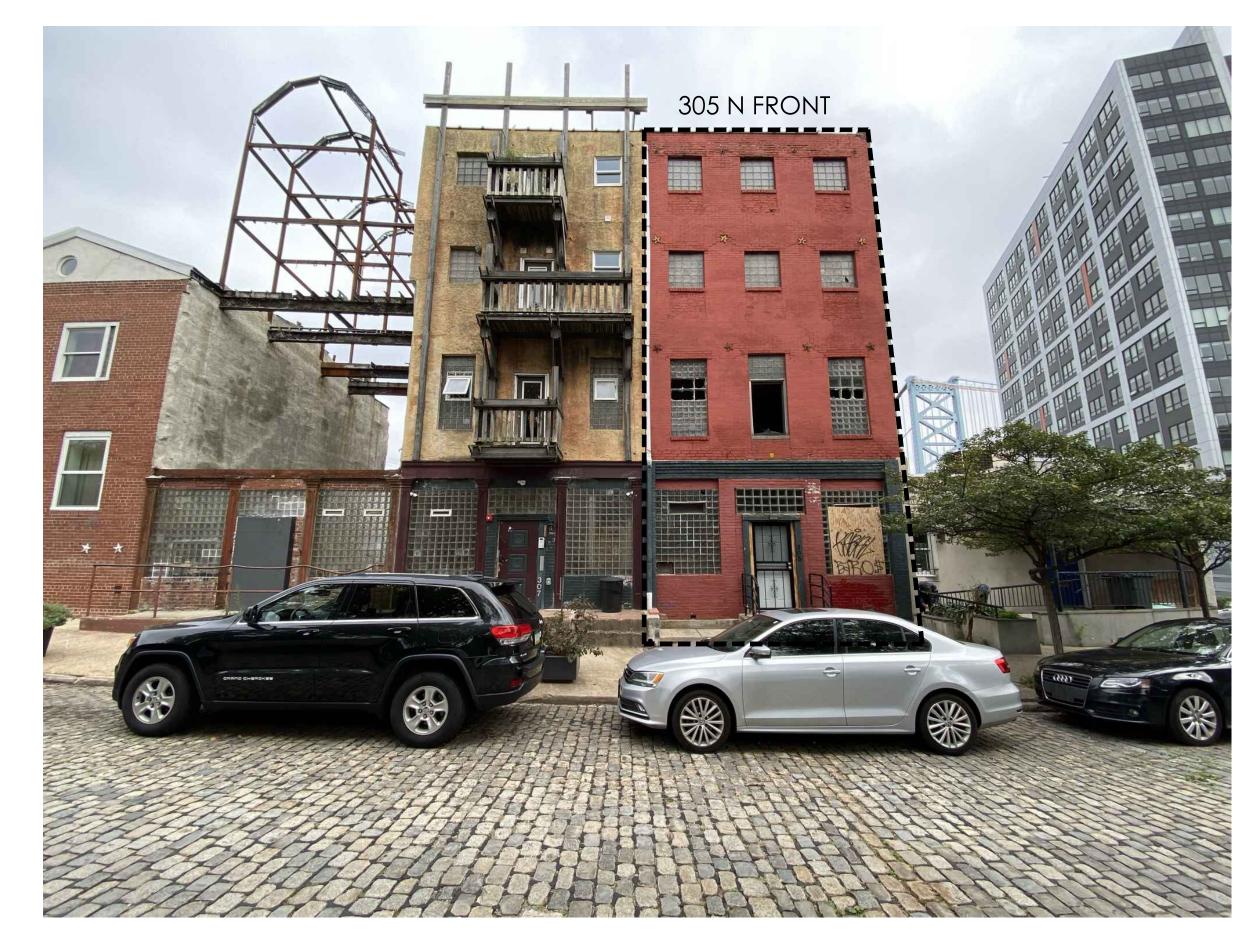
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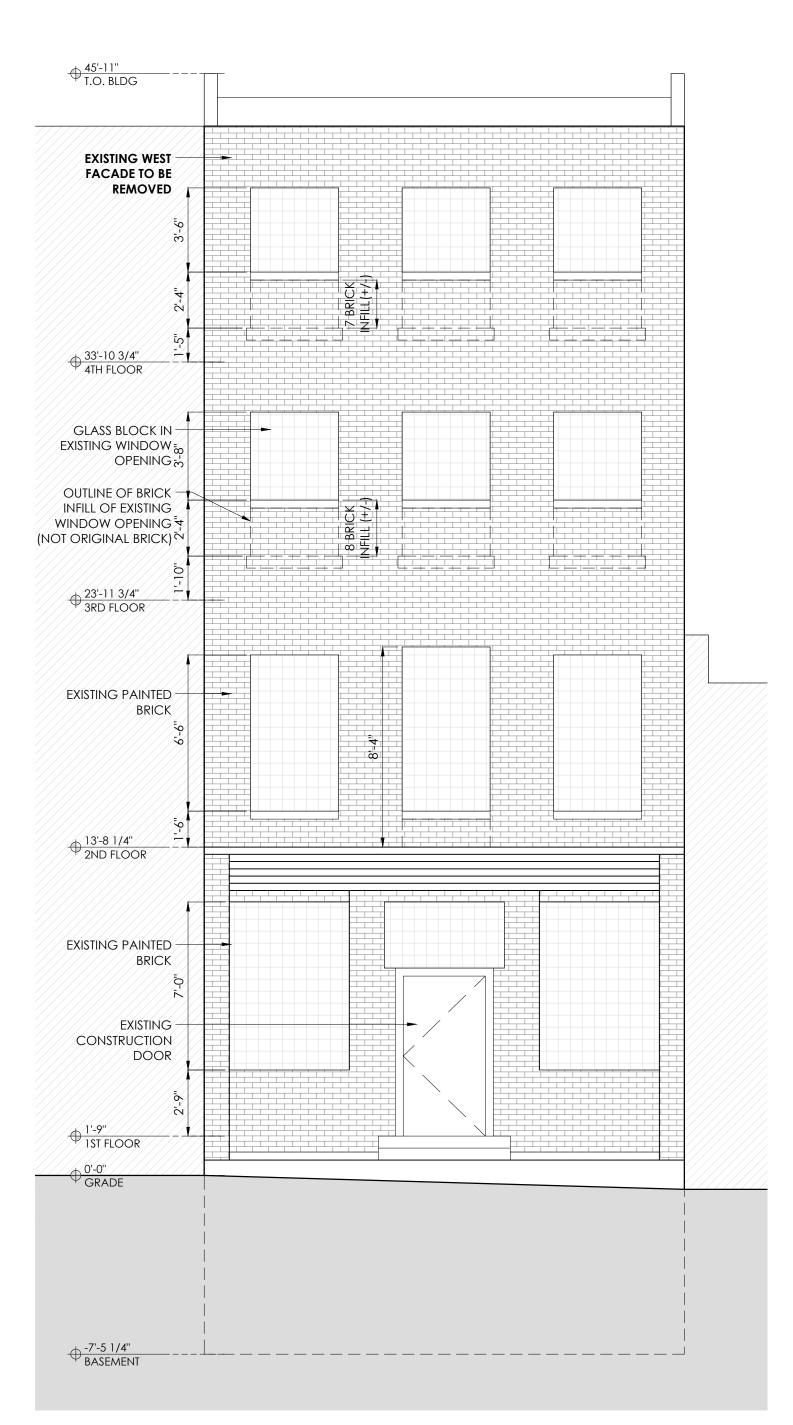
PROPOSED FLOOR PLANS

CAST STONE MATERIAL ALTERNATE: 18 N 3RD STREET - 1ST & 2ND FLOOR AS REVIEWED AND APPROVED BY PHC





3 EXISTING FRONT ELEVATION PHOTO (WEST)
A-300 SCALE: 1/4"=1'-0"



1 EXISTING FRONT ELEVATION (WEST)
A-300 SCALE: 1/4"=1'-0"



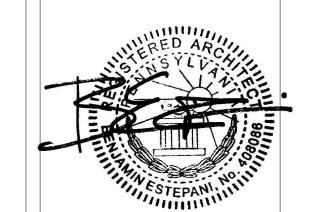
2 PROPOSED FRONT ELEVATION (WEST)
A-300 SCALE: 1/4"=1'-0"

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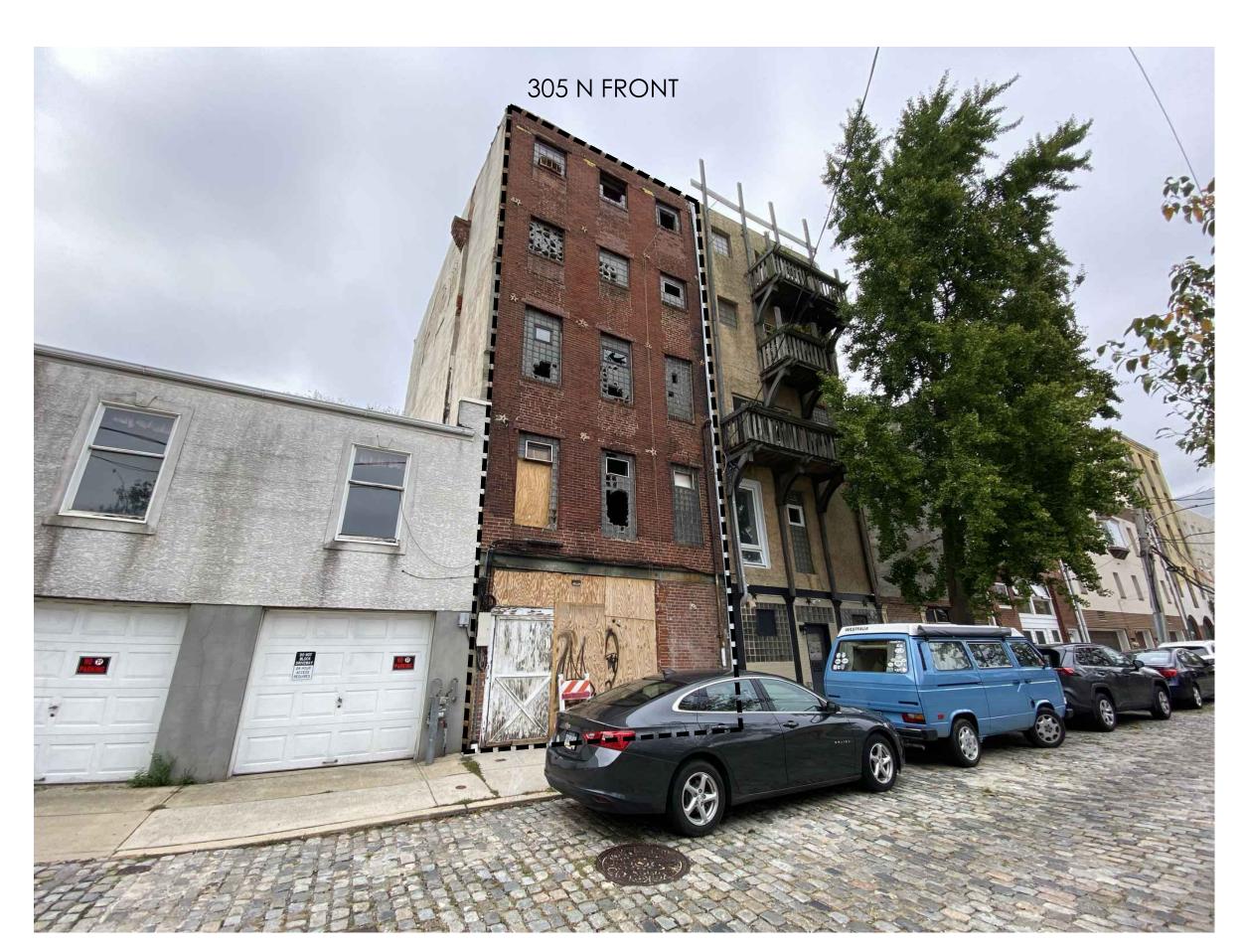
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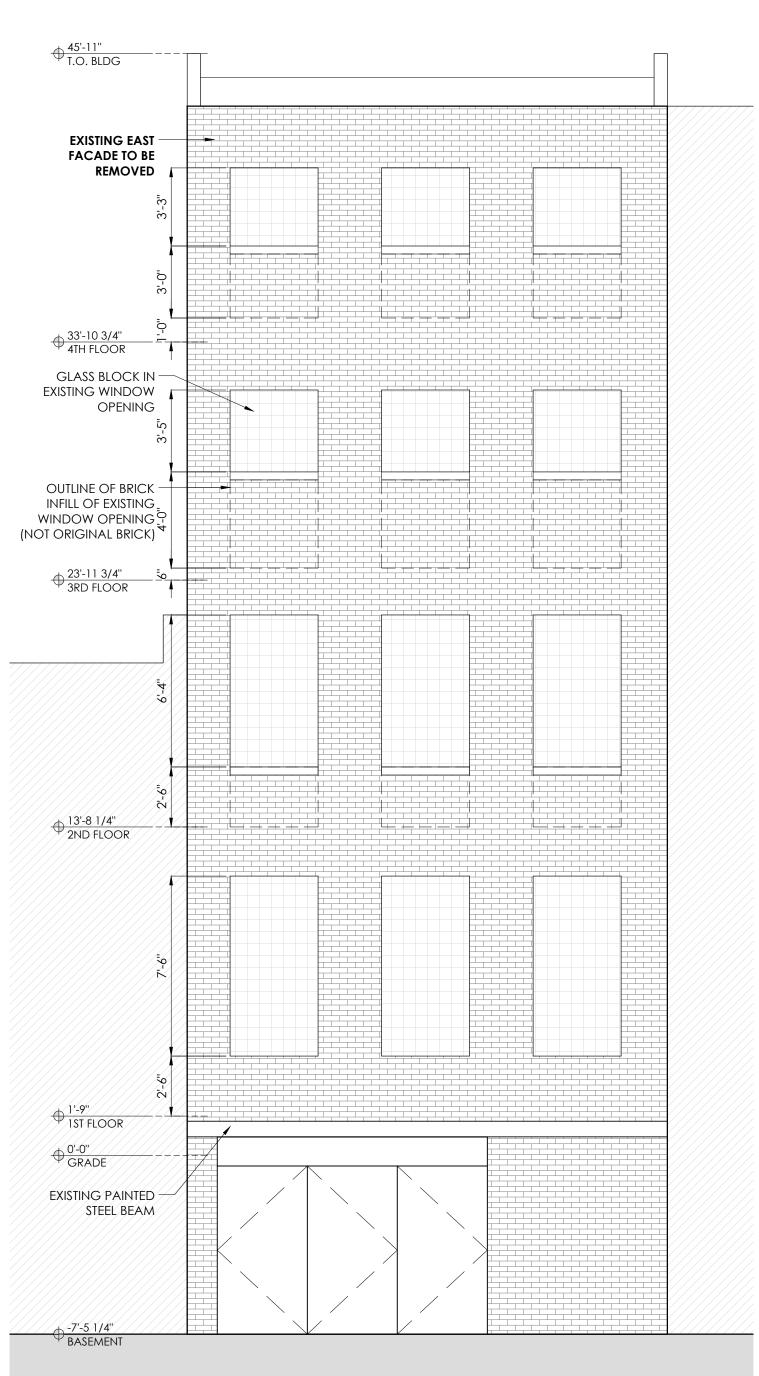
Date Drawn by

WEST EXTERIOR ELEVATION

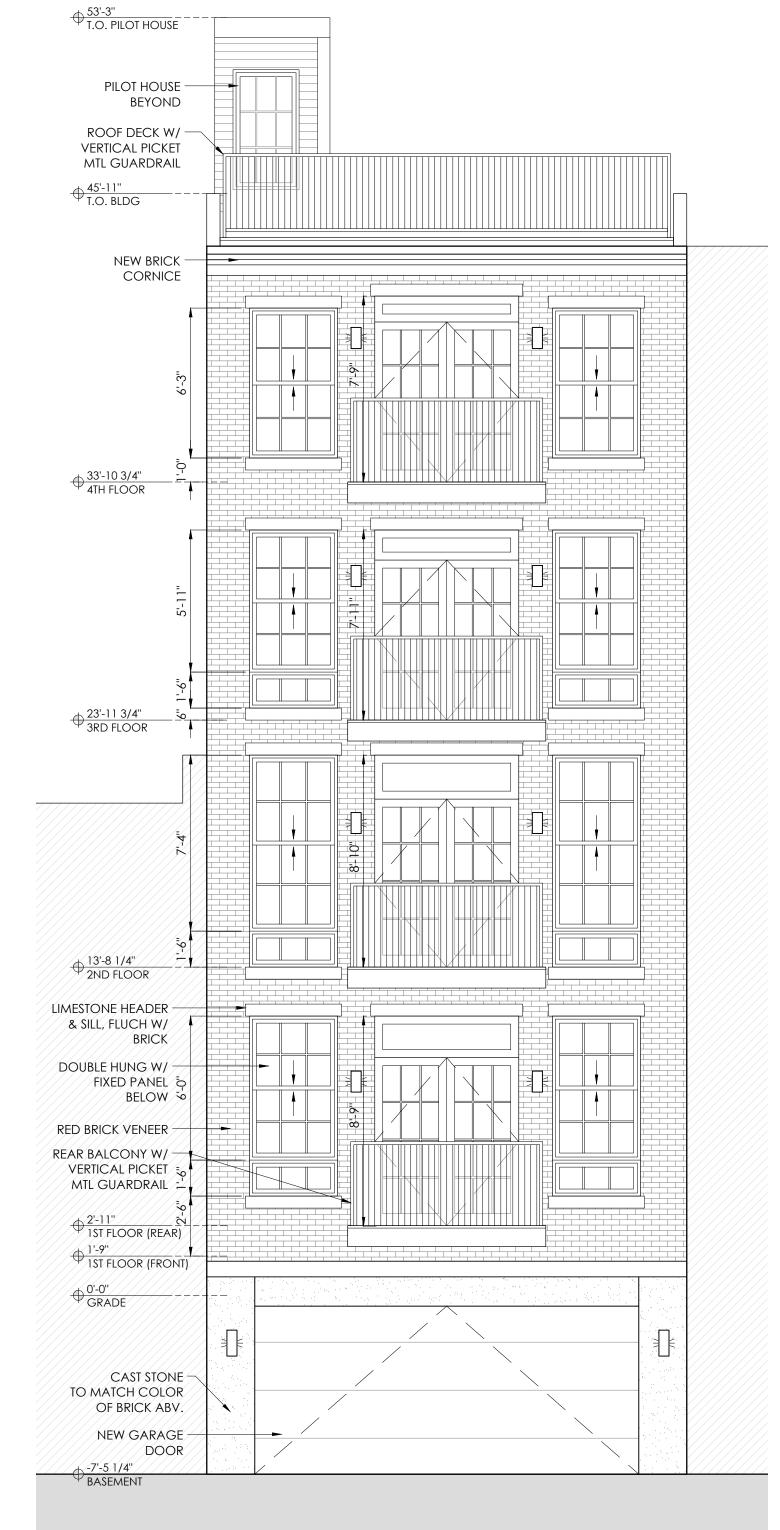


3 EXISTING REAR ELEVATION PHOTO (EAST)

A-300 SCALE: 1/4"=1'-0"



1 EXISTING REAR ELEVATION (EAST)
A-301 SCALE: 1/4"=1'-0"



PROPOSED REAR ELEVATION (EAST)

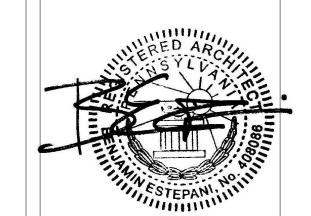
A-301 | SCALE: 1/4"=1'-0"

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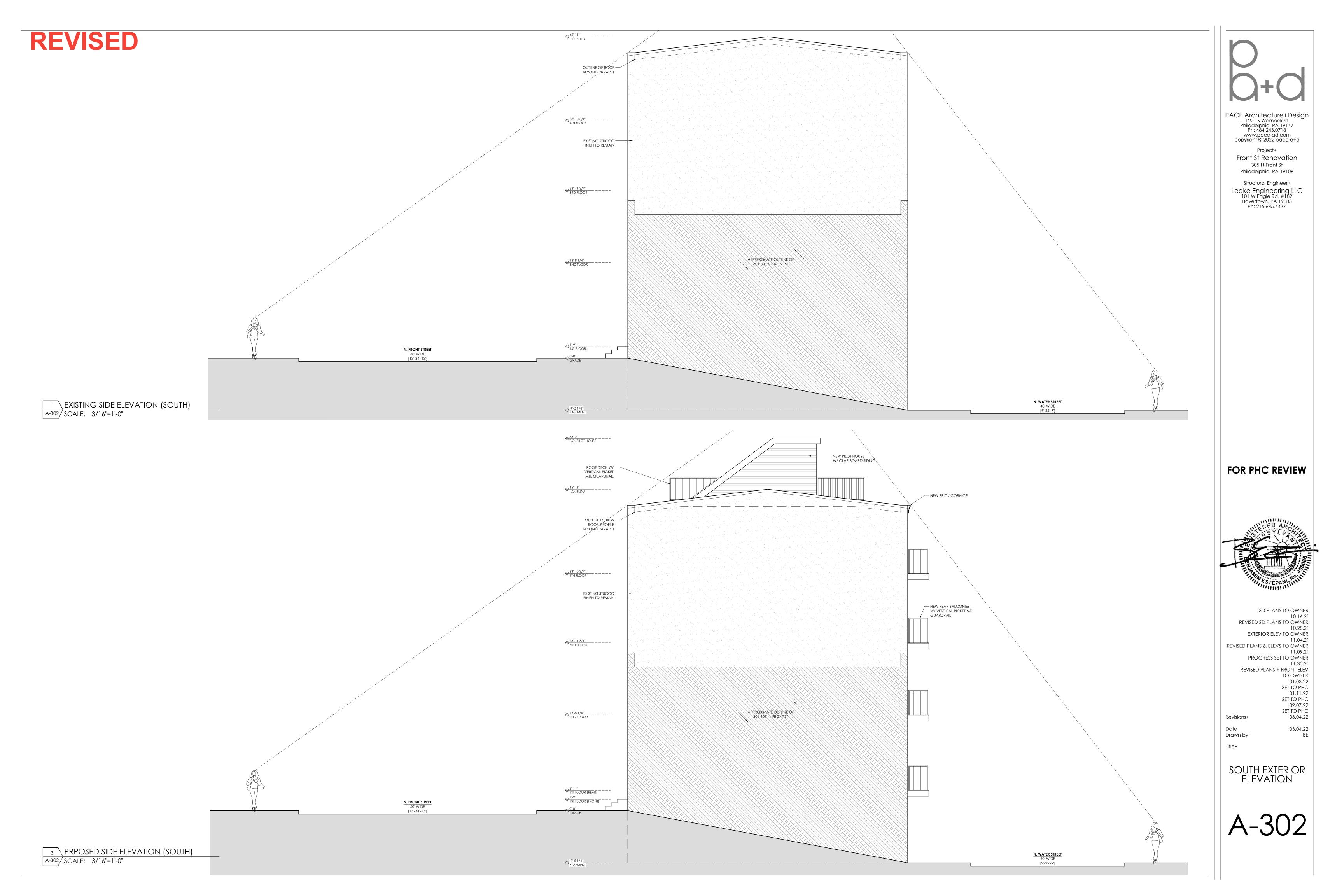


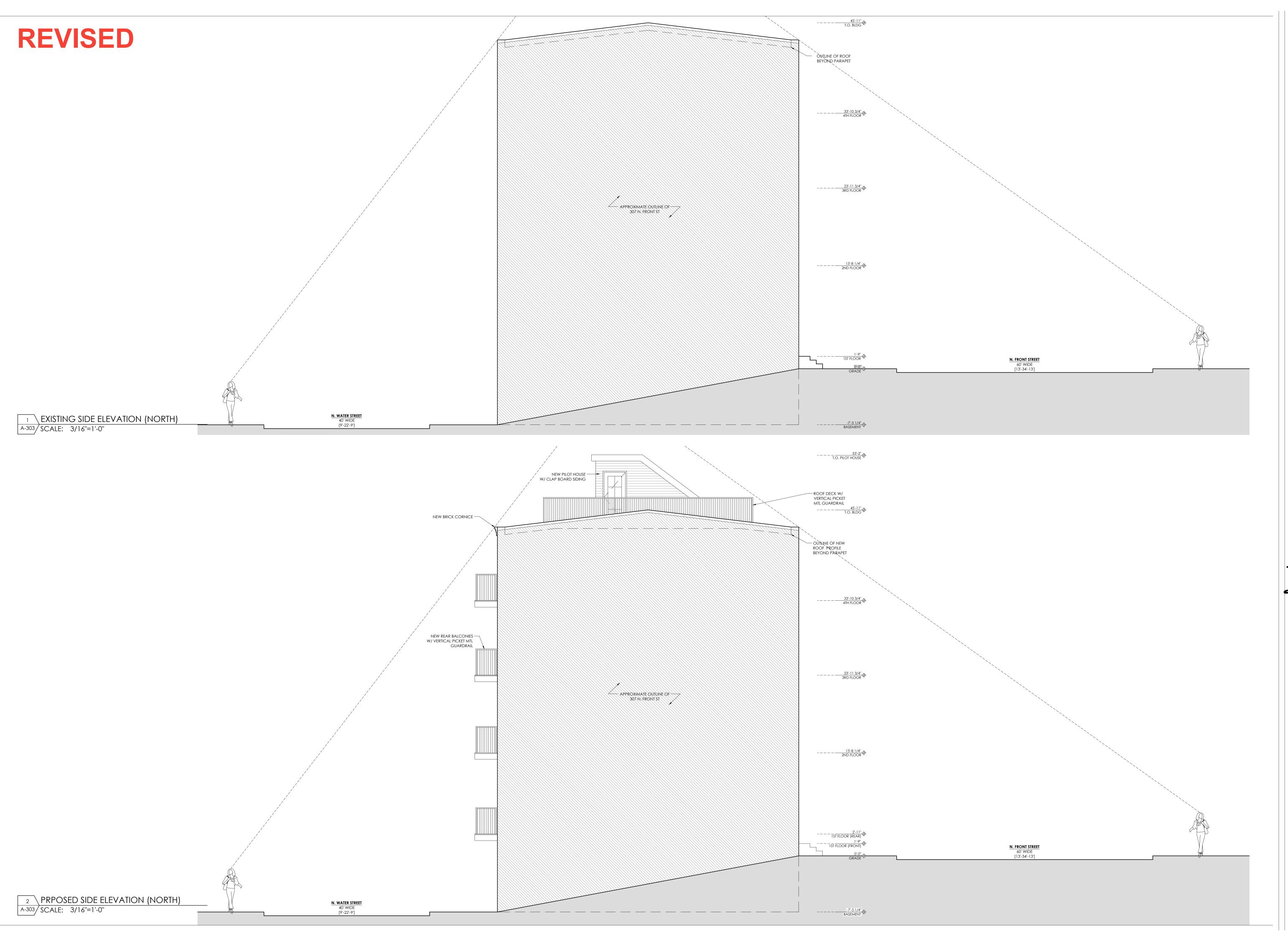
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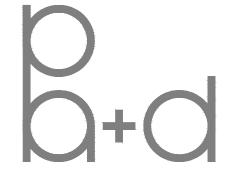
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EAST EXTERIOR ELEVATION





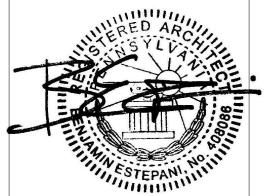


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03.04.22

Date Drawn by 03.04.22 BE

NORTH EXTERIOR ELEVATION



Date: 02/01/2022

Leake Engineering LLC 101 W Eagle Rd #189 Havertown, PA 19083

484 380 5419

Project Address: 305 N Front St. Philadelphia, PA 19106

Scope of Work (SOW): Analysis of the front and rear walls to determine the feasibility of restoring the walls.

GOVERNING CODES:

1. International Building Code and Residential Code 2018 (IBC/IRC

2. AISC 14th Edition, Manual of Steel Construction 3. ACI 318-08, Building Code Requirements for Structural Concrete

4. ASCE/SEI 7-05, Minimum Design Loads for Buildings & Other

5. AWC SDPWS-08, National Design Specifications for Wood

Construction 6. ACI 530-08, Building Code Requirements for Masonry Structures To Whom It May Concern,

This document is to discuss the feasibility of restoring the existing front and rear walls for 305 n Front St, Philadelphia, PA.

Background. The building at 305 N Front St is a four story double wythe brick building. The foundation for the building is stacked stone and the interior framing is wood. The side walls for the structure are the load bearing walls and the front and rear walls bear the load of the brick above.

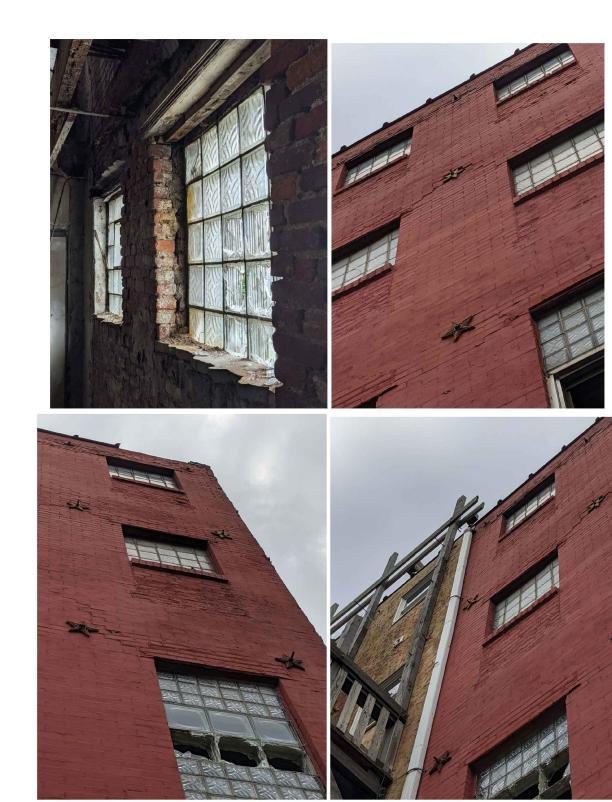
Foundation Deflection. The foundation for the front and rear of the building are deflecting. This deflection is most commonly the result of voids created around and under the foundation walls. These voids are created by water infiltration as the result of broken or cracked underground pipes that either sleeve through or run adjacent to the foundation walls. These voids affect the lateral stability of the foundation walls allowing them to deflect.

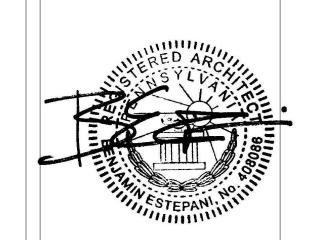
Double Wythe Construction. The brick walls for the front and rear are double wythe brick. As a result of the deflection in the foundation walls the layers of brick are coming apart and water is beginning to infiltrate between the bricks. During the winter months the water between the bricks will freeze and expand, pushing the bricks further from each other. This ultimately results in the appearance of a bowing wall.

Previous Reinforcement. There was a previous reinforcement completed on the deflecting brick walls. This reinforcement consisted of steel plates on the front and back of the building between the floors. This reinforcement is typically referred to as star bolts and is tied back into the wood framing on the interior of the building. Since the star bolts were installed, the star bolts are now "punching" through the brick wall. This punching is evidence that the wall is still moving despite the previous reinforcement.

Adjacent Building. The front and rear facade for the adjacent building is also deflecting. This building was reinforced with wooden 6"x6" posts running vertically and anchored into the building's interior framing between the floors. The 6"x6" posts are deteriorating and will eventually fail. Because the brick walls are connected a failure of those posts may result in a failure of the wall at 305 N Front St.

Conclusion. Given the evidence gathered onsite it is recommended that the brick walls be demolished and rebuilt.





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Project+ Front St Renovation

305 N Front St

Philadelphia, PA 19106

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03.04.22

SET TO PHC 02.07.22 SET TO PHC 03.04.22 Revisions+

Drawn by

STRUCTURAL REPORT

S-100







We reserve the right to amend these conclusions if additional information becomes available. This conclusion is based on data gathered by a field inspection and represents our opinion based on a reasonable degree of engineering certainty with the evidence gathered. Any site plans or details provided with this report are not meant to be used as construction documents. If construction documents can be provided for an additional fee. If you have any questions please contact Alex Bruno at 484 380 5419 or alex.bruno@leakeengineering.com.

Respectfully,

Alex Bruno, P.E.



Leake Engineering LLC

101 W Eagle Rd #189 Havertown, PA 19083 484 380 5419

Project Address: 305 N Front St. Philadelphia, PA 19106 Date: 02/01/2022

Scope of Work (SOW): Analysis of the front and rear walls to determine the feasibility of restoring the walls.

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- 5. AWC SDPWS-08, National Design Specifications for Wood Construction
- 6. ACI 530-08, Building Code Requirements for Masonry Structures

To Whom It May Concern,

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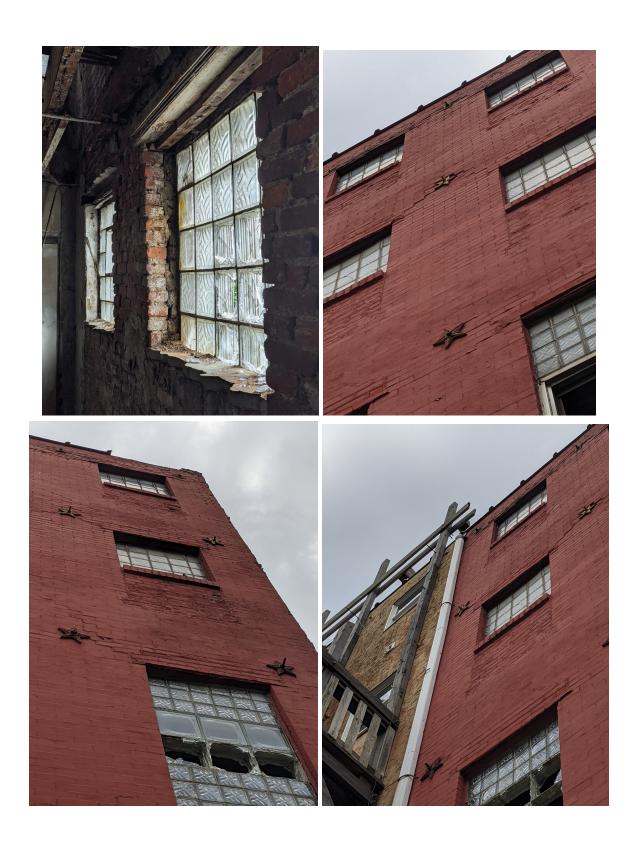
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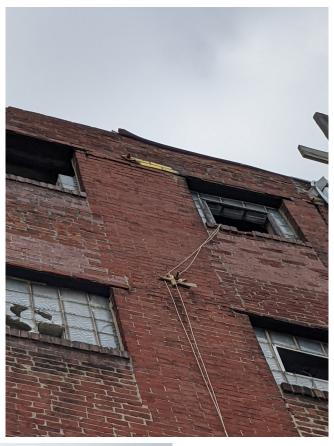
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Conclusion. Given the evidence gathered onsite it is recommended that the brick walls be demolished and rebuilt.















We reserve the right to amend these conclusions if additional information becomes available. This conclusion is based on data gathered by a field inspection and represents our opinion based on a reasonable degree of engineering certainty with the evidence gathered. Any site plans or details provided with this report are not meant to be used as construction documents. If construction documents can be provided for an additional fee. If you have any questions please contact Alex Bruno at 484 380 5419 or alex.bruno@leakeengineering.com.

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ALEX BRUNO
ENGINEER
PE084474
PEX 15 June
2/1/2022

Respectfully,

Alex Bruno, P.E.