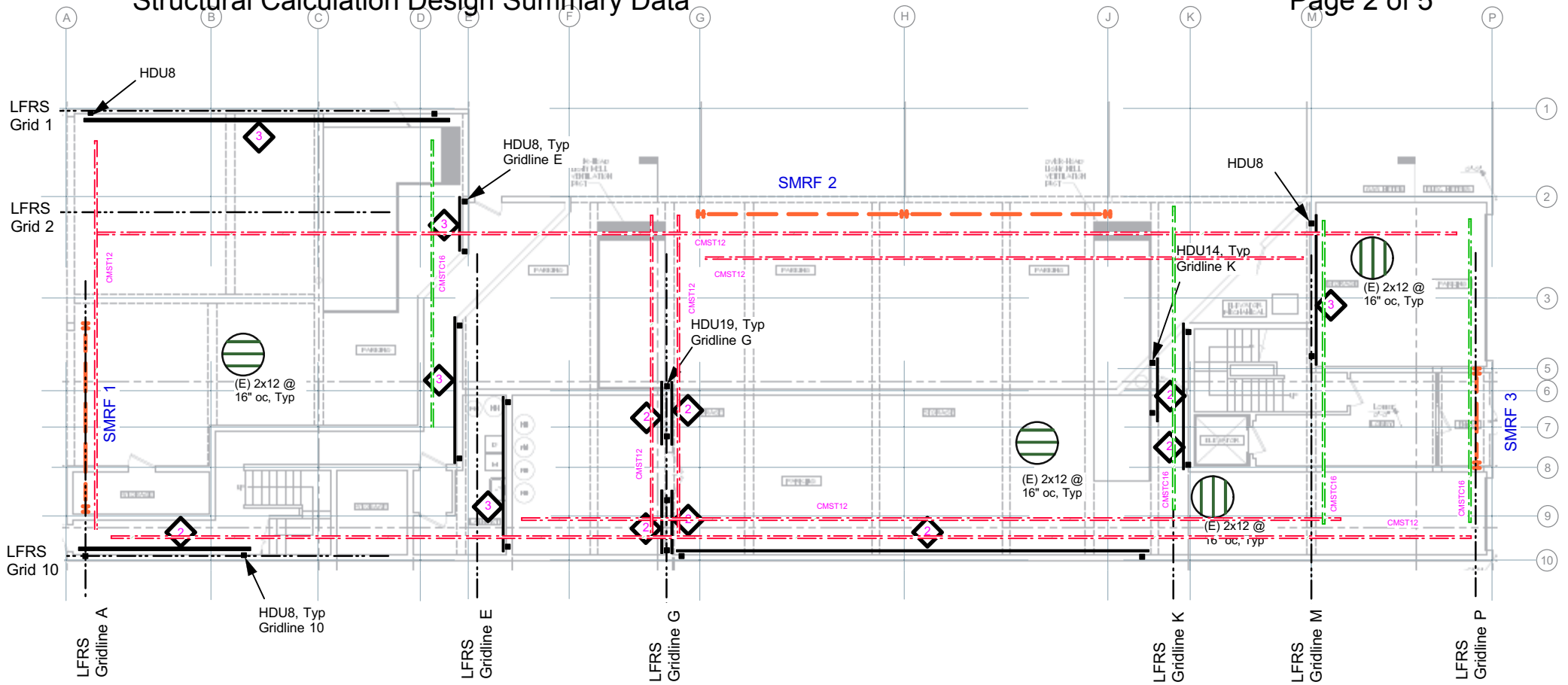
2022-2023 Sample Retrofit Project - San Francisco, CA

Performed Seismic Retrofit (2022) of multi-family residential building in San Francisco (built in 1965) using wood framed shear walls and AISC Welded Steel Special Moment Resisting Frames.



FIRST FLOOR LEVEL - RETROFIT PLAN

NTS

Lateral Force Resisting System (LFRS) Elements :

(N) Shear Wall

Simpson Strong Frame

Note: Simpson Strong Frames consist of FIxed Base W8 Columns and W10 Beams

RETROFIT LEGEND:

3 1/2" Struct I Sheathing w/ 10d Edge Nailing

Holdown each side, as indicated

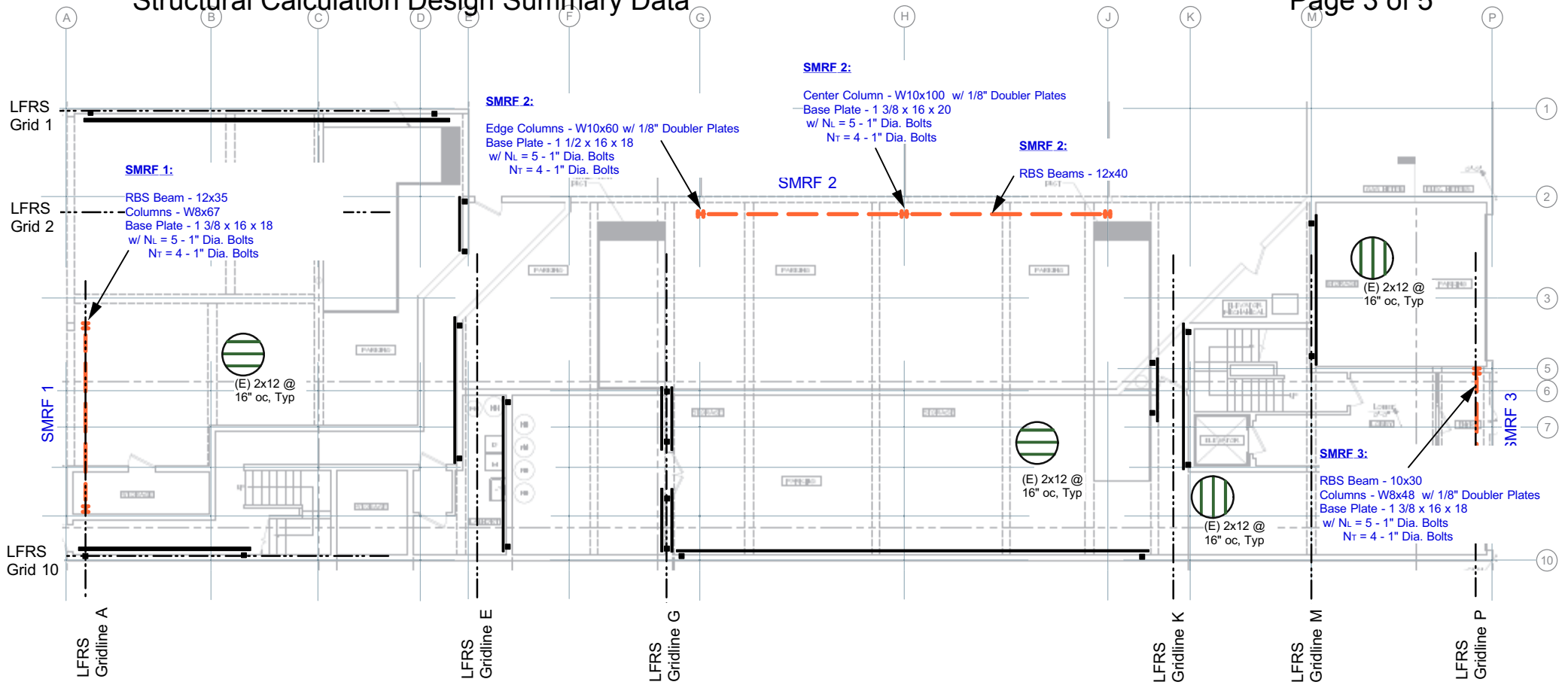
STRAP LEGEND: Note: Straps in W-E direction can be replaced with 6 - 3/4" carriage bolts at Floor joist splices at lines of support.

CS14 Strap w/ 10d (2,490 #)

CMSTC16 Strap w/ 16d (4,585 #)

CMST12 Strap w/ 16d (9,215 #)

Ground Floor Retrofit Plan (from calcs)



GROUND FLOOR RETROFIT PLAN - AISC SMR FRAMES

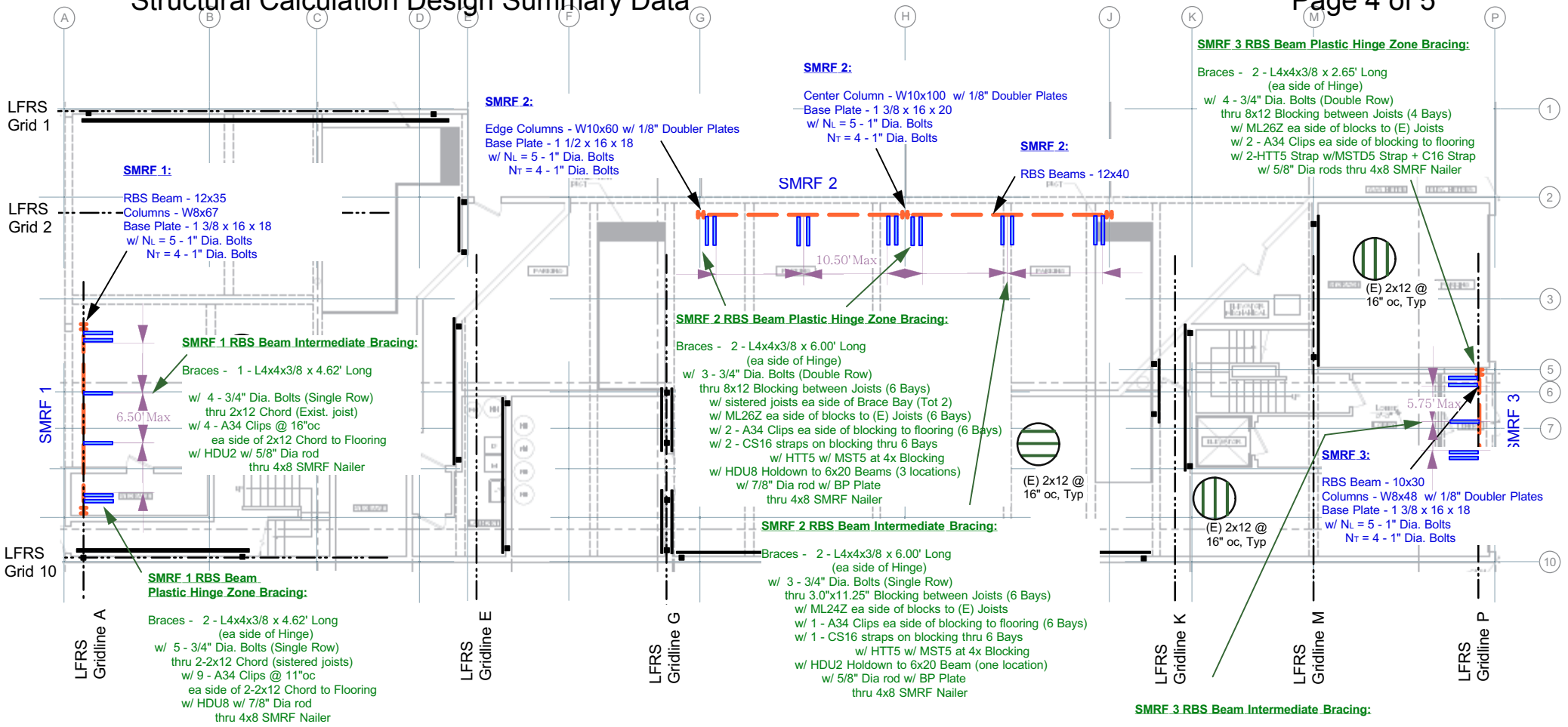
NTS

Lateral Force Resisting System (LFRS) Elements :

(N) Shear Wall

(N) AISC SMRF

Ground Floor Retrofit Plan - AISC SMRF's (from calcs)



GROUND FLOOR RETROFIT PLAN - AISC SMR FRAMES

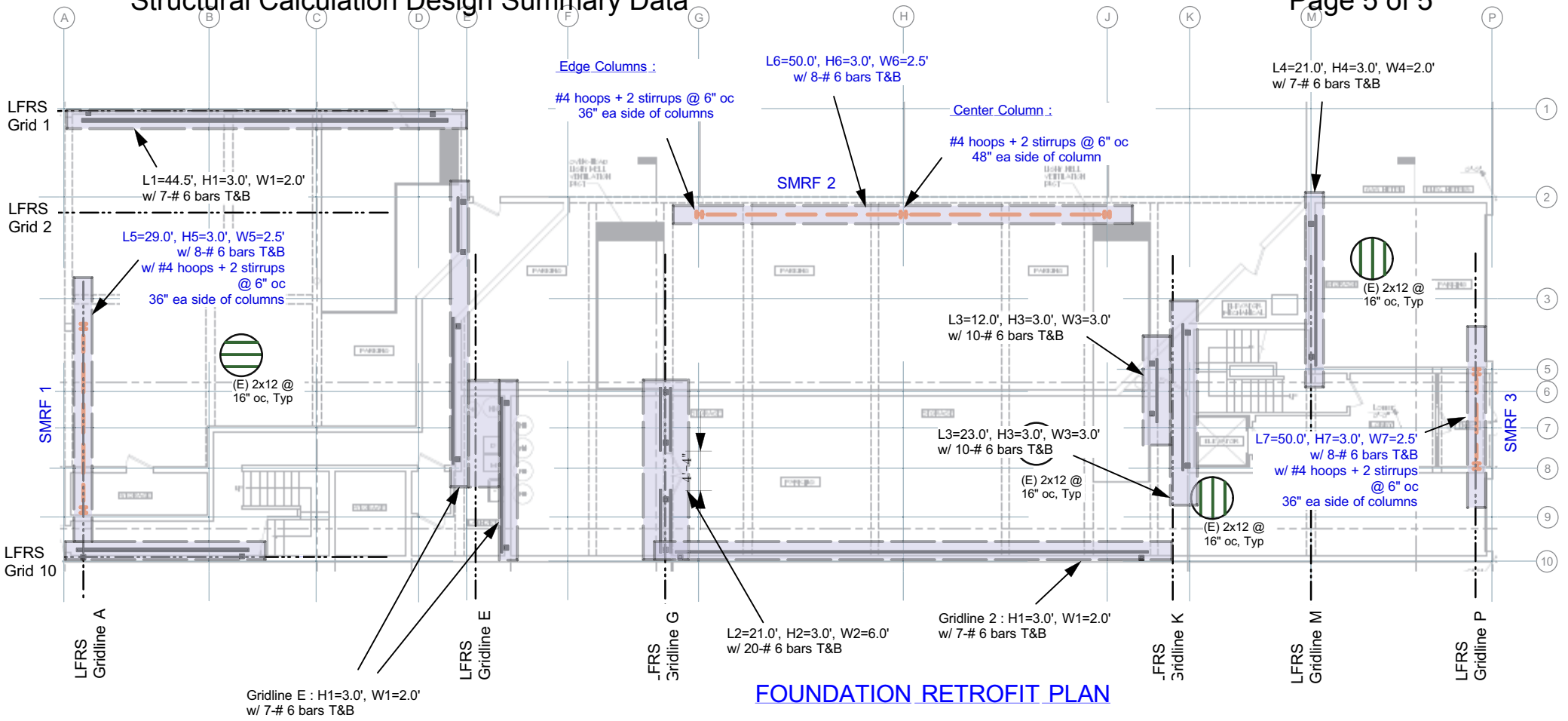
NTS

AISC SMRF BRACING PLAN

Lateral Force Resisting System (LFRS) Elements :

- (N) Shear Wall
- (N) AISC SMRF
- (N) L4x4x3/8 Bracing - Double Shear
- (N) L4x4x3/8 Bracing - Single Shear

Ground Floor Retrofit Plan - AISC SMRF Bracing (from calcs)



FOUNDATION RETROFIT PLAN

FOUNDATION RETROFIT PLAN - AISC SMRF REINFORCEMENT

NTS

FOUNDATION RETROFIT ELEMENTS:

(N) Footings

Lateral Force Resisting System (LFRS) Elements :

(N) Shear Wall

(N) AISC SMRF

Ground Floor Retrofit Plan - AISC SMRF Footings (from calcs)