93 Pleasant Street, Treadwell House

Stone Wall Masonry – Temporary removal and reconstruction

December 16, 2022

Old Stone Wall, History & Work Plan

History

Historic accounts mention a stone wall on this site, predating the existing Jenness-Treadwell house. The original structure on the site was built circa 1696 for Thomas Packer Senior[1]. "Many remember the appearance before the fire of 1813 of the spot on which is now Ex-Mayor Jenness's residence. In front, on Pleasant street, was a stone wall higher than the present iron fence, and on that wall an open fence. There were many stone steps to pass over before the front door was reached. The house was of two stories, of a dark color, and the whole of the premises had more the appearance of a castle than of a common dwelling. … Mrs. Packer was fond of making extensions to her domicil, and therefore, it is said, when her husband was absent from home on any long journey, he would find some addition to the house on his return. The house was thus so enlarged that it became desirable for a public house. "[2] An early survey by Greenleaf indicates open area at the back which may have been bounded by this same wall, other maps indicate a pound. As early as 1634 town pounds were constructed of wood to keep roaming animals, primarily pigs, away from farms. By 1781, stone replaced wood. Town commissioned pounds became common in the following years and a common size for these structures was 30 feet square and were 6 feet tall with walls 4' thick at the bottom to 2' at the top giving them that standard ⅛ batter. They were built to be "horse high, bull strong, and hog tight." The size and grandeur depended on the wealth of the community and were often the best built stone walls in the area but by the late 1800's, most town pounds were obsolete and in disrepair. The current stone wall that runs along Court St has approximately the same mass as a standard pound that would be 30 square, 6' tall, 4' thick at the bottom, 2' thick at the top. The long stones that are in the existing wall may have been used as cornerstones or through stones of the original wall that once purportedly acted as a town pound and shelter from raids.

Current Condition

Repairs and back excavation to the wall ten years ago were for purposes of straightening its "leaning out over the sidewalk" condition. This work revealed a dressed face at the back of the wall, indicating that when originally constructed it was free standing. Subsequent backfill over centuries has placed lateral forces on this wall for which it was not designed to withstand. Periodically and gradually it leans out over the sidewalk, creating unsafe pedestrian conditions requiring continual repairs to replumb the wall. Many such repairs over the years are clearly evident. These repairs include mortar, stone shims, and mismatched larger stones which are not original to the historic wall. The current condition of the wall includes the original stones in good condition, plus many failing recent mortar joint repairs, added stone shims, and mismatched newer replacement stones.

Work Plan

Our request is to protect the stone wall from potential construction damage and to mitigate the need for future invasive repairs, by temporarily removing and safely storing it during construction, and then rebuilding it with the original stored materials after site excavation, utility and foundation work is complete. This workplan will protect the wall from damage which could occur from collapse during construction due to excavation of bedrock found behind and under the wall. This bedrock is contiguous to the bedrock upon which this wall partially sits. Temporarily and safely removing the stones will protect them from damage that would occur if the wall was left in place. Protecting in-place with shoring was pursued but found unfeasible. Because the wall is a dry-laid, multi-wythe three-foot-thick wall it would require through-rods 24" on center, which would damage some of the stones and would be ineffective for utility excavation below the wall. Restoring its original historic aesthetic with the original, undamaged, well-coursed and dry-laid stones is paramount. By protecting the wall in this way, we have the opportunity to not only repair previous repairs, but to properly restore this historic wall more closely to its original state and prevent damage from future repairs.

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[1] Dennis Robinson, "What to know about the History of Portsmouth's 93 Pleasant Street", Portsmouth Herald, April 25, 2021

[2] Brewster's Rambles, pp 318

Existing Conditions - Front wall, Court Street

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16.
17. 

Existing Conditions - Side(East) Wall

18. 

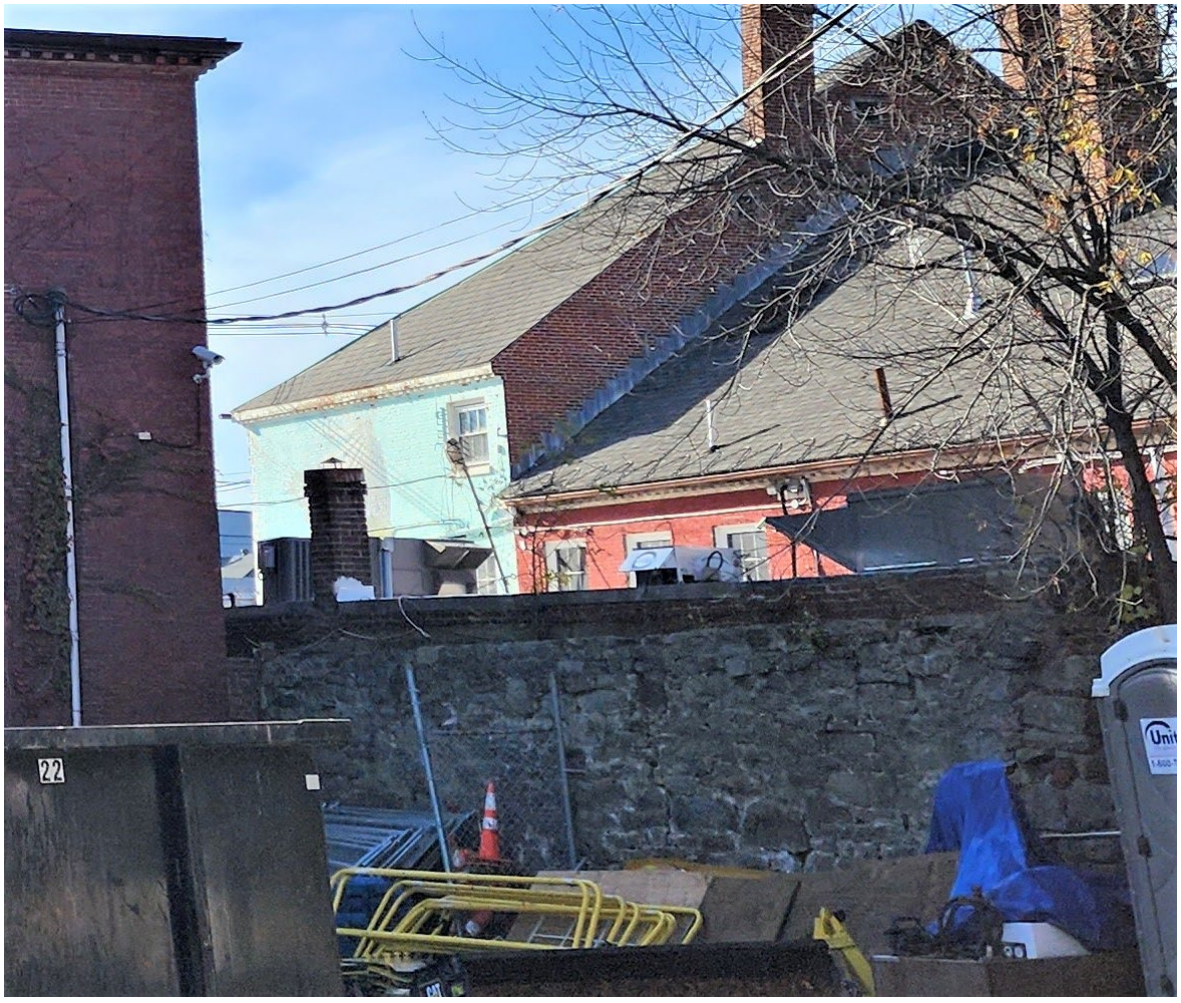
19. 

20. 

21. 

22. 

Existing Conditions - Rear (north) wall

23. 

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Ms. Lynn Kramer
Executive Vice President
McNabb Group
3 Pleasant Street, Suite 400
Portsmouth, NH

December 13, 2022

Re: 93 Pleasant Street
Mortar Rubble Wall Reconstruction

Ms. Kramer,

Based on our site meeting Thursday September 22nd we offer the following process and procedure.
The wall will be removed and reconstructed in like or better condition, maintaining and enhancing the historic value and appearance.

Removal:

1. Close sidewalk with MUTCD signage and add crosswalks at appropriate locations.
2. Remove sidewalk and place portable concrete barrier.
3. Document face of wall appearance with pictures and elevations.
4. Excavate wall on back side.
5. Remove each stone, clean and palletize.
6. Discard mortar and stones that were incorporated in previous wall repair.
7. Transport to staging area.

Reconstruction:

1. Excavate and pour new reinforced 1’ x 5’ concrete footing at 4’ deep for frost protection.
2. Transport pallets as wall construction begins.
3. Increase depth and width of wall with additional stones and concrete below grade and on backside to create 1:4 batter.
4. Place and mortar salvaged stones on backside to give “laid-dry” appearance.
5. Incorporate new stones having same characteristics as original era to replace previous repair material.
6. Place 4” aggregate underdrain with stone and fabric.
7. Backfill with granular backfill material.

Please see attached picture of bridge in Peterborough, NH reconstructed with similar method this past year.

Thank you,

Bernard F. Lee
Chief Estimator

CC: Ryan Duntley

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DRIP EDGE TO WALL
NEW WALL FOR GARAGE ABOVE GARAGE WALL
22-DP
BEGIN 6' HT. T+G GREEN PAINTED CEDAR FENCE AT P/L
EXPOSED LEDGE, (TYP.)
70-DP
6-CFF
5-DIG
5-AMT
6-RYP
1-AML
11-EPI
HANDICAP RAMP W. HANDRAILS
8%
4-RYP
13-EPI
SELECT STONE TO HARVEST FOR STONE WALL REBUILD
10-PX
SMALL UTILITY SPACE
2-CFF
4' ALUMINUM FENCE
3 - 7" GRANITE TREADS
EX. WALL TO REMAIN (WEST FACE + TOP TO BE RE-BUILT AS NECESSARY)
2-PKW
9-BBG
18" W. DRIP EDGE
LAWN
11-LVP
4-CVM
#93
4 STORY BRICK
FF. 28.93
PORCH (ARCH. STONE SURFACE)
HANDRAIL
DRIVEWAY (SEE NOTES)
EDGE OF UNDERGROUND GARAGE WALL
7-PT
28-STP
28-SED
28-SEDS
28-SEDM
28-SEDR
9-BAG
2 - 7" GRANITE TREADS
7" GRANITE TREAD SET FLUSH WITH PORCH
10-AOS
6-CWB
GRANITE PAVER WALK
6-SEDR
6-SEDM
16-LVP
5-CVM
11-BBG
6-PKW
WINDOW WELL
1-AML
5-GMB
5-ABI
PROPOSED FLAG POLE
3' GATE
GRANITE STEPS (6)
STORMWATER SYSTEM IN TWO PARTS
RAILINGS
2-ABI
3-GMB
6-AMT
7-ABI
10-GMB
6 PFC
17-GMB
6-ABI
9-GMB
1-CTN
13-WAL
5-BWG
3.3%
END IRON FENCE
IRON FENCE BEHIND WALL TO MATCH EX.
STONE LANDING
48" W. ROUNDED RIVER STONE
EXTENT OF WALL TO BE REMOVED
LAWN
EX. WALL
33 BGG
5-AMT
5-AMT
5-AMT
DRAIN COVER (TYP. - SEE CIVIL DOCS)
SIDEWALK
1-AML
7-DIG
5-RYP
4-ABI
7-GMB
17-CWB
4-TOS
7-ABI
10-GMB
7-CWB
ACCESS GATE
PROPOSED TRANSFORMER PAD
12" W. ROUNDED RIVER STONE
BIKE RACKS (2)
PROPOSED IRON FENCE
ALL NEW WALLS TO RE-USE + MATCH STONE + PATTERN IN EX. WALL
GRANITE PAVERS ON CONCRETE BASE
3-ABI
4-GMB
4-CFF
2' SQ. STEPPING STONES IN LAWN
3-RF
BEGIN IRON FENCE
APPROX. CURB
7" GRANITE TREAD, GRADE TO SLOPE TO 27'-0" THEREAFTER
LOCATION OF UNDERGROUND UTILITIES
RELOCATED SIGN "STRAWBERRY BANK~MUNICIPAL COMPLEX~ MARKET SQUARE"
COURT STREET
EXTENT OF WALL TO BE REMOVED
1 L2
1 L3
1 L4
1 L5

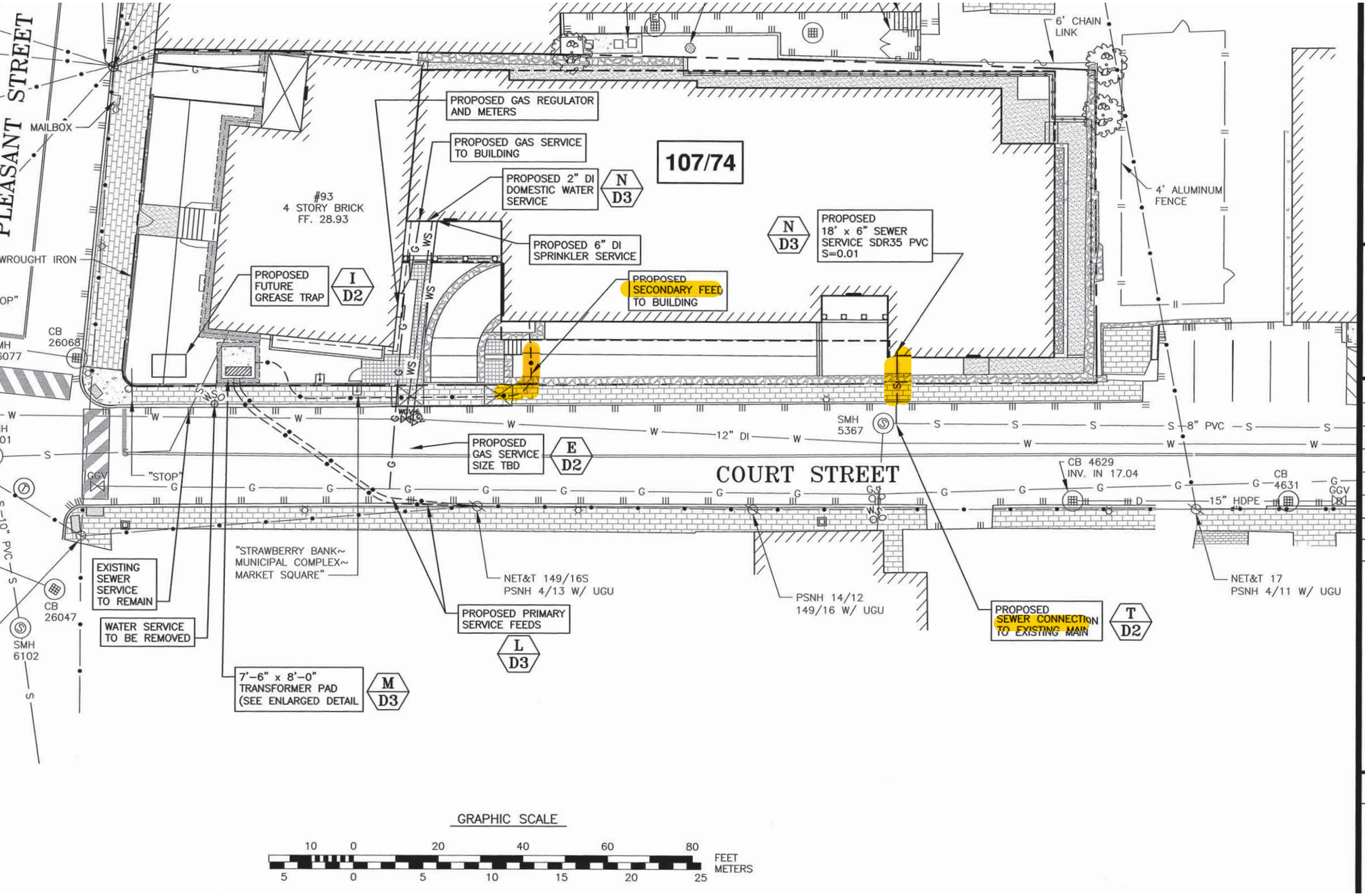
PLEASE NOTE: THIS SHEET IS SCALED FOR 22 BY 34 PAPER, DO NOT RED

P1.0A

LANDSCAPE SITE PLAN
93 PLEASANT STREET

HDC REVISION 3
12.16.2022

ARCOVE ARCHITECTS



GRAPHIC SCALE

10 0 20 40 60 80 FEET

5 0 5 10 15 20 25 METERS

INDICATES THAT EQUIPMENT IS NECESSARY. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR PORTSMOUTH. THE SURVEY SHALL BE COMPLETED AND ANY REQUIRED EQUIPMENT INSTALLED, TESTED, AND ACCEPTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

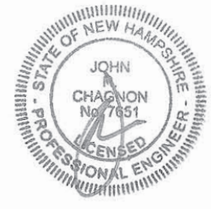
10) COMMUNICATIONS CONDUIT LOCATION SUBJECT TO CONFIRMATION FROM UTILITY PROVIDERS.

11) THE EXISTING WATER MAIN IN COURT STREET IS SHALLOW. INSTALL NEW UTILITIES WITH CAUTION. ELECTRICAL SERVICE WILL BE PLACED UNDER THE WATER MAIN. FIRE SERVICE SHALL BE INSTALLED WITH 5' OF COVER AND INSULATION IMMEDIATELY AFTER TAPPING THE MAIN. NOTIFY CITY WHEN WORK IS TO TAKE PLACE.

COMMERCIAL DEVELOPMENT
93 PLEASANT STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
7	UTILITY CONNECTIONS	6/30/22
6	BUILDING, GREASE TRAP	6/3/22
5	REVISED LAYOUT	11/1/21
4	NOTE 11	10/20/21
3	SUBMIT FOR TAC	9/20/21
2	REVISED BUILDING/EXTERIOR LAYOUT	9/7/21

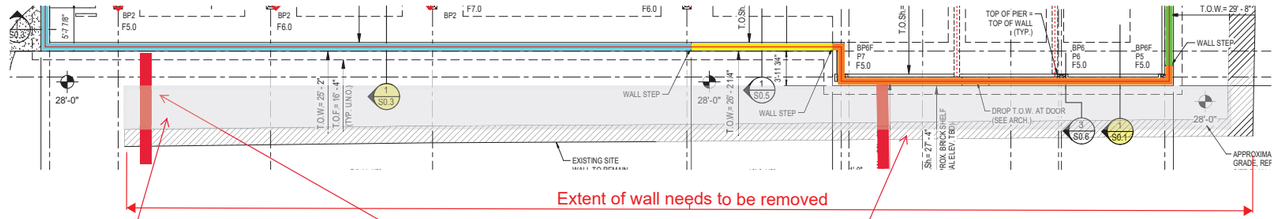
REVISIONS

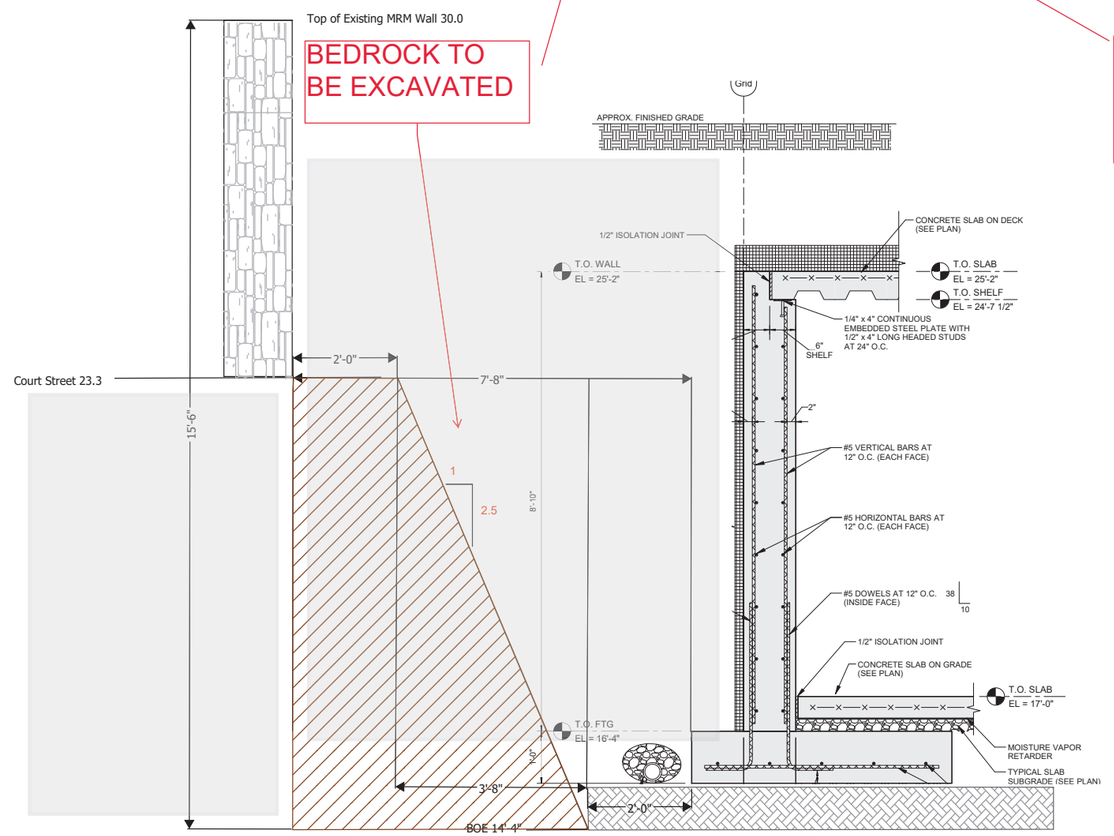


SCALE: 1" = 20' DECEMBER 2020

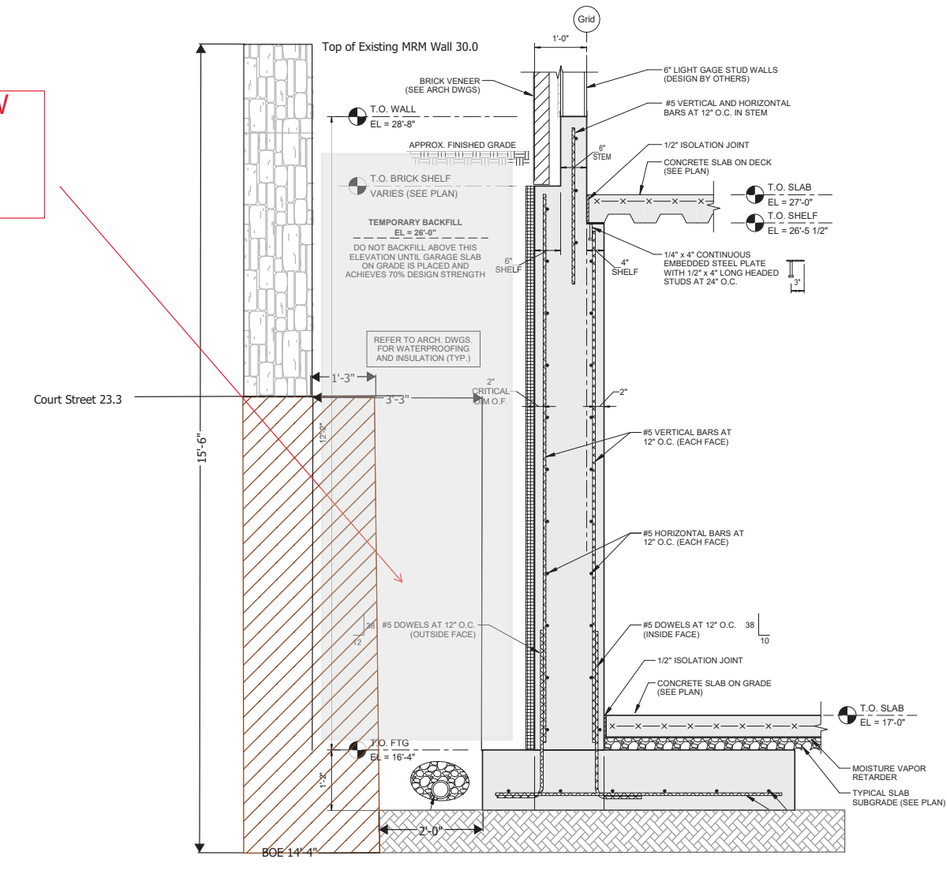
UTILITY PLAN

C5





1 S0.3 FOUNDATION WALL SECTION
3/4" = 1'-0"



1 S0.1 FOUNDATION WALL SECTION
3/4" = 1'-0"

Foundation sections vs. Existing wall conditions

93 Pleasant Street - Portsmouth, NH

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