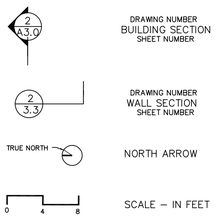
SYMBOLS LEGEND



ABBREVIATIONS

AB	AIR BARRIER
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
@	AT
BLKG	BLOCKING
BM	BEAM
BOT	BOTTOM
CIP	CAST IN PLACE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
DIM	DIMENSION
DIR	DIRECTION
DN	DOWN
DS	DOWNSPOUT
DWG	DRAWING
(E)	EXISTING
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
EXT	EXTERIOR
EQ	EQUAL
FE	PORTABLE FIRE EXTINGUISHER
FIN	FINISH
FF	FINISH FLOOR
FP	FIRE PLACE
FT	FOOT/FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GO	GAS OUTLET
GWB	GYPSUM WALLBOARD
HB	HOSE BIB
HDR	HEADER
HT	HEIGHT
INCL	INCLUDE(ING)
ISUL	ISULATION
INT	INTERIOR
JT	JOINT
LAM	LAMINATE
LT	LIGHT
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MIN	MINIMUM
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O/	OVER
OC	ON CENTER
OPG	OPENING
OPP	OPPOSITE
OSCI	OWNER SUPPLIED CONTRACTOR INSTALLED
OSOI	OWNER SUPPLIED OWNER INSTALLED
(P)	PROPOSED
PERF	PERFERATED
PIP	POURED IN PLACE
PL	PLATE
PLYWD	PLYWOOD
PT	PRESSURE TREATED
PTD	PAINTED
PWD	PRE–WEATHERED STEEL
R	RISER
RCP	REFLECTED CEILING PLAN
REQ'D	REQUIRED
RM	ROOM
RO	ROUGH OPENING
SG	SAFETY GLAZING
SHT	SHEET
SIM	SIMILAR
SOG	SLAB ON GRADE
SP	SPLASH BLOCK
SQ	SQUARE
SS	STAINLESS STEEL
STL	STEEL
STN	STAINED
STO	STORAGE
STRUCT	STRUCTURAL
T	TEMPERED
T&G	TONGUE & GROOVE
T.O.	TOP OF
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VB	VAPOR BARRIER
VIF	VERIFY IN FIELD
VERT	VERTICAL
W/	WITH
WC	WATER CLOSET
WIN	WINDOW
WD	WITHOUT
W/O	WEATHER RESISTANT BARRIER
WRB	

GENERAL NOTES:

1. INSTALL MATERIALS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
2. ALL WORKS SHALL BE PERFORMED IN STRICT ACCORDANCE TO THE ARCHITECT'S CONSTRUCTION DOCUMENTS.
3. DO NOT SCALE DRAWINGS.
4. ALL WORKS SHALL CONFORM WITH THE LATEST EDITION OF THE SEATTLE BUILDING CODE (SBC), OSHA, AND ALL OTHER APPLICABLE CODES AND GOVERNMENT AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORKS THAT HAVE BEEN PERFORMED WHICH DO NOT MEET THESE CODES AND REGULATIONS.
5. VERIFY ALL EXISTING SITE AND NEW PLAN DIMENSIONS BEFORE PROCEEDING WITH THE WORK. REPORT ANY VARIANCE OR DISCREPANCY TO THE ARCHITECT.
6. THE CONSTRUCTION WORK SHALL BY LIMITED TO THE IMMEDIATE AREA IN WHICH THE WORK IS BEING PERFORMED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING OF ALL THE DEBRIS AND DUST THROUGHOUT THE SITE WHICH IS A RESULT OF THIS CONSTRUCTION PROJECT.
7. CONTRACTOR TO VERIFY LOCATION OF ALL UTILITIES AND PIPING BEFORE BEGINNING WORK PROTECT OR MOVE UTILITIES AS REQUIRED.
8. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, CATALOGUE INFORMATION, SPECIFICATIONS, ETC UPON THE REQUEST OF THE ARCHITECT FOR VERIFICATION OF THE DESIGN INTENT, FIELD MEASUREMENT, AND CONFORMATION OF THE CONTRACT DOCUMENTS. FAILURE TO DO SO WITH INDEMNIFY THE ARCHITECT FROM RESPONSIBILITY FOR SUCH WORK.

DEFERRED SUBMITTAL

CIVIL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE SUPPRESSION, FIRE ALARMS.

FIRE SPRINKLER SYSTEM

NFPA 13 FIRE SPRINKLER SYSTEM WILL BE INSTALLED IN THIS BUILDING.

WHOLE HOUSE VENTILATION:

SEE SHEET A201, 202, 203, 204, 205, 206 AND 207 FOR VENTILATION SYSTEM OPTIONS AND REQUIREMENTS.

AIR BARRIER BUILDING TEST

1. THE COMPLETED BUILDING SHALL BE TESTED FOR AIR LEAKAGE AND THE AIR LEAKAGE RATE OF THE BUILDING ENVELOPE SHALL NOT EXCEED 0.30 CFM PER SQ. FT. AT A PRESSURE DIFFERENTIAL OF 0.30 INCHES WATER GAUGE AT THE UPPER 95 PERCENT CONFIDENCE INTERVAL IN ACCORDANCE WITH ASTM E 779 OR AN EQUIVALENT METHOD APPROVED BY THE CODE OFFICIAL.
2. A REPORT THAT INCLUDES THE TESTED SURFACE AREA, FLOOR AREA, AIR BY VOLUME, STORIES ABOVE GRADE, AND LEAKAGE RATES SHALL BE SUBMITTED TO THE BUILDING OWNER AND THE CODE OFFICIAL PER SEC C402.5.1.2.

ENERGY NOTES:

2018 SEATTLE ENERGY CODE

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MIN REQUIREMENTS

• CEILING	R-49
• STEEL FRAMED WALL	R-19 + R-8.5 CI
• WOOD FRAMED WALL	R-25 INT
• MASS WALL	EXTERIOR: R-16 CI INTERIOR: R-13 + R-6 CI WOOD STUD R-13 + R-10 CI METAL STUD
• FLOOR	MASS: R-30 CI STEEL FRAME:R-38 +R-10 CI WOOD FRAME: R-38
• BELOW GRADE WALL	EXTERIOR: R-10 CI INTERIOR: R-19 WOOD STUD R-13 + R-6 CI METAL STUD
• SLAB	R-10, 2'
• OPAQUE DOORS	SWINGING: U-0.37, NONSWINGING: R-4.75

BUILDING ENVELOPE FENESTRATION MAX U FACTOR AND SHGC

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28		
• SHGC FOR ALL VERT FENESTRATION	ORIENTATION	SEW	SEW
	PF<0.2	0.38	0.38
	0.2≤PF<0.5	0.46	0.46
	PF≥0.5	0.61	0.61
• SKYLIGHTS	U=0.45, SHGC: U-0.32		
• ENTRANCE DOORS	U=0.60		

U–FACTOR FOR CLASS AW WINDOWS RATED IN ACCORDANCE W/ AAMA/CSA 101/I.S.2/A440, VERTICAL CURTAIN WALLS AND SITE–BUILT FENESTRATION PRODUCTS

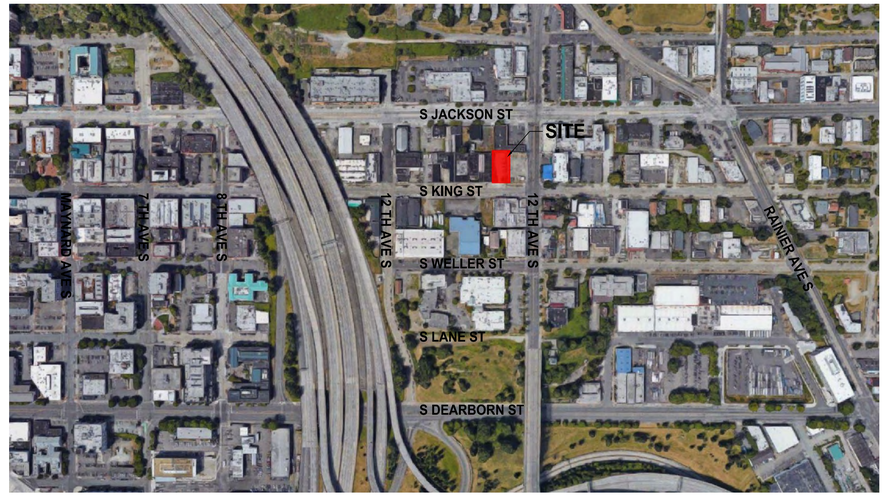
• FENESTRATION U-FACTOR FIXED U=0.26, OPERABLE: U-0.28

PROJECT INFORMATION

PROJECT ADDRESS	1040 S KING ST SEATTLE, WA 98104
DPD PROJECT NUMBER	6705236-CN
ZONING DISTRICT	DMR/C 75/75-95
PARCEL NUMBER	817010-0070
SITE AREA	6000 SF
LEGAL DESCRIPTION	PER QUIT CLAIM DEED RECORDING NO. 20150608001195, RECORDS OF KING COUNTY, WASHINGTON, LOT 14, BLOCK 1, SYNDICATE ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 2 OF PLATS, PAGE 44, RECORDS OF KING COUNTY, WASHINGTON. SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.
PROJECT DESCRIPTION	THE PROPOSED PROJECT IS TO CONSTRUCT A NEW 8-STORY BUILDING ON THE PROPERTY WITH COMMERCIAL USE AT GROUND FLOOR AND 51 UNITS ON UPPER LEVEL. THIS PROJECT, WHILE ADDING DENSITY, WILL PROVIDE HOUSING THAT SUPPORT THE COMMUNITY THAT FORMS THIS PORTION OF THE CHINATOWN INTERNATIONAL DISTRICT.
NUMBER OF PROPOSED UNIT:	51 UNITS
NUMBER OF PARKING STALLS:	NONE (NOT REQUIRED, URBAN CENTER VILLAGE)
GROSS FLOOR AREA:	36,076 SF (NON FAR) + 4,680 SF (FAR) = 40,756 SF
PROPOSED BUILDING HEIGHT:	73' + 9' (STAIR PENTHOUSE)

PROJECT TEAM

OWNER	668 INVESTMENT LLC
ARCHITECT/CONTACT	CHC ARCHITECTS 13301 SE 79TH PL A205 NEWCASTLE WA 98059 CONTACT: CHAOHUA CHANG chcarch@gmail.com P: 425-785-3992



VICINITY MAP

CITY STAMP

CHC ARCHITECTS

8666 REGISTERED ARCHITECT CHAOHUA CHANG STATE OF WASHINGTON

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(M) 425.785.3992 chcarch@gmail.com

1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-26-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME: COVER SHEET

SHEET NUMBER: A000

BUILDING CODE ANALYSIS (2018 SEATTLE BUILDING CODE)

PROPOSED USE:	APARTMENT BUILDING WITH 51 DWELLING UNITS AND RETAIL SPACE ON 1ST FLOOR
OCCUPANCY/ SEPARATION:	R2 (LEVEL 2-8) MERCANTILE (LEVEL 1)
CONSTRUCTION TYPE:	TYPE IA (BASEMENT - LEVEL 3) TYPE VA (LEVEL 4-8)
ACCESSIBLE DWELLING UNITS:	SBC 1107.6.2 GROUP R-2 SBC TABLE 1107.6.2.2 APARTMENTS HOUSES R-2 OCCUPANICIES TANTAINING MORE THAN 10 UNITS, 5% OF TOTAL UNITS REQUIRED: 3 UNITS (51 UNITS X 5% = 2.55) PROVIDED: 3 UNITS; (UNIT 304, 305, 306 SEE SHEET A204)

1.7 **BICYCLE PARKING (SMC TABLE D for 23.54.015)**

REQUIRED: COMMERCIAL

LONG TERM - 1 PER 5,000 SF
SHORT TERM - 1 PER 1,000 SF

COMMERCIAL

LONG TERM - 1 PER DWELLING UNIT
SHORT TERM - 1 PER 20 DWELLING UNIT

PROVIDED: COMMERCIAL

LONG TERM - **1** (COMMERCIAL USE - 2612 SF)
SHORT TERM - **3** (COMMERCIAL USE - 2612 SF)

COMMERCIAL

LONG TERM - **51** (51 UNITS)
SHORT TERM - **3** (51 UNITS)

SEE A202 FOR LOCATIONS.

APPLICABLE CODES

1.1 BUILDING & ACCESSIBILITY	2018 SEATTLE BUILDING CODE
1.2 PLUMBING	2018 SEATTLE PLUMBING CODE
1.3 MECHANICAL	2018 SEATTLE MECHANICAL CODE
1.4 ELECTRICAL	2020 SEATTLE ELECTRICAL CODE
1.5 ENERGY	2018 SEATTLE ENERGY CODE
1.6 ZONING	SEATTLE LAND USE CODE (SMC TITLE 23)
1.7 VENTILATION & INDOOR AIR QUALITY	WASHINGTON STATE VENTILATION AND INDOOR AIR QUALITY CODE
1.8 FIRE CODE	2018 SEATTLE FIRE CODE

ZONING CODE ANALYSIS (SEATTLE MUNICIPAL CODE)

PROJECT ADDRESS	1038 / 1040 S KING ST SEATTLE, WA 98104
DPD PROJECT NUMBER	3024877
ZONING DISTRICT	DMR/C 75/75-95
PARCEL NUMBER	817010-0070
SITE AREA	6000 SF

1.0 ZONING DESCRIPTION	DMR/C 75/75-95
1.1 SITE AREA	6000 SF
1.2 FLOOR AREA RATIO (FAR)	**(SMC 23.49.011 Table A)**

SMC 23.49.011 FLOOR AREA RATIO (FAR) LIMITS
BASE: 2.5 FAR
MAXIMUM: 4.5 FAR

ALLOWED: 4.5X 6,000 SF SITE AREA = 27,000 SF ALLOWABLE FAR
SMC 23.49.011.B.1.f
RESIDENTIAL USE MAY BE EXEMPTED FROM FAR CALCULATIONS.

PROVIDED: 36,076 SF (NON FAR) + 4,680 SF (FAR) = 40,756 SF

BASEMENT: 5075 SF (NON FAR)
1st FLOOR: 4680 SF
2nd FLOOR: 5162 SF (NON FAR)
3rd FLOOR: 4820 SF (NON FAR)
4th FLOOR: 4820 SF (NON FAR)
5th FLOOR: 4820 SF (NON FAR)
6th FLOOR: 4820 SF (NON FAR)
7th FLOOR: 3027 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)
8th FLOOR: 3027 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)
ROOF: 505 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)

1.3 **LOT COVERAGE (SMC TABLE B for 23.49.158)**

LOT SIZE 0-19,000 SF
65' OR LESS: NO LIMIT, GREATER THAN 65' UP TO 85' : 75%

1.4 STRUCTURE HEIGHT SMC (23.49.008)

BASE STRUCTURAL HEIGHT: 75'

SMC 23.49.008.C.4: 95'
IF THE APPLICANT QUALIFIES FOR EXTRA FLOOR AREA UNDER SECTION 23.49.023 AND 23.58A AND THE STRUCTURAL HAS NO NONRESIDENTIAL OR LIVE-WORK USE ABOVE 75'.

THIS PROJECT SHALL MEET THE FOLLOWING:
1. GREEN BUILDING STANDARD (23.49.023. F.)
2. PERFORMANCE OPTION (23.58A.014 B.) - PROVIDING AFFORDABLE HOUSING UNITS
   14% OF LEVEL 8 (RESIDENTIAL USE) = 3027 SF X .14 = 424 SF OF AFFORDABLE HOUSING
   PROVIDED - UNIT 202 (445 SF) ON 2ND FLOOR, SEE A203

1.5 SETBACKS & SEPARATION

FRONT: 10' PORTION OF STRUCTURES BTW 65' TO 85'
10' GREATER THAN 45' UP TO 85' (GREEN STREET SETBACK SMC 23.49.166 B1)
SIDE: NOT REQ'D, 10' ABOVE 65' (NOT STREET LINES) SMC 23.49.166 A.2.

1.6 STREET FACADE REQUIREMENTS SMC 23.49.162

A. MINIMUM FACADE HEIGHT : 25' CLASS I PEDESTRIAN STREETS AND **GREEN STREETS** SMC 23.49.162 A.1.
B. SETBACK LIMITS
   1. PROPERTY LINE FACADE NOT REQUIRED PER MAP 1H
C. FACADE TRANSPARENCY REQUIREMENTS SMC 23.49.162 C.
   30% MIN (AREA BTW 2' AND 8' ABOVE SIDE WALK) SHALL BE TRANSPARENT.
D.3. BLANK FACADE LIMIT
   BLANK FACADE SHALL BE LESS THAN 30' WIDE (EXCEPT GARAGE DOOR) EXCEPTION UP TO 60' PER CITY APPROVAL
   ANY BLANK SEGMENTS SEPARATED BY TRANSPARENT AREAS AT LEAST 2'
   70% LIMIT (TOTAL OF ALL BLANK FACADE SEGMENTS INCLUDING GARAGE DOORS)
F. REFER TO SMC 23.49.162 F. FOR LANDSCAPING REQUIREMENTS.

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1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
ZONING & BUILDING CODE ANALYSIS

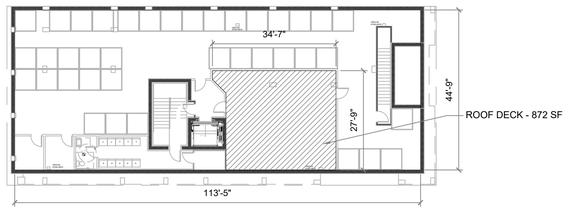
SHEET NUMBER
A001

COMMON RECREATION AREA

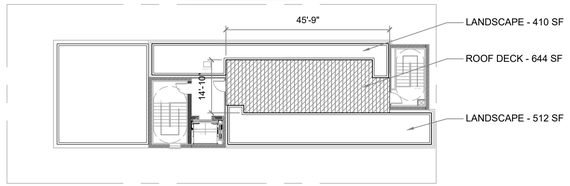
COMMON RECREATION AREA STANDARDS (SMC 23.49.010)

REQIRED: 1528.7 SF RECREATION AREA REQUIRED (FAR TOTAL FROM 2ND -8TH FLOOR 30574 SF X 5%)

PROVIDED: 644 + 872 + 922 = 2438 SF
BASEMENT - 872 SF
ROOF - ROOF DECK - 644 SF , LANDSCAPE AREA - 922 SF



BASEMENT



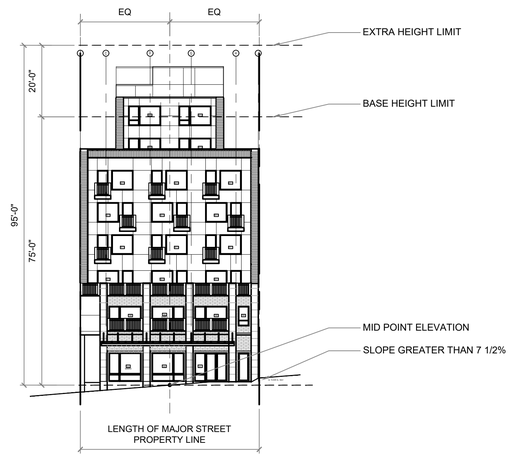
ROOF

STRUCTURE HEIGHT LIMIT MEASUREMENT

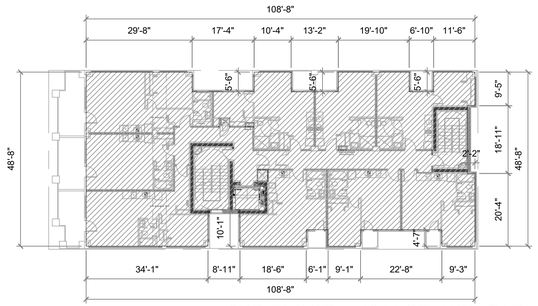
EXTRA HEIGHT LIMIT IN DMR/C 75/75-95 (SMC 23.49.023)

HEIGHT LIMIT IS 95 FEET IF THE APPLICANT QUALIFIES FOR EXTRA FLOOR AREA UNDER SECTION 23.49.023 AND CHAPTER 23.58A AND THE STRUCTURE HAS NO NON-RESIDENTIAL OR LIVE-WORK USE ABOVE 75 FEET.

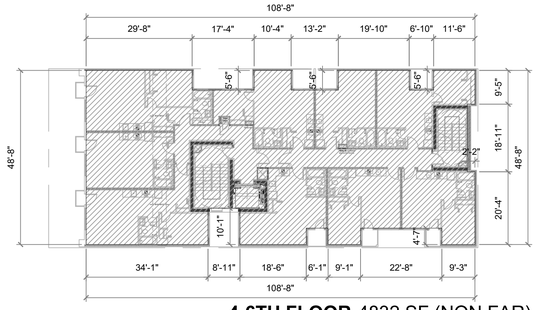
THIS PROJECT SHALL MEET THE FOLLOWING:
1. GREEN BUILDING STANDARD (23.49.023. F.)
2. PERFORMANCE OPTION (23.58A.014 B.) - PROVIDING AFFORDABLE HOUSING UNITS
   14% OF LEVEL 8 (RESIDENTIAL USE) = 3027 SF X .14 = 424 SF OF AFFORDABLE HOUSING
   PROVIDED - UNIT 202 (445 SF) ON 2ND FLOOR, SEE A203



SOUTH ELEVATION

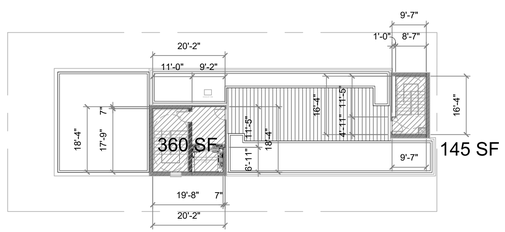


3RD FLOOR 4841 SF (NON FAR)



4-6TH FLOOR 4832 SF (NON FAR)

7-8TH FLOOR 3027 SF (NON FAR)



ROOF 505 SF (NON FAR)

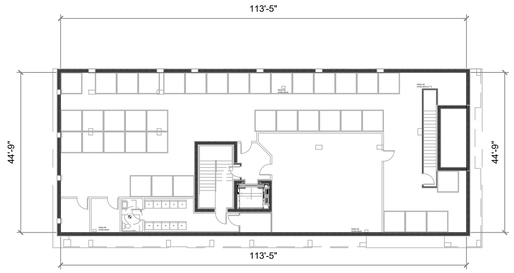
FAR DIAGRAM

SMC 23.49.011 FLOOR AREA RATIO (FAR) LIMITS
BASE: 2.5 FAR
MAXIMUM: 4.5 FAR

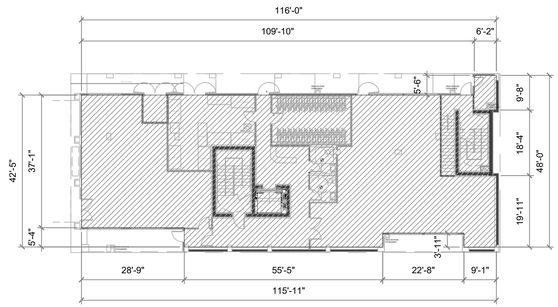
ALLOWED: 4.5X 6,000 SF SITE AREA = 27,000 SF ALLOWABLE FAR
SMC 23.49.011.B.1.f
RESIDENTIAL USE MAY BE EXEMPTED FROM FAR CALCULATIONS.

PROVIDED: 36,344 SF (NON FAR) + 4,638 SF (FAR) = 40,982 SF

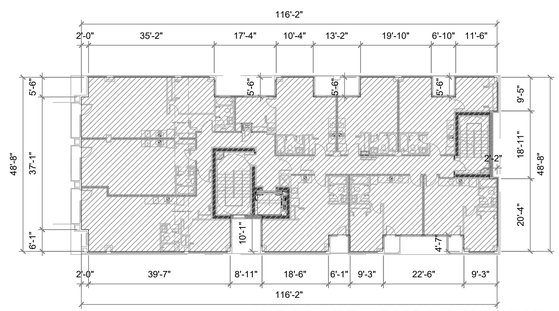
BASEMENT:	5265 SF (NON FAR)
1st FLOOR:	4638 SF
2nd FLOOR:	5183 SF (NON FAR)
3rd FLOOR:	4841 SF (NON FAR)
4th FLOOR:	4832 SF (NON FAR)
5th FLOOR:	4832 SF (NON FAR)
6th FLOOR:	4832 SF (NON FAR)
7th FLOOR:	3027 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)
8th FLOOR:	3027 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)
ROOF:	505 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)



BASEMENT 5,265 SF (NON FAR)



1ST FLOOR 4638 SF



2ND FLOOR 5183 SF (NON FAR)

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1038 MIXED USE PROJECT

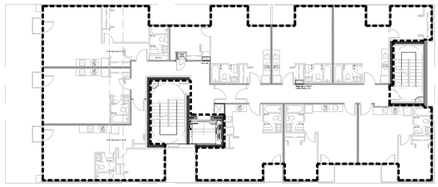
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

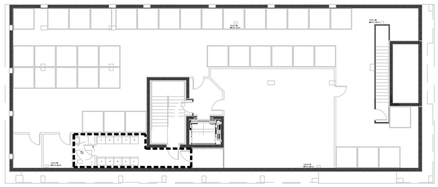
SHEET NAME
GENERAL INFORMATION- FAR DIAGRAM

SHEET NUMBER
A002

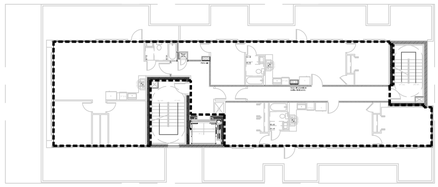
BUILDING PRESSURE BOUNDARY DIAGRAM



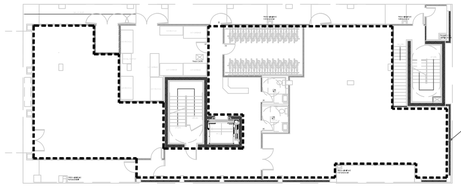
4-6TH FLOOR



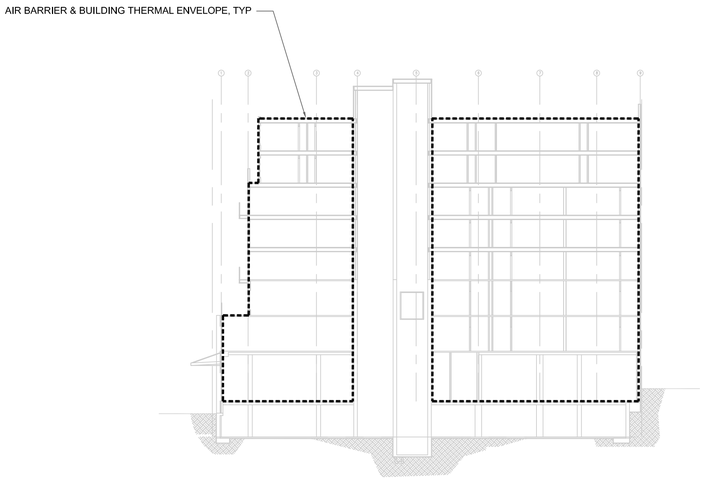
BASEMENT



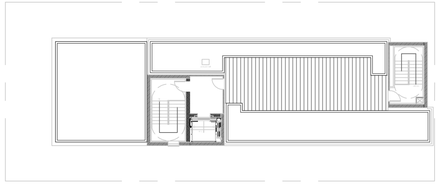
7-8TH FLOOR



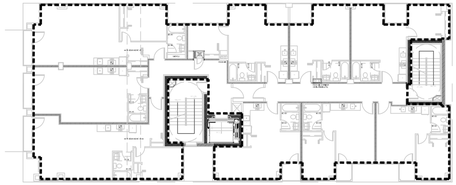
1ST FLOOR



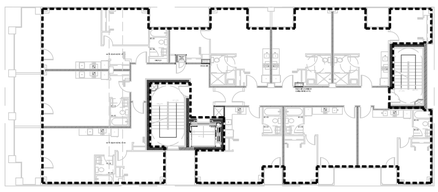
BUILDING SECTION



ROOF



2ND FLOOR



3RD FLOOR

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STATE OF WASHINGTON
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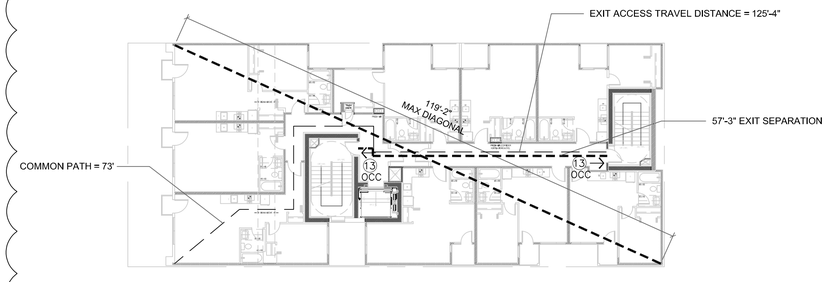
(M) 425.785.3992 chcarch@gmail.com

1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

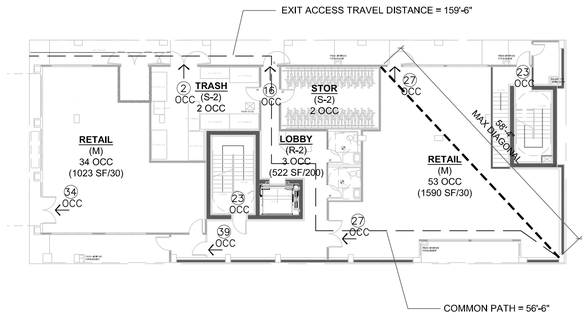
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
GENERAL INFORMATION- BLDG PRESSURE BOUNDARY

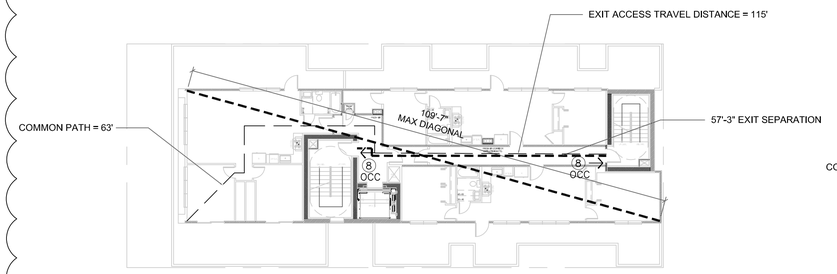
SHEET NUMBER
A003



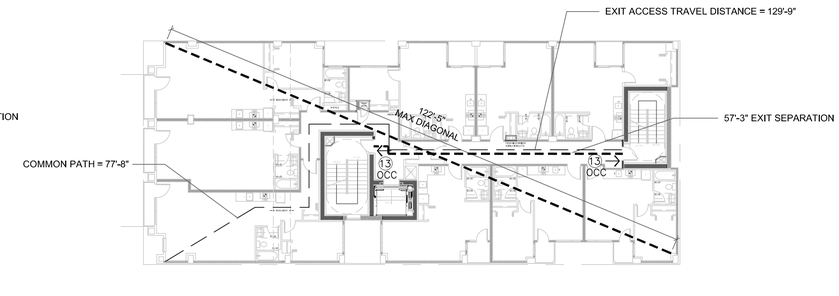
4-6TH FLOOR



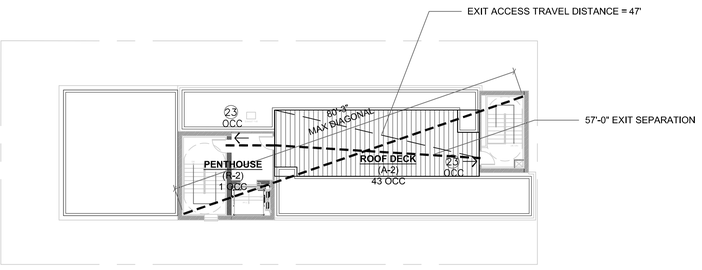
1ST FLOOR



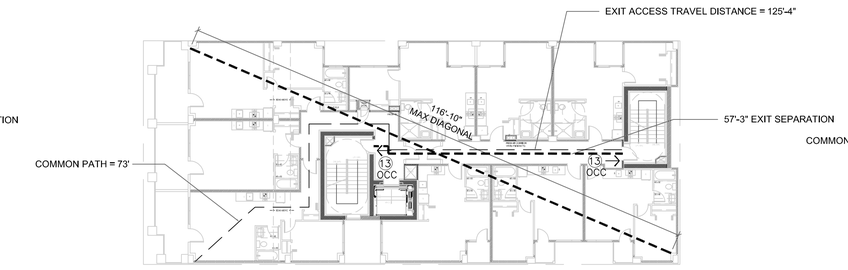
7-8TH FLOOR



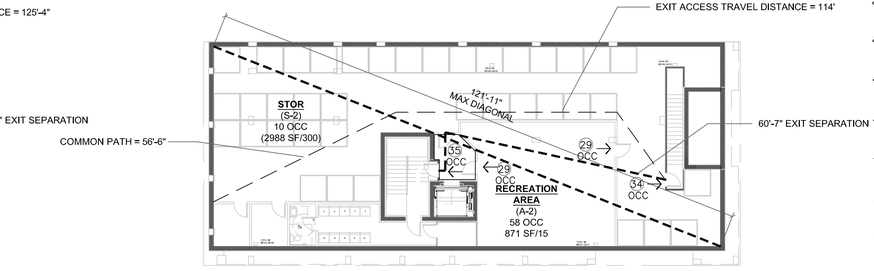
2ND FLOOR



ROOF



3RD FLOOR



BASEMENT

BUILDING CODE ANALYSIS (MEANS OF EGRESS)

OCCUPANT LOAD:
BASE: 2.5 FAR
MAXIMUM: 4.5 FAR

OCCUPANT LOAD					
TABLE 1004.5					
FLOOR		**OCCUPANCY TYPE**	**AREA GSF (UNO)**	**LOAD FACTOR**	**OCCUPANT LOAD**
ROOF	AMENITY DECK	A-2	644	15	43
	PENTHOUSE LOBBY	R-2	96	200	1
8TH FLOOR		R-2	3027	200	16
7TH FLOOR		R-2	3027	200	16
6TH FLOOR		R-2	4832	200	25
5TH FLOOR		R-2	4832	200	25
4TH FLOOR		R-2	4832	200	25
3RD FLOOR		R-2	4841	200	25
2ND FLOOR		R-2	5183	200	26
1ST FLOOR			4638	SEE 1ST FLOOR ON A011	
BASEMENT			5265	SEE BASEMENT ON A011	

CITY STAMP

CHC ARCHITECTS
8666 REGISTERED ARCHITECT CHAOHUA CHANG STATE OF WASHINGTON
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1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-25-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
GENERAL INFORMATION- BUILDING CODE

SHEET NUMBER
A011

UNPROTECTED, SPRINKLERED OPENING CALCULATION

WEST ELEVATION

FIRE SEPARATION DISTANCE 0' < 3'
WEST SIDE BUILDING AREA = **591 SF+1081 SF+585 SF+1644 SF = 3901 SF**
UNPROTECTED, SPRINKLERED OPENING = 0 SF

0 SF/ 3901 SF = 0%

FIRE SEPARATION DISTANCE 5' < 10'

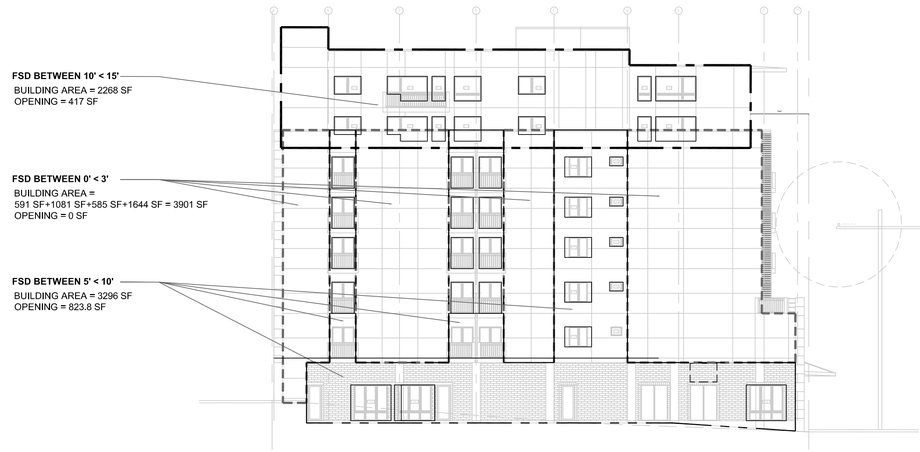
WEST SIDE BUILDING AREA = 3296 SF
UNPROTECTED, SPRINKLERED OPENING = 1071 SF

823.8 SF/ 3296 SF = 24.9% < 25% ALLOWED

FIRE SEPARATION DISTANCE 10' < 15'

WEST SIDE BUILDING AREA = 2268 SF
UNPROTECTED, SPRINKLERED OPENING = 417 SF

417 SF/ 2268 SF = 18.4% < 45% ALLOWED



WEST ELEVATION

EAST ELEVATION

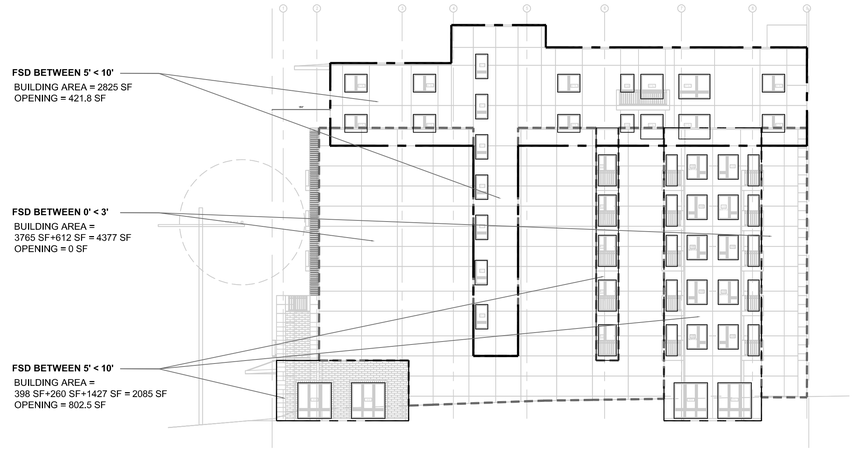
FIRE SEPARATION DISTANCE 0' < 3'
EAST SIDE BUILDING AREA = **3765 SF+612 SF = 4377 SF**
UNPROTECTED, SPRINKLERED OPENING = 0 SF

0 SF/ 4377 SF = 0%

FIRE SEPARATION DISTANCE 5' < 10'

EAST SIDE BUILDING AREA = **398 SF+260 SF+1427 SF**+2825 SF **= 4910 SF**
UNPROTECTED, SPRINKLERED OPENING = 802.5 SF+421.8 SF=1224.3 SF

1224.3 SF/ 4910 SF = 24.9% < 25% ALLOWED



EAST ELEVATION

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SEATTLE WA 98104

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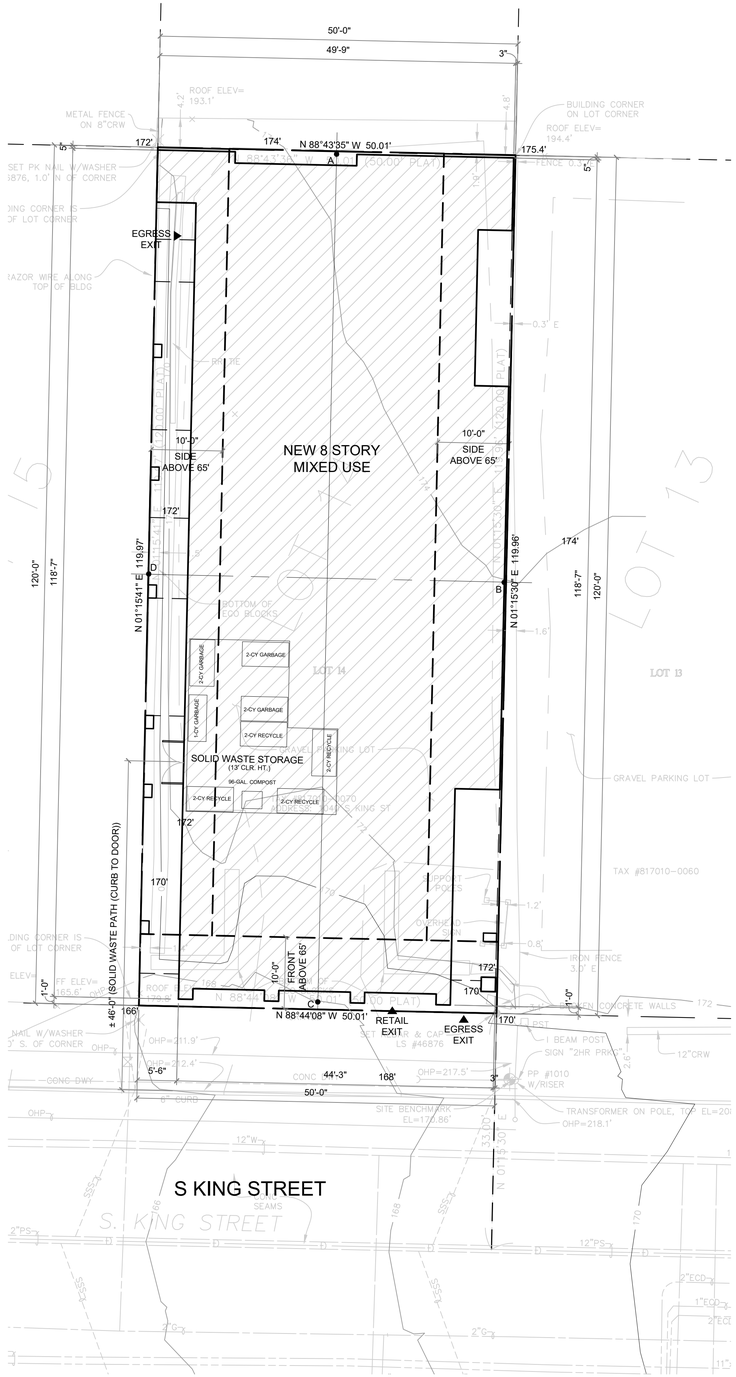
	03-25-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
GENERAL INFORMATION- BUILDING CODE

SHEET NUMBER
A012



1 SITE PLAN
SCALE: 1" = 10'-0"

0 10' 20'

NORTH

PROJECT ADDRESS	1038 / 1040 S KING ST SEATTLE, WA 98104
DPD PROJECT NUMBER	3024877
ZONING DISTRICT	DMR/C 75/75-95
PARCEL NUMBER	817010-0070
SITE AREA	6000 SF

1.0 ZONING DESCRIPTION — DMR/C 75/75-95

1.1 SITE AREA — 6000 SF

1.2 FLOOR AREA RATIO (FAR) — **(SMC 23.49.011 Table A)**

SMC 23.49.011 FLOOR AREA RATIO (FAR) LIMITS
BASE: 2.5 FAR
MAXIMUM: 4.5 FAR

ALLOWED: 4.5X 6,000 SF SITE AREA = 27,000 SF ALLOWABLE FAR
SMC 23.49.011.B.1.f
RESIDENTIAL USE MAY BE EXEMPTED FROM FAR CALCULATIONS.

PROVIDED: 36,076 SF (NON FAR), 4,680 SF (FAR)

BASEMENT:	5075 SF (NON FAR)
1st FLOOR:	4680 SF
2nd FLOOR:	5162 SF (NON FAR)
3rd FLOOR:	4820 SF (NON FAR)
4th FLOOR:	4820 SF (NON FAR)
5th FLOOR:	4820 SF (NON FAR)
6th FLOOR:	4820 SF (NON FAR)
7th FLOOR:	3027 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)
8th FLOOR:	3027 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)
ROOF:	505 SF < 4,500 SF (6,000 SF X 75% COVERAGE = 4,500 SF) (NON FAR)

1.3 **LOT COVERAGE (SMC TABLE B for 23.49.158)**

LOT SIZE 0-19,000 SF
65' OR LESS: NO LIMIT, GREATER THAN 65' UP TO 85' : 75%

1.4 STRUCTURE HEIGHT — SMC (23.49.008)

BASE STRUCTURAL HEIGHT: 75'

SMC 23.49.008.C.4: 95'
IF THE APPLICANT QUALIFIES FOR EXTRA FLOOR AREA UNDER SECTION 23.49.023 AND 23.58A AND THE STRUCTURAL HAS NO NONRESIDENTIAL OR LIVE-WORK USE ABOVE 75'.

1.5 SETBACKS & SEPARATION — SMC 23.45.518

FRONT: 10' PORTION OF STRUCTURES BTW 65' TO 85'
10' GREATER THAN 45' UP TO 85' (GREEN STREET SETBACK SMC 23.49.166 B1)
SIDE: NOT REQ'D, 10' ABOVE 65' (NOT STREET LINES) SMC 23.49.166 A.2.

1.6 STREET FACADE REQUIREMENTS — SMC 23.49.162

A. MINIMUM FACADE HEIGHT : 25' CLASS I PEDESTRIAN STREETS AND **GREEN STREETS** SMC 23.49.162 A.1.
B. SETBACK LIMITS
1. PROPERTY LINE FACADE NOT REQUIRED PER MAP 1H
C. FACADE TRANSPARENCY REQUIREMENTS SMC 23.49.162 C.
30% MIN (AREA BTW 2' AND 8' ABOVE SIDE WALK) SHALL BE TRANSPARENT.
D.3. BLANK FACADE LIMIT
BLANK FACADE SHALL BE LESS THAN 30' WIDE (EXCEPT GARAGE DOOR) EXCEPTION UP TO 60' PER CITY APPROVAL
ANY BLANK SEGMENTS SEPARATED BY TRANSPARENT AREAS AT LEAST 2'
70% LIMIT (TOTAL OF ALL BLANK FACADE SEGMENTS INCLUDING GARAGE DOORS)
F. REFER TO SMC 23.49.162 F. FOR LANDSCAPING REQUIREMENTS.

CITY STAMP

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NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
SITE PLAN

SHEET NUMBER
A100

SEC C406 EFFICIENCY PACKAGE CREDITS

CODE SECTION	CREDIT
1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2	3.0
3. REDUCED LIGHTING POWER: OPTION 2 IN ACCORDANCE WITH SECTION C406.3.2	3.0
5.2. TWO THIRDS OF RENEWABLE ENERGY REQUIRED BY SECTION C406.5	2.0

WHOLE HOUSE VENTILATION

1. VENTILATION SYSTEM METHOD:

   EXHAUST FAN SYSTEM, SEE SMC 403.4.6.1 FOR REQUIREMENTS

2. VENTILATION SYSTEM AT EACH DWELLING UNIT TO BE OPERATED INTERMITTENTLY
3. FLOW RATE / RUN TIME
   0-1 UNITS
   - 60 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 30 CFM X 2 (RATE FACTOR)

   2 BR UNITS
   -70 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 35 CFM X 2 (RATE FACTOR)

   SMC TABLE 403.4.2
   REQUIRED VENTILATION RATE
   (0-1 BEDRM UNIT, FLOOR AREA <1500 SF): 30 CFM (CONTINUOUSLY OPERATING SYSTEMS)
   (2 BEDRM UNIT, FLOOR AREA500-1000 SF): 35 CFM

   SMC TABLE 403. 4. 6. 5
   RATE FACTOR: 2
   RUN TIME PERCENTAGE: 50% IN EACH 4-HR

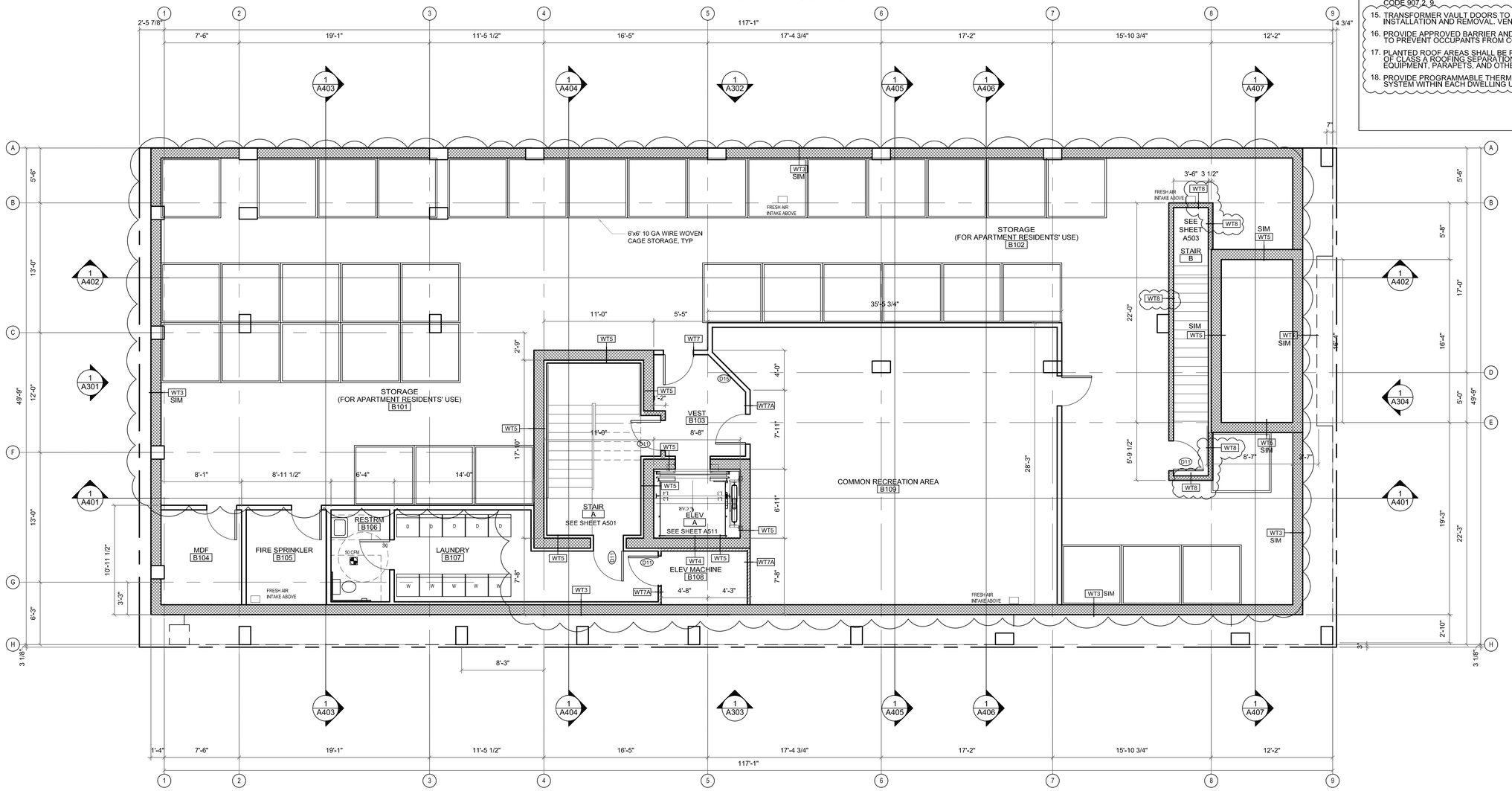
4. WHOLE HOUSE EXHAUST FAN SHALL HAVE A SONE RATING OF 1.0 (SMC 403.4.6).
5. INTAKE OPENINGS SHALL NOT BE LOCATED CLOSER THAN 10' FROM AN APPLIANCE VENT OUTLET UNLESS SUCH VENT OUTLET IS 3' ABOVE THE OUTDOOR AIR INLET. (SMC 401.4.3)
6. AIR INLETS SHALL PROVIDE NOT LESS THAN 4 SQ INCHES OF NET FREE AREA OF OPENING FOR EACH 10 CFM OF OUTDOOR AIR REQUIRED IN SEATTLE MECHANICAL CODE.
7. EACH OCCUPIABLE SPACE SHALL HAVE A MINIMUM OF ONE AIR INLET THAT HAS A MINIMUM OF 4 SQ INCHES OF NET FREE AREA.
8. COMPLY TO SMC 403.4.4.1 HRV REQUIREMENTS.

LEGEND

- 3-HR RATED WALL
- 2-HR RATED WALL
- 1-HR RATED WALL
- WT# — WALL TYPE, SEE SHEET A811
- CO — CARBON MONOXIDE ALARM
- SD — 110V SMOKE ALARM W/ BATTERY BACK UP & ALARM SILENCING SWITCH
- OUTDOOR AIR INLETS AT 48" F.F. SEE WHOLE HOUSE VENTILATION NOTE #4 AND SMC 403. 4. 6. 1 FOR REQUIREMENTS
- EXHAUST FAN
- WHOLE HOUSE EXHAUST FAN

PLAN GENERAL NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
3. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
4. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
5. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED
6. FLOOR TO FLOOR HEIGHT = SEE BUILDING SECTIONS
7. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
8. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
9. PROVIDE UL LISTED FIRE EXTINGUISHIERS PER FIRE DEPARTMENT'S REQUIREMENT.
10. PROVIDE HORIZONTAL FIREBLOCKING IN ALL WOOD FRAMED WALLS AT 10'-0" O.C.
11. COMPLY WITH THE FOLLOWING REQUIREMENTS FOR A SINGLE EXIT:
    a. BUILDING TO BE SPRINKLERED W/ NFPA 13 SYSTEM. RESIDENTIAL HEADS ARE REQUIRED IN ALL HABITABLE SPACES.
    b. STAIRWAY TO BE PRESSURIZED. SEE REQUIREMENTS FOR SINGLE EXIT ON SHEET A1.
12. PROVIDE TANKLESS WATER HEATER IN EACH UNIT FOR HOT WATER SERVICE.
13. PROVIDE CLASS I STANDPIPE SYSTEM AS REQUIRED BY 2018 SEATTLE FIRE CODE 905.3.1. EX1.
14. BUILDING FIRE ALARM SYSTEM TO BE INSTALLED AS REQUIRED BY 2018 SEATTLE FIRE CODE 907.2.9.
15. TRANSFORMER VAULT DOORS TO BE SIZED TO ACCOMMODATE EQUIPMENT INSTALLATION AND REMOVAL. VENTILATION SHALL BE MECHANICAL CIRCULATION.
16. PROVIDE APPROVED BARRIER AND DIRECTIONAL EXIT SIGNS AT THE DISCHARGE LEVEL TO PREVENT OCCUPANTS FROM CONTINUING TO LEVELS BELOW.
17. PLANTED ROOF AREAS SHALL BE PROVIDED WITH A MINIMUM OF 6 FEET OF CLASS A ROOFING SEPARATION FROM ROOF PENTHOUSES, MECHANICAL EQUIPMENT, PARAPETS, AND OTHER STRUCTURES.
18. PROVIDE PROGRAMMABLE THERMOSTAT FOR CONTROL OF THE PRIMARY HEATING SYSTEM WITHIN EACH DWELLING UNIT.



1 BASEMENT
SCALE: 3/16" = 1'-0"

0 8' 16'

NORTH

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1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
BASEMENT FLOOR PLAN

SHEET NUMBER
A201

SEC C406 EFFICIENCY PACKAGE CREDITS

CODE SECTION	CREDIT
1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2	3.0
3. REDUCED LIGHTING POWER: OPTION 2 IN ACCORDANCE WITH SECTION C406.3.2	3.0
5.2. TWO THIRDS OF RENEWABLE ENERGY REQUIRED BY SECTION C406.5	2.0

WHOLE HOUSE VENTILATION

1. VENTILATION SYSTEM METHOD:

   EXHAUST FAN SYSTEM, SEE SMC 403.4.6.1 FOR REQUIREMENTS

2. VENTILATION SYSTEM AT EACH DWELLING UNIT TO BE OPERATED INTERMITTENTLY
3. FLOW RATE / RUN TIME
   0-1 UNITS
   - 60 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 30 CFM X 2 (RATE FACTOR)

   2 BR UNITS
   -70 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 35 CFM X 2 (RATE FACTOR)

   SMC TABLE 403.4.2
   REQUIRED VENTILATION RATE
   (0-1 BEDRM UNIT, FLOOR AREA <1500 SF): 30 CFM (CONTINUOUSLY OPERATING SYSTEMS)
   (2 BEDRM UNIT, FLOOR AREA500-1000 SF): 35 CFM

   SMC TABLE 403. 4. 6. 5
   RATE FACTOR: 2
   RUN TIME PERCENTAGE: 50% IN EACH 4-HR

4. WHOLE HOUSE EXHAUST FAN SHALL HAVE A SONE RATING OF 1.0 (SMC 403.4.6).
5. INTAKE OPENINGS SHALL NOT BE LOCATED CLOSER THAN 10' FROM AN APPLIANCE VENT OUTLET UNLESS SUCH VENT OUTLET IS 3' ABOVE THE OUTDOOR AIR INLET. (SMC 401.4.3)
6. AIR INLETS SHALL PROVIDE NOT LESS THAN 4 SQ INCHES OF NET FREE AREA OF OPENING FOR EACH 10 CFM OF OUTDOOR AIR REQUIRED IN SEATTLE MECHANICAL CODE.
7. EACH OCCUPIABLE SPACE SHALL HAVE A MINIMUM OF ONE AIR INLET THAT HAS A MINIMUM OF 4 SQ INCHES OF NET FREE AREA.
8. COMPLY TO SMC 403.4.4.1 HRV REQUIREMENTS.

LEGEND

- 3-HR RATED WALL
- 2-HR RATED WALL
- 1-HR RATED WALL
- WT# — WALL TYPE, SEE SHEET A811
- CO — CARBON MONOXIDE ALARM
- SD — 110V SMOKE ALARM W/ BATTERY BACK UP & ALARM SILENCING SWITCH
- OUTDOOR AIR INLETS AT 48" F.F. SEE WHOLE HOUSE VENTILATION NOTE #4 AND SMC 403. 4. 6. 1 FOR REQUIREMENTS
- EXHAUST FAN
- WHOLE HOUSE EXHAUST FAN

PLAN GENERAL NOTES:

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10. PROVIDE HORIZONTAL FIREBLOCKING IN ALL WOOD FRAMED WALLS AT 10'-0" O.C.
11. COMPLY WITH THE FOLLOWING REQUIREMENTS FOR A SINGLE EXIT:
    a. BUILDING TO BE SPRINKLERED W/ NFPA 13 SYSTEM. RESIDENTIAL HEADS ARE REQUIRED IN ALL HABITABLE SPACES
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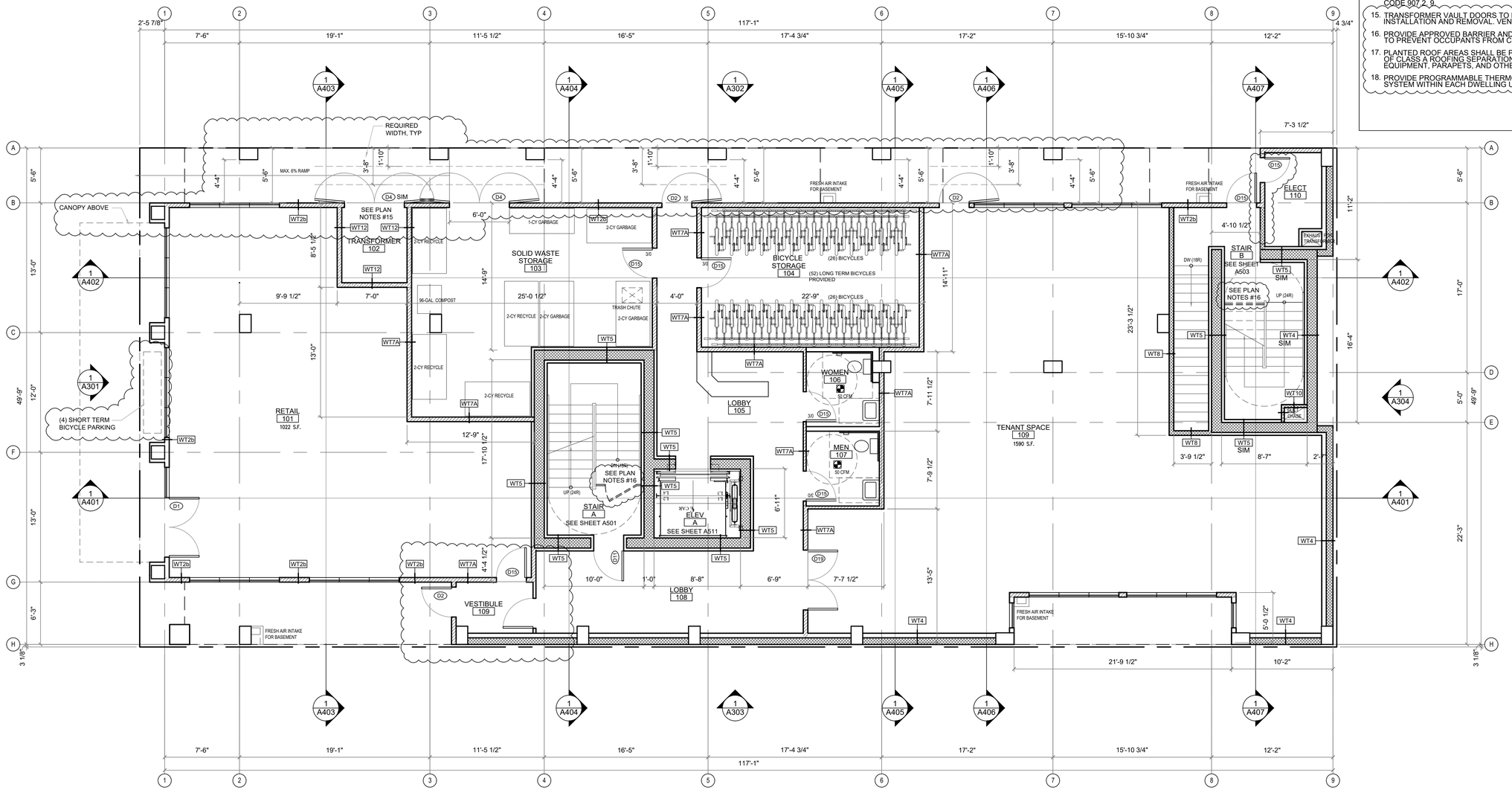

1 1ST FLOOR PLAN
SCALE: 3/16" = 1'-0"

0 8' 16'

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NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME: FIRST FLOOR PLAN

SHEET NUMBER: A202

SEC C406 EFFICIENCY PACKAGE CREDITS

CODE SECTION	CREDIT
1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2	3.0
3. REDUCED LIGHTING POWER: OPTION 2 IN ACCORDANCE WITH SECTION C406.3.2	3.0
5.2. TWO THIRDS OF RENEWABLE ENERGY REQUIRED BY SECTION C406.5	2.0

WHOLE HOUSE VENTILATION

1. VENTILATION SYSTEM METHOD:

   EXHAUST FAN SYSTEM, SEE SMC 403.4.6.1 FOR REQUIREMENTS

2. VENTILATION SYSTEM AT EACH DWELLING UNIT TO BE OPERATED INTERMITTENTLY
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   0-1 UNITS
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   RUN TIME PERCENTAGE: 50% IN EACH 4-HR

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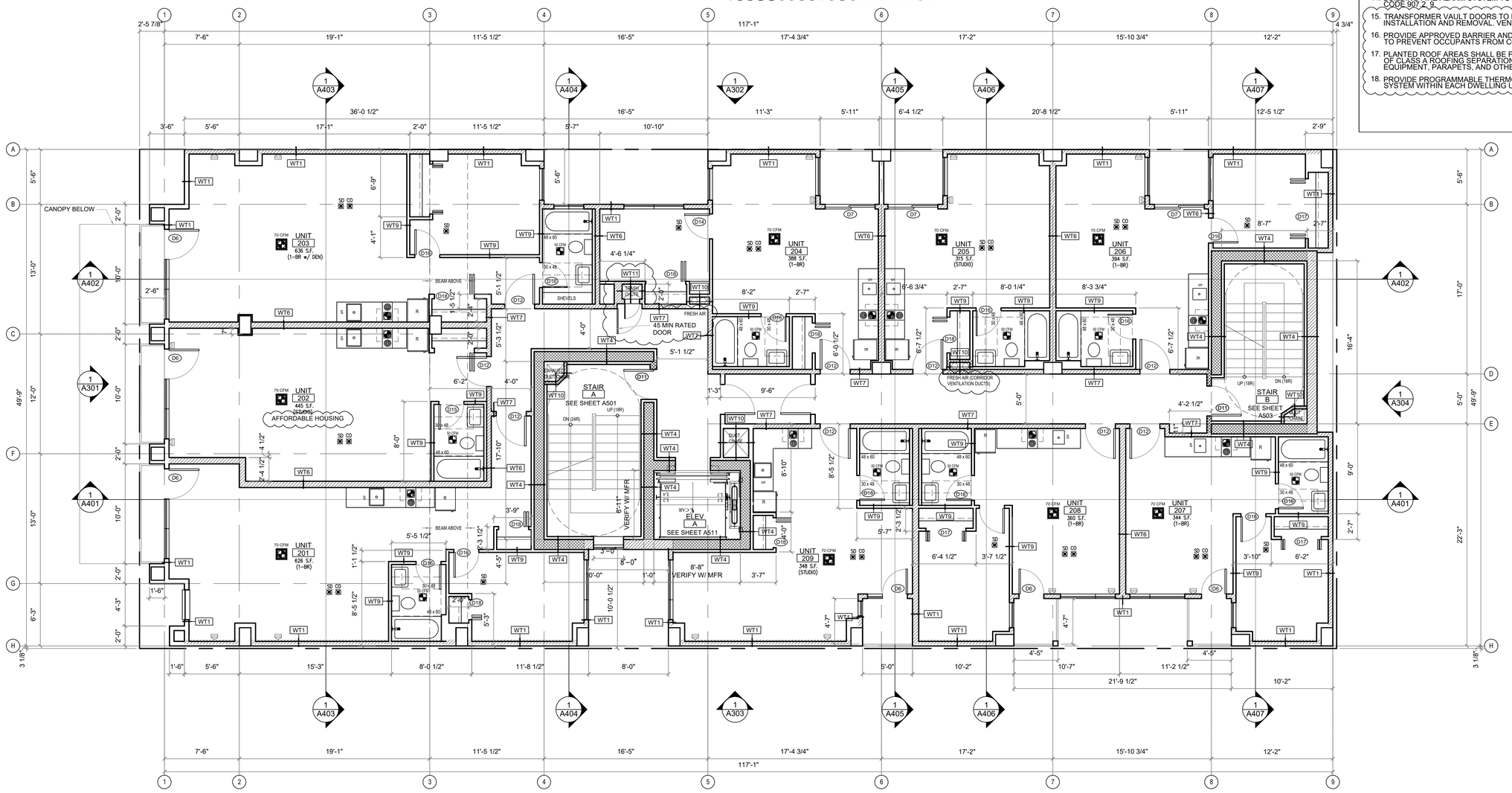
6. AIR INLETS SHALL PROVIDE NOT LESS THAN 4 SQ INCHES OF NET FREE AREA OF OPENING FOR EACH 10 CFM OF OUTDOOR AIR REQUIRED IN SEATTLE MECHANICAL CODE.
7. EACH OCCUPIABLE SPACE SHALL HAVE A MINIMUM OF ONE AIR INLET THAT HAS A MINIMUM OF 4 SQ INCHES OF NET FREE AREA.
8. COMPLY TO SMC 403.4.4.1 HRV REQUIREMENTS.

LEGEND

- 3-HR RATED WALL
- 2-HR RATED WALL
- 1-HR RATED WALL
- WT# — WALL TYPE, SEE SHEET A811
- CO — CARBON MONOXIDE ALARM
- SD — 110V SMOKE ALARM W/ BATTERY BACK UP & ALARM SILENCING SWITCH
- OUTDOOR AIR INLETS AT 48" F.F. SEE WHOLE HOUSE VENTILATION NOTE #4 AND SMC 403. 4. 6. 1 FOR REQUIREMENTS
- EXHAUST FAN
- WHOLE HOUSE EXHAUST FAN

PLAN GENERAL NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
3. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
4. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
5. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED
6. FLOOR TO FLOOR HEIGHT = SEE BUILDING SECTIONS
7. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
8. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
9. PROVIDE UL LISTED FIRE EXTINGUISHIERS PER FIRE DEPARTMENT'S REQUIREMENT.
10. PROVIDE HORIZONTAL FIREBLOCKING IN ALL WOOD FRAMED WALLS AT 10'-0" O.C.
11. COMPLY WITH THE FOLLOWING REQUIREMENTS FOR A SINGLE EXIT:
    a. BUILDING TO BE SPRINKLERED W/ NFPA 13 SYSTEM. RESIDENTIAL HEADS ARE REQUIRED IN ALL HABITABLE SPACES.
    b. STAIRWAY TO BE PRESSURIZED. SEE REQUIREMENTS FOR SINGLE EXIT ON SHEET A1.
12. PROVIDE TANKLESS WATER HEATER IN EACH UNIT FOR HOT WATER SERVICE.
13. PROVIDE CLASS I STANDPIPE SYSTEM AS REQUIRED BY 2018 SEATTLE FIRE CODE 905.3.1. EX1.
14. BUILDING FIRE ALARM SYSTEM TO BE INSTALLED AS REQUIRED BY 2018 SEATTLE FIRE CODE 907. 2. 9.
15. TRANSFORMER VAULT DOORS TO BE SIZED TO ACCOMMODATE EQUIPMENT INSTALLATION AND REMOVAL. VENTILATION SHALL BE MECHANICAL CIRCULATION.
16. PROVIDE APPROVED BARRIER AND DIRECTIONAL EXIT SIGNS AT THE DISCHARGE LEVEL TO PREVENT OCCUPANTS FROM CONTINUING TO LEVELS BELOW.
17. PLANTED ROOF AREAS SHALL BE PROVIDED WITH A MINIMUM OF 6 FEET OF CLASS A ROOFING SEPARATION FROM ROOF PENTHOUSES, MECHANICAL EQUIPMENT, PARAPETS, AND OTHER STRUCTURES.
18. PROVIDE PROGRAMMABLE THERMOSTAT FOR CONTROL OF THE PRIMARY HEATING SYSTEM WITHIN EACH DWELLING UNIT.



1 2ND FLOOR PLAN
SCALE: 3/16" = 1'-0"

0 8' 16'

NORTH

CITY STAMP

CHC ARCHITECTS
8666 REGISTERED ARCHITECT CHAOHUA CHANG STATE OF WASHINGTON
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1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

SHEET NAME: SECOND FLOOR PLAN

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NUMBER: A203

SEC C406 EFFICIENCY PACKAGE CREDITS

CODE SECTION	CREDIT
1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2	3.0
3. REDUCED LIGHTING POWER: OPTION 2 IN ACCORDANCE WITH SECTION C406.3.2	3.0
5.2. TWO THIRDS OF RENEWABLE ENERGY REQUIRED BY SECTION C406.5	2.0

WHOLE HOUSE VENTILATION

1. VENTILATION SYSTEM METHOD:

   EXHAUST FAN SYSTEM, SEE SMC 403.4.6.1 FOR REQUIREMENTS

2. VENTILATION SYSTEM AT EACH DWELLING UNIT TO BE OPERATED INTERMITTENTLY
3. FLOW RATE / RUN TIME
   0-1 UNITS
   - 60 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 30 CFM X 2 (RATE FACTOR)

   2 BR UNITS
   -70 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 35 CFM X 2 (RATE FACTOR)

   SMC TABLE 403.4.2
   REQUIRED VENTILATION RATE
   (0-1 BEDRM UNIT, FLOOR AREA <1500 SF): 30 CFM (CONTINUOUSLY OPERATING SYSTEMS)
   (2 BEDRM UNIT, FLOOR AREA500-1000 SF): 35 CFM

   SMC TABLE 403. 4. 6. 5
   RATE FACTOR: 2
   RUN TIME PERCENTAGE: 50% IN EACH 4-HR

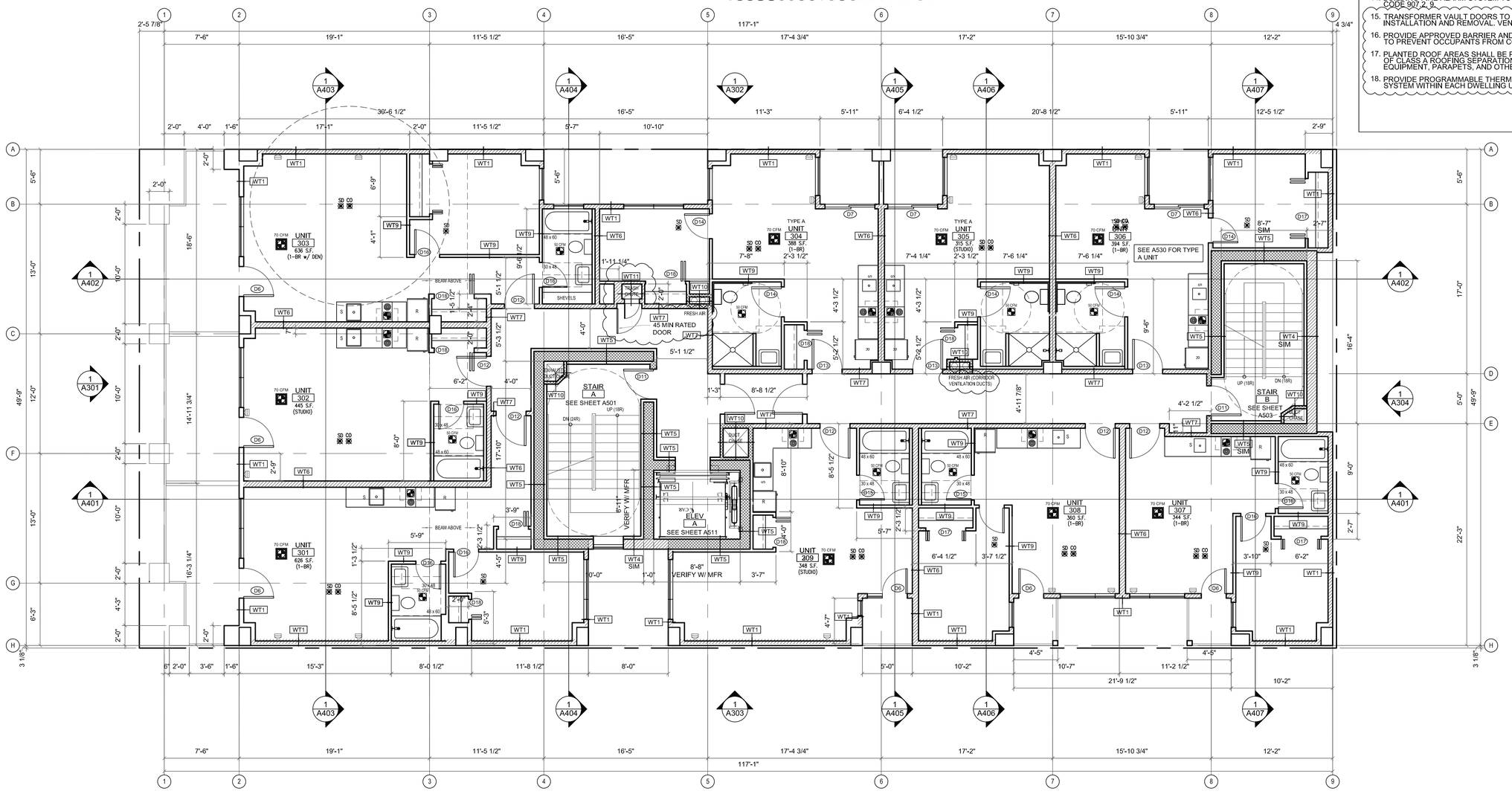
4. WHOLE HOUSE EXHAUST FAN SHALL HAVE A SONE RATING OF 1.0 (SMC 403.4.6).
5. INTAKE OPENINGS SHALL NOT BE LOCATED CLOSER THAN 10' FROM AN APPLIANCE VENT OUTLET UNLESS SUCH VENT OUTLET IS 3' ABOVE THE OUTDOOR AIR INLET. (SMC 401.4.3)
6. AIR INLETS SHALL PROVIDE NOT LESS THAN 4 SQ INCHES OF NET FREE AREA OF OPENING FOR EACH 10 CFM OF OUTDOOR AIR REQUIRED IN SEATTLE MECHANICAL CODE.
7. EACH OCCUPIABLE SPACE SHALL HAVE A MINIMUM OF ONE AIR INLET THAT HAS A MINIMUM ~~OF 4 SQ INCHES OF NET FREE AREA.~~
8. COMPLY TO SMC 403.4.4.1 HRV REQUIREMENTS.

LEGEND

- 3-HR RATED WALL
- 2-HR RATED WALL
- 1-HR RATED WALL
- WT# — WALL TYPE, SEE SHEET A811
- CO — CARBON MONOXIDE ALARM
- SD — 110V SMOKE ALARM W/ BATTERY BACK UP & ALARM SILENCING SWITCH
- OUTDOOR AIR INLETS AT 48" F.F. SEE WHOLE HOUSE VENTILATION NOTE #4 AND SMC 403. 4. 6. 1 FOR REQUIREMENTS
- EXHAUST FAN
- WHOLE HOUSE EXHAUST FAN

PLAN GENERAL NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
3. ALL DIMENSIONS ARE TO FACE OF FRAMING U.N.O.
4. ALL EXHAUST FANS ARE TO VENTED TO OUTSIDE.
5. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED
6. FLOOR TO FLOOR HEIGHT = SEE BUILDING SECTIONS
7. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
8. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
9. PROVIDE UL LISTED FIRE EXTINGUISHIERS PER FIRE DEPARTMENT'S REQUIREMENT.
10. PROVIDE HORIZONTAL FIREBLOCKING IN ALL WOOD FRAMED WALLS AT 10'-0" O.C.
11. COMPLY WITH THE FOLLOWING REQUIREMENTS FOR A SINGLE EXIT:
    a. BUILDING TO BE SPRINKLERED W/ NFPA 13 SYSTEM. RESIDENTIAL HEADS ARE REQUIRED IN ALL HABITABLE SPACES
    b. STAIRWAY TO BE PRESSURIZED. SEE REQUIREMENTS FOR SINGLE EXIT ON SHEET A1.
12. PROVIDE TANKLESS WATER HEATER IN EACH UNIT FOR HOT WATER SERVICE.
13. PROVIDE CLASS I STANDPIPE SYSTEM AS REQUIRED BY 2018 SEATTLE FIRE CODE 905.3.1. EX1.
14. BUILDING FIRE ALARM SYSTEM TO BE INSTALLED AS REQUIRED BY 2018 SEATTLE FIRE CODE 907.2.9.
15. TRANSFORMER VAULT DOORS TO BE SIZED TO ACCOMMODATE EQUIPMENT INSTALLATION AND REMOVAL. VENTILATION SHALL BE MECHANICAL CIRCULATION.
16. PROVIDE APPROVED BARRIER AND DIRECTIONAL EXIT SIGNS AT THE DISCHARGE LEVEL TO PREVENT OCCUPANTS FROM CONTINUING TO LEVELS BELOW.
17. PLANTED ROOF AREAS SHALL BE PROVIDED WITH A MINIMUM OF 6 FEET OF CLASS A ROOFING SEPARATION FROM ROOF PENTHOUSES, MECHANICAL EQUIPMENT, PARAPETS, AND OTHER STRUCTURES.
18. PROVIDE PROGRAMMABLE THERMOSTAT FOR CONTROL OF THE PRIMARY HEATING SYSTEM WITHIN EACH DWELLING UNIT.



1 3RD FLOOR PLAN
SCALE: 3/16" = 1'-0"

0 8' 16'

CITY STAMP

CHC ARCHITECTS
8666 REGISTERED ARCHITECT CHAOHUA CHANG STATE OF WASHINGTON
13301 SE 79th PL, Unit A205, NEWCASTLE, WA 98059
(M) 425.785.3992 chcarch@gmail.com

1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
THIRD FLOOR PLAN

SHEET NUMBER
A204

SEC C406 EFFICIENCY PACKAGE CREDITS

CODE SECTION	CREDIT
1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2	3.0
3. REDUCED LIGHTING POWER: OPTION 2 IN ACCORDANCE WITH SECTION C406.3.2	3.0
5.2. TWO THIRDS OF RENEWABLE ENERGY REQUIRED BY SECTION C406.5	2.0

WHOLE HOUSE VENTILATION

1. VENTILATION SYSTEM METHOD:

   EXHAUST FAN SYSTEM, SEE SMC 403.4.6.1 FOR REQUIREMENTS

2. VENTILATION SYSTEM AT EACH DWELLING UNIT TO BE OPERATED INTERMITTENTLY
3. FLOW RATE / RUN TIME
   0-1 UNITS
   - 60 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 30 CFM X 2 (RATE FACTOR)

   2 BR UNITS
   -70 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 35 CFM X 2 (RATE FACTOR)

   SMC TABLE 403.4.2
   REQUIRED VENTILATION RATE
   (0-1 BEDRM UNIT, FLOOR AREA <1500 SF): 30 CFM (CONTINUOUSLY OPERATING SYSTEMS)
   (2 BEDRM UNIT, FLOOR AREA500-1000 SF): 35 CFM

   SMC TABLE 403. 4. 6. 5
   RATE FACTOR: 2
   RUN TIME PERCENTAGE: 50% IN EACH 4-HR

4. WHOLE HOUSE EXHAUST FAN SHALL HAVE A SONE RATING OF 1.0 (SMC 403.4.6).
5. INTAKE OPENINGS SHALL NOT BE LOCATED CLOSER THAN 10' FROM AN APPLIANCE VENT OUTLET UNLESS SUCH VENT OUTLET IS 3' ABOVE THE OUTDOOR AIR INLET. (SMC 401.4.3)
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7. EACH OCCUPIABLE SPACE SHALL HAVE A MINIMUM OF ONE AIR INLET THAT HAS A MINIMUM ~~OF 4 SQ INCHES OF NET FREE AREA.~~
8. COMPLY TO SMC 403.4.4.1 HRV REQUIREMENTS.

LEGEND

- 3-HR RATED WALL
- 2-HR RATED WALL
- 1-HR RATED WALL
- WT# — WALL TYPE, SEE SHEET A811
- CO — CARBON MONOXIDE ALARM
- SD — 110V SMOKE ALARM W/ BATTERY BACK UP & ALARM SILENCING SWITCH
- OUTDOOR AIR INLETS AT 48" F.F. SEE WHOLE HOUSE VENTILATION NOTE #4 AND SMC 403. 4. 6. 1 FOR REQUIREMENTS
- EXHAUST FAN
- WHOLE HOUSE EXHAUST FAN

PLAN GENERAL NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
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6. FLOOR TO FLOOR HEIGHT = SEE BUILDING SECTIONS
7. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
8. ALL EXTERIOR COLUMNS, BEAMS, AND JOISTS THAT ARE EXPOSED TO THE WEATHER MUST BE PRESSURE-TREATED.
9. PROVIDE UL LISTED FIRE EXTINGUISHIERS PER FIRE DEPARTMENT'S REQUIREMENT.
10. PROVIDE HORIZONTAL FIREBLOCKING IN ALL WOOD FRAMED WALLS AT 10'-0" O.C.
11. COMPLY WITH THE FOLLOWING REQUIREMENTS FOR A SINGLE EXIT:
    a. BUILDING TO BE SPRINKLERED W/ NFPA 13 SYSTEM. RESIDENTIAL HEADS ARE REQUIRED IN ALL HABITABLE SPACES.
    b. STAIRWAY TO BE PRESSURIZED. SEE REQUIREMENTS FOR SINGLE EXIT ON SHEET A1.
12. PROVIDE TANKLESS WATER HEATER IN EACH UNIT FOR HOT WATER SERVICE.
13. PROVIDE CLASS I STANDPIPE SYSTEM AS REQUIRED BY 2018 SEATTLE FIRE CODE 905.3.1. EX1.
14. BUILDING FIRE ALARM SYSTEM TO BE INSTALLED AS REQUIRED BY 2018 SEATTLE FIRE CODE 907.2.9.
15. TRANSFORMER VAULT DOORS TO BE SIZED TO ACCOMMODATE EQUIPMENT INSTALLATION AND REMOVAL. VENTILATION SHALL BE MECHANICAL CIRCULATION.
16. PROVIDE APPROVED BARRIER AND DIRECTIONAL EXIT SIGNS AT THE DISCHARGE LEVEL TO PREVENT OCCUPANTS FROM CONTINUING TO LEVELS BELOW.
17. PLANTED ROOF AREAS SHALL BE PROVIDED WITH A MINIMUM OF 6 FEET OF CLASS A ROOFING SEPARATION FROM ROOF PENTHOUSES, MECHANICAL EQUIPMENT, PARAPETS, AND OTHER STRUCTURES.
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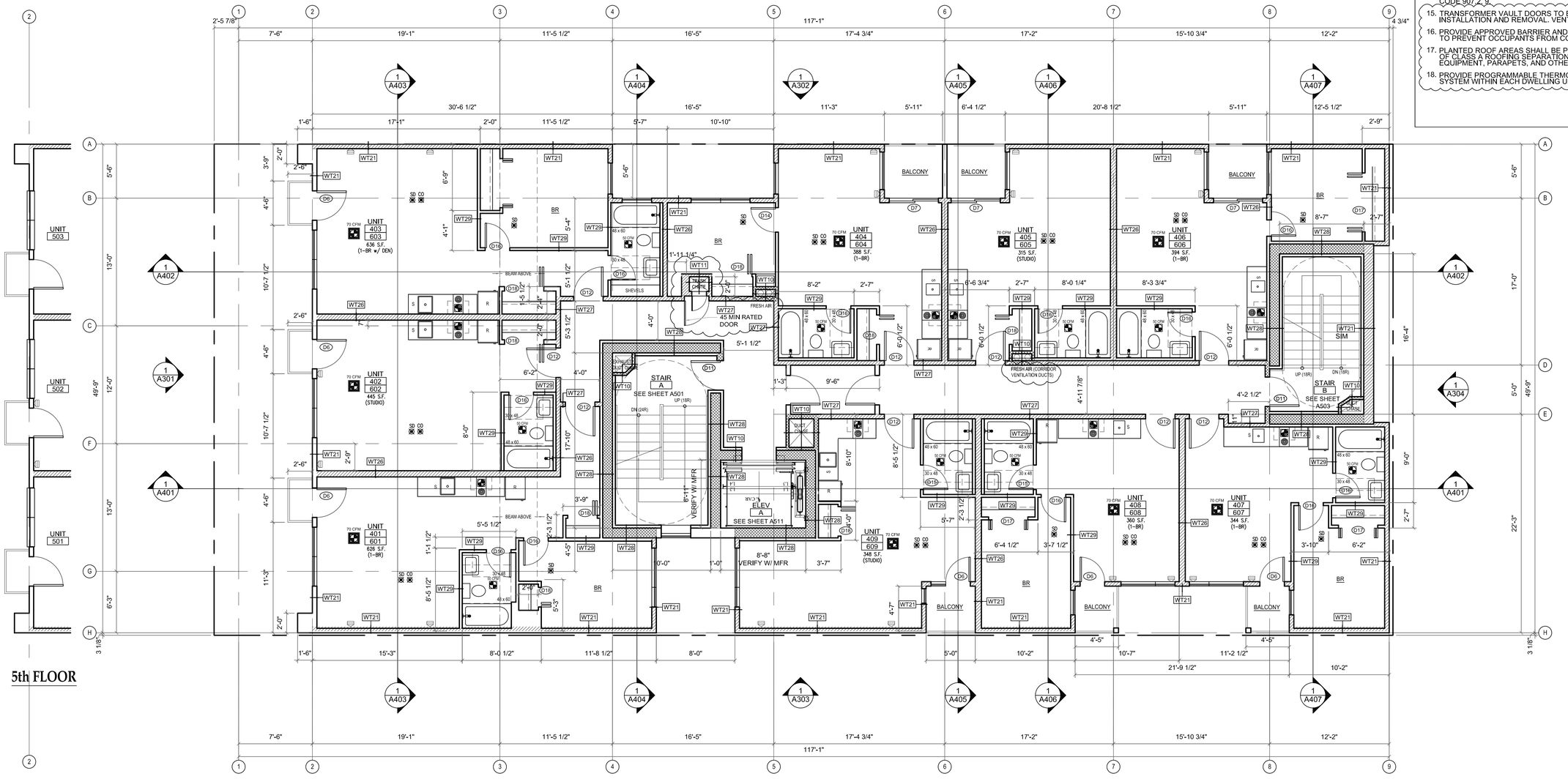

5th FLOOR

5TH FLOOR

1 4-6TH FLOOR PLAN

SCALE: 3/16" = 1'-0"

0 8' 16'

CITY STAMP

CHC ARCHITECTS
8666 REGISTERED ARCHITECT CHAOHUA CHANG STATE OF WASHINGTON
13301 SE 79th PL, Unit A205, NEWCASTLE, WA 98059
(M) 425.785.3992 chcarch@gmail.com

1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
FORTH - SIXTH FLOOR PLAN

SHEET NUMBER
A205

SEC C406 EFFICIENCY PACKAGE CREDITS

CODE SECTION	CREDIT
1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2	3.0
3. REDUCED LIGHTING POWER: OPTION 2 IN ACCORDANCE WITH SECTION C406.3.2	3.0
5.2. TWO THIRDS OF RENEWABLE ENERGY REQUIRED BY SECTION C406.5	2.0

WHOLE HOUSE VENTILATION

1. VENTILATION SYSTEM METHOD:

   EXHAUST FAN SYSTEM, SEE SMC 403.4.6.1 FOR REQUIREMENTS

2. VENTILATION SYSTEM AT EACH DWELLING UNIT TO BE OPERATED INTERMITTENTLY
3. FLOW RATE / RUN TIME
   0-1 UNITS
   - 60 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 30 CFM X 2 (RATE FACTOR)

   2 BR UNITS
   -70 CFM INTERMITTENT AIR FLOW AT 50% RUN TIME: 35 CFM X 2 (RATE FACTOR)

   SMC TABLE 403.4.2
   REQUIRED VENTILATION RATE
   (0-1 BEDRM UNIT, FLOOR AREA <1500 SF): 30 CFM (CONTINUOUSLY OPERATING SYSTEMS)
   (2 BEDRM UNIT, FLOOR AREA500-1000 SF): 35 CFM

   SMC TABLE 403. 4. 6. 5
   RATE FACTOR: 2
   RUN TIME PERCENTAGE: 50% IN EACH 4-HR

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7. EACH OCCUPIABLE SPACE SHALL HAVE A MINIMUM OF ONE AIR INLET THAT HAS A MINIMUM OF 4 SQ INCHES OF NET FREE AREA.
8. COMPLY TO SMC 403.4.4.1 HRV REQUIREMENTS.

LEGEND

- 3-HR RATED WALL
- 2-HR RATED WALL
- 1-HR RATED WALL
- WT# — WALL TYPE, SEE SHEET A811
- CO — CARBON MONOXIDE ALARM
- SD — 110V SMOKE ALARM W/ BATTERY BACK UP & ALARM SILENCING SWITCH
- OUTDOOR AIR INLETS AT 48" F.F. SEE WHOLE HOUSE VENTILATION NOTE #4 AND SMC 403. 4. 6. 1 FOR REQUIREMENTS
- EXHAUST FAN
- WHOLE HOUSE EXHAUST FAN

PLAN GENERAL NOTES:

1. USE CONVENTIONAL FRAMING AND SHEATHING U.N.O.
2. ALL DOOR JAMBS TO BE SET OFF WALLS 6" TYP. U.N.O.
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5. ALL SMOKE DETECTORS MUST BE PROVIDED w/ PRIMARY POWER FROM BUILDING WIRING, PROVIDED w/ BATTERY BACKUP, AND BE INTERCONNECTED
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7. ESCAPE (EGRESS) WINDOW MUST HAVE A CLEAR OPENABLE AREA OF 5.7 S.F. w/ A MINIMUM NET CLEAR HEIGHT OF 24" AND WIDTH DIMENSION OF 20". THE SILL HEIGHT MUST NOT BE MORE THAN 44" ABOVE THE FLOOR.
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10. PROVIDE HORIZONTAL FIREBLOCKING IN ALL WOOD FRAMED WALLS AT 10'-0" O.C.
11. COMPLY WITH THE FOLLOWING REQUIREMENTS FOR A SINGLE EXIT:
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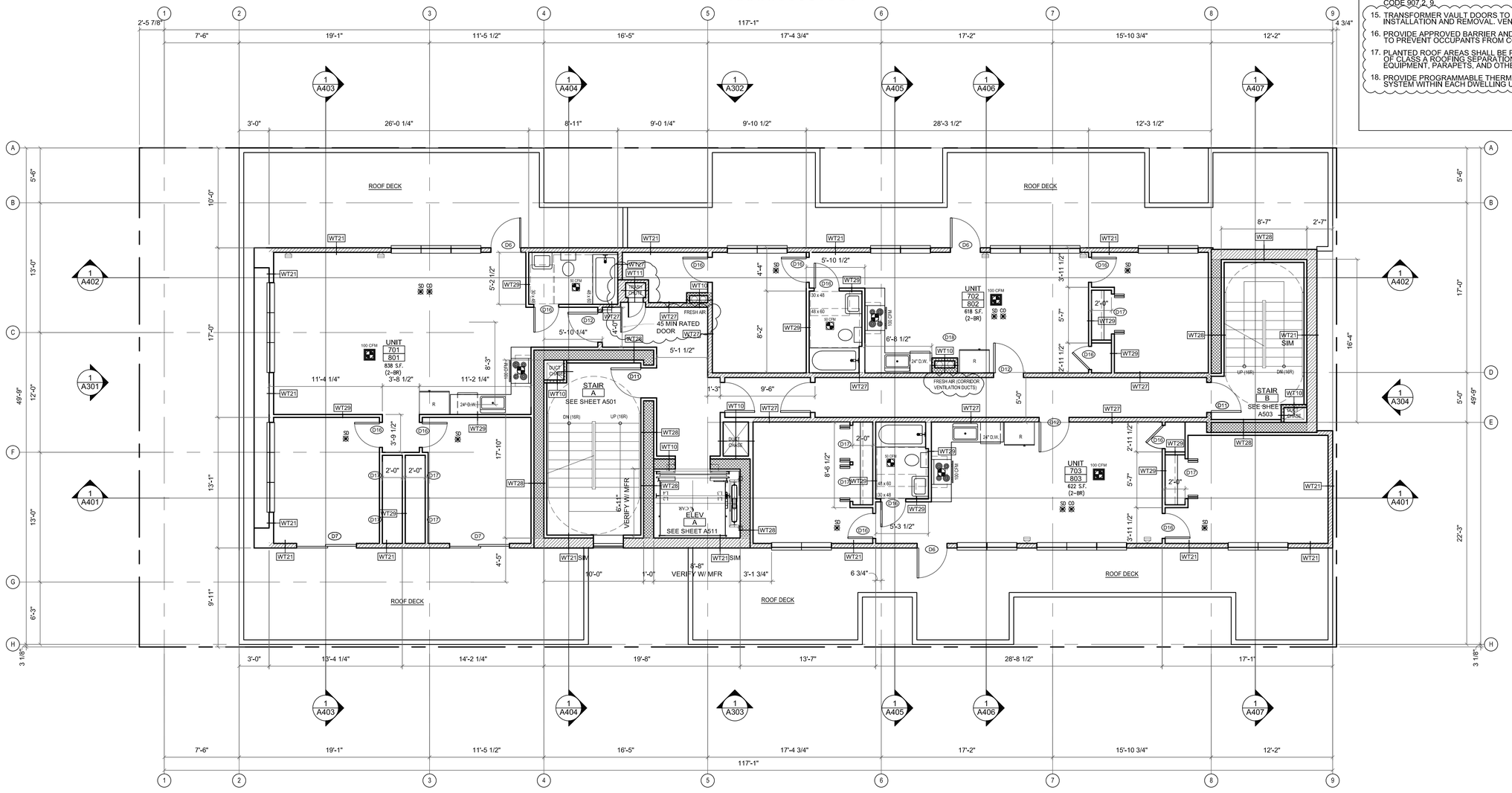

1 7-8TH FLOOR PLAN
SCALE: 3/16" = 1'-0"

0 8' 16'

NORTH

CITY STAMP

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1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
SEVENTH & EIGHTH FLOOR PLAN

SHEET NUMBER
A206

SEC C406 EFFICIENCY PACKAGE CREDITS

CODE SECTION	CREDIT
1. MORE EFFICIENT HVAC PERFORMANCE IN ACCORDANCE WITH SECTION C406.2	3.0
3. REDUCED LIGHTING POWER: OPTION 2 IN ACCORDANCE WITH SECTION C406.3.2	3.0
5.2. TWO THIRDS OF RENEWABLE ENERGY REQUIRED BY SECTION C406.5	2.0

WHOLE HOUSE VENTILATION

1. VENTILATION SYSTEM METHOD:

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LEGEND

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- 2-HR RATED WALL
- 1-HR RATED WALL
- WT# — WALL TYPE, SEE SHEET A811
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- WHOLE HOUSE EXHAUST FAN

PLAN GENERAL NOTES:

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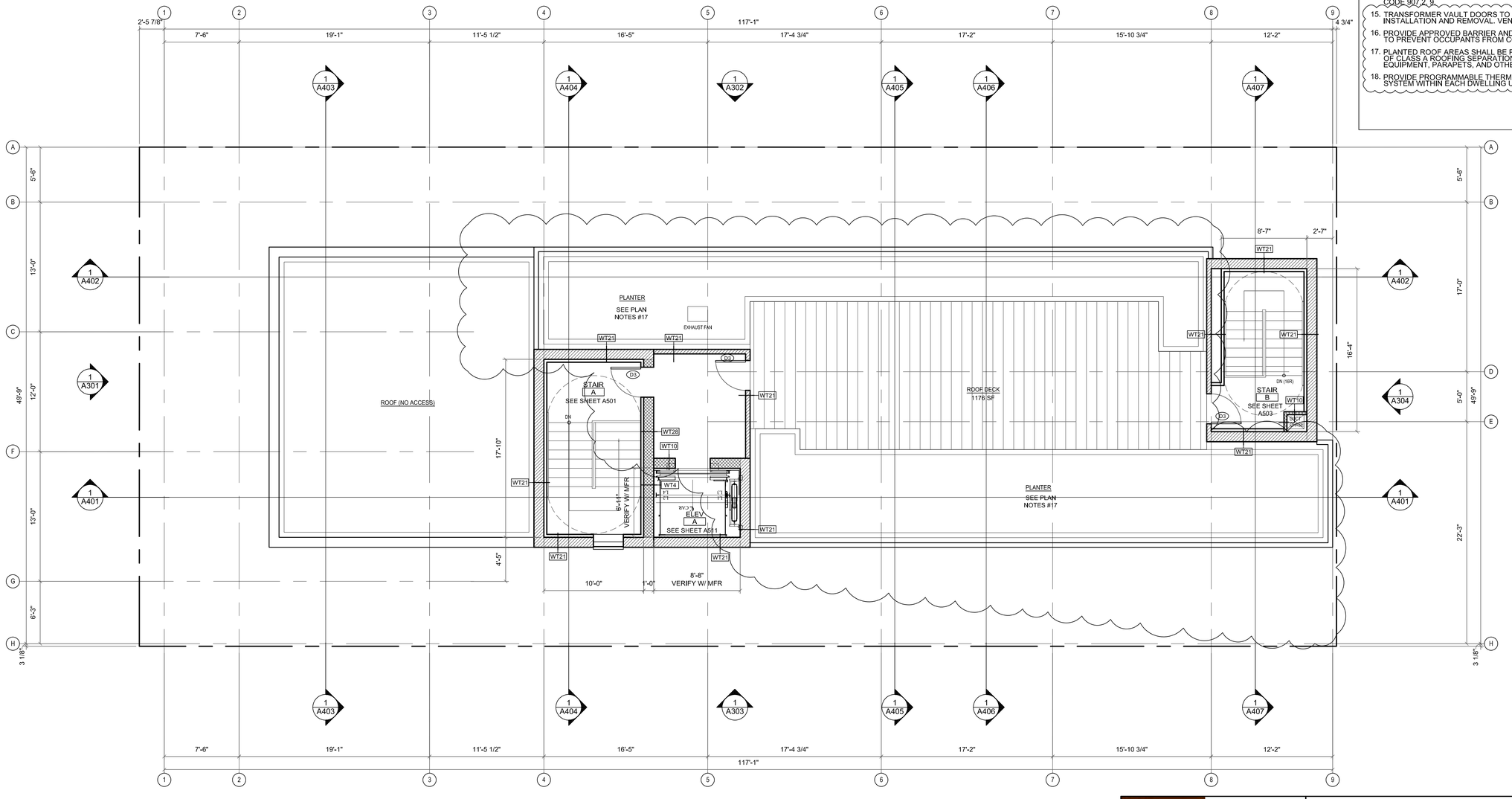
14. BUILDING FIRE ALARM SYSTEM TO BE INSTALLED AS REQUIRED BY 2018 SEATTLE FIRE CODE 907.2.9.
15. TRANSFORMER VAULT DOORS TO BE SIZED TO ACCOMMODATE EQUIPMENT INSTALLATION AND REMOVAL. VENTILATION SHALL BE MECHANICAL CIRCULATION.
16. PROVIDE APPROVED BARRIER AND DIRECTIONAL EXIT SIGNS AT THE DISCHARGE LEVEL TO PREVENT OCCUPANTS FROM CONTINUING TO LEVELS BELOW.
17. PLANTED ROOF AREAS SHALL BE PROVIDED WITH A MINIMUM OF 6 FEET OF CLASS A ROOFING SEPARATION FROM ROOF PENTHOUSES, MECHANICAL EQUIPMENT, PARAPETS, AND OTHER STRUCTURES.
18. PROVIDE PROGRAMMABLE THERMOSTAT FOR CONTROL OF THE PRIMARY HEATING SYSTEM WITHIN EACH DWELLING UNIT.



1 ROOF PLAN
SCALE: 3/16" = 1'-0"

0 8' 16'

NORTH

CITY STAMP

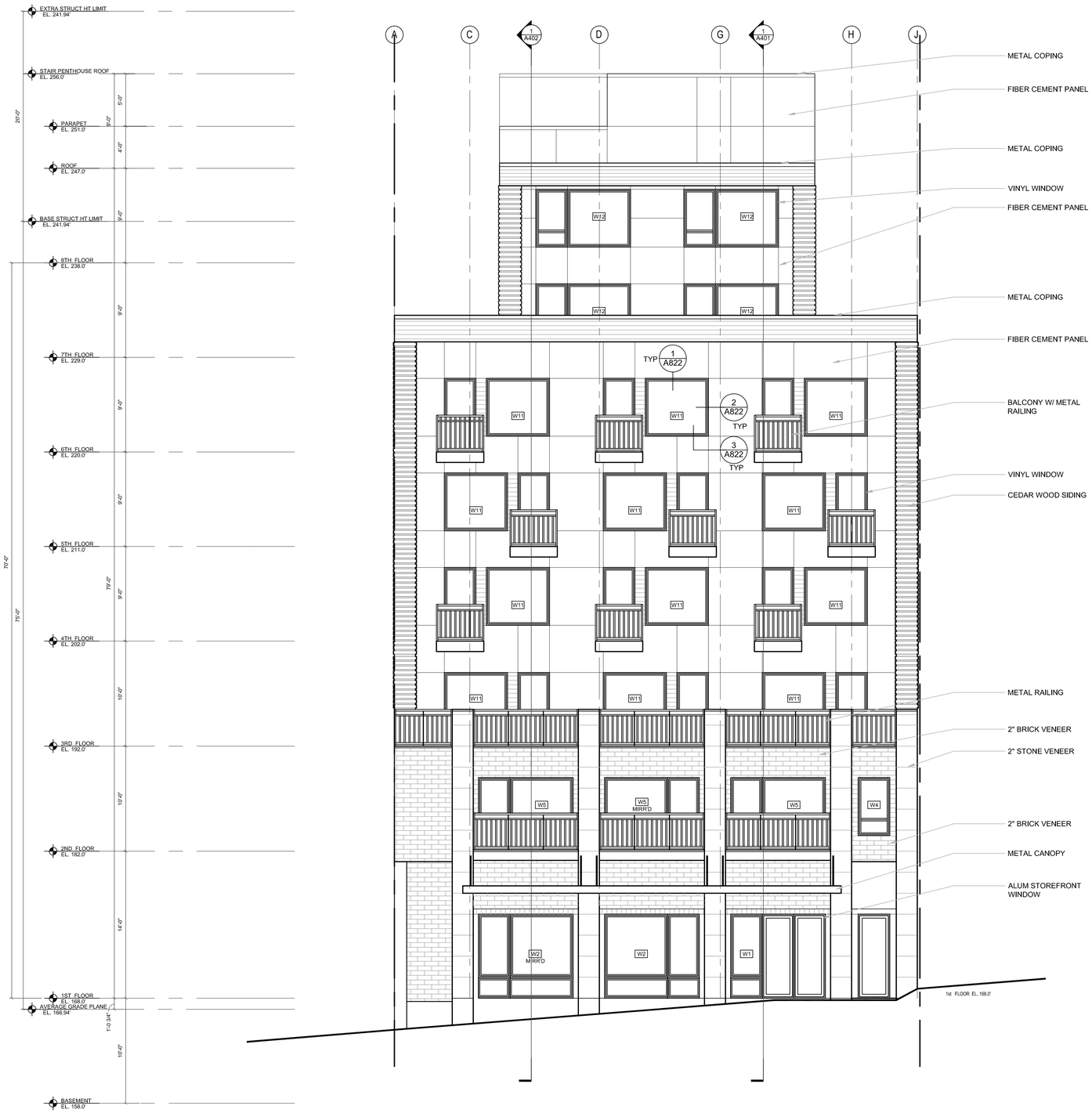
CHC ARCHITECTS
8666 REGISTERED ARCHITECT CHAOHUA CHANG STATE OF WASHINGTON
13301 SE 79th PL, Unit A205, NEWCASTLE, WA 98059
(M) 425.785.3992 chcarch@gmail.com

1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-26-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME: ROOF PLAN

SHEET NUMBER: A207



ELEVATION GENERAL NOTES:

1. A SEPARATE SDOT STREET USE PERMIT IS REQUIRED FOR THIS WORK. THE FOLLOWING ENCROACHMENTS OVER THE RIGHT OF WAY REQUIRES APPROVAL FROM SDOT : CANOPY, SHORING ALONG THE SOUTH PORTION OF THE BUILDING

1 EXTERIOR ELEVATION - SOUTH

SCALE: 3/16" = 1'-0"

0 8' 16'

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1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-25-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
EXTERIOR ELEVATION - SOUTH

SHEET NUMBER
A301

1 EXTERIOR ELEVATION - WEST

SCALE: 3/16" = 1'-0"

0 8' 16'

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SEATTLE WA 98104

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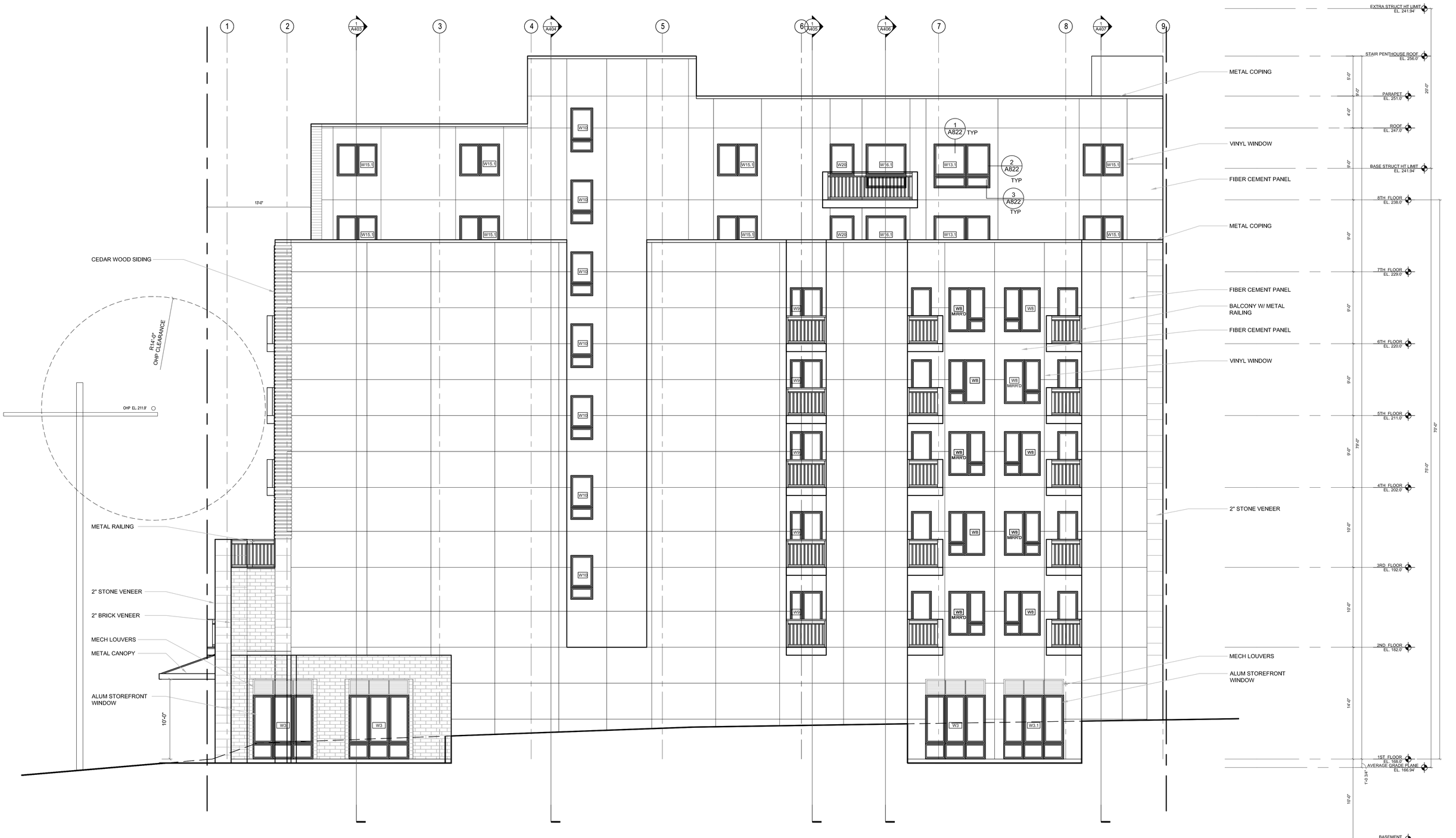
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
EXTERIOR ELEVATION - WEST

SHEET NUMBER
A302



1 EXTERIOR ELEVATION - EAST

SCALE: 3/16" = 1'-0"

0 8' 16'

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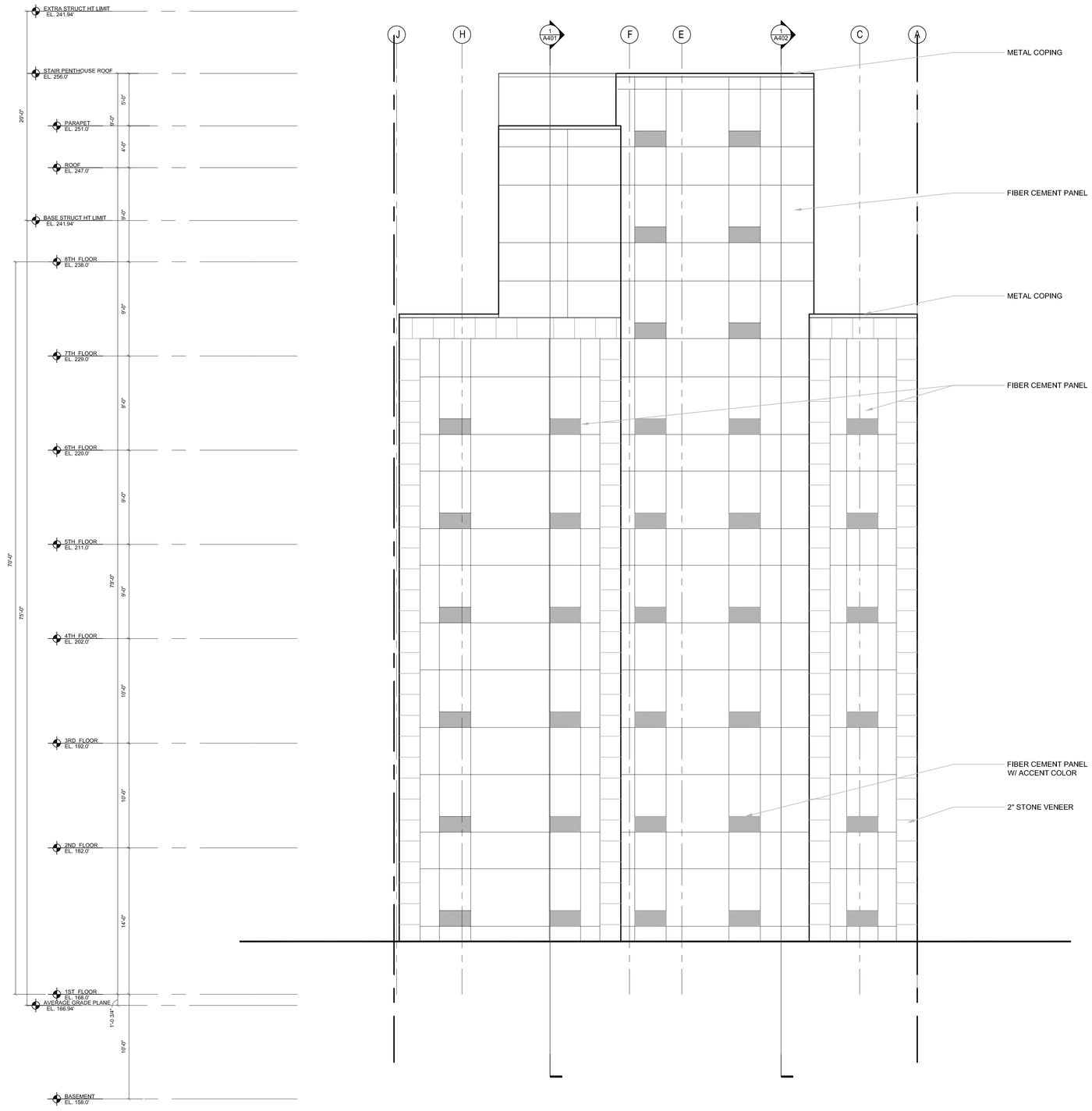
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
EXTERIOR ELEVATION - EAST

SHEET NUMBER
A303



1 EXTERIOR ELEVATION - NORTH

SCALE: 3/16" = 1'-0"

0 8' 16'

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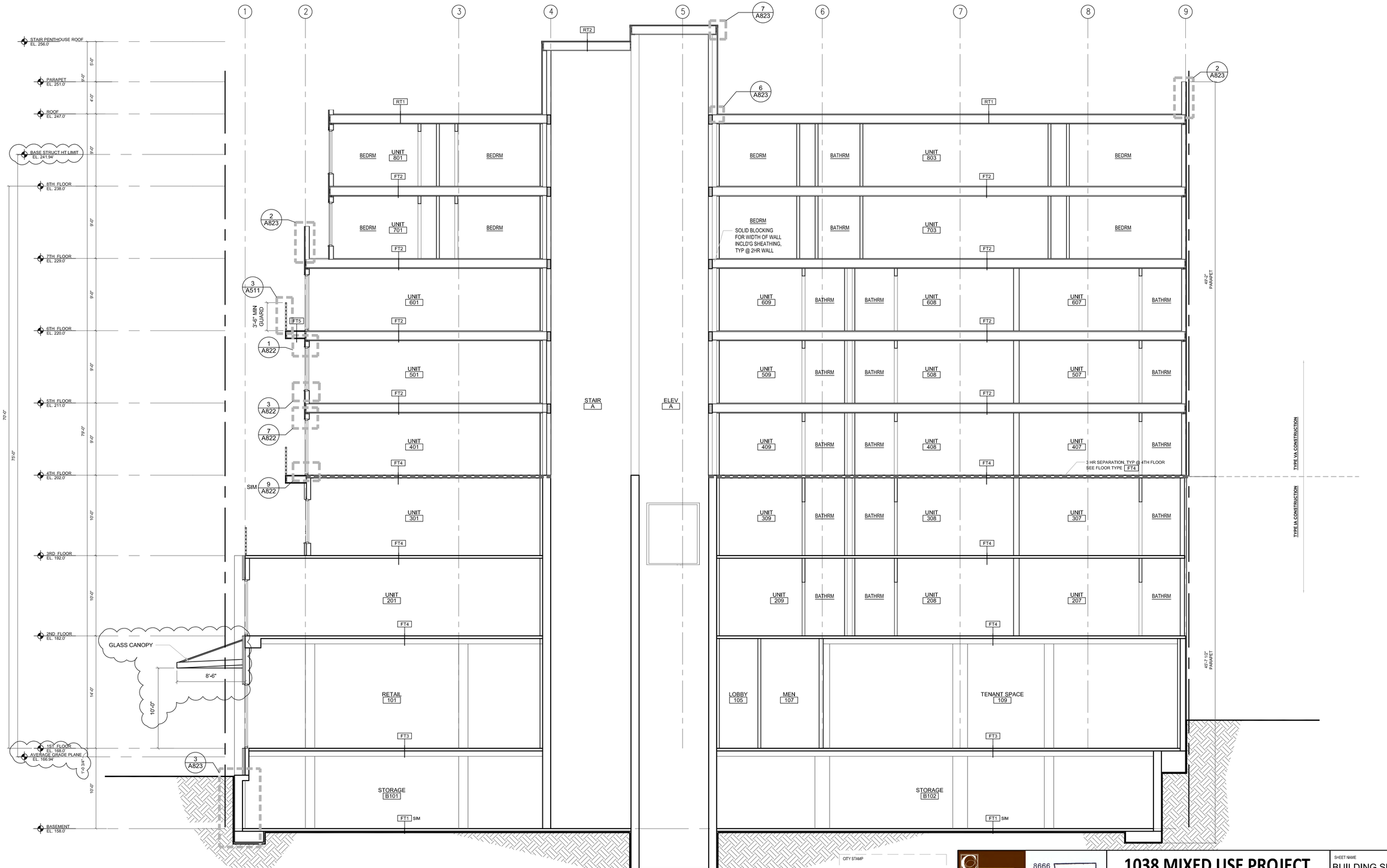
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
EXTERIOR ELEVATION - NORTH

SHEET NUMBER
A304



1 BUILDING SECTION

SCALE: 3/16" = 1'-0"

0 8' 16'

CITY STAMP

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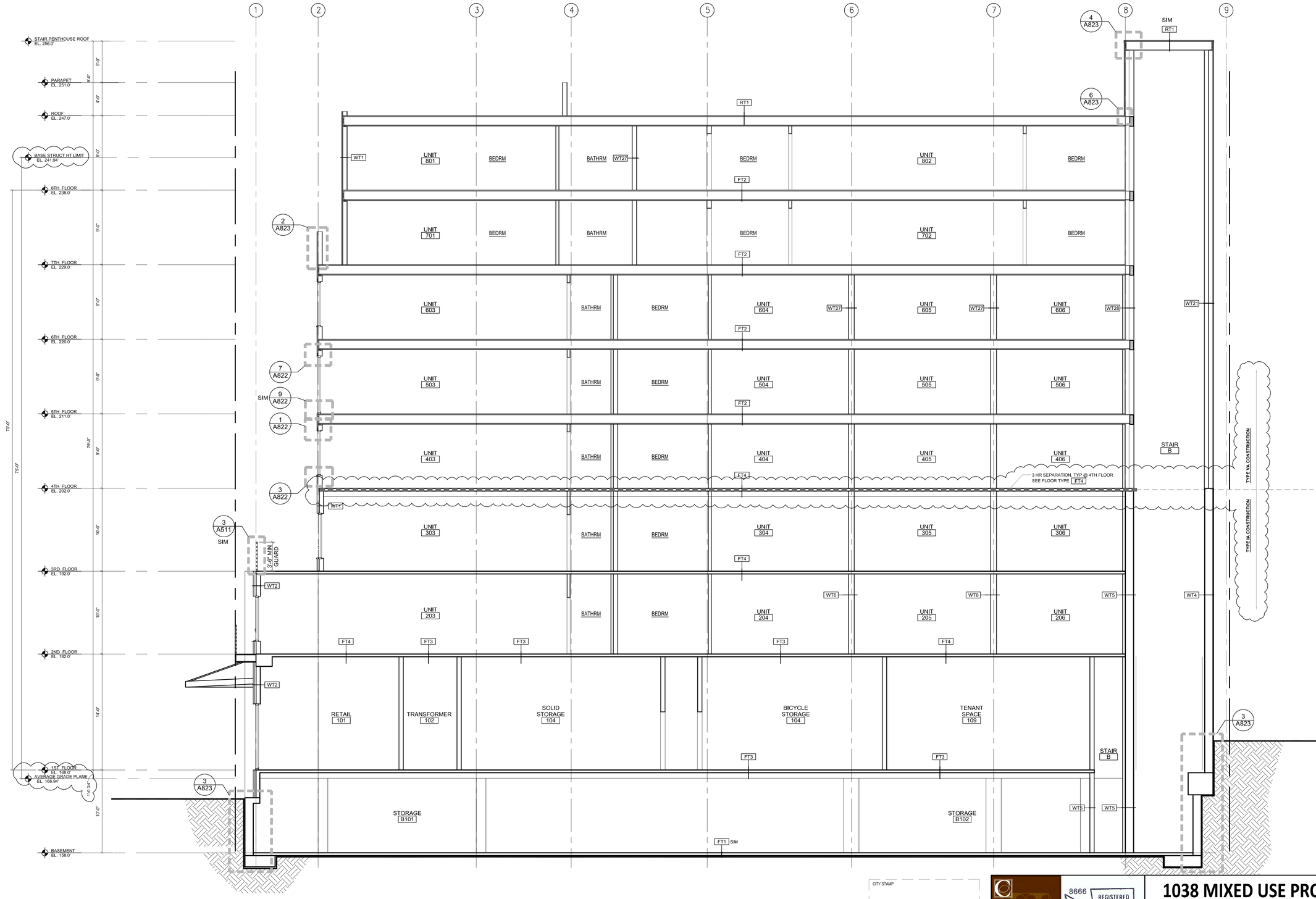
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
BUILDING SECTION

SHEET NUMBER
A401



1 BUILDING SECTION

SCALE: 3/16" = 1'-0"

0 8' 16'

CITY STAMP

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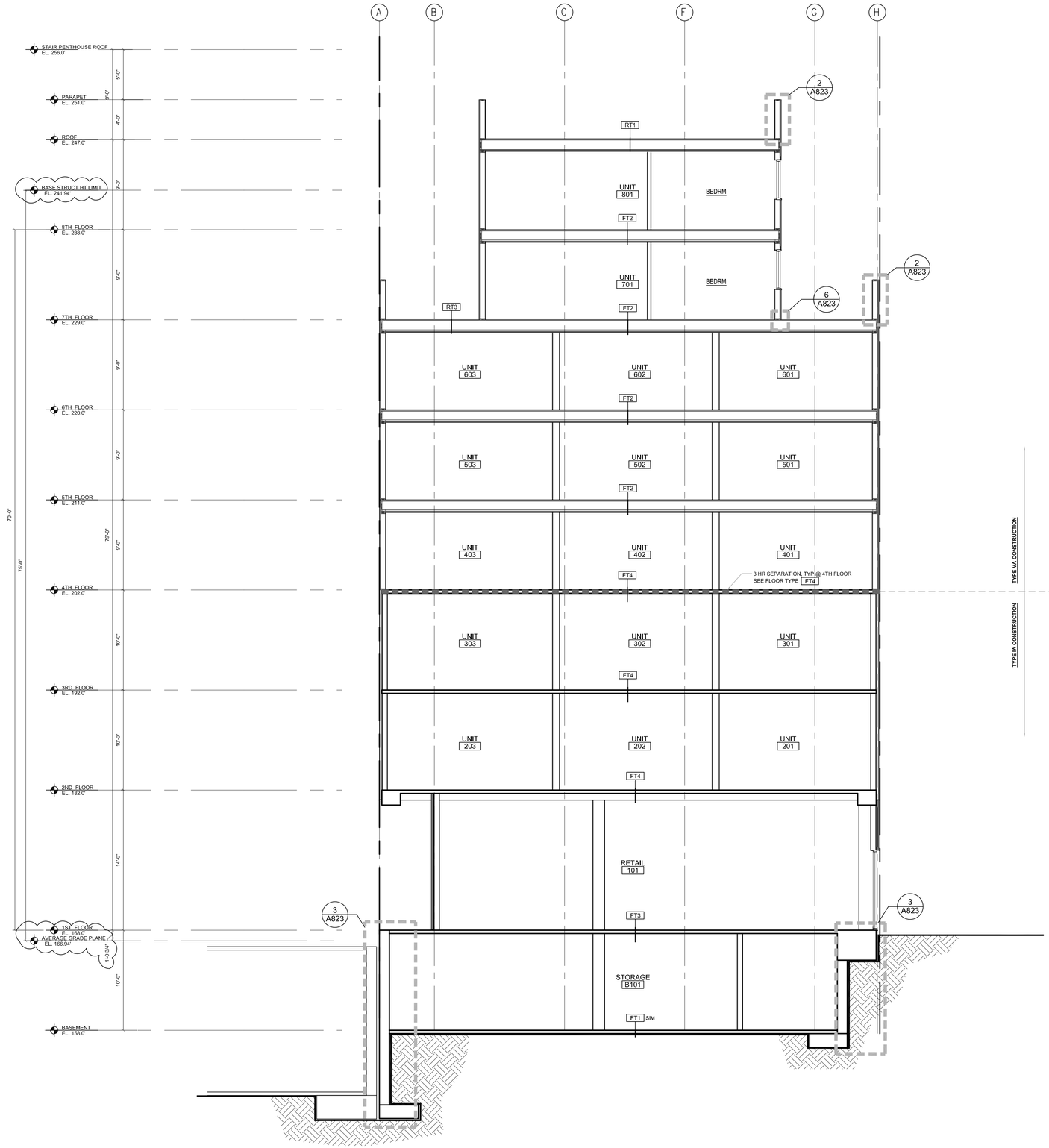
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
BUILDING SECTION

SHEET NUMBER
A402



1 BUILDING SECTION

SCALE: 3/16" = 1'-0"

0 8' 16'

CITY STAMP

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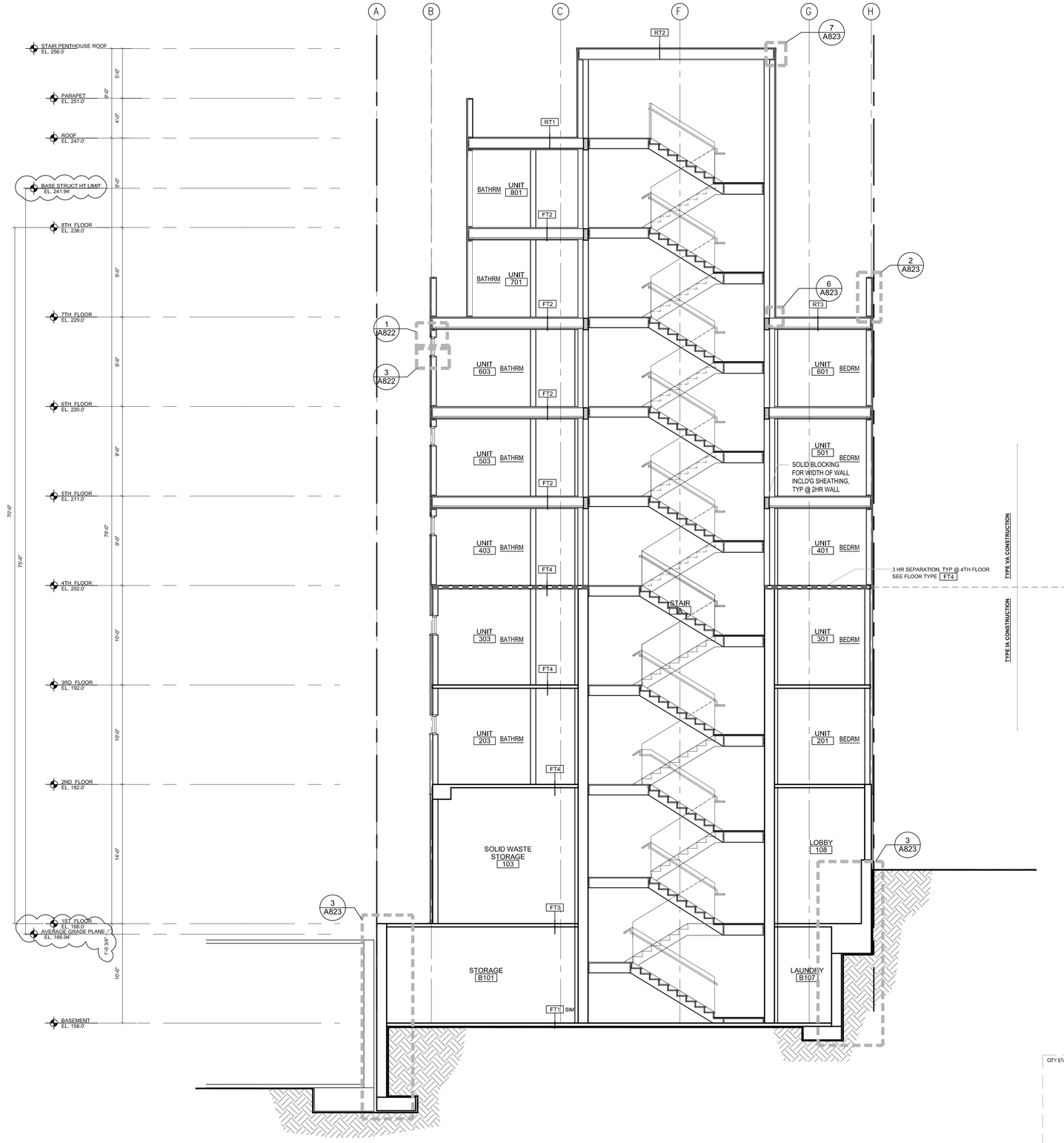
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
BUILDING SECTION

SHEET NUMBER
A403



1 BUILDING SECTION
SCALE: 3/16" = 1'-0"

0 8' 16'

CITY STAMP

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NUMBER	DATE	DESCRIPTION OF REVISIONS
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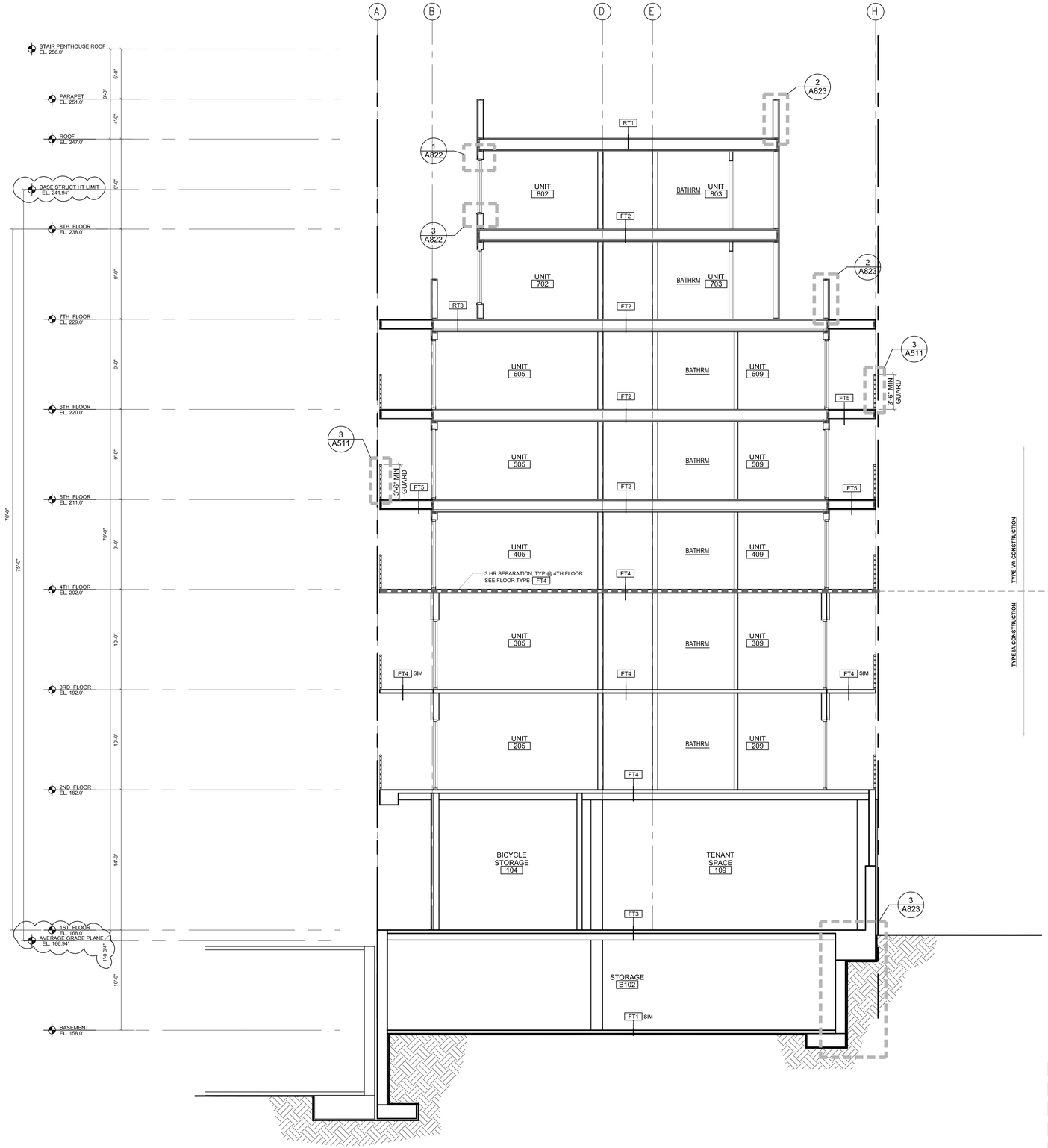
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
BUILDING SECTION

SHEET NUMBER
A404



1 BUILDING SECTION

SCALE: 3/16" = 1'-0"

0 8' 16'

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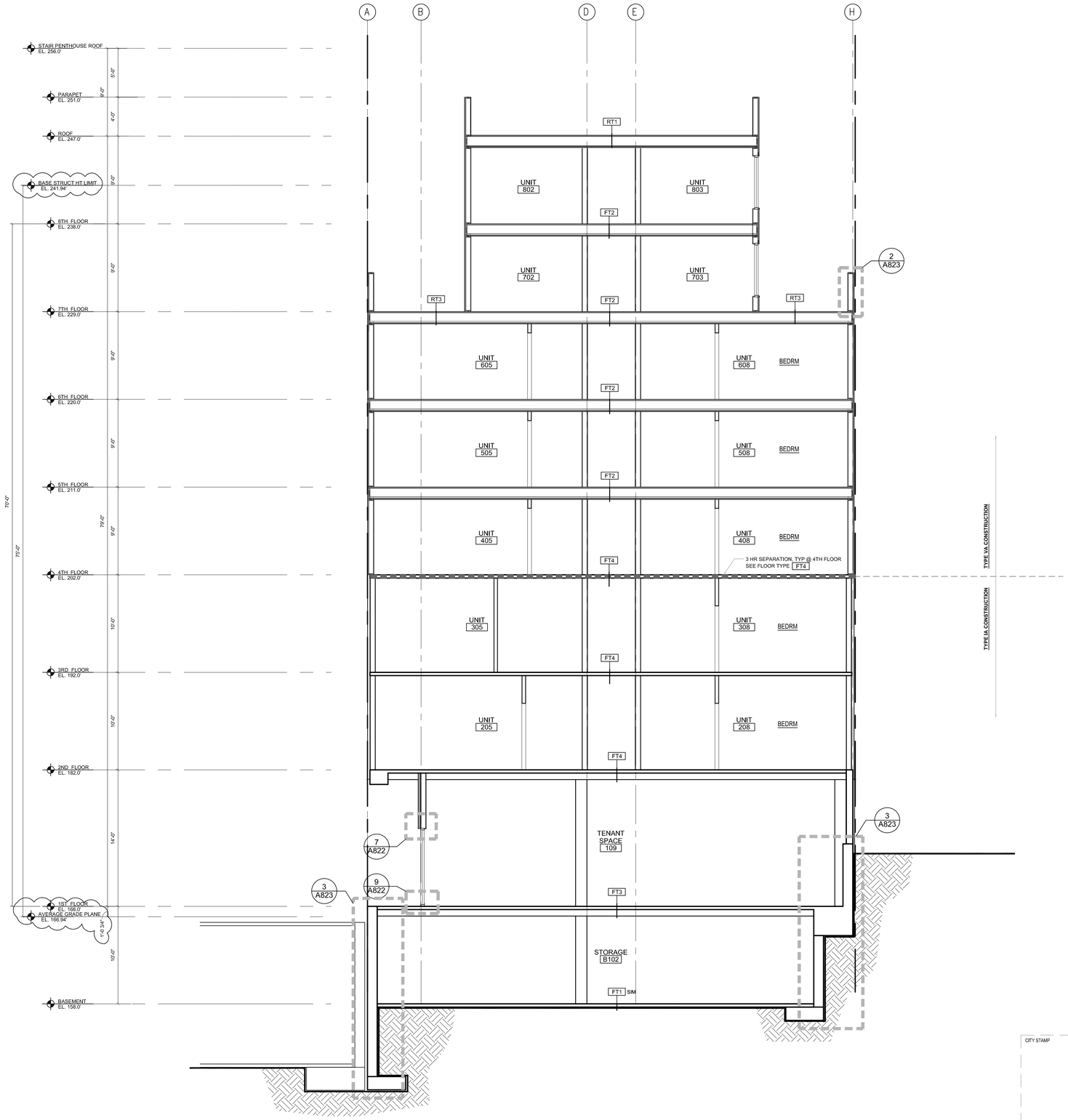
SHEET NAME
BUILDING SECTION

SHEET NUMBER
A405



1 BUILDING SECTION

SCALE: 3/16" = 1'-0"

0 8' 16'

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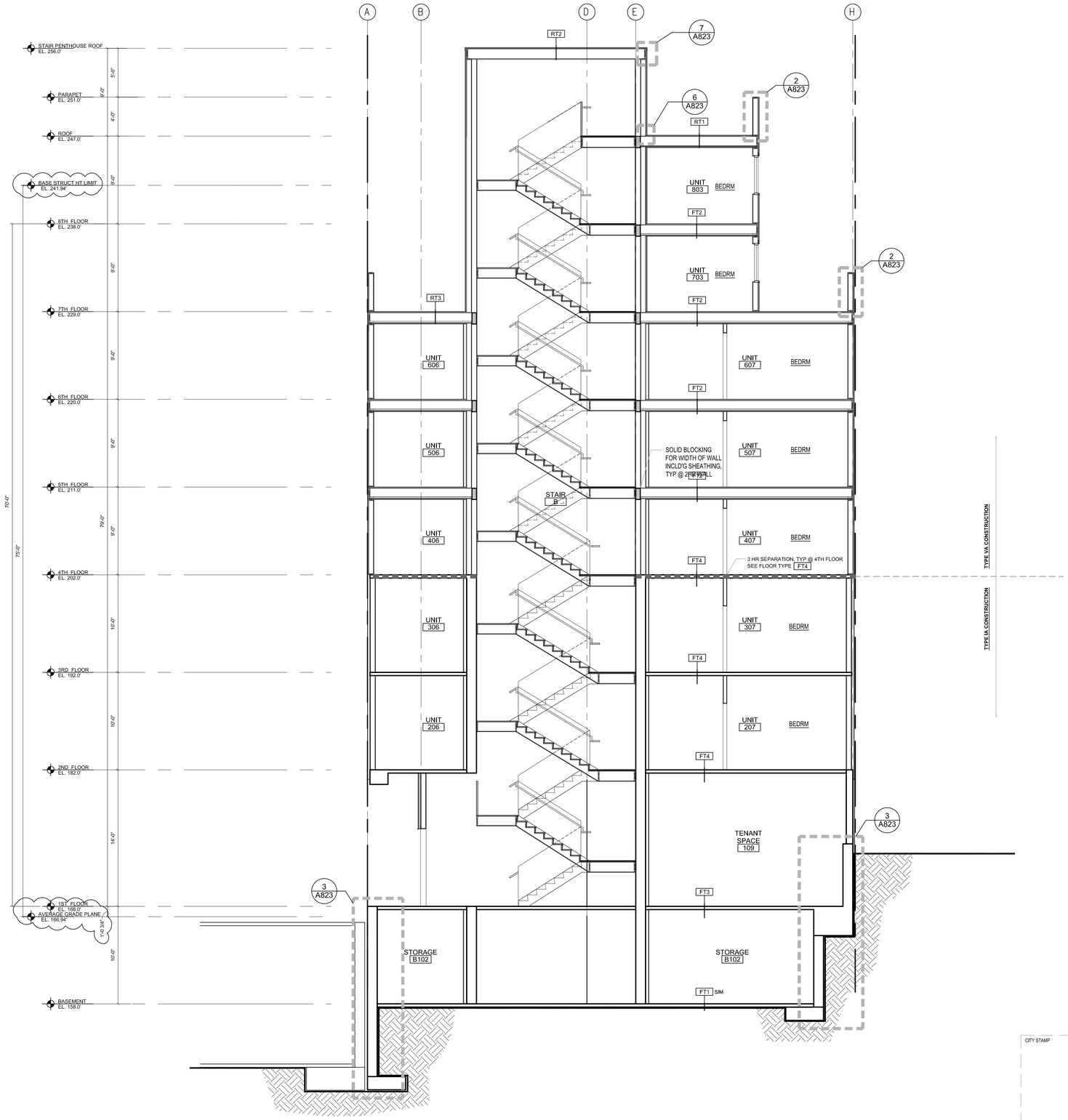
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
BUILDING SECTION

SHEET NUMBER
A406



1 BUILDING SECTION

SCALE: 3/16" = 1'-0"

0 8' 16'

CITY STAMP

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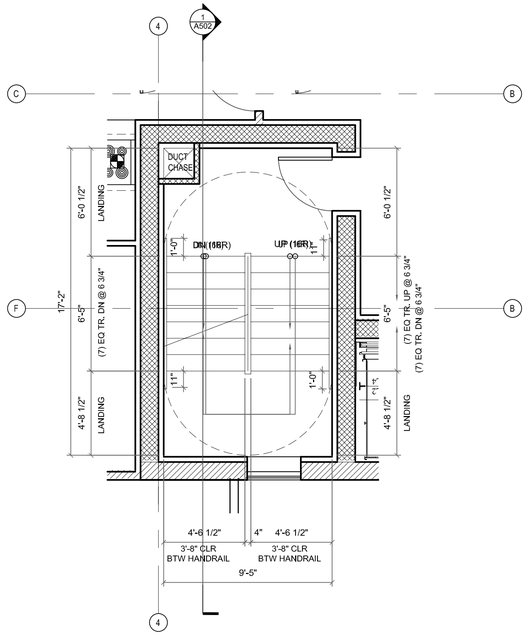
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

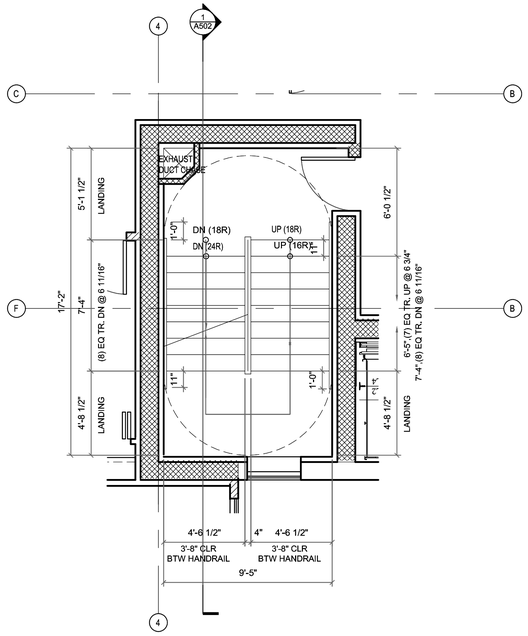
SHEET NAME
BUILDING SECTION

SHEET NUMBER
A407



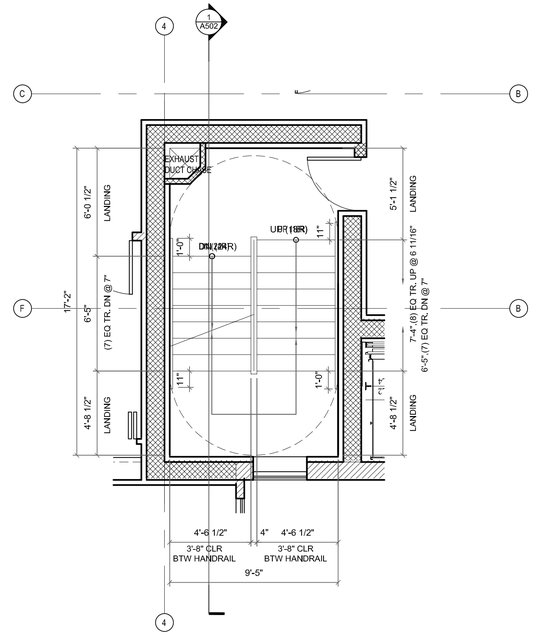
6 STAIR A PLAN - 7-8TH FLOOR

SCALE: 1/4"=1'-0"



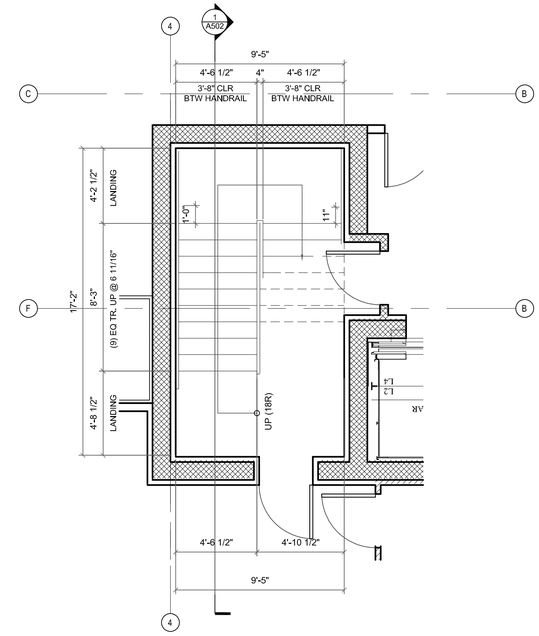
5 STAIR A PLAN - 4TH FLOOR

SCALE: 1/4"=1'-0"



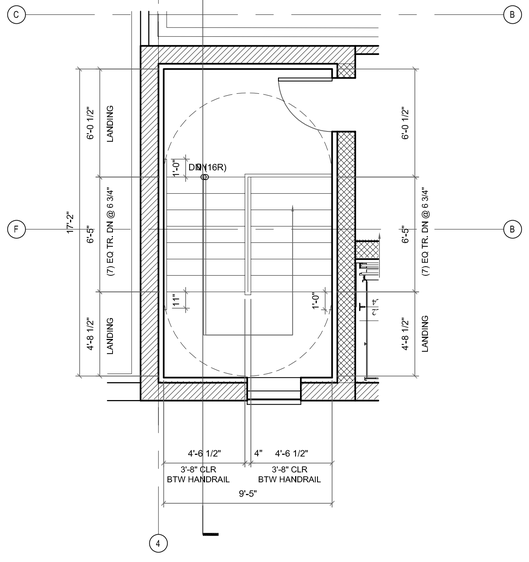
3 STAIR A PLAN - 2ND FLOOR

SCALE: 1/4"=1'-0"



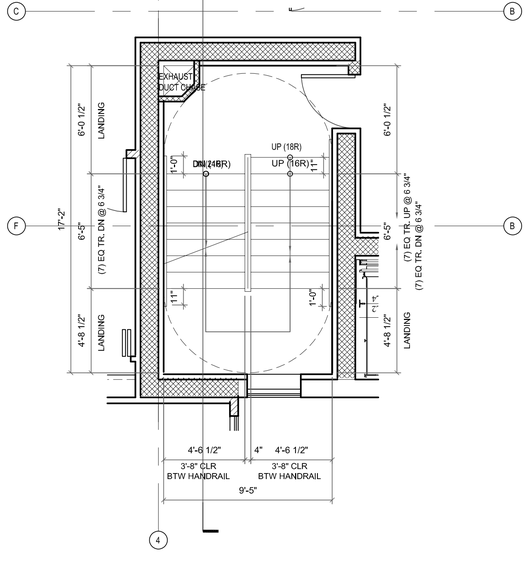
1 STAIR A PLAN - BASEMENT

SCALE: 1/4"=1'-0"



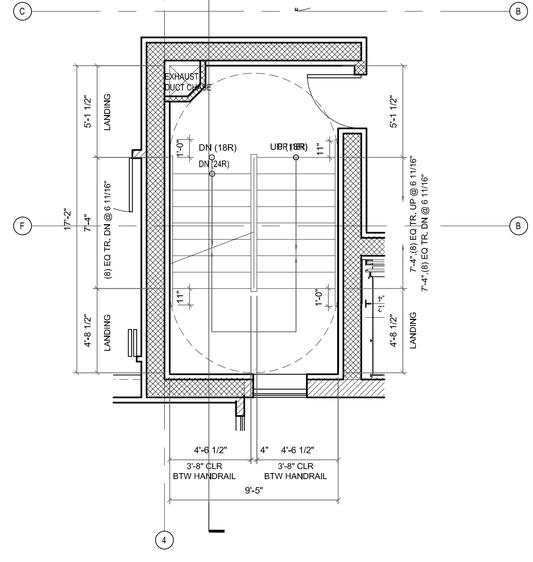
7 STAIR A PLAN - ROOF

SCALE: 1/4"=1'-0"



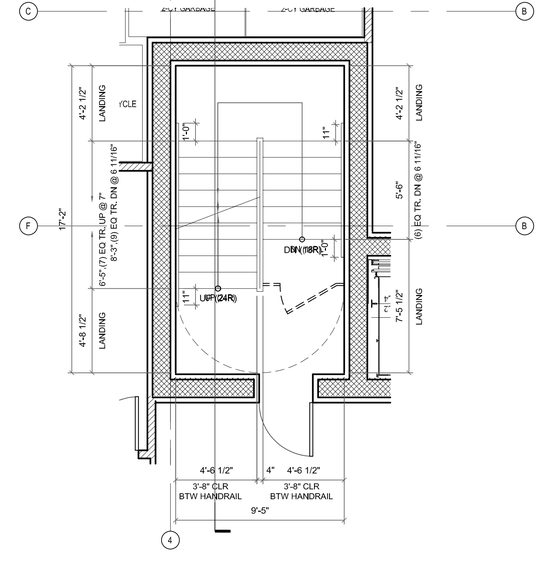
5 STAIR A PLAN - 5-6TH FLOOR

SCALE: 1/4"=1'-0"



4 STAIR A PLAN - 3RD FLOOR

SCALE: 1/4"=1'-0"



2 STAIR A PLAN - 1ST FLOOR

SCALE: 1/4"=1'-0"

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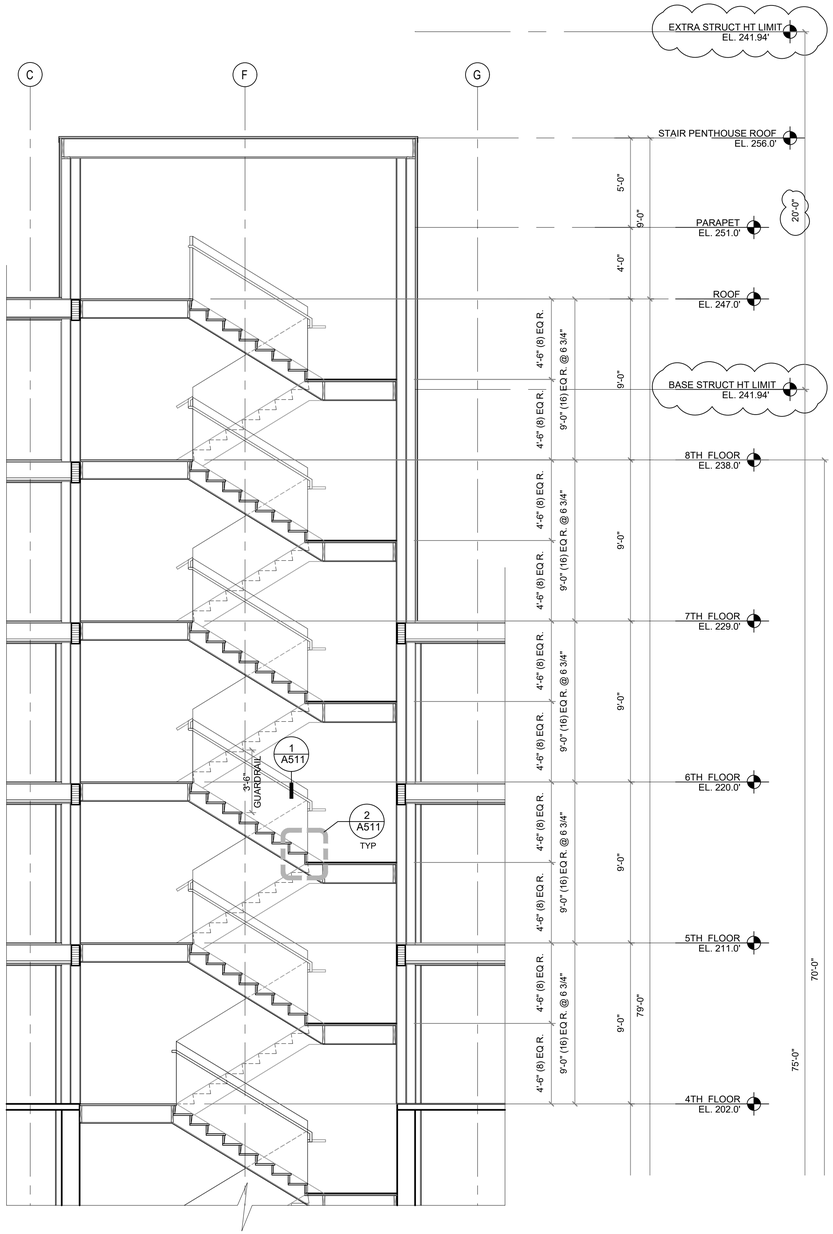
1038 MIXED USE PROJECT

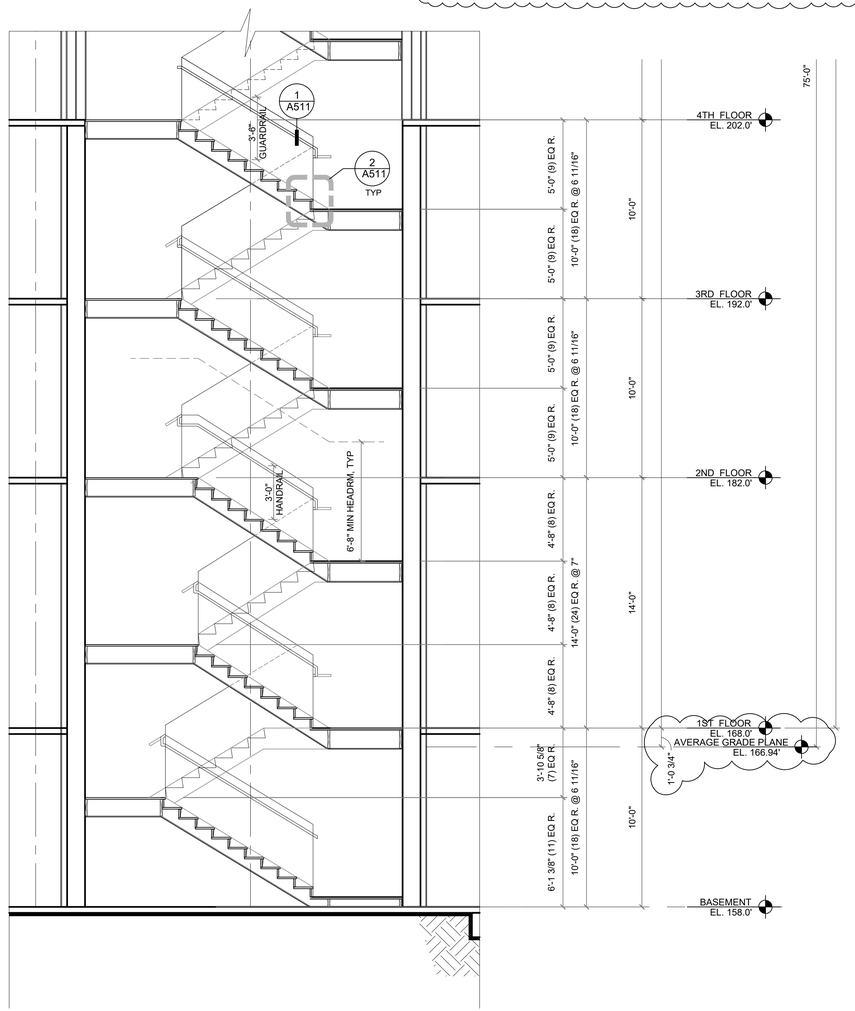
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
VERTICAL CIRCULATION - ELEVATOR A

SHEET NUMBER
A501





STAIR NOTES:

1. STAIRWAYS SHALL BE PRESSURIZED TO A MINIMUM OF 0.15" OF WATER COLUMN RELATIVE TO THE MAIN OCCUPIED FLOOR AREA ON EACH FLOOR AND A MAXIMUM PRESSURE THAT COMPLIES WITH DOOR OPENING FORCE REQUIREMENTS PER SBC 1010.1.3.
2. STAIRWAY PRESSURIZATION SHALL BE ACTIVATED BY A FIRE ALARM ORIGINATING ANYWHERE IN THE BUILDING.
3. STAIR PRESSURIZATION SYSTEMS SHALL BE ON LEGALLY REQUIRED STANDBY POWER.

1 STAIR A SECTION

SCALE: 1/4"=1'-0"

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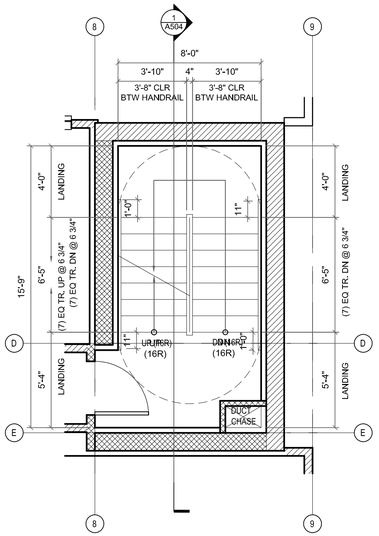
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

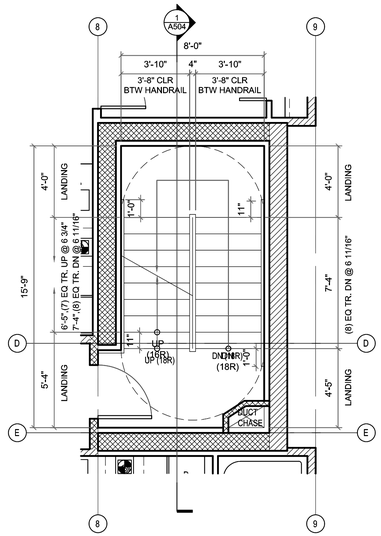
SHEET NAME
VERTICAL CIRCULATION - STAIR A

SHEET NUMBER
A502



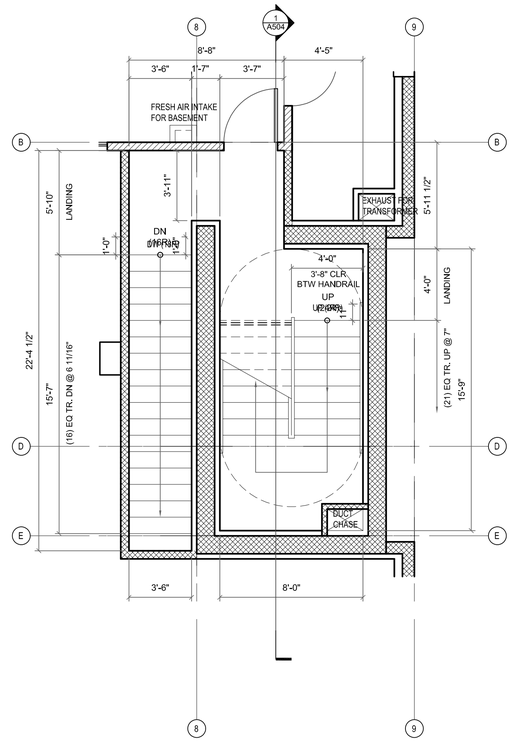
7 STAIR B PLAN - 7-8TH FLOOR

SCALE: 1/4"=1'-0"



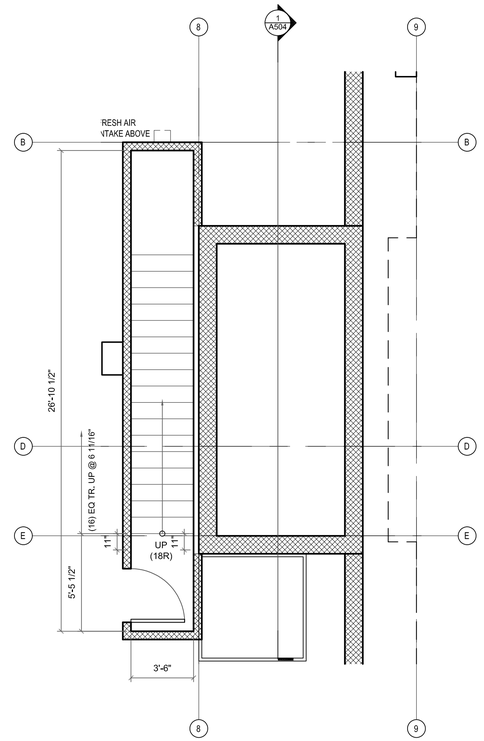
5 STAIR B PLAN - 4TH FLOOR

SCALE: 1/4"=1'-0"



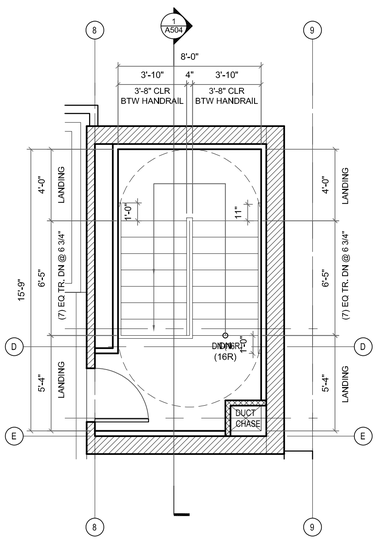
2 STAIR B PLAN - 1ST FLOOR

SCALE: 1/4"=1'-0"



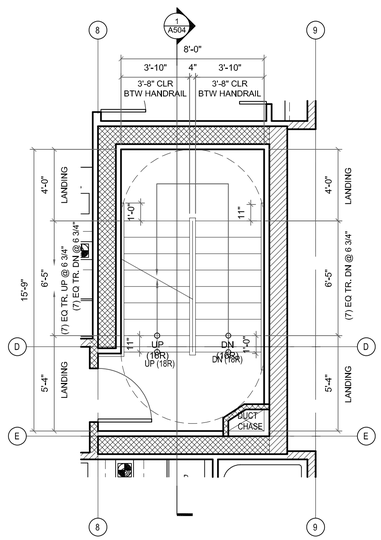
1 STAIR B PLAN - BASEMENT

SCALE: 1/4"=1'-0"



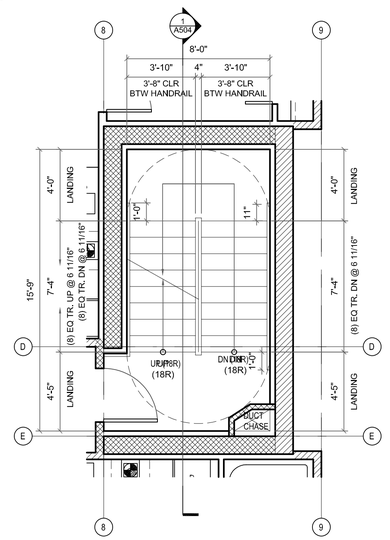
8 STAIR B PLAN - ROOF

SCALE: 1/4"=1'-0"



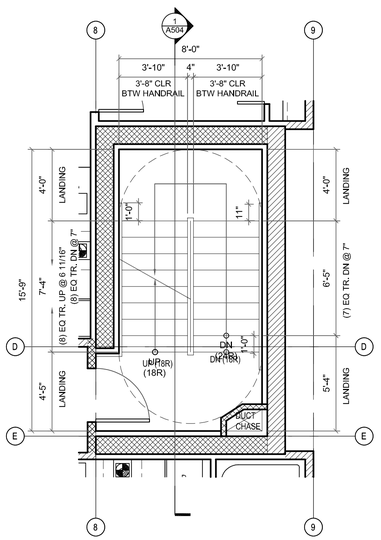
6 STAIR B PLAN - 5 & 6TH FLOOR

SCALE: 1/4"=1'-0"



4 STAIR B PLAN - 3RD FLOOR

SCALE: 1/4"=1'-0"



3 STAIR B PLAN - 2ND FLOOR

SCALE: 1/4"=1'-0"

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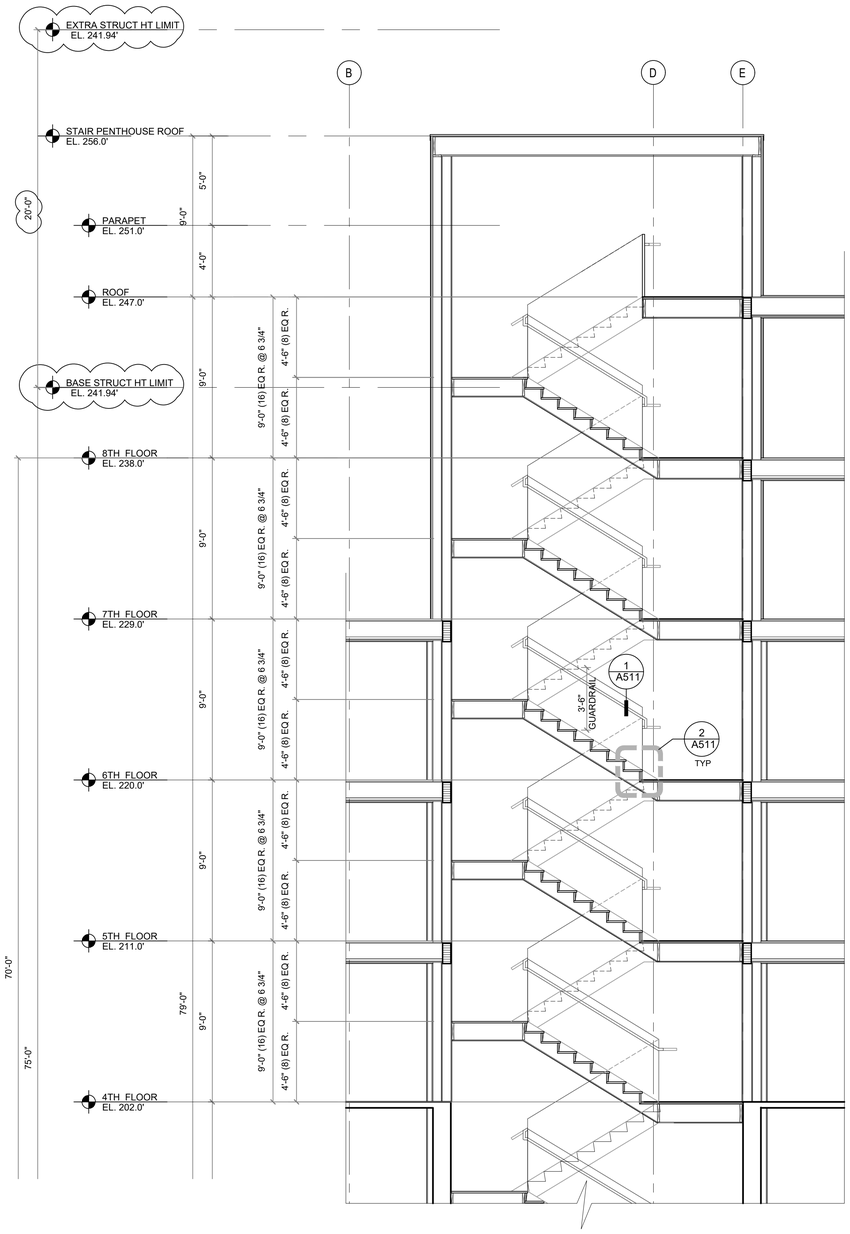
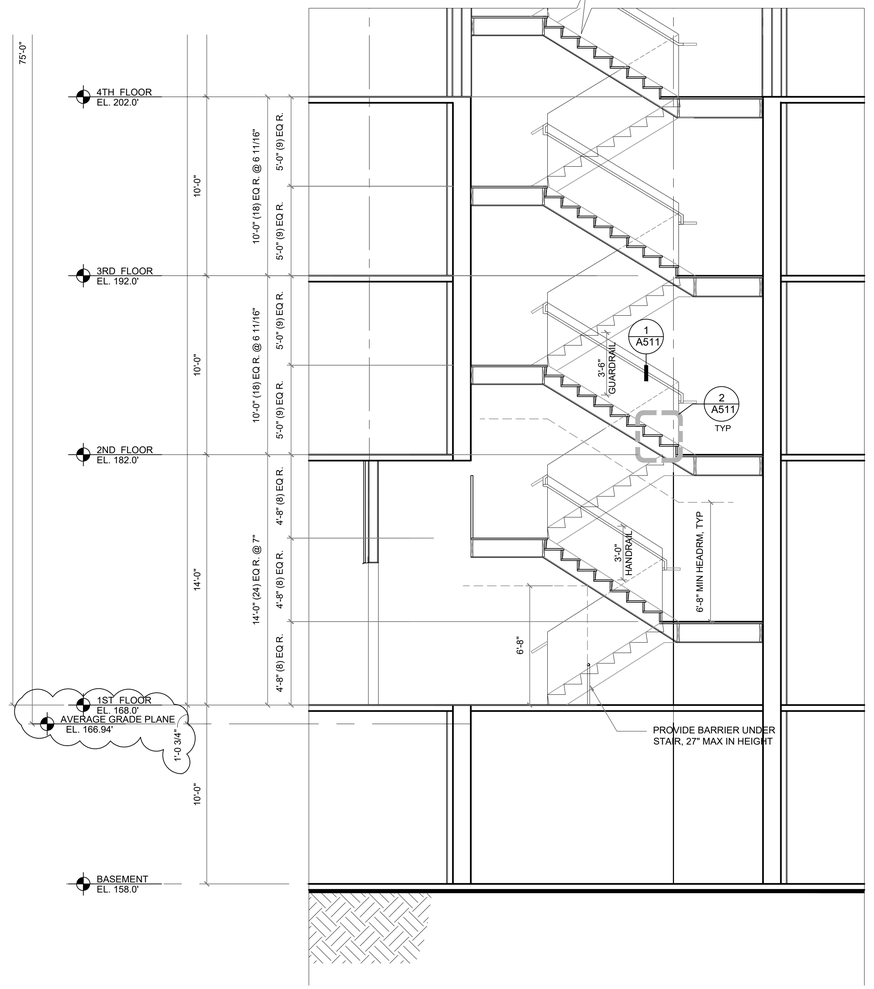
SHEET NAME
VERTICAL CIRCULATION - ELEVATOR A

SHEET NUMBER
A503





STAIR NOTES:

1. STAIRWAYS SHALL BE PRESSURIZED TO A MINIMUM OF 0.15" OF WATER COLUMN RELATIVE TO THE MAIN OCCUPIED FLOOR AREA ON EACH FLOOR AND A MAXIMUM PRESSURE THAT COMPLIES WITH DOOR OPENING FORCE REQUIREMENTS PER SBC 1010.1.3.
2. STAIRWAY PRESSURIZATION SHALL BE ACTIVATED BY A FIRE ALARM ORIGINATING ANYWHERE IN THE BUILDING.
3. STAIR PRESSURIZATION SYSTEMS SHALL BE ON LEGALLY REQUIRED STANDBY POWER.

1 STAIR B SECTION

SCALE: 1/4"=1'-0"

CITY STAMP

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CHAOHUA CHANG
STATE OF WASHINGTON
13301 SE 79th PL, Unit A205, NEWCASTLE, WA 98059
(M) 425.785.3992 chcarch@gmail.com

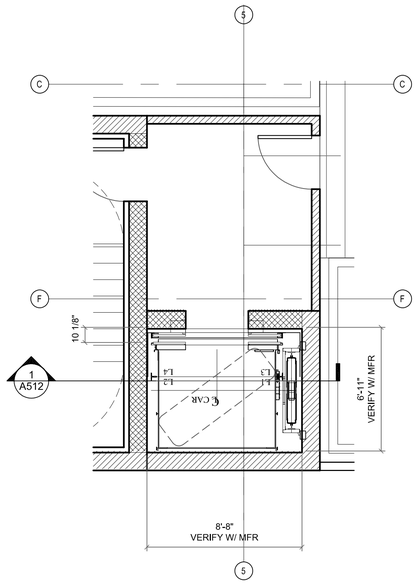
1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

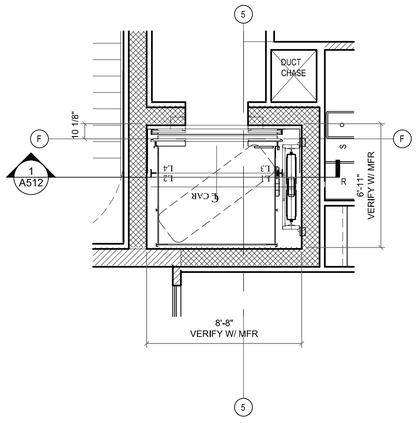
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-26-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
VERTICAL CIRCULATION - STAIR B

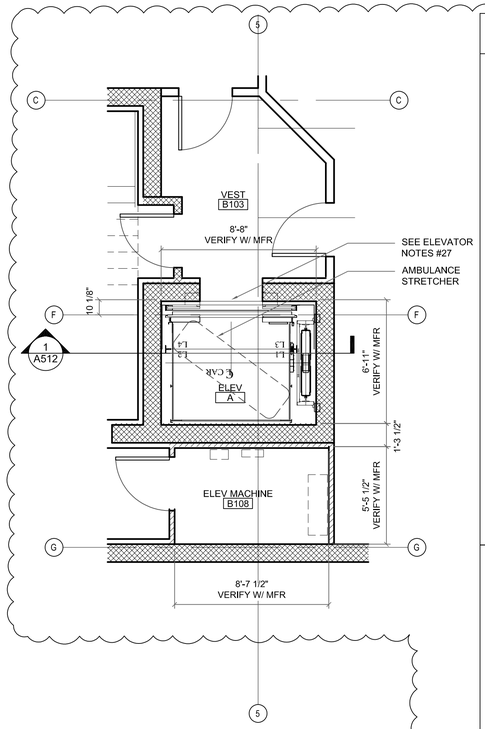
SHEET NUMBER
A504



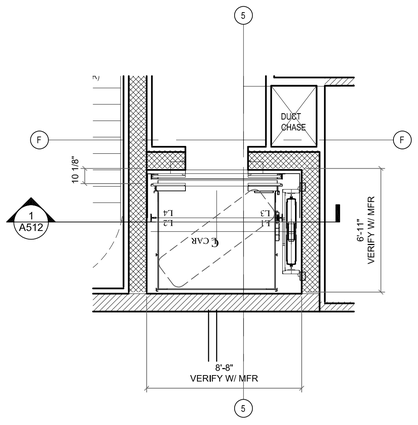
5 ELEV A PLAN - ROOF
SCALE: 1/4"=1'-0"



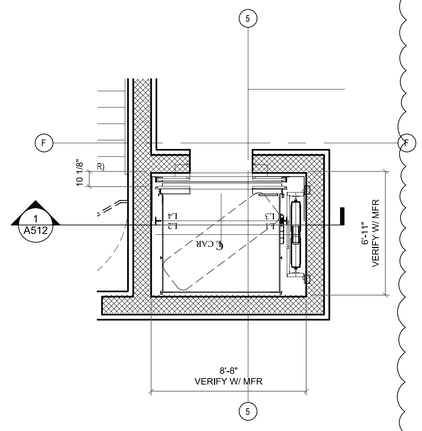
3 ELEV A PLAN - 2-6TH FLOOR
SCALE: 1/4"=1'-0"



1 ELEV A PLAN - BASEMENT
SCALE: 1/4"=1'-0"



4 ELEV A PLAN - 7-8TH FLOOR
SCALE: 1/4"=1'-0"



2 ELEV A PLAN - 1ST FLOOR
SCALE: 1/4"=1'-0"

ELEVATOR NOTES:

23. EACH CONVEYANCE REQUIRES A SEPARATE PERMIT WITH DETAILED INSTALLATION PLANS AND SHALL BE INSTALLED BY A WASHINGTON STATE LICENSED ELEVATOR CONTRACTOR.
24. THE ELEVATOR EMERGENCY OPERATION AND SIGNALING DEVICE WILL COMPLY WITH ASME A17.1, SECTION 2.27.
25. A LEGALLY REQUIRED STANDBY POWER SYSTEM WILL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27 AND THE SEATTLE ELECTRICAL CODE.
26. PROVIDES SMOKE CONTROLLED CURTAIN GUARD SYSTEM THAT MEET UL 1784 AND UL 864 STANDARDS. THE SYSTEM SHALL SATISFY SBC SECTION 713.14.3, OPTION 3.
27. SBC 909.21.1: ELEVATORS SHALL BE PRESSURIZED TO A MINIMUM OF 0.10" AND A MAXIMUM OF 0.25" WATER COLUMN RELATIVE TO ADJACENT OCCUPIED SPACE ON EACH FLOOR.
28. SBC 909.21.5: ELEVATOR PRESSURIZATION SYSTEMS SHALL BE ON LEGALLY REQUIRED STANDBY POWER
29. SBC 909.21.6: ELEVATOR PRESSURIZATION SHALL BE ACTIVATED BY EITHER THE BUILDING FIRE ALARM SYSTEM OR BY ELEVATOR LOBBY SMOKE DETECTORS.

SPRINKLER SYSTEMS AND FIRE ALARMS:

INSTALLATION OF SPRINKLER SYSTEMS AND FIRE ALARMS IN ELEVATOR MACHINERY ROOMS, HOISTWAYS AND PITS SHALL ALSO COMPLY WITH: SDCI / SFD JOINT RULINGS: REFER TO SDCI DIRECTOR'S RULE 7-2014. & SFD ADMINISTRATIVE RULE 9.06.14.

ELEVATOR MACHINE ROOM NOTES:

1. ELEVATOR EQUIPMENT / CONTROLLER ROOMS SHALL BE OF SUFFICIENT SIZE TO ACCOMMODATE ALL RELATED EQUIPMENT AND MAINTAIN ALL WORKING / ELECTRICAL CLEARANCES REQUIRED BY SEATTLE BUILDING CODE 3020 MINIMUM ELECTRICAL CLEARANCES: FRONT= 48 INCHES. SIDES= 18 INCHES. THE MINIMUM SPACE AT THE REAR OF CONTROLLERS WITH BACK-WIRING, TERMINALS OR OTHER ELEMENTS REQUIRING ACCESS = 36 INCHES. THE MINIMUM ALLOWABLE EQUIPMENT / CONTROLLER ROOM SIZE SHALL BE: 5'-0" X 6'-0" FOR A SINGLE ELEVATOR
2. VERIFY THE REQURIED ROOM SIZE TO ACCOMMODATE ALL RELATED EQUIPMENT AND MAINTAIN THE WORKING / ELECTRICAL CLEARANCES.

ELEVATOR CAR:

1. 3016.15 ELEVATOR CAR TO ACCOMMODATE AMBULANCE STRETCHER. IN BUILDINGS PROVIDED WITH AN ELEVATOR, AT LEAST ONE ELEVATOR SHALL PROVIDE FIRE DEPARTMENT EMERGENCY ACCESS TO ALL FLOORS SERVED IN
2. THE STRETCHER-SIZED ELEVATOR CAR MAY ALSO SERVE AS AN ACCESSIBLE MEANS OF EGRESS AS REQUIRED BY SECTION 1009.2.1 OF THE SEATTLE BUILDING CODE.
3. SBC 1009.4 ELEVATORS. IN ORDER TO BE CONSIDERED PART OF AN ACCESSIBLE MEANS OF EGRESS , AN ELEVATOR SHALL COMPLY WITH THE EMERGENCY OPERATION AND SIGNALING DEVICE REQUIREMENTS OF SECTION 2.27 OF ASME A17.1. ((STANDBY)) AN EMERGENCY OR LEGALLY REQUIRED STANDBY POWER SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH CHAPTER 27 AND ((SECTION 3003)) THE SEATTLE ELECTRICAL CODE FOR THE OPERATION OF THE ELEVATOR, THE SHUNT TRIP AND LIGHTING FOR ELEVATOR CARS, CONTROL ROOMS, MACHINE ROOMS, AND MACHINERY SPACES.

ELEVATOR NOTES:

1. SBC SECTION 3022 AND ASME SECTIONS 2.7 AND 2.8. PIPES, DUCTS, CONDUITS, AND EQUIPMENT NOT USED FOR THE OPERATION OF THE ELEVATORS ARE PROHIBITED IN MACHINE ROOM AND HOISTWAYS.
2. SBC 3020. MAINTAIN ALL REQUIRED WORKING CLEARANCES IN MACHINE ROOM.
3. ASME RULE 2.2.2. WATERPROOF AS NECESSARY TO PREVENT ENTRY OF GROUND WATER. SUMP PUMPS MAY BE INSTALLED FOR FLOOD CONTROL BUT NOT APPROVED TO MAINTAIN A DRY PIT.
4. SBC 3023, ASME RULE 2.2.4. PROVIDE PIT LADDER.
5. ASME RULE 2.7.5.2. PROVIDE MACHINE ROOM VENTILATION
6. SBC 3016.5. PROVIDE HOISTWAY VENTILATION. PROVIDE MOTORIZED DAMPERS AS REQUIRED BY SEATTLE ENERGY CODE 1412.4.1 FOR ALL HOISTWAY VENTS. **NOT REQUIRED (ELEVATOR HOISTWAY VENTILATION IS NOT REQUIRED FOR ELEVATORS WITH LESS THAN 75 FEET (22860MM) OF RISE FROM THE LOWEST FLOOR TO THE HIGHEST CEILING OF THE STORIES SERVED BY THE ELEVATOR.)**
7. SBC 3016.3. COMPLY WITH SEISMIC REQUIREMENTS.
8. ASME RULE 2.7.4. PROVIDE 7'-0' CLEAR HEADROOM IN MACHINE ROOM.
9. SBC 3016.4. AND CHAPTER 11; ACCOMMODATE PEOPLE WITH DISABILITIES.
10. ASME SECTION 2.4 AND 3.4. PROVIDE PROPER TOP CAR RUNBYS, CLEARANCES AND REFUGE SPACE.
11. ASME RULE 2.1.1.2 AND 2.11.14. GROUT ALL MASONRY JAMBS AND HEADERS TO RETAIN FIRE RATING OF HOISTWAY. IN OTHER THAN MASONRY, PROVIDE LABELED ENTRANCE ASSEMBLIES INSTALLED AS TESTED.
12. SBC 3020. GROUT BEHIND ALL HOISTWAY PENETRATIONS FOR PIPES, FIXTURES, ETC.
13. SBC 3016.8 ELEVATOR HOISTWAYS SHALL NOT BE VENTED OR PRESSURIZED THROUGH ELEVATOR MACHINE ROOMS.
14. ASME RULES 2.1.1.2 AND 2.14.1.8 GLASS USED IN OR ON ELEVATOR HOISTWAYS AND CARS MUST BE LAMINATED AND MEET THE REQUIREMENTS OF ASME Z97.1
15. SBC 106 PROVIDE CALCULATIONS AND DRAWINGS TO SDCI FOR APPROVAL OF THE STRESSES AS NOTED IN THE APPLICABLE RULES OF ASME SECTION 2.9.
16. ASME SECTION 2.6. PROVIDE CALCULATIONS TO SDCI FOR APPROVAL OF THE ABILITY OF THE PIT FLOOR AND STRUCTURE TO WITHSTAND THE ELEVATOR BUFFER ENGAGEMENT REACTIONS.
17. ASME 2.27.1. PROVIDE MEANS OF TWO-WAY CONVERSATION BETWEEN EACH ELEVATOR AND A READILY ACCESSIBLE POINT (MAIN ELEVATOR LOBBY) OUTSIDE THE HOISTWAY.
18. ASME 2.27.1.1.2 THIS STRUCTURE IS CONSIDERED AS UNATTENDED, AND AN ADDITIONAL EMERGENCY SIGNALING DEVICES SHALL BE PROVIDED (PHONE TO ANSWERING SERVICE).
19. ASME 2.27.1.1.5 PROVIDE AN EMERGENCY POWER SUPPLY FOR THE DEVICES REQUIRED BY 2.27.1 THE SUPPLY SHALL BE CAPABLE OF OPERATING THE AUDIBLE DEVICE FOR AT LEAST ONE HOUR AND THE MEANS OF A TWO-WAY CONVERSATION FOR AT LEAST FOUR HOURS.
20. SBC 3016.12. INSTALL APPROVED KEY RETAINER BOX, KEYED TO THE SECURE CITY KEY.
21. SBC 3016.13 KEYS REQUIRED FOR THE OPERATION OF ELEVATOR, FIRE EMERGENCY SERVICE, THE MACHINE ROOM AND THE MECHANICAL HOISTWAY ACCESS KEY SHALL BE TAGGED AND KEPT IN THE KEY BOX.
22. COMPLY WITH APPLICABLE CODES. ALL APPLICABLE ASME CODES, SEATTLE BUILDING CODES, SEATTLE ELECTRICAL CODES AND ELEVATOR CODES ADOPTED BY REFERENCE APPLY.

CITY STAMP

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8666 REGISTERED ARCHITECT
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SEATTLE WA 98104

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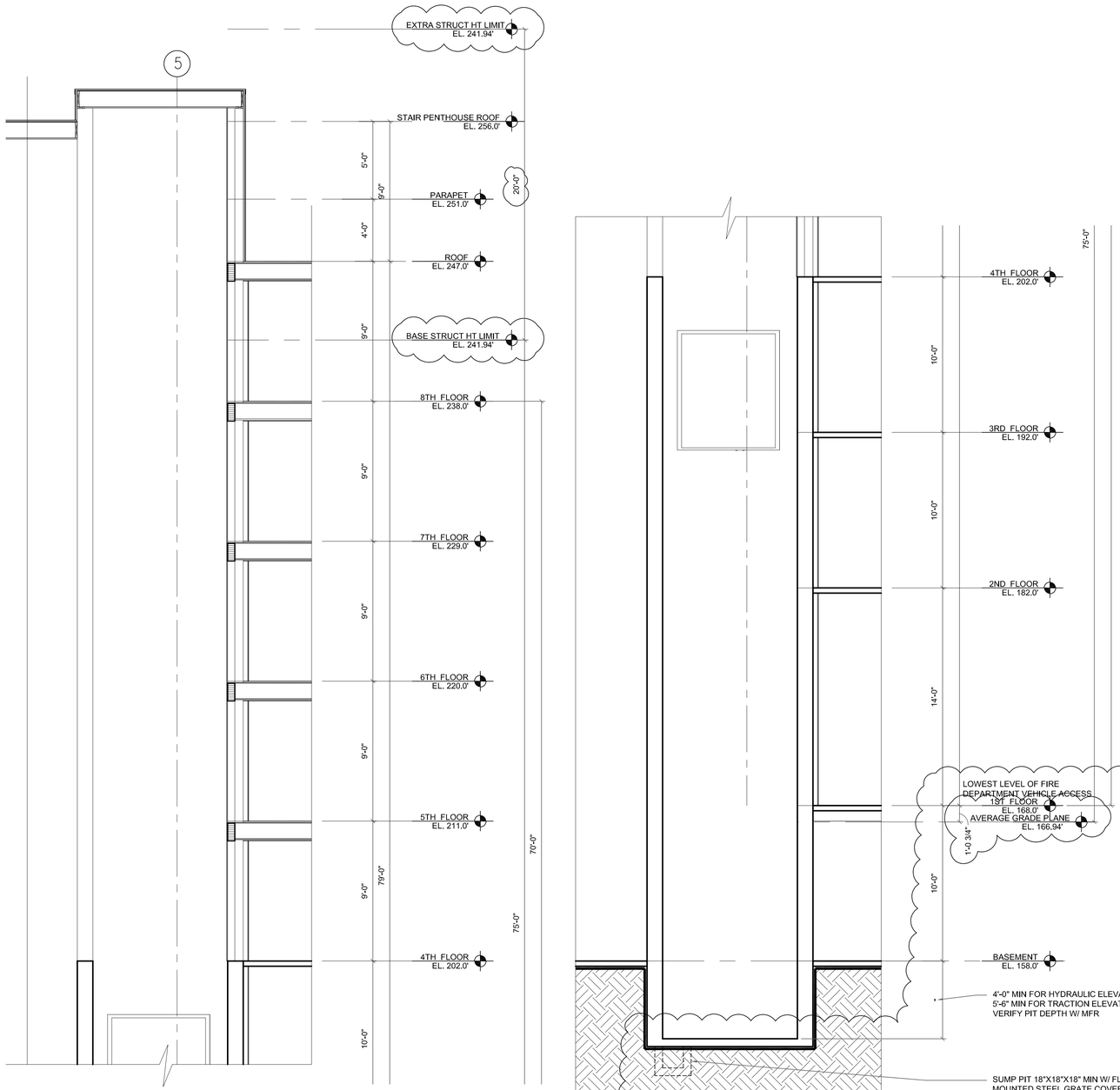
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
VERTICAL CIRCULATION - ELEVATOR A

SHEET NUMBER
A511



1 ELEVATOR A SECTION
SCALE: 1/4"=1'-0"

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21. SBC 3016.9. INSTALL APPROVED KEY RETAINER BOX, KEYED TO THE SECURE CITY KEY.
22. SBC 3016.10 KEYS REQUIRED FOR THE OPERATION OF ELEVATOR, FIRE EMERGENCY SERVICE, THE MACHINE ROOM AND THE MECHANICAL HOISTWAY ACCESS KEY SHALL BE TAGGED AND KEPT IN THE KEY BOX.
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8666 REGISTERED ARCHITECT
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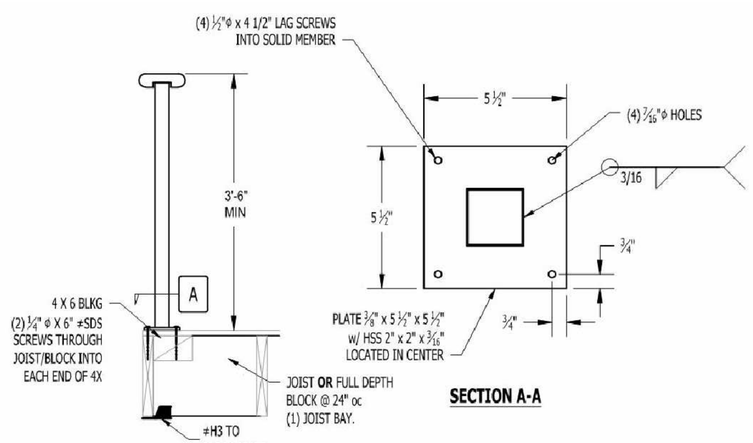
1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-25-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
VERTICAL CIRCULATION - ELEVATOR A

SHEET NUMBER
A512

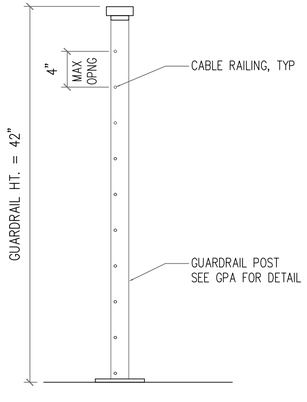


GPA

GUARDRAIL POST APPLICATION

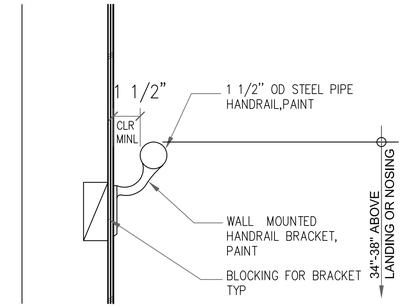
N.T.S.

GPAJ



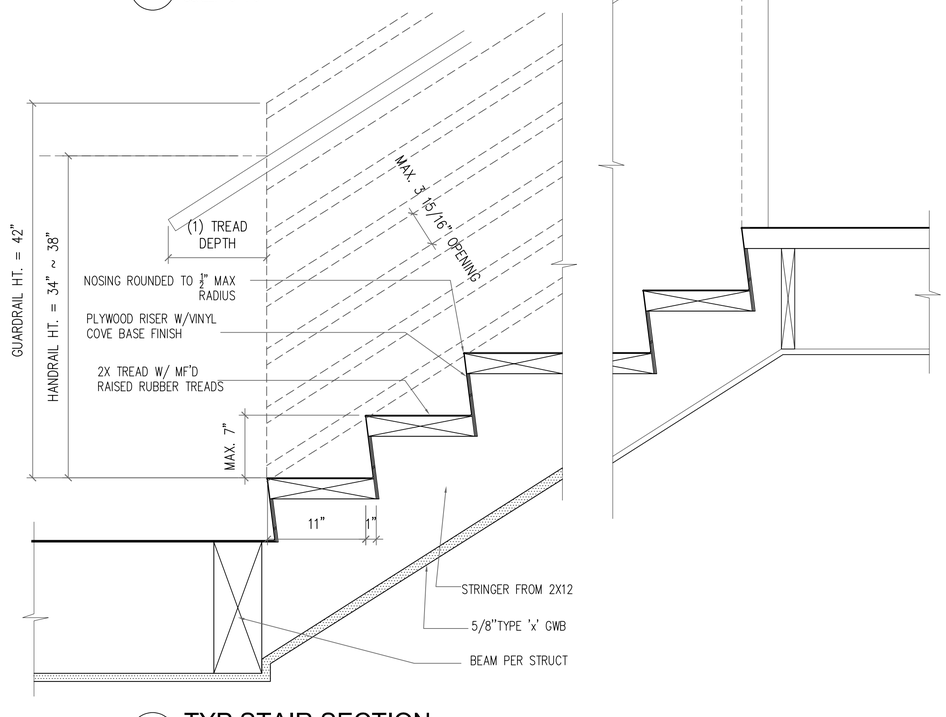
3 TYP GUARDRAIL

SCALE: 1 1/2"=1'-0"



1 HANDRAIL DETAIL

SCALE: 3"=1'-0"



2 TYP STAIR SECTION

SCALE: 1 1/2"=1'-0"

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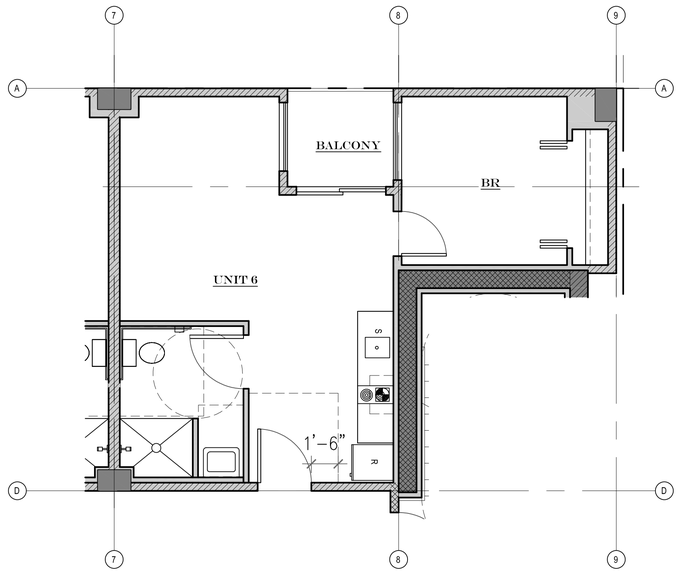
1	12-23-2024	CORRECTION #1 RESPONSE

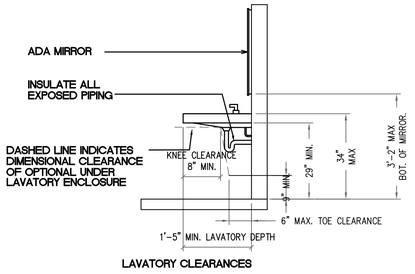
SHEET NAME
VERTICAL CIRCULATION - STAIR DETAILS

SHEET NUMBER
A521

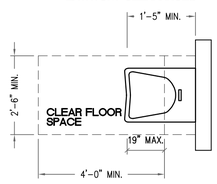


1 TYPE 'A' UNIT ENLARGED PLAN

SCALE: 1/4"=1'-0"



LAVATORY CLEARANCES



CLEAR FLOOR SPACE AT LAVATORIES

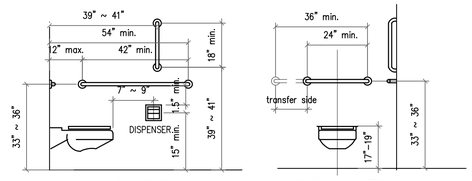
LAV. CLEARANCES

N.T.S.

SIDE WALL VIEW BACK WALL VIEW

W.C. DETAIL- BLOCKING

N.T.S.

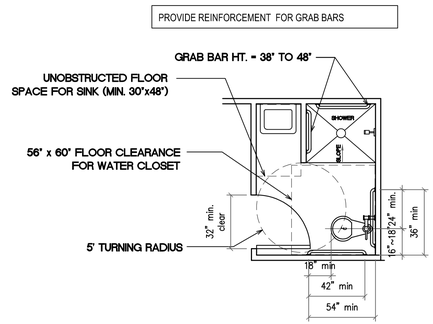


SIDE ELEVATION BACK WALL VIEW

W.C. DETAIL (APPLY TO RESTROOM 1 and 2)

N.T.S.

PROVIDE REINFORCEMENT FOR GRAB BARS



BATHROOM DETAIL

N.T.S.

2 TYPE 'A' ACCESSIBLE BATHROOM STANDARDS

SCALE: 1/4"=1'-0"

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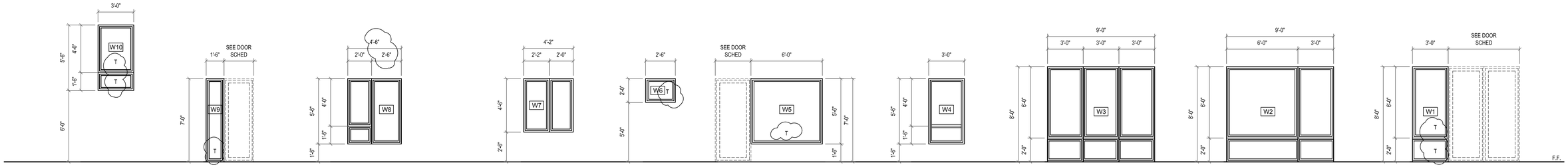
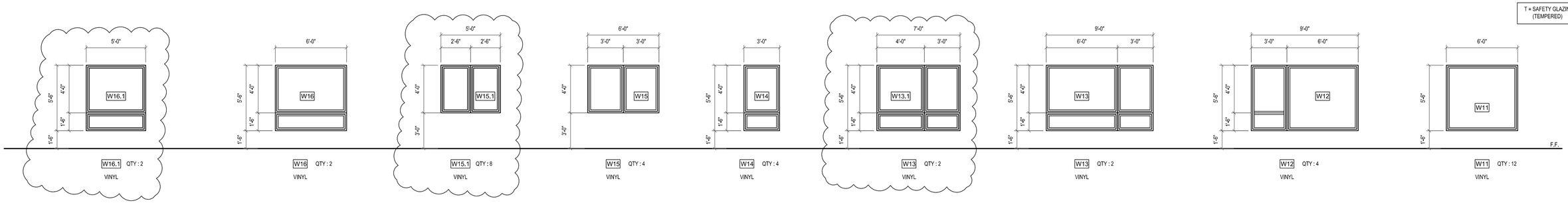
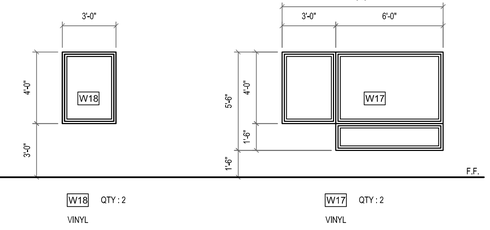
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
ADA STANDARDS -

SHEET NUMBER
A530







ENERGY NOTES:

2018 SEATTLE ENERGY CODE

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MIN REQUIREMENTS

• CEILING	R-49
• STEEL FRAMED WALL	R-19 + R-8.5 CI
• WOOD FRAMED WALL	R-25 INT
• MASS WALL	EXTERIOR: R-16 CI INTERIOR: R-13 + R-6 CI WOOD STUD R-13 + R-10 CI METAL STUD
• FLOOR	MASS: R-30 CI STEEL FRAME:R-38 +R-10 CI WOOD FRAME: R-38R-38
• BELOW GRADE WALL	EXTERIOR: R-10 CI INTERIOR: R-19 WOOD STUD R-13 + R-6 CI METAL STUD
• SLAB	R-10, 2'
• OPAQUE DOORS	SWINGING: U-0.37, NONSWINGING: R-4.75

BUILDING ENVELOPE FENESTRATION MAX U FACTOR AND SHGC

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28		
• SHGC FOR ALL VERT FENESTRATION	ORIENTATION	SEW	SEW
	PF<0.2	0.38	0.38
	0.2≤PF<0.5	0.46	0.46
	PF≥0.5	0.61	0.61
• SKYLIGHTS	U=0.45, SHGC: U-0.32		
• ENTRANCE DOORS	U=0.60		

U-FACTOR FOR CLASS AW WINDOWS RATED IN ACCORDANCE W/ AAMA/CSA 101/I.S.2/A440, VERTICAL CURTAIN WALLS AND SITE-BUILT FENESTRATION PRODUCTS

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28

EGRESS WINDOW

5.7 SF MIN NET CLR OPENING MIN NET
CLEAR 24" HEIGHT AND 20" WIDTH
SILL HEIGHT: 44" OR LESS A.F.F.

1 WINDOW TYPES

SCALE: 1/4"=1'-0"

CITY STAMP

CHC ARCHITECTS
8666 REGISTERED ARCHITECT
CHAOHUA CHANG
STATE OF WASHINGTON
13301 SE 79th PL, Unit A205, NEWCASTLE, WA 98059
(M) 425.785.3992 chcarch@gmail.com

1038 MIXED USE PROJECT

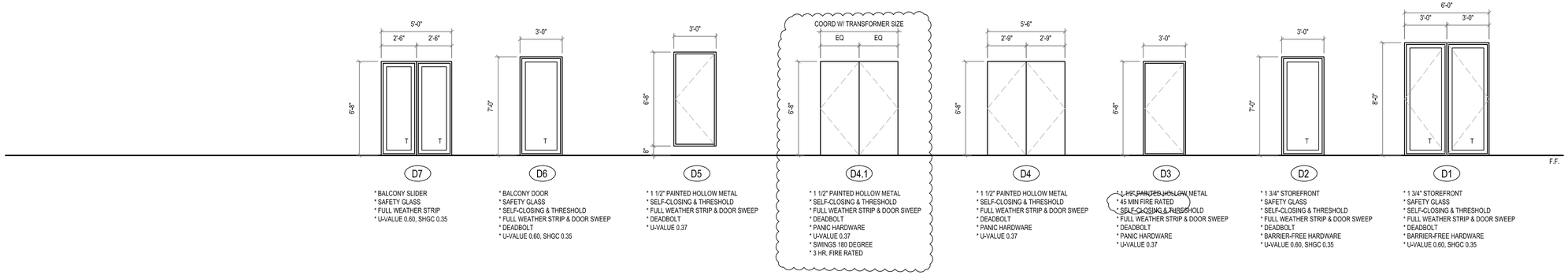
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME

SHEET NUMBER

A801



2 DOOR TYPES

SCALE: 1/4"=1'-0"

ENERGY NOTES:

2018 SEATTLE ENERGY CODE

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MIN REQUIREMENTS

• CEILING	R-49
• STEEL FRAMED WALL	R-19 + R-8.5 CI
• WOOD FRAMED WALL	R-25 INT EXTERIOR: R-16 CI INTERIOR: R-13 + R-6 CI WOOD STUD R-13 + R-10 CI METAL STUD
• MASS WALL	
• FLOOR	MASS: R-30 CI STEEL FRAME:R-38 +R-10 CI WOOD FRAME: R-38R-38
• BELOW GRADE WALL	EXTERIOR: R-10 CI INTERIOR: R-19 WOOD STUD R-13 + R-6 CI METAL STUD
• SLAB	R-10, 2'
• OPAQUE DOORS	SWINGING: U-0.37, NONSWINGING: R-4.75

BUILDING ENVELOPE FENESTRATION MAX U FACTOR AND SHGC

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28
• SHGC FOR ALL VERT FENESTRATION	ORIENTATION SEW SEW PF<0.2 0.38 0.38 0.2≤PF<0.5 0.46 0.46 PF≥0.5 0.61 0.61
• SKYLIGHTS	U=0.45, SHGC: U-0.32
• ENTRANCE DOORS	U=0.60

U-FACTOR FOR CLASS AW WINDOWS RATED IN ACCORDANCE W/ AAMA/CSA 101/I.S.2/A440, VERTICAL CURTAIN WALLS AND SITE-BUILT FENESTRATION PRODUCTS

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28

EGRESS WINDOW

5.7 SF MIN NET CLR OPENING MIN NET
CLEAR 24" HEIGHT AND 20" WIDTH
SILL HEIGHT: 44" OR LESS A.F.F.

CITY STAMP

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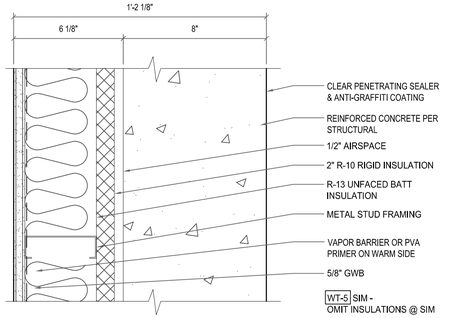
1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
DOOR & WINDOW TYPES

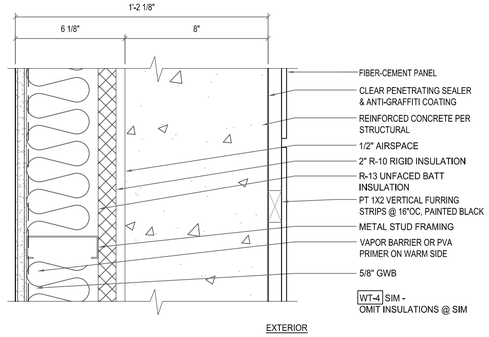
SHEET NUMBER
A802



WT 5

SCALE: 3"=1'-0"

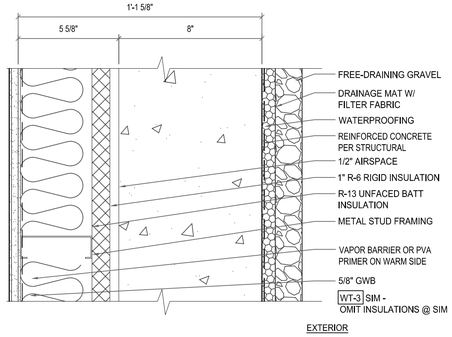
1-3 HR RATED PER SBC 720.1(2) 3



WT 4

SCALE: 3"=1'-0"

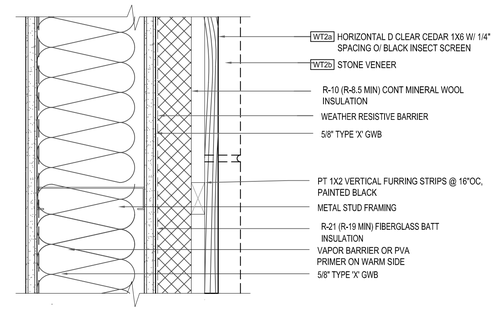
1-3 HR RATED PER SBC 720.1(2) 3



WT 3

SCALE: 3"=1'-0"

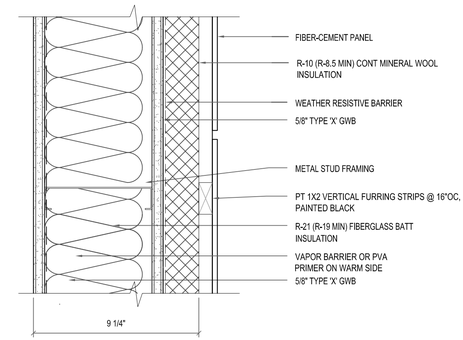
1-3 HR RATED PER SBC 720.1(2) 3



WT 2

SCALE: 3"=1'-0"

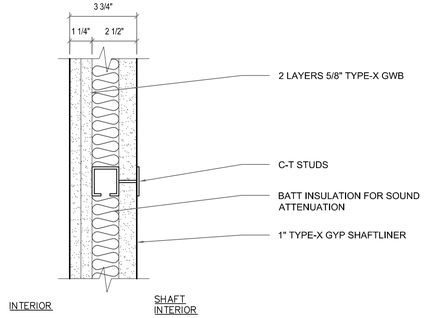
1-HR RATED ASSEMBLY PER WP 1070



WT 1

SCALE: 3"=1'-0"

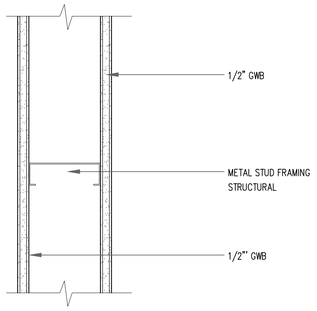
1-HR RATED ASSEMBLY PER WP 1070



WT 10

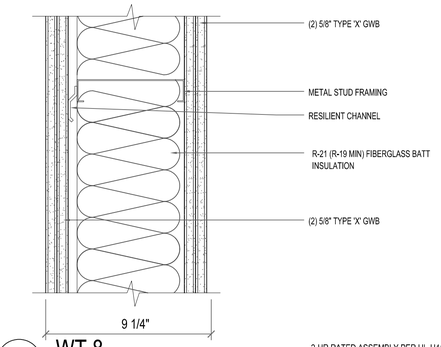
SCALE: 3"=1'-0"

2-HR RATED ASSEMBLY PER UL-U415



WT 9

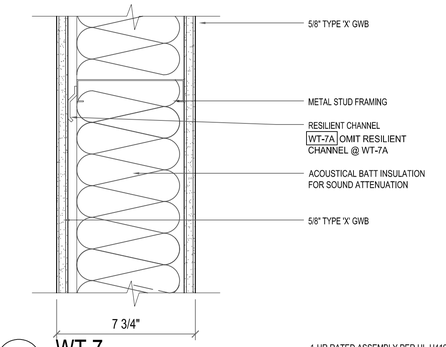
SCALE: 3"=1'-0"



WT 8

SCALE: 3"=1'-0"

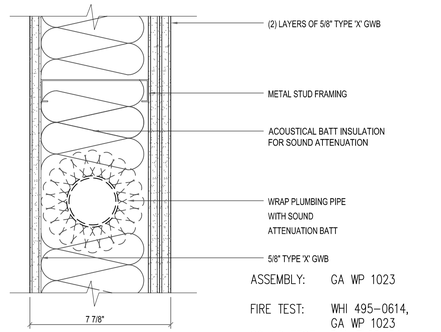
2-HR RATED ASSEMBLY PER UL-U419



WT 7

SCALE: 3"=1'-0"

1-HR RATED ASSEMBLY PER UL-U419



WT 6

SCALE: 3"=1'-0"

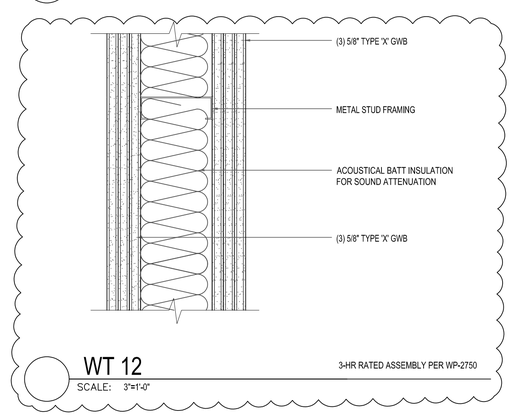
PARTY WALL
W/ PLUMBING

ASSEMBLY: GA WP 1023

FIRE TEST: WHI 495-0614, GA WP 1023

SOUND TEST: RAL TL88-54

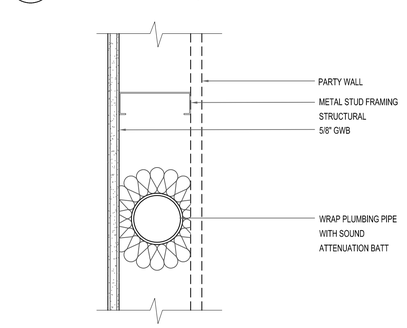
STC: 50-54 1 HR



WT 12

SCALE: 3"=1'-0"

3-HR RATED ASSEMBLY PER WP-2750



WT 11

SCALE: 3"=1'-0"

W/ PLUMBING

ENERGY NOTES:

2018 SEATTLE ENERGY CODE

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MIN REQUIREMENTS

• CEILING	R-49
• STEEL FRAMED WALL	R-19 + R-8.5 CI
• WOOD FRAMED WALL	R-25 INT
• MASS WALL	EXTERIOR: R-16 CI INTERIOR: R-13 + R-6 CI WOOD STUD R-13 + R-10 CI METAL STUD
• FLOOR	MASS: R-30 CI STEEL FRAME:R-38 +R-10 CI WOOD FRAME: R-38R-38
• BELOW GRADE WALL	EXTERIOR: R-10 CI INTERIOR: R-19 WOOD STUD R-13 + R-6 CI METAL STUD
• SLAB	R-10, 2'
• OPAQUE DOORS	SWINGING: U-0.37, NONSWINGING: R-4.75

BUILDING ENVELOPE FENESTRATION MAX U FACTOR AND SHGC

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28		
• SHGC FOR ALL VERT FENESTRATION	ORIENTATION	SEW	SEW
	PF<0.2	0.38	0.38
	0.2≤PF<0.5	0.46	0.46
	PF≥0.5	0.61	0.61
• SKYLIGHTS	U=0.45, SHGC: U-0.32		
• ENTRANCE DOORS	U=0.60		

U-FACTOR FOR CLASS AW WINDOWS RATED IN ACCORDANCE W/ AAMA/CSA 101/I.S.2/A440, VERTICAL CURTAIN WALLS AND SITE-BUILT FENESTRATION PRODUCTS

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28

GENERAL NOTES:

1. INTERMEDIATE FRAMING INCLUDING MIN R-10 INSULATED HEADER IS REQUIRED FOR R-21 WOOD FRAMED EXTERIOR WALLS 16 INCHES ON CENTER PER SEC TABLE C402.1.3 AND SEC A103.2.2.

CITY STAMP

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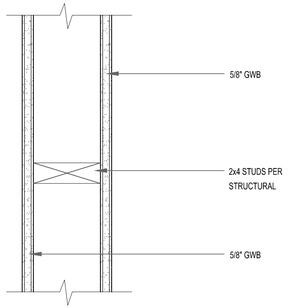
1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

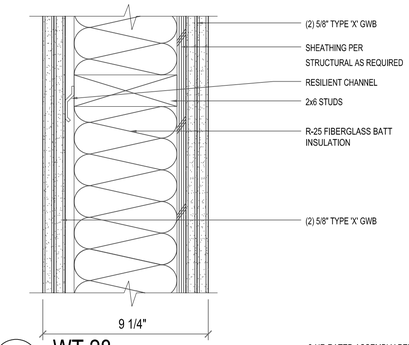
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
ASSEMBLIES - WALL & FLOOR TYPES

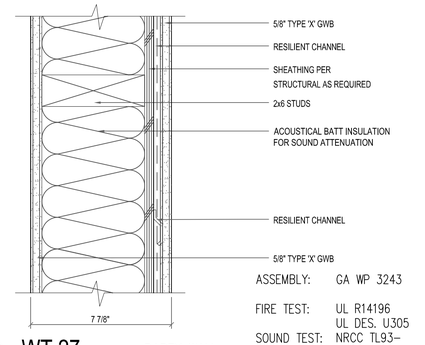
SHEET NUMBER
A811



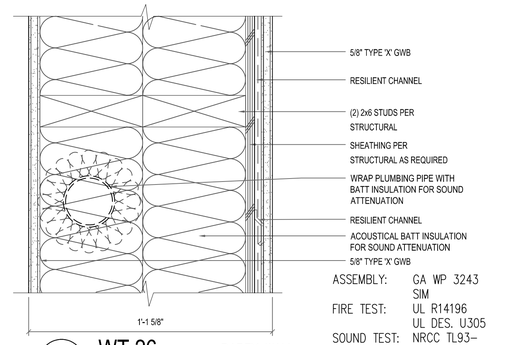
WT 29
SCALE: 3"=1'-0"



WT 28
SCALE: 3"=1'-0"
2-HR RATED ASSEMBLY PER UL-U301

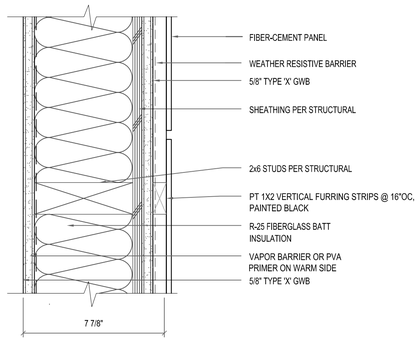


WT 27
SCALE: 3"=1'-0"
PARTY WALL
ASSEMBLY: GA WP 3243
FIRE TEST: UL R14196 UL DES. U305
SOUND TEST: NRCC TL93-116, 3-98
STC: 50-54 1 HR

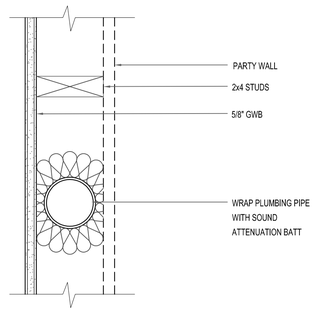


WT 26
SCALE: 3"=1'-0"
PARTY WALL
ASSEMBLY: GA WP 3243 SIM
FIRE TEST: UL R14196 UL DES. U305
SOUND TEST: NRCC TL93-116, 3-98
STC: 50-54 1 HR

WT 22
SCALE: 3"=1'-0"
1-HR RATED ASSEMBLY PER UL-U379



WT 21
SCALE: 3"=1'-0"
1-HR RATED ASSEMBLY PER UL-U379



WT 31
SCALE: 3"=1'-0"
W/ PLUMBING

ENERGY NOTES:

2018 SEATTLE ENERGY CODE

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MIN REQUIREMENTS

• CEILING	R-49
• STEEL FRAMED WALL	R-19 + R-8.5 CI
• WOOD FRAMED WALL	R-25 INT
• MASS WALL	EXTERIOR: R-16 CI INTERIOR: R-13 + R-6 CI WOOD STUD R-13 + R-10 CI METAL STUD
• FLOOR	MASS: R-30 CI STEEL FRAME:R-38 +R-10 CI WOOD FRAME: R-38R-38
• BELOW GRADE WALL	EXTERIOR: R-10 CI INTERIOR: R-19 WOOD STUD R-13 + R-6 CI METAL STUD
• SLAB	R-10, 2'
• OPAQUE DOORS	SWINGING: U-0.37, NONSWINGING: R-4.75

BUILDING ENVELOPE FENESTRATION MAX U FACTOR AND SHGC

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28		
• SHGC FOR ALL VERT FENESTRATION	ORIENTATION	SEW	SEW
	PF<0.2	0.38	0.38
	0.2≤PF<0.5	0.46	0.46
	PF≥0.5	0.61	0.61
• SKYLIGHTS	U=0.45, SHGC: U-0.32		
• ENTRANCE DOORS	U=0.60		

U-FACTOR FOR CLASS AW WINDOWS RATED IN ACCORDANCE W/ AAMA/CSA 101/I.S.2/A440, VERTICAL CURTAIN WALLS AND SITE-BUILT FENESTRATION PRODUCTS

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28

GENERAL NOTES:

1. INTERMEDIATE FRAMING INCLUDING MIN R-10 INSULATED HEADER IS REQUIRED FOR R-21 WOOD FRAMED EXTERIOR WALLS 16 INCHES ON CENTER PER SEC TABLE C402.1.3 AND SEC A103.2.2.

CITY STAMP

CHC ARCHITECTS
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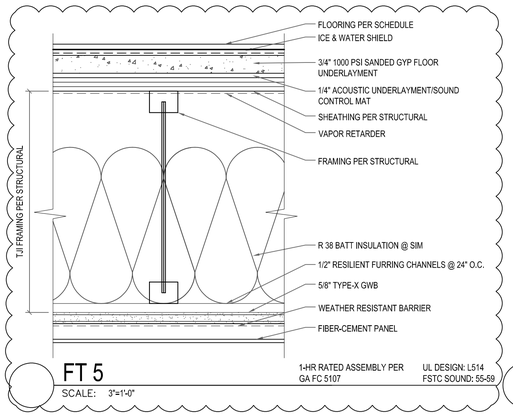
1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
ASSEMBLIES-WALL TYPES

SHEET NUMBER
A812

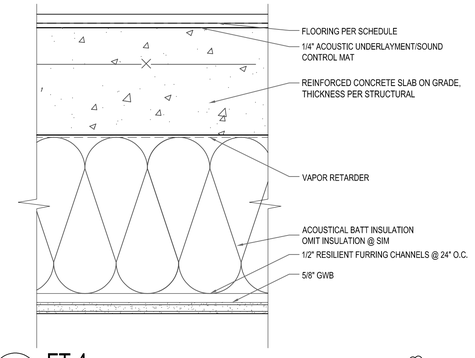


FT 5

SCALE: 3"=1'-0"

1-HR RATED ASSEMBLY PER GA FC 5107

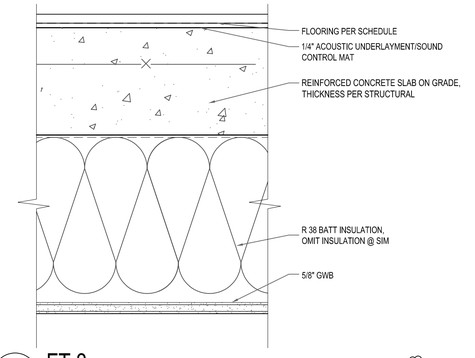
UL DESIGN: L514
FSTC SOUND: 55-59



FT 4

SCALE: 3"=1'-0"

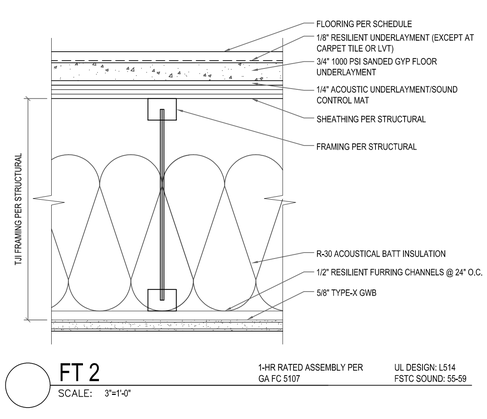
1 HR/2HR/3HR RATED ASSEMBLY PER SBC 721.3(3) 1-1.1



FT 3

SCALE: 3"=1'-0"

1 HR/2HR/3HR RATED ASSEMBLY PER SBC 721.3(3) 1-1.1

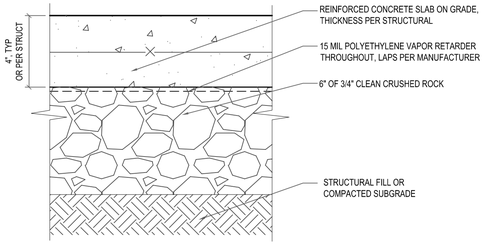


FT 2

SCALE: 3"=1'-0"

1-HR RATED ASSEMBLY PER GA FC 5107

UL DESIGN: L514
FSTC SOUND: 55-59



FT 1

SCALE: 3"=1'-0"

ENERGY NOTES:

2018 SEATTLE ENERGY CODE

OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MIN REQUIREMENTS

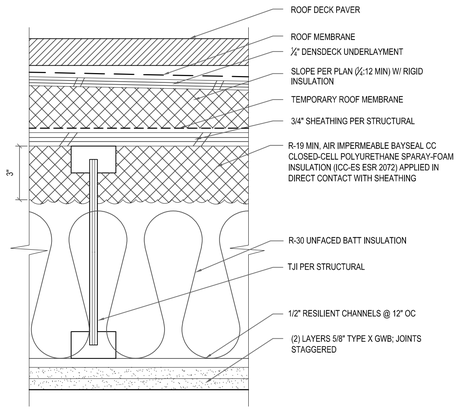
• CEILING	R-49
• STEEL FRAMED WALL	R-19 + R-8.5 CI
• WOOD FRAMED WALL	R-25 INT
• MASS WALL	EXTERIOR: R-16 CI INTERIOR: R-13 + R-6 CI WOOD STUD R-13 + R-10 CI METAL STUD
• FLOOR	MASS: R-30 CI STEEL FRAME:R-38 +R-10 CI WOOD FRAME: R-38R-38 EXTERIOR: R-10 CI
• BELOW GRADE WALL	INTERIOR: R-19 WOOD STUD R-13 + R-6 CI METAL STUD
• SLAB	R-10, 2'
• OPAQUE DOORS	SWINGING: U-0.37, NONSWINGING: R-4.75

BUILDING ENVELOPE FENESTRATION MAX U FACTOR AND SHGC

• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28		
• SHGC FOR ALL VERT FENESTRATION	ORIENTATION	SEW	SEW
	PF<0.2	0.38	0.38
	0.2≤PF<0.5	0.46	0.46
	PF≥0.5	0.61	0.61
• SKYLIGHTS	U=0.45, SHGC: U-0.32		
• ENTRANCE DOORS	U=0.60		

U-FACTOR FOR CLASS AW WINDOWS RATED IN ACCORDANCE W/ AAMA/CSA 101/I.S.2/A440, VERTICAL CURTAIN WALLS AND SITE-BUILT FENESTRATION PRODUCTS

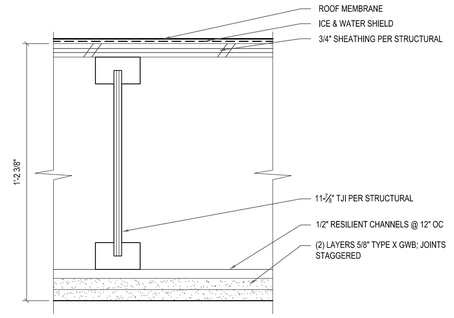
• FENESTRATION U-FACTOR	FIXED U=0.26, OPERABLE: U-0.28



RT 3 - ROOF DECK @ PAVERS (UNVENTED)

SCALE: 3"=1'-0"

1-HR RATED ASSEMBLY PER UL-L570

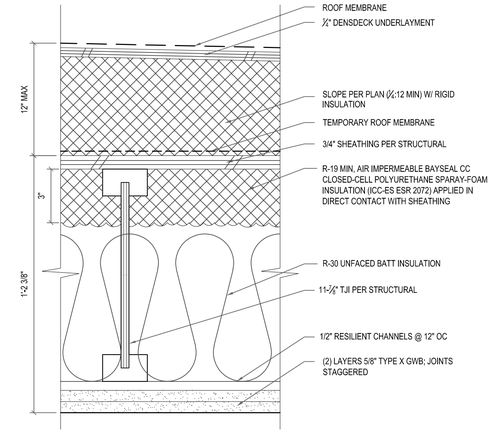


RT 2 -HIGH ROOF (UNVENTED)

SCALE: 3"=1'-0"

SBC1203.3.4.1.3 UNVENTED ROOF OPTION

1-HR RATED ASSEMBLY PER UL-L570



RT 1 - TYPICAL ROOF (UNVENTED)

SCALE: 3"=1'-0"

1-HR RATED ASSEMBLY PER UL-L570

CITY STAMP

CHC ARCHITECTS
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REGISTERED ARCHITECT
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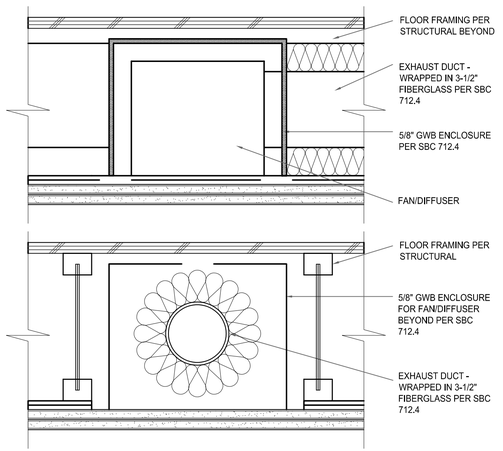
1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
ASSEMBLIES-
ROOF, FLOOR TYPES

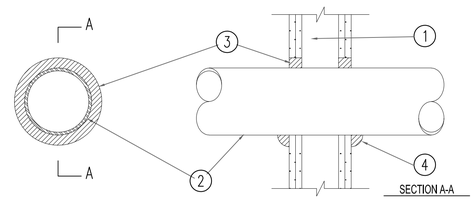
SHEET NUMBER
A813



3 EXHAUST VENT IN JOIST

SCALE: NTS

SYSTEM No. W-L-1054



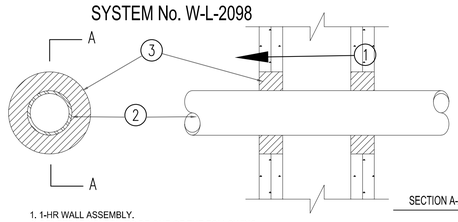
1. ONE-HR WALL ASSEMBLY.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   A. MAXIMUM 30" DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER)
   B. MAXIMUM 30" DIAMETER CAST IRON PIPE.
   C. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.
   D. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
   E. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. MINIMUM 5/8" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
4. MINIMUM 1/2" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT.

NOTES
1. MAXIMUM DIAMETER OF OPENING:
A. 32-1/4" FOR STEEL STUD WALLS
B. 14-1/2" FOR WOOD STUD WALLS.
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 2-1/4"
3. PIPE MAY BE INSTALLED WITH CONTINUOUS POINT OF CONTACT.
4. PIPE MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEG. FROM PERPENDICULAR

2 TYPICAL METAL PIPE PENETRATION

SCALE: NTS

SYSTEM No. W-L-2098

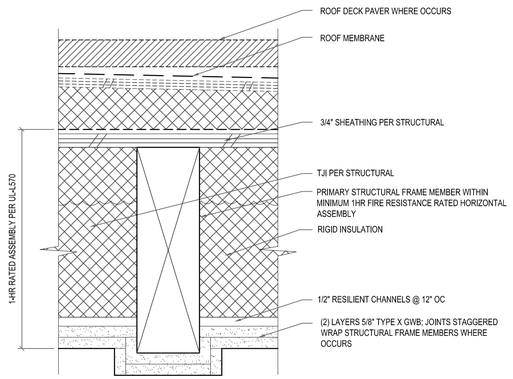


1. 1-HR WALL ASSEMBLY.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
   A. MAXIMUM 2" NOMINAL DIAMETER PVC PLASTIC PIPE (SCHEDULE 40) (CLOSED PIPING SYSTEM)
   B. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR17) (CLOSED PIPING SYSTEM)
3. HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT:
   A. MINIMUM 5/8" DEPTH OF SEALANT FOR A 1-HR. FIRE-RATING.
   B. MINIMUM 1-1/4" DEPTH OF SEALANT FOR A 2-HR. FIRE-RATING.

NOTES
1. MAXIMUM DIAMETER OF OPENING = 4-3/8"
2. ANNULAR SPACE = MINIMUM 3/4", MAXIMUM 1-1/4"

1 TYPICAL PLASTIC PIPE PENETRATION

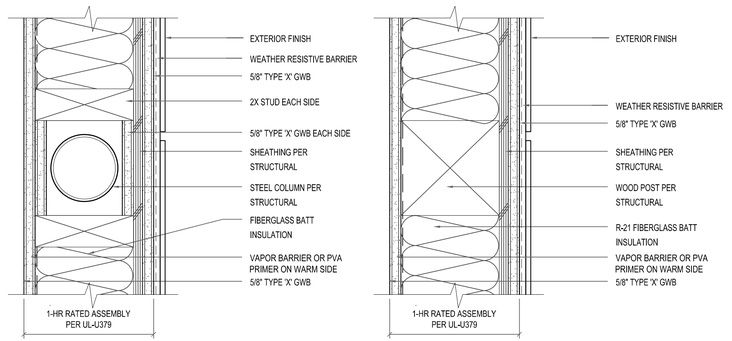
SCALE: NTS



9 FIRE PROTECTION @ HORZ STRUCT MEMBERS

SCALE: 3"=1'-0"

1-HR RATED ASSEMBLY PER UL-L570



8 FIRE PROTECTION @ COLUMNS

SCALE: 3"=1'-0"

CITY STAMP

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1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

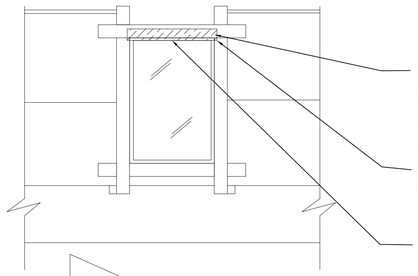
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
DETAILS-
FIRE PROTECTION

SHEET NUMBER
A814

STEP H

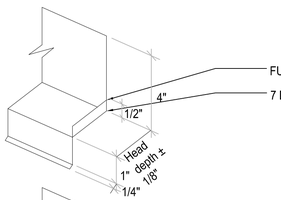
INSTALL HEAD FLASHING



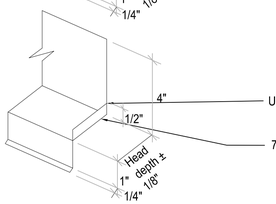
INSTALL 24GA STAINLESS STEEL, GALVANIZED STEEL OR PRE-FINISHED METAL WITH FULLY SOLDERED OR FOLDED JOINTS. SEE DETAILS BELOW FOR DIMENSIONS AND CONFIGURATIONS.

HEAD FLASHING EXTENDS 3/4" BEYOND WINDOW EACH SIDE.

FULLY BED FLASHING IN SEALANT TO WINDOW HEAD.



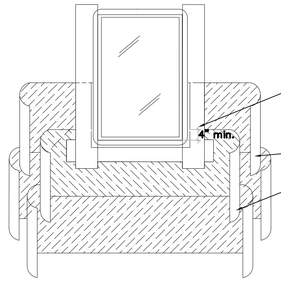
SOLDERED END DAM



FOLDED END DAM

STEP D

INSTALL TWO LAYERS GRADE "D" 60 MINUTE BUILDING PAPER AT SILL



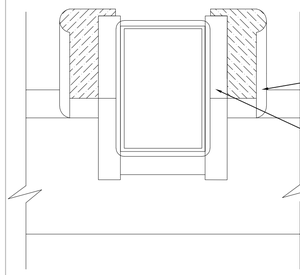
SHINGLE TWO LAYERS OF BUILDING PAPER WORKING FROM BOTTOM TO TOP. PICTURE FRAME BOTH LAYERS UP JAMBS 4" MINIMUM ABOVE ROUGH OPENING. TUCK UNDER VIDIFLEX FLASHINGS 9" MINUMUM.

OFFSET LAYERS SO THAT HORIZONTAL LAPS DO NOT COINCIDE.

NOTE:
-HORIZONTAL LAPS TO BE 4"
-VERTICAL LAPS TO BE 12"
-OFFSET VERTICAL LAPS 24" MINIMUM SO THAT LAPS IN EACH LAYER DO NOT COINCIDE.
-VERTICAL LAPS DO NOT OCCUR WITHIN 24" OF INSIDE OR OUTSIDE CORNERS.

STEP E

INSTALL FIRST LAYER GRADE "D" 60 MINUTE BUILDING PAPER AT JAMBS

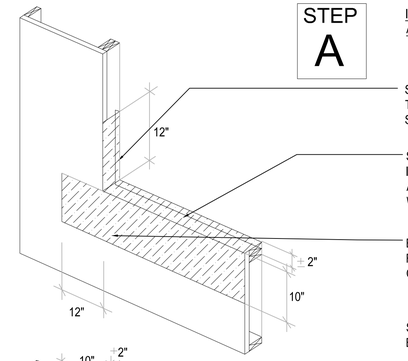


SHINGLE ONE LAYER OF BUILDING PAPER WORKING FROM BOTTOM TO TOP. LAP 4" OVER FIRST LAYER OF BUILDING PAPER PICTURE FRAMED AT SILL.

TUCK BUILDING PAPER MINIMUM 9" BEHIND JAMB VIDIFLEX FLASHING.

STEP A

INSTALL VIDIFLEX F CONTINUOUS AT ROUGH OPENING SILL



SLIT VIDIFLEX AND FOLD THROUGH ROUGH OPENING AS SHOWN.

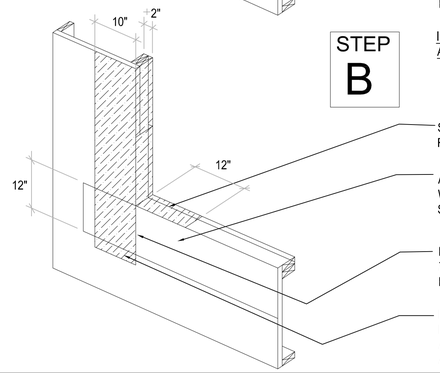
STAPLE OR ADHERE VIDIFLEX TO INTERIOR FACE OF FRAMING OR ADHERE TO ROUGH OPENING WITH SILICONE SEALANT.

EXTEND VIDIFLEX 12" BEYOND ROUGH OPENING AT EACH END OF SILL.

SEE ELEVATION VIEW STEPS A & B IN SECOND BOX BELOW

STEP B

INSTALL VIDIFLEX F CONTINUOUS AT ROUGH OPENING JAMBS



SLIT VIDIFLEX AND FOLD INTO ROUGH OPENING AS SHOWN.

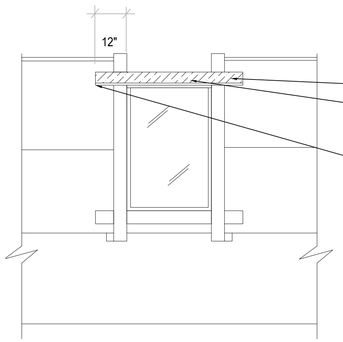
ADHERE TO EXISTING VIDIFLEX WITH DOW CORNING 795 SILICONE SEALANT.

BED CORNER IN DOW CORNING 795 SILICONE SEALANT TO SEAL PIN HOLE AT LAP.

EXTEND VIDIFLEX 12" BELOW ROUGH OPENING AT BOTTOM AND 6" ABOVE ROUGH OPENING AT TOP (NOT SHOWN).

STEP I

INSTALL SECOND LAYER OF PROTECTO WRAP BT20XL AT HEAD



INSTALL 6" PROTECTO WRAP AT HEAD.

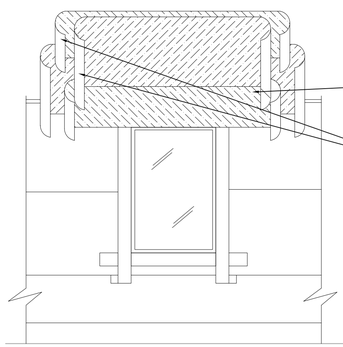
LAP PROTECTO WRAP 3 1/2" ONTO HEAD FLASHING.

EXTEND PROTECTO WRAP 12" BEYOND WINDOW.

NOTE:
-CLEAN WINDOW FLANGES AS RECOMMENDED BY PROTECTO WRAP.
-PRIME ALL SURFACES WITH PROTECTO WRAP BT100, OR 3M SUPER 77 SPRAY ADHESIVE PER MANUFACTURER RECOMMENDATIONS.
-BACK ROLL PROTECTO WRAP WITH HAND ROLLER.

STEP J

INSTALL TWO LAYERS GRADE "D" 60 MINUTE BUILDING PAPER OVER HEAD FLASHING



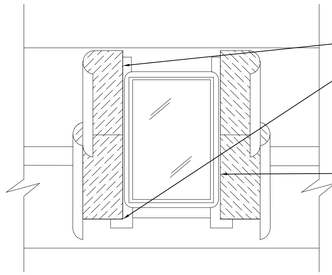
SHINGLE TWO LAYERS OF BUILDING PAPER WORKING FROM BOTTOM TO TOP. START AT BOTTOM OF PROTECTO WRAP AT HEAD AND WORK UP.

OFFSET LAYERS SO THAT HORIZONTAL LAPS DO NOT COINCIDE.

NOTE:
-HORIZONTAL LAPS TO BE 4"
-VERTICAL LAPS TO BE 12"
-OFFSET VERTICAL LAPS 24" MINIMUM SO THAT LAPS IN EACH LAYER DO NOT COINCIDE.
-VERTICAL LAPS DO NOT OCCUR WITHIN 24" OF INSIDE OR OUTSIDE CORNERS.

STEP F

INSTALL SECOND LAYER GRADE "D" 60 MINUTE BUILDING PAPER AT JAMBS

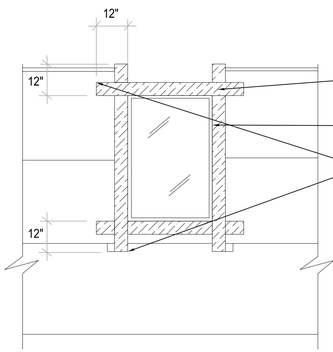


SHINGLE ONE LAYER OF BUILDING PAPER WORKING FROM BOTTOM TO TOP. BEGIN AT BOTTOM OF SILL VIDIFLEX FLASHING AND EXTEND ABOVE JAMB VIDIFLEX FLASHING.

STOP BUILDING PAPER 1" SHORT OF WINDOW FLANGES.

STEP G

INSTALL PROTECTO WRAP BT20XL AT SILL JAMBS & HEAD



INSTALL 6" PROTECTO WRAP AT SILL, THEN JAMBS, THEN HEAD.

LAP PROTECTO WRAP MINIMUM 1" ONTO WINDOW FLANGES.

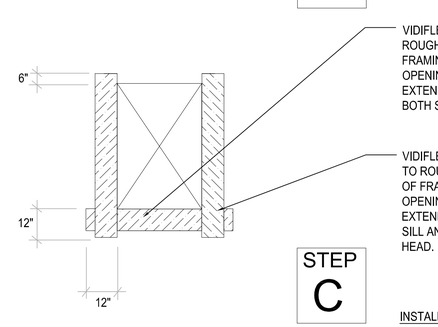
EXTEND PROTECTO WRAP 12" BEYOND WINDOW.

NOTE:
-CLEAN WINDOW FLANGES AS RECOMMENDED BY PROTECTO WRAP.
-PRIME ALL SURFACES WITH PROTECTO WRAP BT100, OR 3M SUPER 77 SPRAY ADHESIVE PER MANUFACTURER RECOMMENDATIONS.
-BACK ROLL PROTECTO WRAP WITH HAND ROLLER.

STEPS A&B

ELEVATION VIEW- STEPS A & B

SEE STEPS A & B

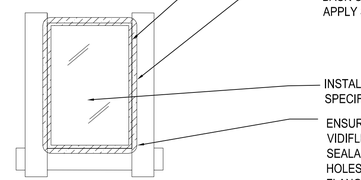


VIDIFLEX AT SILL. STAPLE OR ADHERE TO ROUGH OPENING AT INTERIOR FACE OF FRAMING AND ADHERE TO ROUGH OPENING WITH SILICONE SEALANT. EXTEND 12" BEYOND ROUGH OPENING BOTH SIDES. SEE STEP A.

VIDIFLEX AT JAMBS. STAPLE OR ADHERE TO ROUGH OPENING AT INTERIOR FACE OF FRAMING AND ADHERE TO ROUGH OPENING WITH SILICONE SEALANT. EXTEND 12" BELOW ROUGH OPENING AT SILL AND 6" ABOVE ROUGH OPENING AT HEAD. SEE STEP B.

STEP C

INSTALL FLANGED WINDOW



CLEAN BACK OF WINDOW FLANGES AS RECOMMENDED BY SEALANT MANUFACTURER.

APPLY CONTINUOUS, GENEROUS BEAD OF DOW CORNING 795 SILICONE SEALANT TO BACK OF SILL & JAMB FLANGES. DO NOT APPLY SEALANT TO HEAD FLANGE.

INSTALL WINDOW PER MANUFACTURER SPECIFICATION.

ENSURE COMPLETE SEAL BETWEEN VIDIFLEX AND WINDOW FLANGES. SEALANT SHOULD RUN OUT AT NAIL HOLES AND BEYOND EDGE OF WINDOW FLANGES. SMOOTH EXCESS SEALANT.

CITY STAMP

CHC ARCHITECTS

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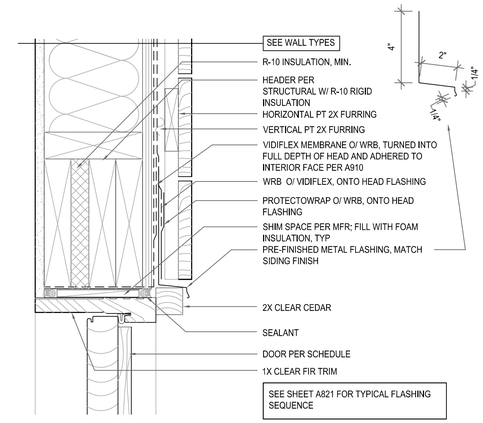
1038 MIXED USE PROJECT

1040 SOUTH KING STREET
SEATTLE WA 98104

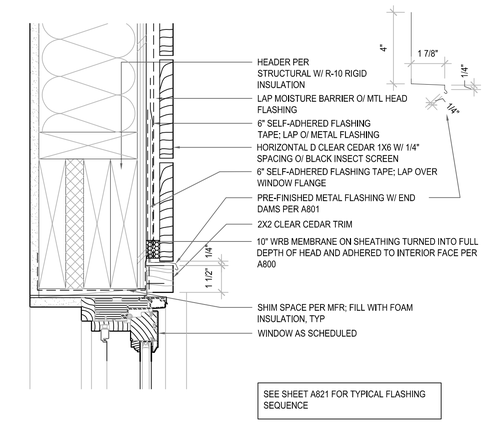
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-26-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
EXTERIOR DETAILS- FLASHING SEQUENCE

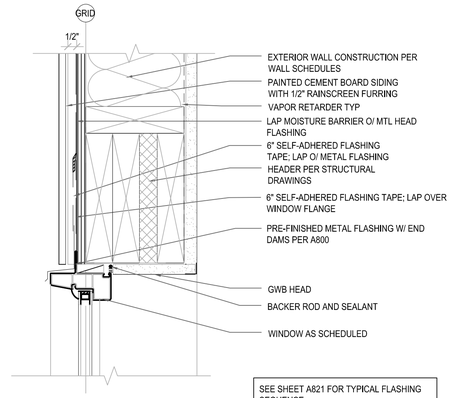
SHEET NUMBER
A821



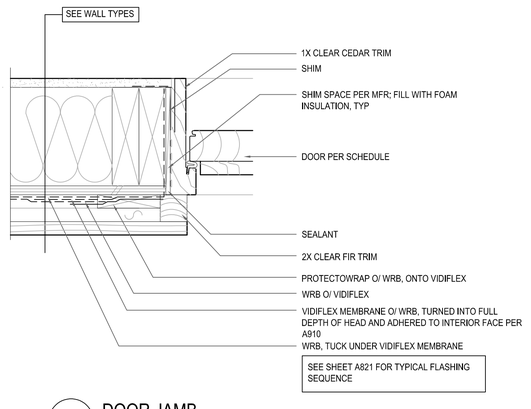
7 DOOR HEAD
SCALE: 3"=1'-0"



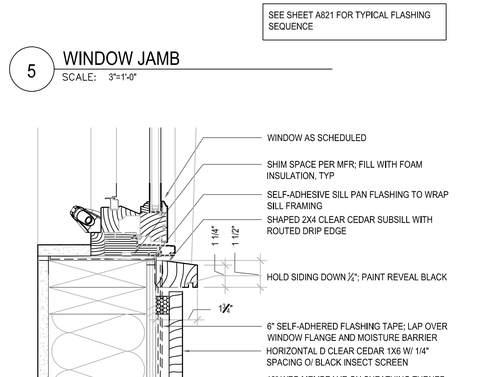
4 WINDOW HEAD
SCALE: 3"=1'-0"



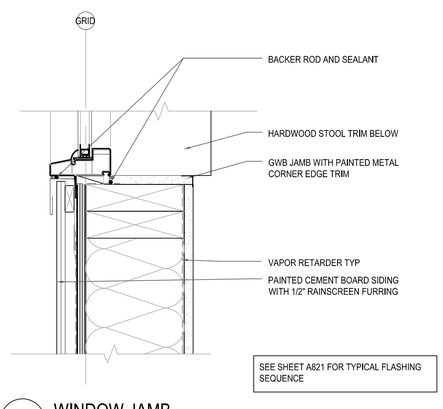
1 WINDOW HEAD
SCALE: 3"=1'-0"



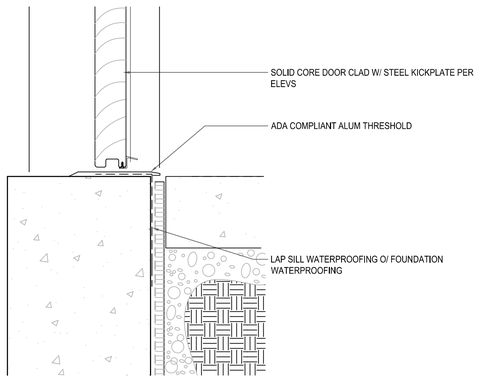
8 DOOR JAMB
SCALE: 3"=1'-0"



5 WINDOW JAMB
SCALE: 3"=1'-0"

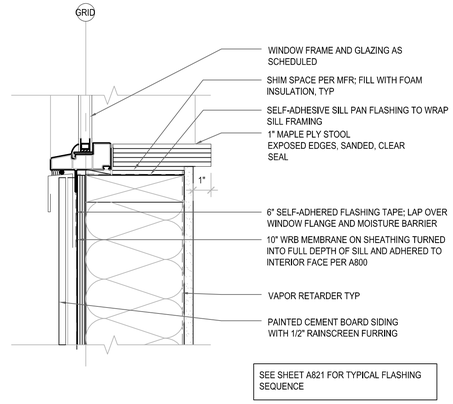


2 WINDOW JAMB
SCALE: 3"=1'-0"



9 DOOR SILL
SCALE: 3"=1'-0"

6 WINDOW SILL
SCALE: 3"=1'-0"



3 WINDOW SILL
SCALE: 3"=1'-0"

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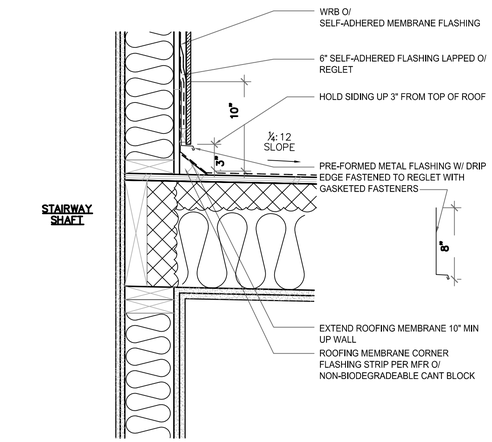
1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

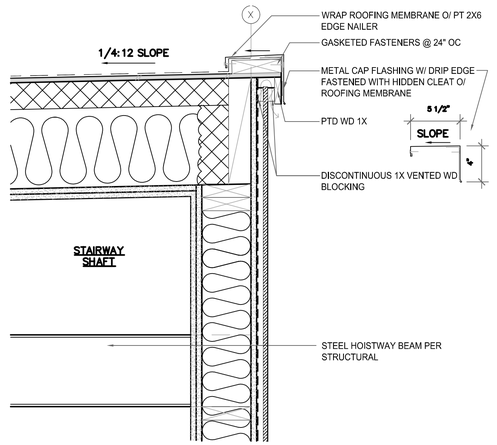
SHEET NAME
WINDOW & DOOR DETAILS

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-28-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

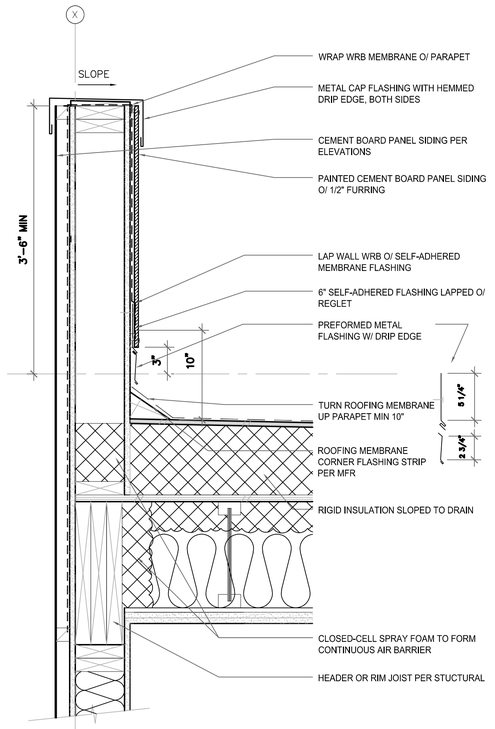
SHEET NUMBER
A822



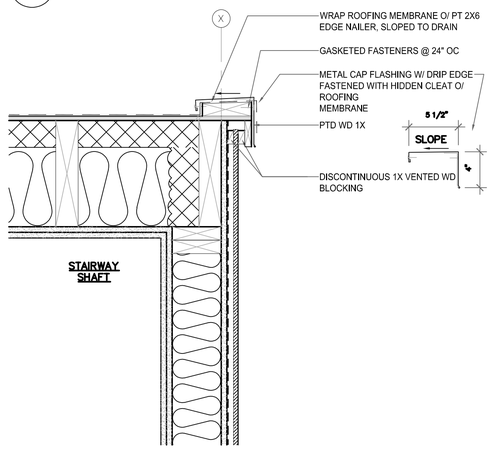
6 ROOF RAKE @ STAIR PENTHOUSE
SCALE: 1 1/2"=1'-0"



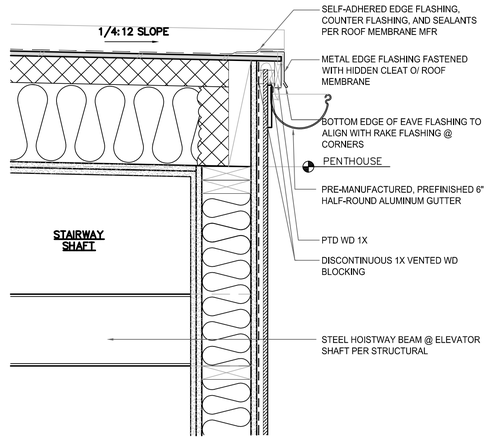
4 STAIR ROOF @ HIGH EAVE
SCALE: 1 1/2"=1'-0"



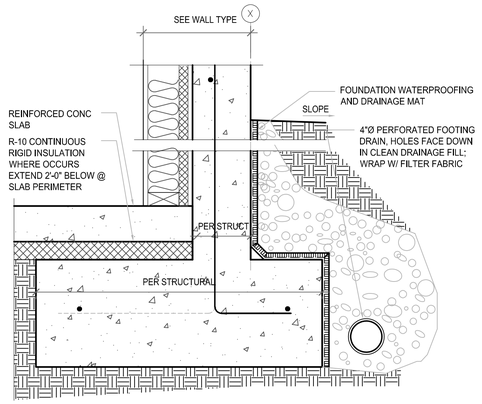
2 TYPICAL ROOF PARAPET
SCALE: 1 1/2"=1'-0"



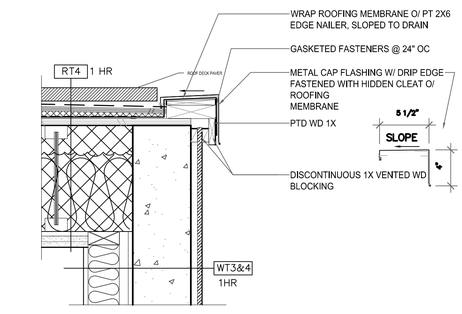
7 STAIR ROOF @ RAKE
SCALE: 1 1/2"=1'-0"



5 STAIR ROOF @ LOW EAVE
SCALE: 1 1/2"=1'-0"



3 TYP FOUNDATION
SCALE: 1 1/2"=1'-0"



8 TYPICAL ROOF DECK
SCALE: 1 1/2"=1'-0"

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8666 REGISTERED ARCHITECT
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1038 MIXED USE PROJECT
1040 SOUTH KING STREET
SEATTLE WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03-26-2021	BUILDING PERMIT SET SUBMITTAL
1	12-23-2024	CORRECTION #1 RESPONSE

SHEET NAME
EXTERIOR DETAILS

SHEET NUMBER
A823

GENERAL STRUCTURAL NOTES

(THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS.)

CRITERIA:

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC) WITH WASHINGTON STATE ADMINISTRATIVE CODE AMENDMENTS, 2015 EDITION.

2. DESIGN LOADING CRITERIA:

RISK CATEGORY IBC TABLE 1604.5	II
ROOF SNOW LOAD	25 PSF (I_S = 1.0)
HEAVY PLANTER AREAS AT LEVEL 1	397 PSF
HEAVY PLANTER AREAS AT ROOF	247 PSF
LIGHT PLANTER AREAS AT ROOF	77 PSF
PUBLIC ROOF DECK	46 PSF
FLOOR LIVE LOAD (PARKING)	40 PSF
FLOOR LIVE LOAD (RESIDENTIAL UNITS)	40 PSF
FLOOR LIVE LOAD (PRIVATE BALCONIES AND DECKS)	60 PSF
FLOOR LIVE LOAD (RESIDENTIAL CORRIDORS)	40 PSF
STAIR LIVE LOAD	100 PSF
CANOPIES	SAME AS ROOF SNOW LOAD
GUARDRAILS/BALCONY RAILS	50 PLF OR 200 LB CONCENTRATED LOAD

SEE LOADING DIAGRAMS FOR FURTHER INFORMATION.

EARTHQUAKE . . . . SEISMIC DESIGN CATEGORY D
$S_S = 1.37$, $S_1 = 0.53$, $S_{DS} = 0.92$, $S_{D1} = 0.53$
SPECIAL REINFORCED CONCRETE SHEAR WALLS: BEARING WALLS
MODAL RESPONSE SPECTRUM ANALYSIS
R = 5, $\Omega_0 = 2.5$, $I_E = 1.0$
Cs = 0.17, BASE SHEAR = 174 KIPS
STORY DRIFT LIMIT = 0.02 * H
CALCULATED MAXIMUM DRIFT = 0.02 * H

LIGHT FRAMED WOOD STRUCTURAL SHEAR WALLS
EQUIVALENT LATERAL FORCE PROCEDURE
R = 6.5, $\Omega_0 = 3.0$, $I_E = 1.0$
Cs = 0.13, BASE SHEAR = 43 KIPS
STORY DRIFT LIMIT = 0.02 * H
CALCULATED MAXIMUM DRIFT = .02* H

WIND . . . . 110 MPH, EXPOSURE "B", K_{zt} = 1.40
WIND (CLADDING/ENCLOSURE ELEMENT DESIGN PRESSURES) . . . . . 41/26 PSF MAX. AT WALLS (LRFD/ASD)
86/54 PSF GROSS UPLIFT AT ROOF (LRFD/ASD)

WIND PRESSURES BASED ON LESS THAN 10 SQUARE FOOT TRIBUTARY AREAS NEAR WALL CORNERS OR ROOF EDGES (EXCLUDING CORNER ZONES AT ROOF). REDUCED DESIGN PRESSURES MAY BE CALCULATED IN ACCORDANCE WITH ASCE 7-10 CHAPTER 30.

SEE DRAWINGS FOR ADDITIONAL LOADING CRITERIA.

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS AND ALL OTHER CONTRACT DOCUMENTS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ALL DISCREPANCIES PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE BUILDING LAYOUT DIMENSIONS (GRID LAYOUTS, SITE COORDINATES, ETC.) AMONGST ALL TRADES, INCLUDING SHOP FABRICATED ITEMS.

4. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES AND CONDITIONS PRIOR TO COMMENCING ANY WORK AND PRIOR TO SUBMITTING SHOP DRAWINGS. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED EITHER ON SITE OBSERVATION, ORIGINAL DRAWINGS OR WERE ASSUMED BASED ON EXPECTED CONDITIONS. IF THE EXISTING CONDITIONS DO NOT CLOSELY MATCH THE CONDITIONS SHOWN ON THE DRAWINGS, OR IF THE EXISTING MATERIALS ARE OF QUESTIONABLE OR SUBSTANDARD QUALITY, NOTIFY THE ENGINEER PRIOR TO COMMENCING ANY WORK.

5. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING, BOTH FOR VERTICAL LOADS AND LATERAL STABILITY, FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

9. ALL STRUCTURAL SYSTEMS COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

10. SEISMIC BRACING AND/OR GRAVITY SUPPORT AND ANCHORAGE OF ALL MECHANICAL OR ELECTRICAL EQUIPMENT SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON, EXCEPT FOR ELEMENTS SPECIFICALLY SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS. THE MECHANICAL/ELECTRICAL CONTRACTOR MUST HIRE THE ENGINEER AND IS RESPONSIBLE FOR ALL COSTS RELATED TO THE PURCHASE AND INSTALLATION OF NECESSARY SUPPORTS, BRACING AND ANCHORAGE. SEISMIC BRACING AND ANCHORAGE DESIGN AND CONSTRUCTION SHALL COMPLY WITH CHAPTER 13 OF ASCE 7-10. SEE GENERAL STRUCTURAL NOTE 14 FOR ADDITIONAL INFORMATION.

11. SHOP DRAWINGS FOR REINFORCING STEEL FOR CONCRETE, CONNECTOR PLATE WOOD ROOF TRUSSES, AND ENGINEERED WOOD I-JOISTS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

    CONTRACTOR SHALL SUBMIT WALL ELEVATION DRAWINGS OF AT LEAST 1/8" = 1'-0" SCALE INDICATING LOCATIONS OF CONNECTION EMBEDMENTS AND WALL OPENINGS FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH REINFORCEMENT SHOP DRAWINGS.

12. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, AND THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY. THE REPRODUCIBLE SHALL BE MARKED AND RETURNED.

    SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

13. DEFERRED SUBMITTALS SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF WASHINGTON. THE COMPONENT DESIGNER SHALL BE A REGISTERED STRUCTURAL ENGINEER IF REQUIRED BY THE BUILDING OFFICIAL OF THE LOCAL JURISDICTION. BUILDING COMPONENT SUBMITTALS SHALL INCLUDE THE DESIGNING PROFESSIONAL ENGINEER'S STAMP AND SHALL BE APPROVED BY THE COMPONENT DESIGNER PRIOR TO CURSORY REVIEW BY THE ENGINEER OF RECORD FOR LOADS IMPOSED ON THE BASIC STRUCTURE. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE INCLUDING ACCOMMODATION FOR STRUCTURAL DISPLACEMENT PER ASCE 7-10 SECTION 13.3.2. AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. DEFERRED SUBMITTALS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE INCLUDED IN THE SUBMITTAL. THE CONTRACTOR SHALL FORWARD DEFERRED SUBMITTALS TO THE BUILDING OFFICIAL WHERE REQUIRED.

    THE FOLLOWING BUILDING COMPONENTS SHALL BE DEFERRED SUBMITTALS FOR THIS PROJECT:
    SEISMIC HOLD-DOWN SYSTEM (SEE NOTE 67)

STATEMENT OF SPECIAL INSPECTION (STRUCTURAL):

14. STATEMENT OF SPECIAL INSPECTIONS – STRUCTURAL ITEMS (SEISMIC DESIGN CATEGORY D***):***

    DEFINITIONS:
    THE SEISMIC FORCE RESISTING SYSTEM FOR THIS STRUCTURE CONSISTS PRIMARILY OF CONCRETE AND WOOD SHEAR WALLS, FLOOR/ROOF DIAPHRAGMS, AND STRUT MEMBERS AS SPECIFIED ON THE DRAWINGS. SEE THE LEGEND OF PLAN SHEETS FOR ADDITIONAL INFORMATION DEFINING MEMBER LOCATIONS.

    SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY THE OWNER APPOINTED INSPECTION AGENCY IN ACCORDANCE WITH CHAPTER 17 OF THE IBC WITH REPORTS PER IBC SECTION 1704.2.4 SUBMITTED TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL FOR EACH DAY SPECIAL INSPECTIONS OR TESTING IS PERFORMED. THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN IBC SECTION 110. SEE TABLES BELOW FOR ADDITIONAL INFORMATION.

STRUCTURAL ITEMS	SPECIAL INSPECTION FREQUENCY	IBC REFERENCE
STRUCTURAL STEEL FABRICATION,ERECTION, AND NONDESTRUCTIVE TESTING*		
SPECIAL INSPECTION AND NONDESTRUCTIVE TESTING FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE (QA) INSPECTION REQUIREMENTS OF AISC 360-10 CHAPTER N. CONTINUOUS INSPECTION SHALL BE PERFORMED AT "P" TASKS DEFINED IN AISC 360-10; PERIODIC INSPECTION SHALL BE PERFORMED AT "O" TASKS DEFINED IN AISC 360-10. ADDITIONAL SPECIAL INSPECTION AND TESTING REQUIREMENTS FOR THE STRUCTURAL STEEL SEISMIC SYSTEM SHALL BE PER AISC 341-10 CHAPTER J AS INDICATED BELOW.		
SHOP AND FIELD WELDING	CONTINUOUS/PERIODIC (QA PER AISC 360 CH. N5.4)	1705.2.1
HIGH STRENGTH BOLTING	CONTINUOUS/PERIODIC (QA AISC 360 CH. N5.6)	1705.2.1
METAL DECKING	PERIODIC 1705.2.2	
HEADED STUDS (COMPOSITE CONSTRUCTION)	CONTINUOUS (QA PER STEEL DECK INSTITUTE)	1705.2.1
MATERIAL VERIFICATION (IDENTIFICATION MARKS AND MANUFACTURER'S TEST REPORTS)	PERIODIC	1705.2.1
STRUCTURAL STEEL SEISMIC SYSTEM (INSPECTION AND TESTING)	CONTINUOUS/PERIODIC (QA PER AISC 341 CH. J)	1705.12.1 & 1705.13.1
COLD-FORMED STEEL FRAMING		
FIELD WELDING	PERIODIC	1705.11.2, 1705.12.3
FASTENERS, BOLTS, STRAPS, HOLDOWNS, ETC.	PERIODIC FOR CONNECTIONS OF ALL MEMBERS OF THE SEISMIC AND WIND FORCE RESISTING SYSTEM INCLUDING DIAPHRAGMS, SHEAR WALLS, STRUTS, & HOLDOWNS	1705.11.2 & 1705.12.3****
COLD-FORMED STEEL TRUSSES	REVIEW OF TEMPORARY AND PERMANENT INSTALLATION BRACING FOR SPANS > 60 FEET	1705.2.4
CONCRETE (SEE GENERAL STRUCTURAL NOTE 22 FOR ADDITIONAL REQUIREMENTS)**		
REINFORCING PLACEMENT	PERIODIC AND PRIOR TO ALL CONCRETE POURS	TABLE 1705.3 ITEM 1
REINFORCING WELDING	PERIODIC (CONTINUOUS FOR SHEAR WALL, MOMENT FRAME, OR OTHER SHEAR REINFORCING AND ALL WELDS GREATER THAN 5/16")	TABLE 1705.3 ITEM 2c
ANCHOR BOLT PLACEMENT	PERIODIC AND PRIOR TO ALL CONCRETE POURS	TABLE 1705.3 ITEM 3
CONCRETE PLACEMENT***	CONTINUOUS	TABLE 1705.3 ITEM 5,6&7
CURING & FORMWORK	PERIODIC	TABLE 1705.3 ITEM 8,11&12
POST-TENSIONING	CONTINUOUS	TABLE 1705.3 ITEM 9&11
PRECAST CONCRETE ERECTION	PERIODIC	TABLE 1705.3 ITEM 10
WOOD		
FASTENERS, BOLTS, STRAPS, HOLDOWNS, ETC.	PERIODIC FOR CONNECTIONS OF ALL MEMBERS OF THE SEISMIC AND WIND FORCE RESISTING SYSTEM INCLUDING DIAPHRAGMS, SHEAR WALLS, STRUTS, & HOLDOWNS	1705.11.1&1705.12.2**** (SEE 1705.5.1 FOR ADDL. REQUIREMENTS AT HIGH LOAD DIAPHRAGMS)
PREFABRICATED CONNECTOR PLATE WOOD TRUSSES	REVIEW OF TEMPORARY AND PERMANENT INSTALLATION BRACING FOR SPANS > 60FT	1705.5.2
EXPANSION BOLTS & INSERTS	PERIODIC INCLUDING TORQUE TESTS IN ACCORDANCE WITH APPROVED ICC-ES REPORTS	TABLE 1705.3 ITEM 4
EPOXY GROUTED RODS OR REBAR	PERIODIC INCLUDING INSPECTION OF EMBEDMENT DEPTH AND HOLE CLEANLINESS PRIOR TO ALL INSTALLATIONS (CONTINUOUS FOR UPWARDLY INCLINED ANCHORS)	TABLE 1705.3 ITEM 4, ACI 318-14 SECTION 17.8
SOIL COMPACTION	CONTINUOUS	1705.6

* STRUCTURAL STEEL QUALITY ASSURANCE INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING, MAY BE WAIVED IF APPROVED BY THE OWNER AND BUILDING OFFICIAL FOR WORK PERFORMED ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION IN ACCORDANCE WITH IBC SECTION 1704.2.5.1.
** EXCEPTIONS 1 THRU 5 PER IBC SECTION 1705.3 SHALL NOT APPLY TO CONCRETE WORK ON THIS PROJECT.
*** FREQUENCY OF CONCRETE LABORATORY TESTING SHALL BE IN ACCORDANCE WITH ACI 318-14 SECTION 26.12.2 UNLESS OTHERWISE NOTED IN THE PROJECT SPECIFICATIONS.
**** THE EXCEPTION FOR SHEATHING FASTENED AT A SPACING GREATER THAN 4"oc SHALL NOT APPLY TO WOOD OR METAL FRAMING ON THIS PROJECT.

ARCH, MECH, & ELEC ITEMS	SEISMIC DESIGN REQUIREMENTS (ASCE 7-10 CHAPTER 13)	PERIODIC SPECIAL INSPECTION AS SPECIFIED PER IBC CHAPTER 17
EXTERIOR WALLS, VENEER & CLADDING	ASCE 7-10 SECTION 13.5.3	REQUIRED FOR WALL FRAMING, FOR FASTENING OF VENEER OR CLADDING EXCEEDING 5 PSF (IBC 1705.12.5)
SUSPENDED CEILINGS	ASCE 7-10 SECTION 13.5.6	INSPECTIONS PER IBC SECTION 110 AND ASCE 7 13.5.6.2.2 AS REQUIRED
ACCESS FLOORS	ASCE 7-10 SECTION 13.5.7	REQUIRED FOR ANCHORAGE (IBC 1705.12.5.1)
PARTITION WALLS FASTENING	ASCE 7-10 SECTION 13.5.8	REQUIRED DURING ERECTION AND FOR WALLS > 15 PSF (IBC 1705.12.5)
STEEL STORAGE RACKS	ASCE 7-10 SECTION 15.5.3	REQUIRED FOR ANCHORAGE OF RACKS > 8 FEET IN HEIGHT (IBC 1705.12.7)
GLAZING SYSTEMS	ASCE 7-10 SECTION 13.5.9	NOT REQUIRED
LIFE SAFETY COMPONENTS INCLUDING FIRE PUMPS, EMERGENCY GENERATORS, SMOKE EVACUATION FANS, AND COMPONENTS WITH HAZARDOUS COMBUSTIBLE, OR HIGHLY TOXIC CONTENTS (Ip=1.5 PER ASCE 7-10 SECTION 13.1.3)	ASCE 7-10 SECTION 13.6 AND IBC 1705.13.2	REQUIRED FOR VERIFICATION OF CERTIFICATE OF COMPLIANCE LABEL ON COMPONENT (IBC 1705.12.4)
INSTALLATION AND ANCHORAGE OF SPRINKLER SYSTEMS, FIRE PUMPS, EMERGENCY GENERATORS, COMPONENTS WITH HAZARDOUS, COMBUSTIBLE, OR HIGHLY TOXIC CONTENTS (Ip=1.5 PER ASCE 7-10 SECTION 13.1.3)	ASCE 7-10 SECTION 13.6 AND IBC 1705.13.2	REQUIRED (IBC 1705.12.4 & 1705.12.6)
ALL OTHER MECHANICAL AND ELECTRICAL COMPONENTS	ASCE 7-10 SECTION 13.6	NOT REQUIRED

STRUCTURAL OBSERVATION IN ACCORDANCE WITH IBC SECTION 1704.6 WILL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD DURING CONSTRUCTION AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION CONSISTS OF VISUAL OBSERVATION FOR GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS AND DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY SECTIONS 110, 1704, OR OTHER SECTIONS OF THE IBC.

CONTRACTOR STATEMENT OF RESPONSIBILITY: CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY IN ACCORDANCE WITH IBC SECTION 1704.4 TO THE BUILDING OFFICIAL AND OWNER PRIOR TO CONSTRUCTION ACKNOWLEDGING THE SPECIAL REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS.

GEOTECHNICAL:

15. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. FOOTINGS SHALL BEAR ON FIRM SOIL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ ELEVATIONS SHOWN ON THE DRAWINGS ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS SHALL BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND GEOTECHNICAL ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE GEOTECHNICAL REPORT.

ALLOWABLE SOIL PRESSURE	5,000 PSF (6,500 PSF FOR SEISMIC/WIND)
LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED/PASSIVE/SEISMIC)	50 PCF/40 PCF/300 PCF/8H
COEFFICIENT OF FRICTION	0.35
SOIL PROFILE TYPE	SITE CLASS D

GEOTECHNICAL REPORT REFERENCE:"PROPOSED DEVELOPMENT 1038 & 1040 SOUTH KING STREET, SEATTLE, WASHINGTON", PROJECT NO. 19-146, BY PANGEO INCORPORATED (Mr. MAN CHONG) DATED NOVEMBER 2020.

ANCHORAGE:

16. EXPANSION BOLTS INTO CONCRETE SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS: "KWIK BOLT TZ" AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 1917); OR "STRONG-BOLT 2" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES NO. 3037); OR "POWERS-STUD+ SD2" AS MANUFACTURED BY DEWALT (ICC-ES NO. 2502). SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC-ES ACCEPTANCE CRITERIA AC193. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION. EXPANSION BOLTS SHALL NOT BE USED AS SUBSTITUTES FOR EMBEDDED ANCHOR BOLTS UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. NOTIFY ENGINEER IF BOLT LOCATIONS CONFLICT WITH REINFORCING STEEL – DO NOT CUT REINFORCING OR REDUCE EMBEDMENT DEPTHS WITHOUT PRIOR APPROVAL.

    UNLESS OTHERWISE NOTED, PROVIDE THE FOLLOWING NOMINAL EMBEDMENT DEPTHS FOR EXPANSION BOLTS INTO CONCRETE:

HILTI KWIK BOLT TZ:	
3/8"Ø EXPANSION BOLTS	2 5/16"
1/2"Ø EXPANSION BOLTS	3 5/8"
5/8"Ø EXPANSION BOLTS	4 7/16"
3/4"Ø EXPANSION BOLTS	5 5/16"
SIMPSON STRONG-BOLT 2:	
3/8"Ø EXPANSION BOLTS	2 7/8"
1/2"Ø EXPANSION BOLTS	3 7/8"
5/8"Ø EXPANSION BOLTS	5 1/8"
3/4"Ø EXPANSION BOLTS	5 3/4"
DEWALT/POWERS POWER-STUD+SD2:	
3/8"Ø EXPANSION BOLTS	2 3/8"
1/2"Ø EXPANSION BOLTS	3 3/4"
5/8"Ø EXPANSION BOLTS	4 7/8"
3/4"Ø EXPANSION BOLTS	5 3/4"

17. EXPANSION BOLTS INTO GROUTED MASONRY SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS: "KWIK BOLT 3", AS MANUFACTURED BY HILTI, INC. (ICC-ES REPORT NO. 1385); OR "WEDGE-ALL" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES REPORT NO. 1396); OR "POWER-STUD-SD1" AS MANUFACTURED BY DEWALT (ICC-ES NO. 2966). SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC-ES ACCEPTANCE CRITERIA AC01. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION. EXPANSION BOLTS SHALL NOT BE USED AS SUBSTITUTES FOR EMBEDDED ANCHOR BOLTS UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. A MINIMUM OF 6" OF SOLID GROUT SHALL BE IN PLACE AND CURED TO A MINIMUM STRENGTH OF 2,000 PSI ON ALL SIDES OF EXPANSION BOLTS AT MASONRY WALLS PRIOR TO BOLT INSTALLATION. BOLTS IN MASONRY WALL SHALL COMPLY WITH RESTRICTIONS SHOWN IN DETAIL 3/S4.1 AT HEAD JOINTS. NOTIFY ENGINEER IF BOLT LOCATIONS CONFLICT WITH REINFORCING STEEL – DO NOT CUT REINFORCING OR REDUCE EMBEDMENT DEPTHS WITHOUT PRIOR APPROVAL.

18. DRIVE PINS AND OTHER POWDER-ACTUATED FASTENERS SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS: "TE SERIES" (0.157" DIAMETER) AS MANUFACTURED BY ITW RAMSET (ICC-ES NO. 1799); OR "X-U" (0.157" DIAMETER) AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 2269); OR "STRONG-TIE PDPA" (0.157" DIAMETER) AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES NO. 2138); OR "CSI PIN" (0.157" DIAMETER) AS MANUFACTURED BY DEWALT (ICC-ES NO. 2024); OR AN APPROVED EQUIVALENT IN STRENGTH AND EMBEDMENT. MINIMUM EMBEDMENT IN CONCRETE SHALL BE 1" UNLESS OTHERWISE NOTED. MAINTAIN AT LEAST 3-1/2" TO NEAREST CONCRETE EDGE.

19. EPOXY-GROUTED RODS OR REBAR TO CONCRETE SPECIFIED ON THE DRAWINGS SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS: "SET-XP" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES NO. 2508); OR "HIT-HY 200" AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 3187), "SAFE-SET" INSTALLATION WITH HOLLOW CARBIDE DRILL BIT IS PERMITTED; OR "PURE110+" AS MANUFACTURED BY DEWALT (ICC-ES NO. 3298), OR "AC200+" AS MANUFACTURED BY DEWALT (ICC-ES NO. 4027). SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC-ES ACCEPTANCE CRITERIA AC308. SPECIAL INSPECTION OF EPOXY-GROUTED ANCHOR INSTALLATION IS REQUIRED. NOTIFY ENGINEER IF ANCHOR LOCATIONS CONFLICT WITH REINFORCING STEEL – DO NOT CUT REINFORCING OR REDUCE EMBEDMENT DEPTHS WITHOUT PRIOR APPROVAL. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY CERTIFIED PERSONNEL IN CONFORMANCE TO ACI 318-14 SECTION 17.8.2.2. HOLES SHALL BE HAMMER DRILLED AND DRY.

    EPOXY GROUTED RODS OR REBAR SHALL NOT BE USED AS SUBSTITUTES FOR CAST-IN-PLACE ANCHOR BOLTS, THREADED RODS, OR REINFORCING STEEL UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. FIELD FIXES OR OTHER CONDITIONS NOT ADDRESSED IN THE DOCUMENTS MUST BE SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER, INCLUDING EMBEDMENT DEPTHS.

    UNLESS OTHERWISE NOTED, PROVIDE THE FOLLOWING EMBEDMENT DEPTHS FOR ANCHORS AT CONCRETE:

3/8"Ø ROD OR #3 BAR	4"
1/2"Ø ROD OR #4 BAR	5"
5/8"Ø ROD OR #5 BAR	7"
3/4"Ø ROD OR #6 BAR	9"
7/8"Ø ROD OR #7 BAR	12"
1"Ø ROD OR #8 BAR	15"

20. HELICAL TIES THROUGH BRICK/HOLLOW CLAY TILE/TERRA COTTA MASONRY SHALL BE ONE OF THE FOLLOWING: "DRYFIX" MANUFACTURED BY HELIFIX, A DIVISION OF HALFEN USA; "HELI-TIE" BY SIMPSON STRONG-TIE COMPANY, INC.; OR "CTP STITCH-TIE" BY CONSTRUCTION TIE PRODCUTS, INC.; OR "HELI-PIN" MANUFACTURED BY DEWALT. TIES SHALL BE MANUFACTURED OF GRADE 304 STAINLESS STEEL. PROVIDE SIZE AND LENGTHS AS INDICATED ON THE DRAWINGS. TIES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND WITH MANUFACTURER'S EQUIPMENT. PERIODIC SPECIAL INSPECTION OF TIES IS REQUIRED. PATCH BUILDING SURFACE AFTER HELICAL WALL TIE INSTALLATION WITH A COLOR-APPROVED CEMENTITIOUS MORTAR.

    (2) TEST INSTALLATIONS SHALL BE PERFORMED FOR EACH TYPE OF HELICAL WALL TIE INSTALLATION, INCLUDING EXTERIOR PATCHING WORK, AND TEST INSTALLATIONS SHALL BE REVIEWED BY THE OWNER'S REPRESENTATIVE AND ARCHITECT PRIOR TO THE INSTALLATION OF THE REMAINDER OF HELICAL WALL TIES.

21. CONCRETE SCREW ANCHORS SHALL BE ONE OF THE FOLLOWING INSTALLED IN STRICT ACCORDANCE WITH THE ICC-ES REPORTS INDICATED AND MANUFACTURER'S INSTRUCTIONS INCLUDING MINIMUM EMBED REQUIREMENTS: "TITEN HD" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY (ICC-ES NO. 2713); OR "KWIK HUS-EZ" AS MANUFACTURED BY HILTI, INC. (ICC-ES NO. 3027); OR "SCREW-BOLT+" AS MANUFACTURED BY DEWALT (ICC-ES NO. 3889). SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH ICC-ES REPORTS INDICATING EQUIVALENT OR GREATER LOAD CAPACITIES. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC-ES ACCEPTANCE CRITERIA AC193. SPECIAL INSPECTION IS REQUIRED FOR ALL CONCRETE SCREW ANCHOR INSTALLATION. CONCRETE SCREW ANCHORS SHALL NOT BE USED AS SUBSTITUTES FOR EMBEDDED ANCHOR BOLTS OR EXPANSION BOLTS UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. NOTIFY ENGINEER IF SCREW ANCHOR LOCATIONS CONFLICT WITH REINFORCING STEEL – DO NOT CUT REINFORCING OR REDUCE EMBEDMENT DEPTHS WITHOUT PRIOR APPROVAL.

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S6.4	WOOD ROOF FRAMING DETAILS
S6.5	WOOD SHEAR WALL SCHEDULE AND DETAILS

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NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
GENERAL STRUCTURAL NOTES

JOB NUMBER

SHEET NUMBER
S1.1

GENERAL STRUCTURAL NOTES

(THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS.)

CONCRETE:

22. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 318-14 CHAPTER 26 AND ACI 301. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION	MIN. 28 DAY STRENGTH (U.O.N.) (f'c)	EXPOSURE CLASSES (ACI 318-14 TABLES 19.3.1.1 AND 19.3.2.1)
A. CONCRETE EXPOSED TO WEATHER	4,500 PSI	(F1, S0, W0, C1)
B. CONCRETE EXPOSED TO EARTH (FOUNDATIONS, BASEMENT WALLS, ETC.)	5,000 PSI	(F0, S0, W0, C1)
C. ALL OTHER CONCRETE (UNLESS LISTED BELOW)	4,000 PSI *	(F0, S0, W0, C0)
D. CONCRETE SHEAR WALLS	5,000 PSI	PER ITEM A THROUGH C ABOVE
E. COLUMNS	5,000 PSI	PER ITEM A THROUGH C ABOVE
F. MILD SLAB & BEAMS SUPPORTING SLABS	5,000 PSI AT 56 DAYS**	PER ITEM A THROUGH C ABOVE

* WATER-CEMENTITIOUS MATERIAL RATIO FOR INTERIOR SLABS SHALL BE BETWEEN 0.40 AND 0.44.

** SHRINKAGE CRITERIA: MIX SHALL BE PROPORTIONED SUCH THAT THE SLAB DRYING SHRINKAGE SHALL NOT EXCEED 0.035% AT 28 DAYS (LABORATORY CONDITIONS). SUBMIT STRENGTH AND SHRINKAGE TEST DATA AND MIX DESIGN TO THE STRUCTURAL ENGINEER FOR REVIEW A MINIMUM OF TWO WEEKS PRIOR TO PLACING ANY CONCRETE.

CONCRETE MIXES SHALL MEET OR EXCEED THE REQUIREMENTS SPECIFIED ABOVE. MIXES SHALL BE SUBMITTED TO THE ENGINEER AND BUILDING OFFICIAL FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE AND SHALL INCLUDE THE AMOUNTS OF CEMENT, CEMENTITOUS MATERIAL, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES, AS WELL AS THE WATER-CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318-14, CHAPTER 26 AND 27. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

CONCRETE MAY BE PLACED BY THE "SHOTCRETE" METHOD, PROVIDED THE APPROVALS, TESTS, AND INSPECTIONS REQUIRED BY THE BUILDING DEPARTMENT ARE OBTAINED. SHOTCRETE MATERIALS, EQUIPMENT, PROCEDURES, PROPORTIONS, BATCHING AND MIXING, AND PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 506.2 AND IBC SECTION 1908. IF WALLS ARE EXPOSED COORDINATE FINISH REQUIREMENTS WITH ARCHITECT.

23. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, fy = 60,000 PSI. GRADE 60 REINFORCING BARS WHICH ARE TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCEMENT COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. D1.4 ARE SUBMITTED.

LONGITUDINAL REINFORCEMENT IN ALL COLUMNS, PILES, DUCTILE FRAME MEMBERS, STRUT MEMBERS, COUPLING BEAMS, AND VERTICAL REINFORCMENT IN SHEAR WALLS SHALL COMPLY WITH ASTM A706. ASTM A615 GRADE 60 REINFORCEMENT ARE ALLOWED IN THESE MEMBERS IF: (A) THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI (RETESTS SHALL NOT EXCEED THIS VALUE BY MORE THAN AN ADDITIONAL 3,000 PSI), (B) THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRESS TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25, AND (C) MINIMUM ELONGATION IN 8 IN. SHALL BE AT LEAST 14 PERCENT FOR BAR SIZES NO. 3 THROUGH NO. 6, AT LEAST 12 PERCENT FOR BAR SIZES NO. 7 THROUGH NO. 11, AND AT LEAST 10 PERCENT FOR BAR SIZES NO. 14 AND NO. 18. CERTIFIED MILL TEST REPORTS FOR EACH SHIPMENT OF REINFORCING SHALL BE SUBMITTED FOR REVIEW.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064.

SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, fy = 60,000 PSI.

24. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT (#5 AND SMALLER) 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS (#5 AND SMALLER) 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-14 SECTION 25.5, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 12" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.

25. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315-99 AND 318-14. LAP ALL CONTINUOUS REINFORCEMENT IN ACCORDANCE WITH "REINFORCEMENT SPLICE AND DEVELOPMENT LENGTH SCHEDULE" OF 20/S3.1. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 12" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.

26. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . . 3"
FORMED SURFACES EXPOSED TO EARTH (i.e. WALLS BELOW GROUND) OR WEATHER (#6 BARS OR LARGER). . . 2"
(#5 BARS OR SMALLER). . . 1 1/2"
SLAB-ON-GRADE BOTTOM REINFORCING (WITH VAPOR BARRIER BELOW) . . . . 1 1/2"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS . . . . 1 1/2"
SLABS AND WALLS (INTERIOR FACE) . . . . (#11 BARS OR SMALLER) . . 1"
(#14 OR #18 BARS) . . 1 1/2"

27. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES.

28. BONDING AGENT SHALL BE "MASTEREMACO ADH 326" BY BASF CORPORATION. OR EQUIVALENT, AND SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST HARDENED CONCRETE. PLACE IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, INCLUDING PREPARATION OF EXISTING SURFACES. CONCRETE SHALL BE CONSIDERED HARDENED AFTER 56 DAYS.

29. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (6,000 PSI MINIMUM).

30. MECHANICAL SPLICING OF REINFORCING BARS, WHERE INDICATED ON THE DRAWINGS, SHALL BE BY AN ICC-ES APPROVED SYSTEM (SUCH AS LENTON, DAYTON SUPERIOR, ETC.) AND SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BARS. SPLICE LOCATIONS OF ALTERNATE BARS SHALL BE OFFSET BY A DISTANCE WHICH CONFORMS TO THE ICC-ES REPORT OF THE SPLICE USED AND TO ACI 318-14 SECTION 18.2.7.1.

31. HEADED DEFORMED BARS, WHERE INDICATED ON THE DRAWINGS, SHALL BE AN ICC-ES APPROVED SYSTEM AND SHALL CONFORM TO ASTM A970 INCLUDING ANNEX A1 REQUIREMENTS FOR CLASS HA HEAD DIMENSIONS.

32. RIGID INSULATION BELOW TOPPING SLABS SHALL BE CLOSED-CELL, LIGHTWEIGHT RIGID CELLULAR POLYSTYRENE GEOFOAM IN WITH COMPLIANCE WITH ASTM D6817 WITH A MAX DENSITY OF 2.5 POUNDS PER CUBIC FOOT, AND WITH A COMPRESSIVE STRENGTH AS INDICATED BELOW . INSTALL IN STRICT ACCORDANCE WITH MANUFACTURERS REQUIREMENTS WITH OFFSET JOINTS.

LOCATION	COMPRESSIVE STRENGTH
INTERIOR SLABS	EPS15 WITH A COMPRESSIVE RESISTANCE OF 3.6 PSI AT 1% STRAIN
EXTERIOR SLABS	EPS29 WITH A COMPRESSIVE RESISTANCE OF 10.9 PSI AT 1% STRAIN

POST-TENSIONING IN SLAB:

33. SPECIFICATIONS: ALL MATERIALS, INSTALLATION, AND WORKMANSHIP SHALL CONFORM TO THE PROJECT SPECIFICATIONS.

34. FORCE DESIGNATION: POST-TENSIONING IS DESIGNATED ON THE STRUCTURAL PLANS WITH THE TOTAL FINAL EFFECTIVE FORCES REQUIRED. THE TOTAL EFFECTIVE FORCE PROVIDED BY THE CONTRACTOR SHALL ACCOUNT FOR THE LOSS OF PRESTRESS PER SECTION 20.3.2.6 ACI 318-14.

35. PRESTRESSING STEEL: SHALL BE ½" DIAMETER, SEVEN WIRE, LOW-RELAXATION STRAND MANUFACTURED IN ACCORDANCE WITH ASTM A416, FREE FROM CORROSION AND HAVING A GUARANTEED MINIMUM ULTIMATE TENSILE STRENGTH OF 270 KSI. STRAND 5HALL BE SHOP COATED WITH COMPOUND TO PREVENT BOND, REDUCE FRICTION, RESIST CORROSION, AND SE ENCASED IN SLIPPAGE SHEATHING. TEARS IN SHEATHING SHALL BE PATCHED BEFORE PLACING CONCRETE. TENDON FABRICATION PROCEDURE SHALL CONFORM TO THE POST-TENSIONING INSTITUTE "SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS."

36. STATEMENT OF SPECIAL INSPECTIONS – STRUCTURAL ITEMS (SEISMIC DESIGN CATEGORY D***):***
POST-TENSIONED SLAB REVIEW: IN ACCORDANCE WITH THE TERMS AGREED TO BY ALL PARTIES DURING THE PRE-CONSTRUCTION MEETING, THE CABLES, REINFORCING, AND EMBEDDED ITEMS IN A POST-TENSIONEP SLAB SHALL BE REVIEWED BY THE APPOINTED REPRESENTATIVE PRIOR TO PLACING CONCRETE. ALL REBAR COUNTS AND TENDON PROFILES SHALL BE REVIEWED BY THE SPECIAL INSPECTION AGENCY AND ALL NOTED DISCREPANCIES CORRECTED BY CONTRACTOR.

37. ANCHORAGES: ANCHORING HARDWARE SHALL MEET THE MINIMUM REQUIREMENTS SET FORTH IN ACI STANDARD BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (PER SECTION 25.8 CI 518-14) OR POST-TENSIONING INSTITUTE, "POST-TENSIONING MANUAL, 6th EDITION."

38. CONCRETE STRENGTH: SHALL BE PER GENERAL STRUCTURAL NOTE 22 GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED IN THE VICINITY OF TENDONS OR ANCHORS. TENSIONING OPERATIONS SHALL NOT COMMENCE UNTIL TEST OF CYLINDERS, CURED UNDER JOBSITE CONDITIONS, INDICATES THAT CONCRETE HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

39. TENDON PLACEMENT: TENDONS SHALL BE DRAPED TO A PARABOLIC PROFILE BETWEEN SUPPORTS AS SHOWN IN DETAILS ANP SHALL CONFORM TO THE PROFILE CONTROL POINTS SHOWN ON PLAN. DIMENSIONS SHOWN ON THE DRAWINGS LOCATE THE CENTER OF GRAVITY OF THE TENDON OR GROUP OF TENDONS. LOW POINTS ARE AT MIDSPAN UNLESS OTHERWISE NOTED. ADEQUATE SUPPORT BARS AND CHAIRS SHALL BE FURNISHED TO HOLD TENDONS IN PLACE DURING CONCRETE PLACEMENT. SEE POST-TENSIONING GENERAL NOTES H & I. CHAIRS FOR SUPPORTS BARS AT BANDED TENDONS SHALL BE SPACED NOT MORE THAN 2'-0"oc. (TWO CHAIR MINIMUM). VERTICAL TENDON DIMENSIONS SHALL NOT VARY MORE THAN ¼" (3/8" FOR CONCRETE THICKER THAN 8") FROM THE DIMENSIONS SHOWN, EXCEPT THAT 1" MINIMUM CONCRETE COVER SHALL BE MAINTAINED AT ALL TIMES. SLIGHT DEVIATION IN SPACING OF SLAB TENDONS WILL BE PERMITTED WERE REQUIRED TO AVOID OPENINGS, INSERTS, AND DOWELS WHERE TENDONS SEEM TO INTERFERE WITH EACH OTHER, ONE TENDON MAY BE MOVED HORIZONTALLY IN ORDER TO AVOID THE INTERFERENCE. A MINIMUM OF TWO BANDED AND UNIFORMLY DISTRIBUTED TENDONS SHALL PASS OVER THE CENTER OF THE SUPPORTING COLUMN. CENTER BANDED TENPONS ON COLUMN WHERE POSSIBLE. WHERE MILD STEEL INTERFERES WITH TENDON LOCATIONS, PROPER TENPON LOCATION HAS PRIORITY. LOCATION OF BANDED TENDONS AND BANDED REINFORCING HAS PRIORITY OVER UNIFORMLY DISTRIBUTED TENDONS AND DISTRIBUTED REINFORCING AT SUPPORTS (SEE 3/S3.4). TWISTING OR ENTWINING OF INDIVIDUAL WIRES OR STRANDS WITHIN A BUNDLE SHALL NOT BE PERMITTED. NO PORTION OF THE TENDON CABLE SHALL BE EXPOSED.

40. MINIMUM CHAIRING: TENDONS SHALL BE SECURED TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION OF THE POST-TENSIONING TENDON DURING AND AFTER THE PLACING OF CONCRETE. SPACING OF POSITIONING DEVICES SHALL NOT EXCEED 3'-6" ON-CENTER.

41. SUPPORT BARS: THE MILD REINFORCING SHOWN ON THE PLANS IS THAT WHICH IS REQUIRED BY DESIGN. SPACING OF SUPPORT EARS SHALL NOT EXCEED 4'-0" ON-CENTER.

42. SHORING: AT ALL POST-TENSIONED CONCRETE SHALL REMAIN IN PLACE UNTIL TENDONS ARE STRESSED. SHORING AT CLOSURE POUR STRIPS SHALL REMAIN IN PLACE UNTIL CONCRETE IN THE CLOSURE POUR STRIP HAS REACHED DESIGN STRENGTH. SEE PLANS FOR EXTENT OF SHORING NEAR CLOSURE STRIPS. SHORING IN THIS ZONE SHALL BE DESIGNED FOR ALL CONSTRUCTION LOADS UNTIL THE CONCRETE WITHIN THE CLOSURE POUR STRIP HAS REACHED DESIGN STRENGTH.

43. CONSTRUCTION JOINTS: CONTRACTOR FOR STRUCTURAL ENGINEERS REVIEN. ALL SUBMIT ALL PROPOSED CONSTRUCTION JOINT LOCATIONS

44. PIPE AND CONDUIT: SEE POST-TENSIONING DETAILS ANP NOTES BELOW FOR RESTRICTIONS ON PLACEMENT OF PIPE AND CONDUIT IN POST-TENSIONED SLAB.
CONDUIT OR PIPE:
SHALL HAVE A MAXIMUM OUTSIDE DIA. OF 1/6 TIMES SLAB THICKNESS OR 2"
SHALL NOT BE PLACED WITHIN 4'-0" OF COLUMN FACE
SHALL NOT BE PLACED WITHIN 1'-6" OF TENDON ANCHORS
SHALL BE A MINIMUM OF 2" CLEAR FROM TENDONS AT ALL LOCATIONS
SHALL BE SPACED A MINIMUM OF THREE x DIA. APART (LARGEST DIA.)
SHALL BE LOCATED IN THE MIDDLE THIRD OF THE SLAB SPAN
AS MUCH AS POSSIBLE, CONDUIT SHALL RUN PARALLEL WITH EITHER THE BANDED OR DISTRIBUTED TENDONS, NOT DIAGONALLY.
WHERE MORE THAN (3) CONDUIT GROUPS OF (3) CONDUITS ARE LESS THAN 12" CENTER-TO-CENTER OR WHERE CONTRACTOR CHOOSES TO REDUCE CONDUIT SPACING WITHIN A GROUP, SPECIAL REINFORCING WILL BE REQUIRED. TYPICAL REINFORCING AT CONDUIT GROUPS SHALL BE PER DETAIL 5/S3.5. CONDUIT SPACED FARTHER APART THAN SPECIFIED MINIMUM DO NOT REQUIRE ADDITIONAL REINFORCING.

45. BLOCKOUTS: CONTRACTOR SHALL SUBMIT TO THE STRUCTURAL ENGINEER LOCATIONS AND SIZES OF ALL MECHANICAL, PLUMBING AND ELECTRICAL BLOCKOUTS LOCATED WITHIN THE POST-TENSIONED SLAB, SPECIFICALLY AT HATCHED AREAS OF STUDRAILS PER 20/S3.6 AND NEAR ALL COLUMNS. SUBMITTAL SHALL OCCUR THREE WEEKS PRIOR TO PLACEMENT OF BLOCKOUTS. SEE 10/S3.5 FOR ADDITIONAL REINFORCEMENT REQUIRED AT BLOCKOUT GROUPS.

46. STRESSING OPERATION: TENDONS SHALL BE STRESSED BY MEANS OF A HYDRAULIC JACK EQUIPPED WITH A CALIBRATED HYDRAULIC PRESSURE GAUGE. A CALIBRATION CHART SHALL ACCOMPANY EACH JACK AND GAUGE. STRESSING OPERATIONS SHALL BE IN ACCORDANCE WITH SEQUENCE PROVIDED BY THE POST-TENSIONING SUPPLIER. AS A MINIMUM, STRESS MINIMUM OF (2) TENDONS AT SLAB EDGES PERPENDICULAR TO BANDED TENDONS BEFORE STRESSING BANDED TENDONS. JOB SITE INSTRUCTION OF CONTRACTOR'S PERSONNEL IN ALL PLACING AND STRESSING OPERATIONS SHALL BE PROVIDED BY POST-TENSIONING SUPPLIER AS REQUIRED. RECORDS SHALL BE KEPT BY A QUALIFIED AGENCY OF ALL JACKING FORCES AND ELONGATIONS. MEASURED ELONGATIONS DEVIATING UP TO 1% FROM REQUIRED ELONGATIONS ARE ACCEPTABLE. TENDONS LESS THAN 50 FEET IN LENGTH SHALL NOT HAVE MEASURED ELONGATIONS DEVIATING MORE THAN 1/4". IF MEASURED ELONGATIONS EXCEED TOLERANCE, CONTACT TENDON SUPPLIER. TENDON TAILS SHALL NOT BE GUT PRIOR TO REVIEW OF ELONGATION REPORTS BY STRUCTURAL ENGINEER.

47. INSERTS: CONCRETE INSERTS TO SUSPEND MECHANICAL, ELECTRICAL, AND ARCHITECTURAL WORK SHALL BE CAST-IN-PLACE. POWER DRIVEN FASTENERS WILL BE PERMITTED ONLY WERE IT CAN BE SHOWN THAT THE FASTENERS WILL NOT SPALL THE CONCRETE, ARE LOCATED SO AS TO AVOID DAMAGING THE TENDONS, AND DO NOT PENETRATE SLAB BY MORE THAN ¾".

48. ENCAPSULATED POST-TENSIONING ANCHORAGE SYSTEM: ALL TENDON ANCHORS SHALL BE ENCAPSULATED. ENCAPSULATED ANCHORAGE SYSTEM SHALL MEET ALL REQUIREMENTS BELOW AND THOSE OF PTI GUIDE SPECIFICATIONS FOR MONO-STRAND CORROSION PROTECTION SYSTEMS FOR AGGRESSIVE ENVIRONMENTS. ALL ANCHOR PLATES SHALL BE PLASTIC COATED, HAVE GREASE-FILLED CAPS THAT COVER THE CUT END OF THE T ENPON, AND HAVE GREASE-FILLED TUBES OR TRUMPETS TO COVER EXPOSED CABLE ON THE SLAB-SIDE OF THE ANCHOR PLATE.

49. FIELD QUALITY CONTROL
    A. ENCAPSULATED TENDONS SHALL NOT BE EXPOSED TO WEATHER FOR MORE THAN SEVEN (7) CALENDAR DAYS PRIOR TO CONCRETE PLACEMENT.
    B. TENDON SHEATHING DAMAGED OVER MORE THAN TEN PERCENT OF LENGTH SHALL BE REJECTED. DAMAGED LENGTH NEED NOT BE CONTINUOUS.
    C. BEFORE CONCRETE PLACEMENT AROUND SHEATHING, ALL TENDON DAMAGE SHALL BE REPAIRED TO WATERTIGHT CONDITION. REPAIRS SHALL BE ACCEPTABLE TO THE ENGINEER.
    D. INSPECT SHEATHING FOR UNREPAIRED DAMAGE, FOR WATERTIGHT SEAL BETWEEN SHEATHING AND ANCHOR, AND FOR CORRECT INSTALLATION OF ANCHORS, BEFORE CONCRET IS PLACED.
    E. RELATIVE WEDGE EMBEDMENT SHALL NOT EXCEED 1/8".

50. PROTECTION
    A. AFTER RECEIVING AUTHORIZATION FROM THE ENGINEER, AS DESCRIBED IN POST-TENSIONING GENERAL NOTE Q, THE TENDON TAILS SHALL BE CUT AND THE EXPOSED TENDON END AND CHUCKS SHALL BE MADE WATERTIGHT BY COVERING WITH GREASE-FILLED TENDON CAP AS SOON AS TENDONS ARE COOL TO THE TOUGH. CUTTING OF TENDONS ANP INSTALLATION OF GREASE CAPS SHALL BE WITNESSED BY THE SPECIAL INSPECTOR.
    B. AFTER SEALING EXPOSED END OF TENDONS AND CHUCKS, AND BEFORE GROUTING TENDON POCKET, COAT POCKET WITH BONDING AGENT. PREPARE SURFACE PER MANUFACTURERS INSTRUCTIONS.
    C. GROUT TENDON POCKETS SOLID WITH NON-SHRINK, NON-STAIN, CHLORIDE FREE GROUT SUCH AS MASTERFLOW 816 OR TARGET PORTLAND EXPANPING GROUT.

STEEL:

51. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON THE LATEST EDITIONS OF THE A.I.S.C. SPECIFICATIONS AND CODES:

A. SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS-ALLOWABLE STRESS AND PLASTIC DESIGN, OR LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.

B. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, ADOPTED APRIL 14, 2010.

IN REFERENCE TO SECTIONS 3.1.2 AND 4.4.1, THE CONTRACT DOCUMENTS (DESIGN DRAWINGS) SHOW COMPLETE CONNECTION DETAILS FOR ALL MEMBERS EXCEPT THOSE NOTED TO BE DESIGN-BUILD ITEMS. ALTERNATE CONNECTION DETAILS REQUESTED BY THE FABRICATOR SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL VIA A REQUEST FOR INFORMATION (RFI) PRIOR TO COMPLETION OF SHOP DRAWINGS.

IN REFERENCE TO SECTION 3.1.6, FABRICATOR SHALL ALSO REVIEW PROJECT SPECIFICATIONS AND ARCHITECTURAL DRAWINGS TO DETERMINE PAINTING AND GALVANIZING REQUIREMENTS. MEMBERS EMBEDDED IN CONCRETE, MASONRY OR TO RECEIVE SPRAY-ON FIREPROOFING SHALL NOT BE PAINTED. DO NOT PAINT OR GALVANIZE AREAS OF PIECES TO BE FIELD WELDED, OR REMOVE PAINT AND GALVANIZING IN FIELD PRIOR TO WELDING.

IN REFERENCE TO SECTION 3.3, IN THE EVENT OF DISCREPANCIES BETWEEN DESIGN DRAWINGS AND SPECIFICATIONS, THE DESIGN DRAWINGS GOVERN.

IN REFERENCE TO SECTION 4.1, THE FABRICATOR SHALL NOT ASSUME BID PACKAGES CONSTITUTE RELEASING THE DRAWINGS FOR CONSTRUCTION WITHOUT EXPLICIT DIRECTION TO DO SO BY THE OWNER.

C. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

D. QUALITY CONTROL SHALL BE IN ACCORDANCE WITH AISC 360 CHAPTER N (AISC 341 CHAPTER J FOR STEEL SEISMIC SYSTEM).

CONTRACTOR SHALL ALSO COMPLY WITH OSHA REGULATION 29 CFR PART 1926 SUBPART R - STEEL ERECTION, PUBLISHED JANUARY 18, 2001. MISCELLANEOUS PLATES FOR GUYING CABLE ATTACHMENTS, TEMPORARY JOIST BRACING, ETC. SHALL BE ADDED AS REQUIRED. CONTRACTOR SHALL EVALUATE COLUMNS AND PROVIDE ADEQUATE BASE PLATE SHIMS, ADDITIONAL TEMPORARY ERECTION BOLTS/CLIPS, GUYS, OR TEMPORARY BRACING AS REQUIRED PER SECTION 1926.755.

52. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
A. WIDE FLANGE AND WT SHAPES	A992	50 KSI
B. PLATES, ANGLES, CHANNELS, AND RODS	A36	36 KSI
C. PLATES (NOTED GRADE 50 ON DRAWINGS)	A572	50 KSI
D. PIPE MEMBERS	A53 (TYPE E OR S, GRADE B)	35 KSI
E. STRUCTURAL TUBING (HSS - SQUARE OR RECTANGULAR)	A500 (GRADE B)	46 KSI
F. ANCHOR BOLTS OR ANCHOR RODS	F1554 (GRADE 36)	36 KSI
G. CONNECTION BOLTS	A325-N	
H. THREADED RODS FOR EPOXY GROUTED CONNECTIONS	A36 OR F1554	36 KSI

HEAVY SECTIONS THAT ARE PART OF THE SEISMIC FORCE RESISTING SYSTEM SHALL CONFORM WITH AISC 341-10 SECTION A3.3. HOT ROLLED SHAPES WITH FLANGES 1.5 INCH THICK AND THICKER SHALL HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT 70 DEGREES F, TESTED IN THE ALTERNATE CORE LOCATION AS DESCRIBED IN ASTM A6 SUPPLEMENTARY REQUIREMENT S30. PLATES 2 INCHES AND THICKER SHALL HAVE A MINIMUM CHARPY V-NOTCH TOGHNESS OF 20 FT-LBS AT 70 DEGREES F, MEASURED AT ANY LOCATION PERMITTED BY ASTM A673, FREQUENCY P.

53. DIMENSIONAL TOLERANCE FOR STRUCTURAL STEEL MEMBERS SHALL BE PER THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, SECTION 6.4 AND ASTM SPECIFICATION A6. UNLESS SPECIFICALLY ALLOWED BY THE ENGINEER, COLUMN MEMBERS SHALL NOT BE MODIFIED BY THE ROTARY STRAIGHTENING PROCESS.

54. BOLTS IN CONNECTIONS NOT SPECIFIED AS SLIP-CRITICAL NEED ONLY BE TIGHTENED TO THE SNUG TIGHT CONDITION. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. IF A SLOTTED HOLE OCCURS IN AN OUTER PLY, A FLAT HARDENED WASHER OR COMMON PLATE WASHER SHALL BE INSTALLED OVER THE SLOT.

ALL SLIP-CRITICAL CONNECTION BOLTS SHALL BE APPROVED SELF LOAD INDICATING TYPES (SUCH AS BETHLEHEM INDICATOR BOLTS, LeJEUNE TENSION CONTROL BOLTS, ETC.), AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. CONNECTED PLIES SHALL BE PREPARED TO MEET THE REQUIREMENTS FOR CLASS A FAYING SURFACES.

55. HOLE SIZES IN STEEL MEMBERS FOR CONNECTIONS TO CONCRETE OR MASONRY SHALL BE AS FOLLOWS UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS:

	MAXIMUM HOLE DIA. OVER NOMINAL BOLT DIA.	
ANCHOR TYPE	OTHER THAN COL. BASE PLATES	COL. BASE PLATES
CAST-IN-PLACE ANCHOR BOLTS	1/16" *	TABLE 14-2 OF AISC STEEL CONSTR. MANUAL, 14TH ED.
EXPANSION BOLTS	1/16" *	5/16"
EPOXY GROUTED BOLTS	1/8" *	

* USE OF LARGER HOLES WOULD REQUIRE THE USE OF WELDED PLATE WASHERS AND WOULD REQUIRE PRIOR APPROVAL BY THE STRUCTURAL ENGINEER.

HARDENED OR COMMON PLATE WASHERS ARE REQUIRED BELOW ALL NUTS WHERE OVERSIZED HOLES ARE USED AND SHALL BE SIZED TO COVER ENTIRE HOLE. MINIMUM WASHER SIZES FOR COLUMN BASE PLATES SHALL BE IN ACCORDANCE WITH TABLE 14-2 OF THE AISC STEEL CONSTRUCTION MANUAL, 14TH EDITION.

56. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. DO NOT PAINT OR GALVANIZE AREAS OF PIECES TO BE FIELD WELDED, OR REMOVE PAINT AND GALVANIZING IN FIELD PRIOR TO WELDING. WELDING OF GRADE 60 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING STEEL IS NOT PERMITTED. SEE REINFORCEMENT NOTE FOR MATERIAL REQUIREMENTS OF WELDED BARS.

THE WELD SYMBOLS SHOWN ON THE DRAWINGS ARE INTENDED ONLY TO AID THE CONTRACTOR IN THE DETERMINATION OF FIELD VERSUS SHOP WELDING. THE CONTRACTOR SHALL WORK WITH THE FABRICATOR AND ERECTOR TO COORDINATE THE FINAL DETERMINATION OF FIELD VERSUS SHOP WELDS TO ACCOMMODATE THE CONSTRUCTION SEQUENCING OF THE PROJECT.

57. COLD-FORMED STEEL FRAMING MEMBERS SHALL BE OF THE SHAPE, SIZE, AND GAGE SHOWN ON THE DRAWINGS. NOTATIONS ON THE DRAWINGS, RELATING TO MEMBER TYPES AND SIZES OR MISCELLANEOUS FRAMING ITEMS, REFER TO CATALOG NUMBERS OF THE "STEEL STUD MANUFACTURER'S ASSOCIATION" STANDARD SPECIFICATIONS, AND ICC-ESR REPORT NO. 3064P. ALTERNATE FRAMING SHALL BE SUBJECT TO REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO FABRICATION. ALL COLD-FORMED STEEL FRAMING SHALL ALSO CONFORM TO THE AISI "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" AND THE AISI "CODE OF STANDARD PRACTICE FOR COLD-FORMED STRUCTURAL FRAMING." SEE 20/S7.1 FOR METAL FRAMING NOTES.

58. HEADED STUDS FOR COMPOSITE CONNECTION OF STRUCTURAL STEEL TO CONCRETE AND THREADED STUDS (CPL'S OR CFL'S) FOR CONNECTION OF STRUCTURAL STEEL TO OTHER ELEMENTS SHALL BE MANUFACTURED FROM MATERIAL CONFORMING TO ASTM A29 GR. 1010 THROUGH 1020 (TYPE 2, Fu = 60 KSI MIN.). HEADED STUDS SHALL BE WELDED IN CONFORMANCE WITH THE REQUIREMENTS OF A.W.S D1.1 CHAPTER 7. UNLESS OTHERWISE NOTED, STUDS SHALL BE WELDED BY THE AUTOMATIC MACHINE WELDING PROCESS IN CONFORMANCE WITH A.W.S. REQUIREMENTS.

STUD TYPES SHALL BE MANUFACTURED BY NELSON STUD WELDING, INC. OR EQUIVALENT. HEADED STUDS SHALL BE TYPE S3L SHEAR CONNECTORS, THREADED STUDS SHALL BE TYPE CPL PARTIALLY THREADED STUDS OR TYPE CFL FULLY THREADED STUDS.

59. DEFORMED BAR ANCHORS (D2L's) SHALL BE TYPE D2L ANCHORS BY NELSON STUD WELDING, INC., OR EQUIVALENT. ANCHORS SHALL BE MADE FROM COLD ROLLED, DEFORMED STEEL CONFORMING TO ASTM A-496.

AT NON-BRACED/MOMENT FRAME AND NON-STRUT CONNECTIONS, A706 GRADE 60 REINFORCING BARS OF AN EQUAL DIAMETER AND LENGTH OF THE SPECIFIED D2L's MAY BE USED PROVIDED THEY ARE WELDED TO THE SUPPORTING STEEL IN ACCORDANCE WITH THE TABLE BELOW:

BAR SIZE	ALL-AROUND FILLET WELD SIZE
#4	5/16"
#5	3/8"
#6	7/16"

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

DIHONG SHAO
32363

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
GENERAL STRUCTURAL NOTES

JOB NUMBER

SHEET NUMBER
S1.2

GENERAL STRUCTURAL NOTES

(THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS.)

WOOD:

60. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.I.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17 OR W.W.P.A. WESTERN LUMBER GRADING RULES. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

STUDS AND JOISTS: (2x AND 3x MEMBERS)	HEM-FIR NO. 2 MINIMUM BASIC DESIGN STRESS, Fc = 1300 PSI, Fb = 850 PSI, Fv = 150 PSI, E = 1300 KSI
(4x MEMBERS)	HEM-FIR NO. 1 MINIMUM BASIC DESIGN STRESS, Fc = 1350 PSI, Fb = 975 PSI, Fv = 150 PSI, E = 1500 KSI
BEAMS AND STRINGERS: (INCLUDING 6x AND LARGER MEMBERS)	DOUGLAS FIR NO. 1 MINIMUM BASIC DESIGN STRESS, Fb = 1350 PSI, Fv = 170 PSI, E = 1600 KSI
POSTS: (4x MEMBERS)	HEM-FIR NO. 1 MINIMUM BASIC DESIGN STRESS, Fc = 1350 PSI, E = 1500 KSI
(6x & LARGER MEMBERS)	DOUGLAS FIR NO. 1 MINIMUM BASIC DESIGN STRESS, Fc = 1000 PSI, E = 1600 KSI
PLATES, LEDGERS & MISCELLANEOUS LIGHT FRAMING:	HEM-FIR NO. 3 OR STUD GRADE MINIMUM BASIC DESIGN STRESS, Fb = 500 PSI, E = 1200 KSI Fc = 725 PSI, Ft = 300 PSI

NOTE: FINGER JOINTED STUDS MAY BE SUBSTITUTED ONLY IF THEY MEET PRESCRIBED BENDING STRESS & TENSION STRESS CRITERIA.

NOTE: WHERE NOTED ON THE DRAWINGS, PLATES SHALL BE DOUGLAS FIR NO. 3 OR STUD GRADE.

61. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND A.I.T.C. STANDARDS IN ACCORDANE WITH IBC SECTION 2303.1.3. EACH MEMBER SHALL BEAR AN A.I.T.C. IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. CERTIFICATE OF CONFORMANCE. HORIZONTAL MEMBERS AND INCLINED MEMBERS OF LESS THAN 1:1 SLOPE SHALL HAVE A RADIUSED CAMBER OF 3,500 FT. UNLESS OTHERWISE NOTED.

SIMPLE SPAN BEAMS:	DOUGLAS FIR COMBINATION 24F-V4 Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI
CONTINUOUS OR CANTILEVERED BEAMS:	DOUGLAS FIR COMBINATION 24F-V8 Fb = 2400 PSI, Fv = 265 PSI, E = 1800 KSI
COLUMNS:	DOUGLAS FIR COMBINATION 1-DF-L3
(2 LAMINATIONS)	Fc = 1200 PSI, Fbyy = 1000 PSI, Fbxx = 1250 PSI, E = 1500 KSI
(3 LAMINATIONS)	Fc = 1200 PSI, Fbyy = 1250 PSI, Fbxx = 1250 PSI, E = 1500 KSI
(4 OR MORE LAMINATIONS)	Fc = 1550 PSI, Fbyy = 1450 PSI, Fbxx = 1500 PSI, E = 1500 KSI

GLUED LAMINATED MEMBERS EXPOSED TO WEATHER OR MOISTURE SHALL BE TREATED WITH A NON-CORROSIVE, APPROVED PRESERVATIVE.

62. ENGINEERED LUMBER: EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, THE NER OR ICC-ES REPORT NUMBER, AND THE QUALITY CONTROL AGENCY. ALL MEMBERS SHALL BE MANUFACTURED WITH AN APPROVED ADHESIVE.

BEAMS:	LAMINATED STRAND LUMBER (LSL) Fb = 2325 PSI, E = 1550 KSI, Fv = 310 PSI (DEPTH ≥ 9 1/2") Fb = 1700 PSI, E = 1300 KSI, Fv = 425 PSI (DEPTH < 9 1/2")
	LAMINATED VENEER LUMBER (LVL) Fb = 2600 PSI, E = 2000 KSI, Fv = 285 PSI
	PARALLEL STRAND LUMBER (PSL) Fb = 2900 PSI, E = 2000 KSI, Fv = 290 PSI
RIM BOARD:	LAMINATED STRAND LUMBER (LSL) Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI
STUDS:	LAMINATED STRAND LUMBER (LSL) Fb = 2250 PSI, E = 1500 KSI, Fv = 400 PSI, Fc = 1950 PSI (WIDTH ≥ 7 1/4") Fb = 1700 PSI, E = 1300 KSI, Fv = 400 PSI, Fc = 1400 PS (WIDTH < 7 1/4")
POSTS:	PARALLEL STRAND LUMBER (PSL) Fb = 2400 PSI, E = 1800 KSI, Fv = 290 PSI, Fc = 2500 PSI

DESIGN SHOWN ON THE DRAWINGS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER IN ACCORDANCE WITH ICC-ES REPORT NO. ESR-1387. ALTERNATE ENGINEERED LUMBER MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. A CURRENT NER OR ICC-ES REPORT AND A LIST STATING THE ITEM-FOR-ITEM SUBSTITUTION MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR ANY PROPOSED SUBSTITUTES.

63. ENGINEERED WOOD I-JOISTS SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS, STIFFENERS, ETC., SHALL BE DETAILED AND FURNISHED BY THE MANUFACTURER. PERMANENT AND TEMPORARY BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL JOIST HANGERS AND OTHER HARDWARE SHALL BE COMPATIBLE IN SIZE WITH ENGINEERED WOOD I-JOISTS PROVIDED.

JOIST TYPES:

9 1/2" I-110 JOIST
M = 2500 (ft-lbs), EI = 157 x 10^6 (in.^{2}-lbs), V = 1220 (lbs)

9 1/2" I-210 JOIST
M = 2810 (ft-lbs), EI = 185 x 10^6 (in.^{2}-lbs), V = 1220 (lbs)

9 1/2" I-230 JOIST
M = 3330 (ft-lbs), EI = 206 x 10^6 (in.^{2}-lbs), V = 1260 (lbs)

11 7/8" I-110 JOIST
M = 3160 (ft-lbs), EI = 267 x 10^6 (in.^{2}-lbs), V = 1420 (lbs)

11 7/8" I-210 JOIST
M = 3755 (ft-lbs), EI = 315 x 10^6 (in.^{2}-lbs), V = 1480 (lbs)

11 7/8" I-230 JOIST
M = 4215 (ft-lbs), EI = 347 x 10^6 (in.^{2}-lbs), V = 1485 (lbs)

11 7/8" I-360 JOIST
M = 6180 (ft-lbs), EI = 419 x 10^6 (in.^{2}-lbs), V = 1550 (lbs)

11 7/8" I-560 JOIST
M = 9500 (ft-lbs), EI = 621 x 10^6 (in.^{2}-lbs), V = 2050 (lbs)

14" I-110 JOIST
M = 3740 (ft-lbs), EI = 392 x 10^6 (in.^{2}-lbs), V = 1610 (lbs)

14" I-210 JOIST
M = 4400 (ft-lbs), EI = 462 x 10^6 (in.^{2}-lbs), V = 1680 (lbs)

14" I-230 JOIST
M = 4990 (ft-lbs), EI = 509 x 10^6 (in.^{2}-lbs), V = 1680 (lbs)

14" I-360 JOIST
M = 7335 (ft-lbs), EI = 612 x 10^6 (in.^{2}-lbs), V = 1770 (lbs)

14" I-560 JOIST
M = 11275 (ft-lbs), EI = 913 x 10^6 (in.^{2}-lbs), V = 2195 (lbs)

DESIGN LOADS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

LIVE LOAD	PER DESIGN LOADING CRITERIA
DEAD LOAD	30 PSF
WIND UPLIFT AT ZONE 1	19/29 PSF (NET/GROSS, ASD)
WIND UPLIFT AT ZONE 2	23/33 PSF (NET/GROSS, ASD)

I-JOISTS SHALL MEET OR EXCEED MINIMUM PROPERTIES INDICATED ABOVE AND FROM APA TECHNICAL PUBLICATION ON I-JOISTS Z725. A CURRENT NER OR ICC-ES REPORT MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. JOIST CHORD MEMBERS SHALL BE AT LEAST 1 3/4" WIDE AND CONSIST OF MATERIAL WITH A SPECIFIC DENSITY OF AT LEAST 0.50. JOIST MANUFACTURE SHALL BE ONE OF THE FOLLOWING:

WEYERHAEUSER (ICC-ES REPORT NO. ESR-1153)

REDBUILT LLC (ICC-ES REPORT NO. ESR-2994)

BOISE CASCADE (ICC-ES REPORT NO. ESR-1336)

ROSEBURG (ICC-ES REPORT NO. ESR-1251)

LOUSIANA-PACIFIC (ICC-ES REPORT NO. ESR-1305)

ALTERNATE ENGINEERED WOOD I-JOISTS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. A CURRENT NER OR ICC-ES REPORT AND A LIST STATING THE ITEM-FOR-ITEM SUBSTITUTION MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR ANY PROPOSED SUBSTITUTES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING COSTS RELATING TO REVIEW AND/OR RE-DESIGN TO ACCOMMODATE PROPOSED SUBSTITUTIONS.

THE JOIST MANUFACTURER SHALL COORDINATE LOCATIONS AND SUPPORT CONFIGURATIONS OF PLUMBING, MECHANICAL UNITS, DUCTS, AND/OR OTHER MISCELLANEOUS ITEMS WITH THE CONTRACTOR PRIOR TO JOIST FABRICATION. THE JOIST MANUFACTURER SHALL DESIGN JOISTS TO SUPPORT ALL LOADS ASSOCIATED WITH SUCH ITEMS. THE JOIST SHOP DRAWINGS SHALL INCLUDE ALL DESIGN LOADS AND APPROVED HANGER CONNECTION DETAILS TO JOISTS FOR SUPPORT OF HUNG MECHANICAL SYSTEM COMPONENTS.

SUBMIT SHOP DRAWINGS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION.

ALL I-JOIST HANGERS SHALL BE 'ITS' SERIES, UNLESS OTHERWISE NOTED.

64. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH ANSI/TPI 1-2014 AND IBC SECTION 2303.4 FOR THE SPANS AND CONDITIONS SHOWN ON THE DRAWINGS.

DESIGN LOADS SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	PER DESIGN LOADING CRITERIA
BOTTOM CHORD LIVE LOAD	PER DESIGN LOADING CRITERIA
TOP CHORD DEAD LOAD	10 PSF
BOTTOM CHORD DEAD LOAD	7 PSF
WIND UPLIFT (TOP CHORD)	23/33 PSF (ASD,NET/GROSS)

THE TRUSS MANUFACTURER SHALL COORDINATE LOCATIONS AND SUPPORT CONFIGURATIONS OF PLUMBING, MECHANICAL UNITS, DUCTS, AND/OR OTHER MISCELLANEOUS ITEMS WITH THE CONTRACTOR PRIOR TO TRUSS FABRICATION. THE TRUSS MANUFACTURER SHALL DESIGN TRUSSES TO SUPPORT ALL LOADS ASSOCIATED WITH SUCH ITEMS. THE TRUSS SHOP DRAWINGS SHALL INCLUDE ALL DESIGN LOADS AND APPROVED HANGER CONNECTION DETAILS TO TRUSS CHORDS FOR SUPPORT OF HUNG MECHANICAL SYSTEM COMPONENTS.

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED AS A DEFERRED SUBMITTAL TO THE ARCHITECT AND STRUCTURAL ENGINEER PER GENERAL STRUCTURAL NOTE 13. SHOP DRAWINGS SHALL INDICATE SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE TRUSS MANUFACTURER SHALL PROVIDE ALL TRUSS-TO-TRUSS AND TRUSS-TO-BEAM/JOIST CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. THE TRUSS MANUFACTURER SHALL DESIGN AND PROVIDE DETAILS FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

65. ALL PRESSURE-TREATED (P.T.) WOOD MEMBERS SPECIFIED ON THE DRAWINGS THAT OCCUR ABOVE GROUND AND CONTINUOUSLY PROTECTED FROM MOISTURE (INTERIOR LOCATIONS) SHALL BE PRESSURE-TREATED WITH DOT SODIUM BORATE (SBX) WITHOUT $NaSiO_2$. AT LOCATIONS PERMANENTLY EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, WOOD MEMBERS SHALL BE PRESSURE-TREATED WITH COPPER AZOLE CA-B (HEM-FIR ONLY), OR ALKALINE COPPER QUAT (ACQ-C FOR DOUGLAS-FIR, OR ACQ-D FOR HEM-FIR) PRESERVATIVES UNLESS OTHERWISE NOTED. AMMONIACAL COPPER ZINC ARSENATE (ACZA) PRESERVATIVE, OR OTHER PRESERVATIVES WITH AMMONIA CARRIERS, SHALL NOT BE USED.

SEE GENERAL STRUCTURAL NOTES 66 AND 69 FOR MATERIAL REQUIREMENTS OF CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE-TREATED MEMBERS.

INSTALL 2 LAYERS OF ASPHALT-IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC., AND CONCRETE OR MASONRY.

66. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR WOOD CONSTRUCTION CONNECTORS CATALOG NO. C-C-2017. ALTERNATE CONNECTORS CONFORMING WITH IBC SECTION 1711 MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER. A CURRENT ICC-ES REPORT AND A LIST STATING THE ITEM-FOR-ITEM SUBSTITUTION MUST BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR ANY PROPOSED SUBSTITUTES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING COSTS RELATING TO REVIEW AND/OR RE-DESIGN TO ACCOMMODATE PROPOSED SUBSTITUTIONS. INSTALL NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, CENTER STRAP ON JOINT AND INSTALL NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER, WITH EQUAL NUMBER AND SIZE OF FASTENERS IN EACH MEMBER. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

ALL TIMBER CONNECTORS IN CONTACT WITH FIRE RETARDANT TREATED WOOD OR PRESSURE-TREATED WOOD THAT USES PRESERVATIVE CHEMICALS OTHER THAN DOT SODIUM BORATE (SBX) WITHOUT $NaSiO_2$ SHALL BE MANUFACTURED FROM ZMAX STEEL BY SIMPSON (G185 STEEL PER ASTM A653), OR TYPE 304 OR 316 STAINLESS STEEL. ALTERNATIVELY, CONNECTORS CAN BE POST HOT DIP GALVANIZED PER ASTM A123 OR MECHANICALLY GALVANIZED PER ASTM B695, CLASS 55 OR GREATER. STAINLESS STEEL FASTENERS SHALL BE USED WITH STAINLESS STEEL CONNECTORS, AND HOT DIP GALVANIZED FASTENERS PER ASTM A153 SHALL BE USED WITH GALVANIZED CONNECTORS.

67. SELF-TIGHTENING HOLDOWN SYSTEM SHALL BE DESIGNED BY THE MANUFACTURER FOR THE LOADS AND CONDITIONS SHOWN ON THE DRAWINGS AND SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS. SELF-TIGHTENING SYSTEM SHALL BE DESIGNED TO ACCOMMODATE 3/8" OF SHRINKAGE PER FLOOR. SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED AS A DEFERRED SUBMITTAL TO THE ARCHITECT AND STRUCTURAL ENGINEER PER GENERAL TRUCTURAL NOTE 13. SHOP DRAWINGS SHALL INDICATE LOCATIONS, LOAD CAPACITIES AND SELF-TIGHTENING DEVICE OF EACH HOLDOWN RUN. THESE PRODUCTS SHALL BE ONE OF THE FOLLOWING:

AUTO TIGHT ROD SYSTEM USING THE "AT AUTOMATIC TAKE-UP SHRINKAGE COMPENSATOR" TAKEUP DEVICE MANUFACTURED BY COMMINS MANUFACTURING INC. (ICC-ES REPORT NO. ESR-1344)

EARTHBOUND SEISMIC HOLDOWN SYSTEM USING THE "SLACKJACK" TAKEUP DEVICE MANUFACTURED BY EARTHBOUND CORPORATION (ICC-ES REPORT NO. ESR-2848)

ATS ANCHOR TIEDOWN SYSTEMS USING THE "TUD", "ATUD", & "CTUD" TAKEUP DEVICE MANUFACTURED BY SIMPSON STRONG-TIE (ICC-ES REPORT NO. ESR-2320)

THE MANUFACTURER SHALL DESIGN THE SELF-TIGHTENING HOLDOWN SYSTEM SUCH THAT VERTICAL ELONGATION, DEFLECTION, AND MOVEMENT OF THE HOLDOWN SYSTEM AT EACH FLOOR DOES NOT EXCEED 0.15". VERTICAL ELONGATION, DEFLECTION, AND MOVEMENT SHALL INCLUDE ROD ELONGATION, BEARING PLATE DEFLECTION RESULTING FROM WOOD PERPENDICULAR TO GRAIN COMPRESSION, AND TAKE UP DEVICE LOAD DEFORMATION AT SPECIFIED LOADS FROM THE HOLDOWN LOAD SCHEDULE OF 20/S6.6. TAKE UP DEVICE LOAD DEFORMATION SHALL INCLUDE TAKEUP DEVICE AVERAGE TRAVEL AND SEATING INCREMENT Δ_R IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC316.

SUBSTITUTES PROPOSED BY CONTRACTOR SHALL BE SUBMITTED FOR REVIEW WITH CURRENT ICC-ES REPORTS. IN ADDITION, SUBSTITUTIONS SHALL MEET ICC-ES ACCEPTANCE CRITERIA AC316.

68. WOOD FRAMING NOTES: THE FOLLOWING APPLY UNLESS OTHERWISE NOTED ON THE DRAWINGS:

A. ALL WOOD FRAMING DETAILS SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE IBC. MINIMUM NAILING SHALL CONFORM TO IBC TABLE 2304.10.1 OR CURRENT ICC-ES REPORT NER-272. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS. INSTALL WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. INSTALLATION OF LAG SCREWS SHALL CONFORM TO 2015 NDS SECTION 11.1.4, AND INSTALLATION OF BOLTS SHALL CONFORM TO 2015 NDS SECTION 11.1.3.

B. WALL FRAMING: TWO STUDS MINIMUM SHALL BE INSTALLED AT THE ENDS OF ALL WALLS, UNLESS OTHERWISE NOTED. INSTALL SOLID BLOCKING FOR WOOD COLUMNS THROUGH FLOOR SPACES TO SUPPORTS BELOW.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12"oc STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0"oc PER IBC SECTION 2308.6 (EMBED 7"), UNLESS OTHERWISE NOTED. 3" x 3" x 0.229" PLATE WASHERS SHALL BE USED WITH ALL SILL PLATE ANCHOR BOLTS AND INSTALLED PER AF&PA SDPWS-2015 SECTION 4.3.6.4.3. INDIVIDUAL MEMBERS OF BUILT-UP STUD POSTS SHALL BE NAILED TO EACH OTHER WITH 16d @ 12"oc STAGGERED.

C. FLOOR AND ROOF FRAMING: INSTALL DOUBLE JOISTS SEPARATED BY SOLID BLOCKING EQUAL TO DEPTH OF STUDS ABOVE UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS. INSTALL SOLID BLOCKING AT ALL BEARING POINTS. TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI-JOIST BEAMS TOGETHER WITH 16d @ 12"oc STAGGERED.

ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AS SHOWN ON THE DRAWINGS. INSTALL APPROVED PANEL EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED TONGUE-AND-GROOVE JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12"oc. AT BLOCKED FLOOR AND ROOF DIAPHRAGMS, INSTALL FLAT 2x BLOCKING AT ALL UNFRAMED PANEL EDGES AND NAIL WITH EDGE NAILING SPECIFIED.

IN ACCORDANCE WITH IBC SECTION 1604.8.3, DECKS SHALL BE POSITIVELY ANCHORED TO THE STRUCTURE BY MEANS OTHER THAN NAILS SUBJECT TO WITHDRAWAL. ANCHOR WITH MINIMUM (1) CS16 STRAP AT EACH END ATTACHED TO DECK JOISTS AND TO A SOLID BLOCKING MEMBER WITHIN THE BUILDING.

D. WOOD SHRINKAGE: THE PLUMBING, FIRE PROTECTION, DRAINAGE, MECHANICAL, ELECTRICAL, CLADDING, AND OTHER SYSTEMS INSTALLED WITHIN THE BUILDING SHALL BE DESIGNED AND CONSTRUCTED TO ACCOMMODATE VERTICAL SHRINKAGE AT THE WOOD FRAMING LEVELS. THE WOOD SHRINKAGE AMOUNT SHALL BE ASSUMED TO EQUAL 3/8"FOR EACH WOOD FRAMED FLOOR LEVEL.

E. NAILING: MINIMUM NAIL DIAMETER AND LENGTH SHALL BE AS FOLLOWS:

	NAIL SIZE ON DRAWINGS	DIAMETER AND LENGTH
SHEATHING NAILS	8d	0.131" x 2 1/4"
	10d	0.148" x 2 1/2"
FRAMING NAILS	10d	0.148" x 3"
	16d	0.148" x 3 1/4"

69. ALL TIMBER FASTENERS IN CONTACT WITH FIRE RETARDANT TREATED WOOD OR PRESSURE-TREATED WOOD THAT USES CHEMICALS OTHER THAN DOT SODIUM BORATE (SBX) WITHOUT $NaSiO_2$, SHALL BE POST HOT DIP GALVANIZED PER ASTM A153.

MASONRY:

70. CONCRETE MASONRY UNIT WALLS SHALL BE CONSTRUCTED OF MEDIUM OR NORMAL WEIGHT MASONRY UNITS, CONFORMING TO ASTM C90, LAID IN A RUNNING BOND WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1,900 PSI. MORTAR SHALL BE TYPE "S" IN CONFORMANCE WITH ASTM C270 AND ARTICLE 2.6A OF TMS602-13/ACI530.1-13/ASCE6-13. GROUT SHALL CONFORM TO ARTICLE 2.2 OF TMS602/ACI530.1/ASCE6 AND ASTM C1019 REQUIREMENTS AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS, DESIGN F'm = 1,500 PSI AT 28 DAYS. STRENGTH SHALL BE VERIFIED BY PRISM TESTING OR SHALL BE VERIFIED BY THE UNIT STRENGTH METHOD IN ACCORDANCE WITH IBC SECTION 1705.4 AND ARTICLE 1.4B OF TMS602/ACI530.1/ASCE6 PRIOR TO CONSTRUCTION. ADDITIONAL UNIT STRENGTH OR PRISM TESTING IN ACCORDANCE WITH ASTM C1314 SHALL BE COMPLETED FOR EACH 5,000 SQUARE FEET OF WALL DURING CONSTRUCTION.

UNLESS OTHERWISE NOTED, PROVIDE THE FOLLOWING REINFORCEMENT:

6" WALLS	#4 @ 48"oc. VERT.	(2)#4 @ 48"oc. HORIZ.
8" WALLS	#5 @ 48"oc. VERT.	(2)#5 @ 48"oc. HORIZ.
12" WALLS	#5 @ 32"oc. VERT.	(2)#5 @ 40"oc. HORIZ.

IN ADDITION, PROVIDE (1)#5 (#4 @ 6" WALLS) VERT. AT FREE ENDS OF WALLS, AND (2)#5 ((2)#4 @ 6" WALLS) HORIZONTAL AT ELEVATED FLOOR AND ROOF LEVELS AND AT TOPS OF WALLS. REINFORCE WALL CORNERS AND INTERSECTIONS PER 15/S4.1. REINFORCE JAMBS AND FREE ENDS OF WALLS PER 13/S4.1 U.O.N. REINFORCE WALL OPENINGS PER 8/S4.1 U.O.N. ALL HORIZONTAL REINFORCEMENT SHALL BE PLACED IN BOND BEAMS. SEE 4/S4.1 FOR REINFORCING DEVELOPMENT AND LAP SPLICE SCHEDULE.

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1038 BUILDING
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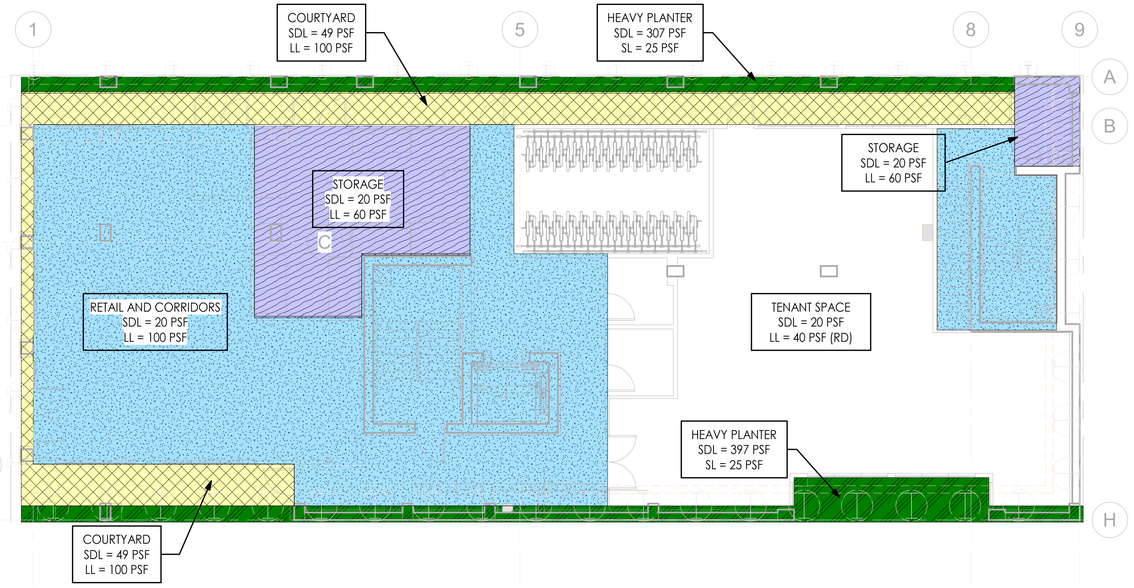
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

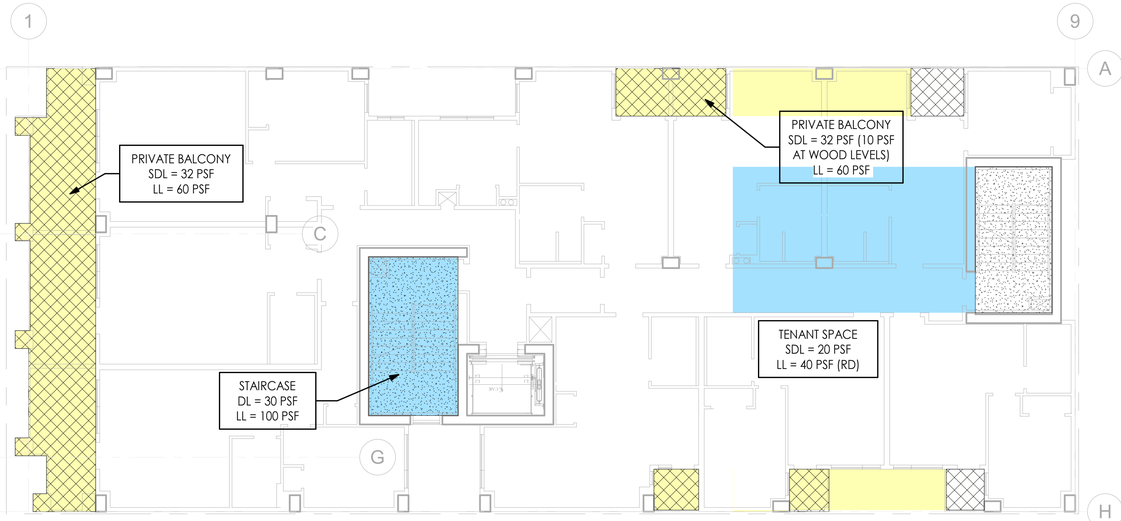
SHEET TITLE
GENERAL STRUCTURAL NOTES

JOB NUMBER

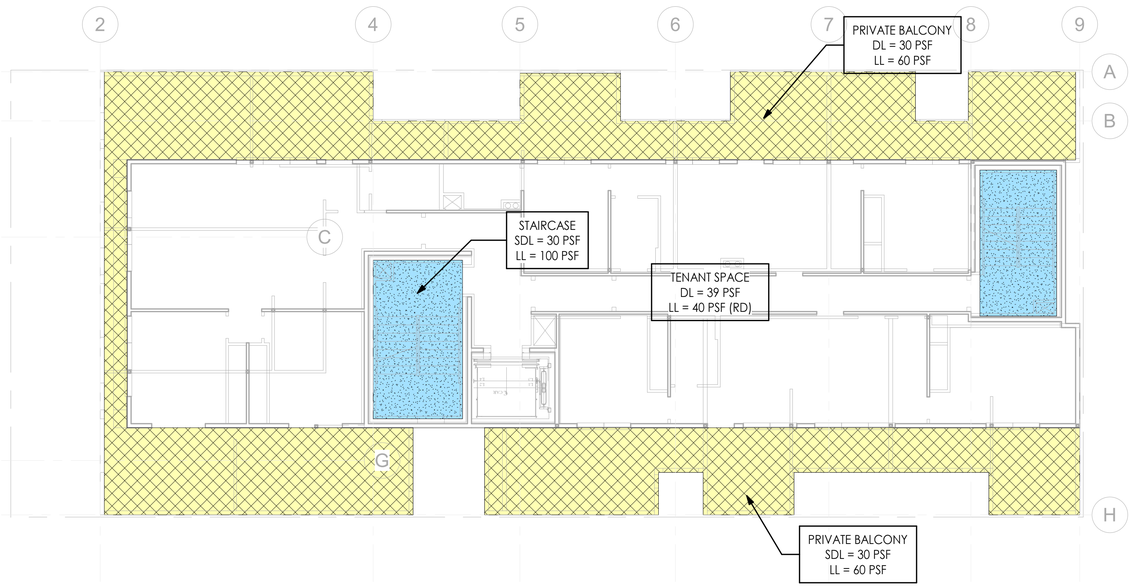
SHEET NUMBER
S1.3



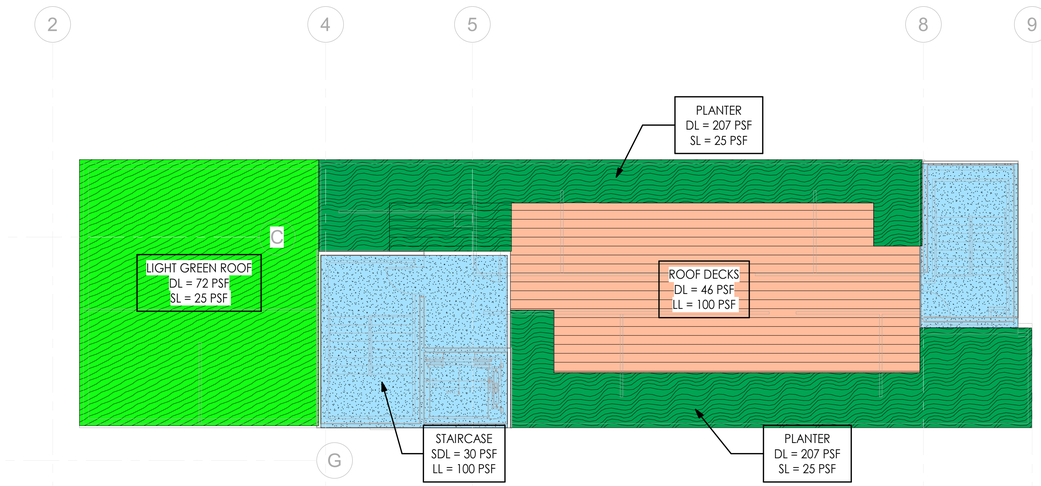
1 LEVEL 1 LOADING DIAGRAM
1/8" = 1'-0"



2 TYPICAL LOADING DIAGRAM
1/8" = 1'-0"



3 LEVEL 7 LOADING DIAGRAM
1/8" = 1'-0"



4 ROOF LOADING DIAGRAM
1/8" = 1'-0"

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NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
LOADING DIAGRAMS

JOB NUMBER

SHEET NUMBER
S1.4

FOUNDATION PLAN NOTES:

1. SLAB ELEVATION SHALL BE AS SHOWN ON PLAN. SLAB-ON-GRADE SHALL BE 4" THICK WITH 6X6W1.4W1.4 WWM AT CENTER. PROVIDE VAPOR BARRIER PER SPECIFICATIONS BELOW SLAB AT INTERIOR SPACES OVER FREE-DRANING CAPILLARY BREAK MATERIAL PER GEOTECHNICAL REPORT.

   SEE ARCHITECTURAL DRAWINGS FOR SLAB DEPRESSION AND SLOPE REQUIREMENTS.

2. PROVIDE CONSTRUCTION/CONTROL JOINTS IN SLABS ON GRADE TO DIVIDE SLAB INTO RECTANGULAR AREAS 225 SQUARE FEET OR LESS. AREAS SHALL BE APPROXIMATELY SQUARE AND HAVE NO ACUTE ANGLES. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. JOINT LOCATIONS MUST BE APPROVED BY THE ARCHITECT. SEE 4/S3.1.

3. TOPS OF ALL FOOTINGS ELEVATIONS ARE PER PLAN. OVER EXCAVATE AND PLACE SUITABLE COMPACTED FILL AS DIRECTED BY OWNER APPROVED GEOTECHNICAL ENGINEER WHERE REQUIRED. CONTRACTOR SHALL COORDINATE WITH FINAL SITE GREADES AND MAINTAIN MINIMUM DEPTH OF FOOTINGS SHOWN ON THE DRAWINGS.

4. SEE ARCHITECTURAL/MECHANICAL/CIVIL/UTILITIES DRAWINGS FOR UNDERSLAB PIPING. COORDINATE FOUNDATION DEPTHS AND PIPING IN ACCORDANCE WITH 7/S3.1.

5. SEISMIC FORCE RESISTING SYSTEM COMPRISES OF CONCRETE SHEAR WALLS. SEE ELEVATIONS ON SHEET S3.3.

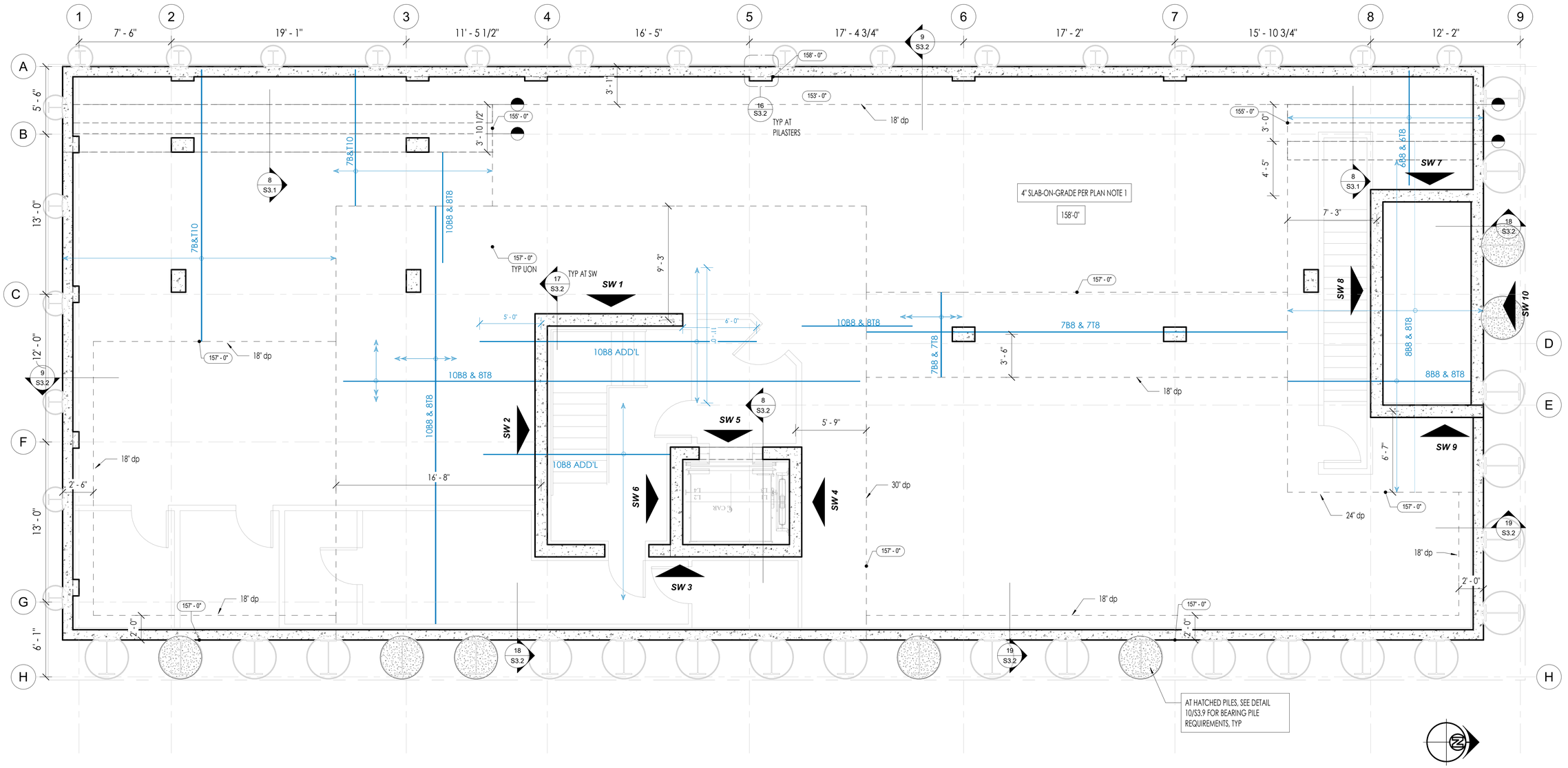
FOUNDATION LEGEND:

- x'-x" — TOP OF SLAB ELEVATION
- x'-x" — TOP OF FOOTING ELEVATION
- STEP IN TOP OF SLAB
- x — FOOTING MARKS PER 20/S3.2
- high / low — STEP IN FOOTING PER 8/S3.1
- Cx — COLUMN MARK PER 20/S3.2

Bar Legend:

(8) 5 B 15

- QUANTITY (WHERE SPECIFIED)
- BAR SIZE
- "T" TOP, "M" MIDDLE, or "B" BOTTOM
- @ SPACING oc (EQ. SPACE IF NOT SPECIFIED)



1 BASEMENT
1/4" = 1'-0"

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NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
BASEMENT FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.0

CONCRETE PLAN NOTES:

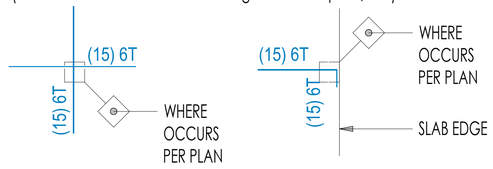
1. PLAN. T.O. SLAB ELEVATION, SLAB THICKNESS AND REINFORCING SHALL BE AS NOTED ON VERIFY DIMENSIONS, SLOPES, AND ELEVATIONS W/ ARCHITECTURAL DRAWINGS.
2. SEE S3.8 FOR TYPICAL MIDL SLAB DETAILS. INCLUDING ADDITIONAL REQUIRED REINFORCING.
3. MECHANICAL PIPING, ELECTRICAL FIXTURES AND OTHER HEAVY LOADS HUNG FROM P.T. SLAB SHALL BE SUPPORTED WITH UNISTRUT CONCRETE INSERTS OR EQUAL.
4. MECHANICAL PIPING AND ELECTRICAL CONDUIT SHALL PENETRATE THE P.T. SLAB AT ONLY PREDETERMINED SLEEVE LOCATIONS. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF SLAB PENETRATIONS AND SUBMIT FOR REVIEW PER GENERAL STRUCTURAL NOTES.
5. CORE DRILLING OR ROTO-HAMMERING OF P.T. SLAB IS NOT PERMITTED WITHOUT ENGINEER APPROVAL. SEE POST TENSIONING NOTES IN GENERAL STRUCTURAL NOTES.
6. REFERENCE ARCHITECTURAL DRAWINGS FOR MISC. EMBEDS REQUIRED AT NON-STRUCTURAL ELEMENTS.
7. SEE WOOD LEVELS FOR TYPICAL STAIR DETAILS AND FRAMING.
8. SEISMIC FORCE RESISTING SYSTEM COMPRISES OF CONCRETE SHEAR WALLS PER ELEVATIONS ON SHEET S3.3 AND DETAILS ON S3.4. DIAPHRAGM CONSISTS OF THE FLOOR SLAB.
9. LEVEL 1 SLAB IS DESIGNED FOR 3-HOUR FIRE SEPARATION. PROVIDE 1 1/4" MIN. CLEAR COVER TO MILD REINFORCING AT EXTERIOR SPANS AND 1" MIN. CLEAR COVER AT INTERIOR SPANS.

CONCRETE PLAN LEGEND:

- x'-x" — TOP OF SLAB ELEVATION
- x'-x" — BOTTOM OF SLAB (SOFFIT) ELEVATION
- x" dp. — DEPTH OF DROP IN SLAB SOFFIT
- STEP IN TOP OF SLAB
- X — STUDRAIL CALLOUT PER 20/S3.6

Typical Stud Rails & Reinforcing:

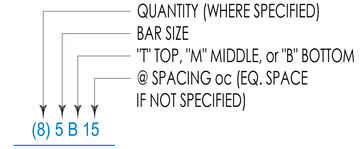
(Additional information for reinforcing at columns per 7/S3.8)

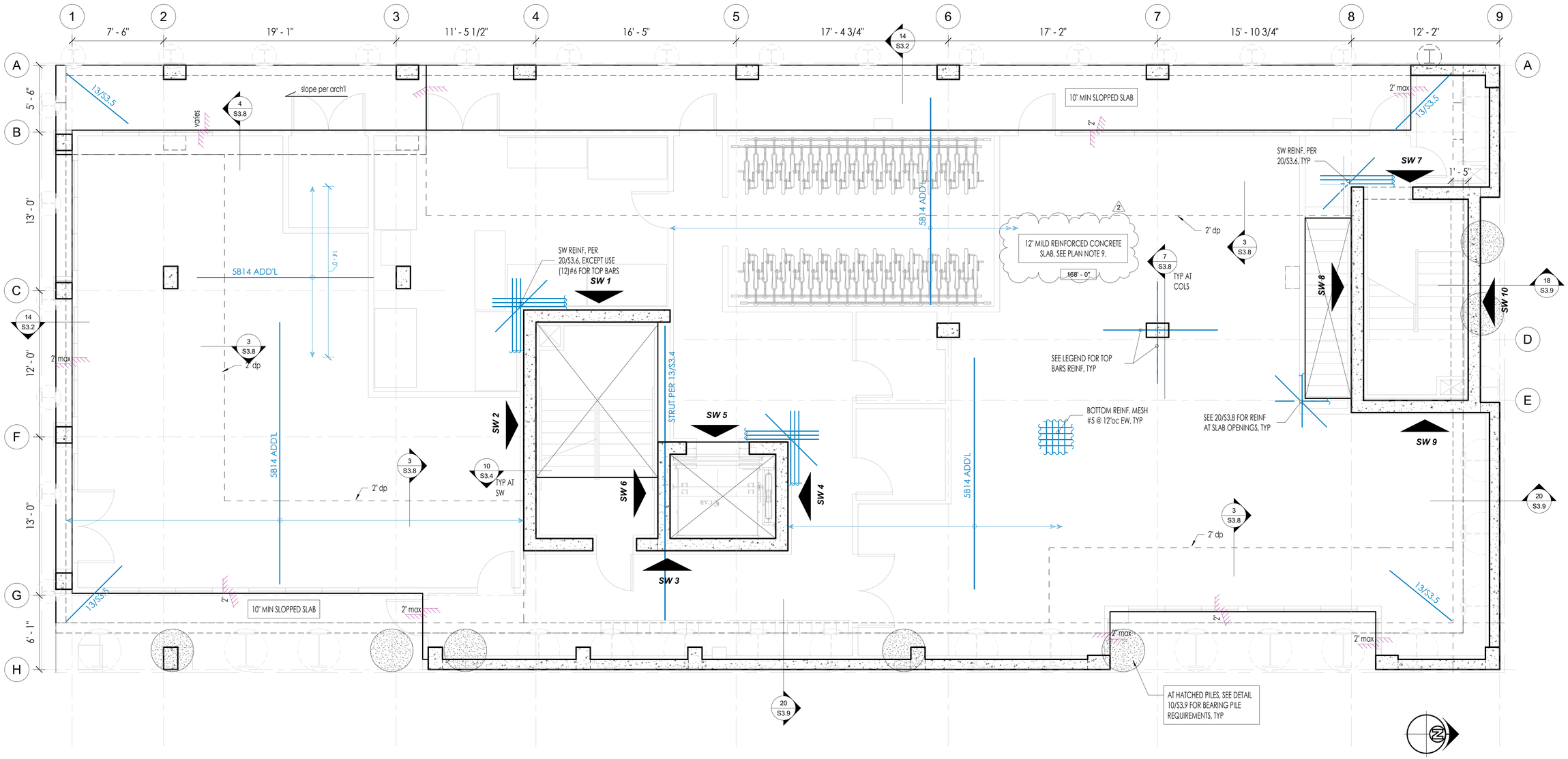


REINFORCING AT INTERIOR COLUMNS, TYPICAL U.O.N.

REINFORCING AT EXTERIOR COLUMNS, TYPICAL U.O.N.

Bar Legend:





1 LEVEL 1
1/4" = 1'-0"

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2	10/28/2024	BP REVIEW CYCLE 1

SHEET TITLE
LEVEL 1 FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.1

CONCRETE PLAN NOTES:

1. PLAN. T.O. SLAB ELEVATION, SLAB THICKNESS AND REINFORCING SHALL BE AS NOTED ON VERIFY DIMENSIONS, SLOPES, AND ELEVATIONS W/ ARCHITECTURAL DRAWINGS.
2. SEE S3.4 AND S3.5 FOR TYPICAL POST-TENSIONING DETAILS, INCLUDING ADDITIONAL REQUIRED REINFORCING. SEE GENERAL STRUCTURAL NOTES FOR POST-TENSIONING NOTES.

   SLAB IS DESIGNED FOR 3-HOUR FIRE SEPARATION. PROVIDE 1 1/4" MIN. CLEAR COVER TO MILD REINFORCING AT EXTERIOR SPANS AND 1" MIN. CLEAR COVER AT INTERIOR SPANS. PROVIDE 2" MIN. CLEAR COVER TO POST-TENSIONING REINFORCING AT EXTERIOR SPANS AND 1" MIN. CLEARCOVER AT INTERIOR SPANS. (2)
3. PROVIDE (3)#4 TOP & BOTTOM CONT. (SEE 15/S3.4 FOR PLACEMENT) ALONG PERIMETER OF SLAB WHERE NOTED ON PLAN. BARS ARE IN ADDITION TO (2)#4 EDGE BARS SHOWN IN 15/S3.4 AND ON PLAN. (3)#4 TOP & BOTTOM ARE NOT REQUIRED WHERE CONCRETE SHEAR WALL REINFORCING OF 20/S3.5 IS REQUIRED.

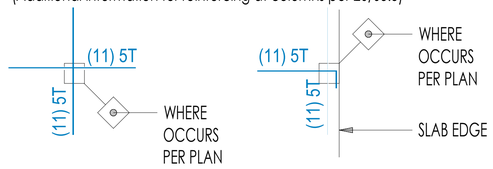
   TENDON LOCATIONS SHALL BE MARKED ACCORDING TO DETAIL 6/S3.4.
4. MECHANICAL PIPING, ELECTRICAL FIXTURES AND OTHER HEAVY LOADS HUNG FROM P.T. SLAB SHALL BE SUPPORTED WITH UNISTRUT CONCRETE INSERTS OR EQUAL.
5. MECHANICAL PIPING AND ELECTRICAL CONDUIT SHALL PENETRATE THE P.T. SLAB AT ONLY PREDETERMINED SLEEVE LOCATIONS. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF SLAB PENETRATIONS AND SUBMIT FOR REVIEW PER GENERAL STRUCTURAL NOTES.
6. CORE DRILLING OR ROTO-HAMMERING OF P.T. SLAB IS NOT PERMITTED WITHOUT ENGINEER APPROVAL. SEE POST TENSIONING NOTES IN GENERAL STRUCTURAL NOTES.
7. REFERENCE ARCHITECTURAL DRAWINGS FOR MISC. EMBEDS REQUIRED AT NON-STRUCTURAL ELEMENTS.
8. SEE WOOD LEVELS FOR TYPICAL STAIR DETAILS AND FRAMING.
9. ALL TENDON HEIGHTS INDICATED ON PLAN ARE WITH REFERENCE TO THE BOTTOM OF SLAB.
10. SEISMIC FORCE RESISTING SYSTEM COMPRISES OF CONCRETE SHEAR WALLS PER ELEVATIONS ON SHEET S3.3 AND DETAILS ON S3.4. DIAPHRAGM CONSISTS OF THE FLOOR SLAB.

CONCRETE PLAN LEGEND:

- x'-x" — TOP OF SLAB ELEVATION
- x'-x" — BOTTOM OF SLAB (SOFFIT) ELEVATION
- x" dp. — DEPTH OF DROP IN SLAB SOFFIT
- STEP IN TOP OF SLAB
- X — STUDRAIL CALLOUT PER 20/S3.6
- STRESSING END OF P.T. STRAND
- X.X — TENDON HEIGHT TO CGS FROM BOTTOM OF SLAB
- ANCHOR END OF P.T. STRAND

TYPICAL STUD RAILS & REINFORCING:

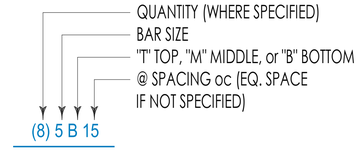
(Additional information for reinforcing at columns per 20/S3.5)

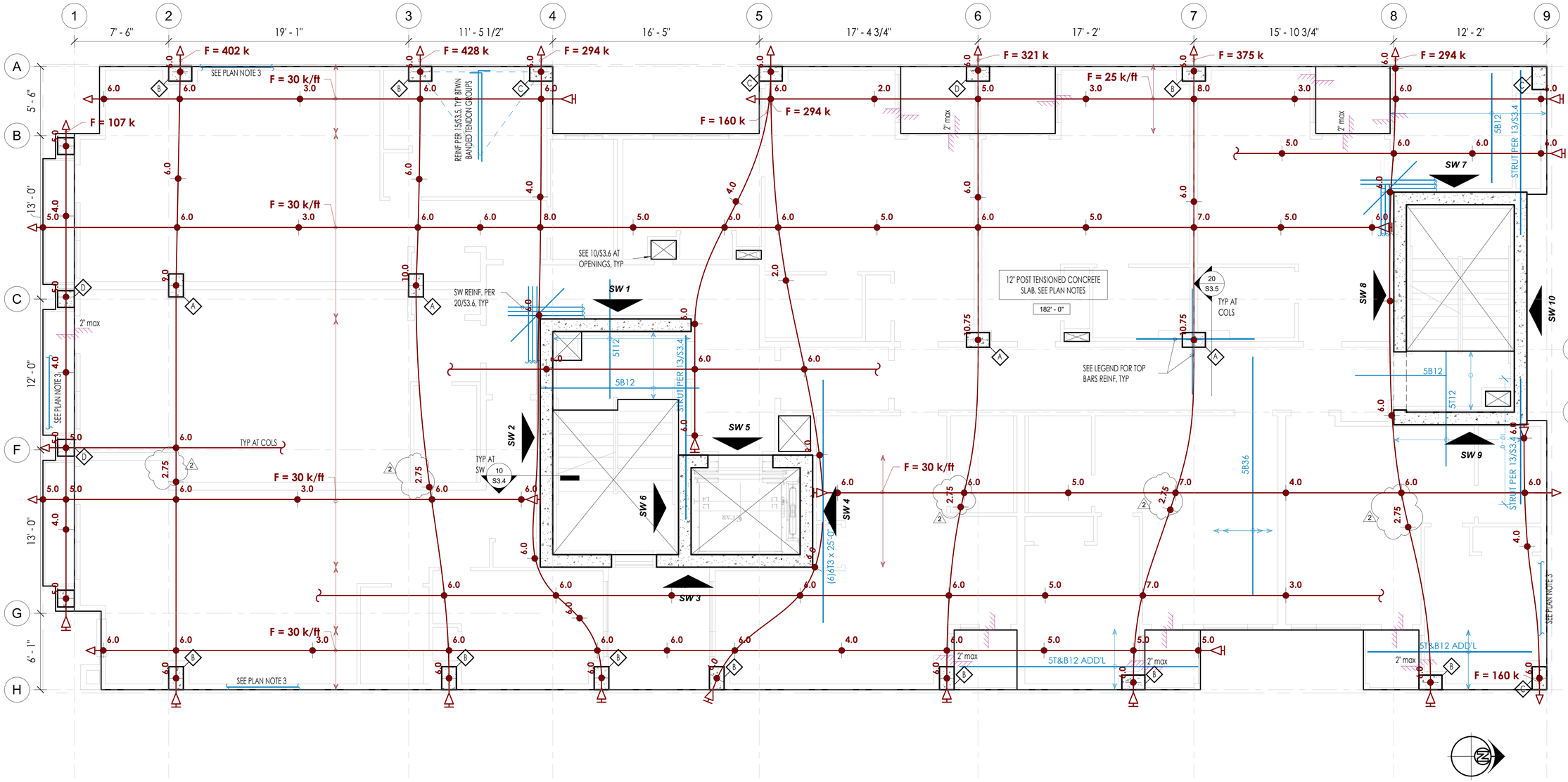


REINFORCING AT INTERIOR COLUMNS, TYPICAL U.O.N.

REINFORCING AT EXTERIOR COLUMNS, TYPICAL U.O.N.

Bar Legend:





1 LEVEL 2
1/4" = 1'-0"

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NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT
2	10/28/2024	BP REVIEW CYCLE 1

SHEET TITLE
LEVEL 2 FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.2

CONCRETE PLAN NOTES:

1. PLAN. T.O. SLAB ELEVATION, SLAB THICKNESS AND REINFORCING SHALL BE AS NOTED ON VERIFY DIMENSIONS, SLOPES, AND ELEVATIONS W/ ARCHITECTURAL DRAWINGS.
2. SEE S3.4 AND S3.5 FOR TYPICAL POST-TENSIONING DETAILS, INCLUDING ADDITIONAL REQUIRED REINFORCING. SEE GENERAL STRUCTURAL NOTES FOR POST-TENSIONING NOTES.

   SLAB IS DESIGNED FOR 3-HOUR FIRE SEPARATION. PROVIDE 1 1/4" MIN. CLEAR COVER TO MILD REINFORCING AT EXTERIOR SPANS AND 1" MIN. CLEAR COVER AT INTERIOR SPANS. PROVIDE 2" MIN. CLEAR COVER TO POST-TENSIONING REINFORCING AT EXTERIOR SPANS AND 1" MIN. CLEARCOVER AT INTERIOR SPANS.
3. PROVIDE (3)#4 TOP & BOTTOM CONT. (SEE 15/S3.4 FOR PLACEMENT) ALONG PERIMETER OF SLAB WHERE NOTED ON PLAN. BARS ARE IN ADDITION TO (2)#4 EDGE BARS SHOWN IN 15/S3.4 AND ON PLAN. (3)#4 TOP & BOTTOM ARE NOT REQUIRED WHERE CONCRETE SHEAR WALL REINFORCING OF 20/S3.5 IS REQUIRED.

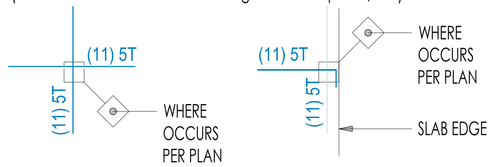
   TENDON LOCATIONS SHALL BE MARKED ACCORDING TO DETAIL 6/S3.4.
4. MECHANICAL PIPING, ELECTRICAL FIXTURES AND OTHER HEAVY LOADS HUNG FROM P.T. SLAB SHALL BE SUPPORTED WITH UNISTRUT CONCRETE INSERTS OR EQUAL.
5. MECHANICAL PIPING AND ELECTRICAL CONDUIT SHALL PENETRATE THE P.T. SLAB AT ONLY PREDETERMINED SLEEVE LOCATIONS. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF SLAB PENETRATIONS AND SUBMIT FOR REVIEW PER GENERAL STRUCTURAL NOTES.
6. CORE DRILLING OR ROTO-HAMMERING OF P.T. SLAB IS NOT PERMITTED WITHOUT ENGINEER APPROVAL. SEE POST TENSIONING NOTES IN GENERAL STRUCTURAL NOTES.
7. REFERENCE ARCHITECTURAL DRAWINGS FOR MISC. EMBEDS REQUIRED AT NON-STRUCTURAL ELEMENTS.
8. SEE WOOD LEVELS FOR TYPICAL STAIR DETAILS AND FRAMING.
9. ALL TENDON HEIGHTS INDICATED ON PLAN ARE WITH REFERENCE TO THE BOTTOM OF SLAB.
10. SEISMIC FORCE RESISTING SYSTEM COMPRISES OF CONCRETE SHEAR WALLS PER ELEVATIONS ON SHEET S3.3 AND DETAILS ON S3.4. DIAPHRAGM CONSISTS OF THE FLOOR SLAB.

CONCRETE PLAN LEGEND:

- x'-x" — TOP OF SLAB ELEVATION
- x'-x" — BOTTOM OF SLAB (SOFFIT) ELEVATION
- x" dp. — DEPTH OF DROP IN SLAB SOFFIT
- STEP IN TOP OF SLAB
- X — STUDRAIL CALLOUT PER 20/S3.6
- STRESSING END OF P.T. STRAND
- X.X — TENDON HEIGHT TO CGS FROM BOTTOM OF SLAB
- ANCHOR END OF P.T. STRAND

TYPICAL STUD RAILS & REINFORCING:

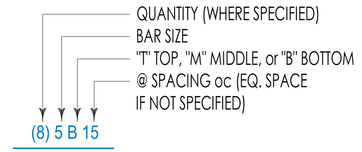
(Additional information for reinforcing at columns per 20/S3.5)

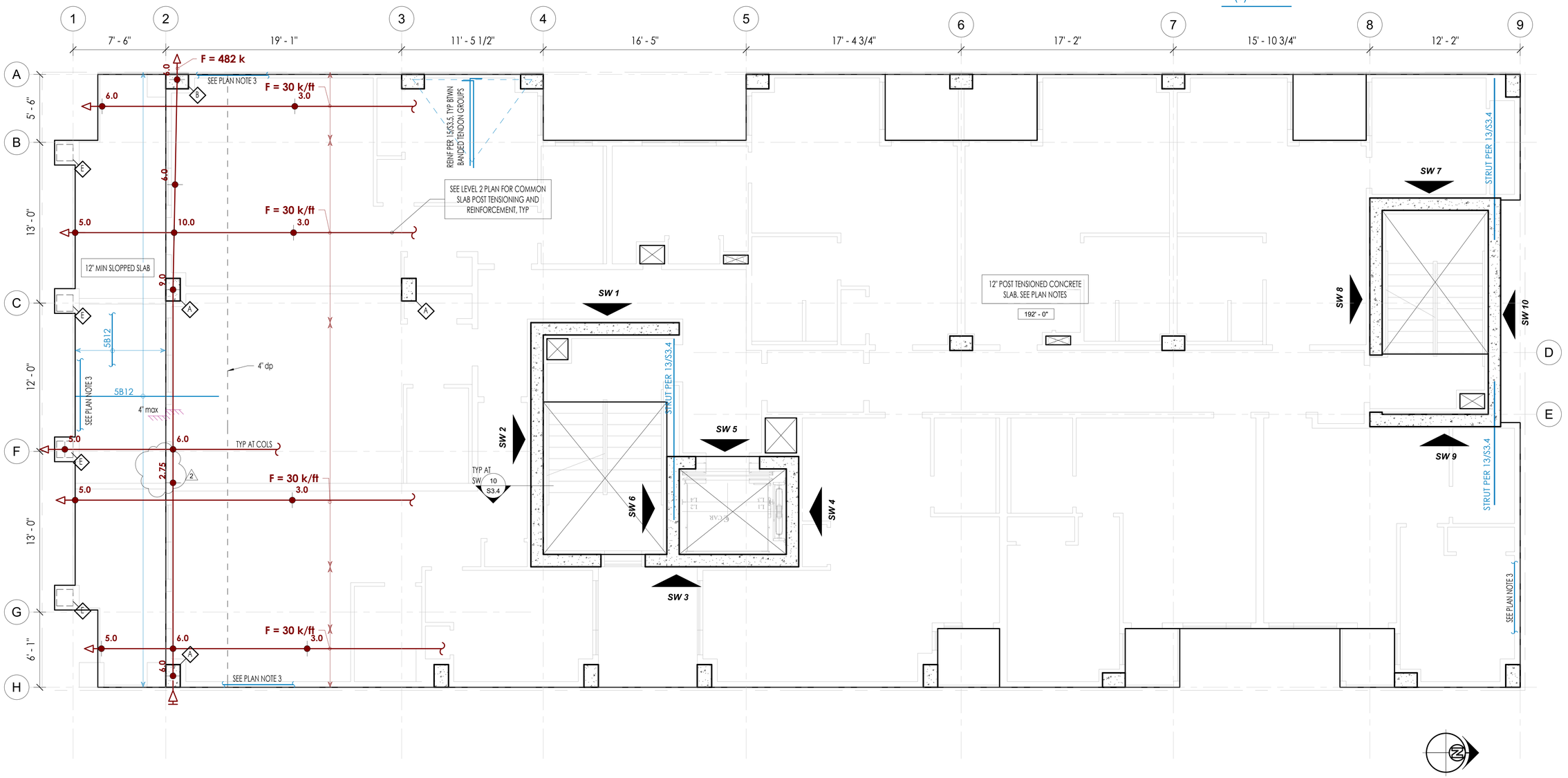


REINFORCING AT INTERIOR COLUMNS, TYPICAL U.O.N.

REINFORCING AT EXTERIOR COLUMNS, TYPICAL U.O.N.

Bar Legend:





1 LEVEL 3
1/4" = 1'-0"

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1038 BUILDING

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NUMBER	DATE	DESCRIPTION OF REVISIONS
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2	10/28/2024	BP REVIEW CYCLE 1

SHEET TITLE

LEVEL 3 FLOOR PLAN

JOB NUMBER

SHEET NUMBER

S2.3

CONCRETE PLAN NOTES:

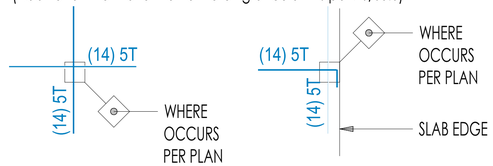
1. PLAN. T.O. SLAB ELEVATION, SLAB THICKNESS AND REINFORCING SHALL BE AS NOTED ON VERIFY DIMENSIONS, SLOPES, AND ELEVATIONS W/ ARCHITECTURAL DRAWINGS.
2. SEE S3.4 AND S3.5 FOR TYPICAL POST-TENSIONING DETAILS, INCLUDING ADDITIONAL REQUIRED REINFORCING. SEE GENERAL STRUCTURAL NOTES FOR POST-TENSIONING NOTES.
3. SEE 5/S3.7 FOR ADDED MILD STEEL AT HOLDOWNS. LOCATE HOLDOWNS PER SHEET S2.5.
4. LEVEL 4 SLAB IS DESIGNED FOR 3-HOUR FIRE SEPARATION. PROVIDE 1 1/4" MIN. CLEAR COVER TO MILD REINFORCING AT EXTERIOR SPANS AND 1" MIN. CLEAR COVER AT INTERIOR SPANS. PROVIDE 2" MIN. CLEAR COVER TO POST-TENSIONING REINFORCING AT EXTERIOR SPANS AND 1" MIN. CLEARCOVER AT INTERIOR SPANS.
5. PROVIDE (3)#4 TOP & BOTTOM CONT. (SEE 15/S3.4 FOR PLACEMENT) ALONG PERIMETER OF SLAB WHERE NOTED ON PLAN. BARS ARE IN ADDITION TO (2)#4 EDGE BARS SHOWN IN 15/S3.4 AND ON PLAN. (3)#4 TOP & BOTTOM ARE NOT REQUIRED WHERE CONCRETE SHEAR WALL REINFORCING OF 20/S3.5 IS REQUIRED.
6. TENDON LOCATIONS SHALL BE MARKED ACCORDING TO DETAIL 6/S3.4.
7. MECHANICAL PIPING, ELECTRICAL FIXTURES AND OTHER HEAVY LOADS HUNG FROM P.T. SLAB SHALL BE SUPPORTED WITH UNISTRUT CONCRETE INSERTS OR EQUAL.
8. MECHANICAL PIPING AND ELECTRICAL CONDUIT SHALL PENETRATE THE P.T. SLAB AT ONLY PREDETERMINED SLEEVE LOCATIONS. SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATION AND SIZE OF SLAB PENETRATIONS AND SUBMIT FOR REVIEW PER GENERAL STRUCTURAL NOTES.
9. CORE DRILLING OR ROTO-HAMMERING OF P.T. SLAB IS NOT PERMITTED WITHOUT ENGINEER APPROVAL. SEE POST TENSIONING NOTES IN GENERAL STRUCTURAL NOTES.
10. REFERENCE ARCHITECTURAL DRAWINGS FOR MISC. EMBEDS REQUIRED AT NON-STRUCTURAL ELEMENTS.
11. SEE WOOD LEVELS FOR TYPICAL STAIR DETAILS AND FRAMING.
12. ALL TENDON HEIGHTS INDICATED ON PLAN ARE WITH REFERENCE TO THE BOTTOM OF SLAB.
12. SEISMIC FORCE RESISTING SYSTEM COMPRISES OF CONCRETE SHEAR WALLS PER ELEVATIONS ON SHEET S3.3 AND DETAILS ON S3.4. DIAPHRAGM CONSISTS OF THE FLOOR SLAB.

CONCRETE PLAN LEGEND:

- x'-x" — TOP OF SLAB ELEVATION
- x'-x" — BOTTOM OF SLAB (SOFFIT) ELEVATION
- x" dp. — DEPTH OF DROP IN SLAB SOFFIT
- STEP IN TOP OF SLAB
- X — STUDRAIL CALLOUT PER 20/S3.6
- STRESSING END OF P.T. STRAND
- X.X — TENDON HEIGHT TO CGS FROM BOTTOM OF SLAB
- ANCHOR END OF P.T. STRAND

TYPICAL STUD RAILS & REINFORCING:

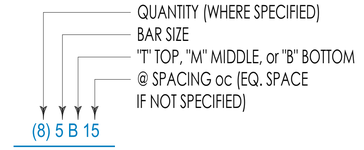
(Additional information for reinforcing at columns per 20/S3.5)

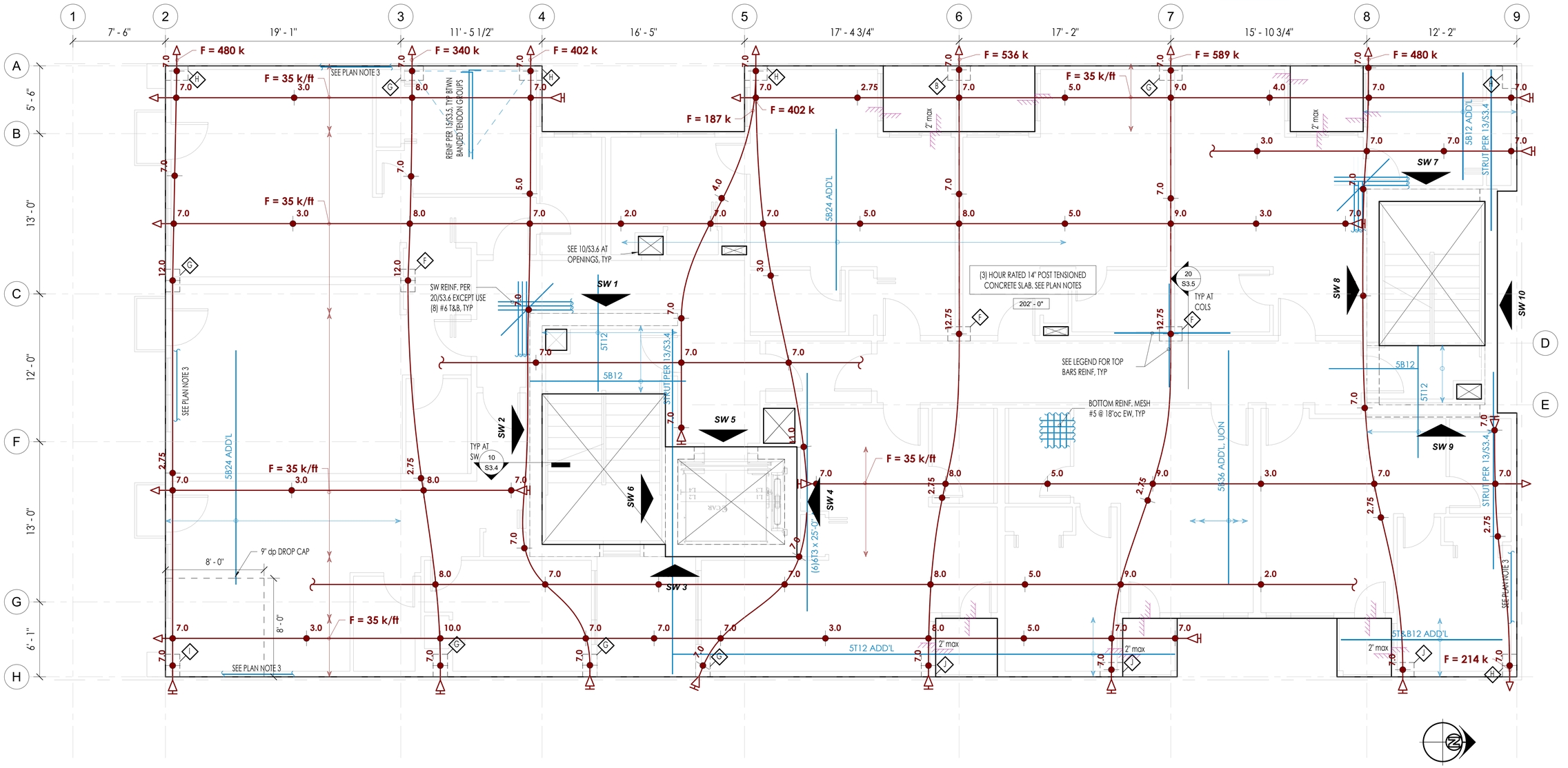


REINFORCING AT INTERIOR COLUMNS, TYPICAL U.O.N.

REINFORCING AT EXTERIOR COLUMNS, TYPICAL U.O.N.

Bar Legend:





1 LEVEL 4
1/4" = 1'-0"

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1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
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SHEET TITLE
LEVEL 4 FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.4

WOOD PLAN NOTES:

1. STUD WALLS SHALL BE 2x4@16"oc TYP AT INTERIOR, AND 2x6@16"oc TYP AT EXTERIOR, U.O.N. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S6.5 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALL PANEL EDGES. SEE 1/S6.1, 2/S6.1, AND 3/S6.1 FOR HOLES AND NOTCHES IN STUDS AND PLATES.
2. POSTS OR JAMB STUDS SUPPORTING BEAMS, GIRDER TRUSSES, OR POSTS ABOVE SHALLBE (2) STUDS, U.O.N. AT EXTERIOR WALLS SEE JAMB REQUIREMENT PER 12/S6.1. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
3. BEAMS SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   INTERIOR BEAMS OVER DOORS WITH A CLEAR SPAN NO GREATER THAN 4'-0" SHALL BE (2) 2x8 AND DROPPED BELOW STUD WALL TOP PLATE PER 13/S6.1 ALL OTHER BEAMS SHALL BE 3 1/2" x 9 1/2" AND FLUSH FRAMED PER DETAILS, U.O.N.

   EXTERIOR BEAMS SHALL CONSIST OF RIM BOARD PER DETAILS 5/S6.3 AND 20/S6.3 CONTINUOUS OVER WALL OPENINGS, U.O.N.
4. INSTALL HU (MAX.) HANGERS AT ALL FLUSH WOOD BEAM-TO-WOOD BEAM CONNECTIONS AND ALL FLUSH SKEWED FRAMING CONNECTIONS, U.O.N. HU HANGERS SHALL BE SIZED TO MATCH NOMINAL DEPTH OF SUPPORTED MEMBERS, U.O.N. FOR OTHER TYPICAL JOIST OR BEAM CONNECTIONS SEE SCHEDULE 20/S6.2.
5. FLOOR AND ROOF SHEATHING SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   FLOOR SHEATHING SHALL CONSIST OF 3/4" T&G SHEATHING, U.O.N. (PANEL SPAN RATING 48/24). SEE ARCHITECTURAL FOR GYPCRETE TOPPING REQUIREMENTS - 1 1/4" MAXIMUM THICKNESS).

   ROOF SHEATHING SHALL CONSIST OF 5/8" SHEATHING, U.O.N. (PANEL SPAN RATING 32/16).

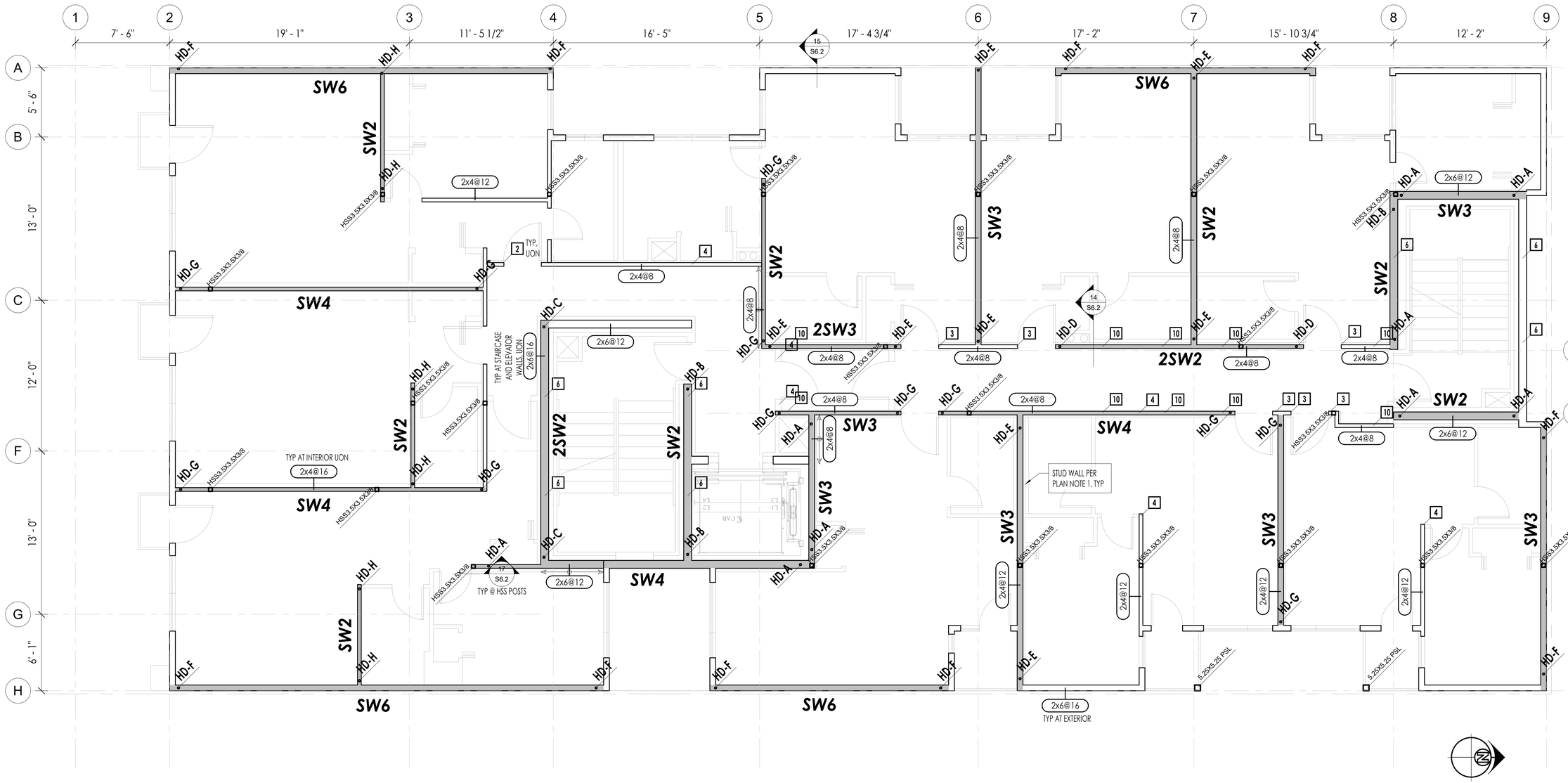
   NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES AND BLOCKING W/ 10d @ 6"oc. NAIL SHEATHING TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc. GLUE SHEATHING AT ALL SUPPORTS W/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
6. AT AREAS INDICATED AS BLOCKED DIAPHRAGM, INSTALL 2x FLAT BLOCKING (PER GENERAL STRUCTURAL NOTES) AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING AT PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL FIELD TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc.
8. SHALLOW SLAB HOLDOWN SYSTEM SHALL BE DESIGNED TO RESIST NET UPLIFT AND COMPRESSION FORCES PER SCHEDULE OF 10/S6.5. SEE GENERAL STRUCTURAL NOTES FOR REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF HOLDOWN ANCHORAGE TO CONCRETE WITH THE HOLDOWN SYSTEM MANUFACTURER.
9. GENERAL CONTRACTOR SHALL COORDINATE PLUMBING, PIPING, DUCTING AND OTHER MECHANICAL SYSTEM SUPPORT CONFIGURATIONS, LOADS AND CONNECTION DETAILS WITH MECHANICAL CONTRACTOR, TRUSS MANUFACTURER AND JOIST MANUFACTURER PRIOR TO FABRICATION
10. SHEAR WALLS SHALL BE SHEATHED WITH OSB AT INTERIOR WALLS, AND PLYWOOD AT EXTERIOR WALLS. OSB SHALL NOT BE SUBSTITUTED FOR PLYWOOD, AND VISA VERSA. SEE 20/S6.5 FOR NAILING REQUIREMENTS. AT SHEATHED WALLS, CONTRACTOR SHALL EXTEND SHEATHING TO ACHIEVE FULL COVERAGE OF ENTIRE WALL TO AVOID CONFLICTS BETWEEN VARYING STRUCTURAL SHEATHING AND GWB THICKNESSES.

LEGEND:

- POST THIS LEVEL (SEE PLAN NOTE 2)
- STRUCTURAL WALL THIS LEVEL (SEE PLAN NOTE 1)
- x — NUMBER OF STUDS IN MULTI-STUD POST THIS LEVEL - SEE 10/S6.1 AND GSN FOR NAILING
- SPAN DIRECTION OF FRAMING MEMBERS (SEE PLAN NOTE 3)
- (D) — DROPPED BEAM. SEE 13/S6.1
- X@x — BEARING STUD WALL TYPE. SEE PLAN NOTE 1
- BLOCKED DIAPHRAGM (SEE PLAN NOTE 6)

SEISMIC FORCE RESISTING SYSTEM LEGEND:

- SHEAR WALL THIS LEVEL PER SCHEDULE OF 20/S6.5 (SEE PLAN NOTE 1 AND 10)
- SW / HD-X — HOLDOWN RUN TYPE 'X' THIS LEVEL PER SCHEDULE OF 10/S6.5
- STRUT — FRAMING MEMBER NAILED AS STRUT PER PLAN NOTES



1 LEVEL 4 WOOD
1/4" = 1'-0"

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
LEVEL 4 WOOD FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.5

WOOD PLAN NOTES:

1. STUD WALLS SHALL BE 2x4@16"oc TYP AT INTERIOR, AND 2x6@16"oc TYP AT EXTERIOR, U.O.N. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S6.5 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALL PANEL EDGES. SEE 1/S6.1, 2/S6.1, AND 3/S6.1 FOR HOLES AND NOTCHES IN STUDS AND PLATES.
2. POSTS OR JAMB STUDS SUPPORTING BEAMS, GIRDER TRUSSES, OR POSTS ABOVE SHALLBE (2) STUDS, U.O.N. AT EXTERIOR WALLS SEE JAMB REQUIREMENT PER 12/S6.1. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
3. BEAMS SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   INTERIOR BEAMS OVER DOORS WITH A CLEAR SPAN NO GREATER THAN 4'-0" SHALL BE (2) 2x8 AND DROPPED BELOW STUD WALL TOP PLATE PER 13/S6.1 ALL OTHER BEAMS SHALL BE 3 1/2" x 9 1/2" AND FLUSH FRAMED PER DETAILS, U.O.N.

   EXTERIOR BEAMS SHALL CONSIST OF RIM BOARD PER DETAILS 5/S6.3 AND 20/S6.3 CONTINUOUS OVER WALL OPENINGS, U.O.N.
4. INSTALL HU (MAX.) HANGERS AT ALL FLUSH WOOD BEAM-TO-WOOD BEAM CONNECTIONS AND ALL FLUSH SKEWED FRAMING CONNECTIONS, U.O.N. HU HANGERS SHALL BE SIZED TO MATCH NOMINAL DEPTH OF SUPPORTED MEMBERS, U.O.N. FOR OTHER TYPICAL JOIST OR BEAM CONNECTIONS SEE SCHEDULE 20/S6.2.
5. FLOOR AND ROOF SHEATHING SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   FLOOR SHEATHING SHALL CONSIST OF 3/4" T&G SHEATHING, U.O.N. (PANEL SPAN RATING 48/24). SEE ARCHITECTURAL FOR GYPCRETE TOPPING REQUIREMENTS - 1 1/4" MAXIMUM THICKNESS).

   ROOF SHEATHING SHALL CONSIST OF 5/8" SHEATHING, U.O.N. (PANEL SPAN RATING 32/16).

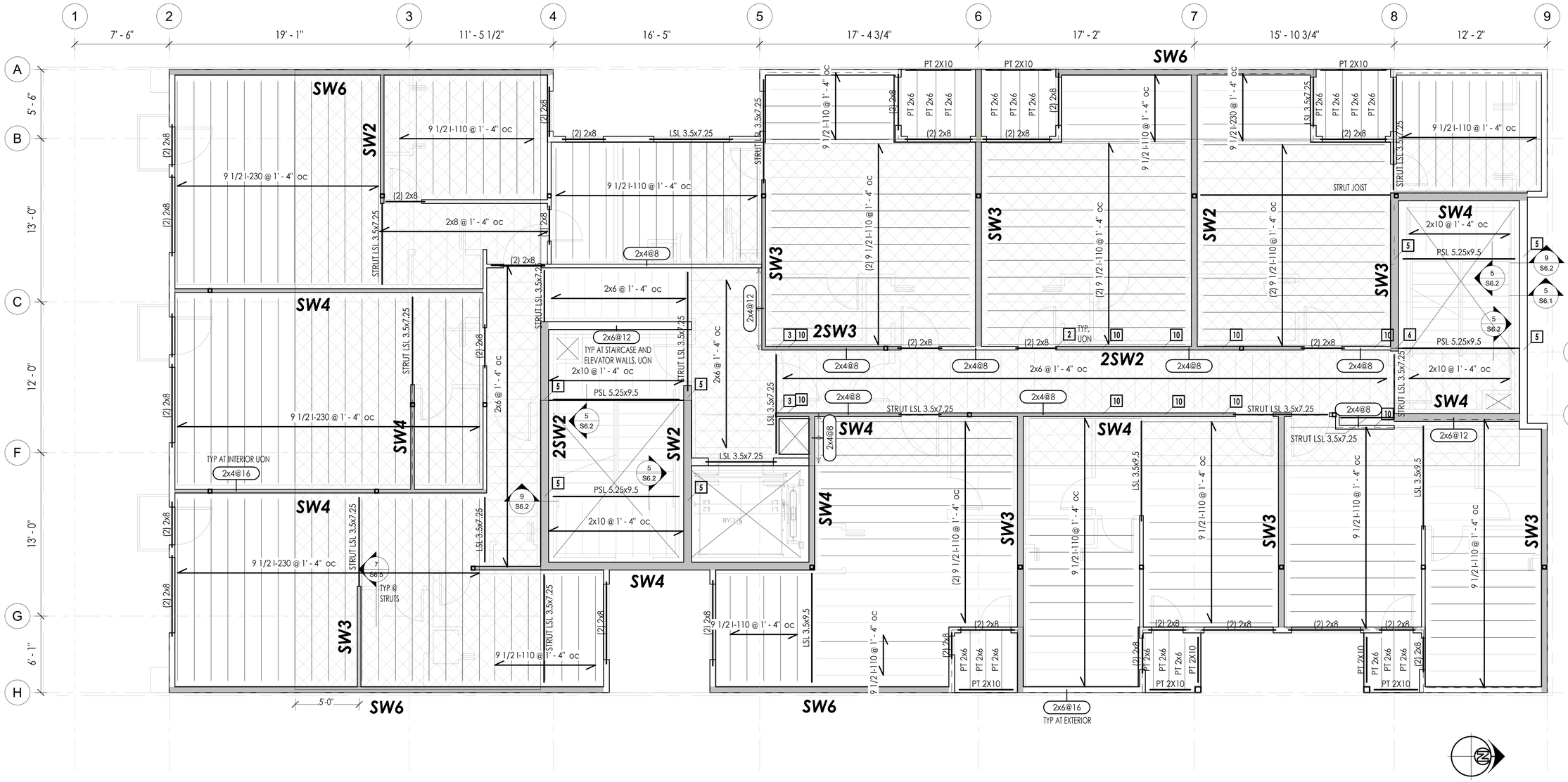
   NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES AND BLOCKING W/ 10d @ 6"oc. NAIL SHEATHING TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc. GLUE SHEATHING AT ALL SUPPORTS W/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
6. AT AREAS INDICATED AS BLOCKED DIAPHRAGM, INSTALL 2x FLAT BLOCKING (PER GENERAL STRUCTURAL NOTES) AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING AT PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL FIELD TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc.
8. SHALLOW SLAB HOLDOWN SYSTEM SHALL BE DESIGNED TO RESIST NET UPLIFT AND COMPRESSION FORCES PER SCHEDULE OF 10/S6.5. SEE GENERAL STRUCTURAL NOTES FOR REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF HOLDOWN ANCHORAGE TO CONCRETE WITH THE HOLDOWN SYSTEM MANUFACTURER.
9. GENERAL CONTRACTOR SHALL COORDINATE PLUMBING, PIPING, DUCTING AND OTHER MECHANICAL SYSTEM SUPPORT CONFIGURATIONS, LOADS AND CONNECTION DETAILS WITH MECHANICAL CONTRACTOR, TRUSS MANUFACTURER AND JOIST MANUFACTURER PRIOR TO FABRICATION
10. SHEAR WALLS SHALL BE SHEATHED WITH OSB AT INTERIOR WALLS, AND PLYWOOD AT EXTERIOR WALLS. OSB SHALL NOT BE SUBSTITUTED FOR PLYWOOD, AND VISA VERSA. SEE 20/S6.5 FOR NAILING REQUIREMENTS. AT SHEATHED WALLS, CONTRACTOR SHALL EXTEND SHEATHING TO ACHIEVE FULL COVERAGE OF ENTIRE WALL TO AVOID CONFLICTS BETWEEN VARYING STRUCTURAL SHEATHING AND GWB THICKNESSES.

LEGEND:

- POST THIS LEVEL (SEE PLAN NOTE 2)
- STRUCTURAL WALL THIS LEVEL (SEE PLAN NOTE 1)
- x — NUMBER OF STUDS IN MULTI-STUD POST THIS LEVEL - SEE 10/S6.1 AND GSN FOR NAILING
- SPAN DIRECTION OF FRAMING MEMBERS (SEE PLAN NOTE 3)
- (D) — DROPPED BEAM. SEE 13/S6.1
- X@x — BEARING STUD WALL TYPE. SEE PLAN NOTE 1
- BLOCKED DIAPHRAGM (SEE PLAN NOTE 6)

SEISMIC FORCE RESISTING SYSTEM LEGEND:

- SHEAR WALL THIS LEVEL PER SCHEDULE OF 20/S6.5 (SEE PLAN NOTE 1 AND 10)
- SW HD-X — HOLDOWN RUN TYPE 'x' THIS LEVEL PER SCHEDULE OF 10/S6.5
- STRUT — FRAMING MEMBER NAILED AS STRUT PER PLAN NOTES



1 LEVEL 5
1/4" = 1'-0"

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
LEVEL 5 FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.6

WOOD PLAN NOTES:

1. STUD WALLS SHALL BE 2x4@16"oc TYP AT INTERIOR, AND 2x6@16"oc TYP AT EXTERIOR, U.O.N. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S6.5 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALL PANEL EDGES. SEE 1/S6.1, 2/S6.1, AND 3/S6.1 FOR HOLES AND NOTCHES IN STUDS AND PLATES.
2. POSTS OR JAMB STUDS SUPPORTING BEAMS, GIRDER TRUSSES, OR POSTS ABOVE SHALLBE (2) STUDS, U.O.N. AT EXTERIOR WALLS SEE JAMB REQUIREMENT PER 12/S6.1. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
3. BEAMS SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   INTERIOR BEAMS OVER DOORS WITH A CLEAR SPAN NO GREATER THAN 4'-0" SHALL BE (2) 2x8 AND DROPPED BELOW STUD WALL TOP PLATE PER 13/S6.1 ALL OTHER BEAMS SHALL BE 3 1/2" x 9 1/2" AND FLUSH FRAMED PER DETAILS, U.O.N.

   EXTERIOR BEAMS SHALL CONSIST OF RIM BOARD PER DETAILS 5/S6.3 AND 20/S6.3 CONTINUOUS OVER WALL OPENINGS, U.O.N.
4. INSTALL HU (MAX.) HANGERS AT ALL FLUSH WOOD BEAM-TO-WOOD BEAM CONNECTIONS AND ALL FLUSH SKEWED FRAMING CONNECTIONS, U.O.N. HU HANGERS SHALL BE SIZED TO MATCH NOMINAL DEPTH OF SUPPORTED MEMBERS, U.O.N. FOR OTHER TYPICAL JOIST OR BEAM CONNECTIONS SEE SCHEDULE 20/S6.2.
5. FLOOR AND ROOF SHEATHING SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   FLOOR SHEATHING SHALL CONSIST OF 3/4" T&G SHEATHING, U.O.N. (PANEL SPAN RATING 48/24). SEE ARCHITECTURAL FOR GYPCRETE TOPPING REQUIREMENTS - 1 1/4" MAXIMUM THICKNESS).

   ROOF SHEATHING SHALL CONSIST OF 5/8" SHEATHING, U.O.N. (PANEL SPAN RATING 32/16).

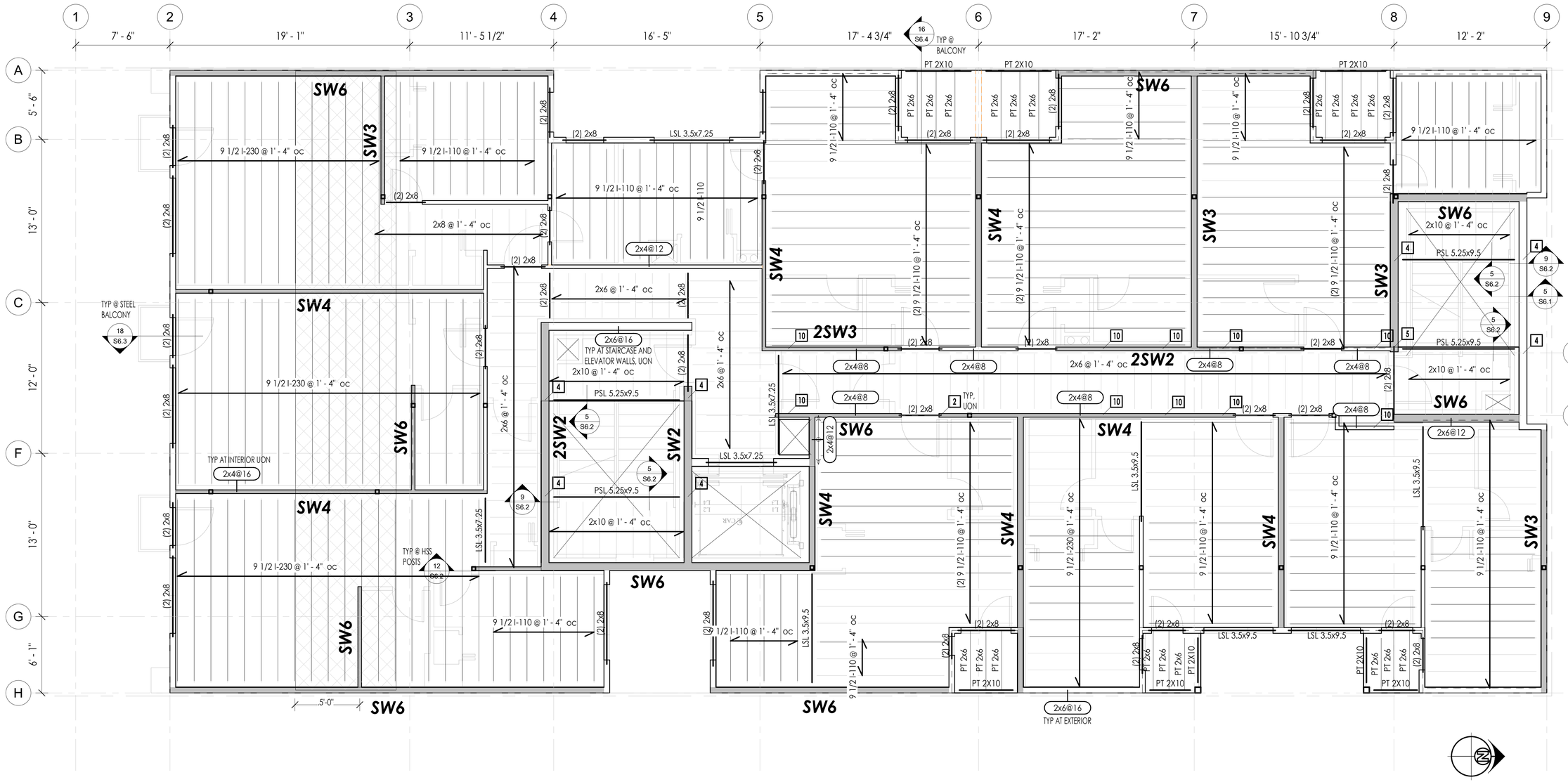
   NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES AND BLOCKING W/ 10d @ 6"oc. NAIL SHEATHING TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc. GLUE SHEATHING AT ALL SUPPORTS W/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
6. AT AREAS INDICATED AS BLOCKED DIAPHRAGM, INSTALL 2x FLAT BLOCKING (PER GENERAL STRUCTURAL NOTES) AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING AT PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL FIELD TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc.
8. SHALLOW SLAB HOLDOWN SYSTEM SHALL BE DESIGNED TO RESIST NET UPLIFT AND COMPRESSION FORCES PER SCHEDULE OF 10/S6.5. SEE GENERAL STRUCTURAL NOTES FOR REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF HOLDOWN ANCHORAGE TO CONCRETE WITH THE HOLDOWN SYSTEM MANUFACTURER.
9. GENERAL CONTRACTOR SHALL COORDINATE PLUMBING, PIPING, DUCTING AND OTHER MECHANICAL SYSTEM SUPPORT CONFIGURATIONS, LOADS AND CONNECTION DETAILS WITH MECHANICAL CONTRACTOR, TRUSS MANUFACTURER AND JOIST MANUFACTURER PRIOR TO FABRICATION
10. SHEAR WALLS SHALL BE SHEATHED WITH OSB AT INTERIOR WALLS, AND PLYWOOD AT EXTERIOR WALLS. OSB SHALL NOT BE SUBSTITUTED FOR PLYWOOD, AND VISA VERSA. SEE 20/S6.5 FOR NAILING REQUIREMENTS. AT SHEATHED WALLS, CONTRACTOR SHALL EXTEND SHEATHING TO ACHIEVE FULL COVERAGE OF ENTIRE WALL TO AVOID CONFLICTS BETWEEN VARYING STRUCTURAL SHEATHING AND GWB THICKNESSES.

LEGEND:

- POST THIS LEVEL (SEE PLAN NOTE 2)
- STRUCTURAL WALL THIS LEVEL (SEE PLAN NOTE 1)
- x — NUMBER OF STUDS IN MULTI-STUD POST THIS LEVEL - SEE 10/S6.1 AND GSN FOR NAILING
- SPAN DIRECTION OF FRAMING MEMBERS (SEE PLAN NOTE 3)
- (D) — DROPPED BEAM. SEE 13/S6.1
- X@x — BEARING STUD WALL TYPE. SEE PLAN NOTE 1
- BLOCKED DIAPHRAGM (SEE PLAN NOTE 6)

SEISMIC FORCE RESISTING SYSTEM LEGEND:

- SW HD-X — SHEAR WALL THIS LEVEL PER SCHEDULE OF 20/S6.5 (SEE PLAN NOTE 1 AND 10)
- HOLDOWN RUN TYPE 'x' THIS LEVEL PER SCHEDULE OF 10/S6.5
- STRUT — FRAMING MEMBER NAILED AS STRUT PER PLAN NOTES



1 LEVEL 6
1/4" = 1'-0"

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING

1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
LEVEL 6 FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.7

WOOD PLAN NOTES:

1. STUD WALLS SHALL BE 2x4@16"oc TYP AT INTERIOR, AND 2x6@16"oc TYP AT EXTERIOR, U.O.N. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S6.5 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALL PANEL EDGES. SEE 1/S6.1, 2/S6.1, AND 3/S6.1 FOR HOLES AND NOTCHES IN STUDS AND PLATES.
2. POSTS OR JAMB STUDS SUPPORTING BEAMS, GIRDER TRUSSES, OR POSTS ABOVE SHALLBE (2) STUDS, U.O.N. AT EXTERIOR WALLS SEE JAMB REQUIREMENT PER 12/S6.1. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
3. BEAMS SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   INTERIOR BEAMS OVER DOORS WITH A CLEAR SPAN NO GREATER THAN 4'-0" SHALL BE (2) 2x8 AND DROPPED BELOW STUD WALL TOP PLATE PER 13/S6.1 ALL OTHER BEAMS SHALL BE 3 1/2" x 9 1/2" AND FLUSH FRAMED PER DETAILS, U.O.N.

   EXTERIOR BEAMS SHALL CONSIST OF RIM BOARD PER DETAILS 5/S6.3 AND 20/S6.3 CONTINUOUS OVER WALL OPENINGS, U.O.N.
4. INSTALL HU (MAX.) HANGERS AT ALL FLUSH WOOD BEAM-TO-WOOD BEAM CONNECTIONS AND ALL FLUSH SKEWED FRAMING CONNECTIONS, U.O.N. HU HANGERS SHALL BE SIZED TO MATCH NOMINAL DEPTH OF SUPPORTED MEMBERS, U.O.N. FOR OTHER TYPICAL JOIST OR BEAM CONNECTIONS SEE SCHEDULE 20/S6.2.
5. FLOOR AND ROOF SHEATHING SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   FLOOR SHEATHING SHALL CONSIST OF 3/4" T&G SHEATHING, U.O.N. (PANEL SPAN RATING 48/24). SEE ARCHITECTURAL FOR GYPCRETE TOPPING REQUIREMENTS - 1 1/4" MAXIMUM THICKNESS).

   ROOF SHEATHING SHALL CONSIST OF 5/8" SHEATHING, U.O.N. (PANEL SPAN RATING 32/16).

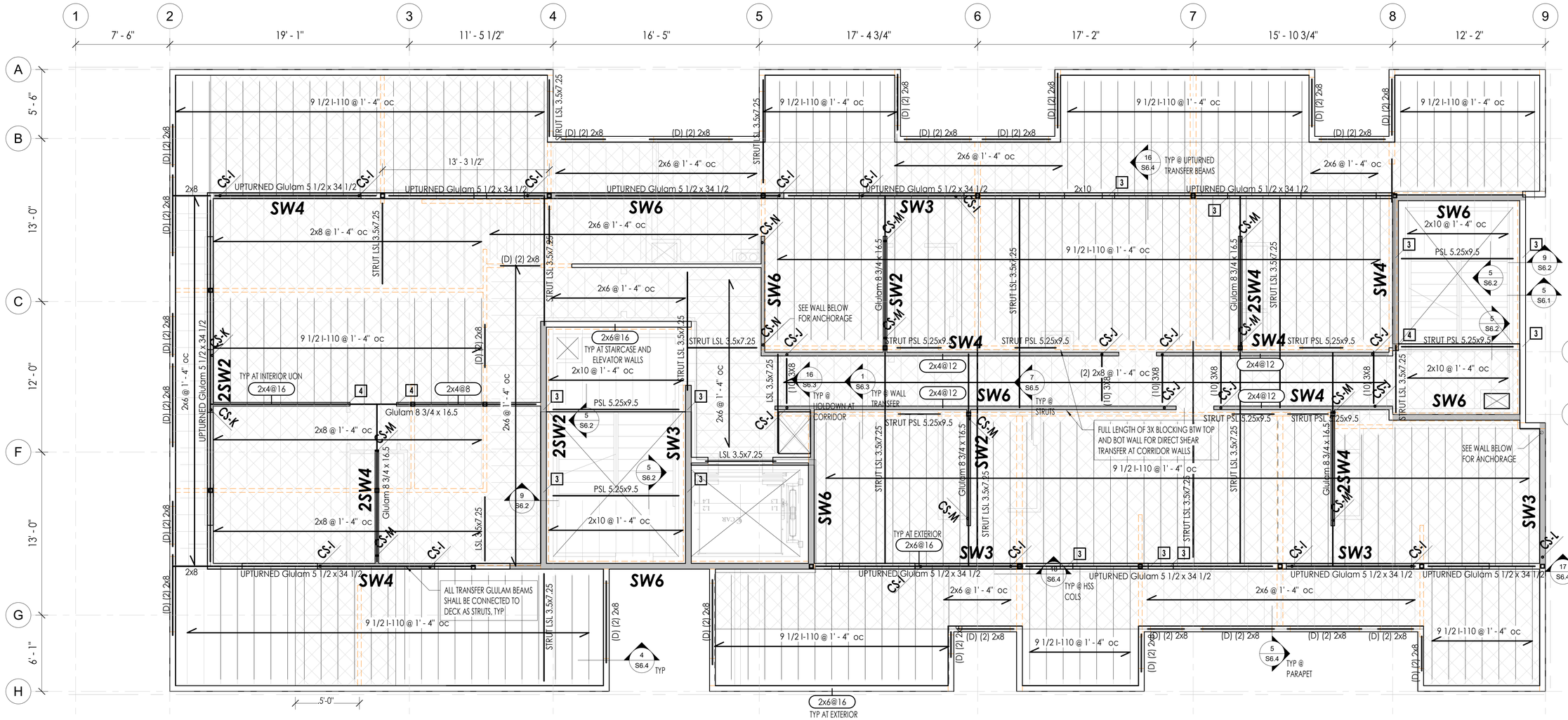
   NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES AND BLOCKING W/ 10d @ 6"oc. NAIL SHEATHING TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc. GLUE SHEATHING AT ALL SUPPORTS W/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
6. AT AREAS INDICATED AS BLOCKED DIAPHRAGM, INSTALL 2x FLAT BLOCKING (PER GENERAL STRUCTURAL NOTES) AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING AT PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL FIELD TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc.
8. SHALLOW SLAB HOLDOWN SYSTEM SHALL BE DESIGNED TO RESIST NET UPLIFT AND COMPRESSION FORCES PER SCHEDULE OF 10/S6.5. SEE GENERAL STRUCTURAL NOTES FOR REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF HOLDOWN ANCHORAGE TO CONCRETE WITH THE HOLDOWN SYSTEM MANUFACTURER.
9. GENERAL CONTRACTOR SHALL COORDINATE PLUMBING, PIPING, DUCTING AND OTHER MECHANICAL SYSTEM SUPPORT CONFIGURATIONS, LOADS AND CONNECTION DETAILS WITH MECHANICAL CONTRACTOR, TRUSS MANUFACTURER AND JOIST MANUFACTURER PRIOR TO FABRICATION
10. SHEAR WALLS SHALL BE SHEATHED WITH OSB AT INTERIOR WALLS, AND PLYWOOD AT EXTERIOR WALLS. OSB SHALL NOT BE SUBSTITUTED FOR PLYWOOD, AND VISA VERSA. SEE 20/S6.5 FOR NAILING REQUIREMENTS. AT SHEATHED WALLS, CONTRACTOR SHALL EXTEND SHEATHING TO ACHIEVE FULL COVERAGE OF ENTIRE WALL TO AVOID CONFLICTS BETWEEN VARYING STRUCTURAL SHEATHING AND GWB THICKNESSES.

LEGEND:

- POST THIS LEVEL (SEE PLAN NOTE 2)
- STRUCTURAL WALL THIS LEVEL (SEE PLAN NOTE 1)
- x — NUMBER OF STUDS IN MULTI-STUD POST THIS LEVEL - SEE 10/S6.1 AND GSN FOR NAILING
- SPAN DIRECTION OF FRAMING MEMBERS (SEE PLAN NOTE 3)
- (D) — DROPPED BEAM. SEE 13/S6.1
- X@x — BEARING STUD WALL TYPE. SEE PLAN NOTE 1
- BLOCKED DIAPHRAGM (SEE PLAN NOTE 6)

SEISMIC FORCE RESISTING SYSTEM LEGEND:

- SHEAR WALL THIS LEVEL PER SCHEDULE OF 20/S6.5 (SEE PLAN NOTE 1 AND 10)
- SW CS-X — HOLDOWN RUN TYPE 'x' THIS LEVEL PER SCHEDULE OF 8/S6.4
- STRUT — FRAMING MEMBER NAILED AS STRUT PER PLAN NOTES



1 LEVEL 7
1/4" = 1'-0"

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING

1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE

LEVEL 7 FLOOR PLAN

JOB NUMBER

SHEET NUMBER

S2.8

WOOD PLAN NOTES:

1. STUD WALLS SHALL BE 2x4@16"oc TYP AT INTERIOR, AND 2x6@16"oc TYP AT EXTERIOR, U.O.N. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S6.5 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALL PANEL EDGES. SEE 1/S6.1, 2/S6.1, AND 3/S6.1 FOR HOLES AND NOTCHES IN STUDS AND PLATES.
2. POSTS OR JAMB STUDS SUPPORTING BEAMS, GIRDER TRUSSES, OR POSTS ABOVE SHALLBE (2) STUDS, U.O.N. AT EXTERIOR WALLS SEE JAMB REQUIREMENT PER 12/S6.1. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
3. BEAMS SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   INTERIOR BEAMS OVER DOORS WITH A CLEAR SPAN NO GREATER THAN 4'-0" SHALL BE (2) 2x8 AND DROPPED BELOW STUD WALL TOP PLATE PER 13/S6.1 ALL OTHER BEAMS SHALL BE 3 1/2" x 9 1/2" AND FLUSH FRAMED PER DETAILS, U.O.N.

   EXTERIOR BEAMS SHALL CONSIST OF RIM BOARD PER DETAILS 5/S6.3 AND 20/S6.3 CONTINUOUS OVER WALL OPENINGS, U.O.N.
4. INSTALL HU (MAX.) HANGERS AT ALL FLUSH WOOD BEAM-TO-WOOD BEAM CONNECTIONS AND ALL FLUSH SKEWED FRAMING CONNECTIONS, U.O.N. HU HANGERS SHALL BE SIZED TO MATCH NOMINAL DEPTH OF SUPPORTED MEMBERS, U.O.N. FOR OTHER TYPICAL JOIST OR BEAM CONNECTIONS SEE SCHEDULE 20/S6.2.
5. FLOOR AND ROOF SHEATHING SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   FLOOR SHEATHING SHALL CONSIST OF 3/4" T&G SHEATHING, U.O.N. (PANEL SPAN RATING 48/24). SEE ARCHITECTURAL FOR GYPCRETE TOPPING REQUIREMENTS - 1 1/4" MAXIMUM THICKNESS).

   ROOF SHEATHING SHALL CONSIST OF 5/8" SHEATHING, U.O.N. (PANEL SPAN RATING 32/16).

   NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES AND BLOCKING W/ 10d @ 6"oc. NAIL SHEATHING TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc. GLUE SHEATHING AT ALL SUPPORTS W/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
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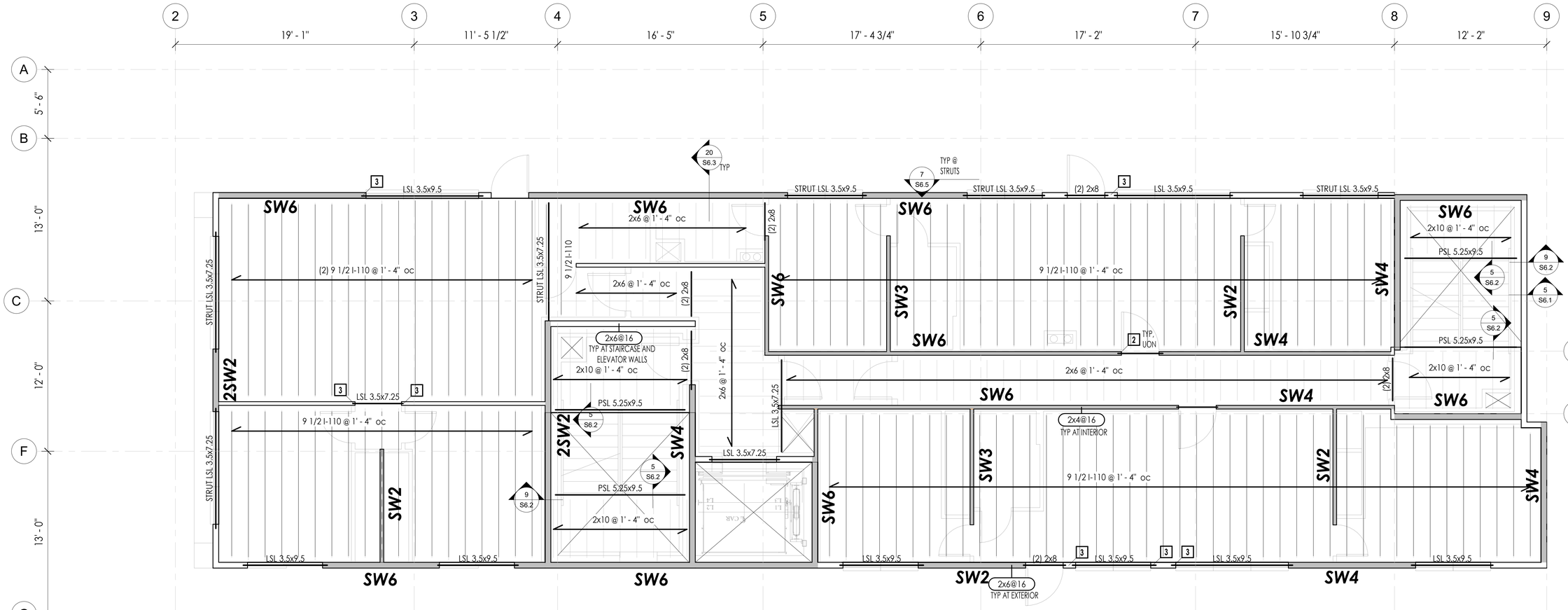
8. SHALLOW SLAB HOLDOWN SYSTEM SHALL BE DESIGNED TO RESIST NET UPLIFT AND COMPRESSION FORCES PER SCHEDULE OF 10/S6.5. SEE GENERAL STRUCTURAL NOTES FOR REQUIREMENTS. CONTRACTOR SHALL COORDINATE ALL LOCATIONS OF HOLDOWN ANCHORAGE TO CONCRETE WITH THE HOLDOWN SYSTEM MANUFACTURER.
9. GENERAL CONTRACTOR SHALL COORDINATE PLUMBING, PIPING, DUCTING AND OTHER MECHANICAL SYSTEM SUPPORT CONFIGURATIONS, LOADS AND CONNECTION DETAILS WITH MECHANICAL CONTRACTOR, TRUSS MANUFACTURER AND JOIST MANUFACTURER PRIOR TO FABRICATION
10. SHEAR WALLS SHALL BE SHEATHED WITH OSB AT INTERIOR WALLS, AND PLYWOOD AT EXTERIOR WALLS. OSB SHALL NOT BE SUBSTITUTED FOR PLYWOOD, AND VISA VERSA. SEE 20/S6.5 FOR NAILING REQUIREMENTS. AT SHEATHED WALLS, CONTRACTOR SHALL EXTEND SHEATHING TO ACHIEVE FULL COVERAGE OF ENTIRE WALL TO AVOID CONFLICTS BETWEEN VARYING STRUCTURAL SHEATHING AND GWB THICKNESSES.

LEGEND:

- POST THIS LEVEL (SEE PLAN NOTE 2)
- STRUCTURAL WALL THIS LEVEL (SEE PLAN NOTE 1)
- [x] NUMBER OF STUDS IN MULTI-STUD POST THIS LEVEL - SEE 10/S6.1 AND GSN FOR NAILING
- SPAN DIRECTION OF FRAMING MEMBERS (SEE PLAN NOTE 3)
- (D) DROPPED BEAM. SEE 13/S6.1
- X@x BEARING STUD WALL TYPE. SEE PLAN NOTE 1
- BLOCKED DIAPHRAGM (SEE PLAN NOTE 6)

SEISMIC FORCE RESISTING SYSTEM LEGEND:

- SW HD.X — SHEAR WALL THIS LEVEL PER SCHEDULE OF 20/S6.5 (SEE PLAN NOTE 1 AND 10)
- HOLDOWN RUN TYPE 'x' THIS LEVEL PER SCHEDULE OF 10/S6.5
- STRUT — FRAMING MEMBER NAILED AS STRUT PER PLAN NOTES



1 LEVEL 8
1/4" = 1'-0"

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING

1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
LEVEL 8 FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.9

WOOD PLAN NOTES:

1. STUD WALLS SHALL BE 2x4@16"oc TYP AT INTERIOR, AND 2x6@16"oc TYP AT EXTERIOR, U.O.N. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S6.5 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALL PANEL EDGES. SEE 1/S6.1, 2/S6.1, AND 3/S6.1 FOR HOLES AND NOTCHES IN STUDS AND PLATES.
2. POSTS OR JAMB STUDS SUPPORTING BEAMS, GIRDER TRUSSES, OR POSTS ABOVE SHALLBE (2) STUDS, U.O.N. AT EXTERIOR WALLS SEE JAMB REQUIREMENT PER 12/S6.1. NAIL STUDS TOGETHER PER GENERAL STRUCTURAL NOTES.
3. BEAMS SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   INTERIOR BEAMS OVER DOORS WITH A CLEAR SPAN NO GREATER THAN 4'-0" SHALL BE (2) 2x8 AND DROPPED BELOW STUD WALL TOP PLATE PER 13/S6.1 ALL OTHER BEAMS SHALL BE 3 1/2" x 9 1/2" AND FLUSH FRAMED PER DETAILS, U.O.N.

   EXTERIOR BEAMS SHALL CONSIST OF RIM BOARD PER DETAILS 5/S6.3 AND 20/S6.3 CONTINUOUS OVER WALL OPENINGS, U.O.N.
4. INSTALL HU (MAX.) HANGERS AT ALL FLUSH WOOD BEAM-TO-WOOD BEAM CONNECTIONS AND ALL FLUSH SKEWED FRAMING CONNECTIONS, U.O.N. HU HANGERS SHALL BE SIZED TO MATCH NOMINAL DEPTH OF SUPPORTED MEMBERS, U.O.N. FOR OTHER TYPICAL JOIST OR BEAM CONNECTIONS SEE SCHEDULE 20/S6.2.
5. FLOOR AND ROOF SHEATHING SHALL CONSIST OF THE FOLLOWING, U.O.N.:

   FLOOR SHEATHING SHALL CONSIST OF 3/4" T&G SHEATHING, U.O.N. (PANEL SPAN RATING 48/24). SEE ARCHITECTURAL FOR GYPCRETE TOPPING REQUIREMENTS - 1 1/4" MAXIMUM THICKNESS).

   ROOF SHEATHING SHALL CONSIST OF 5/8" SHEATHING, U.O.N. (PANEL SPAN RATING 32/16).

   NAIL SHEATHING AT ALL FRAMED PANEL EDGES, DIAPHRAGM BOUNDARIES AND BLOCKING W/ 10d @ 6"oc. NAIL SHEATHING TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc. GLUE SHEATHING AT ALL SUPPORTS W/ ADHESIVE CONFORMING TO ASTM SPECIFICATION D3498.
6. AT AREAS INDICATED AS BLOCKED DIAPHRAGM, INSTALL 2x FLAT BLOCKING (PER GENERAL STRUCTURAL NOTES) AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING AT PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL PANEL EDGES AND DIAPHRAGM BOUNDARIES W/ 10d @ 6"oc. NAIL SHEATHING IN PANEL FIELD TO ALL STRUTS, STRUT BLOCKING, AND INTERIOR SHEAR WALLS BELOW W/ TWO ROWS OF 10d @ 4 1/2"oc (STAGGER ROWS). NAIL SHEATHING AT ALL INTERMEDIATE SUPPORTS W/ 10d @ 12"oc.
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LEGEND:

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SEISMIC FORCE RESISTING SYSTEM LEGEND:

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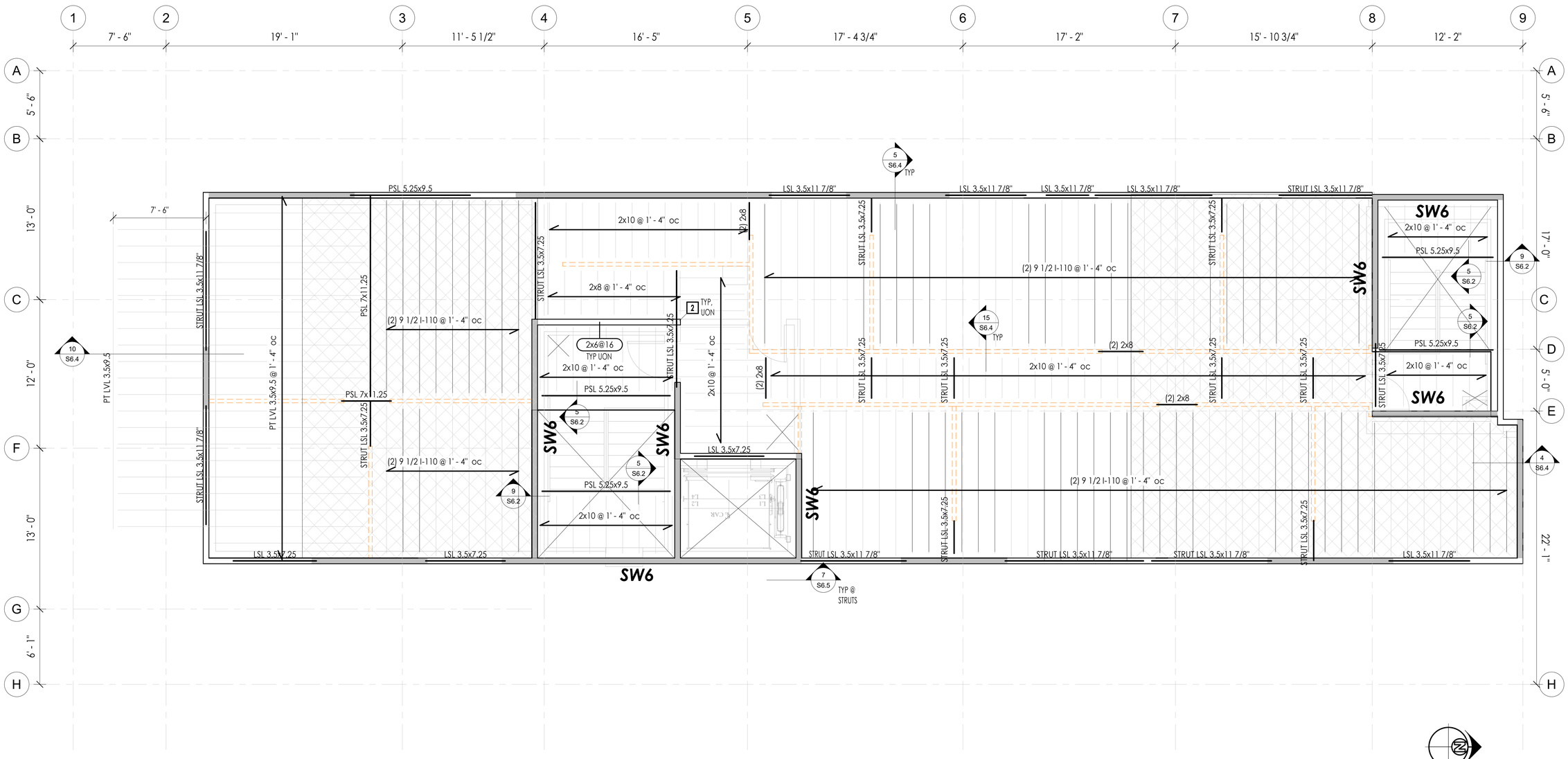

1 ROOF
1/4" = 1'-0"

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1038 BUILDING

1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
ROOF FLOOR PLAN

JOB NUMBER

SHEET NUMBER
S2.10

WOOD PLAN NOTES:

1. STUD WALLS SHALL BE 2x4@16"oc TYP AT INTERIOR, AND 2x6@16"oc TYP AT EXTERIOR, U.O.N. SEE ARCHITECTURAL FOR WALL TYPES. SEE 20/S6.5 FOR SPECIAL STUD REQUIREMENTS AT HEAVILY NAILED SHEAR WALL PANEL EDGES. SEE 1/S6.1, 2/S6.1, AND 3/S6.1 FOR HOLES AND NOTCHES IN STUDS AND PLATES.
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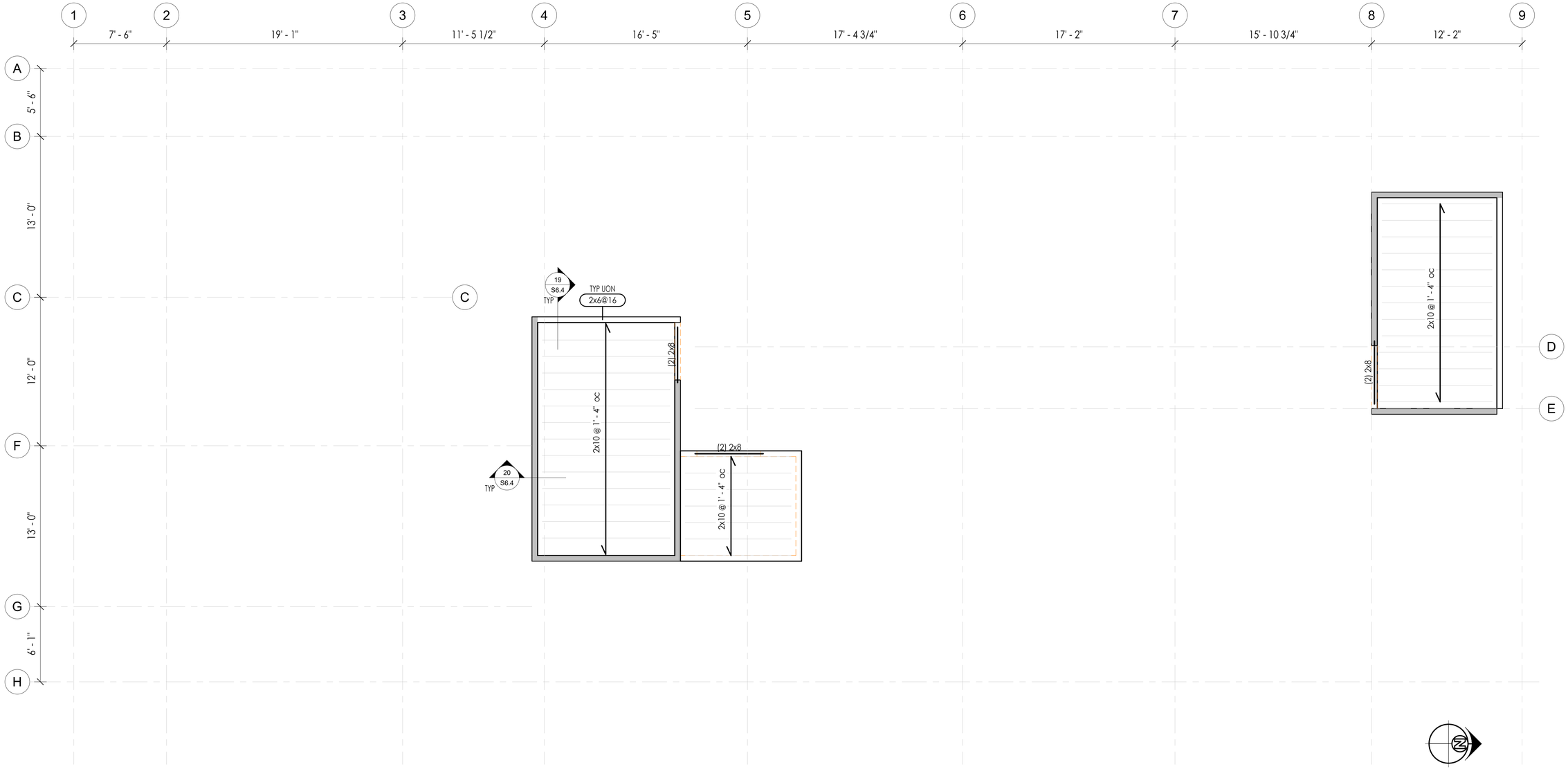

1 HIGH ROOF
1/4" = 1'-0"

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1038 BUILDING

1040 SOUTH KING STREET, SEATTLE, WA 98104

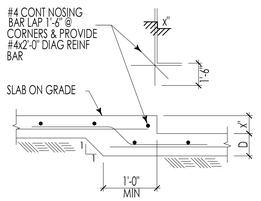
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
HIGH ROOF PLAN

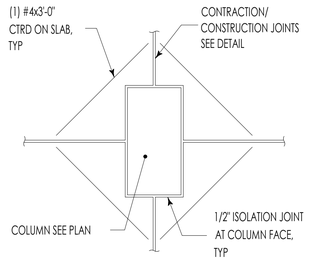
JOB NUMBER

SHEET NUMBER
S2.11

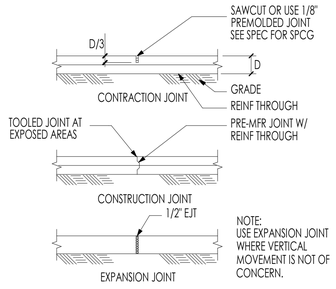
1



DEPRESSED SLAB ON GRADE 2

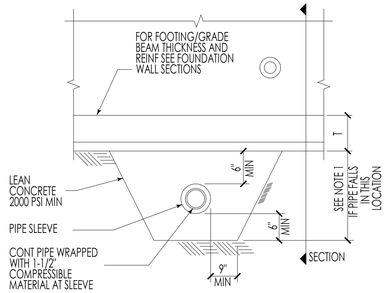


ISOLATION JOINT AT COLUMN 3



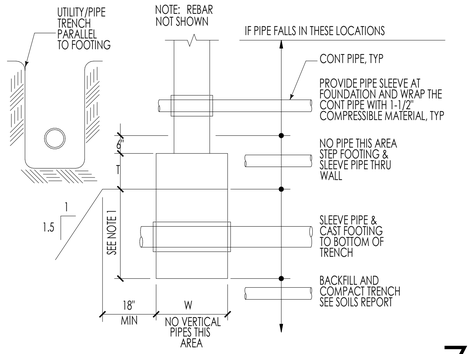
SLAB ON GRADE JOINT DETAILS 4

5

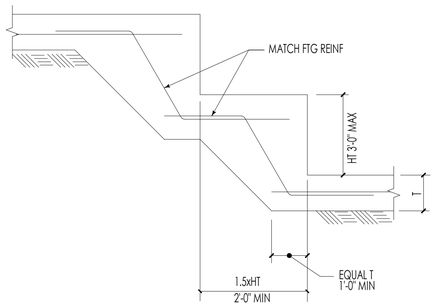


NOTES:

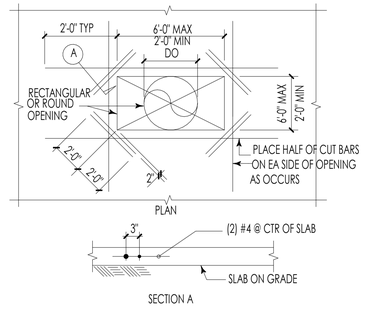
1. SINGLE PIPES 8"Ø OR LESS PERPENDICULAR TO AND GREATER THAN 24" CLEAR BELOW FOOTINGS DO NOT REQUIRE CONCRETE ENCASEMENT. (PIPE GROUPINGS BELOW 24" SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER).
2. PIPES LARGER THAN 8"Ø SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER.



PIPE CLEARANCE AT STRIP FTG/GRADE BEAM 7

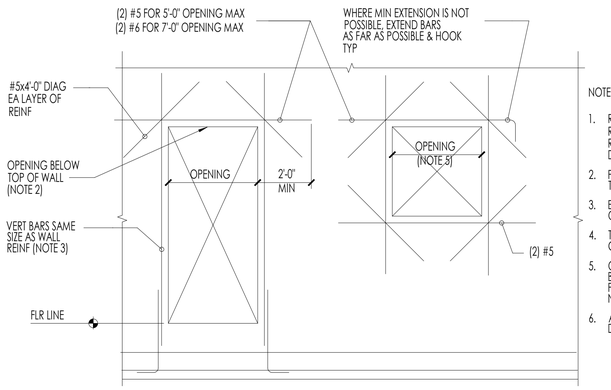


STEPPED FOOTING 8



OPENING IN CONCRETE SLAB 9

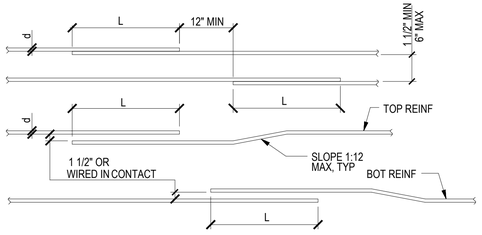
10



NOTES:

1. REINFORCEMENT SHOWN IS IN ADDITION TO ANY OTHER WALL REINFORCEMENT SPECIFIED FOR THIS PROJECT. SUCH WALL REINFORCEMENT IF ANY, IS NOT SHOWN FOR CLARITY. SEE DETAILS FOR TYPICAL CONCRETE WALL REINFORCING.
2. PROVIDE #3 STIRRUPS @ 8" OC ABOVE ALL OPENINGS LESS THAN 12" BELOW TOP OF WALL.
3. EXTEND JAMB BARS FLR TO FLR OR FLR TO ROOF, WHERE OPENING EXCEEDS 5'-0" IN WIDTH.
4. THE ABOVE REINFORCING DOES NOT APPLY TO OPENINGS GREATER THAN 7'-0".
5. OPENINGS LESS THAN 8" DO NOT REQUIRE ADDITIONAL TRIM BARS. AT OPENINGS MORE THAN 8", BUT LESS THAN 2'-0" PROVIDE (1) #5 BAR T&B, NO DIAGONAL BARS ARE NECESSARY.
6. ALL REINFORCEMENT LAP LENGTHS SHALL BE SUFFICIENT TO DEVELOP A CLASS 'B' TENSION LAP SPLICE.

REINF OF CONC WALL OPNG 12

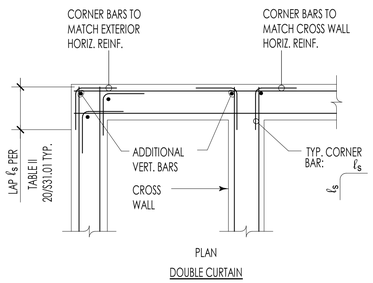


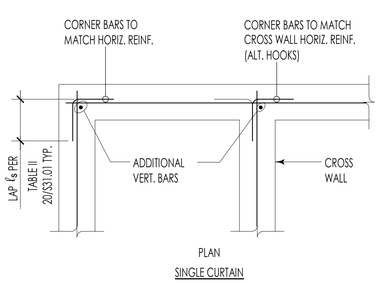
1. SCHEDULE APPLIES TO UNCOATED GRADE 60 BARS IN NORMAL WEIGHT CONCRETE.
2. FOR LIGHTWEIGHT CONCRETE MULTIPLY LENGTH IN SCHEDULE BY 1.3.
3. ALL SPLICES SHALL BE CLASS B SPLICES UNLESS INDICATED OTHERWISE.
4. TOP BARS (INDICATED WITH "T" IN SCHEDULE) ARE HORIZONTAL TOP BARS WITH MORE THAN 12" OF CONC CAST BLW THE BARS.
5. BOTTOM BARS (INDICATED WITH "B" IN SCHEDULE) ARE ALL VERTICAL BARS AND HORIZONTAL BARS WITH LESS THAN 12" OF CONCRETE CAST BELOW HORIZONTAL BARS.
6. ANY PORTION OF A STRAIGHT BAR EMBEDMENT LENGTH NOT WITHIN THE CONFINED CORE SHALL BE INCREASED BY A FACTOR OF 1.6.
7. ALL HORIZONTAL SPLICES SHALL BE STAGGERED AS SHOWN. IF MORE THAN 50% OF VERTICAL REINFORCING IS LAP SPLICED WITHIN THE REQUIRED LAP SPLICE LENGTH, THE LAP SPLICE LENGTH SHALL BE INCREASED BY 33%.
8. LAP SPLICES LISTED IN THE SCHEDULE ARE CLASS B LAPS. FOR CLASS A LAPS REDUCE LENGTH BY 25%.
9. FOR f'c=4500psi USE VALUES FOR 4000psi.
10. AT HOOKS, SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2 1/2".
11. END COVER FOR 90 DEGREE HOOKS MUST BE EQUAL TO OR GREATER THAN 2".

SPLICE OR DEVELOPMENT LENGTH (INCHES)

NORMAL WT. CONCRETE f'c (psi)	I) MINIMUM "CLASS B" TENSION LAP SPLICE (ls) SCHEDULE																	
	0.375"		0.500"		0.625"		0.750"		0.875"		1.000"		1.128"		1.270"		1.410"	
	#3		#4		#5		#6		#7		#8		#9		#10		#11	
	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B	T	B
3000	28	22	38	29	47	36	56	43	81	63	93	72	105	81	116	90	128	98
4000	25	19	33	25	41	31	49	37	71	54	81	62	91	70	101	78	111	85
5000	22	17	29	23	36	28	44	34	63	49	72	56	81	63	90	69	99	76
6000	20	16	27	21	33	26	40	31	58	45	66	51	74	57	82	63	90	70
-	II) MINIMUM STRAIGHT DEVELOPMENT LENGTH (ld) SCHEDULE																	
3000	22	17	29	22	36	28	43	33	63	48	72	55	81	62	90	69	98	76
4000	19	15	25	19	31	24	37	29	54	42	62	48	70	54	78	60	85	66
5000	17	13	23	17	28	22	34	26	49	38	56	43	63	48	69	54	76	59
6000	16	12	21	16	26	20	31	24	45	34	51	39	57	44	63	49	70	54
-	III) MINIMUM EMBEDMENT LENGTHS (ldh) FOR STANDARD END HOOKS																	
4000	6	-	7	-	9	-	10	-	12	-	14	-	15	-	17	-	19	-
5000	6	-	6	-	8	-	9	-	11	-	12	-	14	-	16	-	17	-
6000	6	-	6	-	7	-	9	-	10	-	11	-	13	-	14	-	16	-
-	IV) MINIMUM LAB SPLICE LENGTH (lsc) FOR BARS IN COMPRESSION																	
>3000	-	-	-	-	-	-	23	-	33	-	37	-	46	-	57	-	68	-
-	V) MINIMUM STRAIGHT DEVELOPMENT LENGTH (ldc) FOR BARS IN COMPRESSION																	
>3000	-	-	-	-	-	-	19	-	22	-	25	-	29	-	32	-	36	-
-	VI) SHEAR WALL VERTICAL LAP SPLICE LENGTH (ls)																	
5000	-	-	17	-	21	-	29	-	47	-	60	-	73	-	88	-	98	-

REINFORCING SPLICE AND DEVELOPMENT SCHEDULE 20





REINFORCEMENT OF CONC WALLS AT CORNERS 17

DHS ENGINEERS
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Seattle, WA 98101
(206) 734 5858

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE

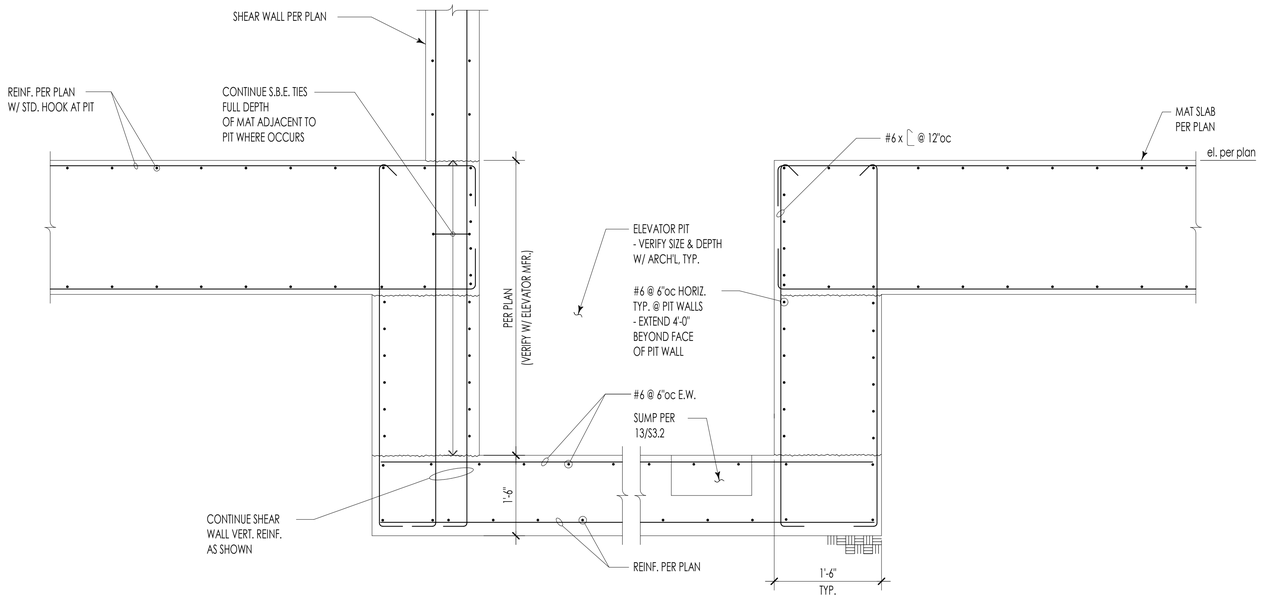
TYPICAL CONCRETE DETAILS

JOB NUMBER

SHEET NUMBER

S3.1

NOTE:
PROVIDE MISC. METALS AS REQUIRED
BY ELEVATOR MANUFACTURER.

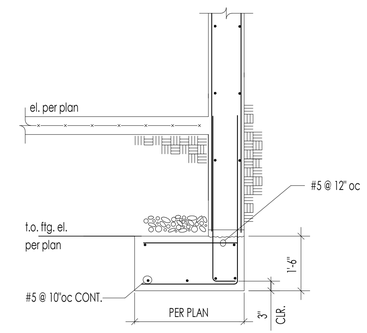


ELEVATOR PIT 8

MARK	SIZE	REINFORCING
A	6'-6"x6'-6"x18"dp.	(7)#7 E.W. BOT.
B	8'-6"x8'-6"x24"dp.	(9)#8 E.W. BOT.

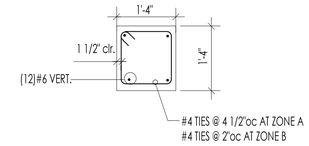
SEE GENERAL STRUCTURAL NOTES FOR ALLOWABLE BEARING PRESSURE REQD.

4

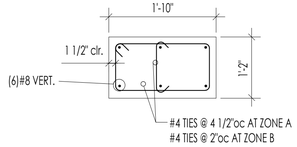


SEE 19/S3.2 FOR
COMMON CALL-OUTS

9

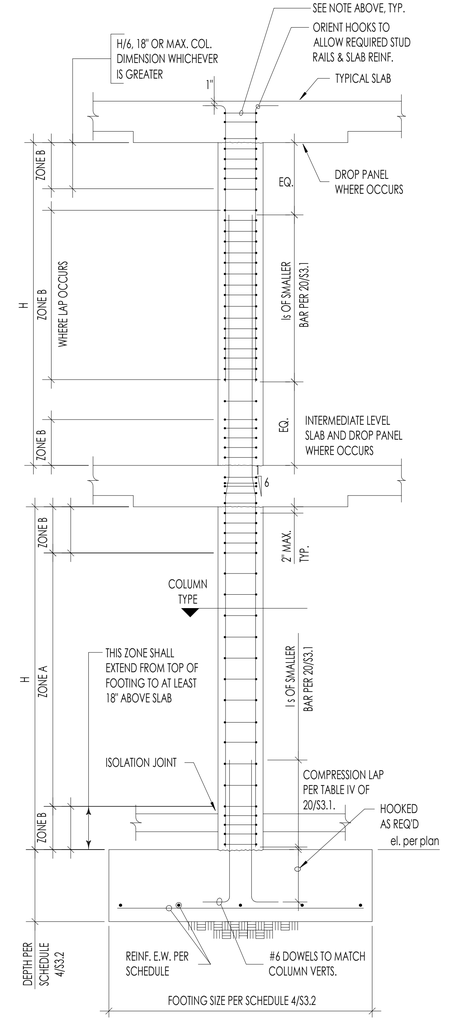


COLUMN ALONG GRID 1

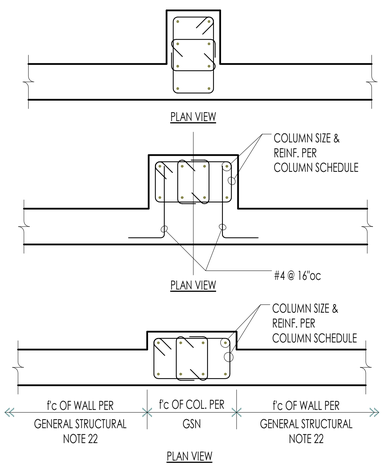


COLUMN TYPE

NOTE:
WITHIN SLAB DEPTH SPACE TIES AT ZONE B SPACING UNLESS
SLAB FRAMES IN (4) SIDES OF COLUMN. WHERE SLAB FRAMES
IN (4) SIDES TIES MAY BE SPACED AT 2x ZONE B SPACING.

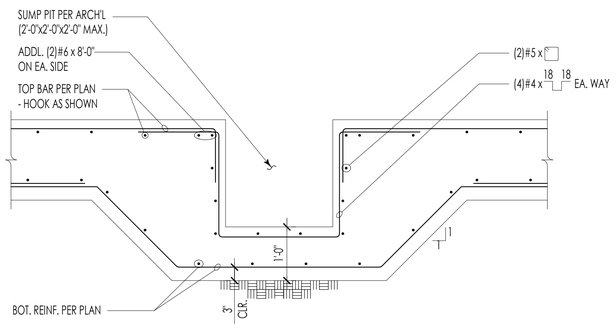


CONCRETE COLUMN ELEVATION 20

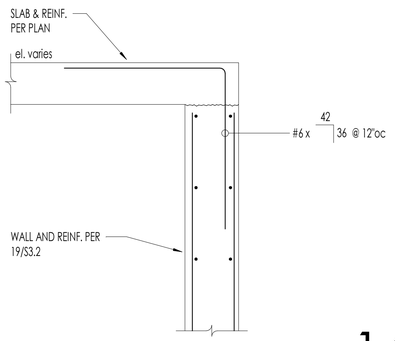


NOTE:
WALL REINF. SHALL CONTINUE
THROUGH PILASTER REINF.

16



ELEVATOR SUMP 13



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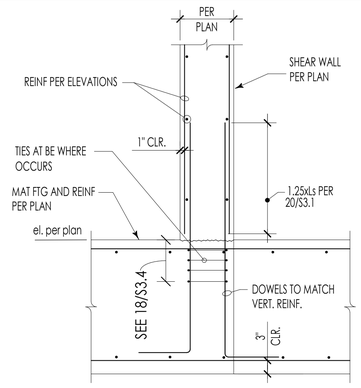
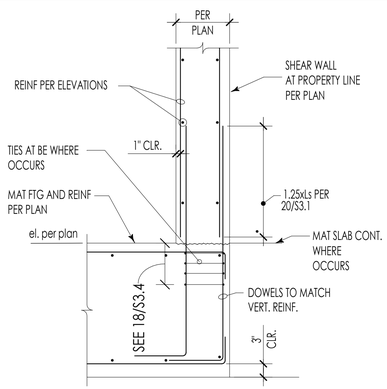
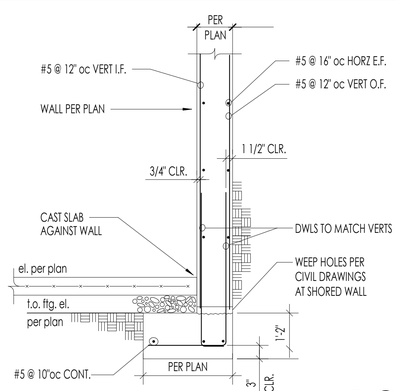


SHEAR WALL FTG 17



SHEAR WALL FTG AT PROPERTY LINE 18



BASEMENT WALL FOOTING 19

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Seattle, WA 98101
(206) 734 5858

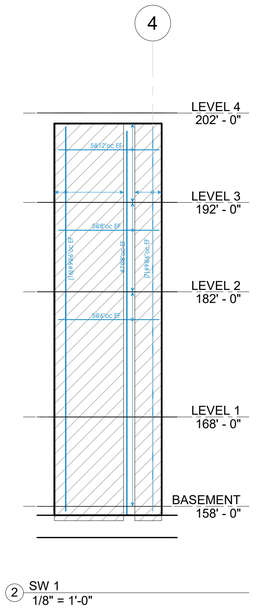
1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

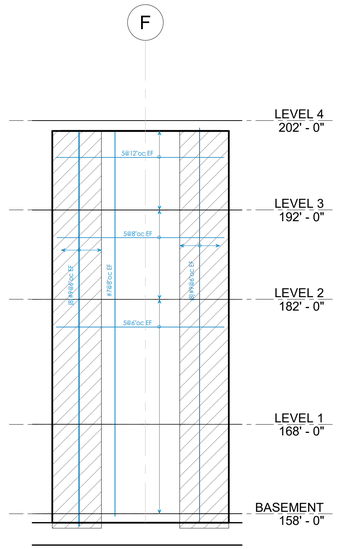
SHEET TITLE
BASEMENT AND COLUMN
DETAILS

JOB NUMBER

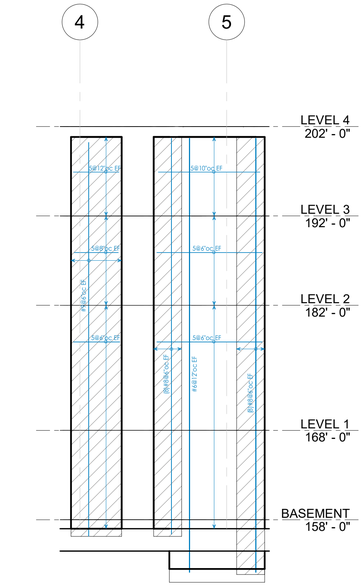
SHEET NUMBER
S3.2



2 SW 1
1/8" = 1'-0"



3 SW 2
1/8" = 1'-0"



4 SW 3
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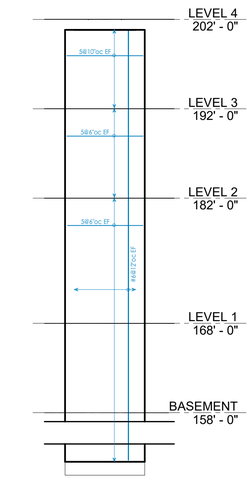
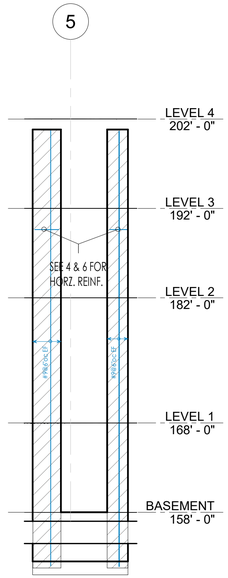


5 SW 4
1/8" = 1'-0"



6 SW 5
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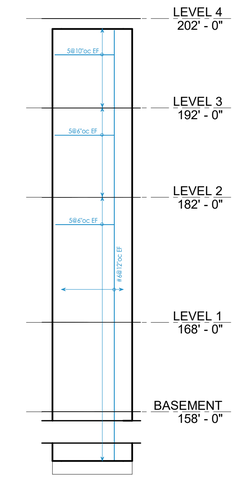
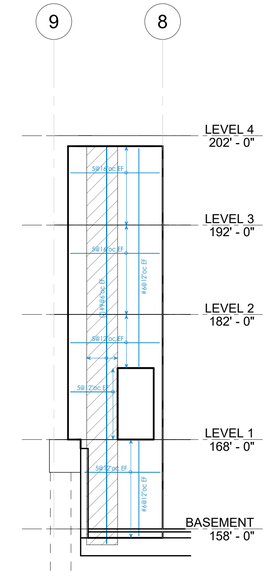
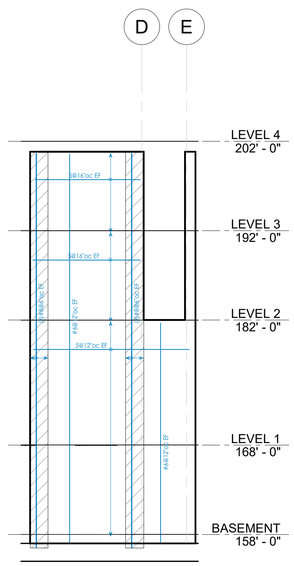


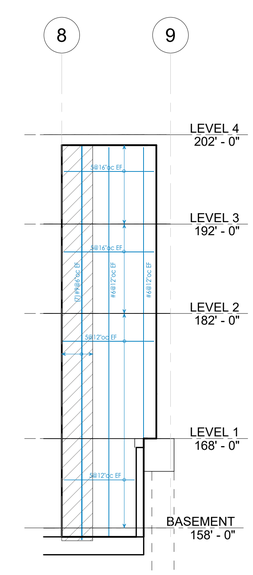
7 SW 6
1/8" = 1'-0"



8 SW 7
1/8" = 1'-0"



9 SW 8
1/8" = 1'-0"



10 SW 9
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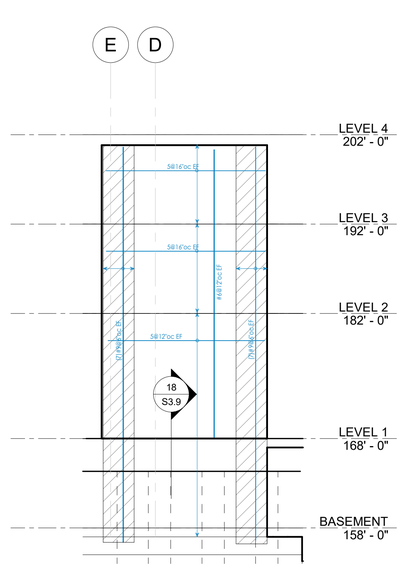
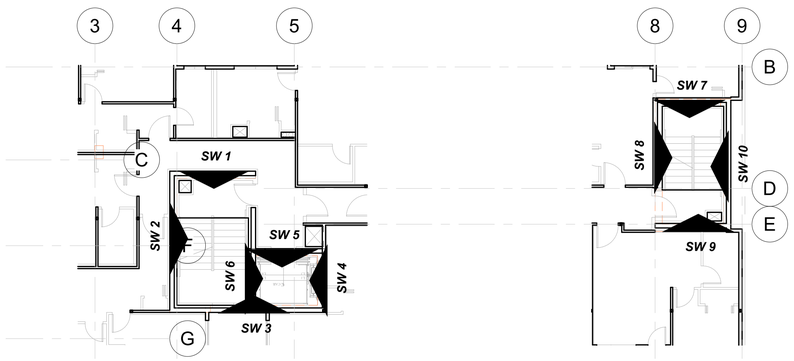


11 SW 10
1/8" = 1'-0"



LEGEND:

S.B.E., SPECIAL BOUNDARY ELEMENT
PER 7/S3.4 EXTENTS PER ELEVATION

NOTES:

1. SHEAR WALL THICKNESS & REINFORCEMENT SHALL BE 12" WITH #7 @ 12" OC FOR VERT. AND #5 @ 12" OC FOR HORIZ., EACH FACE, UNLESS OTHERWISE NOTED ON THE ELEVATIONS. PROVIDE MATCHING DOWELS TO FOOTINGS U.O.N.
2. REBAR DETAILING: ALL SHEAR WALL HORIZONTAL REINFORCEMENT SHALL BE DEVELOPED AND SPLICED FOR FULL TENSION CAPACITY PER SCHEDULE OF 20/S3.1 . EMBED FOOTING DOWELS 125% OF TABLE I OF 20/S3.1 WHERE DEPTH AVAILABLE. VERTICAL SHEAR WALL REINFORCEMENT SHALL BE DEVELOPED & SPLICED PER 20/S3.1.
3. PROVIDE HOOKS AT ENDS OF ALL HORIZONTAL BARS AT WALL ENDS, WALL INTERSECTIONS AND AT FACES OF OPENINGS PER 2/S3.4, 3/S3.4 & 4/S3.4. ADDITIONAL REQUIREMENTS AT SPECIAL BOUNDARY ELEMENTS PER 7/S3.4.
4. REFER TO SCHEDULE FOR DOWELS REQUIRED AT INTERSECTIONS OF SLABS AND WALLS. SEE DETAIL 10/S3.4.
5. SEE GENERAL STRUCTURAL NOTE 23 FOR SPECIAL MATERIAL REQUIREMENTS OF ALL VERTICAL BARS.
6. PROVIDE A MINIMUM OF 1" CLEAR COVER TO ALL VERTICAL SHEAR WALL REINFORCEMENT.

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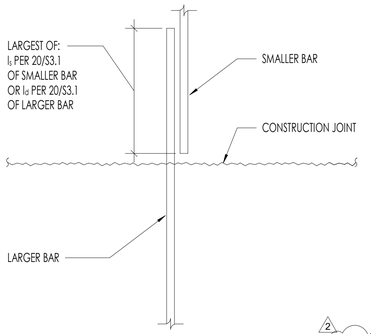
	03/01/2020	BUILDING PERMIT

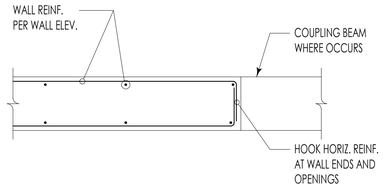
SHEET TITLE
CONCRETE SHEAR WALL ELEVATIONS

JOB NUMBER

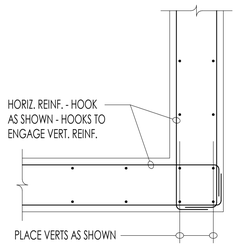
SHEET NUMBER
S3.3



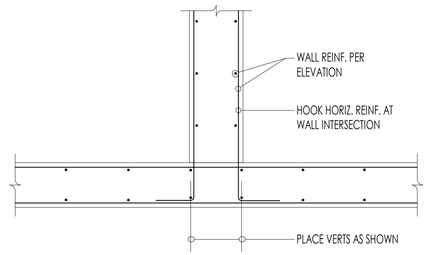
SHEAR WALL VERTICAL REINF. LAP 1



TYPICAL SHEAR WALL END 2



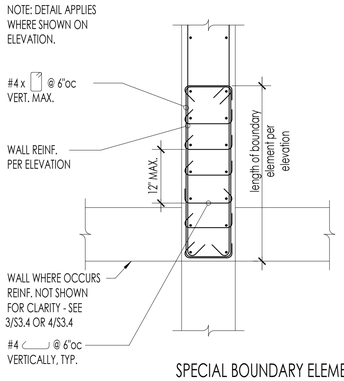
TYPICAL SHEAR WALL CORNER 3



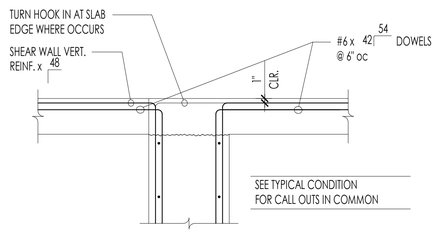
TYPICAL SHEAR WALL INTERSECTION 4

5

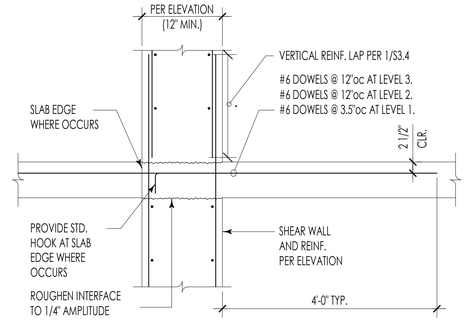
6



SPECIAL BOUNDARY ELEMENT 7



TOP OF WALL CONDITION

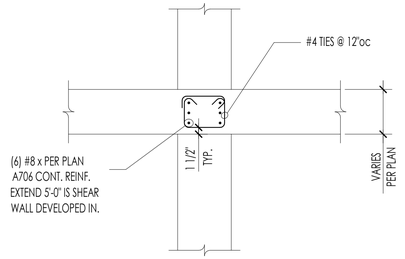


TYPICAL CONDITION

SLAB TO SHEAR WALL DOWELS 10

11

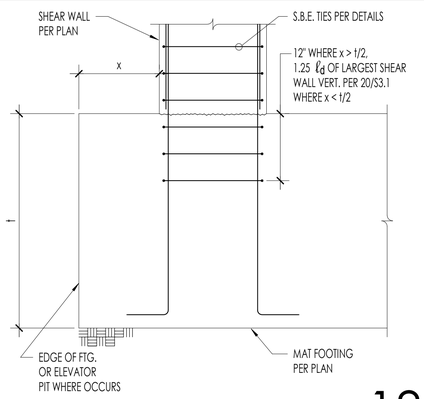
12



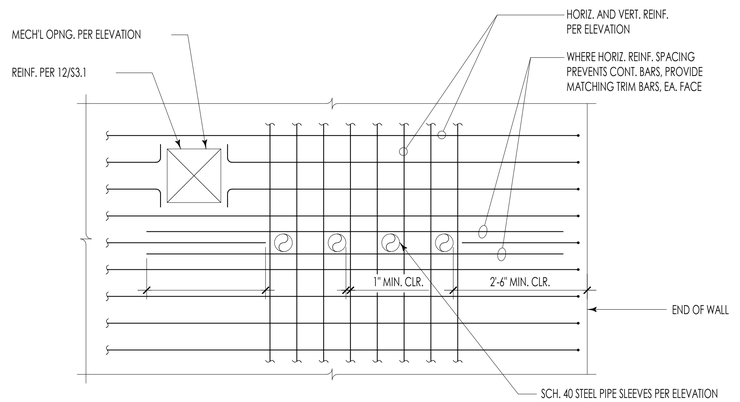
CONCRETE STRUT DETAIL 13

16

17



BOUNDARY ELEMENT AT FOOTINGS 18



NOTES:
1. SLEEVES MAY NOT BE PLACED WITHIN 2'-6" OF END OF WALL. UNLESS OTHERWISE SHOWN ON WALL ELEVATIONS.
2. REINF. IS IN ADDITION TO REINF. REQD. PER PLANS & WALL ELEVATIONS.
3. SEE 12/S3.1 FOR REINF. WHEN SLEEVES ARE GREATER THAN 8"ø. OR WHERE SLEEVES DO NOT FIT BETWEEN WALL VERTICAL REINF. AS SHOWN.
4. ALL SLEEVES SHALL BE SUBMITTED TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

REINFORCING AT PIPES SLEEVES THROUGH SHEAR WALLS 20

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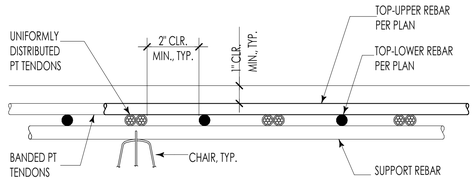
2	10/28/2024	BP REVIEW CYCLE 1

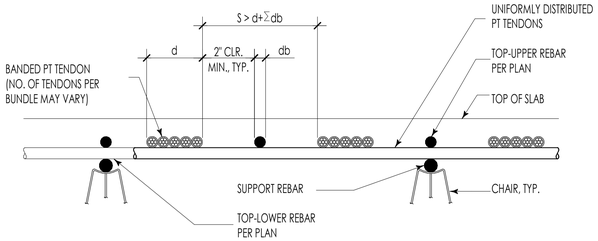
SHEET TITLE
CONCRETE SHEAR WALL DETAILS

JOB NUMBER

SHEET NUMBER
S3.4



SECTION THRU UNIFORMLY DISTRIBUTED PT TENDONS



SECTION THRU BANDED PT TENDONS

TYPICAL SECTION THRU TENDONS AT COLUMNS 4

5

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Seattle, WA 98101
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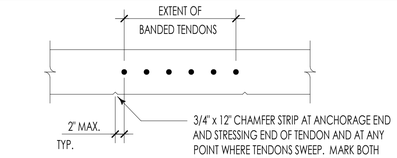
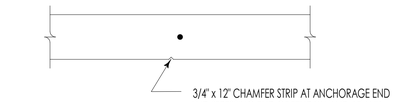
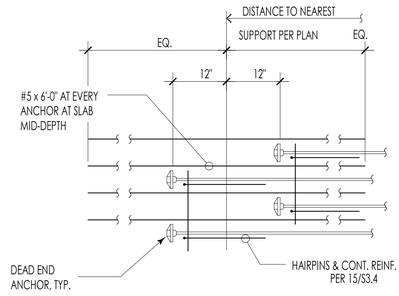


BANDED TENDONS

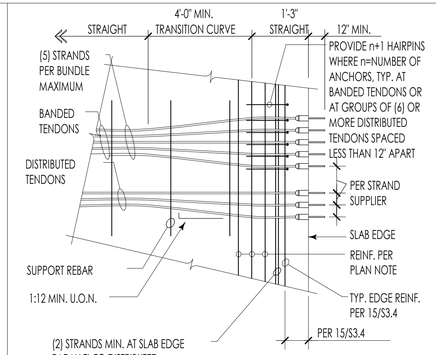


DISTRIBUTED TENDONS

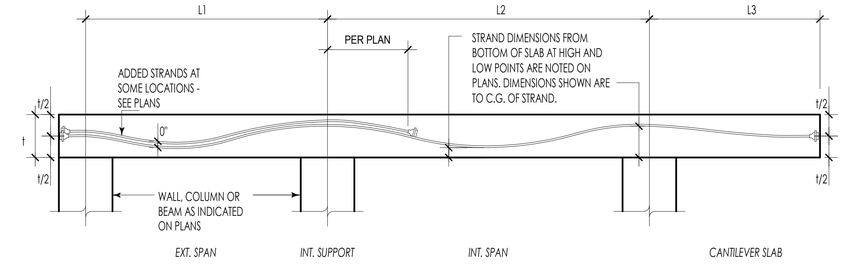
TENDON MARKING DETAIL 6



REINF. AT ADDED TENDONS 7



REINF. AT END OF TENDONS 8

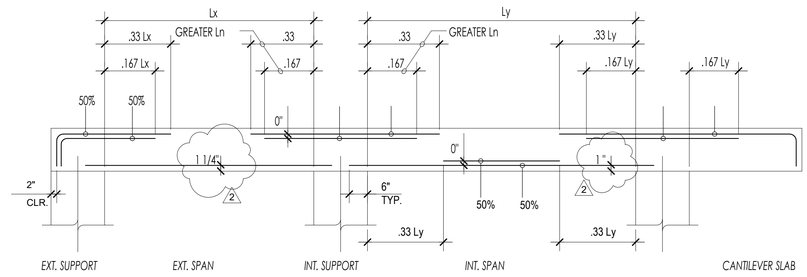


POST-TENSIONING

NOTES:

1. PT REQUIREMENTS AND STRAND DIMENSIONS PER PLAN AND GENERAL NOTES.
2. STRAND LOW POINTS ARE LOCATED MIDWAY BETWEEN HIGH POINTS UNLESS OTHERWISE NOTED.
3. DRAPE STRAND IN PARABOLIC PROFILE BETWEEN HIGH AND LOW POINTS.
4. WHERE CLOSURE POUR OCCURS, DRAPE TENDONS WITH PARABOLIC PROFILE WITH LOW POINT PER NOTE 2 AND ANCHOR POINT AS SHOWN ON PLAN AT THE CLOSURE POUR. TENDONS SHALL NOT BE PROFILED AS DOUBLE-CANTILEVER.

DROP PANELS (WHERE OCCUR) NOT SHOWN FOR CLARITY



MILD-REINFORCING

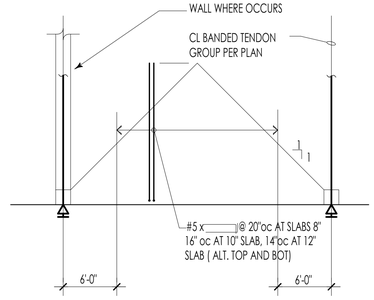
NOTES:

1. MILD REINFORCING REQUIREMENTS PER PLAN.
2. REINFORCE SINGLE SPAN CONDITIONS W/ LENGTHS PER EXTERIOR SPANS.

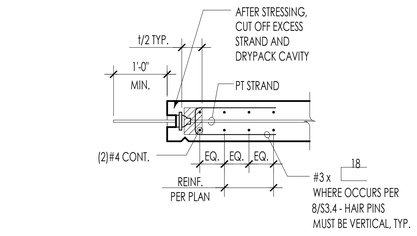
KEY:

Lx = CLEAR SPAN
Ly = CLEAR SPAN
Ln = Lx or Ly

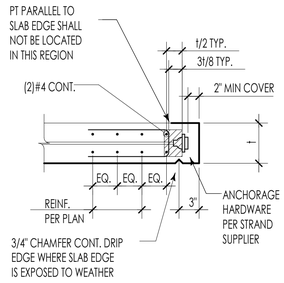
TYPICAL POST-TENSIONED SLAB ELEVATION 15



PT SLAB REINF. BTW BANDED TENDON GROUPS 16

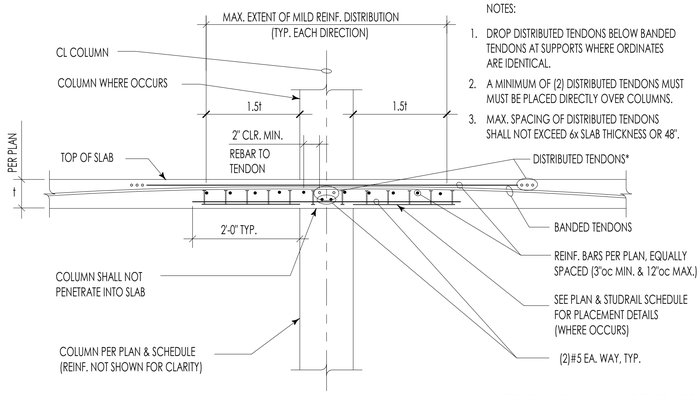


STRESSING END



ANCHOR END

TYPICAL POST-TENSIONED SLAB SECTION 18



NOTES:

1. DROP DISTRIBUTED TENDONS BELOW BANDED TENDONS AT SUPPORTS WHERE ORDINATES ARE IDENTICAL.
2. A MINIMUM OF (2) DISTRIBUTED TENDONS MUST MUST BE PLACED DIRECTLY OVER COLUMNS.
3. MAX. SPACING OF DISTRIBUTED TENDONS SHALL NOT EXCEED 6x SLAB THICKNESS OR 48".

TYPICAL COLUMN AT FLAT SOFFIT 20

1038 BUILDING

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SHEET TITLE

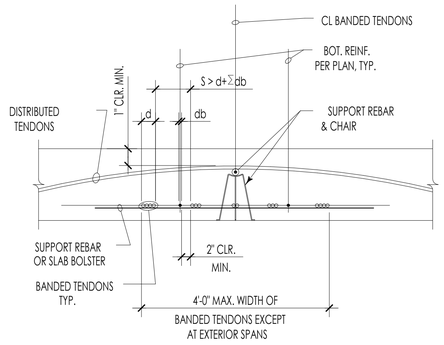
TYPICAL POST-TENSIONING DETAILS

JOB NUMBER

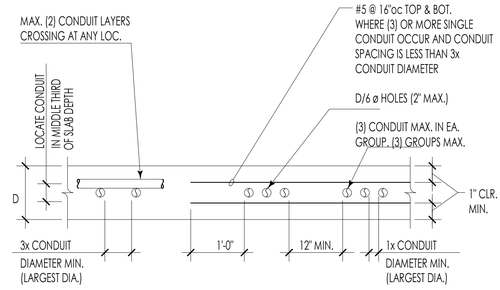
SHEET NUMBER

S3.5

1



SECTION THRU BANDED TENDON AT MID-SPAN 2



SINGLE CONDUIT CONDUIT GROUP

NOTES:

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR PLACEMENT OF CONDUIT IN POST-TENSIONED SLAB. SEE GENERAL STRUCTURAL NOTES FOR REQUIREMENTS.
2. SEE POST-TENSIONING NOTES FOR GENERAL PROVISIONS FOR CONDUIT IN POST-TENSIONED SLAB.
3. SEE DIAGRAM AT LEFT FOR CONDUIT PLACEMENT RESTRICTIONS. PROVIDE REINFORCING AS REQUIRED IN DIAGRAM. CONDUIT PLACEMENT NOT MEETING CRITERIA SHOWN IN DIAGRAM SHALL BE SUBMITTED TO ENGINEER FOR REINFORCING DESIGN.
4. PROVIDE 1" MIN. VERTICAL CLEARANCE BETWEEN CONDUIT AND PERPENDICULAR TENDONS. PROVIDE 4" MIN. HORIZONTAL CLEARANCE BETWEEN CONDUIT AND PARALLEL TENDONS.

CONDUIT PLACEMENT AND REINFORCING 4

5

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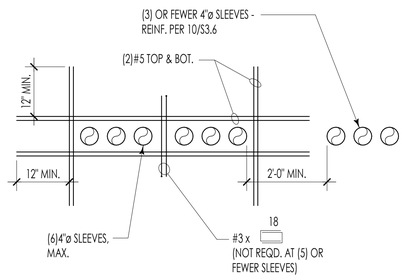
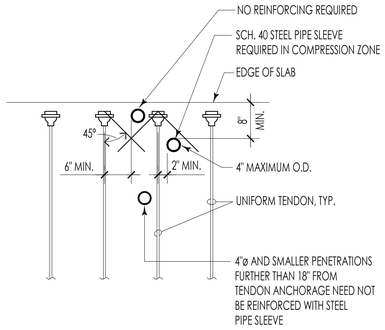
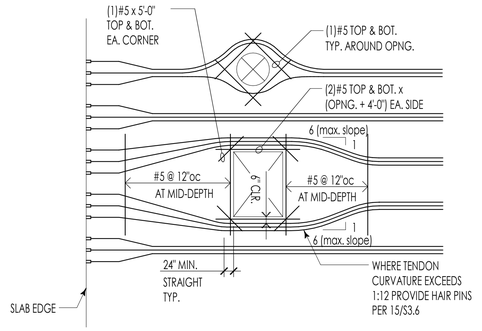
6



TYPICAL REINFORCING AT SLEEVED PENETRATIONS 7

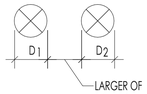


PENETRATIONS AT TENDON ANCHORAGE 8



NOTES:

1. OPENINGS SHALL NOT BE PLACED WITHIN 4' OF ANY COLUMN.
2. ROUND OPENINGS MAY BE GROUPED AND REINFORCED SIMILAR TO RECTANGULAR OPENINGS. SEE 7/S3.6 .

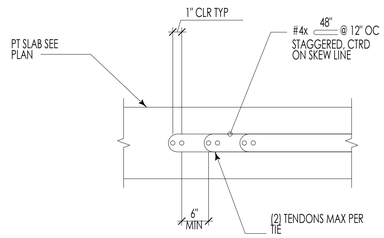


3. MAXIMUM OPENING SIZE IF LOCATED NEAR MIDSPAN:
   ROUND: 48"ø
   RECTANGULAR: 36" x 36"
4. REINFORCE OPENING WITH LARGEST DIMENSION OF 10" OR GREATER AS SHOWN. NO REINFORCING REQUIRED FOR INDIVIDUAL OPENINGS SMALLER THAN 10"

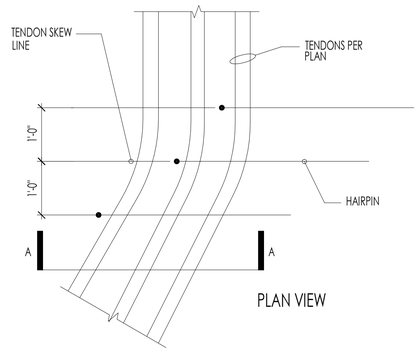
PT AND ADDITIONAL REINFORCING AT SLAB OPENINGS 10

11

12



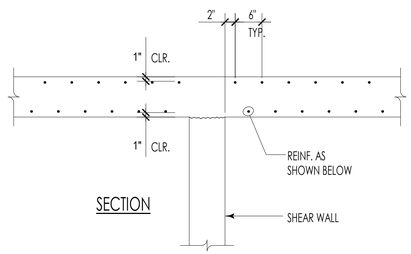
SECTION A-A



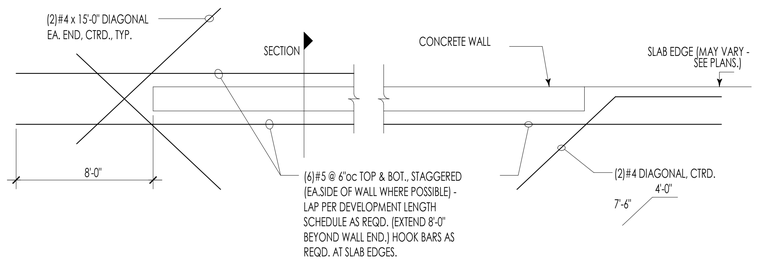
PLAN VIEW

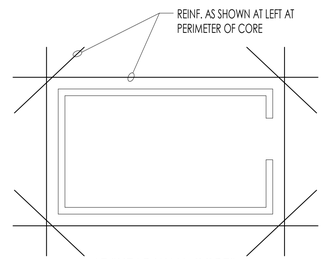
REINFORCING AT SKEWED TENDONS 15

16



SECTION





AT SHEAR WALL CORES

PLAN VIEW

TYPICAL SLAB REINFORCING ALONG SHEAR WALLS 20

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

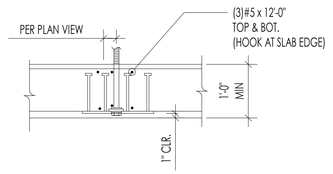
SHEET TITLE

TYPICAL POST-TENSIONING DETAILS

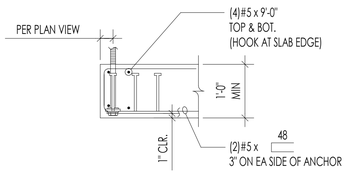
JOB NUMBER

SHEET NUMBER

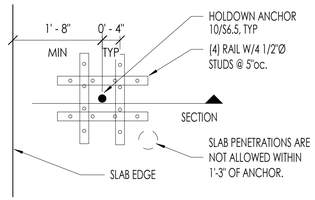
S3.6



SECTION AT MID SLAB

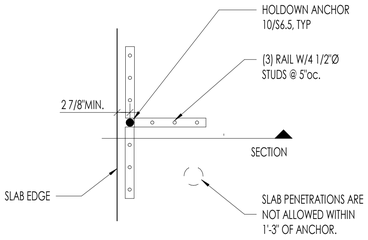


SECTION AT SLAB EDGE



PLAN VIEW AT MID SLAB

STUDRAILS ARE NOT REQUIRED AT 3/4"Ø ANCHORE RODS AT MID SLAB CONDITION. PROVIDE ONLY MILD REINF SHOWN



PLAN VIEW AT SLAB EDGE

REINFORCEMENT AT SLAB EDGE HOLDOWNS 5

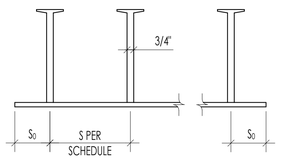
1

STUDRAIL SCHEDULE

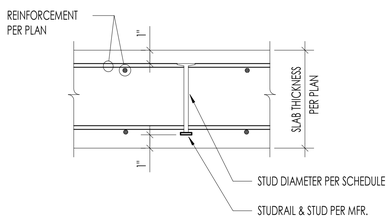
CALLOUT	CONFIGURATION	# OF RAILS	STUDRAIL TYPE
A	INTERIOR	8	SR-1
B	EDGE	6	SR-1
C	CORNER	4	SR-2
D	EDGE	7	SR-3
E	ONE SIDED	2	SR-4
F	INTERIOR	8	SR-5
G	EDGE	6	SR-6
H	CORNER	4	SR-5
I	CORNER	4	SR-8
J	EDGE	6	SR-7

STUDRAIL TYPE

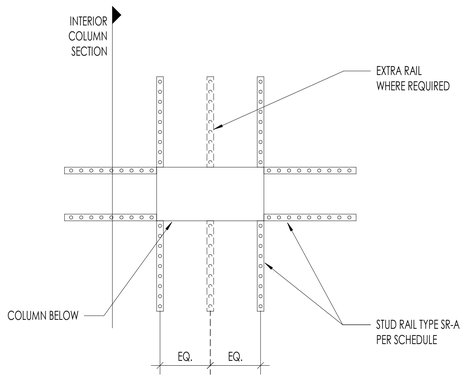
TYPE	NUMBER OF STUDS PER RAIL	S (in.)	S_0 (in.)	OVERALL LENGTH (in.)
SR-1	7	7.125	5.25	53.25
SR-2	6	5.25	5.25	49.25
SR-3	6	6.375	4.25	40.375
SR-4	12	6.375	4.25	80.75
SR-5	10	4.875	6.25	56.375
SR-6	17	4.875	6.25	82.5
SR-7	9	5.25	7.625	71.5
SR-8	22	3.5	10.75	95



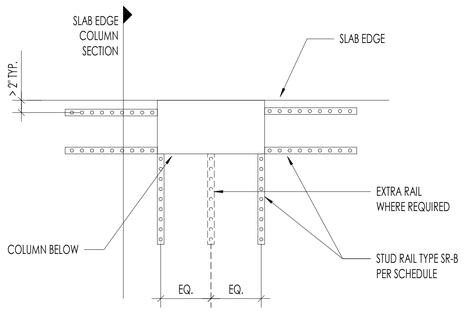
STUDRAIL



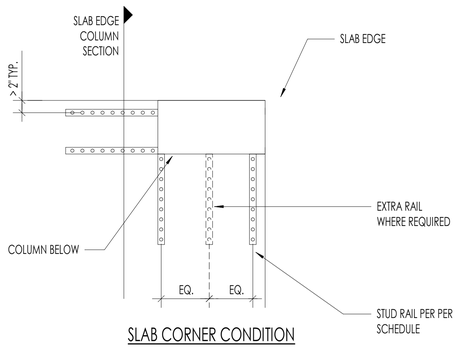
STUD SECTION



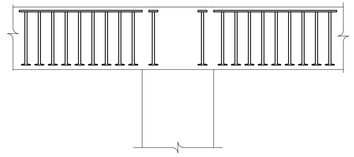
INTERIOR CONDITION



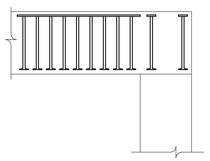
SLAB EDGE CONDITION



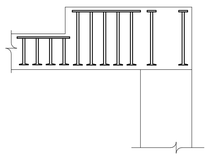
SLAB CORNER CONDITION



SECTION AT INTERIOR COLUMNS



SECTION AT SLAB EDGE



SECTION AT SLAB WITH DEPRRESSIONS

NOTES:

1. ALIGN STUDRAILS WITH FACE OF COLUMN BELOW, U.O.N.
2. STUDRAILS SHALL BE 2" MIN. FROM OPENINGS AND SLAB EDGES.
3. STUDRAILS SHALL BE EVENLY SPACED ACROSS COLUMN FACE.
4. STUDRAILS MUST BE VERTICAL.
5. STUDRAIL HEIGHT IS DETERMINED BY THE THICKNESS OF THE SLAB. ADJUST HEIGHT AS NECESSARY WHERE SLABS STEP AND SLOPE.
6. CONTRACTOR SHALL SUBMIT FINAL SHOP DRAWINGS SHOWING ALL SLAB PENETRATIONS FOR MECHANICAL, PLUMBING, AND ELECTRICAL PER THE GENERAL STRUCTURAL NOTES.
7. SUBMIT TECHNICAL INFORMATION FOR STUDRAILS TO ESR FOR APPROVAL. SUBMITTAL MUST INCLUDE CURRENT ICC-ES REPORT. SPECIAL INSPECTION IS REQUIRED FOR ALL STRUCTURAL INSTALLATIONS.

STUDRAIL SCHEDULE AND DETAILS 20

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1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

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1040 SOUTH KING STREET, SEATTLE, WA 98104

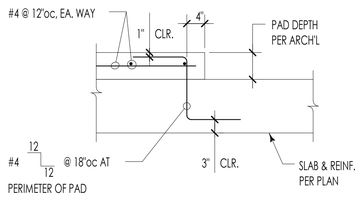
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
STUDRAIL SCHEDULE

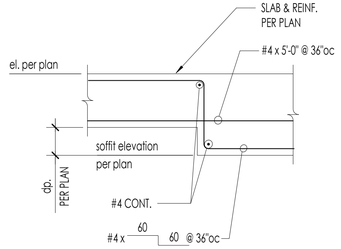
JOB NUMBER

SHEET NUMBER
S3.7

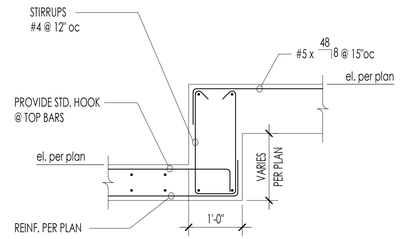
1



MECHANICAL PAD 2



SOFFIT STEP 3



SLAB STEP 4

5

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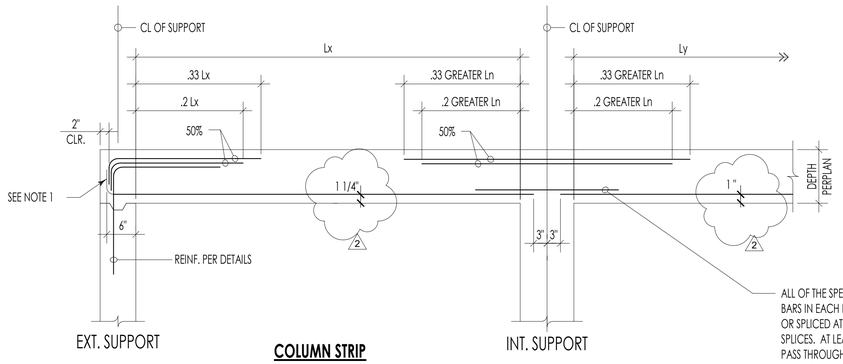
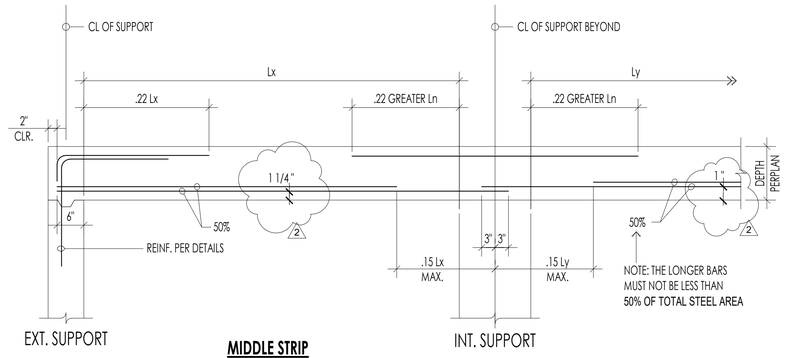
11

12

TYPICAL COLUMN AT FLAT SOFFIT 7

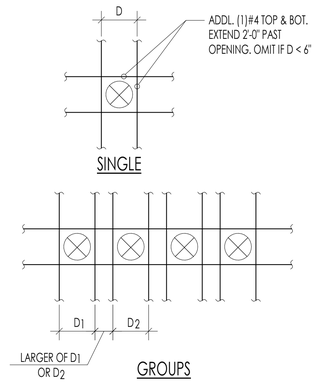


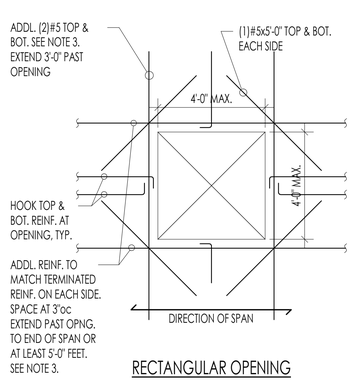


TYPICAL MILD SLAB ELEVATION 15

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

17





NOTES:

1. SINGLE OPENINGS MAY BE GROUPED AND REINFORCED SIMILAR TO RECTANGULAR OPENINGS.
2. OPENINGS NOT SHOWN IN STRUCTURAL PLANS SHALL BE SUBMITTED FOR REVIEW PRIOR TO CONSTRUCTION.
3. ADDL. REINF. AROUND OPENINGS NOT REQUIRED WHERE BEAMS AND WALLS OCCUR AT EDGE OF OPENINGS. AT THESE LOCATIONS PROVIDE (2)#5 TOP AND BOTTOM (OPNG. +4'-0") EA. SIDE AND CORNER BARS.

REINFORCEMENT AROUND OPENINGS AT MILD SLABS 20

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT
2	10/28/2024	BP REVIEW CYCLE 1

SHEET TITLE

MILD SLAB DETAILS

JOB NUMBER

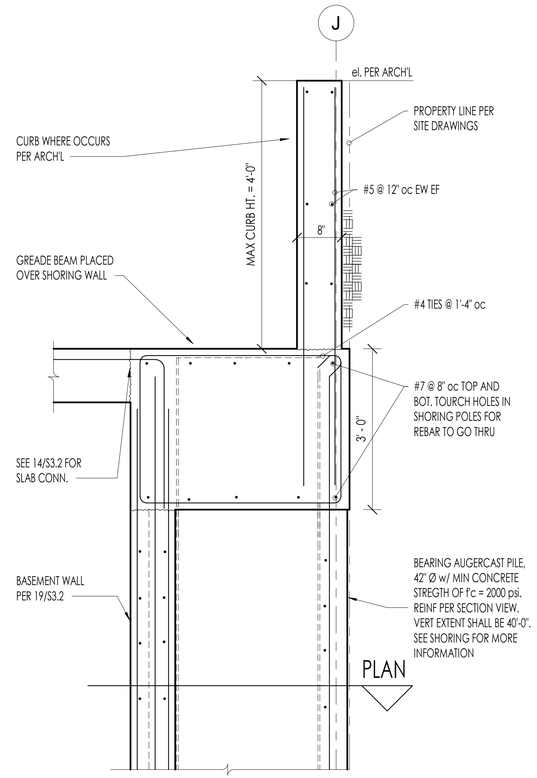
SHEET NUMBER

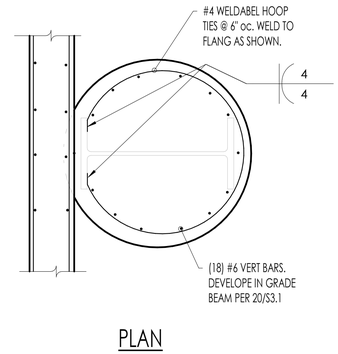
S3.8

1

2

3





6

7

8

10

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1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

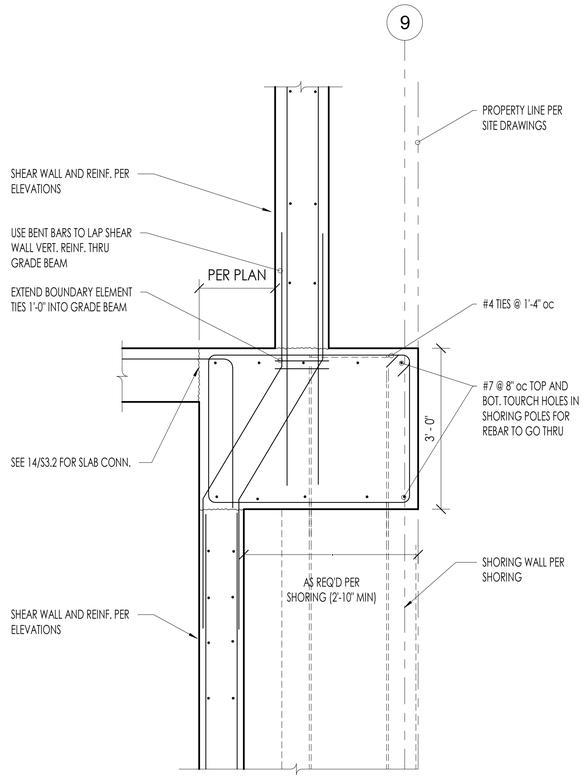
NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
MISC CONCRETE DETAILS

JOB NUMBER

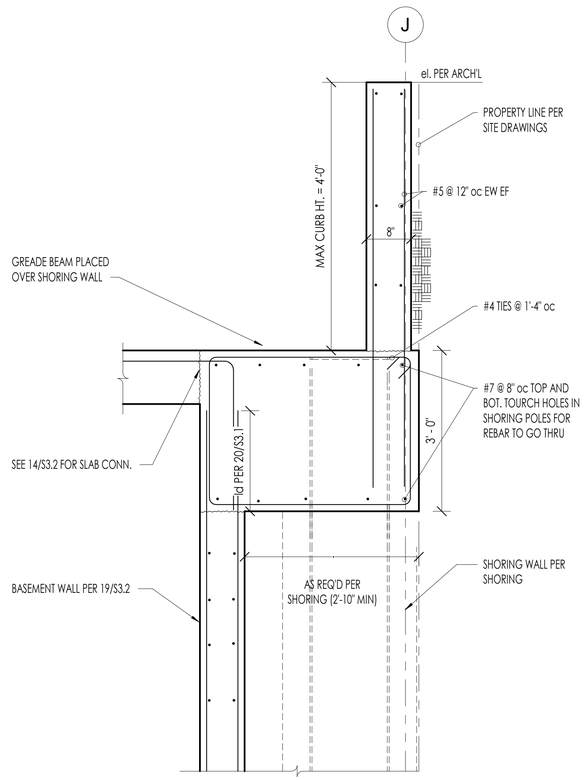
SHEET NUMBER
S3.9

11



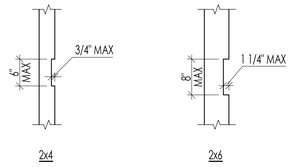
16

18



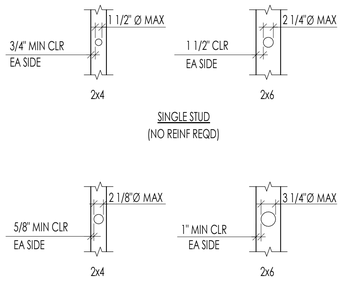
GRADE BEAM WITH CURB EXTENSION

20

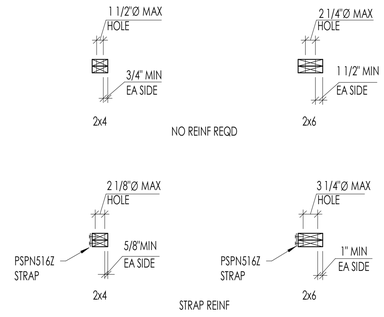


NOTE:
NOTCHES SHALL NOT BE ALLOWED IN MORE THAN (2) CONSECUTIVE STUDS.

ALLOWABLE NOTCHES IN STUDS 1

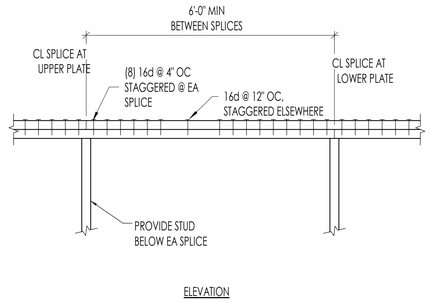


ALLOWABLE HOLES THROUGH STUDS 2

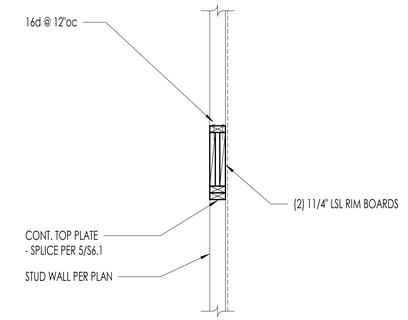


NOTE:
AT BOTTOM PLATES, FOLLOW GUIDELINES SHOWN AND USE CS16 x 2'-0" STRAP.

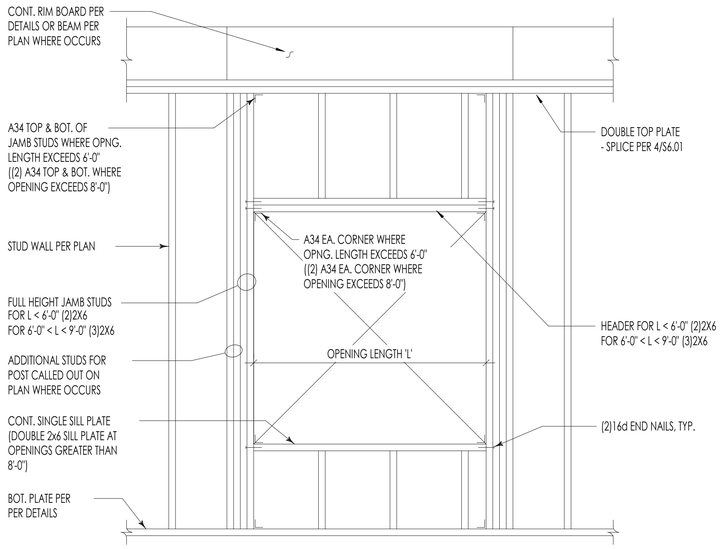
ALLOWABLE HOLES THROUGH TOP PLATES 3



TOP PLATE SPLICE 4

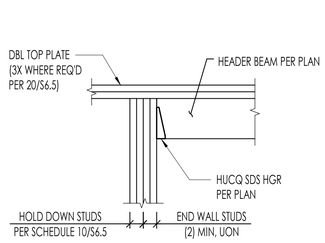


2 5

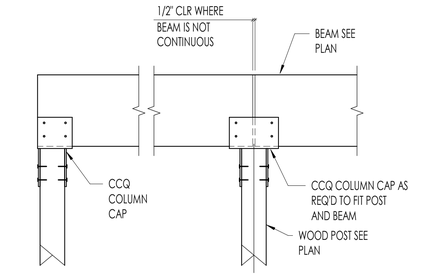


NOTES: NAIL TOGETHER BUILT-UP MEMBERS PER GENERAL STRUCTURAL NOTES.

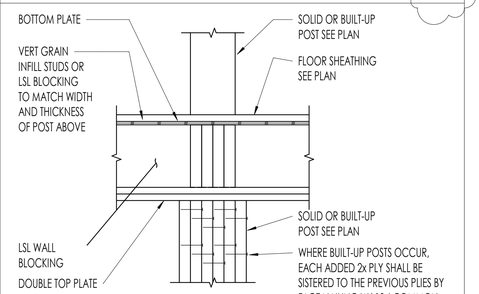
TYPICAL NON-BEARING WALL AT EXTERIOR 12



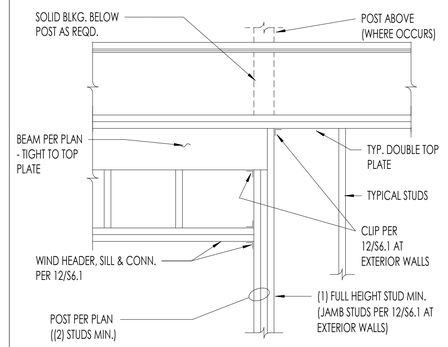
HEADER CONNECTION AT SW HOLDWON 8



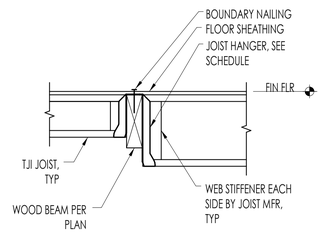
BEAM TO POST CONNECTION 9



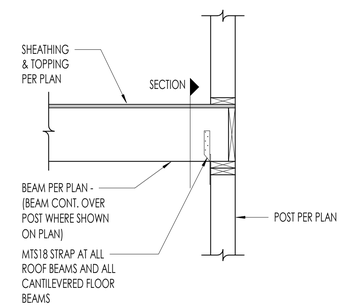
TYPICAL MULTI-STUD POST AT FLOOR 10

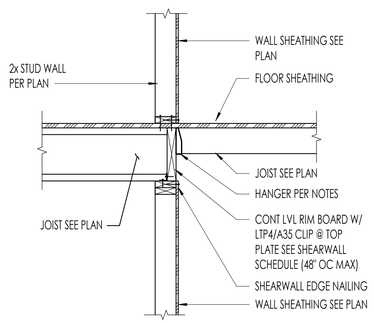


DROPPED BEAM FRAMING 13

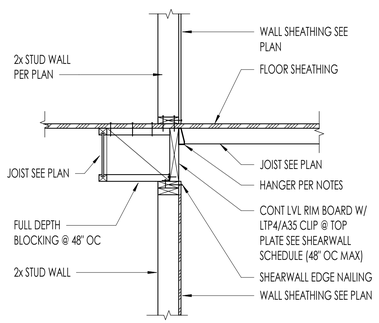


JOIST CONNECTION TO BEAMS 14



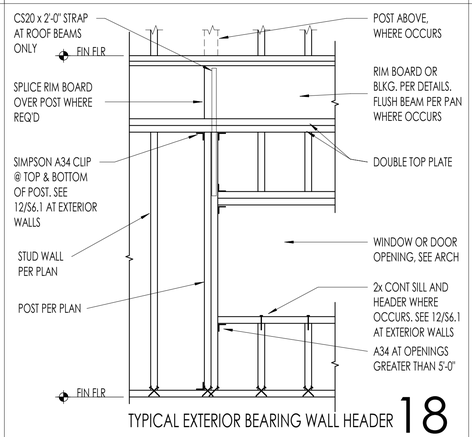


JOIST PARALLEL

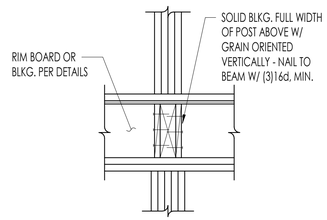


JOIST PERPENDICULAR

TYPICAL CORRIDOR FRAMING 17



TYPICAL EXTERIOR BEARING WALL HEADER 18



FLUSH BEAM PERPENDICULAR TO WALL 20

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1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

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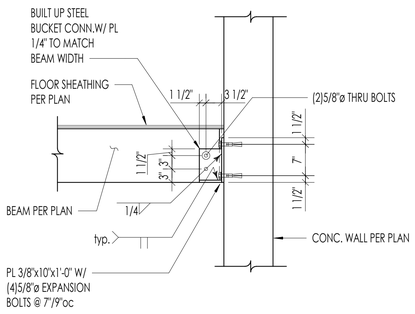
2	10/28/2024	BP REVIEW CYCLE 1

SHEET TITLE
TYPICAL WOOD DETAILS

JOB NUMBER

SHEET NUMBER
S6.1

1



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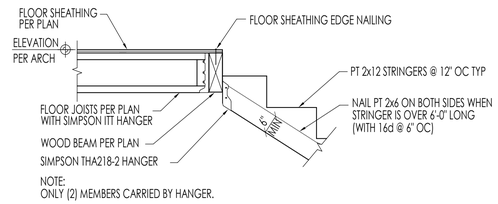
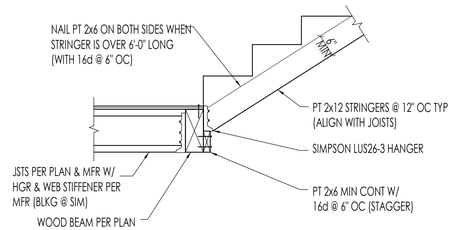
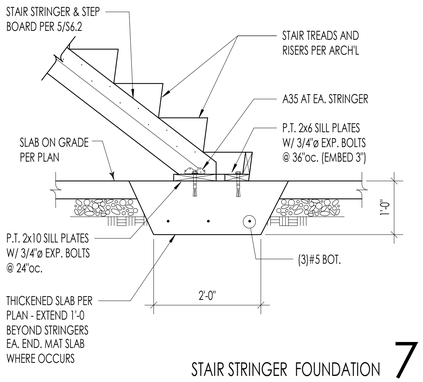




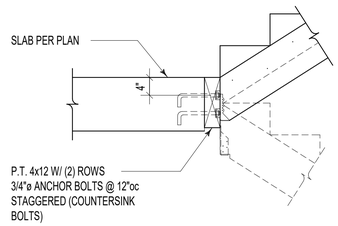
TYPICAL STAIR STRINGER CONNECTION 5

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

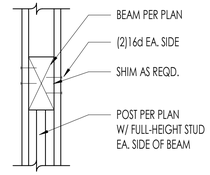
6



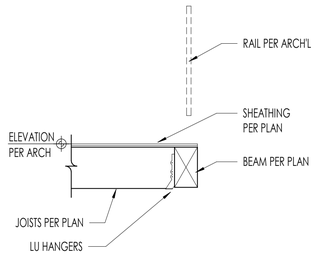
STAIR STRINGER FOUNDATION 7



STAIR STRINGER AT CONCRETE SLAB 8

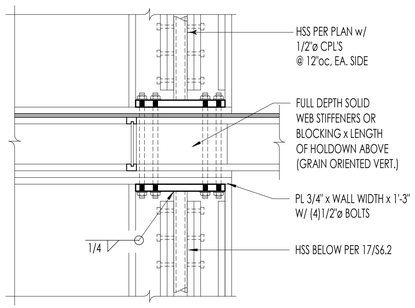


STAIR INTERMEDIATE LANDING BEAM CONN 9

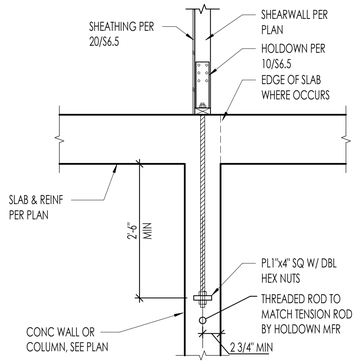


STAIR LANDINGS 10

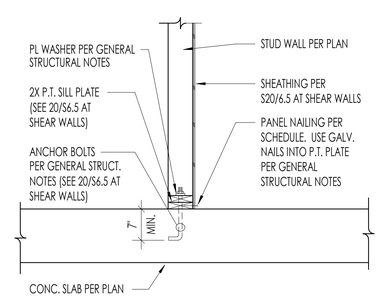
11



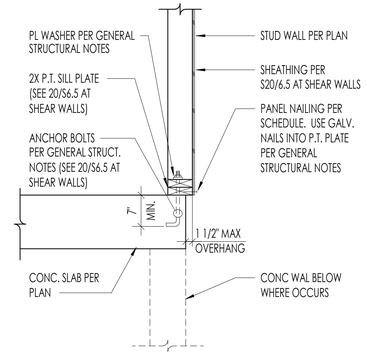
HSS COL IN WALL 12



HOLDOWN AT CONC COL OR WALL 13

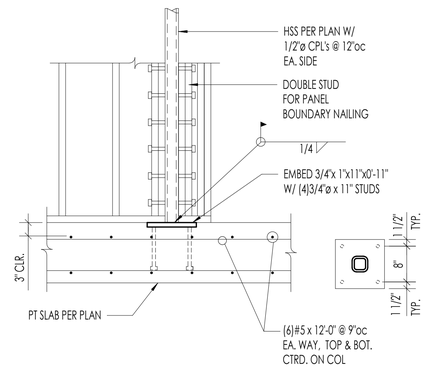


WOOD WALL AT CONC SLAB 14



WOOD WALL AT CONC SLAB EDGE 15

16



HSS COL BASE CONN 17

18

19

20

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

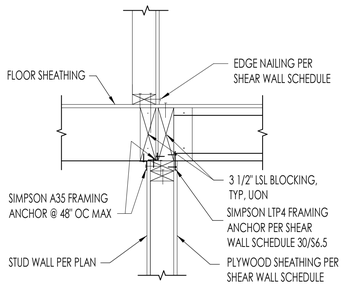
SHEET TITLE

WOOD STAIR AND WALL CONNECTION DETAILS

JOB NUMBER

SHEET NUMBER

S6.2



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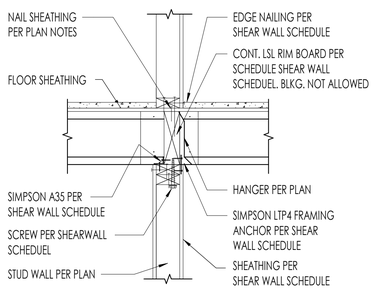
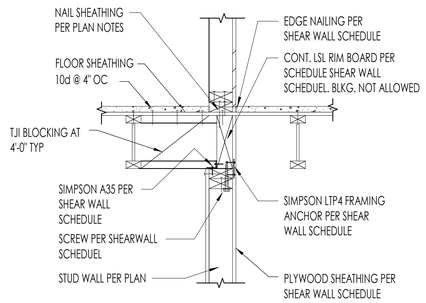
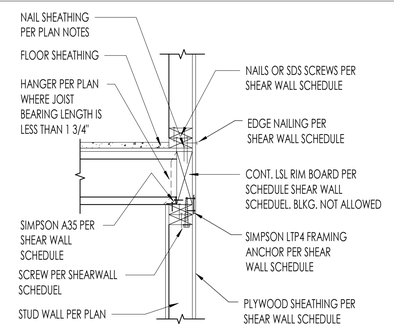


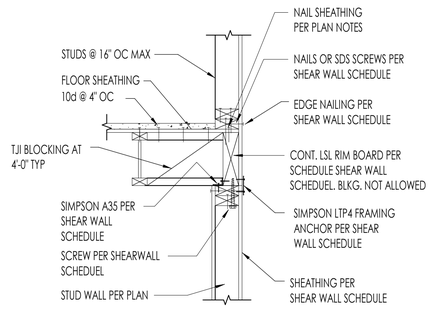
INTERIOR SHEAR WALL



INTERIOR SHEAR WALL

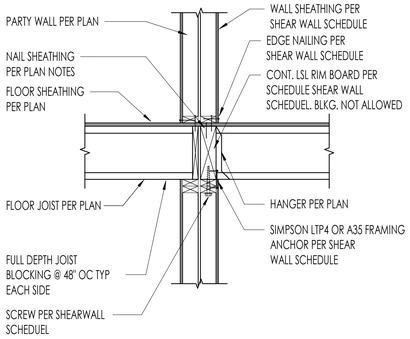


EXTERIOR SHEAR WALL

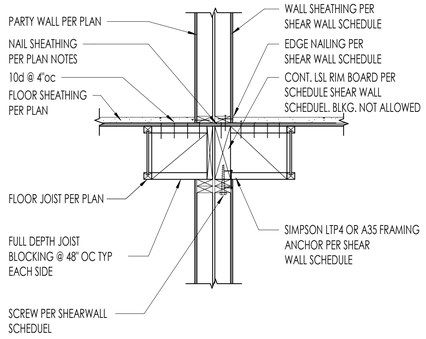


EXTERIOR SHEAR WALL

TYPICAL SHEAR WALL CONNECTION DETAILS AT FLOOR 5

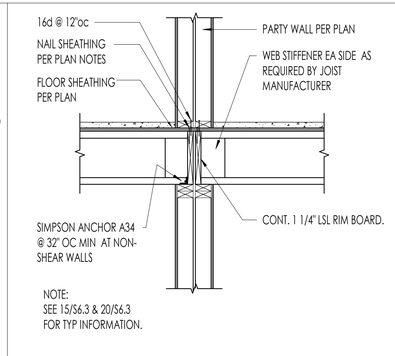


WALL PERPENDICULAR

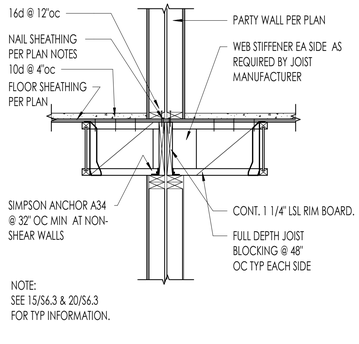


WALL PARALLEL

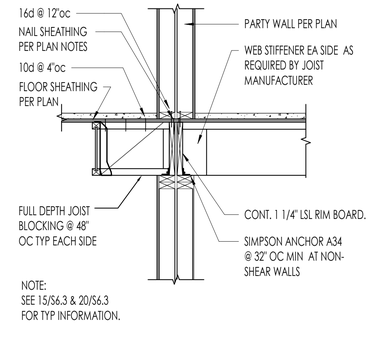
PARTY SHEAR WALL 7



WALL PERPENDICULAR

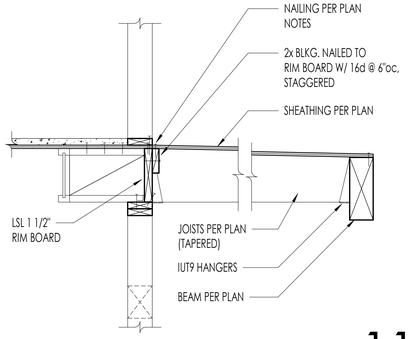


WALL PARALLEL



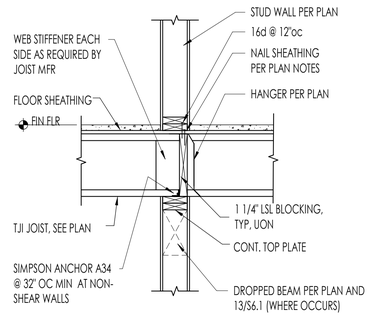
WALL PARALLEL/PERPENDICULAR

TYPICAL FLOOR JOIST CONNECTION AT PARTY WALLS 10

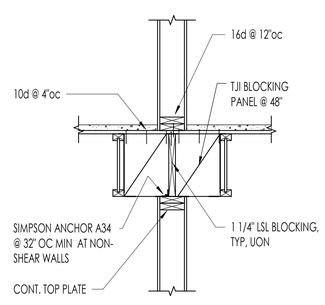


WOOD BALCONY 11

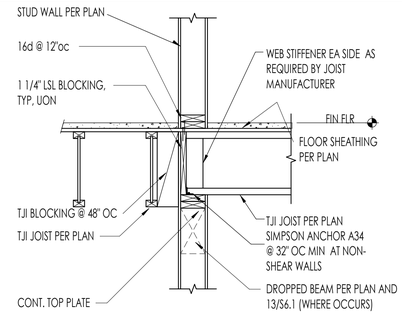
12



WALL PERPENDICULAR

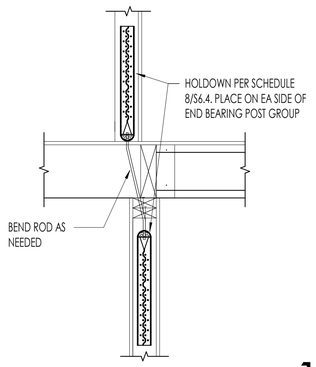


WALL PARALLEL



WALL PARALLEL/PERPENDICULAR

FLOOR JOIST CONNECTION AT INTERIOR BEARING WALL 15



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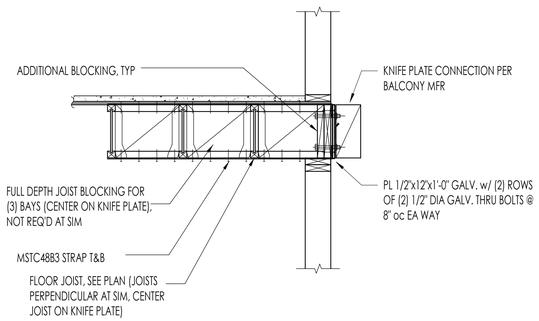
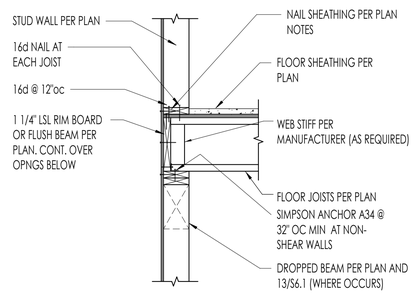
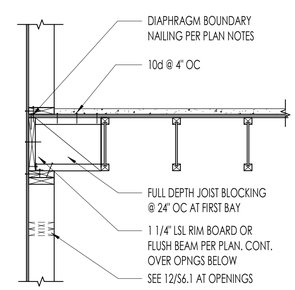


STEEL BALCONY CONNECITON 18



WALL PERPENDICULAR

* AT SHEAR WALLS SEE 5/S6.3



WALL PARALLEL

(FOR CALL OUTS IN COMMON SEE WALL PERPENDICULAR)

TYPICAL FLOOR JOIST CONNECTION AT EXTERIOR WALL 20

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING

1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

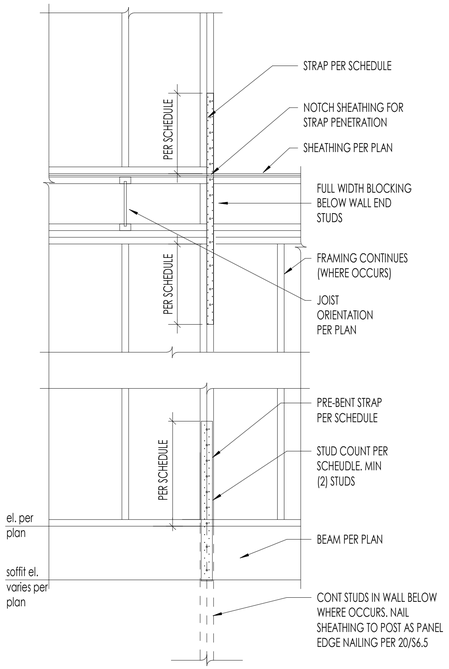
SHEET TITLE

WOOD FLOOR FRAMING DETAILS

JOB NUMBER

SHEET NUMBER

S6.3



LEVEL	STRAP CS-I			STRAP CS-J			STRAP CS-K		
	STRAP	STRAP EXTENSION	MIN NUMBER OF STUDS, UON	STRAP	STRAP EXTENSION	MIN NUMBER OF STUDS, UON	STRAP	STRAP EXTENSION	MIN NUMBER OF STUDS, UON
8TH	CMST12	3'-3"	(3)2X6	CMST16	1'-8"	(6)2X4	(2) CMST12	3'-3"	(8)2X6
7TH	(2)MSTC66B3	0'-11 1/4"	(4)2X6	(2)HDU-SDS2.5	0'-11 1/4"	(10)2X4	(8)MSTC66B3	0'-11 1/4"	(8)2X6
NOTES									

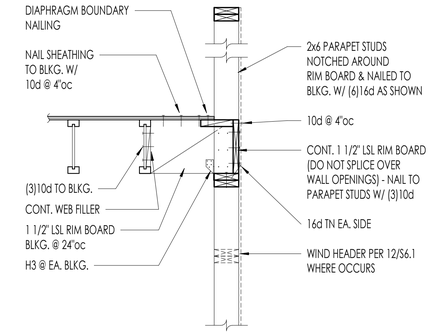
LEVEL	STRAP CS-L			STRAP CS-M			STRAP CS-N		
	STRAP	STRAP EXTENSION	MIN NUMBER OF STUDS, UON	STRAP	STRAP EXTENSION	MIN NUMBER OF STUDS, UON	STRAP	STRAP EXTENSION	MIN NUMBER OF STUDS, UON
8TH	CMST16	1'-8"	(3)2X4	CMST12	3'-3"	(7)2X4	CMST16	1'-8"	(4)2X4
7TH	(2) MSTC66B3	0'-11 1/4"	(6)2X4	(4)MSTC66B3	0'-11 1/4"	(12)2X4	MSTC66B3	0'-11 1/4"	(4)2X4
NOTES									

NOTES:

1. HOLDOWN TYPES REFER TO SIMPSON STRONG-TIE CATALOG CALLOUTS.

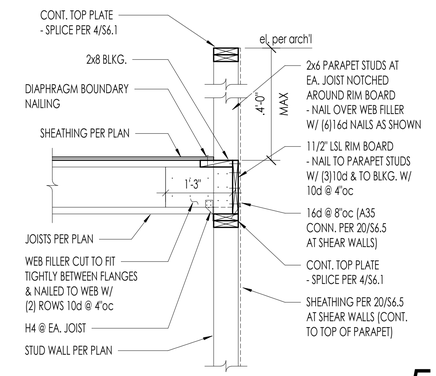
2. NAIL PLYWOOD SHEATHING TO STUDS RECEIVING HOLDOWN W/SCHEDULED PANEL EDGE NAILING. STAGGER NAILS SO THAT EACHSTUD IS NAILED.

SHEAR WALL STRAP SCHEDULE 8

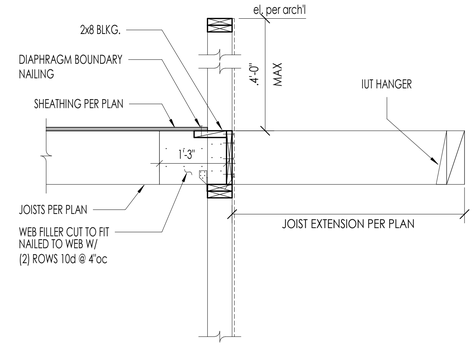


SEE 5/S6.4 FOR COMMON CALL-OUTS

4

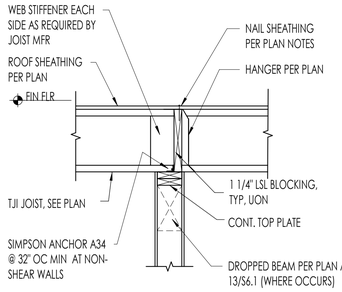


TYPICAL PARAPET DETAIL 5

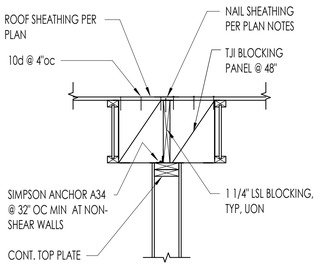


SEE 5/S6.4 FOR COMMON CALL-OUTS

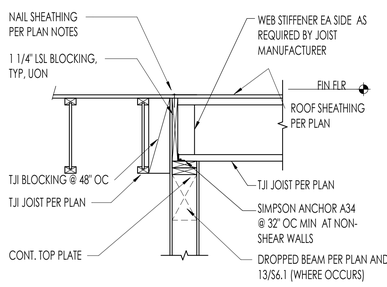
10



WALL PERPENDICULAR

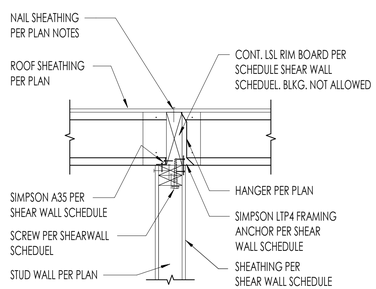


WALL PARALLEL

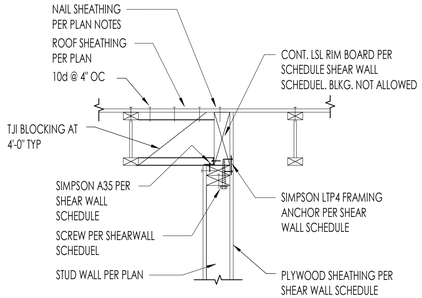


WALL PARALLEL/PERPENDICULAR

TYPICAL BEARING WALL CONNECTION DETAILS AT ROOF 13

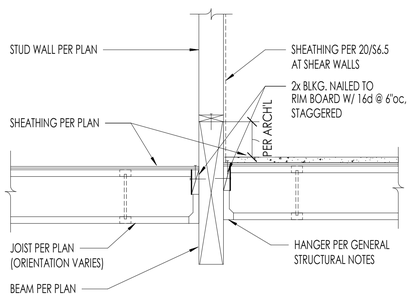


INTERIOR SHEAR WALL



INTERIOR SHEAR WALL

TYPICAL SHEAR WALL CONNECTION DETAILS AT ROOF 15



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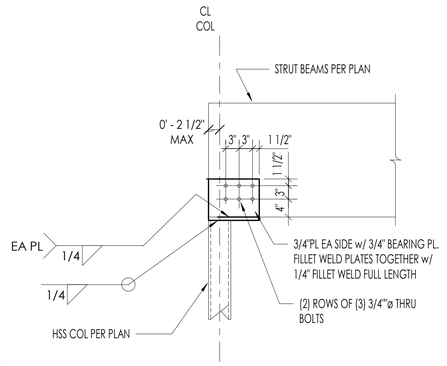
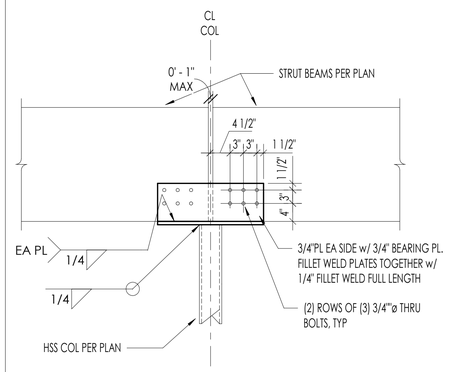
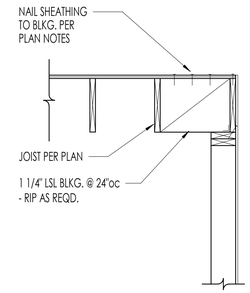


GLULAM TRANSFER BEAM TO COL CONN - SINGLE BEAM 17

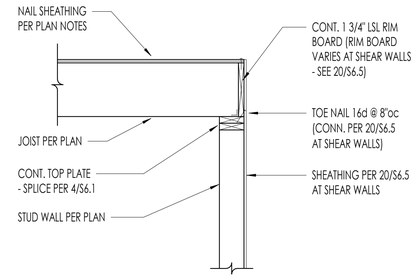


GLULAM TRANSFER BEAM TO COL CONN - DOUBLE BEAM 18



SEE 17/S6.4 FOR COMMON CALL-OUTS

19



PENTHOUSE WALL AND ROOF CONNECTION 20

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

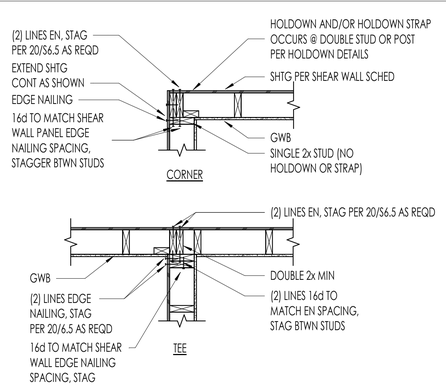
SHEET TITLE

WOOD ROOF FRAMING DETAILS

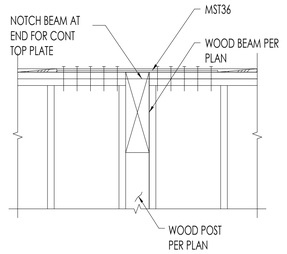
JOB NUMBER

SHEET NUMBER

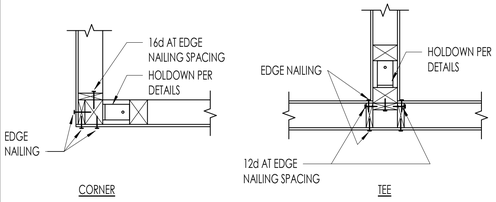
S6.4



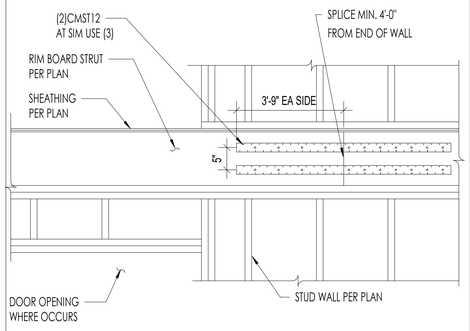
TYPICAL SHEAR WALL INTERSECTION 1



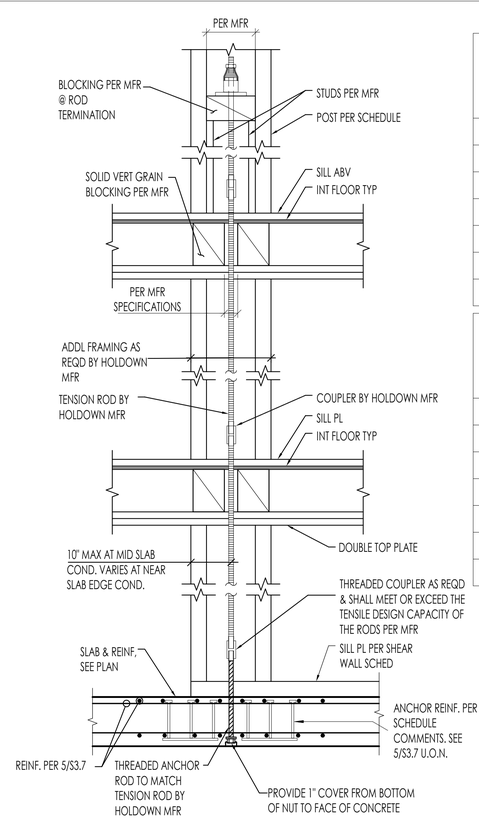
WALL POST 2



SHEAR WALL HOLDOWN AT INTERSECTION 6



7



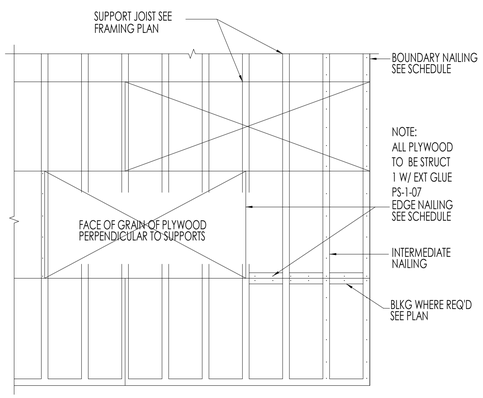
LEVEL	HOLDOWN HD-A			HOLDOWN HD-B			HOLDOWN HD-C			HOLDOWN HD-D		
	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON
8TH	0.7	2.6	(2) 2x4, (2) 2x6	3.2	5.2	(2)2X6	6.2	8.8	(3)2X6	-	-	-
7TH	1.1	11.5	(4) 2x4, (3) 2x6	6.3	11.9	(4)2X6	15.0	19.9	(6)2X6	-	-	-
6TH	3.4	16.5	(6) 2x4, (4) 2x6	12.2	21.7	(6)2X6	29.5	36.6	(10)2X6	12.0	26.3	(12)2X4
5TH	5.6	21.1	(8) 2x4, (6) 2x6	17.7	29.7	(8)2X6	43.7	53.1	(14)2X6	25.2	41.3	(19)2X4
4TH	7.7	27.4	(10) 2x4, (7) 2x6	25.5	39.2	(10)2X6	55.9	67.6	(16)2X6	37.6	56.5	(25)2X4
TIEDOWN ROD	3/4" Ø GR 55			1 1/8" Ø GR 55			1 3/4" Ø GR 55			1 1/2" Ø GR 55		
ANCHORAGE	SEE 5/S3.7 FOR TYPICAL MID SLAB AND SLAB EDGE ANCHORAGE REINFORCEMENT AT LEVEL 4. AT TOP OF WALLS SEE 13/S6.2.											

LEVEL	HOLDOWN HD-E			HOLDOWN HD-F			HOLDOWN HD-G			HOLDOWN HD-H		
	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON	CUMULATIVE DESIGN TENSION (KIP)	INCREMENTAL BEARING LOAD (KIP)	MIN NUMBER OF STUDS, UON
8TH	-	-	-	-	-	-	-	-	-	-	-	-
7TH	-	-	-	-	-	-	-	-	-	-	-	-
6TH	8.8	22.4	(10)2X4	4.1	6.1	(2)2X6	-4.0	21.6	(10)2X4	4.1	5.7	(3)2X4
5TH	18.3	33.2	(16)2X4	7.4	12.5	(4)2X6	8.1	28.8	(14)2X4	10.3	13.3	(6)2X4
4TH	29.7	47.1	(22)2X4	10.5	18.6	(6)2X6	12.5	37	(16)2X4	18.6	22.9	(11)2X4
TIEDOWN ROD	1 1/4" Ø GR 55			3/4" Ø GR 55			3/4" Ø GR 55			1" Ø GR 55		
ANCHORAGE	SEE 5/S3.7 FOR TYPICAL MID SLAB AND SLAB EDGE ANCHORAGE REINFORCEMENT AT LEVEL 4. AT TOP OF WALLS SEE 17/S6.2.											

NOTES:

1. ALL TIE DOWN RODS MUST HAVE MIN Fu = 125ksi AND Fy = 105ksi.
2. HOLDOWN SYSTEM MFR TO DESIGN COMPRESSION POSTS. POST SIZES SHOWN ARE MINIMUM.
3. LOADS ARE SERVICE LEVEL.

SHEAR WALL HOLDOWN 10

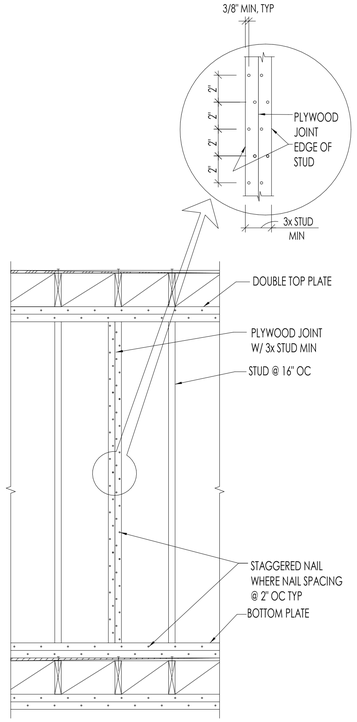


DIAPHRAGM SCHEDULE				
LOCATION	PLYWOOD/PANEL ID	BOUN. NAILS	EDGE NAILS	INTER. NAILS
ROOF	SEE PLAN NOTES	10d @ 6"	10d @ 6"	10d @ 12"
FLOOR	SEE PLAN NOTES	10d @ 6"	10d @ 6"	10d @ 12"
BLOCKED DIAPHRAGM	SEE PLAN NOTES	10d @ 4"	10d @ 4"	10d @ 4"

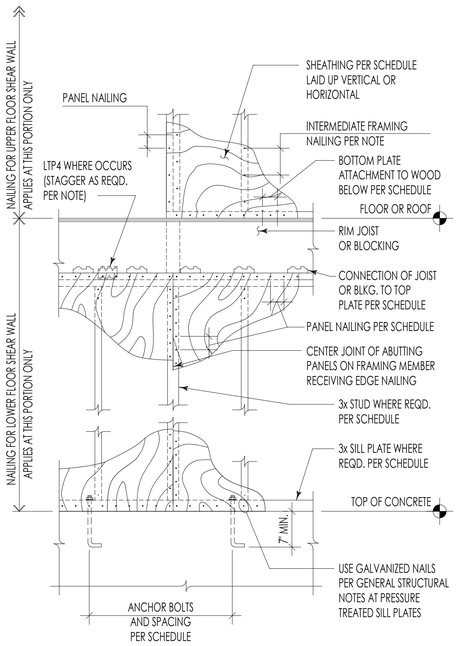
NOTES:

1. USE BOUNDARY NAILING AT ALL HIPS, RIDGES, VALLEYS AND OPENINGS.
2. USE COMMON NAIL FOR ALL DIAPHRAGM NAILING.
3. PLYWOOD SHALL BE GLUED (SUB-FLOOR ADHESIVE) FOR FLOORS.
4. MIN EDGE DISTANCE FOR NAILS SHALL BE 3/8"
5. MIN SHEATHING SHEET SIZE SHALL BE 2'-0"x4'-0".
6. NAILS SHALL NOT BE OVERDRIVEN. OPERATOR TO ADJUST AIR PRESSURE OF PNEUMATIC NAILER AS REQUIRED TO AVOID HEAD OF NAILPENETRATING SKIN OF PLYWOOD SHEATHING.
7. SEE PLANS FOR AREAS OF BLOCKED DIAPHRAGMS.
8. USE BOUNDARY NAILING AT ALL CONNECTIONS TO SHEAR WALLS.

TYPICAL SHEATING LAYOUT AND NAILING 16



SHEAR WALL ELEVATION STAGGERED NAILING 17



ELEVATION

SHEAR WALL ELEVATION 18

	MARK	SHEATHING ①	0.148" x 2 1/2" PANEL NAILING ②	MINIMUM LSL OR LVL RIM BOARD THICKNESS (BASED ON SHEAR WALL BELOW RIM BOARD) ④	CONNECTION OF JOIST OR BLKG. TO TOP PLATE (BASED ON SHEAR WALL BELOW RIM BOARD) ⑧			BOTTOM PLATE ATTACHMENT ⑧		ANCHOR BOLTING TO CONCRETE ⑨ ⑩		LRFD CAPACITY (PLF)
					A35 CLIPS	⑦ LTP4 CLIPS	0.220"ø x 5" SDWS SCREWS ⑤	0.148" x 3 1/4" NAILS ⑤	0.220"ø x 5" SDWS SCREWS ⑤	5/8"ø	3/4"ø	
DOUGLAS FIR FRAMING	W6	1/2"	6"oc	1 3/4"	22"oc	23"oc	14"oc	5"oc	14"oc	48"oc	48"oc	495
	W4	1/2"	4"oc	1 3/4"	15"oc	15"oc	9"oc	4"oc	9"oc	47"oc	48"oc	735
	W3	1/2"	3"oc	3 1/2"	12"oc	12"oc	10"oc	(2) ROWS @ 5"oc	10"oc	36"oc	47"oc	960
	W2	1/2"	2"oc	3 1/2"	9"oc	9"oc	8"oc	(2) ROWS @ 4"oc	8"oc	28"oc	36"oc	1230
	W2-5/8	5/8"	2"oc	3 1/2"	8"oc	8"oc	(2) ROWS @ 14"oc	(2) ROWS @ 3"oc	(2) ROWS @ 14"oc	25"oc	32"oc	1390
	2W4	1/2" EA. SIDE ⑥	4"oc	3 1/2"	7"oc	7"oc	(2) ROWS @ 12"oc	(2) ROWS @ 3"oc	(2) ROWS @ 12"oc	23"oc	30"oc	1470
	2W3	1/2" EA. SIDE ⑥	3"oc	3 1/2"	6"oc	6"oc	(2) ROWS @ 10"oc	NOT ALLOWED	(2) ROWS @ 10"oc	18"oc	23"oc	1920
	2W2	1/2" EA. SIDE ⑥	2"oc	3 1/2"	9"oc EA. SIDE	9"oc EA. SIDE	(2) ROWS @ 8"oc	NOT ALLOWED	(2) ROWS @ 8"oc	14"oc	18"oc	2465
	2W2-5/8	5/8" EA. SIDE ⑥	2"oc	3 1/2"	8"oc EA. SIDE	8"oc EA. SIDE	(2) ROWS @ 7"oc	NOT ALLOWED	(2) ROWS @ 7"oc	12"oc	16"oc	2785

SHEAR WALL SCHEDULE NOTES:

① SHEATHING SHALL CONSIST OF 15/32" OSB (19/32" OSB AT W2-5/8) AT INTERIOR WALLS, AND 1/2" PLYWOOD AT EXTERIOR WALLS. OSB SHALL NOT BE SUBSTITUTED FOR PLYWOOD OR VICE VERSA. SHEATHING SHALL HAVE A MINIMUM SPAN RATING OF 24/0.

② PANEL NAILING APPLIES TO ALL SHEATHING PANEL EDGES. INSTALL BLOCKING AT ALL UNFRAMED PANEL EDGES. NAIL SHEATHING TO INTERMEDIATE FRAMING WITH PANEL NAILS AT 12"oc. NAIL TO BE PLACED AT LEAST ⅜" FROM PANEL EDGES AND THE EDGE OF CONNECTING MEMBERS.

③ THICKNESS OF STUD OR BLKG. AT ABUTTING PANEL EDGES, AND THICKNESS OF FOUNDATION SILL PLATE SHALL BE 3x, EXCEPT AT W6 WALLS. DOUBLE 2x MEMBERS MAY BE SUBSTITUTED FOR 3x MEMBERS AT WALLS WITH ONLY ONE LAYER OF SHEATHING. WALL STUDS SHALL BE FACE NAILED TOGETHER PER THE BOTTOM PLATE ATTACHMENT COLUMN OF THE SCHEDULE. SILL PLATES SHALL BE NAILED TOGETHER W/ 10d @ 8"oc, STAGGERED.

④ SEE PLANS AND DETAILS FOR LOCATIONS WHERE THICKER RIM BOARD MAY BE REQUIRED.

⑤ SEE PLAN VIEW FOR MINIMUM ROW SPACING AND MINIMUM EDGE DISTANCE.

⑥ WHERE PANELS ARE APPLIED TO EACH FACE OF A WALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.

⑦ CLIPS SHALL BE INSTALLED W/ 0.131 x 2 1/2" NAILS IN ALL HOLES. WHERE CLIPS ARE REQUIRED EACH SIDE, CLIPS SHALL BE STAGGERED TO AVOID NAIL INTERFERENCE.

⑧ CONTRACTOR MAY USE EITHER OF THE CONNECTION OPTIONS INDICATED AND MAY COMBINE A35 CLIPS ON ONE SIDE OF WALL WITH LTP4 ON THE OPPOSITE SIDE.

⑨ PLATE WASHERS IN 2x4 STUD WALLS AND ALL SINGLE SIDED SHEAR WALLS SHALL BE 3"x3"x0.229". DOUBLE SIDED 2x6 SHEAR WALLS SHALL HAVE 4 1/2"x3"x0.229" PLATE WASHERS. THE EDGE OF PLATE WASHERS SHALL BE LOCATED WITHIN 1/2" OF THE EDGE OF BOTTOM PLATE ON THE SIDE WITH SHEATHING.

⑩ INSTALL ADDITIONAL ANCHOR BOLTS EACH SIDE OF PLATE BREAKS AND PENETRATIONS EXCEEDING THE "NO REINFORCING" HOLE SIZE PER 3/S6.1.

WOOD SHEAR WALL SCHEDULE 20

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

DIMONG SHIU STATE OF WASHINGTON 21063 REGISTERED PROFESSIONAL ENGINEER

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE

WOOD SHEAR WALL SCHEDULE AND DETAILS

JOB NUMBER

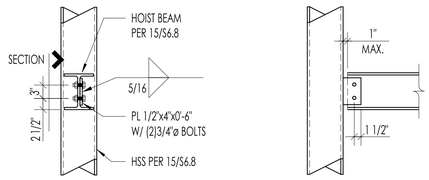
SHEET NUMBER

S6.5

1

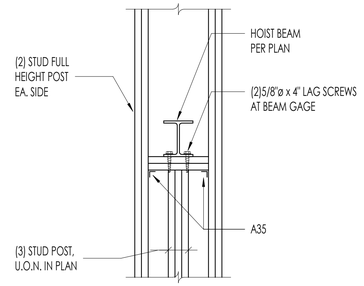
2

3



HOIST BEAM CONNECTING TO HSS COLUMN CONDITION

SECTION



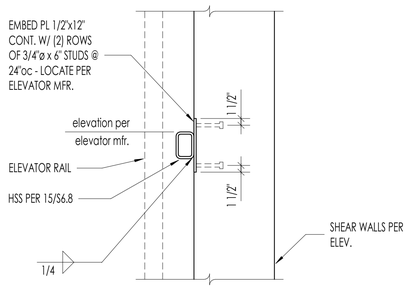
HOIST BEAM BEARING ON WOOD WALL CONDITION

HOIST BEAM SUPPORT AND CONNECTIONS 5

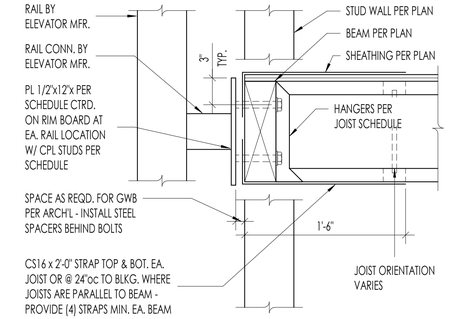
6

7

8



ELEVATOR RAIL CONNECTION TO CONC. SWs 9

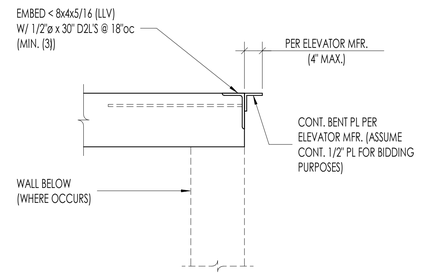


10

11

12

13



14

RAIL PL SCHEDULE	
PL WIDTH PER ELEVATOR MFR.	ATTACHMENT
30"	(6)5/8"ø CPL STUDS @ 6"/10"oc
18"	(4)5/8"ø CPL STUDS @ 6"/10"oc

ELEVATOR RAIL CONNECTION AT WOOD FLOORS 15

16

17

18

19

20

DHS ENGINEERS
1601 5th Avenue, 1100
Seattle, WA 98101
(206) 734 5858

1038 BUILDING
1040 SOUTH KING STREET, SEATTLE, WA 98104

NUMBER	DATE	DESCRIPTION OF REVISIONS
	03/01/2020	BUILDING PERMIT

SHEET TITLE
ELEVATOR DETAILS

JOB NUMBER

SHEET NUMBER
S6.6

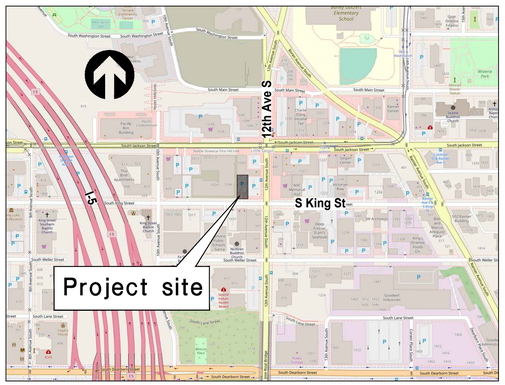
DHS ENGINEERS

1038 S KING ST

SEATTLE, WASHINGTON

TEMPORARY SHORING WALL PLANS

SHEET NUMBER	SHEET TITLE
SH1.0-1.1	COVER SHEET AND NOTES
SH2.0	SHORING PLANS
SH3.0-3.3	WALL ELEVATIONS
SH4.0	CROSS-SECTIONS
SH5.0-5.3	DETAILS



VICINITY MAP

GENERAL:

THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING DIMENSIONS AND SITE CONDITIONS, DETERMINING ACTUAL LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS AND THOSE UTILITIES OR UNDERGROUND OBSTRUCTIONS NOT SHOWN ON THE PLANS, AND FOR REMOVAL OF ALL ABANDONED UTILITIES, OR OTHER UNDERGROUND OBSTRUCTIONS THAT INTERFERE WITH THE NEW CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION PROCESS AND THE SAFETY OF THE WORKERS. THIS INCLUDES BUT IS NOT LIMITED TO, THE CONSTRUCTION SEQUENCE, TEMPORARY HANDRAILS, EXCAVATION ACCESS, AND BARRIERS. IT ALSO INCLUDES LIFTING OF MATERIALS AND CONSTRUCTION EQUIPMENT INTO AND OUT OF THE EXCAVATION, TEMPORARY BRACING OF FORMWORK, TEMPORARY SHORING OF EXCAVATIONS, AND STABILITY OF ALL TEMPORARY CUT SLOPES.

REFERENCE DATA:

THE EXISTING SITE, TOPOGRAPHICAL, AND UTILITY DATA; THE PROPOSED GRADES AND UTILITIES; THE DIMENSIONS AND DEPTHS OF THE PROPOSED FOUNDATIONS; AND THE PROPOSED SHORING WALL LOCATIONS ARE BASED ON THE FOLLOWING:

- THE DRAWING TITLED: "TOPOGRAPHIC AND BOUNDARY SURVEY, SW 1/4, NE 1/4 SEC 5, TWP. 24N., RGE 4E., W.M., ADAM GHONG, 1040 S KING ST, SEATTLE, WASHINGTON", DATED JULY 14, 2016, PREPARED BY TERRANE.
- THE STRUCTURAL DRAWING SET TITLED: "1038 BUILDING, 1040 SOUTH KING STREET, SEATTLE, WA", PREPARED BY DHS ENGINEERS, RECEIVED ELECTRONICALLY IN AUTOCAD FORMAT ON MARCH 1, 2021.

BUILDING CODES, DESIGN MANUALS, AND SPECIFICATIONS:

2015 INTERNATIONAL BUILDING CODE (AS AMENDED BY THE CITY OF SEATTLE)

PUBLICATION NO. FHWA-IF-99-015, GEOTECHNICAL ENGINEERING CIRCULAR NO. 4, GROUND ANCHORS AND ANCHORED SYSTEMS

DESIGN SURCHARGE LOADS:

FOR THE NORTH WALL, THE EXISTING 1-STORY BEARING WALL BUILDING IS LOCATED ABOUT 6-FT OR MORE AWAY FROM THE FACE OF THE WALL, AND WE HAVE ESTIMATED THE D+L FOOTING LOAD AS (500 PSF)(10-FT)=5 K/FT. WHEN THAT LOADING PLUS 100 PSF AREAL SURCHARGE IS APPLIED, THE RESULTANT LATERAL LOADING MAY BE REPRESENTED BY 200 PSF OVER THE ENTIRE WALL HEIGHT.

FOR THE EAST AND SOUTH WALLS, A MODERATE CONSTRUCTION SURCHARGE LOADING OF 500 PSF VERTICAL AND 150 PSF HORIZONTAL AREAL SURCHARGE LOADING WAS CONSIDERED IN THE DESIGN.

STRUCTURAL WELDING:

MINIMUM WELD SIZE 1/4" CONTINUOUS FILLET. MINIMUM WELD LENGTH 2 INCHES. ALL WELDING TO BE PERFORMED BY WABO-CERTIFIED WELDERS PER AWS STANDARD SPECIFICATIONS. USE E70XX ELECTRODES.

DESIGN CALCULATIONS:

THE TEMPORARY SHORING WALL DESIGN CALCULATIONS ARE CONTAINED IN THE LETTER REPORT TITLED: "TEMPORARY SHORING WALL DESIGN CALCULATIONS AND PLANS, 1038 S KING STREET, SEATTLE, WA", PREPARED BY GROUND SUPPORT PLLC FOR DHS ENGINEERS, DATED MARCH 29, 2021.

SHORING DESIGN CRITERIA:

THE SUBSURFACE DESIGN PARAMETERS AND SHORING WALL DESIGN CRITERIA ARE BASED UPON THE FOLLOWING STUDY: "UPDATED GEOTECHNICAL REPORT, PROPOSED DEVELOPMENT, 1038 & 1040 SOUTH KING STREET, SEATTLE, WASHINGTON", PREPARED BY PANGEO, INC., DATED NOVEMBER 30, 2020.

GROUNDWATER / DEWATERING:

BASED ON THE GEOTECHNICAL REPORT, GROUNDWATER WAS NOT ENCOUNTERED DURING THE SOIL EXPLORATIONS. THEREFORE, FOR THE PURPOSES OF DESIGN OF THE SHORING WALLS, THE WATER TABLE IS ASSUMED TO OCCUR BENEATH THE BASE OF THE EXCAVATION.

NEVERTHELESS, LOCALIZED WET ZONES AND/OR PERCHED POCKETS AND STRINGERS OF WATER-BEARING SOILS MAY BE ENCOUNTERED AT ANY TIME. THE WALL FACE EXCAVATION MUST PROCEED CAUTIOUSLY TO AVOID EXCESSIVE GROUND LOSS OR DISTURBANCE IN AREAS OF WATER BEARING SOILS. GAPS IN THE TIMBER LAGGING WILL PROVIDE A FREE-DRAINING FACE CONDITION, AND SUMP PUMPS AND TRENCHES WILL BE REQUIRED AT THE EXCAVATION BASE TO CONTROL WATER INSIDE THE SITE.

TIMBER LAGGING:

ALL LAGGING BOARDS SHALL BE IN GOOD CONDITION, AND SHALL BE HEM-FIR NO. 2 OR BETTER, AND SHALL BE PRESSURE-TREATED IN ACCORDANCE WITH AWPA STANDARD C14 (FOR END USE CLASSIFICATION 4B), TO A MINIMUM RETENTION OF 0.40 PCF, USING THE CCA PROCESS (COMMERCIAL PRODUCT NAME OSMOSE OR APPROVED EQUAL). ALTERNATIVE TREATMENT PROCESSES MAY BE SUBMITTED TO GROUND SUPPORT PLLC FOR APPROVAL.

THE CONTRACTOR SHALL EXCAVATE THE WALL FACE AND INSTALL THE LAGGING IN SUCH A MANNER AS TO MAINTAIN A SAFE WORK PLACE AND AVOID EXCESSIVE SLOUGHING AND OVERBREAK. BACKFILL BEHIND LAGGING BOARDS WITH A FREE-DRAINING GRANULAR MATERIAL, OR NATIVE SOILS IF APPROVED BY THE GEOTECHNICAL ENGINEER.

AS A MINIMUM, PRIOR TO PLACING THE SUBSEQUENT SET OF TIMBER LAGGING, DO NOT EXCAVATE MORE THAN 4 FEET BELOW THE CURRENT DEPTH OF LAGGED WALL FACE, ALONG ANCHORED WALLS, DO NOT EXCAVATE MORE THAN 2 FEET BELOW THE CURRENT LEVEL OF ANCHORS UNTIL THE THOSE ANCHORS ARE INSTALLED, CURED, TESTED, AND STRESSED.

STRUCTURAL STEEL:

ALL STRUCTURAL STEEL WIDE FLANGE AND OTHER ROLLED SHAPES SHALL CONFORM TO ASTM A572 / AASHTO M270, GRADE 50; ALL STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A36 / AASHTO M270, GRADE 36; ALL RECTANGULAR STEEL TUBE WALERS SHALL CONFORM TO ASTM A500, GRADE B; AND ALL PIPES SHALL CONFORM TO ASTM A53 GRADE B, UNLESS SHOWN OTHERWISE ON THE PLANS, OR APPROVED OTHERWISE BY THE ENGINEER.

LEAN-MIX CONCRETE:

ALL LEAN-MIX CONCRETE SHALL HAVE A MINIMUM OF 1-1/2 SACKS (141 LBS) OF CEMENT AND 200 LBS OF FLY ASH PER CUBIC YARD OF CONCRETE. PORTLAND CEMENT SHALL BE TYPE I, II, OR III CONFORMING TO ASTM C150 / AASHTO M85. FLY ASH SHALL BE TYPE F CONFORMING TO ASTM C618.

SLUMP FOR ALL LEAN-MIX CONCRETE SHALL NOT BE LESS THAN 5 INCHES AND NO GREATER THAN 9 INCHES. ADMIXTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C494 / AASHTO M194, SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND SHALL BE APPROVED BY THE ENGINEER.

AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C33 / AASHTO M6 FOR FINE AGGREGATES AND AASHTO M80, CLASS B FOR COARSE AGGREGATES.

STRUCTURAL CONCRETE FOR 42" DIAMETER SHAFT TOES:

IN ADDITION TO THE REQUIREMENTS ABOVE FOR LEAN-MIX CONCRETE, ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE, AND SHALL HAVE TEST DATA DEMONSTRATING A MINIMUM 28 DAY STRENGTH OF 3000 PSI.

GROUND ANCHOR DESIGN RESPONSIBILTIES:

A DESIGN ANCHOR PULLOUT VALUE OF 2 K/FT WAS CONSIDERED IN THE SELECTION OF THE ANCHOR BOND LENGTHS SHOWN ON THE PLANS, AND A MINIMUM ANCHOR DIAMETER OF 5-1/2" IS ALSO ILLUSTRATED IN THE DETAIL SHEETS.

HOWEVER, THE SHORING CONTRACTOR IS COMPLETELY RESPONSIBLE FOR SELECTING DRILLING METHOD (OPEN-HOLE AIR-ROTARY, CASED, AUGER-CAST, ETC.), DIAMETER (6", 8", ETC.), AND METHOD OF GROUTING (TREMIE, CAPPING, POST-GROUTING, AUGER-CASTING, ETC.) AS REQUIRED TO ACHIEVE THE ANCHOR DESIGN LOADS SHOWN ON THE PLANS, WHICH ARE BASED ON A SERVICE RESISTANCE OF 2 K/FT.

IF THE SHORING CONTRACTOR FEELS THE 2 K/FT VALUE IS NOT ACHIEVABLE, THEN HE OR SHE MUST RAISE THIS ISSUE WITH THE OWNER BEFORE BID TIME. A REDESIGN WILL BE REQUIRED IF THE OWNER SELECTS A SHORING CONTRACTOR THAT CANNOT ACHIEVE THE DESIGN PULLOUT OF 2 K/FT.

1

DESIGN	DRAWN	REV/EX	DATE	REV	DESCRIPTION
CJA	CJA	RJB	3/29/2021	0	PERMIT ISSUE
CJA	CJA	RJB	11/6/2024	1	COMMENT RESPONSE #1

Ground Support PLLC
16932 Woodinville Redmond Rd NE, #210
Woodinville, WA 98072
Ph: (425) 488-1143 Fax: (425) 605-4057

1038 S KING ST

TEMPORARY SHORING WALL
COVER & SHORING NOTES

PROJ. NO. 21-03

SHEET NUMBER

SH1.0

DRILLED SOLDIER PILES:

THE MINIMUM REQUIRED STRUCTURAL STEEL W-SHAPES FOR THE SOLDIER PILES ARE INDICATED ON THE PLANS. ALTERNATIVE STEEL SECTIONS MAY BE USED PROVIDED THAT THE SECTION MODULUS OF EACH ALTERNATIVE STEEL SECTION ARE EQUAL TO OR GREATER THAN THE CROSS-SECTIONAL AREA AND SECTION MODULUS OF THE CORRESPONDING STEEL SECTION SHOWN ON THE PLANS, AND IS APPROVED BY THE SHORING DESIGNER.

SHAFTS SHALL BE CONSTRUCTED SO THAT THE CENTER AT THE TOP OF THE SHAFT IS WITHIN +/- 3 INCHES OF THE PLAN LOCATION. SHAFTS SHALL BE PLUMB. THE ELEVATION AT THE TOP OF SHAFT SHALL BE +/- 3 INCHES FROM THE PLAN LOCATION. DURING CONSTRUCTION FOR THE SHAFTS, THE CONTRACTOR SHALL MAKE FREQUENT CHECKS ON THE PLUMBNESS, ALIGNMENT, AND DIMENSIONS OF THE SHAFTS. ANY DEVIATION EXCEEDING THE ALLOWABLE TOLERANCES SHALL BE CORRECTED IMMEDIATELY.

THE STEEL SOLDIER PILES SHALL BE PLACED SO THAT THE CENTER OF THE PILE IS WITHIN +/- 1 INCH OF THE PLAN LOCATION AT THE TOP OF THE PILE, AND WITHIN 0.5% OF VERTICAL WITH DEPTH.

SHAFTS SHALL BE EXCAVATED TO THE REQUIRED DEPTH AS SHOWN ON THE PLANS. THE EXCAVATION SHALL BE COMPLETED IN A CONTINUOUS OPERATION USING EQUIPMENT CAPABLE OF EXCAVATING THROUGH THE TYPE OF MATERIAL EXPECTED TO BE ENCOUNTERED.

IF THE SHAFT EXCAVATION IS STOPPED WITH THE APPROVAL OF THE ENGINEER, THE SHAFT SHALL BE SECURED BY INSTALLATION OF A SAFETY COVER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE SAFETY OF THE SHAFT AND SURROUNDING SOIL AND THE STABILITY OF THE SIDE WALLS. A TEMPORARY CASING SHOULD BE USED IF NECESSARY TO ENSURE SUCH SAFETY AND STABILITY.

WHERE CAVING CONDITIONS ARE ENCOUNTERED, FURTHER EXCAVATION WILL NOT BE ALLOWED UNTIL THE CONTRACTOR SELECTS A METHOD TO PREVENT GROUND MOVEMENT. THE CONTRACTOR MAY ELECT TO PLACE A TEMPORARY CASING OR USE OTHER METHODS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL USE APPROPRIATE MEANS (SUCH AS A CLEANOUT BUCKET), TO CLEAN THE BOTTOM OF THE EXCAVATION SUCH THAT NO MORE THAN 2 INCHES OF LOOSE OR DISTURBED MATERIAL IS PRESENT.

WHEN UNEXPECTED OBSTRUCTIONS, WHICH REQUIRE SPECIALIZED EQUIPMENT AND/OR LABOR ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PROMPTLY AND THE OBSTRUCTIONS SHALL BE REMOVED AND THE EXCAVATION CONTINUED IN A MANNER APPROVED BY THE ENGINEER.

TEMPORARY CASINGS FOR THE SHAFTS SHALL BE REMOVED. A MINIMUM 5 FOOT HEAD OF CONCRETE MUST BE MAINTAINED TO BALANCE THE SOIL AND WATER PRESSURE AT THE BOTTOM OF THE CASING DURING REMOVAL. THE CASING SHALL BE SMOOTH.

SHAFT CONCRETE SHALL BE PLACED AS SHOWN ON THE PLANS AND SHALL COMMENCE WITHIN 2 HOURS AFTER COMPLETION OF THE EXCAVATION. SHAFT CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION TO THE TOP OF THE SHAFT.

IF WATER IS NOT PRESENT, THE CONCRETE SHALL BE DEPOSITED BY A METHOD WHICH PREVENTS AGGREGATE SEGREGATION. THE CONTRACTOR'S METHOD FOR DEPOSITING CONCRETE SHALL HAVE APPROVAL OF THE ENGINEER PRIOR TO CONCRETE PLACEMENT.

IF WATER IS PRESENT, THE CONCRETE SHALL BE DEPOSITED BY TREMIE PLACEMENT METHODS.

SPECIAL INSPECTION OF THE SHORING WALLS:

IN ACCORDANCE WITH SECTION 1704 OF IBC (2015), SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING SHORING ITEMS OR PROCESSES: SOLDIER PILE FABRICATION AND INSTALLATION, AND GROUND ANCHOR INSTALLATION AND TESTING.

SDCI PRECONSTRUCTION MEETING:

A PRECONSTRUCTION MEETING IS REQUIRED BETWEEN THE OWNER'S REPRESENTATIVES (GEOTECHNICAL SPECIAL INSPECTOR, GENERAL CONTRACTOR, AND EXCAVATION CONTRACTOR) AND THE SDCI SITE INSPECTOR. CONTACT 206-684-8860 TO ARRANGE THE MEETING.

SDOT PRECONSTRUCTION MEETING:

PRIOR TO INSTALLATION OF THE SHORING SYSTEM, A PRECONSTRUCTION MEETING IS REQUIRED WITH SDOT. ATTENDEES SHALL INCLUDE: AN OWNER'S REPRESENTATIVE, THE GENERAL CONTRACTOR, THE EXCAVATION AND SHORING SUBCONTRACTORS, THE GEOTECHNICAL ENGINEERS, SURVEYORS, SHORING DESIGNERS, AND SDOT PERSONNEL.

MONITORING:

SURVEY MONITORING OF THE SHORING WALLS, SHALL BE PERFORMED TO DETERMINE THE VERTICAL AND HORIZONTAL MOVEMENT OF THE MONITORING POINTS. THE MEASURING SYSTEM SHALL HAVE AN ACCURACY OF AT LEAST 0.01 FEET.

THE MONITORING PROGRAM SHALL BE DETERMINED BY THE GEOTECHNICAL SPECIAL INSPECTOR BUT, AT A MINIMUM, SHALL INCLUDE THE FOLLOWING:

(1) ESTABLISH SURVEY LINES NEAR THE TOP OF THE WALL, ON ADJACENT CRITICAL STRUCTURES OR BUILDINGS WITHIN A DISTANCE EQUAL TO THE HEIGHT OF THE WALL, AND ALONG THE CURBLINE AND CENTERLINE OF ADJACENT ROADWAYS OR ALLEYS.

(2) SURVEY POINTS ALONG THE LINES INDICATED IN NOTE 1 ABOVE SHOULD BE SPACED NO MORE THAN EVERY 20-FEET ALONG THE WALL. FOR SOLDIER PILES, PLACE MONITORING POINTS AT THE TOP OF AT LEAST EVERY OTHER SOLDIER PILE.

(3) ESTABLISH A BASELINE READING OF MONITORING POINTS ON THE GROUND SURFACE AND SETTLEMENT-SENSITIVE STRUCTURES BEHIND THE SHORING WALL ALIGNMENT PRIOR TO DEWATERING, EXCAVATION, AND INSTALLATION OF THE SHORING SYSTEMS.

(4) A LICENSED SURVEYOR THAT IS NOT THE CONTRACTOR MUST PERFORM THE SURVEYING AT LEAST ONCE A WEEK. HOWEVER, THE SURVEYING MUST BE PERFORMED BY A LICENSED SURVEYOR A MINIMUM OF TWICE A WEEK, IN ACCORDANCE WITH THE MONITORING REQUIREMENTS ESTABLISHED IN THE PROJECT GEOTECHNICAL ENGINEERING REPORT.

(5) MONITORING POINTS ESTABLISHED ALONG THE CURBLINE AND CENTERLINE OF ADJACENT ROADWAYS NEED TO BE MONITORED WHEN TOTAL WALL MOVEMENTS REACH 0.5 INCH OR AT SDOT REQUEST.

(6) THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND PROVIDE AN EVALUATION OF WALL PERFORMANCE AND THE SURVEY DATA TO SDCI AND SDOT ON AT LEAST A WEEKLY BASIS. PER SDCI, THIS WEEKLY REVIEW MUST CONTAIN A GRAPHICAL PRESENTATION OF THE WALL MOVEMENT VERSUS TIME.

(7) IMMEDIATELY NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEERS, SHORING DESIGNER, SDCI, AND SDOT, IF 0.5 INCH OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS OR WHEN TOTAL MOVEMENTS REACH 0.5 INCH.

(8) IF MOVEMENTS EXCEED 0.5 INCHES, THE ENGINEERS AND SHORING DESIGNER SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP AND IMPLEMENT REMEDIAL MEASURES SUFFICIENT TO LIMIT TOTAL MOVEMENTS AT 1 INCH.

(9) ALL EARTHWORK AND CONSTRUCTION ACTIVITIES MUST BE DIRECTED TOWARD IMMEDIATE IMPLEMENTATION OF REMEDIAL MEASURES TO LIMIT DEFORMATIONS TO WHAT IS CONSIDERED AS ACCEPTABLE BY SDOT (1 INCH MAXIMUM).

(10) SURVEY FREQUENCY CAN BE DECREASED AFTER THE SHORING SYSTEM HAS BEEN INSTALLED AND THE EXCAVATION IS COMPLETE IF THE DATA INDICATES NO OR LITTLE ADDITIONAL MOVEMENT. SURVEYING MUST CONTINUE UNTIL THE PERMANENT STRUCTURE (INCLUDING FLOOR SLABS AS BRACES) IS COMPLETED UP TO STREET GRADES. THE SURVEY FREQUENCY WOULD BE DETERMINED BY THE GEOTECHNICAL ENGINEER, WITH APPROVAL BY BOTH SDCI AND SDOT, AND WOULD BE BASED ON THE SHORING PERFORMANCE.

TEMPORARY GROUND ANCHORS:

1. GENERAL:

1A. THE CONTRACTOR SHALL SELECT THE GROUND ANCHOR TYPE, THE INSTALLATION METHOD, THE ANCHOR DIAMETER, AND THE METHOD OF GROUTING, IN ORDER TO DEVELOP THE DESIGN LOADS INDICATED ON THE PLANS, AS VERIFIED IN ACCORDANCE WITH THE ANCHOR TESTING PROGRAM. REVISED PLANS SHALL BE SUBMITTED TO SDCI FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION IF THE CONTRACTOR DECIDES TO INSTALL GROUND ANCHORS DIFFERENT FROM THE GROUND ANCHORS SHOWN ON THIS PLAN SET. SEE THE GROUND ANCHOR SCHEDULES ON THE WALL ELEVATION SHEETS, AND SHEET SH5.2 FOR THE SPECIFIED ANCHOR DIAMETER AND STRAND REQUIREMENTS.

1B. HOWEVER, IF THE PROPOSED METHODS RESULT IN A LARGER DIAMETER, A LONGER ANCHOR LENGTH, OR A SUBSTANTIALLY GREATER GROUTING PRESSURE THAN INDICATED ON THE APPROVED PLANS, THEN THE CONTRACTOR MUST SUBMIT HIS PROPOSED INSTALLATION AND GROUTING METHODS TO GROUND SUPPORT AND SDCI FOR APPROVAL PRIOR TO CONSTRUCTION. THE DETAILS ON SH5.2 MAY BE REFERENCED TO SEE WHAT IS GENERALLY ENVISAGED AS FOR THE GROUND ANCHORS.

2. GROUND ANCHOR INSTALLATION:

2A. AT THE GROUND SURFACE, THE DRILLHOLE SHALL BE LOCATED WITHIN 4 INCHES OF THE LOCATION SHOWN ON THE PLANS. THE DRILLHOLE SHALL BE LOCATED SO THE LONGITUDINAL AXIS OF THE DRILLHOLE AND THE LONGITUDINAL AXIS OF THE TENDON ARE PARALLEL.

2B. AT THE POINT OF ENTRY, THE GROUND ANCHOR SHALL BE INSTALLED WITHIN +/- 3 DEGREES OF THE INCLINATION FROM HORIZONTAL SHOWN IN THE PLANS. AT THE POINT OF ENTRY, THE HORIZONTAL ANGLE MADE BY THE GROUND ANCHOR AND THE STRUCTURE SHALL BE WITHIN +/- 3 DEGREES OF A LINE DRAWN PERPENDICULAR TO THE PLANE OF THE STRUCTURE, UNLESS SHOWN OTHERWISE ON THE PLANS. AT ALL ANCHOR LOCATIONS WHERE TIEBACKS CROSS, THE INCLINATION AND ORIENTATION OF THE ANCHORS SHALL BE +/- 1 DEGREE.

2C. WHEN CAVING CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SELECT SHALL A METHOD TO PREVENT GROUND MOVEMENT. THE CONTRACTOR MAY USE TEMPORARY CASING.

2D. THE TENDON SHALL BE INSERTED INTO THE DRILLHOLE TO THE DESIRED DEPTH WITHOUT DIFFICULTY. WHEN THE TENDON CANNOT BE COMPLETELY INSERTED, THE CONTRACTOR SHALL REMOVE THE TENDON FROM THE DRILLHOLE AND CLEAN OR REDRILL THE HOLE TO PERMIT INSERTION. PARTIALLY INSERTED TENDONS SHALL NOT BE DRIVEN OR FORCED INTO THE HOLE.

2E. THE CONTRACTOR SHALL USE A NEAT-CEMENT OR A SAND-CEMENT GROUT. THE CEMENT SHALL NOT CONTAIN LUMPS OR OTHER INDICATIONS OF HYDRATION. ADMIXTURES, IF USED, SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2F. THE GROUT EQUIPMENT SHALL PRODUCE A GROUT FREE OF LUMPS AND UNDISPERSED CEMENT. A POSITIVE DISPLACEMENT GROUT PUMP SHALL BE USED. THE PUMP SHALL BE EQUIPPED WITH A PRESSURE GAUGE TO MONITOR GROUT PRESSURES. THE PRESSURE GAUGE SHALL BE CAPABLE OF MEASURING PRESSURES OF AT LEAST 150 PSI OR TWICE THE ACTUAL GROUT PRESSURES USED BY THE CONTRACTOR, WHICHEVER IS GREATER. THE GROUTING EQUIPMENT SHALL BE SIZED TO ENABLE THE GROUT TO BE PUMPED IN ONE CONTINUOUS OPERATION. THE MIXER SHALL BE CAPABLE OF CONTINUOUSLY AGITATING THE GROUT.

2G. THE GROUT SHALL BE INJECTED FROM THE LOWEST POINT OF THE DRILLHOLE. THE GROUT MAY BE PUMPED THROUGH GROUT TUBES, CASING, OR DRILL RODS. THE GROUT CAN BE PLACED BEFORE OR AFTER INSERTION OF THE TENDON. THE QUANTITY OF THE GROUT AND THE GROUT PRESSURES SHALL BE RECORDED. THE GROUT PRESSURES AND GROUT TAKES SHALL BE CONTROLLED TO PREVENT EXCESSIVE HEAVE IN SOILS OR FRACTURING OF ROCK FORMATIONS.

2H. NO GROUT SHALL BE PLACED UNDER PRESSURE ABOVE THE BOND LENGTH DURING INITIAL GROUTING OF THE ANCHOR BOND LENGTH. THE GROUT AT THE TOP OF THE DRILLHOLE SHALL NOT CONTACT THE BACK OF THE STRUCTURE.

2I. AFTER GROUTING, THE TENDON SHALL NOT BE LOADED UNTIL THE GROUT HAS ATTAINED SUFFICIENT STRENGTH TO CARRY THE TEST LOAD.

3. ANCHOR GROUT:

3A. THE GROUT SHALL BE A NEAT OR SAND/CEMENT MIXTURE WITH A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1500 PSI AND A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI PER ASTM C109 / AASHTO T106.

3B. TYPE II CEMENT CONFORMING TO THE REQUIREMENTS OF ASTM C150 / AASHTO M85 SHALL BE USED.

3C. FINE AGGREGATES SHALL CONSIST OF CLEAN, NATURAL SAND, CONFORMING TO THE REQUIREMENTS OF ASTM C33 / AASHTO M6. MANUFACTURED SAND IS ACCEPTABLE PROVIDED IT IS SUITABLE FOR PUMPING IN ACCORDANCE WITH ACI 304, SECTION 4.2.2.

3D. ADMIXTURES SHALL BE IN ACCORDANCE WITH ASTM C494 / AASHTO M194. ADMIXTURES WHICH CONTROL BLEED, IMPROVE FLOW, REDUCE WATER CONTENT, AND RETARD SET MAY BE USED IN THE GROUT SUBJECT TO THE APPROVAL OF THE ENGINEER. EXPANSIVE ADMIXTURES SHALL ONLY BE ADDED TO THE GROUT USED FOR FILLING SEALED ENCAPSULATIONS, TRUMPETS AND ANCHORAGE COVERS. ACCELERATORS WILL NOT BE PERMITTED. ADMIXTURES SHALL BE COMPATIBLE WITH PRESTRESSING STEELS AND MIXED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

4. ANCHOR TENDONS:

4A. THE GROUND ANCHORS TENDONS SHALL CONSIST OF THE FOLLOWING:

1. SEVEN-WIRE, LOW-RELAXATION STRANDS WITH AN ULTIMATE TENSILE STRENGTH OF 270 KSI CONFORMING TO ASTM A416 / AASHTO M203.

4B. STRAND COUPLERS SHALL NOT BE ALLOWED.

5. BONDBREAKER:

5A. A BONDBREAKER MUST BE PROVIDED TO PREVENT THE TENDON FROM BONDING TO THE ANCHOR GROUT SURROUNDING THE UNBONDED LENGTH.

5B. THE BONDBREAKER SHALL BE FABRICATED FROM A SMOOTH PLASTIC TUBE OR PIPE HAVING THE FOLLOWING PROPERTIES:

1. RESISTANCE TO CHEMICAL ATTACK FROM AGGRESSIVE ENVIRONMENTS, GROUT OR GREASE.
2. RESISTANCE TO AGING BY ULTRAVIOLET LIGHT.
3. FABRICATED FROM MATERIAL NON-DETRIMENTAL TO THE TENDON.
4. CAPABLE OF WITHSTANDING ABRASION, IMPACT, AND BENDING DURING HANDLING AND INSTALLATION.
5. ENABLE THE TENDON TO ELONGATE DURING TESTING AND STRESSING.
6. ALLOW THE TENDON TO REMAIN UNBONDED AFTER LOCKOFF.

6. SPACERS AND CENTRALIZERS:

6A. SPACERS SHALL BE USED ALONG THE TENDON BOND LENGTH OF MULTI-ELEMENT TENDONS TO SEPARATE EACH OF THE INDIVIDUAL ELEMENTS OF THE TENDON SO THE PRESTRESSING STEEL WILL BOND TO THE GROUT.

6B. SPACERS SHALL BE POSITIONED SO THEIR CENTER-TO-CENTER SPACING DOES NOT EXCEED 10 FEET. IN ADDITION, THE UPPER SPACER SHALL BE LOCATED A MAXIMUM OF 5 FEET FROM THE TOP OF THE TENDON BOND LENGTH AND THE LOWER SPACER SHALL BE LOCATED A MAXIMUM OF 5 FEET FROM THE BOTTOM OF THE TENDON BOND LENGTH. SPACERS SHALL PERMIT GROUT TO FREELY FLOW UP THE DRILLHOLE. SPACERS SHALL BE FABRICATED FROM PLASTIC.

6C. CENTRALIZERS SHALL PERMIT FREE GROUT FLOW AND SHALL PROVIDE A MINIMUM OF 1 INCH OF COVER OVER THE TENDON BOND LENGTH.

6D. CENTRALIZERS SHALL BE SECURELY ATTACHED TO THE TENDON AND THE CENTER TO CENTER SPACING SHALL NOT EXCEED 10 FEET. THE UPPER CENTRALIZER SHALL BE LOCATED A MAXIMUM OF 5 FEET FROM THE TOP OF THE TENDON BOND LENGTH AND THE LOWER CENTRALIZER SHALL BE LOCATED A MAXIMUM OF 1 FOOT FROM THE BOTTOM OF THE TENDON BOND LENGTH. CENTRALIZERS SHALL BE FABRICATED FROM PLASTIC.

7. ANCHORAGE DEVICES:

7A. ANCHORAGE DEVICES SHALL BE CAPABLE OF DEVELOPING 95% OF THE MINIMUM SPECIFIED ULTIMATE TENSILE STRENGTH OF THE PRESTRESSING STEEL TENDON. THE ANCHORAGE DEVICES SHALL CONFORM TO THE STATIC STRENGTH REQUIREMENTS OF SECTION 3.1.6(1) AND SECTION 3.1.8(1) OF THE PTI "GUIDE SPECIFICATION FOR POST TENSIONING MATERIALS".

7B. THE BEARING PLATES SHALL BE STRUCTURAL STEEL CONFORMING TO ASTM A36/AASHTO M183. THE BEARING PLATES SHALL BE SIZED SO THE ALLOWABLE BENDING STRESSES IN THE PLATE PER AISC-ASD ARE NOT EXCEEDED WHEN THE DESIGN LOAD OF THE GROUND ANCHOR IS APPLIED.

8. ANCHOR TESTING:

8A. EACH GROUND ANCHOR SHALL BE TESTED. THE MAXIMUM TEST LOAD SHALL NOT EXCEED 80% OF THE MINIMUM GUARANTEED ULTIMATE TENSILE STRENGTH (GUTS) OF THE TENDON. THE TEST LOAD SHALL BE SIMULTANEOUSLY APPLIED TO THE ENTIRE TENDON. STRESSING OF SINGLE ELEMENTS OF MULTI-ELEMENT TENDONS WILL NOT BE PERMITTED.

8B. THE TESTING EQUIPMENT SHALL CONSIST OF:

1. A DIAL GAUGE OR VERNIER SCALE CAPABLE OF MEASURING TO 0.001 INCHES SHALL BE USED TO MEASURE THE GROUND ANCHOR MOVEMENT. THE MOVEMENT-MEASURING DEVICE SHALL HAVE A MINIMUM TRAVEL EQUAL TO THE THEORETICAL ELASTIC ELONGATION OF THE TOTAL ANCHOR LENGTH AT THE MAXIMUM TEST LOAD PLUS 1 INCH. THE DIAL GAUGE OR VERNIER SCALE SHALL BE SUPPORTED INDEPENDENT OF THE JACKING SYSTEM AND RETAINED STRUCTURE AND SHALL BE ALIGNED SO THAT ITS AXIS IS WITHIN 5 DEGREES FROM THE AXIS OF THE GROUND ANCHOR.

2. A HYDRAULIC JACK AND PUMP SHALL BE USED TO APPLY THE TEST LOAD. THE JACK AND PRESSURE GAUGE SHALL BE CALIBRATED BY AN INDEPENDENT TESTING LABORATORY AS A UNIT. THE PRESSURE GAUGE SHALL BE GRADUATED IN 100 PSI INCREMENTS OR LESS. THE PRESSURE GAUGE WILL BE USED TO MEASURE THE APPLIED LOAD. THE RAM TRAVEL OF THE JACK SHALL NOT BE LESS THAN THE THEORETICAL ELASTIC ELONGATION OF THE TOTAL ANCHOR LENGTH AT THE MAXIMUM TEST LOAD PLUS ONE INCH. THE JACK SHALL BE INDEPENDENTLY SUPPORTED AND CENTERED OVER THE TENDON SO THAT THE TENDON DOES NOT CARRY THE WEIGHT OF THE JACK.

8C. VERIFICATION TESTS SHALL BE PERFORMED ON 2 ANCHORS PER SOIL TYPE ENCOUNTERED, ANCHOR TYPE USED, OR INSTALLATION METHOD USED. VERIFICATION ANCHORS CAN BE USED AS PRODUCTION ANCHORS IF THEY ARE ACCEPTABLE AS DEFINED BELOW. THE VERIFICATION TEST SHALL BE MADE BY INCREMENTALLY LOADING THE ANCHOR IN ACCORDANCE WITH THE FOLLOWING SCHEDULE.

LOAD	HOLD TIME	LOAD	HOLD TIME	LOAD	HOLD TIME
AL	UNTIL STABLE	0.25DL	UNTIL STABLE	0.75DL	UNTIL STABLE
0.25DL	UNTIL STABLE	0.50DL	UNTIL STABLE	1.00DL	UNTIL STABLE
AL	UNTIL STABLE	0.75DL	UNTIL STABLE	1.25DL	UNTIL STABLE
0.25DL	UNTIL STABLE	1.00DL	UNTIL STABLE	1.50DL	UNTIL STABLE
0.50DL	UNTIL STABLE	1.25DL	UNTIL STABLE	1.75DL	UNTIL STABLE
AL	UNTIL STABLE	AL	UNTIL STABLE	AL	UNTIL STABLE
0.25DL	UNTIL STABLE	0.25DL	UNTIL STABLE	0.25DL	UNTIL STABLE
0.50DL	UNTIL STABLE	0.50DL	UNTIL STABLE	0.50DL	UNTIL STABLE
0.75DL	UNTIL STABLE	0.75DL	UNTIL STABLE	0.75DL	UNTIL STABLE
AL	UNTIL STABLE	1.00DL	UNTIL STABLE	1.00DL	UNTIL STABLE
0.25DL	UNTIL STABLE	1.25DL	UNTIL STABLE	1.25DL	UNTIL STABLE
0.50DL	UNTIL STABLE	1.50DL	60 MINUTES	1.50DL	UNTIL STABLE
0.75DL	UNTIL STABLE	AL	UNTIL STABLE	1.75DL	UNTIL STABLE
1.00DL	UNTIL STABLE	0.25DL	UNTIL STABLE	2.00DL	UNTIL STABLE
AL	UNTIL STABLE	0.50DL	UNTIL STABLE	AL	UNTIL STABLE

THE ALIGNMENT LOAD (AL) SHOULD BE THE MINIMUM LOAD REQUIRED TO ALIGN THE TESTING APPARATUS AND SHOULD NOT EXCEED 0.05DL. DIAL GAUGES SHOULD BE SET AT "ZERO" AFTER THE ALIGNMENT LOAD HAS BEEN APPLIED.

A 10-MINUTE CREEP TEST SHALL BE PERFORMED AT THE 1.50 DL AND 2.00DL INCREMENTS. THE LOAD-HOLD PERIOD SHALL START AS SOON AS THE MAXIMUM TEST LOAD IS APPLIED AND THE ANCHOR MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, AND 10 MINUTES. IF THE ANCHOR MOVEMENT BETWEEN 1 AND 10 MINUTES EXCEEDS 0.04 INCHES, THE MAXIMUM TEST LOAD SHALL BE HELD OF AN ADDITIONAL 50 MINUTES. IF THE LOAD HOLD IS EXTENDED, THE ANCHOR MOVEMENTS SHALL BE RECORDED AT 20, 30, 50, AND 60 MINUTES. IF AN ANCHOR FAILS IN CREEP, RETESTING WILL NOT BE ALLOWED.

8D. PROOF TESTS SHALL BE PERFORMED ON ALL PRODUCTION ANCHORS BY INCREMENTALLY LOADING THE GROUND ANCHOR IN ACCORDANCE WITH THE FOLLOWING SCHEDULE. AT LOAD INCREMENTS OTHER THAN MAXIMUM TEST LOAD, THE LOAD SHALL BE HELD LONG ENOUGH TO OBTAIN A STABLE READING.

AL	1.00DL
0.25DL	1.25DL
0.50DL	1.33DL
0.75DL	

THE MAXIMUM TEST LOAD SHALL BE HELD FOR 10 MINUTES. THE LOAD-HOLD PERIOD SHALL START AS SOON AS THE MAXIMUM TEST LOAD IS APPLIED AND THE ANCHOR MOVEMENT SHALL BE MEASURED AND RECORDED AT 1, 2, 3, 5, 6, AND 10 MINUTES. IF THE ANCHOR MOVEMENT BETWEEN 1 AND 10 MINUTES EXCEEDS 0.04 INCHES, THE MAXIMUM TEST LOAD SHALL BE HELD OF AN ADDITIONAL 50 MINUTES. IF THE LOAD HOLD IS EXTENDED, THE ANCHOR MOVEMENTS SHALL BE RECORDED AT 20, 30, 50, AND 60 MINUTES. IF AN ANCHOR FAILS IN CREEP, RETESTING WILL NOT BE ALLOWED.

8E. A VERIFICATION OR PROOF TESTED GROUND ANCHOR WITH A 10 MINUTE LOAD HOLD CREEP TEST IS CONSIDERED ACCEPTABLE WHEN:

1. THE GROUND ANCHOR CARRIES THE MAXIMUM TEST LOAD WITH LESS THAN 0.04 INCHES OF MOVEMENT BETWEEN THE 1 AND 10 MINUTE READINGS.
2. THE TOTAL MOVEMENT AT THE MAXIMUM TEST LOAD EXCEEDS 80% OF THE THEORETICAL ELASTIC ELONGATION OF THE UNBONDED LENGTH.

8F. A VERIFICATION OR PROOF TESTED GROUND ANCHOR WITH A 60 MINUTE LOAD HOLD CREEP TEST IS CONSIDERED ACCEPTABLE WHEN:

1. THE GROUND ANCHOR CARRIES THE MAXIMUM TEST LOAD WITH LESS THAN 0.08 INCHES OF MOVEMENT PER LOG CYCLE OF TIME AND THE CREEP RATE IS LINEAR OR DECREASING.
2. THE TOTAL MOVEMENT AT THE MAXIMUM TEST LOAD EXCEEDS 80% OF THE THEORETICAL ELASTIC ELONGATION OF THE UNBONDED LENGTH.

IN ADDITION TO THE ABOVE, A VERIFICATION TESTED GROUND ANCHOR MUST NOT EXPERIENCE A PULLOUT FAILURE AT THE MAXIMUM TEST LOAD. A PULLOUT FAILURE IS DEFINED AS THE LOAD AT WHICH ATTEMPTS TO INCREASE THE TEST LOAD RESULT IN CONTINUED PULLOUT MOVEMENT OF THE TEST ANCHOR.

8G. GROUND ANCHORS THAT HAVE A CREEP RATE GREATER THAN SPECIFIED CAN BE INCORPORATED IN THE FINISHED WORK AT A LOAD EQUAL TO ONE-HALF OF THE FAILURE LOAD. THE FAILURE LOAD IS THE MAXIMUM LOAD CARRIED BY THE ANCHOR AFTER THE LOAD HAS BEEN ALLOWED TO STABILIZE FOR TEN MINUTES.

8H. WHEN A GROUND ANCHOR FAILS, THE CONTRACTOR SHALL MODIFY THE ANCHOR DESIGN, THE CONSTRUCTION PROCEDURES, OR BOTH. THESE MODIFICATIONS MAY INCLUDE, BUT ARE NOT LIMITED TO: INSTALLING REPLACEMENT GROUND ANCHORS, MODIFYING THE INSTALLATION METHODS, INCREASING THE BOND LENGTH, OR CHANGING THE GROUND ANCHOR TYPE.

8I. AFTER INTERNAL SUPPORT OF THE EXCAVATION IS PROVIDED BY THE SUBSURFACE PORTION OF THE STRUCTURE, ANCHORS MUST BE DETENSIONED. BASED ON THE CONSTRUCTION SEQUENCE OF THE PERMANENT BASEMENT WALLS AND FLOOR SLABS, THE GENERAL CONTRACTOR WILL COORDINATE WITH THE DESIGN TEAM AS TO WHEN ANCHOR DETENSIONING IS APPROPRIATE. ANCHOR DETENSIONING AND PATCHING OF THE BASEMENT WALLS WILL BE PERFORMED BY THE GENERAL CONTRACTOR.

SHORING REMOVAL:

ALL SOLDIER PILES, GROUND ANCHORS, AND TIMBER LAGGING WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE REMOVED TO A MINIMUM DEPTH OF 4 FEET BELOW FINISHED GRADE IN ACCORDANCE WITH CITY OF SEATTLE REQUIREMENTS ONCE THE BELOW-GRADE STRUCTURE IS COMPLETED AND THE SHORING IS NO LONGER FUNCTIONING AS EARTH SUPPORT.

SDOT EXISTING SEWER/STORM NOTE:

ALL SEWER AND STORM LINES IN THE ROW WITHIN 10 FEET (OR WITHIN 20 FEET IF SUCH LINES ARE 30 FEET OR MORE OFF SITE PROPERTY LINE) OF ANY PROPOSED SHORING ELEMENT SHALL BE VIDEOTAPED OF PRE-PROJECT CONDITION AND A COPY SENT TO SPU AT SPU_DAM_PIPE_REHAB@SEATTLE.GOV PRIOR TO PRECONSTRUCTION MEETING. SIMILAR VIDEOTAPE OF POST-PROJECT CONDITION IS ALSO REQUIRED AND SENT TO SPU AT SAME EMAIL ADDRESS.

DESIGN	DRAWN	REVIEW	DATE	REV	DESCRIPTION
CJK	CJK	RLB	3/29/2021	0	PERMIT ISSUE

Ground Support PLLC
16932 Woodinville Redmond Rd NE, #210
Woodinville, WA 98072
Ph: (425) 488-1143 Fax: (425) 605-4057

1038 S KING ST

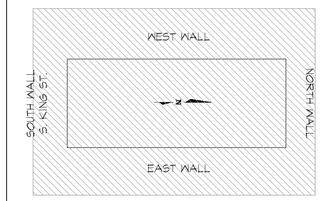
TEMPORARY SHORING WALL NOTES

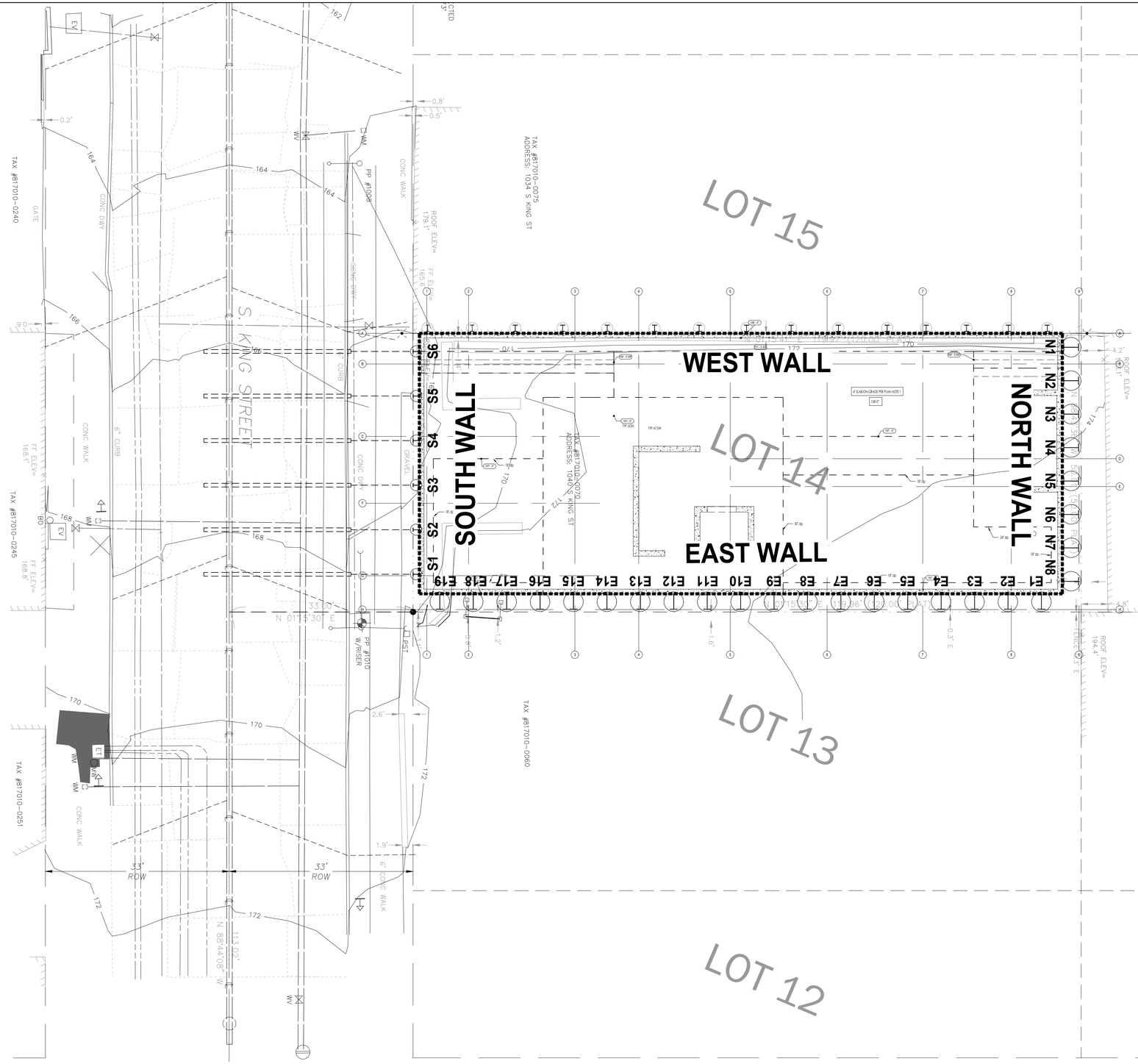
PROJ. NO. 21-03

SHEET NUMBER

SH1.1

WALL KEY PLAN





N

0 10 20
FEET

LEGEND

P1 / (I)	SOLDIER PILE
	GROUND ANCHOR
(B)	BUILDING GRID LOCATION
	FACE OF SOLDIER PILE WALL
100	EXISTING GRADE CONTOUR
	PROPOSED BUILDING WALL

DESIGN	DRAWN	REVIEW	DATE	REV	DESCRIPTION
CJK	CJK	RJB	3/24/2021	0	PERMIT ISSUE

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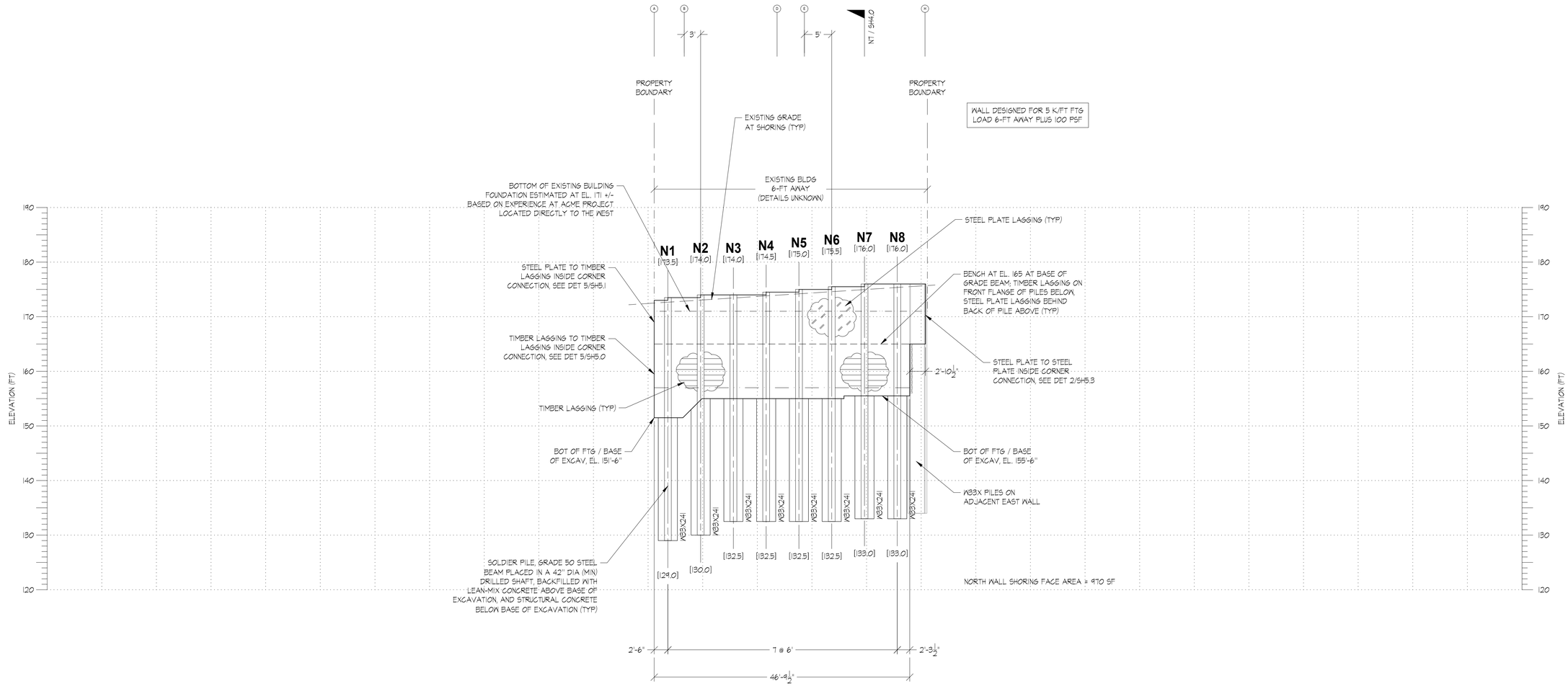
1038 S KING ST
TEMPORARY SHORING WALL SHORING PLAN

PROJ. NO. 21-03

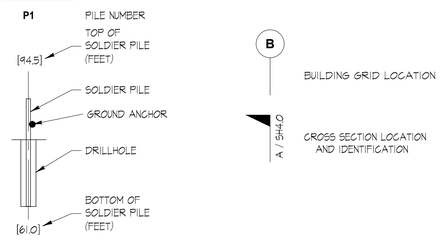
SHEET NUMBER

SH2.0

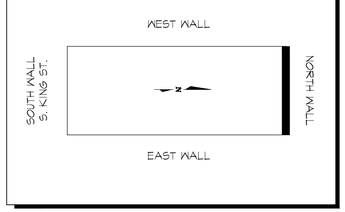


NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.

LEGEND



WALL KEY PLAN



0 10 20
FEET

DESIGN	DRAWN	REV/EX	DATE	REV	DESCRIPTION
CJK	CJK	RJB	3/29/2021	0	PERMIT ISSUE

Ground Support PLLC
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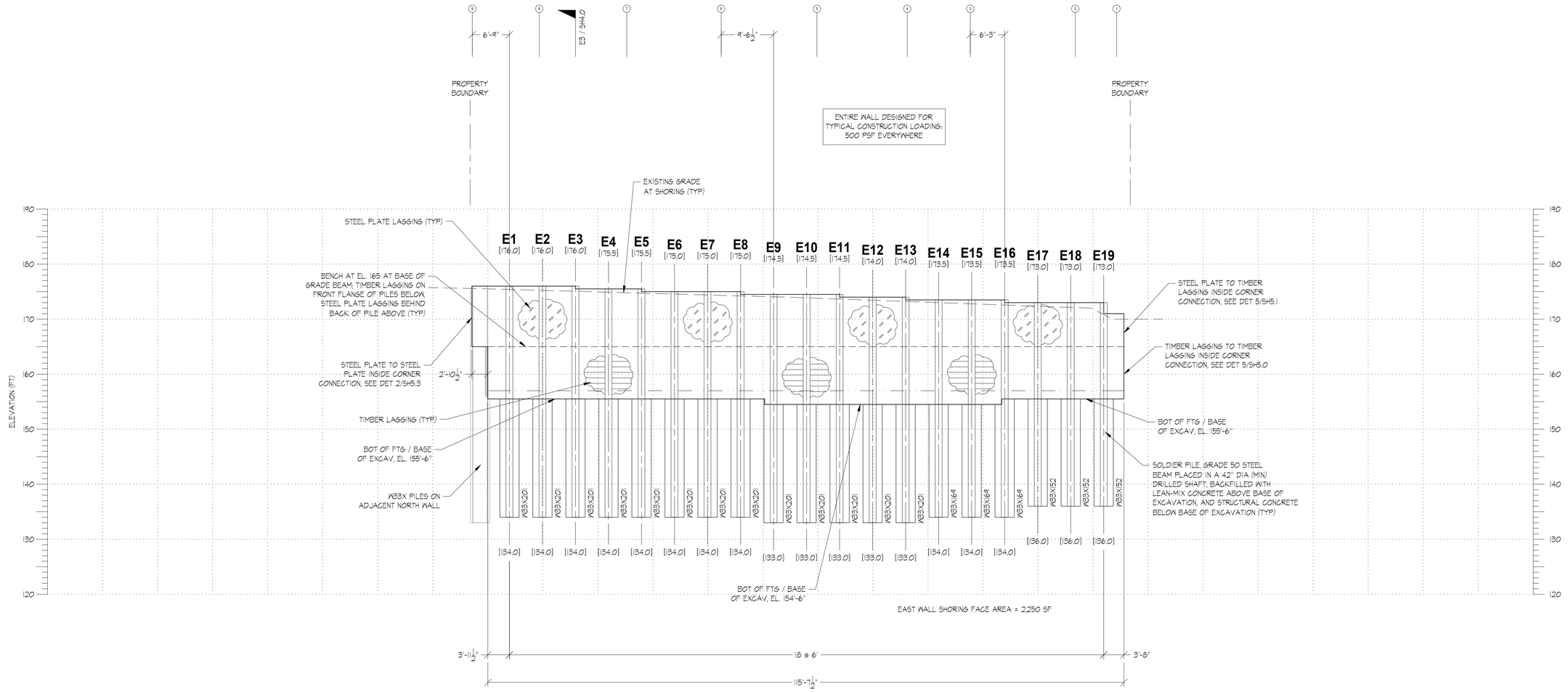
1038 S KING ST

TEMPORARY SHORING WALL NORTH ELEVATION

PROJ. NO. 21-03

SHEET NUMBER

SH3.0



E1 [176.0] [134.0]
E2 [176.0] [134.0]
E3 [176.0] [134.0]
E4 [175.5] [134.0]
E5 [175.5] [134.0]
E6 [175.0] [134.0]
E7 [175.0] [134.0]
E8 [175.0] [134.0]
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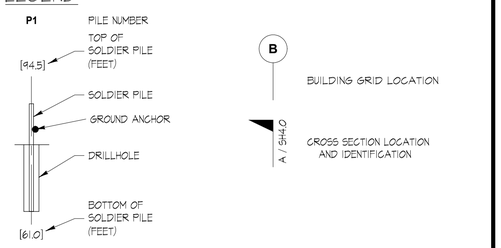
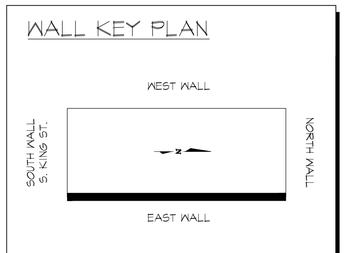
E10 [174.5] [133.0]
E11 [174.5] [133.0]
E12 [174.0] [133.0]
E13 [174.0] [133.0]
E14 [173.5] [134.0]
E15 [173.5] [134.0]
E16 [173.5] [134.0]
E17 [173.0] [136.0]
E18 [173.0] [136.0]
E19 [173.0] [136.0]

NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.

LEGEND



WALL KEY PLAN



0 10 20
FEET

DESIGN	DRAWN	REV/EX	DATE	REV	DESCRIPTION
CJK	CJK	RLB	3/24/2021	0	PERMIT ISSUE

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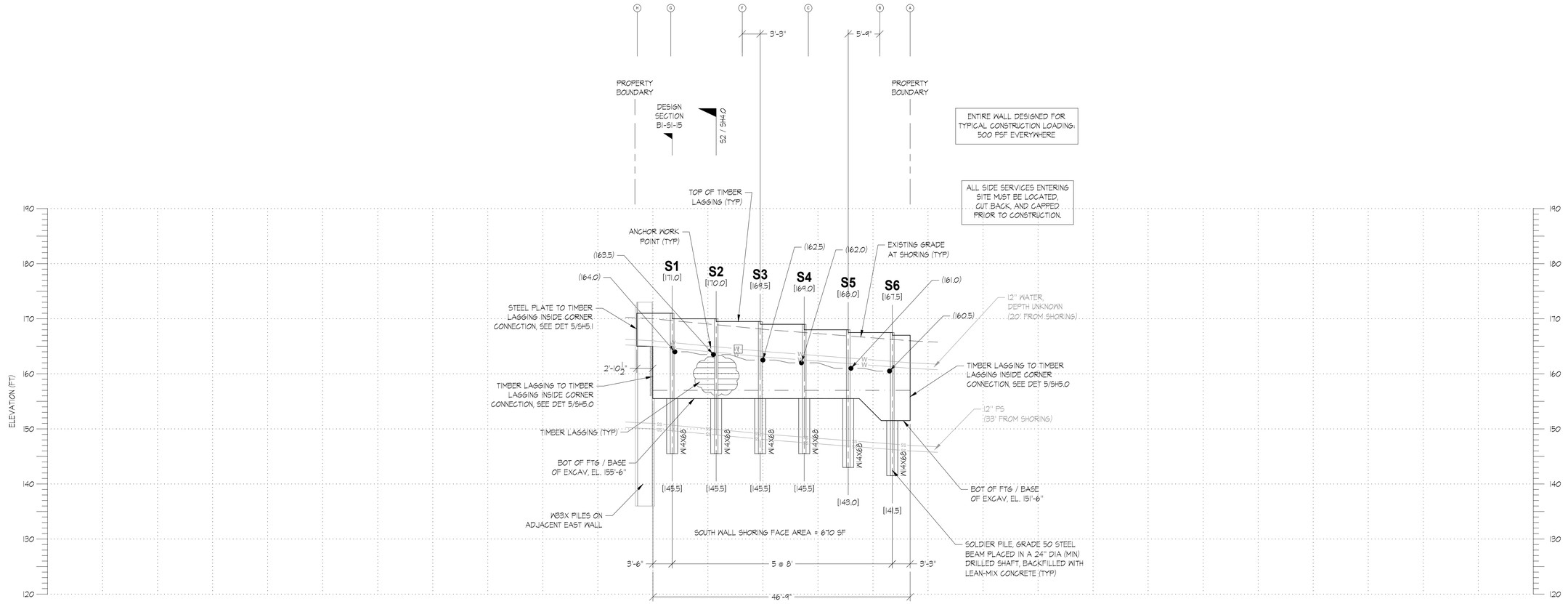
TEMPORARY SHORING WALL EAST ELEVATION

PROJ. NO. 21-03

SHEET NUMBER

SH3.1



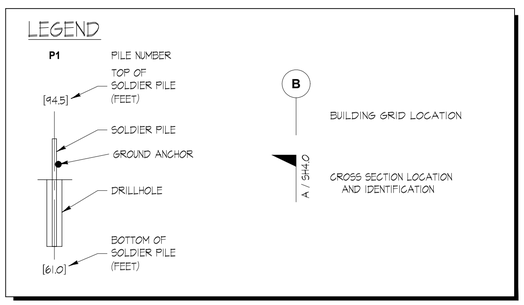
SOUTH WALL

ANCHOR SCHEDULE

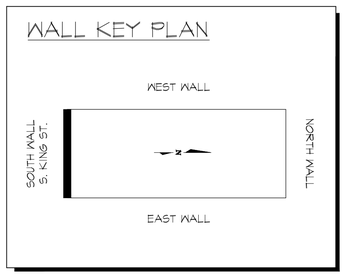
PILE(S)	ROW NUMBER	DECLI-NATION (DEG)	TOTAL LENGTH (FT)	UNBOND LENGTH (FT)	BOND LENGTH (FT)	NO. OF STRANDS	DESIGN LOAD (K)	LOCKOFF LOAD (K)
S1-S6	1	35	47	15	32	2	64	64

NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.

LEGEND



WALL KEY PLAN



0 10 20
FEET

DESIGN	DRAWN	REV/EX	DATE	REV	DESCRIPTION
CJK	CJK	RJB	3/29/2021	0	PERMIT ISSUE

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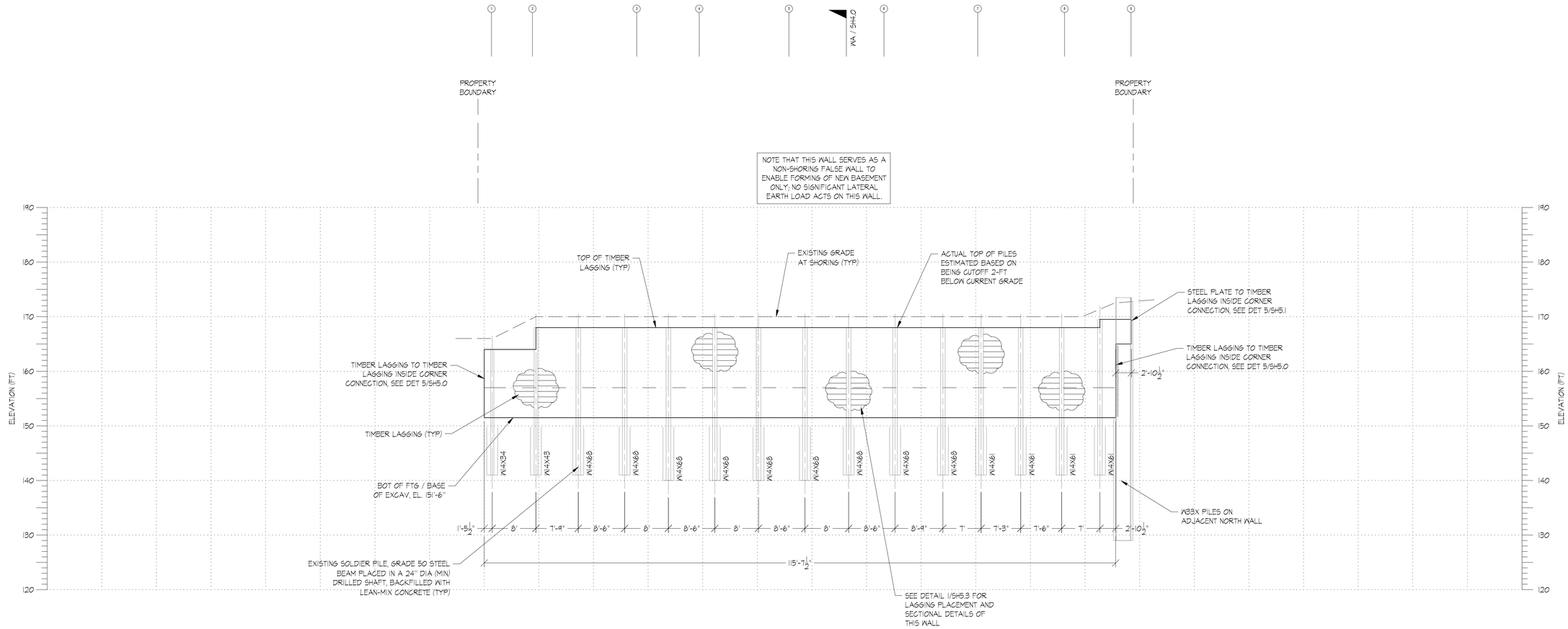
TEMPORARY SHORING WALL SOUTH ELEVATION

PROJ. NO. 21-03

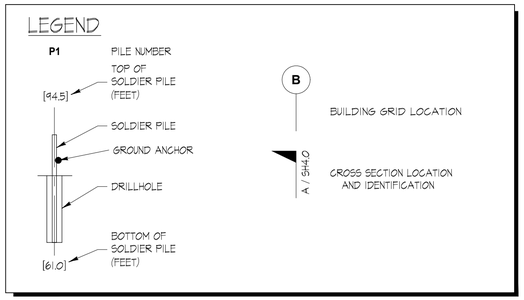
SHEET NUMBER

SH3.2

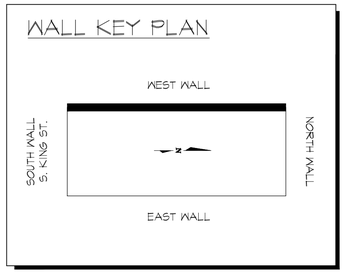


NOTE: INFORMATION SUPPLIED TO GROUND SUPPORT PLLC AT TIME OF SHORING DESIGN INSUFFICIENT TO CHECK FOR ALL POTENTIAL CONFLICTS BETWEEN SHORING ELEMENTS AND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATION OF ALL UTILITIES WITHIN ZONE OF SHORING ELEMENTS AND FOR CHECKING THAT NO SUCH CONFLICTS EXIST.

LEGEND



WALL KEY PLAN



0 10 20
FEET

DESIGN	DRAWN	REV/EX	DATE	REV	DESCRIPTION
CJK	CJK	RJB	3/24/2021	0	PERMIT ISSUE

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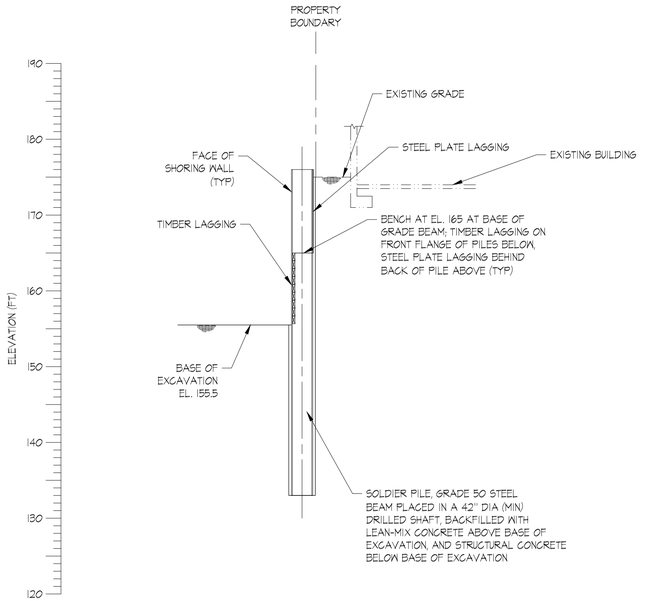
TEMPORARY SHORING WALL WEST ELEVATION

PROJ. NO. 21-03

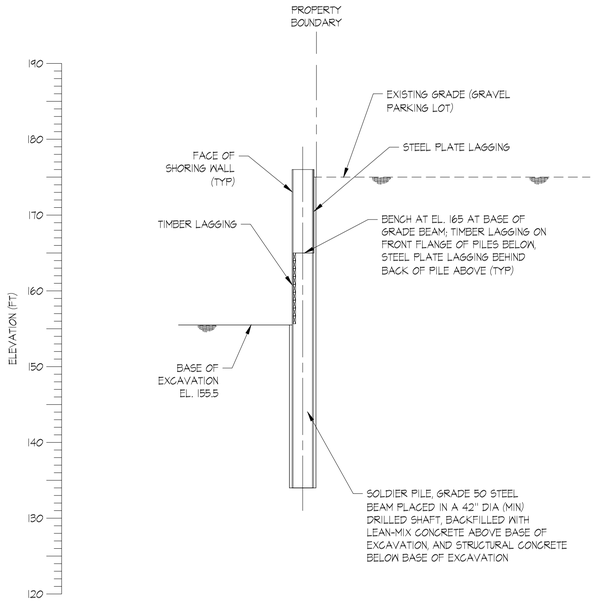
SHEET NUMBER

SH3.3



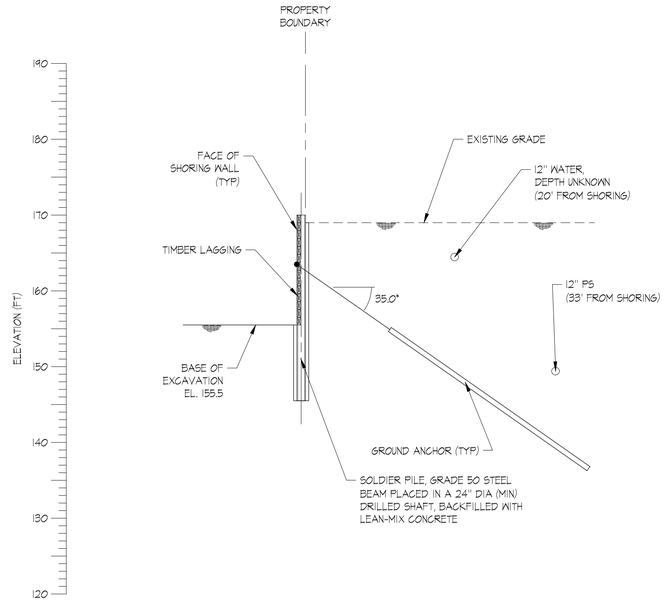
N7 / SH4.0 NORTH WALL CROSS-SECTION

0 10 FEET



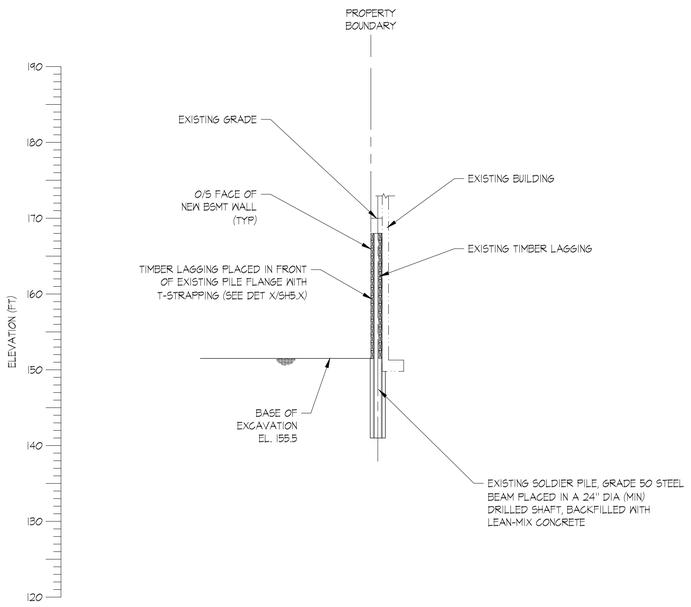
E3 / SH4.0 EAST WALL CROSS-SECTION

0 10 FEET



S2 / SH4.0 SOUTH WALL CROSS-SECTION

0 10 FEET



WA / SH4.0 WEST WALL CROSS-SECTION

0 10 FEET

DESIGN	DRAWN	REVIEW	DATE	REV	DESCRIPTION
CJK	CJK	RLB	3/29/2021	0	PERMIT ISSUE

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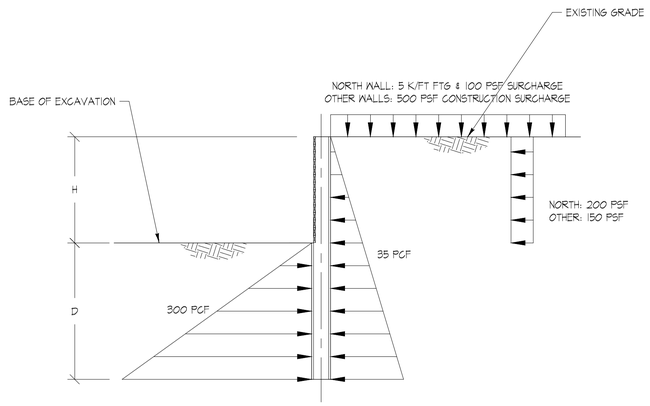
TEMPORARY SHORING WALL CROSS-SECTIONS

PROJ. NO. 21-03

SHEET NUMBER

SH4.0

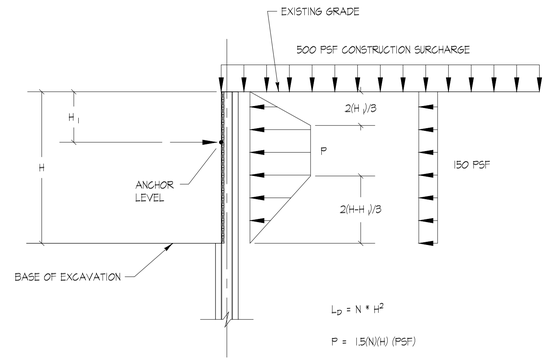


NOTES:

1. BELOW THE EXCAVATION BASE, ACTIVE AND PASSIVE PRESSURES ARE APPLIED TO AN EFFECTIVE PILE WIDTH EQUAL TO 1 AND 2 PILE DIAMETERS, RESPECTIVELY.

2. TOE EMBEDMENT IS DETERMINED BY ACHIEVING FORCE AND MOMENT BALANCE THROUGHOUT TOE OF PILE.

1 / SH5.0 — SHORING DESIGN DIAGRAM CANTILEVERED STAGE — NOT TO SCALE



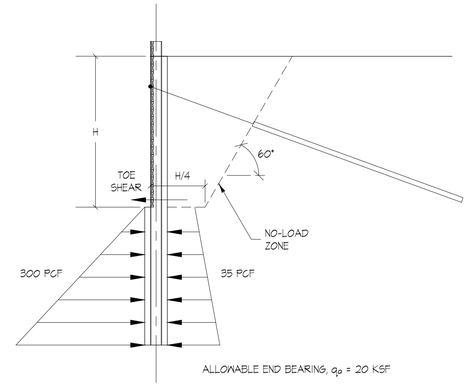
NOTES:

1. EQUIVALENT UNIFORM EARTH PRESSURE FACTOR, "N", EQUAL TO 23 PCF, BASED ON THE PEAK VALUE GIVEN IN FIGURE 4 OF THE REFERENCED GEOTECHNICAL REPORT.

2. NOTE THAT WE HAVE DESIGNED FOR SLIGHTLY MORE TOTAL LOAD THAN IN THE GEOTECHNICAL REPORT, WHICH IS CONSERVATIVE, AND HAVE SIMPLY EXPRESSED IT AS AN EQUIVALENT UNIFORM VALUE FOR EQUATION PURPOSES.

3. NOTE ALSO THAT THE SHAPE OF THE ACTUAL DIAGRAM UTILIZED IS BASED ON PUBLICATION NO. FHWA-IF-99-015, GEOTECHNICAL ENGINEERING CIRCULAR NO. 4, GROUND ANCHORS AND ANCHORED SYSTEMS, AS ILLUSTRATED IN THE ABOVE DIAGRAM, THIS RESULTS IN MORE ANCHOR LOAD WHICH IS CONSERVATIVE, ALTHOUGH SLIGHTLY LESS LATERAL TOE LOAD. BUT THE TOE DEPTH IS CONTROLLED BY A 10-FT MINIMUM ANYWAY.

2 / SH5.0 — SHORING DESIGN DIAGRAM SINGLE-ANCHORED PILES — NOT TO SCALE



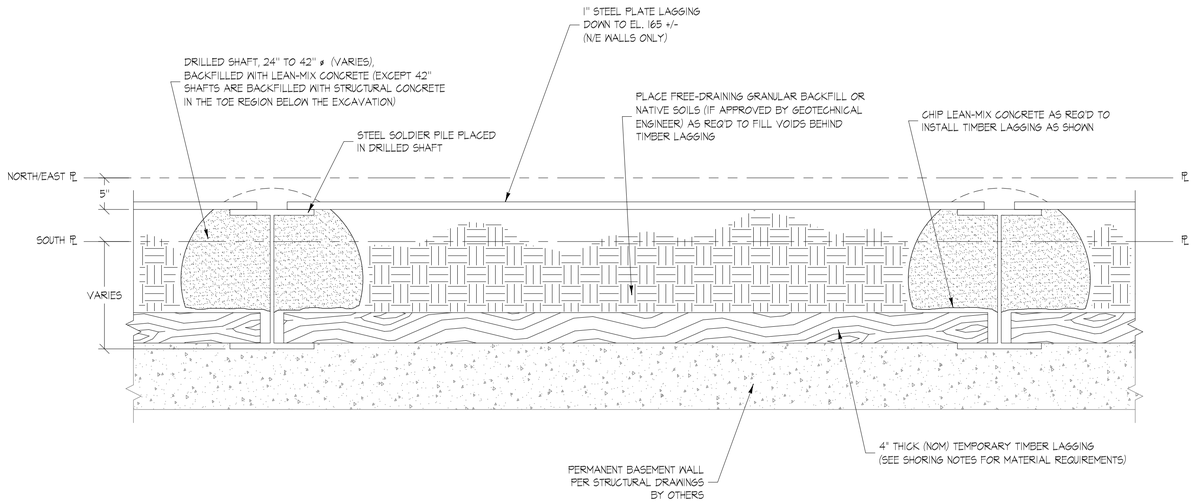
ALLOWABLE END BEARING, q_a = 20 KSF

ALLOWABLE SKIN FRICTION, f_a = 1 KSF

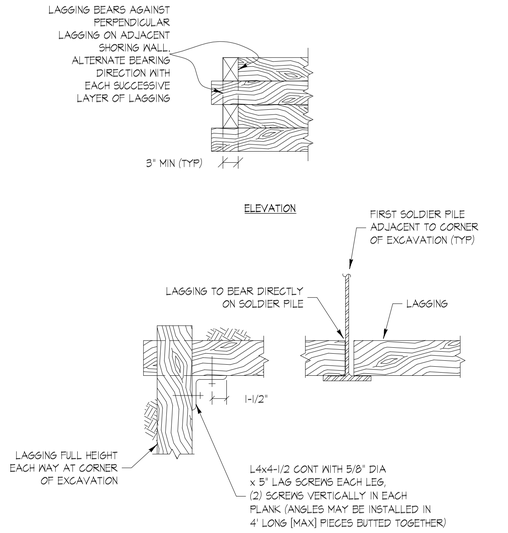
NOTE:

TOE EMBEDMENT DETERMINED BY APPLYING ACTIVE AND PASSIVE PRESSURES TO AN EFFECTIVE PILE WIDTH EQUAL TO 1 AND 2 PILE DIAMETERS, RESPECTIVELY, AND ADJUSTING DEPTH TO BALANCE LATERAL LOADS.

3 / SH5.0 — NO-LOAD ZONE & TOE EMBEDMENT DIAGRAM — NOT TO SCALE



4 / SH5.0 — PILE / SHAFT / TIMBER & STEEL LAGGING PLACEMENT DETAIL (NORTH, EAST, SOUTH WALLS) — NOT TO SCALE



5 / SH5.0 — INTERIOR CORNER TIMBER LAGGING SUPPORT DETAIL — NOT TO SCALE

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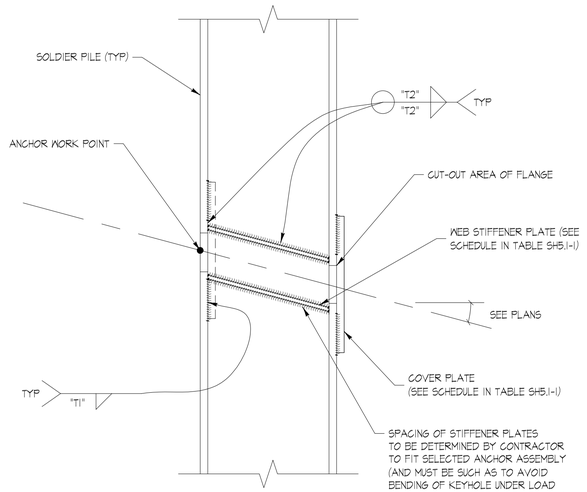
TEMPORARY SHORING WALL DETAILS

PROJ. NO. 21-03

SHEET NUMBER

SH5.0

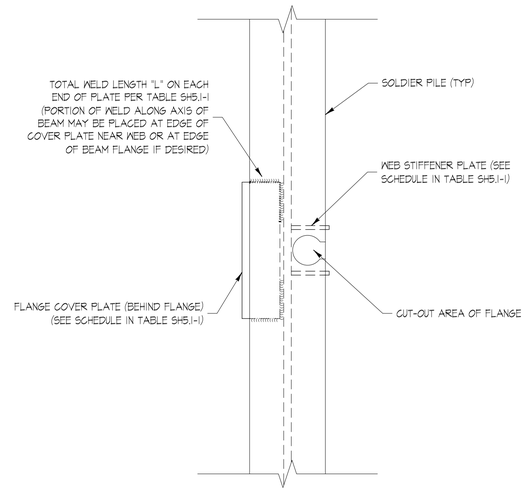


NOTE:

THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ANCHOR TO PILE CONNECTION TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

1 / SH5.1 — ANCHOR TO PILE CONNECTION DETAIL (SIDE VIEW)

NOT TO SCALE



NOTE:

THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PROPOSED ANCHOR TO PILE CONNECTION TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

2 / SH5.1 — ANCHOR TO PILE CONNECTION DETAIL (FRONT VIEW)

NOT TO SCALE

TABLE SH5.1-1
ANCHOR TO PILE CONNECTION SCHEDULE

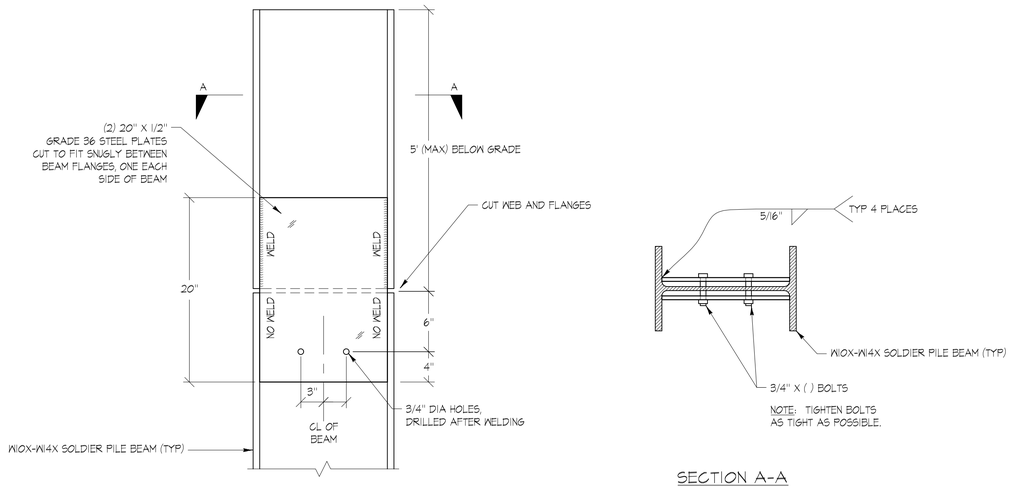
PILE SECTION	GRADE 50 COVER PLATE DIMENSIONS (IN)	COVER PLATE WELD LENGTH L (IN)	COVER PLATE WELD SIZE T1 (IN)	GRADE 50 WEB STIFFENER PLATE DIMENSIONS (IN)	WEB STIFFENER PLATE WELD SIZE T2 (IN)
W14X68	1 X 4 X 42	22	3/8	3/4 X 4-1/2 X FULL HT	5/16

NOTE:

WEB STIFFENER PLATES ARE FULL DEPTH, ARE FLUSH AT LOAD END, AND WELDED FULL LENGTH AND ALONG LOAD END, AND ON BOTH SIDES OF STIFFENER.

3 / SH5.1 — ANCHOR TO PILE CONNECTION SCHEDULE

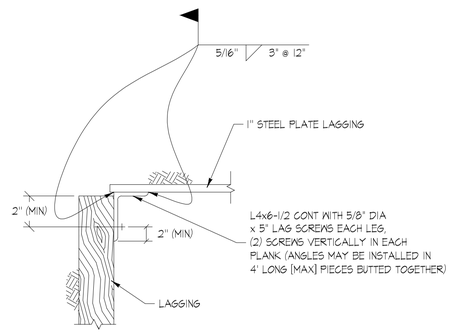
NOT TO SCALE



SECTION A-A

4 / SH5.1 — TYPICAL REMOVABLE TOP CONNECTION DETAIL (W10X-W14X SOLDIER PILES)

NOT TO SCALE



5 / SH5.1 — STEEL TO TIMBER LAGGING CONNECTION DETAIL

NOT TO SCALE

DESIGN	DRAWN	REVIEW	DATE	REV	DESCRIPTION
CJK	CJK	RJB	3/29/2021	0	PERMIT ISSUE

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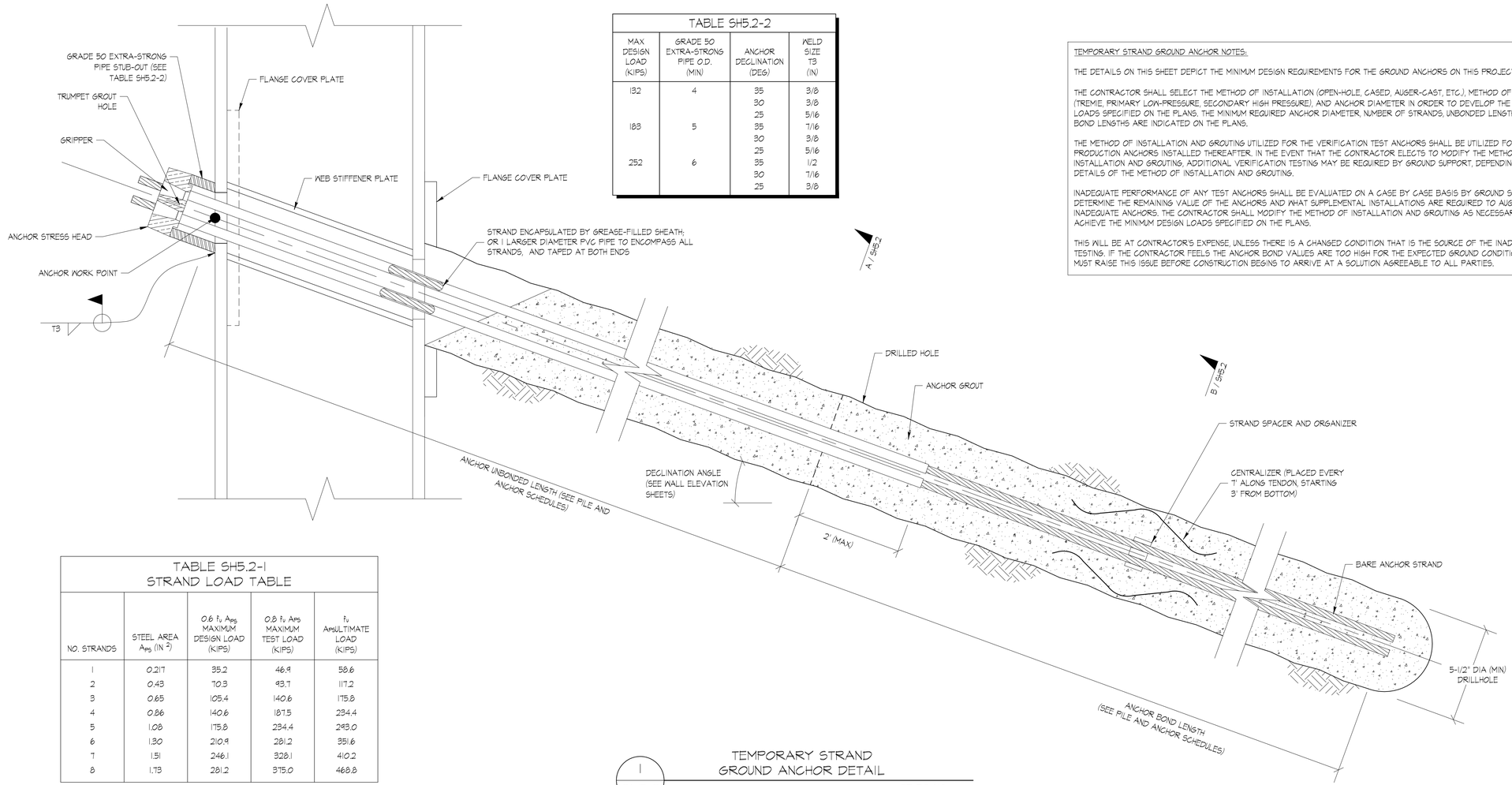
TEMPORARY SHORING WALL DETAILS

PROJ. NO. 21-03

SHEET NUMBER

SH5.1



1 SH5.2 TEMPORARY STRAND GROUND ANCHOR DETAIL

NOT TO SCALE

TABLE SH5.2-2			
MAX DESIGN LOAD (KIPS)	GRADE 50 EXTRA-STRONG PIPE O.D. (MIN)	ANCHOR DECLINATION (DEG)	WELD SIZE T3 (IN)
132	4	35	3/8
		30	3/8
		25	5/16
183	5	35	7/16
		30	3/8
		25	5/16
252	6	35	1/2
		30	7/16
		25	3/8

TEMPORARY STRAND GROUND ANCHOR NOTES:

THE DETAILS ON THIS SHEET DEPICT THE MINIMUM DESIGN REQUIREMENTS FOR THE GROUND ANCHORS ON THIS PROJECT.

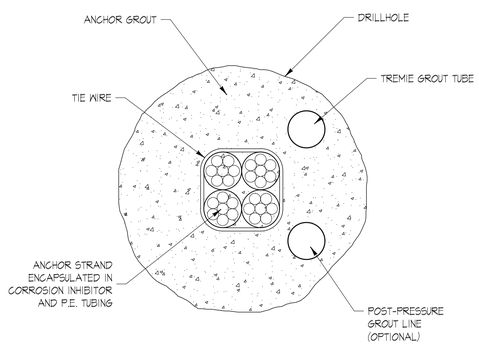
THE CONTRACTOR SHALL SELECT THE METHOD OF INSTALLATION (OPEN-HOLE, CASED, AUGER-CAST, ETC.), METHOD OF GROUTING (TREMIE, PRIMARY LOW-PRESSURE, SECONDARY HIGH PRESSURE), AND ANCHOR DIAMETER IN ORDER TO DEVELOP THE DESIGN LOADS SPECIFIED ON THE PLANS. THE MINIMUM REQUIRED ANCHOR DIAMETER, NUMBER OF STRANDS, UNBONDED LENGTHS, AND BOND LENGTHS ARE INDICATED ON THE PLANS.

THE METHOD OF INSTALLATION AND GROUTING UTILIZED FOR THE VERIFICATION TEST ANCHORS SHALL BE UTILIZED FOR ALL PRODUCTION ANCHORS INSTALLED THEREAFTER. IN THE EVENT THAT THE CONTRACTOR ELECTS TO MODIFY THE METHOD OF INSTALLATION AND GROUTING, ADDITIONAL VERIFICATION TESTING MAY BE REQUIRED BY GROUND SUPPORT, DEPENDING ON THE DETAILS OF THE METHOD OF INSTALLATION AND GROUTING.

INADEQUATE PERFORMANCE OF ANY TEST ANCHORS SHALL BE EVALUATED ON A CASE BY CASE BASIS BY GROUND SUPPORT TO DETERMINE THE REMAINING VALUE OF THE ANCHORS AND WHAT SUPPLEMENTAL INSTALLATIONS ARE REQUIRED TO AUGMENT THE INADEQUATE ANCHORS. THE CONTRACTOR SHALL MODIFY THE METHOD OF INSTALLATION AND GROUTING AS NECESSARY TO ACHIEVE THE MINIMUM DESIGN LOADS SPECIFIED ON THE PLANS.

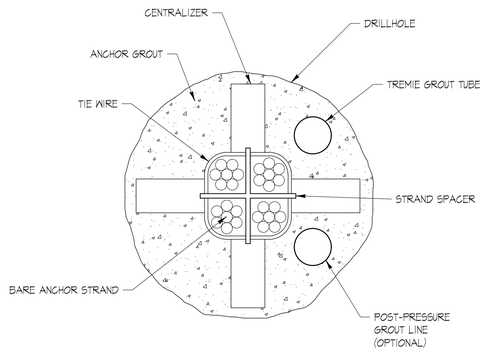
THIS WILL BE AT CONTRACTOR'S EXPENSE, UNLESS THERE IS A CHANGED CONDITION THAT IS THE SOURCE OF THE INADEQUATE TESTING. IF THE CONTRACTOR FEELS THE ANCHOR BOND VALUES ARE TOO HIGH FOR THE EXPECTED GROUND CONDITIONS, HE/SHE MUST RAISE THIS ISSUE BEFORE CONSTRUCTION BEGINS TO ARRIVE AT A SOLUTION AGREEABLE TO ALL PARTIES.

TABLE SH5.2-1 STRAND LOAD TABLE				
NO. STRANDS	STEEL AREA A_{ps} (IN ^{2})	0.6 f_u A_{ps} MAXIMUM DESIGN LOAD (KIPS)	0.8 f_u A_{ps} MAXIMUM TEST LOAD (KIPS)	f_u A_{ps} ULTIMATE LOAD (KIPS)
1	0.217	35.2	46.9	58.6
2	0.43	70.3	93.7	117.2
3	0.65	105.4	140.6	175.8
4	0.86	140.6	187.5	234.4
5	1.08	175.8	234.4	293.0
6	1.30	210.9	281.2	351.6
7	1.51	246.1	328.1	410.2
8	1.73	281.2	375.0	468.8



A SH5.2 UNBONDED ZONE TYPICAL SECTION

NOT TO SCALE



B SH5.2 BONDED ZONE TYPICAL SECTION

NOT TO SCALE

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CJA	CJA	RLB	3/29/2021	0	PERMIT ISSUE

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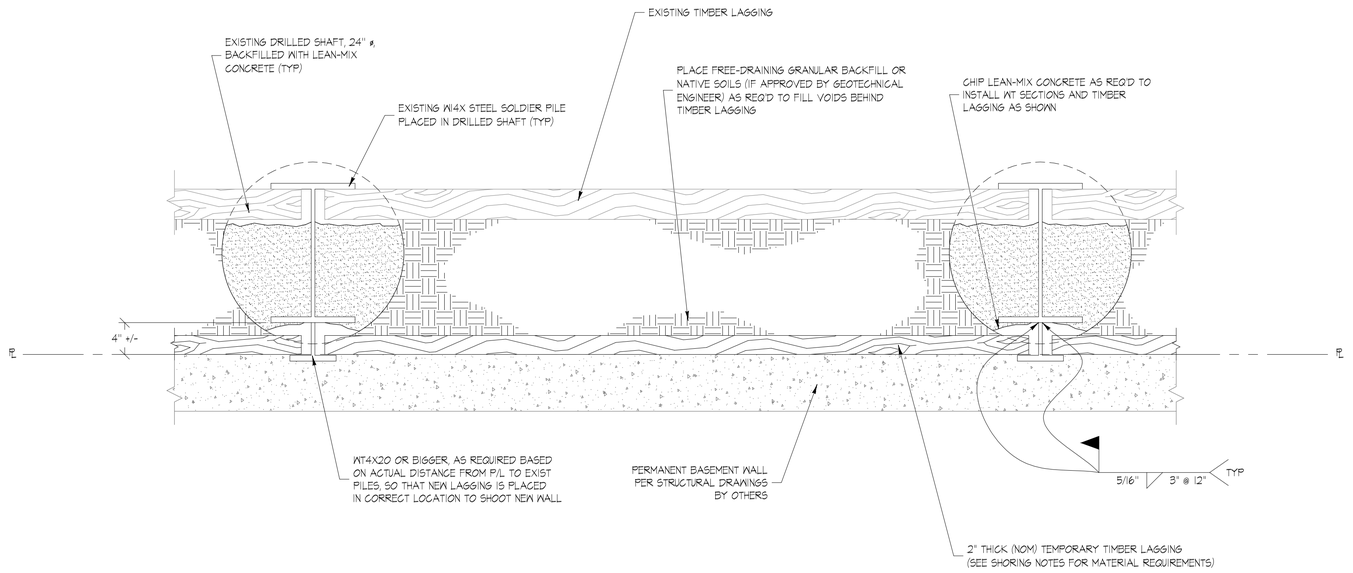
TEMPORARY SHORING WALL DETAILS

PROJ. NO. 21-08

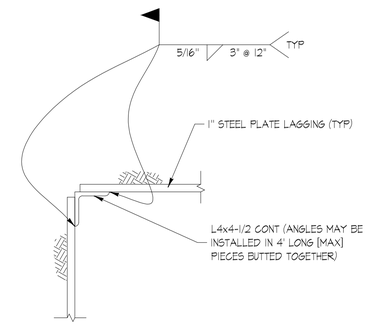
SHEET NUMBER

SH5.2



1 / SH5.3 — PILE / SHAFT / TIMBER LAGGING PLACEMENT DETAIL (WEST WALL)

NOT TO SCALE



NOTE:

ALTERNATIVELY, THE ANGLE MAY BE ELIMINATED, AND IF THE PLATES MEET UP WELL, THEY MAY BE WELDED DIRECTLY TOGETHER WITH ONE SET OF STITCH WELDS AS SPECIFIED.

2 / SH5.3 — STEEL TO STEEL LAGGING CONNECTION DETAIL

NOT TO SCALE

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TEMPORARY SHORING WALL DETAILS

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SHEET NUMBER

SH5.3

CONSTRUCTION STORMWATER CONTROL (CSC) GENERAL NOTES

1. A FIRST GROUND DISTURBANCE INSPECTION IS REQUIRED PRIOR TO START OF WORK ON ALL SITES WITH LAND DISTURBING ACTIVITY.
2. SCHEDULE A FIRST GROUND DISTURBANCE INSPECTION FOR AN ISSUED BUILDING PERMIT AT 206-684-8900 OR ONLINE AT WWW.SEATTLE.GOV/DPD/PERMITS/INSPECTIONS/
3. THE APPLICANT SHALL DESIGNATE AN EROSION AND SEDIMENT CONTROL (ESC) SUPERVISOR WHO SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS). FOR LARGE CONSTRUCTION PROJECTS, THE ESC SUPERVISOR SHOULD BE A CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (CESCL). PROVIDE THE NAME AND PHONE NUMBER OF THE ESC SUPERVISOR TO THE SITE INSPECTOR AT THE FIRST GROUND DISTURBANCE INSPECTION.
4. BMPS SHALL BE INSTALLED PRIOR TO STARTING CONSTRUCTION TO ENSURE SEDIMENT-LADEN WATER DOES NOT LEAVE THE PROJECT SITE OR ENTER ROADSIDE DITCHES, STORM DRAINS, SURFACE WATERS, OR WETLANDS.
5. THE BMPS INCLUDED IN THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. THE APPLICANT IS RESPONSIBLE FOR ENSURING THAT BMPS ARE MODIFIED AS NEEDED FOR UNEXPECTED STORM EVENTS OR OTHER UNFORESEEN CIRCUMSTANCES, AND TO ACCOUNT FOR CHANGING SITE CONDITIONS.
6. ANY AREAS OF DISTURBED SOIL THAT WILL NOT BE WORKED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON (OCT 1 TO APRIL 30) OR SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPT 30) SHALL BE IMMEDIATELY STABILIZED WITH APPROVED BMPS METHODS (E.G. STRAW, MULCH, PLASTIC COVERING, COLD MIX, ETC.)
7. GRADING AND/OR SOIL DISTURBING ACTIVITIES MAY BE LIMITED OR PROHIBITED FOR CERTAIN SITES SUBJECT TO ECA STANDARDS (I.E. ECA STEEP SLOPES, LANDSLIDE PRONE AREAS, ETC.) BETWEEN OCTOBER 31ST AND APRIL 1ST. IF NOTED IN THE GEOTECHNICAL SPECIAL INSPECTIONS REQUIREMENTS, A GRADING SEASON EXTENSION LETTER (GSEL) ISSUED BY SDCI IS REQUIRED FOR ALL GRADING AND/OR SOIL DISTURBING ACTIVITIES DURING THIS PERIOD. THE GEOTECHNICAL SPECIAL INSPECTOR MUST SUBMIT ELECTRONIC APPLICATIONS FOR A GSEL USING THE SDCI PROJECT PORTAL. ALLOW FOUR TO SIX WEEKS FOR PROCESSING. FAILURE TO OBTAIN THE GSEL PRIOR TO OCTOBER 31 MAY RESULT IN A WORK STOPPAGE.
8. CITY STREETS AND SIDEWALKS SHALL BE KEPT CLEAN AT ALL TIMES. NO MATERIAL SHALL BE STORED ON CITY STREETS OR SIDEWALKS WITHOUT A STREET USE PERMIT FROM THE SEATTLE DEPARTMENT OF TRANSPORTATION (SDOT).
9. POLLUTION CONTROL MEASURES SHALL BE FOLLOWED TO ENSURE THAT NO LIQUID PRODUCTS OR CONTAMINATED WATER ENTERS ANY STORM DRAINAGE FACILITIES OR OTHERWISE LEAVES THE PROJECT SITE. ANY HAZARDOUS MATERIALS OR LIQUID PRODUCTS THAT HAVE THE POTENTIAL TO POLLUTE RUNOFF SHALL BE STORED AND DISPOSED OF PROPERLY.
10. ENSURE THAT WASHOUT FROM CONCRETE TRUCKS IS PERFORMED OFF-SITE OR IN DESIGNATED CONCRETE WASHOUT AREAS ONLY. DO NOT WASH OUT CONCRETE TRUCKS ONTO THE GROUND, OR TO STORM DRAINS OR OPEN DITCHES. DO NOT DUMP EXCESS CONCRETE ONSITE, EXCEPT IN DESIGNATED CONCRETE WASHOUT AREAS.
11. ALL AREAS OF DISTURBED SOIL SHALL BE FULLY STABILIZED WITH THE APPROPRIATE SOIL AMENDMENT AND COVER MEASURES AT COMPLETION OF THE PROJECT. TYPICAL COVER MEASURES INCLUDE LANDSCAPING OR HYDROSEED WITH MULCH.

CONSTRUCTION STORMWATER CONTROL (CSC) PLAN REQUIREMENTS / NARRATIVE

THIS PLAN IS REQUIRED FOR ALL PROJECTS WITH GREATER THAN 750 SQUARE FEET OF LAND DISTURBING ACTIVITIES.

SHOW TEMPORARY AND PERMANENT BEST MANAGEMENT PRACTICES (BMPS) IN THE PLAN VIEW OF THIS SHEET THAT WILL ACCOMPLISH THE MINIMUM REQUIREMENTS DESCRIBED IN THE NARRATIVE BELOW.

THE BMPS SHOWN IN THE PLAN VIEW OF THIS PLAN ARE THE MINIMUM REQUIRED. ADDITIONAL BMPS ARE REQUIRED WHEN MINIMUM CONTROLS ARE NOT SUFFICIENT TO PREVENT EROSION OR TRANSPORT OF SEDIMENT OR OTHER POLLUTANTS FROM THE SITE.

- MARK CLEARING LIMITS
- DELINEATE ENVIRONMENTALLY CRITICAL AREAS
- RETAIN TOP LAYER AND NATIVE VEGETATION
- ESTABLISH CONSTRUCTION ACCESS
- PROTECT DOWNSTREAM PROPERTIES AND RECEIVING WATERS
- PREVENT EROSION AND SEDIMENT TRANSPORT FROM THE SITE
- STABILIZE SOILS
- PROTECT SLOPES
- PROTECT STORM DRAINS
- STABILIZE CHANNEL AND OUTLETS
- CONTROL POLLUTANTS
- CONTROL DEWATERING
- MAINTAIN AND INSPECT BMPs
- EXECUTE CONSTRUCTION STORMWATER CONTROL PLAN
- MINIMIZE OPEN TRENCHES
- PHASE THE PROJECT
- INSTALL PERMANENT FLOW CONTROL AND WATER QUALITY FACILITIES
- PROTECT STORMWATER BMPs PRIOR TO, DURING, AND AFTER CONSTRUCTION

COMPLETE CONSTRUCTION STORMWATER CONTROL BMP DETAILS AND REQUIREMENTS ARE LOCATED IN DIRECTOR'S RULE DPD DR 21-2015, CHAPTER 4, VOLUME 2: CONSTRUCTION STORMWATER CONTROL, OF THE SEATTLE STORMWATER MANUAL. SHOW ALL BMPS ON THIS PLAN SHEET THAT WILL BE USED TO ACHIEVE THE REQUIREMENTS ABOVE.

POST CONSTRUCTION SOIL MANAGEMENT PLAN

AT THE END OF PROJECT, ALL AREAS DISTURBED AND NOT COVERED WITH A HARD SURFACE MUST BE AMENDED PER THE SOIL AMENDMENT DETAIL BELOW AND PROBE TO 12-INCHES AT THE SITE FINAL INSPECTION.

- LABEL ALL AREAS DISTURBED AND NOT COVERED WITH A HARD SURFACE WITHIN THE SITE AS ONE OF THE FOLLOWING: SA (SOIL AMENDMENT AREA) or ND (NON-DISTURBED AREA). SEE DEFINITIONS BELOW. DO NOT REFERENCE AN ALTERNATE PLAN SHEET.
- AN ESTIMATE OF THE VOLUME OF COMPOST REQUIRED IS AUTOMATICALLY CALCULATED ON THE SITE AND DRAINAGE CONTROL SUMMARY SHEET REQUIRED ON THE DRAINAGE AND WASTEWATER CONTROL PLAN (DWC PLAN). THE ACTUAL VOLUME OF COMPOST REQUIRED WILL BE DETERMINED IN THE FIELD.

DEFINITIONS:

- NON-DISTURBED AREA (ND): VEGETATED AREAS THAT WILL NOT BE SUBJECT TO LAND DISTURBING ACTIVITY (SEE D) DO NOT REQUIRE SOIL AMENDMENT IF THEY ARE FENCED AND CONTINUOUSLY PROTECTED THROUGHOUT CONSTRUCTION. THE FENCING MUST BE IN PLACE AT THE FIRST GROUND DISTURBANCE INSPECTION. THIS WILL BE MONITORED BY THE DPD SITE INSPECTOR. NO DISTURBANCE, INCLUDING VEHICLE TRAFFIC OR MATERIAL STORAGE, IS ALLOWED IN THESE AREAS UNTIL FINAL INSPECTION. LABEL THESE AREAS AS (ND) IN THE PLAN VIEW.
- SOIL AMENDMENT AREA (SA): VEGETATED OR COMPOST AREAS (TURF AND LANDSCAPE) MUST BE AMENDED PER THE SOIL AMENDMENT DETAIL AND THE SUBSOIL MUST BE LOOSENED SO IT WILL PROBE TO A DEPTH OF 12 INCHES PRIOR TO SITE FINAL INSPECTION. THIS INCLUDES AREAS IMPACTED BY CLEARING AND GRADING, STOCKPILING, SITE ACCESS, PATHWAYS AND MATERIALS OR EQUIPMENT STORAGE. LABEL THESE AREAS AS (SA) IN THE PLAN VIEW.

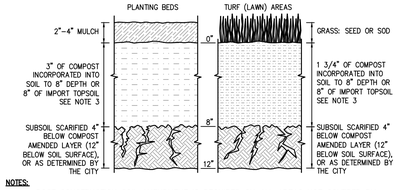
ESTIMATED COMPOST REQUIRED FOR SOIL AMENDMENT

ONLY COMPLETE THE FOLLOWING CALCULATION IF A DRAINAGE AND WASTEWATER CONTROL PLAN (DWC PLAN) IS NOT REQUIRED (E.G. SUBJECT TO FIELD INSPECTION (STFI) DEMOLITION PERMITS)

_____ (SQUARE FEET) X 0.0062 = _____ (CUBIC YARDS)

AREA REQUIRING AMENDMENT (SA) — REQUIRED COMPOST

SOIL AMENDMENT

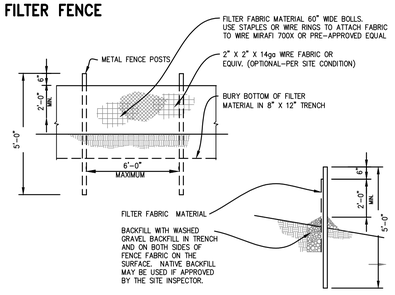


NOTES:

1. POST CONSTRUCTION SOIL AMENDMENT IS REQUIRED ON ALL AREAS NOT COVERED BY IMPERVIOUS SURFACE WHERE SOIL IS DISTURBED DURING CONSTRUCTION.
2. SOIL AMENDMENT MUST PASS A 12 INCH MINIMUM PROBE TEST.
3. IMPORT TOPSOIL, IF USED, MUST MEET THE REQUIREMENTS OF THE 2016 SEATTLE STORMWATER MANUAL, VOL. 1, SECTIONS 5.1.5.1 AND 5.1.5.3.

SYMBOL: (SA) AREA REQUIRING SOIL AMENDMENT (ND) NON-DISTURBED AREA (SOIL AMENDMENT NOT REQUIRED)

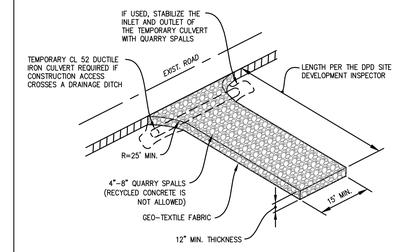
FILTER FENCE



NOTE: ANGLE SILT FENCE BACK UP THE SLOPE AT THE END OF RUN.

SYMBOL: FF

STABILIZED CONSTRUCTION ACCESS



STABILIZED ACCESS SHALL BE USED IN ALL AREAS OF THE SITE WITH VEHICLE TRAFFIC AND PARKING, INCLUDING PLANTING STRIPS. RECYCLED CONCRETE IS NOT ALLOWED.

SYMBOL: CE

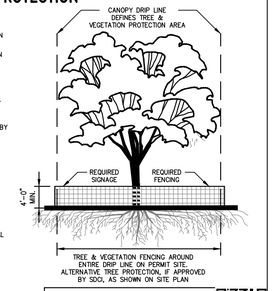
TREE & VEGETATION PROTECTION

TREE PROTECTION FENCING AND SIGN

1. CHAIN LINK, WIRE MESH, OR SIMILAR OPEN RIGID MATERIAL (NO PLYWOOD)
2. MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE
3. KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION
4. NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA: MATERIAL STORAGE/STOCKPILING, PARKING, EXCAVATION, DUMPING, OR WASHING
5. MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF SDCI PLANNER ONLY
6. IF ROOTS GREATER THAN 2 INCH FOUND OUTSIDE OF FENCING, PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
7. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION

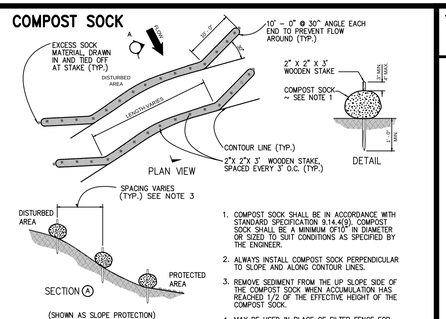
1. ORANGE MESH OR SIMILAR OPEN MATERIAL
2. MINIMIZE CONSTRUCTION ZONE
3. PROTECT VEGETATION OUTSIDE CONSTRUCTION ZONE WITH FENCING AS SHOWN
4. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS



LINK TO MORE TREE PROTECTION INFORMATION:

SYMBOL: VEG

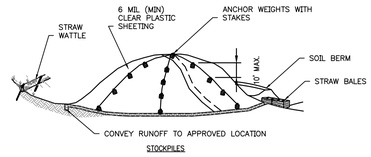
COMPOST SOCK

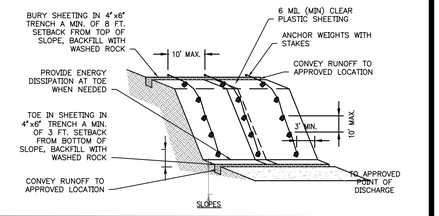


1. COMPOST SOCK SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 9.14.4(9). COMPOST SOCK SHALL BE A MINIMUM OF10" IN DIAMETER OR SIZED TO SUIT CONDITIONS AS SPECIFIED BY THE ENGINEER.
2. ALWAYS INSTALL COMPOST SOCK PERPENDICULAR TO SLOPE AND ALONG CONTOUR LINES.
3. REMOVE SEDIMENT FROM THE UP SLOPE SIDE OF THE COMPOST SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE COMPOST SOCK.
4. MAY BE USED IN PLACE OF FILTER FENCE FOR PREMIER CONTROL.

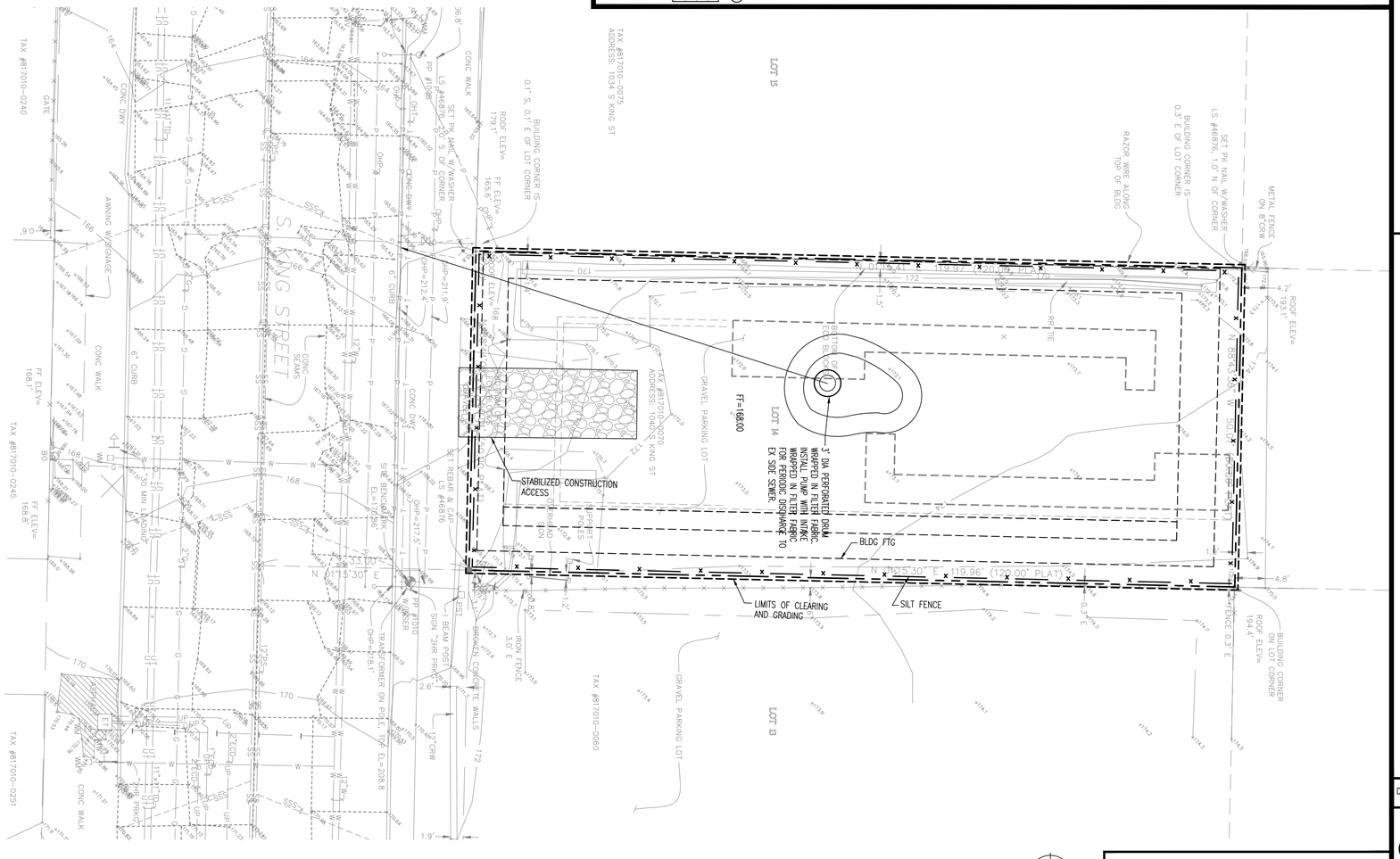
SYMBOL: CS

STOCKPILE AND EXPOSED SLOPE COVERING





SYMBOL: SP



CHOOMFENG CHIA — STATE OF WASHINGTON — 36884 — REGISTERED PROFESSIONAL ENGINEER — 11/01/2021

CONSTRUCTION STORMWATER CONTROL & POST CONSTRUCTION SOIL MANAGEMENT PLAN

NOTE: THIS PLAN IDENTIFIES THE MINIMUM MEASURES REQUIRED; ADDITIONAL MEASURES MAY BE REQUIRED BASED ON CONSTRUCTION METHODS AND ACTUAL AREA OF DISTURBANCE.

SCALE: 1" = 10' (0, 1", 2") NORTH ARROW

DPD APPROVAL STAMP

TEMPLATE VERSION: 2017-06-02

STANDARD CONSTRUCTION STORMWATER CONTROL (CSC) AND POST CONSTRUCTION SOIL MANAGEMENT (SOIL) PLAN

APPLICANT PLAN SET

CITY OF SEATTLE

DEPARTMENT OF CONSTRUCTION AND INSPECTIONS

DATE: 03/19/2021

STANDARD CSC/SOIL PLAN

SHEET CSC

Address: 1040 S KING STREET, SEATTLE, WA 98104 Project Number: 6705236-CN

DRAINAGE & WASTEWATER CONTROL PLAN REQUIREMENTS

THIS PLAN SHALL SHOW A SITE PLAN INCLUDING ALL DRAINAGE FEATURES (HARD SURFACES, BMPS, DRAIN LINES, CATCH BASINS, INLETS, PUMPS, ETC.) AND ALL SIDE SEWER FEATURES (SERVICE DRAIN SIDE SEWERS AND SANITARY SIDE SEWERS AND THEIR APPROVED POINTS OF CONNECTION).

SEE THE INSTRUCTIONS FOR THE DRAINAGE AND WASTEWATER CONTROL PLAN ON THE SDCI STORMWATER CODE WEBPAGE AND VOLUME 1, CHAPTER 8 OF THE 2016 SEATTLE STORMWATER MANUAL FOR SITE PLAN AND DRAINAGE ELEMENTS REQUIRED ON THIS PLAN.
http://www.seattle.gov/dpd/codesrules/codes/stormwater/default.htm

THE DETAILS SHOWN IN THIS ARE A SELECTION OF COMMONLY USED ON–SITE STORMWATER MANAGEMENT BMPs. SEE THE CITY OF SEATTLE STORMWATER MANUAL, VOLUME 3, CHAPTER 5 (DIRECTOR'S RULE DPD 21–2016/SPU DWW–200) FOR ADDITIONAL ON–SITE STORMWATER MANAGEMENT BMPs AND AND ADDITIONAL REQUIREMENTS FOR ALL BMPs.

SITE AND DRAINAGE CONTROL SUMMARY SHEET

COMPLETE THE ELECTRONIC ON–SITE STORMWATER MANAGEMENT CALCULATOR AND INSERT THE SITE AND DRAINAGE CONTROL SUMMARY SHEET BELOW. THE ELECTRONIC DOCUMENT IS AVAILABLE ON THE DPD STORMWATER CODE WEBSITE.
http://www.seattle.gov/dpd/codesrules/codes/stormwater/default.htm

On-site Stormwater Management - List Approach Calculator
Site and Drainage Control Summary
Version 07-28-2017

To use the On-Site List Calculator you must select "Enable Content" when the Security Warning appears.

Project Information

Site Address	1040 S King St, Seattle WA 98104	SDCI Project Number	6705236-CN
Primary Contact	Chaohua Chang	SDOT Project Number	
Project Type	Parcel-Based	Primary Contact E-mail or Phone	425-785-3992

Total Site Area	6,000 sf
Total New plus Replaced Hard Surface Area	6,000 sf
Existing Hard Surface Area to Remain	0 sf
Total New and/or Replaced Lawn and Landscaping	0 sf
Undisturbed and protected site area	0 sf
Was the project lot created or reduced in size after Jan 1, 2016?	No

Project Engineer: Choomeng Chin,P.E. Engineer E-mail: cmchin.c2my@gmail.com

On-site Stormwater Management required for ≥ 1,500 sf of new plus replaced area.

On-site Performance Standard will be used (professional engineer required)? No

Site Information

Note: If required for your project, reference the Preliminary Assessment Report (PAR) to complete this section. If the total areas proposed are different form those provided in the PAR, requirements may change.

Approved Point of Stormwater Discharge	Public Combined Sewer Main
Drainage Basin	Combined Sewer Service Area
Is the downstream drainage system considered Capacity Constrained by SPU?	No
Approved Point of Wastewater Discharge	Public Combined Sewer Main
Approved Point of Sub-Surface Discharge	Public Combined Sewer Main
Flow Control is required	No
Flow Control Standard	
Water Treatment for pollution-generating surfaces is required	No

Select required treatment: ☐ Oil Control ☐ Phosphorus ☐ Enhanced ☐ Basic
Total Pollution Generating Hard Surface Area ______ sf
Total Pollution Generating Pervious Surface Area ______ sf

Source Control is required	No
Environmentally Critical Areas	No

☐ Steep Slope ☐ Potential Slide ☐ Riparian Corridor ☐ Wetland ☐ Liquefaction ☐ Flood Prone
☐ Landfill ☐ Known Landslide ☐ Fish / Wildlife ☐ Peat / Groundwater Management ☐ Shoreline Habitat

Temporary dewatering required	No
Permanent dewatering required	
Is there known soil and/or groundwater contamination on this site?	No
A licensed professional recommends dispersion not be used anywhere within the project site due to reasonable concerns of erosion, slope failure, or flooding.	No

Infiltration Information

Is infiltration investigation required?	Yes
Type of test:	
Is infiltration on the site feasible?	No
Why?	Site cannot meet required horizontal setbacks

Site Measured Infiltration Rate ____ x Infiltration Rate Correction Factor 0.5 = 0 Site Design Inf Rate

On-site Stormwater Management

Number of roof areas	2
Number of other surface areas	0

Surface	Surfaces Description	On-site BMP	Contrib. Area (sf)	Facility Size (sf)	Facility Configuration
1	Roof:Green roof and plar	Vegetated Roof System	740	740 sf	4 inch Single-Course
2	Roof:Roof Area	None Feasible	5,260	-	

Total New/Replaced Roof Area	6,000	Total Roof Area Managed	6,000
Total New/Replaced Other Surface Area	0	Total Other Surface Managed	0
Total Area Managed	6,000	Total Volume Managed On Site	5,325 gal
Estimated compost required for soil amendment	0 cy	*Volume of compost required for soil amendment will be verified by the DPD Site Inspector for SDCI permitted projects.*	

seattle.gov

ON-SITE STORMWATER MANAGEMENT PLANTINGS

PLANTING GENERAL NOTES
1. PLANTS SHALL BE SITED ACCORDING TO SUN, SOIL, WIND AND MOISTURE REQUIREMENTS.
2. AT A MINIMUM, PROVISIONS MUST BE MADE FOR SUPPLEMENTAL IRRIGATION DURING THE FIRST TWO GROWING SEASONS.

BIORETENTION CELLS, PLANTERS AND RAIN GARDEN NOTES
1. FOR A LIST OF APPROVED PLANTS FOR BIORETENTION/RAIN GARDEN FACILITIES, SEE APPENDIX E, SECTION E–9 OF THE 2016 SEATTLE STORMWATER MANUAL.
2. VEGETATION COVERAGE OF SELECTED PLANS MUST ACHIEVE 90–PERCENT COVERAGE WITHIN 2 YEARS OR ADDITIONAL PLANTINGS SHALL BE PROVIDED. UNLESS DESIGNED BY A LICENSED LANDSCAPE ARCHITECT, PROVIDE A MINIMUM OF 1 PLANT PER EVERY 2 SQUARE FEET OF BIORETENTION BOTTOM AND SLOPED SIDE AREA.
3. PROVIDE A MINIMUM OF THREE DIFFERENT SPECIES OF SHRUBS AND HERBACEOUS PLANTS IN EACH FACILITY.

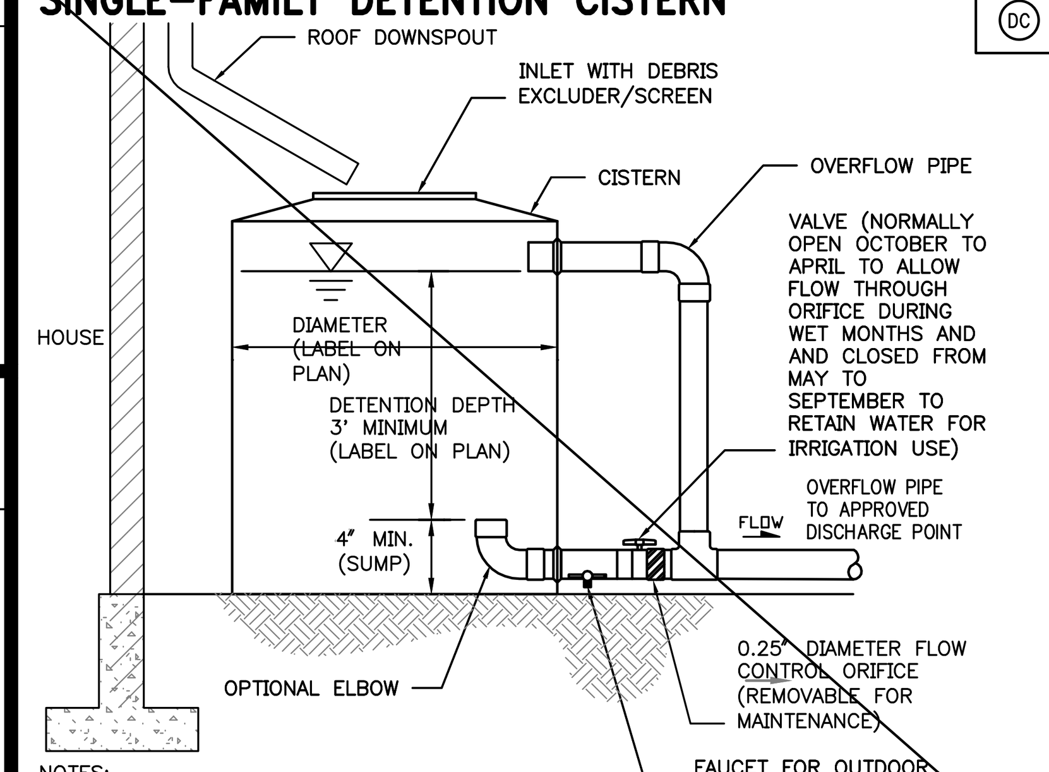
VEGETATED ROOF NOTES
1. APPROPRIATE PLANTS INCLUDE SUCCULENTS, GRASSES, HERBS, AND WILDFLOWERS THAT ARE ADAPTED TO HARSH CONDITIONS. PLANTS MAY BE INSTALLED AS PRE–GROWN MATS, INDIVIDUAL PLUGS, CUTTINGS, OR SPREAD AS SEEDS.
2. VEGETATION COVERAGE OF SELECTED PLANS MUST ACHIEVE 80–PERCENT COVERAGE WITHIN 2 YEARS OR ADDITIONAL PLANTINGS SHALL BE PROVIDED.
3. A LANDSCAPE MANAGEMENT PLAN SHALL BE DEVELOPED AND IMPLEMENTED.

SIDE SEWER AND DRAINAGE PERMIT NOTES

1. SIDE SEWERS AND DRAINAGE FACILITIES SHALL BE CONSTRUCTED PER THE "REQUIREMENTS FOR DESIGN OF SIDE SEWERS (DRAINAGE & WASTEWATER)" DIRECTORS' RULE DPD 4–2011/2011–004 AND PER THE "2016 SEATTLE STORMWATER MANUAL" DIRECTORS' RULE DPD 21–2015/SPU DWW–200.
2. A SEPARATE DRAINAGE AND SIDE SEWER PERMIT IS REQUIRED FOR ALL ONSITE DRAINAGE ELEMENTS AND SIDE SEWERS/SERVICE DRAINS. APPROVAL OF THIS PLAN IS REQUIRED PRIOR TO OBTAINING A DRAINAGE AND SIDE SEWER PERMIT.
3. RE–USE OF EXISTING SIDE SEWERS WHEN THERE WILL BE AN INCREASE IN LIVING UNITS REQUIRES THE EVALUATION AND CERTIFICATION (PE EVAL/CERT) OF THE EXISTING SIDE SEWER BY A PROFESSIONAL ENGINEER PRIOR TO FINALIZING THE SIDE SEWER AND DRAINAGE PERMIT. IN MOST CASES, THE SIDE SEWER MUST BE LINED ALL THE WAY TO THE MAIN. SEE DIRECTORS RULE 4–2011V.M AND SMC 21.16.240.
4. IN ORDER TO ADD UNITS TO AN EXISTING SIDE SEWER, A CERTIFIED LETTER STATING THE INTENT TO ADD UNITS TO THE SHARED SIDE SEWER MUST BE SENT TO ALL PROPERTY OWNERS OF PARCELS SERVED BY THE SHARED SIDE SEWER AT LEAST 30 DAYS PRIOR TO APPLYING FOR THE SIDE SEWER PERMIT. SMC 21.16.240.C. A RECEIPT OF CERTIFIED MAILING AND THE CERTIFICATION/ATTESTATION OF MAILING NOTIFICATION MUST BE SUBMITTED TO SDCI PRIOR TO PERMIT ISSUANCE.
5. DEVIATIONS FROM THE APPROVED DRAINAGE AND WASTEWATER CONTROL PLAN MAY REQUIRE A FORMAL POST–SUBMITTAL REVISION FOR PLAN REVIEW AND APPROVAL. POST–SUBMITTAL REVISIONS MUST BE SUBMITTED ELECTRONICALLY THROUGH THE SDCI PROJECT PORTAL.

SINGLE–FAMILY DETENTION CISTERN

SYMBOL DC

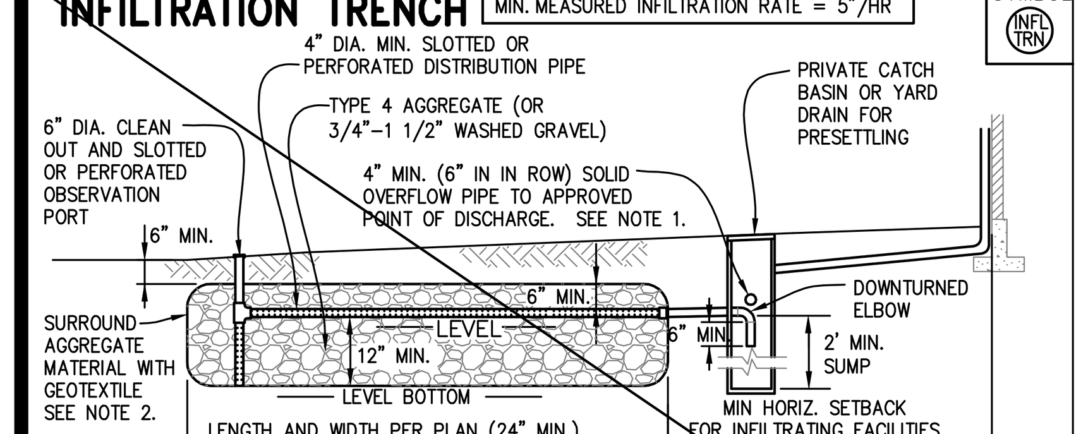


NOTES:
1. OVERFLOW PIPE CAN BE INTERIOR OR EXTERIOR TO CISTERN.
2. SEE THE SEATTLE STORMWATER MANUAL VOLUME 3, SECTION 5.5.2 FOR ADDITIONAL REQUIREMENTS.

INFILTRATION TRENCH

MIN. MEASURED INFILTRATION RATE = 5"/HR

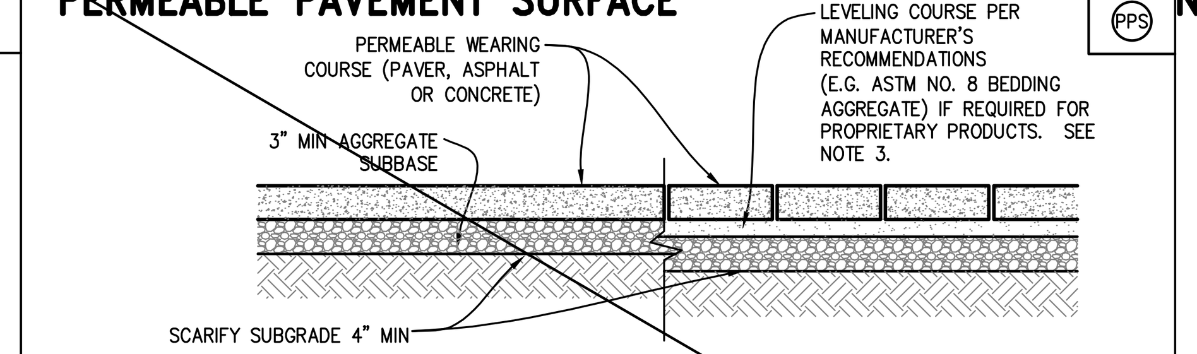
SYMBOL INFL TRN



NOTES:
1. OVERFLOW PIPE: SET THE INVERT OF THE OVERFLOW PIPE AT, OR ABOVE, THE CROWN OF THE DISTRIBUTION PIPE. ALTERNATIVELY, THE OVERFLOW PIPE MAY BE A 5' MIN. LONG PERFORATED/SLOTTED PIPE IN THE GRAVEL RESERVOIR WITH CAPPED FREE ENDS THAT IS SEPARATED FROM THE DISTRIBUTION PIPE AND IS SET ABOVE THE INVERT OF THE DISTRIBUTION PIPE. IN THIS CASE, THE OVERFLOW MUST BE ROUTED THORUGH A SEPARATE CATCH BASIN PRIOR TO CONNECTING WITH WITH A PUBLIC DRAINAGE SYSTEM.
2. GEOTEXTILE SHALL BE LOW SURVIVABILITY, CLASS C PER COS SPEC 9–37 TABLES 1 AND 2.
3. SCARIFY SUBGRADE TO A MIN. DEPTH OF 4" BEFORE FILLING TRENCH WITH WASHED GRAVEL.
4. SEE THE SEATTLE STORMWATER MANUAL VOLUME 3, SECTION 5.4.2, FOR ADDITIONAL REQUIREMENTS.

PERMEABLE PAVEMENT SURFACE

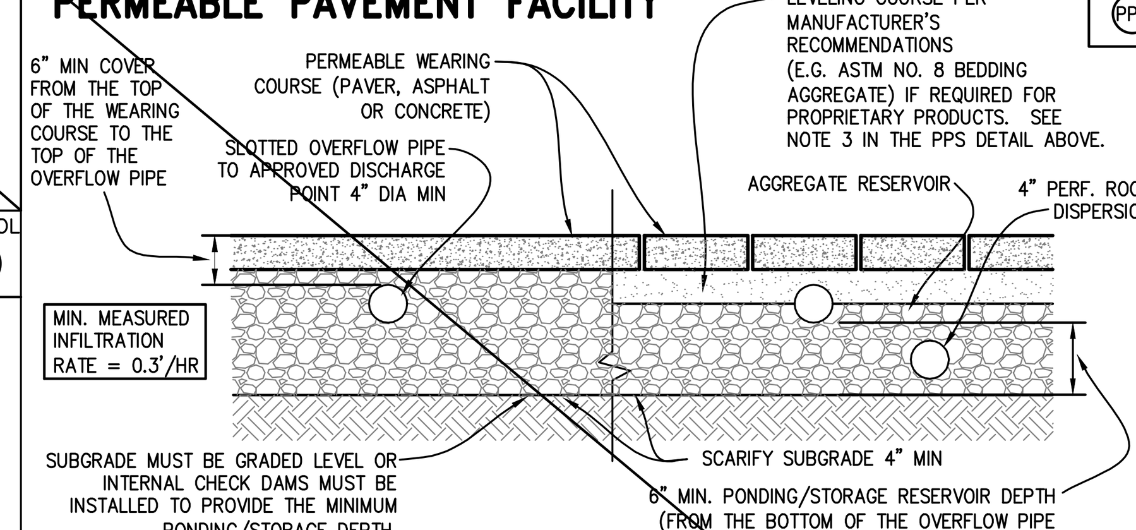
SYMBOL PPS



NOTES:
1. PERMEABLE PAVEMENT SURFACE AREA DIMENSIONS AND PAVEMENT SLOPE MUST BE SHOWN ON DRAINAGE CONTROL PLAN.
2. AGGREGATE SUBBASE SHALL BE CLEAN, CRUSHED GRAVEL OR CRUSHED ROCK – TYPE 22 OR 24 FOR WALKWAYS AND TYPE 13 FOR VEHICULAR APPLICATIONS.
3. THE LEVELING COURSE SHALL BE A FREE DRAINING AGGREGATE AND SHALL NOT RESTRICT THE INFILTRATION RATE THROUGH THE SYSTEM. FRACTURED JOINTING SAND IS NOT ALLOWED.
4. THE SUBGRADE SLOPE MUST BE LESS THAN 6% SLOPE TO BE USED FOR ON–SITE STORMWATER MANAGEMENT.
5. PERMEABLE PAVEMENT SURFACES DO NOT REQUIRE THE SETBACKS FOR INFILTRATING FACILITIES.
6. SEE THE SEATTLE STORMWATER MANUAL VOLUME 3, SECTION 5.6.2, FOR ADDITIONAL REQUIREMENTS.

PERMEABLE PAVEMENT FACILITY

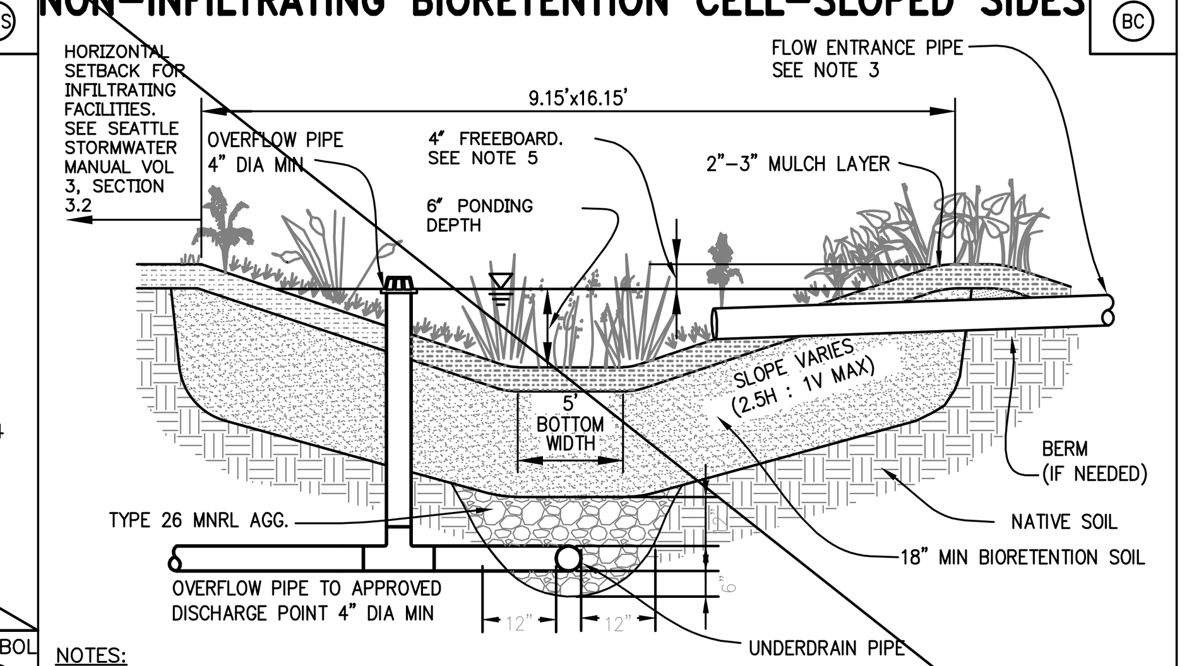
SYMBOL PPF



NOTES:
1. PERMEABLE PAVEMENT SURFACE FACILITY DIMENSIONS AND PAVEMENT SLOPE MUST BE SHOWN ON DRAINAGE CONTROL PLAN.
2. AGGREGATE SUBBASE SHALL BE CLEAN, CRUSHED GRAVEL OR CRUSHED ROCK – TYPE 22 OR 24 FOR WALKWAYS AND TYPE 13 FOR VEHICULAR APPLICATIONS.
3. CHECK DAMS SHALL BE INSTALLED TO ENSURE THE DESIGN PONDING DEPTH IN THE STORAGE RESERVOIR IF THE SUBGRADE SLOPE IS GREATER THAN 1%.
4. PERMEABLE PAVEMENT FACILITIES MUST MEET THE SETBACK REQUIREMENTS FOR INFILTRATING FACILITIES (E.G. 5' FROM BUILDINGS W/O BASEMENT, 10' FROM BUILDINGS W/ BASEMENTS, 5' FROM PROPERTY LINES EXCEPT ABUTTING R.O.W, 10' FROM OTHER INFILTRATION FACILITIES, ETC. PER SEATTLE STORMWATER MANUAL VOLUME 3, SECTION 3.2)
5. THE PONDING/STORAGE RESERVOIR SHALL BE COMPLETELY BELOW THE ELEVATION OF THE SURROUNDING GRADE UNLESS CONTAINED WITH AN IMPERMEABLE STRUCTURE SUCH AS A CONCRETE RETAINING WALL.
6. SEE THE SEATTLE STORMWATER MANUAL VOLUME 3, SECTION 5.4.6, FOR ADDITIONAL REQUIREMENTS.

NON–INFILTRATING BIORETENTION CELL–SLOPED SIDES

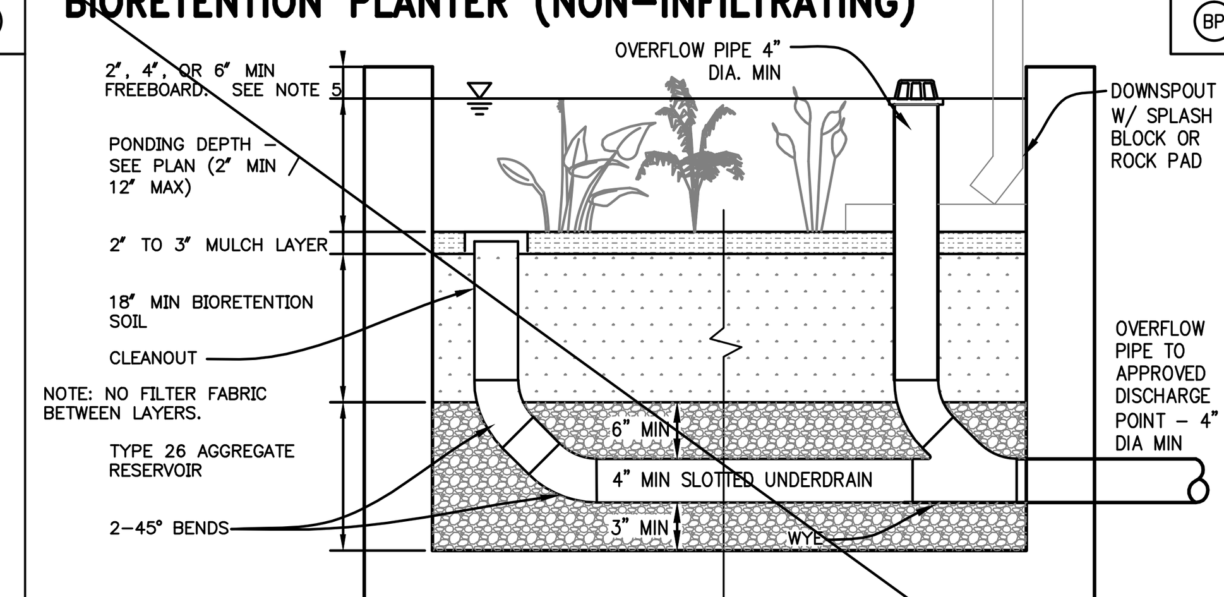
SYMBOL BC



NOTES:
1. BOTTOM AND TOP CELL DIMENSIONS MUST BE SHOWN ON DRAINAGE CONTROL PLAN.
2. PONDING DEPTH AND FREEBOARD SHALL BE NOTED ON THE DRAINAGE CONTROL PLAN.
3. FLOWS MUST ENTER THE CELL ABOVE THE MULCH LAYER. PROVIDE ENERGY DISSIPATION SUCH AS A SPLASH BLOCK OR ROCK PAD.
4. MINIMUM FREEBOARD SHALL BE 2 INCHES FOR CONTRIBUTING DRAINAGE AREAS LESS THAN 3,000 SF, 4 INCHES FOR AREAS 3,000 SF TO 5,000 SF AND 6 INCHES FOR AREAS GREATER THAN 5,000 SF. FREEBOARD SHALL BE NOTED ON THE DRAINAGE CONTROL PLAN.
5. SEE THE SEATTLE STORMWATER MANUAL VOL. 3, SECTION 5.4.4, FOR ADDITIONAL REQUIREMENTS.

BIORETENTION PLANTER (NON–INFILTRATING)

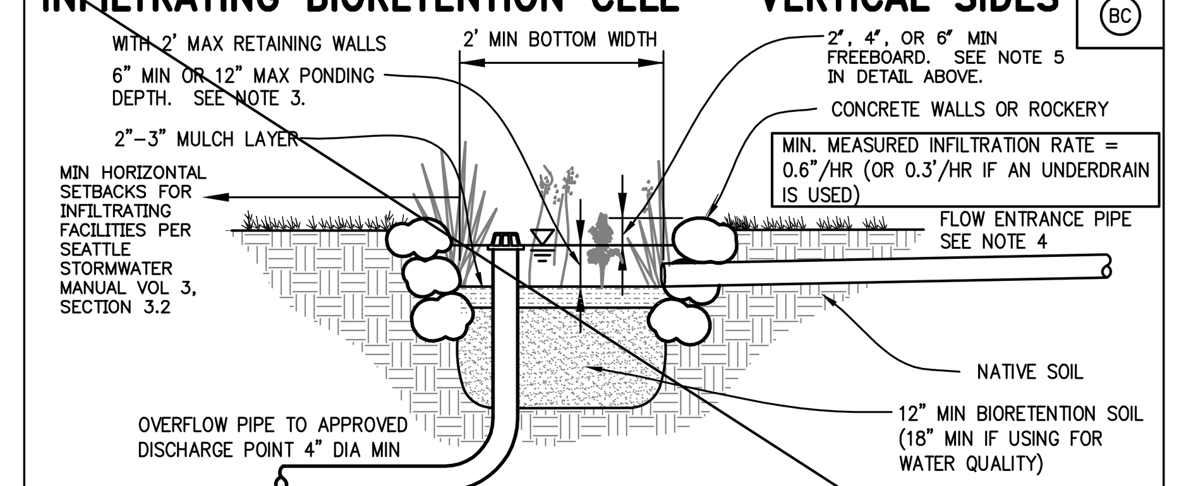
SYMBOL BP



NOTES:
1. BIORETENTION PLANTER AREA DIMENSIONS MUST BE SHOWN ON DRAINAGE CONTROL PLAN.
2. AGGREGATE RESERVOIR SHALL BE TYPE 26 MINERAL AGGREGATE (WASHED SANDY GRAVEL / FILTER MATERIAL).
3. PLANTER SHALL BE A MINIMUM INSIDE WIDTH OF 2 FEET.
4. SLOTTED DRAIN PIPE SHALL RUN THE LENGTH OF THE PLANTER.
5. MINIMUM FREEBOARD SHALL BE 2 INCHES FOR CONTRIBUTING DRAINAGE AREAS LESS THAN 3,000 SF, 4 INCHES FOR AREAS 3,000 SF TO 5,000 SF AND 6 INCHES FOR AREAS GREATER THAN 5,000 SF. FREEBOARD SHALL BE NOTED ON THE DRAINAGE CONTROL PLAN.
6. SEE THE SEATTLE STORMWATER MANUAL VOL. 3, SECTION 5.8.2, FOR ADDITIONAL REQUIREMENTS.

INFILTRATING BIORETENTION CELL – VERTICAL SIDES

SYMBOL BC

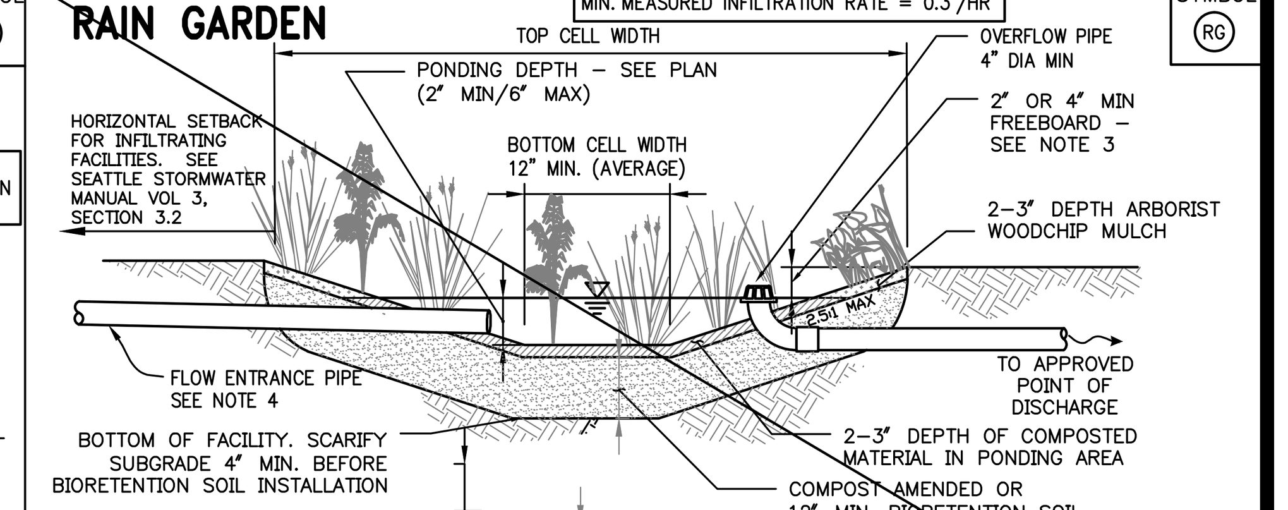


NOTES:
1. BOTTOM AND TOP CELL DIMENSIONS MUST BE SHOWN ON DRAINAGE CONTROL PLAN.
2. PONDING DEPTH AND FREEBOARD SHALL BE NOTED ON THE DRAINAGE CONTROL PLAN.
3. THE MINIMUM PONDING DEPTH MAY BE REDUCED TO 2" IF CONTINUOUS STORMWATER MODELING IS USED.
4. FLOWS MUST ENTER THE CELL ABOVE THE MULCH LAYER. PROVIDE ENERGY DISSIPATION SUCH AS A SPLASH BLOCK OR ROCK PAD.
5. SEE THE SEATTLE STORMWATER MANUAL VOL. 3, SECTION 5.4.4, FOR ADDITIONAL REQUIREMENTS.

RAIN GARDEN

MIN. MEASURED INFILTRATION RATE = 0.3'/HR

SYMBOL RG



NOTES:
1. BOTTOM AND TOP CELL DIMENSIONS MUST BE SHOWN ON DRAINAGE CONTROL PLAN.
2. PONDING DEPTH AND FREEBOARD SHALL BE NOTED ON THE DRAINAGE CONTROL PLAN.
3. MINIMUM FREEBOARD SHALL BE 2 INCHES FOR CONTRIBUTING DRAINAGE AREAS LESS THAN 3,000 SF AND 4 INCHES FOR AREAS 3,000 SF TO 5,000 SF. NOTE THE FREEBOARD ON THE DRAINAGE CONTROL PLAN.
4. FLOWS MUST ENTER THE CELL ABOVE THE MULCH LAYER. PROVIDE ENERGY DISSIPATION SUCH AS A SPLASH BLOCK OR ROCK PAD.
5. SEE THE SEATTLE STORMWATER MANUAL VOL. 3, SECTION 5.4.5, FOR ADDITIONAL REQUIREMENTS.

AS-BUILT MEASUREMENTS / NOTES

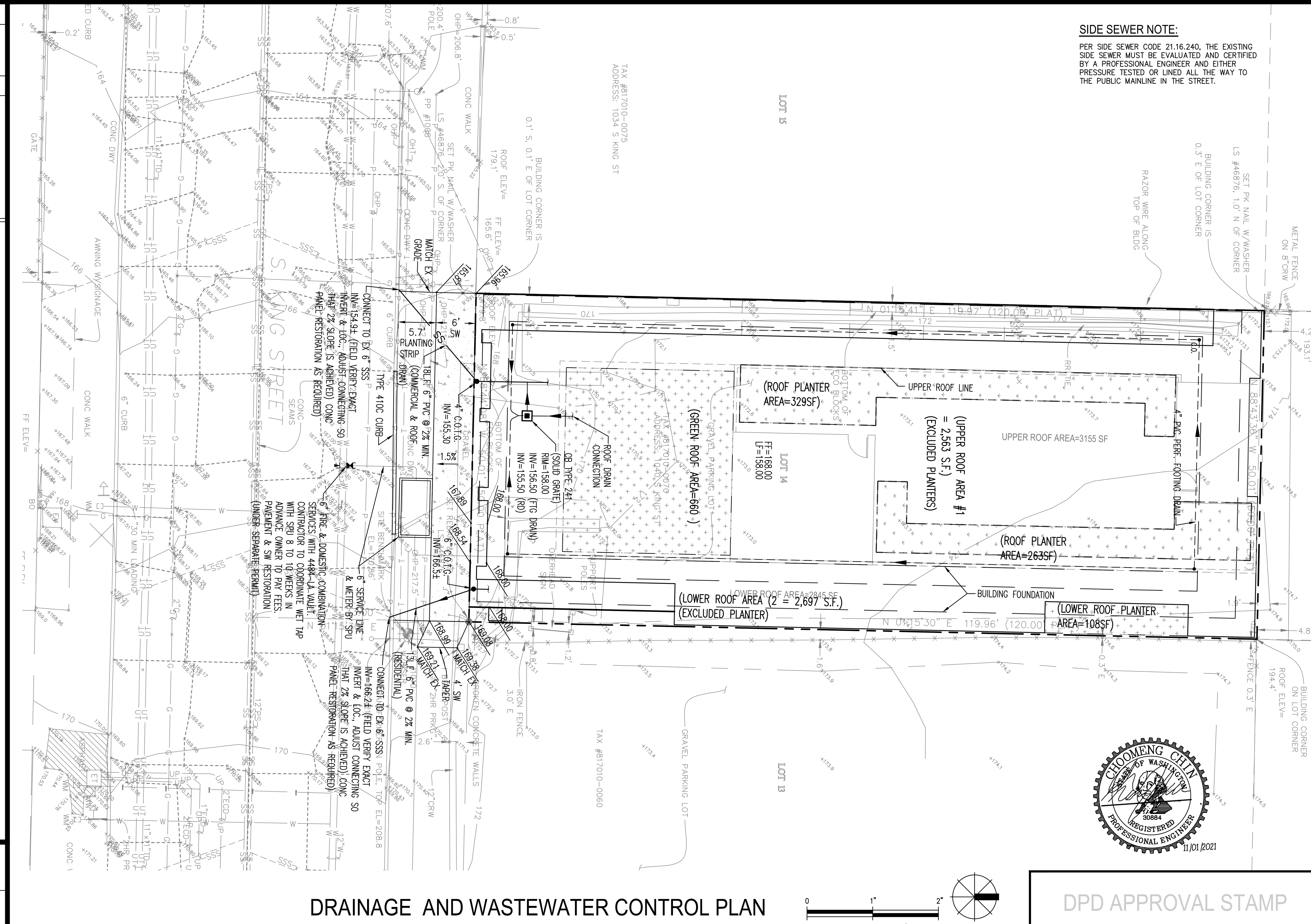
THIS SECTION IS TO BE COMPLETED AFTER THE DRAINAGE, WASTEWATER, AND SIDE SEWER FEATURES HAVE BEEN INSTALLED. FOR INSTRUCTIONS TO PREPARE THE AS–BUILT PLAN, SEE SDCI TIP #504.

SDCI SIDE SEWER AND DRAINAGE PERMIT # ____________

MEASUREMENTS IN THE RIGHT–OF–WAY
(TO BE TAKEN BY A REGISTERED SIDE SEWER CONTRACTOR (RSSC))
1. DISTANCE FROM CENTERLINE OF DOWSTREAM MH TO CENTERLINE OF NEW SERVICE CONNECTION ________
2. SIDE SEWER INTERSECTION WITH PROPERTY LINE – DEPTH ________
3. SIDE SEWER INSTERSECTION WITH PROPERTY LINE – DISTANCE ________

STORMWATER FACILITIES/CONTROL OPERATIONS & MAINTENANCE REQUIREMENTS

ALL STORMWATER FACILITIES/CONTROLS SHALL BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2016 SEATTLE STORMWATER MANUAL, APPENDIX G.



SIDE SEWER NOTE:

PER SIDE SEWER CODE 21.16.240, THE EXISTING SIDE SEWER MUST BE EVALUATED AND CERTIFIED BY A PROFESSIONAL ENGINEER AND EITHER PRESSURE TESTED OR LINED ALL THE WAY TO THE PUBLIC MAINLINE IN THE STREET.

CHOOMENG CHIN, STATE OF WASHINGTON, 30884, REGISTERED PROFESSIONAL ENGINEER, 3/19/2021

DRAINAGE AND WASTEWATER CONTROL PLAN

SCALE: 1" = 10'   NORTH ARROW

DPD APPROVAL STAMP

TEMPLATE VERSION: 2017-07-14

STANDARD DRAINAGE AND WASTEWATER CONTROL (DWC) PLAN

APPLICANT PLAN SET

CITY OF SEATTLE
DEPARTMENT OF CONSTRUCTION AND INSPECTIONS

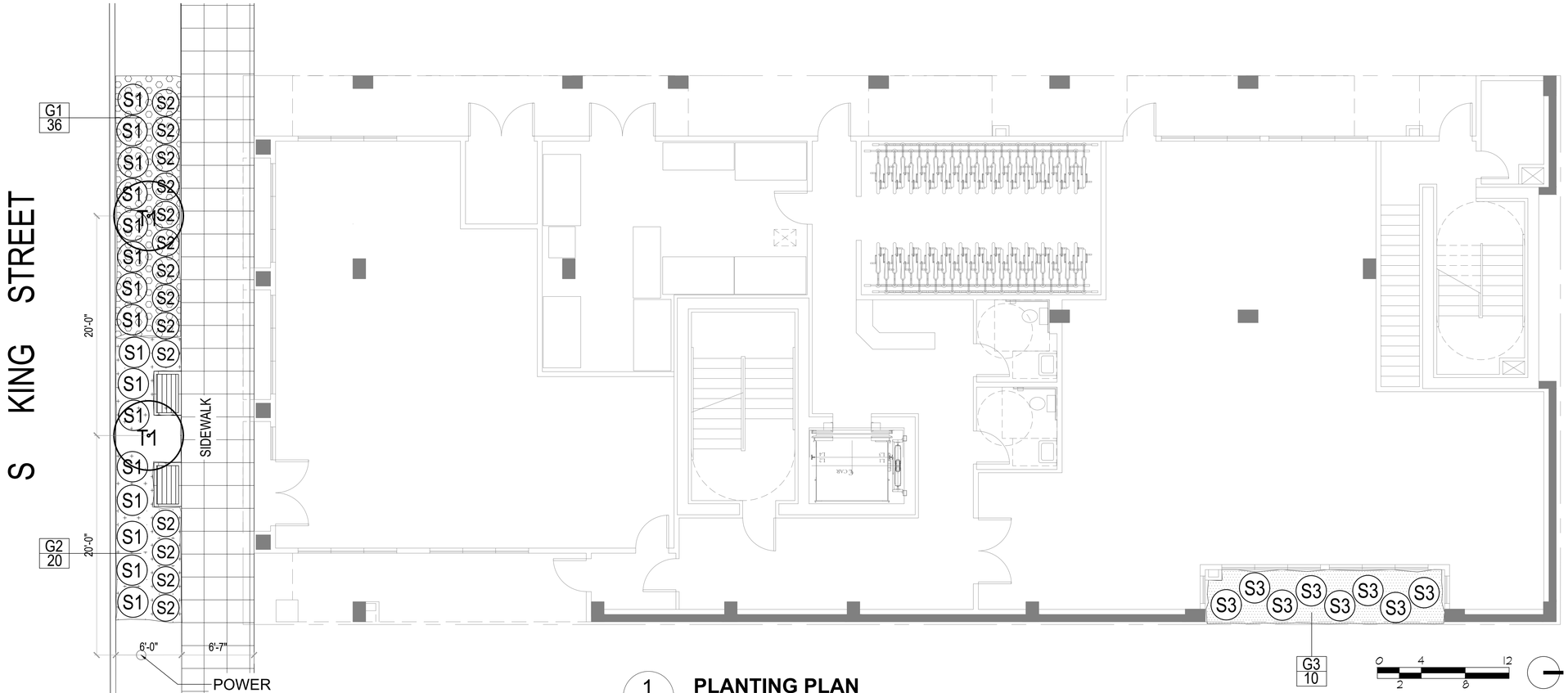
Project Number: 6705236-CN

Address: 1040 S KING STREET, SEATTLE, WA 98104

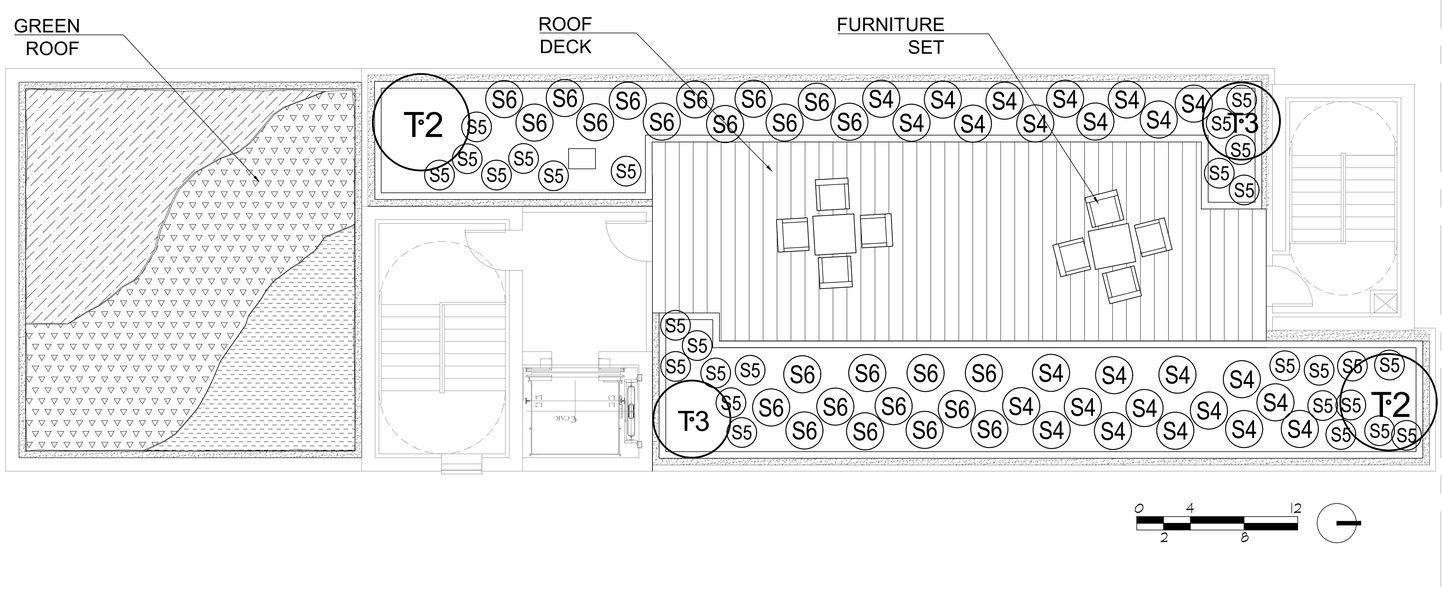
DATE: 03/19/2021

STANDARD DWC PLAN

SHEET DWC



1 L-1 **PLANTING PLAN**
SCALE 1/8" = 1'-0"



3 L-1 **PLANTING AREA**
SCALE 1/8" = 1'-0"

PLANTING LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY	NOTE (GREEN FACTOR)
A. TREES					
T1	CARPINUS JAPONICA	JAPANESE HORNBEAM	2"	2	(B3, H3)
T2	ACER PALMATUM-DISSECTUM 'CRIMSON QUEEN'	CRIMSON QUEEN JAPANESE MAPLE	3'H	2	(B3)
T3	PINUS SYLVESTRIS'(POM POM)'	POM POM PINE TREE	4'H	2	(B3)
B. SHRUBS					
S1	*RHODODENDRON 'PURPLE GEM'	PURPLE GEM AZALEA	3 GAL	16	(B2, H1, H3)
S2	DAPHNE ODORA 'AUREO-MARGINATA'	VARIEGATED WINTER DAPHNE	3 GAL	14	(B2, H1, H3)
S3	*CHOISYA TERNATA 'SUNDANCE'	MEXICAN MOCK ORANGE	3 GAL	12	(B2, H1)
S4	*NANDINA DOMESTICA 'GULF STREAM'	DWARF HEAVENLY BAMBOO	5 GAL	25	(B2, H1)
S5	*HYDRANGEA QUERCIFOLIA 'PEE WEE'	DWARF OAK-LEAF HYDRANGEA	5 GAL	28	(B2, H1)
S6	*LAVANDULA ANGUSTIFOLIA	ENGLISH LAVENDER	2 GAL	20	(B2, H1)
C. GROUNDCOVER					
G1	*CALLUNA	HEATHER	1 GAL	36	24" O.C.(B1,H1)
G2	*FESTUCA GLAUCA 'ELIJAH BLUE'	BLUE FESCUE	1 GAL	20	24" O.C.(B1,H1)
G3	*LIRIOPE	LILYTYRF	1 GAL	10	24" O.C.(B1,H1)
D. GREEN ROOF PLANTS					
G4	SEDUM MIX TYPE 1		4" POT	308 SQFT	(A1,C2,H1)
G5	SEDUM MIX TYPE 2		4" POT	205 SQFT	(A1,C2,H1)
G6	SEDUM MIX TYPE 3		4" POT	147 SQFT	(A1,C2,H1)

NOTE:
1. * MEANS DROUGHT- TOLERANT PLANT SPECIES AND FROM SEATTLE GREEN FACTOR PLANT LIST
2. TREES PLANTED PER CITY OF SEATTLE PLANT 100A
3. EXISTING SOIL AMENDED PER CITY OF SEATTLE PLANT 142 AND DPD DIRECT'S RULE 10-2011 A1

2 L-1 **PLANTING LEGEND**

CHC ARCHITECTS
10915 NE 123rd LN #B312
KIRKLAND WA 98034
(M) 425.785.3992
(O) 425.285.9855
cchang03@yahoo.com

LOTUS LANDSCAPE DESIGN
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4021 170th Ave SE Bellevue, WA 98008
lotuslandscapedesign@comcast.net

1040 APARTMENT

1040 S KING STREET
SEATTLE WA 98104

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
Josephine Chung-Chen Lian
CERTIFICATE NO. 905

NUMBER	DATE	DESCRIPTION OF REVISIONS

SHEET TITLE
LANDSCAPE PLAN

JOB NUMBER

SHEET NUMBER
L-1

Revised 12/28/10

Green Factor Score Sheet

SEATTLE×green factor

Project title:

		enter sq ft of parcel			
	Parcel size *(enter this value first)* *	6,000		SCORE	0.346

	Landscape Elements**	Totals from GF worksheet		Factor	Total
A	**Landscaped areas (select one of the following for each area)**				
1	Landscaped areas with a soil depth of less than 24"	enter sq ft: 660		0.1	66
2	Landscaped areas with a soil depth of 24" or greater	enter sq ft: 1154		0.6	692.4
3	Bioretention facilities	enter sq ft: 0		1.0	-
B	**Plantings (credit for plants in landscaped areas from Section A)**				
1	Mulch, ground covers, or other plants less than 2' tall at maturity	enter sq ft: 1814		0.1	181
2	Shrubs or perennials 2'+ at maturity - calculated at 12 sq ft per plant (typically planted no closer than 18" on center)	enter number of plants: 115	1380	0.3	414
3	Tree canopy for "small trees" or equivalent (canopy spread 8' to 15') - calculated at 75 sq ft per tree	enter number of plants: 6	450	0.3	135
4	Tree canopy for "small/medium trees" or equivalent (canopy spread 16' to 20') - calculated at 150 sq ft per tree	enter number of plants: 0	0	0.3	-
5	Tree canopy for "medium/large trees" or equivalent (canopy spread of 21' to 25') - calculated at 250 sq ft per tree	enter number of plants: 0	0	0.4	-
6	Tree canopy for "large trees" or equivalent (canopy spread of 26' to 30') - calculated at 350 sq ft per tree	enter number of plants: 0	0	0.4	-
7	Tree canopy for preservation of large existing trees with trunks 6"+ in diameter - calculated at 20 sq ft per inch diameter	enter inches DBH: 0	0	0.8	-
C	**Green roofs**				
1	Over at least 2" and less than 4" of growth medium	enter sq ft: 660		0.4	264.0
2	Over at least 4" of growth medium	enter sq ft:		0.7	-
D	**Vegetated walls**	enter sq ft: 0		0.7	-
E	**Approved water features**	enter sq ft: 0		0.7	-
F	**Permeable paving**				
1	Permeable paving over at least 6" and less than 24" of soil or gravel	enter sq ft: 0		0.2	-
2	Permeable paving over at least 24" of soil or gravel	enter sq ft: 0		0.5	-
G	**Structural soil systems**	enter sq ft: 0		0.2	-
		sub-total of sq ft =	6,118		
H	**Bonuses**				
1	Drought-tolerant or native plant species	enter sq ft: 2425		0.1	242.5
2	Landscaped areas where at least 50% of annual irrigation needs are met through the use of harvested rainwater	enter sq ft: 0		0.2	-
3	Landscaping visible to passersby from adjacent public right of way or public open spaces	enter sq ft: 787		0.1	79
4	Landscaping in food cultivation	enter sq ft: 0		0.1	-
			Green Factor numerator =		2,074

**** Do not count public rights-of-way in parcel size calculation.***

***** You may count landscape improvements in rights-of-way contiguous with the parcel. All landscaping on private and public property must comply with the Landscape Standards Director's Rule (DR 6-2009)***

1 / L-2 **GREEN FACTOR SCORESHEET**

NOTE:
1. REQUIRED GREEN FACTOR SCORE: 0.3 OR GREATER
2. PROJECT GREEN FACTOR SCORE: 0.346> 0.3
3. DETAIL CALCULATIONS ARE AS FOLLOWING:
   A1=660 SQFT (AREA5 660)
   A2=1154 SQFT (AREAS SHOWN ON THE PLAN)
   AREA2(277)+AREA4(108)+AREA6(300)+AREA7(440)
   B1=A1(660)+A2(1154) = 1814 SQFT
   (GROUND EITHER COVER WITH MULCH OR GROUND COVERS)
   B2= ALL SHRUBS AND PERENNIALS (115)*12 =1380 SQFT
   B3= SMALL TREES (JAPANESE HORNBEAN*2+
   DWARF MAPLE*2+
   POM POM PINE TREE*2) *75=450 SQFT

C1 = 660FT
H1= 2425 SQFT
SHRUBS: 115*12 = 1380 SQFT
GROUNDCOVER: AREA2(277)+AREA4(108)
AREA5(660)=1283
H3= 787 SQFT (VISIBLE LANDSCAPEING AREA FROM R-O-W)
TREES:(JAPANESE HORNBEAN*2)*75=150 SQFT
SHURBS: 30*12= 360 SQFT
GROUNDCOVER: AREA2(277)= 277 SQFT

Revised 4/8/09

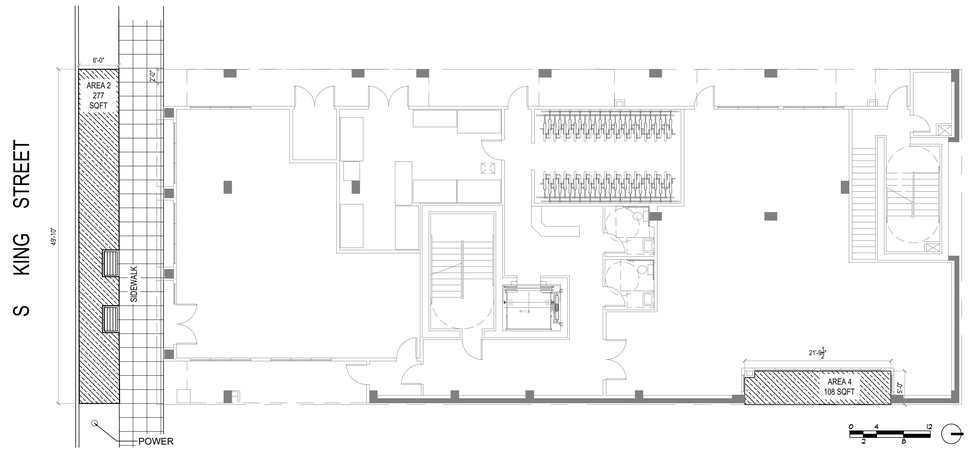
Green Factor Worksheet*

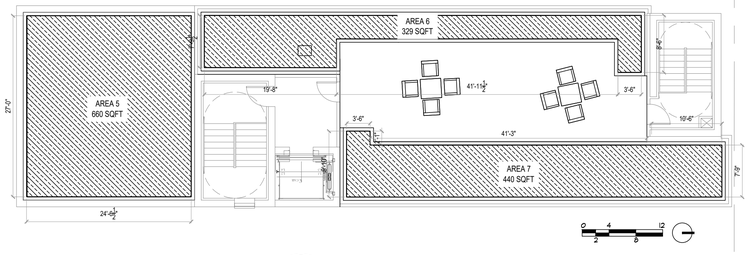
SEATTLE×green factor

		Planting Area 1	2	3	4	5	6	7	TOTAL**
A1	square feet					660			**660**
A2	square feet		277		108		329	440	**1154**
A3	square feet								**0**
B1	square feet		277		108	660	329	440	**1814**
B2	# of plants		30		8		37	40	**115**
B3	# of trees		2				2	2	**6**
B4	# of trees								**0**
B5	# of trees								**0**
B6	# of trees								**0**
B7	# of trees								**0**
C1	square feet					660			**660**
C2	square feet								**0**
D	square feet								**0**
E	square feet								**0**
F1	square feet								**0**
F2	square feet								**0**
G	square feet								**0**
H1	square feet	0	637	0	204	660	444	480	**2425**
H2	square feet								**0**
H3	square feet	0	787						**787**
H4	square feet								**0**

*** See Green Factor score sheet for category definitions**
**** Enter totals on the Green Factor score sheet**

2 / L-2 **GREEN FACTOR WORK SHEET**





3 / L-2 **PLANTING AREA**
SCALE 3/32" = 1'-0"

CHC ARCHITECTS
10915 NE 123rd LN #B312
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1040 APARTMENT
1040 S KING STREET
SEATTLE WA 98104

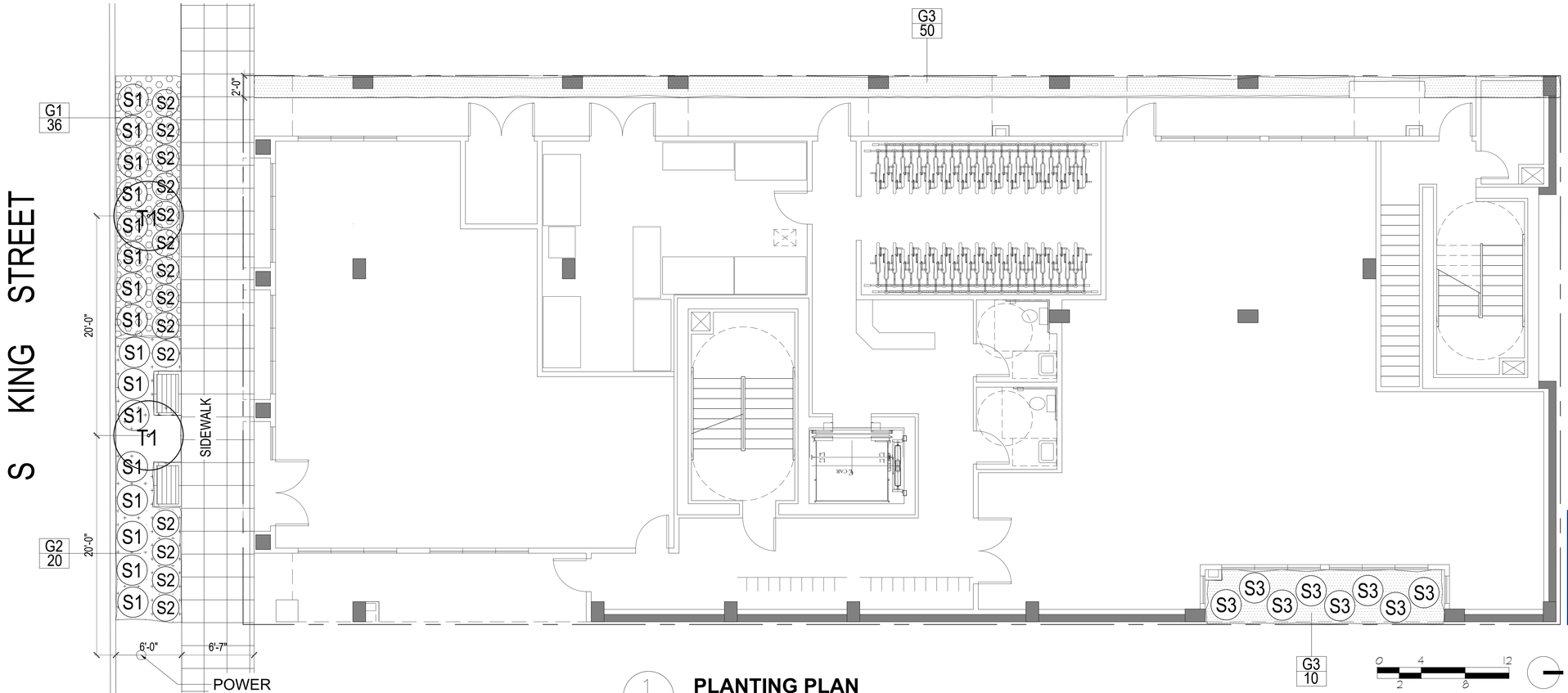
STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
Josephine Chang-Chien Lian
CERTIFICATE NO. 905

NUMBER	DATE	DESCRIPTION OF REVISIONS

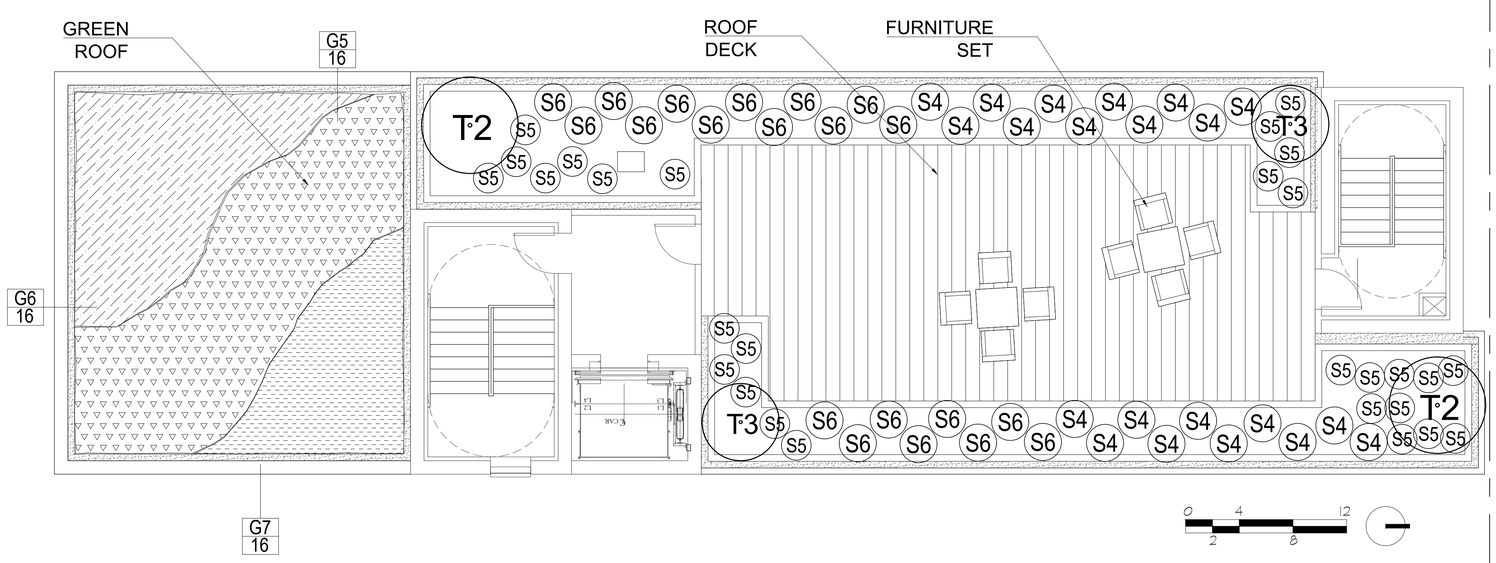
SHEET TITLE
ROOF GARDEN

JOB NUMBER

SHEET NUMBER
L-2



1 L-1 **PLANTING PLAN**
SCALE 1/8" = 1'-0"



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SCALE 1/8" = 1'-0"

PLANTING LIST

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T2	ACER PALMATUM-DISSECTUM 'CRIMSON QUEEN'	CRIMSON QUEEN JAPANESE MAPLE	3'H	2	(B3)
T3	PINUS SYLVESTRIS'(POM POM)'	POM POM PINE TREE	4'H	2	(B3)
B. SHRUBS					
S1	*RHODODENDRON 'PURPLE GEM'	PURPLE GEM AZALEA	3 GAL	16	(B2, H1, H3)
S2	DAPHNE ODORA 'AUREO-MARGINATA'	VARIEGATED WINTER DAPHNE	3 GAL	14	(B2, H1, H3)
S3	*CHOISYA TERNATA 'SUNDANCE'	MEXICAN MOCK ORANGE	3 GAL	8	(B2, H1,)
S4	*NANDINA DOMESTICA 'GULF STREAM'	DWARF HEAVENLY BAMBOO	5 GAL	21	(B2, H1)
S5	*HYDRANGEA QUERCIFOLIA 'PEE WEE'	DWARF OAK-LEAF HYDRANGEA	5 GAL	28	(B2, H1)
S6	*LAVANDULA ANGUSTIFOLIA	ENGLISH LAVENDER	2 GAL	20	(B2, H1)
C. GROUNDCOVER					
G1	*CALLUNA	HEATHER	1 GAL	36	24" O.C.(B1,H1)
G2	*FESTUCA GLAUCA 'ELIJAH BLUE'	BLUE FESCUE	1 GAL	20	24" O.C.(B1,H1)
G3	*LIRIOPE	LILYTYRF	1 GAL	60	24" O.C.(B1,H1)
D. GREEN ROOF PLANTS					
G4	CAREX TESTACEA	ORANGE NEW ZEALAND SEDGE	1 GAL	16	24" O.C.(B1)
G5	OPHIOPOGON PLANISCAPUS 'NIGRESCENS'	BLACK MONDO GRASS	1 GAL	16	24" O.C.(B1,H1)
G6	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	1 GAL	16	24" O.C.(B1)

NOTE:
1. * MEANS DROUGHT- TOLERANT PLANT SPECIES AND FROM SEATTLE GREEN FACTOR PLANT LIST
2. TREES PLANTED PER CITY OF SEATTLE PLANT 100A
3. EXISTING SOIL AMENDED PER CITY OF SEATTLE PLANT 142 AND DPD DIRECT'S RULE 10-2011 A1

2 L-1 **PLANTING LEGEND**

SDOT URBAN FORESTRY
Landscape Architect Office
Seattle Department of Transportation
Street trees conceptual design review

☑ CONCEPTUAL APPROVAL ☐ REVISE AND RESUBMIT ☐ REJECTED

UF Record # 0002188 SIP #
Subject to permit issuance for pruning, removal, and submittal approval for planting
BY Cindy KOZAK DATE 9/23/2021

CHC ARCHITECTS
10915 NE 123rd LN #B312
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SEATTLE WA 98104

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
SIGNATURE
Josephine Chung-Chen Liao
CERTIFICATE NO. 905

NUMBER	DATE	DESCRIPTION OF REVISIONS

SHEET TITLE
LANDSCAPE PLAN

JOB NUMBER

SHEET NUMBER
L-1

LEGAL DESCRIPTION

PER QUIT CLAIM DEED RECORDING NO. 20150608001195, RECORDS OF KING COUNTY, WASHINGTON.

LOT 14, BLOCK 1, SYNDICATE ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 2 OF PLATS, PAGE 44, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

REFERENCES

R1 = SDOT RECORD DRAWING, VAULT PLAN NO. 774–775, FIRST HILL STREETCAR PROJECT

HORIZONTAL DATUM - NAD 83 (2011)

MONUMENT #1
OWNER: CITY OF SEATTLE
ID: N/A
DESCRIPTION: CASED CONCRETE MON W/BRASS PIN, DOWN 0.7'
LOCATION: INTX 10TH AVE S & S KING ST
N: 221799.11
E: 1273732.05

MONUMENT #2
OWNER: CITY OF SEATTLE
ID: N/A
DESCRIPTION: CASED CONCRETE MON W/BRASS PIN, DOWN 1.0'
LOCATION: INTX S KING ST & 12TH AVE S
N: 221785.95
E: 1274328.05

VERTICAL DATUM - NAVD 88

VERTICAL BENCHMARK #1
SOURCE: CITY OF SEATTLE
ID: SNV–2503
DESCRIPTION: BRASS CAP
LOCATION: 15'S & 1' W OF BKCW AT SE COR OF INTX E SPRUCE ST & 12TH AVE
ELEVATION: 230.06'

VERTICAL BENCHMARK #2
SOURCE: CITY OF SEATTLE
ID: SNV–5129
DESCRIPTION: BRASS CAP
LOCATION: 0.5' N OF MID PT OF CURVE OF INTX BKCW IN THE SW COR S DEARBORN ST & 9TH AVE S
ELEVATION: 76.44'

VERTICAL BENCHMARK #3
SOURCE: SITE BENCHMARK
ID: N/A
DESCRIPTION: PK NAIL WITH TAG IN POWER POLE #1010
LOCATION: NORTH SIDE OF S KING ST NEAR SE CORNER OF SITE
ELEVATION: 170.86'

SURVEYOR'S NOTES

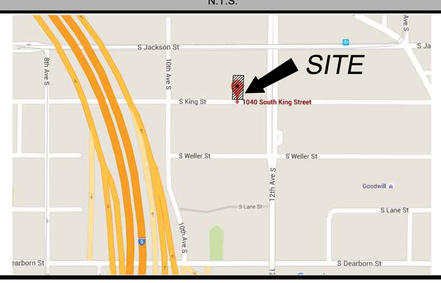
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN JULY OF 2016. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. BURIED UTILITIES SHOWN BASED ON RECORDS FURNISHED BY OTHERS AND VERIFIED WHERE POSSIBLE IN THE FIELD. GEODIMENSIONS ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS OR ACCEPT RESPONSIBILITY FOR UNDERGROUND LINES WHICH ARE NOT MADE PUBLIC RECORD. FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO DESIGN CONTACT THE UTILITY OWNER/AGENCY. AS ALWAYS, CALL 1–800–424–5555 BEFORE CONSTRUCTION.
4. SUBJECT PROPERTY TAX PARCEL NO. 817010–0070.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 6,000± S.F. (0.14± ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. INSTRUMENTATION FOR THIS SURVEY WAS A TRIMBLE ELECTRONIC DISTANCE MEASURING UNIT. PROCEDURES USED IN THIS SURVEY WERE DIRECT AND REVERSE ANGLES, NO CORRECTION NECESSARY. MEETS STATE STANDARDS SET BY WAC 332–130–090.

LEGEND

	ASPHALT SURFACE
	BENCHMARK
	BUILDING
	CENTERLINE ROW
	CONCRETE SURFACE
ET	ELECTRICAL TRANSFORMER
EV	ELECTRICAL VAULT
	FENCE LINE (CHAIN LINK/IRON)
	FIRE HYDRANT
	GAS VALVE
	GUY ANCHOR
MH	MAINTENANCE HOLE (AS NOTED)
MW	MONITORING WELL
	FOUND MONUMENT IN CASE
	NAIL AS NOTED
PP	POWER POLE
PP	POWER POLE W/ LIGHT
	REBAR & CAP (SET)
	SIGN (AS NOTED)
BO	WATER BLOW OFF
	WATER GATE VALVE
WM	WATER METER
WV	WATER VALVE
CALC'D	CALCULATED DISTANCE
CRW	CONCRETE RETAINING WALL
DWY	DRIVEWAY
ECD	ELECTRICAL CONDUIT
ECO	ECOLOGY
FF	FINISHED FLOOR
G	GAS LINE
OHP/OHT	OVERHEAD POWER/TEL
PS	PIPE SEWER COMBINED
(R)	RECORD DATA
SSMH	SANITARY SEWER MANHOLE
SSS	SANITARY SIDE SEWER
TD	TELEPHONE DUCT

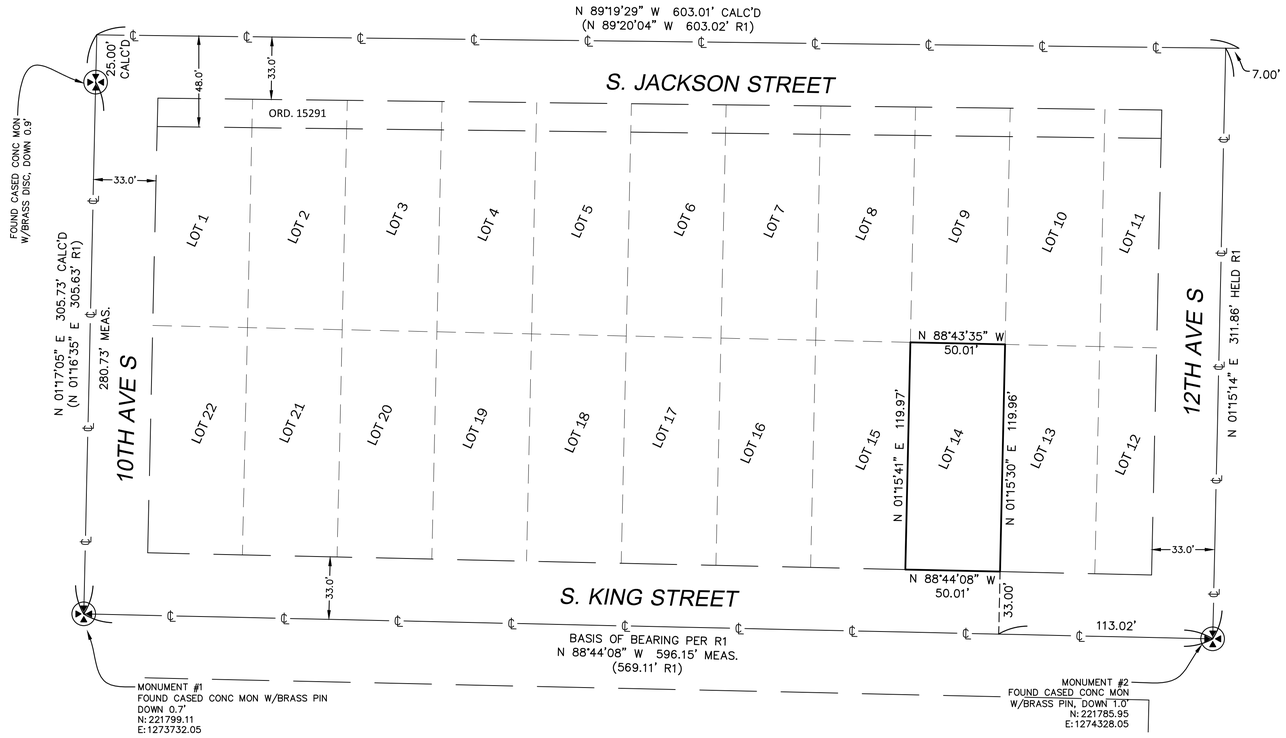
VICINITY MAP

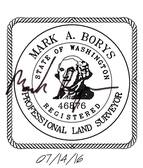
N.T.S.



CONTROL MAP

SCALE: 1" = 40'





07/14/16

Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net

NO	REVISION	DATE

TOPOGRAPHIC & BOUNDARY SURVEY
SW 1/4, NE 1/4 SEC 5, TWP. 24N., RGE 4E., W.M.

ADAM CHONG

1040 S KING ST
SEATTLE, WASHINGTON

JOB NO.:	160698
DATE:	7/14/16
DRAFTED BY:	TLR
CHECKED BY:	MAB/JGM
SCALE:	1" = 40'

N

10 0 5 10

(IN FEET)
1 inch = 10 ft.

METAL FENCE ON 8"CRW

SET PK NAIL W/WASHER LS #46876, 1.0' N OF CORNER

BUILDING CORNER IS 0.3' E OF LOT CORNER

RAZOR WIRE ALONG TOP OF BLDG

RR TIE

BOTTOM OF ECO BLOCKS

ROOF ELEV= 193.1'

4.2'

N 88°43'36" W 50.01' (50.00' PLAT)

BUILDING CORNER ON LOT CORNER

ROOF ELEV= 194.4'

4.8'

FENCE 0.3' E

1.9'

0.3' E

N 01°15'41" E 119.97' (120.00' PLAT)

N 01°15'30" E 119.96' (120.00' PLAT)

1.5'

1.6'

LOT 15

LOT 14

LOT 13

LOT 12

GRAVEL PARKING LOT

GRAVEL PARKING LOT

TAX #817010-0070
ADDRESS: 1040 S KING ST

TAX #817010-0075
ADDRESS: 1034 S KING ST

TAX #817010-0060

SUPPORT POLES

1.2'

OVERHEAD SIGN

0.8'

IRON FENCE 3.0' E

NOTE: OHP ELEVATIONS COLLECTED 7-7-16 AT 2:55 PM, TEMP=73°

BUILDING CORNER IS 0.1' S, 0.1' E OF LOT CORNER

ROOF ELEV= 179.1'

FF ELEV= 165.6'

ROOF ELEV= 179.8'

BOTTOM OF ECO BLOCKS

N 88°44'08" W 50.01' (50.00 PLAT)

BROKEN CONCRETE WALLS

CONC WALK

GRAVEL

PST

I BEAM POST SIGN "2HR PRKG"

SET PK NAIL W/WASHER LS #46876, 2.0' S. OF CORNER

SET REBAR & CAP LS #46876

12"CRW

6" CONC WALK

TRANSFORMER ON POLE, TOP EL=200.4' 4 VERT. PIPES ON E. SIDE OF POLE

PP #1008

PP #1010 W/RISER

SITE BENCHMARK EL=170.86'

TRANSFORMER ON POLE, TOP EL=208.8

6" CURB

CONC DWY

33.00'

N 01°15'30" E

33' ROW

SSMH RIM=154.14
12" E & W
CTR CHAN=137.44

S. KING STREET

CONC SEAMS

SSMH RIM=173.16
12" E & W
CTR CHAN=153.26

MONUMENT #2
FOUND CONC MON W/BRASS PIN

113.02'
N 88°44'08" W

2"G

11"x11"TD

2"ECD

30 MIN LOADING

2HR PRKG

5" EXTRUDED CURB

AWNING W/SIGNAGE

CONC WALK

ASPHALT

GATE

6"CRW

FF ELEV= 168.1'

FF ELEV= 168.8'

TAX #817010-0240

TAX #817010-0245

TAX #817010-0251

MARK A. BOBYS
STATE OF WASHINGTON
46876
REGISTERED
PROFESSIONAL LAND SURVEYOR
07/14/16

Terrane
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2 OF 2