

CCC 145 POST LRT CONSTRUCTION/PRE-HIGH-RISE BLAST CRACK SURVEY



OTTAWA, ONTARIO October 17, 2019

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2019 10 17 19366

Carleton Condominium Corporation No. 145 % Des Services 2339 Ogilvie Road, Box 46104 Ottawa, ON K1J 8M6

Attn: Ms. Josee Deslongchamps

CCC 145 - POST LRT CONSTRUCTION / PRE-HIGH-RISE BLAST - CRACK SURVEY

Dear Ms. Deslongchamps:

At your request, Keller Engineering performed a follow-up crack survey of all unit interiors and the garage of Carleton Condominium Corporation No. 145 (CCC No. 145) located at 151 Bay Street in Ottawa, ON. A garage crack survey was first requested prior to the tunneling project of the LRT. The follow-up crack survey was conducted on July 29, 2019 as the LRT reached substantial completion and as construction began of a new high-rise tower in the parking lot on Slater and Lyon, adjacent to CCC No. 145.

The history of crack surveys is as follows:

- 1. March 5, 2013 Garage, installation of crack monitoring gauges at locations shown on the appended drawings
- 2. March 31, 2014 North Wing unit interiors (07, 08, 09, 10, 11) prior to LRT tunneling
- 3. February 9, 2015 North Wing unit interiors upon completion of tunneling
- 4. May 8, 2015 04 unit interiors
- 5. July 29, 2019 all unit interiors, upon substantial completion of LRT, discussed in this report
- 6. August 6, 2019, Garage, previously installed crack monitoring gauges and visual assessment of the existing cracks, discussed in this report

CCC No. 145 is a 38-year old, 13-storey apartment building containing 141 residential units. The building structure consists of reinforced concrete cladded with brick veneer. The interiors of the units are painted drywall ceiling and walls with varying types of finished flooring. The corridors walls are covered with wallpaper. The parking garage structure consists of typical two-way concrete slabs supported on concrete columns. Repairs to the parking garage were carried out in 2010.

Our condition documentation and assessment work consisted of the following:

- visual observation of existing and new interior cracks
- illustration of survey findings
- monitoring of garage crack size using gauges



DISCUSSION

Based on the periodic surveys of the unit interiors, new cracks developed in the interior finishes of the majority of the units during the time that the tunneling for the LRT project was occurring adjacent to the building. While some cracking in the drywall ceilings and walls were pre-existing, 88 new or expanded cracks were observed on the walls and 65 new or expanded cracks were observed in the ceiling, after substantial completion of the LRT. Units ending in 01, 02, 03, 05, and 06 were inspected for the first time in 2019. Although there is no record of pre-existing conditions for these units, 258 cracks were observed on the walls and 162 cracks were observed on the ceiling.

The gauges installed on pre-existing cracks in the garage foundation walls were monitored since their original installation in 2013. During this monitoring period, no significant movement was noted at these gauges. Follow-up inspections of the garage crack survey did not note any significant increases in the number of cracks or cracks in size.

Upon completion of the most recent crack survey; the construction of the neighboring high rise was beginning. Upon completion of the construction, an additional survey should be carried out to document the most up to date condition of both the units and garage.

The accumulated findings of the surveys are included in Appendix A.

Trusting this meets with your present requirements, please feel free to contact us should you require further information.

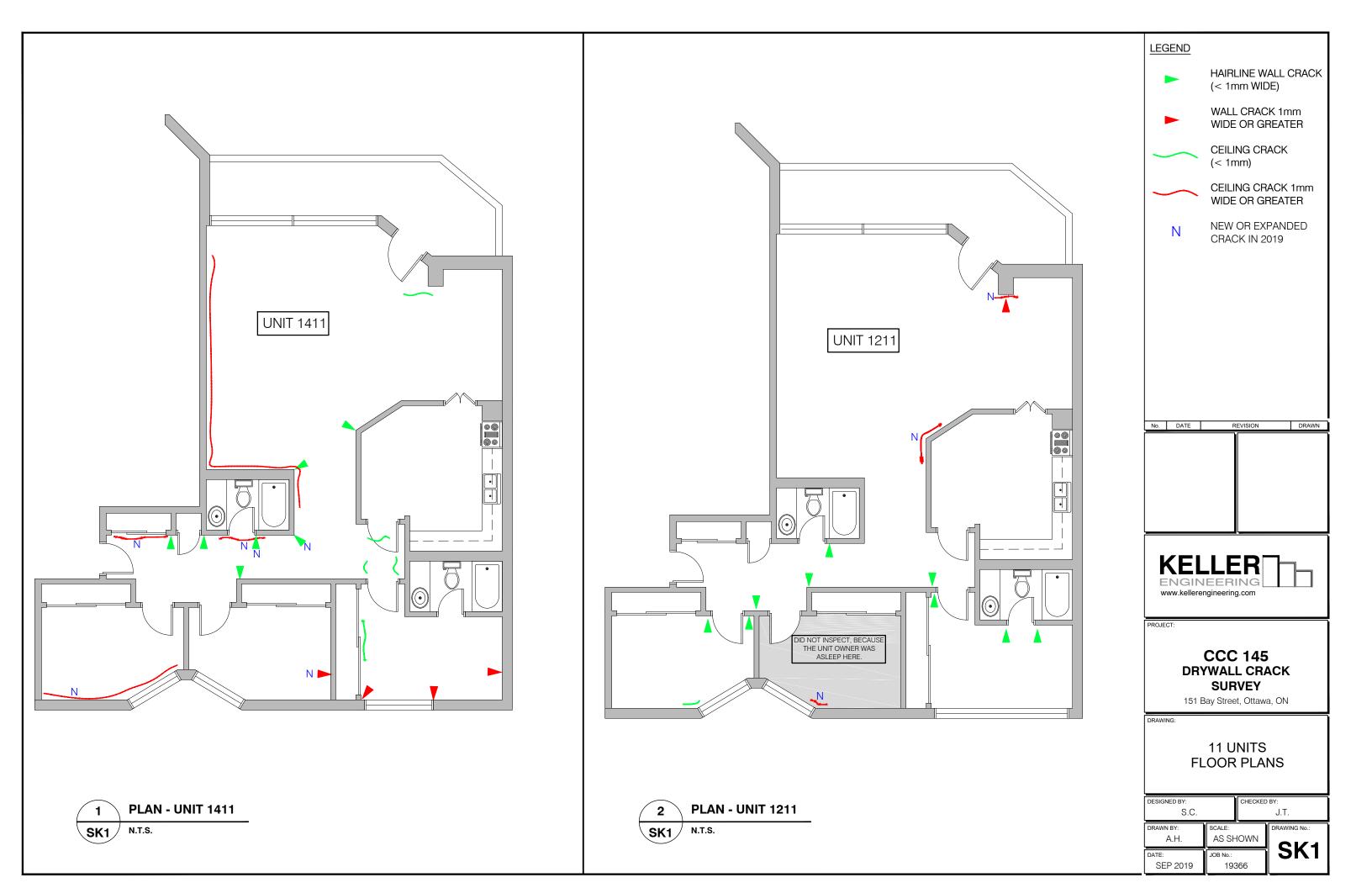
Sincerely,

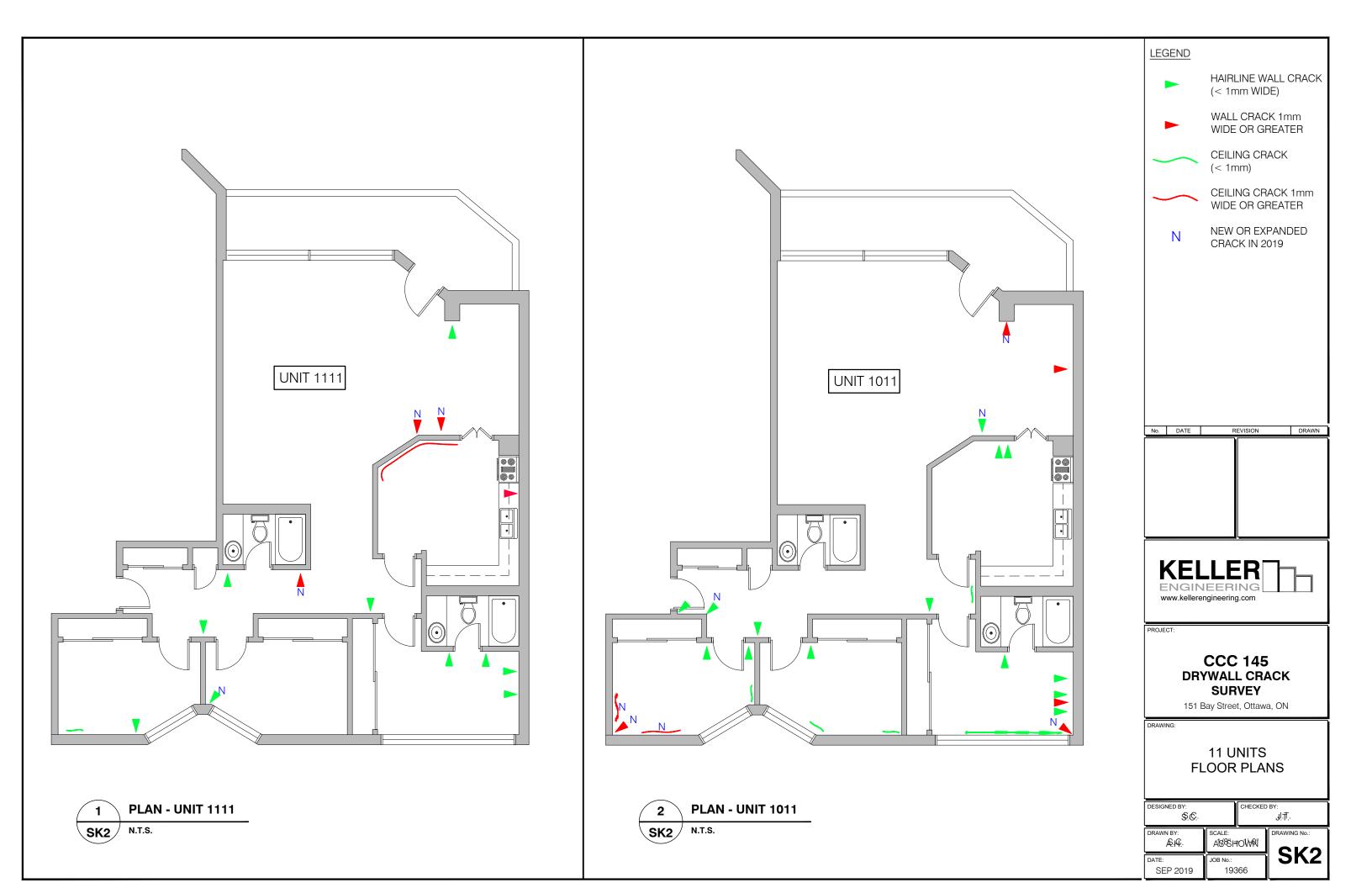
Steve Christison, P.Eng

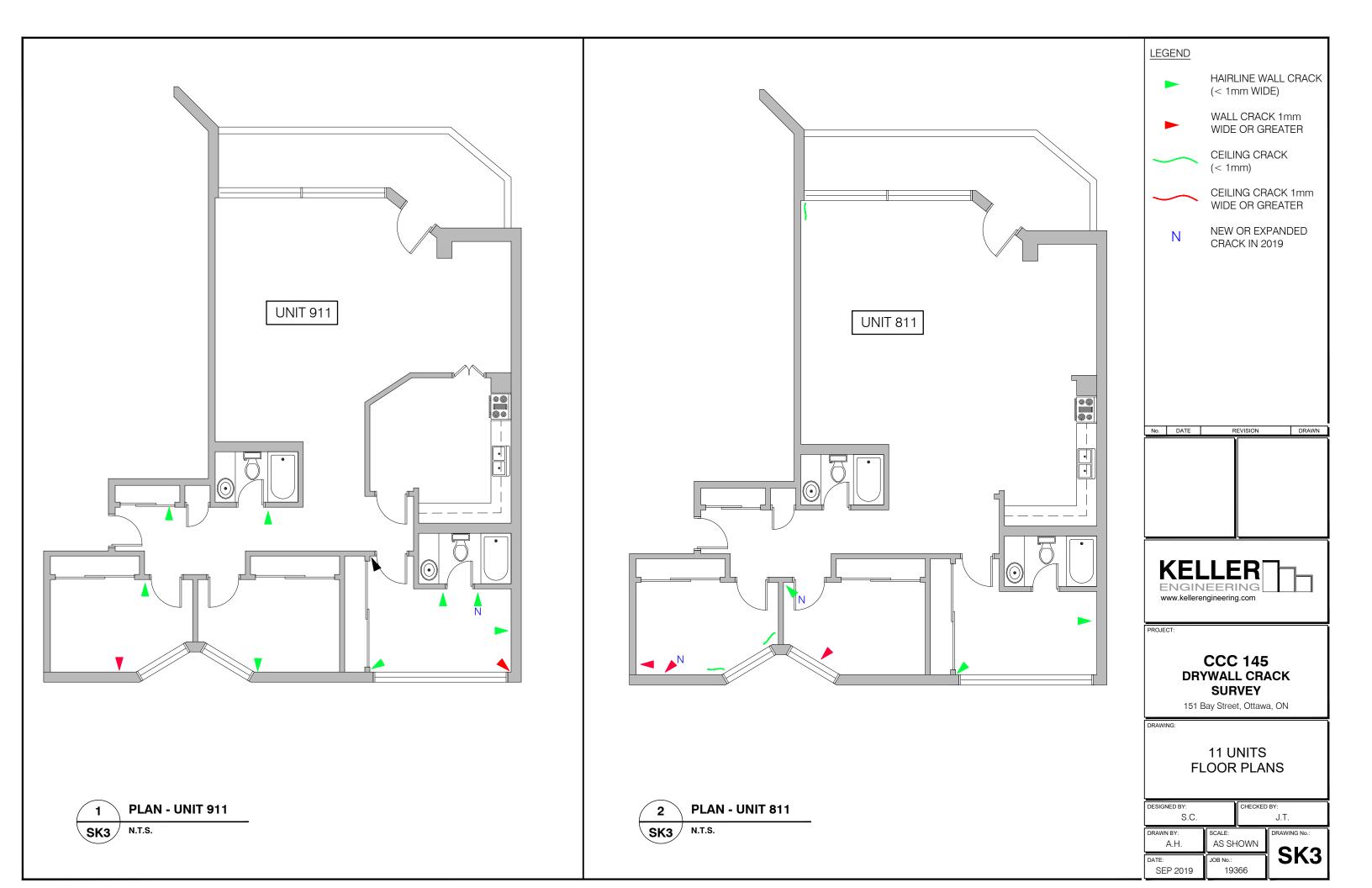


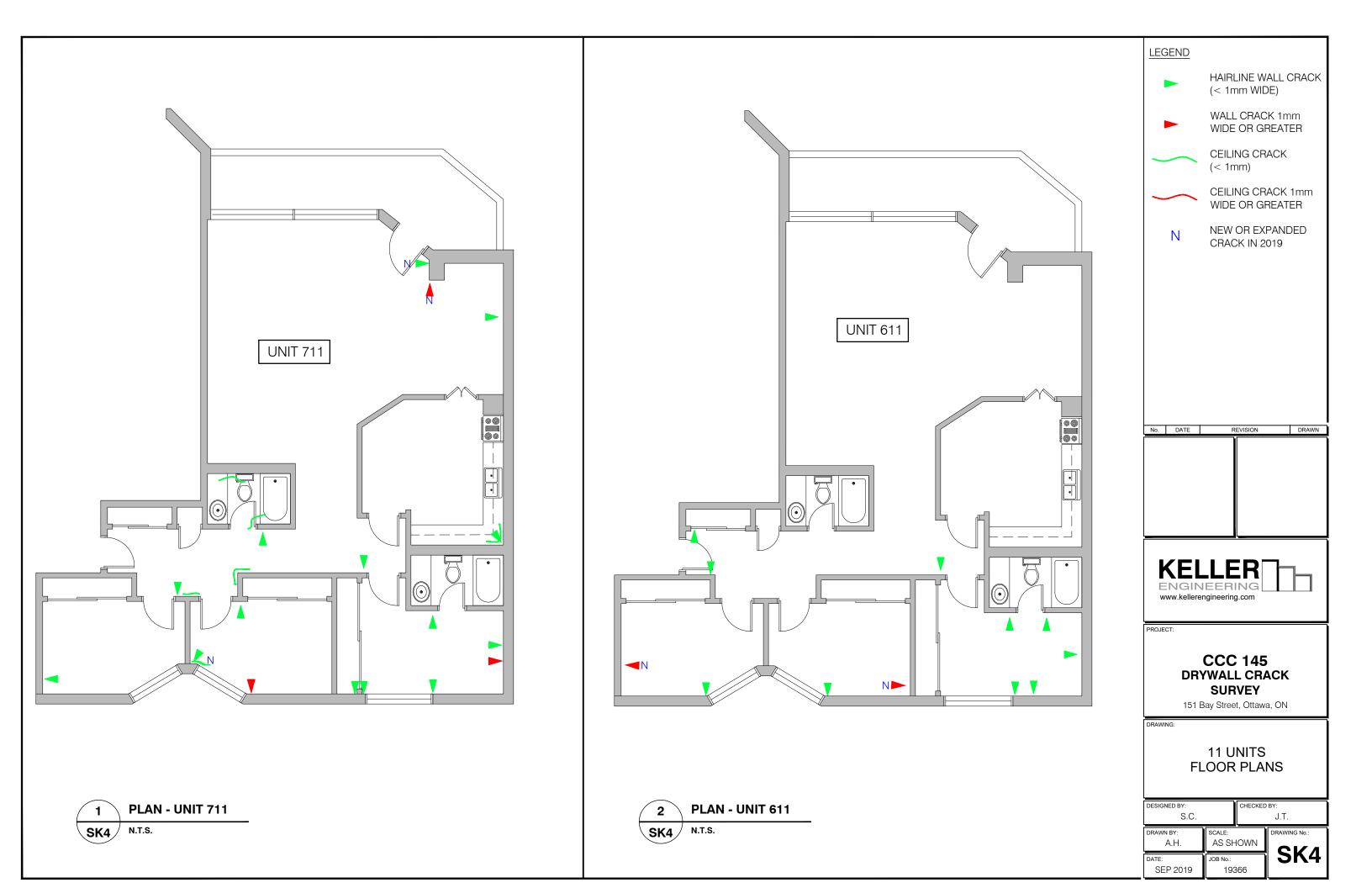
APPENDIX A CRACK SURVEY

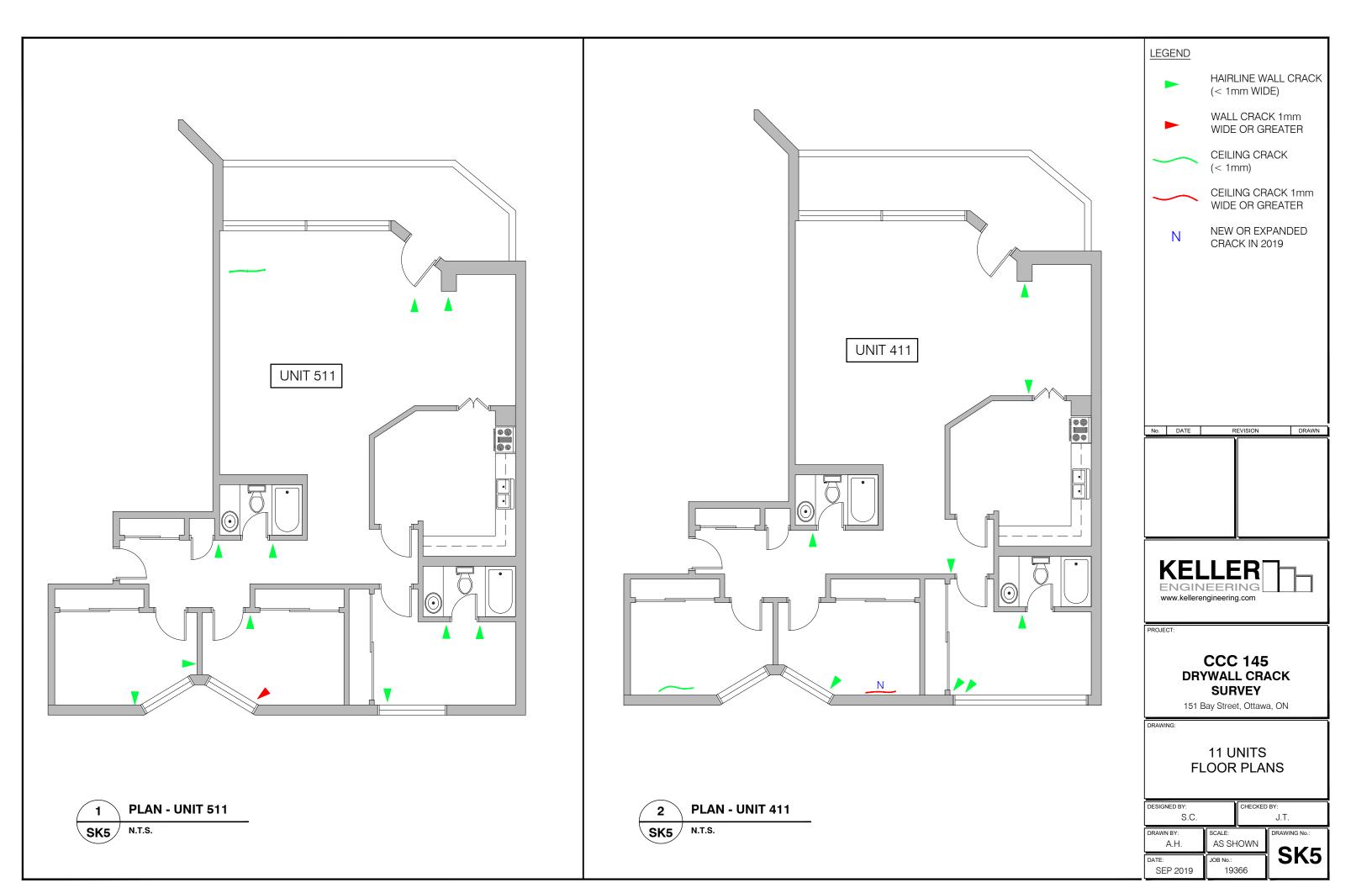


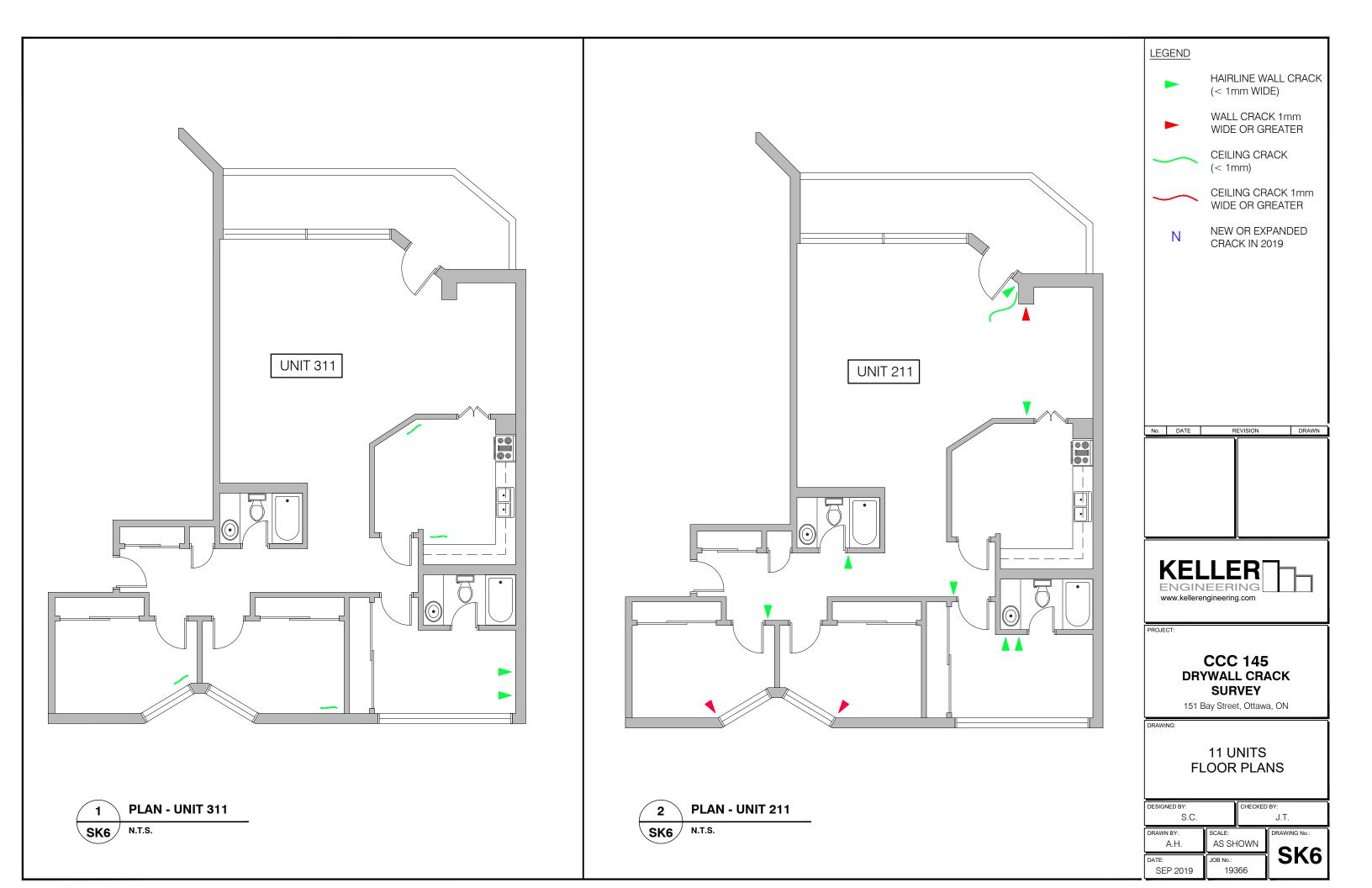


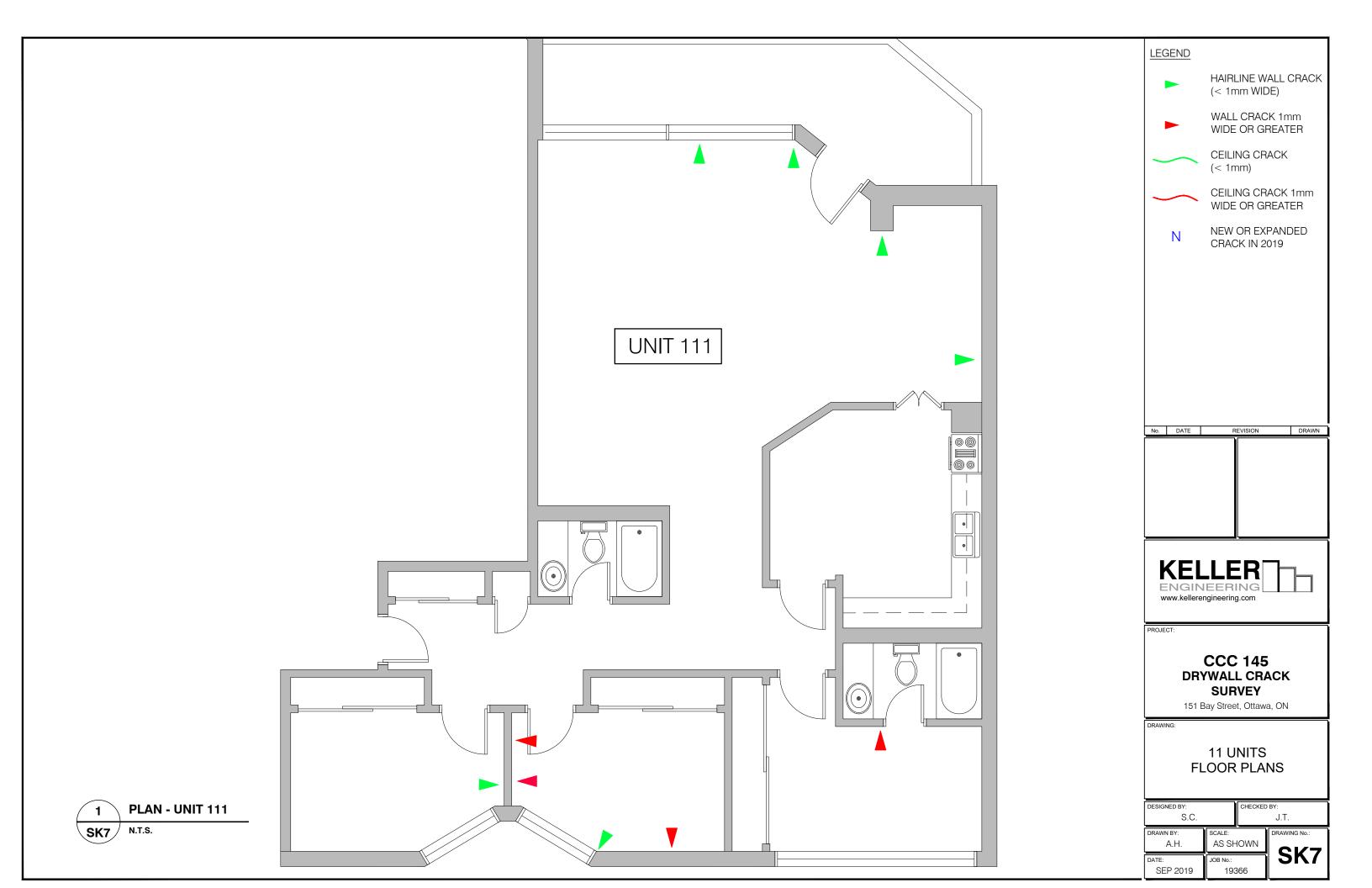


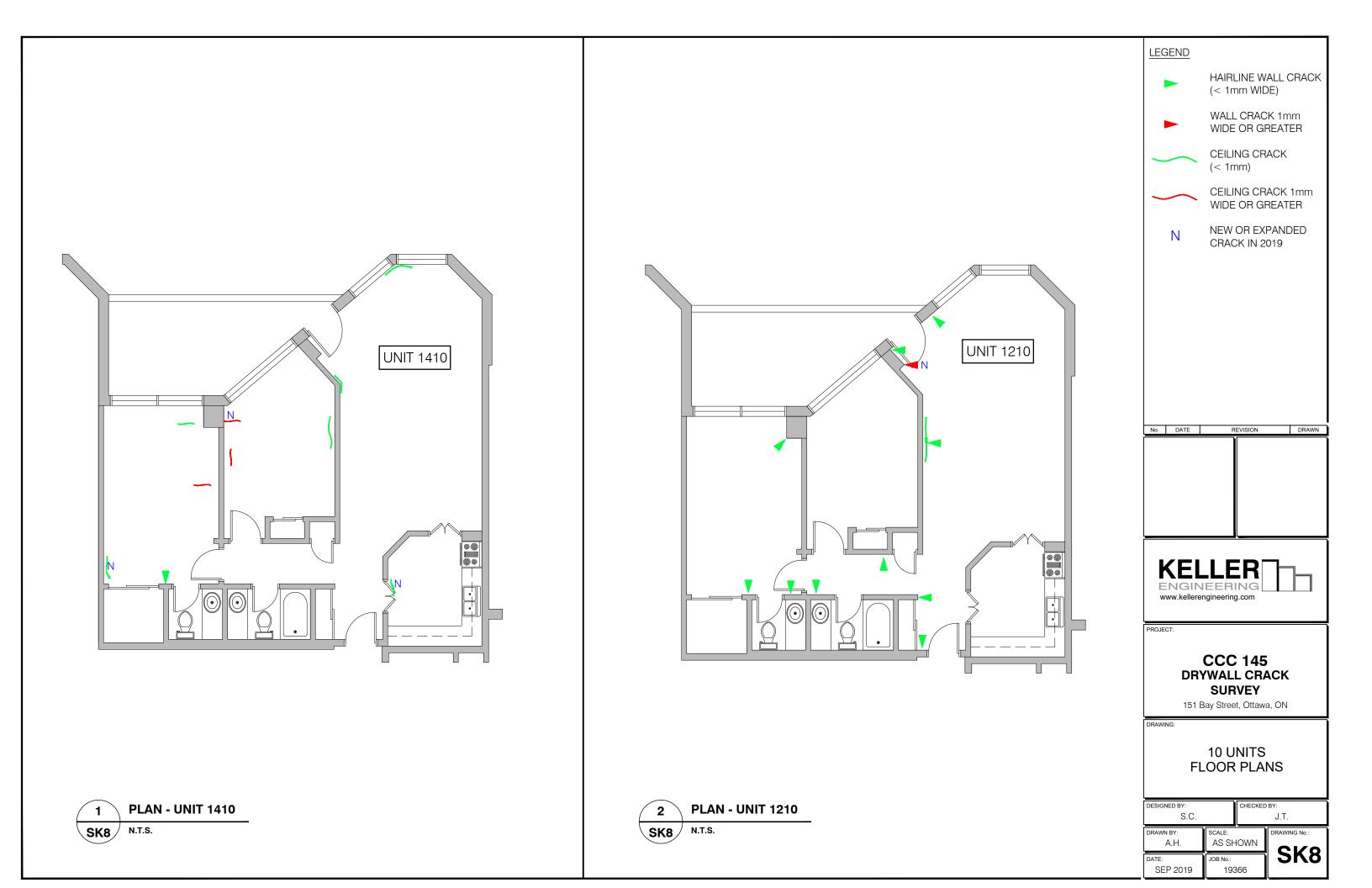


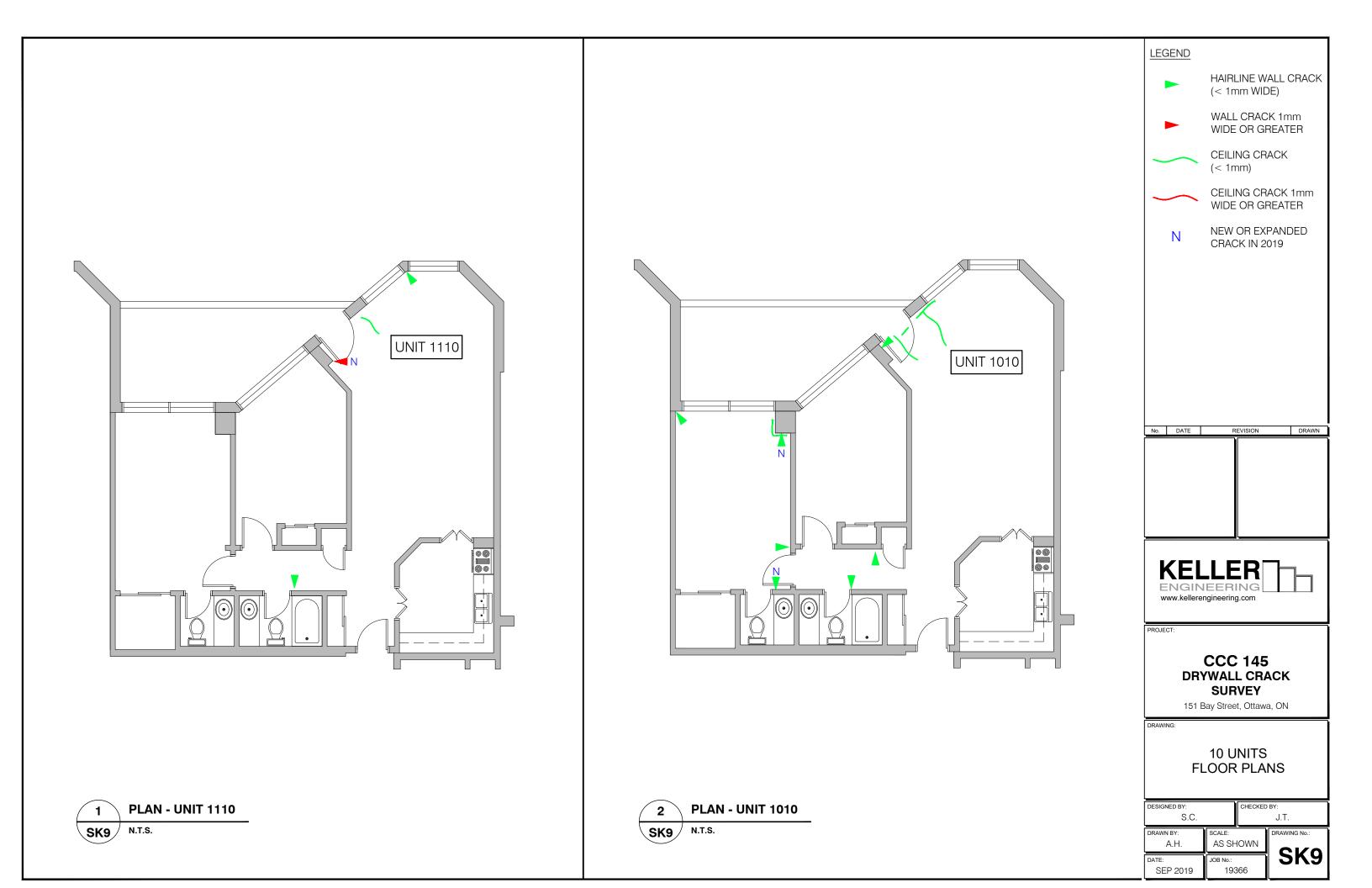


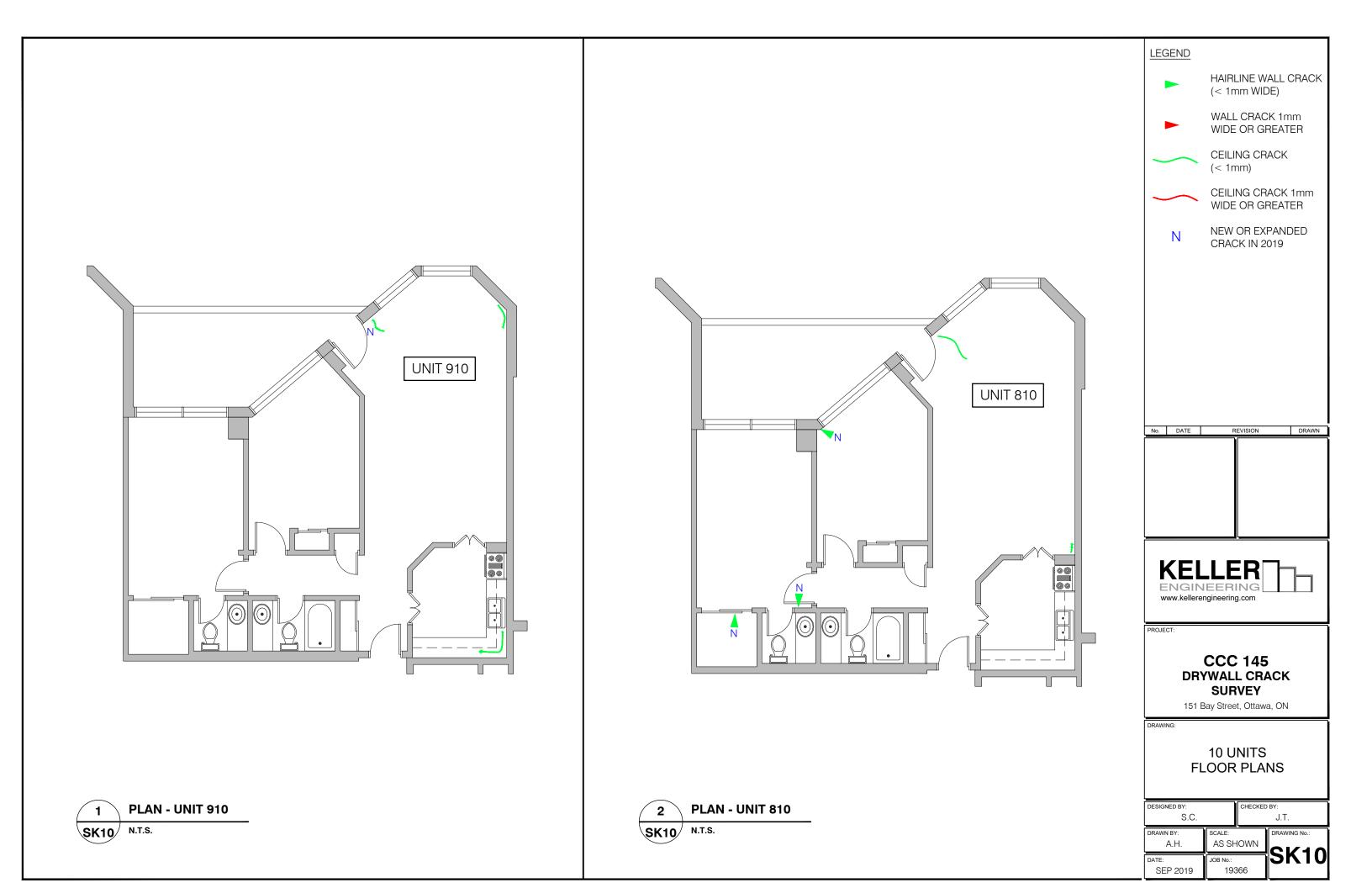


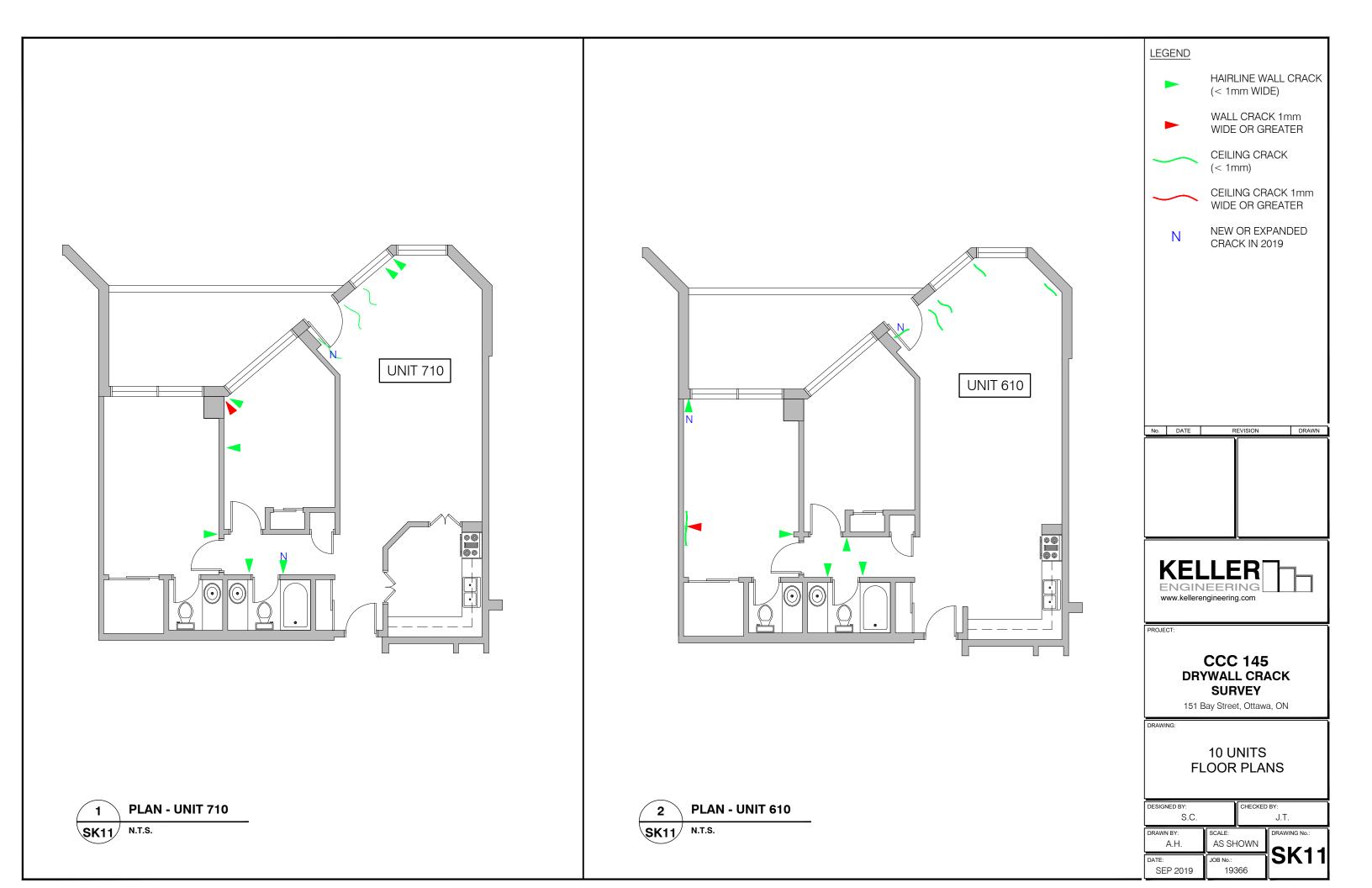


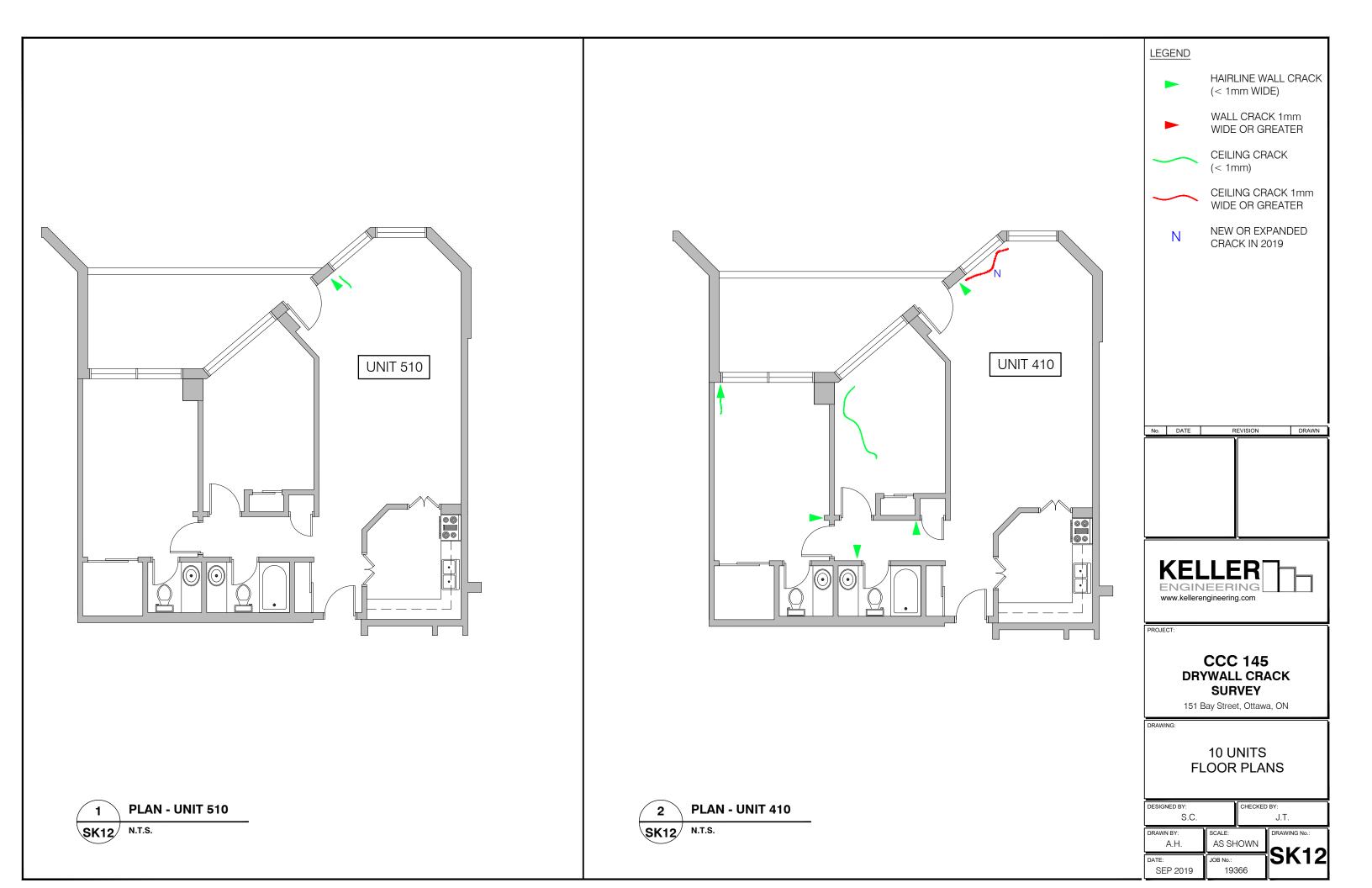


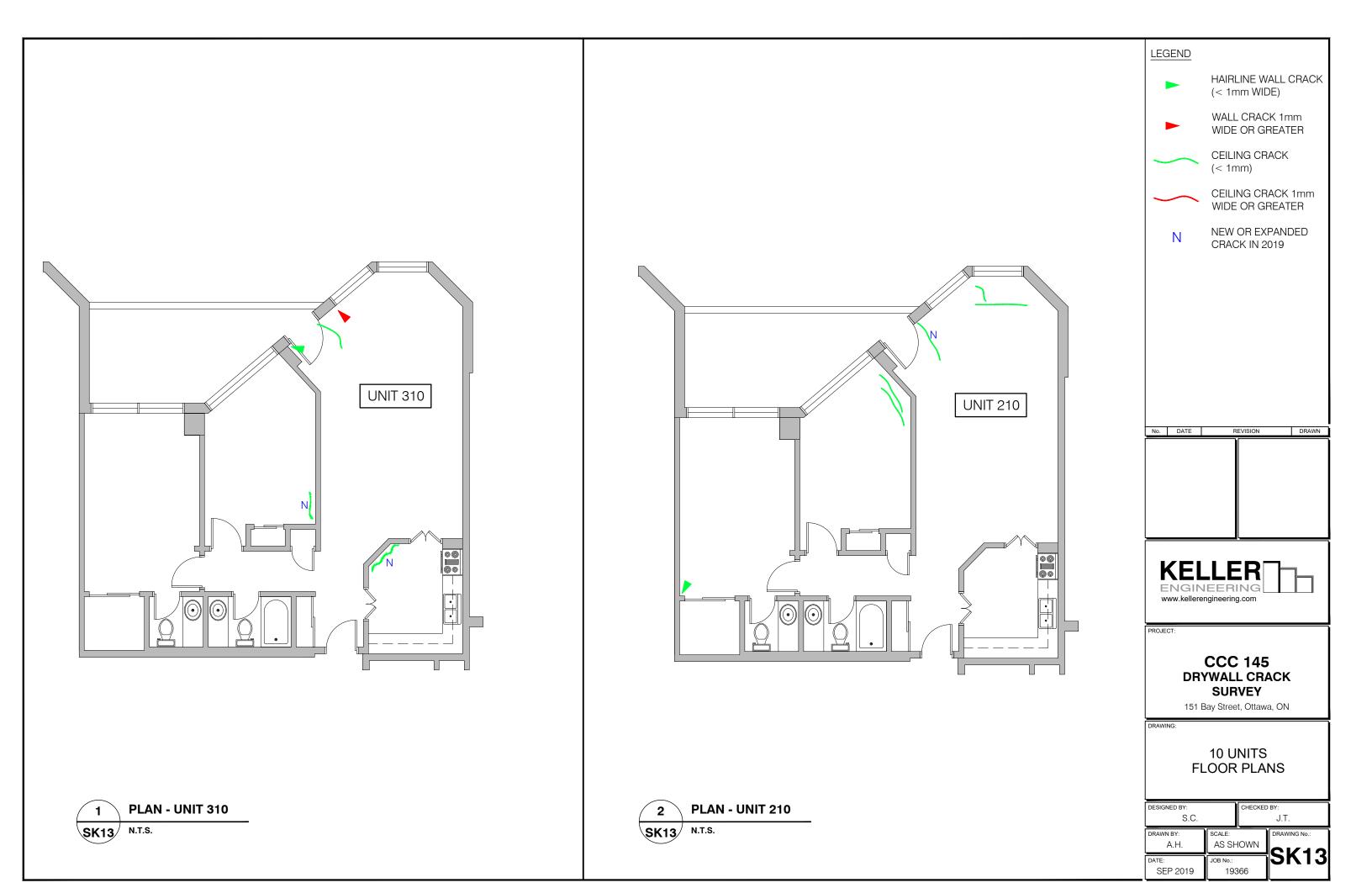


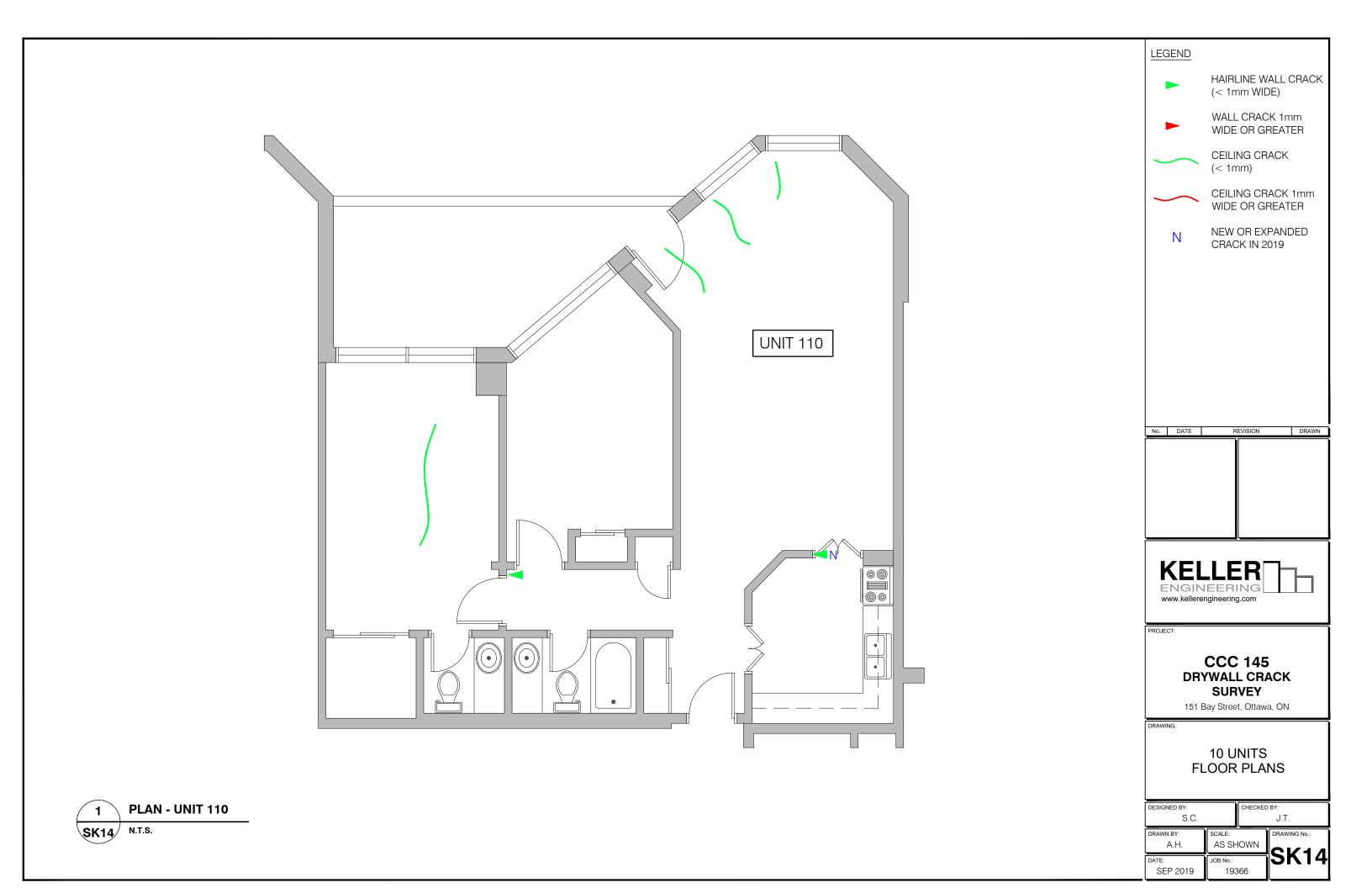


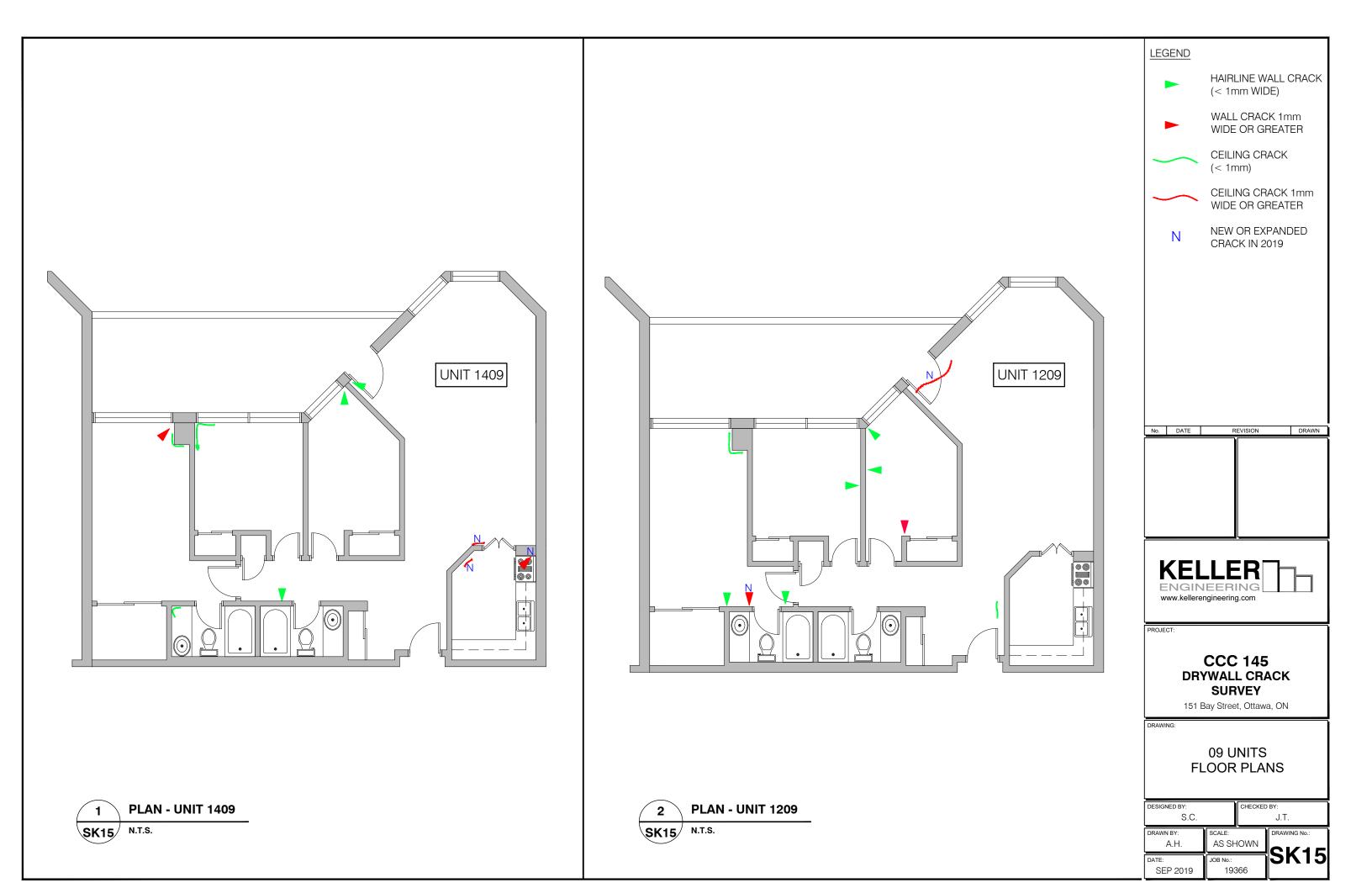


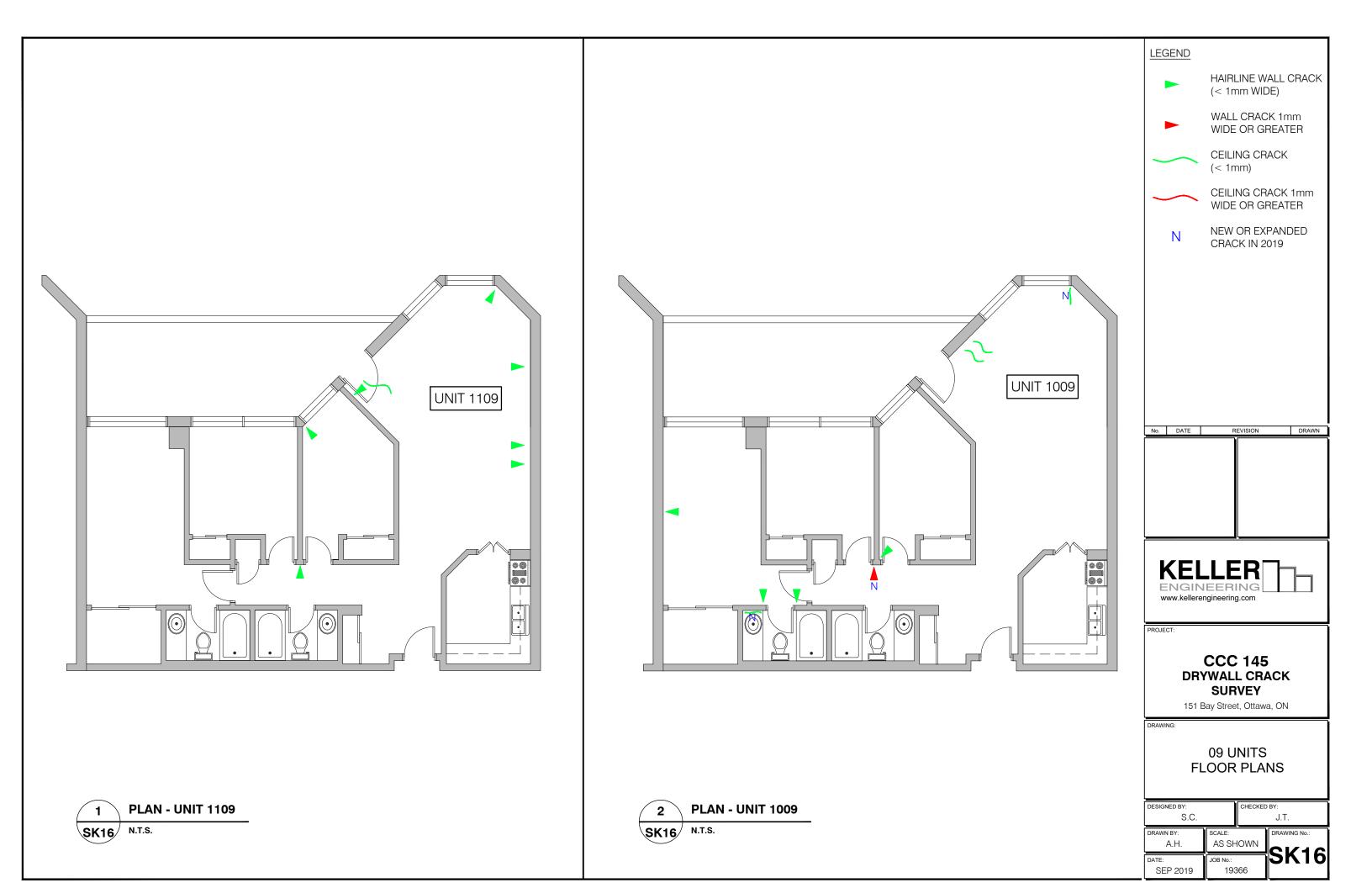


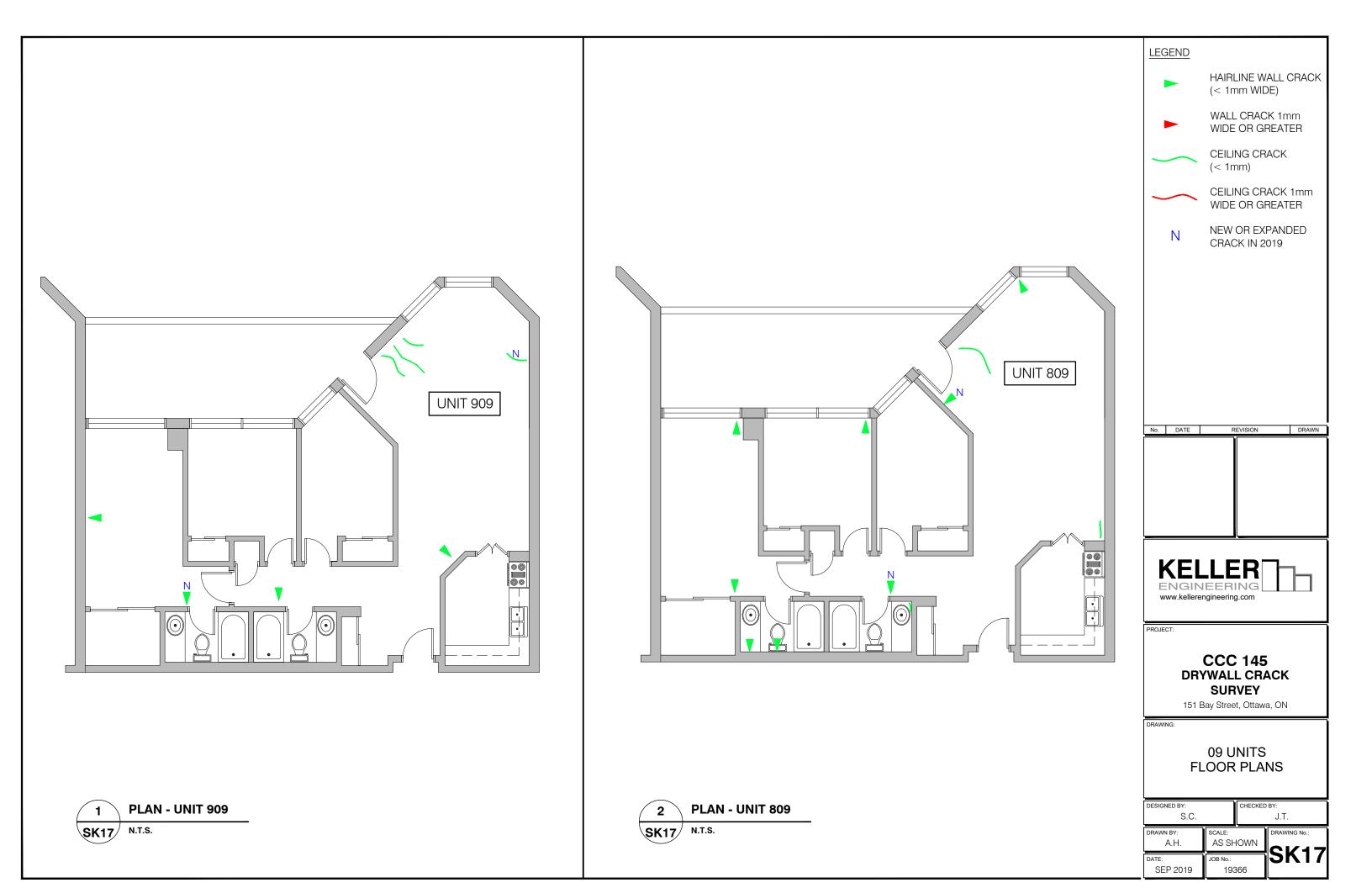


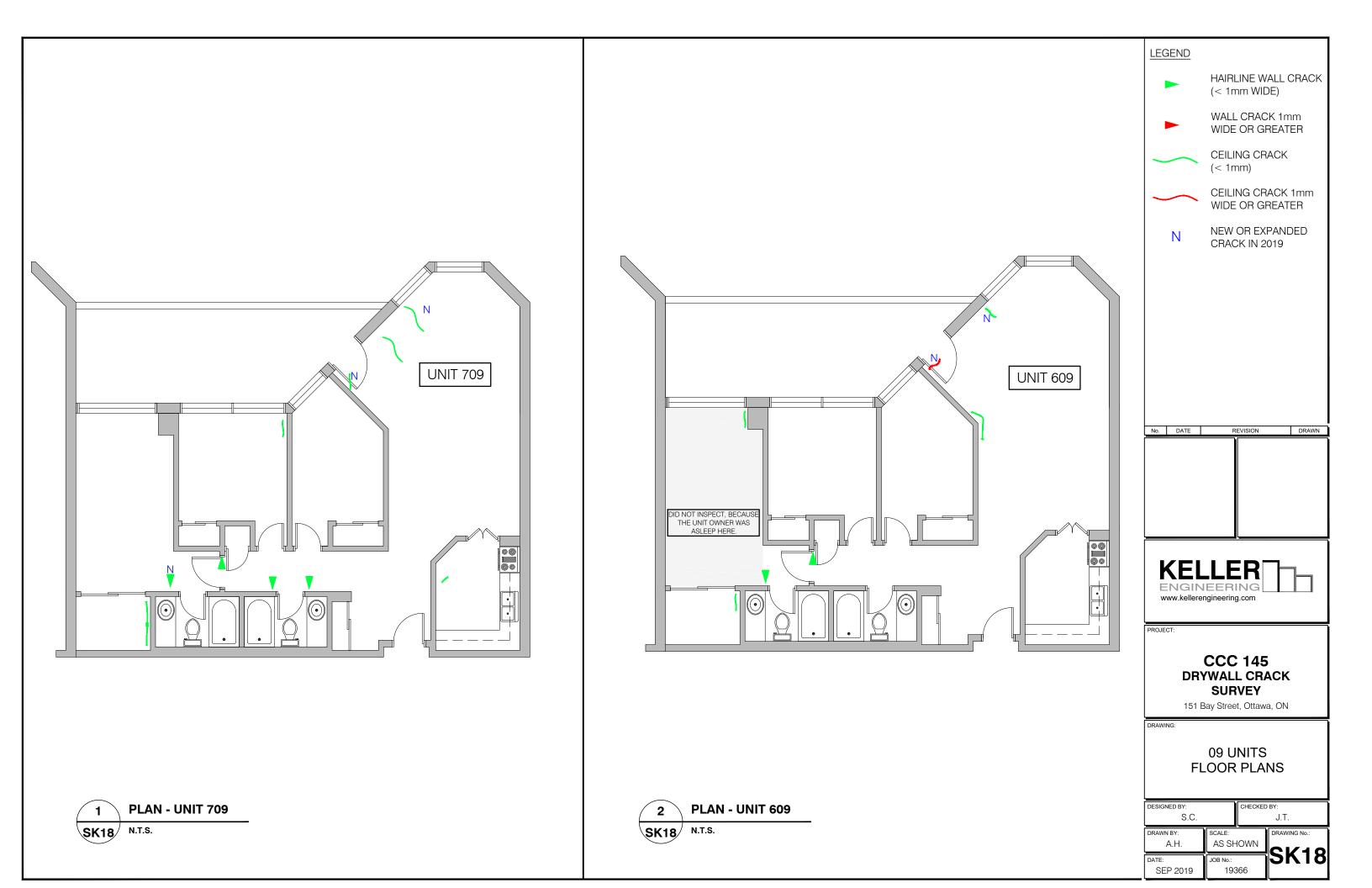




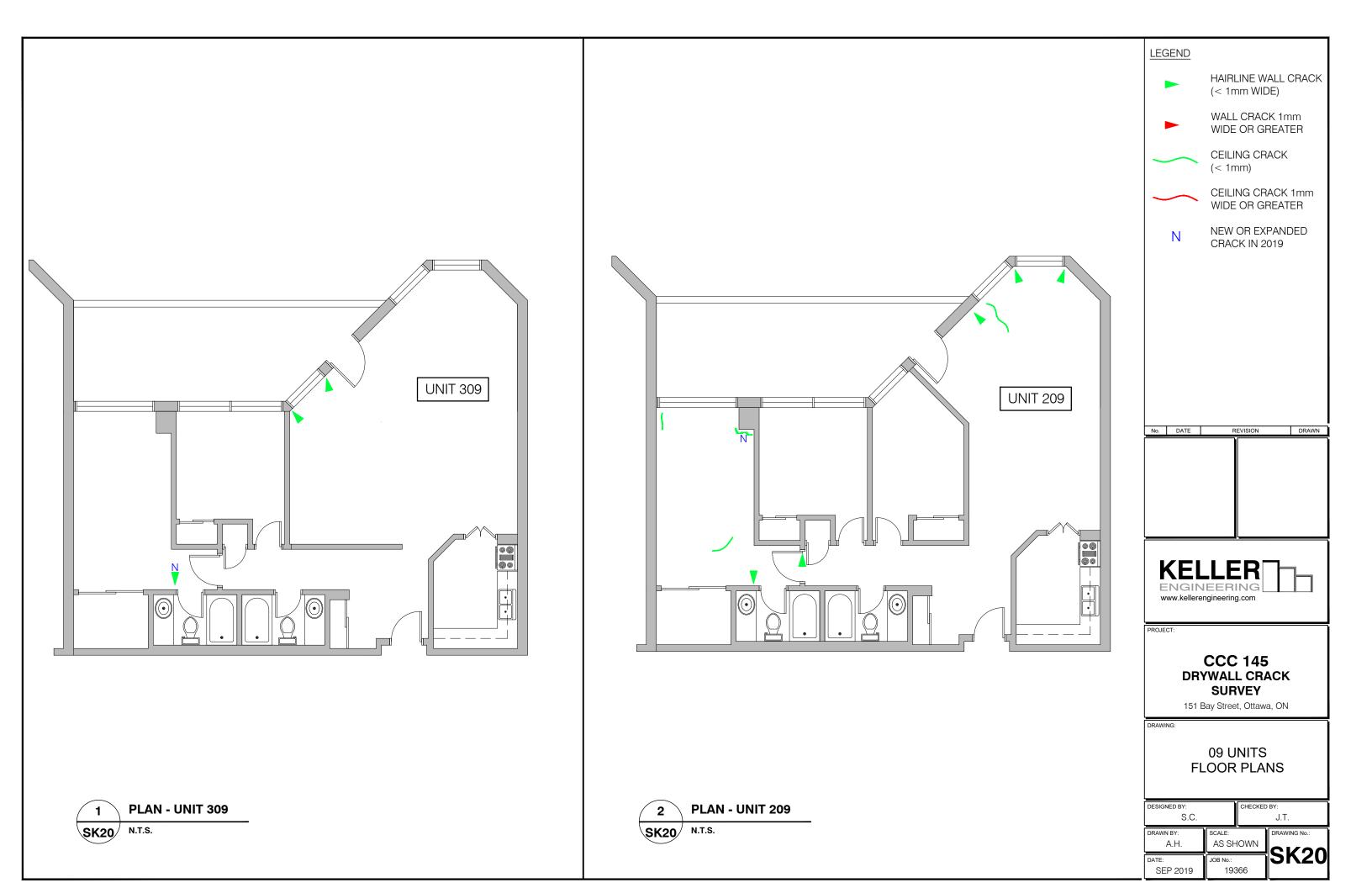


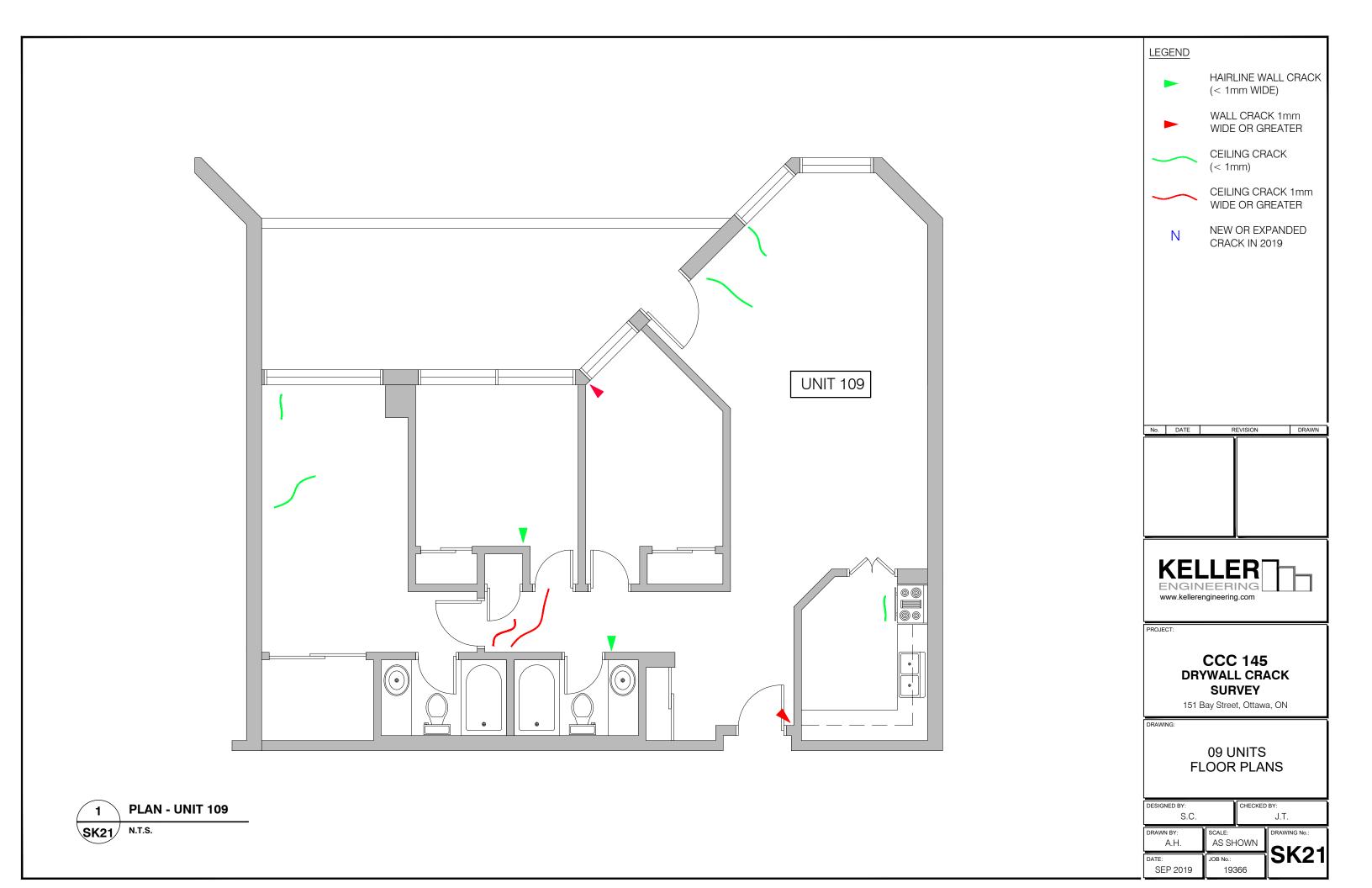


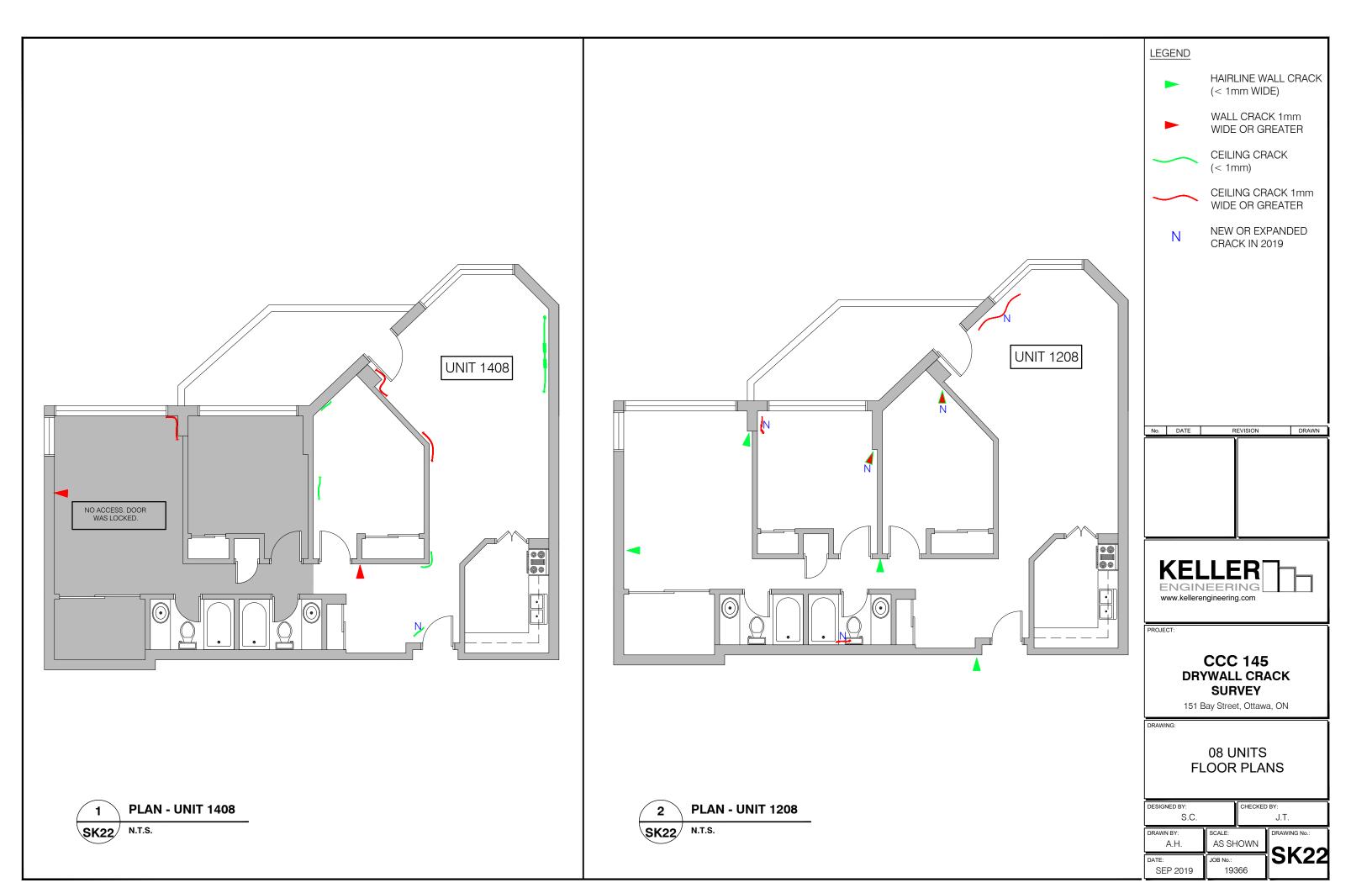




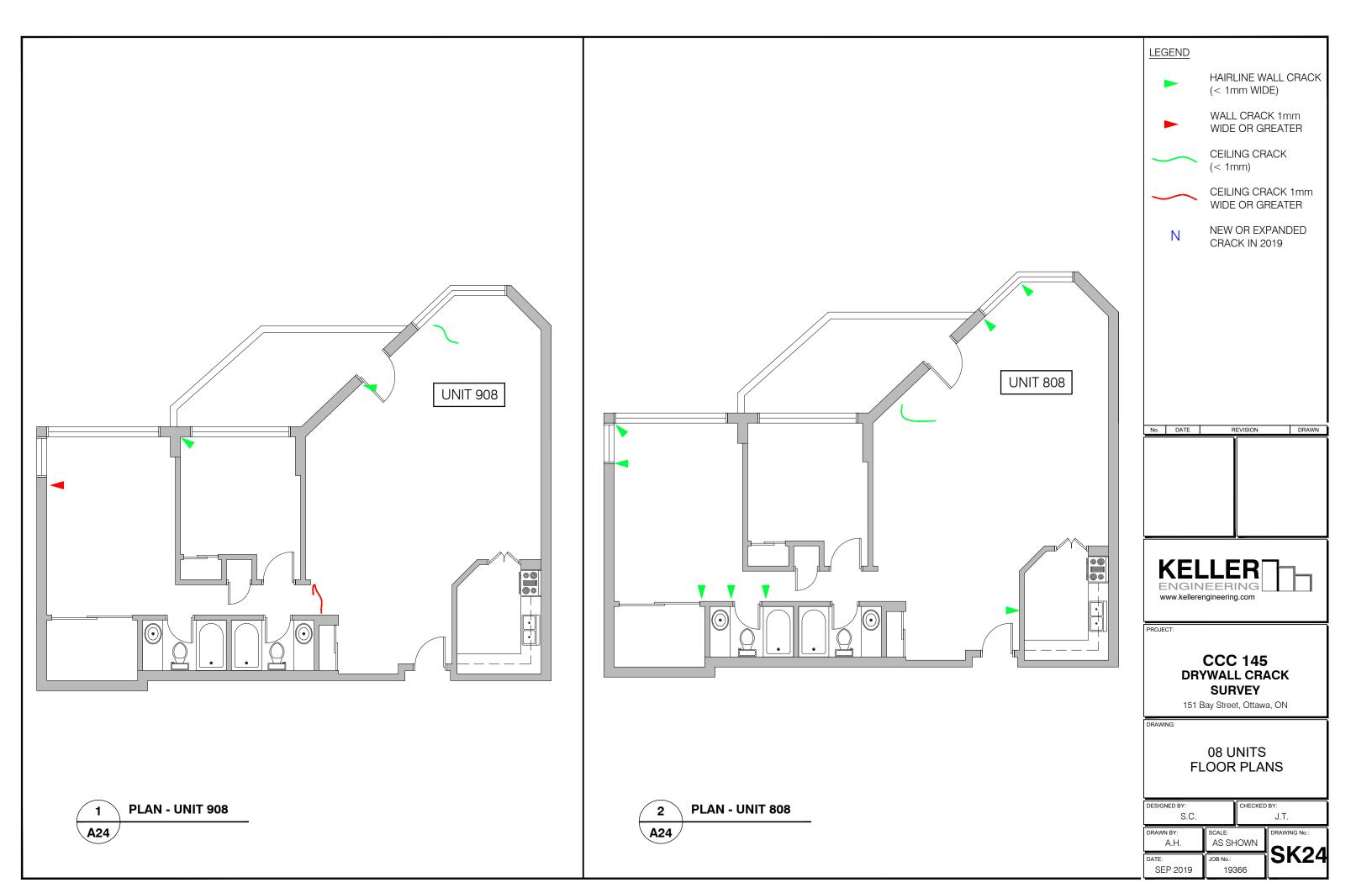


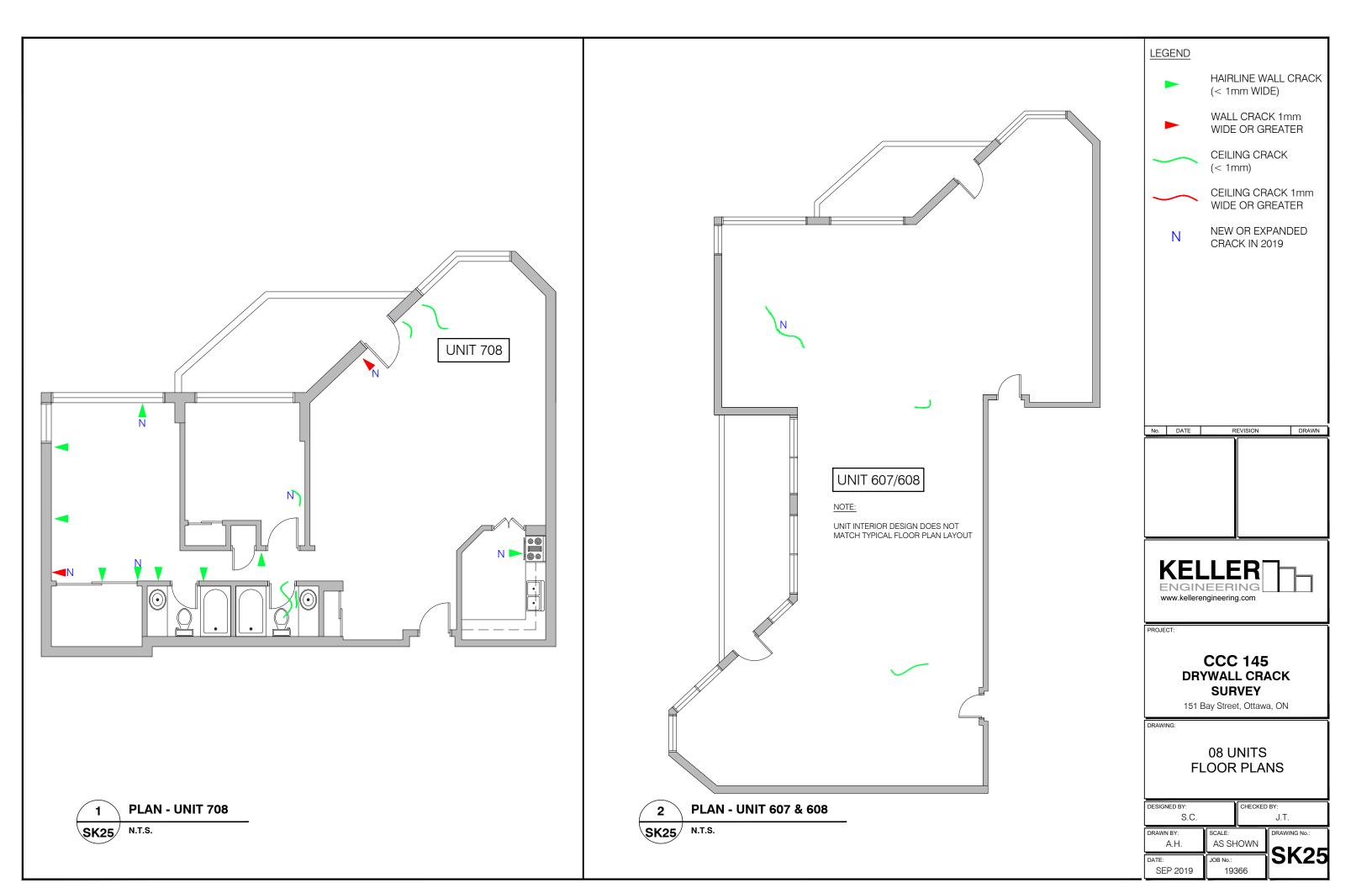


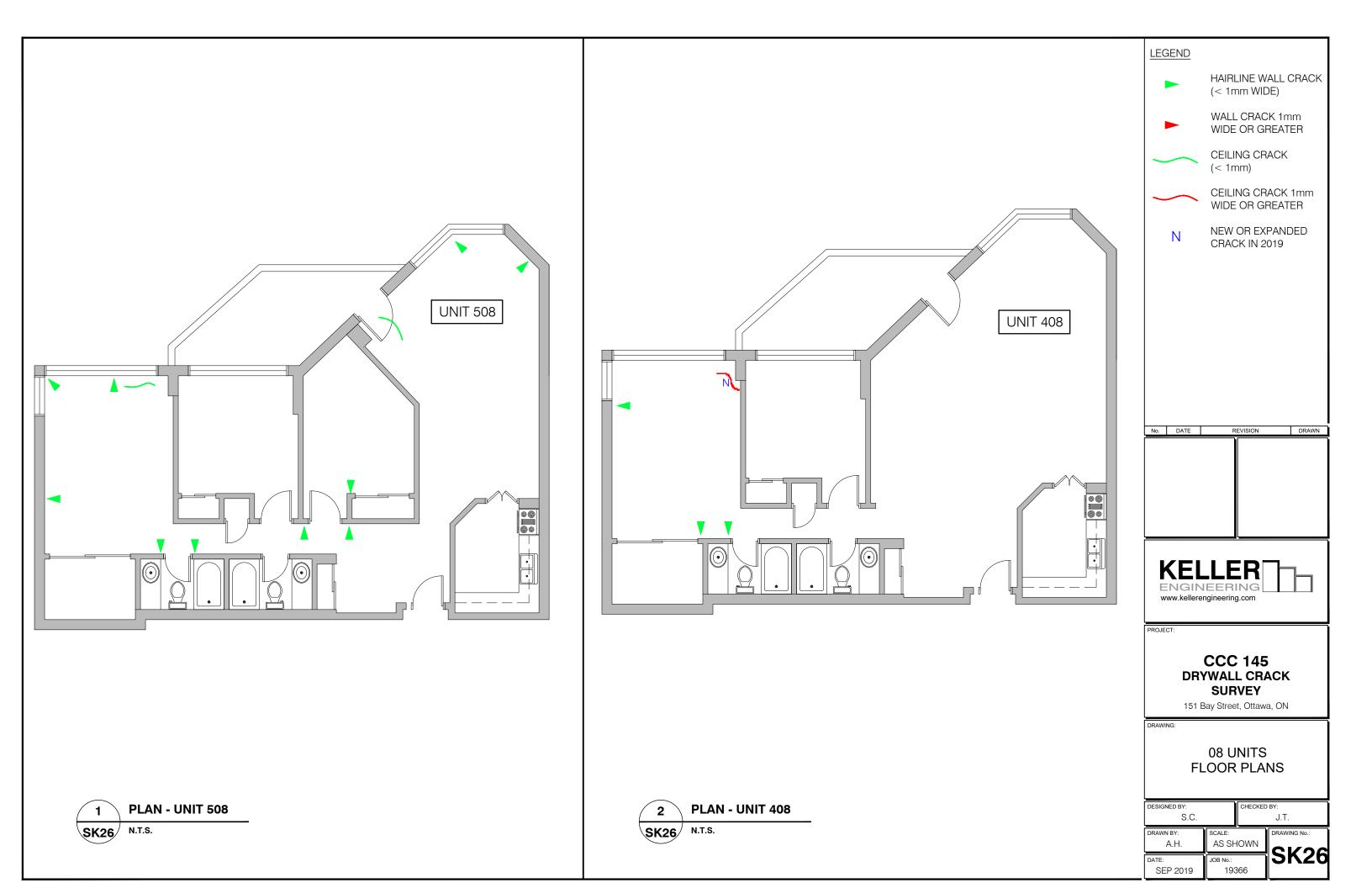




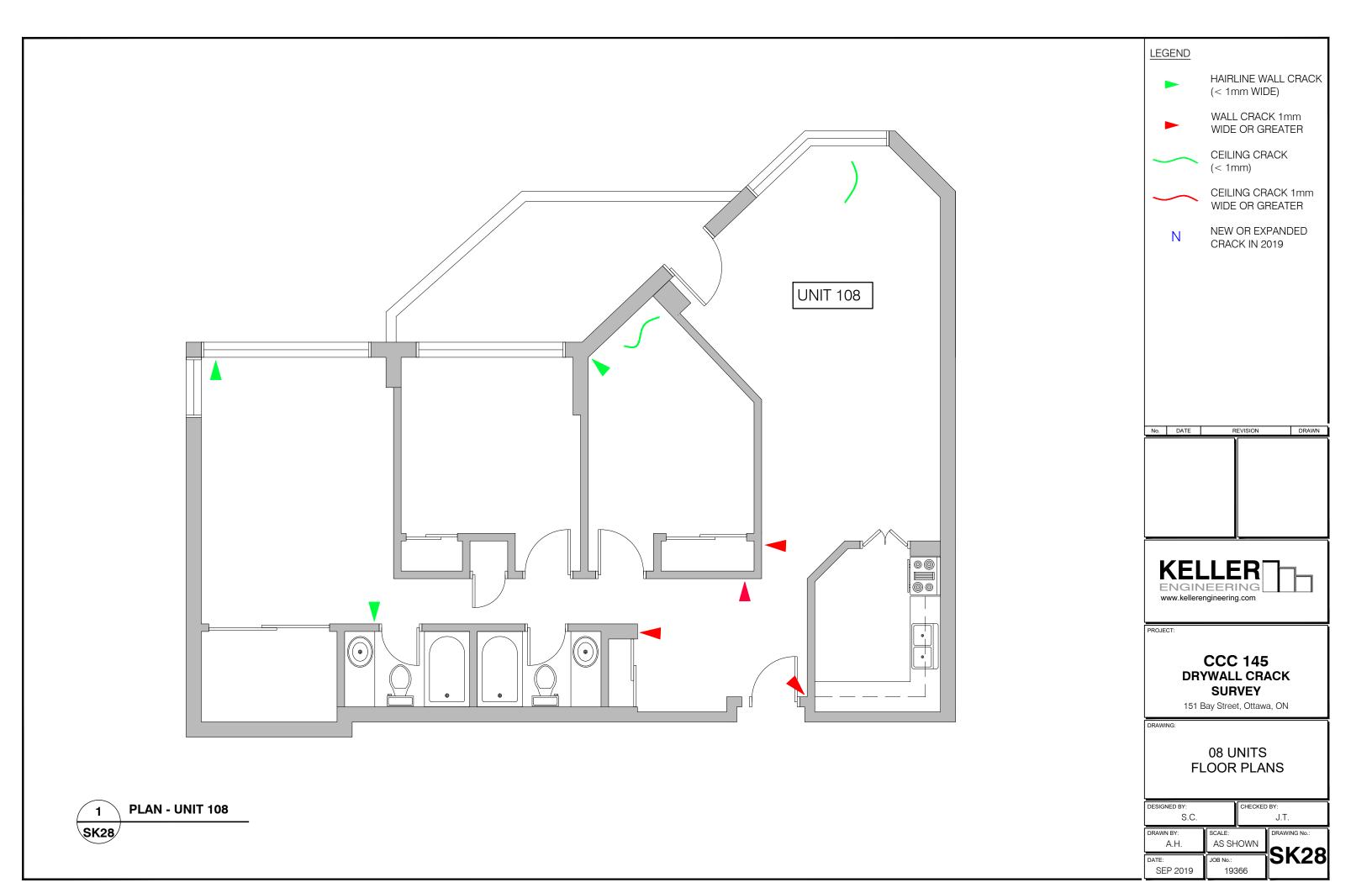




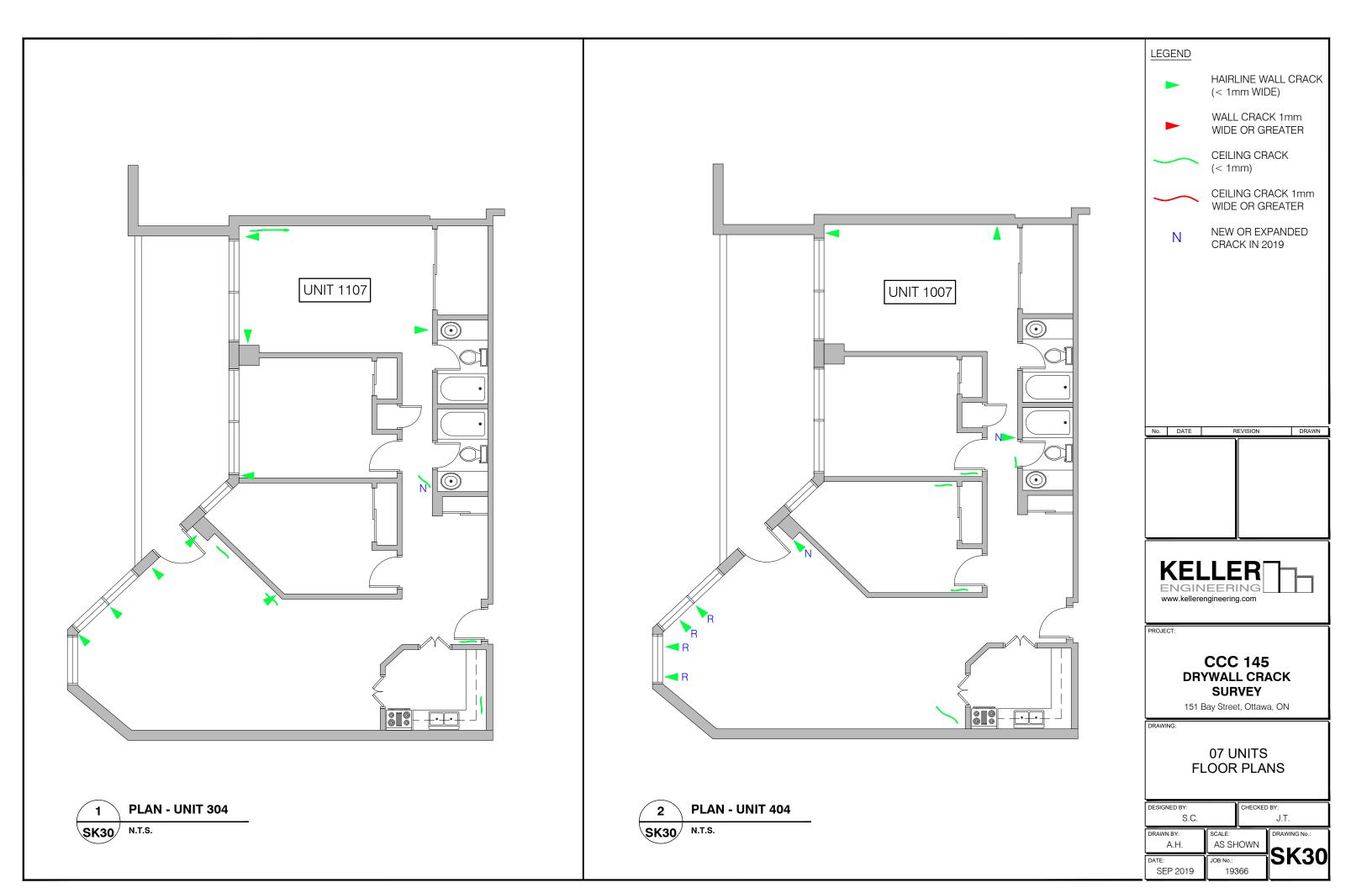


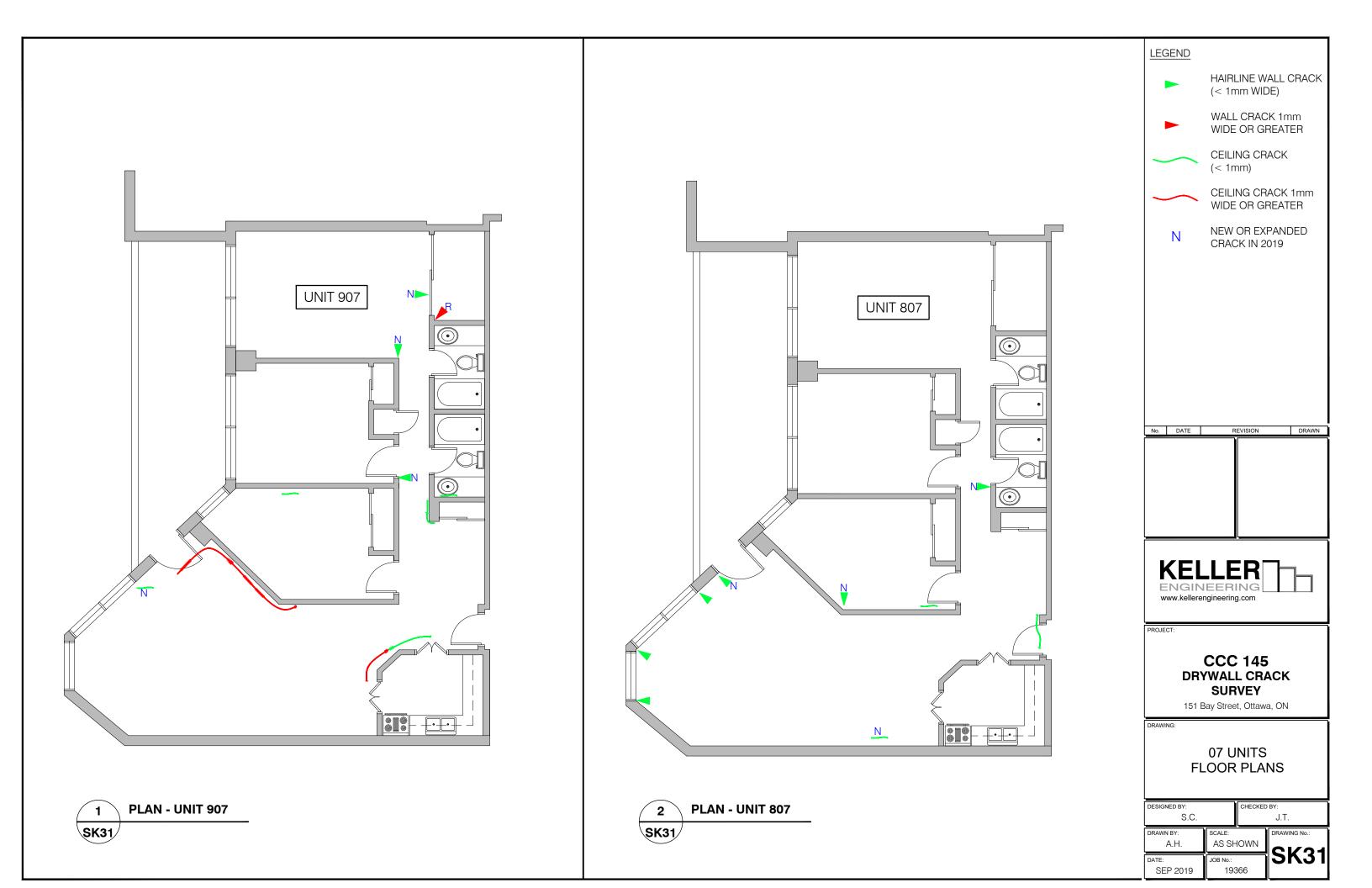


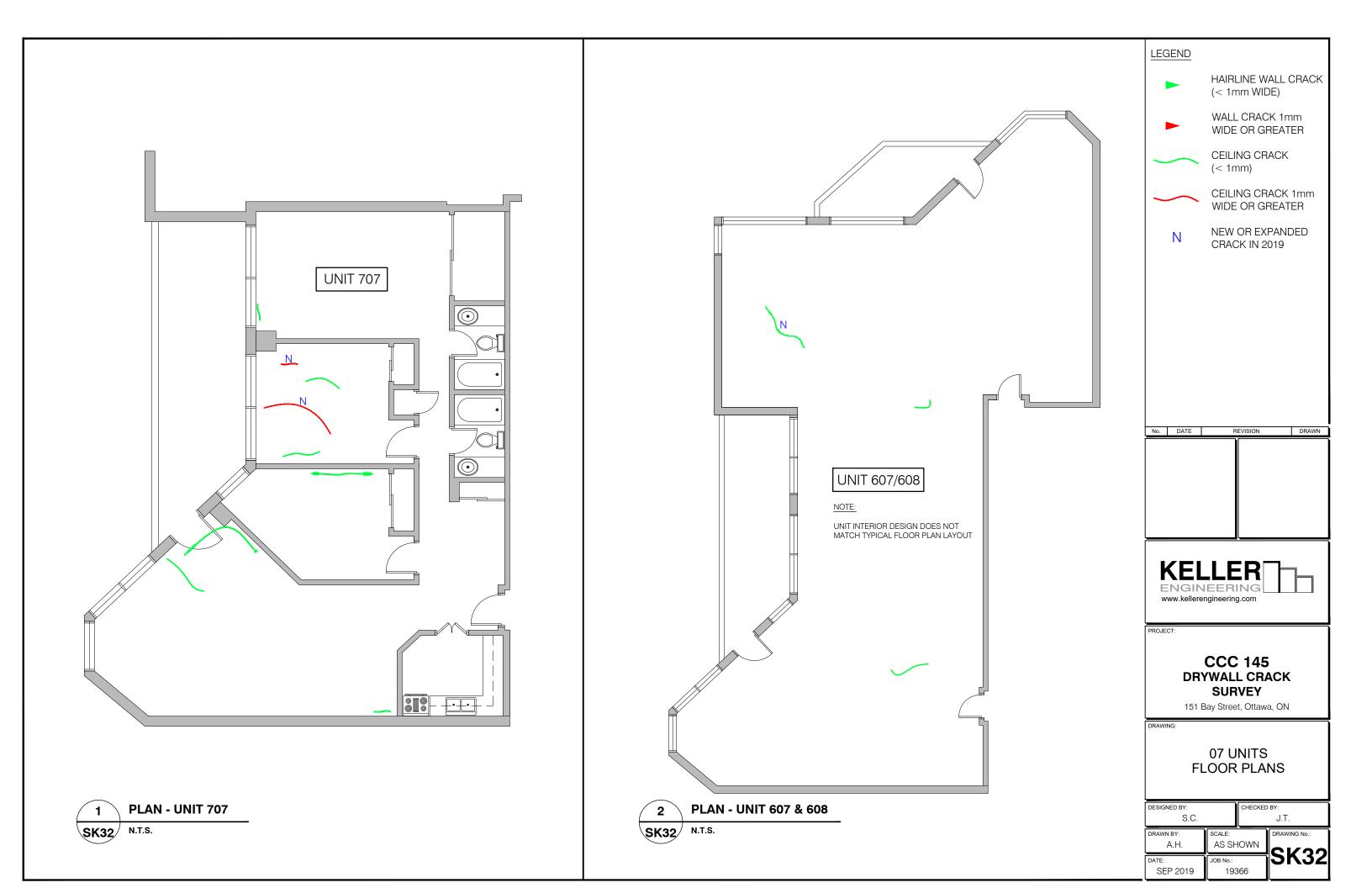


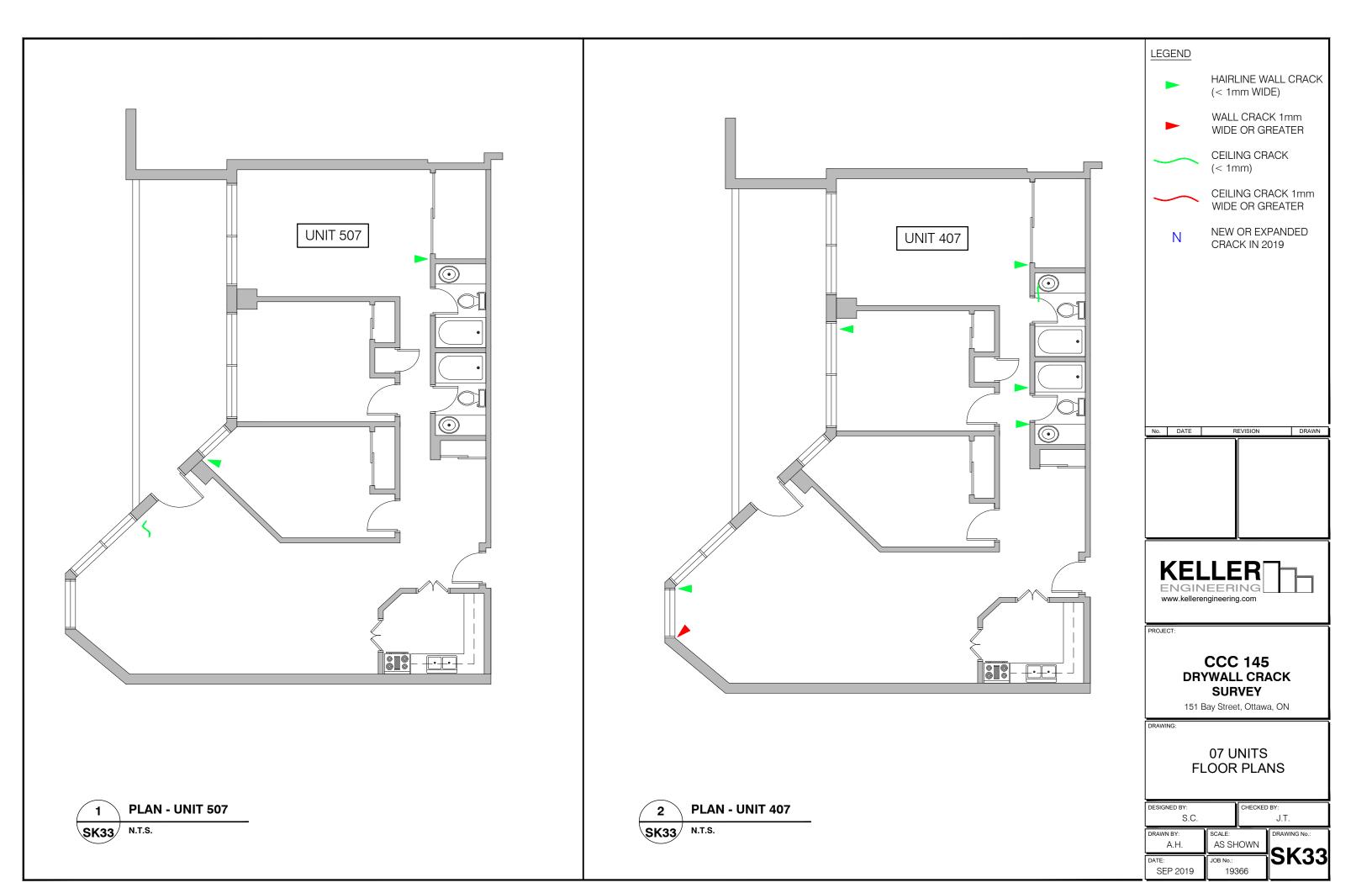


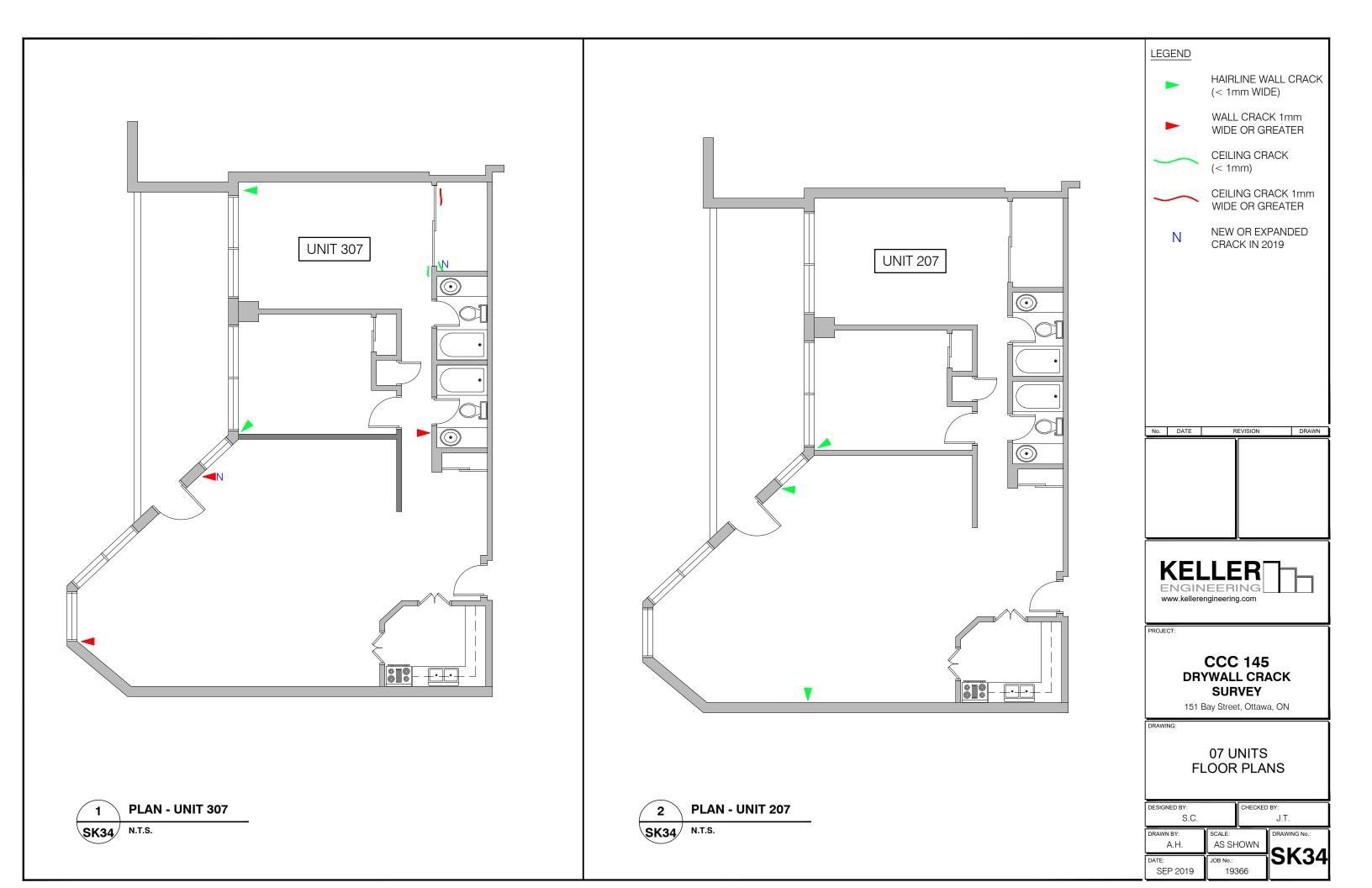




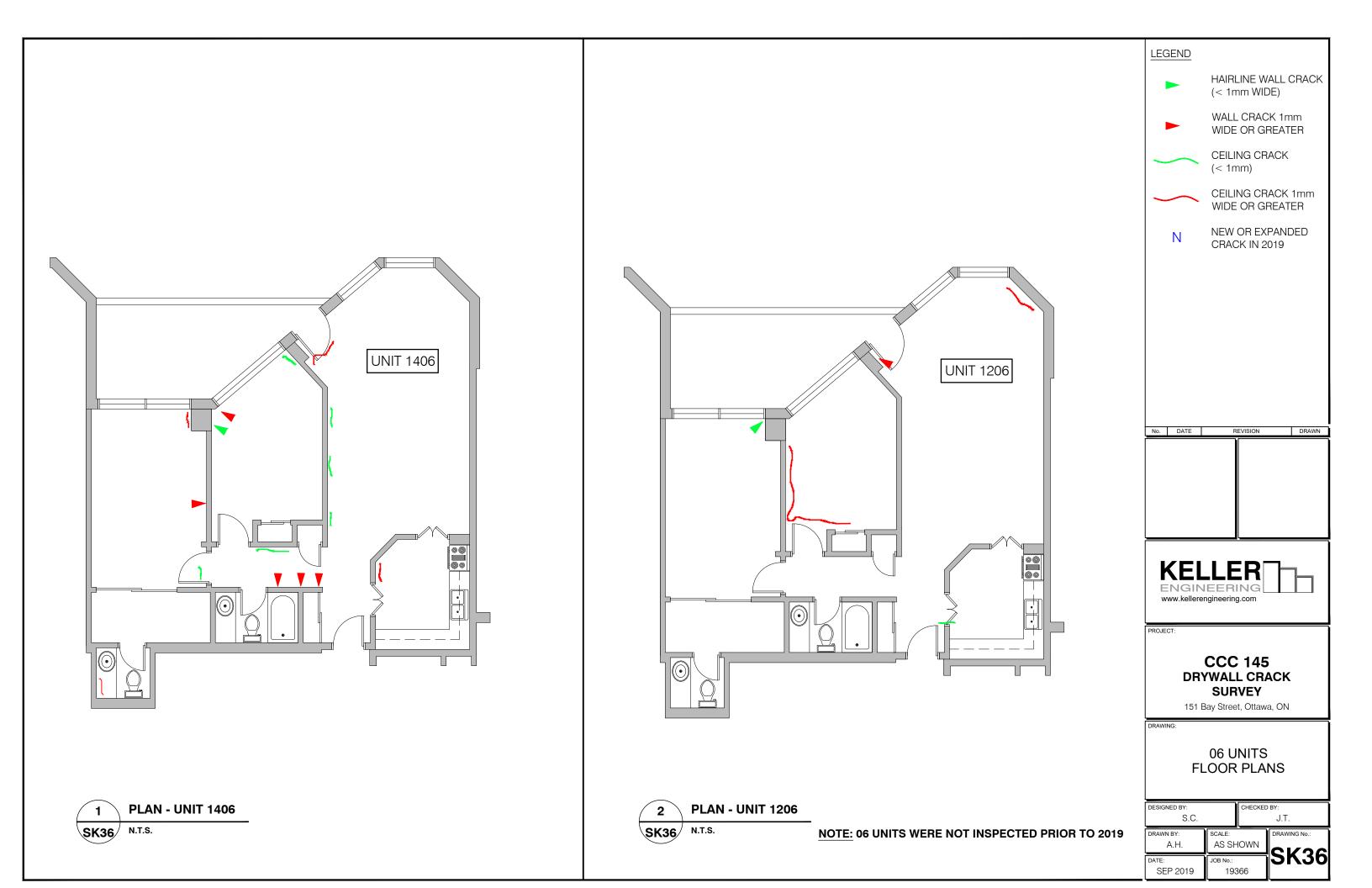


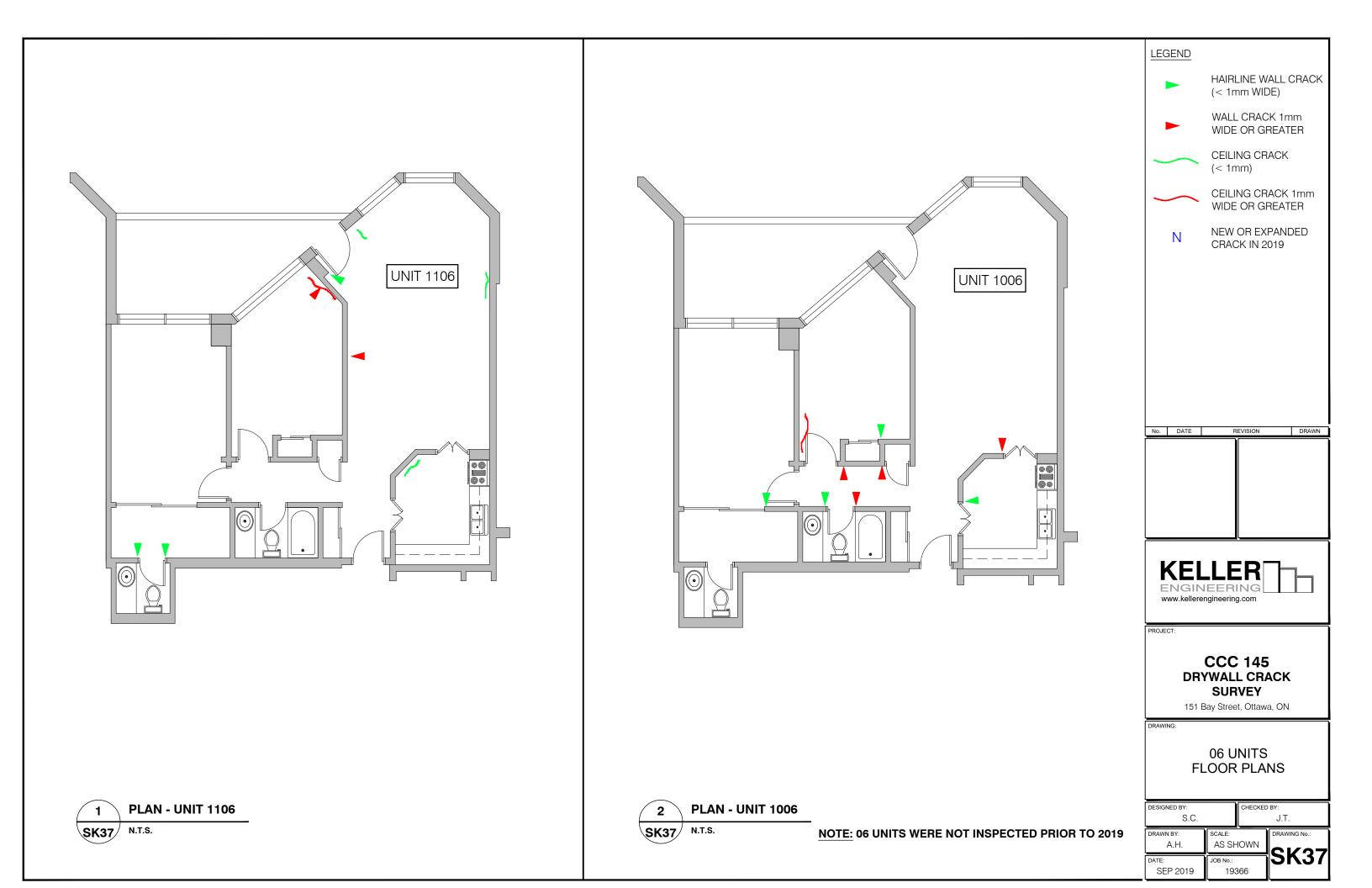


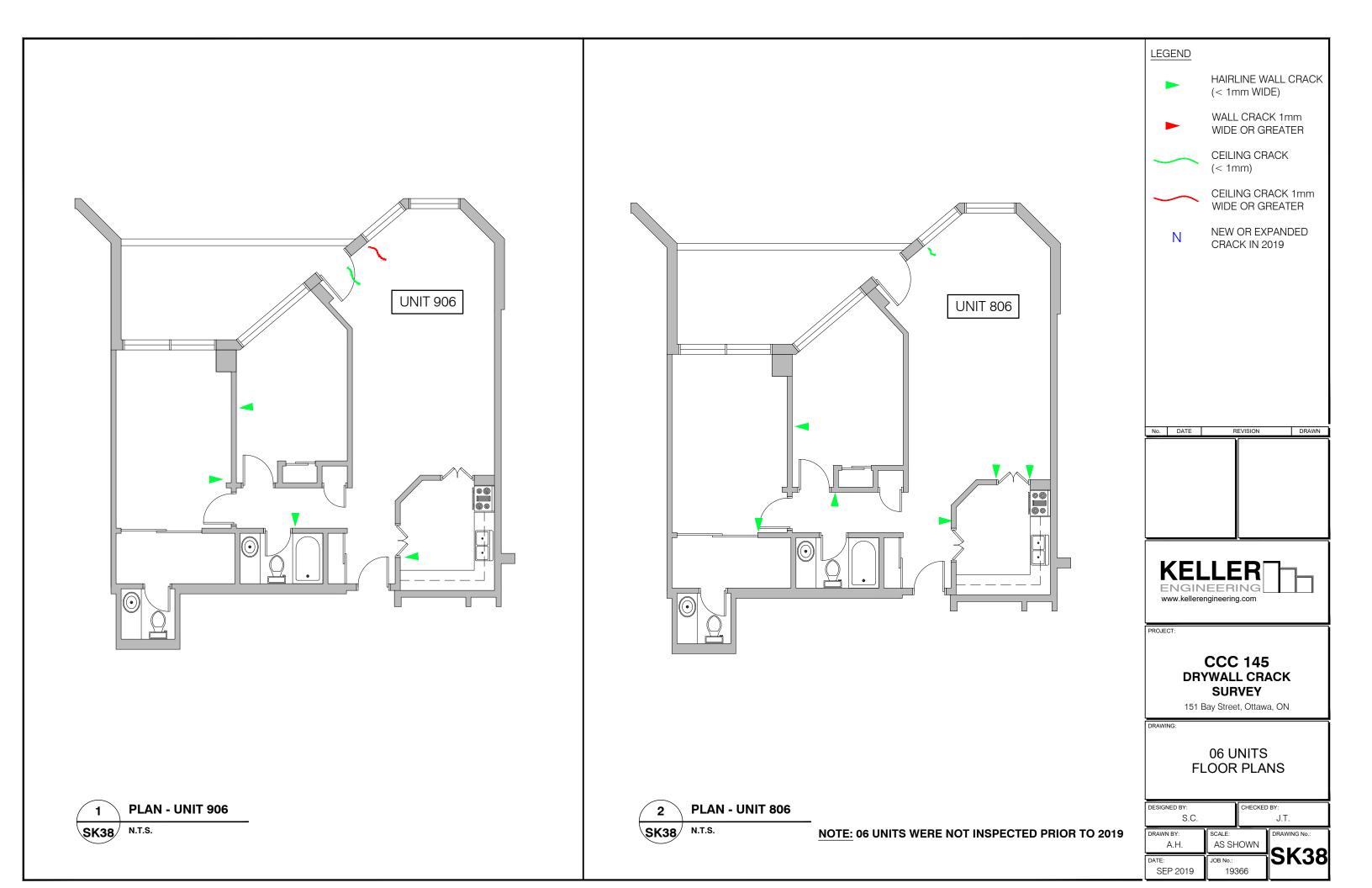


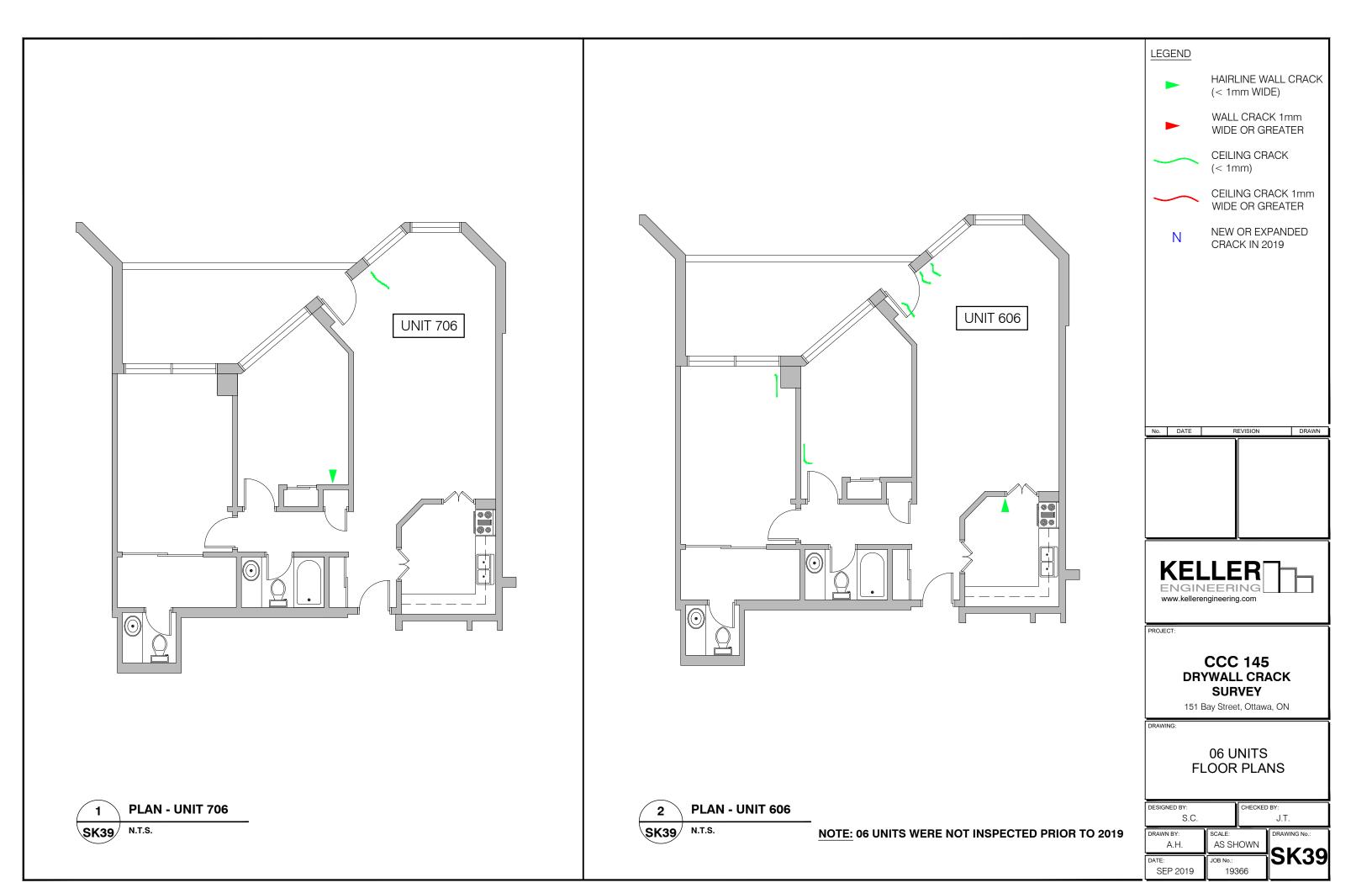


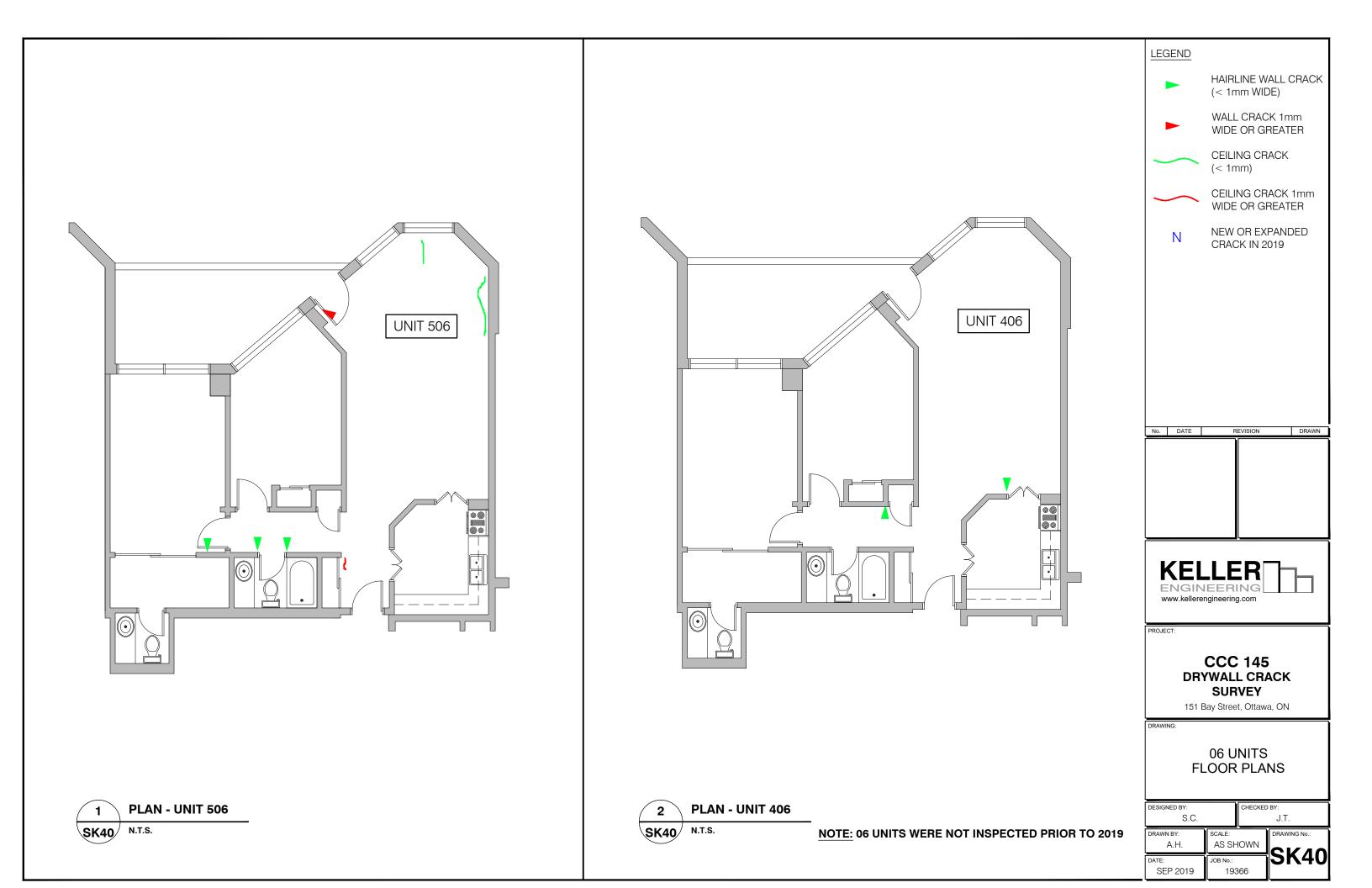


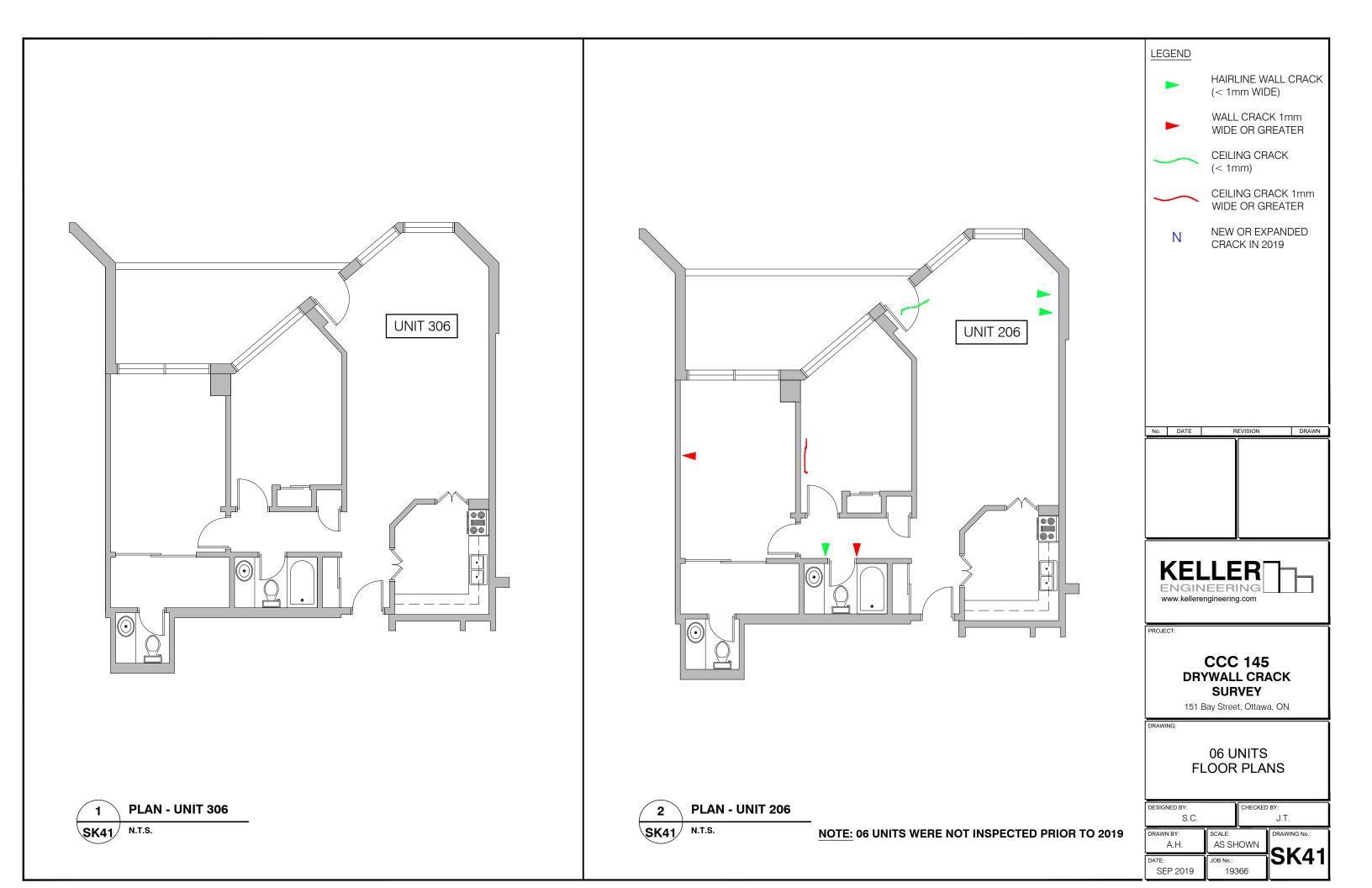


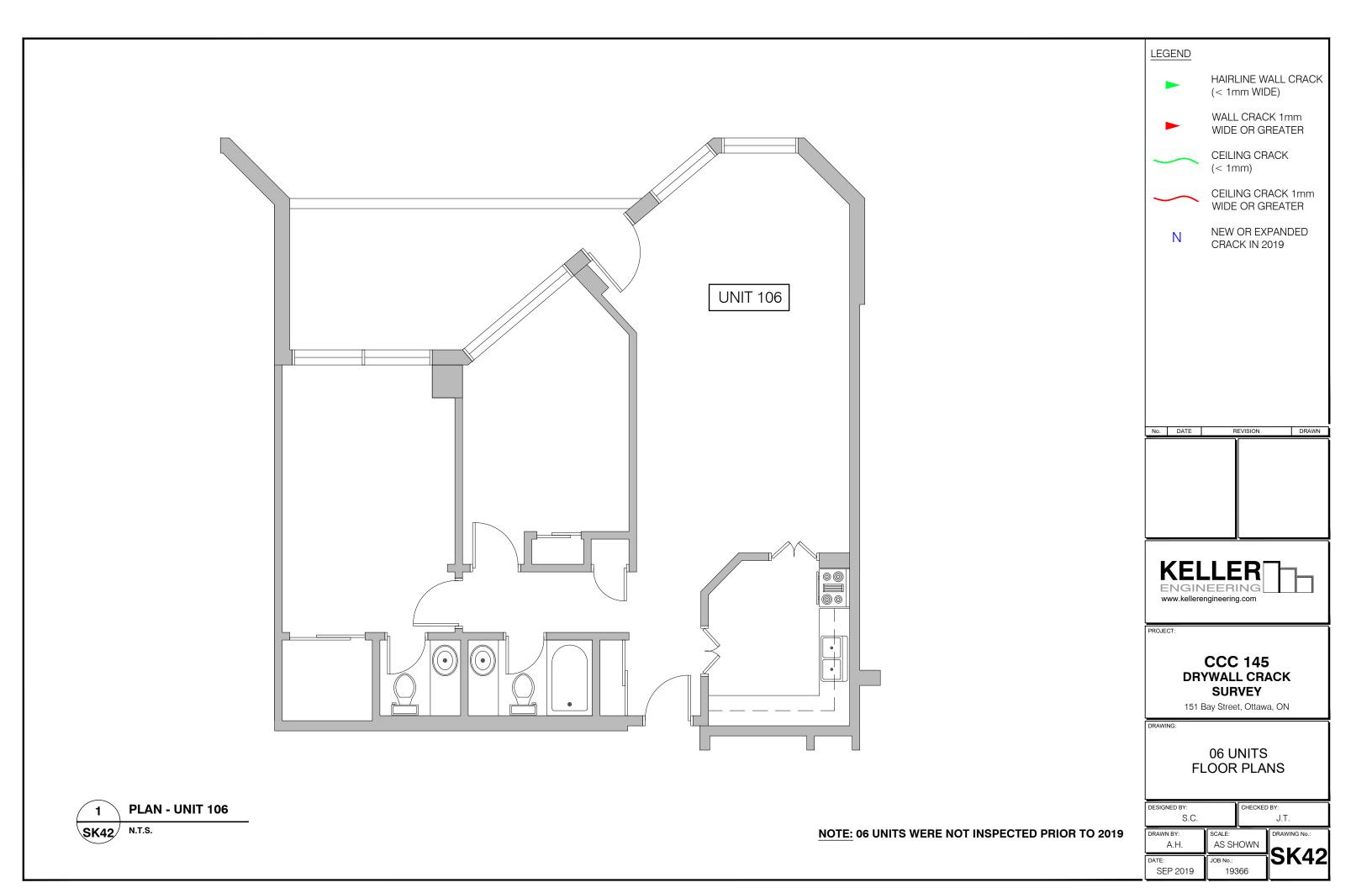


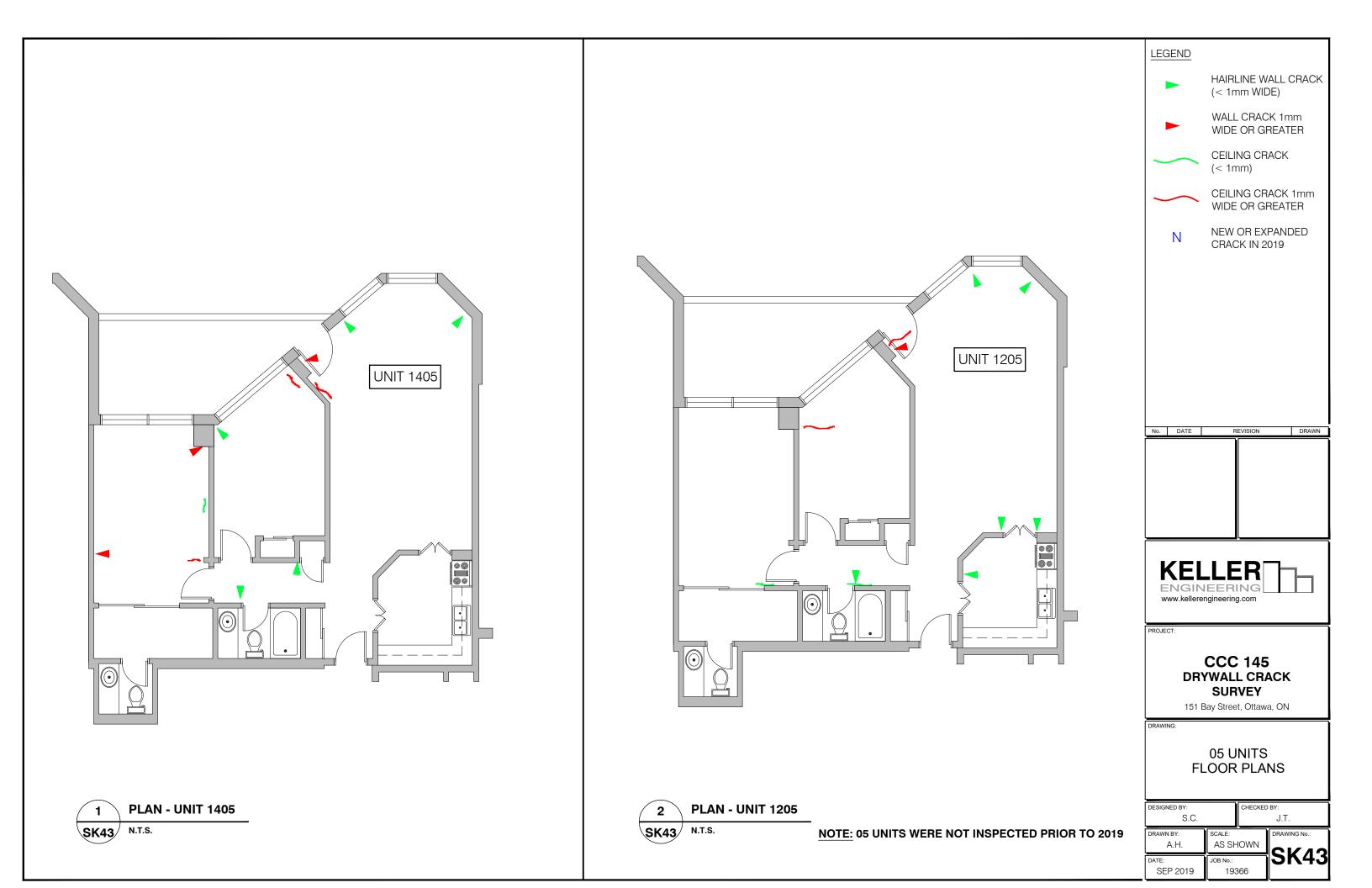


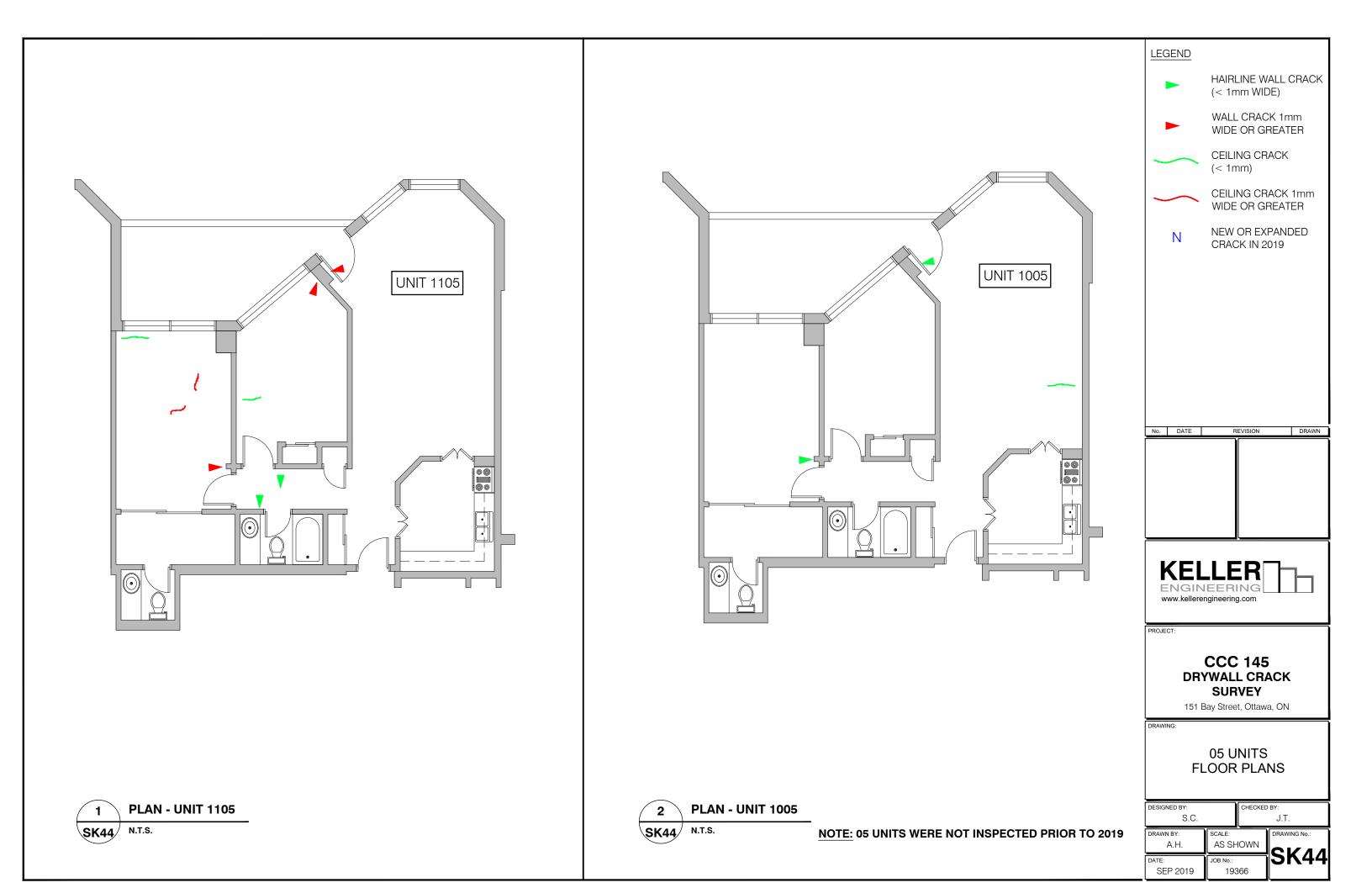


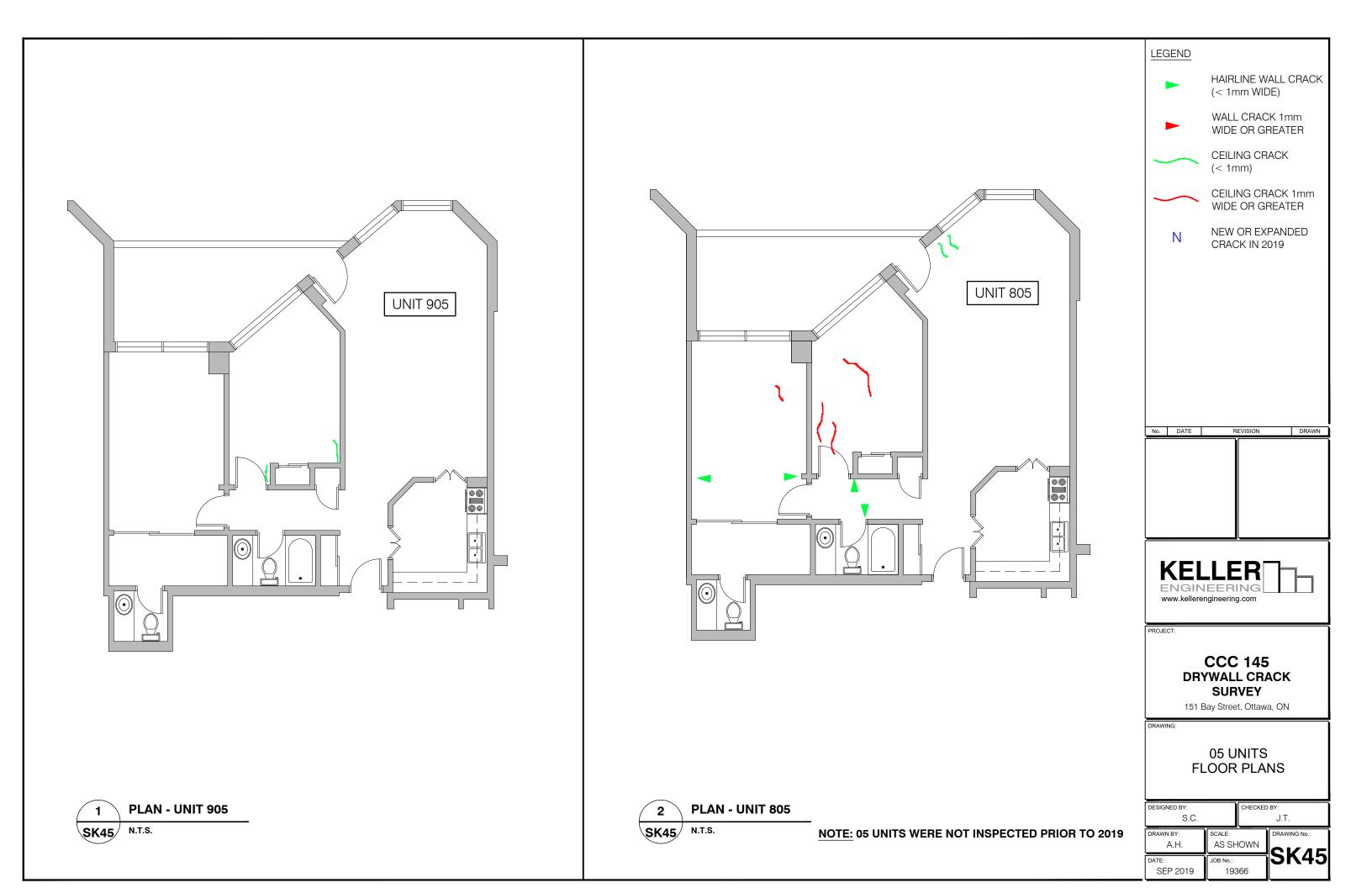


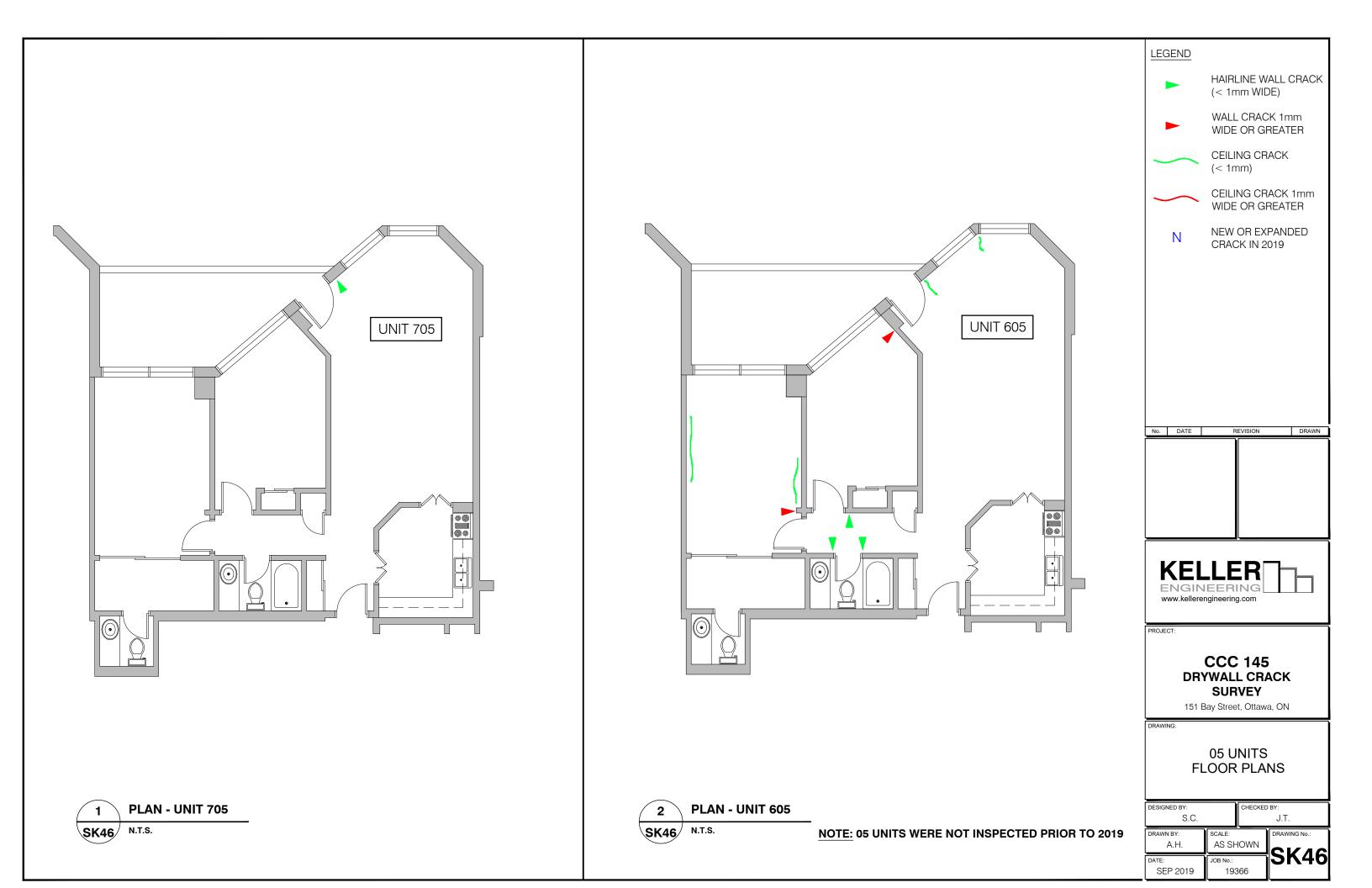


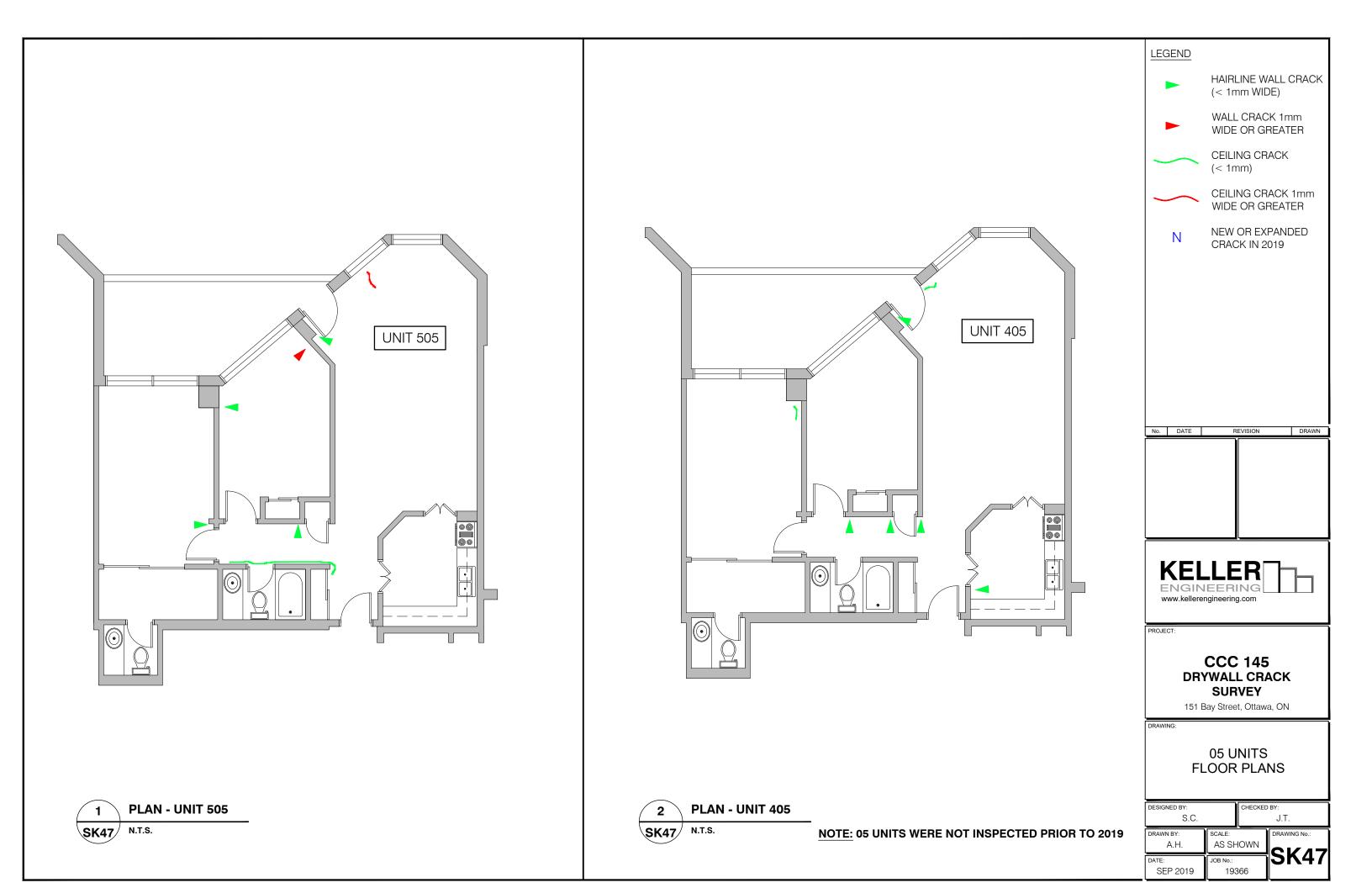


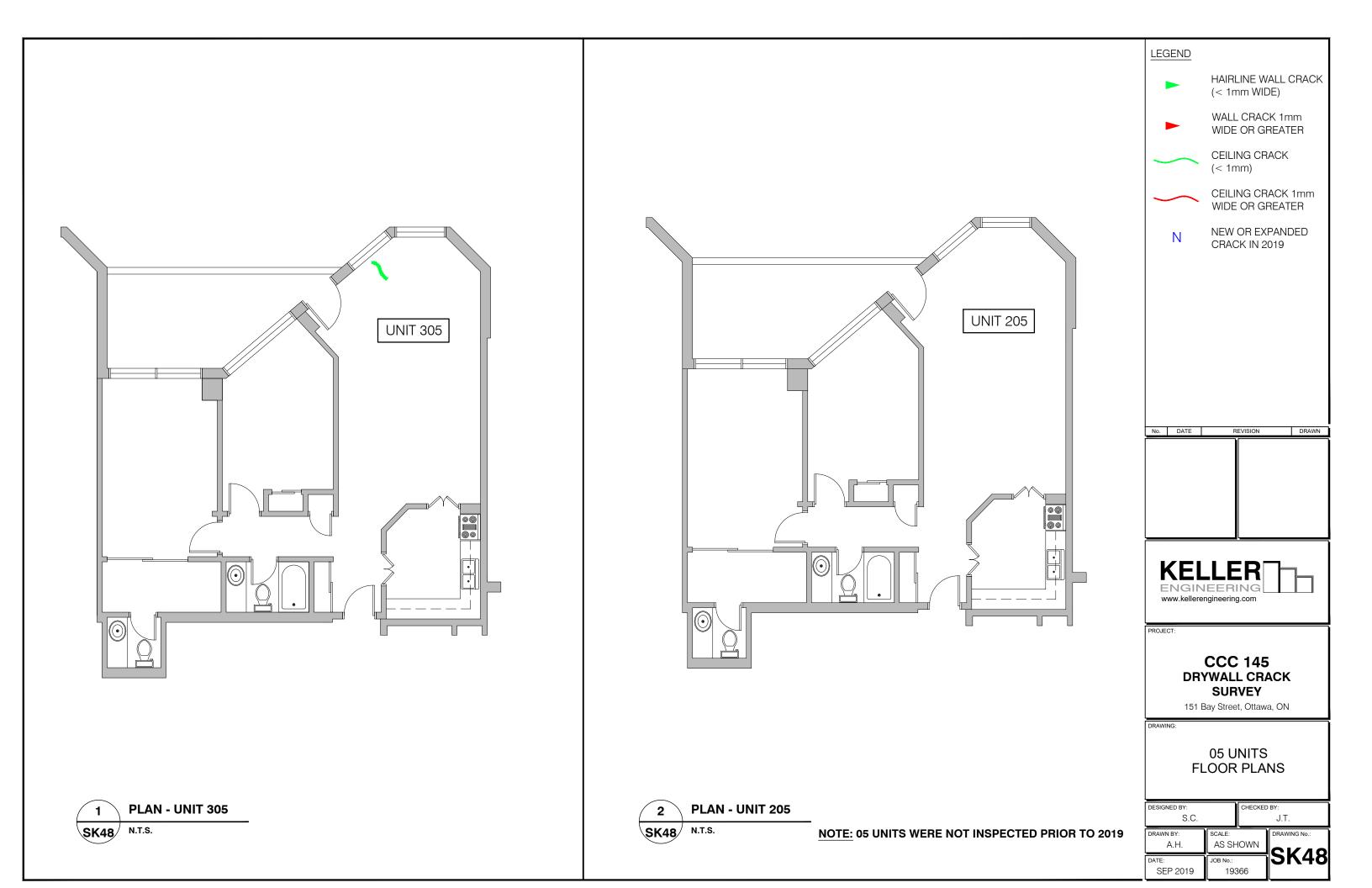


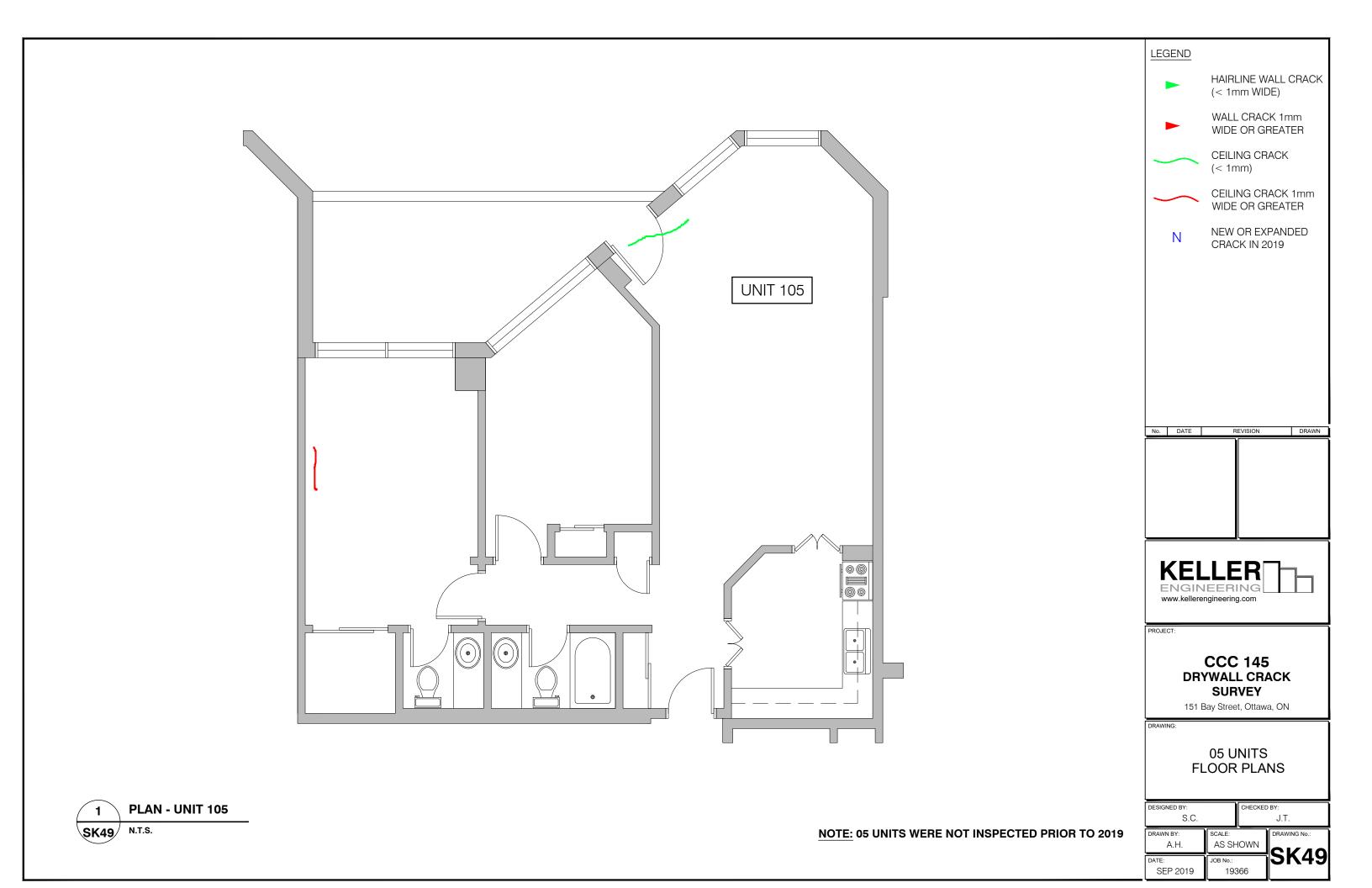


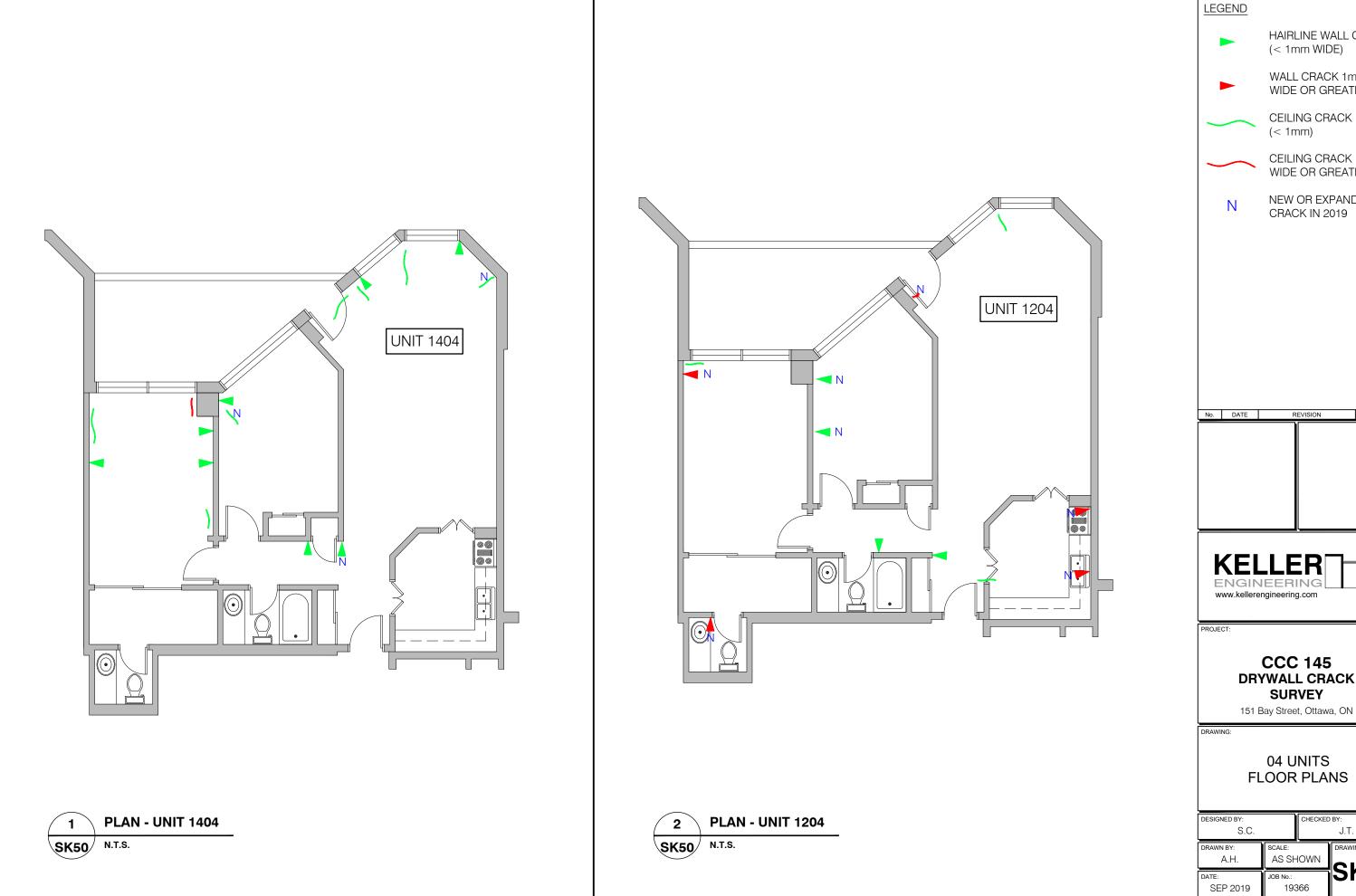












<u>LEGEND</u> HAIRLINE WALL CRACK (< 1mm WIDE) WALL CRACK 1mm WIDE OR GREATER CEILING CRACK CEILING CRACK 1mm WIDE OR GREATER NEW OR EXPANDED CRACK IN 2019 No. DATE REVISION DRAWN ENGINEERING

> **CCC 145 DRYWALL CRACK SURVEY**

04 UNITS FLOOR PLANS

CHECKED BY: DRAWING No.:

AS SHOWN

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