Crumbling Foundations

Working Towards a Solution
Why Does It Happen?

• Presence of pyrrhotite in the concrete combined with moisture and oxygen.

• Critical element is moisture and the interaction of pyrrhotite with moisture and oxygen.

• Homes with small amounts of pyrrhotite can still experience crumbling foundations*

• Even with the presence of pyrrhotite, if there is no exposure to moisture and oxygen, the home will not experience crumbling foundations.

*Information from Trois-Rivières, Quebec: Inspector for pyrrhotite issues
Who Is Affected?

- 37 Towns have reported at least one case. Concentration is in municipalities within driving distance of the quarry.
- Residential homes and condominium units. Commercial building could be affected but there have been no reports to date.
- Walls are where this is often first noticed, but this can affect slabs and footings.
- What is not known is the total number of cases.

Data compiled from Municipalities, CT Department of Consumer Protection and CT Insurance Department.
What Does It Cost to Test and RemEDIATE?

- $3,000 - $5,000 to test to confirm the presence of pyrrhotite
- $100,000 - $200,000 or more per home for remediation (the price is dependent on the size of the home). Ancillary costs, including landscaping, “accessories” increases the cost.
What are the long term implications?

- Reduction in municipal tax will impact mill rates
- Depressed real estate market in Connecticut’s northeast will affect much of the state
- Long-term economic impacts through a ripple affect from those who are currently affected or will be affected, including businesses and commercial buildings.
Trois-Rivières, Quebec, Canada (pop. 126,000)

• Similar problem with crumbling foundations as a result of pyrrhotite.

• Estimates of total impacted houses: 1800 confirmed houses. Higher estimates are up to 4000

• State created fund (with a recent infusion of federal funding) to help homeowners.

• No aid to commercial building owners

• Lost $13 Million in tax revenue through revaluations of the 1800 homes ($190 Million in tax revenue in 2016). Revaluations have ranged but a reduction of 40% total value has been the average
Trois-Rivières, Quebec Available Aid for Homeowners

• Insurance Program called “Homeowners’ Guarantee”
  – Construction Guarantee Insurance
  – Private insurance purchased by homeowner on new construction that guaranteed certain aspects of the construction, including the foundation
  – There is no known equivalent in Connecticut
  – Homes remediated: 621

• Pyrrhotite Program
  – Local Program
  – Received State Funding ($30MM) and recently, Federal Funding ($30MM)
  – Number of homes remediated: 445, with additional federal funding, expect to help an addition 440 homes
Trois-Rivières, Quebec Local Program

- Developed in conjunction with the Quebec Housing Corporation (equivalent to the state’s housing authority)
- Pays 75% of remediation costs up to $75,000
- Building must have damage OR have 0.3% or more pyrrhotite as measured by volume
- Must supply two estimates from qualified contractors
- Must be pre-approved through the process before receiving any funding and before beginning work
- Residential foundation or basement rehabilitation only
- No assistance for purchases after June 22, 2011
What is the potential impact for Connecticut?

- 439 homes have reported to DCP to date. If data from towns, department of insurance and DCP is aggregated, total known homes to date is over 592.
- 592 homes = minimum of $59 million in damage
- True estimates of actual impact is unknown. 20 of the initially identified towns had approximately 19,000 homes built in that time period.
CRCOG Ad-Hoc Working Group on Crumbling Foundations

• Formed by CRCOG to address the issue
• Comprised primarily of municipal officials (First Selectman, Mayors and Town Managers)
• State Representatives and Federal Delegation have been present in meetings
Working Group Recommendations and Objectives

- Recommendations on applying HSB 5180 for towns
- Recommended Guidelines for towns in implementing fee waivers
- Creating a qualified vendor list for testing, structural engineering and remediation services
- Developing templates for funding distribution
- Working with multiple state agencies to develop additional avenues of support for homeowners
House Bill 5180 – An Act Concerning Crumbling Foundations

• Requires the name of the individual or entity who installed the concrete be provided to the building official for new construction (residential or commercial)

• Allows for reassessment of residential buildings (90 days after receipt of report or following assessment year, whichever is earlier) upon receipt of a licensed engineer report.

• Reassessment is good for five years, but homeowner must notify of replacement or repair within 30 days.
House Bill 5180 – An Act Concerning Crumbling Foundations - Continued

• Requires a report from DCP by January 1, 2017

• Any documentation obtained by executive branch is confidential for seven years
Reassessment Recommended Guidelines

Background

• Not enough home sales with this problem documented to establish market data

• Developed in conjunction with multiple assessors in affected towns as well as state building official, and municipal building officials

• There was not a 100% consensus on the guidelines, however, majority of the assessors agreed with the framework
Re-Assessment Guidelines

- Five Progressive levels (vetted with State Building Official)
- Some towns have the tax assessor and building official go together to verify the problem and assess the damage in addition to the engineering report.
- Reassessment discount is recommended off of the building value. (A minority of assessor feel that the devaluation value could be applied as a percentage off an estimate cost to cure (or about $800 per linear foot), but the majority prefers the building value as that is more defensible and is a standardized measure, not subject to numerous variations)
Re-assessment Guidelines Continued

- Level A (documented to be "defective" - no sign of problems), 20% (requires a petrographic analysis to establish that the problem actually exists)
- Level B (minor degradation - no repair required), 60%
- Level C (minor to moderate degradation - repair suggested/recommended), 75%
- Level D (moderate to severe degradation - significant repairs required), 90%
- Level E (severe degradation - imminent threat of failure), 100%
Potential Impact – Willington Example

• 30% of Willington’s taxable property was built in the affected time period (approximately 625 homes).

• The percentage of those homes that are actually affected or could be affected is unknown, but the impact to Willington’s town budget and taxable property could be significant.
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*Model does not include additions, stand-alone garages or other structures.

Note: 209 homes is 1/3 of the potentially affected homes. Willington estimates that up to 50% of the 625 could be affected.
Other Recommendations from the Working Committee

• Building fee waiver guidelines

• Recommended framework for funding.
  – Homeowner template has been approved by the committee to begin working with legislative delegation.
  – Committee is also developing a framework(s) for planned unit developments and condominiums

• Checklist for towns
Proposal for Individual Municipal Loan Program

- Towns may require referendum or town meeting
- Issues of whether municipal bonds can be used for private interest (may require state law change and some municipalities will require charter revisions)
- Costly implementation of multiple loan programs across multiple towns
- Loan collateral issues
- Higher impact towns have staggering estimates Coventry estimates $100 million to repair homes estimated to be damaged (assuming 30% of homes built in the time period). Willington estimates $42 million.
Conclusion

• Critical issue for the region
• Wide ranging impacts with multiple stakeholders

http://crcog.org/crumbling-foundations/

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