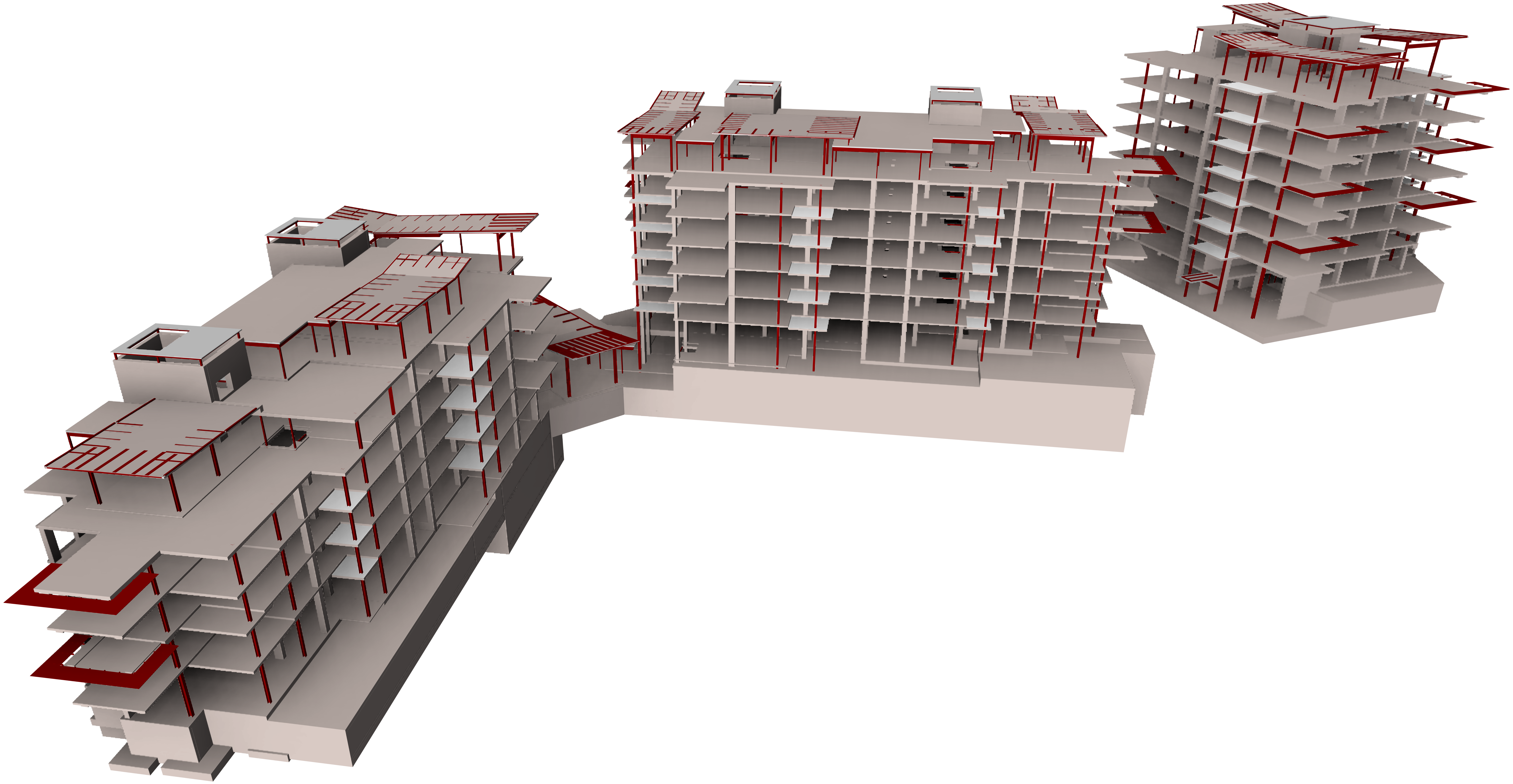


SOMMET BLANC

Magnusson Klemencic Associates

CONSTRUCTION DOCUMENTS

DAVID C. FIELDS
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect ____
project manager ____
drawn by ____
checked by ____
job no. 20052
date 11/18/2022

revisions:

no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

11/18/2022

COVER

S0.00

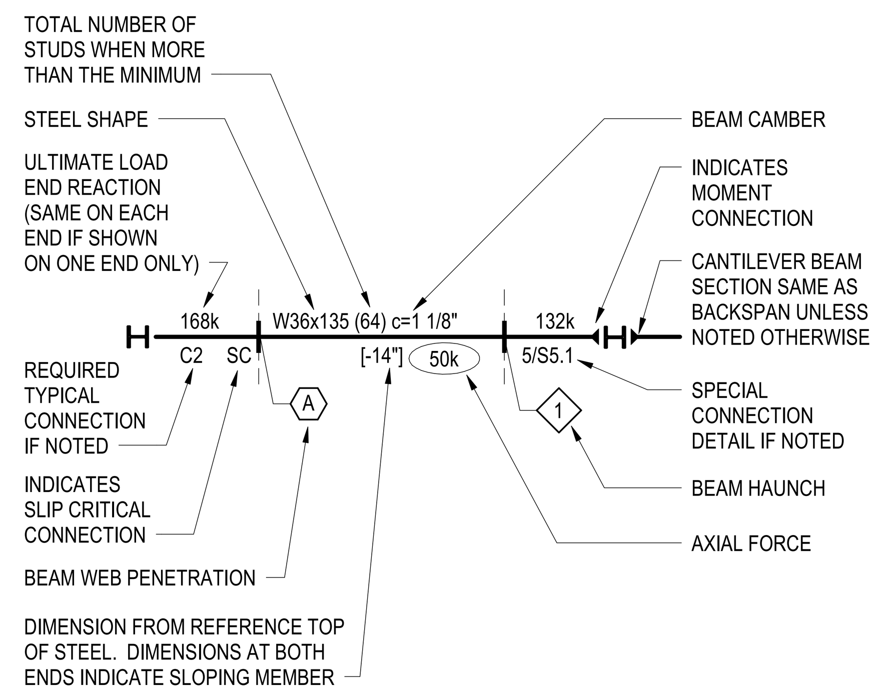
16 ABBREVIATIONS

&	AND
@	AT
°, DEG	DEGREE
ø, DIA	DIAMETER
#	NUMBER, POUND
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT
AESS	ARCHITECTURAL EXPOSED STRUCTURAL STEEL
AGGR	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
APPD	APPROVED
APPROX	APPROXIMATE
AR	ANCHOR RODS
ARCH	ARCHITECTURAL; ARCHITECT
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BAL	BALANCE
BD	BOARD
BF	BRACED FRAME
BLDG	BUILDING
BLK	BLOCK; BLOCKING
BM	BEAM
BMU	BRICK MASONRY UNIT
BOS	BOTTOM OF STEEL; BOSOM (WELD)
BOT	BOTTOM
BRCG	BRACING
BRG	BEARING
BRKT	BRACKET
BSMT	BASEMENT
BTWN	BETWEEN
BU	BUILT-UP
c	CAMBER
C	STANDARD CHANNEL
CANT	CANTILEVER
CC	CENTER TO CENTER
CG	CENTER OF GRAVITY
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION WELD
CL	CENTERLINE
CLR	CLEARANCE; CLEAR
CLT	CROSS LAMINATED TIMBER
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPRESSION
CONC	CONCRETE
CONFIG	CONFIGURATION
CONN	CONNECTION; CONNECT
CONST	CONSTRUCTION
CONT	CONTINUE; CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE; COORDINATION
CORR	CORRUGATED
CP, CJP	COMPLETE JOINT PENETRATION WELD
CTR	CENTER
CTSK	COUNTERSINK; COUNTERSUNK
CU	CUBIC
d	PENNY (NAIL)
db	NOMINAL BAR DIAMETER (INCHES)
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DC	DEMAND CRITICAL WELD
DEG, °	DEGREE
DEMO	DEMOLISH; DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DIA, ø	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DICA	DRILLED-IN CONCRETE ANCHOR
DIM	DIMENSION
DISC	DISCONTINUED; DISCONTINUOUS
DL	DEAD LOAD
DLT	DOWEL LAMINATED TIMBER
DN	DOWN
DO	DITTO
DWG	DRAWING
DWL	DOWEL
(E)	EXISTING
E	EAST
E-W	EAST-WEST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBEDDED
ENGR	ENGINEER
EQ	EQUAL; EARTHQUAKE
EQUIP	EQUIPMENT
ES	EACH SIDE
ETC	ET CETERA
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EXTD	EXTEND; EXTENDED
F	DEGREES FAHRENHEIT
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FAR FACE
FFE	FINISH FLOOR ELEVATION
FG	FRICTION GRIP BOLT
FIN	FINISH
FL	FLOOR; FLOOR LINE
FLG	FLANGE
FOS	FACE OF STUD
FP	FIREPROOF; FULL PENETRATION
FRMG	FRAMING
FS	FULL SIZE; FAR SIDE
FT	FOOT; FEET
FTG	FOOTING
FV	FIELD VERIFY
GA	GAGE, GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GFRC	GLASS FIBER REINFORCED CONCRETE
GL	GLUED LAMINATED (BEAM)
GR	GRADE
GRND	GROUND
H	HORIZONTAL
HEF	HORIZONTAL EACH FACE
HGR	HANGER
HIF	HORIZONTAL INSIDE FACE
HOF	HORIZONTAL OUTSIDE FACE
HORIZ	HORIZONTAL
HP	HP SHAPES; HIGH POINT
HS	HIGH STRENGTH
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
ICC	INTERNATIONAL CODE COUNCIL
ID	INSIDE DIAMETER
IN	INCH
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP (1,000 POUNDS)
KO	KNOCK-OUT
KSI	KIPS PER SQUARE INCH

L	ANGLE
LAB	LABORATORY
LB, #	POUND
LF	LINEAL FOOT
LIN	LINEAL; LINEAR
LL	LIVE LOAD
LLBB	LONG LEGS BACK-TO-BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION; LOCATE
LONGIT	LONGITUDINAL
LP	LOW POINT
LSL	LONG SLOTTED (HOLES)
LSW	LIGHT GAGE SHEAR WALL
LTWT	LIGHTWEIGHT
LVL	LEVEL
LWC	LIGHTWEIGHT CONCRETE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MC	MISCELLANEOUS CHANNEL
MECH	MECHANICAL
MEMB	MEMBRANE
MEP	MECHANICAL/ ELECTRICAL / PLUMBING
MEZZ	MEZZANINE
MF	MOMENT FRAME
MFB	MOMENT FRAME BEAM
MFC	MOMENT FRAME COLUMN
MFR	MANUFACTURE; MANUFACTURER
MFRG	MANUFACTURING
MIN	MINIMUM; MINUTE
MISC	MISCELLANEOUS
ML	MATCH LINE
MO	MASONRY OPENING
MS	MECHANICAL SPLICE
N	NORTH
N-S	NORTH-SOUTH
NF	NEAR FACE
NIC	NOT IN CONTRACT
NLT	NAIL LAMINATED TIMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
NWC	NORMALWEIGHT CONCRETE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE (HAND)
OPT	OPTION; OPTIONAL
OVS	OVERSIZED (HOLES)
OWJ	OPEN WEB JOIST
P	PIPE
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PCP	PRECAST CONCRETE PANEL
PEN	PENETRATION
PERP	PERPENDICULAR
PH	PENTHOUSE
PJP, PP	PARTIAL JOINT PENETRATION WELD
PL	PLATE
PLC	PLACE
PLF	POUNDS PER LINEAL FOOT
PLYWD	PLYWOOD
PP, PJP	PARTIAL JOINT PENETRATION WELD
PREFAB	PREFABRICATED
PS	PRESTRESSED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST-TENSIONED
PV	PHOTOVOLTAICS
PVC	POLYVINYL CHLORIDE
R	RADIUS
RB	RISER BAR
RC	REINFORCED CONCRETE
RCMD	RECOMMEND
REF	REFERENCE
REINF	REINFORCE; REINFORCING; REINFORCEMENT
REQD	REQUIRED
REQT	REQUIREMENT
S1S	SURFACED ONE SIDE
S2S	SURFACED TWO SIDES
S4S	SURFACED FOUR SIDES
S	AMERICAN STANDARD SHAPE; SOUTH
SB	SPACER BAR; SUPPORT BAR
SC	SLIP CRITICAL
SCC	STRUCTURAL CONSULTANT TO THE CONTRACTOR
SCHED	SCHEDULE, SCHEDULED
SDQ	SPECIAL DUCTILE QUALITY
SECT	SECTION
SEOR	STRUCTURAL ENGINEER OF RECORD
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SLBB	SHORT LEGS BACK-TO- BACK
SOG	SLAB ON GRADE
SOSD	SLAB ON STEEL DECK
SP	SPIRAL
SPC	SPACE
SPCG	SPACING
SPEC	SPECIFICATION
SQ	SQUARE
SSL	SHORT SLOTTED (HOLES)
STD	STANDARD
STIFF	STIFFENER
STIRR	STIRRUP
STL	STEEL
STR	STRAIGHT
STRUC	STRUCTURAL
SUPT	SUPPORT
SW	SHEAR WALL
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T&R	TREAD AND RISER
TBD	TO BE DETERMINED
TEMP	TEMPERATURE; TEMPORARY
THK	THICK; THICKNESS
THRU	THROUGH
TOC	TOP OF CURB; TOP OF CONCRETE
TOF	TOP OF FOOTING
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRANS	TRANSVERSE
TYP	TYPICAL
UB	UNIVERSAL BEAM
UBC	UNIFORM BUILDING CODE
UC	UNIVERSAL COLUMN
UL	UNDERWRITERS' LABORATORY, INC.
UNO	UNLESS NOTED OTHERWISE
UT	ULTRASONIC TEST
V, VERT	VERTICAL
VEF	VERTICAL EACH FACE
VG	VERTICAL GRAIN
VIF	VERTICAL INSIDE FACE
VOF	VERTICAL OUTSIDE FACE
W	WIDE FLANGE; WIDE; WEST
W/	WITH
W/O	WITHOUT
WD	WOOD
WF	WIDE FLANGE
WH	WEEP HOLE
WL	WORK LINE
WP	WORK POINT
WPJ	WEAKENED PLANE JOINT
WT	WEIGHT; STRUCTURAL TEE CUT FROM W SHAPE
WWR	WELDED WIRE REINFORCING
YD	YARD

1

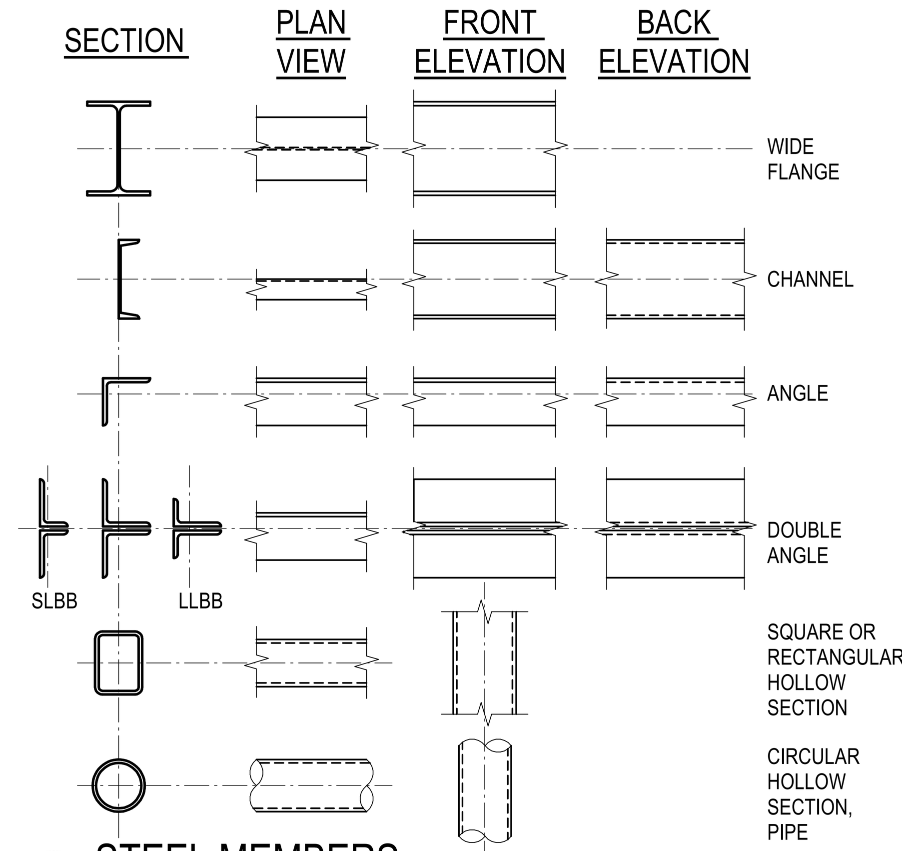
7 BEAM CALLOUT KEY



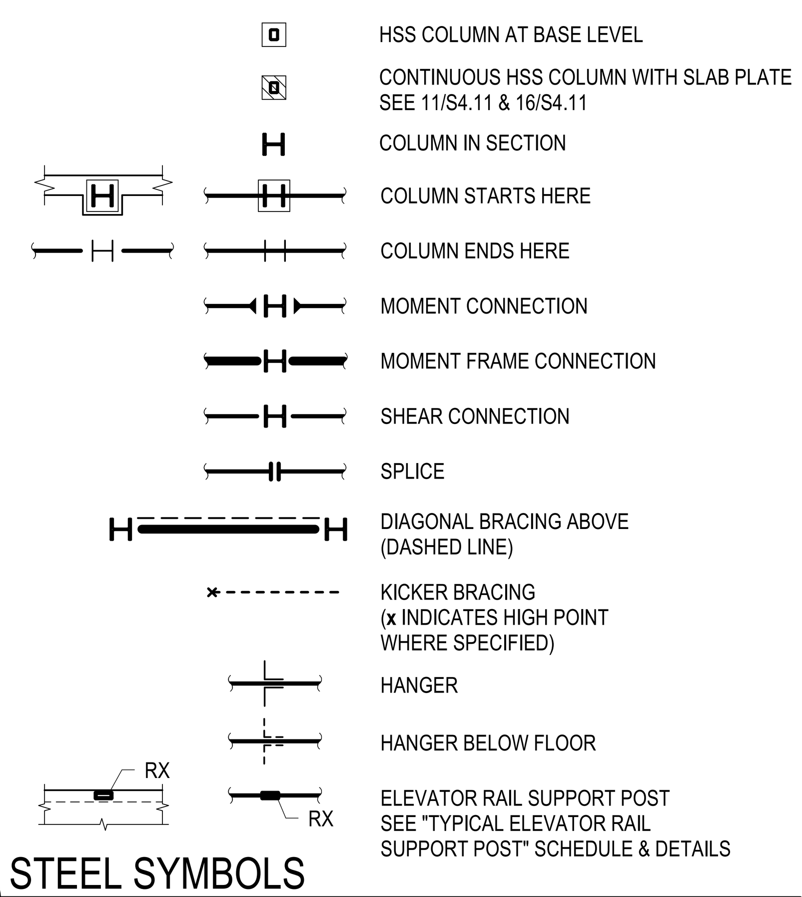
NOTES:

1. NO REACTION AT EITHER END INDICATES MINIMUM CONNECTION FOR BEAM DEPTH. SEE "GENERAL NOTES FOR STEEL CONNECTIONS".
2. SPACE STUDS PER "TYPICAL SHEAR STUD PLACEMENT" DETAIL.
3. "M" IN PLACE OF STEEL SHAPE INDICATES W10x12 WITH MINIMUM CONNECTION.
4. "HSS" IN PLACE OF STEEL SHAPE INDICATES HSS8x4x1/4.
5. "E" IN PLACE OF STEEL SHAPE INDICATES FRAMING PER "TYPICAL EXTENDED DECK EDGE" DETAILS.
6. WHERE NO BEAM SIZE IS CALLED OUT ADJACENT TO FLOOR OR ROOF OPENING, REFER TO TYPICAL STEEL DETAILS FOR SIZES AND CONNECTIONS.

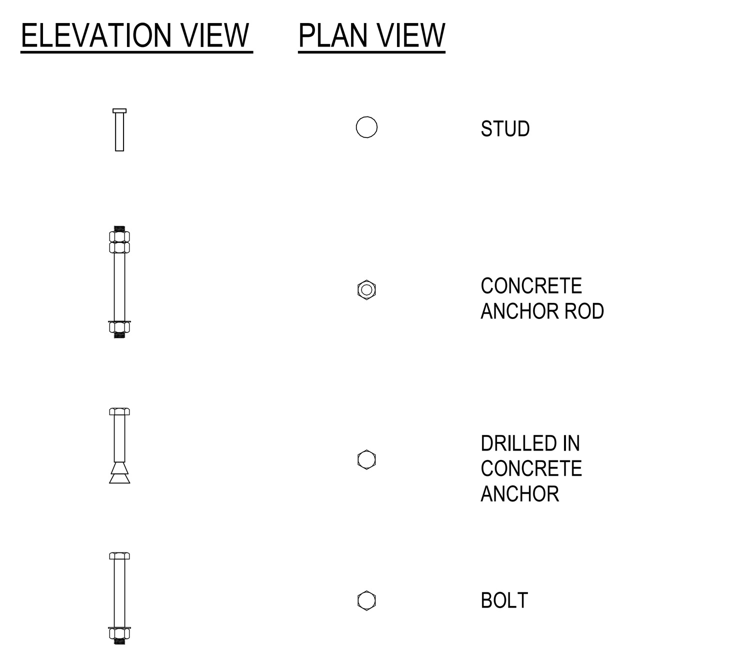
3 STEEL MEMBERS



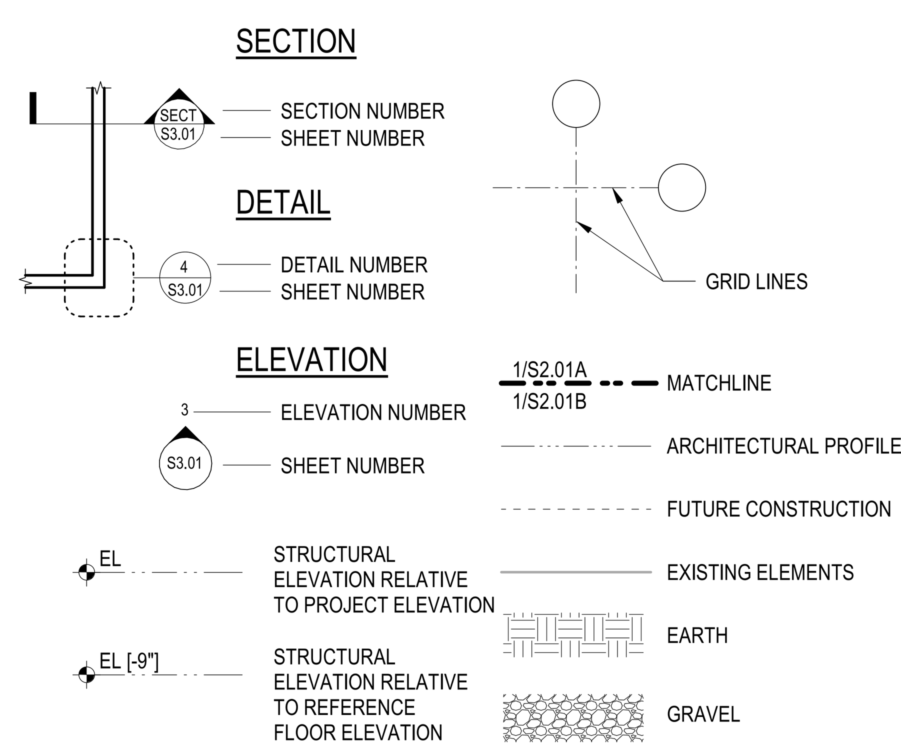
8 STEEL SYMBOLS



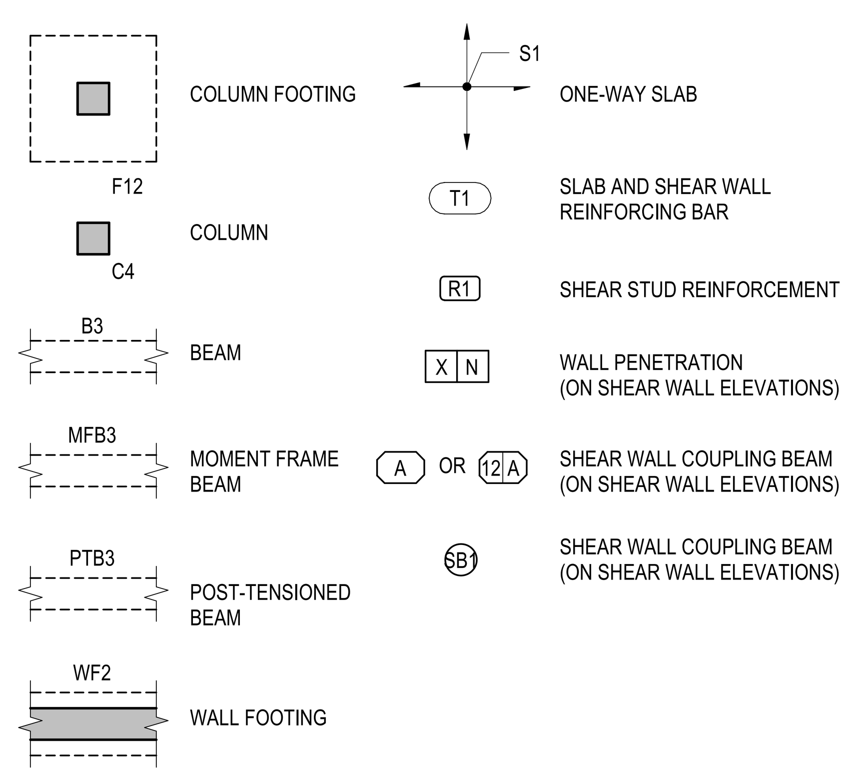
12 CONNECTORS



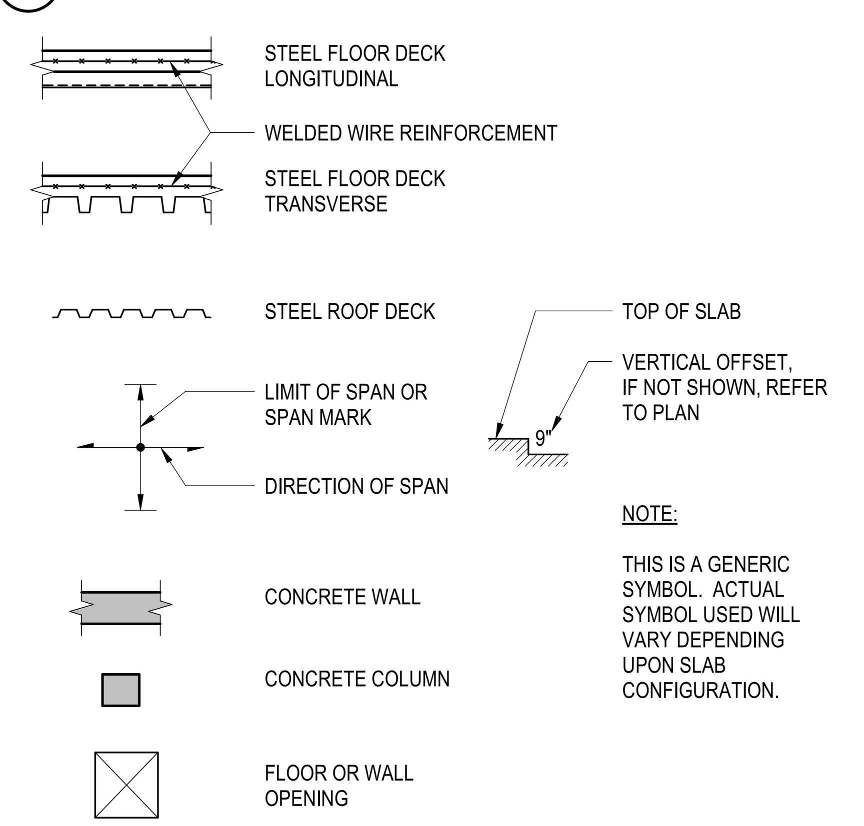
13 MISCELLANEOUS SYMBOLS



17 CONCRETE SCHEDULE MARKS



18 CONCRETE SYMBOLS



NOTE:

THIS IS A GENERIC SYMBOL. ACTUAL SYMBOL USED WILL VARY DEPENDING UPON SLAB CONFIGURATION.

19 DRAWING LIST

DRAWING LIST

SHEET NUMBER	SHEET NAME
S0.00	COVER
S0.01	ABBREVIATIONS, LEGENDS, AND DRAWING LIST
S0.02	REINFORCING DETAILS
S0.03	GENERAL NOTES
S0.04	GENERAL NOTES
S0.05	ISOMETRIC VIEWS
S0.06	ISOMETRIC VIEWS
S0.07	ISOMETRIC VIEWS
S0.08	ISOMETRIC VIEWS
S1.00	LOAD MAPS
S1.01	LOAD MAPS
S1.02	LOAD MAPS
S1.03	LOAD MAPS
S1.04	LOAD MAPS
S1.05	LOAD MAPS
S1.06	LOAD MAPS
S1.07	LOAD MAPS
S1.08	LOAD MAPS
S1.09	LOAD MAPS
S2.01	TOWER A & B LEVEL B1 COMPOSITE FRAMING PLAN
S2.02	TOWER A & B LEVEL P2 COMPOSITE FRAMING PLAN
S2.11	TOWER A LEVEL 1 & TOWER B LEVEL P1 COMPOSITE FRAMING PLAN
S2.12	TOWER A LEVEL 2 & TOWER B LEVEL 1 COMPOSITE FRAMING PLAN
S2.A.01	TOWER A LEVEL B1 FRAMING PLAN
S2.A.01.B	TOWER A LEVEL B1 LONGITUDINAL REINFORCING PLAN
S2.A.01.V	TOWER A LEVEL B1 SHEAR REINFORCING PLAN
S2.A.02	TOWER A LEVEL P2 FRAMING PLAN
S2.A.02.R	TOWER A LEVEL P2 REINFORCING PLAN
S2.A.11	TOWER A LEVEL 1 FRAMING PLAN
S2.A.11.R	TOWER A LEVEL 1 REINFORCING PLAN
S2.A.12	TOWER A LEVEL 2 FRAMING PLAN
S2.A.12.R	TOWER A LEVEL 2 REINFORCING PLAN
S2.A.13	TOWER A LEVEL 3 FRAMING PLAN
S2.A.13.R	TOWER A LEVEL 3 REINFORCING PLAN
S2.A.14	TOWER A LEVEL 4 FRAMING PLAN
S2.A.14.R	TOWER A LEVEL 4 REINFORCING PLAN
S2.A.15	TOWER A LEVEL 5 FRAMING PLAN
S2.A.15.R	TOWER A LEVEL 5 REINFORCING PLAN
S2.A.16	TOWER A LEVEL 6 FRAMING PLAN
S2.A.16.R	TOWER A LEVEL 6 REINFORCING PLAN
S2.A.17	TOWER A ROOF FRAMING PLAN
S2.A.18	TOWER A EMBEDDED HSS ROOF FRAMING PLAN
S2.A.50	TOWER A PARTIAL PLANS
S2.AB.01	TOWER A & B PARKING LEVEL 2 FRAMING PLAN
S2.AB.11	AB CONNECTOR LEVEL 1 FRAMING PLAN
S2.AB.11.R	AB CONNECTOR LEVEL 1 REINFORCING PLAN
S2.AB.12	AB CONNECTOR ROOF FRAMING PLAN
S2.AB.13	AB CONNECTOR EMBEDDED HSS ROOF FRAMING PLAN
S2.B.01	TOWER B LEVEL B1 FRAMING PLAN
S2.B.01.B	TOWER B LEVEL B1 LONGITUDINAL REINFORCING PLAN
S2.B.01.V	TOWER B LEVEL B1 SHEAR REINFORCING PLAN
S2.B.02	TOWER B LEVEL P2 FRAMING PLAN
S2.B.02.B	TOWER B LEVEL P2 MAT LONGITUDINAL REINFORCING PLAN
S2.B.02.R	TOWER B LEVEL P2 REINFORCING PLAN
S2.B.02.V	TOWER B LEVEL P2 MAT SHEAR REINFORCING PLAN
S2.B.03	TOWER B LEVEL P1 FRAMING PLAN
S2.B.03.R	TOWER B LEVEL P1 REINFORCING PLAN
S2.B.11	TOWER B LEVEL 1 FRAMING PLAN
S2.B.11.R	TOWER B LEVEL 1 REINFORCING PLAN
S2.B.12	TOWER B LEVEL 2 FRAMING PLAN
S2.B.12.R	TOWER B LEVEL 2 REINFORCING PLAN
S2.B.13	TOWER B LEVEL 3 FRAMING PLAN
S2.B.13.R	TOWER B LEVEL 3 REINFORCING PLAN
S2.B.14	TOWER B LEVEL 4 FRAMING PLAN
S2.B.14.R	TOWER B LEVEL 4 REINFORCING PLAN
S2.B.15	TOWER B LEVEL 5 FRAMING PLAN
S2.B.15.R	TOWER B LEVEL 5 REINFORCING PLAN
S2.B.16	TOWER B LEVEL 6 FRAMING PLAN
S2.B.16.R	TOWER B LEVEL 6 REINFORCING PLAN
S2.B.17	TOWER B LEVEL 7 FRAMING PLAN
S2.B.17.R	TOWER B LEVEL 7 REINFORCING PLAN
S2.B.18	TOWER B ROOF FRAMING PLAN
S2.B.19	TOWER B EMBEDDED HSS ROOF FRAMING PLAN
S2.B.50	TOWER B PARTIAL PLANS
S2.C.01	TOWER C FOUNDATION LEVEL FRAMING PLAN
S2.C.01.B	TOWER C FOUNDATION LONGITUDINAL REINFORCING PLAN
S2.C.01.V	TOWER C FOUNDATION SHEAR REINFORCING PLAN
S2.C.11	TOWER C LEVEL 1 FRAMING PLAN
S2.C.11.R	TOWER C LEVEL 1 REINFORCING PLAN
S2.C.12	TOWER C LEVEL 2 FRAMING PLAN
S2.C.12.R	TOWER C LEVEL 2 REINFORCING PLAN
S2.C.13	TOWER C LEVEL 3 FRAMING PLAN
S2.C.13.R	TOWER C LEVEL 3 REINFORCING PLAN
S2.C.14	TOWER C LEVEL 4 FRAMING PLAN
S2.C.14.R	TOWER C LEVEL 4 REINFORCING PLAN
S2.C.15	TOWER C LEVEL 5 FRAMING PLAN
S2.C.15.R	TOWER C LEVEL 5 REINFORCING PLAN
S2.C.16	TOWER C LEVEL 6 FRAMING PLAN
S2.C.16.R	TOWER C LEVEL 6 REINFORCING PLAN
S2.C.17	TOWER C LEVEL 7 FRAMING PLAN
S2.C.17.R	TOWER C LEVEL 7 REINFORCING PLAN
S2.C.18	TOWER C LEVEL 8 FRAMING PLAN
S2.C.18.R	TOWER C LEVEL 8 REINFORCING PLAN
S2.C.19	TOWER C ROOF LEVEL FRAMING PLAN
S2.C.20	TOWER C EMBEDDED HSS FRAMING PLAN
S2.C.50	TOWER C PARTIAL PLANS

DRAWING LIST

SHEET NUMBER	SHEET NAME
S3.30	TOWER A & B BASEMENT WALL ELEVATIONS
S3.31	TOWER A & B BASEMENT WALL ELEVATIONS
S3.32	TOWER A & B BASEMENT WALL ELEVATIONS
S3.33	TOWER A & B BASEMENT WALL ELEVATIONS
S3.35	TOWER A & B BASEMENT WALL SECTIONS
S3.40	TOWER C BASEMENT WALL ELEVATIONS
S3.45	TOWER C BASEMENT WALL SECTIONS
S3.A1	TOWER A WEST CORE WALL ELEVATIONS
S3.A2	TOWER A EAST CORE WALL ELEVATIONS
S3.A10	TOWER A WEST CORE WALL SECTIONS
S3.A11	TOWER A WEST CORE WALL SECTIONS
S3.A20	TOWER A EAST CORE WALL SECTIONS
S3.A21	TOWER A EAST CORE WALL SECTIONS
S3.B1	TOWER B NORTH CORE WALL ELEVATIONS
S3.B2	TOWER B SOUTH CORE WALL ELEVATIONS
S3.B10	TOWER B NORTH CORE WALL SECTIONS
S3.B11	TOWER B NORTH CORE WALL SECTIONS
S3.B20	TOWER B SOUTH CORE WALL SECTIONS
S3.B21	TOWER B SOUTH CORE WALL SECTIONS
S3.C1	TOWER C SHEAR WALL ELEVATIONS
S3.C2	TOWER C SHEAR WALL ELEVATIONS
S3.C10	TOWER C SHEAR WALL SECTIONS
S3.C20	TOWER C SHEAR WALL SECTIONS
S4.00	COLUMN SCHEDULES
S4.01	TYPICAL CONCRETE COLUMN DETAILS
S4.02	TYPICAL CONCRETE DETAILS
S4.03	TYPICAL CONCRETE BEAM DETAILS AND SCHEDULE
S4.04	TYPICAL MILD SLAB DETAILS
S4.05	TYPICAL POST-TENSIONED SLAB DETAILS
S4.06	TYPICAL STUD RAIL DETAILS AND SCHEDULE
S4.07	TYPICAL OPENINGS AND EMBEDMENTS IN CONCRETE
S4.08	TYPICAL SHEAR WALL DETAILS
S4.09	TYPICAL COUPLING BEAM DETAILS AND SCHEDULES
S4.11	TYPICAL STEEL DETAILS
S4.12	TYPICAL STEEL DETAILS
S4.13	TYPICAL STEEL BEAM CONNECTIONS TO CONCRETE
S4.14	TYPICAL STEEL DECK DETAILS
S4.15	TYPICAL STEEL DECK DETAILS
S4.16	TYPICAL STEEL DETAILS
S4.21	TYPICAL NON-LOAD BEARING CMU WALL DETAILS
S4.22	TYPICAL NON-LOAD BEARING CMU WALL DETAILS
S4.A.10	TOWER A STEEL COLUMN SCHEDULE
S4.B.10	TOWER B STEEL COLUMN SCHEDULE
S4.C.10	TOWER C STEEL COLUMN SCHEDULE
S5.00	TOWER A & B CONCRETE SECTIONS AND DETAILS
S5.01	TOWER A & B CONCRETE SECTIONS AND DETAILS
S5.05	TOWER C CONCRETE SECTIONS AND DETAILS
S5.06	TOWER C CONCRETE SECTIONS AND DETAILS
S6.00	TOWER A & B STEEL SECTIONS AND DETAILS
S6.05	TOWER C STEEL SECTIONS AND DETAILS

DAVID C. FIELDS 12385783-2203 STATE OF UTAH

Reserved for permit stamp

Olson Kundig

159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project: SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect

project manager

drawn by

checked by

job no. 20052

date 11/18/2022

revisions:

no.	date		by
1	11/18/2022	IFC	

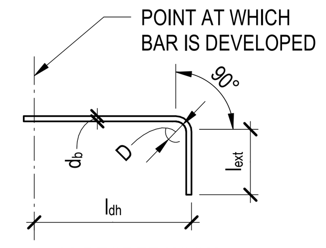
CONSTRUCTION DOCUMENTS

11/18/2022

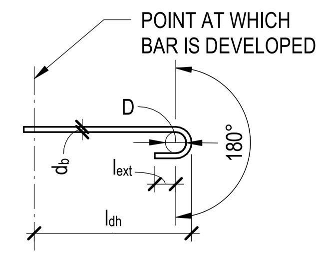
ABBREVIATIONS, LEGENDS, AND DRAWING LIST

S0.01

STANDARD HOOK			
ALL GRADES (D) FINISHED BEND DIAMETER			
BAR SIZE	D	90° HOOKS	180° HOOKS
		lext	lext
#3	2.25	4.5	2.5
#4	3	6	2.5
#5	3.75	7.5	2.5
#6	4.5	9	3
#7	5.25	10.5	3.5
#8	6	12	4
#9	9	13.5	4.5
#10	10.25	15.25	5
#11	11.25	17	5.75
#14	17	20.25	6.75
#18	22.5	27	9



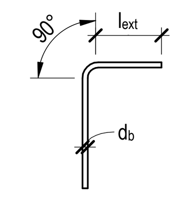
90 DEGREE HOOK



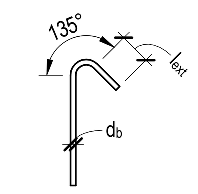
180 DEGREE HOOK

2 TYPICAL STANDARD HOOK GEOMETRY

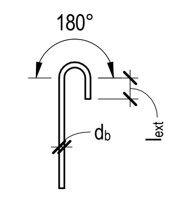
STANDARD HOOK FOR STIRRUPS, TIES, AND HOOPS				
ALL GRADES (D) FINISHED BEND DIAMETER				
BAR SIZE	D	90° HOOKS	135° HOOKS	180° HOOKS
		lext	lext	lext
#3	1.5	3	3	2.5
#4	2	3	3	2.5
#5	2.5	3.75	3.75	2.5
#6	4.5	9	4.5	3
#7	5.25	10.5	5.25	3.5
#8	6	12	6	4



90 DEGREE HOOK



135 DEGREE HOOK



180 DEGREE HOOK

3 STANDARD HOOK GEOMETRY FOR STIRRUPS, TIES, AND HOOPS

NOTES:

1. NOTATIONS:
   db: NOMINAL BAR DIAMETER (INCHES)
   Ld: TENSION DEVELOPMENT LENGTH (INCHES) FOR REINFORCEMENT SATISFYING THE FOLLOWING REQUIREMENTS:
   SLABS AND WALLS: CLEAR SPACING > 2db, AND CONCRETE CLEAR COVER > db
   BEAMS AND COLUMNS: CLEAR SPACING > db, AND CONCRETE CLEAR COVER > db
   Lt: DEVELOPMENT LENGTH OF BARS IN THICK CONCRETE = 1.3 X Ld (INCHES)
   Lb: DEVELOPMENT LENGTH OF BARS OR DOWELS IN COMPRESSION = 19 X db (INCHES)
   Lc: TIED COLUMN LAP SPLICE IN COMPRESSION = 30 X db (INCHES)
   Lcs: SPIRAL COLUMN LAP SPLICE IN COMPRESSION = 22.5 X db (INCHES)
   Lsb: TYPICAL LAP SPLICE LENGTH = 1.3 X Ld (INCHES)
   Lsbt: LAP SPLICE LENGTH OF HORIZONTAL BARS IN THICK CONCRETE = 1.69 X Ld (INCHES)
   Ldh: DEVELOPMENT LENGTH IN TENSION OF STANDARD HOOK, WITH SIDE COVER ≥ 2 1/2" AND END COVER ≥ 2"
   Ldt: DEVELOPMENT LENGTH IN TENSION OF HEADED BAR
2. MULTIPLY VALUES IN THE TABLE BY 1.5 IF CLEAR SPACING OR CONCRETE COVER DO NOT MEET THE REQUIREMENTS FOR Ld IN NOTE 1.
3. "HORIZONTAL BARS IN THICK CONCRETE" REFERS TO BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW. THIS INCLUDES BEAMS, SLABS, FOUNDATIONS, AND WALLS.
4. #14 AND #18 BARS SHALL NOT BE LAP SPLICED. SEE "GENERAL NOTES."
5. MULTIPLY VALUES IN THE TABLE BY 1.33 FOR USE WITH LIGHTWEIGHT AGGREGATE CONCRETE. FOR EPOXY COATED REINFORCEMENT, MULTIPLY VALUES IN THE TABLES BY 1.5 AND WITH EXCEPTION TO Ldh WHICH IS TO BE MULTIPLIED BY 1.2.
6. FOR EPOXY COATED REINFORCEMENT, MULTIPLY VALUES IN THE TABLES BY 1.5 AND WITH EXCEPTION TO Ldh WHICH IS TO BE MULTIPLIED BY 1.2.
7. WHEN BARS OF DIFFERENT SIZES ARE LAP SPLICED IN TENSION, SPLICE LENGTH SHALL BE THE LARGER OF Ld OF LARGER BAR AND Lsb OF SMALLER BAR, OR Lt AND Lsbt FOR BARS IN THICK CONCRETE.

4 REINFORCING BAR DEVELOPMENT AND SPLICE LENGTH NOTES

f'c = 4,000 PSI / GRADE 60						
BAR SIZE	Ld	Lt	Lsb	Lsbt	Ldt	Ldh
#3	15	19	19	25	6	7
#4	19	25	25	33	8	11
#5	24	31	31	41	11	15
#6	29	37	37	49	15	20
#7	42	54	54	71	18	25
#8	48	62	62	81	22	30
#9	54	70	70	91	27	36
#10	61	79	79	102	32	43
#11	67	87	87	114	37	51
#14	81	105	-	-	-	66
#18	108	140	-	-	-	102

f'c = 5,000 PSI / GRADE 60						
BAR SIZE	Ld	Lt	Lsb	Lsbt	Ldt	Ldh
#3	13	17	17	22	6	7
#4	17	23	23	29	8	11
#5	22	28	28	36	11	15
#6	26	34	34	44	14	19
#7	38	49	49	63	18	24
#8	43	56	56	72	22	29
#9	48	63	63	81	26	35
#10	54	71	71	92	31	42
#11	60	78	78	102	36	49
#14	72	94	-	-	-	64
#18	96	125	-	-	-	98

f'c = 6,000 PSI / GRADE 60						
BAR SIZE	Ld	Lt	Lsb	Lsbt	Ldt	Ldh
#3	12	16	16	20	6	7
#4	16	21	21	27	8	10
#5	20	26	26	33	11	14
#6	24	31	31	40	14	19
#7	34	45	45	58	17	24
#8	39	51	51	66	21	29
#9	44	57	57	74	25	34
#10	50	64	64	84	30	41
#11	55	71	71	93	35	48
#14	66	86	-	-	-	63
#18	88	114	-	-	-	96

ALL CONCRETE STRENGTHS / GRADE 60			
BAR SIZE	Lb	Lc	Lcs
#3	8	12	9
#4	9	15	12
#5	12	19	15
#6	14	23	17
#7	16	27	20
#8	18	30	23
#9	21	34	26
#10	23	39	29
#11	26	43	32
#14	31	-	-
#18	41	-	-

f'c = 8,000 PSI / GRADE 60						
BAR SIZE	Ld	Lt	Lsb	Lsbt	Ldt	Ldh
#3	12	14	14	18	6	6
#4	14	18	18	23	7	9
#5	17	22	22	29	9	13
#6	21	27	27	35	12	16
#7	30	39	39	50	15	20
#8	34	44	44	57	18	25
#9	38	50	50	64	22	30
#10	43	56	56	72	26	35
#11	48	62	62	80	30	41
#14	57	74	-	-	-	54
#18	76	99	-	-	-	83

f'c = 10,000 PSI / GRADE 60						
BAR SIZE	Ld	Lt	Lsb	Lsbt	Ldt	Ldh
#3	12	12	12	16	6	6
#4	12	16	16	21	6	8
#5	15	20	20	26	8	11
#6	18	24	24	31	11	15
#7	27	35	35	45	14	18
#8	30	39	39	51	16	22
#9	34	44	44	58	20	27
#10	39	50	50	65	23	32
#11	43	55	55	72	27	37
#14	51	67	-	-	-	49
#18	68	89	-	-	-	74

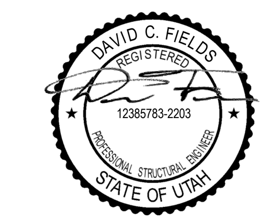
8 REINFORCING BAR DEVELOPMENT LENGTHS AND LAP SPLICES - GRADE 60

f'c = 8,000 PSI / GRADE 80						
BAR SIZE	Ld	Lt	Lsb	Lsbt	Ldt	Ldh
#3	16	21	21	27	6	8
#4	21	27	27	35	9	12
#5	26	34	34	44	12	17
#6	31	41	41	53	16	22
#7	46	59	59	77	20	27
#8	52	67	67	87	24	33
#9	59	76	76	99	29	39
#10	66	85	85	111	35	47
#11	73	95	95	123	40	55
#14	88	114	-	-	-	72
#18	117	151	-	-	-	111

f'c = 6,000 PSI / GRADE 80						
BAR SIZE	Ld	Lt	Lsb	Lsbt	Ldt	Ldh
#3	18	24	24	31	7	9
#4	24	31	31	41	10	14
#5	30	39	39	51	14	19
#6	36	47	47	61	18	25
#7	52	68	68	88	23	31
#8	60	78	78	101	28	38
#9	67	88	88	114	33	45
#10	76	99	99	128	40	54
#11	84	109	109	142	47	63
#14	101	131	-	-	-	83
#18	135	175	-	-	-	128

ALL CONCRETE STRENGTHS / GRADE 80			
BAR SIZE	Lb	Lc	Lcs
#3	9	18	14
#4	12	24	18
#5	15	30	23
#6	18	36	27
#7	21	42	32
#8	24	48	36
#9	28	55	41
#10	31	61	46
#11	34	68	51
#14	41	-	-
#18	55	-	-

13 REINFORCING BAR DEVELOPMENT LENGTHS AND LAP SPLICES - GRADE 80



Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

11/18/2022

REINFORCING DETAILS

S0.02

GENERAL

ALL TYPICAL DETAILS AND NOTES SHOWN ON DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE DRAWINGS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

3D VIEWS (INCLUDING AXONOMETRICS, ISOMETRICS, PERSPECTIVES, ETC.) ARE PROVIDED FOR REFERENCE PURPOSES ONLY. IN THE EVENT OF ANY DISCREPANCIES BETWEEN INFORMATION REPRESENTED BY BOTH A 3D VIEW AND BY A NON-3D VIEW WITHIN THE CONSTRUCTION DOCUMENTS, THE NON-3D VIEW SHALL GOVERN IN ALL CASES. INFORMATION REPRESENTED BY 3D VIEWS, BUT NOT REPRESENTED ELSEWHERE IN THE CONSTRUCTION DOCUMENTS IS NOT INTENDED TO BE PART OF THE CONSTRUCTION DOCUMENTS.

BUILDING CODE

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE BUILDING CODE. THE PUBLICATIONS LISTED BELOW ARE THE GOVERNING CODES AND STANDARDS AND ARE REFERENCED BY THEIR BASIC DESIGNATION. IN THE CASE OF CONFLICTING REQUIREMENTS, THE BUILDING CODE SHALL GOVERN.

APPLICABLE CODES AND STANDARDS

BUILDING CODE	INTERNATIONAL BUILDING CODE (IBC), 2018 EDITION (INCLUDING THE STATE OF UTAH BUILDING CODE AMENDMENTS)
ACI 318	AMERICAN CONCRETE INSTITUTE, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," 2014 EDITION
TMS 402/602	THE MASONRY SOCIETY, "BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES," 2016 EDITION
RCSC	RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS, "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS," 2014 EDITION
AISC 341	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS," 2016 EDITION
AISC 360	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," 2016 EDITION
ASCE 7	AMERICAN SOCIETY OF CIVIL ENGINEERS, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES," 2016 EDITION,
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM INTERNATIONAL)
AWS A2.4	AMERICAN WELDING SOCIETY, "STANDARD SYMBOLS FOR WELDING, BRAZING, AND NONDESTRUCTIVE EVALUATION," 2012 EDITION
AWS D1.1	AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - STEEL," 2015 EDITION
AWS D1.4	AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - REINFORCING STEEL INCLUDING METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION," 2018 EDITION
AWS D1.8	AMERICAN WELDING SOCIETY, "STRUCTURAL WELDING CODE - SEISMIC SUPPLEMENT," 2016 EDITION
ICC	INTERNATIONAL CODE COUNCIL, INTERNATIONAL CODE COUNCIL - EVALUATION SERVICES (ICC-ES)
IAPMO	INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS – UNIFORM EVALUATION SERVICE (IAPMO-UES)

STRUCTURAL DESIGN DATA

LOAD COMBINATIONS: LOAD COMBINATIONS ARE IN ACCORDANCE WITH SECTION 1605 OF THE BUILDING CODE.

LIVE LOADS: LIVE LOADS SHALL BE IN ACCORDANCE WITH THE LOAD DIAGRAMS.

SNOW LOADS: SNOW LOADING AND SNOW DRIFT LOADING SHALL BE IN ACCORDANCE WITH THE BUILDING CODE (SECTION 1608), , INCLUDING SITE-SPECIFIC DETERMINATION OF GROUND SNOW LOAD PER UTAH STATE AMENDMENT TO SECTION 1608.2.1.

GROUND SNOW LOAD: Pg = 194 PSF

IMPORTANCE FACTOR: Is = 1.0

SNOW EXPOSURE FACTOR: Ce = 1.0

THERMAL FACTOR: Ct = 1.0

FLAT-ROOF SNOW LOAD: Pf = 136 PSF

WIND LOADS: WIND PRESSURE SHALL BE IN ACCORDANCE WITH THE BUILDING CODE (SECTION 1609).

BASIC WIND SPEED (3-SECOND GUST): Vult = 115 MPH
BASIC WIND SPEED (3-SECOND GUST): Vasd = 85 MPH

RISK CATEGORY: II

EXPOSURE CATEGORY: B

INTERNAL PRESSURE COEFFICIENT: GCpi = 0.18

SEISMIC LOADS: SEISMIC LOADING SHALL BE IN ACCORDANCE WITH THE BUILDING CODE.

BUILDING LOCATION: LATITUDE: 40.615° N
LONGITUDE: 111.508° W

RISK CATEGORY: II

IMPORTANCE FACTOR: Ie = 1.0

MAPPED SPECTRAL ACCELERATION PARAMETERS: Ss = 0.60, S1 = 0.21

SITE CLASS: C

SITE COEFFICIENTS: Fa = 1.263, Fv = 1.5

SPECTRAL RESPONSE COEFFICIENTS: Sds = 0.50, Sd1 = 0.21

SEISMIC DESIGN CATEGORY: D

LATERAL SYSTEM:
TOWERS A, B & C: SPECIAL REINFORCED CONCRETE SHEAR WALLS
TOWER AB CONNECTOR: STEEL SPECIAL CANTILEVER COLUMNS

RESPONSE MODIFICATION COEFFICIENT:
TOWERS A, B & C: R=6
TOWER AB CONNECTOR: R= 2 1/2"

SEISMIC RESPONSE COEFFICIENT:
TOWER A:
NORTH-SOUTH: Cs = 0.078
EAST-WEST: Cs = 0.046
TOWER B:
NORTH-SOUTH: Cs = 0.034
EAST-WEST: Cs = 0.049
AB CONNECTOR:
NORTH-SOUTH: Cs = 0.202
EAST-WEST: Cs = 0.202
TOWER C:
NORTH-SOUTH: Cs = 0.061
EAST-WEST: Cs = 0.033

DESIGN BASE SHEAR:
TOWER A:
NORTH-SOUTH: V = 1440 KIPS
EAST-WEST: V = 853 KIPS
TOWER B:
NORTH-SOUTH: V = 1071 KIPS
EAST-WEST: V = 1537 KIPS
AB CONNECTOR:
NORTH-SOUTH: V = 115 KIPS
EAST-WEST: V = 168 KIPS
TOWER C:
NORTH-SOUTH: V = 1477 KIPS
EAST-WEST: V = 796 KIPS

ANALYSIS PROCEDURE USED: MODAL RESPONSE SPECTRUM ANALYSIS

LOAD PATH FOR LATERAL FORCES: LATERAL FORCES ARE CARRIED BY THE ROOF AND FLOOR DIAPHRAGMS TO THE SHEAR WALLS. MOMENTS, SHEARS, AND ROTATIONAL FORCES ARE DELIVERED TO THE FOUNDATION BY THE SHEAR WALLS IN PROPORTION TO THEIR ABILITY TO RESIST LATERAL DEFORMATION.

STORY DRIFT

THE PRIMARY STRUCTURE WILL EXPERIENCE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS. THE STORY DRIFTS PERPENDICULAR AND/OR PARALLEL TO THE PRIMARY STRUCTURE ARE AS FOLLOWS:

SEISMIC DRIFT

LEVELS	SERVICE LEVEL STORY DRIFT	DESIGN STORY DRIFT, IeDp
TOWERS A, B, & C:		
ALL	1/2"	1 1/2"
AB CONNECTOR:	1/2"	3"

WIND DRIFT

LEVELS	SERVICE LEVEL STORY DRIFT	DESIGN STORY DRIFT
TOWERS A, B, & C:		
ALL	1/2"	1"
AB CONNECTOR:	1/2"	1 1/2"

WHERE REQUIRED BY THE BUILDING CODE, NON-STRUCTURAL COMPONENTS INCLUDING EXTERIOR CLADDING; STAIRS, ELEVATORS, AND MISCELLANEOUS METALS; MECHANICAL/ELECTRICAL/PLUMBING SYSTEM SUPPORTS; INTERIOR METAL STUD FRAMING; AND ANY OTHER ELEMENTS REQUIRED BY THE BUILDING CODE SHALL BE DESIGNED TO ACCOMMODATE THE PRIMARY STRUCTURE STORY DRIFTS WITH ANY APPLICABLE ELEMENT-SPECIFIC MODIFICATIONS PER CHAPTER 13 OF ASCE 7.

FOUNDATIONS

THE FOUNDATION DESIGN IS BASED ON THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL ENGINEERING DESIGN REPORT ENTITLED "GEOTECHNICAL INVESTIGAION - CONDOMINIUM DEVELOPMENT LOTS 1 AND 2, B2 EAST PROPERTY - 9300 MARSAC AVENUE - PARK CITY, UTAH" DATED SEPTEMBER 11, 2019, PREPARED BY APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC. REFER TO THIS REPORT FOR ALL GEOTECHNICAL REQUIREMENTS AND ANTICIPATED CONDITIONS BELOW GRADE.

COLUMN DOWELS SHALL BE INSTALLED WITH A TEMPLATE TO HOLD BARS IN THE PROPER POSITION AND SHALL BE PLACED WITH A TOLERANCE OF +/—1/4 INCH.

1

MAT FOUNDATION AND SPREAD FOOTINGS: DESIGN SOIL BEARING PRESSURE = 3,500 PSF (SPREAD FOOTINGS BEARING ON AT LEAST 4 FEET OF COMPACTED STRUCTURAL FILL, NATURAL CLAYEY GRAVEL OR BEDROCK); 5,000 PSF (SPREAD FOOTINGS BEARING ENTIRELY ON BEDROCK); VARIABLE UP TO 8,500 PSF (MAT FOUNDATIONS). ALL FOOTINGS SHALL BEAR ON SUITABLE UNDISTURBED SOIL, BEDROCK, AND/OR PREPARED BASE MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. WHERE SUITABLE UNDISTURBED SOILS ARE NOT FOUND AT THE SPECIFIED FOOTING ELEVATION, OVER-EXCAVATE TO THE DEPTHS REQUIRED BY THE GEOTECHNICAL ENGINEER AND REPLACE MATERIALS WITH STRUCTURAL FILL, LEAN CONCRETE, OR PROVIDE OTHER PREPARATION AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO ACHIEVE THE REQUIRED BEARING CAPACITY.

STRUCTURAL FILL

ALL FILL PLACED TO SUPPORT SLABS ON GRADE, BEHIND PERMANENT WALLS, AND AROUND ALL DRAINS SHALL CONSIST OF WELL GRADED, GRANULAR MATERIAL PER THE SPECIFICATIONS. SOILS FOR STRUCTURAL FILL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER. STRUCTURAL FILL SHALL BE PLACED ON SOUND NATIVE MATERIAL. PROOF-ROLL CUT AREAS WHICH PROVIDE SUPPORT FOR PERMANENT STRUCTURES. AREAS WHICH ARE EXCESSIVELY YIELDING, AS DETERMINED BY THE CONTINUOUS OBSERVATION OF THE GEOTECHNICAL ENGINEER, SHALL BE OVEREXCAVATED AND REPLACED WITH STRUCTURAL FILL. STRUCTURAL FILL SHALL BE PLACED PER THE SPECIFICATION.

LATERAL PRESSURE ON SUBGRADE WALLS

THE DESIGN PRESSURES FOR SUBGRADE WALLS ARE BASED ON A "DRAINED" CONDITION. SEE CIVIL AND MECHANICAL DRAWINGS FOR SUBGRADE DRAINAGE SYSTEM. SEE GEOTECHNICAL REPORT FOR COMPACTION REQUIREMENTS AT SUBGRADE WALLS. SUBGRADE WALLS AND SUPPORTING SLABS SHALL HAVE ATTAINED THEIR FULL CONCRETE STRENGTH BEFORE PLACING ANY BACKFILL. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACES FOR WALLS IF BACKFILL IS PLACED BEFORE WALLS AND SLABS ACHIEVE FULL CONCRETE STRENGTH.

BACKFILLED, RESTRAINED BASEMENT WALLS ARE DESIGNED USING AN "APPARENT" EARTH PRESSURE AS SHOWN IN THE LOAD MAPS.

CONCRETE

MIXING, BATCHING, TRANSPORTING, PLACING, AND CURING OF ALL CONCRETE, AND SELECTION OF CONCRETE MATERIALS, SHALL CONFORM TO ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE," EXCEPT AS NOTED BELOW. PROPORTIONS OF AGGREGATE TO CEMENTITIOUS PASTE SHALL BE SUCH AS TO PRODUCE A DENSE, WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER.

MIX DESIGNS LISTED BELOW SHALL BE SUBMITTED TO THE ARCHITECT AND APPROVED PRIOR TO USE. SELECTION OF CONCRETE MIX PROPORTIONS SHALL BE IN ACCORDANCE WITH ACI 301. MIX PROPORTIONS SHALL MEET OR EXCEED THE REQUIREMENTS LISTED BELOW FOR THE LOCATIONS NOTED. THE MORE STRINGENT OF THE REQUIREMENTS LISTED SHALL GOVERN.

PROVIDE ASTM C150 (TYPE I OR TYPE II) OR ASTM C595 (TYPE IL, IS, IP, OR IT) CEMENT UNLESS NOTED OTHERWISE. THE CEMENTITIOUS MATERIAL CONTENT SHALL BE ADEQUATE FOR THE SPECIFIED REQUIREMENTS FOR STRENGTH, WATER-CEMENT RATIO, DURABILITY, AND FINISH ABILITY.

MAXIMUM COMPLEMENTARY CEMENTING MATERIALS (EX. FLY ASH, SLAG, SILICA FUME) AS A PERCENTAGE OF TOTAL WEIGHT OF CEMENTITIOUS MATERIAL SHALL BE 50 PERCENT. FLY ASH SHALL MEET ASTM C618 REQUIREMENTS, AND SHALL NOT EXCEED 30 PERCENT OF TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENT RATIO SHALL BE BASED ON TOTAL CEMENTITIOUS MATERIAL, INCLUDING COMPLEMENTARY CEMENTING MATERIALS. MAXIMUM SIZE OF AGGREGATE SHALL BE AS LISTED BELOW.

ALL CONCRETE USED IN HORIZONTAL SURFACES EXPOSED TO THE WEATHER SHALL CONTAIN AN ACCEPTABLE ADMIXTURE TO PRODUCE AIR-ENTRAINED CONCRETE WITH TOTAL AIR CONTENT AS NOTED IN THE CONCRETE MIX SPECIFICATION TABLE. TOLERANCE FOR AIR CONTENT SHALL BE +/—1.5 PERCENT. AIR CONTENT SHALL BE MEASURED AT THE DISCHARGE OF THE TRUCK. IF CONCRETE IS PUMPED, AIR CONTENT SHALL BE MEASURED AT THE DISCHARGE END OF THE PUMP LINE. TESTS FOR AIR CONTENT SHALL MEET ASTM C172 REQUIREMENTS.

THE CONTRACTOR SHALL DETERMINE SLUMP. EACH CONCRETE MIX SUBMITTED SHALL HAVE THE SLUMP SPECIFIED. SLUMP SHALL BE MEASURED AT THE DISCHARGE OF THE TRUCK. IF CONCRETE IS PUMPED, SLUMP SHALL BE MEASURED AT THE DISCHARGE END OF THE PUMP LINE. SLUMPS SHALL BE WITHIN +1 INCH AND —2 INCHES OF THE SPECIFIED SLUMP.

THE USE OF SUPER PLASTICIZERS AND WATER REDUCERS IS ALLOWED, BUT NOT REQUIRED. ALL ADMIXTURES SHALL BE CHLORIDE-FREE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

CONCRETE MIX SPECIFICATION TABLE

LOCATION	f'c MIN (PSI)	TEST AGE (DAYS)	MAX W/C RATIO	MAX AGGREGATE SIZE	AIR CONTENT PERCENT
MISCELLANEOUS CONCRETE, CURBS, SIDEWALKS	4,000	28	0.50	1"	4.5
EXTERIOR EXPOSED SLABS ON GRADE	4,000	28	0.45	1"	4.5
INTERIOR SLABS ON GRADE	4,000	28	0.50	1"	-
MAT FOUNDATION, SPREAD FOOTINGS	6,000	56	0.44	1"	-
BASEMENT WALLS	6,000	56	0.44	3/4"	-
CONCRETE ON STEEL DECK	4,000	28	0.44	3/4"	-
MILD REINFORCED BEAMS AND SLABS	6,000	28	0.44	3/4"	-
EXTERIOR EXPOSED POST-TENSIONED BEAMS AND SLABS	6,000	28	0.40	3/4"	5.0
INTERIOR POST-TENSIONED BEAMS AND SLABS	6,000	28	0.40	3/4"	-
COLUMNS	PER COL SCHED	56	0.44	3/4"	-
SHEAR WALLS	PER WALL ELEV	56	0.44	3/4"	-

SHOTCRETE

STRUCTURAL SHOTCRETE MAY BE USED FOR WALLS IN LIEU OF CAST-IN-PLACE CONCRETE. SHOTCRETE SHALL CONFORM STRICTLY TO THE REQUIREMENTS OF THE BUILDING CODE, SECTION 1908. NON-CONTACT LAP SPLICES SHALL BE DETAILED IN ACCORDANCE WITH THE CODE AND SUBMITTED ON SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS. TEST PANELS ARE REQUIRED FOR HEAVILY REINFORCED AREAS SUCH AS PILASTERS, WALL COLUMNS, ETC. THE CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS FOR SHOTCRETING.

MASSIVE CONCRETE

CONCRETE PLACED IN MONOLITHIC PLACEMENTS WHERE THE MINIMUM OF ALL THREE DIMENSIONS EXCEEDS 4'-0" SHALL BE CONSIDERED "MASSIVE CONCRETE" AND SHALL BE SUBJECT TO THE APPLICABLE REQUIREMENTS OF ACI 301, CHAPTER 8.

ASTM C150 TYPE III CEMENT IS PROHIBITED. UNLESS OTHERWISE SPECIFIED, USE MODERATE OR LOW HEAT OF HYDRATION CEMENT, BLENDED HYDRAULIC CEMENT WITH MODERATE OR LOW HEAT OF HYDRATION PROPERTIES, OR PORTLAND CEMENT WITH FLY ASH, POZZOLAN, OR GROUND-GRANULATED BLAST-FURNACE SLAG. ADDITIVES CONTAINING CALCIUM CHLORIDE ARE PROHIBITED. APPROVED RETARDING, RETARDING HIGH-RANGE WATER REDUCING, OR RETARDING PLASTICIZING ADMIXTURE SHALL BE USED.

THE TEMPERATURE OF CONCRETE AT TIME OF PLACEMENT SHALL NOT EXCEED 95 DEGREES FAHRENHEIT. THE MAXIMUM INTERNAL TEMPERATURE DURING CURING SHALL NOT EXCEED 160 DEGREES FAHRENHEIT. THE MAXIMUM TEMPERATURE DIFFERENCE BETWEEN CENTER AND SURFACE OF PLACEMENT SHALL NOT EXCEED 50 DEGREES FAHRENHEIT. CONFORM TO THE REQUIREMENTS OF ACI 305.1 AND ACI 306.1 FOR HOT-WEATHER AND COLD-WEATHER CONCRETING, RESPECTIVELY. IF COOLING METHODS ARE EMPLOYED, THEY SHALL NOT INCREASE THE WATER-CEMENT RATIO OR SLUMP BEYOND ALLOWABLE LIMITS. THE CONCRETE SHALL BE COOLED GRADUALLY SO THAT THE SURFACE TEMPERATURE DROP DOES NOT EXCEED 20 DEGREES FAHRENHEIT IN ANY 24-HOUR PERIOD AFTER PLACEMENT.

SUBMIT DETAILED PROCEDURES, MATERIALS, MIX DESIGNS, AND TEST RESULTS INCLUDING HEAT OF HYDRATION TEST DATA PER ASTM C1702 TO THE ENGINEER BEFORE CONSTRUCTION OF MASSIVE CONCRETE.

REINFORCING STEEL

ALL REINFORCING SHALL BE NEW BILLET STOCK ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE. REINFORCING REQUIRED TO BE EPOXY COATED SHALL BE ASTM A775, GRADE 60, UNLESS NOTED OTHERWISE. BARS SHALL BE SECURELY TIED IN PLACE WITH #16 GAGE MINIMUM ANNEALED BLACK WIRE. EPOXY-COATED REINFORCING BARS SHALL BE FASTENED WITH NYLON-, EPOXY-, OR PLASTIC-COATED TIE WIRE OR OTHER ACCEPTABLE MATERIALS. BARS SHALL BE SUPPORTED ON CHAIRS IN ACCORDANCE WITH THE CRSI MANUAL OF STANDARD PRACTICE. THE CONTRACTOR SHALL COORDINATE REINFORCING STEEL PLACEMENT DETAILS AND PROVIDE TEMPLATES FOR PLACING STEEL IN CONGESTED AREAS AS NECESSARY. SHOP DRAWINGS (INCLUDING PLACING PLANS AND ELEVATIONS) SHALL BE SUBMITTED TO, AND REVIEWED BY, THE ARCHITECT/ENGINEER BEFORE STARTING FABRICATION.

REINFORCING BARS SHALL BE LAP SPLICED FOR TENSION (LSB) UNLESS NOTED OTHERWISE ON THE DRAWINGS. #14 AND #18 BARS SHALL BE SPLICED USING MECHANICAL COUPLINGS INCLUDING SPLICES WITH SMALLER BARS. #14 AND #18 BARS SHALL NOT BE LAP SPLICED. AT THE CONTRACTOR'S OPTION, MECHANICAL COUPLINGS MAY BE USED FOR ANY BAR SIZE, PROVIDED A CURRENT ICC—ES (OR IAPMO-UES EQUIVALENT) REPORT DEMONSTRATES THAT THE PRODUCT CAN ACHIEVE A MINIMUM TENSILE STRENGTH OF 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NO REINFORCING BARS SHALL BE SPLICED BY WELDING. FOR REINFORCING WITHIN SHEAR WALLS, AND REINFORCING THAT CONNECTS THE SLABS TO THE SHEAR WALLS, MECHANICAL SPLICES MAY BE USED IF THE MECHANICAL SPLICE STRENGTH IS INCREASED TO DEVELOP 100 PERCENT OF THE SPECIFIED TENSILE STRENGTH OF THE SPLICED BAR. SPLICE DEVICES SHALL HAVE A CURRENT ICC-ES (OR IAPMO-UES EQUIVALENT) REPORT THAT SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. HEADED BARS OR TERMINATORS SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS OR AT THE CONTRACTOR'S OPTION FOR CONGESTED AREAS OF REINFORCEMENT ANCHORAGE SUBJECT TO THE ENGINEER'S APPROVAL. HEADED BARS OR TERMINATORS SHALL MEET THE REQUIREMENTS OF ACI 318 AND ASTM A970, AND HAVE A CURRENT ICC-ES (OR IAPMO-UES EQUIVALENT) REPORT.

WELDING OR TACK WELDING OF REINFORCING BARS TO OTHER BARS OR TO PLATES, ANGLES, ETC, IS PROHIBITED, EXCEPT WHERE SPECIFICALLY APPROVED BY THE ENGINEER. WHERE WELDING IS APPROVED, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E9018 OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.4.

MINIMUM CAST-IN-PLACE CONCRETE COVER OVER REINFORCING STEEL, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:

1. CONCRETE CAST AGAINST EARTH:

   ALL BAR SIZES: 3 INCHES

2. CONCRETE EXPOSED TO EARTH OR WEATHER:

   #6 BAR OR LARGER: 2 INCHES
   #5 BAR OR SMALLER: 1 1/2 INCHES

3. OTHER CONCRETE:

   SLABS:
   #14 AND #18 BARS: 1-1/2 INCHES
   #11 BARS AND SMALLER:
   TOP BARS: 3/4 INCH
   BOTTOM BARS: 1 INCH

   WALLS:
   #14 AND #18 BARS: 1-1/2 INCHES
   #11 BARS AND SMALLER: 1 INCH

   BEAMS AND COLUMNS - TIES, STIRRUPS, SPIRALS:
   ALL BAR SIZES: 1-1/2 INCHES

SPECIFIED CONCRETE COVER SHALL BE MAINTAINED TO ALL REINFORCEMENT AT CONCRETE REVEALS AND INSETS. SHOP DRAWINGS SHOWING CONCRETE REVEALS AND OTHER INSETS SHALL BE SUBMITTED FOR REVIEW.

SPECIAL DUCTILE QUALITY REINFORCING STEEL

VERTICAL REINFORCING IN COLUMNS AND SHEAR WALLS, LONGITUDINAL AND DIAGONAL REINFORCING IN COUPLING BEAMS, AND ALL OTHER REINFORCING MARKED "SDQ" SHALL BE LOW-ALLOY STEEL DEFORMED ASTM A706. BILLET STEEL ASTM A615, GRADE 60 REINFORCEMENT MAY BE USED IN THESE MEMBERS IF (1) THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 PSI AND (2) THE RATIO OF THE ACTUAL ULTIMATE TENSILE STRENGTH TO THE ACTUAL TENSILE YIELD STRENGTH IS NOT LESS THAN 1.25. IF MILL REPORTS ARE NOT AVAILABLE, THE REINFORCING SHALL BE TESTED PER THE SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE. (3) MINIMUM ELONGATION IN 8-INCH SHALL BE AT LEAST 14 PERCENT FOR BAR SIZES NO. 3 THROUGH 6, AT LEAST 12 PERCENT FOR BAR SIZES NO. 7 THROUGH 11, AND AT LEAST 10 PERCENT FOR BAR SIZES NO. 14 AND 18.

WELDED WIRE REINFORCEMENT

WELDED WIRE REINFORCEMENT (WWR) SHALL BE ELECTRICALLY WELDED AND CONFORM TO ASTM A1064. LAP EDGES AND ENDS OF REINFORCEMENT A MINIMUM OF ONE MESH SPACING PLUS 2 INCHES, BUT NOT LESS THAN 6 INCHES. WELDED WIRE REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS IN ACCORDANCE WITH THE CRSI MANUAL OF STANDARD PRACTICE.

POST-TENSIONED PRESTRESSED CONCRETE

POST-TENSIONING SHOP DRAWINGS, INCLUDING PLANS AND DETAILS, SHALL BE SUBMITTED TO AND REVIEWED BY THE ARCHITECT BEFORE STARTING FABRICATION.

IN ADDITION TO THE REQUIREMENTS IN THE CONCRETE MIX SPECIFICATION TABLE NOTED ABOVE, ALL POST-TENSIONED CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 3,000 PSI AT TIME OF INITIAL STRESS. THE CONTRACTOR SHALL SUBSTANTIATE CONCRETE STRENGTH BEFORE POST-TENSIONING.

POST-TENSIONING REINFORCEMENT SHALL BE 1/2—INCH-DIAMETER, UNBONDED, LOW RELAXATION, 270—KSI HIGH-TENSILE WIRE STRAND CONFORMING TO ASTM A416.

POST-TENSIONING TENDONS SHALL BE ENCASED IN WATERPROOF POLYETHYLENE PLASTIC SHEATHING OF 50 MILS MINIMUM THICKNESS. SHEATHING SHALL BE OF SUFFICIENT STRENGTH TO PREVENT UNREPAIRABLE DAMAGE DURING FABRICATION, TRANSPORTATION, INSTALLATION, STORAGE, CONCRETE PLACEMENT, AND TENSIONING. AN ENCAPSULATED TENDON SYSTEM SHALL BE USED AT ALL LOCATIONS.

THE MINIMUM NUMBER OF TENDONS REQUIRED FOR INSTALLATION IS SHOWN ON THE DRAWINGS AND IS BASED ON A FINAL EFFECTIVE PRESTRESS FORCE OF 26.8 KIPS PER TENDON. IF THE MINIMUM FINAL EFFECTIVE PRESTRESS FORCE, CONSIDERING ALL LOSSES NOTED BELOW, IS LESS THAN 26.8 KIPS AT ANY LOCATION ALONG THE TENDON LENGTH, THE CONTRACTOR SHALL PROVIDE ADDITIONAL TENDONS. TENDONS SHALL BE INSTALLED WITH A PARABOLIC DRAPE UNLESS NOTED OTHERWISE AND HELD IN THEIR DESIGNED POSITIONS AS SHOWN ON THE DRAWINGS. A MINIMUM OF TWO TENDONS SHALL PASS THROUGH EACH COLUMN IN EACH DIRECTION AT SLABS WITHOUT BEAMS. DISTRIBUTED TENDONS MAY BE GROUPED WHILE PROVIDING THE SAME TOTAL COUNT, ALTHOUGH SPACING BETWEEN SUCH GROUPS SHALL NOT EXCEED 5 FEET NOR EIGHT TIMES THE SLAB THICKNESS. TENDON DEAD END AND LIVE END SYMBOLS ARE SHOWN ONLY TO REPRESENT POTENTIAL POST-TENSIONING DIRECTION. AT THE CONTRACTOR'S OPTION BUT SUBJECT TO THE ENGINEER'S APPROVAL, LIVE ENDS MAY BE SWITCHED OR ALTERNATED, DOUBLE-ENDED TENSIONING MAY BE USED, AND INTERMEDIATE TENSIONING MAY BE USED. THE FINAL POST-TENSIONING DIRECTION AND SEQUENCE SHALL BE SELECTED BY THE CONTRACTOR TO ACHIEVE THE REQUIRED MINIMUM EFFECTIVE PRESTRESS FORCE, BUT IS SUBJECT TO THE ENGINEER'S FINAL APPROVAL.

THE POST-TENSIONED SLABS ARE DESIGNED BASED ON TENDONS BEING CONTINUOUS BETWEEN EDGES OF SLABS AS SHOWN ON THE DRAWINGS. ANY ADDITIONAL INTERMEDIATE STRESSING JOINTS OR CLOSURE STRIPS REQUIRED BY THE CONTRACTOR MAY REQUIRE ADDITIONAL REINFORCEMENT AND SHALL BE SUBMITTED AND REVIEWED BY THE STRUCTURAL ENGINEER BEFORE STARTING CONSTRUCTION.

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION STAMPED BY AN ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED: (1) THE DETAILED DESIGN OF TENDON END ANCHORAGES; (2) THE CALCULATION OF STRESS LOSSES DUE TO CREEP, SHRINKAGE, TENDON RELAXATION, ANCHORAGE SLIP, WOBBLE FRICTION, AND FRICTION DUE TO VERTICAL AND HORIZONTAL TENDON CURVATURE; (3) POST-TENSIONING SHOP DRAWINGS. THIS INFORMATION SHALL CONFORM TO ACI 318.

NO CONCRETE SHALL BE PLACED UNTIL THE POST-TENSIONING TENDONS AND REINFORCEMENT LOCATION HAVE BEEN INSPECTED AND APPROVED BY THE TESTING AGENCY. CONTINUOUS INSPECTION AND RECORDING OF ELONGATION IS REQUIRED DURING ALL STRESSING OPERATIONS. DO NOT CUT TENDON ENDS UNTIL THE ENTIRE SLAB HAS BEEN SATISFACTORILY STRESSED AND THE ENGINEER HAS REVIEWED ELONGATIONS.

WHERE REQUIRED BY OWNER, THE POSITION OF TENDONS SHALL BE MARKED ON THE FORMS IMMEDIATELY BEFORE NEW CONCRETE IS PLACED WITH A MATERIAL WHICH LEAVES A PHYSICAL IMPRESSION ON THE UNDERSIDE OF THE SLAB.

DRILLED-IN CONCRETE ANCHORS AND POWER-DRIVEN FASTENERS SHALL BE PLACED A MINIMUM DISTANCE EQUAL TO THE SLAB THICKNESS AWAY FROM TENDON LOCATIONS AND FOUR TIMES THE SLAB THICKNESS FROM THE FACE OF ANY COLUMN. WHERE TENDON MARKING IS NOT SUCCESSFUL, TENDONS SHALL BE LOCATED BY SLAB SCANNING PRIOR TO ANCHOR INSTALLATION. EXCEPTION: POWDER ACTUATED FASTENERS WITH EMBEDMENT OF 5/8 INCH OR LESS MAY BE INSTALLED AT ANY LOCATION ON THE SLAB. NO REBAR OR POST-TENSIONING TENDONS SHALL BE DAMAGED BY ANCHORS AND FASTENERS.

FORM CAMBER

IN ADDITION TO ANY CAMBER NOTED IN THE STRUCTURAL DRAWINGS, CONCRETE FORMWORK SHALL BE CAMBERED TO COMPENSATE FOR FORM SAG UNDER WET CONCRETE LOAD. CAMBERS OF LESS THAN 1/8 INCH MAY BE NEGLECTED.

PRECAST CONCRETE

REFER TO ARCHITECTURAL DRAWINGS FOR FINISH REQUIREMENTS, REVEALS, OPENINGS, DETAILS, AND DIMENSIONS NOT SHOWN. HORIZONTAL PRECAST MEMBERS SHALL BE CAST, STRESSED, TRANSPORTED, AND ERECTED IN A HORIZONTAL, UPRIGHT POSITION. SUPPORTS DURING TRANSPORTATION AND ERECTION SHALL APPROXIMATE THOSE IN THE FINAL STRUCTURE. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE AND INSTALL ADDITIONAL REINFORCING (STEEL STIFFENERS, BRACING, LIFTING INSERTS, ETC) TO RESIST ERECTION AND TRANSPORTATION STRESSES. LIFTING INSERTS SHALL BE INSTALLED AT LOCATIONS WHERE THEY WILL BE HIDDEN BY CONSTRUCTION OR OTHERWISE COVERED. FINISH ALL PANELS WHICH WILL BE COVERED WITH TOPPING SLABS WITH ROUGH SCREED FINISH TO ENSURE BONDING OF THE APPLIED CONCRETE. SUBMIT DETAILED SHOP DRAWINGS OF ALL PRECAST CONCRETE WORK TO THE ARCHITECT FOR REVIEW BEFORE STARTING FABRICATION.

ALL PRECAST CONCRETE CONNECTIONS (PLATES, ANGLES, ETC) SHALL BE GALVANIZED STEEL. REMOVE GALVANIZING WHERE FIELD WELDING IS REQUIRED, AND PAINT FIELD WELDS WITH ONE COAT OF "GALVACON" OR APPROVED EQUAL. SEE SHEAR STUD CONNECTORS NOTE FOR STUDS WELDED TO CONNECTIONS. FIELD WELDING SHALL BE DONE BY AWS-CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1.

CONSTRUCTION JOINTS

ALL CONSTRUCTION JOINTS IN SLABS, BEAMS, AND WALLS SHALL BE KEYED IN ACCORDANCE WITH THE TYPICAL DETAILS OR, AT THE CONTRACTOR'S OPTION, SHALL BE INTENTIONALLY ROUGHENED IN ACCORDANCE WITH THE FOLLOWING: THE SURFACE OF ROUGHENED JOINTS SHALL BE SAND BLASTED OR ROUGHENED WITH A CHIPPING HAMMER TO EXPOSE THE AGGREGATE EMBEDDED IN THE PREVIOUS POUR. THE EXPOSED AGGREGATE SHALL PROTRUDE A MINIMUM OF 1/4 INCH. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.

VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL BE HELD TO A MAXIMUM SPACING OF 40'—0".

ALL CONSTRUCTION JOINTS FOR BEAMS AND SLABS SHALL BE IN ACCORDANCE WITH THE TYPICAL DETAILS. BEAMS AND SLABS HAVE BEEN DESIGNED ASSUMING ANY CONSTRUCTION JOINTS ARE LOCATED IN THE MIDDLE THIRD OF THE SPAN.

ALL CONSTRUCTION JOINTS IN SLABS ON STEEL DECK SHALL BE IN ACCORDANCE WITH THE TYPICAL DETAILS. STEEL BEAMS AND GIRDERS HAVE BEEN DESIGNED ASSUMING THE CONSTRUCTION JOINTS ARE LOCATED IN THE MIDDLE THIRD OF THE BEAM, GIRDER, OR SLAB SPAN.

ALL CONSTRUCTION JOINTS IN SLABS, BEAMS, AND WALLS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE STARTING CONSTRUCTION. PROVIDE JOINTS AT LOCATIONS SPECIFICALLY NOTED ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.

SLEEVES

EXCEPT AS DETAILED ON STRUCTURAL DRAWINGS, NO CONCRETE FOOTINGS, BEAMS, OR GIRDERS SHALL BE SLEEVED FOR PIPING OR DUCTS, UNLESS APPROVED BY THE ENGINEER.

ANCHORAGE TO HARDENED CONCRETE

ANCHORAGE TO HARDENED CONCRETE SHALL INCLUDE MECHANICAL AND ADHESIVE ANCHORS OF SIZE, NUMBER, AND SPACING AS SHOWN ON THE DRAWINGS. HOLES SHALL BE DRILLED AND CLEANED AND ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND AN APPROVED ICC—ES (OR IAPMO-UES EQUIVALENT) REPORT. INSPECTION AND TESTING SHALL BE PROVIDED IN ACCORDANCE WITH THE GENERAL NOTES AND THE APPROVED ICC—ES (OR IAPMO-UES EQUIVALENT) REPORT.

WHERE THE ANCHOR TYPE IS SPECIFIED ON THE DRAWINGS, SUBSTITUTION FOR A DIFFERENT TYPE OF ANCHORAGE (INCLUDING SUBSTITUTING FOR CAST-IN-PLACE ANCHORAGE) SHALL NOT BE PERMITTED WITHOUT PRIOR CONSENT OF THE ENGINEER.

ACCEPTABLE ANCHORS SHALL HAVE A CURRENT ICC—ES (OR IAPMO-UES EQUIVALENT) REPORT INDICATING THAT THE ANCHOR IS PERMITTED FOR RESISTING SEISMIC LOADS IN CRACKED CONCRETE. UNLESS NOTED OTHERWISE, ANCHORS SHALL BE ASTM A36 THREADED ROD OR ASTM A615, GRADE 60 REINFORCING STEEL DOWELS.

WHEN EMBEDMENT IS NOTED ON THE DRAWINGS, THE ANCHOR EFFECTIVE EMBEDMENT DEPTH SHALL EQUAL OR EXCEED THE NOTED EMBEDMENT DEPTH. WHERE NO EMBEDMENT IS NOTED ON THE DRAWINGS, THE MINIMUM EFFECTIVE ANCHOR EMBEDMENT DEPTH SHALL BE 6.5 ANCHOR DIAMETERS, MINIMUM DISTANCE TO THE NEAREST CONCRETE EDGE SHALL BE 12 ANCHOR DIAMETERS, AND MINIMUM ANCHOR SPACING SHALL BE 8 ANCHOR DIAMETERS.

STAINLESS STEEL ANCHORS SHALL BE USED AT ALL EXTERIOR LOCATIONS AND WHERE SPECIFICALLY INDICATED ON THE DRAWINGS. NO STEEL REINFORCEMENT SHALL BE CUT TO INSTALL ANCHORS. DEFECTIVE OR ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT OR AN INJECTABLE ADHESIVE MATCHING THE ADJACENT CONCRETE COMPRESSIVE STRENGTH. NOTIFY THE STRUCTURAL ENGINEER OF DEFECTIVE OR ABANDONED HOLES IN WALLS AND COLUMNS. THESE ELEMENTS MAY REQUIRE NON-SHRINK GROUT WITH A COMPRESSIVE MODULUS OF ELASTICITY MATCHING THAT OF THE ADJACENT CONCRETE.

HOLES SHALL BE DRILLED WITH ROTARY IMPACT HAMMER OR EQUIVALENT METHOD TO PRODUCE A HOLE WITH A ROUGH INSIDE SURFACE. CORE DRILLING HOLES IS NOT PERMITTED. THE ADHESIVE SHALL BE MIXED, APPLIED, AND CURED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS IN THE ICC—ES (OR IAPMO-UES EQUIVALENT) REPORT. ALL PLACEMENT AND CURING SHALL BE CONDUCTED WITH CONCRETE AND AIR TEMPERATURES ABOVE 50 DEGREES FAHRENHEIT. ADHESIVE SHALL BE APPLIED ONLY TO CLEAN, DRY CONCRETE. POSITIVE PROTECTION SHALL BE PROVIDED SO THAT ANCHORS ARE NOT DISTURBED DURING THE CURING PERIOD. DEFECTIVE OR ABANDONED HOLES SHALL BE FILLED WITH NON-SHRINK GROUT OR AN INJECTABLE ADHESIVE MATCHING THE ADJACENT CONCRETE COMPRESSIVE STRENGTH. NOTIFY THE STRUCTURAL ENGINEER OF DEFECTIVE OR ABANDONED HOLES IN WALLS AND COLUMNS. THESE ELEMENTS MAY REQUIRE NON-SHRINK GROUT WITH A COMPRESSIVE MODULUS OF ELASTICITY MATCHING THAT OF THE ADJACENT CONCRETE.

NONSHRINK GROUT FOR BASE PLATES, SLEEVES, AND EMBEDDED STEEL

GROUT SHALL BE AN APPROVED NONSHRINK CEMENTITIOUS GROUT CONTAINING NATURAL AGGREGATES DELIVERED TO THE JOB SITE IN FACTORY PREPACKAGED CONTAINERS REQUIRING ONLY THE ADDITION OF WATER. THE MINIMUM 28—DAY COMPRESSIVE STRENGTH SHALL BE AT LEAST 1,000 PSI HIGHER THAN THE SUPPORTING CONCRETE STRENGTH, UNLESS NOTED OTHERWISE. GROUT SHALL BE MIXED, APPLIED, AND CURED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. FOR GROUTING UNDER BASE PLATES, GROUT SHALL BE PROPORTIONED AS A FLOWABLE MIX. WHEN A FLOWABLE MIX DOES NOT PROVIDE THE REQUIRED STRENGTH OR WHEN A MINIMUM STRENGTH OF 10,000 PSI IS REQUIRED, AN EPOXY GROUT SHALL BE USED.

EMBEDDED ELECTRICAL CONDUIT

ELECTRICAL CONDUIT SHALL BE RIGID STEEL CONDUIT OR FLEXIBLE PLASTIC CONDUIT. ALUMINUM CONDUIT IS PROHIBITED.

FOR CONDUIT PLACED IN CONCRETE FLAT SLABS OR SLABS THAT ARE PART OF A CONCRETE SLAB AND BEAM SYSTEM, CONDUIT SHALL HAVE A MAXIMUM OUTSIDE DIAMETER OF 1/6 TIMES THE SLAB THICKNESS AND SHALL BE EMBEDDED WITHIN THE MIDDLE THIRD OF THE SLAB DEPTH. MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE THREE TIMES THE CONDUIT DIAMETER. CONDUIT SHALL BE ROUTED TO MAINTAIN A MINIMUM CLEAR DISTANCE FROM PRESTRESSING TENDONS OF 1'-0" HORIZONTAL PARALLEL TO THE TENDONS AND 1 INCH VERTICAL PERPENDICULAR TO THE TENDONS. SEE THE TYPICAL CONDUIT PLACEMENT CRITERIA DETAIL.

FOR CONDUIT PLACED IN SLABS ON STEEL DECKING, CONDUIT SHALL BE RUN ABOVE THE STEEL DECK FLUTES PER THE TYPICAL CONDUIT IN SLAB ON STEEL DECK DETAIL. WHERE THE REQUIREMENTS OF THE TYPICAL CONDUIT IN SLAB ON STEEL DECK DETAIL CANNOT BE MET, CONDUIT SHALL ROUTE UNDER THE SLAB ON STEEL DECK OR AN ALTERNATE LOCATION WHICH SHALL BE COORDINATED BY THE CONTRACTOR WITH THE ARCHITECT AND OTHER TRADES.

CONDUIT SHALL BE FIRMLY CHAIRED AND TIED TO PREVENT DISPLACEMENT DURING POURING. PLACE #4 AT 12 INCHES ADDITIONAL REINFORCING ABOVE AND BELOW CONDUIT IN CONCRETE SLABS, PERPENDICULAR TO THE CONDUIT. THE ADDED REINFORCING SHALL EXTEND 1'-0" PAST THE CONDUIT ON BOTH SIDES. PLACE ADDITIONAL REINFORCING ABOVE CONDUIT RUNNING ABOVE STEEL DECK FLUTES AS REQUIRED BY THE TYPICAL CONDUIT IN SLAB ON STEEL DECK DETAIL.

POLYSTYRENE/RIGID INSULATION FOR BUILT-UP SLABS

POLYSTYRENE OR RIGID INSULATION PLACED BELOW CONCRETE SLABS SHALL CONSIST OF RIGID CELLULAR POLYSTYRENE CONFORMING TO ASTM D6817. POLYSTYRENE SHALL HAVE A MINIMUM COMPRESSIVE RESISTANCE OF 3.6 PSI AT 1 PERCENT DEFORMATION UNLESS NOTED OTHERWISE. SECURE POLYSTYRENE IN PLACE PER THE MANUFACTURER'S RECOMMENDATIONS. THE BLOCKS OF POLYSTYRENE SHALL BE PLACED TO OFFSET JOINTS 24 INCHES BETWEEN THE ADJACENT LAYERS.

AT THE CONTRACTOR'S OPTION, IN LIEU OF POLYSTYRENE CONFORMING TO ASTM D6817, PROVIDE POLYSTYRENE CONFORMING TO ASTM C578 TYPE XIV RATED FOR 40 PSI COMPRESSIVE RESISTANCE AT 10 PERCENT DEFORMATION WITH A MINIMUM THICKNESS OF 2 INCHES PER LAYER.

DAVID C. FIELDS
STATE OF UTAH

Reserved for permit stamp

159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

Olson Kundig

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS
11/18/2022

GENERAL NOTES

S0.03

STRUCTURAL STEEL

ALL STEEL SHALL CONFORM TO THE FOLLOWING:

W-SHAPES	ASTM A992, Fy=50 KSI ASTM A913, Fy=50 KSI
ALL ANGLES AND CHANNELS UNLESS NOTED OTHERWISE	ASTM A36, Fy=36 KSI
SQUARE OR RECTANGULAR STRUCTURAL TUBE (HSS)	ASTM A500, GRADE C, Fy=50 KSI
ROUND STRUCTURAL TUBE (HSS)	ASTM A500, GRADE C, Fy=46 KSI
STEEL PIPE DIAMETER LESS THAN OR EQUAL TO 12 INCHES	ASTM A53, TYPE E OR S, GRADE B, Fy=35 KSI
MATERIAL CALLED OUT ON PLANS AS (Fy=36 KSI)	ASTM A36, Fy=36 KSI
MATERIAL CALLED OUT ON PLANS AS (Fy=65 KSI)	ASTM A572, Fy=65 KSI
ALL OTHER STEEL UNLESS NOTED OTHERWISE	ASTM A572, Fy=50 KSI ASTM A588, Fy=50 KSI

GENERAL NOTES FOR STEEL CONNECTIONS SHALL APPLY TO ALL STEEL CONNECTIONS UNLESS NOTED OTHERWISE.

ALL WORK SHALL BE IN ACCORDANCE WITH THE AISC SPECIFICATION. SHOP DRAWINGS SHALL BE SUBMITTED AND REVIEWED BY THE ARCHITECT/ENGINEER BEFORE COMMENCING FABRICATION. ALL STEEL ANCHORS AND TIES AND OTHER MEMBERS EMBEDDED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED. DIMENSIONAL TOLERANCE FOR BUILT-UP MEMBERS SHALL BE PER AWS D1.1.

FOR ASTM A6 HOT-ROLLED SHAPES WITH A FLANGE THICKNESS OF 2 INCHES OR GREATER OR BUILT-UP SHAPES WITH A PLATE THICKNESS OF 2 INCHES OR GREATER THAT ARE SPLICED OR CONNECTED USING COMPLETE JOINT PENETRATION GROOVE WELDS, CHARPY V—NOTCH TESTING SHALL BE PROVIDED IN ACCORDANCE WITH ASTM A6 SUPPLEMENTARY REQUIREMENT S30, AS APPLICABLE, WITH A MINIMUM VALUE OF 20 FOOT—POUNDS AT 70 DEGREES FAHRENHEIT.

STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSION POINTS AT THE MAXIMUM DECK SPAN LOCATION, UNLESS NOTED OTHERWISE. MINIMUM CONNECTIONS SHALL BE A TWO-BOLT CONNECTION USING 7/8-INCH-DIAMETER GR A325 BOLTS IN SINGLE SHEAR.

BOLTS DESIGNATED "GR A325" IN THE DRAWINGS REFER TO ASTM F3125 GRADE A325 HEAVY HEX BOLTS OR GRADE F1852 TWIST-OFF STYLE TENSION-CONTROL BOLTS. BOLTS DESIGNATED "GR A490" IN THE DRAWINGS REFER TO ASTM F3125 GRADE A490 HEAVY HEX BOLTS OR GRADE F2280 TWIST-OFF STYLE TENSION-CONTROL BOLTS. BOLT STYLE MAY BE SELECTED AT CONTRACTOR OPTION. ALL HIGH-STRENGTH BOLTS SHALL BE INSTALLED, TIGHTENED, AND INSPECTED IN ACCORDANCE WITH THE RCSC.

BOLTS IN CONNECTIONS OF BEAM-TO-BEAM/GIRDER MAY BE SNUG-TIGHT, UNLESS SPECIFICALLY CALLED OUT PRETENSIONED OR SLIP-CRITICAL. SNUG-TIGHT CONNECTIONS SHALL BE INSTALLED PER THE CRITERIA FOR SNUG-TIGHT BOLTS.

ALL OTHER BOLTED CONNECTIONS SHALL BE PRETENSIONED. PRETENSIONED AND SLIP-CRITICAL CONNECTIONS MAY USE TURN-OF-NUT PRETENSIONING, TWIST-OFF-TYPE TENSION-CONTROL BOLT PRETENSIONING, OR DIRECT-TENSION-INDICATOR PRETENSIONING. WHERE SLIP-CRITICAL CONNECTIONS ARE NOTED, FAYING SURFACES SHALL BE CLASS A, UNLESS SPECIFICALLY CALLED OUT AS CLASS B.

ALL HIGH-STRENGTH BOLTS SHALL HAVE WASHERS INSTALLED PER THE RCSC, UNLESS NOTED OTHERWISE.

ALL ASTM A307 BOLTS SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF-LOCKING NUTS.

ALL BOLT HOLES SHALL BE STANDARD SIZE, UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SELECTION OF OPTIONAL DETAILS SHOWN ON THE DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS THAT INCLUDE, BUT ARE NOT LIMITED TO, ERECTION ANGLES, LIFT HOLES, AND OTHER AIDS.

STRUCTURAL STEEL WELDING

STRUCTURAL STEEL SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS A2.4 SYMBOLS. ALL WELDING SHALL BE DONE BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH AWS D1.1 AND AWS D1.8. WELDS SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES, BASED ON PLATE THICKNESS. THE MINIMUM WELD SIZE SHALL BE 3/16 INCH. FIELD WELDING SYMBOLS HAVE NOT NECESSARILY BEEN INDICATED ON THE DRAWINGS. WHERE SHOWN, PROPER FIELD WELDING PER AWS D1.1 SHALL BE USED. WHERE NO FIELD WELDING SYMBOLS ARE SHOWN, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE USE OF SHOP AND FIELD WELDS. ALL PARTIAL JOINT PENETRATION GROOVE WELD SIZES SHOWN ON THE DRAWINGS REFER TO EFFECTIVE THROAT THICKNESS, UNLESS NOTED OTHERWISE. FOR BASE METALS WITH MAXIMUM YIELD STRENGTH EQUAL TO 50 KSI, ALL WELDS SHALL BE MADE USING LOW HYDROGEN ELECTRODES WITH MINIMUM TENSILE STRENGTH PER AWS D1.1 (MINIMUM 70 KSI). FOR BASE METALS WITH YIELD STRENGTH HIGHER THAN 50 KSI, ALL WELDS SHALL BE MADE USING LOW HYDROGEN ELECTRODES FROM WITHIN THE SAME GROUP PER AWS D1.1 TABLE 3.1. LOW HYDROGEN SMAW ELECTRODES SHALL BE STORED IN AN OVEN OR USED WITHIN THE ATMOSPHERIC TIME PERIODS SPECIFIED IN AWS D1.1 TABLE 5.1, OR SHALL BE REBAKED PER AWS D1.1 CLAUSE 5.3. ELECTRODES SHALL BE REBAKED NO MORE THAN ONE TIME, AND ELECTRODES THAT HAVE BEEN WET SHALL NOT BE USED.

FILLER METALS FOR ALL COMPLETE JOINT PENETRATION GROOVE WELDED T- AND CORNER JOINTS WITH BACKING LEFT IN PLACE AND COMPLETE JOINT PENETRATION GROOVE WELDED SPLICES IN HEAVY SECTIONS AS DEFINED IN AISC 360 A3.1c SHALL HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FOOT-POUNDS AT 40 DEGREES FAHRENHEIT.

ALL WELDING SHALL BE PERFORMED IN STRICT ADHERENCE TO A WRITTEN WELDING PROCEDURE SPECIFICATION (WPS) PER AWS D1.1 AND AWS D1.8. ALL WELDING PARAMETERS SHALL BE WITHIN THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS. WELDING PROCEDURES SHALL BE SUBMITTED TO THE OWNER'S TESTING AGENCY FOR REVIEW PRIOR TO STARTING FABRICATION OR ERECTION. COPIES OF THE WPS SHALL BE ON SITE AND AVAILABLE TO ALL WELDERS AND THE SPECIAL INSPECTOR.

ALL COMPLETE JOINT PENETRATION WELDS SHALL BE ULTRASONICALLY TESTED UPON COMPLETION OF THE CONNECTION, EXCEPT PLATE LESS THAN OR EQUAL TO 1/4 INCH THICK, WHICH SHALL BE MAGNETIC PARTICLE TESTED. REDUCTION IN TESTING MAY BE MADE IN ACCORDANCE WITH THE BUILDING CODE WITH APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOINT PREPARATIONS AND WELDING PROCEDURES THAT INCLUDE, BUT ARE NOT LIMITED TO: REQUIRED ROOT OPENINGS, ROOT FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, SURFACE ROUGHNESS VALUES, AND TAPERS AND TRANSITIONS OF UNEQUAL PARTS.

FIREPROOFING STRUCTURAL STEEL

REFER TO ARCHITECTURAL PLANS FOR MINIMUM HOURLY VALUES OF STEEL FIRE PROTECTION FOR DETERMINING THE THICKNESS OF SPRAY APPLIED FIREPROOFING. THE STRUCTURAL FRAME CONSISTS OF COLUMNS AND GIRDERS, BEAMS, TRUSSES, AND SPANDRELS HAVING DIRECT CONNECTIONS TO THE COLUMNS AND BRACING MEMBERS DESIGNED TO CARRY GRAVITY LOADS. FLOOR OR ROOF MEMBERS THAT HAVE NO CONNECTION TO COLUMNS SHALL BE CONSIDERED SECONDARY MEMBERS.

ANCHOR RODS

ANCHOR RODS SHALL BE ASTM F1554 GRADE 36 WITH CLASS 2A THREADS, UNLESS NOTED OTHERWISE. FURNISH ANCHOR RODS PREFABRICATED WITH MATCHING DOUBLE HEAVY HEX NUTS JAMMED AT THE END EMBEDDED IN CONCRETE. FURNISH PLATE WASHERS AND MATCHING HEAVY HEX NUTS FOR SECURING THE BASE PLATE TO THE ANCHOR RODS. HOOKED ANCHOR RODS SHALL NOT BE USED EXCEPT WHERE NOTED. A RIGID STEEL TEMPLATE SHALL BE USED TO LOCATE ANCHOR RODS WHILE PLACING CONCRETE. ANCHOR RODS SHALL HAVE SUFFICIENT LENGTH TO PROVIDE THE MINIMUM EMBEDMENT SHOWN ON THE DRAWINGS, MEASURED FROM THE FACE OF THE CONCRETE TO THE NEAR FACE OF THE DOUBLE NUT, WITH ADEQUATE EXTENSION AS REQUIRED TO RECEIVE THE BASE PLATE WITH ADEQUATE THREAD PROJECTION FOR FULL NUT ENGAGEMENT. ANCHOR ROD INSTALLATION SHALL BE COORDINATED WITH REINFORCING AND FORMWORK. LEVELING NUTS SHALL NOT BE USED EXCEPT AFTER EVALUATION BY THE CONTRACTOR'S ERECTION ENGINEER. AFTER BASE INSTALLATION, ANCHOR ROD NUTS SHALL BE INSTALLED TO A SNUG-TIGHT CONDITION. NO HEATING OR BENDING OF THE ANCHOR RODS IS PERMITTED. HOLES IN THE BASE MATERIAL SHALL NOT BE ENLARGED BY BURNING.

COMPOSITE FLOOR SYSTEM

FLOOR SLABS SHALL BE CONSTRUCTED TO THE THICKNESS SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO THE SPECIFICATIONS FOR FLOOR TOLERANCES. THE CONTRACTOR SHALL INCLUDE THE QUANTITIES OF THE ADDED CONCRETE DUE TO THE STEEL DECK DEFLECTION. DESIGN CAMBER SHOWN FOR THE STEEL BEAMS HAS BEEN CALCULATED BASED ON THE DEFLECTION OF THE BEAM DUE TO THE WEIGHT OF THE STEEL AND CONCRETE SLAB.

MINIMUM SLAB REINFORCING IS WWR 6x6-W2.9xW2.9, UNLESS NOTED OTHERWISE.

SHEAR CONNECTOR STUDS

ALL SHEAR CONNECTOR STUDS SHALL BE 3/4 INCH IN DIAMETER UNLESS NOTED OTHERWISE. ACCEPTABLE TYPES SHALL BE "TRU-WELD" (ICC—ES ER—2577 OR IAPMO-UES EQUIVALENT) OR "NELSON" (ICC—ES ER—2856 OR IAPMO-UES EQUIVALENT). SHEAR CONNECTOR STUDS SHALL BE AUTOMATICALLY END WELDED IN SHOP OR FIELD WITH EQUIPMENT RECOMMENDED BY MANUFACTURER OF STUDS. STEEL STUD MATERIAL, WELDING, AND INSPECTION SHALL BE IN ACCORDANCE WITH AWS D1.1. SHEAR STUDS SHALL BE PLACED AT A MAXIMUM SPACING OF 2'—0" ON CENTER FOR ALL BEAMS SUPPORTING A STEEL DECK WITH CONCRETE FILL OR A CAST-IN-PLACE CONCRETE SLAB. THIS SPACING SHALL ALSO APPLY WHEN THE NUMBER OF STUDS IS NOT INDICATED ON THE PLANS. SEE "SHEAR STUD PLACEMENT" FOR LAYOUT CRITERIA. STEEL DECK SHOP DRAWINGS DETAILING THE SHEAR STUD PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE INSTALLATION.

STEEL COMPOSITE DECK

THE STEEL DECK SHALL BE OF DEPTH SHOWN ON THE STRUCTURAL DRAWINGS. GAGE OF DECK SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE SPAN CONDITIONS, SHORING REQUIREMENTS, CONSTRUCTION LOADS, DEFLECTION REQUIREMENTS, AND THE SUPERIMPOSED LOADS SHOWN ON THE DRAWINGS, LOAD DIAGRAMS, AND NOTES. MINIMUM GAGE IS 20. MAXIMUM DEAD LOAD DEFLECTION IS 3/4 INCH OR L/180. WRITTEN VERIFICATION OF CONFORMANCE FOR ALL CONDITIONS IN THE STRUCTURE SHALL BE SUBMITTED FOR ACCEPTANCE PRIOR TO FABRICATION. THE CAPACITIES OF THE DECK SHALL BE BASED ON CURRENT ICC—ES (OR IAPMO-UES EQUIVALENT) REPORTS. SHOP DRAWINGS SHALL BE SUBMITTED SHOWING DECK GAGE, LAYOUT, FASTENING, STUD LAYOUT, AND CLOSURES. IF ANY SHORING IS TO BE USED, IT SHALL BE APPROVED BY THE GENERAL CONTRACTOR AND SHALL BE SHOWN ON THE SHOP DRAWINGS. UNITS SHALL SPAN OVER FOUR SUPPORTS, CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE FRAMING DOES NOT PERMIT. THE AISI SPECIFICATIONS SHALL GOVERN THE DESIGN OF ALL DECK UNITS. STEEL DECK AND ALL OF ITS FLASHINGS SHALL CONFORM TO ASTM A653. THE STEEL SHALL HAVE RECEIVED, BEFORE BEING FORMED, A METAL PROTECTIVE COATING OF ZINC CONFORMING TO ASTM A653—G60. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3.

CONCRETE BONDING-TYPE UNITS SHALL BE FORMED WITH DEFORMATIONS TO PROVIDE AN INTERLOCK BETWEEN THE CONCRETE AND STEEL. UNLESS SHOWN OTHERWISE, UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT THE ENDS OF THE UNITS AND AT INTERMEDIATE SUPPORTS BY 3/4-INCH DIAMETER PUDDLE WELDS AT 1'-0" ON CENTER; WHERE TWO UNITS ABUT, EACH UNIT SHALL BE SO FASTENED TO THE STEEL SUPPORTS. THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY 1 1/2—INCH TOP SEAM WELDS AT 2'—0" ON CENTER OR BUTTON PUNCHED AT 2'—0" ON CENTER. DECK UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES BY 3/4—INCH-DIAMETER PUDDLE WELDS AT 1'—0" ON CENTER. 3/4—INCH-DIAMETER SHEAR STUDS WELDED THROUGH DECK MAY BE USED IN PLACE OF 3/4—INCH-DIAMETER PUDDLE WELDS. DESIGN AND PROVIDE FLASHING AND CLOSURE PLATES AT WALL ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CLOSURE. COORDINATE ALL CLOSURES WITH ELEVATOR, STAIR, ESCALATOR AND OTHER ARCHITECTURAL DETAILS. THE DECK INSTALLATION, WHEN COMPLETE, SHALL BE READY TO RECEIVE CONCRETE.

STEEL DECK TYPES SHALL BE VERCO TYPE W, ASC TYPE W, OR APPROVED EQUAL.

CONTRACTOR SHALL USE THE NECESSARY CONCRETE PLACEMENT AND FINISH METHODS TO ACHIEVE THE SPECIFIED CONCRETE THICKNESS AND SHALL TAKE THE NECESSARY MEASURES DURING CONCRETE PLACEMENT SO AS NOT TO OVERLOAD THE DECK.

1

STEEL ROOF DECK

THE STEEL DECK SHALL BE OF DEPTH AND GAGE SHOWN ON THE STRUCTURAL DRAWINGS. STEEL DECK AND ALL OF ITS FLASHINGS SHALL CONFORM TO ASTM A653 AND SHALL HAVE CURRENT ICC-ES (OR IAPMO-UES EQUIVALENT) REPORTS. THE STEEL DECK SHALL HAVE RECEIVED, BEFORE BEING FORMED, A METAL PROTECTIVE COATING OF ZINC CONFORMING TO ASTM A653—G60. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3. UNITS SHALL SPAN OVER FOUR SUPPORTS, CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE THE FRAMING DOES NOT PERMIT.

UNLESS NOTED OTHERWISE, NONCOMPOSITE UNITS SHALL BE CONNECTED AS FOLLOWS:

CONNECT DECK TO THE STEEL SUPPORTS AT THE ENDS OF THE UNITS AND AT INTERMEDIATE SUPPORTS BY A MINIMUM OF FOUR 3/4-INCH PUDDLE WELDS PER 3'—0" OF WIDTH. WHERE TWO UNITS ABUT, EACH UNIT SHALL BE SO CONNECTED TO THE STEEL FRAMING.

THE SIDE LAPS OF ADJACENT UNITS SHALL BE CONNECTED BETWEEN SUPPORTS BY 1-1/2" TOP SEAM WELDS AT A MAXIMUM SPACING OF 2'—0" ON CENTER.

DECK UNITS SHALL BE CONNECTED TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES WITH 3/4 INCH PUDDLE WELDS AT THE SAME SPACING AS THE SIDE LAP CONNECTIONS.

WHERE STEEL MEMBERS ARE PARALLEL TO THE DECK FLUTES AND AT THE SAME ELEVATION OF THE BOTTOM OF THE DECK, ADJUST DECK LAYOUT AND CONNECT DECK TO STEEL WITH SAME WELDING AS REQUIRED FOR SIDE BOUNDARIES.

STEEL DECK THAT IS TO BE COVERED WITH INSULATING CONCRETE SHALL BE SLOTTED OR PERFORATED TO PROVIDE A MINIMUM OF 1.5 PERCENT UNIFORMLY DISTRIBUTED VENTING. PROVIDE FLASHING AND CLOSURE PLATES AT ALL PERIMETER LOCATIONS REQUIRING CLOSURE. THE DECK INSTALLATION, WHEN COMPLETE, SHALL BE READY TO RECEIVE INSULATING CONCRETE.

SHOP DRAWINGS SHALL BE SUBMITTED SHOWING DECK DEPTH, GAGE, LAYOUT, CONNECTIONS, AND CLOSURES

STEEL DECK TYPES SHALL BE VERCO TYPE N—24, ASC TYPE N, OR APPROVED EQUAL.

MASONRY

CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE BUILDING CODE. ALL HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT. MINIMUM REQUIRED BLOCK COMPRESSIVE STRENGTH IS 2,000 PSI. ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLID WITH CONCRETE GROUT. GROUT MIX SHALL CONTAIN PORTLAND CEMENT, AGGREGATE, AND A GROUT-ENHANCING SHRINKAGE-COMPENSATING ADDITIVE. MAXIMUM SIZE OF AGGREGATE SHALL BE 3/8 INCH. SLUMP SHALL BE 8 TO 11 INCHES. WATER-REDUCING ADMIXTURES MAY BE USED. MINIMUM GROUT COMPRESSIVE STRENGTH BASED ON 28—DAY TESTS SHALL EQUAL OR EXCEED THE SPECIFIED f'm AND BE GREATER THAN OR EQUAL TO THE SPECIFIED MINIMUM DESIGN STRENGTH. GROUT SHALL BE VIBRATED WHILE PLACING TO ENSURE THAT CELLS ARE COMPLETELY FILLED. SUBMIT GROUT MIXES TO ARCHITECT FOR REVIEW BEFORE COMMENCING MASONRY CONSTRUCTION. ALL UNITS SHALL BE LAID IN RUNNING BOND USING TYPE S MORTAR WITH HEAD JOINTS. MASONRY MINIMUM DESIGN STRENGTH IS f'm = 2,000 PSI.

REQUIRED MORTAR PROPORTIONS BY VOLUME

TYPE	PORTLAND CEMENT	HYDRATED LIME	AGGREGATE MEASURED IN A DAMP, LOOSE CONDITION
S	1	OVER 1/4 TO 1/2	NOT LESS THAN 2 1/4 AND NOT MORE THAN 3 TIMES THE SUM OF THE VOLUMES OF THE CEMENT

COLUMN SHORTENING AND BEAM DEFLECTION

COLUMN SHORTENING WILL OCCUR DUE TO THE WEIGHT OF THE CONSTRUCTION ABOVE. THIS SHORTENING WILL CONTINUE UNTIL ALL OF THE DEAD LOAD IS ON THE STRUCTURE, INCLUDING THE CLADDING. THE COLUMNS SHALL BE FABRICATED LONGER THAN THE FINAL LENGTHS SHOWN IN THE CONSTRUCTION DOCUMENTS TO COMPENSATE FOR THIS SHORTENING. IN ADDITION, THE CONTRACTOR SHALL SUPPLY SHIMMING OR MILLING AS REQUIRED DUE TO NORMAL CONSTRUCTION TOLERANCES AND ERECTION PROCEDURES. DIFFERENTIAL COLUMN SHORTENING OCCURS WHEN COLUMNS STOP AT DIFFERENT LEVELS OR ARE SUBJECT TO TRANSFER BEAM DEFLECTION.

FLOOR BEAMS, ESPECIALLY EDGE BEAMS, TRANSFER GIRDERS, AND CANTILEVERS WILL CONTINUE TO DEFLECT WHEN ADDITIONAL LOAD IS APPLIED. THESE MEMBERS HAVE BEEN CAMBERED TO COMPENSATE FOR THE THEORETICAL DEFLECTION. HOWEVER, THIS MAY NOT OCCUR UNTIL ALL THE DEAD LOAD IS APPLIED TO THE MEMBER. THE CONTRACTOR SHALL COORDINATE THE ATTACHMENT OF ANY ITEMS TO MEMBERS WHICH WILL CONTINUE TO SHORTEN OR DEFLECT DUE TO LATER STAGES OF CONSTRUCTION.

EXTERIOR CLADDING

THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE CLADDING SYSTEMS, INCLUDING THEIR STRUCTURAL INTEGRITY, WATERPROOFING SYSTEMS, AND CONNECTION TO THE PRIMARY STRUCTURE.STRUCTURAL ELEMENTS AT THE BUILDING PERIMETER HAVE BEEN DESIGNED FOR THE VERTICAL LOADS SHOWN ON THE LOAD MAPS. CLADDING ATTACHMENTS SHALL NOT APPLY MOMENTS TO SLAB EDGES OR LATERAL LOADS TO STEEL BEAMS OR INTRODUCE TORSIONAL LOADS INTO STEEL BEAMS OR COLUMNS. BRACES, ADDED REINFORCING, AND/OR TIES SHALL BE DESIGNED AND SUPPLIED BY THE CONTRACTOR FOR LOAD ECCENTRICITIES AND LATERAL LOADS. THE CONTRACTOR SHALL SUPPLY ALL CONNECTION MATERIAL, BRACES, ETC. EXPANSION BOLTING TO POST-TENSIONED SLABS IS NOT PERMITTED EXCEPT AS NOTED IN THE "POST-TENSIONED PRESTRESSED CONCRETE" NOTES. SUBMITTED DOCUMENTS SHALL INDICATE MAGNITUDE AND LOCATION OF ALL LOADS IMPOSED ON THE PRIMARY STRUCTURE.

EXTERIOR CLADDING CONNECTIONS SHALL ACCOUNT FOR STRUCTURAL DEFLECTION, COLUMN SHORTENING, AND CONSTRUCTION TOLERANCE. IN ADDITION, THE CLADDING DESIGN SHALL ACCOMMODATE A TYPICAL VERTICAL MOVEMENT AT EACH FLOOR OF 1/2 INCH DUE TO VARIABLE LIVE LOADING. THIS DISPLACEMENT WILL OCCUR AT THE FREE END OF CANTILEVER BEAMS AND AT MIDSPAN OF EDGE SLABS AND BEAMS.

THE CLADDING SHALL ACCOMMODATE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS PERPENDICULAR AND/OR PARALLEL TO THE WALL AS DEFINED IN THE STORY DRIFT SECTION OF THESE NOTES. THE CLADDING SHALL REMAIN UNDAMAGED UNDER THE SERVICE-LEVEL STORY DRIFT AND SHALL NOT FALL FROM THE BUILDING UNDER THE DESIGN STORY DRIFT.

STAIRS, ELEVATORS, AND MISCELLANEOUS METALS

UNLESS SHOWN AND DETAILED IN THE STRUCTURAL DRAWINGS, ALL STAIRS ARE TO CONSIST OF A PRE-FABRICATED AND PRE-ENGINEERED STAIR, LANDING, AND RAILING SYSTEM DESIGNED BY THE CONTRACTOR OR STAIR SUPPLIER. SEE THE ARCHITECT FOR STAIR SYSTEM LAYOUT, DIMENSIONS, AND CONFIGURATION OF RISE AND RUN. THE CONTRACTOR SHALL BE RESPONSIBLE TO DESIGN AND PROVIDE THE STAIR SYSTEM INCLUDING ALL CONNECTIONS AND SECONDARY SUPPORT FRAMING. WHERE REQUIRED BY THE BUILDING CODE, THE STAIRS SHALL ACCOMMODATE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS AS DEFINED IN THE STORY DRIFT SECTION OF THESE NOTES. UNDER THE SERVICE LEVEL STORY DRIFTS, ALL STAIRS MUST REMAIN FUNCTIONAL. UNDER THE DESIGN STORY DRIFTS ALL EGRESS STAIRS MUST REMAIN FUNCTIONAL AND ALL OTHER STAIRS MUST REMAIN CONNECTED TO THE BUILDING.

ALL ELEVATOR MACHINE BEAMS, HOIST BEAMS, SILLS, DOOR SUPPORTS, AND RAILS AND THEIR CONNECTIONS TO THE PRIMARY STRUCTURE ARE TO BE DESIGNED BY THE ELEVATOR MANUFACTURER. THE CONTRACTOR SHALL PROVIDE ADDITIONAL FRAMING AS NECESSARY FOR MACHINE ROOM FLOOR PENETRATIONS PER THE TYPICAL DETAILS. THE ELEVATOR MACHINE BEAMS SHALL BE DESIGNED FOR THE TRIBUTARY LOADS INDICATED IN THE LOAD MAPS IN ADDITION TO THE WEIGHT OF THE SUPPORTED EQUIPMENT AND SELF-WEIGHT OF THE MACHINE ROOM FLOOR/ROOF STRUCTURE. CONNECTIONS BETWEEN ELEVATOR MACHINE BEAMS AND PRIMARY STRUCTURES SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER OF RECORD. WHERE REQUIRED BY THE BUILDING CODE, THE ELEVATORS SHALL ACCOMMODATE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS AS DEFINED IN THE STORY DRIFT SECTION OF THESE NOTES.

THE CONTRACTOR SHALL DESIGN AND SUPPLY ALL ADDITIONAL MISCELLANEOUS METALS THAT ARE INDICATED IN THE ARCHITECTURAL DRAWINGS OR THOSE METALS WHICH ARE FOUND TO BE NECESSARY TO SUPPORT THE ARCHITECTURAL FINISHES OR OTHER BUILDING SYSTEMS. WHERE REQUIRED BY THE BUILDING CODE, THE MISCELLANEOUS METALS SHALL ACCOMMODATE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS AS DEFINED IN THE STORY DRIFT SECTION OF THESE NOTES.

ALL FRAMING AND CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL NOT RESULT IN ECCENTRIC LOADS BEING APPLIED TO THE PRIMARY STRUCTURE NOR LATERAL LOADS BEING APPLIED TO THE BOTTOM FLANGE OF STEEL BEAMS. THE CONTRACTOR'S DESIGN SHALL VERIFY THAT THE CONNECTIONS DO NOT RESULT IN ADVERSE LOCAL CONNECTION STRESSES OCCURRING WITHIN THE PRIMARY STRUCTURE. SUBMIT CALCULATIONS STAMPED BY AN ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED AND SHOP DRAWINGS INDICATING IMPOSED LOADS ON THE PRIMARY STRUCTURE.

MECHANICAL/ELECTRICAL/PLUMBING SYSTEM SUPPORTS

THE CONTRACTOR SHALL DESIGN AND SUPPLY ALL ADDITIONAL MISCELLANEOUS METALS AND SYSTEM SUPPORT COMPONENTS THAT ARE NECESSARY TO SUPPORT ALL MECHANICAL, ELECTRICAL (TELECOM, AUDIO VISUAL, ETC), AND PLUMBING/FIRE-PROTECTION SYSTEMS. SUCH METALS AND SUPPORT COMPONENTS AND THEIR CONNECTIONS SHALL BE PROVIDED AS NECESSARY TO DIRECTLY AND CONCENTRICALLY IMPOSE LOADS ON THE PRIMARY STRUCTURE. THE CONNECTIONS TO THE PRIMARY STRUCTURE ARE SUBJECT TO THE REQUIREMENTS OF THE MISCELLANEOUS METALS SECTION ABOVE. THESE SYSTEMS MAY BE SUPPORTED DIRECTLY FROM STEEL ROOF AND COMPOSITE FLOOR/ROOF SLABS SUBJECT TO THE FOLLOWING LIMITATIONS: 250 POUNDS MAY HANG FROM COMPOSITE SLAB ON DECK, 50 POUNDS MAY HANG FROM STEEL ROOF DECK. LOADS SHALL BE LOCATED NO CLOSER THAN 5 FEET FROM ANY ADJACENT HANGING LOAD, AND THE CONTRACTOR SHALL COORDINATE THE SUPPORT AND HANGING LOADS FROM ALL BUILDING SYSTEMS. WHERE REQUIRED BY THE BUILDING CODE, THE MECHANICAL/ELECTRICAL/PLUMBING SYSTEM SUPPORTS SHALL ACCOMMODATE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS AS DEFINED IN THE STORY DRIFT SECTION OF THESE NOTES.

INTERIOR METAL STUD FRAMING

INTERIOR PARTITIONS SHALL CONSIST OF METAL STUD TYPE FRAMING THAT HAS CURRENT ICC—ES (OR IAPMO-UES EQUIVALENT) EVALUATION REPORTS. CONNECTION OF STUDS, TRACK, AND OTHER ITEMS BY MEANS OF EITHER DRILLED-IN ANCHORAGE OR POWDER DRIVEN FASTENERS SHALL OCCUR WITH FASTENERS AS INDICATED IN THE METAL STUD ICC—ES (OR IAPMO-UES EQUIVALENT) REPORTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRUCTURAL DESIGN OF SOFFITS, SUSPENDED WALLS, CEILINGS, OR CONDITIONS WHERE THE STUD FRAMING IS USED TO SUPPORT CASEWORK OR SIZEABLE DOOR/WINDOW HARDWARE; THE METAL STUD FRAMING; AND ANY MISCELLANEOUS STEEL FRAMING THAT IS DETERMINED TO BE NECESSARY BASED ON THE CONTRACTOR'S DESIGN.

INTERIOR METAL STUD FRAMING AND ITS CONNECTIONS TO THE STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE UP TO 3/4" OF VERTICAL MOVEMENT DUE TO VARIABLE LIVE LOADING. WHERE REQUIRED BY THE BUILDING CODE, INTERIOR METAL STUD FRAMING SHALL ACCOMMODATE LATERAL MOVEMENTS BETWEEN ADJACENT FLOORS AS DEFINED IN THE STORY DRIFT SECTION OF THESE NOTES.

SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS INDICATING IMPOSED LOADS ON THE PRIMARY STRUCTURE FOR THESE CONDITIONS. SUBMITTED DOCUMENTS SHALL BEAR THE STAMP AND SIGNATURE OF AN ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED.

BUILDING TOLERANCES

STANDARD TOLERANCES SHALL BE BASED ON THE REQUIREMENTS OF THE AISC CODE OF STANDARD PRACTICE AND ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS".

STRENGTH AND STABILITY DURING CONSTRUCTION

DURING CONSTRUCTION, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE.

A COMPLETED STRUCTURE IS REQUIRED TO PROVIDE GLOBAL STABILITY, TO PROVIDE LOCAL STABILITY OF INDIVIDUAL STRUCTURAL COMPONENTS (SLABS, DECKS, BEAMS, COLUMNS, WALLS, ETC.), AND TO RESIST IMPOSED LOADS.

THE STRUCTURE WAS ANALYZED AND DESIGNED BY MKA CONSIDERING ITS COMPLETED STATE ONLY. THE DESIGN DID NOT EVALUATE PARTIALLY COMPLETED CONSTRUCTION STAGES.

THE CONTRACTOR SHALL CONSIDER ALL ASPECTS OF CONSTRUCTION SEQUENCING. CONSIDERATIONS SHALL INCLUDE BUT NOT BE LIMITED TO STEEL ERECTION AND CONCRETE PLACEMENT, CRANE REQUIREMENTS, TEMPORARY SHORING, BRACING/STRENGTHENING, TEMPORARY CONSTRUCTION LOADS, SAFETY PROCEDURES, TEMPERATURE CHANGE, AND MOISTURE EFFECTS.

THE CONTRACTOR SHALL EVALUATE THE NEED FOR AND RETAIN AS NECESSARY AN ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED TO REVIEW ALL STAGES OF CONSTRUCTION SEQUENCING, VALIDATE ALL TEMPORARY CONSTRUCTION LOADS, AND PREPARE A COMPREHENSIVE CONSTRUCTION/ERECTION PLAN TO ADDRESS BOTH STABILITY AND RESISTANCE TO IMPOSED LOADS UNTIL THE STRUCTURE IS COMPLETE.

TEMPORARY SUPPORTS, TEMPORARY CONNECTIONS, AND/OR CONSTRUCTION/ ERECTION AIDS SHALL BE REMOVED BY THE CONTRACTOR AFTER THEY ARE NO LONGER REQUIRED.

EXISTING STRUCTURE

EXISTING STRUCTURAL DIMENSIONS AND MEMBER SIZES ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION. THE CONTRACTOR SHALL VERIFY THE ACTUAL CONFIGURATION OF EXISTING CONSTRUCTION AND THE CONDITION OF THE STRUCTURE BEFORE BEGINNING WORK. ANY DISCREPANCIES OR UNSOUND CONDITIONS SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION BEFORE BEGINNING WORK. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS, EMBEDMENTS, AND OPENINGS NOT SHOWN. REFER TO MECHANICAL AND ELECTRICAL PLANS FOR DUCTS, PIPING, EMBEDMENTS, AND OPENINGS NOT SHOWN.

TEMPORARY SHORING AND BRACING MAY BE NECESSARY IN ORDER TO PERFORM THE NECESSARY STRUCTURAL MODIFICATIONS TO THE EXISTING STRUCTURE SHOWN ON THE STRUCTURAL AND ARCHITECTURAL PLANS AND DETAILS. THE CONTRACTOR MUST RETAIN AN ENGINEER LICENSED TO PERFORM THE WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED, WHO SHALL INVESTIGATE WHERE THIS TEMPORARY SHORING/BRACING IS REQUIRED AND SHALL DESIGN THIS TEMPORARY SHORING/BRACING.

MISCELLANEOUS

REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL, ELEVATOR, OR OTHER SPECIALTY ENGINEERING DRAWINGS FOR DIMENSIONS NOT SHOWN, INCLUDING BUT NOT LIMITED TO: SIZE AND LOCATION OF CURBS, EQUIPMENT HOUSEKEEPING PADS, WALL AND FLOOR OPENINGS, BLOCKOUTS, FLOOR DEPRESSIONS, SUMPS, DRAINS, ANCHOR BOLTS, EMBEDDED ITEMS, ARCHITECTURAL TREATMENT, ETC. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND RESOLVE DISCREPANCIES OR CONFLICTS PRIOR TO CONSTRUCTION.

WHERE SECTIONS ARE INDICATED ON THE PLAN BY A NUMBER AND A DRAWING NUMBER THUS, 1/S5.01, THE INDICATED SECTION (1) IS SHOWN ON STRUCTURAL DRAWING S5.01.

SHOP DRAWINGS

SHOP DRAWINGS FOR REINFORCING STEEL AND STRUCTURAL STEEL SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

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

REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL CONCRETE DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP DETAILED SLAB EDGE AND CONCRETE OUTLINE DRAWINGS THAT ARE BASED ON THE ARCHITECTURAL, STRUCTURAL, AND MEP DRAWINGS. THE DETAILED EDGE AND OUTLINE DRAWINGS SHALL BE SUBMITTED FOR REVIEW. SUBMITTED DRAWINGS SHALL CONTAIN ALL CONCRETE CURBS, FORM OUTLINES, AND EMBEDDED ITEMS. DIMENSIONS AND OUTLINES DEVELOPED BY THE CONTRACTOR MAY VARY FROM THOSE SHOWN BY THE ARCHITECT AND ENGINEER AS NECESSARY BASED ON THE DEPENDENCY ON ADJACENT MATERIALS THAT ARE DETERMINED BY THE CONTRACTOR AND/OR SUPPLIER (EXTERIOR CLADDING, ELEVATOR EQUIPMENT, FINAL MEP SHAFT SIZES, ETC.). CONCRETE OUTLINES SHALL BE ADJUSTED AS NECESSARY TO ACCOUNT FOR CONSTRUCTION METHODS AND FOR SLAB SHRINKAGE. THE CONCRETE OUTLINE DEVELOPED BY THE CONTRACTOR SHALL NOT MATERIALLY ALTER THE DESIGN INTENT SHOWN IN THE STRUCTURAL DRAWINGS.

DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD; THEREFORE, THEY SHALL BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY THE ENGINEER OF RECORD. THE CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.

SUBMITTALS SHALL BE PROVIDED ELECTRONICALLY WHENEVER POSSIBLE AND WILL BE MARKED AND RETURNED ELECTRONICALLY. WHEN HARD COPY SUBMITTALS ARE REQUIRED, ONE ORIGINAL AND ONE COPY SHALL BE PROVIDED; THE REPRODUCIBLE COPY WILL 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 DRAWINGS 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.

SHOP DRAWINGS FOR DEFERRED SUBMITTALS THAT ARE DEFINED AS DESIGN-BUILD COMPONENTS IN THE CONSTRUCTION DOCUMENTS SHALL BE SEALED AND SIGNED BY AN ENGINEER LICENSED TO PERFORM WORK IN THE JURISDICTION WHERE THE PROJECT IS LOCATED 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 AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL DRAWINGS. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED ON BASIC STRUCTURE. DESIGN CALCULATIONS SHALL BE INCLUDED IN THE SUBMITTAL.

DEFERRED STRUCTURAL SUBMITTALS

SOME STRUCTURAL SYSTEMS ARE DEFINED AS VENDOR-DESIGNED COMPONENTS PER THE STRUCTURAL DOCUMENTS. THESE ELEMENTS OF THE DESIGN ARE DEFERRED SUBMITTAL COMPONENTS AND HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT THE STAMPED COMPONENT SYSTEM DOCUMENTS TO THE BUILDING OFFICIAL FOR APPROVAL.

DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT, WHO SHALL REVIEW THEM FOR GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE CONTRACTOR SHALL SUBMIT THESE REVIEWED DEFERRED SUBMITTAL DOCUMENTS TO THE BUILDING OFFICIAL. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

THE FOLLOWING LIST INCLUDES THE ITEMS THAT ARE DEFINED AS DEFERRED STRUCTURAL SUBMITTAL COMPONENTS. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS FOR ADDITIONAL DEFERRED SUBMITTAL COMPONENTS.

DEFERRED STRUCTURAL SUBMITTAL COMPONENTS:

- ANCHORAGE FOR MECHANICAL/ELECTRICAL/PLUMBING SYSTEMS
- EXTERIOR CLADDING
- GUARDRAILS AND HANDRAILS
- METAL STAIRS AND LANDINGS
- METAL STUD SYSTEMS
- POST-TENSIONING SYSTEMS

SPECIAL INSPECTION

THE FOLLOWING ITEMS REQUIRE SPECIAL INSPECTION AND TESTING PER IBC SECTION 1705. THIS WORK SHALL BE PERFORMED BY A SPECIAL INSPECTOR CERTIFIED BY THE CITY OF PARK CITY TO PERFORM THE TYPES OF INSPECTIONS AND TESTS SPECIFIED. THE FREQUENCY OF INSPECTIONS AND TESTING SHALL BE AS OUTLINED IN THE IBC TABLE ITEMS LISTED BELOW. DEFICIENCIES SHALL BE REPORTED DAILY TO THE CONTRACTOR. SUMMARY REPORTS SHALL BE DISTRIBUTED WEEKLY TO THE OWNER, ARCHITECT, CONTRACTOR, BUILDING OFFICIAL, AND STRUCTURAL ENGINEER. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR SPECIAL INSPECTION AND TESTING.

ITEM	DESCRIPTION (REFER TO IBC SECTION 1705)	IBC TABLE REQUIREMENTS
STRUCTURAL STEEL AND WELDING	STRUCTURAL STEEL THAT IS PART OF THE STRUCTURE.	SECTION 1705.2
HIGH STRENGTH BOLTING	SEE SPECIFICATIONS FOR PROCEDURES FOR INSPECTION AND TESTING.	SECTION 1705.2
CONCRETE	CONCRETE THAT IS PART OF THE STRUCTURE.	SECTION 1705.2, TABLE 1705.3, ITEMS 5, 6, 7, 8, 11, 12
SHOTCRETE		TABLE 1705.3, ITEMS 5, 6, 7, 8
ANCHORS CAST IN CONCRETE		TABLE 1705.3, ITEM 3
ANCHORS POST-INSTALLED IN HARDENED CONCRETE	INSTALLATION OF MECHANICAL AND ADHESIVE ANCHORS.	TABLE 1705.3, ITEM 4
REINFORCING STEEL AND PRESTRESSING STEEL TENDONS	A. STRESSING AND GROUTING OF TENDONS.	TABLE 1705.3, ITEM 9
	B. PLACEMENT OF REINFORCING STEEL AND PRESTRESSING TENDONS.	TABLE 1705.3, ITEM 1
	C. SPLICING OF REINFORCING BY WELDING OR THREADED COUPLERS.	TABLE 1705.3, ITEM 1, 2
	D. PRESTRESSING TENDON ANCHORAGES/STRESSING POCKETS: PERIODIC SPECIAL INSPECTION SHALL INCLUDE THE FOLLOWING: VERIFY THAT GREASE COVERS ARE SECURELY IN PLACE AND THAT THE CORROSION PROTECTION IS INTACT FOR ENCAPSULATED TENDONS. OBSERVE THAT THE STRESSING POCKET HAS BEEN CLEANED, COATED WITH APPROVED BONDING AGENT, AND FILLED WITH AN APPROVED NON-SHRINK GROUT.	N/A
STRUCTURAL MASONRY	ALL MASONRY SHOWN ON STRUCTURAL DRAWING INCLUDING MASONRY SHOWN IN TYPICAL DETAILS BUT LOCATED ON ARCHITECTURAL DRAWINGS.	SECTION 1705.4
SOILS		SECTION 1705.6, TABLE 1705.6
SEISMIC RESISTANCE		SECTION 1705.12

STRUCTURAL OBSERVATION

THE ENGINEER OF RECORD SHALL PROVIDE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS, AT SIGNIFICANT CONSTRUCTION STAGES AND AT THE COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY IBC SECTIONS 110, 1705, OR OTHER SECTIONS OF THE INTERNATIONAL BUILDING CODE. STRUCTURAL OBSERVATION REPORTS SHALL BE ISSUED TO THE OWNER, ARCHITECT, CONTRACTOR, AND BUILDING OFFICIAL AT SIGNIFICANT CONSTRUCTION STAGES.

DAVID C. FIELDS
12385783-2203
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St. Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

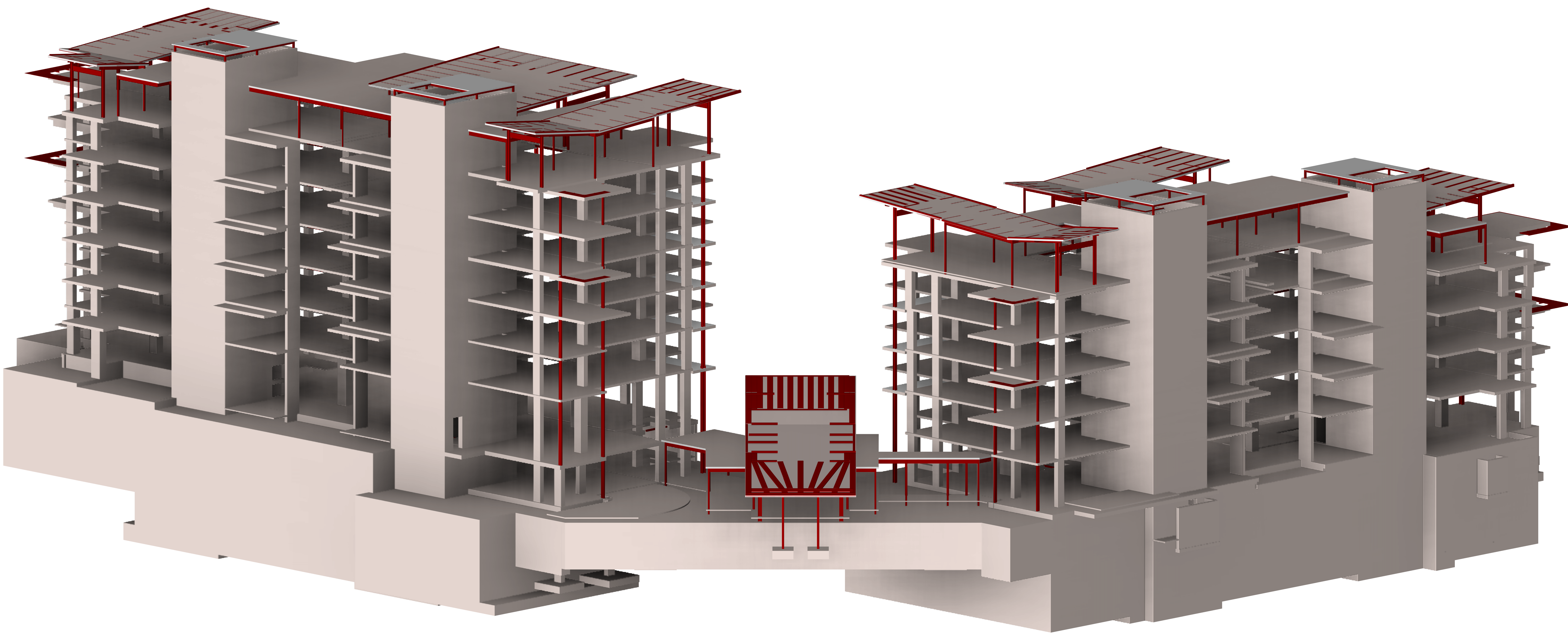
revisions:

no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS
11/18/2022

GENERAL NOTES

S0.04



DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig

159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect ______
project manager ______
drawn by ______
checked by ______
job no. 20052
date 11/18/2022

revisions:

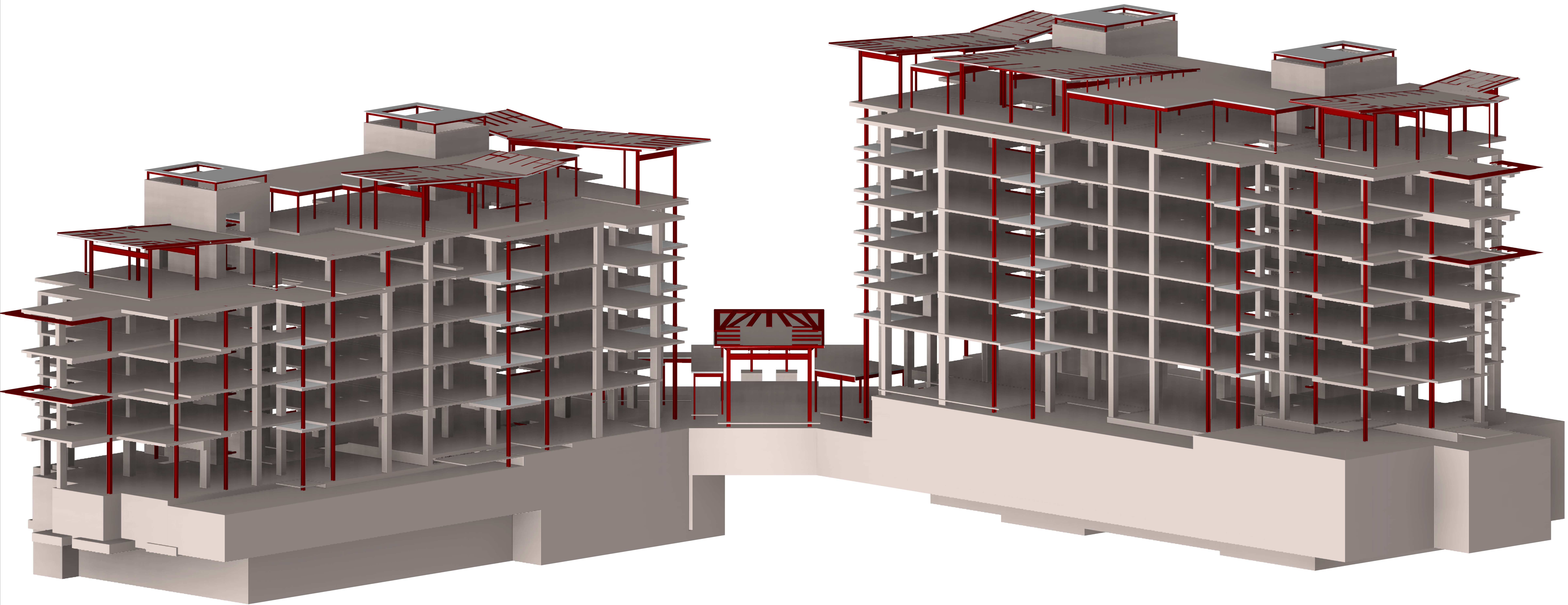
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

11/18/2022

ISOMETRIC VIEWS

S0.05



DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON
KLEMENCIC
ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect__________
project manager__________
drawn by__________

checked by__________
job no. 20052
date 11/18/2022

revisions:

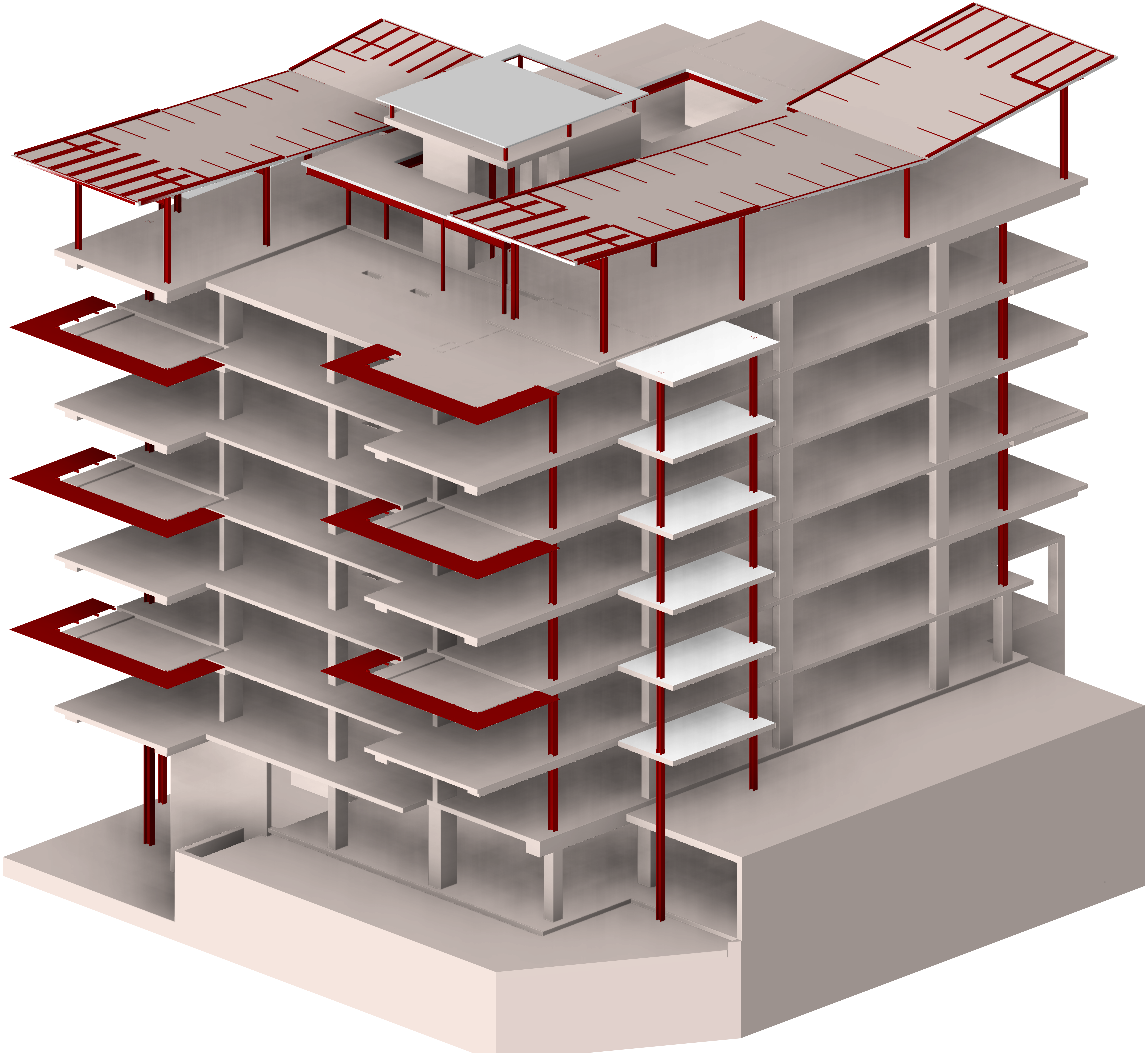
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION
DOCUMENTS

11/18/2022

ISOMETRIC VIEWS

S0.06



DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by

checked by
job no. 20052
date 11/18/2022

revisions:

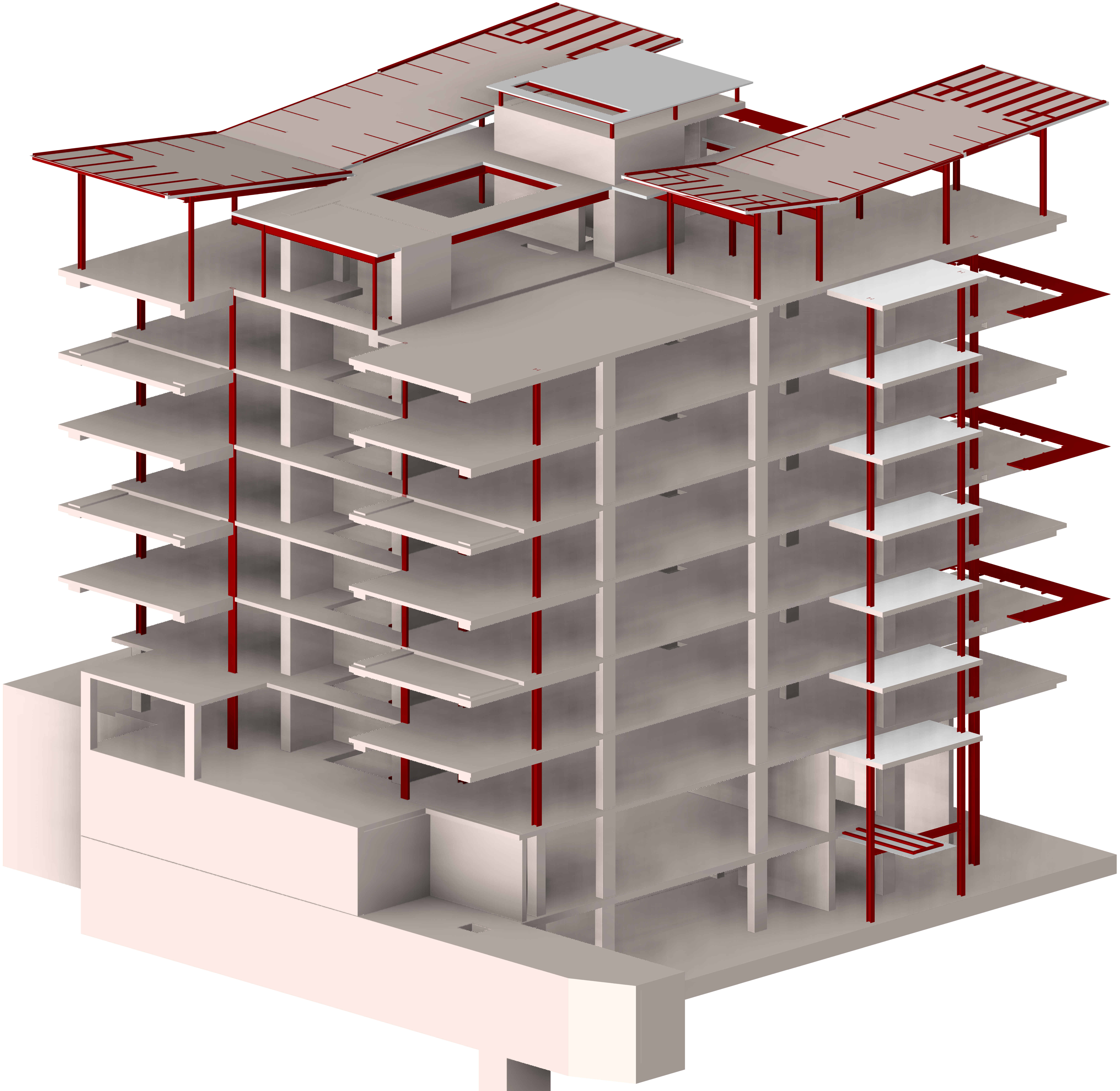
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

11/18/2022

ISOMETRIC VIEWS

S0.07



DAVID C. FIELDS
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig

159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by

checked by
job no. 20052
date 11/18/2022

revisions:

no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

11/18/2022

ISOMETRIC VIEWS

S0.08

LOAD MAP KEY:

A 1

NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK

LETTER INDICATES LIVE LOAD MARK

INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

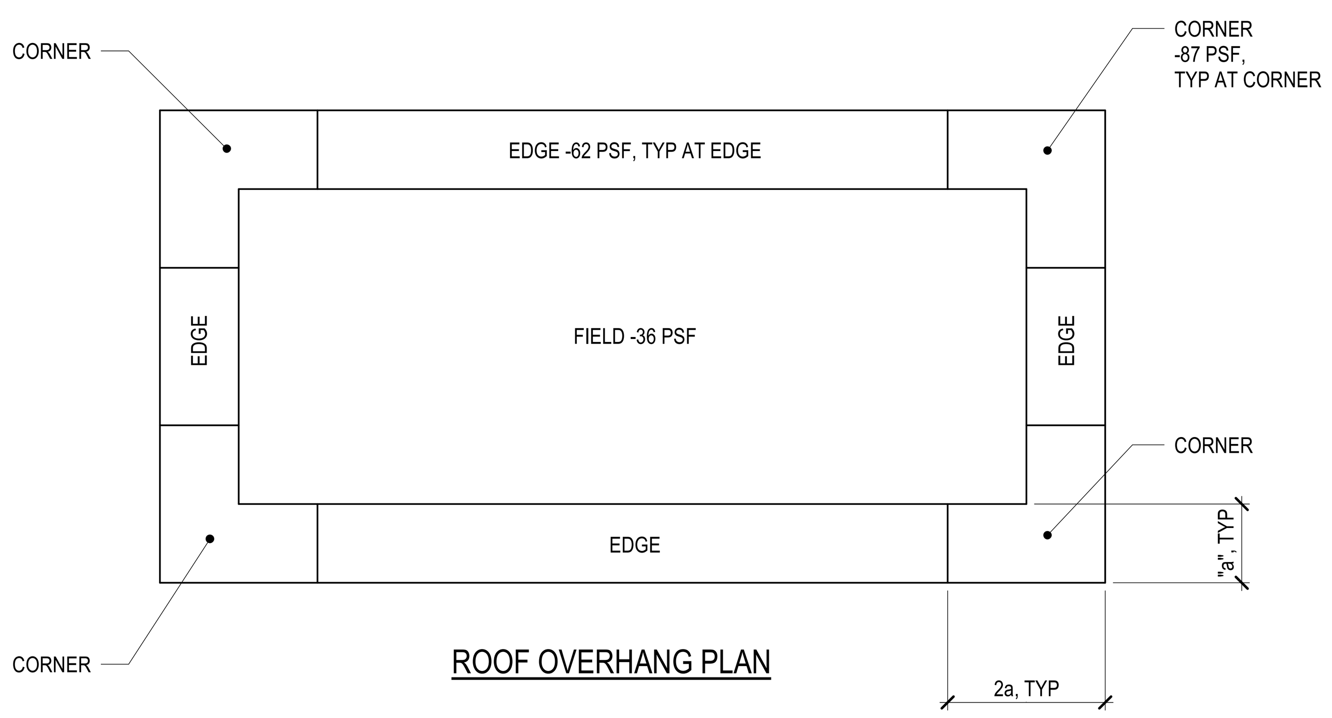
LIVE LOAD (LL) DESIGNATIONS		
MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS							
MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

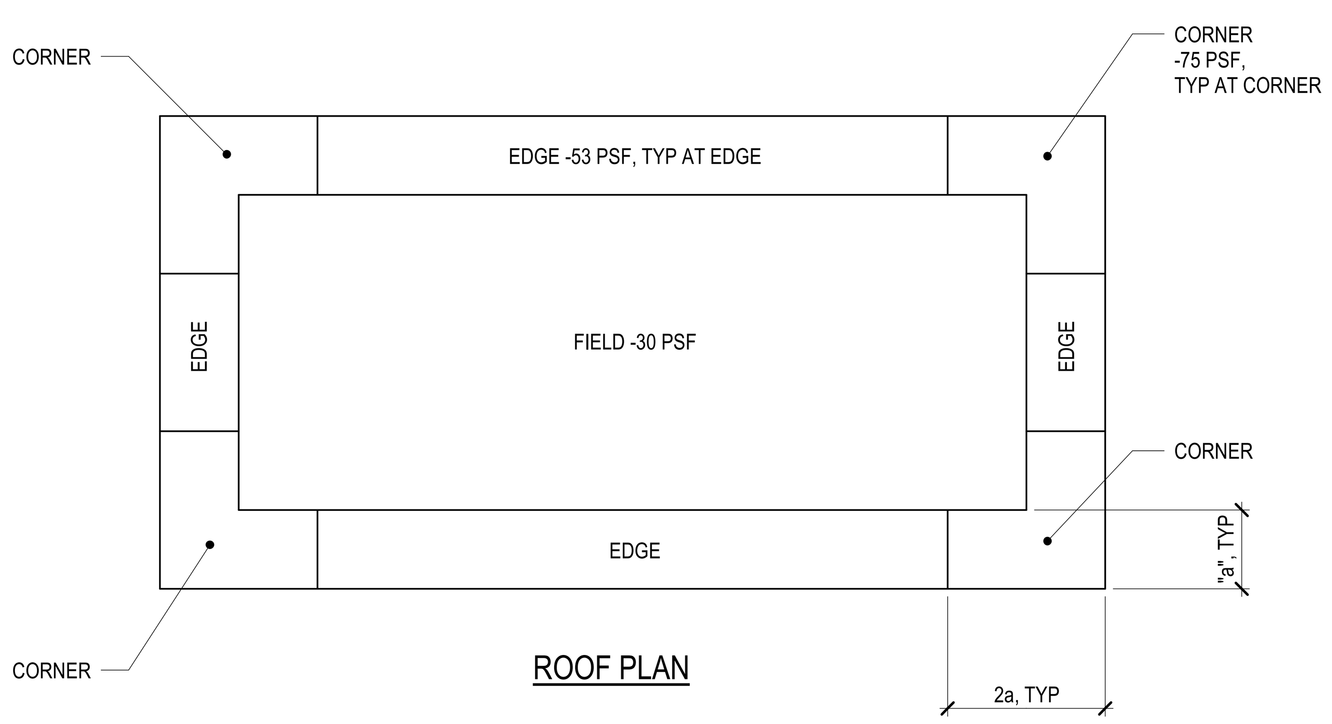
LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE. BUILT-UP SLABS SHOWN ON PLAN ARE CONSIDERED TO BE PART OF THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS



ROOF OVERHANG PLAN

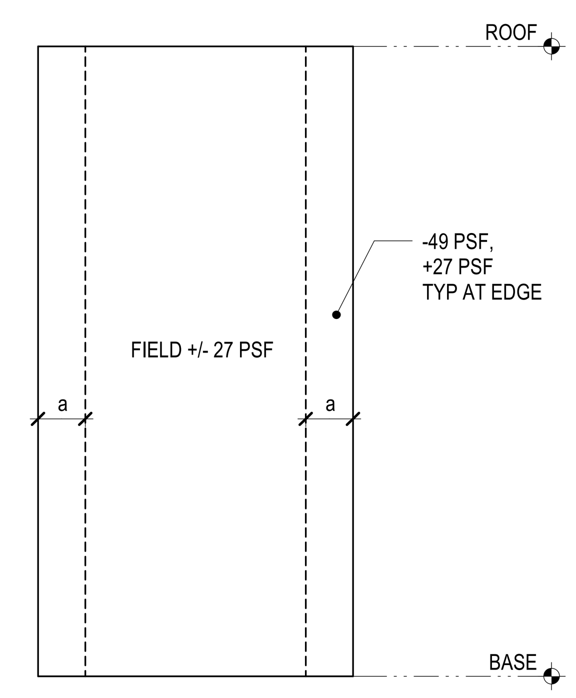


ROOF PLAN

NOTES:

1. SEE NOTES IN "COMPONENTS AND CLADDING WIND PRESSURE DIAGRAM" DETAIL.
2. ROOF OVERHANG PLAN APPLIES TO PORTIONS OF ROOFS PROJECT HORIZONTALLY BEYOND THE WALL BELOW.

16 ROOF WIND UPLIFT PRESSURE DIAGRAM

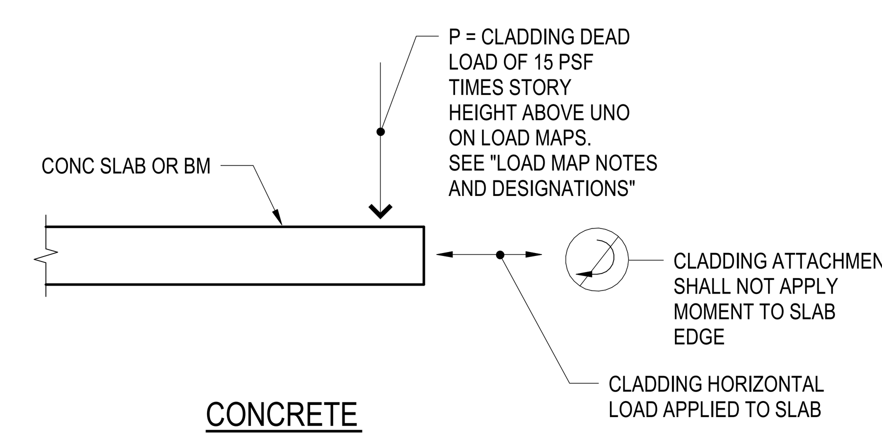


BUILDING ELEVATION

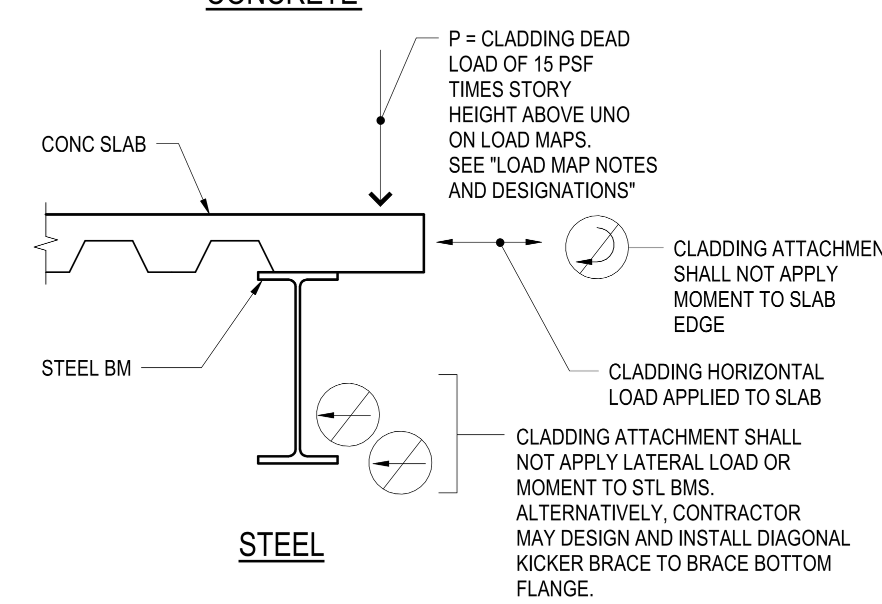
NOTES:

1. WIND LOADS FOR COMPONENTS AND CLADDING ARE DETERMINED IN ACCORDANCE WITH IBC 2018 SECTION 1609 / ASCE 7-16 SECTION 30, AND ARE STRENGTH LEVEL (Vult) PRESSURES. SCALING TO NOMINAL (Vasd) PRESSURES MAY BE ACCOMPLISHED BY MULTIPLYING THE INDICATED VALUES BY 0.60.
2. EXTERIOR COMPONENTS AND CLADDING SHALL BE DESIGNED TO ACCOMMODATE WORST CASE WIND LOADS SHOWN. ALTERNATIVELY, WIND LOADS MAY BE DETERMINED DIRECTLY FROM THE PROVISIONS OF IBC 2018 SECTION 1609 / ASCE 7-16 USING THE WIND LOAD CRITERIA NOTED IN THE "GENERAL NOTES."
3. METHOD OF APPLICATION AND MODIFICATION FACTORS APPLICABLE FOR CORNERS, OVERHANGS, ETC SHALL BE DETERMINED PER ASCE 7-16 BY THE CLADDING DESIGNER. REFER TO "GENERAL NOTES" FOR ADDITIONAL INFORMATION AFFECTING CLADDING DESIGN, AND CONNECTION TO THE STRUCTURE.
4. INWARD (POSITIVE) PRESSURE ACTS TOWARDS THE BUILDING SURFACE AND OUTWARD (NEGATIVE) PRESSURE ACTS AS SUCTION ON THE BUILDING SURFACE.
5. PRESSURES ARE CALCULATED USING THE MINIMUM EFFECTIVE WIND AREA (10 SQUARE FEET).
6. EDGE PRESSURES SHALL BE USED FOR A DISTANCE "a" FROM THE BUILDING'S CORNERS, WHERE "a" IS 10% OF THE LEAST HORIZONTAL DIMENSION, BUT NOT LESS THAN 3 FEET. "a" IS USED FOR OUTWARD PRESSURES ONLY.
7. NET PRESSURE TO ALL PARAPETS IS 104 PSF.

18 COMPONENTS AND CLADDING WIND PRESSURE DIAGRAM



CONCRETE



STEEL

NOTES:

1. REFER TO GENERAL NOTES, "EXTERIOR CLADDING" FOR ADDITIONAL INFORMATION.
2. STRUCTURE IS DESIGNED FOR THE EQUIVALENT UNIFORM LOAD CORRESPONDING TO THE ANTICIPATED WEIGHT OF THE CLADDING SYSTEM. CLADDING ATTACHMENTS WILL APPLY CONCENTRATED LOADS TO THE STRUCTURE. CONTRACTOR SHALL SUBMIT TYPICAL CLADDING ATTACHMENT DETAILS FOR REVIEW AND COMMENT PRIOR TO PREPARATION OF DETAILED CLADDING SUBMITTAL.

20 CLADDING LOAD NOTES

DAVID C. FIELDS
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

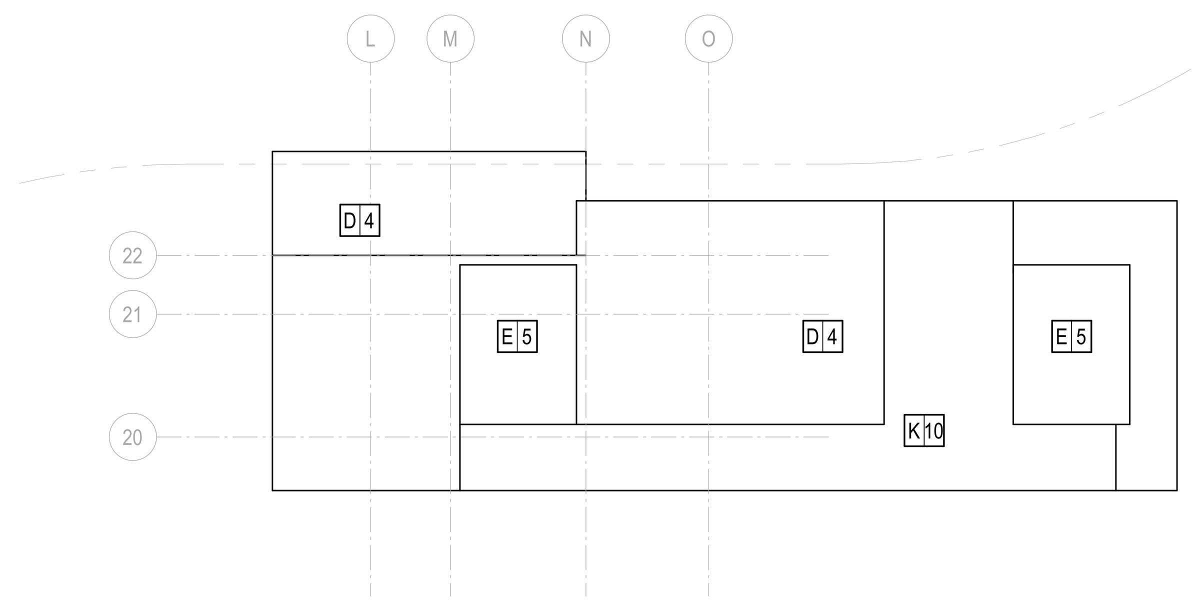
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

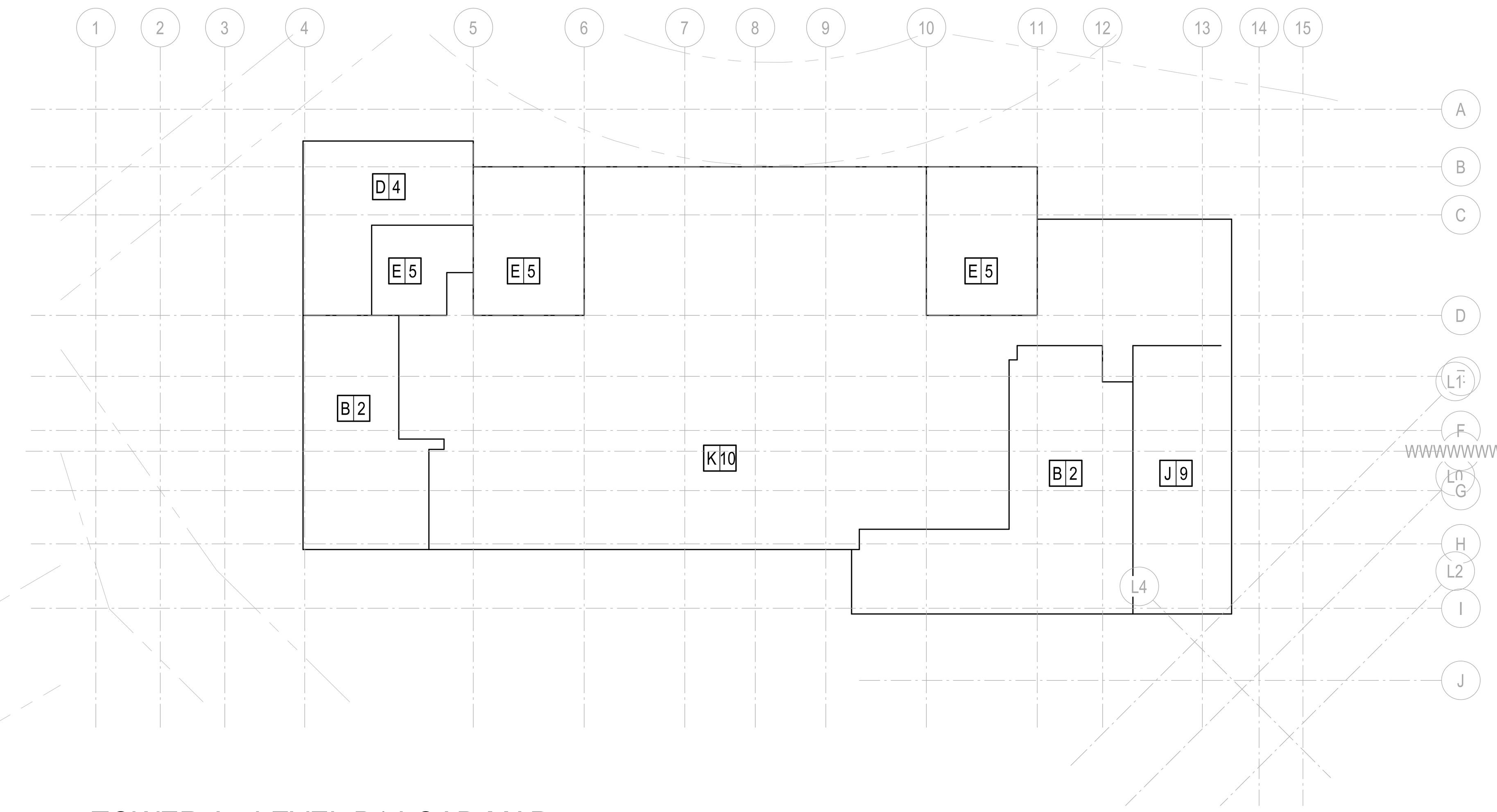
11/18/2022

LOAD MAPS

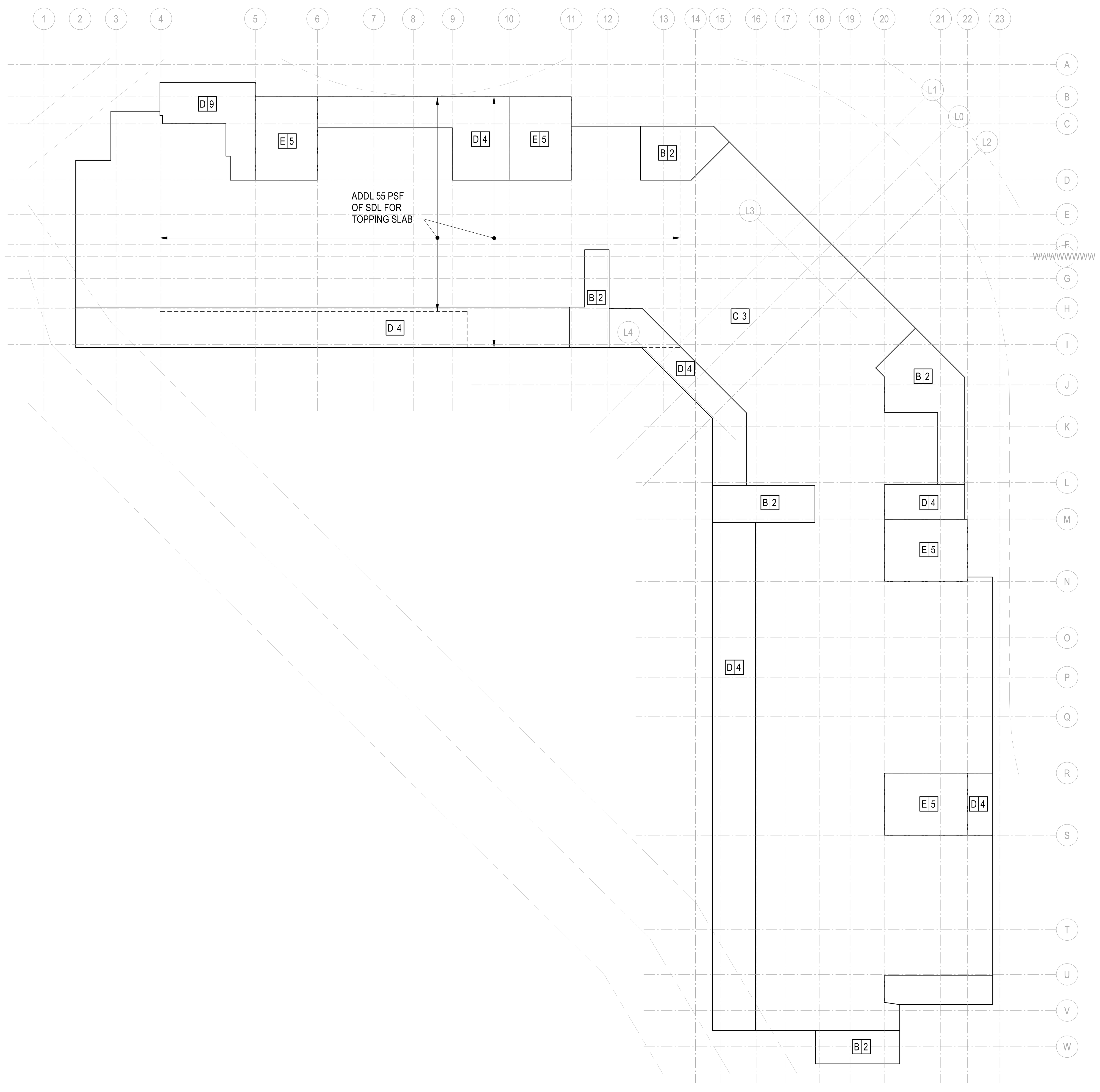
S1.00



2 TOWER B - LEVEL B1 LOAD MAP



3 TOWER A - LEVEL B1 LOAD MAP



4 TOWER A & B - PARKING LEVEL 2 LOAD MAP

LOAD MAP KEY:

A1 — NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK; LETTER INDICATES LIVE LOAD MARK

INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

LIVE LOAD (LL) DESIGNATIONS

MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

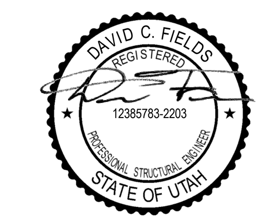
SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS

MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE. BUILT-UP SLABS SHOWN ON PLAN ARE CONSIDERED TO BE PART OF THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS



Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

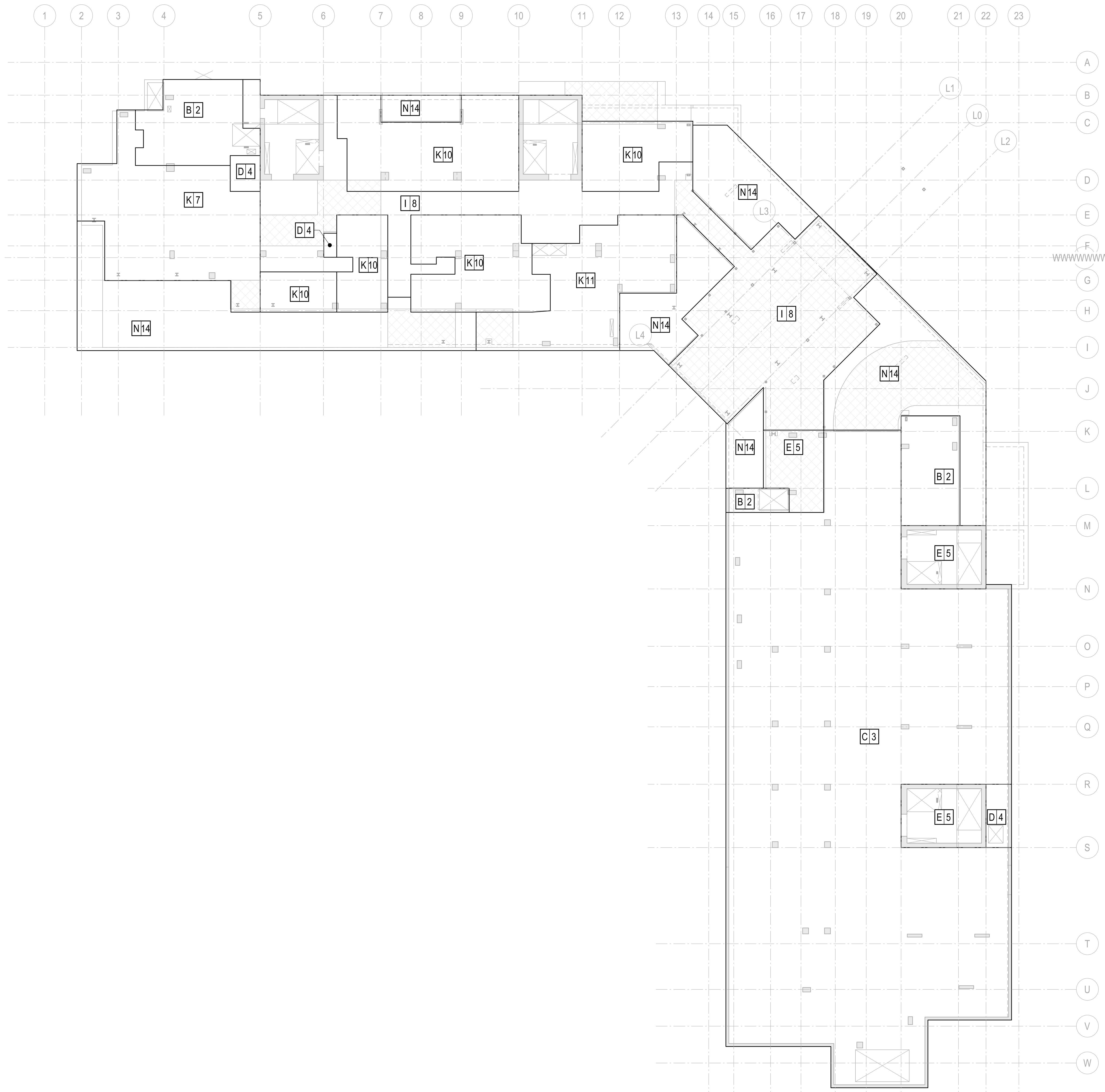
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

11/18/2022

LOAD MAPS

S1.01



1 TOWER A - LEVEL 1 & TOWER B - LEVEL P1 LOAD MAP

LOAD MAP KEY:

A 1
- NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK
- LETTER INDICATES LIVE LOAD MARK

INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

LIVE LOAD (LL) DESIGNATIONS

MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

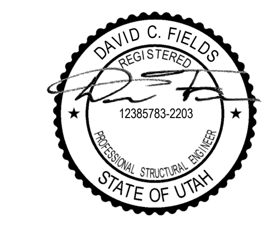
SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS

MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE. BUILT-UP SLABS SHOWN ON PLAN ARE CONSIDERED TO BE PART OF THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS



Reserved for permit stamp

Olson Kundig
159 South Jackson St. Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect______
project manager______
drawn by______
______
checked by______
job no. 20052
date 11/18/2022

revisions:

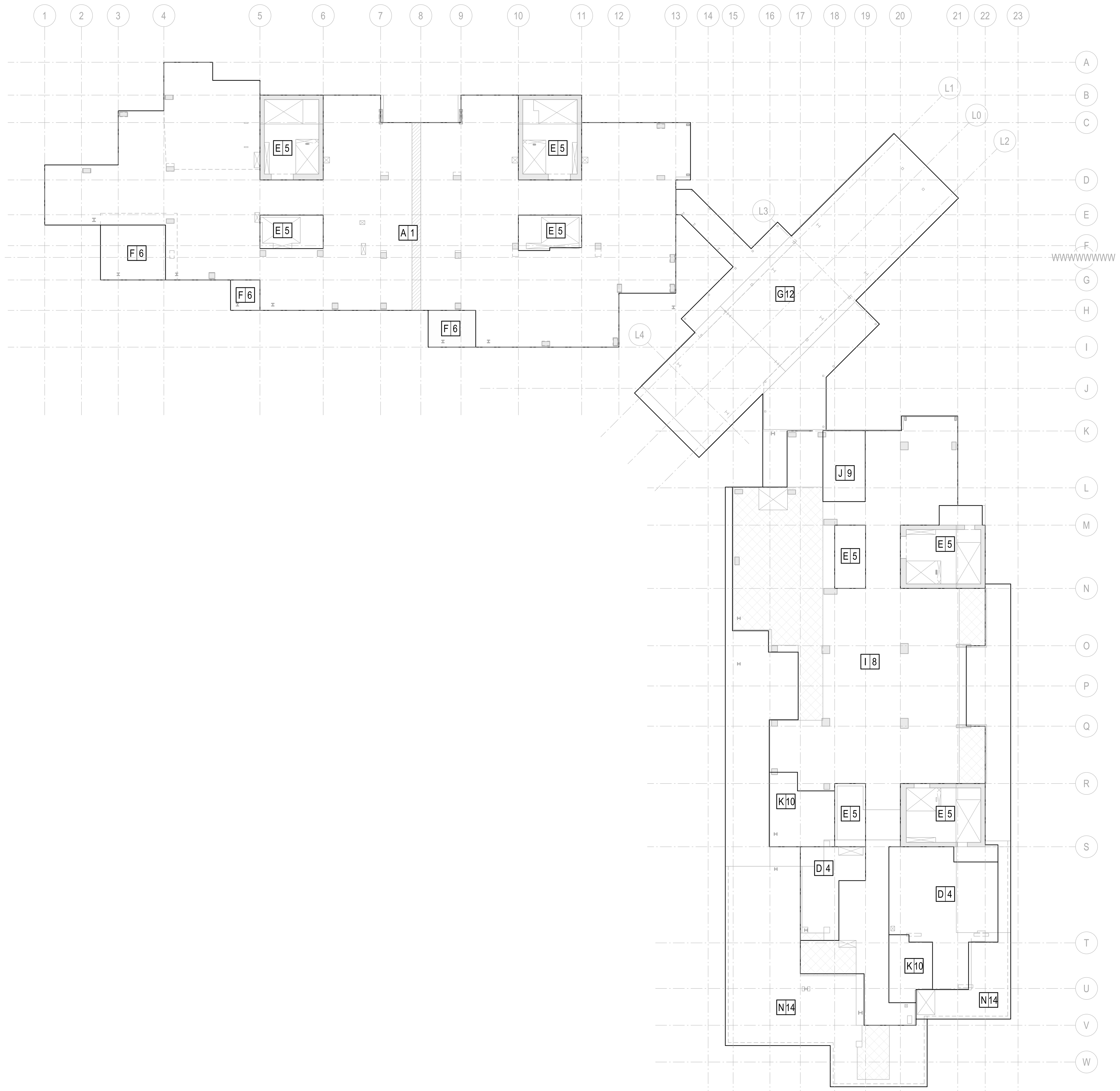
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

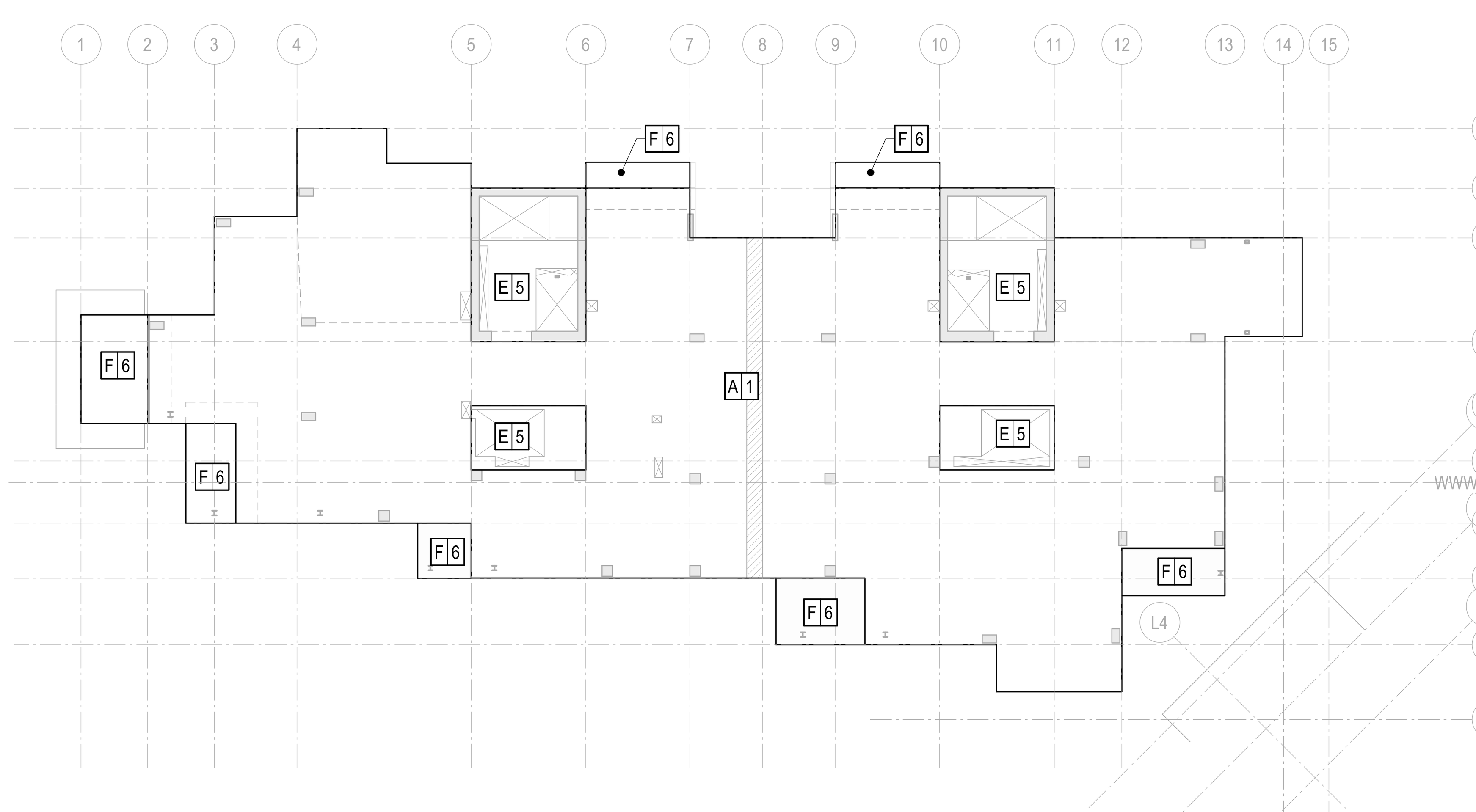
11/18/2022

LOAD MAPS

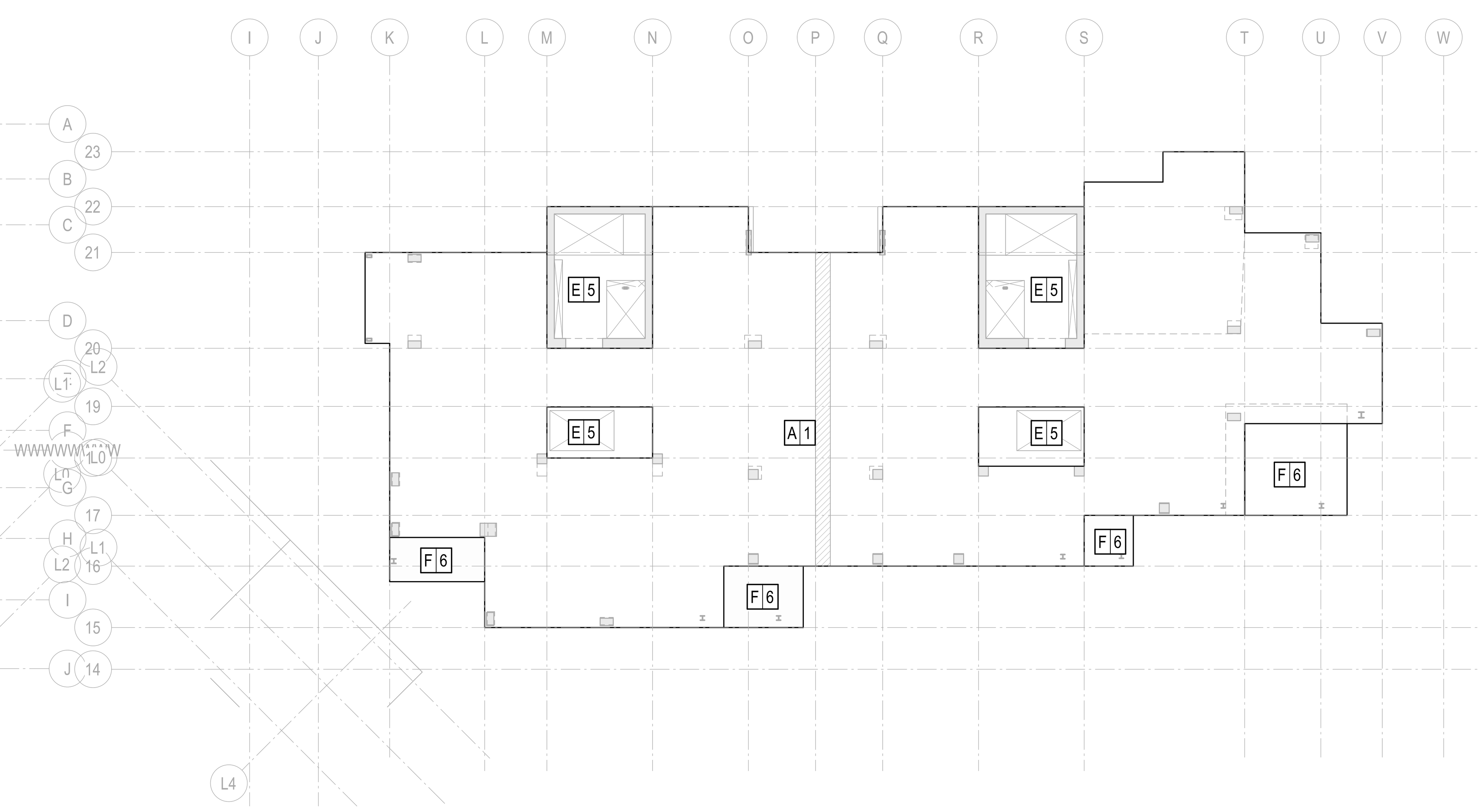
S1.02



1 TOWER A - LEVEL 2 & TOWER B - LEVEL 1 LOAD MAP



2 TOWER A - LEVEL 3 LOAD MAP



3 TOWER B - LEVEL 2 LOAD MAP

LOAD MAP KEY:

A 1
NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK
LETTER INDICATES LIVE LOAD MARK

INDICATES CLADDING LOADS IN POUNDS PER SQUARE FOOT OF SURFACE AREA.
SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

LIVE LOAD (LL) DESIGNATIONS

MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS

MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE. BUILT-UP SLABS SHOWN ON PLAN ARE CONSIDERED TO BE PART OF THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS

DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

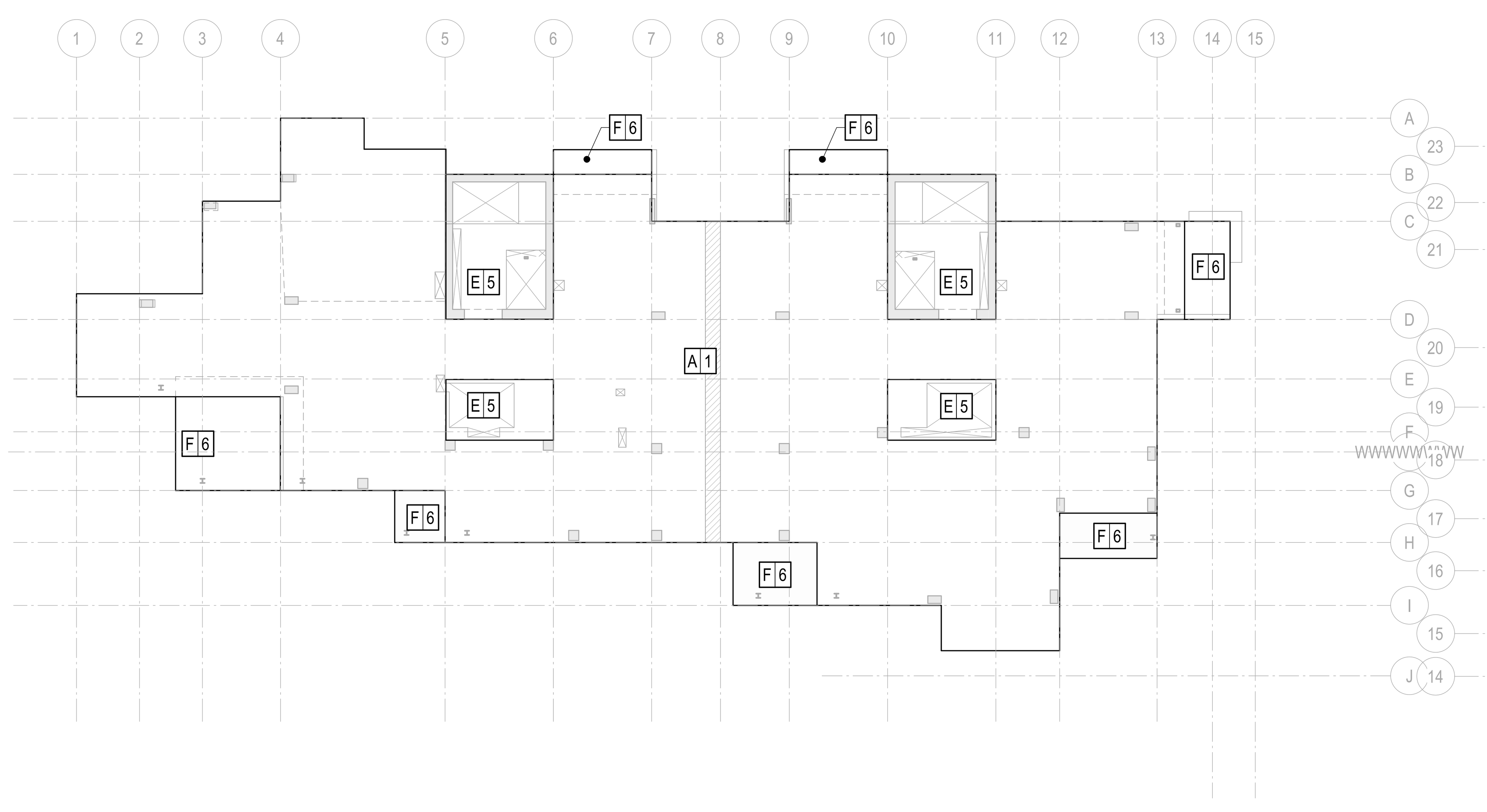
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

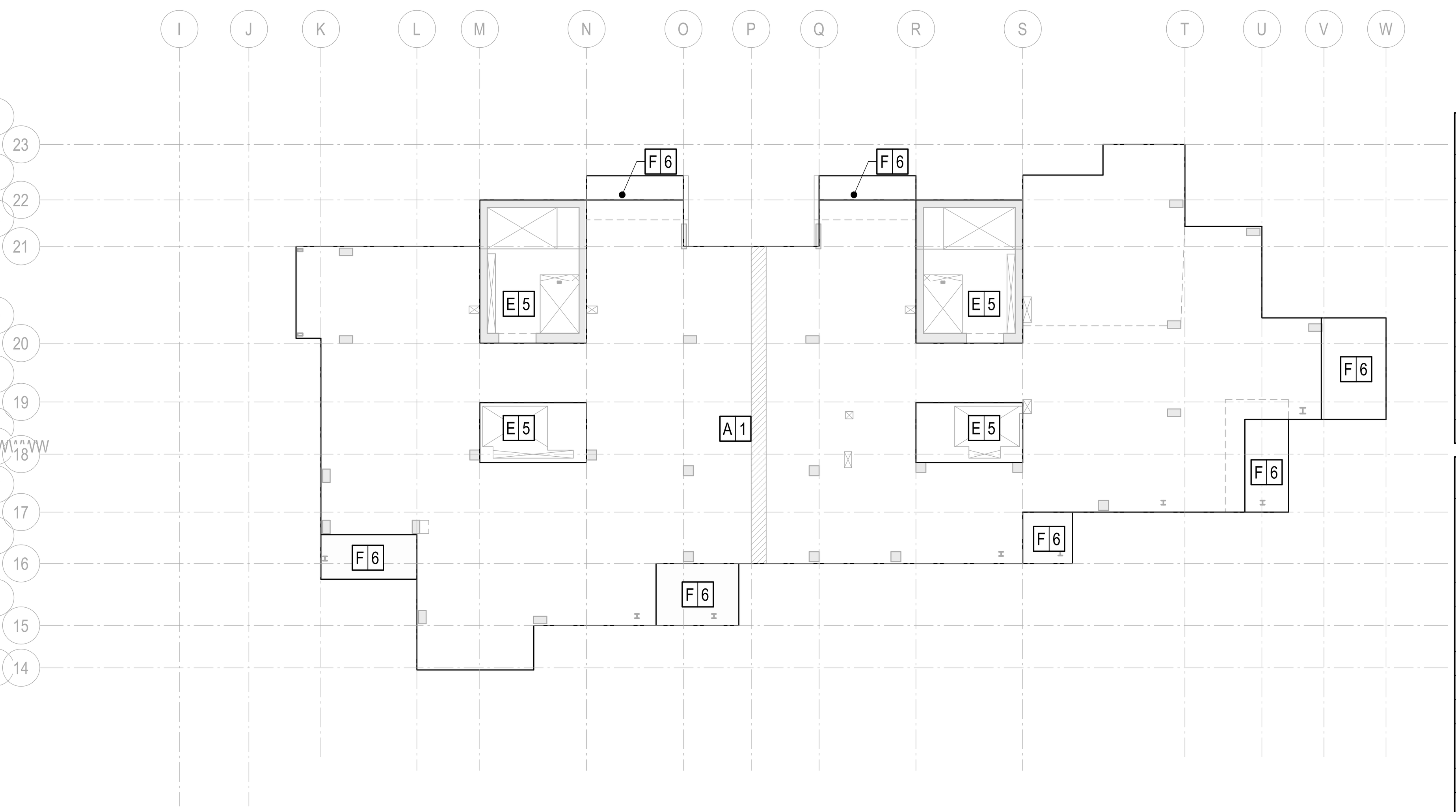
11/18/2022

LOAD MAPS

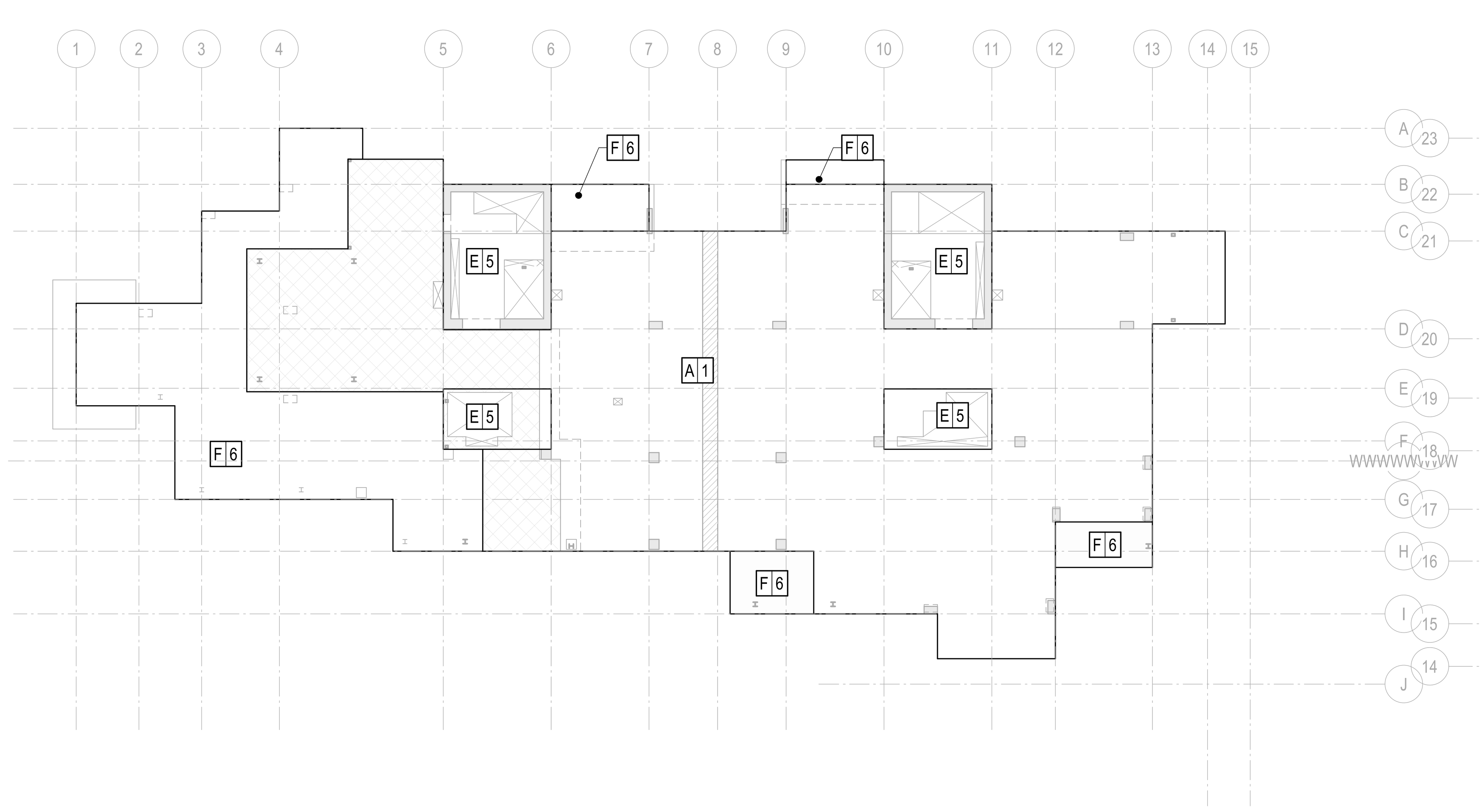
S1.03



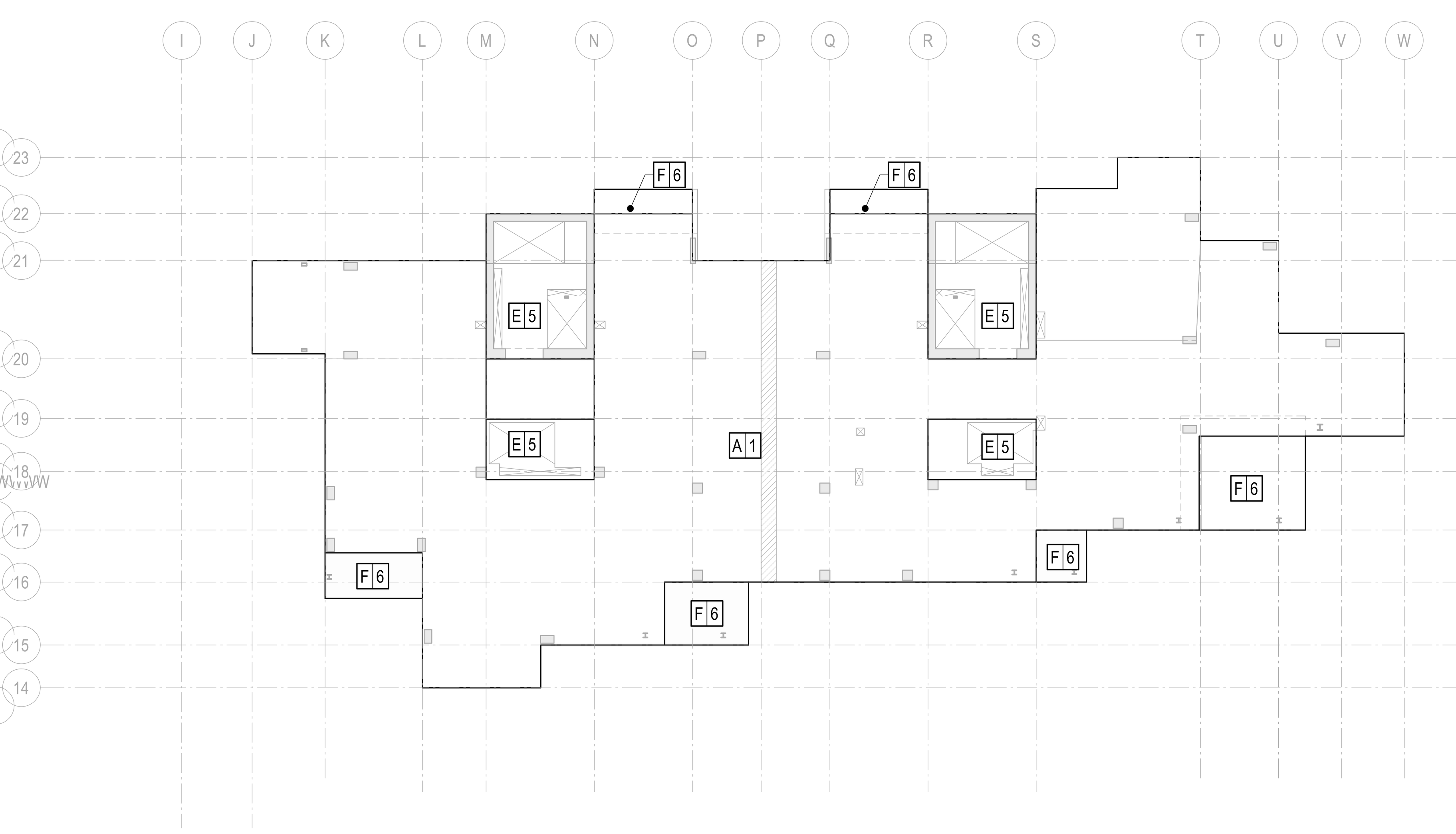
1 TOWER A - LEVEL 4 LOAD MAP



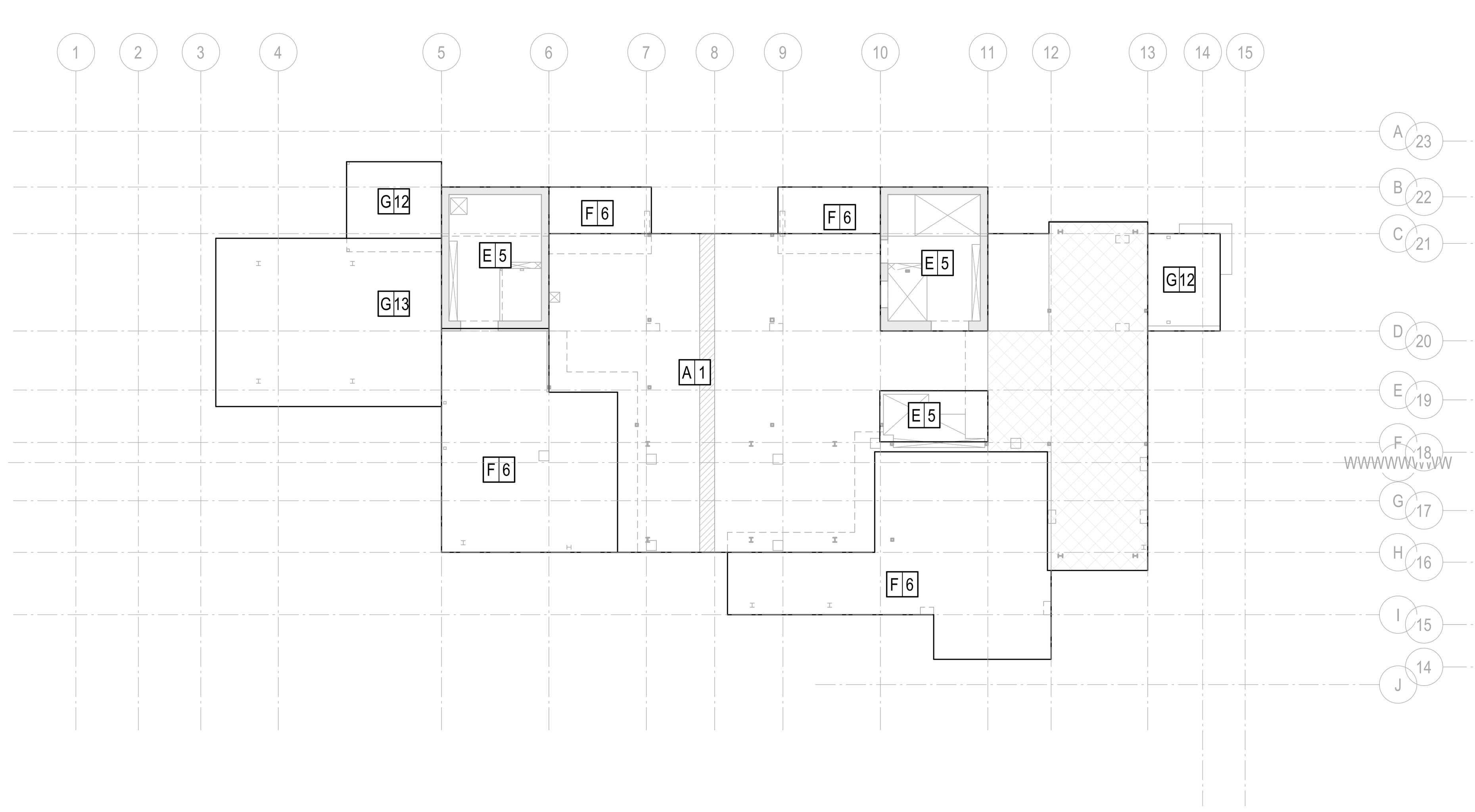
2 TOWER B - LEVEL 3 LOAD MAP



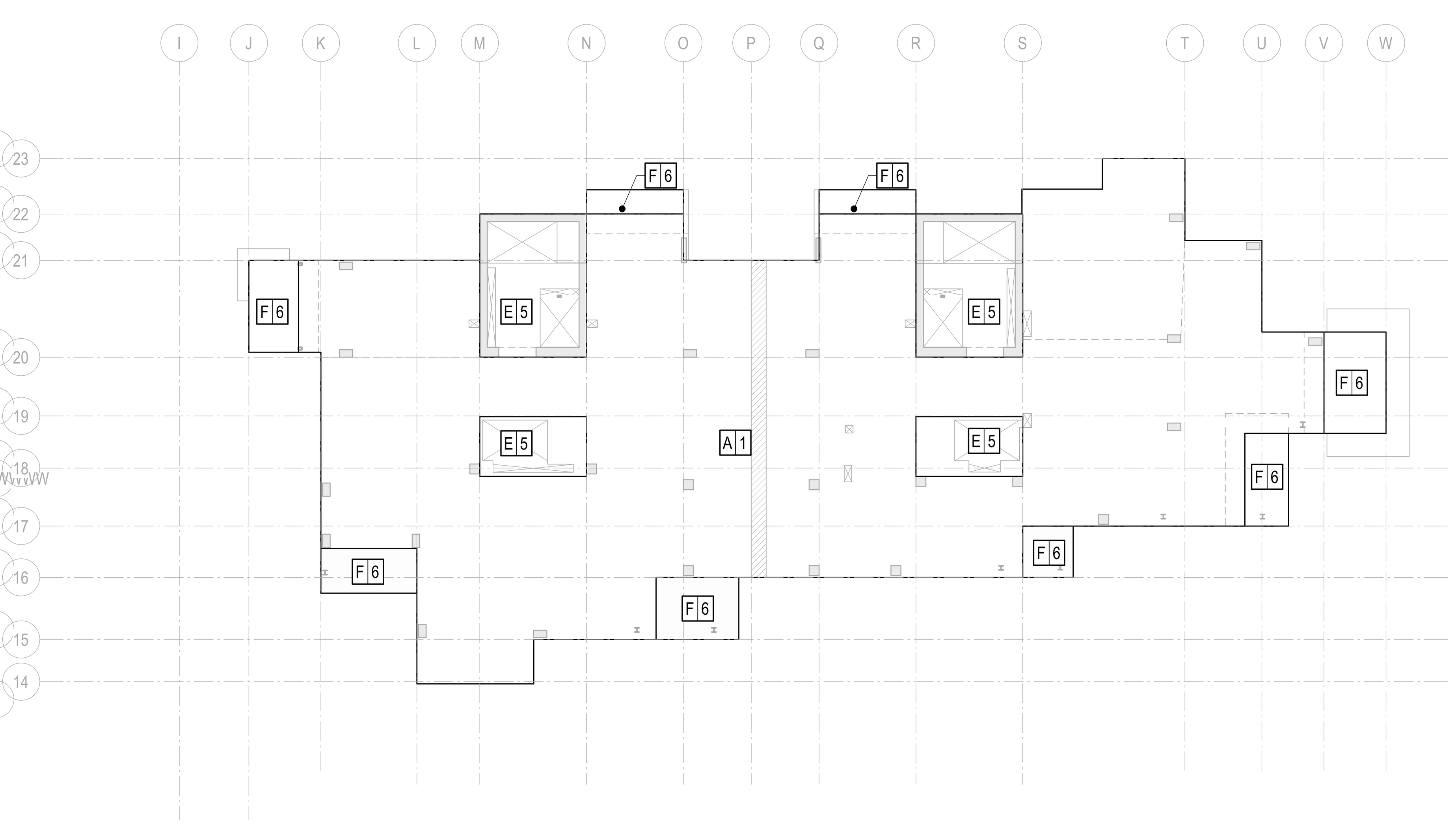
3 TOWER A - LEVEL 5 LOAD MAP



4 TOWER B - LEVEL 4 LOAD MAP



5 TOWER A - LEVEL 6 LOAD MAP



6 TOWER B - LEVEL 5 LOAD MAP

LOAD MAP KEY:

A 1
- NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK
- LETTER INDICATES LIVE LOAD MARK

INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

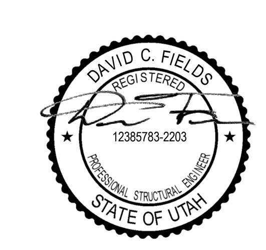
LIVE LOAD (LL) DESIGNATIONS		
MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS							
MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE. BUILT-UP SLABS SHOWN ON PLAN ARE CONSIDERED TO BE PART OF THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS



Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

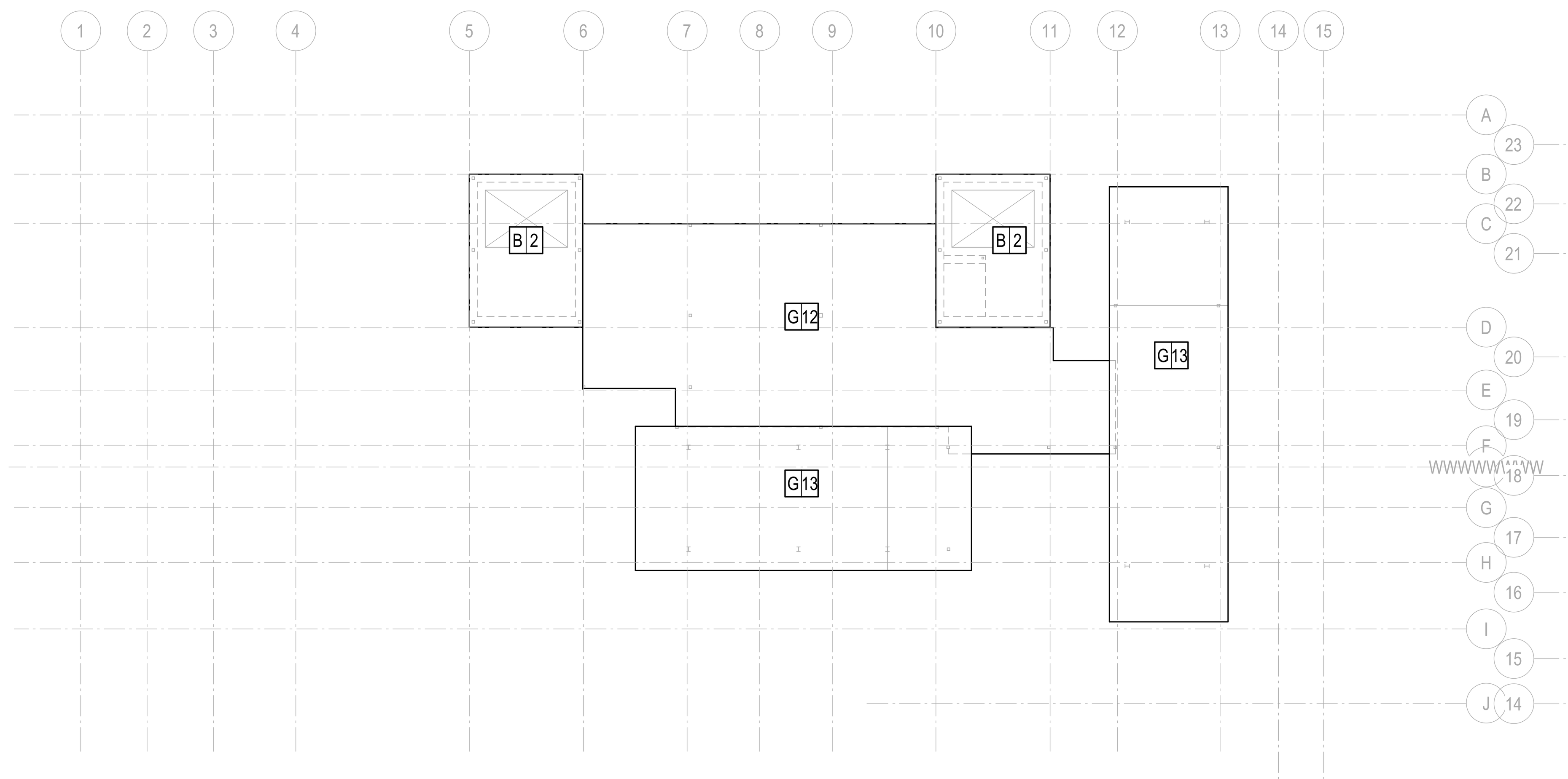
revisions:

no.	date		by
1	11/18/2022	IFC	

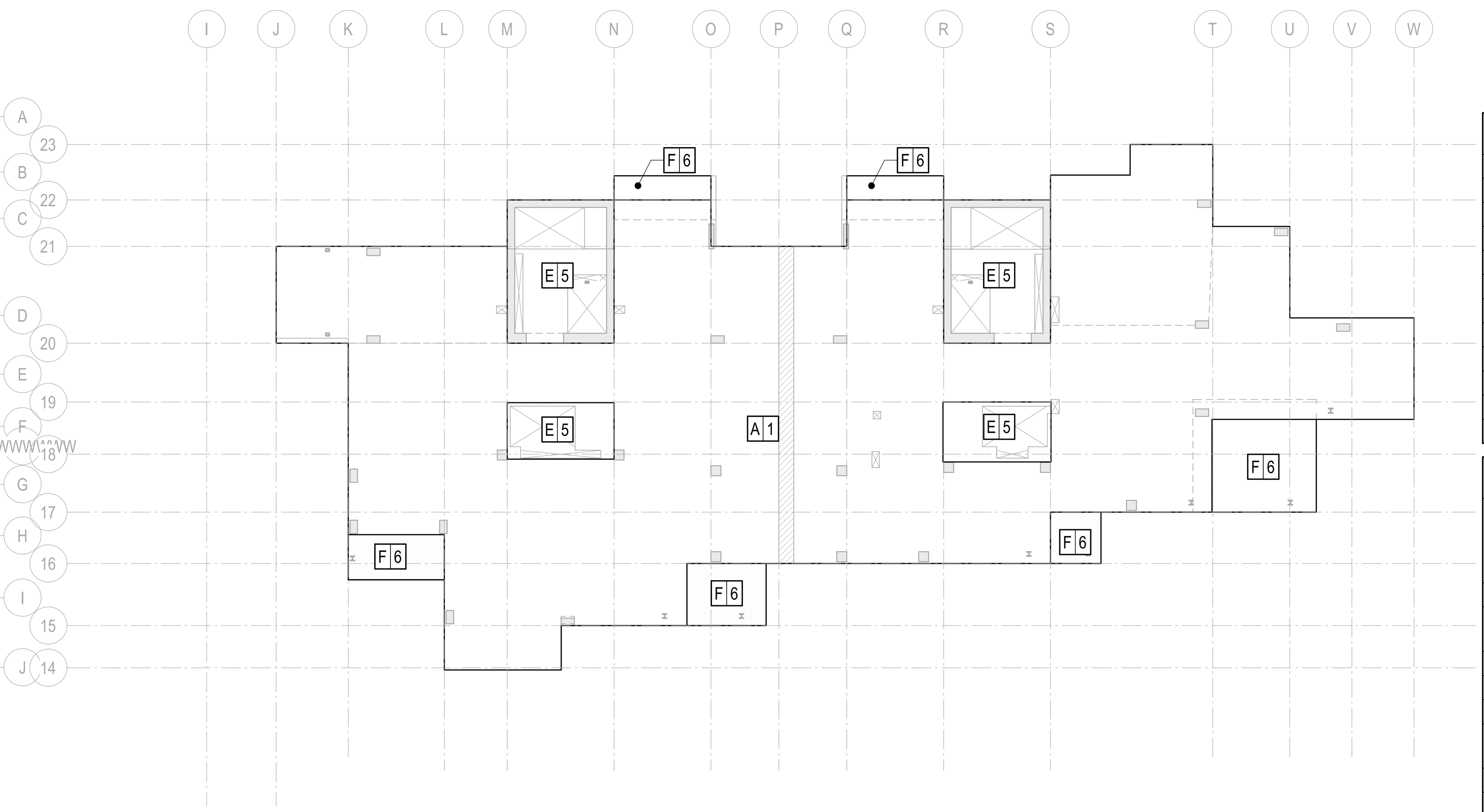
CONSTRUCTION DOCUMENTS
11/18/2022

LOAD MAPS

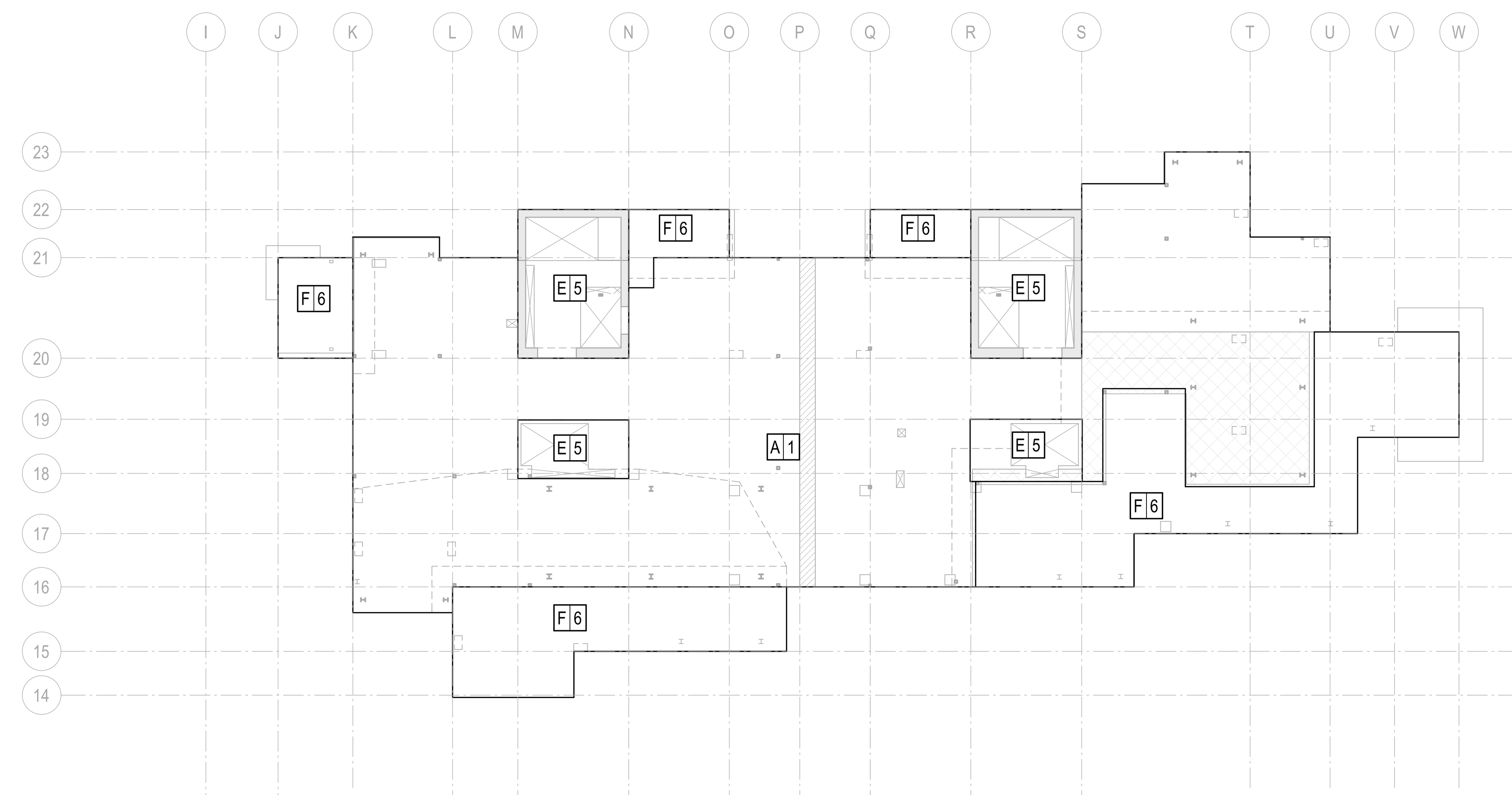
S1.04



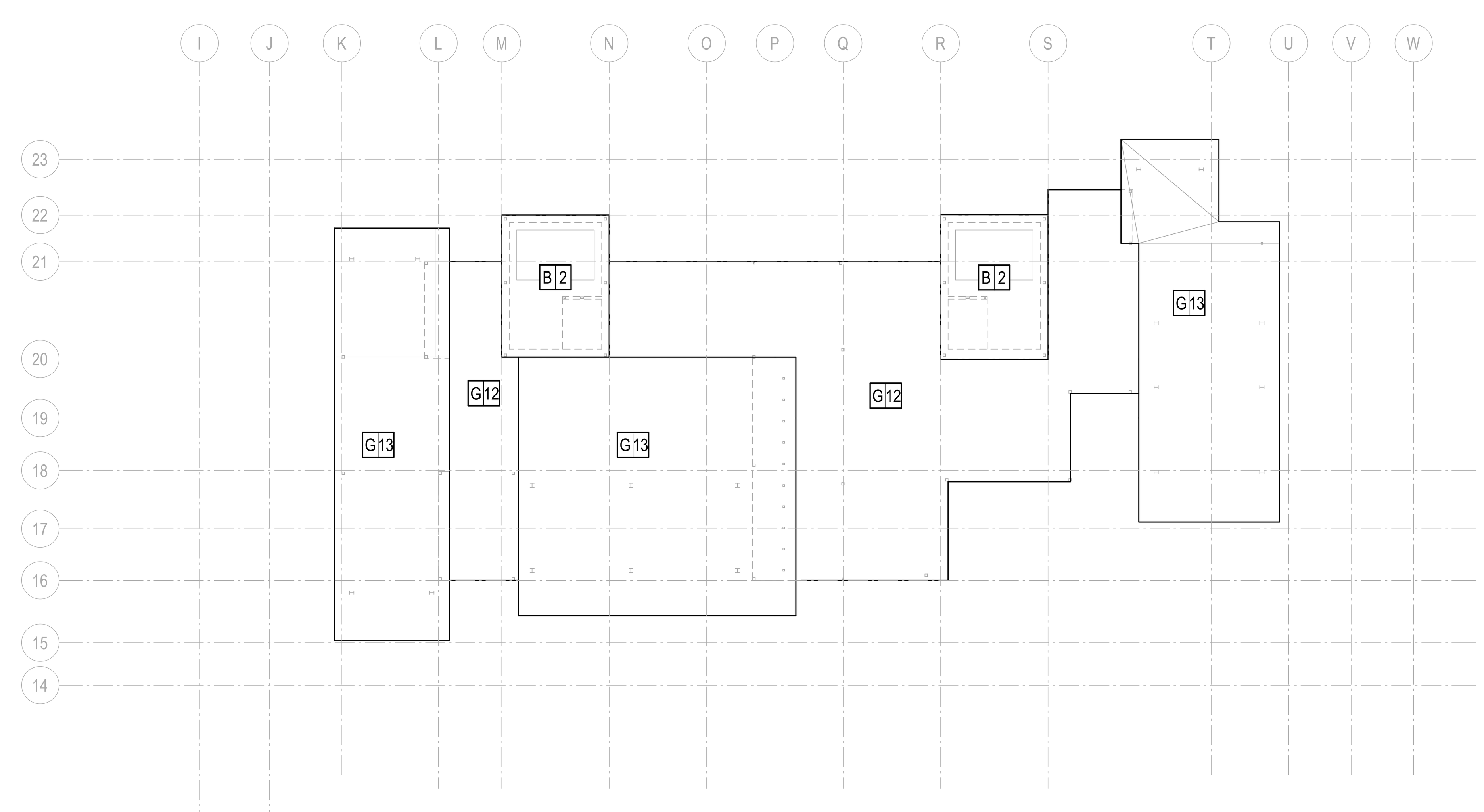
1 TOWER A - ROOF LOAD MAP



2 TOWER B - LEVEL 6 LOAD MAP



4 TOWER B - LEVEL 7 LOAD MAP



6 TOWER B - ROOF LOAD MAP

LOAD MAP KEY:

A 1 — NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK; LETTER INDICATES LIVE LOAD MARK

◇ INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

LIVE LOAD (LL) DESIGNATIONS

MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS

MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE. BUILT-UP SLABS SHOWN ON PLAN ARE CONSIDERED TO BE PART OF THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS

DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

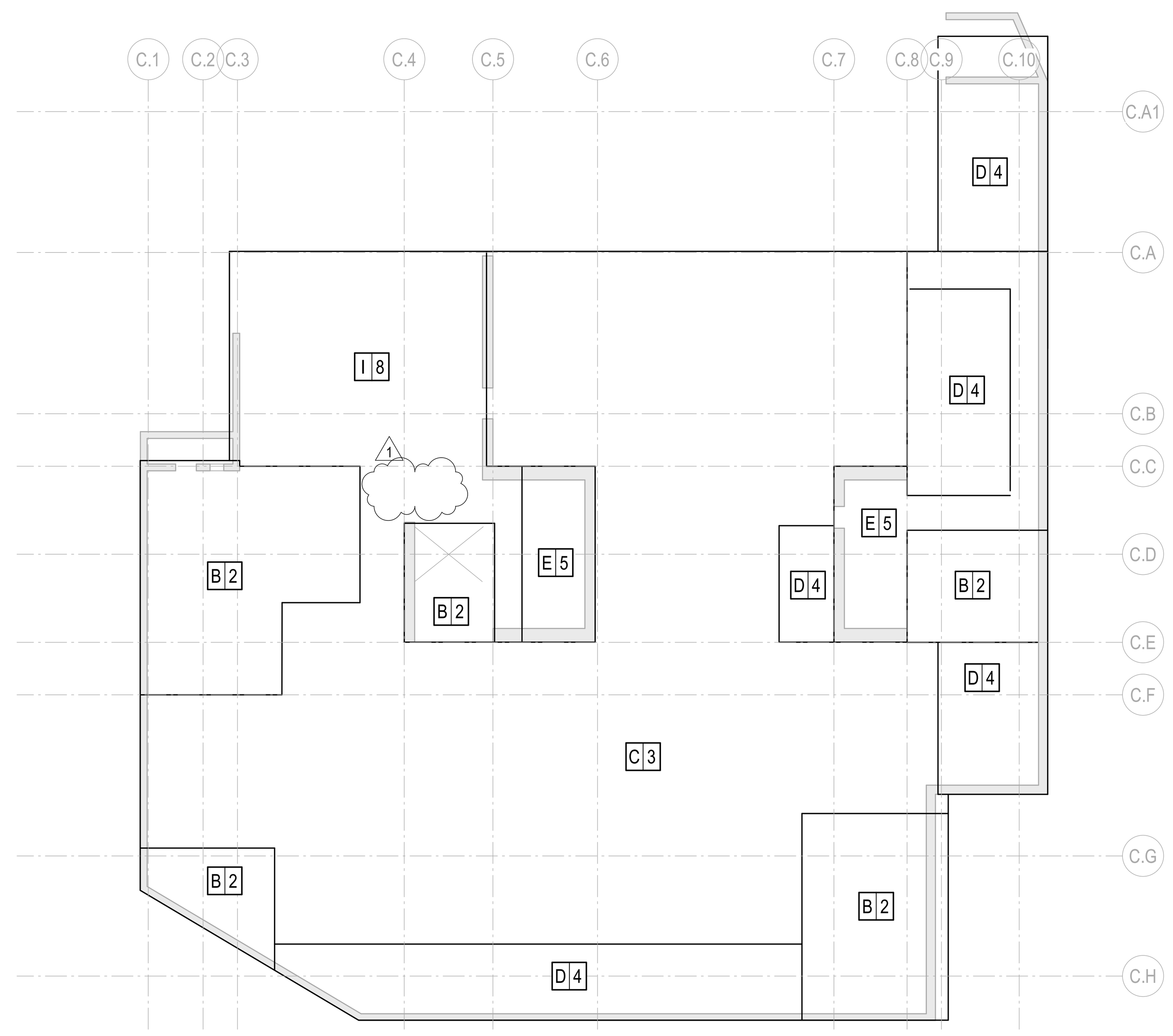
revisions:

no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS
11/18/2022

LOAD MAPS

S1.05



1 TOWER C PARKING LOAD MAP

2 TOWER C LEVEL 1 LOAD MAP

LOAD MAP KEY:

A 1

NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK

LETTER INDICATES LIVE LOAD MARK

* * INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

LIVE LOAD (LL) DESIGNATIONS

MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

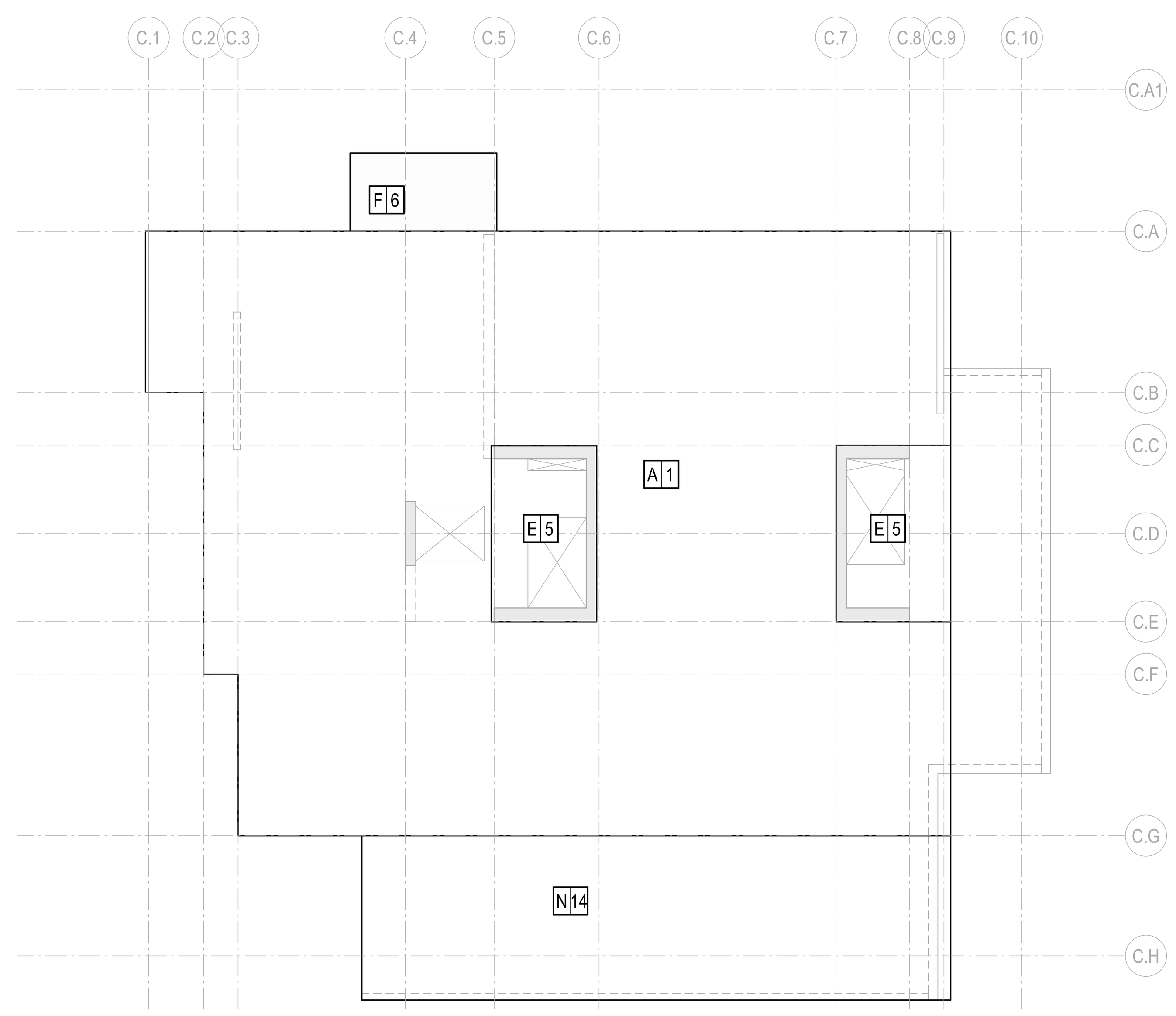
SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS

MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

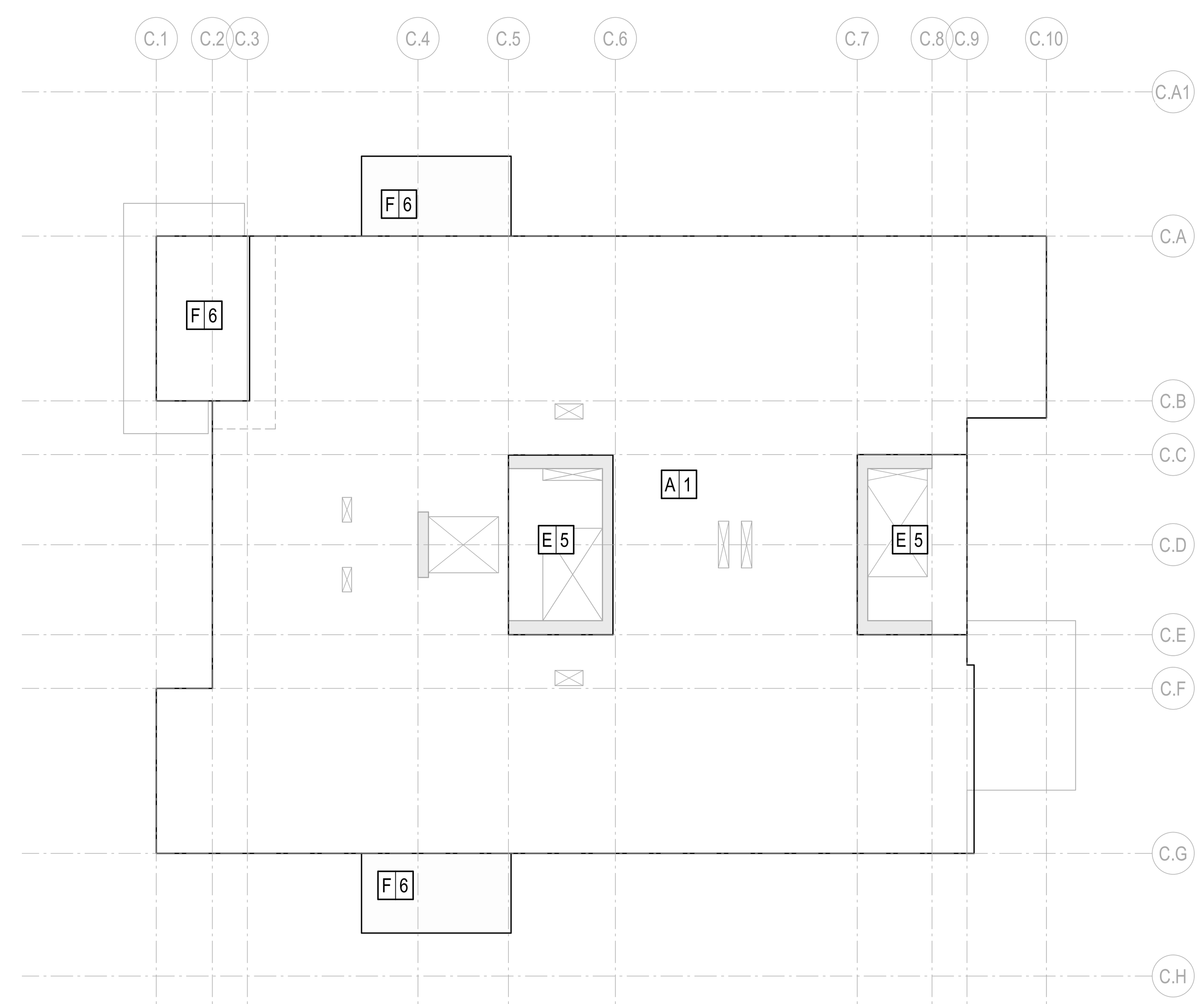
LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS



3 TOWER C LEVEL 2 LOAD MAP



4 TOWER C LEVEL 3 LOAD MAP

DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig

159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

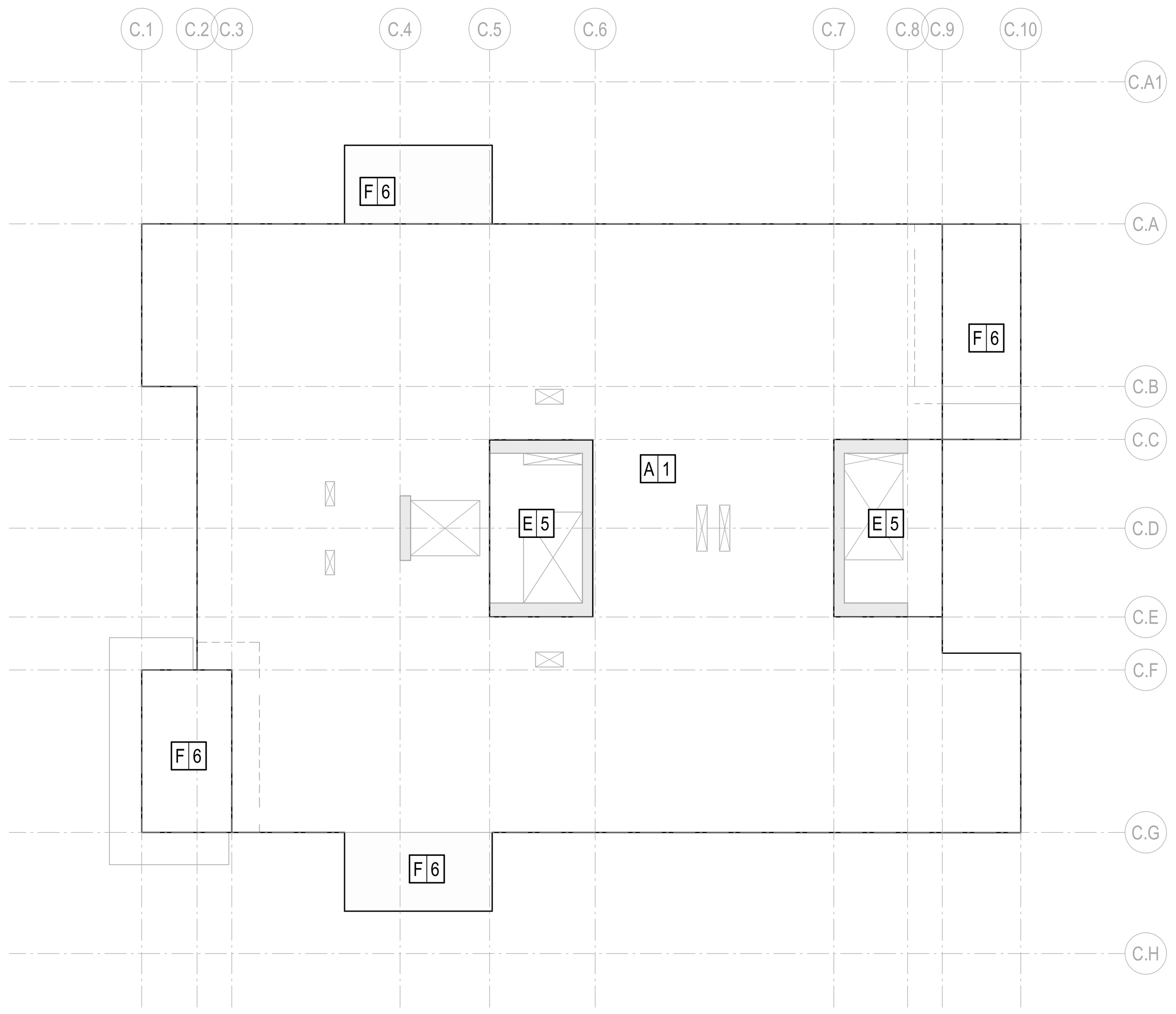
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

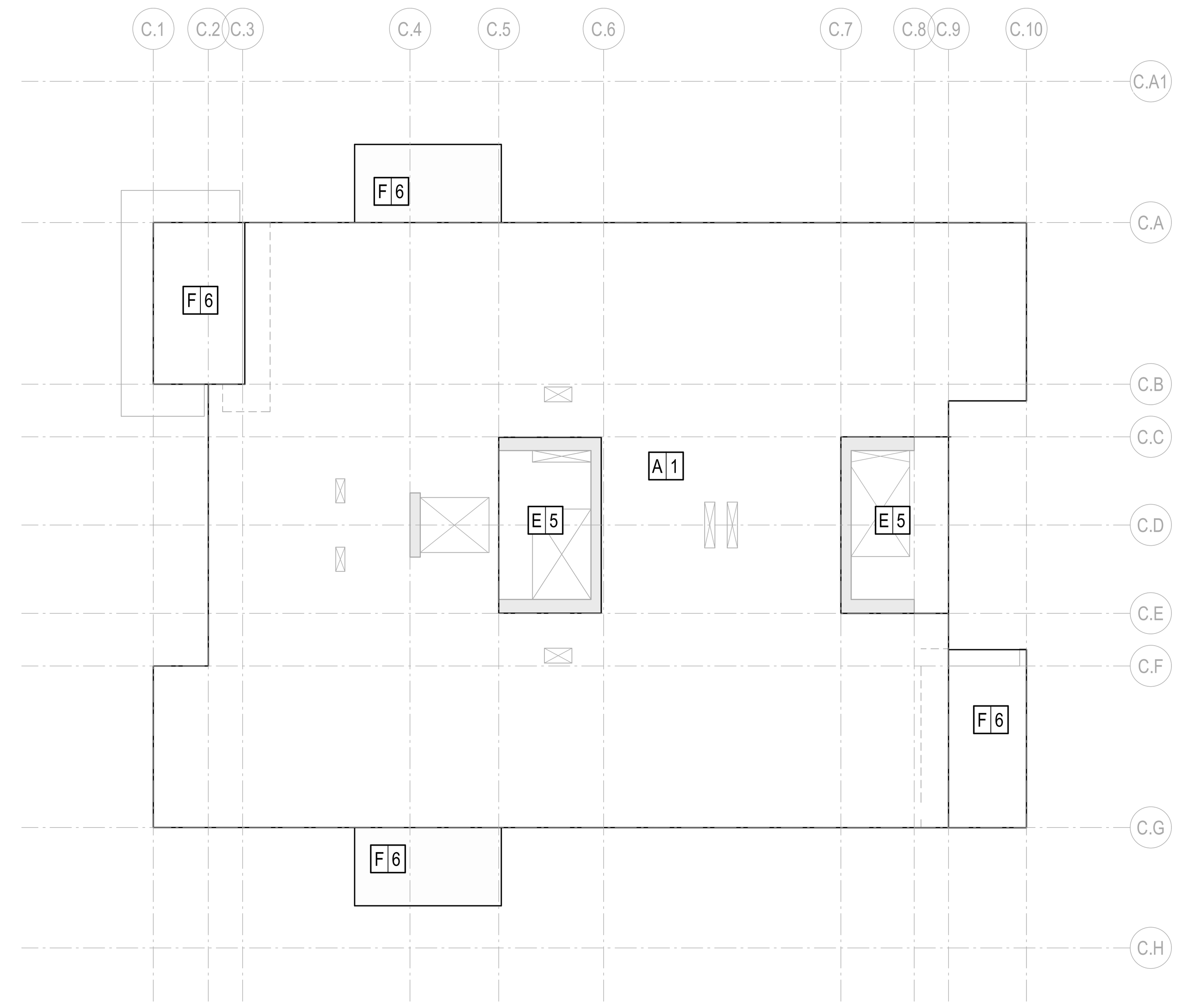
11/18/2022

LOAD MAPS

S1.06



1 TOWER C LEVEL 4 LOAD MAP



2 TOWER C LEVEL 5 LOAD MAP

LOAD MAP KEY:

A 1

NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK

LETTER INDICATES LIVE LOAD MARK

* * INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

LIVE LOAD (LL) DESIGNATIONS

MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

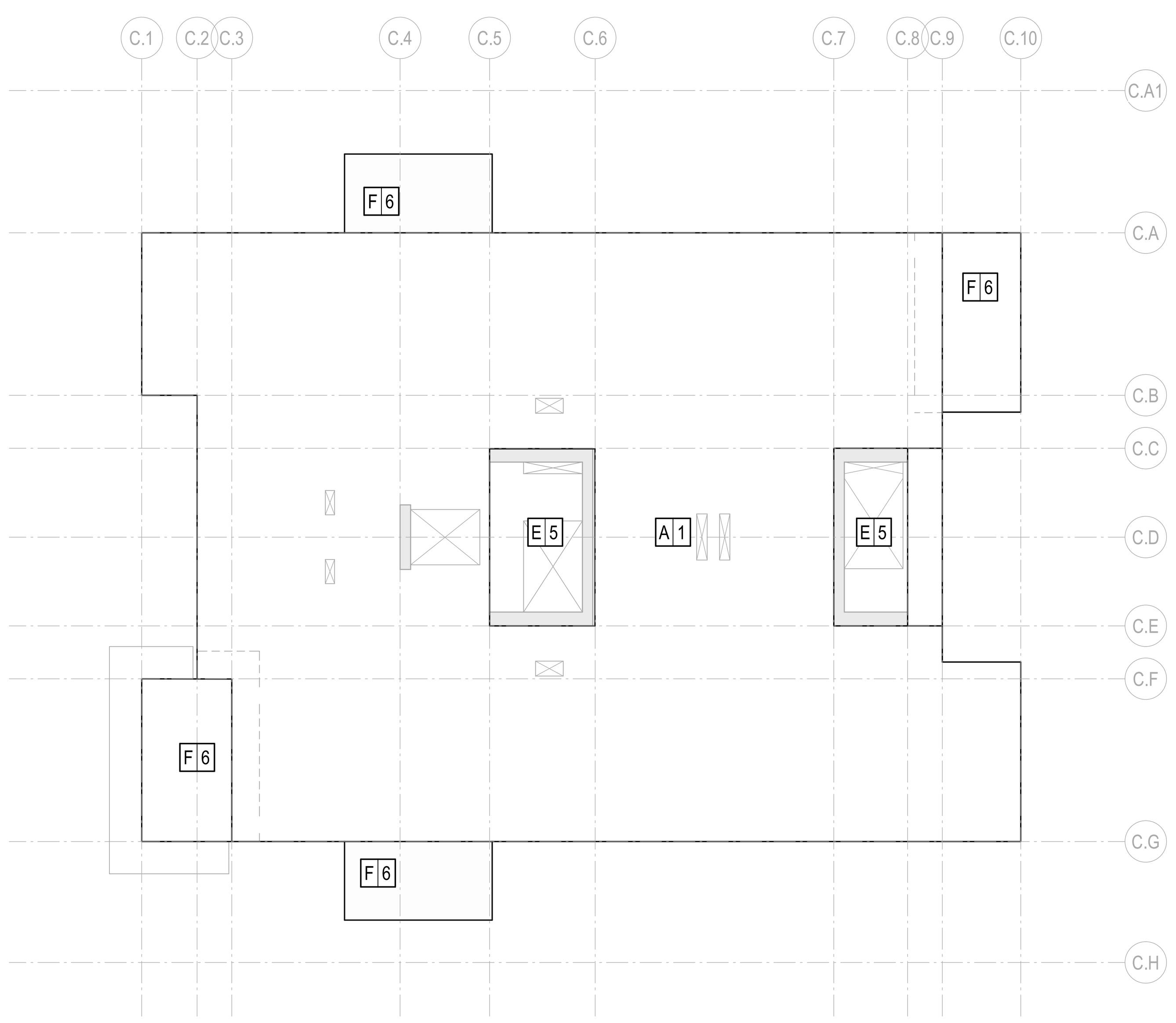
SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS

MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

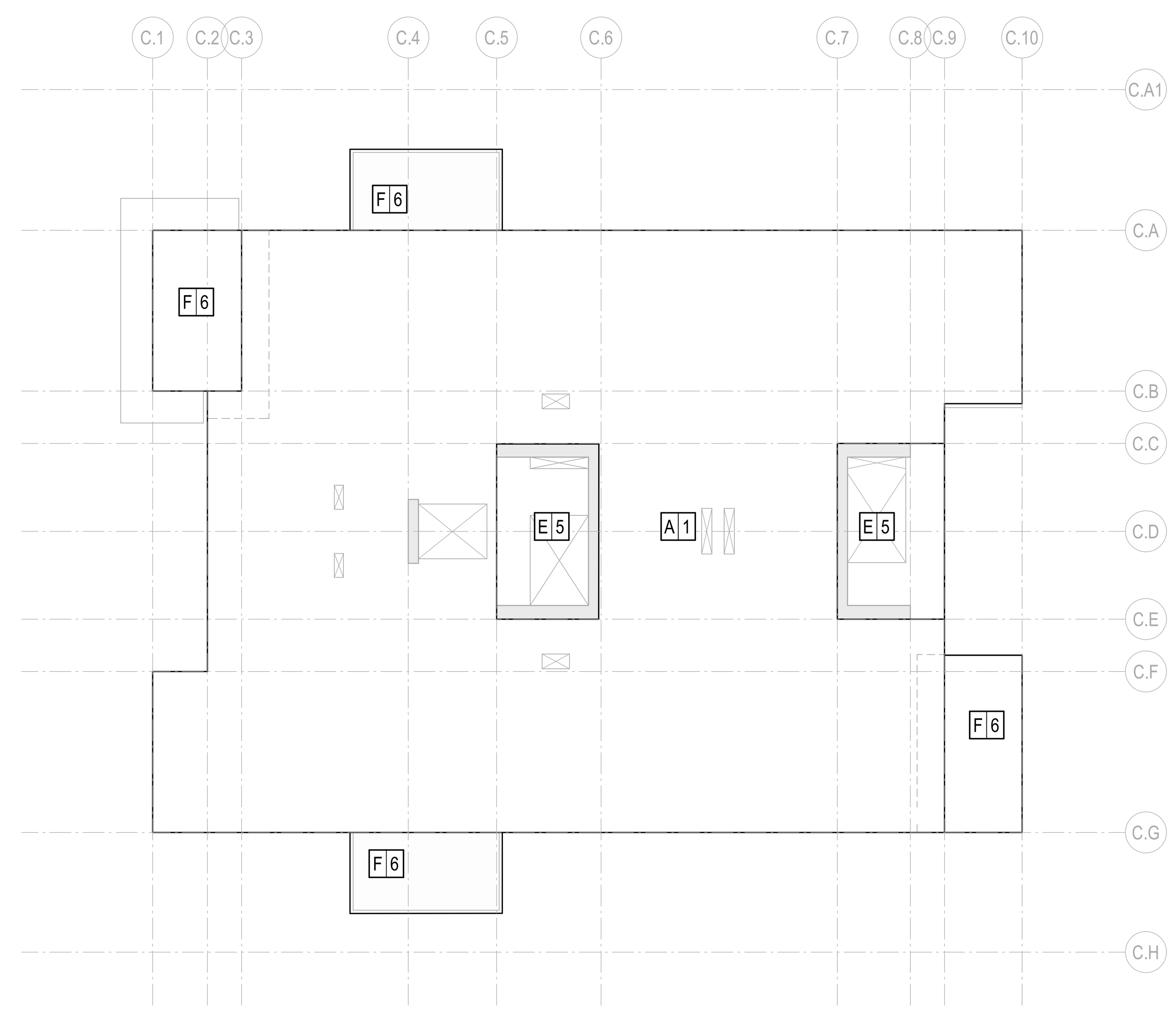
LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS



3 TOWER C LEVEL 6 LOAD MAP



4 TOWER C LEVEL 7 LOAD MAP

DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

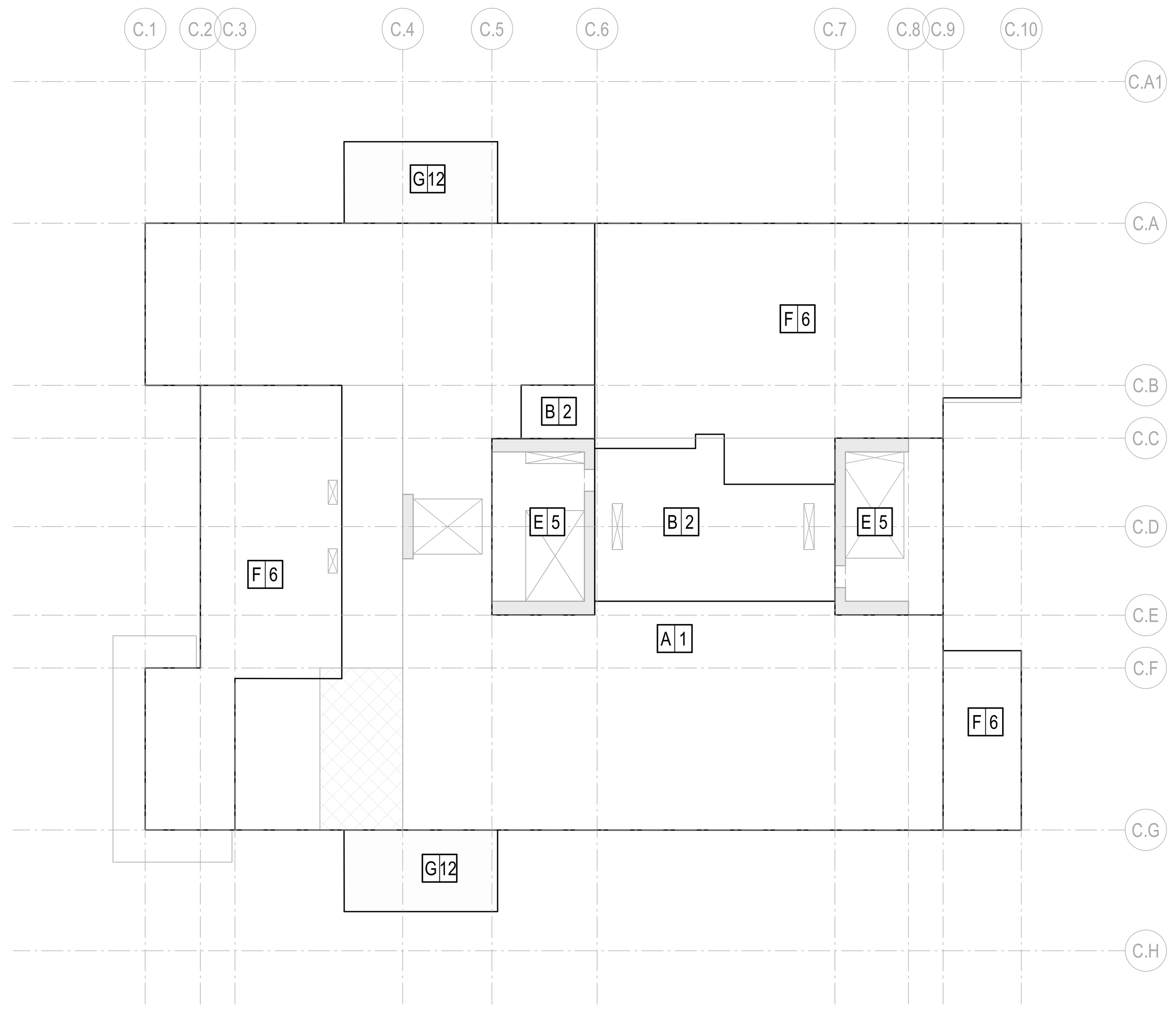
no.	date		by
1	11/18/2022	IFC	

CONSTRUCTION DOCUMENTS

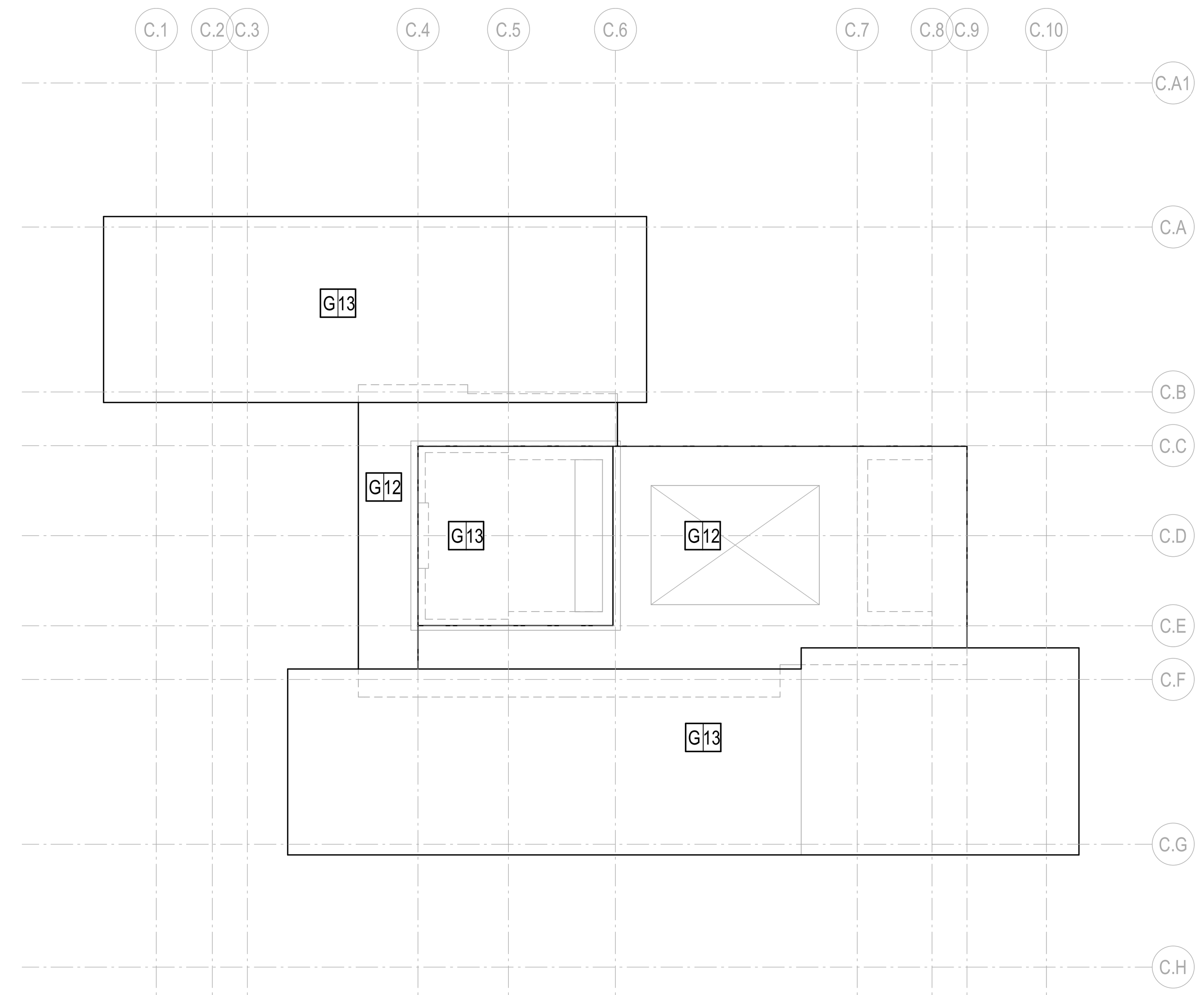
11/18/2022

LOAD MAPS

S1.07



1 TOWER C LEVEL 8 LOAD MAP



2 TOWER C ROOF LOAD MAP

LOAD MAP KEY:

A 1

NUMBER INDICATES SUPERIMPOSED DEAD LOAD MARK

LETTER INDICATES LIVE LOAD MARK

INDICATES CLADDING LOAD IN POUNDS PER SQUARE FOOT OF SURFACE AREA. SEE "CLADDING LOAD NOTES" DETAIL AT THE END OF LOAD MAPS.

LIVE LOAD (LL) DESIGNATIONS

MARK	USE	LIVE LOAD (PSF)
A	RESIDENTIAL	40(R)
B	MECHANICAL / ELECTRICAL	125
C	PARKING	40(R) (20%)
D	LIGHT STORAGE	125
E	ASSEMBLY / CORRIDORS	100
F	BALCONY	60(R)
G	ROOF	20(R)
I	GROUND LOBBY	100
J	OFFICE	60 + 15 PARTITION LOAD
K	AMENITY	100
N	GROUND FLOOR TERRACE	100

SUPERIMPOSED DEAD LOAD (SDL) DESIGNATIONS

MARK	TYPE	TOTAL SDL (PSF)	CEILING/MEP LOAD (PSF)	FLOOR FINISH LOAD (PSF)	PARTITION LOAD (PSF)	SPECIAL LOAD (PSF)	SPECIAL LOAD DESCRIPTION
1	RESIDENTIAL	30	5	5	20		
2	MECHANICAL / ELECTRICAL	15	10		5		
3	PARKING	5	5				
4	LIGHT STORAGE	15	10		5		
5	CORRIDORS	15	10		5		
6	BALCONY	75	10	15		50	INSULATION + TOPPING SLAB
7	RETAIL	60	10			50	BUILT UP SLAB
8	GROUND LOBBY	60	10	40	10		
9	OFFICE	15	10	5			
10	AMENITY	30	10	15	5		
11	FITNESS	65	5	5	5	50	ISOLATION SLAB
12	GREEN ROOF	40	10	5		25	INSULATION + LIGHT GREEN ROOF
13	ROOF	25	10			15	INSULATION + ROOFING
14	DEEP SOIL	330	10			320	SOIL DEPTH TBC

LOAD MAP NOTES:

1. LIVE LOADS MARKED (R) ARE REDUCIBLE IN ACCORDANCE WITH THE BUILDING CODE.
2. SUPERIMPOSED DEAD LOADS ARE IN ADDITION TO THE SELF-WEIGHT OF THE STRUCTURE.
3. SEE FRAMING PLANS FOR DESIGN LOAD OF SPECIFIC ITEMS SUCH AS ELEVATORS, ESCALATORS, AND MECHANICAL / ELECTRICAL EQUIPMENT.

LOAD MAP NOTES AND DESIGNATIONS

DAVID C. FIELDS
REGISTERED
12385783-2203
PROFESSIONAL STRUCTURAL ENGINEER
STATE OF UTAH

Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

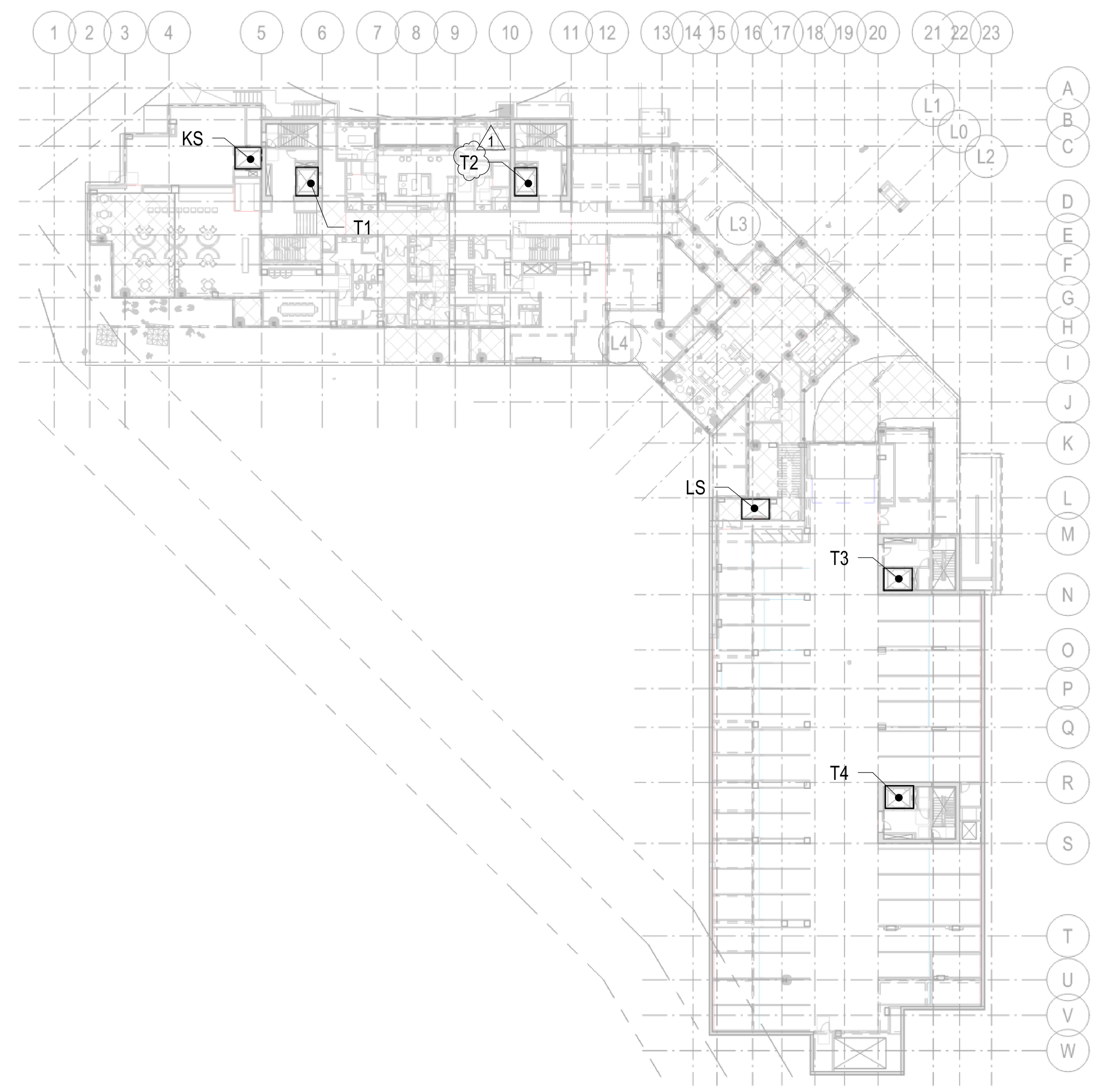
no.	date		by
1	11/18/2022	IFC	

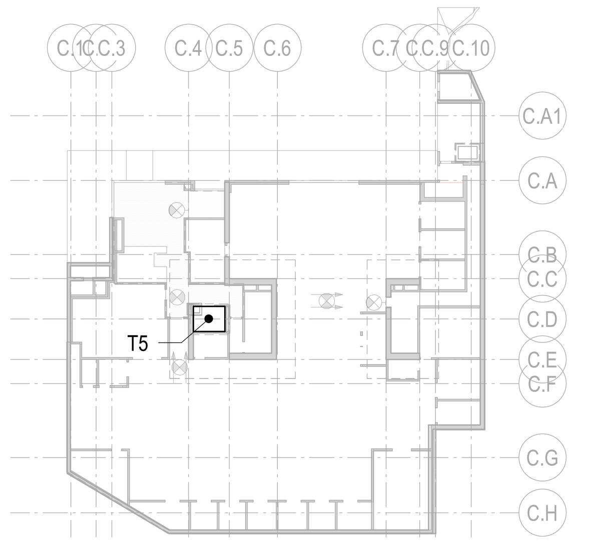
CONSTRUCTION DOCUMENTS

11/18/2022

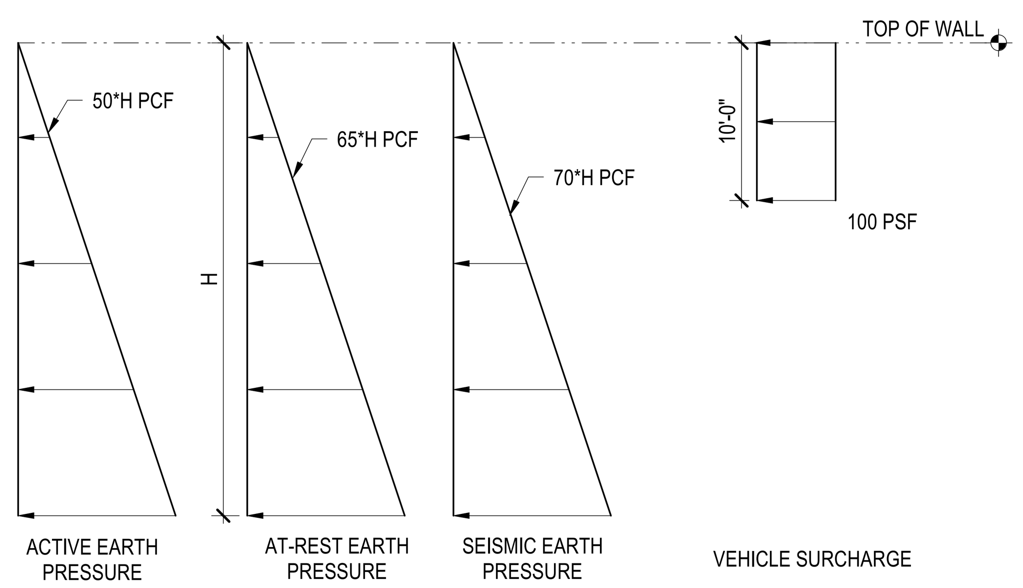
LOAD MAPS

S1.08





ELEVATOR KEY PLAN



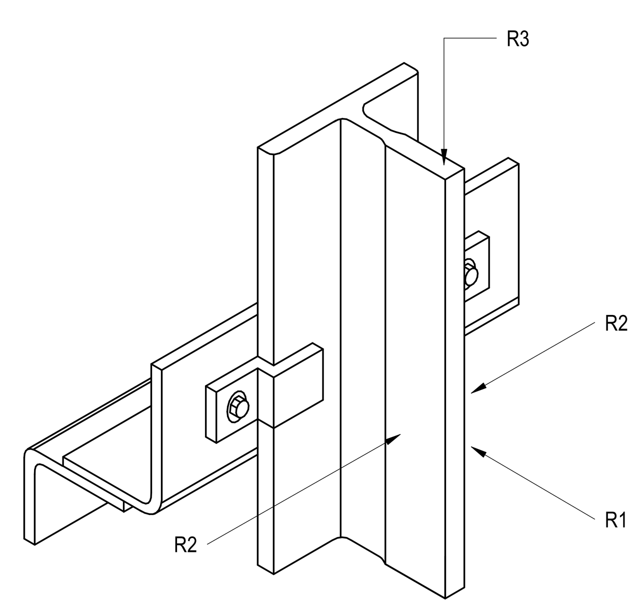
SOIL LOADS

LIVE LOADS

NOTES:

1. H = HEIGHT OF BASEMENT WALL, (FT)
2. DESIGN PRESSURES ARE BASED ON A "DRAINED" CONDITION PER THE GENERAL NOTES.
3. THE PRESSURE DIAGRAM IS APPROPRIATE FOR PERMANENT BASEMENT WALLS CONSTRUCTED IN FRONT OF TEMPORARY SHORING WALLS WITH TIEBACK OR SOIL NAIL ANCHORS. IF ADDITIONAL SURCHARGE LOADING (SUCH AS FROM SOIL STOCKPILES, EXCAVATORS, DUMP TRUCKS, CRANES, OR CONCRETE TRUCKS) IS ANTICIPATED, THE STRUCTURAL AND GEOTECHNICAL ENGINEERS SHALL BE NOTIFIED.

16 LATERAL PRESSURE ON SUBGRADE WALLS



ELEVATOR RAIL NORMAL REACTIONS		LS	KS	T1-4	T5
CAR	R1 (KIPS)	0.7	1.4	1.3	1.3
	R2 (KIPS)	0.4	1.9	0.7	0.7
	R3 (KIPS)	SEE ELEVATOR PIT PLANS			
CAR	R1 (KIPS)	0.8	1.1	1.1	1.1
	R2 (KIPS)	0.4	0.6	0.6	0.6
	R3 (KIPS)	SEE ELEVATOR PIT PLANS			

ELEVATOR RAIL NORMAL REACTIONS		LS	KS	T1-4	T5
CAR	R1 (KIPS)	0.7	1.1	1.1	1.1
	R2 (KIPS)	0.4	0.5	0.5	0.5
	R3 (KIPS)	SEE ELEVATOR PIT PLANS			
CAR	R1 (KIPS)	0.8	1.1	1.1	1.1
	R2 (KIPS)	0.4	0.6	0.6	0.6
	R3 (KIPS)	SEE ELEVATOR PIT PLANS			

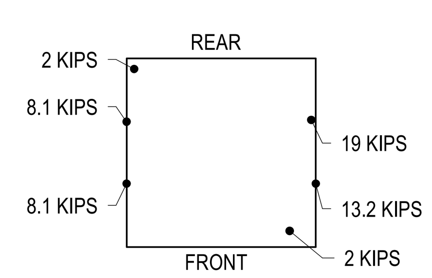
NOTES:

1.NOTES:
1. ELEVATOR RAIL SUPPORT BEAMS AND POST HAVE BEEN DESIGNED TO MEET DEFLECTION LIMITS OF 1/4" FOR NORMAL LOADS AND 1/4" FOR SEISMIC LOADS.

2. MAXIMUM ASSUMED UNSUPPORTED ELEVATOR RAIL SPAN IS 10'-6" FOR ELEVATORS "KS" AND T1 THROUGH T5. MAXIMUM ASSUMED UNSUPPORTED ELEVATOR RAIL SPAN IS 14'-0" FOR ELEVATOR "LS". PROVIDE ELEVATOR RAIL SUPPORT POST PER THE TYPICAL DETAIL WHERE REQUIRED BY THE ELEVATOR SUPPLIER. COORDINATE QUANTITY AND LOCATION WITH ELEVATOR SUPPLIER.

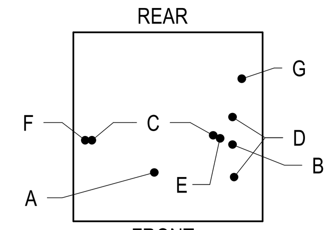
3. "CWT" = COUNTERWEIGHT.

14 ELEVATOR RAIL REACTIONS



OVER HEAD
(ABOVE TOWER B LEVEL 1)

REACTION POINT	REACTION TYPE	REACTION (KIPS)
A	CAR BUFFER	29.1
B	CAR BUFFER	26.4
C	CAR SAFETY	27.4
D	DRIVE MACHINE	23.4
E	CAR RAIL	25
F	CWT RAIL	17
G	CWT RAIL	9

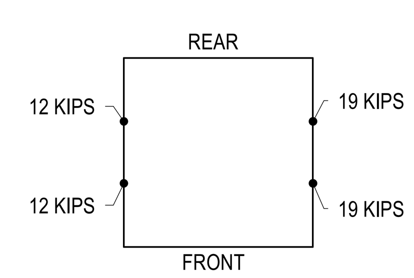


PIT PLAN
(ELEVATED PIT ABOVE LEVEL P2)

NOTES:

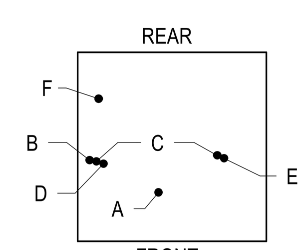
1. REACTIONS E-G ARE ALTERNATE REACTIONS IF A RAIL SUPPORTED MACHINE IS CHOSEN. LOADS E-F DO NOT OCCUR SIMULTANEOUSLY.
2. LOADS A & B DO NOT OCCUR SIMULTANEOUSLY.
3. LOADS HAVE BEEN DOUBLED FOR IMPACT.

17 LOBBY SHUTTLE (LS) ELEVATOR REACTIONS



OVER HEAD
(ABOVE TOWER A L1)

REACTION POINT	REACTION TYPE	REACTION (KIPS)
A	CAR BUFFER	52.3
B	CAR BUFFER	47.8
C	CAR SAFETY	31.2
D	DRIVE MACHINE	31
E	CAR RAIL	22
F	CWT RAIL	10.3

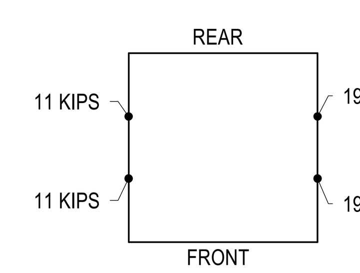


PIT PLAN
(LEVEL B1)

NOTES:

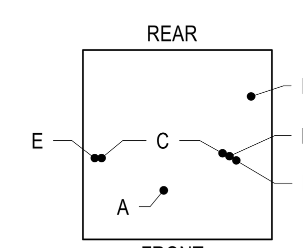
1. REACTIONS D-F ARE ALTERNATE REACTIONS IF A RAIL SUPPORTED MACHINE IS CHOSEN. LOADS E-F DO NOT OCCUR SIMULTANEOUSLY.
2. LOADS A & B DO NOT OCCUR SIMULTANEOUSLY.
3. LOADS HAVE BEEN DOUBLED FOR IMPACT.

18 KITCHEN SERVICE (KS) ELEVATOR REACTIONS



OVER HEAD
(T1 - TOWER A6; T2 - TOWER A ROOF; T3 & T4 - TOWER B ROOF)

REACTION POINT	REACTION TYPE	REACTION (KIPS)
A	CAR BUFFER	53.3
B	CAR BUFFER	48.8
C	CAR SAFETY	32.2
D	DRIVE MACHINE	32
E	CAR RAIL	23
F	CWT RAIL	11

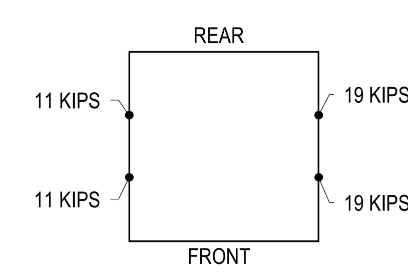


PIT PLAN
(LEVEL B1)

NOTES:

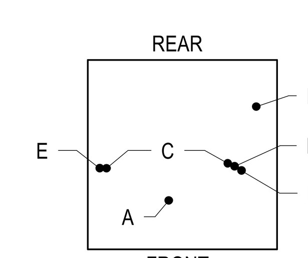
1. REACTIONS D-F ARE ALTERNATE REACTIONS IF A RAIL SUPPORTED MACHINE IS CHOSEN. LOADS E-F DO NOT OCCUR SIMULTANEOUSLY.
2. LOADS A & B DO NOT OCCUR SIMULTANEOUSLY.
3. LOADS HAVE BEEN DOUBLED FOR IMPACT.

19 ELEVATOR T1-T4 REACTIONS



OVER HEAD
(TOWER C ROOF)

REACTION POINT	REACTION TYPE	REACTION (KIPS)
A	CAR BUFFER	53.3
B	CAR BUFFER	48.8
C	CAR SAFETY	32.2
D	DRIVE MACHINE	32
E	CAR RAIL	23
F	CWT RAIL	11

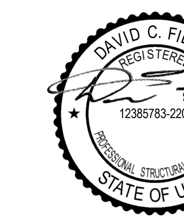


PIT PLAN
(LEVEL P1)

NOTES:

1. REACTIONS D-F ARE ALTERNATE REACTIONS IF A RAIL SUPPORTED MACHINE IS CHOSEN. LOADS E-F DO NOT OCCUR SIMULTANEOUSLY.
2. LOADS A & B DO NOT OCCUR SIMULTANEOUSLY.
3. LOADS HAVE BEEN DOUBLED FOR IMPACT.

20 ELEVATOR T5 REACTIONS



Reserved for permit stamp

Olson Kundig
159 South Jackson St, Suite 600
Seattle, Washington 98104 USA
+1 206 624 5670 olsonkundig.com

project:
SOMMET BLANC - ABC
DEER VALLEY, UTAH

MAGNUSSON KLEMENCIC ASSOCIATES
Structural + Civil Engineers
Seattle Chicago
www.mka.com
206 292 1200

principal architect
project manager
drawn by
checked by
job no. 20052
date 11/18/2022

revisions:

1 11/18/2022 IFC
no. date by

CONSTRUCTION DOCUMENTS
11/18/2022

LOAD MAPS
S1.09