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Spring Conference
April 20-22, 2023

Sawgrass Marriott
Golf Resort & Spa



Friends Don't Sue Friends.....Most of the Time

**GEOPROFESSIONAL
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**CASE
HISTORY** | NUMBER
105

PROJECT MANAGEMENT

The Client
A major national home builder

The Project
A new townhouse development

**Assignment of the GBA-
Member Firm**
Perform a geotechnical-engineering study of the project site and provide a written report describing its subsurface conditions. Perform construction-materials engineering and testing (CoMET) during site

Background
The development company – one of the GBA-Member Firm's top-ten clients for 15 years – was experiencing a financial resurgence: Housing was easy to buy and, as a result, selling like proverbial hotcakes. The company's newest venture – one of six ongoing at the time – was a small townhouse development on unimproved land. Designed by one of the developer's staff architects, the multiunit townhouse building was to be a two-story, wood-frame structure. A staff civil engineer designed

Plans also called for construction of a mechanically stabilized earth (MSE) retaining wall.

the proposal that the developer's project supervisor meet with the wall designer to discuss the potential for structural issues associated with normal wall movement (creep).

The Member Firm's project manager recommended in the proposal that the developer's project supervisor meet with the wall designer.

The client retained both the Member Firm and a structural-engineering firm on a sole-source basis, with the structural-engineering firm assigning an experienced wall designer to direct its efforts. The client asked six wall-construction companies to submit bids, and ultimately chose the low bidder, a relatively inexperienced company whose experience

Dan Schaefer, P.E.
Froehling & Robertson, Inc.

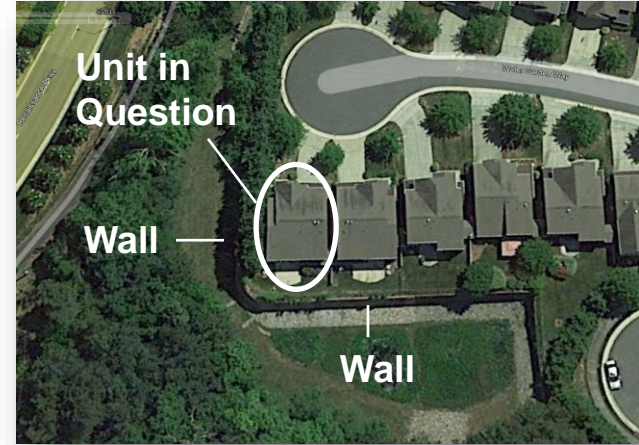
A Series of Unfortunate Events

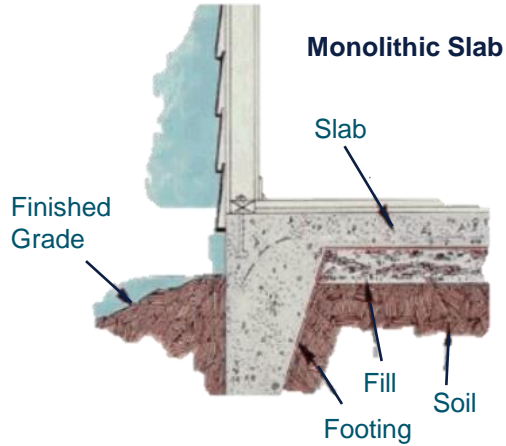
- Misdiagnosis by Owner Expert
- Alleged Wall Movement
- Triggered Unnecessary Repair
- Led to Lawsuit
- What Did We Do Wrong?
- Very Simple Missteps
- Expensive Way to Learn a Lesson



Introduction

- Client – National Homebuilder – LD Division
- Project – New Townhouse Development
- Structure – Two-Story Townhouse on Monolithic Slab Foundation
- Wall – 18' Tall MSE, 20' from Structure
- Member Firm Assignment – CoMET Services During Construction of an MSE Retaining Wall
- Construction - 2004
- Claim/Lawsuit - 2007 to 2009



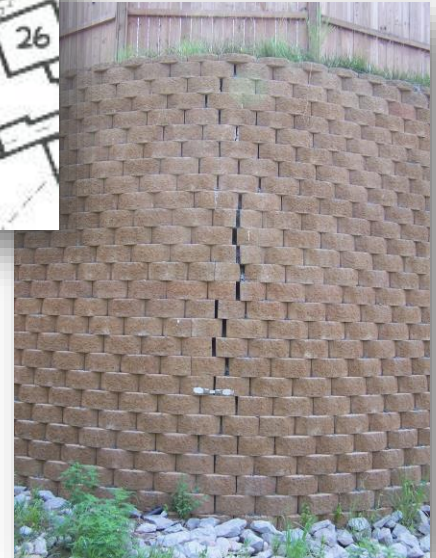
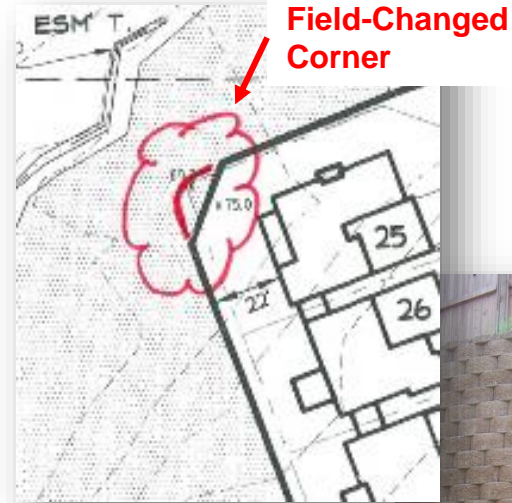


Slab Problems

- Unreinforced Monolithic Floor Slab
- Poor Design & Construction Practices
 - Design Restricts Shrinkage
 - Questionable Concrete Quality
 - No Curing & Late Jointing
 - Early Loading
- Random Plastic Shrinkage Cracks
- Known Widespread Issue
- Level Floor & No Structural Concern

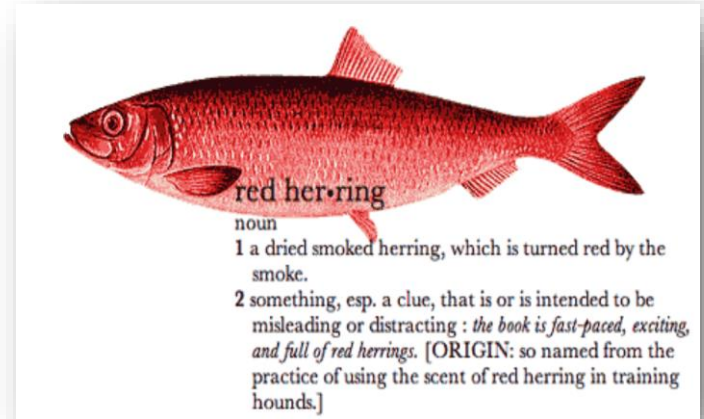
Wall Problems

- Wall Construction Went Well
- Field Change by Contractor
 - Angled Corner to Tight Radius
 - Block Cutting & Stacking Issues
 - Missing Pins & Grid Connectivity
 - Blocks Opened After Construction
- Change Not Approved by Designer
- Reported as Discrepancy by Technician
- NOT Communicated by PM
- No Other Signs of Movement or Distress



The Red Herring

- Homebuilder Hired Expert
- Concluded Cracks in House Caused by Lateral Wall Movement and Slab Settlement
- Data Did Not Support Conclusion
- Mislead by Crack in Wall
- Recommended \$400,000 Repair
- Widespread Disagreement by Other Experts
 - Wall Cracks were Just in Façade
 - Slab Cracks from Plastic Shrinkage



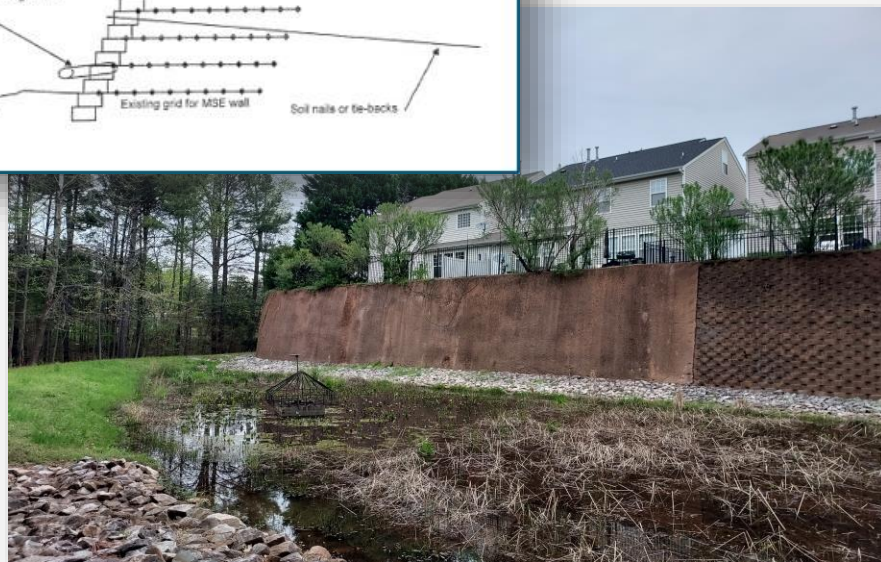
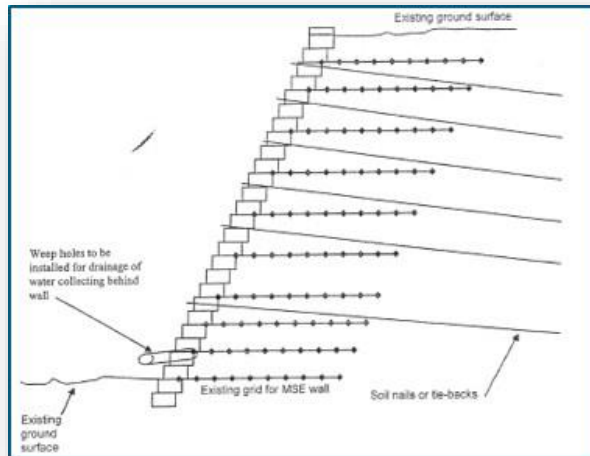
The Demand

- Client Sent Demand Letter
- Claimed We Were Aware of Issue
- Claimed Retaining Wall Has Failed
- Seeking Reimbursement For Repair from Designer, Contractor & CoMET provider
- 10-Day Notice Before Starting Repairs
- Insufficient Time to Perform Proper Evaluation
- Could Not Stop the Direction of the Issue



The Fix

- Owner's Expert Overkilled Repair
- Townhouse: Helical Pier Support
- Wall: Soil Nail Repair
 - 30' Soil Nails
 - 6" Shotcrete Facing
 - Extended >75 feet in each direction
- Several Other Repair Options Available



The Discovery

- CoMET Firm Had the Only Documentation of Construction
 - Detailed Daily Field Reports
 - Damaging Progress Report
- Contractor
 - In Bankruptcy & Represented by GL Insurance Carrier
 - Inexperienced - Little Supervision - No Documentation
- Wall Designer: Remote and Infrequent Visits
- Homebuilder: PM Visited Infrequently and No Longer Employed
- Three Experts Agreed: No Wall Movement & Repair was Overkill
- Yet... the Lawsuit Marched On

The Mediation

- Contractor
 - Represented by GLI Carrier
 - Carrier Gave Up and Offered \$75,000
 - Most At Fault in Poor Wall Construction
- CoMET Firm
 - Deep Pocket, Felt We Had Good Case
 - Attorney Pushed for Settlement
 - Settled for \$75,000 in 2009, PLI covered \$25k
 - Cost over 100 hours plus Legal Fees
 - Big Distraction and Added Stress
- Designer
 - Small Firm
 - Incensed To Even Be Named in Claim



Lessons Learned

- **If It Isn't In Writing, It Never Happened.**
 - In this case it was in writing and it and still never happened
 - Technician noted discrepancy in daily report
 - PM didn't see it and rendered written report almost meaningless
- **Don't Always Blame the Field Technician.**
 - Not uncommon for field staff to be blamed for problems
 - When PM's poor planning and communication is sometime root cause

Lessons Learned

- **Project Managers Must Stay Engaged.**
 - Make periodic site visits and regularly communicate with field staff
 - Timely review of field reports is essential
 - Quick reporting and tracking of discrepancies required
 - Field technician was abandoned by PM, and put in position of authority
 - Had the PM been engaged, we would never have been involved
- **Reduce Risk Through Active Communication.**
 - Poor internal communications led to issue being muted
 - Written field report was not enough
 - No Pre-Con meeting led to poor communication with project team

Lessons Learned

- **Perform Better Go/No Go Analysis.**
 - Top client clouded our vision despite residential risks
 - Inexperienced contractor should have been a warning sign
- **Jeopardized Relationships Can be Mended.**
 - Determined to not lose the client
 - Met and educated client on lessons learned
 - Decided to no longer perform CoMET services on MSE walls
 - Grew closer to client & established new practices to prevent issues