



Tate Wyly, P.E.  
Wyco Engineering and Construction, LLC  
P.O. Box 1172  
Marana, AZ 85653

**CLIENT:** Sage Memorial Hospital  
SR 264 & Hwy 191  
Ganado, AZ 86505

**ATTENTION:** Jarom Prows/Levi Wyaco

**PROJECT:** Sage Memorial Hospital – Structural Investigation – Group Home Assessment

**PROJECT NO.:** 2026-008-001

**REPORT DATE:** March 5, 2026

**PURPOSE(S) OF ASSESSMENT:**

1. To perform a site visit to Building #1 (Group Home), to visually observe the existing building conditions.
2. To provide our professional opinion on the condition and structural adequacy of the existing structures.

**BACKGROUND INFORMATION:**

Existing construction drawings were provided by the Client from PAIKI (A Native American Architecture and Engineering Firm) dated June 2008. The following drawing sets were reviewed by WYCO Engineering and Construction, LLC as part of this assessment:

- Structural
- Mechanical, Electrical, & Plumbing (MEP)
- Architectural
- Civil

Submittals and shop drawings were not available for review at the time of the assessment. These documents typically assist in verifying that construction was performed in accordance with the design documents and applicable industry standards. Third-party inspection reports were also not available at the time of this investigation.

**BUILDING DESCRIPTION:**

The existing structure is a single-story building approximately 59 feet by 160 feet in plan dimension. Primary structural components include prefabricated wood roof trusses, 2x6 interior non-bearing wood stud walls, a concrete slab-on-grade floor system, insulated concrete form (ICF) exterior wall construction, and reinforced concrete stem walls with spread footings.



**OBSERVATIONS:** (Site photos are included as Appendix A)

- We performed a site visit the week of February 23rd, to visually observe the existing building. We were able to assess the existing conditions of the Framing and Foundation. We were able to observe representative portions of the roof framing from below, through the lay-in access panel in the ceiling.
- The existing building is one story, roughly 59 feet by 160 feet. The basic construction is sawn lumber joist roof framing, 2x6 interior non-bearing wood walls, concrete slab on grade, Insulated Concrete Foam (ICF) Units and 8" concrete stem wall with footing.
- Specific observations regarding the roof framing:
  - The roof is framed with 2x Prefabricated Trusses at 24-inch spacing, spanning front to back. Wood sheathed panel and the steel decking is the roofing assembly.
- The trusses bear on the front and rear exterior walls, with no interior bearing walls running along the centerline of the building.
- The interior steel beam is a W27x84 spans north-south at the middle of the building, supporting the ceiling trusses, spanning a max of 38ft. The beam segments are supported by ICF Walls.
- The floor system is made up of 5" Concrete Slab-on-Grade, 3000 psi concrete, with 6ftx6ft – W4.0xW4.0 Welded Wire Fabric (WWF) over 15 mil Vapor Retarder. The SOG assembly sits above the 8" Aggregate Base Course, this soil should have been compacted to 95% density, based on industry minimum standards.
  - Visual inspection identified separation of the slab-on-grade along Gridline 11, see photos (Ganado site).
- The ICF Walls bear on an 8" concrete stem wall and footings. There is large separation from the slab and the stem wall.
- We observed signs of excessive deflection and cracking of gypsum board of the interior walls, near gridline 10 to gridline 12.
- The exterior side stucco has cracks but no leakage has entered the building and within reason.
- The drainage of the building will have to be revised during construction, with drainage a minimum of 5 percent slope away from the building.

**CONCLUSIONS:**

1. By calculation, the Pre-Fabricated Wood Trusses are adequate to support the design gravity loads (18 psf roof dead, 20 psf roof live load, in combination with 10 psf flat roof snow load).
2. By calculation, the W27x84 steel beams are stressed to 80 percent of max capacity under the design loads. As such, the beams constitute can withstand additional loading, if alterations are requested.
3. The Exterior below grade concrete stem walls will require a retrofit connection to close out gap between the SOG and the Exterior Stem Wall. See the provided sketch of proposed fix. The original



detail, 'Typical Wall Section' Detail does not specify any dowels from the concrete turndown of the slab-on-grade (SOG) to the Concrete Stem Wall.

4. The Eastside and Northside grading plans note drainage to the north. This drainage was to collect water to drainage basin pond at the north side of property. The grading will have to be adjusted for the basin to drain to the west of the building.
5. SOG cracking is occurring from western wall to eastern, along gridline 11, approximated 0.911" at time of site visit. The crack was measured and marked for further inspection. After removing debris and rocks at the crack, visual inspection shows the Construction Joint did not have any Welded Wire Fabric present but has a vapor barrier. Without the W.W.F., the lateral stability was eliminated. The W.W.F. provides structural stability for Thermal Expansion and Shrinkage (as required in ACI Code for minimum amount of steel in structural concrete concrete) for the slab-on-grade. The Slab is sliding away from each other at gridline 11. The Slab is not settled vertically, as the slab was measured with an 8ft level at several locations and is relatively flat.

#### **RECOMMENDATIONS:**

1. Concrete Stem Wall/SOG Gap Condition: See Sketch
  - The exterior of the building will need to dug out and demolition of existing sidewalk will be required for fix. The Concrete Stem Wall will then be drilled through and a minimum of 6" in the Slabs Toe-Down and infilled with Structural Epoxy. Next, a 5/8" diameter threaded rod will need to be installed, minimum embedment of 6" will be required, and WYCO E&C require \*SSI Report for proper installation of epoxy. After the epoxy has cured, a washer and nut will be installed and torqued to close the Wall and SOG. All metals shall be galvanized to prevent any rust.  
  
*\*WYCO E&C can be contracted as the 3<sup>rd</sup> party SSI Inspector, at additional proposal can added, if a different contractor is selected.*
2. Concrete Crack(s) at Gridline 11: See Sketch
  - The crack at gridline will have to be sawcut and removed, a minimum of 2ft wide (along gridline) x 1ft deep, length of wall (approximately 41 ft of length).
  - See attached sketch for the turndown and requirements for reconnecting the slab. The slab demolition and repair shall be completed after stem walls fix has been completed.
    - The existing soil shall be compacted with a mechanical compactor.
  - The contractor shall report to WYCO how much the crack has moved or if the crack has closed.
3. Exterior Drainage: See photos of drainage issues.
  - To avoid any further soil settlement/movement.
    - WYCO E&C recommends removing the entryway stones. Import suitable soil and level the stones to match the door entry, or place concrete with scupper.
  - WYCO E&C recommends installing perforated pipes along the North/West/East



landscaped areas, adjacent to the building. The existing dirt shall be compacted and sloping away from the building (at a minimum of 2% grade).

- Yearly maintenance of the landscaping is required. To clean out grates, pipes, and remove weeds.

### **Limitations**

This report is based on visual observations made during the site visit and review of available documents. No destructive testing or subsurface geotechnical investigation was performed unless otherwise noted. Conditions not visible at the time of inspection may exist.

Please do not hesitate to contact us if you have questions regarding this report or if you need additional information.

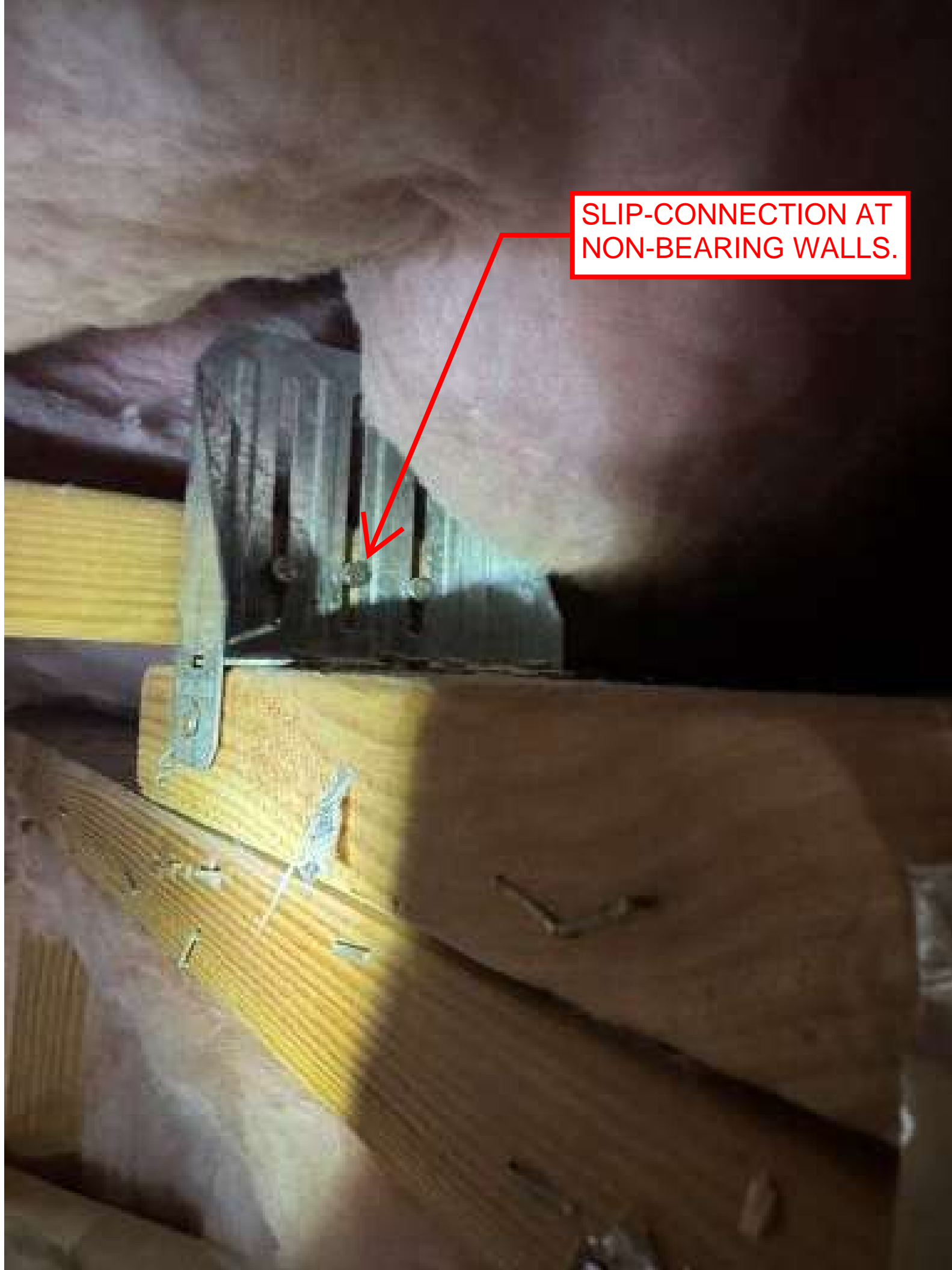
Prepared By: Jimmy Hoskie, Project Manager, P.E.

### **ATTACHMENTS:**

Appendix A: Site photo

Appendix B: Construction Plans and Details

SLIP-CONNECTION AT  
NON-BEARING WALLS.



CRACK AT EAST  
DOORWAY,  
MEASURED = 0.575"





CRACKS FROM  
NON-BEARING  
WALL TO ICF WALL



STEMWALL  
AND SOG  
CRACK



CRACKS FROM  
NON-BEARING  
WALL TO ICF WALL



GAP FROM  
NON-BEARING WALL  
BEING LIFTED FROM  
TRUSSES.

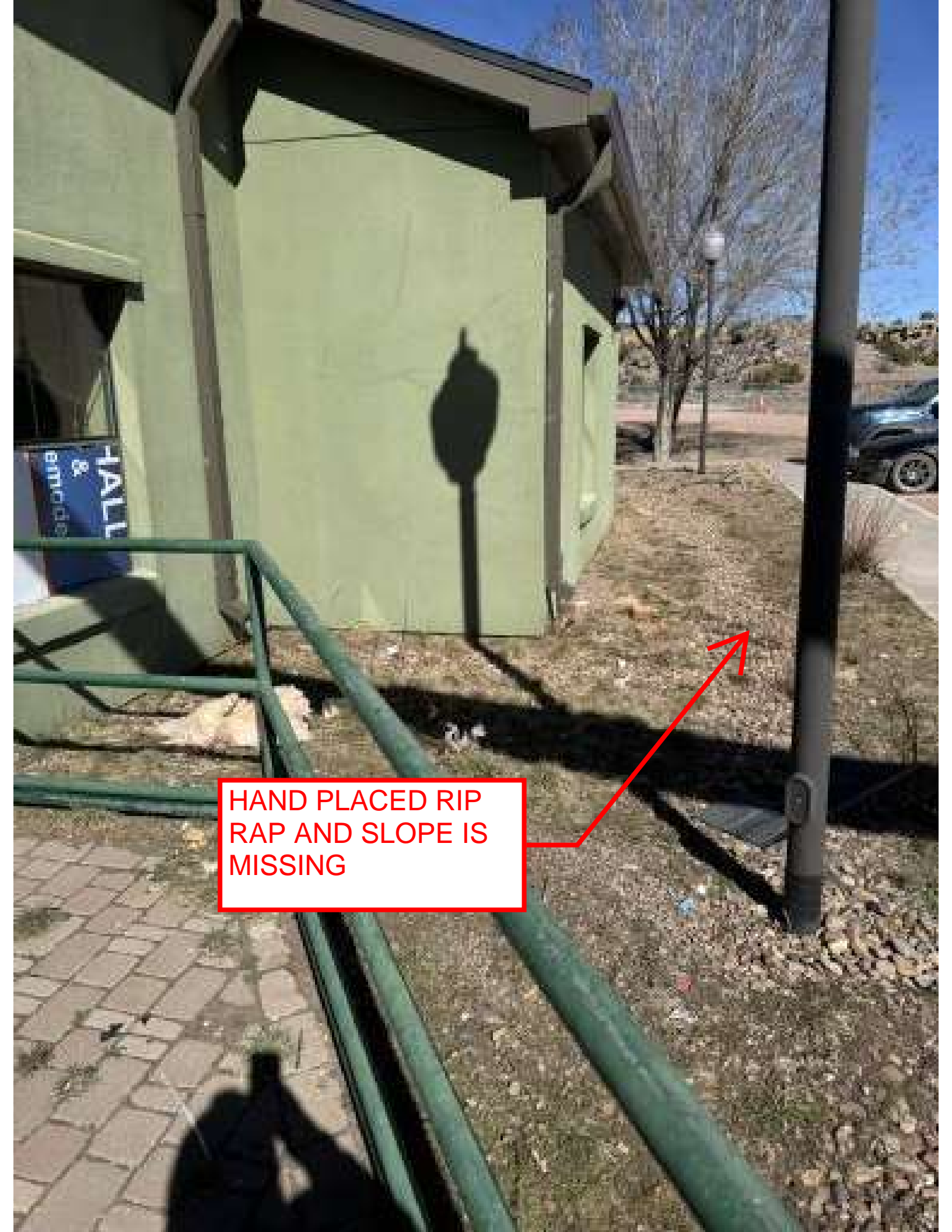


SOIL SETTLEMENT AT  
ENTRY STONES



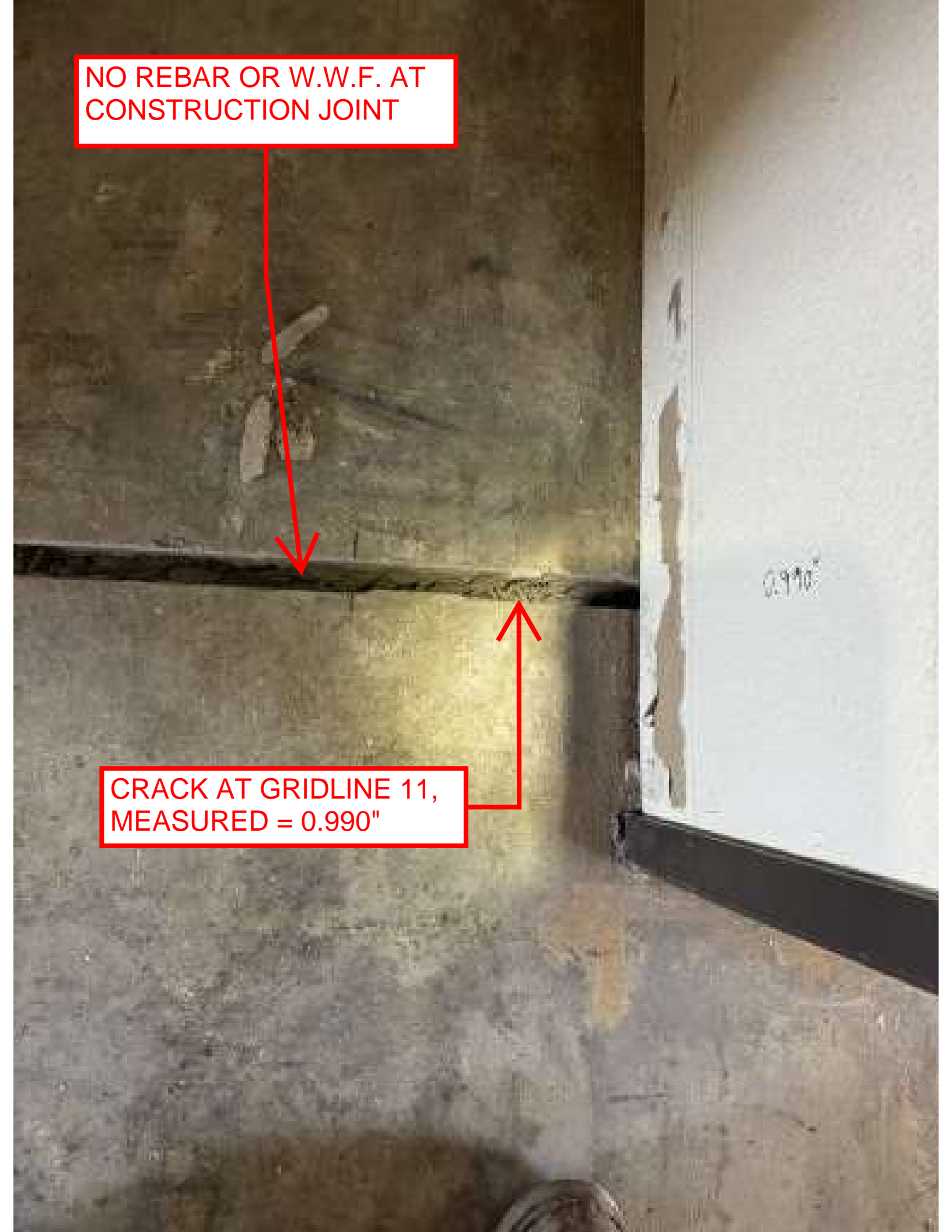
SOIL NOT DRAINING  
EXCESS WATER

HAND PLACED RIP RAP AND SLOPE IS MISSING



NO REBAR OR W.W.F. AT  
CONSTRUCTION JOINT

CRACK AT GRIDLINE 11,  
MEASURED = 0.990"



NO REBAR OR W.W.F. AT CONSTRUCTION JOINT

CRACK AT GRIDLINE 11,  
MEASURED = 0.816"



GYPSUM CRACKING AT  
GRIDLINE 11,  
MEASURED = 0.25"





STEMWALL  
AND SOG  
CRACK



CRACK AT  
NON-BEARING  
WALL

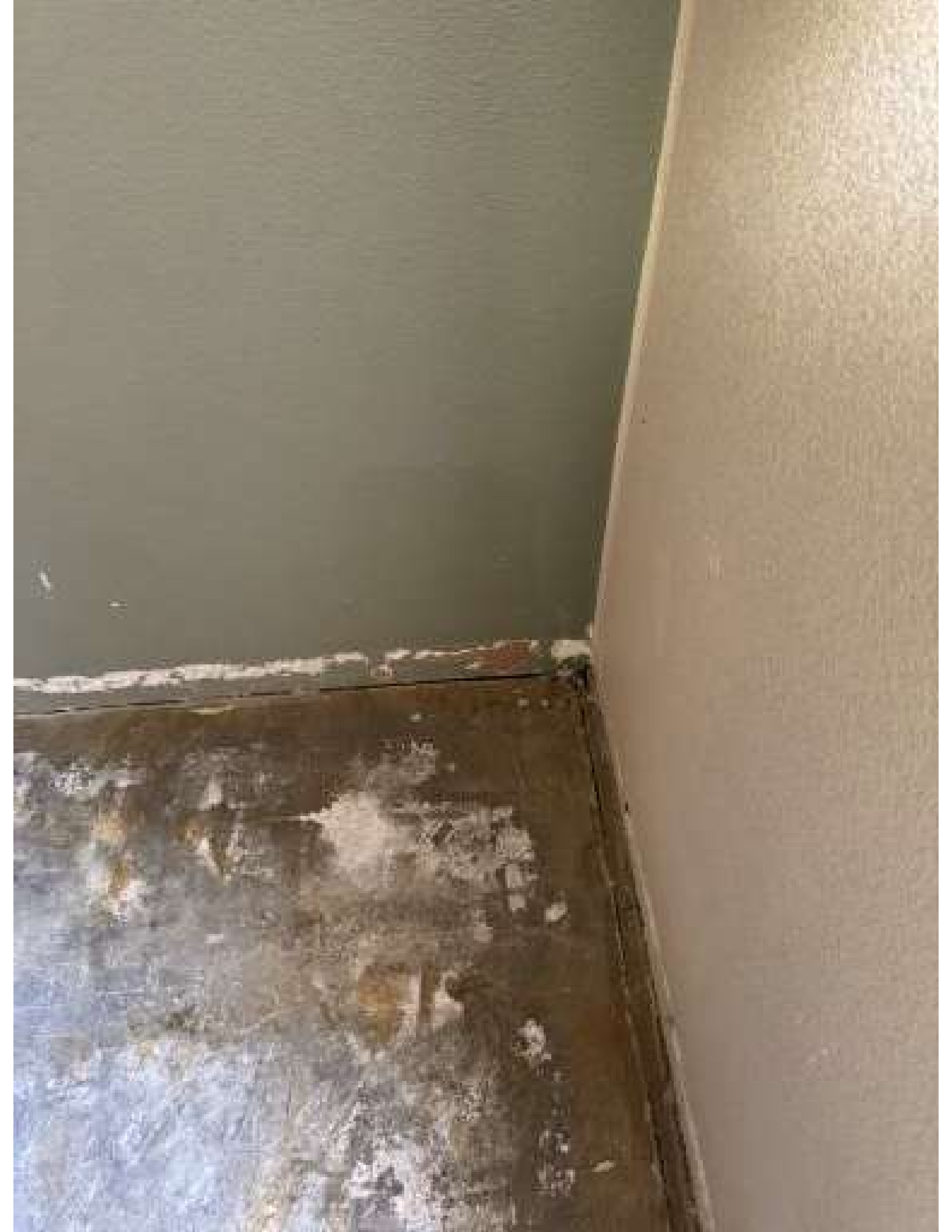




SEPARATION FROM STEM  
WALL AND SOG



SEPARATION FROM STEM  
WALL AND SOG









SEPARATION FROM STEM  
WALL AND SOG

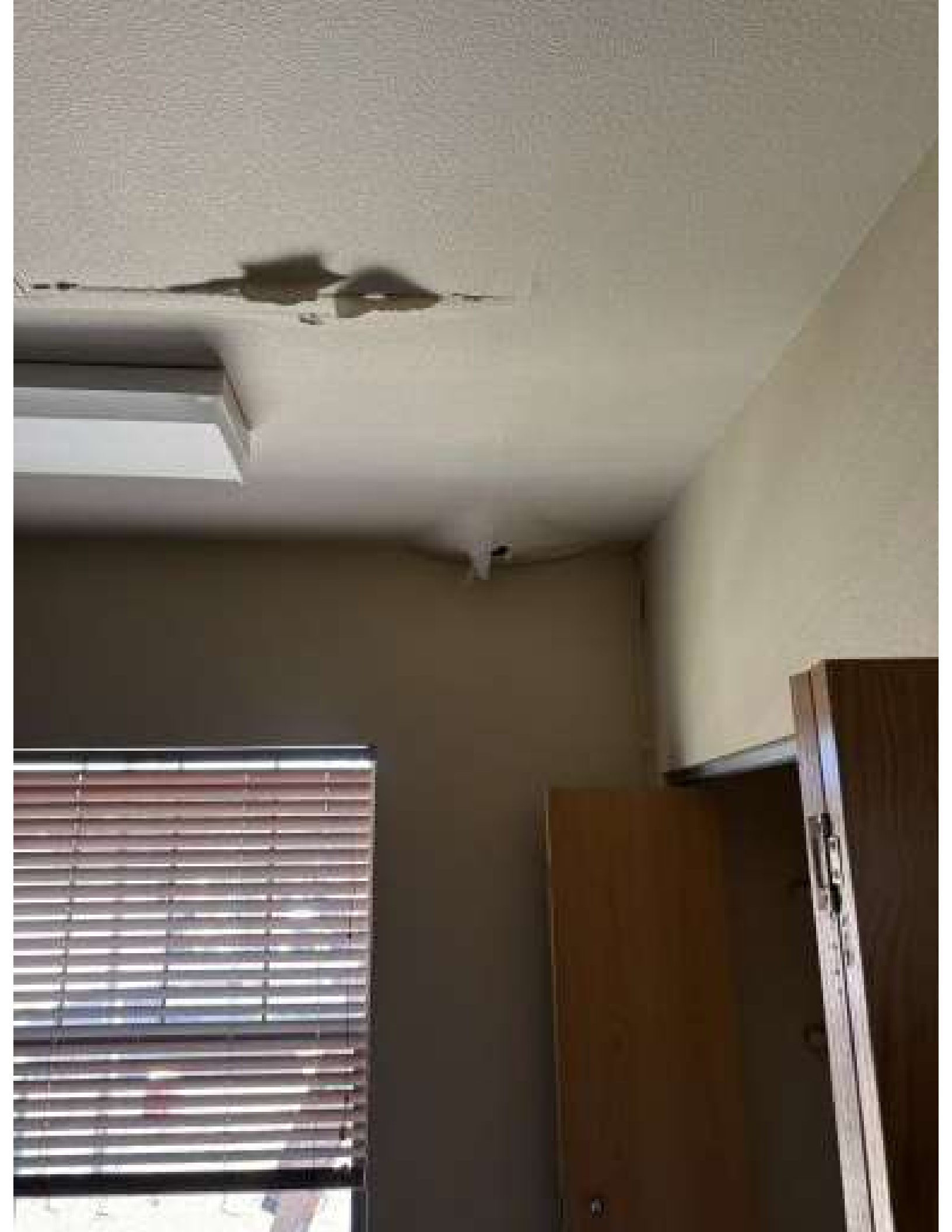


SEPARATION FROM STEM  
WALL AND SOG

0.66%







SEPARATION FROM  
STEM WALL AND SOG







SIDEWALK  
HAS NO  
SLOPE TO  
DRAIN  
FROM  
BUILDING









NO SLOPING  
GRADE OR  
DRAINAGE









CHADCO ASSISTED  
LIVING CENTER







A photograph showing a gravel bed area next to a light green wall. A white, cylindrical drain pipe is partially buried in the gravel. A black pipe runs along the wall on the left. A concrete sidewalk is visible in the bottom right corner. Two red arrows point to the drain and the gravel area, with text boxes explaining the issues.

CLOGGED  
DRAIN,  
LEADS TO  
THE WEST

NO GRADE  
SLOPE

CLOGGED DRAIN FROM  
COURTYARD AT  
WESTSIDE OF BUILDING.




NO  
DRAINAGE  
AT HEADER  
CURB

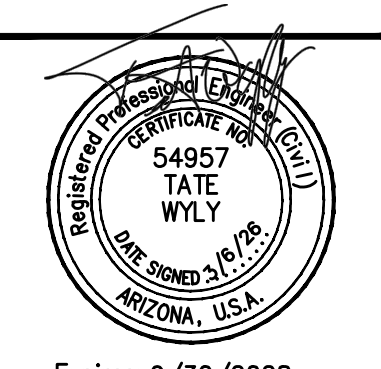


ALL DRAINAGE  
SLOPING TO  
BUILDING



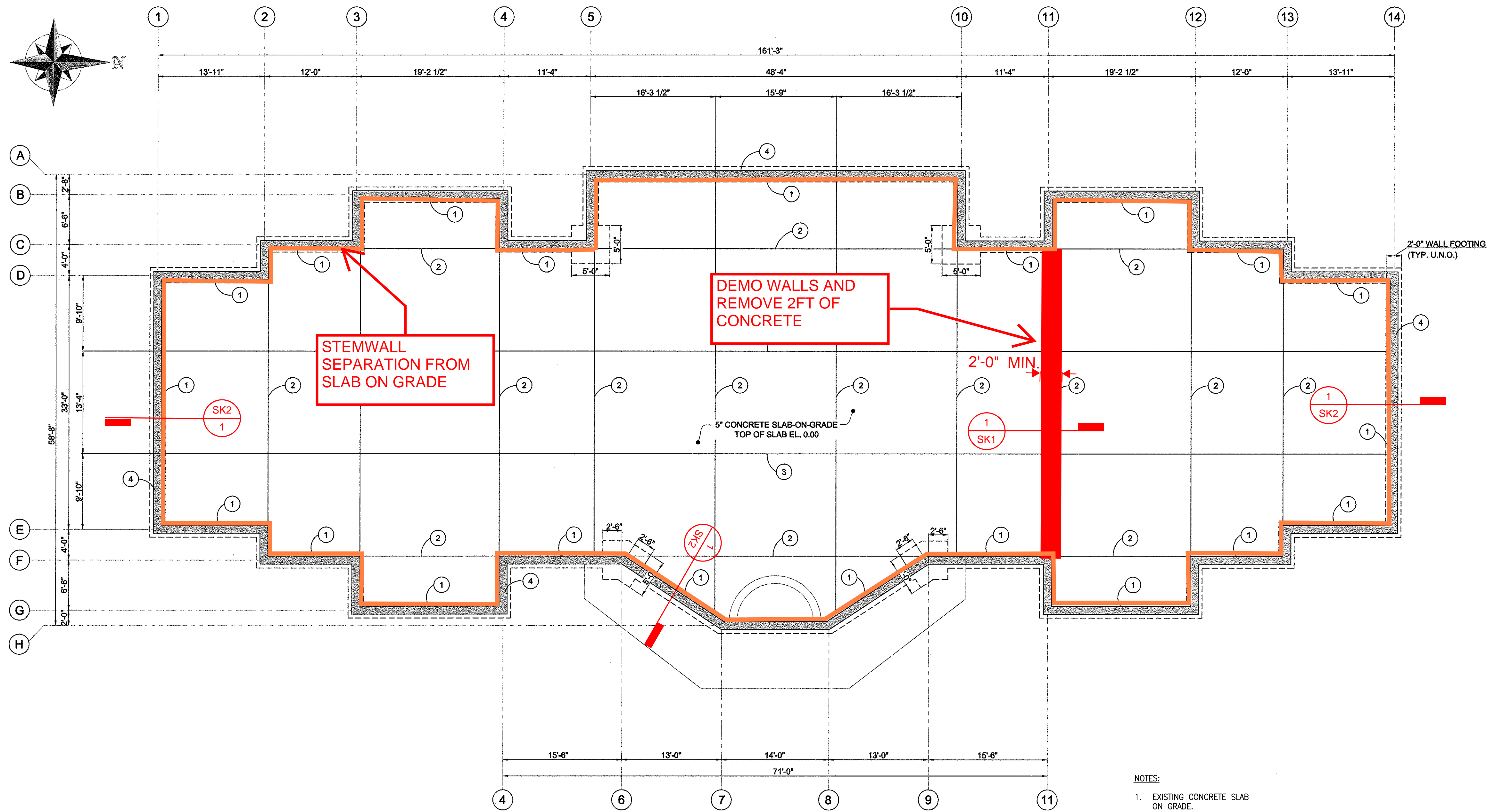
A photograph of a building's exterior corner. The walls are made of light-colored Insulated Concrete Form (ICF) panels. At the top, there is a brown metal roofline with a gutter. A vertical metal pipe runs down the corner. A red arrow points to a gap between the ICF wall and the roof structure. A red-bordered text box is overlaid on the image, containing a description of the problem.

ICF WALL IS MOVING  
SEPARATING FROM SOG,  
RESULTING IN THE TRUSSES  
STAYING IN PLACE. CREATING  
THE GAP AT TOP OF WALL



KEYED NOTES (#)	
1.	SEALED EDGE ISOLATION JOINT (SEI)
2.	CONTROL JOINT (CJ)
3.	CONSTRUCTION JOINT (CSJ)
4.	6" CONCRETE CORE ICF WALL (TYP.)

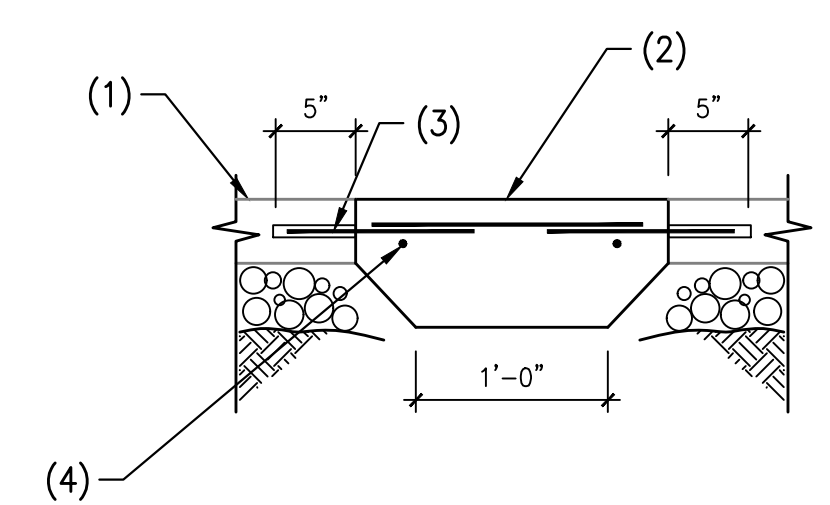
FOR SLAB-ON-GRADE AND JOINT DETAILS, SEE DRAWING S1.  
 FOR ACTUAL TOP OF SLAB ELEV., SEE CIVIL DWGS.  
 SUGGESTED SLAB-ON-GRADE JOINT ARRANGEMENT IS SHOWN, ALTERNATIVE JOINT ARRANGEMENT MEETING ACI CODE REQUIREMENTS MAY BE SUBMITTED BY CONTRACTOR FOR APPROVAL.



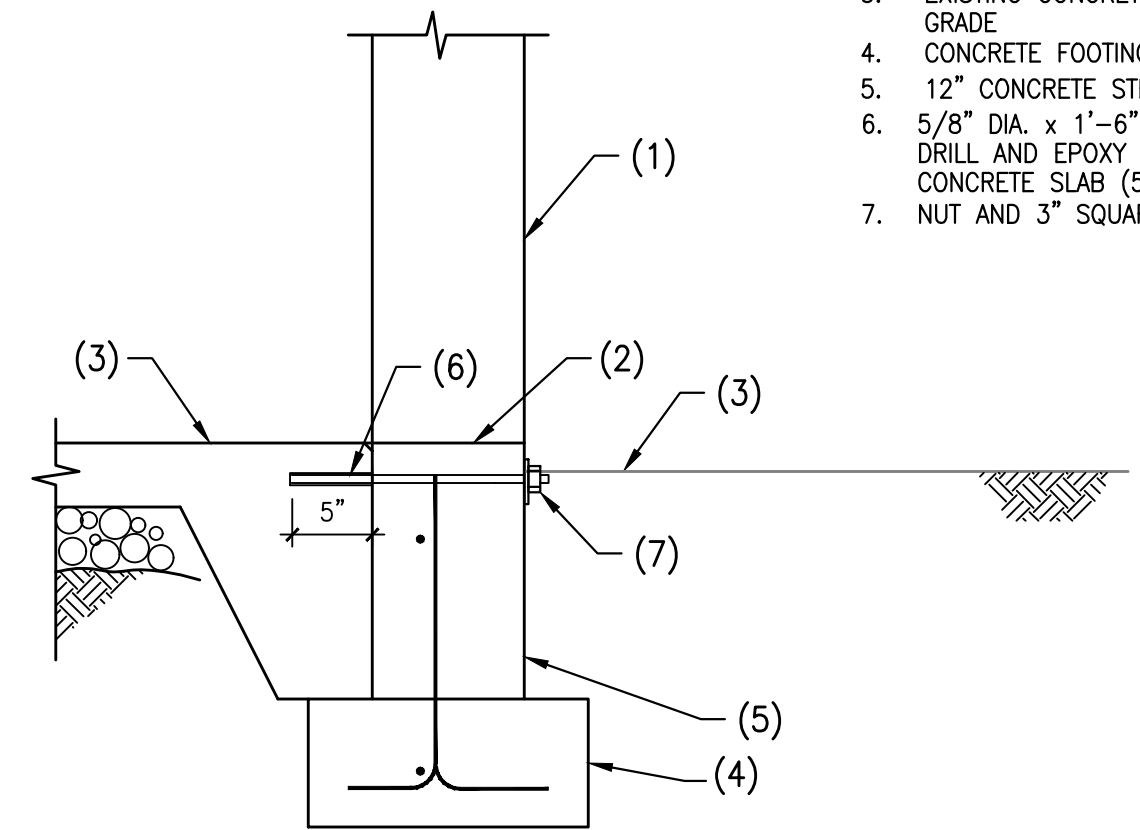
**FOUNDATION PLAN**  
 SCALE 3/8" = 1'-0"

- NOTES:
- EXISTING CONCRETE SLAB ON GRADE.
  - NEW CONCRETE SLAB ON GRADE.
  - #3 x 1'-6" LONG AT 24" O.C. DRILL AND EPOXY INTO EXISTING CONCRETE SLAB (5" EMBED), STAGGERED
  - (2) #4 CONTINUOUS.
  - #4 BARS AT 12" O.C.

- NOTES:
- ICF WALL
  - TOP OF ADJACENT CONCRETE STEM WALL
  - EXISTING CONCRETE SOG OR GRADE
  - CONCRETE FOOTING
  - 12" CONCRETE STEM WALL
  - 5/8" DIA. x 1'-6" LONG AT 5'-0" O.C. DRILL AND EPOXY INTO EXISTING CONCRETE SLAB (5" EMBED).
  - NUT AND 3" SQUARE STEEL WASHER

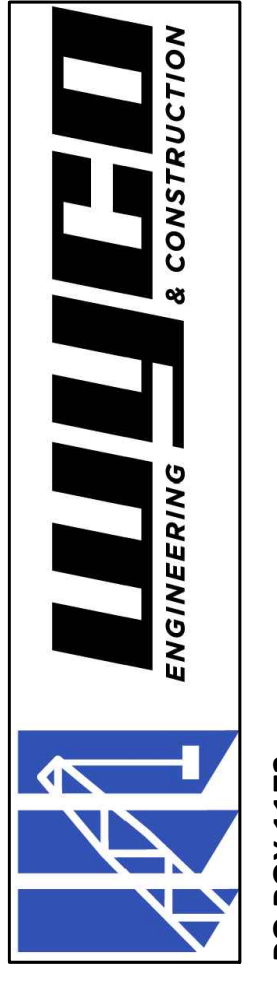


SK1 NEW CONCRETE SLAB AT EXISTING CONCRETE SLAB  
 SCALE: NOT TO SCALE



SK2 CONCRETE STEM WALL TO SOG CONNECTION  
 SCALE: NOT TO SCALE

Project: **SAGE MEMORIAL - GROUP HOME PROJECT**  
**GANADO, AZ**



PO BOX 1172  
 MARANA, AZ 85653  
 520.954.2637  
 TATE.WYLY@WYCO-EC.COM

NO.	DATE	REVISION	BY

DWG TITLE: **foundation plan**

ENGINEER	CHECKED BY
JOB NO	DRAWN BY
SCALE	DATE
DWG NO	
<b>S200</b>	
SHEET NO	