



# Structural System Narrative Novato City Building – Scheme C

**PROJECT:** Novato City Building  
**DATE:** February 24, 2011  
**REFERENCE DRAWINGS:** KPFF Structural Sheets: PSC – 1, 2, 3 & 4  
**GEOTECHNICAL REPORT:** Herzog Geotechnical Consulting Engineers, titled “Supplemental Geotechnical Investigation, Novato City Offices, Novato, California”, dated January 12<sup>th</sup>, 2011.

**PROJECT SPECIFIC DATA OR ASSUMPTIONS:**

**Location:** Novato, CA  
**Project Description:** 2 story steel framed office building over a concrete podium and 1 level on grade / partial subterranean parking.  
**Building Code** 2010 California Building Code  
**Live Load Design**  
 Roof, sloping 16 psf, reducible  
 Roof, flat 20 psf, reducible  
 Office space 80 psf, reducible + 15PSF partitions  
 Office corridors 100 psf, reducible

**Pile/Pier Capacity:** undetermined kips, DL+LL  
**Water Table Depth:** 1 to 4 feet below grade.

**QUANTITY ESTIMATES:**

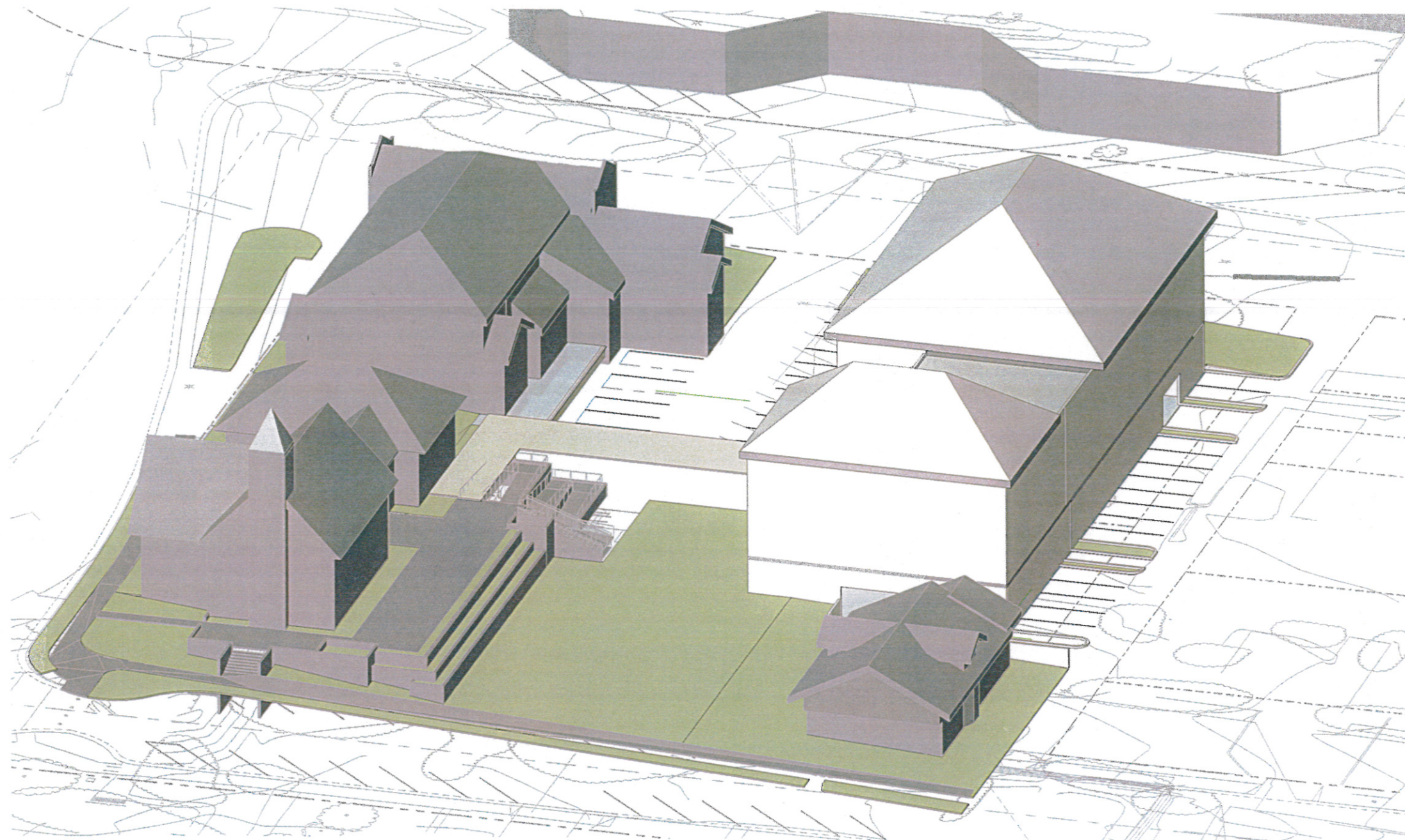
#	ELEMENT	SIZE, REINF, ETC.	REMARKS
1	Driven or Torque Down Steel Piles	Provide 10'-0" minimum embedment into bedrock. The bedrock elevation varies over the site.	Estimate 58 piles at an average pile length of 22'-0".
2	Subgrade Preparation	4" crushed rock	
3	Structural Slab on Grade	12" structural concrete slab on grade. Estimate 8 psf of rebar.	f <sub>c</sub> =4,000 psi at 28 days. Use low shrinkage aggregates (0.04%) at 28 days, and a maximum 0.45 water:cement ratio.
4	Typical Continuous Concrete Grade Beams	3'-0" wide x 3'-0" deep Continuous Grade Beam (including slab depth). Estimate with plf of rebar.	f <sub>c</sub> =4,000 psi at 28 days



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5	Continuous Concrete Grade Beams under Concrete Shear Walls	3'-6" wide x 4'-6" deep Continuous Grade Beam (including slab depth) with 60 plf of rebar estimated	f <sub>c</sub> =4,000 psi at 28 days
6	Concrete Columns	18" square concrete columns to underside of podium slab. Estimate 45 plf of rebar .	f <sub>c</sub> =4,000 psi at 28 days
7	Concrete Shear Walls	12" thick concrete shear walls with 10 psf of rebar estimated.	f <sub>c</sub> =4,000 psi at 28 days.
8	Post Tensioned Podium Slab	9" cast-in-place post-tensioned slab with no drop panels. Estimate 1.0 psf of P.T. and 2.5 psf of rebar.	f <sub>c</sub> =3,000 psi at 96 hours, 5,500 psi at 28 days. Use low shrinkage mix, 0.45 water:cement ratio, max.
9	Office Floor Framing	3-1/4" thick lightweight concrete fill on 3"-20 gage composite metal decking (vented) on steel beams and girders (3/4" headed studs at 12" on center typical on all beams and girders. Assume 16 psf of steel weight. Assume steel columns extend to the podium level only.	f <sub>c</sub> =4,000 psi at 28 days. Structural steel will be ASTM A992. <u>Alternate:</u> 2-1/2" hardrock concrete fill on 3"-20 ga metal deck with spray fireproofing.
10	Roof Framing	1 1/2"-18 gage bare metal decking on steel beams and girder. Assume 14 psf of steel weight.	Structural steel will be ASTM A992.
11	Lateral Force Resisting System – office.	Special steel moment frames where shown on plans	Structural steel will be ASTM A992.



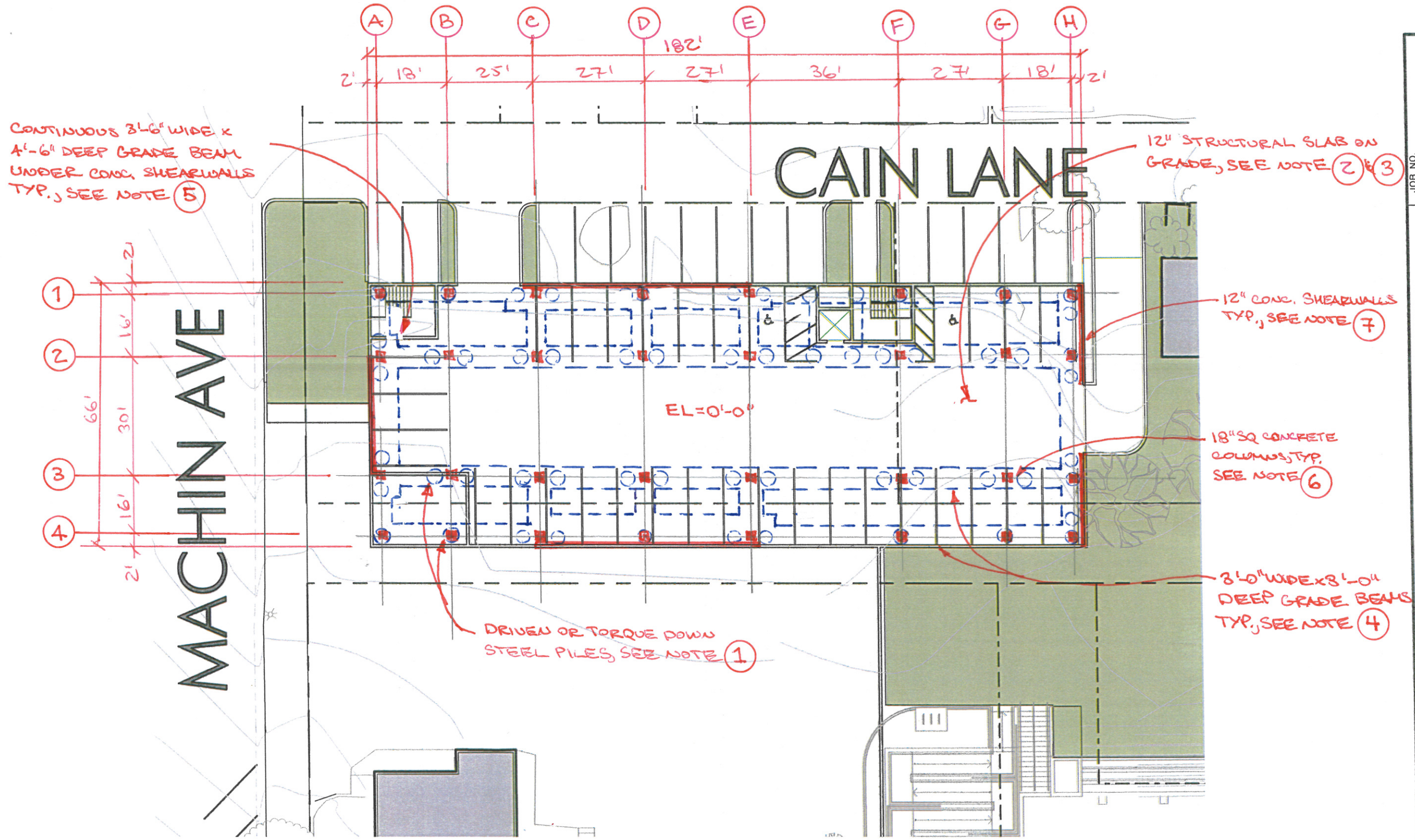


3D VIEW

PARKING INFORMATION - SCHEME C

ON SITE PARKING — 77 SPACES



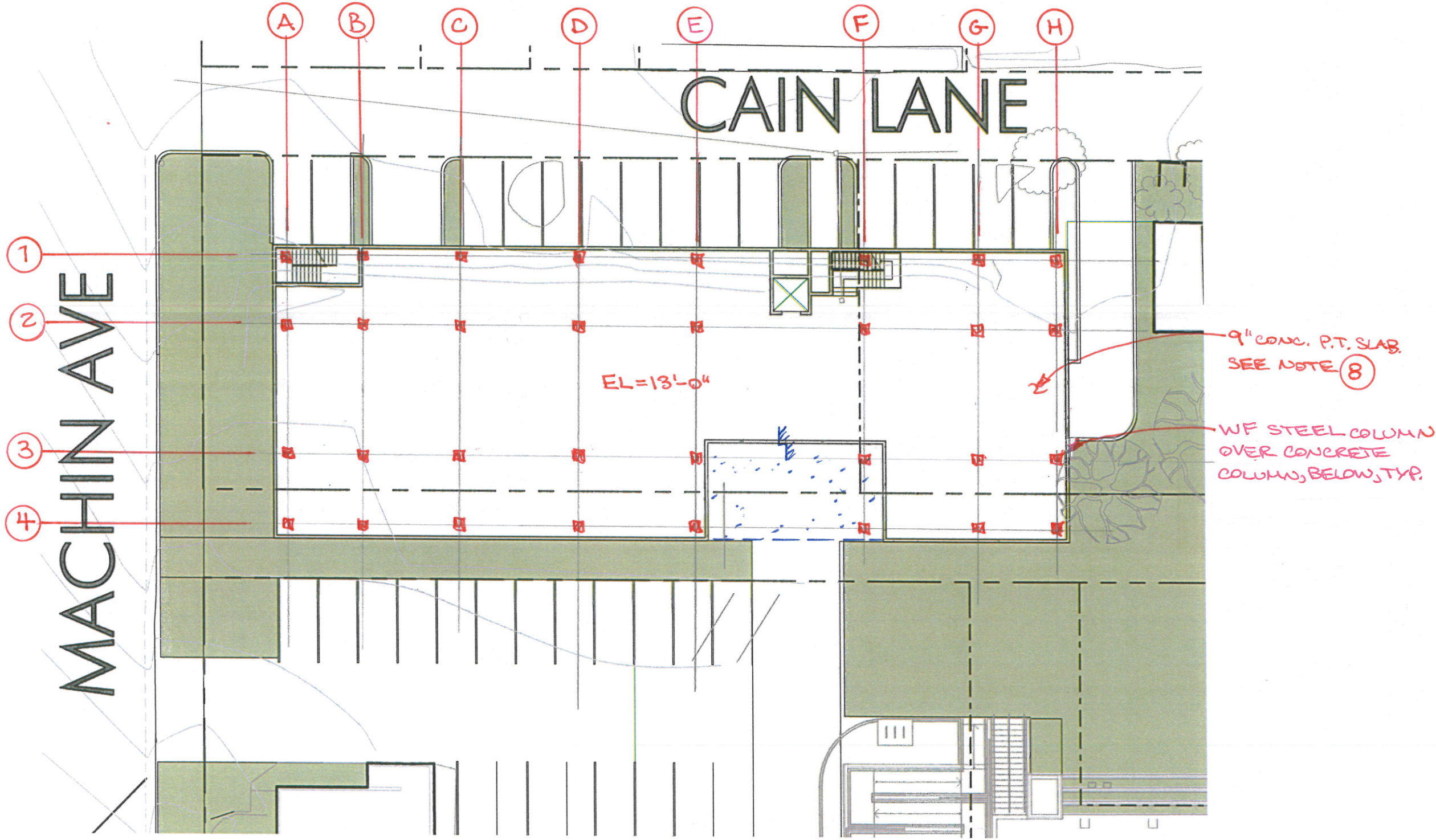


SCHEME C - FOUNDATION/PARKING LEVEL PLAN


PROJECT NAME NOVATO CITY BUILDING NOVATO, CALIFORNIA	JOB NO. 111020.00
	SHEET NO. PSC-1
SHEET TITLE SCHEME C - FOUNDATION/PARKING PLAN	DATE 2/24/20
SIGNED	

**kpff**  
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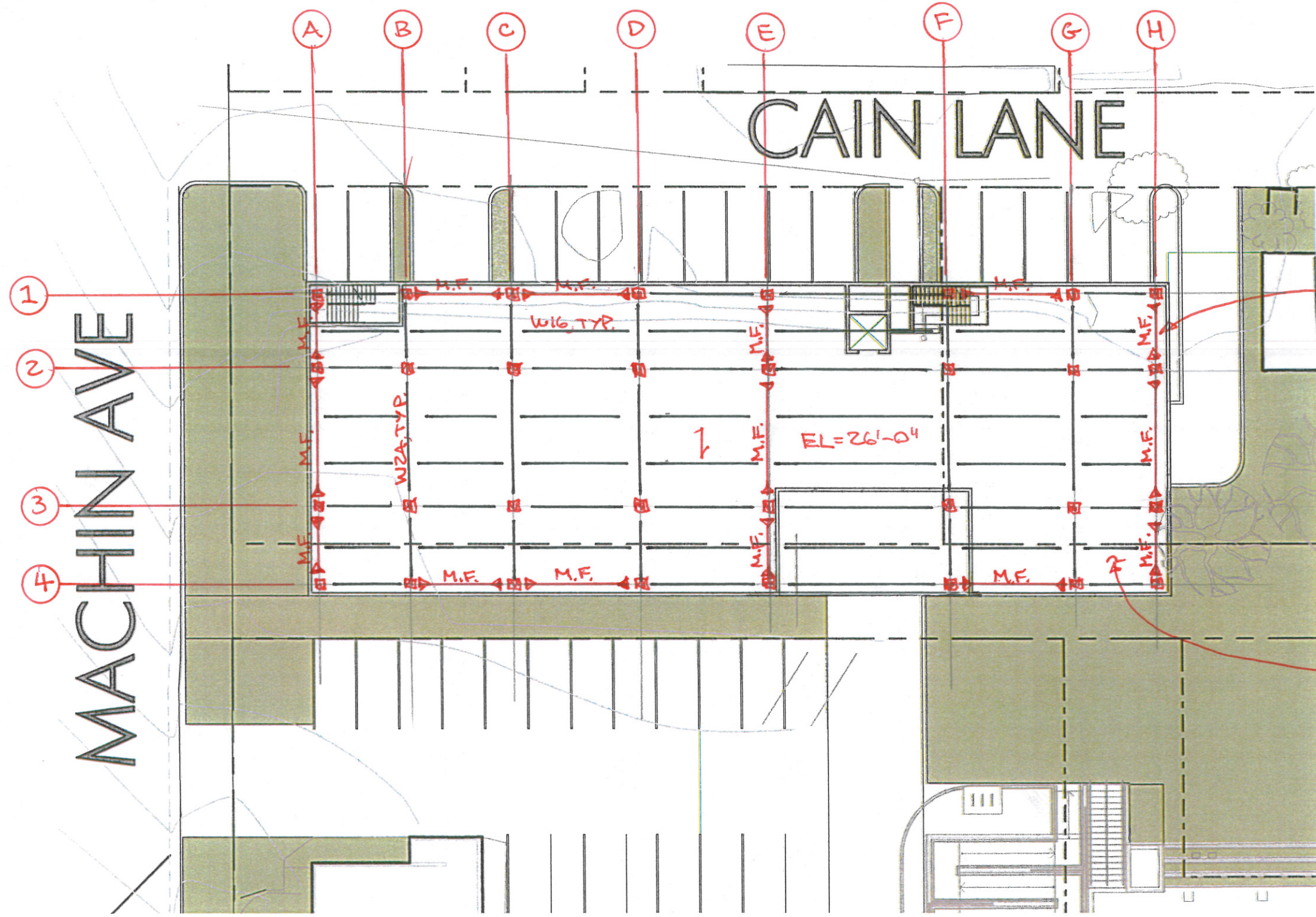





SCHEME C - GROUND FLOOR PLAN

 <p> <b>kpff</b>          Consulting Engineers          221 Main St, Suite 800          San Francisco, California 94105          (415) 989-1004 Fax 989-1552       </p>	PROJECT NAME NOVATO CITY BUILDING NOVATO, CALIFORNIA	JOB NO. 111020.00
	SHEET TITLE SCHEME C - GROUND FLOOR PLANS	SHEET NO. PSC-2
SIGNED		DATE 2/22/2011

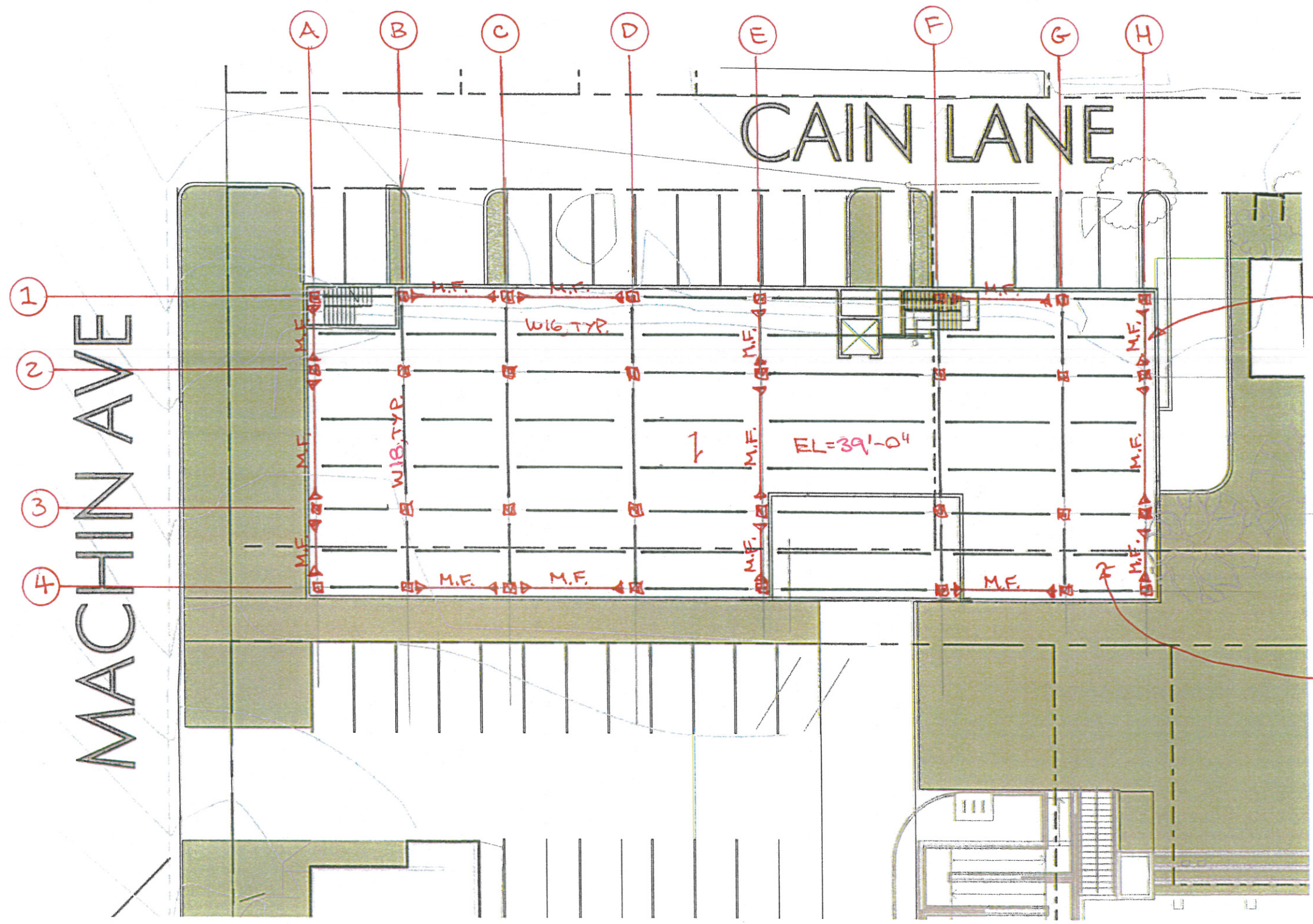




SCHEME C - 2<sup>ND</sup> FLOOR FRAMING PLAN

 <p> <b>kpfi</b>          Consulting Engineers          221 Main St, Suite 800          San Francisco, California 94105          (415) 989-1004 Fax 989-1552       </p>	PROJECT NAME NOVATO CITY BUILDING NOVATO, CALIFORNIA	JOB NO. 111020.00
	SHEET TITLE SCHEME C - 2 <sup>ND</sup> FLOOR FRAMING	SHEET NO. PSC-3
SIGNED	DATE 2/24/2011	





STEEL MOMENT  
FRAME TYP., SEE  
NOTE (11).

ROOF FRAMING  
BARE METAL  
DECK OVER  
STEEL WIDE  
FLANGE BEAMS  
SEE NOTE (10)

SCHEME C - ROOF FRAMING PLAN

JOB NO.	111020.00
SHEET NO.	PSC-4

PROJECT NAME	NOVATO CITY BUILDING NOVATO, CALIFORNIA
SHEET TITLE	SCHEME C - ROOF FRAMING PLAN
SIGNED	
DATE	2/24/2011

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