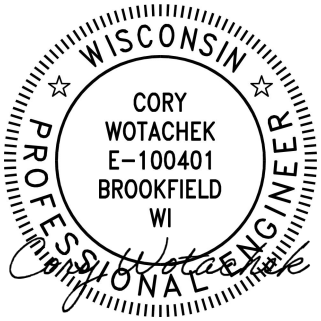
VM ENGINEERING

FOUNDATION INSPECTION REPORT

Cory Wotachek, PE (# E-100401)
PHONE: (262) 282-8566
EMAIL: Cory@VMproeng.com

DATE: 2/29/24

CONDITIONS: 30's Sunny



Client: Carlea Jussila	Present: Yes
Inspection Address: 606 Lee Ct, Waukesha, WI	
Billing Address:	
Telephone: 262-470-5926	Email: carleajussila@gmail.com

The following report is the professional opinion of Cory Wotachek, which is not a warranty. The report is limited to the components of the foundation that were visible on the date of the inspection and the engineer's opinion of their condition at the time of the inspection. This report does not address dormant or concealed defects that may occur in the future that are no evident at the time of this inspection.

REPORT SUMMARY AND RECOMMENDATIONS

All repairs to be completed per the State of Wisconsin Uniform Building Code

The purpose of this inspection was to assess the foundation for structural stability and dampness/ moisture. This property is a single-family home constructed in the 1960's. The basement foundation has concrete masonry block walls. A self-leveling laser was used to measure walls for lateral deviations from plumb vertical.

The west foundation wall was found to have various horizontal and step joint cracks as shown on S1.0. The wall was found tipped in roughly 1" at the midspan. It is recommended to reinforce the west wall with steel braces per the Wisconsin Uniform Building Code, Chapter VI without excavation. There was discoloration, and efflorescence found in the northwest corner. Due to the consistency and magnitude of the dampness and staining it is recommended to install new drain tile to the sump crock/pump per the Wisconsin Uniform Building Code, Chapter VI prior to installation of the steel braces.

The south foundation walls were found with horizontal cracks and a tipped measurement of roughly 3/8" at the midspan of the wall. At this time from what was able to be visibly inspected two options are permissible: 1) The homeowner can proactively install steel braces per the Wisconsin Uniform Building Code, Chapter VI without excavation to prevent any future movement. 2) The wall and cracks can be monitored for any new lateral deviations or joint cracks that indicate active wall movement.

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ADDITIONAL SITE NOTES:

CONT.

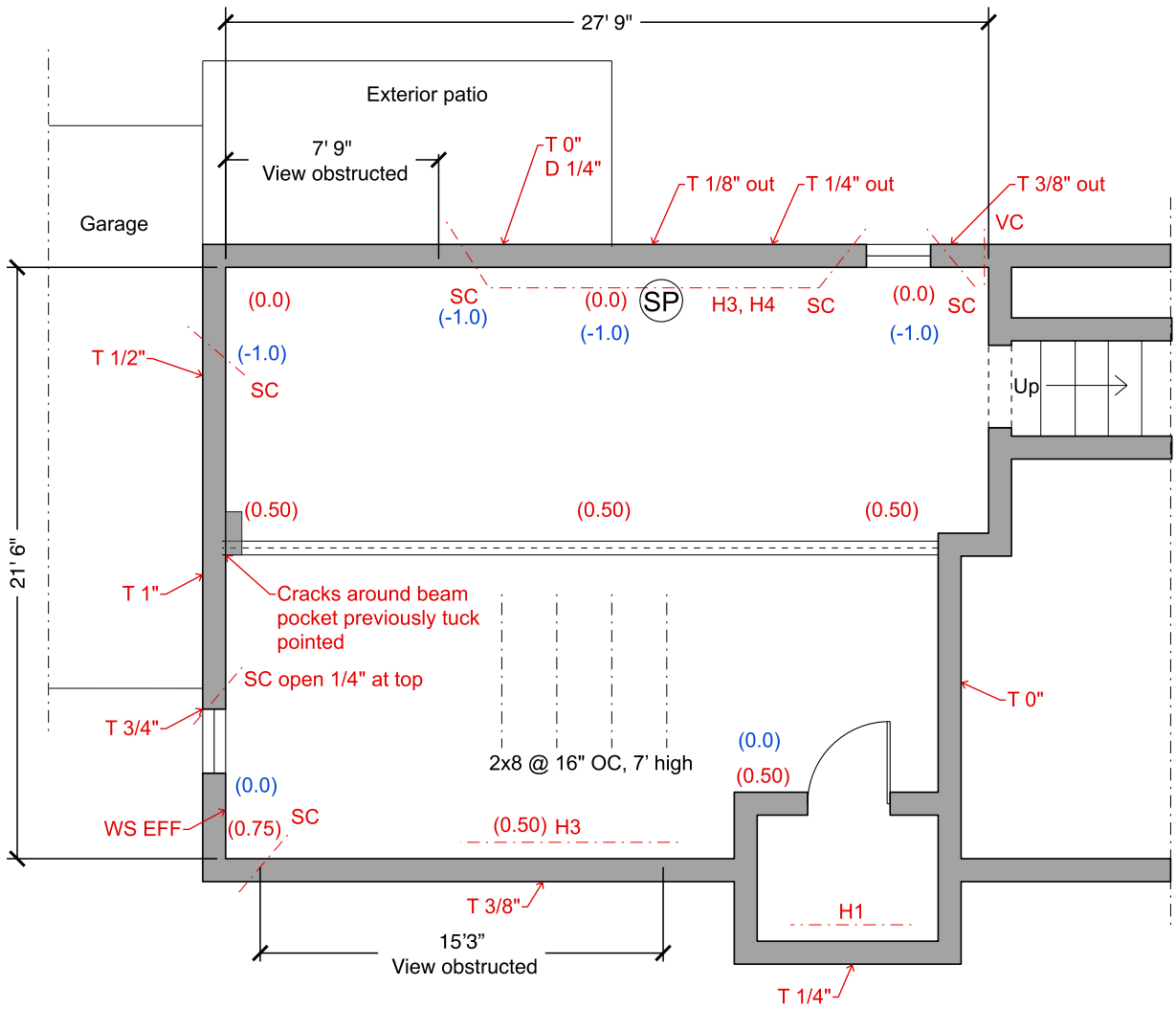
The east foundation wall at the time of the inspection was found to have no signs of recent or active movement with no measured displacement. Therefore, no reinforcing is warranted for this wall.

The north foundation wall was found to have various horizontal and step joint cracks as shown on S1.0. The wall was tipped or bowed roughly 1/4" to 3/8" in and out. A laser lever was utilized to measure vertical deviations throughout the basement. It was found that the north wall has settled approximately up to 1.0" in relation to the south wall.

When foundations are instable and actively settling it is necessary to excavate the settling areas and reinforce with resistance or helical piers below the footings. There are two approaches to definitively determine that settlement is active: 1 – monitor over a 5-10 year period and remeasure walls, 2 – have a soil boring test completed and analyzed by a geotechnical engineer. These two options can be completed prior to committing to a repair. To aid in the monitoring of the settlement it is recommended to have the cracks tuckpointed for preventing moisture intrusion and to create a baseline for potential settlement. It is recommended to work on the exterior water mitigation as mentioned in the following paragraph. Water is a variable that can play a large part in foundation settlement, tipping, and bowing issues.

To reduce the total water volume entering the drainage system and saturating the soil adjacent to the foundation, it is recommended to regrade the exterior grading and landscaping to pitch away from the foundation a minimum of 1/2" per foot. All roof gutter downspouts should be extended a minimum of 5ft away from the foundation or past landscaping gardens. Inspection of the exterior had shown the driveway on the south side of the dwelling was cracked and sloped toward the foundation. It is recommended that mud jacking or replacement of the driveway with a drain be performed to correct the pitch. The west exterior grading was also found to be sloped toward the garage and dwelling. Depending on the property line it may not be feasible to regrade. A landscaping professional could be contacted for the design and installation of a french drain or similar system to help manage water on the driveway and landscape. It is also recommended to ensure gutters are cleaned and functioning properly considering the large adjacent trees.

This report is comprised of my professional opinions to a reasonable probability based upon my training and experience as an engineer. I reserve the right to change my opinions based on new information that may be discovered. Please contact me with any questions or if you would like to discuss this report.



Elevations of grout line at H6

Elevations of bottom of joists

KEY:

D - Measurement of wall displacement
T - Measurement of wall tipping
H x - Horizontal crack at course x from top of wall
SC - Step Cracks
EFF- Efflorescence
VC - Vertical Cracks
BS - Measurement of base shear
SP - Sump pump
WS - Water stains
(X") – Differential elevation measurement

N

AGE	1960's	TYPE	SFH	STORIES	Two
FND WALLS	CMU	HEIGHT	7'0"	FLOOR	Slab
North Wall	3/8"	Active?	Yes		
South Wall	3/8"	Active?	No		
West Wall	1"	Active?	Yes		
East Wall	0"	Active?	No		
Moisture present?	No	Water stains or discoloration?	Yes		

Notes: Split level home, exterior grading on south and west pitched toward dwelling

VM Engineering LTD

Vince Matarrese, PE E-45530
Vince@VMproeng.com
Cory Wotachek, PE E-100401
Cory@VMproeng.com

DATE	SCALE	CREATOR
2/29/24	N.T.S.	CLW

CLIENT Carlea Jussila

FOUNDATION DOCUMENTATION PLAN

606 Lee Ct
Waukesha, WI

DRAWING No.

S1.0





VM Engineering LTD

Vince Matarrese, PE E-45530
Vince@VMproeng.com

Cory Wotachek, PE E-100401
Cory@VMproeng.com

VM ENGINEERING

Terms and Conditions

This agreement is between VM Engineering Ltd. (VM Eng.) and the undersigned Client ("Client").

For the Fee stated herein, the following is provided to the Client:

- Single site visit
- Limited visual inspection of the foundation of the home or building identified above
- Report with measurements, observations and recommendations
- Limited visual inspection of exposed framing or relevant structural members

Additional inspection scope and additional charges require written agreement between VM Engineering Ltd. and Client.

Extends of visual inspection:

- This inspection is limited to a basic visual inspection of those portions of the foundation system that are visible and open to plain view on the day of inspection.
- This inspection is limited to portions of the foundation system that are visible without moving or removing any obstructions.
- During inspection no excavation of soils, removal of finishes or removal of obstructions will occur.
- VM Eng. cannot and does not render any opinion regarding the condition of such portions of the foundation system that are not reasonably open to visual inspection.

Client understands and agrees that VM Eng. cannot comment on the presence of problems or defects that are not reasonably exposed to visual inspection at time of site visit. Client agrees that VM Eng. is not responsible for any foundation defects or problems that cannot be detected through a reasonable visual inspection of the type performed under this agreement.

Client understands and agrees that VM Eng. shall not be responsible for any defects, problems or structural conditions that are not visible at time of inspection.

The following are not included in this inspection and report:

- Determination and compliance of original construction with regards to the Plans and Specifications or relevant building code.
- Material testing and determination of material properties.
- Soil borings, soil testing, or any other geotechnical analysis. VM Eng. cannot render an opinion in regards to soil properties or soil conditions. Determination of soil stability must be made by geotechnical engineer. Client understands and agrees that VM Eng. will not render opinions as a geotechnical engineer.
- Contamination of hazardous materials, asbestos, radon gas, mold, insects or pests.
- Warranties or guarantees of foundation performance
- Advice regarding the purchase or sale of the property or the value of the property.

Client understands any estimated budget costs are based on industry standards and are not to be taken as official quotes.

Client understands that over time foundation problems can develop or worsen which cannot be predicted. VM Eng. does not guarantee that the conditions found at time of this report will not worsen or become more serious over time. Client agrees that VM Eng. is not guaranteeing the condition of the foundation nor is liable for future changes to the foundation.

Repair recommendations are the professional opinion of VM Eng. based upon the limited visual inspection. Client understands and agrees that Vm Eng. does not guarantee that the repair recommendations will render the foundation free of all defects or issues after repairs are completed.

Client understands that the foundation inspection agreement and report is in no way or form a warranty or guarantee.

Client acknowledges that they have read, understand and agree to all of the terms and conditions stated in this agreement.

Client Acceptance:_____ Date: _____

VM Engineering LTD - Waukesha, WI
C (262) 282-8566 Cory@VMproeng.com