

Caledonia Courthouse Building Stabilization

Wednesday, January 22, 2014



History

- The original Caledonia Courthouse is an historic masonry building built in the 1850's.
- Interior Renovation took place in the 1930's.
- An addition was built on the Eastern side in 1999 by EH Danson. At that time, the foundation was repaired along the eastern wall.
- Building Maintenance noticed the movement of the northern gable end wall as evidenced by gaps in the interior finishes and a bulge around the second floor in the exterior wall.
- A preliminary structural inspection report, prepared by EH Danson with consultation from Dewolfe Engineering, documented the foundation deterioration and instability around the north, south, and western walls, as evidenced by movement and bulges in the gable end wall and a bulge in the western wall, as well as framing issues throughout the building causing buckling and cracks in the historic finishes and uneven flooring.

Scope of Work

- Excavate the north, south and western perimeters of the building.
- Provide temporary bracing and shoring to support the building during construction.
- Remove the dry stacked stone foundation and replace with a concrete foundation.
- Pin the masonry walls back to the structure of the building.
- Repair interior framing issues by reinforcing beams and joists not adequately sized for the span they are supporting.
- Exterior masonry will be repointed and cracks repaired.
- Historic interior finishes will be repaired to historic condition.



Attachment A: Voids in Dry Stacked Stone Foundation



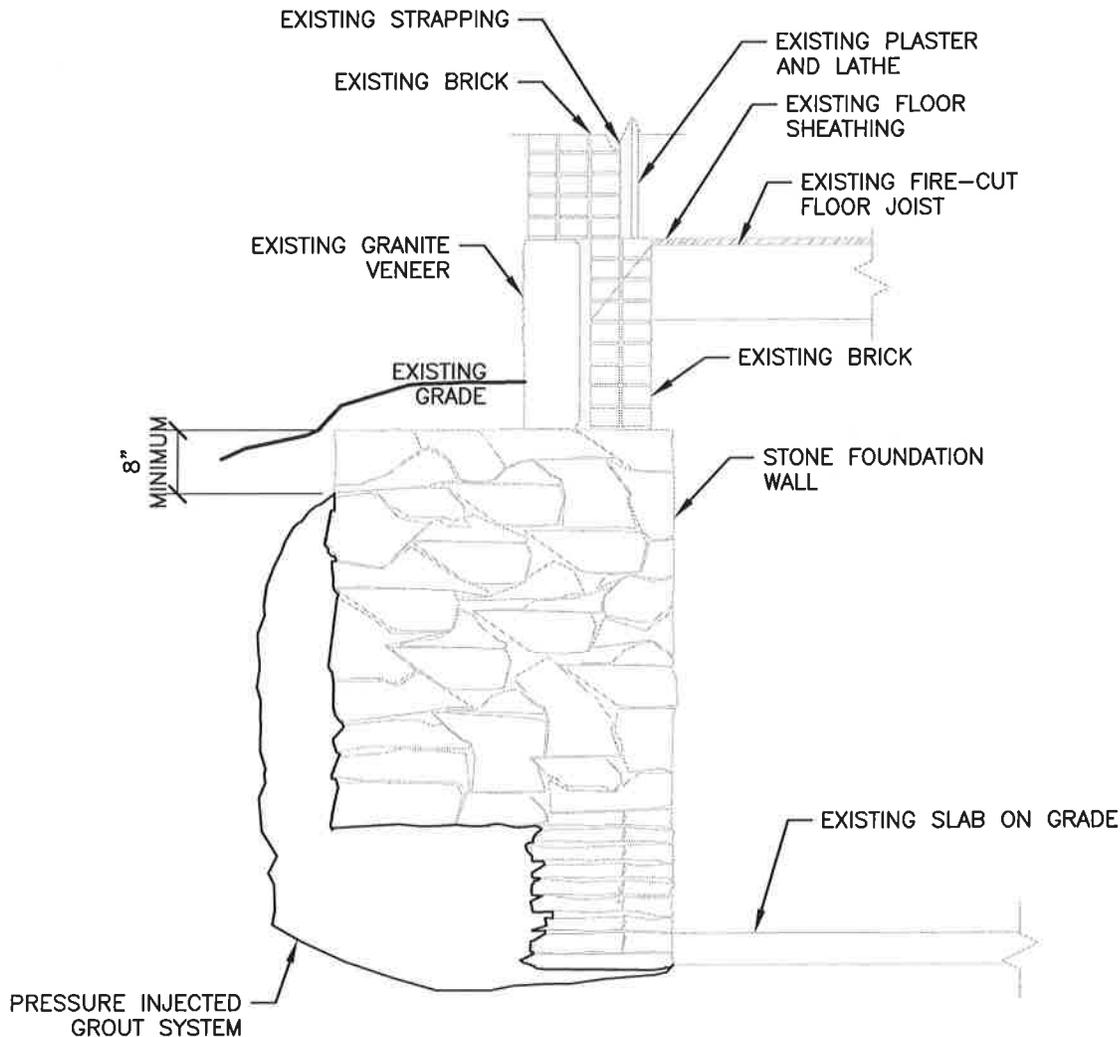
Attachment B: Top view of beam showing movement of masonry wall away from structural members (approximately 3-4").



Attachment C: Interior Finish Gaps



Attachment D: Sagging in Interior Framing



ALTERNATE #2-PRESSURE INJECTED GROUT SYSTEM

SCALE: $\frac{1}{2}" = 1'-0"$

1
SSK-7

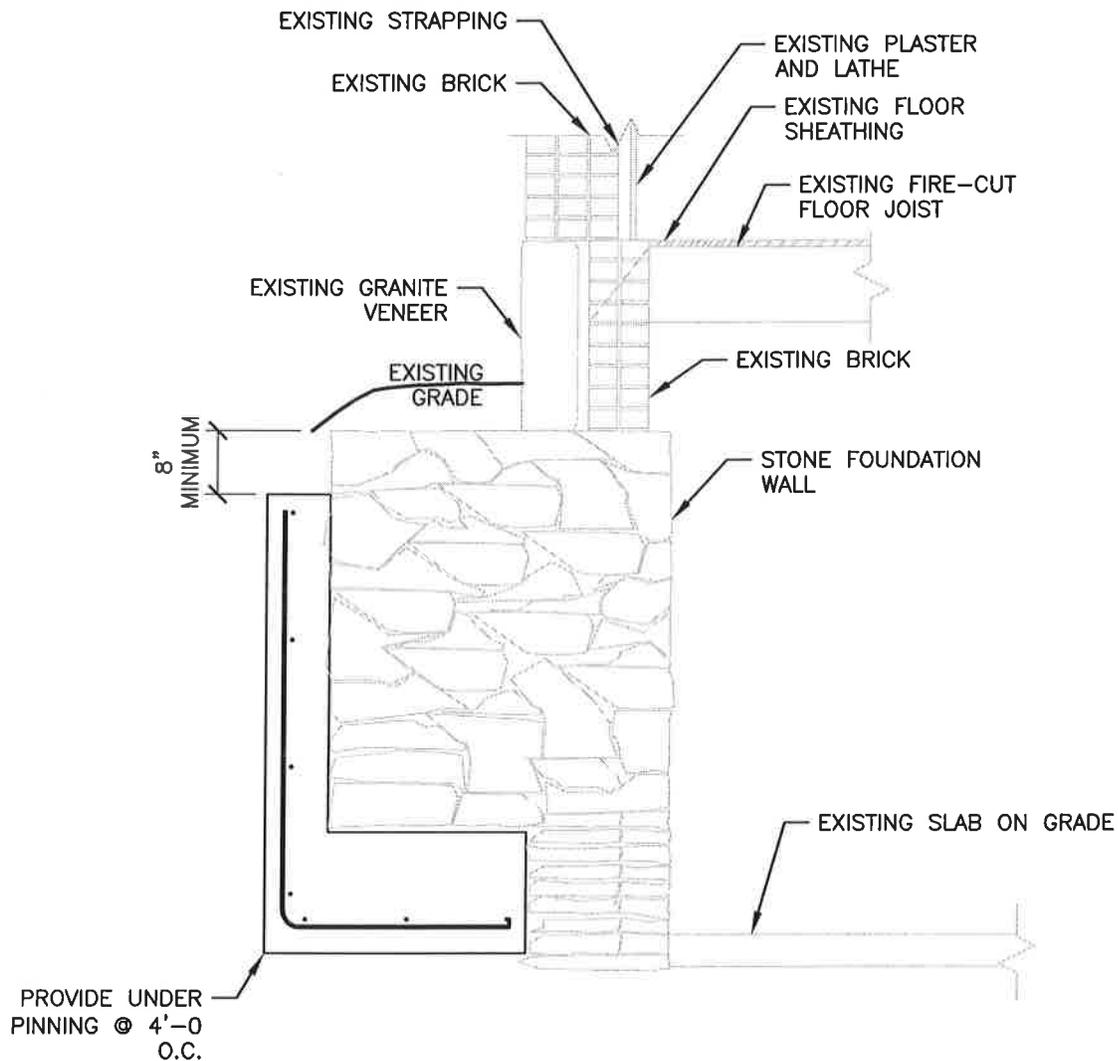
Civil & Structural Engineers
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PROJECT: 13289
 CALEDONIA COURTHOUSE
 DWG REF:
 DATE: JANUARY 15, 2014

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ALTERNATE #1-UNDER PINNING EXISTING FOUNDATION WALL

SCALE: $\frac{1}{2}''=1'-0''$

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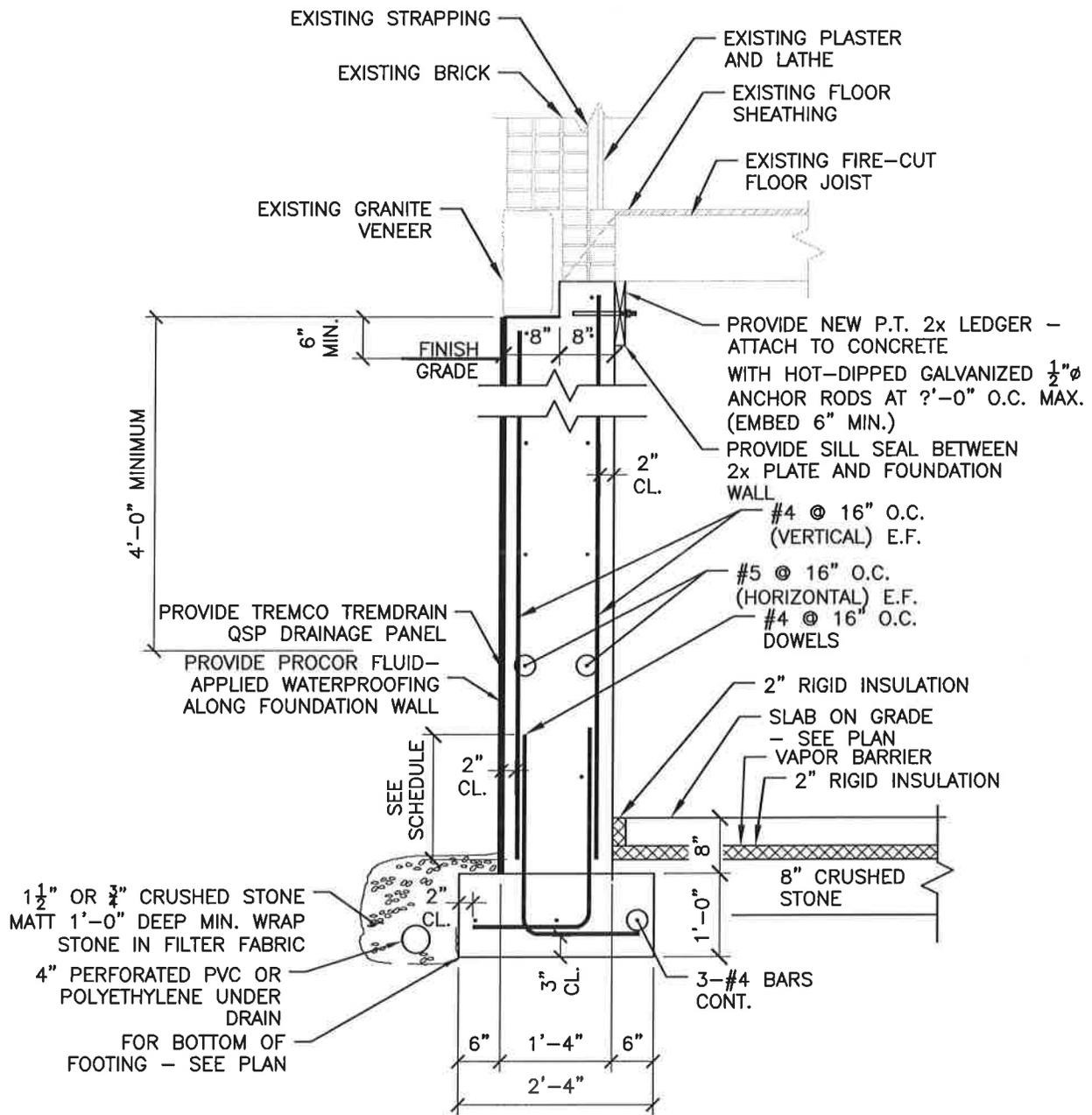
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RECOMMENDED WALL DETAIL

SCALE: $\frac{1}{2}'' = 1'-0''$

1
SSK-5

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