

Appendix B: Condition of SIP Screws After Failure Tests

After each timber frame and SIP roof assembly was tested to failure, screws utilized to attach SIPs to the timber frames were removed and assemblies were dismantled. Upon removal, the condition of SIP screws were documented as to whether they were not damaged, bent, or broken. Some screws could not be removed and this was noted also. Provided below are diagrams illustrating the location and condition of all SIP screws that could be removed from the five tested roof assemblies. Figure B.1 shows examples of bent and broken screws that were removed from Assembly 4.



Figure B.1. Examples of bent and broken screws extracted from Assembly 4 after failure.

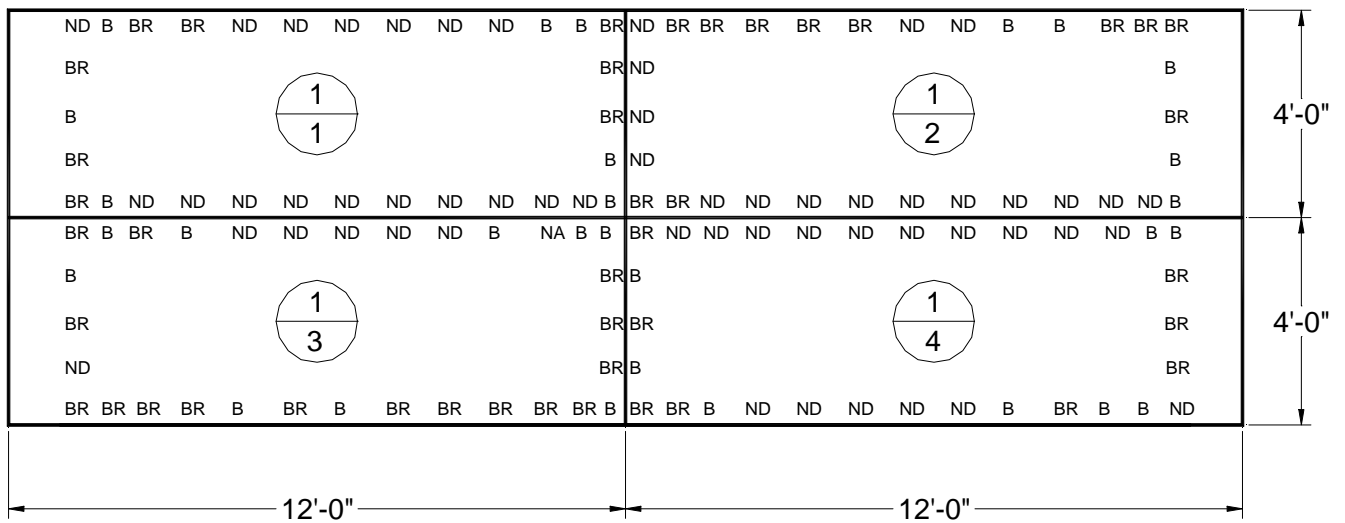


Figure B.2. Condition and location of screws attaching SIPs to timbers following failure of Assembly 1. (BR indicates broken screws, B indicates bent screws, ND indicates no damage to screws and NA indicates screws that could not be assessed or withdrawn.)

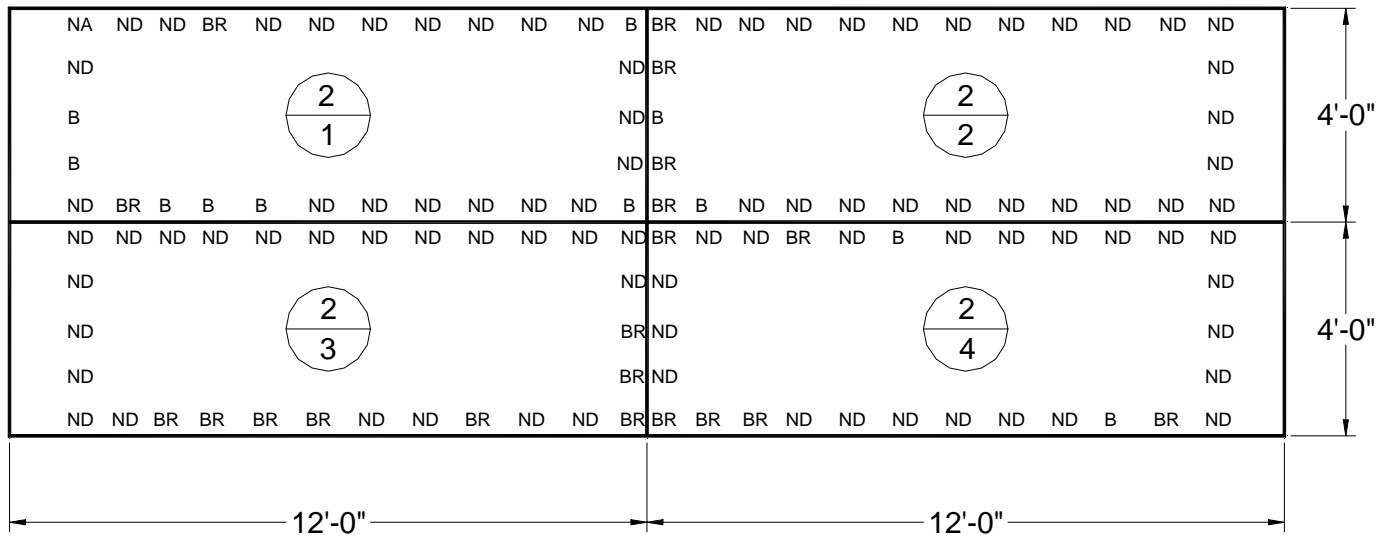


Figure B.3. Condition and location of screws attaching SIPs to timbers following failure of Assembly 2. (BR indicates broken screws, B indicates bent screws, ND indicates no damage to screws and NA indicates screws that could not be assessed or withdrawn.)

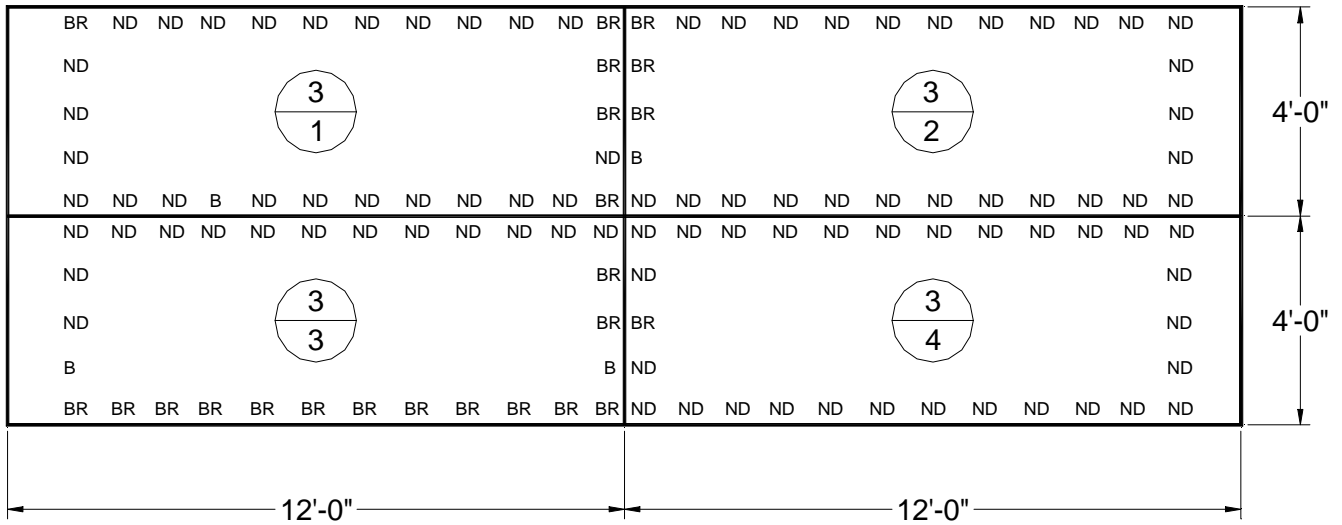


Figure B.4. Condition and location of screws attaching SIPs to timbers following failure of Assembly 3. (BR indicates broken screws, B indicates bent screws, ND indicates no damage to screws and NA indicates screws that could not be assessed or withdrawn.)

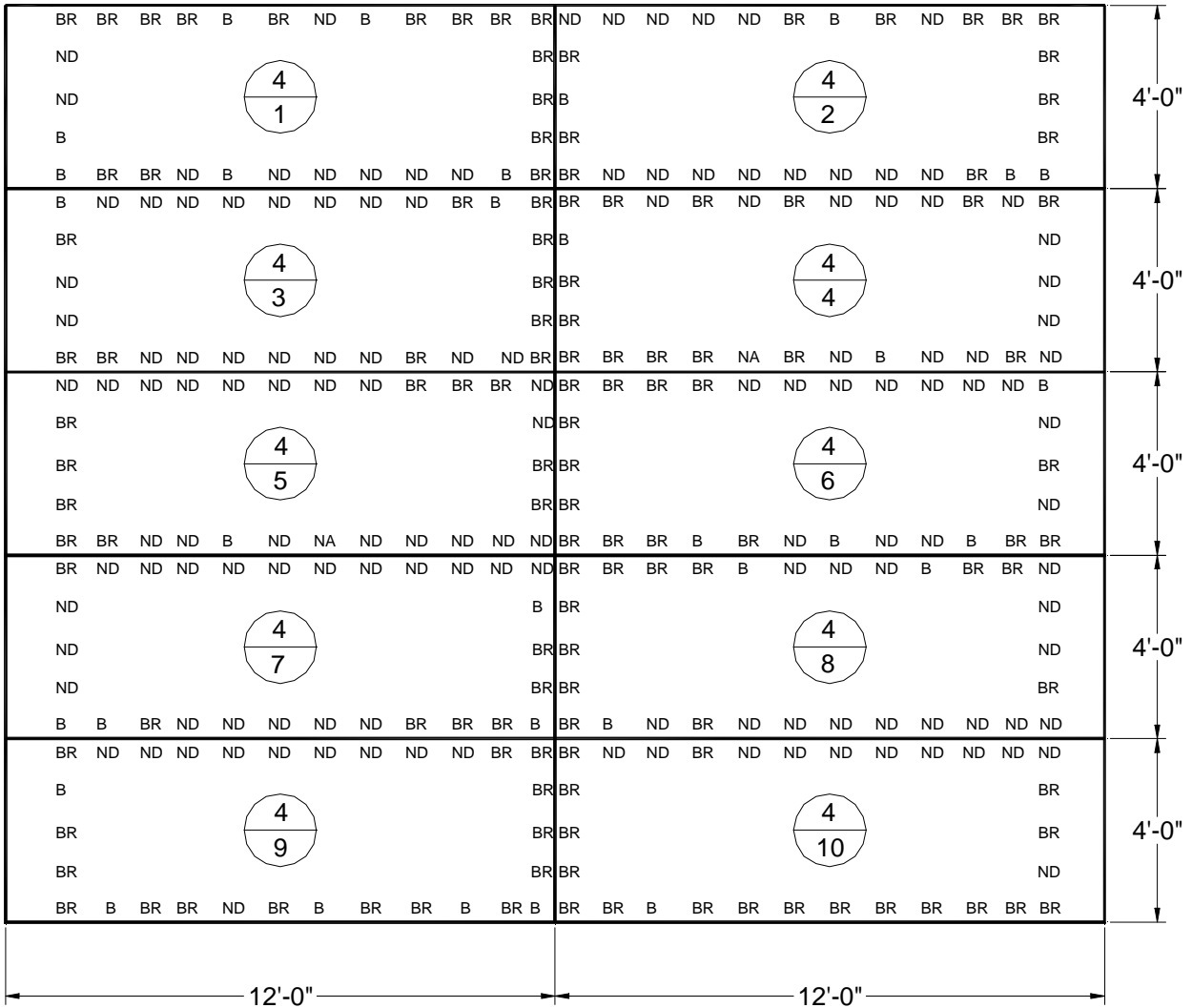


Figure B.5. Condition and location of screws attaching SIPs to timbers following failure of Assembly 4. (BR indicates broken screws, B indicates bent screws, ND indicates no damage to screws and NA indicates screws that could not be assessed or withdrawn.)

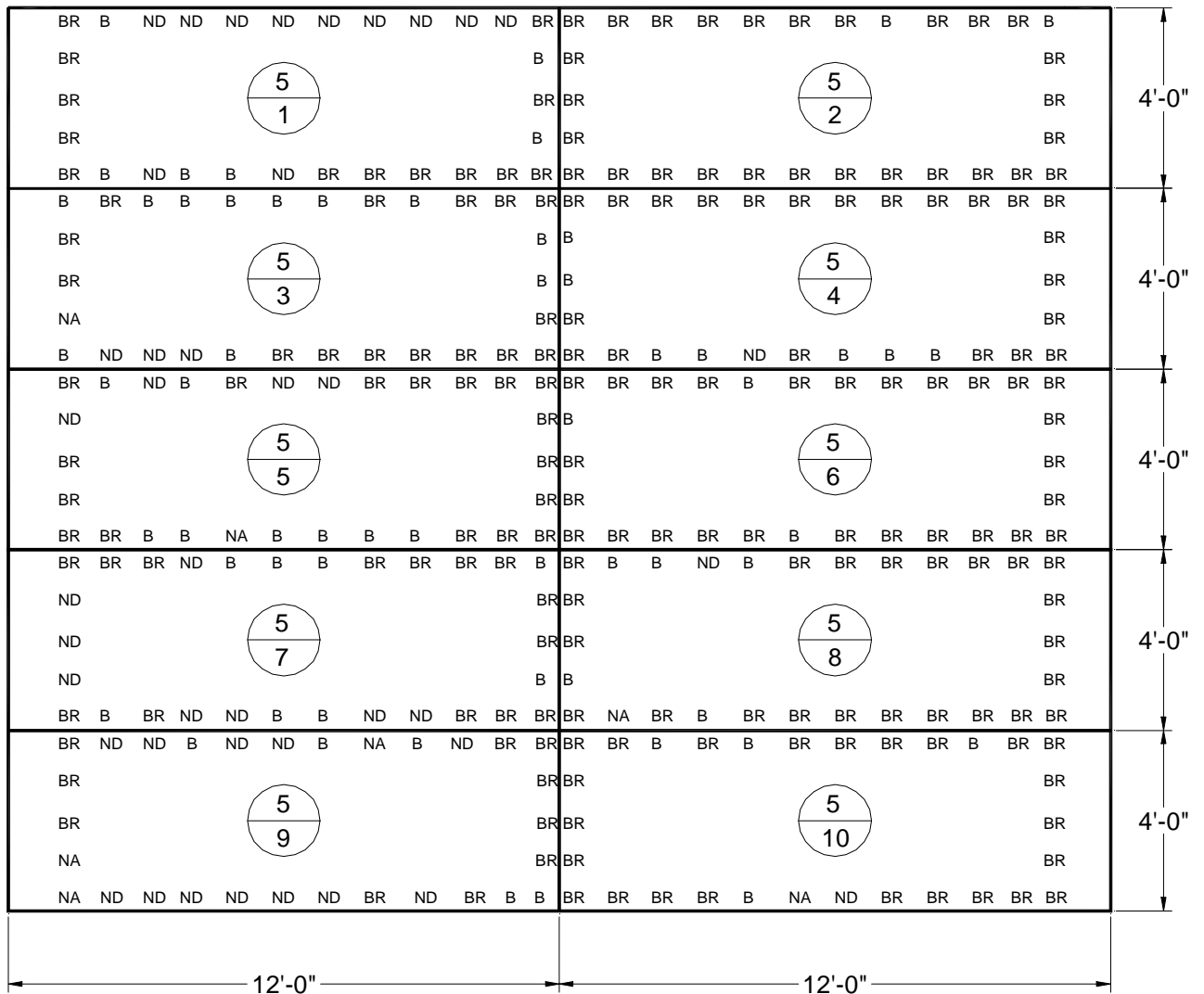


Figure B.6. Condition and location of screws attaching SIPs to timbers following failure of Assembly 5. (BR indicates broken screws, B indicates bent screws, ND indicates no damage to screws and NA indicates screws that could not be assessed or withdrawn.)