

**PROJECT:**

**Doctors Residence  
38 Laverendrye Crescent  
Marathon Ontario**

**Moisture Penetration Report**



PREPARED FOR:



Town of Marathon  
4 Hemlo Drive  
Marathon, ON P0T 2E0

PREPARED BY:

**Critchley Hill Architecture Inc.**  
123 McIntyre Street W  
North Bay, Ontario, B1B 2Y5

Submitted: September 20, 2023

## INTRODUCTION

Critchley Hill Architecture Inc (CHAI) has been retained by the Town of Marathon to provide architectural services to complete a building condition report on Doctors Residence located at 38 Laverendrye Crescent, Marathon Ontario.

The house was constructed with a pressure treated wood foundation in the early 1980's. The house was of wood frame construction with a stucco and brick masonry veneer finish. The residence is a side split design, with a two (2) car garage. The residence was just recently resided with vinyl siding.

As requested by the Town of Marathon we attended the site and observed the following foundation and above grade exterior wall conditions:

Foundation Walls: Approximately 30 feet of the top of the pressure treated foundation walls along the back and right side of the residence was opened up on the inside of the building from the concrete floor slab to the underside of the floor joist above.

- The sill plates at the concrete floor slab in various locations are rotted out along with the bottoms of the wood studs.
- It is noted that the wood plates have a damp sand back fill below the wood plates.

Exterior Wall Foundation Wall below grade: The municipality exposed the exterior side of the foundation walls.

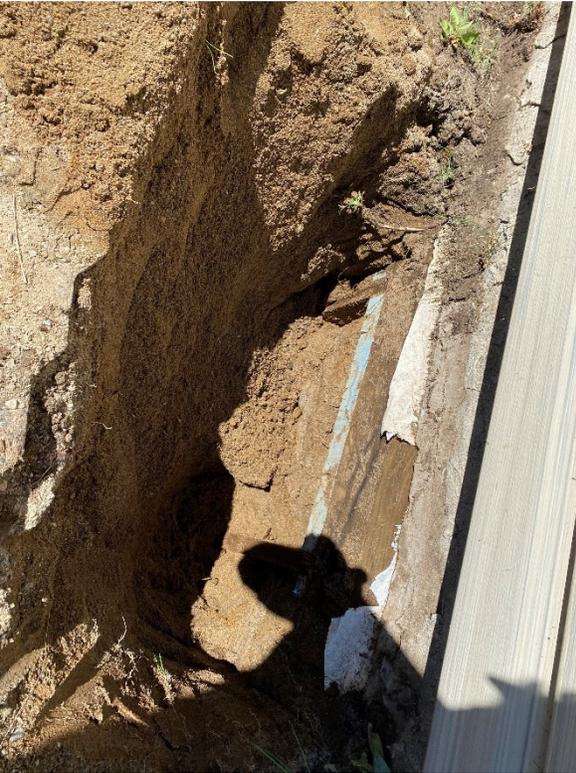
- The foundation wall is constructed with evenly spaced wood studs.
- The exterior grade slopes towards the house directing water to the foundation wall.
- The exterior sheathing appears to extend to a depth of approximately 16" and in various locations is rotted.
- The wood studding also appears to not be protected. There is sand and gravel backfill material between the wood studs of the foundation walls.
- All the above are non-compliant building code issues.

Foundation Wall Remediation:

- Temporary support upper floor, roof, and wall framing.
- Cut back existing interior concrete floor slab.

- Remove damaged foundation construction as required.
- Provide new concrete footings, block masonry or concrete foundation wall, and perimeter building insulation.
- Provide weeping tile where require.
- Backfill exterior of building and slope grade away from building.
- Backfill interior of building and pour new concrete floor slabs as required.





Upper Exterior Walls: The upper exterior wall was exposed from the interior side and the following conditions were found:

- The Insulation was removed to expose the wood stud framing. There was evidence of areas of rotting, water penetration staining, and in some areas mould was present.
- There are areas of the exterior plywood sheathing rotting.
- It was observed that the exterior window aluminium sill cladding on the wood frames is open and allowing moisture to enter the windowsill and possibly into the wall structure.
- The upper walls are vinyl siding over a damaged stucco wall finish. The vinyl siding seems to be contributing to moisture penetration in the wall structure.

Upper Wall Remediation:

- Remove exterior vinyl siding in all locations.
- Remove exterior stucco finish in all locations.
- Examine and remove all damaged wall sheathing.
- Remove all rotten wood studs and replace with new wood studs.
- Remove all areas of mould.
- Remove and replace all windows.
- Replace all wall insulation and vapour barrier.
- Replace all interior wall finishes, baseboards, window trims, and paint as required.







## 2.0 COST ESTIMATES

Due to the unknown areas of the existing foundation being of pressure treated wood construction which has an estimated life expectancy of 50 years, and the building is approximately 40 years of age at this time. The partial remedial repair will be \$200,000.00 +/-.

A detailed breakdown cost estimate for the recommended upgrades is shown below:

<u>Foundation Remediation</u>	
Replace foundation	\$ 200,000.00
<u>Exterior Wall Remediation</u>	
Remove exterior stucco finish in all locations.	\$ 3,000.00
Examine and remove all damaged wall sheathing.	\$ 1,000.00
Remove all rotten wood studs and replace with new wood studs.	\$ 1,500.00
Remove all areas of mould.	\$ 2,000.00
Remove and replace selected windows.	\$ 15,000.00
Replace all wall insulation and vapour barrier.	\$ 1,000.00
Replace all interior wall finishes, baseboards, window trims, and paint as required.	\$ 3,000.00
Removal / Reinstall existing electrical fixtures equipment	\$ 4,500.00
<b>Sub Total</b>	<b>\$ 231,000.00</b>
General Conditions	\$ 20,000.00
Permits/Bonds/Insurance (\$19/1000)	\$ 4,389.00
Supervision & Administration at 10%	\$ 23,100.00
Contractor O H & P at 15%	\$ 34,650.00
<b>Total Construction Cost Estimate</b>	<b>\$ 313,139.00</b>

### 3.0 CONCLUSION

We trust the enclosed report is acceptable and satisfactory as you plan the needed upgrades and renovations to your existing facility. Should you have any questions, comments or require any additional information, please do not hesitate to contact our office.



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**Allan Evans, MATTO**  
Report By



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**Ian Hill, B. Arch, OAA**  
Checked By