

# 590 CASTRO STREET MOUNTAIN VIEW, CA



PLANNING RESUBMITTAL #6R  
02.18.2022

THE  
**SOBRATO**  
ORGANIZATION

**KSH** ARCHITECTS  
KORTH SUNSERI HAGEY

**TGP** The  
Guzzardo  
Partnership, Inc.

**k w** KIER+WRIGHT

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**590 CASTRO STREET  
MOUNTAIN VIEW, CA**



**PROJECT INFORMATION**

ZONING: DOWNTOWN P(19), AREA I 'CIVIC CENTER'

APN: 158-10-033

LOT AREA: 41,353 SF (.97 ACRES ±)

**SETBACKS:**

- S1 (FRONT SETBACK @ CASTRO) NONE REQUIRED / PROVIDED (BUILT TO BACK OF SIDEWALK)  
*EXISTING 12' SIDEWALK UTILITY EASEMENT TO REMAIN*
- S2 (FRONT SETBACK @ CHURCH) NONE REQUIRED / PROVIDED  
*EXISTING 5' SIDEWALK UTILITY EASEMENT TO REMAIN*
- S3 (SIDE SETBACK @ EASEMENT)  
*NONE REQUIRED / 15'-8 1/2" PROVIDED*
- S4 (SIDE SETBACK @ PASEO)  
*50'-60' MIN. WIDTH PEDESTRIAN OPEN SPACE REQUIRED / 50'-2" PROVIDED*

EXISTING FLOOR AREA: 9,228 SF ± (1 STORY)

PROPOSED FLOOR AREA (SEE ALSO 1/A0.2A 'ZONING CALCULATIONS' FOR MORE DETAIL):  
TOTAL OFFICE AREA (FLOORS 1-4) = ~91,878 SF  
RETAIL AREA = ~10,564 SF  
TOTAL (GROSS) FLOOR AREA = 102,442 SF

PROPOSED PARKING AREA (SEE ALSO 1/A0.2A 'ZONING CALCULATIONS' FOR MORE DETAIL):  
P2 LEVEL = 41,200 SF  
P1 LEVEL = 41,200 SF  
FIRST FLOOR DRIVEWAY/ENTRY = 2,919 SF  
TOTAL PARKING AREA = 85,319 SF

PROPOSED BUILDING COVERAGE (SEE 1/A0.2A 'ZONING CALCULATIONS' FOR MORE DETAIL):  
28,794 SF / 41,353 SF = 69.6% TOTAL (70% MAX ALLOWED)

PROPOSED FAR (NO LIMIT):  
TOTAL OFFICE AREA (FLOORS 1-4) = ~91,878 SF  
RETAIL AREA = ~10,564 SF  
FIRST FLOOR DRIVEWAY/ENTRY = 2,919 SF  
TOTAL FLOOR AREA = 105,361 SF  
105,361 SF / 41,353 SF LOT AREA = 2.55 (PROVIDED)

PROPOSED BUILDING HEIGHT: 4 STORIES / 55' MAX.  
(SEE 1/A0.2A 'ZONING CALCULATIONS' & A3.- BUILDING ELEVATIONS / SECTIONS FOR MORE INFORMATION / DIMENSIONS)

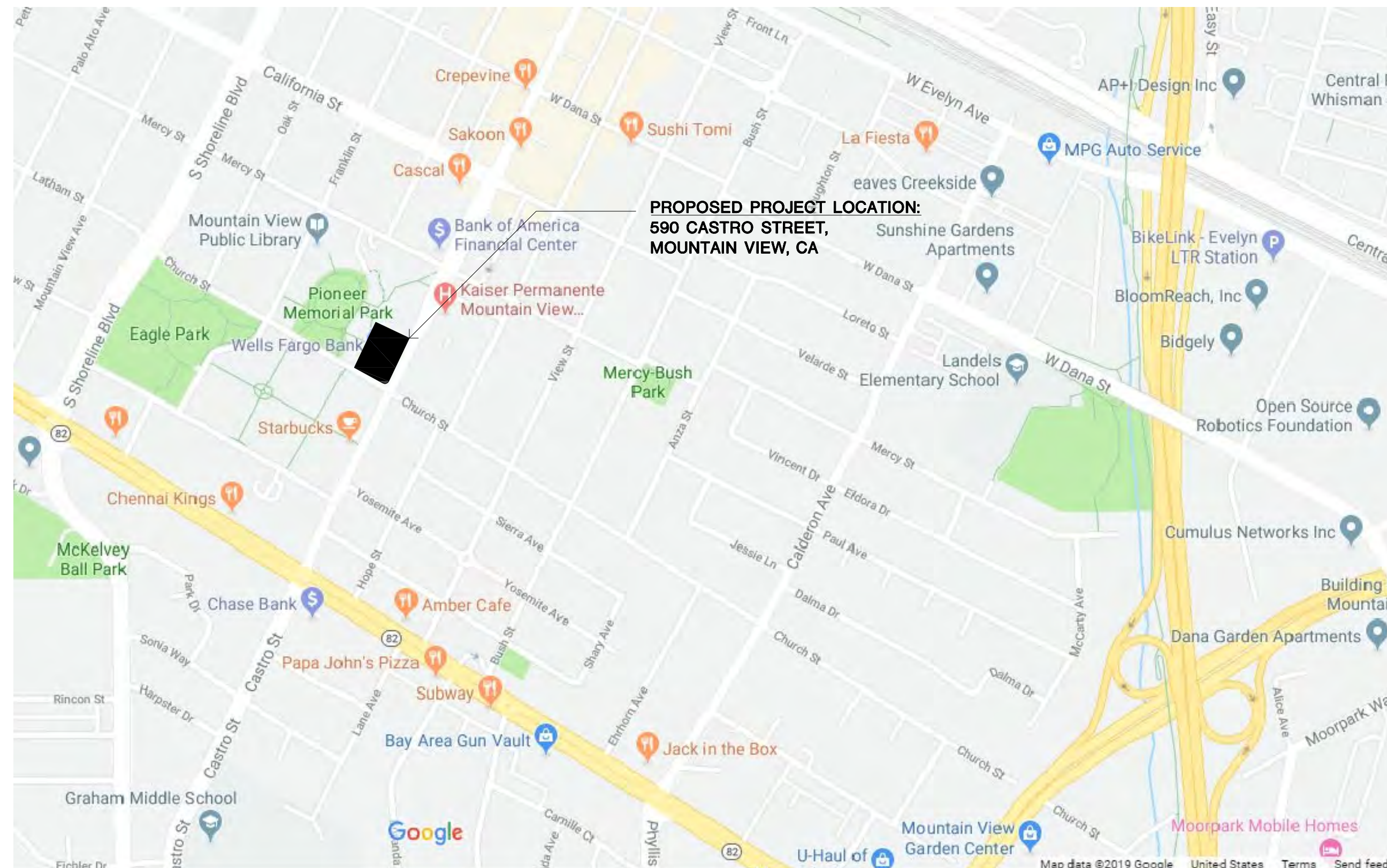
PARKING REQUIRED (MV TABLE II-1)  
1/333 SF OFFICE (276 STALLS FOR 91,878 SF)  
1/300 SF RETAIL (36 STALLS FOR 10,564 SF)  
312 +/- STALLS REQUIRED FOR 102,334 SF GROSS BUILDING AREA

**PARKING PROVIDED (SELF-PARK WITH TANDEM / ATTENDANT-ASSIST):**  
P1 LEVEL: 119 STALLS (29 RETAIL + 90 OFFICE)  
P2 LEVEL: 136 STALLS (ALL OFFICE)  
TOTAL: 255 STALLS (2.49 - 2.61/1,000 SF) PROVIDED IN 2 LEVELS\*

\* PROJECT PROPOSES REDUCED PARKING DUE TO (REDUCED) DEMAND & TO PROMOTE SUSTAINABILITY (SEE SEPARATE DOCUMENTS FOR REVIEW)



**2 | NEIGHBORHOOD CONTEXT MAP**  
N.T.S.



**1 | VICINITY MAP**  
N.T.S.

**ACCESSIBLE, EVSE, & CAV/CARPOOL STALLS REQUIRED / PROVIDED**

ACCESSIBLE STALLS	REQ. FOR 201-300 TOTAL STALLS IS 7 ACCESSIBLE STALLS (PER CBC T11B-208.2)	7 STALLS
VAN ACCESSIBLE STALLS	7 TOTAL ACCESSIBLE STALLS / 6 = 1.166 → 2 STALLS (PER CBC 11B-208.2.4)	2 STALLS
STD. ACCESSIBLE STALLS	7 TOTAL ACCESSIBLE STALLS - 2 VAN ACCESSIBLE STALLS = 5 STALLS	5 STALLS
EVSE INSTALLED STALLS	REQ. 15% IS 40.2 → 41 EVSE STALLS (PER MVCC T 101.10 & A5.106.5.3.2)	41 STALLS
CAV / CARPOOL EVSE INSTALLED STALLS	REQ. 8% FOR 201+ TOTAL STALLS PER CGC T 5.106.5.2 = 22 STALLS (P1 LEVEL)	22 STALLS
STD. ADA EVSE INSTALLED STALLS	MIN. REQ. FOR 26-50 EV STALLS IS 1 STALL (PER CBC T 11B-228.3.2.1)	1 STALL
VAN ADA EVSE INSTALLED STALLS	MIN. REQ. FOR 26-50 EV STALLS IS 1 STALL (PER CBC T 11B-228.3.2.1)	1 STALL
AMBULATORY EVSE INSTALLED STALLS	MIN. REQ. FOR 26-50 EV STALLS IS 1 STALL (PER CBC T 11B-228.3.2.1)	1 STALL
STD. EVSE INSTALLED STALLS	41 - 22 - 1 - 1 - 1 = 16 STALLS (P2 LEVEL)	16 STALLS

**P1 LEVEL PARKING PROVIDED (119 TOTAL STALLS INCLUDING 29 FOR RETAIL)**

STANDARD STALLS	37 SELF-PARK STALLS + 50 ATTENDANT-ASSIST STALLS (INCL. 22 TANDEM)	87 STALLS
ACCESSIBLE STALLS	7 TOTAL ACCESSIBLE STALLS PER ABOVE (5 STD + 2 VAN)	7 STALLS
EVSE INSTALLED STALLS	25 TOTAL EVSE STALLS PER ABOVE (22 CAV/CARPOOL + 1 EA. ADA/VAN/AMBULATORY)	25 STALLS

**P2 LEVEL PARKING PROVIDED (136 TOTAL STALLS)**

STANDARD STALLS	66 SELF-PARK STALLS + 54 ATTENDANT-ASSIST STALLS (INCL. 23 TANDEM)	120 STALLS
EVSE INSTALLED STALLS	16 TOTAL EVSE STALLS PER ABOVE	16 STALLS

**BIKE PARKING REQUIRED (MV CITY CODE - 5% OF PARKING PROVIDED):**  
SHORT-TERM (RACKS) BIKE PARKING REQUIRED = 14 BIKES  
LONG-TERM (SECURED ENCLOSURE) BIKE PARKING REQUIRED = 14 BIKES

SHORT-TERM (RACKS) BIKE PARKING PROVIDED: 11 RACKS ONSITE (22 BIKES) + 7 RACKS OFFSITE WITHIN FRONTAGE (14 BIKES), 36 BIKES TOTAL (SEE L1.22)  
LONG-TERM (SECURED ENCLOSURE) BIKE PARKING PROVIDED: 16 BIKES (SEE 3/A2.0)

**ISSUES AND REVISIONS**

NO.	DATE	DESCRIPTION
07.17.19		PLANNING SUBMITTAL
02.21.20		PLANNING RESUBMITTAL #1
06.24.20		PLANNING RESUBMITTAL #2
05.20.21		PLANNING RESUBMITTAL #3
09.20.21		PLANNING RESUBMITTAL #4
12.17.21		PLANNING RESUBMITTAL #5
01.27.22		PLANNING RESUBMITTAL #6
02.18.22		PLANNING RESUBMITTAL #6R

PROJECT NUMBER  
17007

SHEET TITLE  
**PROJECT INFORMATION**

SCALE  
AS NOTED



SHEET NUMBER

**A0.1**



590 CASTRO STREET  
MOUNTAIN VIEW, CA



**ZONING CALCULATIONS**

TOTAL SITE (LOT) AREA:  
41,353 SF (.97 ACRES ±)

- SETBACKS:  
S1 (FRONT SETBACK @ CASTRO) NONE REQUIRED / PROVIDED (BUILD TO BACK OF SIDEWALK)  
EXISTING 12' SIDEWALK UTILITY EASEMENT TO REMAIN  
S2 (FRONT SETBACK @ CHURCH) NONE REQUIRED / PROVIDED  
EXISTING 5' SIDEWALK UTILITY EASEMENT TO REMAIN  
S3 (SIDE SETBACK @ EASEMENT)  
NONE REQUIRED / 15'-8 1/2" PROVIDED  
S4 (SIDE SETBACK @ PASEO):  
50'-0" MIN. WIDTH PEDESTRIAN OPEN SPACE REQUIRED / 50'-2" PROVIDED

BUILDING COVERAGE:  
B1 (SEE PLAN DIMENSIONS & FLOOR AREA CALC.) = 28,794 SF

% OF SITE COVERAGE = 28,794 SF / 41,353 SF = 69.6% TOTAL (70% MAX ALLOWED)

PAVING COVERAGE:  
TOTAL SITE AREA = 12,559 SF (41,353 SF - 28,794 SF)  
LANDSCAPE PLANTING = 3,217 SF (~26% OF TOTAL SITE AREA)  
OFFSITE PLANTING AREA = 1,211 SF

OPEN AREA:  
1,091 SF THIRD FLOOR TERRACE  
4,739 SF FOURTH FLOOR TERRACE  
13,970 SF GRADE LEVEL OPEN SPACE (33.8% OF LOT AREA)  
TOTAL OPEN AREA = 19,800 SF  
47.9% TOTAL OPEN AREA

FLOOR AREA:  
PARKING LEVEL P2 = 41,200 SF  
PARKING LEVEL P1 = 41,200 SF  
FIRST FLOOR (27,480 SF TOTAL FOOTPRINT)  
-10,564 SF RETAIL  
+ 2,919 SF COVERED DRIVEWAY / PARKING ENTRY  
+ -13,997 SF OFFICE  
= 27,480 SF TOTAL FIRST FLOOR  
SECOND FLOOR = 27,979 SF  
THIRD FLOOR = 27,405 SF  
FOURTH FLOOR = 22,497 SF  
TOTAL FLOOR AREA = 187,761 SF

TOTAL OFFICE/RETAIL AREA (ONLY) = 102,442 SF

BUILDING HEIGHT (SEE A3.0 - A3.3 BUILDING ELEVATIONS/SECTION FOR DIMENSIONS):  
T.O. ROOF = 55' MAX / 4 STORIES ALLOWED  
55'-0" / 4 STORIES PROPOSED  
T.O. HVAC SCREEN = 65'-0" PROPOSED (+10' ABOVE ROOF)

**LEGEND**

- EGRESS PATH OF TRAVEL\*\*, \*\*
- ← ACCESSIBLE PATH OF TRAVEL (SEE 3/-)
- ☑ RATED BUILDING ELEMENT (AS NOTED)
- \* COMMON PATH OF EGRESS (CBC T 1006.2.1)  
A, M = 75' MAX. (SPRINKLERED)  
B, S = 100' MAX. (SPRINKLERED)
- \*\* EXIT ACCESS TRAVEL DISTANCE (CBC T 1017.2)  
A, M = 250' MAX. (SPRINKLERED)  
B = 300' MAX. (SPRINKLERED)  
S-2 = 400' MAX. (SPRINKLERED)

**BUILDING CODE SUMMARY**

BUILDING CODE: 2019 CALIFORNIA BUILDING CODE & ASSOCIATED  
(BUILDING PERMIT SUBMITTAL TO BE AFTER JANUARY 1, 2020)

AREAS:	GROUP A	GROUP B	GROUP M	GROUP S-2
4TH FLR	5,330 SF	17,167 SF	0 SF	0 SF
3RD FLR	6,508 SF	20,897 SF	0 SF	0 SF
2ND FLR	6,673 SF	21,306 SF	0 SF	0 SF
1ST FLR	2,940 SF	11,057 SF	10,564 SF	0 SF
LEVEL P1	0 SF	0 SF	0 SF	41,200 SF
LEVEL P2	0 SF	0 SF	0 SF	41,200 SF
TOTAL	21,451 SF	70,427 SF	10,564 SF	82,400 SF

GROSS OCCUPIED (INTERIOR) BUILDING AREA: 184,842 SF

NO. OF STOREYS: 4

HEIGHT: 55'-0" (TO TOP OF ROOF HIGH POINT, SEE ALSO A3.-  
ELEVATIONS & SECTIONS FOR MORE DETAIL)

CONSTRUCTION TYPE:  
TYPE I-B

BUILDING(S) WILL BE FULLY SPRINKLERED.  
NON-SEPARATED OCCUPANCIES TO BE PROVIDED PER CBC 508.3.

GROUP A-2:	ALLOWABLE HEIGHT PER CBC T 504.3	180'
ALLOWABLE STOREYS PER CBC T 504.4	12	
ALLOWABLE AREA PER CBC T 506.2	UNLIMITED SF	
<b>ALLOWABLE SUMMARY</b>	<b>UNLIMITED SF, 12 STOREYS, 180'</b>	
GROUP B:	ALLOWABLE HEIGHT PER CBC T 504.3	180'
ALLOWABLE STOREYS PER CBC T 504.4	12	
ALLOWABLE AREA PER CBC T 506.2	UNLIMITED SF	
<b>ALLOWABLE SUMMARY</b>	<b>UNLIMITED SF, 12 STOREYS, 180'</b>	
GROUP M:	ALLOWABLE HEIGHT PER CBC T 504.3	180'
ALLOWABLE STOREYS PER CBC T 504.4	12	
ALLOWABLE AREA PER CBC T 506.2	UNLIMITED SF	
<b>ALLOWABLE SUMMARY</b>	<b>UNLIMITED SF, 12 STOREYS, 180'</b>	
GROUP S-2:	ALLOWABLE HEIGHT PER CBC T 504.3	180'
ALLOWABLE STOREYS PER CBC T 504.4	12	
ALLOWABLE AREA PER CBC T 506.2	237,000 SF	
<b>ALLOWABLE SUMMARY</b>	<b>237,000 SF, 12 STOREYS, 180'</b>	

IN COMPLIANCE WITH CBC 508.3.2, THE ALLOWABLE BUILDING AREA, HEIGHT AND NUMBER OF STOREYS OF THE BUILDING OR PORTION THEREOF IS TO BE BASED ON THE MOST RESTRICTIVE ALLOWANCES. FOR TYPE I-B WITH UNLIMITED A, B, M, THE S-2 IS THE LIMITING OCCUPANCY (MAX. 237,000 SF AREA, 12 STOREYS, 180'). THE PROPOSED PROJECT IS LESS THAN 190,000 SF, 4 STOREYS, 60').

**RATING REQUIREMENTS FOR TYPE I-B (CBC T 601):**  
PRIMARY STRUCTURAL FRAME: 2 HR  
BEARING WALLS EXTERIOR: 2 HR  
BEARING WALLS INTERIOR: 2 HR  
NON-BEARING WALLS EXTERIOR: PER CBC T 602  
NON-BEARING WALLS INTERIOR: 0 HR  
FLOOR CONSTRUCTION AND SECONDARY MEMBERS: 2 HR  
ROOF CONSTRUCTION AND SECONDARY MEMBERS: 1 HR

**RATING REQUIREMENTS FOR NON-BEARING EXTERIOR WALLS (CBC T 602):**  
ALL EXTERIOR WALLS (FSD > 30') TO BE NON-RATED

**ALLOWABLE OPENINGS EXTERIOR WALLS (CBC T 705.8):**  
ALL EXTERIOR WALLS (FSD > 30') UNLIMITED

ISSUES AND REVISIONS

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02.21.20		PLANNING RESUBMITTAL #1
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05.20.21		PLANNING RESUBMITTAL #3
09.20.21		PLANNING RESUBMITTAL #4
12.17.21		PLANNING RESUBMITTAL #5
01.27.22		PLANNING RESUBMITTAL #6

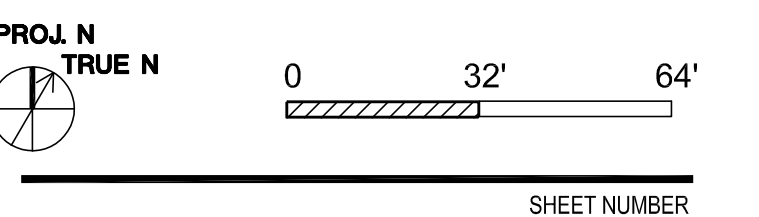
PROJECT NUMBER  
17007

SHEET TITLE

ZONING CALCULATIONS, CONST. TYPE  
ANALYSIS, & EGRESS PLANS

SCALE

1/32"=1'-0"



SHEET NUMBER

A0.2A

**OCCUPANCY CALCULATIONS:**

OFFICE #1 OCCUPANCY (6,808 SF): GROUP B, A-3  
(1 OCC. / 150 SF & 1 OCC. / 15 SF)  
STAIR EXCLUDED (380 SF)  
OFFICE (B): 5,106 SF. / 150 = 35 OCC.  
ASSEMBLY (A-3) ~25% ALLOWANCE: 1,702 SF / 15 = 114 OCC.  
TOTAL = 149 OCCUPANTS (2 EXITS REQUIRED)

TOTAL DOOR WIDTH: 149 X 0.15 = 22.35" MIN. REQ.  
2 DOORS @ 64" + 1 @ 32" (3 @ 160" TOTAL) PROVIDED

OFFICE (COMMONS) OCCUPANCY (5,915 SF): GROUP B, A-3  
(1 OCC. / 150 SF & 1 OCC. / 15 SF)  
STAIR / ELEVATORS EXCLUDED (547 SF)  
OFFICE (B): 4,677 SF. / 150 = 32 OCC.  
ASSEMBLY (A-3) LOBBY: 1,238 SF / 15 = 83 OCC. (2 EXITS REQ.)  
TOTAL = 115 OCCUPANTS (2 EXITS REQUIRED)

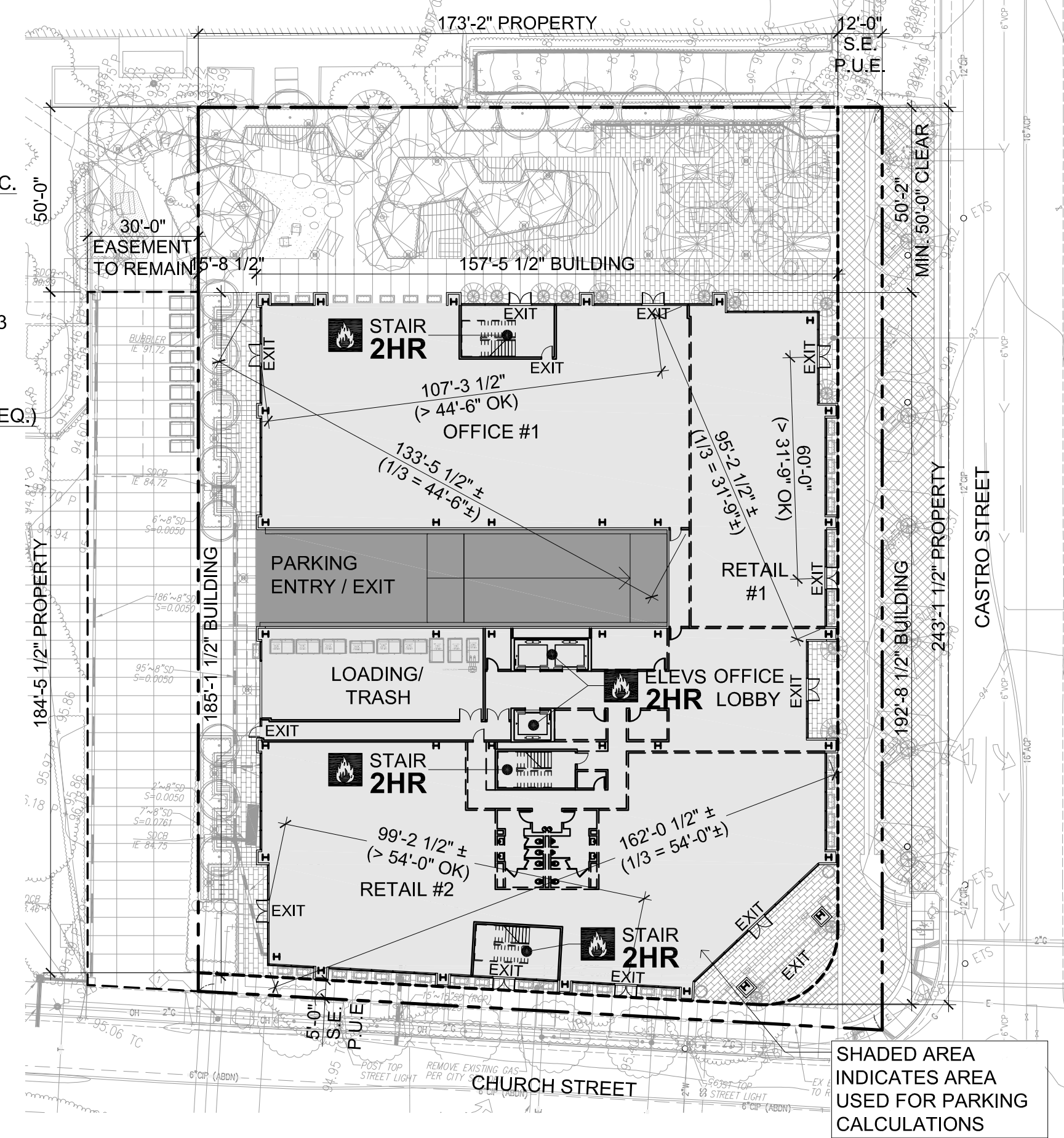
TOTAL DOOR WIDTH: 115 X 0.15 = 17.25" MIN. REQ.  
1 DOOR @ 32" + 1 DOOR @ 64" (2 @ 96" TOTAL) PROVIDED

RETAIL #1 OCCUPANCY: GROUP M (1 OCC. / 15 SF)  
AREA: 3,179 SF. / 15 = 212 OCC. (2 EXITS REQUIRED)

TOTAL DOOR WIDTH: 212 X 0.15 = 31.8" MIN.  
2 DOORS @ 64" CLR. EA. (128" TOTAL) PROVIDED

RETAIL #2 OCCUPANCY: GROUP M (1 OCC. / 15 SF)  
STAIR EXCLUDED (347 SF)  
AREA: 7,385 SF. / 15 = 493 OCC. (2 EXITS REQUIRED)

TOTAL DOOR WIDTH: 493 X 0.15 = 73.95" MIN.  
3 DOORS @ 64" CLR. EA. (192" TOTAL) PROVIDED



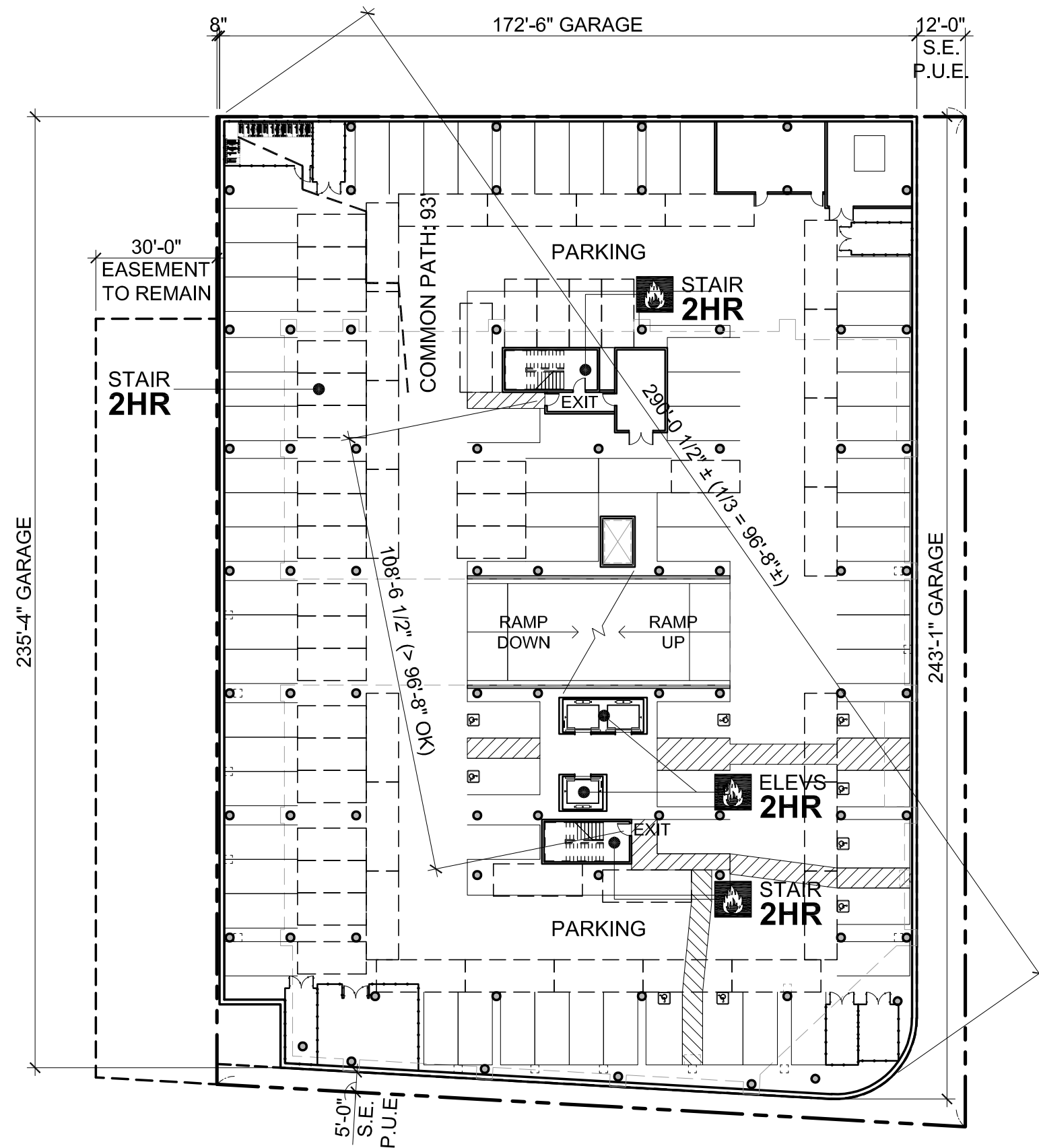
3 FIRST FLOOR EGRESS PLAN  
1/32" = 1'-0"

**OCCUPANCY CALCULATIONS:**

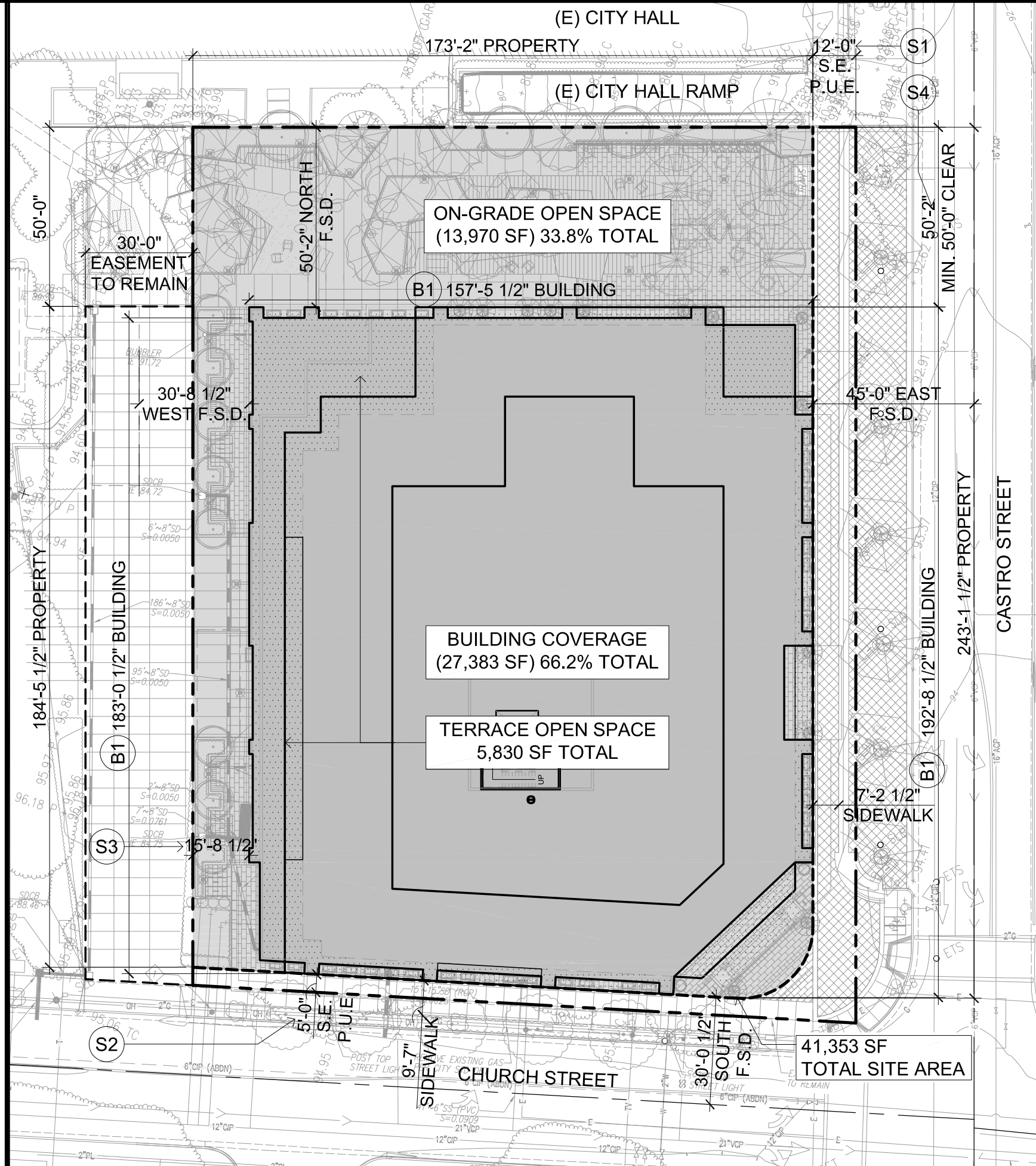
OCCUPANCY: GROUP S-2 (1 OCC. / 200 SF)  
AREA: 41,200 SF. / 200 = 206 OCC. (2 EXITS REQUIRED)

TOTAL DOOR WIDTH: 206 X 0.15 = 30.9" MIN. REQ.  
2 DOORS @ 32" MIN. CLR. EA. (64" TOTAL) PROVIDED

TOTAL EGRESS WIDTH: 206 X 0.2 = 41.2" MIN. REQ.  
2 STAIRS @ 44" MIN. CLR. EA. (88" TOTAL) PROVIDED



2 TYPICAL PARKING LEVEL (P2/P1 SIM) EGRESS PLAN  
1/32" = 1'-0"



1 SITE PLAN / ZONING CALCULATIONS  
1/32" = 1'-0"



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VIEW FROM CORNER OF CASTRO STREET & CHURCH STREET

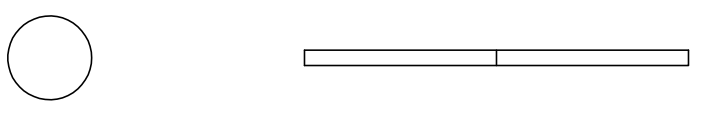
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	12.17.21	PLANNING RESUBMITTAL #5

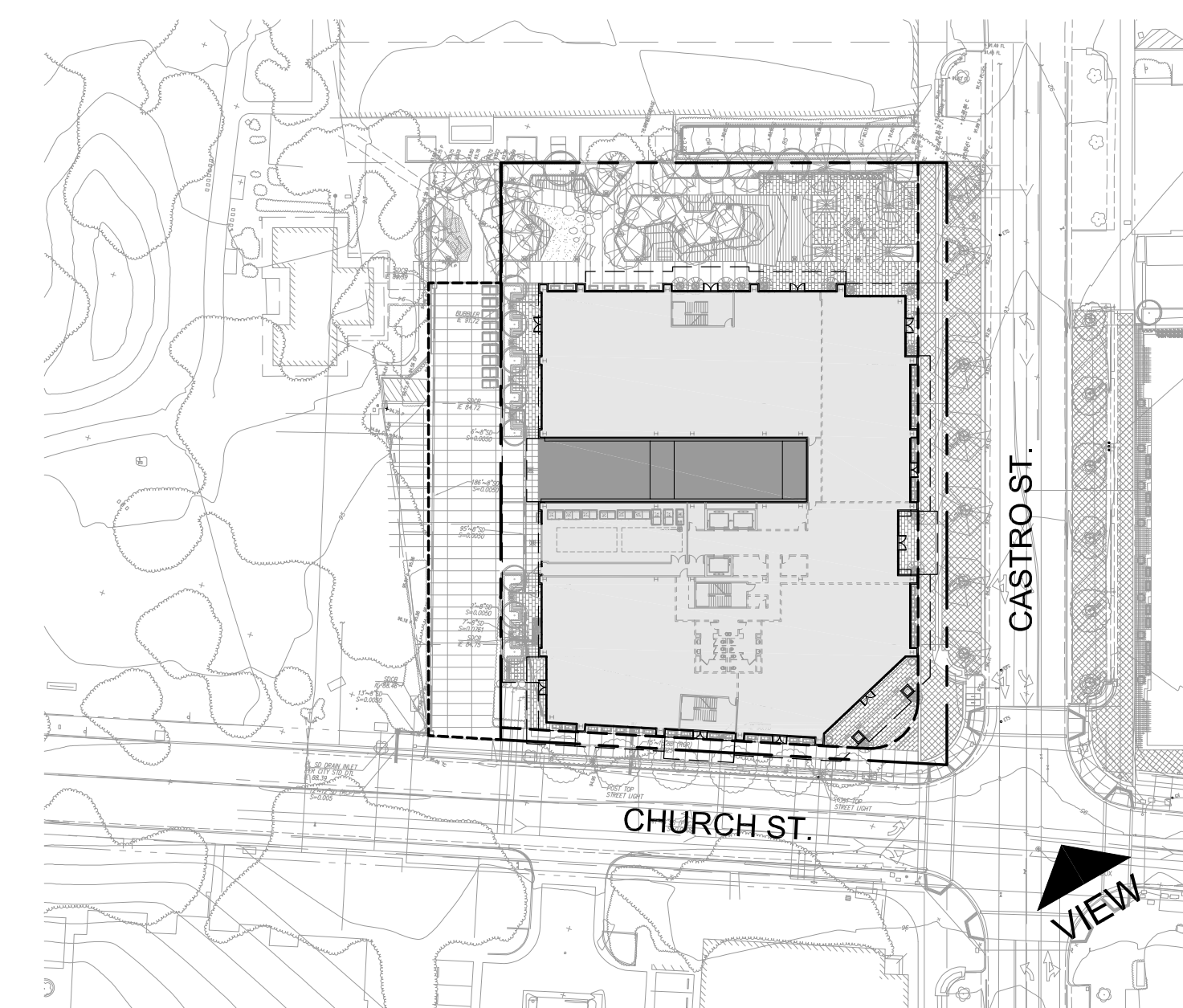
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SHEET TITLE  
**RENDERED PERSPECTIVE**

SCALE  
**AS NOTED**



SHEET NUMBER



**1** KEY PLAN - PROPOSED SITE  
1/8" = 1'-0"

**R1**



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VIEW FROM CHURCH STREET

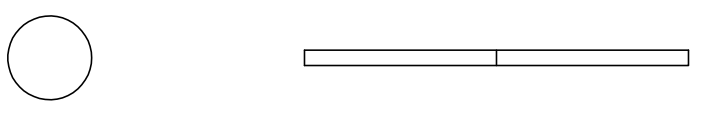
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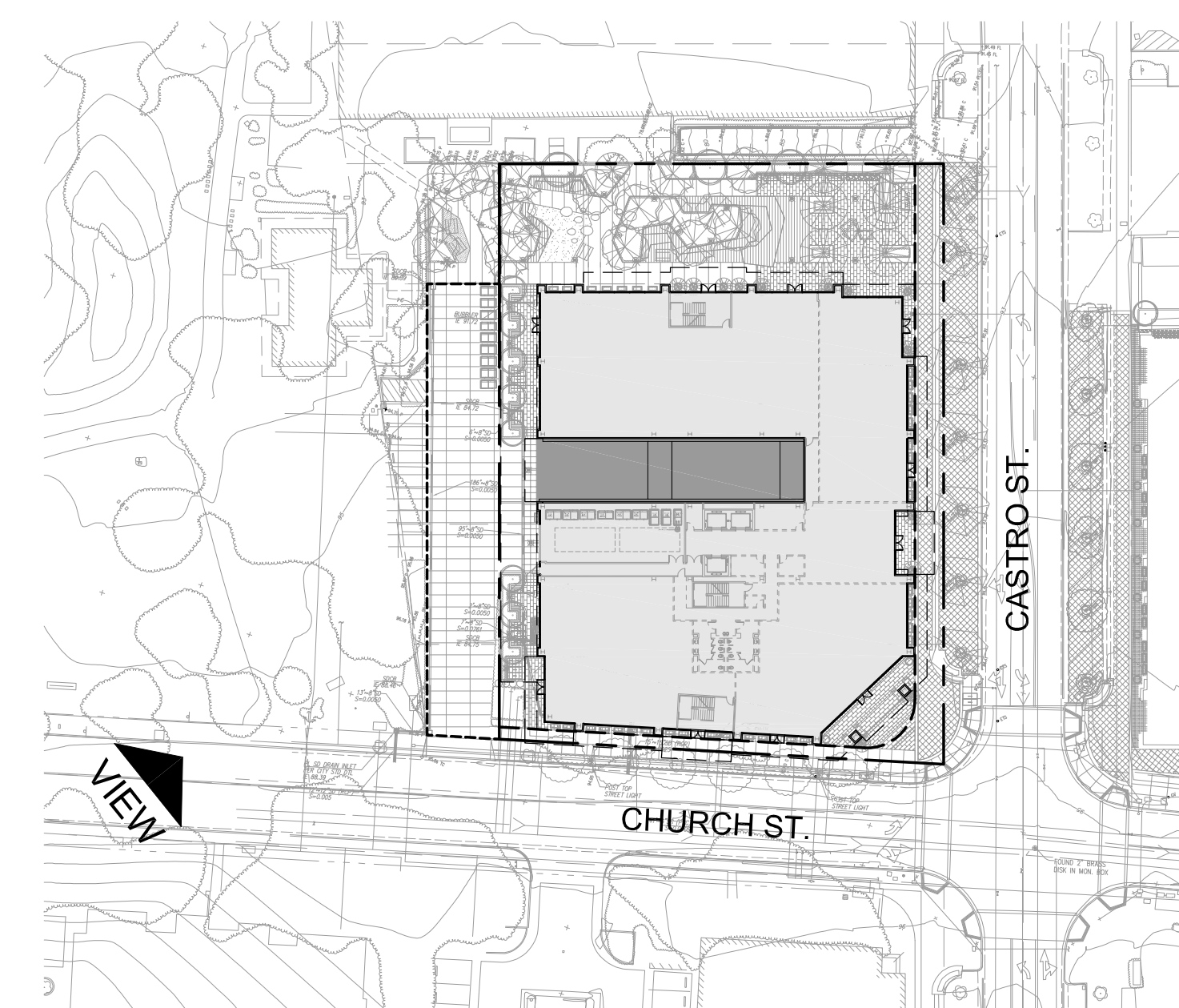
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**RENDERED PERSPECTIVE**

SCALE  
**AS NOTED**



SHEET NUMBER



**1** KEY PLAN - PROPOSED SITE  
1/8" = 1'-0"

**R2**



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VIEW FROM CASTRO STREET

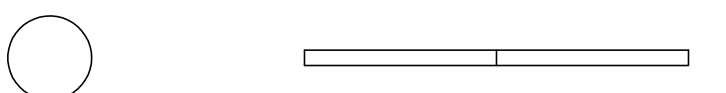
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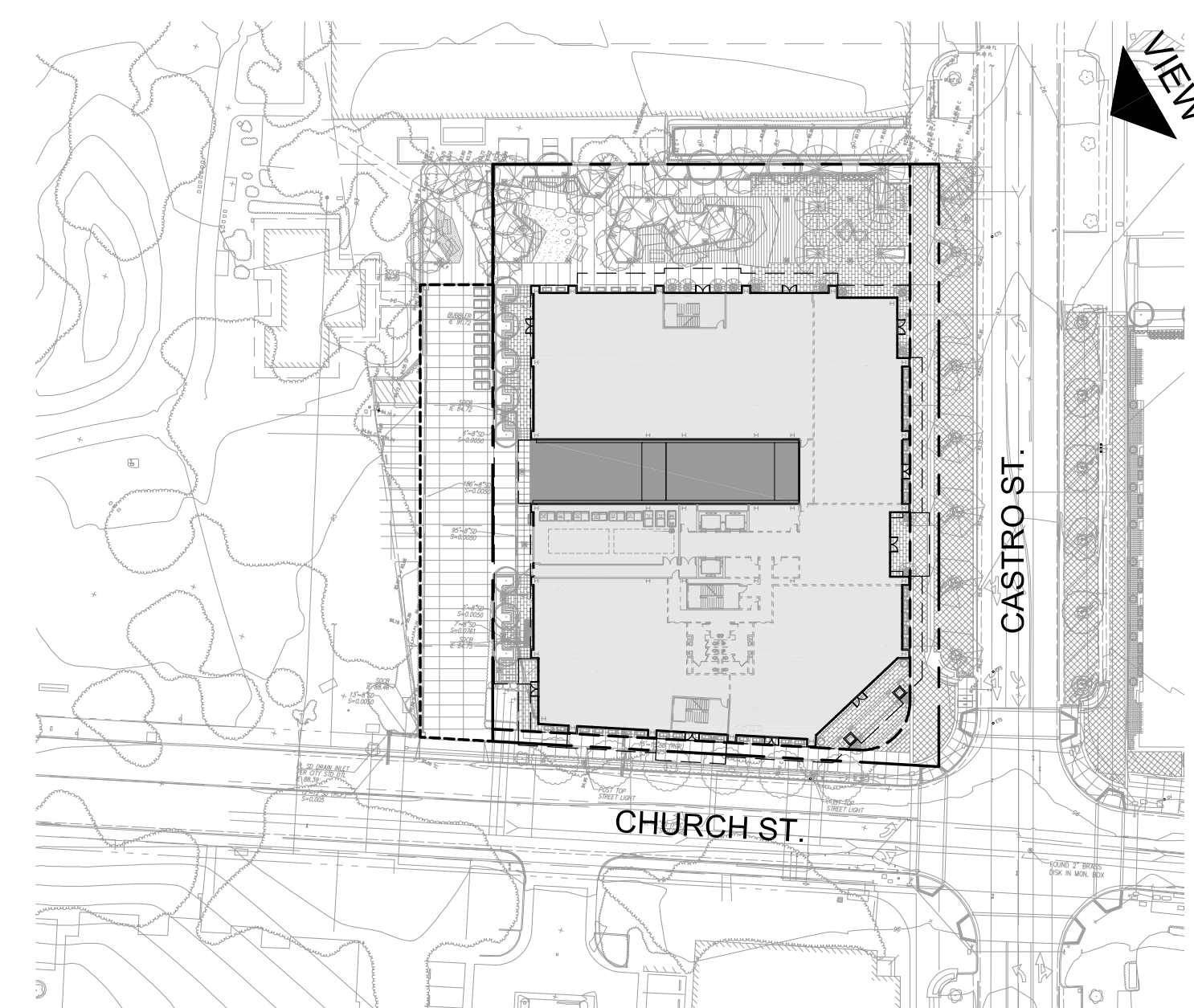
SHEET TITLE  
**RENDERED PERSPECTIVE**

SCALE  
**AS NOTED**



SHEET NUMBER

**R3**



**1** KEY PLAN - PROPOSED SITE  
1/8" = 1'-0"



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MOUNTAIN VIEW, CA

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VIEW FROM CASTRO STREET

ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION
	02.21.20	PLANNING RESUBMITTAL #1
	06.24.20	PLANNING RESUBMITTAL #2
	05.20.21	PLANNING RESUBMITTAL #3
	09.20.21	PLANNING RESUBMITTAL #4
	12.17.21	PLANNING RESUBMITTAL #5

PROJECT NUMBER  
17007

SHEET TITLE

**RENDERED PERSPECTIVE**

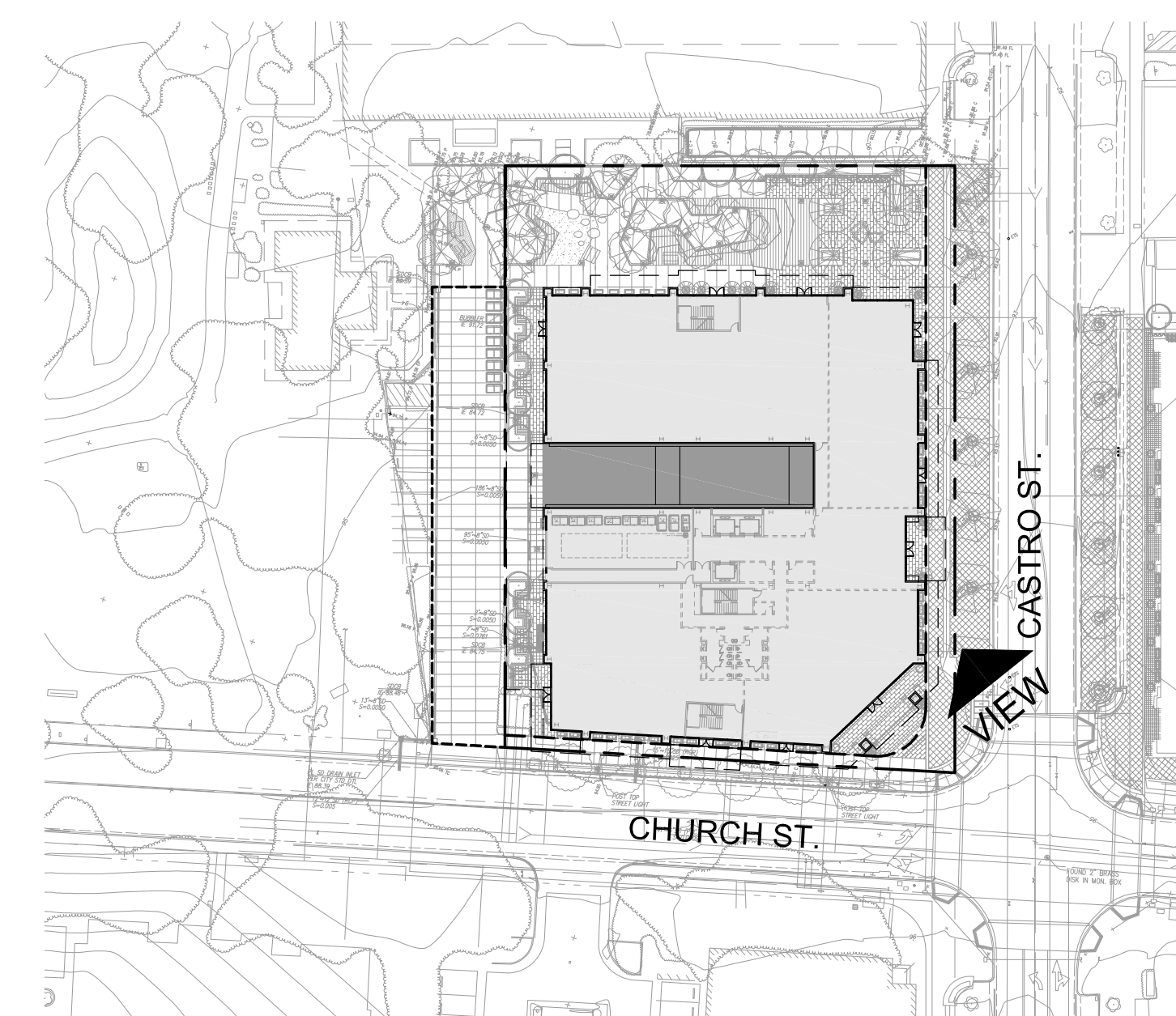
SCALE

**AS NOTED**



SHEET NUMBER

**R5**



**1** KEY PLAN - PROPOSED SITE  
1/8" = 1'-0"



590 CASTRO STREET  
MOUNTAIN VIEW, CA

THE  
**SOBRATO**  
ORGANIZATION

**KSH**  
**ARCHITECTS**  
KORTH SUNSERI HAGEY



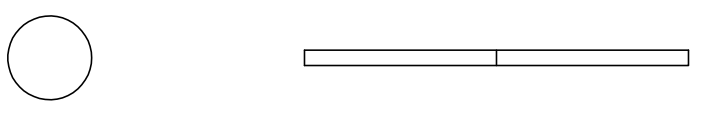
VIEW FROM CORNER OF CASTRO STREET & CHURCH STREET

ISSUES AND REVISIONS		
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	12.17.21	PLANNING RESUBMITTAL #5

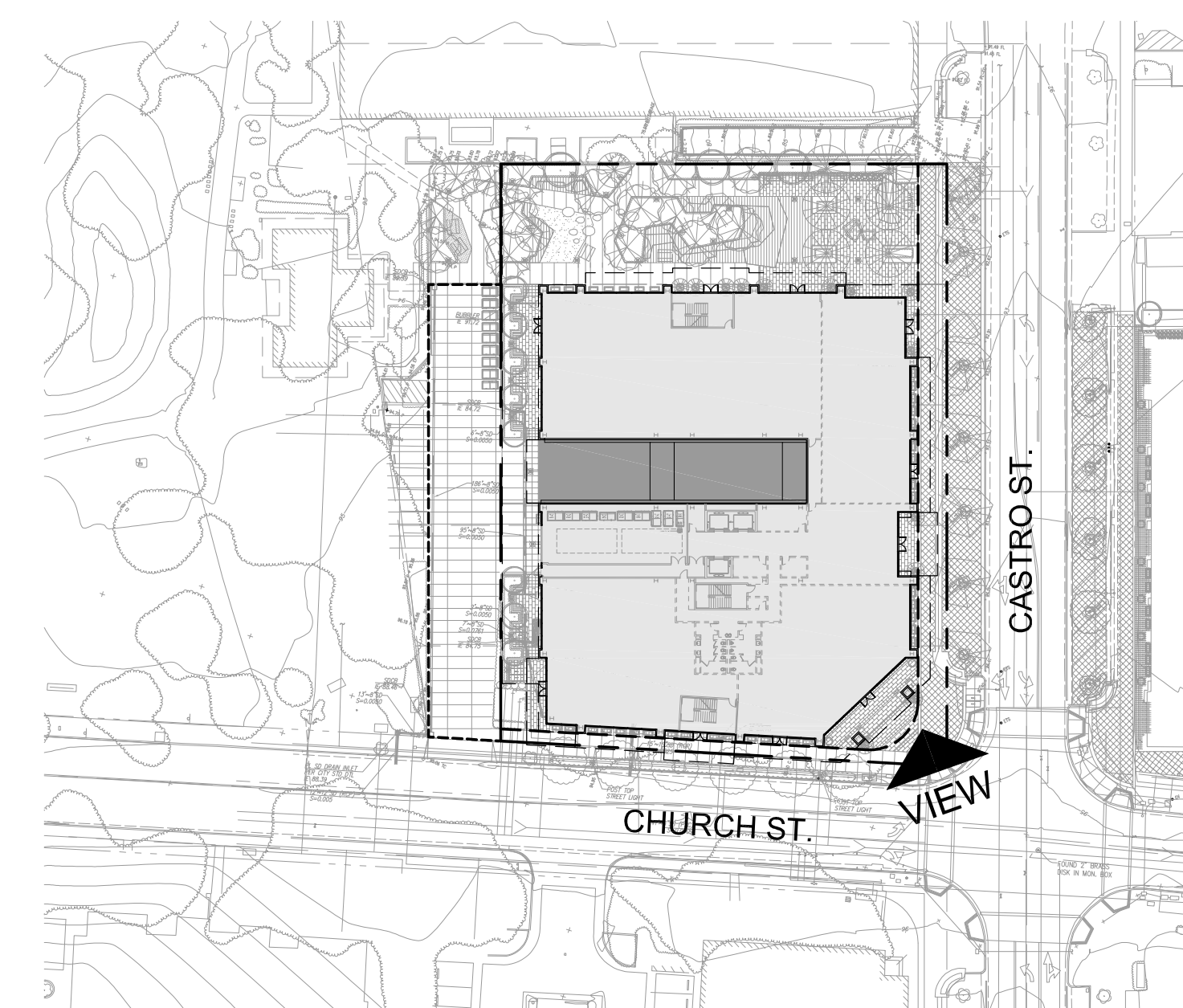
PROJECT NUMBER  
17007

SHEET TITLE  
**RENDERED PERSPECTIVE**

SCALE  
**AS NOTED**



SHEET NUMBER



**1** KEY PLAN - PROPOSED SITE  
1/8" = 1'-0"

**R6**



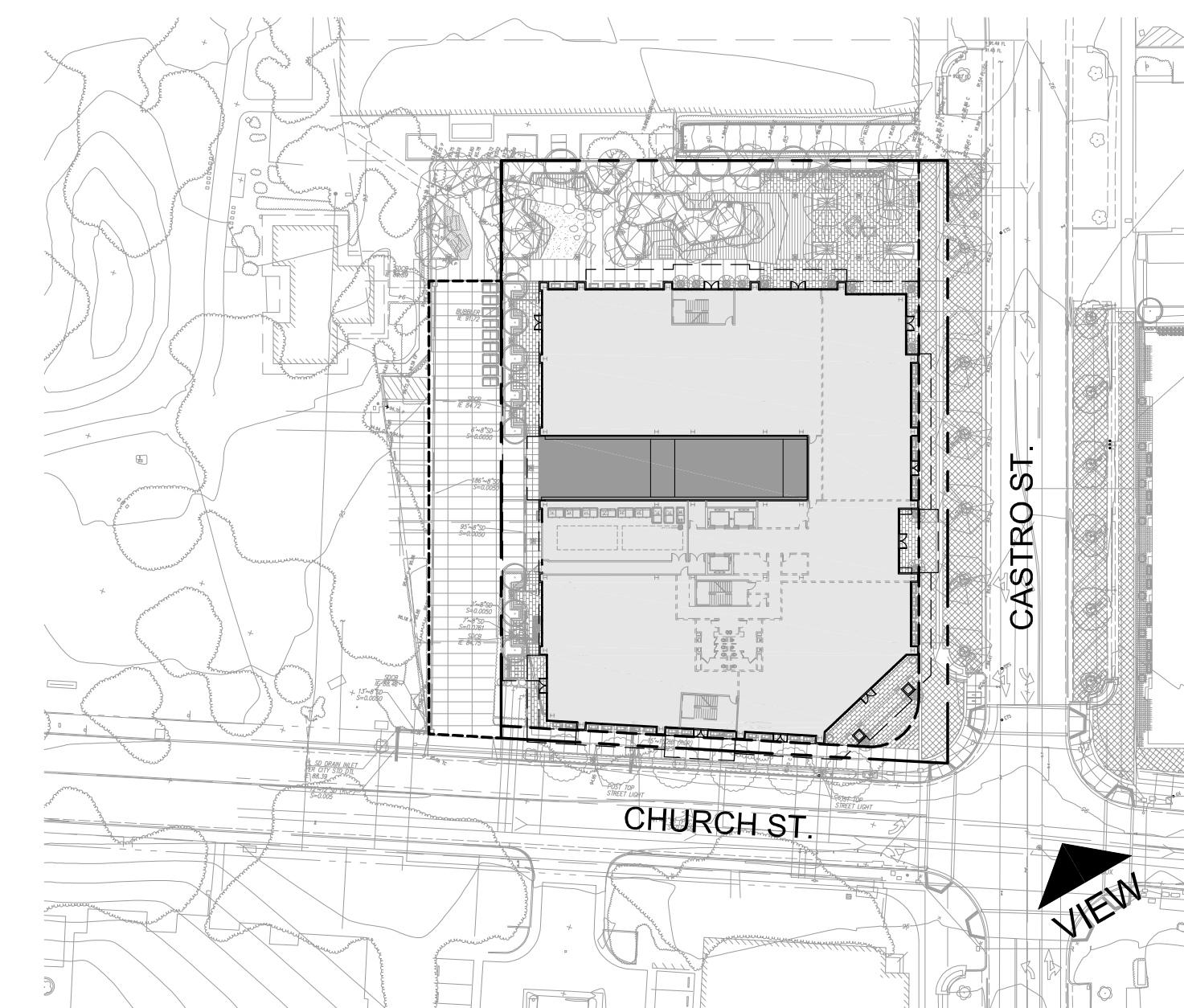
590 CASTRO STREET  
MOUNTAIN VIEW, CA

THE  
**SOBRATO**  
ORGANIZATION

**KSH**  
ARCHITECTS  
KORTH SUNSERI HAGEY



VIEW FROM CORNER OF CASTRO STREET & CHURCH STREET



**1** KEY PLAN - PROPOSED SITE  
1/8" = 1'-0"

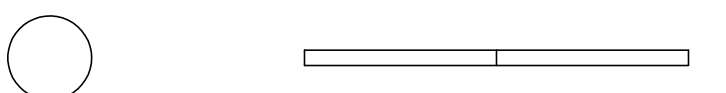
ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION
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	12.17.21	PLANNING RESUBMITTAL #5

PROJECT NUMBER  
17007

SHEET TITLE  
**RENDERED PERSPECTIVE**

SCALE  
**AS NOTED**



SHEET NUMBER

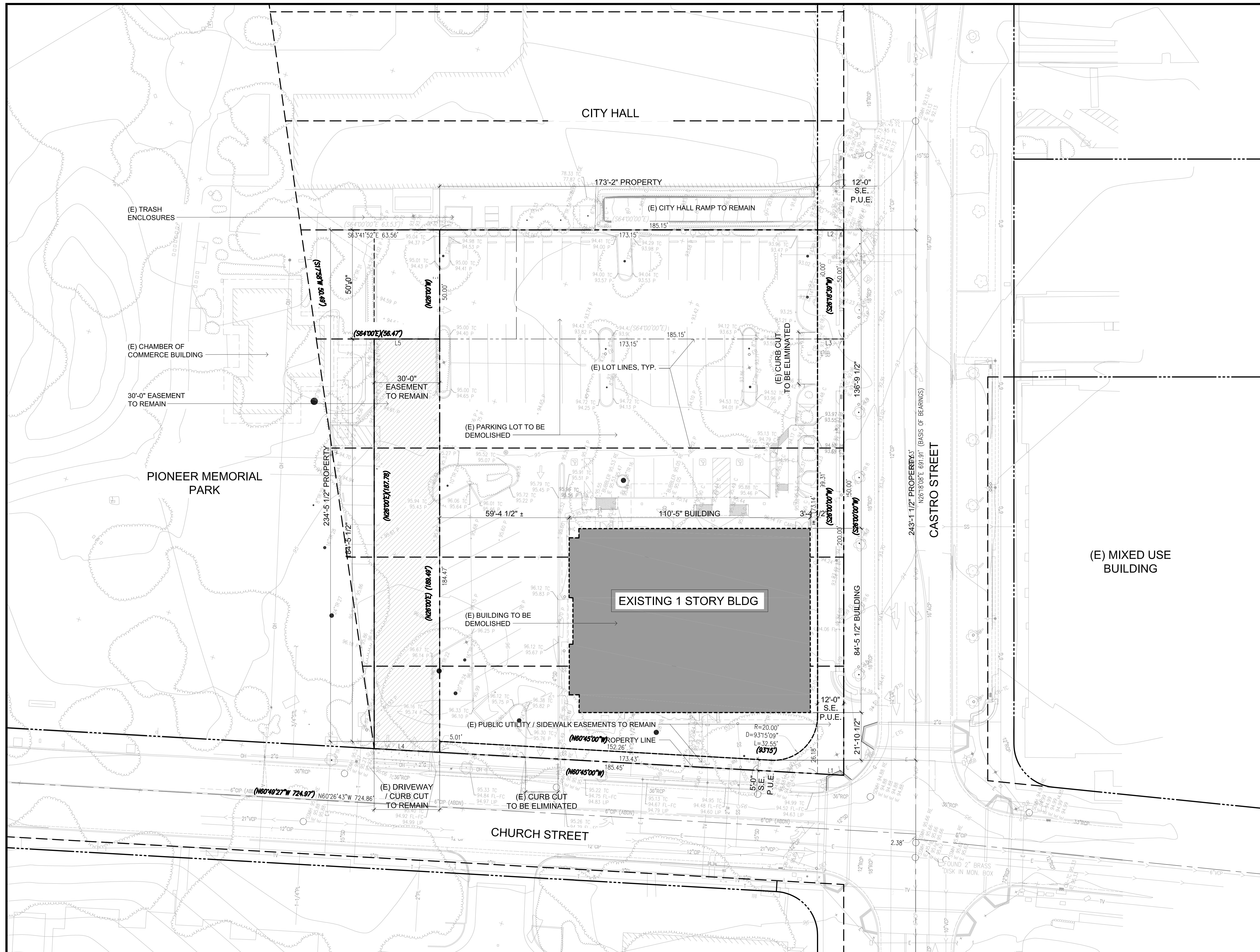
**R7**



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MOUNTAIN VIEW, CA

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KORTH SUNSERI HAGEY



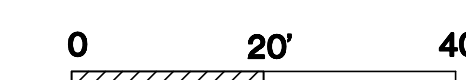
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	02.21.20	PLANNING RESUBMITTAL #1
	06.24.20	PLANNING RESUBMITTAL #2
	05.12.21	PLANNING RESUBMITTAL #3
	09.20.21	PLANNING RESUBMITTAL #4
	12.17.21	PLANNING RESUBMITTAL #5

PROJECT NUMBER  
17007

SHEET TITLE  
**EXISTING SITE PLAN**

SCALE  
**1" = 20'-0"**



SHEET NUMBER

**A1.0**



590 CASTRO STREET  
MOUNTAIN VIEW, CA

THE  
**SOBRATO**  
ORGANIZATION

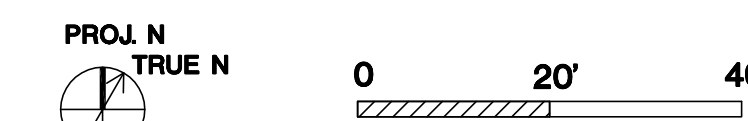


ISSUES AND REVISIONS	
NO.	DESCRIPTION
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02.21.20	PLANNING RESUBMITTAL #1
06.24.20	PLANNING RESUBMITTAL #2
05.20.21	PLANNING RESUBMITTAL #3
09.20.21	PLANNING RESUBMITTAL #4
12.17.21	PLANNING RESUBMITTAL #5
02.18.22	PLANNING RESUBMITTAL #6R

PROJECT NUMBER  
17007

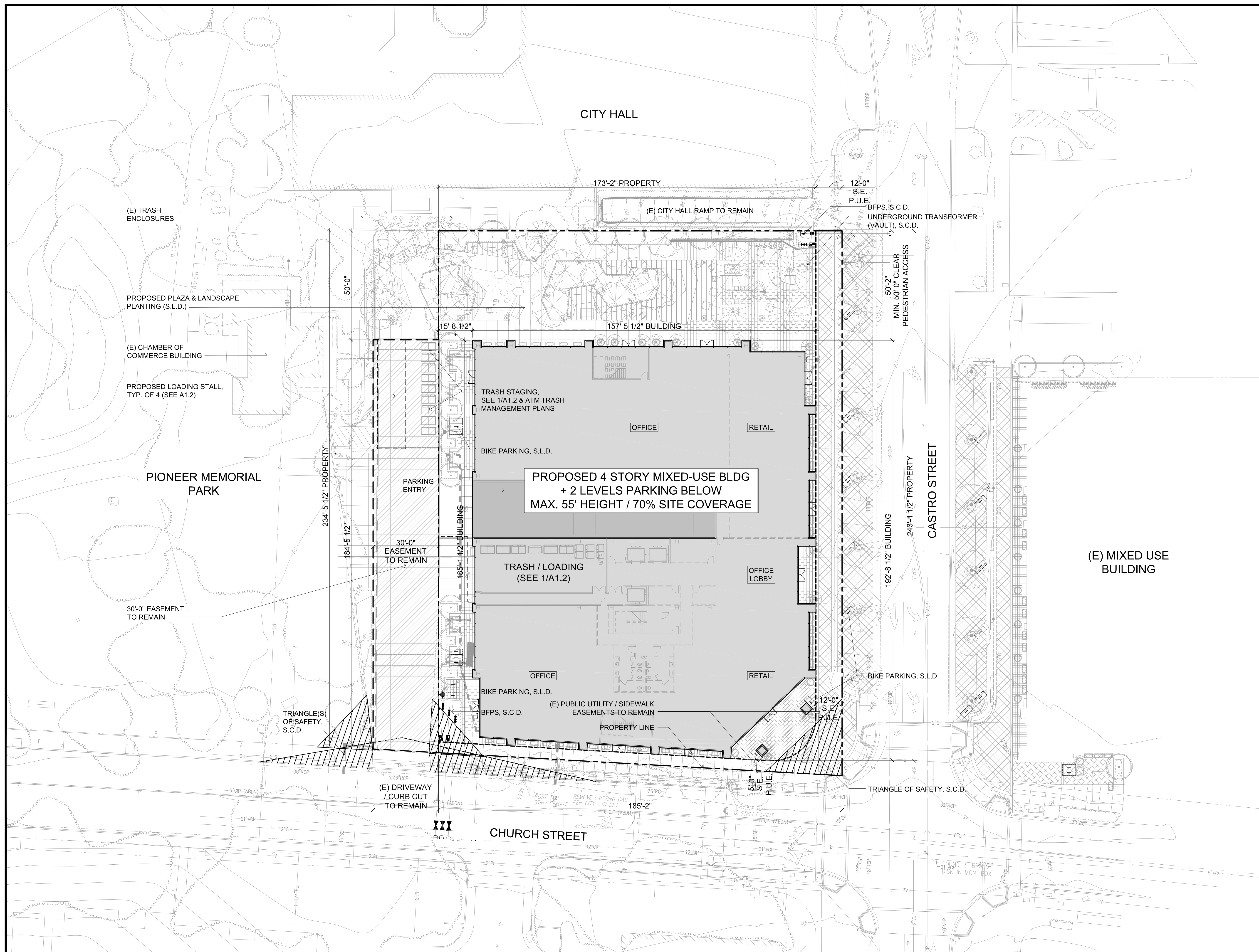
SHEET TITLE  
**PROPOSED SITE PLAN**

SCALE  
1" = 20'-0"



SHEET NUMBER

**A1.1**



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REPORT

590 CASTRO STREET

SOLAR DESIGN REVIEW

MAY 12, 2021  
PROJECT #2001903

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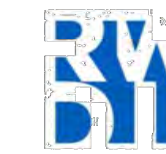
INTRODUCTION

RWDI was retained to conduct an experience-based review of the current design of a 4-story office building proposed to be constructed at 590 Castro St. in Mountain View, California.

The goal of the review is to provide high-level commentary on how the proposed project is expected to interact with the sun, and the effects that those interactions may have on the occupants of the building; as required by the City of Mountain View.

This review is based on the design described in the 3D model provided to RWDI by KSH Architects on May 6, 2021. Its findings may not necessarily be applicable for designs which significantly deviate from this iteration (Figure 1).

Note that no simulations were conducted as part of this review. This qualitative assessment is based on the above noted information provided by KSH Architects, a knowledge of the local sun path in Mountain View and RWDI's experience in assessing solar impacts on the built environment around the world.



DESIGN REVIEW

Site Context

The surrounding built context generally consists of low-rise structures, punctuated by isolated midrise developments (Figure 2).

The site is bounded on the south and east sides by 36 ft wide streets. On the north side of the site is City Hall, and on the west side is Pioneer Memorial Park. The Proposed Project is generally of the same scale as its surroundings and is mostly well set back from its neighbors. Therefore, we would not expect the surrounding buildings to cause atypical amounts of shadowing on the Proposed Project or vice versa.

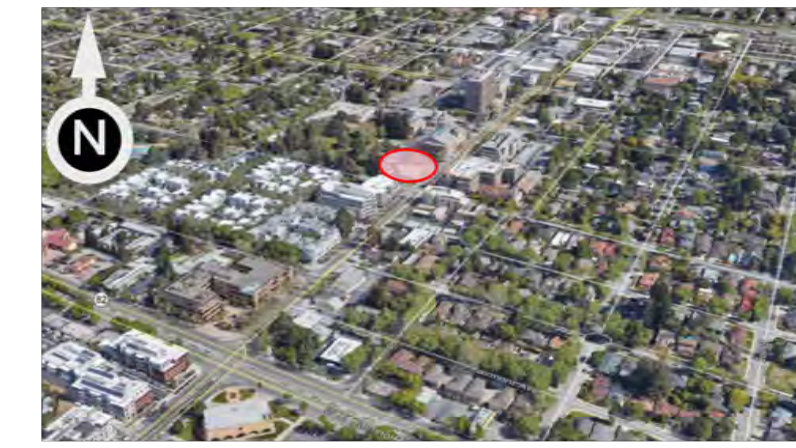
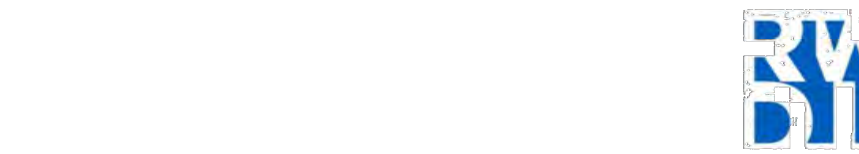


Figure 2: Surrounding Built Context (Credit: Google Earth), red circle marks the site location.



Figure 1: Perspective View of the Proposed Project

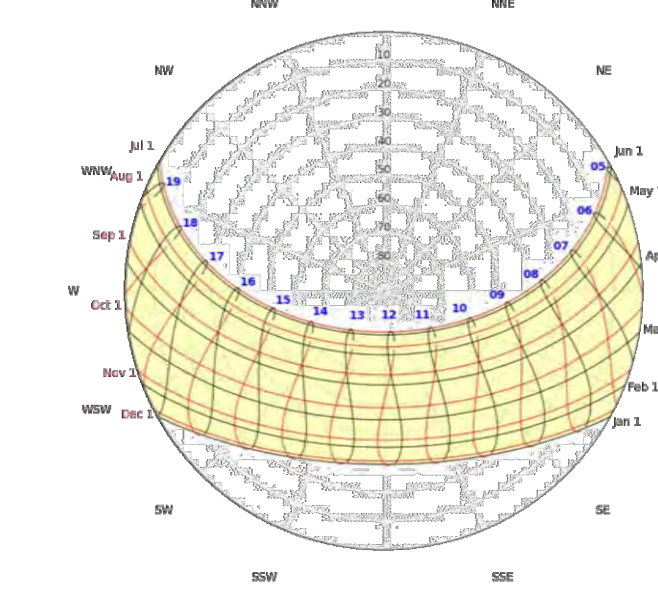


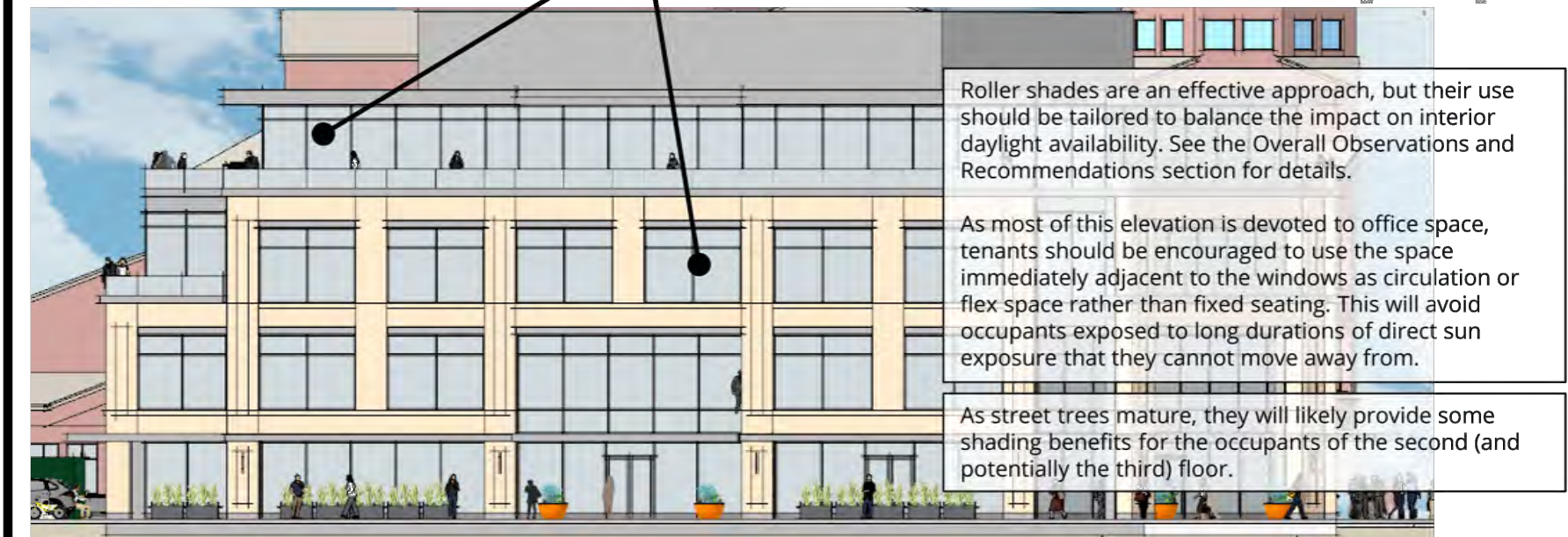
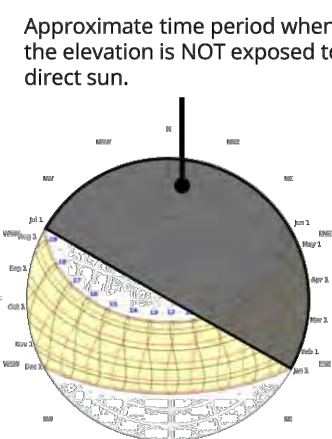
Figure 3: Sun Path Diagram for the Mountain View Area

DESIGN REVIEW

South Elevation

This elevation will be very frequently exposed to direct sun all year. During summer, though the sun will be more intense, the sun will be higher, and the direct sun exposure will likely be limited to the areas adjacent to the windows. The inset provided to the windows will help provide some shading compared to windows that are flush with the facade. The overhang of the roof over the glazing of the top floor is also a positive design feature which helps reduce the depth to which direct sun will penetrate.

In the winter and shoulder seasons, sunlight may penetrate quite deeply during the afternoons. This may lead to glare and heat gain issues for the occupants. The opaque facade elements will help to reduce the potential solar heat gain impact. Supplementary shading devices would be needed to lower the heat gain and glare risk.



RWDI Project #2001903  
May 12, 2021

Solar Design Review | 4

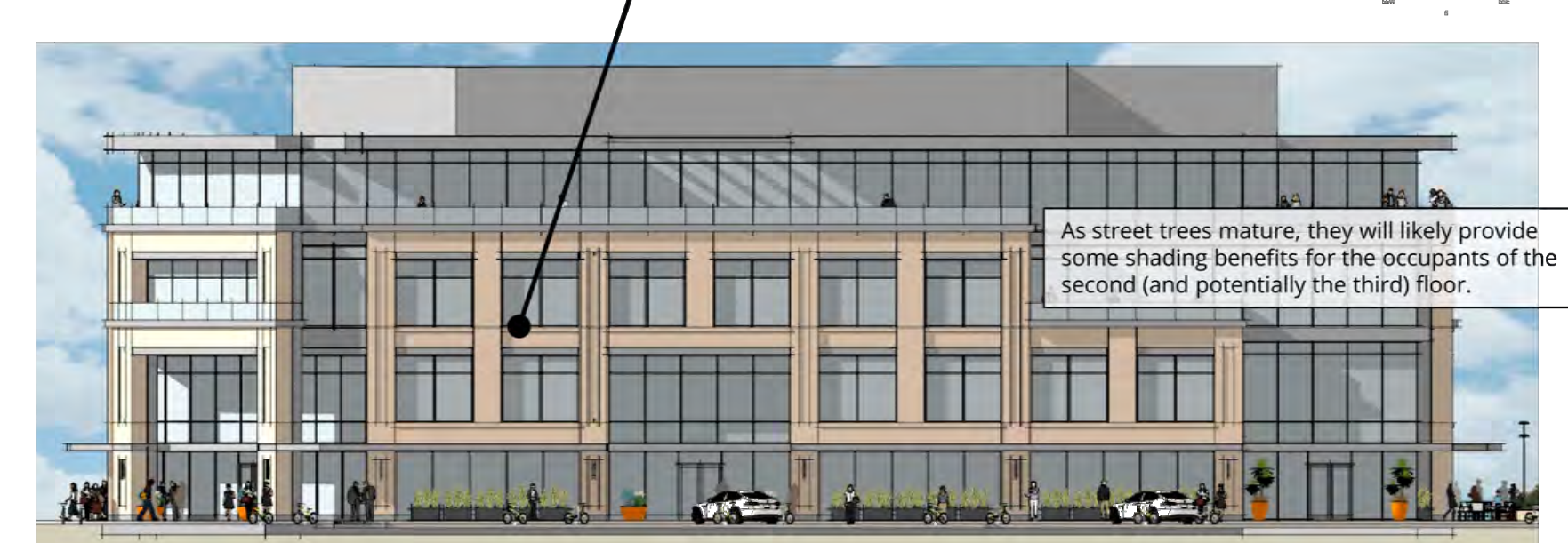
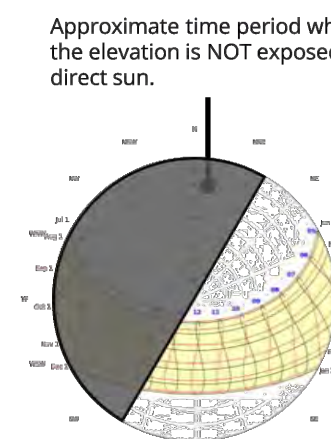
DESIGN REVIEW

East Elevation

This elevation will be exposed to direct sun all year during the mornings and into early afternoon in winter. The building across the street to the east is also a four-story structure and is unlikely to prevent solar access to this elevation during much of this time.

The large window area provides a good source of daylight, but internal glare and heat gains are likely. The low solar angles during the morning may result in sunlight penetrating quite deeply. This impact may be exaggerated during the winter months when the sun remains at lower angles all morning and into early afternoon. The overhang of the roof over the glazing of the top floor is a positive design feature and is likely to reduce the depth to which direct sun will penetrate.

Much of the commentary related to the shading devices for the south elevation applies here as well.



RWDI Project #2001903  
May 12, 2021

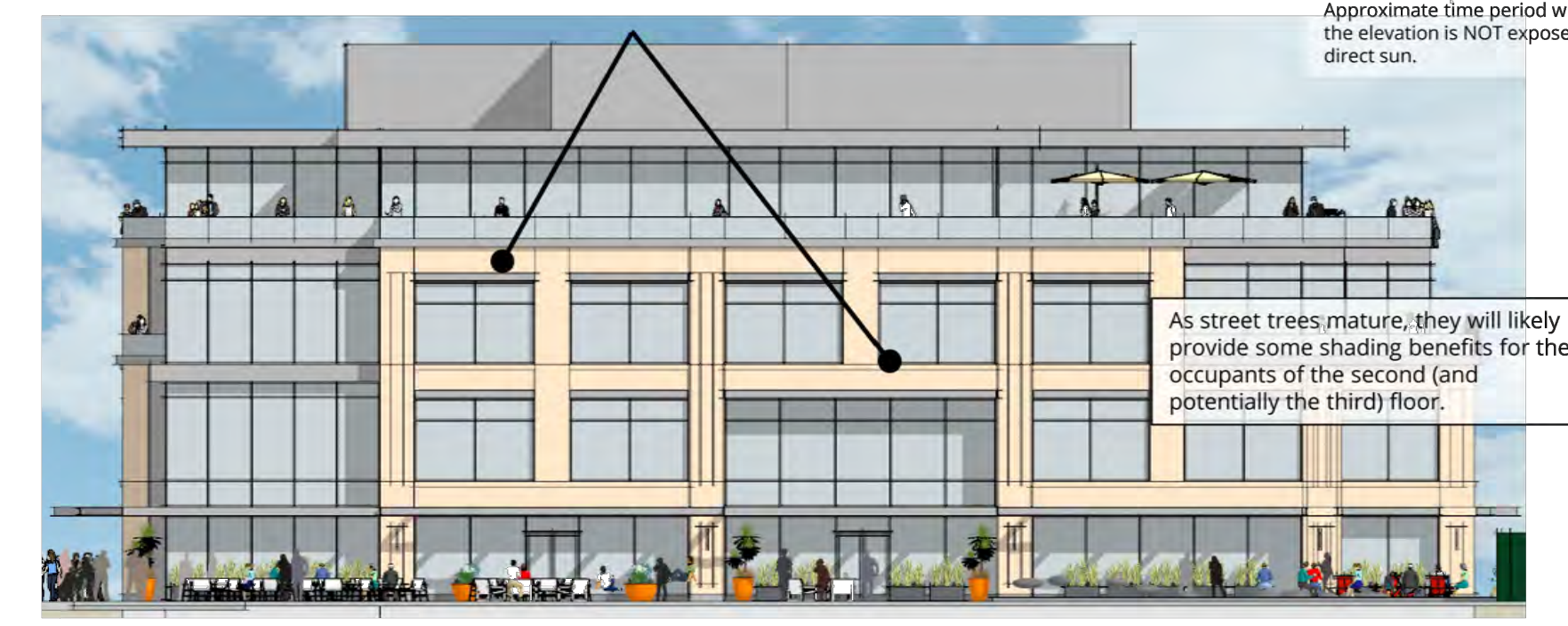
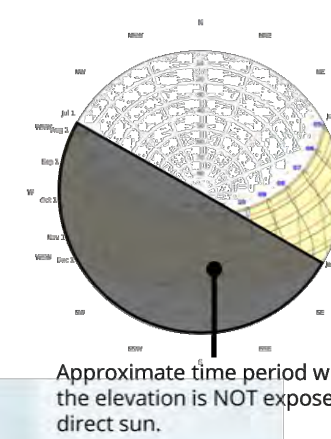
Solar Design Review | 5

DESIGN REVIEW

North Elevation

This elevation is expected to be somewhat exposed direct sun during the early morning hours of the summer and the shoulder seasons, while the sun is lower in the sky. This encourages morning daylight, while limiting direct sun, and the associated heat gains during the more intense midday period.

The higher window-to-wall ratio on this elevation is a positive feature from a daylight standpoint. Direct sun that does penetrate may be bright for those adjacent to the windows. Roller blinds or other temporary shading would be more appropriate here, as opposed to permanent shading (e.g., frit). However, much of the time where these very low angles occur is outside of typical office hours, and therefore no mitigation may be necessary.



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May 12, 2021

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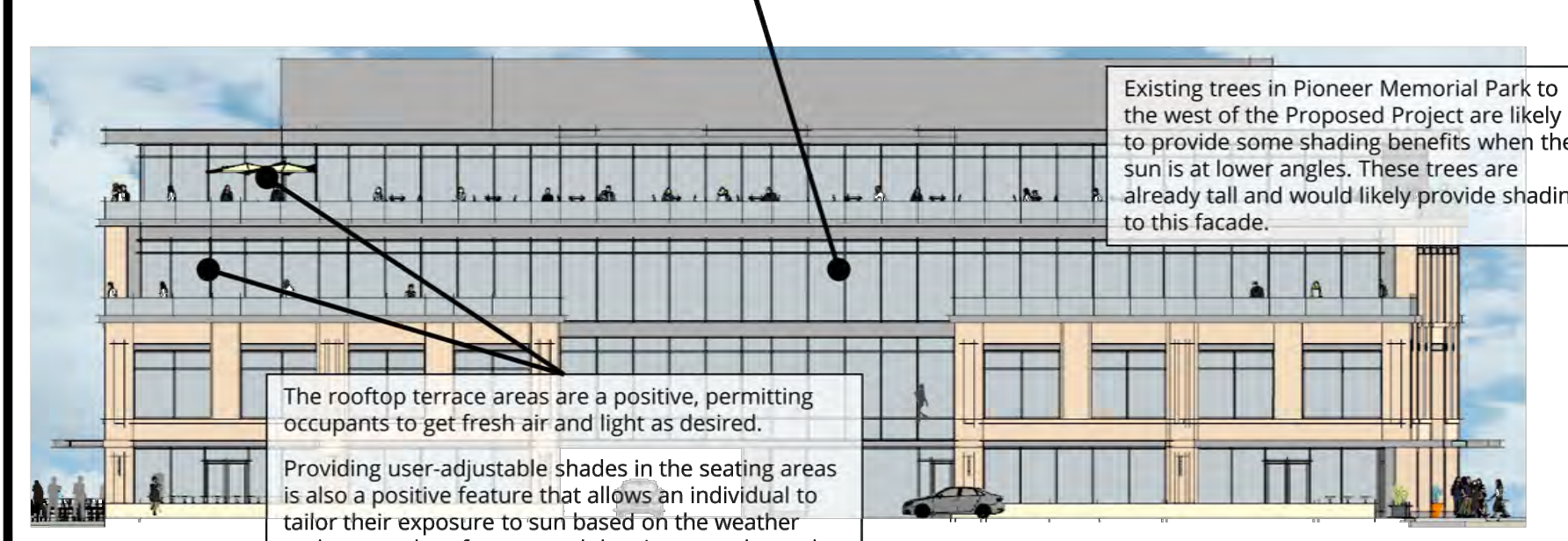
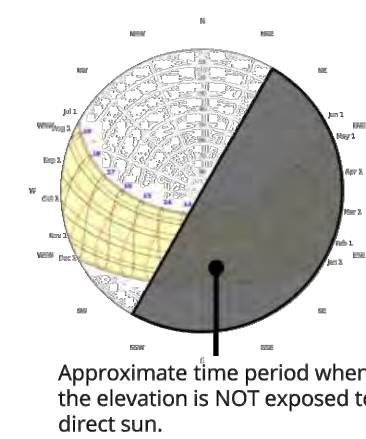
DESIGN REVIEW

West Elevation

This elevation is expected to be exposed to direct sun during the late afternoon to sunset all year round.

In the winter and shoulder seasons, sunlight may penetrate quite deeply during the afternoons. This may lead to glare and heat gain issues for the occupants. The opaque facade elements will help to reduce the potential solar heat gain impact. Supplementary shading devices would be needed to lower the heat gain and glare risk.

Roller shades are an effective approach, but their use should be tailored to balance the impact on interior daylight availability. See the Overall Observations and Recommendations section for details.



RWDI Project #2001903  
May 12, 2021

Solar Design Review | 7

DESIGN REVIEW

Overall Observations and Recommendations

The large area of north facing windows is expected to provide significant daylight access with a lower risk of glare. The east elevation of the building also has large glass windows which is expected to help with daylight access. However, the east elevation is going to be exposed to sunlight in the early morning hours, where the low solar angles can result in deeply penetrating sunlight.

The south elevation will be frequently exposed to sunlight throughout the year and the west will likely be frequently exposed in the afternoons.

The trees at street level fronting all the facades are a positive feature which will help provide some shading benefit to the building. The existing trees in Pioneer Memorial Park are also expected to provide shading to the lower levels of the west facade of the Proposed Project.

If further shading is desired by the project team, RWDI suggests the following options for consideration:

- Roller Shades:** While roller shades are a common strategy to minimize internal glare and heat gains, occupants commonly leave them down, which impacts daylighting. To combat this automated blinds triggered by light sensors could be considered instead.
- Glazing Changes:** Office environments tend to have significant cooling requirements all year due to the equipment loads. This makes selecting glazing units with a low Solar Heat Gain Coefficient (SHGC) important. Glazing units with a low SHGC would be particularly beneficial on the south and west elevations. A lower SHGC can be achieved through changing glass color, adding coatings and/or adding or modifying frit color and density.

RWDI notes that while tinted or fritted glass would help reduce the effects of interior glare, they are unlikely to be able to act as 'stand-alone' solutions without creating a significant impact on views and daylight access.

We would suggest instead that the design team review glass samples to decide on a glass type that is acceptable architecturally, and then work with manufacturers to find a glazing unit which uses that glass and has the lowest SHGC. Mock-up tests are strongly advised. Lower SHGC glass can then be supplemented with roller shades or other measure to control transient impacts.

RWDI Project #2001903  
May 12, 2021

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DESIGN REVIEW

Overall Observations and Recommendations

- Combining "Permanent" Shading Devices with Adjustable Shades:** A combination of 'permanent' shading devices in the upper part of the windows with occupant-controlled shades in the lower part can provide a good balance to permanently mitigate high solar angle sunlight penetration, while permitting views out. Examples of permanent shading devices include fritting, after-market prismatic coatings and 'light-louvers'.
- Exterior Sunshades and Recessing Windows:** Exterior sunshades at the top of the windows and/or recessing the windows further into the building on the south and west facade would help reduce summer heat gains to an extent but would need to be excessively deep in order to mitigate glare and heat gains during the whole of the year. Employing multiple horizontal shades would lower the required fin depth, particularly if they were angled downward.

The latter two options are preferable since these redirect the incoming sunlight to the ceiling rather than block it outright. This means that these systems can preserve daylight while limiting direct heat gains and glare on people.

Another advantage of films, louvers and shades is that they can be removed. This makes the design resilient against changes in the built environment that reduce access to light (i.e., new construction on adjacent sites).

- Combining "Permanent" Shading Devices with Adjustable Shades:** A combination of 'permanent' shading devices in the upper part of the windows with occupant-controlled shades in the lower part can provide a good balance to permanently mitigate high solar angle sunlight penetration, while permitting views out. Examples of permanent shading devices include fritting, after-market prismatic coatings and 'light-louvers'.
- Exterior Sunshades and Recessing Windows:** Exterior sunshades at the top of the windows and/or recessing the windows further into the building on the south and west facade would help reduce summer heat gains to an extent but would need to be excessively deep in order to mitigate glare and heat gains during the whole of the year. Employing multiple horizontal shades would lower the required fin depth, particularly if they were angled downward.

A combination of the above four approaches could also be employed if desired. This type of 'layered' approach can draw upon the advantages of different options and if planned appropriately, can be implemented in phases allowing for costs to be spread out and occupant feedback to be gathered.

RWDI Project #2001903  
May 12, 2021

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590 CASTRO STREET  
MOUNTAIN VIEW, CA

THE  
**SOBRATO**  
ORGANIZATION

**KSH**  
**ARCHITECTS**  
KORTH SUNSERI HAGEY

ISSUES AND REVISIONS		
NO.	DATE	DESCRIPTION
	02.21.20	PLANNING RESUBMITTAL #1
	06.24.20	PLANNING RESUBMITTAL #2
	05.20.21	PLANNING RESUBMITTAL #3
	09.20.21	PLANNING RESUBMITTAL #4
	12.17.21	PLANNING RESUBMITTAL #5

PROJECT NUMBER  
17007

SHEET TITLE  
**SOLAR DESIGN**

SCALE  
**N.T.S.**

SHEET NUMBER

**A1.5**



590 CASTRO STREET  
MOUNTAIN VIEW, CA

THE  
**SOBRATO**  
ORGANIZATION



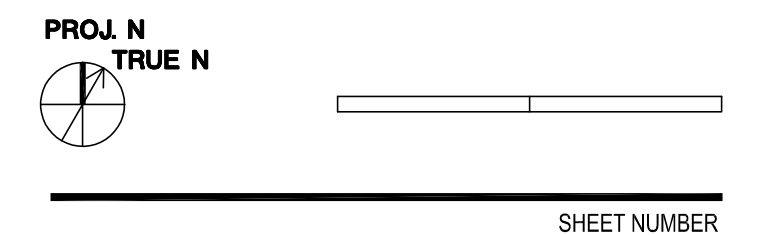
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	06.24.20	PLANNING RESUBMITTAL #2
	05.20.21	PLANNING RESUBMITTAL #3
	09.20.21	PLANNING RESUBMITTAL #4
	12.17.21	PLANNING RESUBMITTAL #5
	01.27.22	PLANNING RESUBMITTAL #6

PROJECT NUMBER  
17007

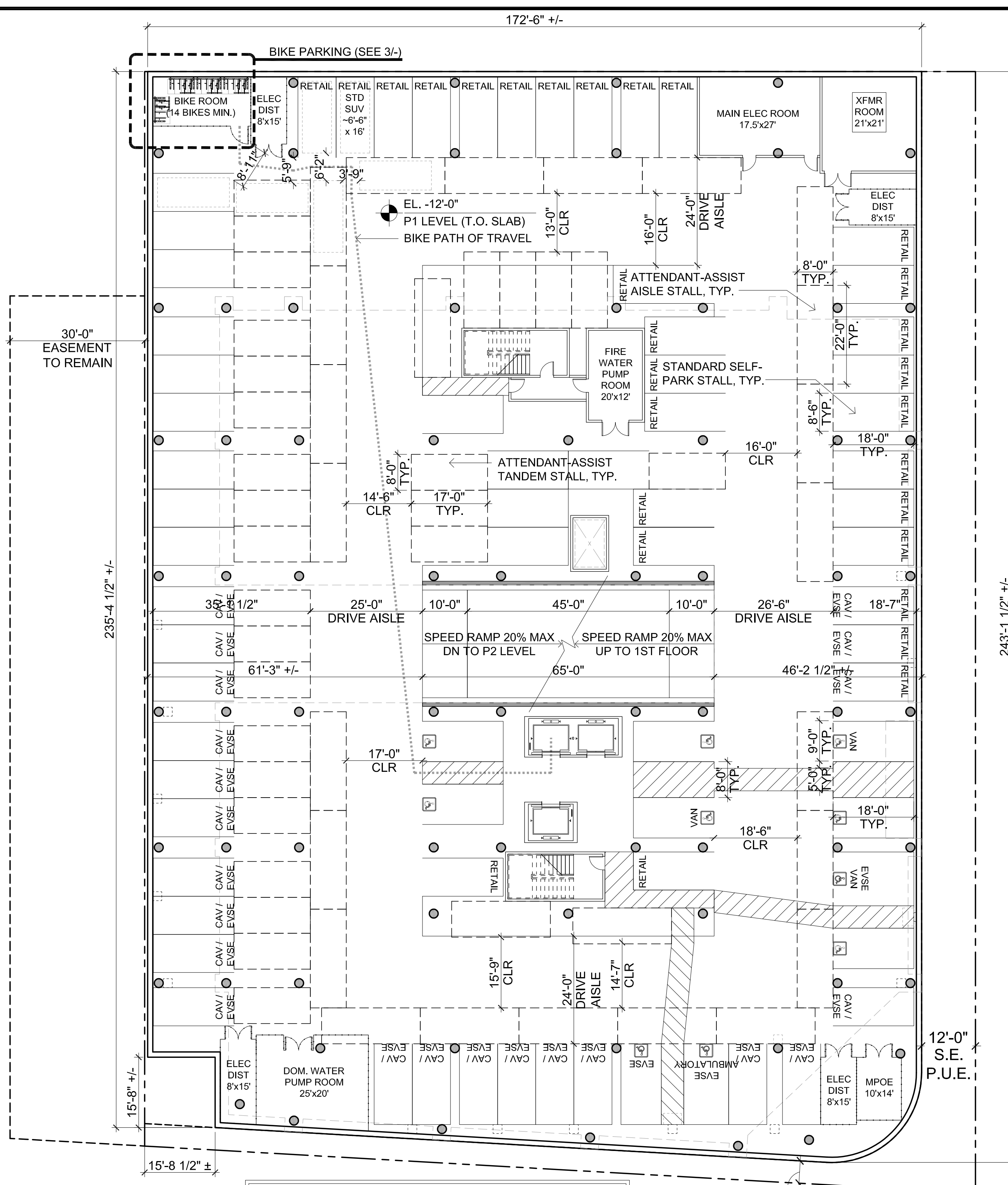
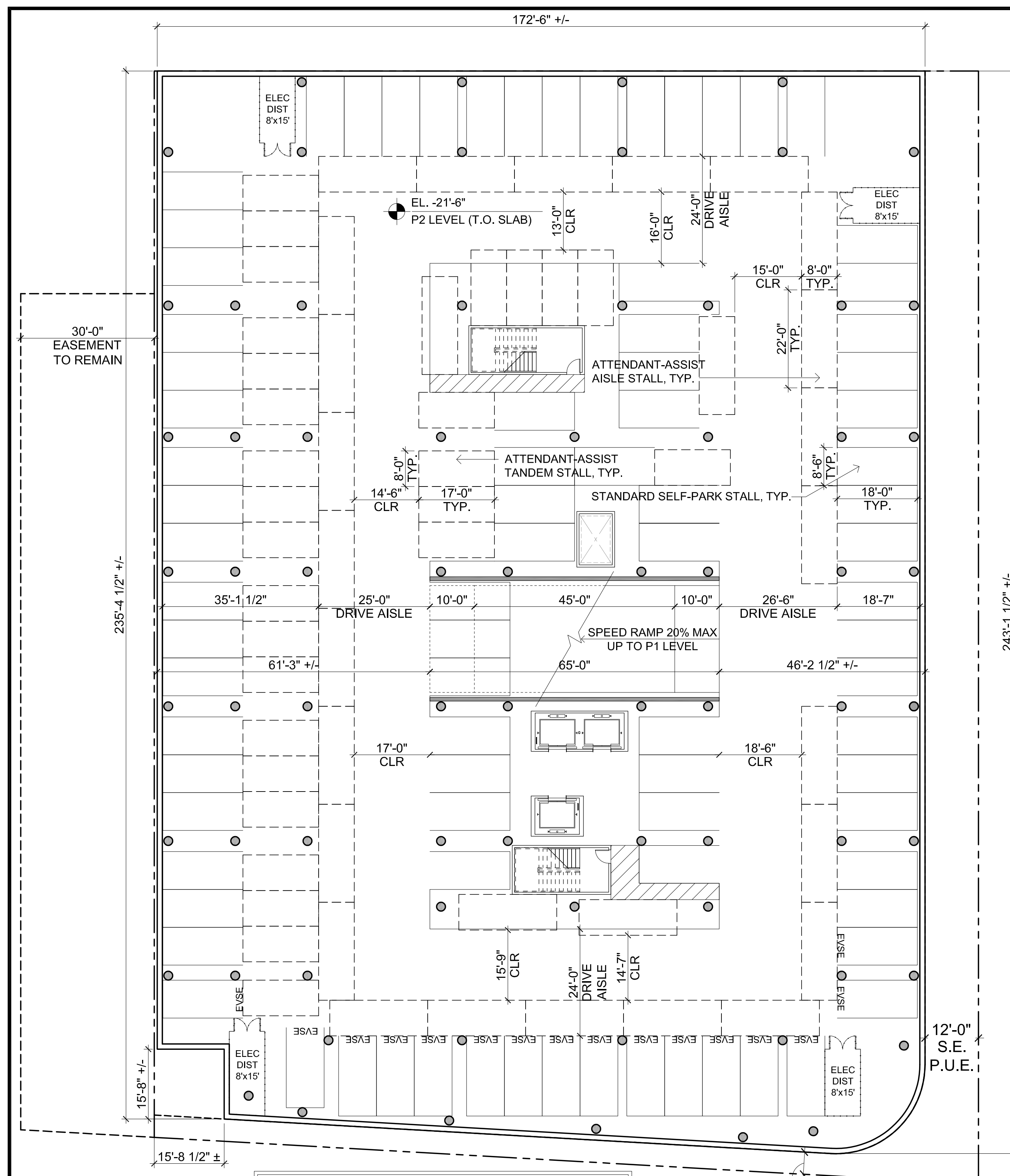
SHEET TITLE  
**PROPOSED PLANS  
PARKING**

SCALE  
**AS NOTED**



SHEET NUMBER

**A2.0**



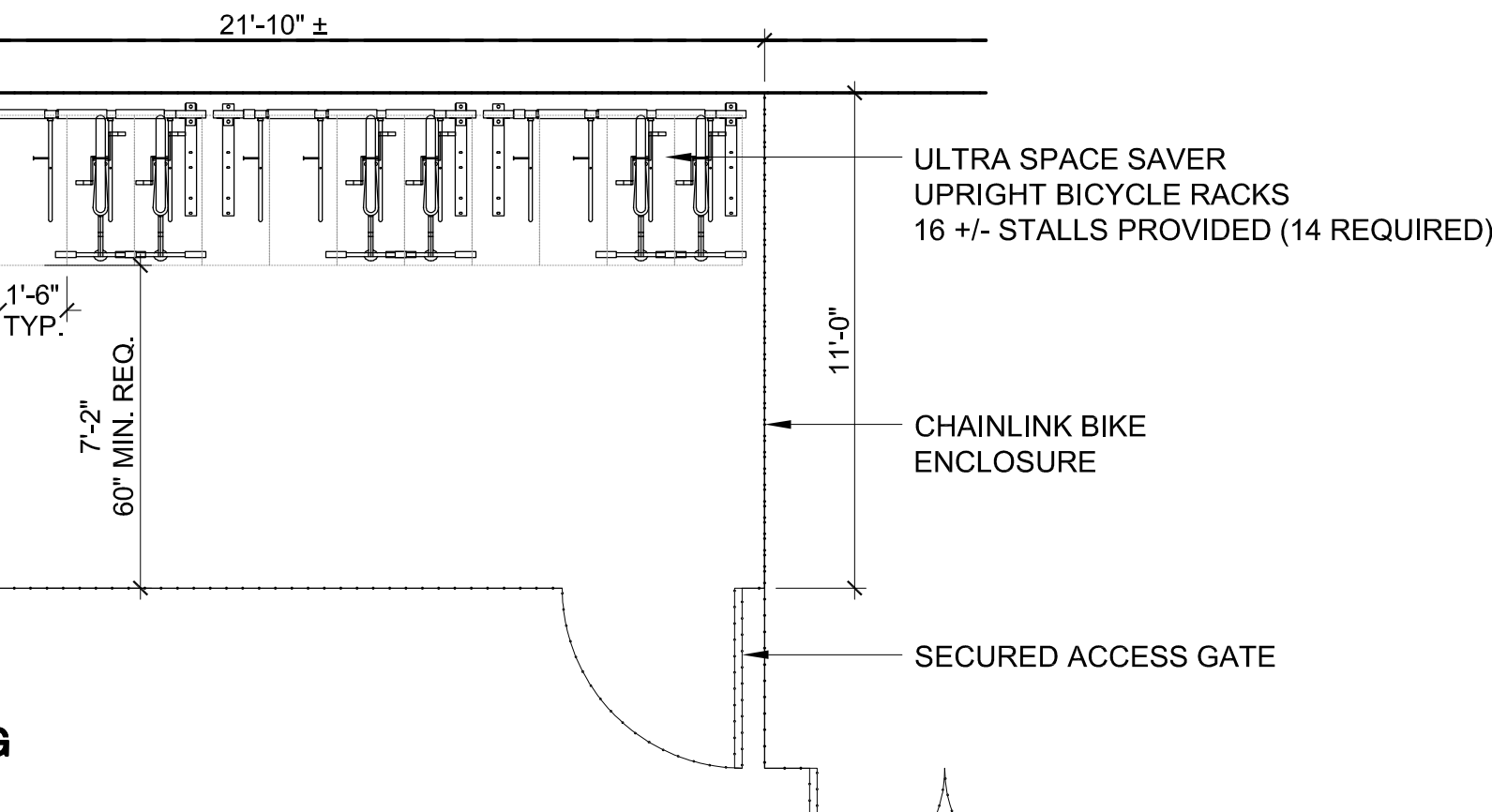
**1 | P2 PARKING LEVEL**  
1/16" = 1'-0"

P2 LEVEL (136 STALLS)  
82 SELF-PARK STALLS (INCLUDES 16 STD EVSE INSTALLED)  
54 ATTENDANT-ASSIST STALLS (INCLUDES 23 TANDEM)

**2 | P1 PARKING LEVEL**  
1/16" = 1'-0"

P1 LEVEL (119 STALLS INCLUDING 29 STALLS FOR RETAIL)  
37 SELF-PARK STALLS  
50 ATTENDANT-ASSIST STALLS (INCLUDES 22 TANDEM)  
7 SELF-PARK ADA  
\* 5 STD ADA  
\* 2 VAN ADA  
25 SELF-PARK EVSE INSTALLED  
\* 22 CAV / CARPOOL EVSE INSTALLED  
\* 1 STD ADA EVSE INSTALLED  
\* 1 VAN ADA EVSE INSTALLED  
\* 1 AMBULATORY EVSE INSTALLED

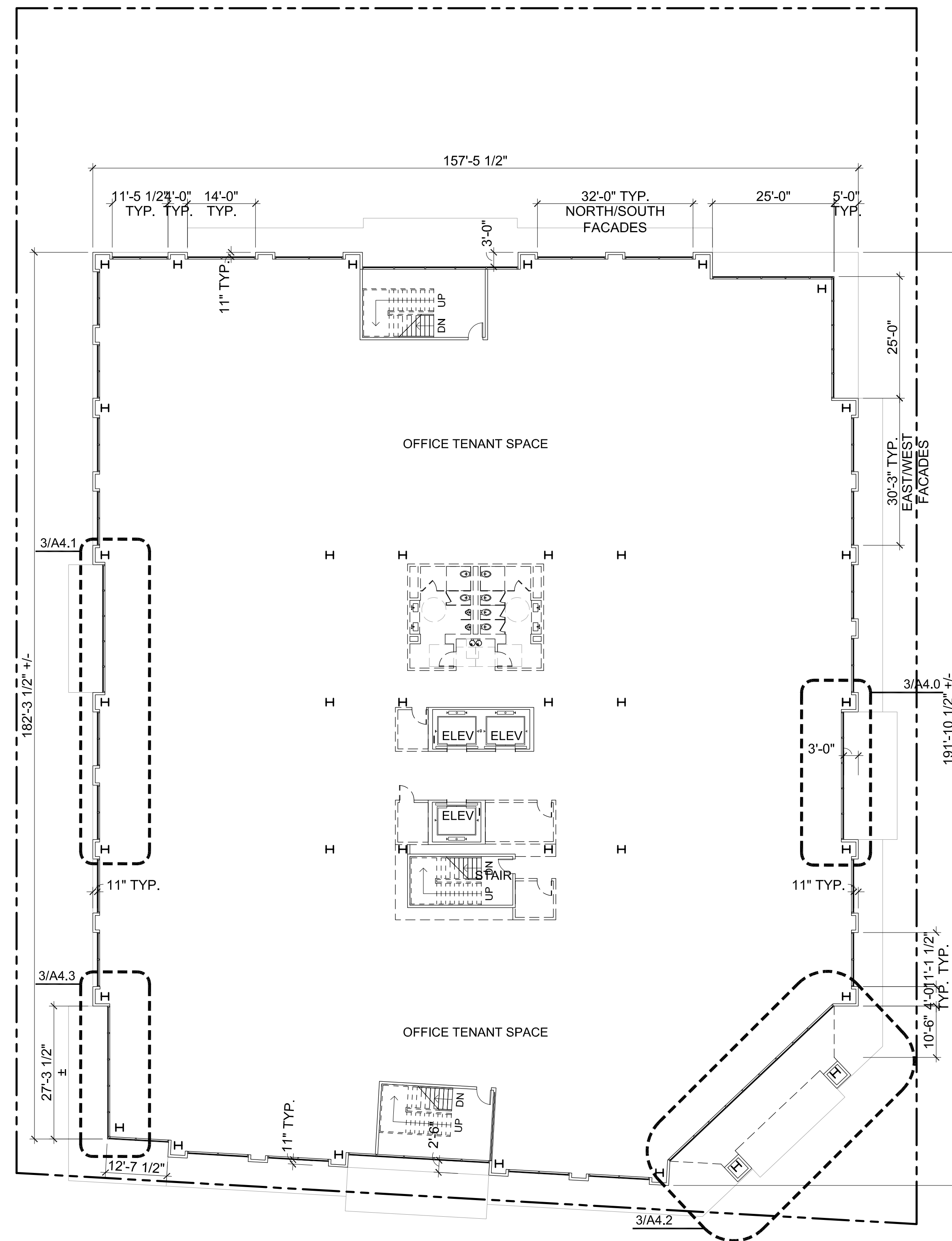
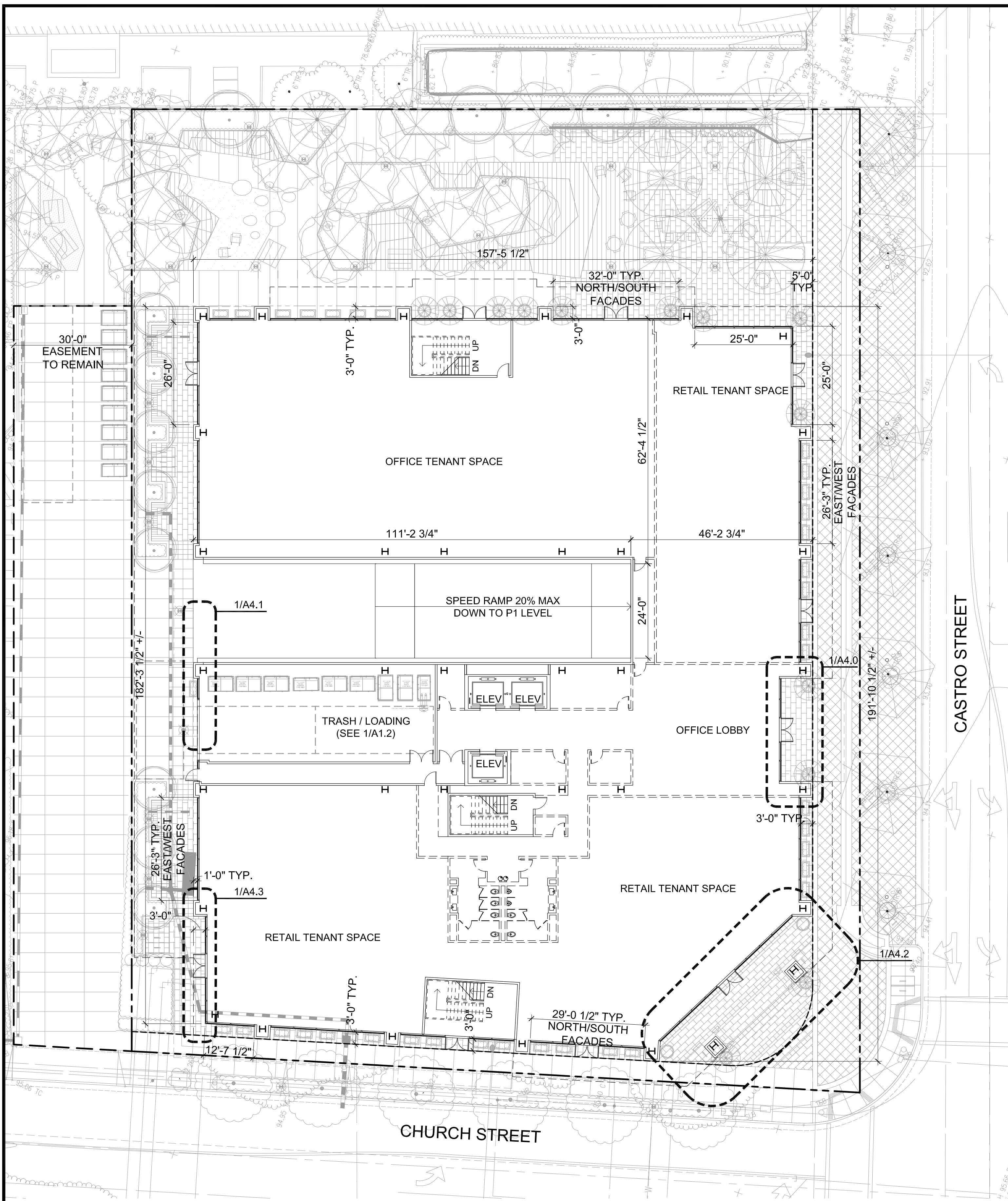
**3 | BIKE PARKING**  
1/4" = 1'-0"





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MOUNTAIN VIEW, CA

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ORGANIZATION



NOTE: CORE/INTERIOR LAYOUT IS T.B.D AND SHOWN FOR REFERENCE ONLY

**1** FIRST FLOOR PLAN  
1/16" = 1'-0"

NOTE: CORE/INTERIOR LAYOUT IS T.B.D AND SHOWN FOR REFERENCE ONLY

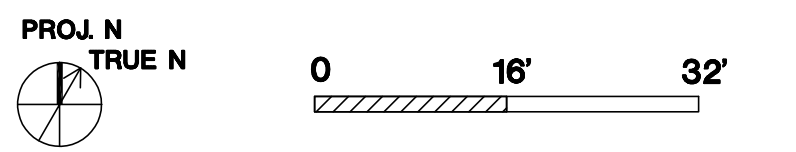
**2** TYPICAL SECOND FLOOR PLAN (THIRD FLOOR SIM.)  
1/16" = 1'-0"

ISSUES AND REVISIONS		
NO.	DATE	DESCRIPTION
	07.17.19	PLANNING SUBMITTAL
	02.21.20	PLANNING RESUBMITTAL #1
	05.12.20	PLANNING RESUBMITTAL #2
	05.20.21	PLANNING RESUBMITTAL #3
	09.20.21	PLANNING RESUBMITTAL #4
	12.17.21	PLANNING RESUBMITTAL #5
	01.27.22	PLANNING RESUBMITTAL #6

PROJECT NUMBER  
17007

SHEET TITLE  
**PROPOSED PLANS  
FIRST & SECOND FLOORS**

SCALE  
1/16" = 1'-0"



SHEET NUMBER

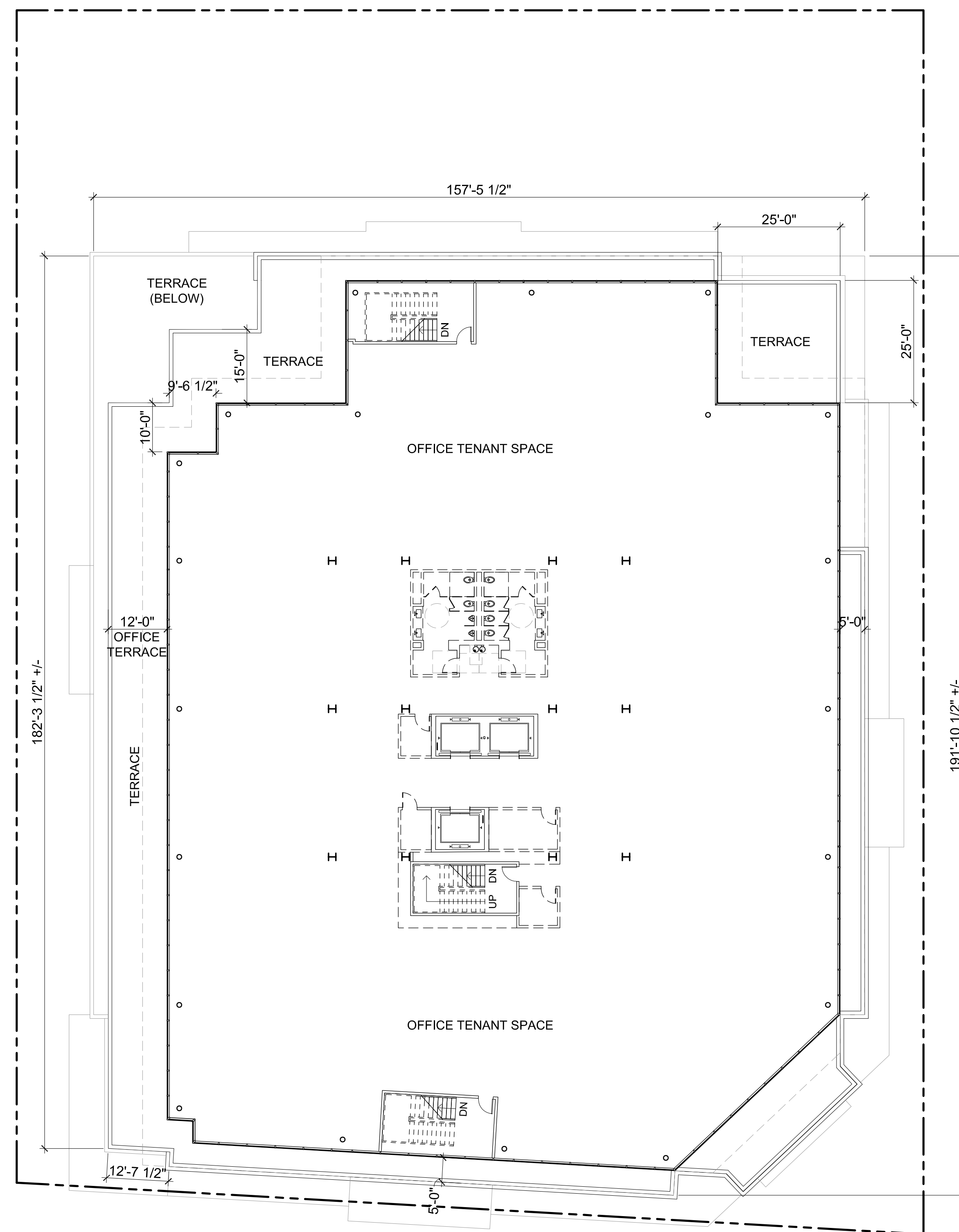
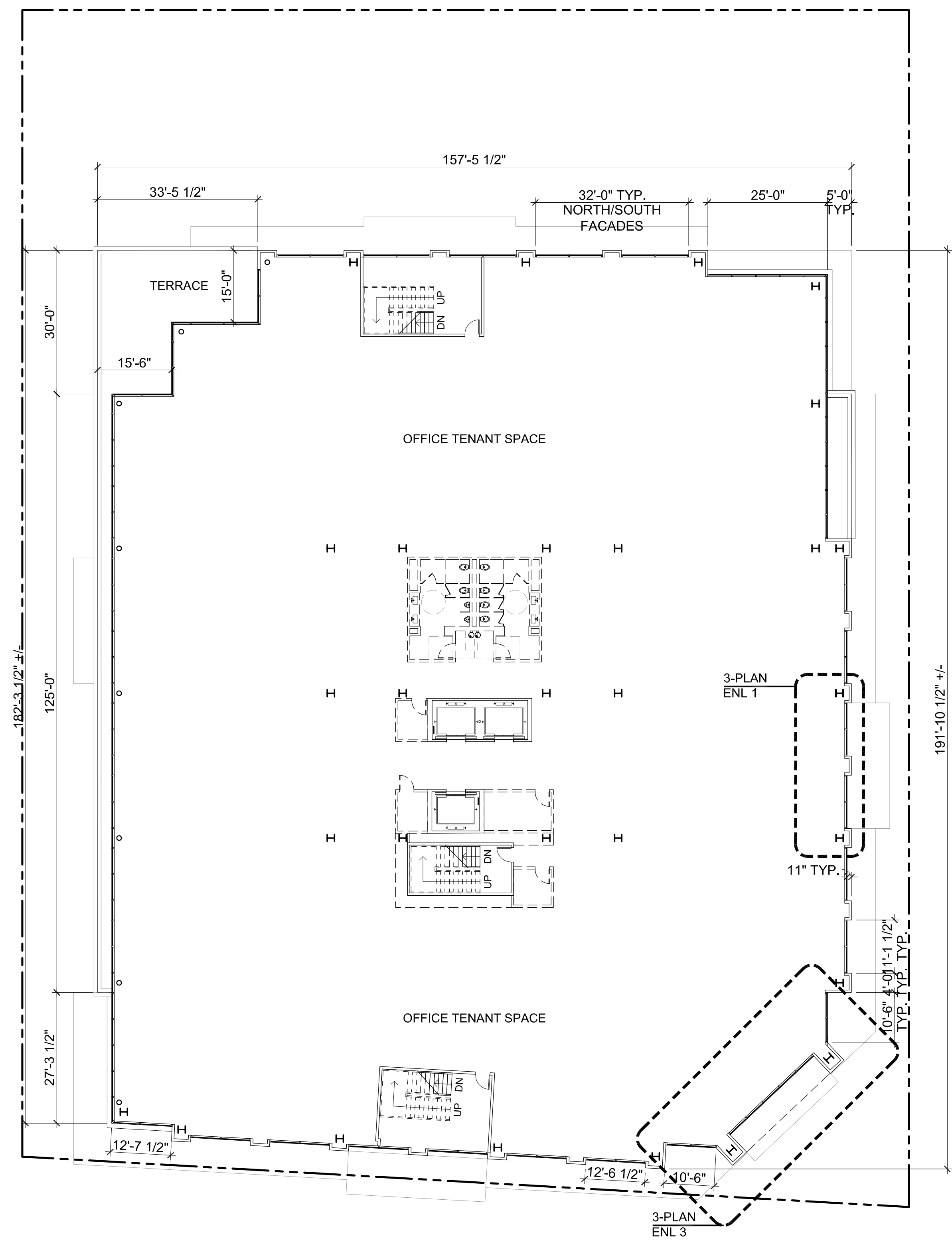
**A2.1**



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KORTH SUNSERI HAGEY



NOTE: CORE/INTERIOR LAYOUT IS T.B.D AND SHOWN FOR REFERENCE ONLY

**1** **THIRD FLOOR PLAN**  
1/16" = 1'-0"

NOTE: CORE/INTERIOR LAYOUT IS T.B.D AND SHOWN FOR REFERENCE ONLY

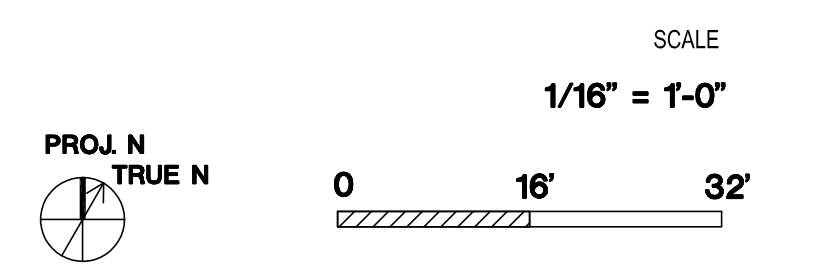
**2** **FOURTH FLOOR PLAN**  
1/16" = 1'-0"

ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION
07.17.19		PLANNING SUBMITTAL
02.21.20		PLANNING RESUBMITTAL #1
06.24.20		PLANNING RESUBMITTAL #2
05.20.21		PLANNING RESUBMITTAL #3
09.20.21		PLANNING RESUBMITTAL #4
12.17.21		PLANNING RESUBMITTAL #5

PROJECT NUMBER  
17007

SHEET TITLE  
**PROPOSED PLANS  
THIRD & FOURTH FLOORS**



SHEET NUMBER

**A2.2**

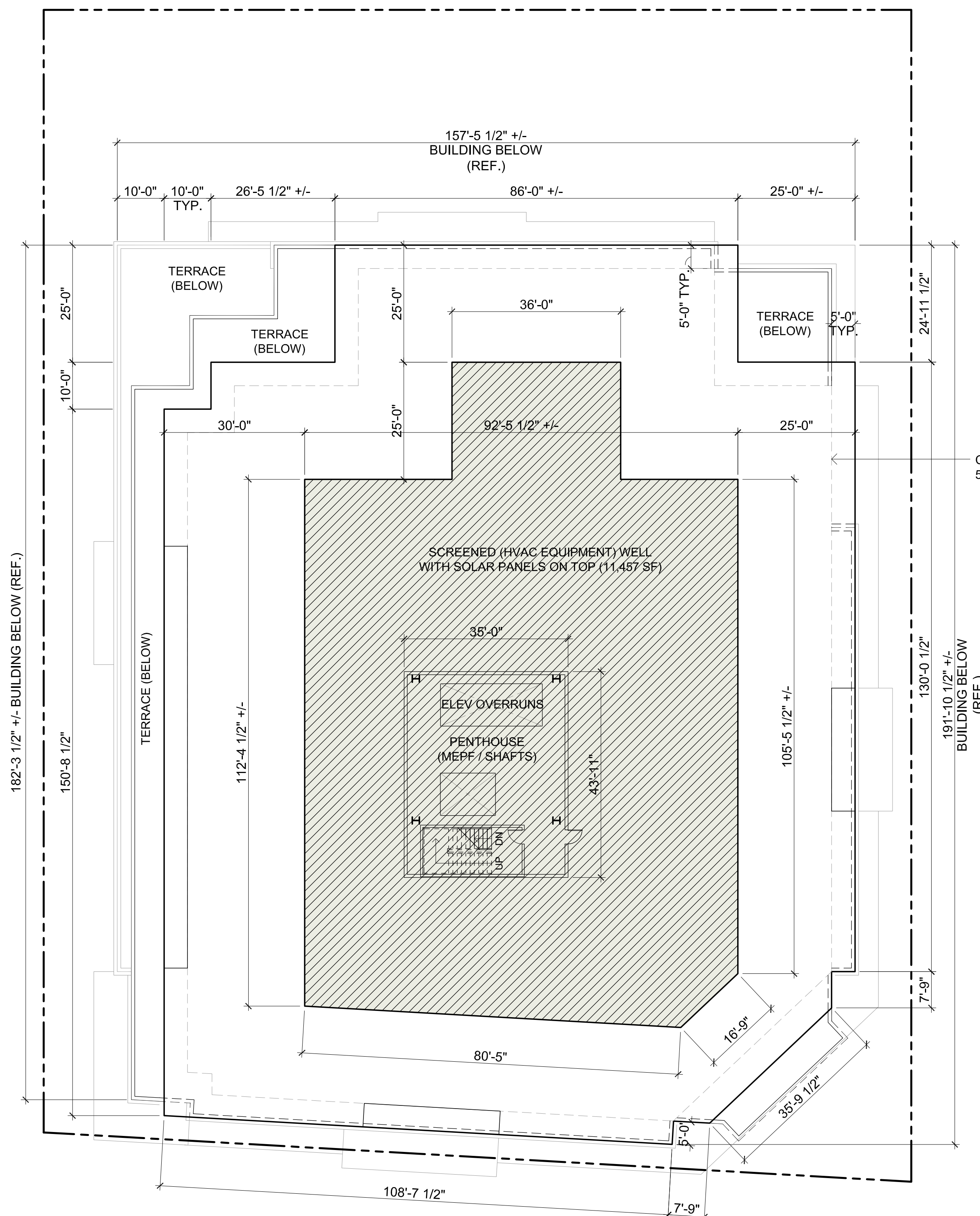


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MOUNTAIN VIEW, CA

THE  
**SOBRATO**  
ORGANIZATION



**ARCHITECTS**  
KORTH SUNSERI HAGEY



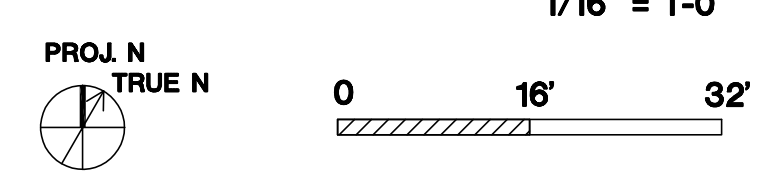
COVERED ROOF AREA: 22,494 SF  
50% PV AREA: 11,247 SF MIN.

ISSUES AND REVISIONS		
NO.	DATE	DESCRIPTION
	05.20.21	PLANNING RESUBMITTAL #3
	09.20.21	PLANNING RESUBMITTAL #4
	12.17.21	PLANNING RESUBMITTAL #5

PROJECT NUMBER  
17007

SHEET TITLE  
**PROPOSED ROOF PLAN**

SCALE  
1/16" = 1'-0"



SHEET NUMBER

NOTE: CORE/INTERIOR LAYOUT IS T.B.D AND SHOWN FOR REFERENCE ONLY

**1 ROOF PLAN - PV ABOVE MECHANICAL + LOW ON ROOF**

1/16" = 1'-0"

**A2.3**