



Legal description Address: 954 COAST GUARD RD PID: 030104009 Legal Text: Block B, District Lot 1517,

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Address: 954 COAST GUARD RD PID: 030104009		Client James Macintosh	Sheets - archi	itectural
Legal Text: Block B, District Lot 1517,	. Clavoquot Land District. & DL 1507	District of Ucluelet		
,	····/·································	200 Main Street		
		Ucluelet, BC, VOR 3A0	A0.0 - General	L
		T: (250) 726-7744	A0.00	Cover sheet
		E: jmacintosh@ucluelet.ca	A0.01	Project information a
		Prime Consultant	A0.02	Legends and Schedu
		Dan Todd	A0.03	Assemblies
Building code summary		Urban Systems	A0.04	Washroom accessibi
Regulated by:	BCBC 2018, Part 3	312 - 645 Fort St.	A0.10	Site plan
Major occupancy:	Group A, Division 2	Victoria, BC, V8W 1G2 T: (250) 220-7060 x6246	A0.11	Context plan
Building area:	2481 ft ² / 230.6m ²	E: dtodd@urbansystems.ca		
No. of storeys:	2			nd ceiling plans
Building height:	6.4m	Architect	A1.01	Floor plan - L1
Streets/access routes:	1 road	Brian Wakelin, MAIBC, MRAIC, LEED/AP	A1.02	Floor plan - L2
Building classification(3.2.2.25): Sprinkler system (3.2.4.1):	Group A, Division 2, up to 2 Storeys No	PUBLIC: Architecture + Communication	A1.03	Floor plan - Roof
Standpipe:	No	1495 Frances Street Vancouver BC V5L 1Z1	A1.10	RCP - L1
Fire alarm (3.2.4.1):	No	T: (604) 738-4323	A1.11	RCP - L2
High building:	No	E: brian@publicdesign.ca		
Permitted construction(3.2.2.25):	Combustible	E: sasha@publicdesign.ca	A2.0 - Elevatio	ins
Mezzanine area:	0 230.6m2 / 1.2m2 pp = 234ppl		A2.01	Exterior elevations
Occupant load(3.1.17.1): Hazardous substances:	Refer to Hazardous Materials	Structural Consultant	A2.02	Exterior elevations
	Report	Jeff Duncan Herold Engineering Limited	A2.03	Interior elevations
		7 -1920 Lyche Road	A2.04	Interior elevations
		Ucluelet, BC, VOR 3A0		
		T: (250) 534-9145	A3.0 - Section	S
		E: JDuncan@heroldengineering.com	A3.01	Building sections
		Machanical Consultant	A3.02	Building sections
		Mechanical Consultant Patrick Stewart	A3.03	Building sections
		AME Group	A3.10	Wall sections
		200 – 638 Smithe Street,		
		Vancouver, BC, V6B 1E3	A4.0 - Large s	cale drawings
		T: (604) 684-5995 x107	A4.01	Enlarged floor plan -
		E: PatrickStewart@amegroup.ca	A4.02	Enlarged exterior ele
		Electrical Consultant	A4.03	Enlarged exterior ele
		Pelle Björner		
		AES Engineering	A5.0 - Details	
		500-3795 Carey Rd.	A5.01	Guard details - ext
		Victoria, BC, V8Z 6T8	A5.02	Guard details - ext
		T: (778)-746-2009 E: Pelle.Bjornert@aesengr.com	A5.10	Plan details - ext
			A5.11	Plan details - int
		Cost Consultant	A5.20	Section details - ext
		Daniel Holland	A5.21	Section details - ext
		RTAQS	A5.22	Section details - int
		205 – 1777 56th Street		
		Tsawwassen (Delta),BC, V4L 0A6 T: (604) 616-0285	A6.0 - Schedu	les
		E: daniel@rtaqs.com	A6.01	Door and frame sche
			A6.10	Window schedule
			A7.0 - Vertical	circulation
			A7.01	Stair #1
			A8.0 - Casewo	
			A8.01	Casework

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Project team

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Sheets - architectural demolition

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AD1.0 - Floor and ceiling plans AD1.01 Demolition plans AD3.0 - Sections AD3.01 Demolition Sections Demolition sections

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Drawing list

arged floor plan - L2 arged exterior elevations arged exterior elevations

d details - ext d details - ext n details - ext

r and frame schedule dow schedule

Casework Casework

ATTENTION

This drawing is prepared for the sole use of DISTRICT OF UCLUELET No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above.

SURVEY INFORMATION PREPARED BY: COORD SYST: SURVEY DATE:

urbansystems.ca

Professional Seals

public

1495 FRANCES ST VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA

Date Issue / Revision A July 26, 2021 Issue for Class C Costing B Feb 7, 2022 Issue for Class B Costing D Jun 10, 2022 Issue for tender

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Amphitrite House Project information and drawing list

Sheet Number Project Number Drawing Number Revision A0.01 D

Room finish schedule

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Room		Floor		Base	finish			Wall f	inish		Ceiling	
number	Name	finish	North	East	South	West	North	East	South	West	finish	Comments
101	Storage rm	N/A	N/A	N/A	N/A	N/A	PT.WH	PT.WH	PT.WH	PT.WH	PT.WH	
102	Service rm	N/A	N/A	N/A	N/A	N/A	PT.WH	PT.WH	PT.WH	PT.WH	PT.WH	
103	Inacessible space	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
105	Stair	N/A	N/A	N/A	N/A	N/A	PT.WH	PT.WH	PT.WH	PT.WH	PT.WH	
201	Multi-purpose rm	RES	WDT3	WDT3	WDT3	WDT3	PT.WH	PT.WH	PT.WH	PT.WH	PT.WH	
202	Barista bar	RES	WDT3	WDT3	WDT3	WDT3	PT.WH	PT	PT.WH	PT.WH	PT.WH	
203	Universal W/C	RES	WDT3	WDT3	WDT3	WDT3	PT.WH	PT	PT.WH	PT.WH	PT.WH	
204	Gender neutral W/C	RES	WDT3	WDT3	WDT3	WDT3	PT.WH	PT	PT.WH	PT.WH	PT.WH	
205	Stair	N/A	N/A	WDT3	N/A	N/A	PT.WH	PT	PT.WH	PT.WH	PT.WH	

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Specialty equipment schedule

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Specialty Equipment Schedule						
Mark	Model	Manufacturer	Description	Volts	Supplied by	Intalled by
SE 01	Mini	Mazzer	Small espresso grinder	100-120V	Owner	Owner
SE 02	Knock Chute	Espesso Supply	Built-in knock box chute		Contractor	Contractor
SE 03	2026696	Rubbermaid	Slim Jim 13gal under counter container		Owner	Owner
SE 04	ROTARY VANE PUMP MOTOR - STANDARD 230V MOTOR	Espresso Parts	Espresso machine pump	230V	Owner	Owner
SE 05			Cup Dispenser		Owner	Owner
SE 06	Linea PB	La Marzocco	Espresso station	208-240V	Owner	Owner
SE 07	EPPR724	Espresso Parts	Pitcher rinser		Contractor	Contractor
SE 08	TUC-48G-LP-HC~FGD01	TRUE	LOW PROFILE GLASS DOOR REFRIGERATOR WITH HYDROCARBON REFRIGERANT~FRAMED GLASS DOOR VERSION 01	115V	Owner	Owner
SE 09	FETCO A150	FETCO	Coffee pot		Owner	Owner
SE 10	Ice Machine C-80BAJ-AD	Hoshizaki	Undercounter ice machine	115V	Owner	Owner
SE 11	Jet Tech EV18	Jet Tech	High Temperature Undercounter Dishwasher	208-240V	Contractor	Contractor

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Keynote	Description
AD	Access door - see mech
Baseboard	
GDS1	Roof gutter and leader assembly
GDS1.1	Clamp brackets
JS2	Rigid joint selants
LAV	Lavatory - see mech
LT	See electrical
MWB1.1	Base cabinet - 1 door, 1 adjustable shelf
MWB2.0S	Base cabinet - 2 doors, prepped for sink
MWC1	Bench
MWFP	Filler panel
MWW2.2	Wall cabinet - 2 doors, 2 adjustable shelves
WC	Water closet - see mech
WCA1	Toilet tissue dispenser
WCA1.2	Toilet tissue dispenser - double
WCA6	Soap dipenser
WCA8	Feminine napkin disposal bin
WCA10	Hand dryer
WCA16.H30	Grab bar - 90-degree two wall - 760 x 760mm (30 x 30"
WCA16.S24	Grab bar - straight - 610mm (24")
WCA21	Deodorant block holders
WCA25	Mirror
WCA26	Shelf
WCA27	Diaper changing station
WCA41	Sharps disposal

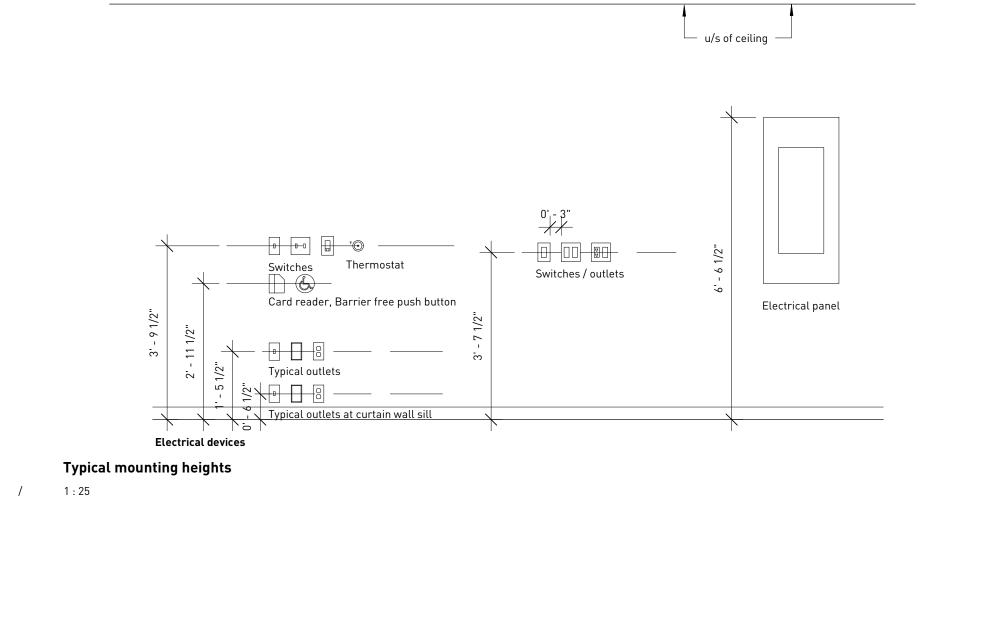
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Keynote legend

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					This drawing is prepared for the sole use of DISTRICT OF UCLUELET
Equipr	ment legend	Graphic legend	I	Abbreviation legend	No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.
\bigoplus	duplex receptacle - see electrical		north arrow	aff = above finished floor cl = centre line c/w = complete with	1 WARNING Utilities or structures shown on this drawing were compiled fr information supplied by various parties and may not be
\bigoplus	fourplex receptacle - see electrical		grid line identification	eq = equal exist = existing ext = exterior	complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area
\$	single pole switch - see electrical	(2)	grid une identification	int = interior max = maximum min = minimum	the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage
	occupancy sensor - see electrical	LEVEL NAME 1000	elevation relative to main floor	na = not applicable nic = not in contract oc = on centre	caused by third party negligence or failure to comply with the above.
	vacancy sensor - see electrical	drawing —		osci = owner supplied contractor installed osoi = owner supplied owner installed rec = recessed	2 SURVEY INFORMATION PREPARED BY: COORD SYST:
[EX]	exit sign - see electrical	number	section reference	reqd = required rm = room	SURVEY DATE:
F	fire alarm pull station - see electrical	number		sim = similar tme = to match existing t/o = top of	
Ð	fire alarm gong/speaker - see electrical	ROOM NAME room <u>202</u> number 222m2 area	room tag	typ = typical uno = unless noted otherwise u/s = underside vif = verify in field	
S	smoke alarm - see electrical	(D222b)	door tag / refer to schedule	w/ = with	3
\otimes	smoke detector - see electrical	$\langle W2 \rangle$	window tag / refer to schedule		
\bigcirc	floor box - see electrical	wxx	assembly tag / refer to assembly schedule		
	linear light - see electrical		ceiling elevation		
\bigcirc	pot light - see electrical	<u>_</u>			4
	supply air - see mechanical	Ę	centre line		
	return air - see mechanical		existing construction to remain		
	exhaust air - see mechanical		existing construction to be demolished		urbansystems.ca
	supply air, wall-mounted - see mechanical		new construction Ohr fire separation		
	return air, wall-mounted - see mechanical		3/4hr fire seperation		5 Professional Seals
\oplus	ceiling-mounted sprinkler - see mechanical				
\bigtriangledown	wall-mounted sprinkler - see mechanical				
Ţ	thermostat - see mechanical				
FD	floor drain - see mechanical				6
	camera - see security				
=]=	WAP - see communications				7
					# Date Issue / Revision
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Drawing Number Revision

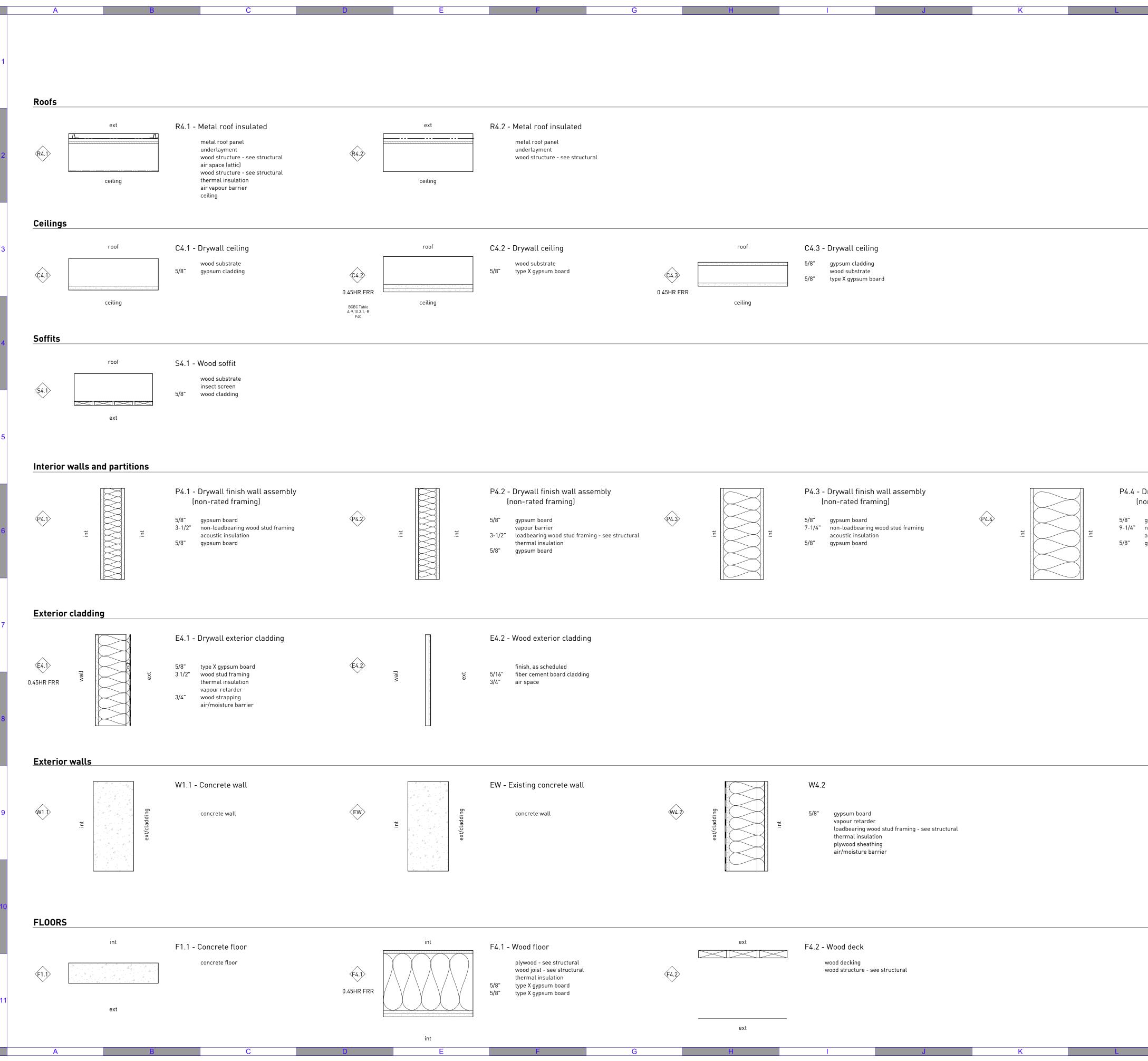
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Sheet Number Project Number

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indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION PREPARED BY: COORD SYST: SURVEY DATE: urbansystems.ca Professional Seals P4.4 - Drywall finish wall assembly (non-rated framing) 5/8" gypsum board 9-1/4" non-loadbearing wood stud framing acoustic insulation 5/8" gypsum board public 1495 FRANCES ST VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA # Date Issue / Revision Арр A July 26, 2021 Issue for Class C Costing B Feb 7, 2022 Issue for Class B Costing C Feb 8, 2022 Issue for Class B Costing - R1 D Jun 10, 2022 Issue for tender URBAN SYSTEMS Scale 1:10 Quality Control by BW Designed by BW SM Drawn by Amphitrite House Assemblies Sheet Number Project Number Drawing Number Revision A0.03 2110 D Ν

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ATTENTION

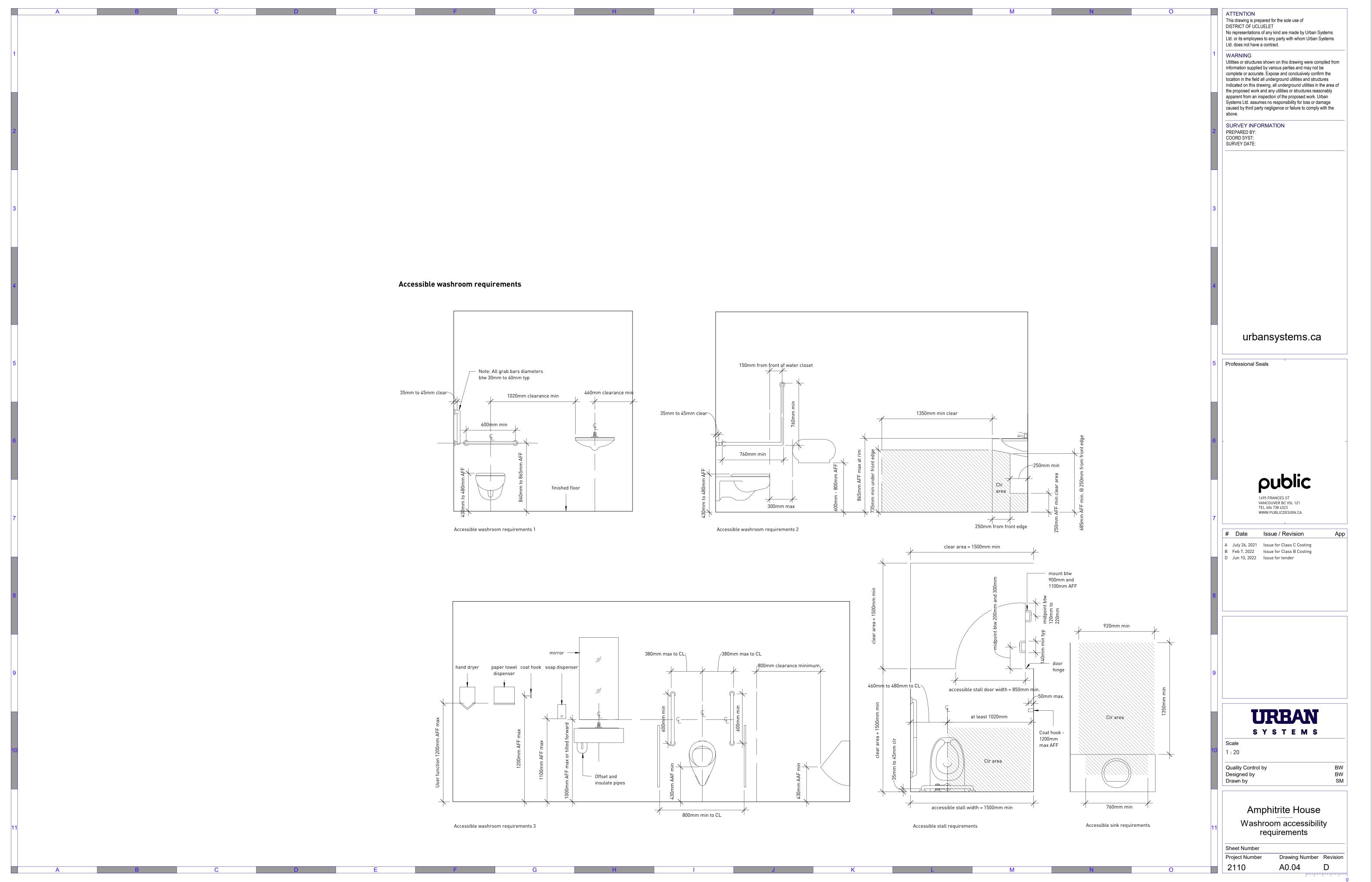
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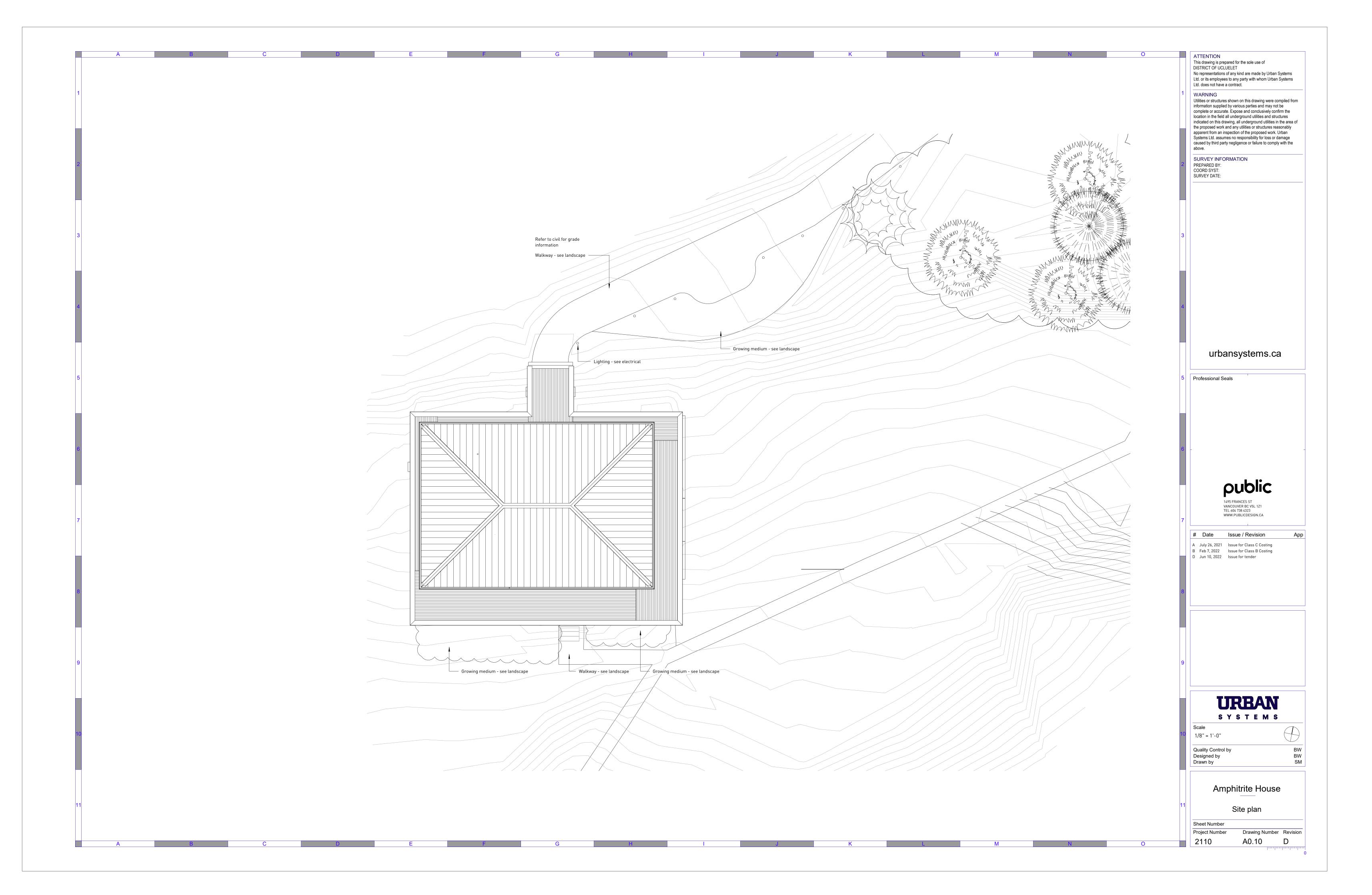
This drawing is prepared for the sole use of DISTRICT OF UCLUELET

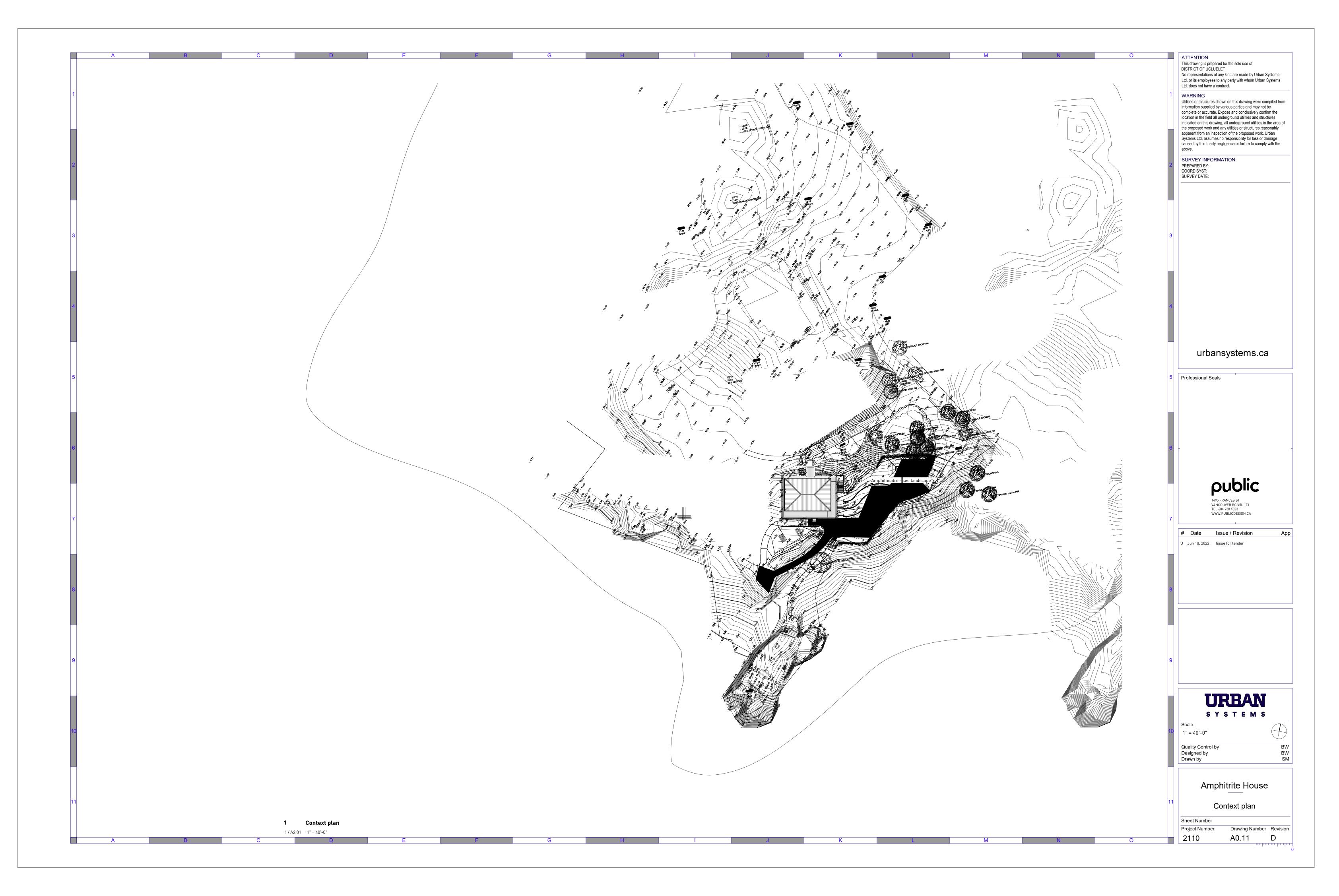
Ltd. does not have a contract.

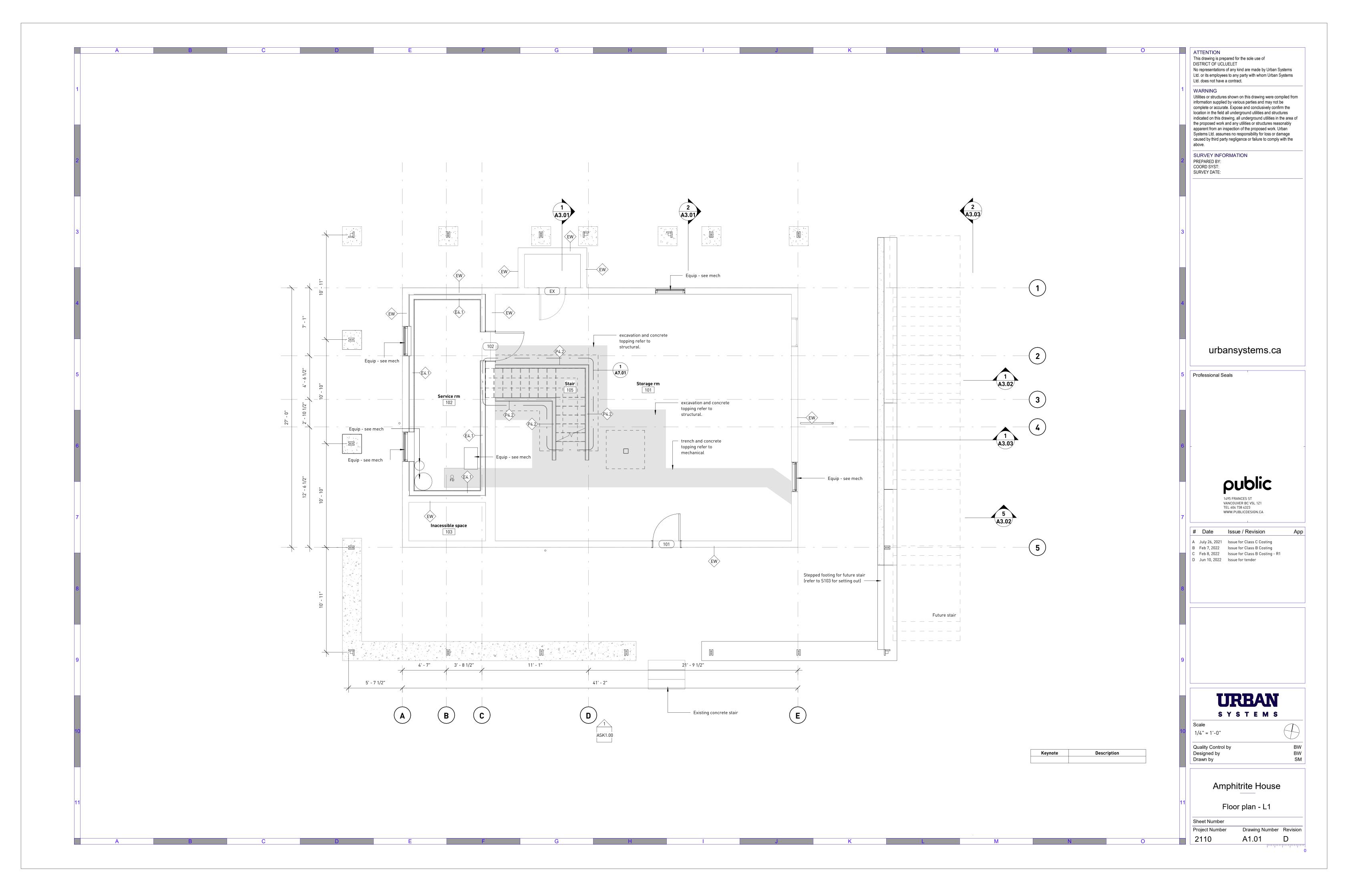
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems

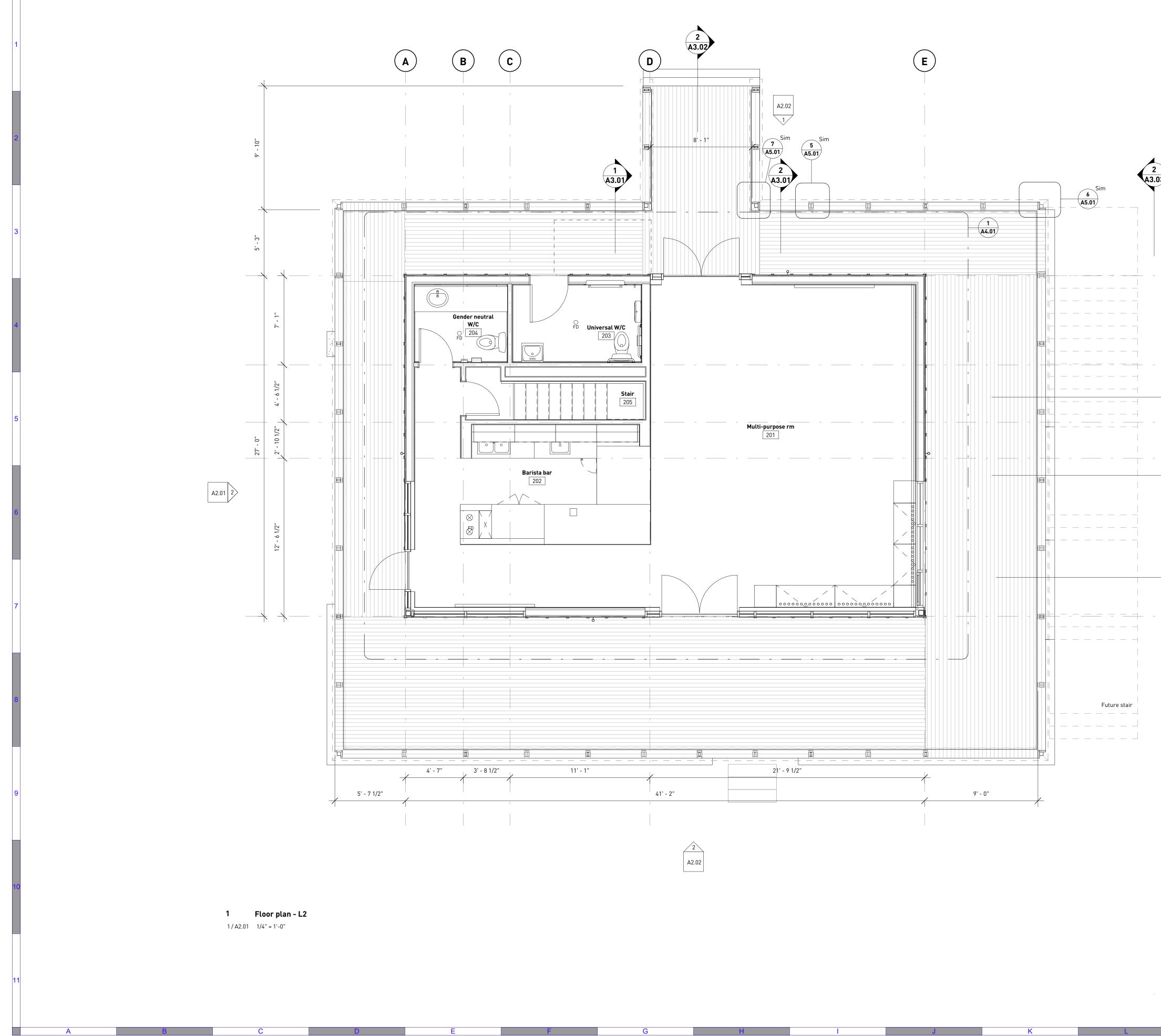
Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures









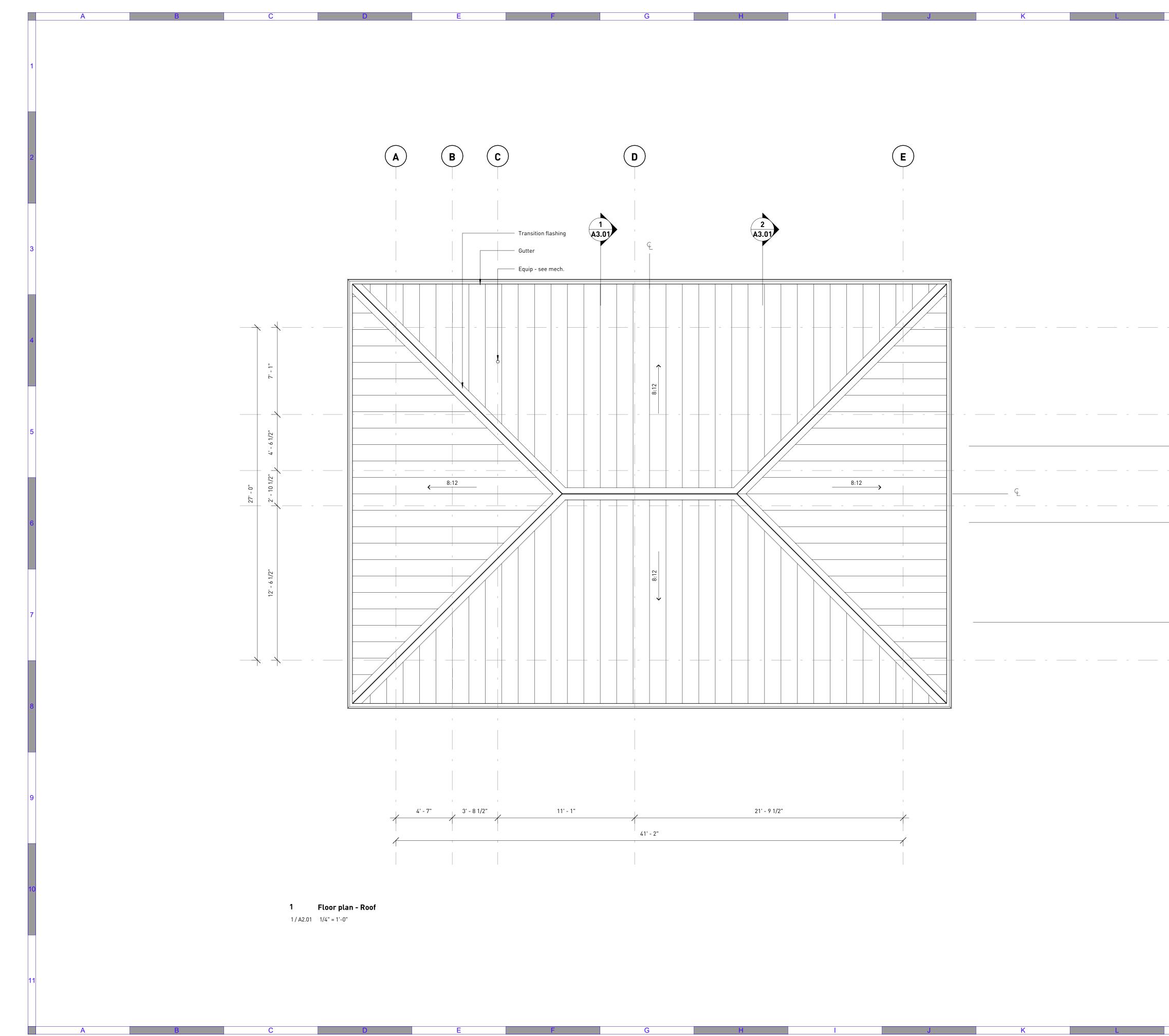


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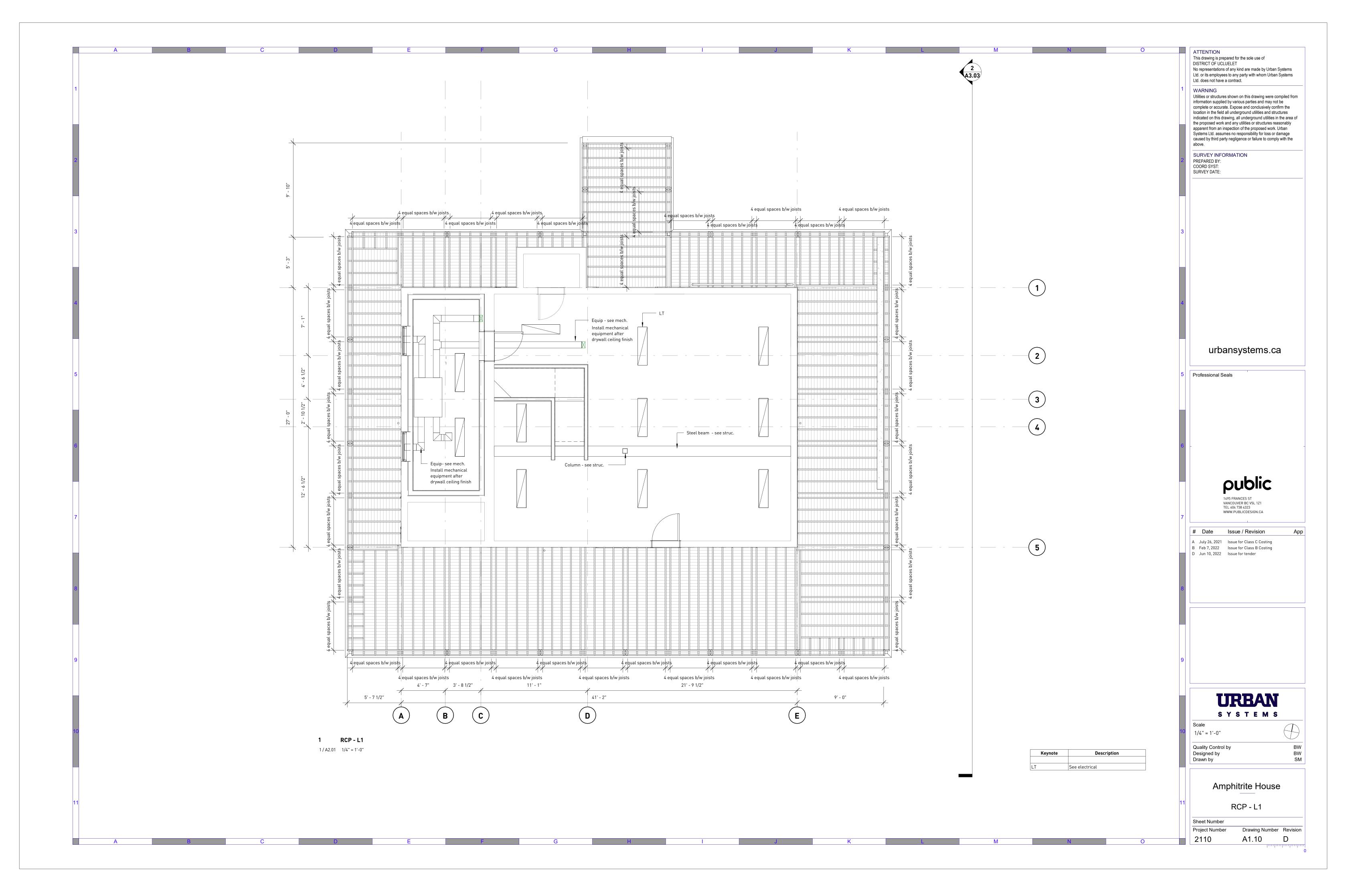
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				ATTENTION This drawing is prepared for the sole use of DISTRICT OF UCLUELET No representations of any kind are made by Urban Systems
			1	Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.
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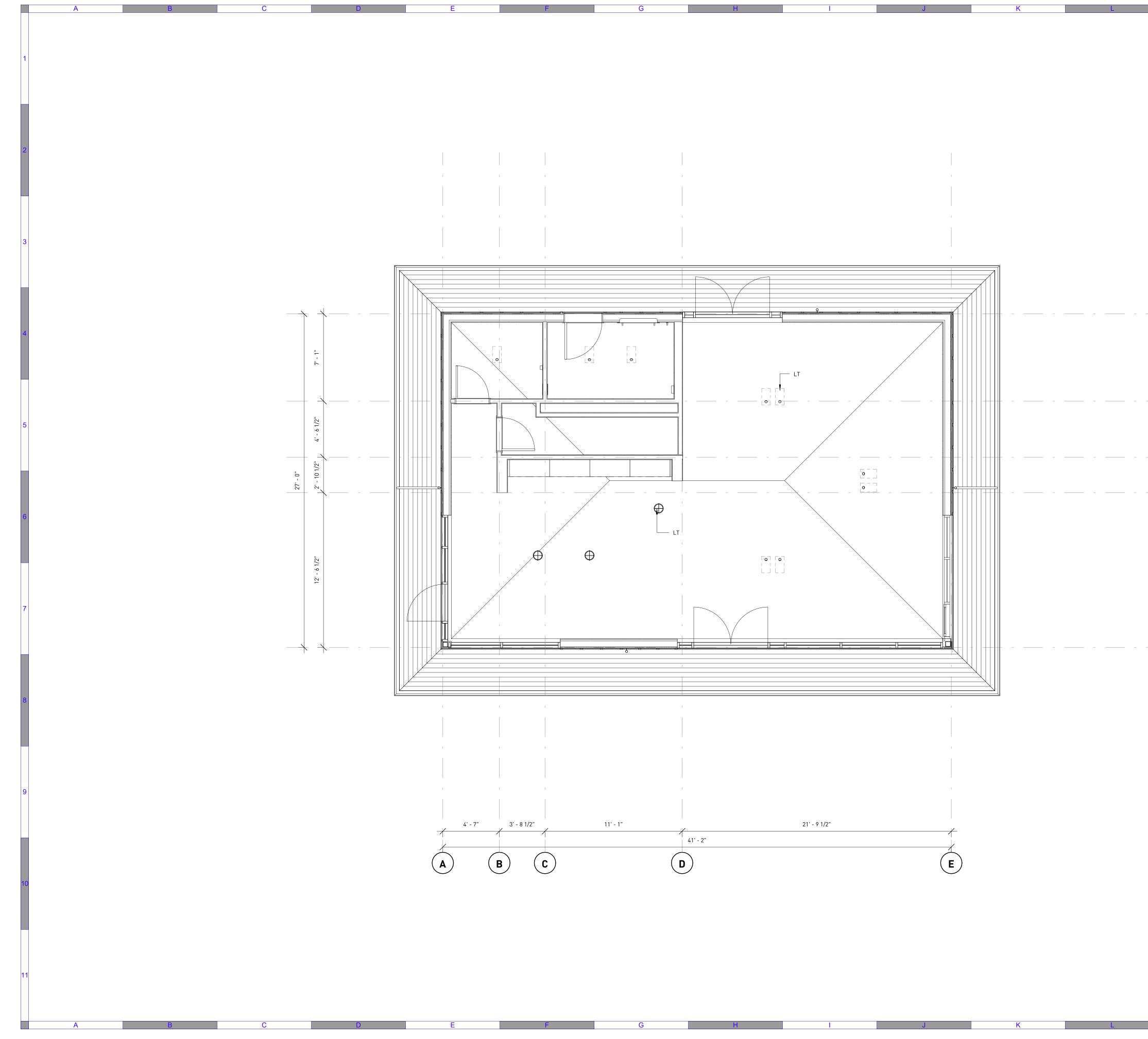
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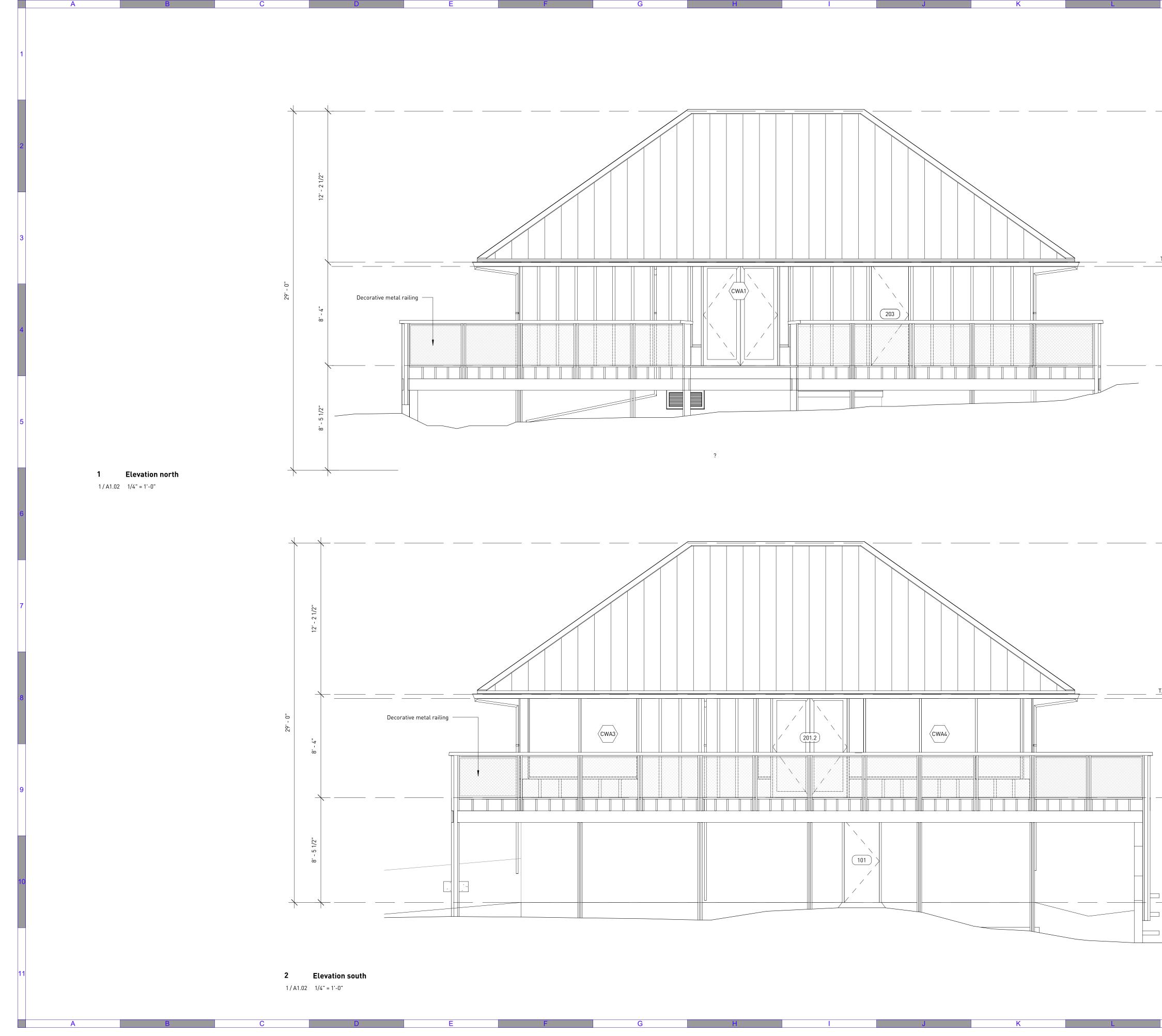
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			11	Floor plan - Roof
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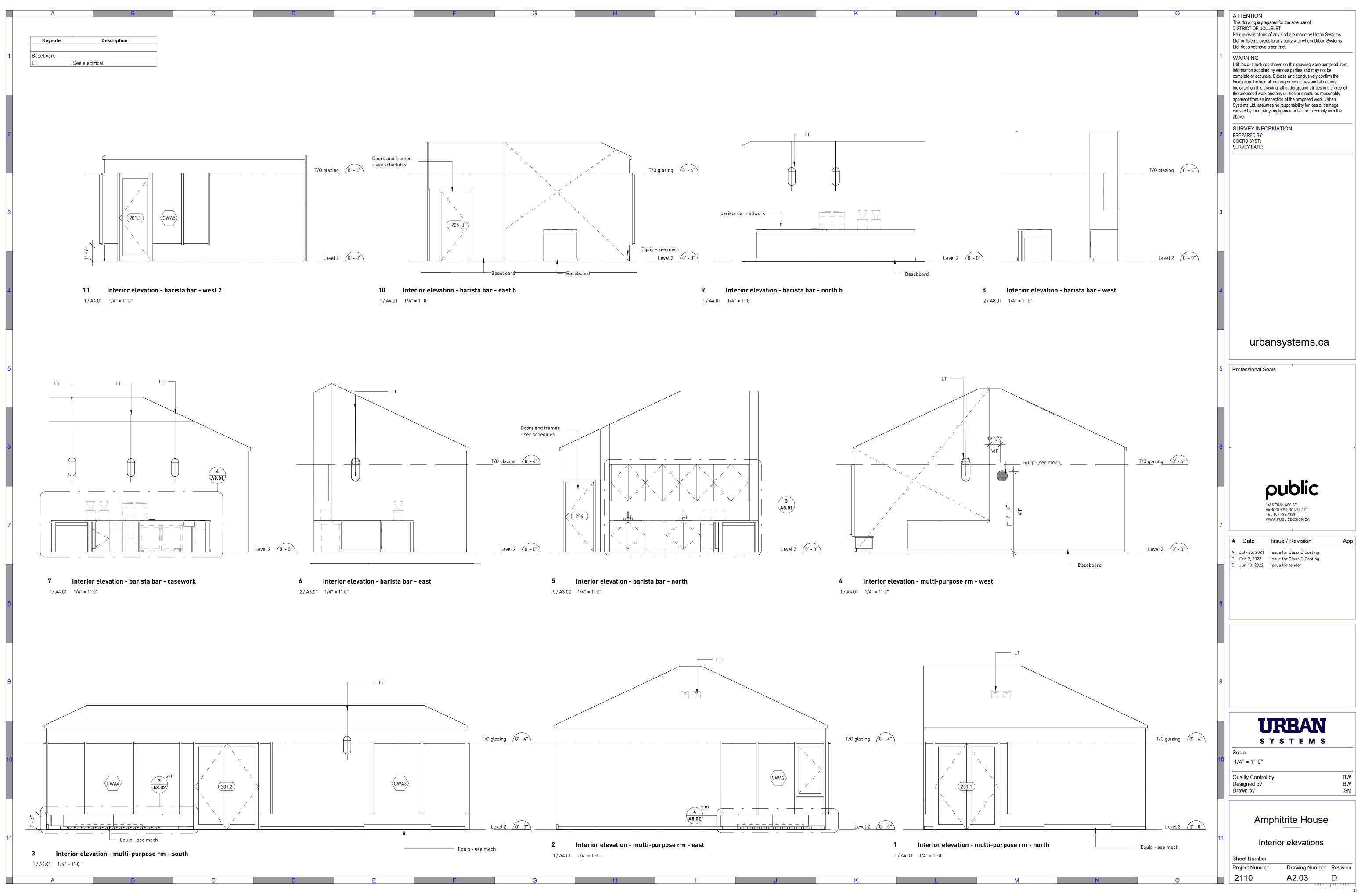
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			2	SURVEY INFORMATION
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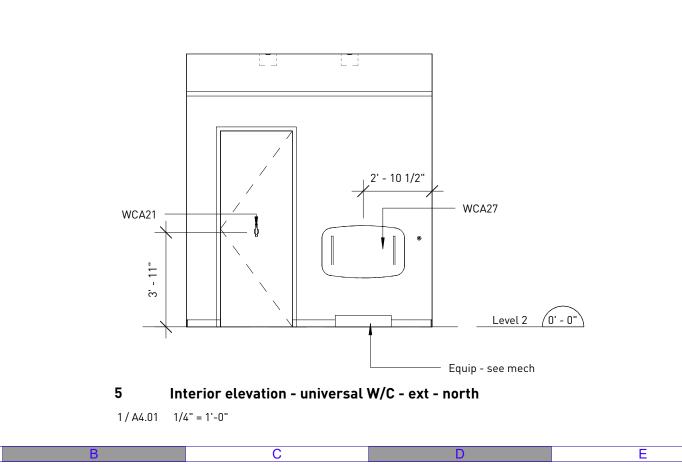


Keynote	Description
AD	Access door - see mech
Baseboard	
LT	See electrical
WC	Water closet - see mech
WCA1	Toilet tissue dispenser
WCA1.2	Toilet tissue dispenser - double
WCA6	Soap dipenser
WCA8	Feminine napkin disposal bin
WCA10	Hand dryer
WCA16.H30	Grab bar - 90-degree two wall - 760 x 760mm (30 x 30")
WCA16.S24	Grab bar - straight - 610mm (24")
WCA21	Deodorant block holders
WCA25	Mirror
WCA26	Shelf
WCA27	Diaper changing station
WCA41	Sharps disposal

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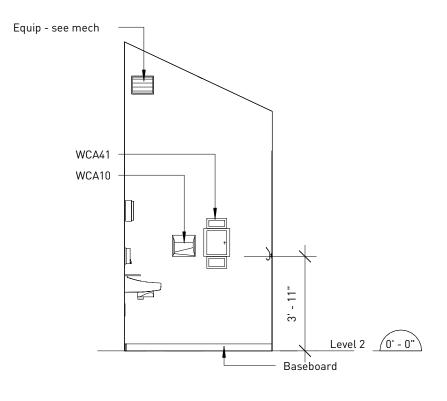
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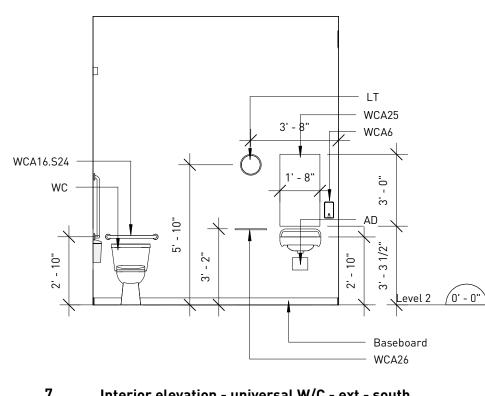


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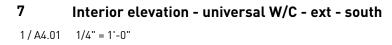
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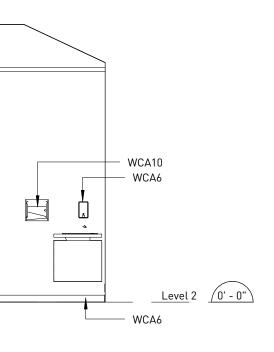


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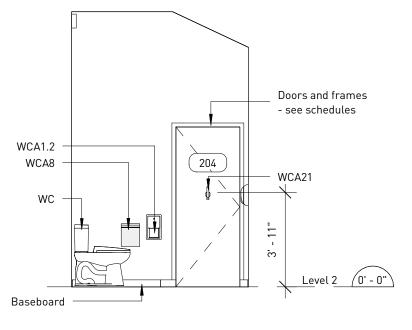
8 Interior elevation - universal W/C - ext - west 1 / A4.01 1/4" = 1'-0"

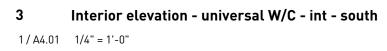
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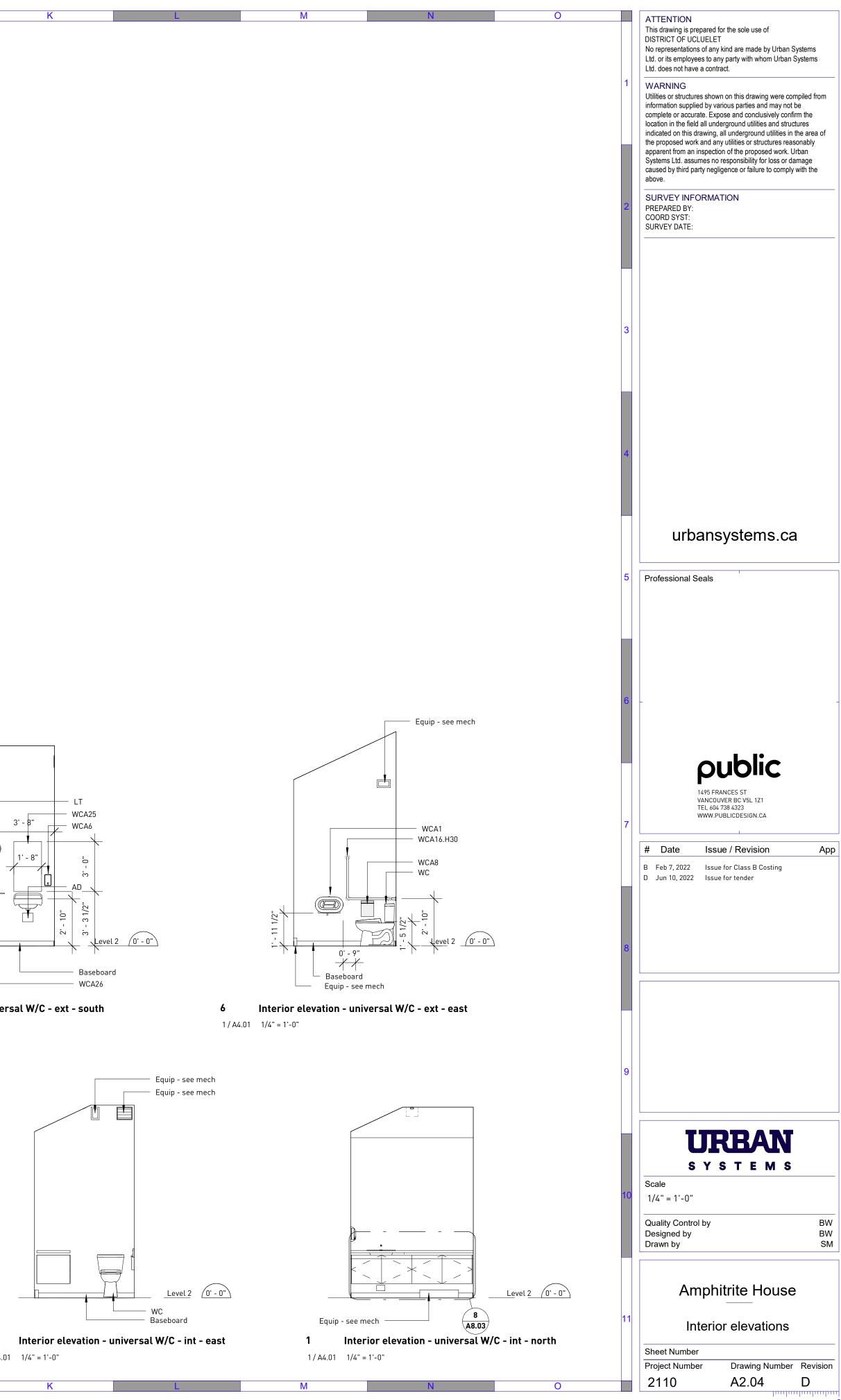




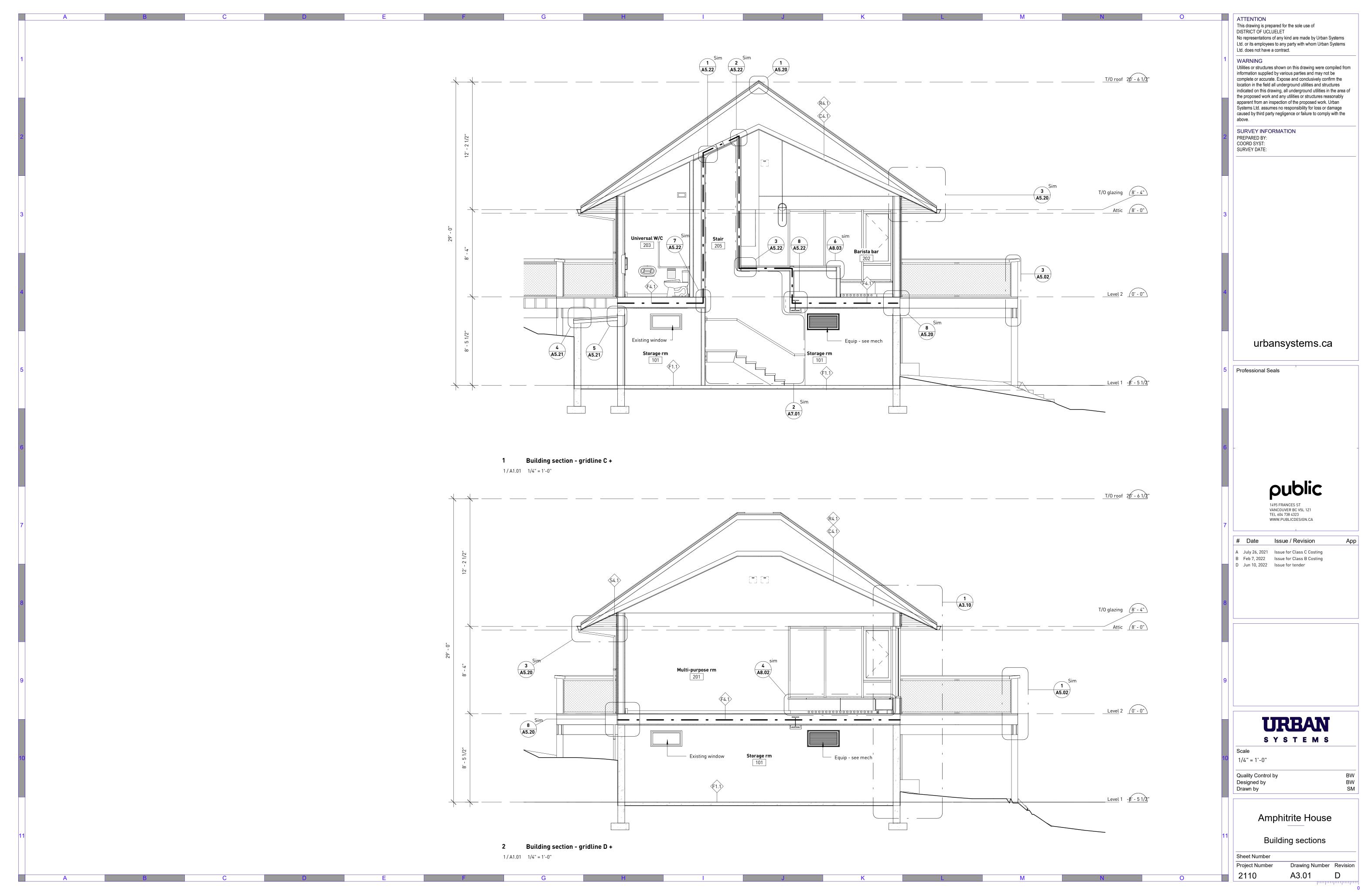
4 Interior elevation - universal W/C - int - west

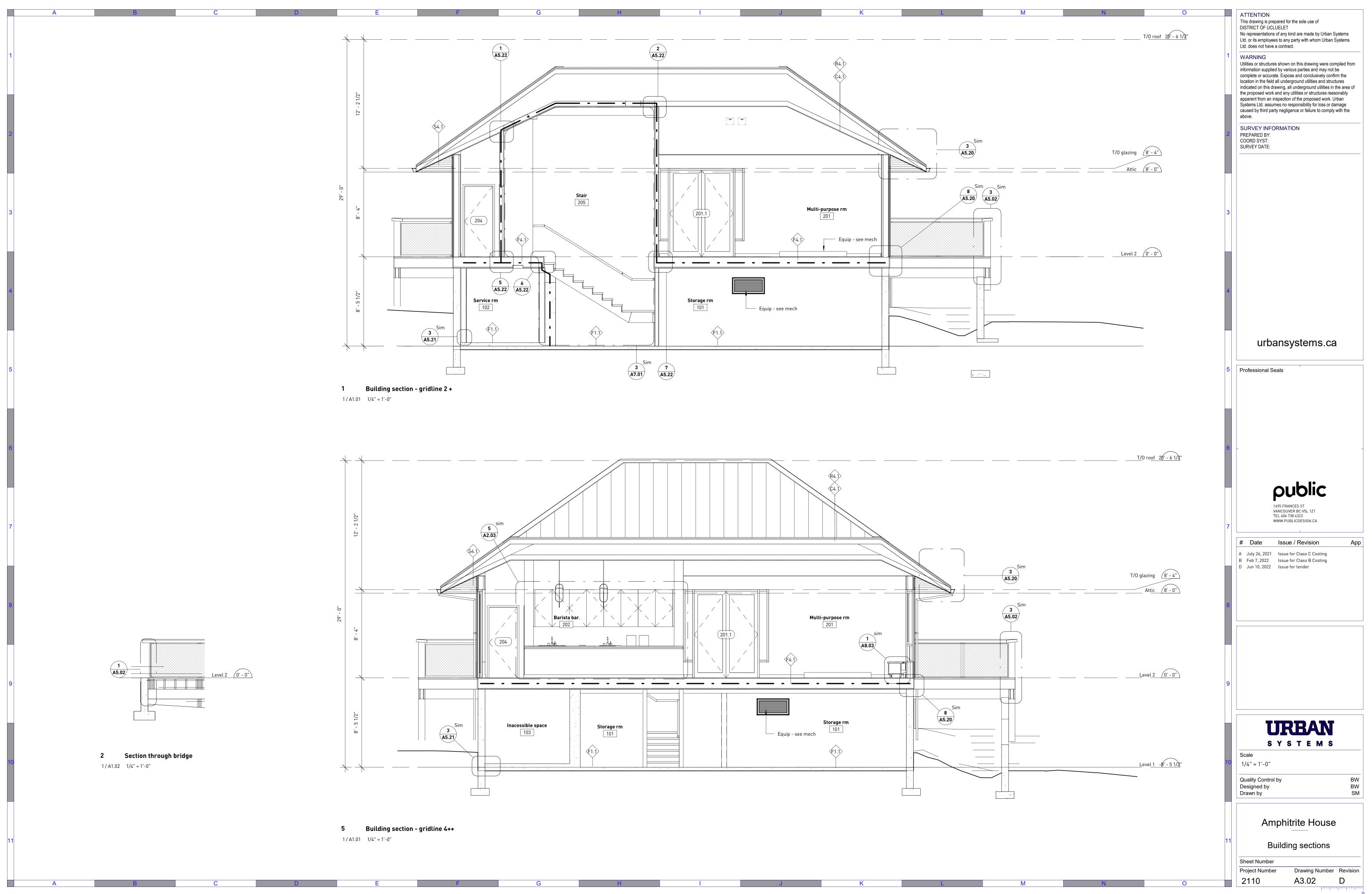


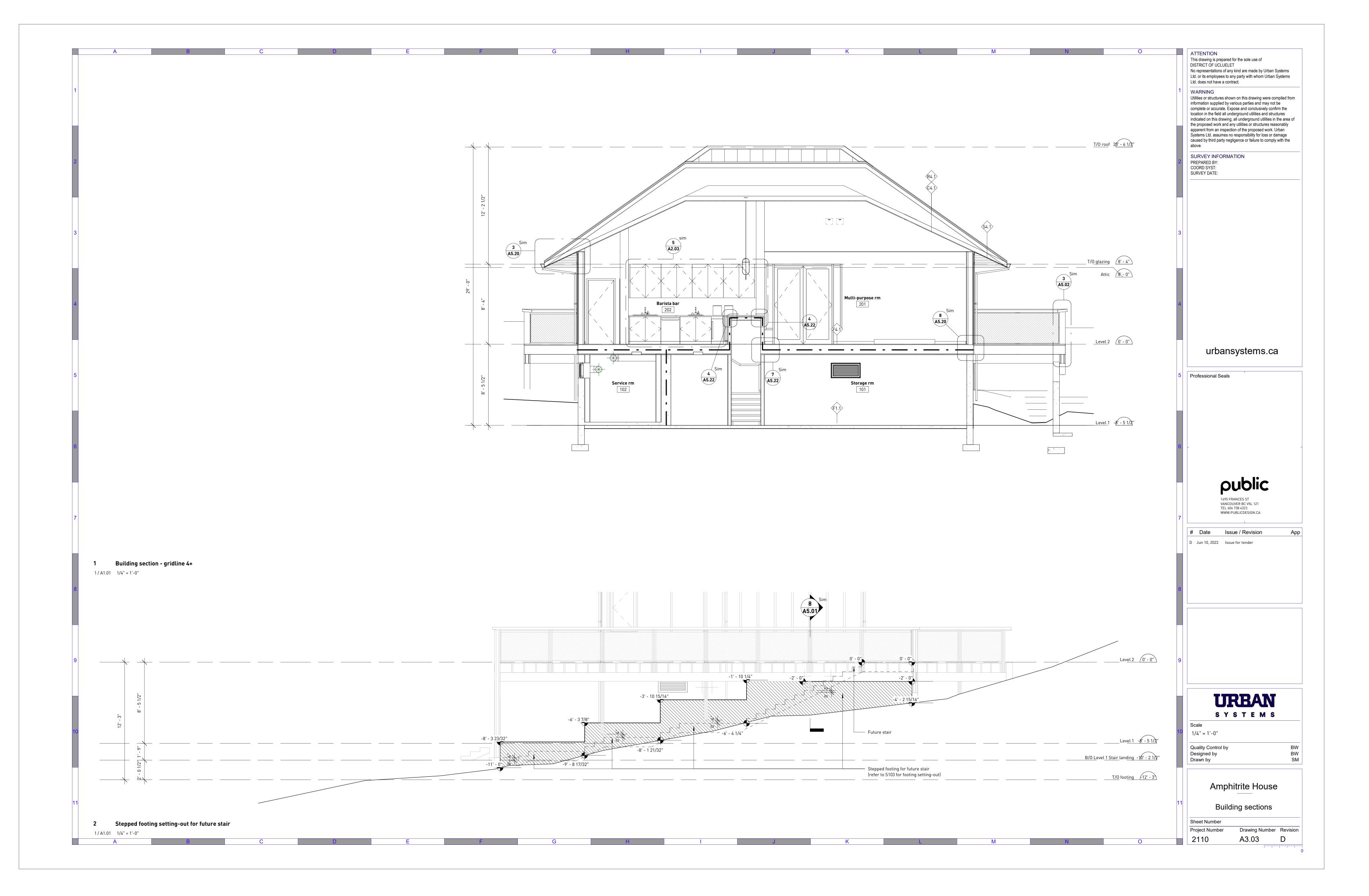


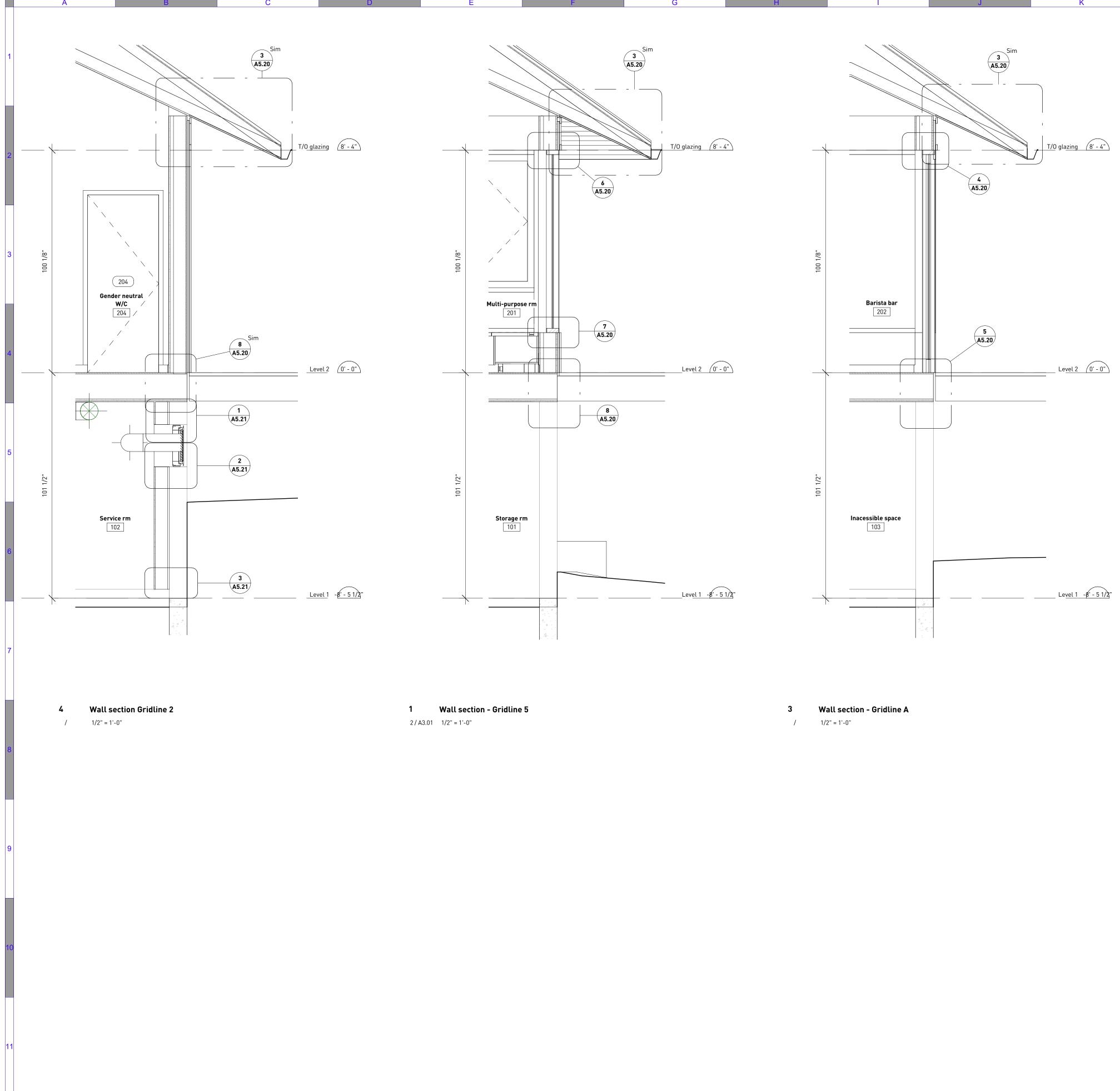


2 1 / A4.01 1/4" = 1'-0"









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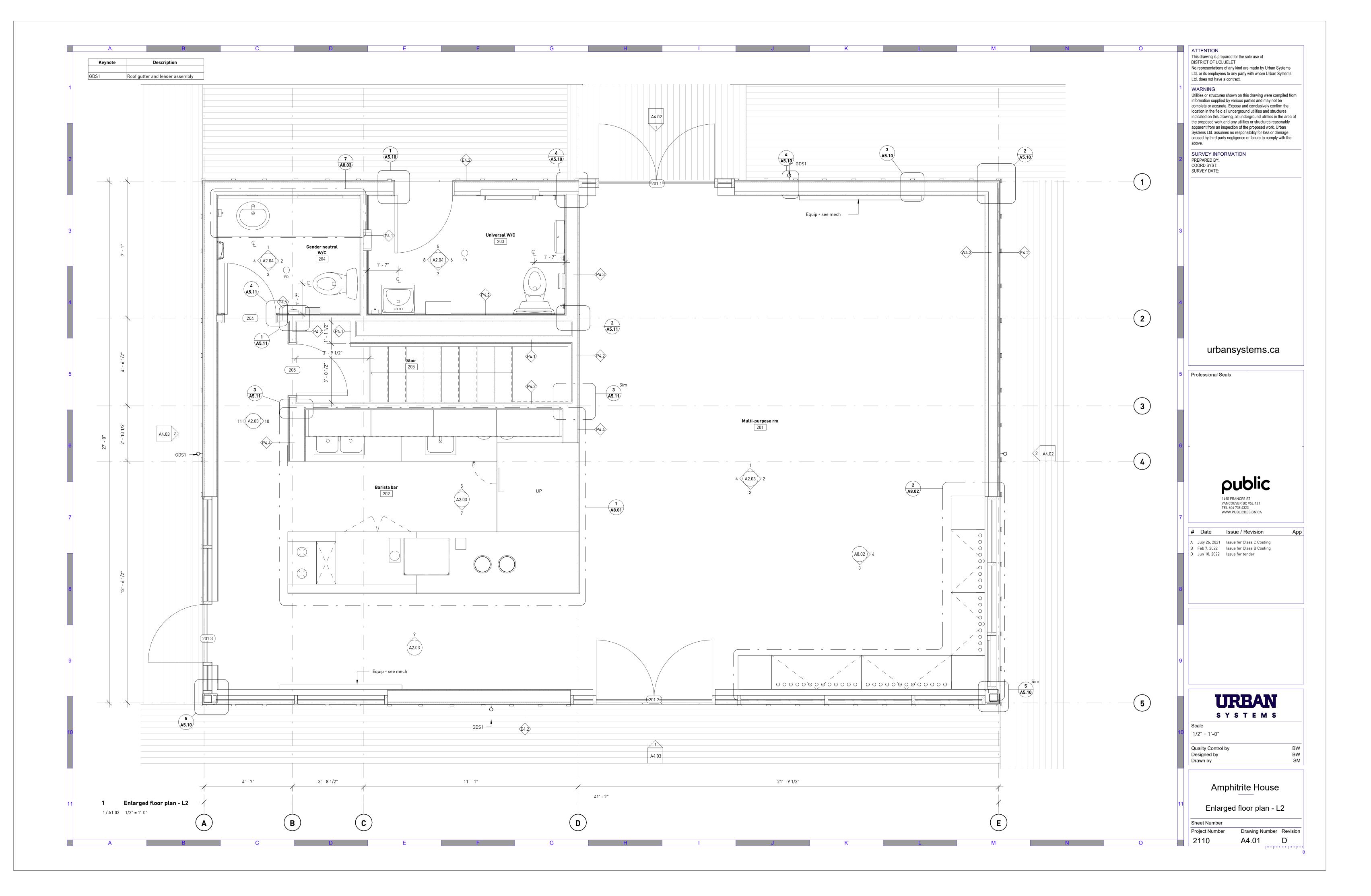
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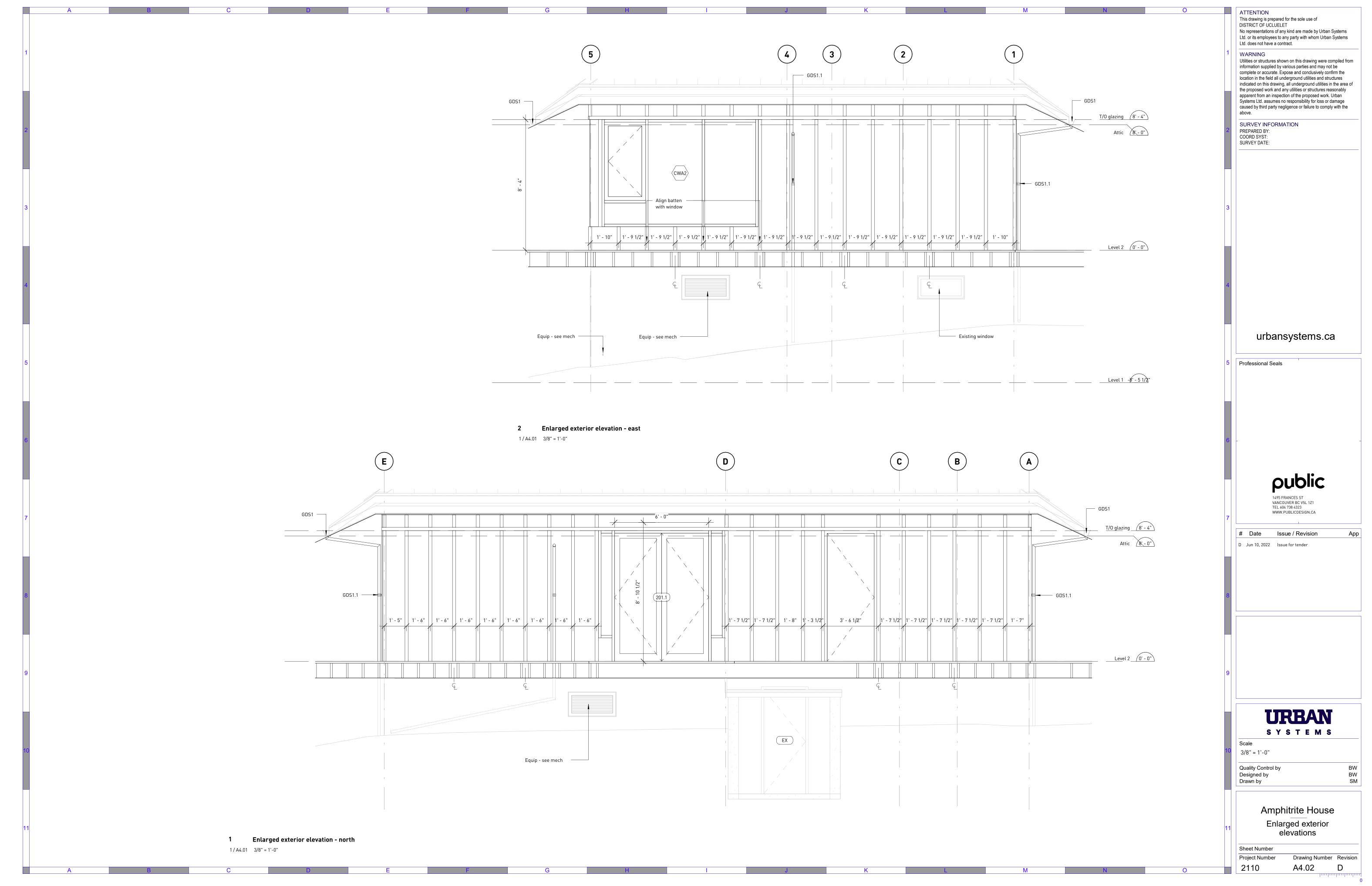
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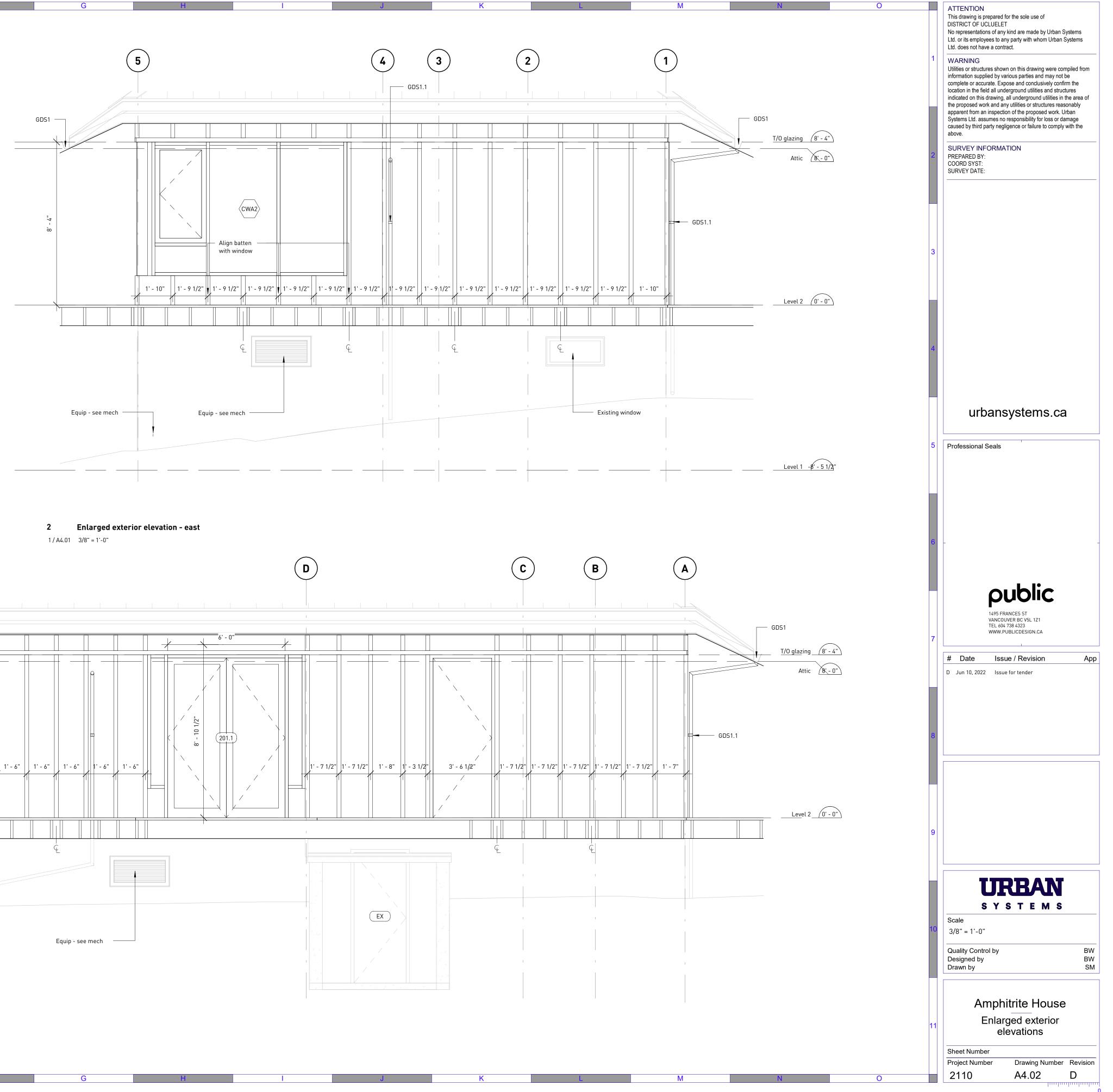
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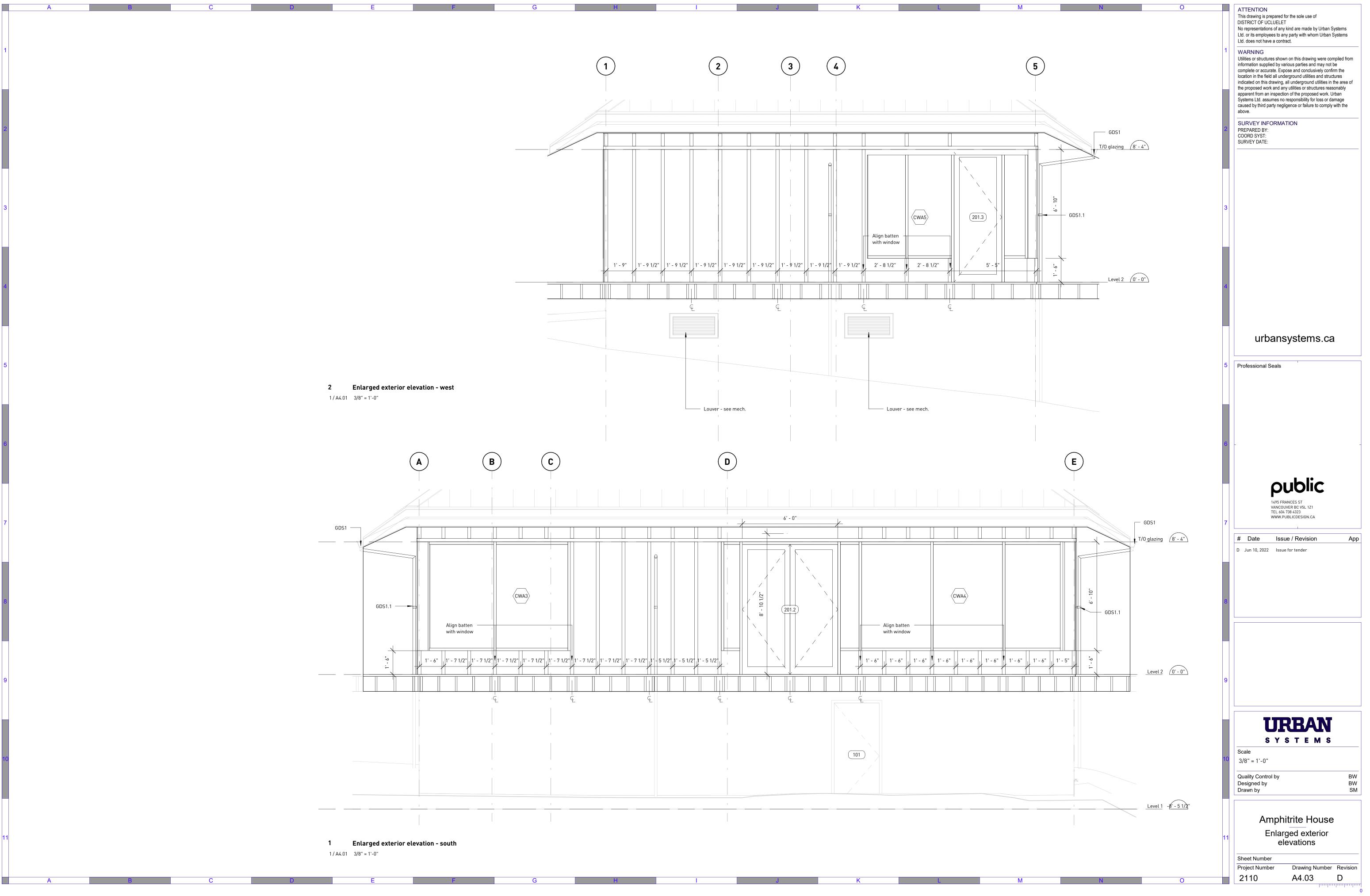
0	1	Wall sections Sheet Number Project Number Drawing Number Revision 2110 A3.10 D
		Amphitrite House
1	0	SYSTEMS Scale 1/2" = 1'-0" Quality Control by Designed by Drawn by SM
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7		Image: Provision of the system of the sys
e	3	
5	5	urbansystems.ca Professional Seals
4	ŀ	
3	3	
2	2	the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION PREPARED BY: COORD SYST: SURVEY DATE:
1		ATTENTION This drawing is prepared for the sole use of DISTRICT OF UCLUELET No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of
0		ATTENTION

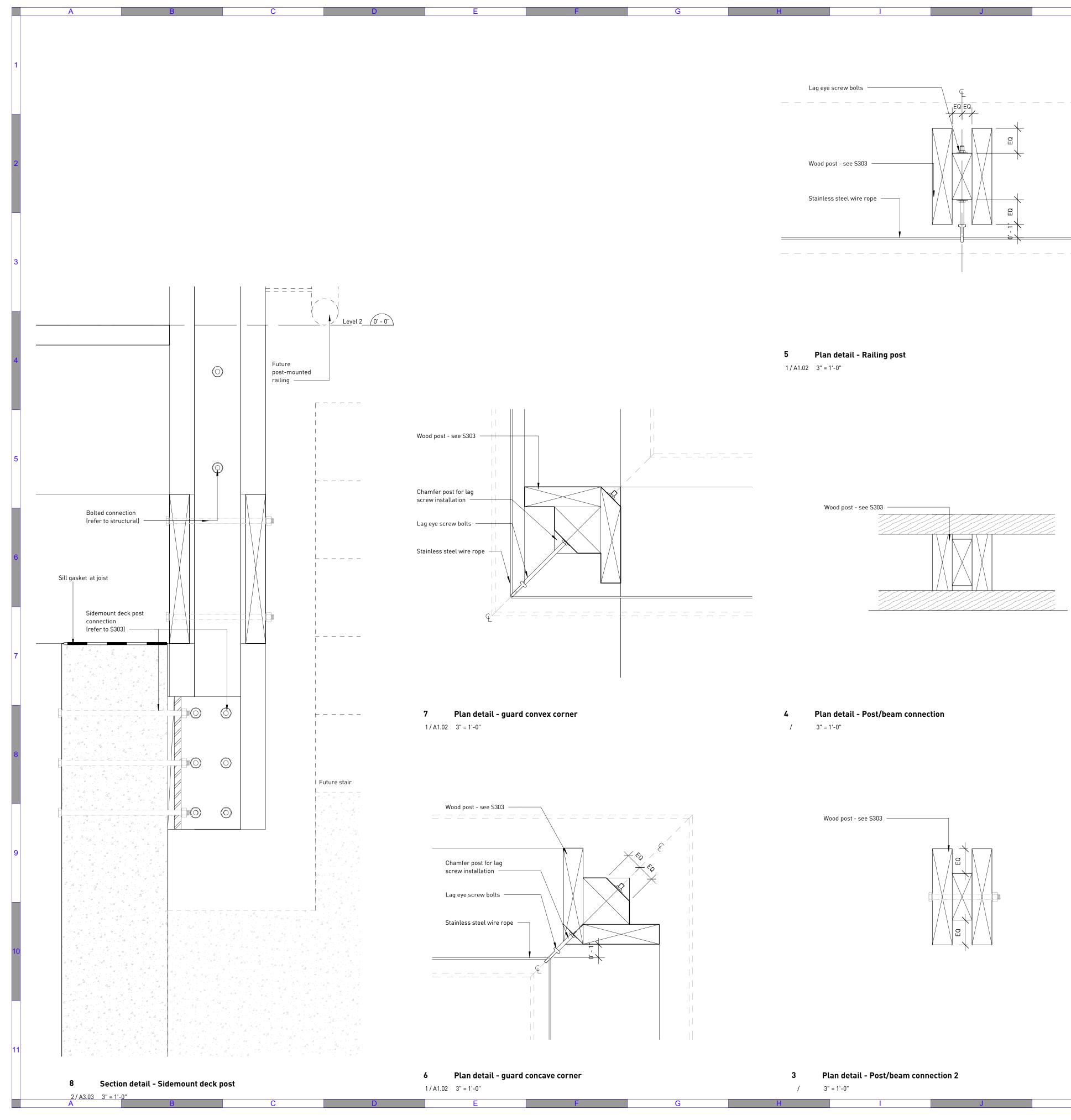


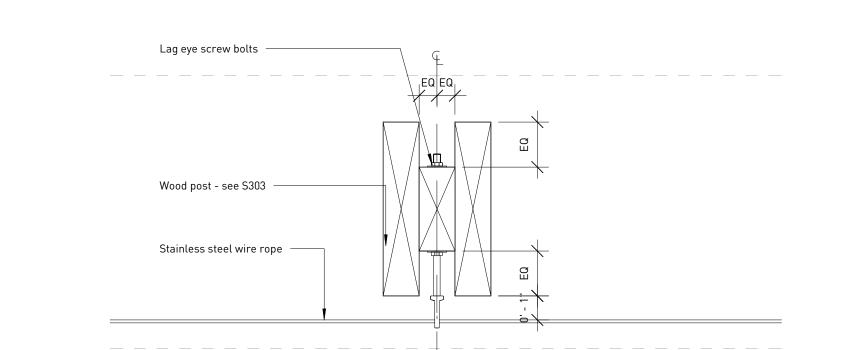








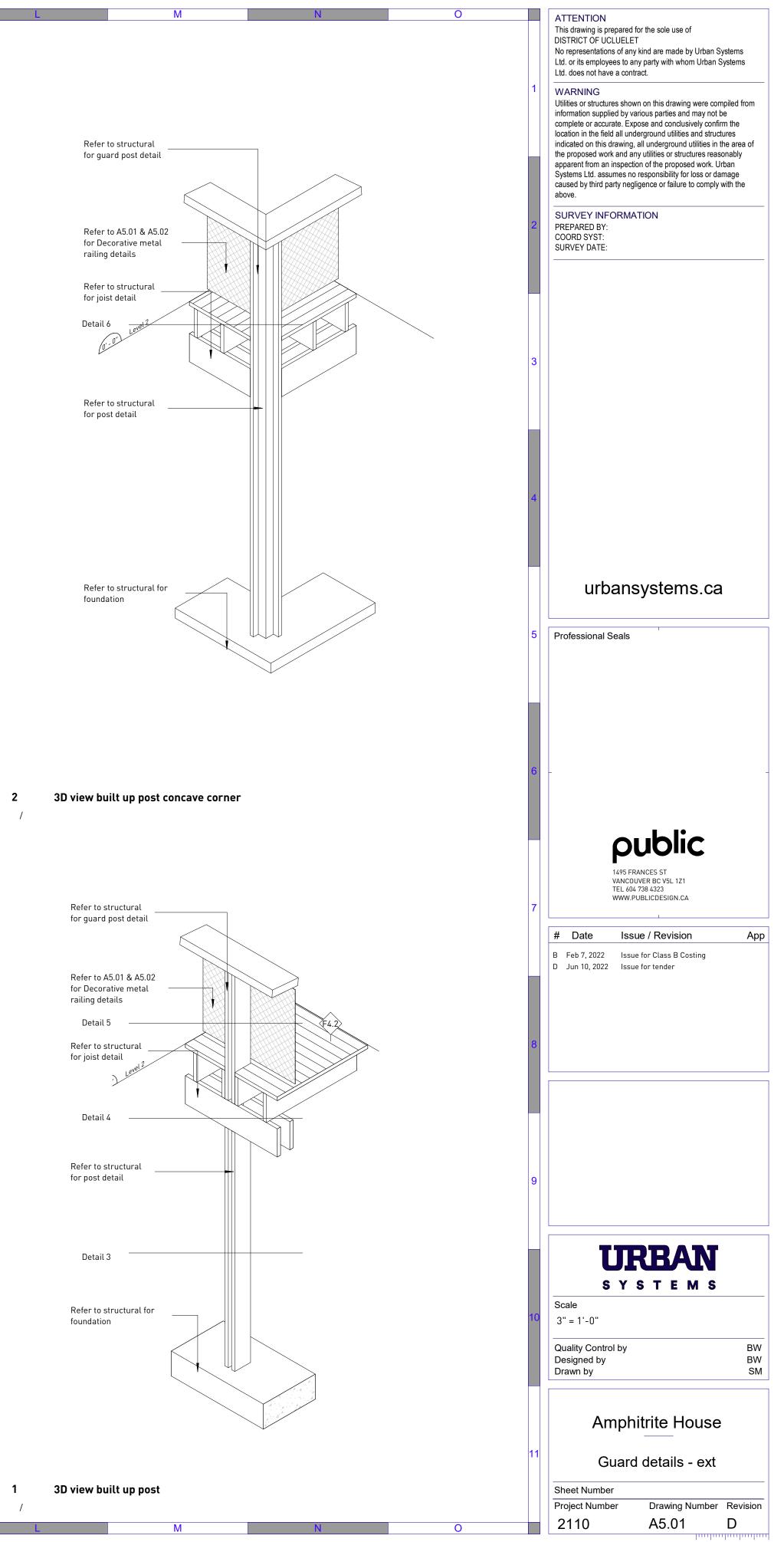


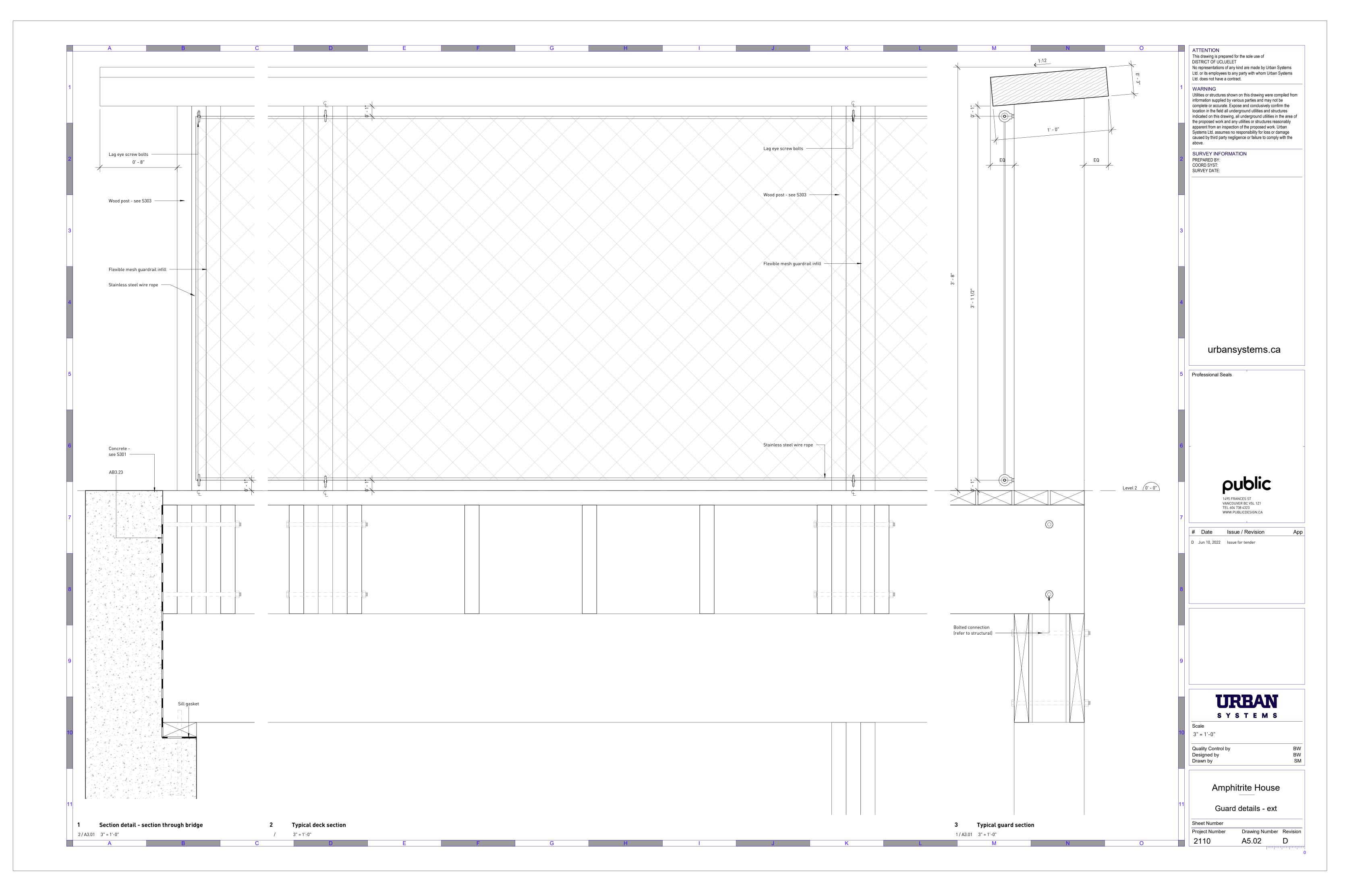


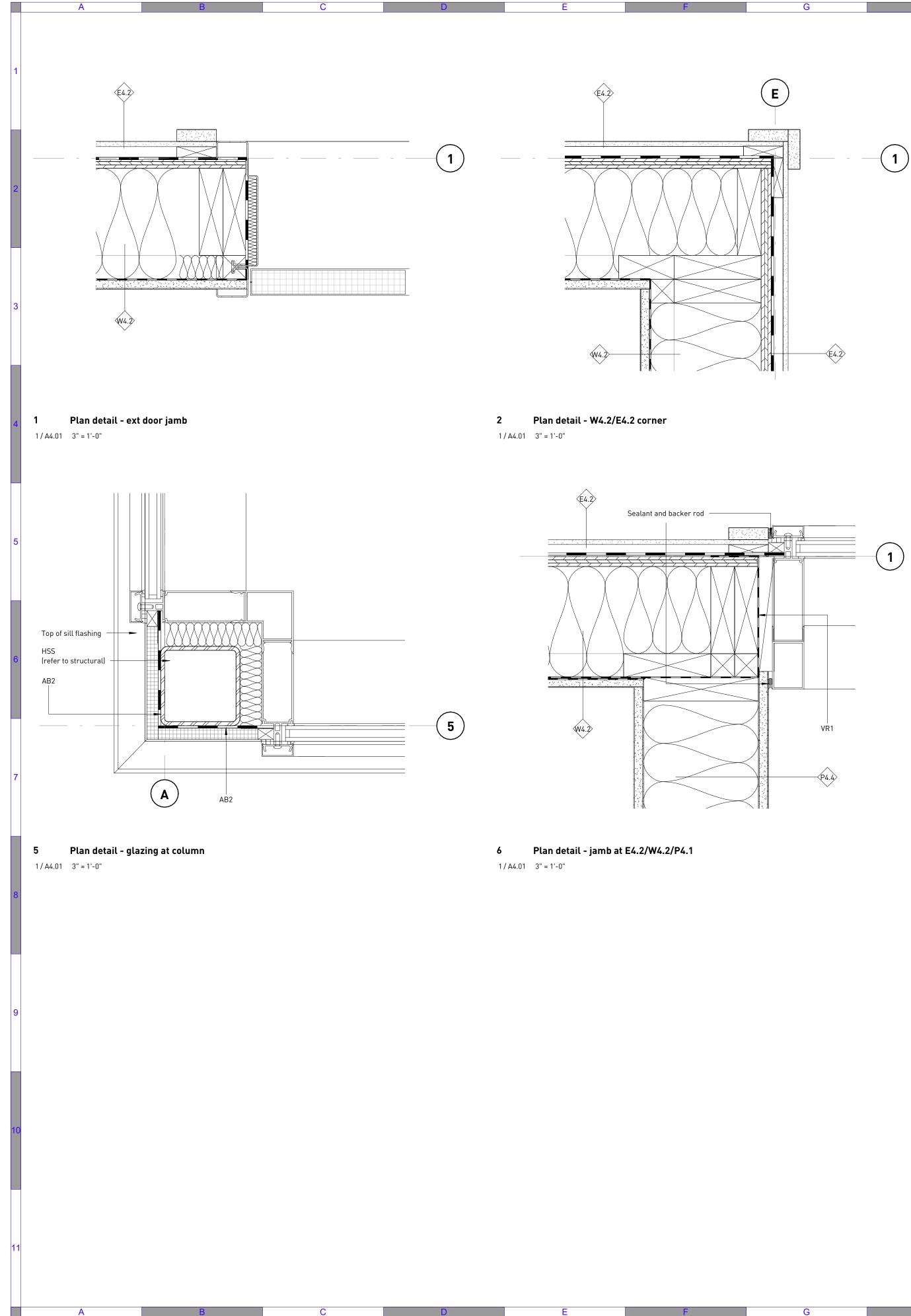


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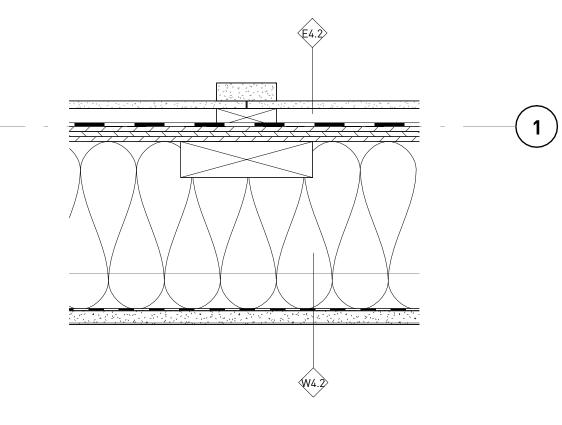
3	}	Plan detail - Post/beam conn	ection 2		1
	/	3" = 1'-0"			/
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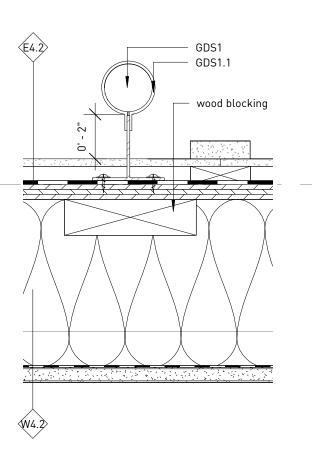
3 Plan detail - batten connection to W4.2/E4.2 1/A4.01 3" = 1'-0"

1/A4.01 3" = 1'-0"

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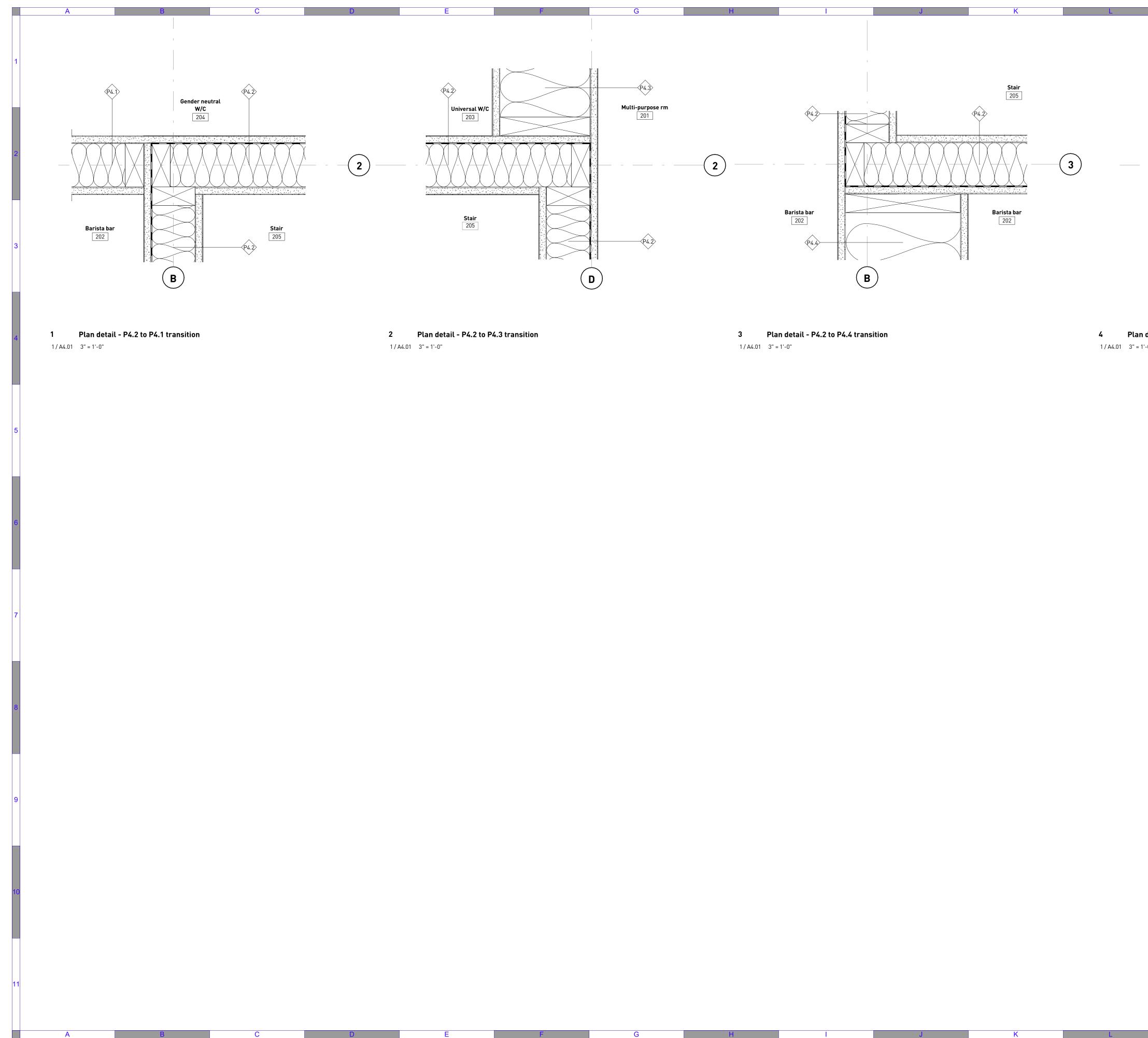
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{ 1

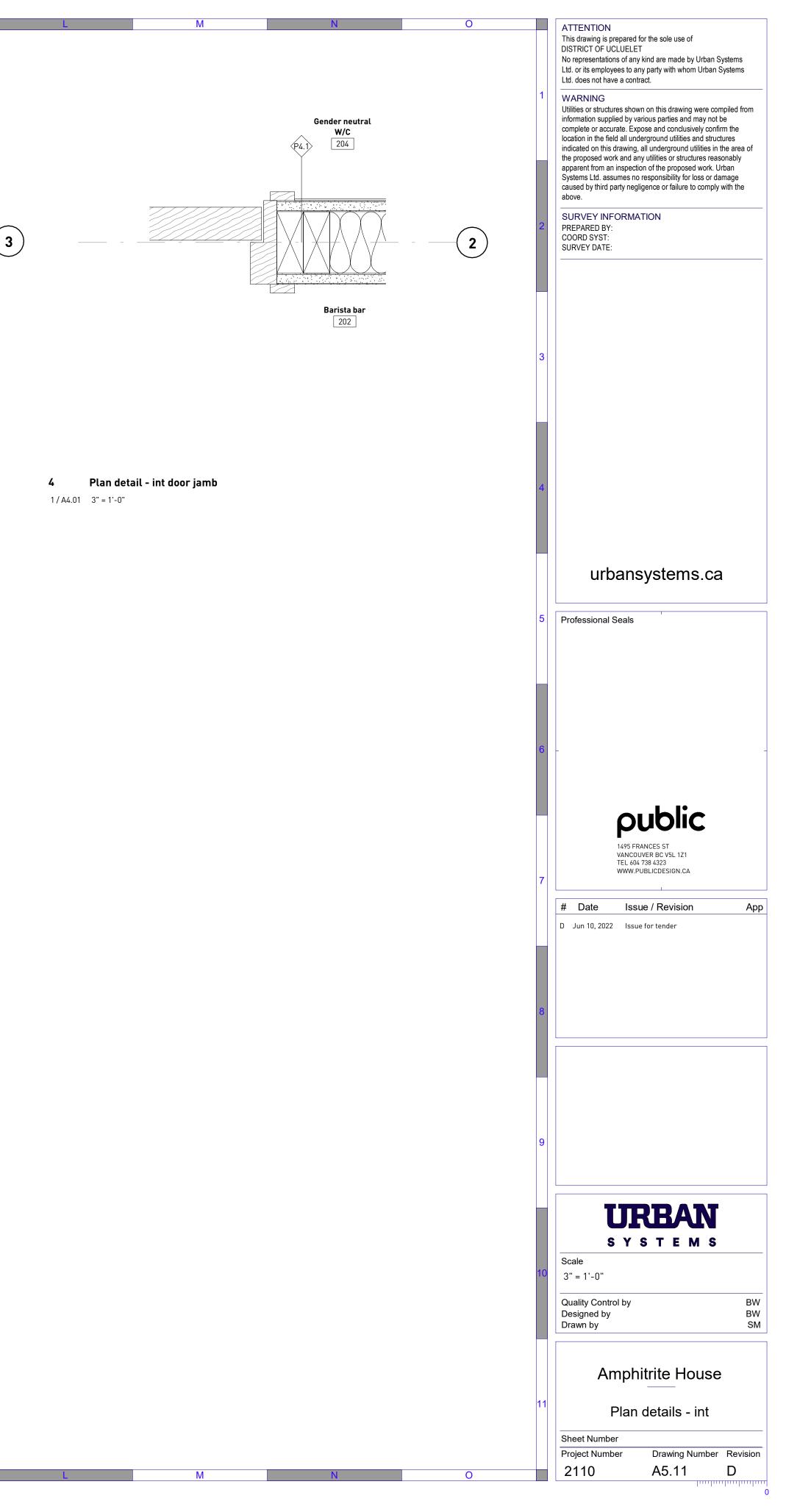
4 Plan detail - Rain water leader

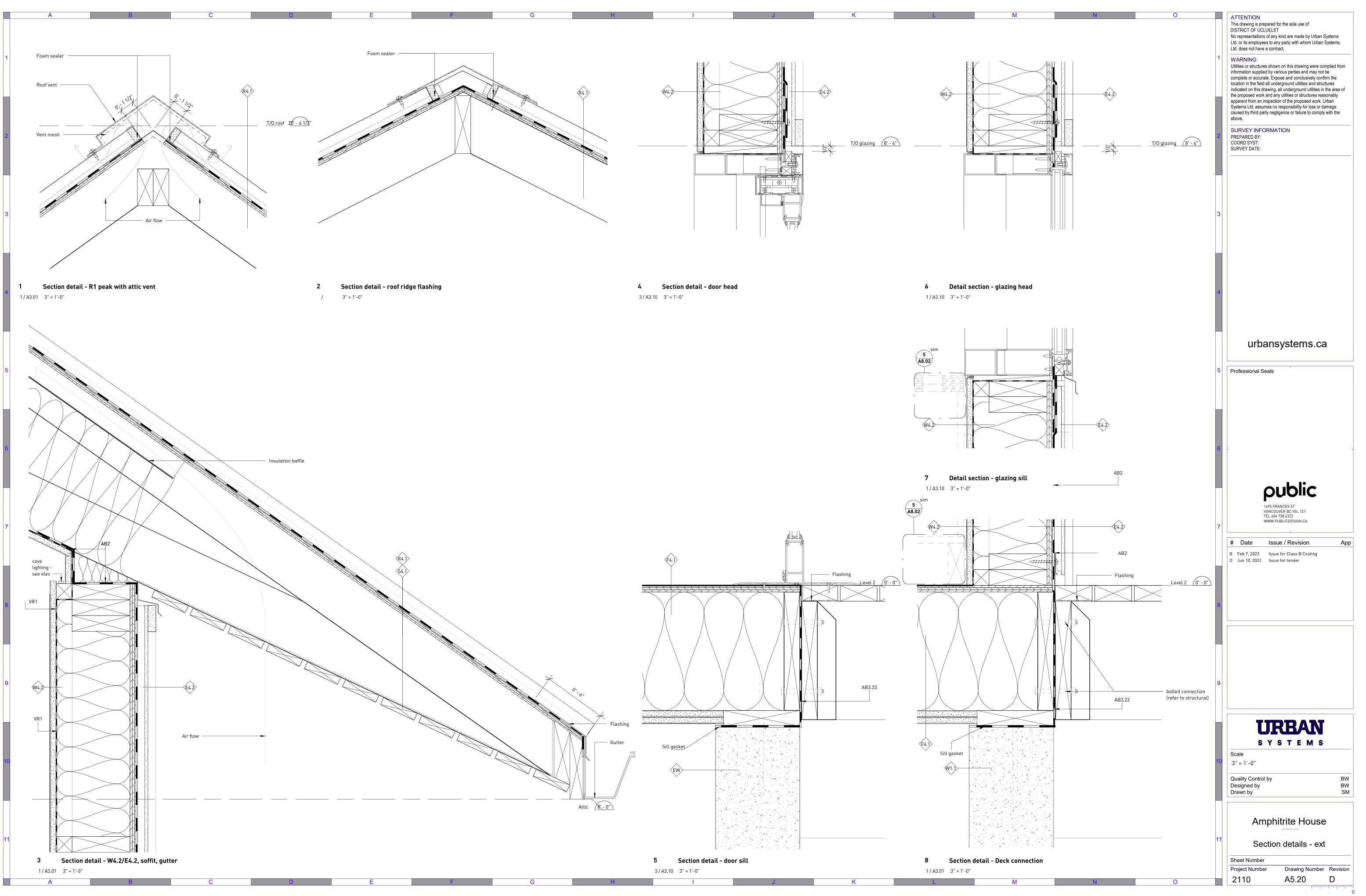
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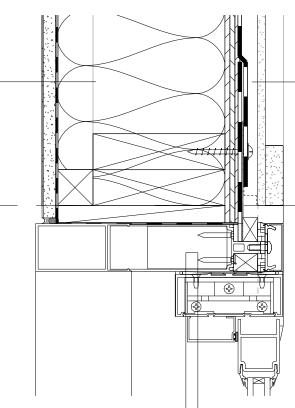
0		
0		ATTENTION This drawing is prepared for the sole use of DISTRICT OF UCLUELET No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.
1	1	WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably
		apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the
2	2	above. SURVEY INFORMATION PREPARED BY:
		COORD SYST: SURVEY DATE:
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2	4	
		urbansystems.ca
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t	5	Professional Seals
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		public 1495 FRANCES ST
7	7	VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA
		# Date Issue / Revision App B Feb 7, 2022 Issue for Class B Casting
		BFeb 7, 2022Issue for Class B CostingDJun 10, 2022Issue for tender
3	3	
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		URBAN
		S Y S T E M S Scale
	0	3" = 1'-0" Quality Control by BW
		Designed byBWDrawn bySM
		Amphitrite House
1	1	Plan details - ext
		Sheet Number Project Number Drawing Number
0		2110 A5.10 D

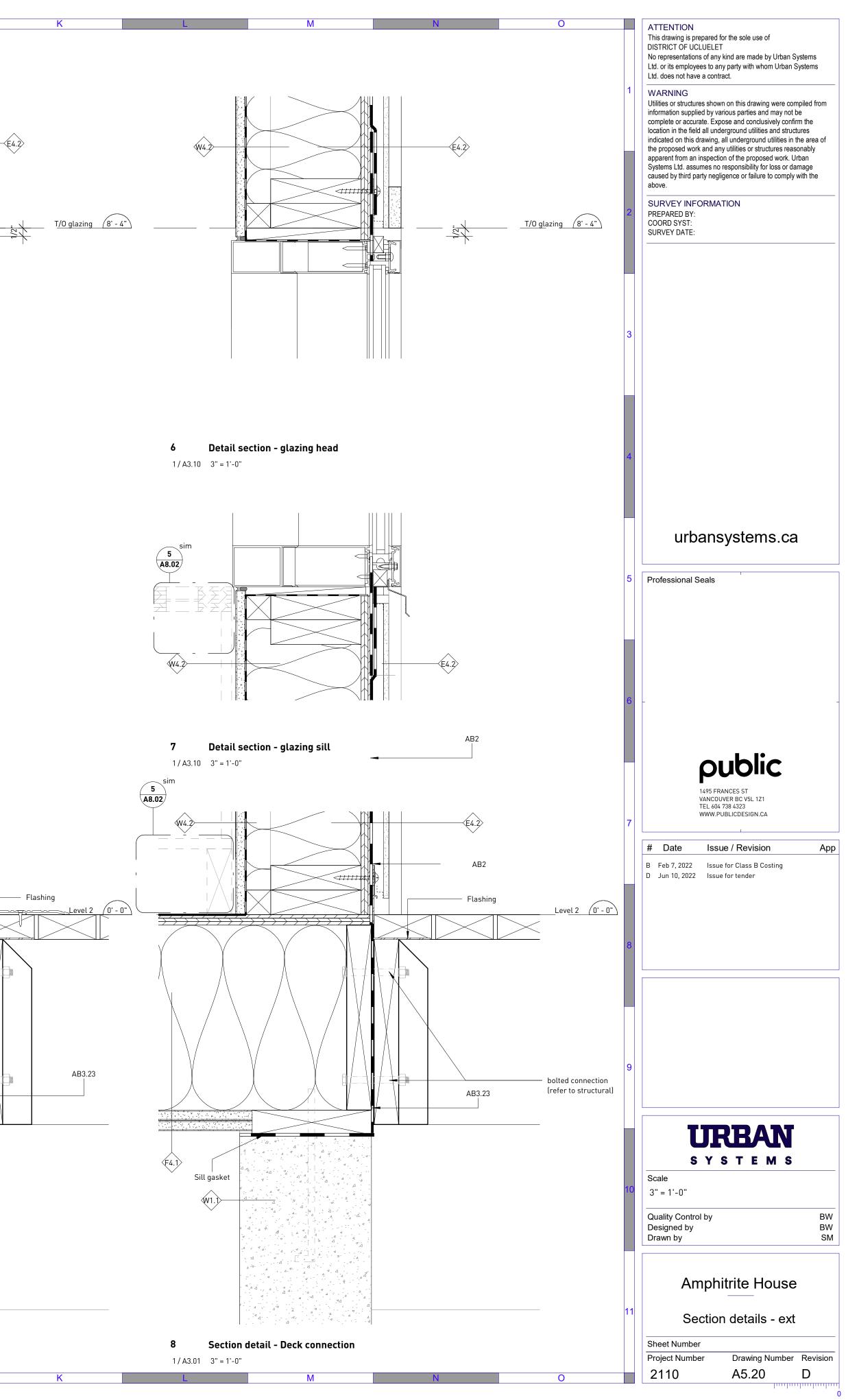


1/A4.01 3" = 1'-0"

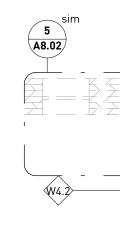


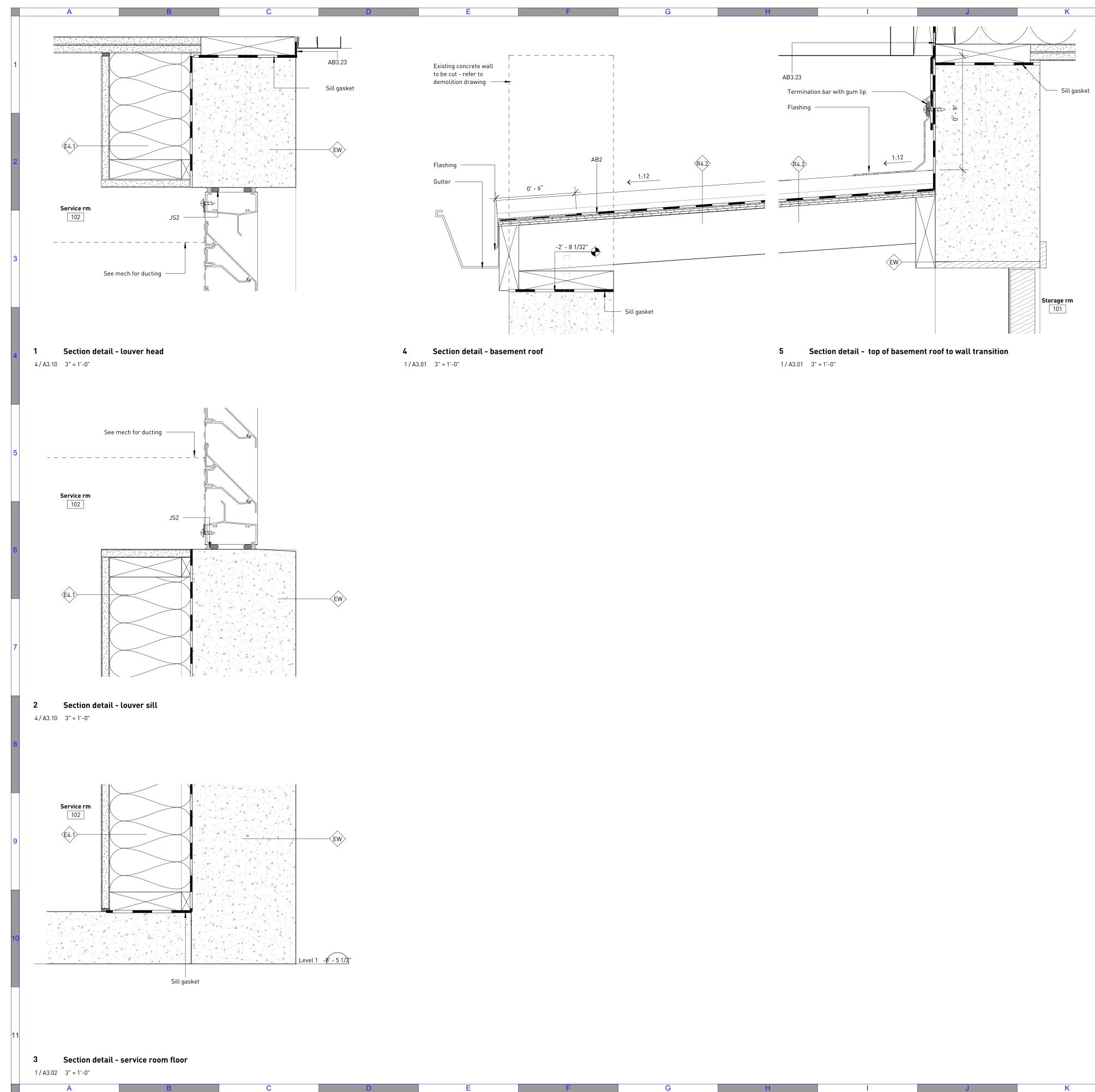












0		ATTENTION
		This drawing is prepared for the sole use of DISTRICT OF UCLUELET
		No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems
	1	Ltd. does not have a contract.
	I	WARNING Utilities or structures shown on this drawing were compiled from
		information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the
		location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably
		the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage
		caused by third party negligence or failure to comply with the above.
		SURVEY INFORMATION
	2	PREPARED BY: COORD SYST:
		SURVEY DATE:
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		urbansystems.ca
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		1495 FRANCES ST VANCOUVER BC V5L 1Z1 TEL 604 738 4323
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		# Date Issue / Revision App
		D Jun 10, 2022 Issue for tender
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		URBAN
		SYSTEMS
		Scale
	10	3" = 1'-0"
		Quality Control by BW
		Designed by BW Drawn by SM
		A
		Amphitrite House
	11	Section details - ext
		Sheet Number Project Number Drawing Number Revision
		2110 A5.21 Drawing Number Revision
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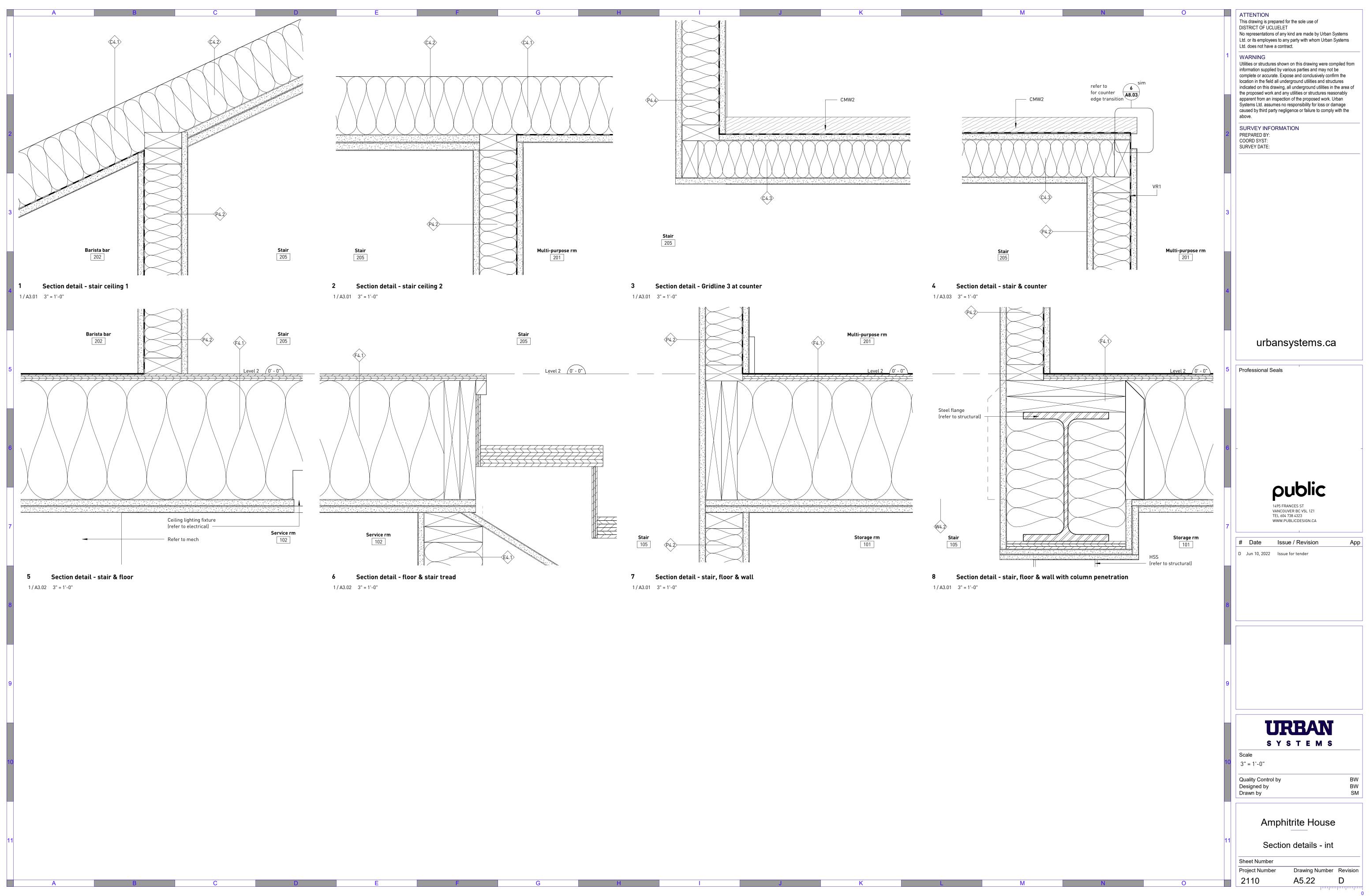
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		Width	Door		Frame		
Door number	Height		Construction type	Configuration	type	Hardware group	
101	6' - 8"	2' - 10"	MTD1.X	В	MFT1.X		
102	6' - 8"	3' - 0"	WD2.45	В	WDF.45		
201.1	8' - 2"	6' - 0"	ENT1	D	-		R
201.2	8' - 2"	6' - 0"	ENT1	D	-		R
201.3	8' - 2"	3' - 0"	ENT1	С	-		R
203	8' - 2"	3' - 0"	MTD1.X	В	MFT1.X		
204	6' - 8"	2' - 8"	WD2	В	WDF		
205	6' - 8"	2' - 8"	WD2.45	В	WDF.45		
EX	6' - 8"	2' - 8"	Existing	В	Existing		



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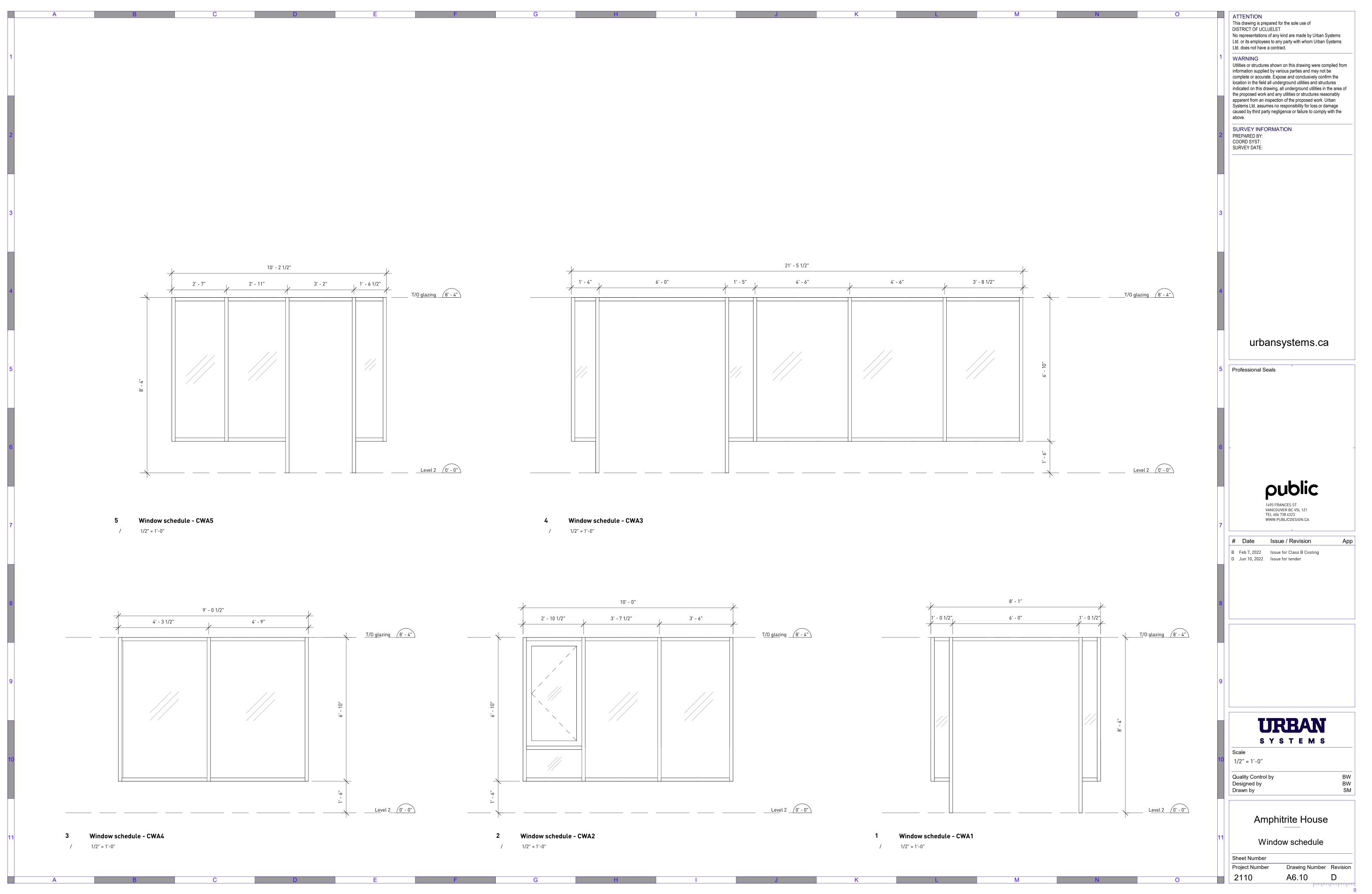
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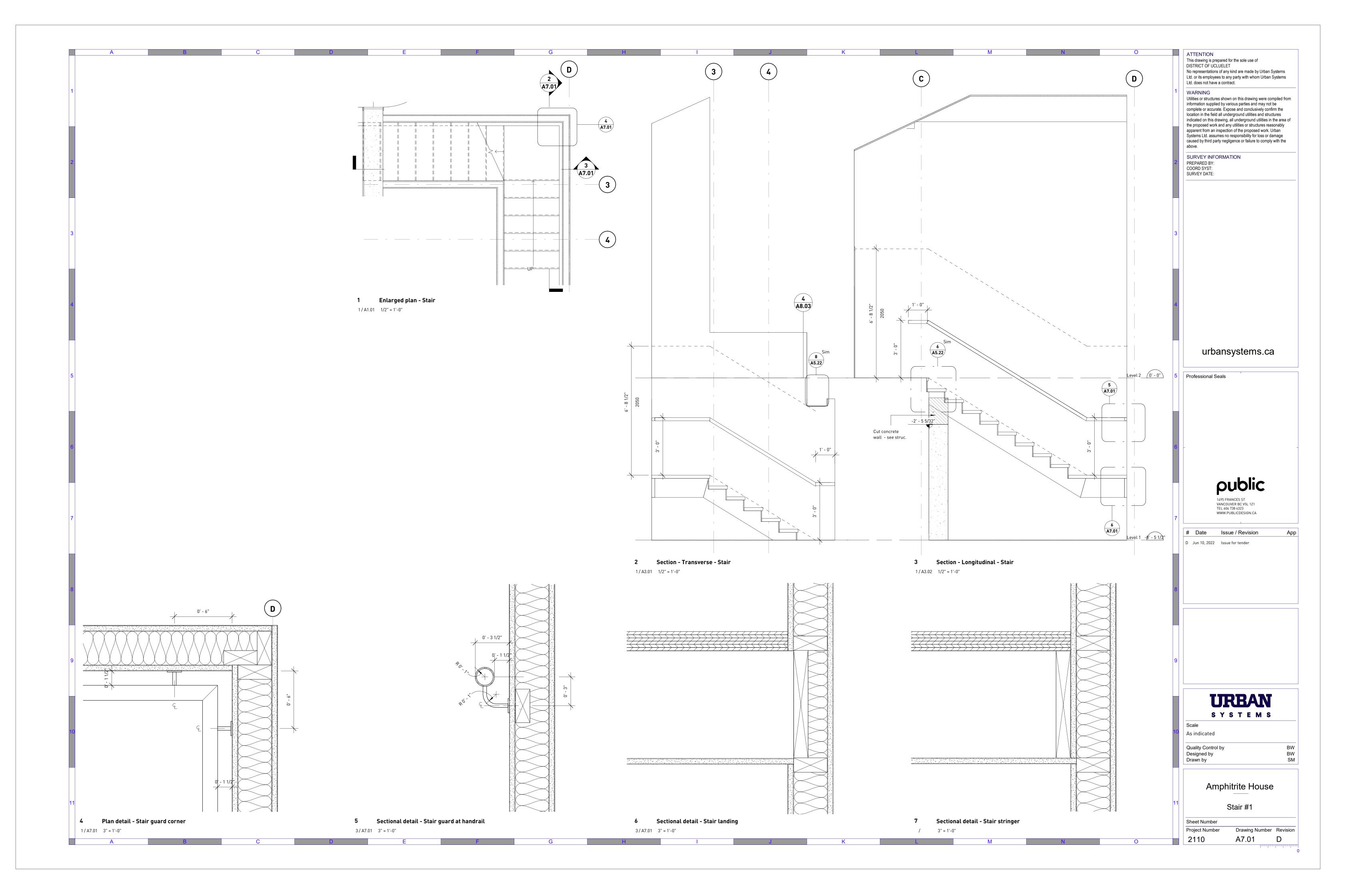
No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Utback apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the SURVEY INFORMATION PREPARED BY: COORD SYST: SURVEY DATE: urbansystems.ca Professional Seals public 1495 FRANCES ST VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA # Date Issue / Revision Арр A July 26, 2021 Issue for Class C Costing B Feb 7, 2022 Issue for Class B Costing D Jun 10, 2022 Issue for tender URBAN SYSTEMS 1 : 25 Quality Control by Designed by Drawn by BW BW SM Amphitrite House Door and frame schedule Sheet Number Drawing Number Revision Project Number A6.01 D

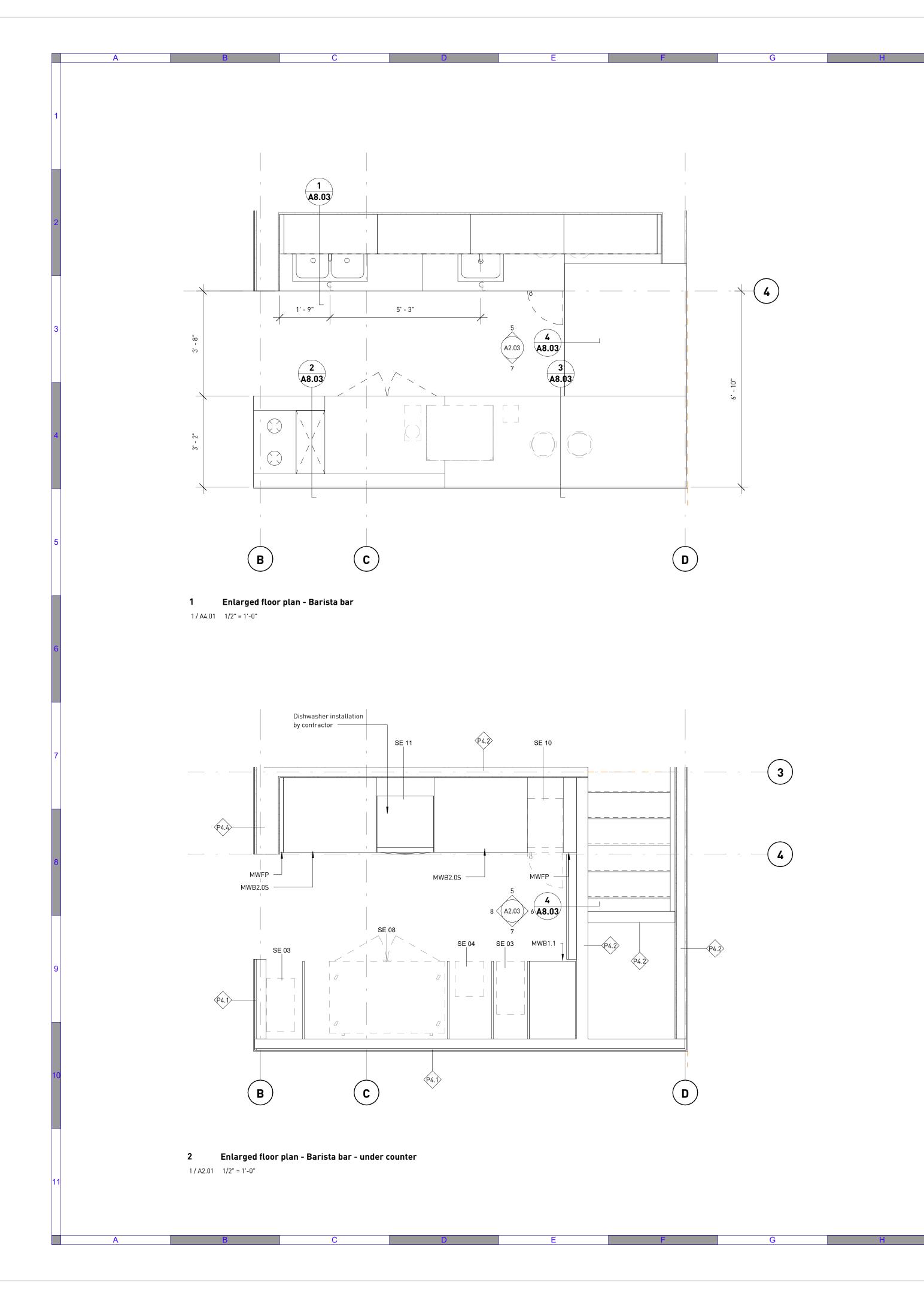
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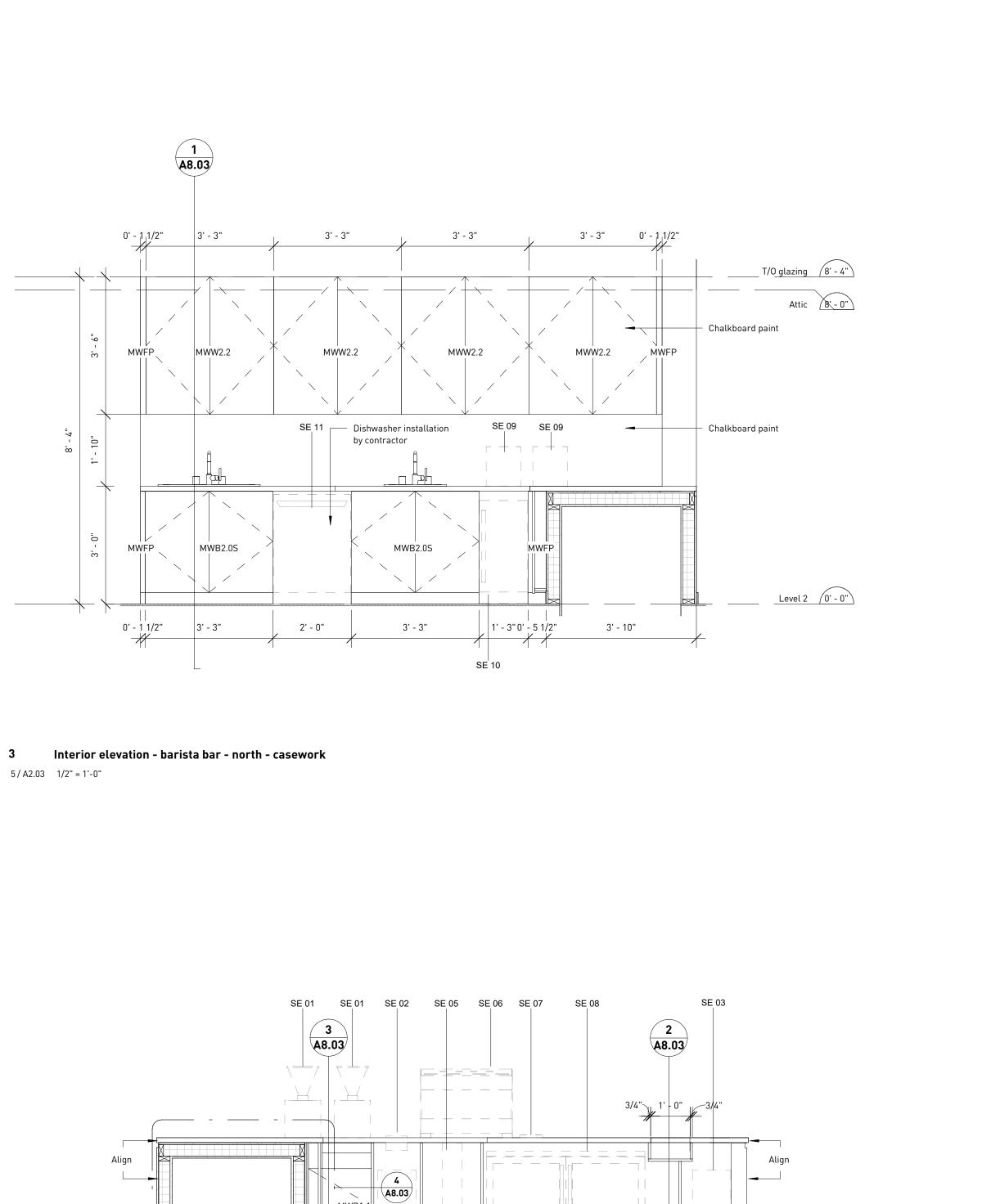
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ATTENTION

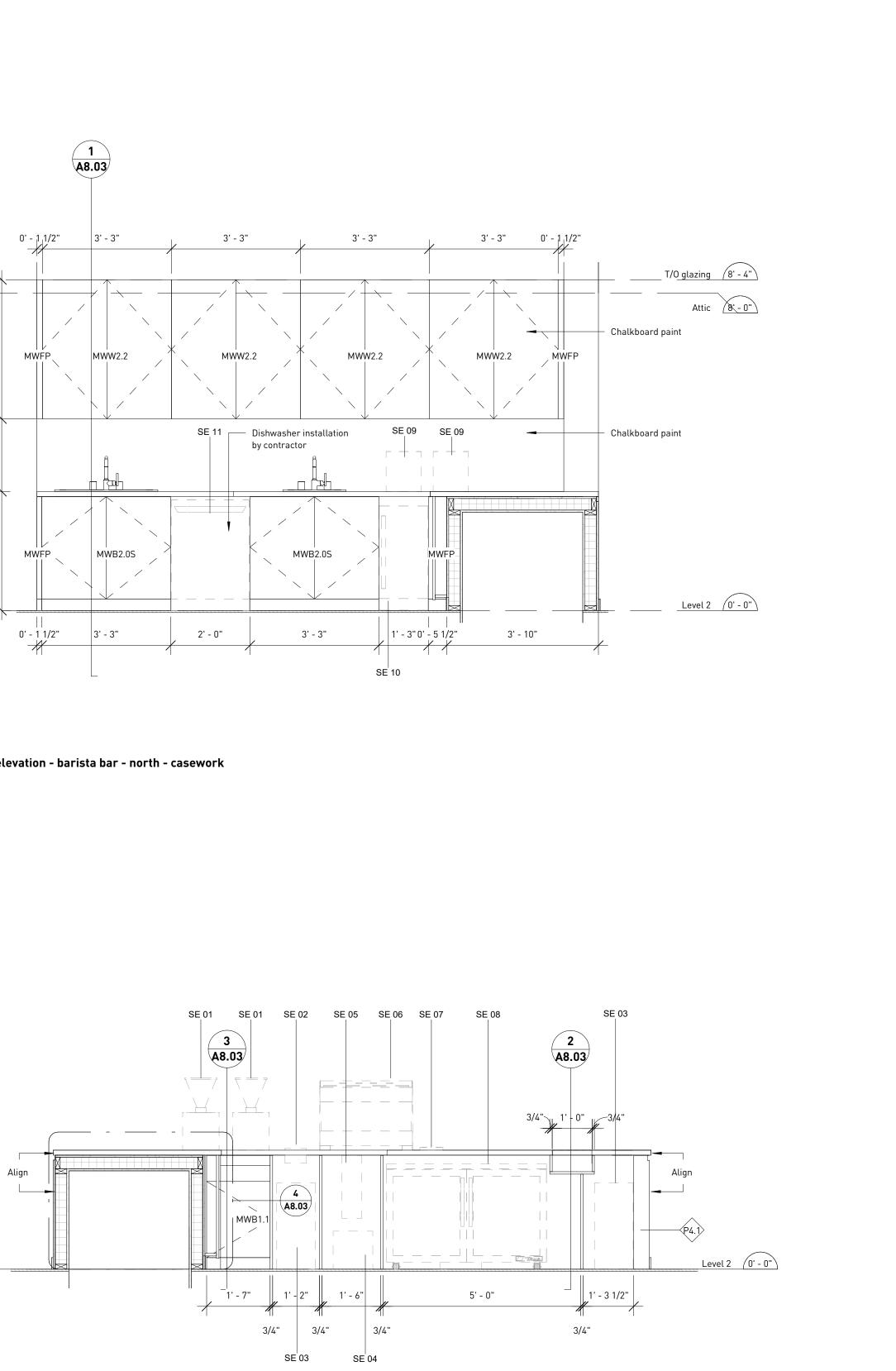






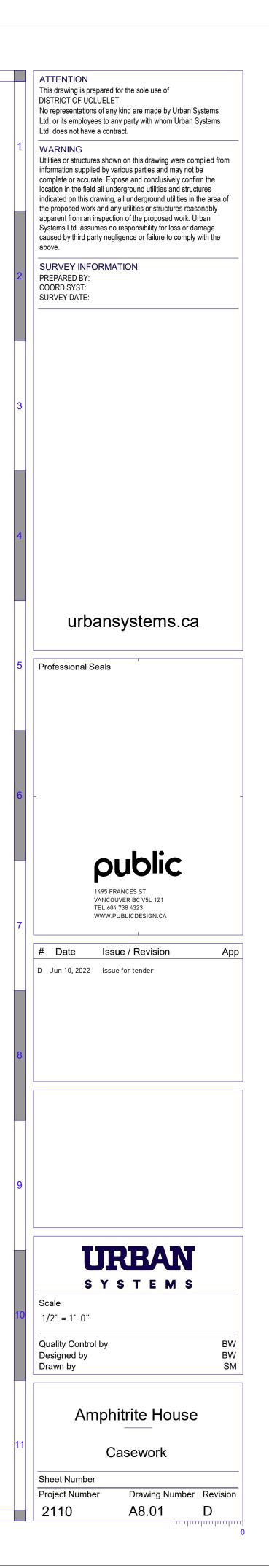


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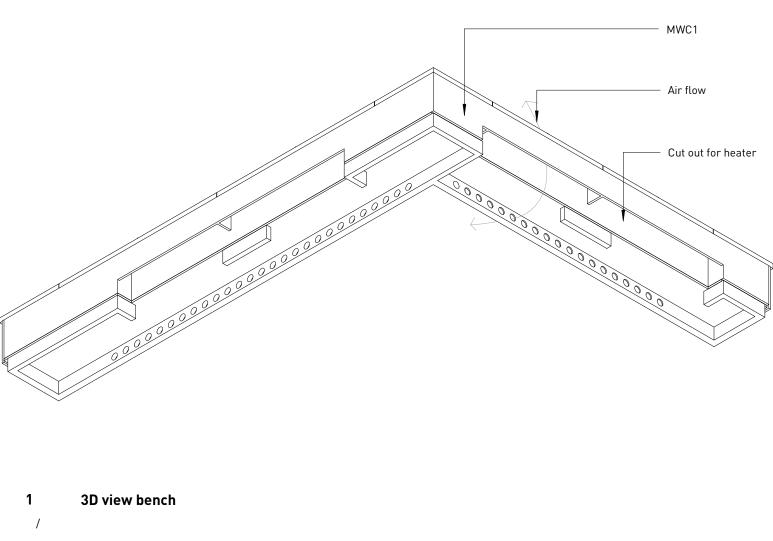
4 Interior elevation - barista bar - south - casework 7/A2.03 1/2" = 1'-0"

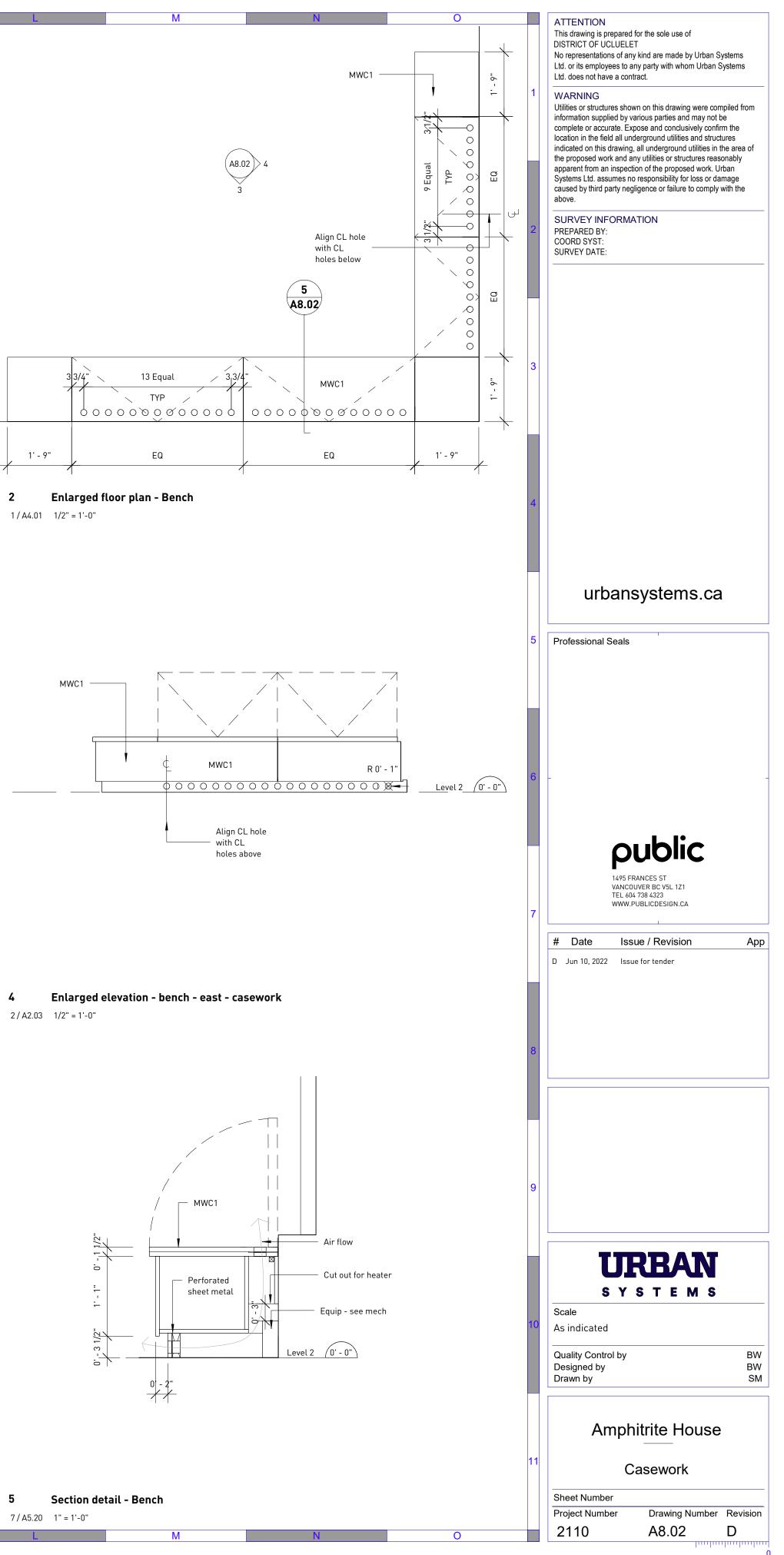


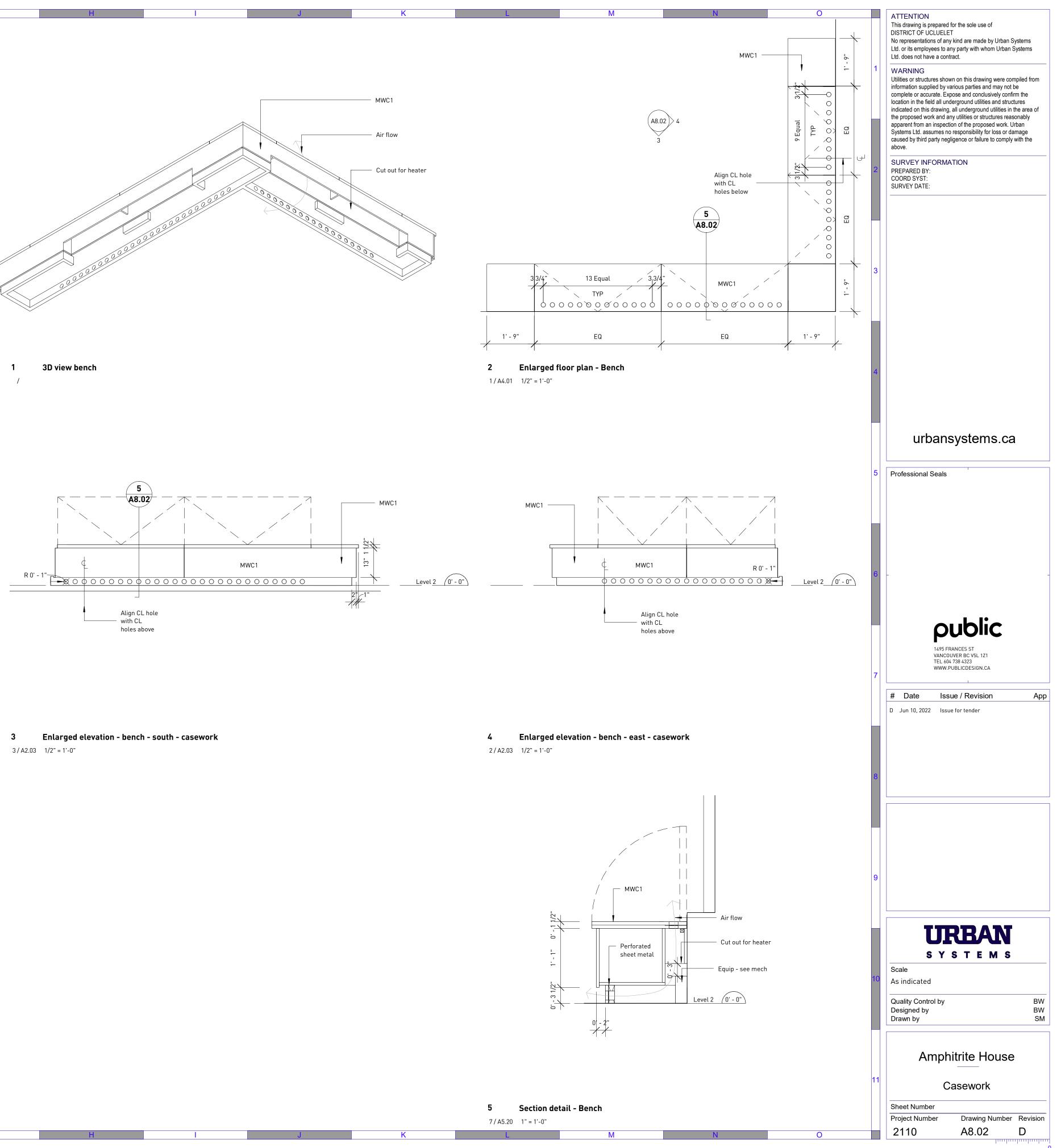
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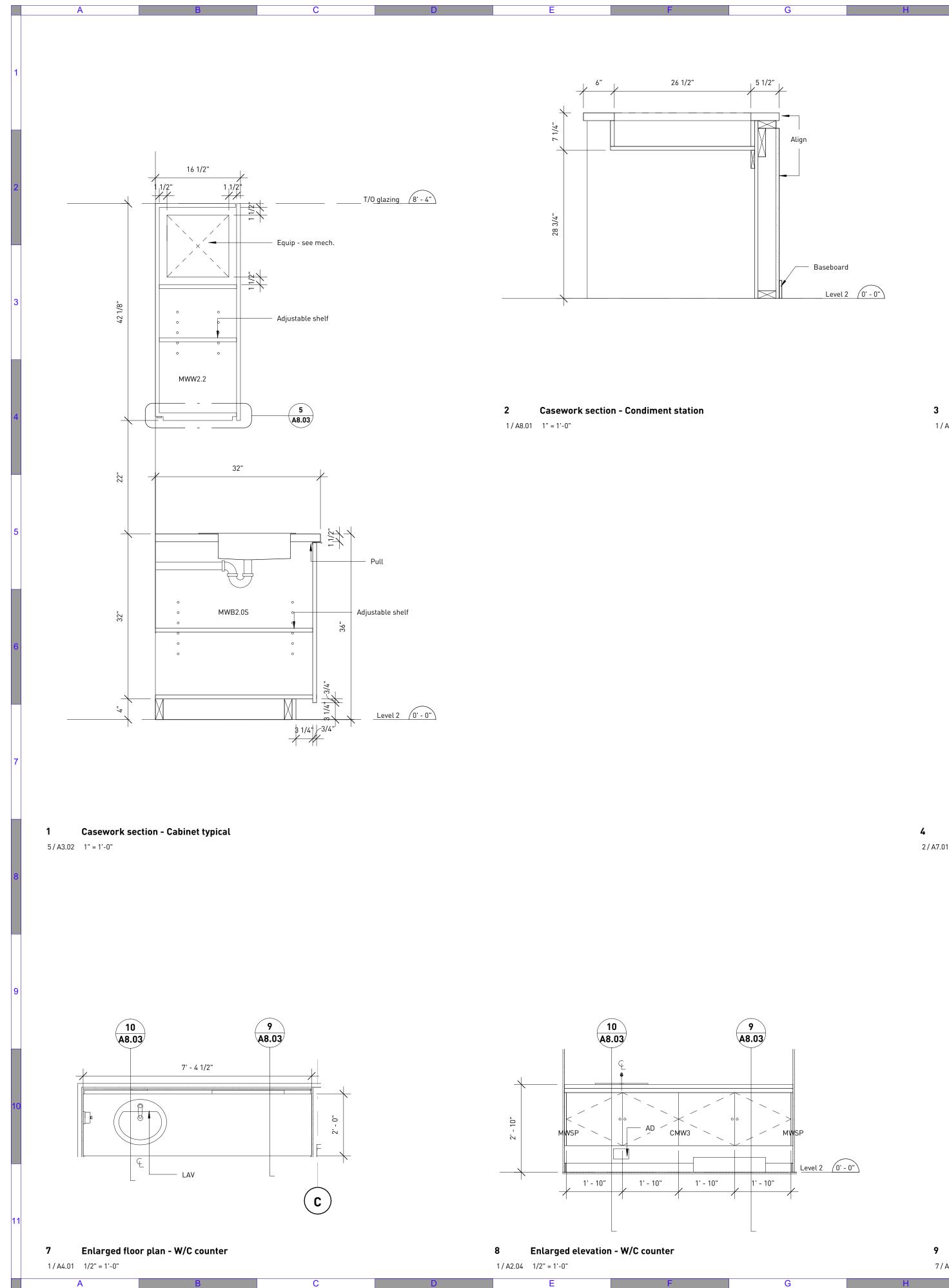
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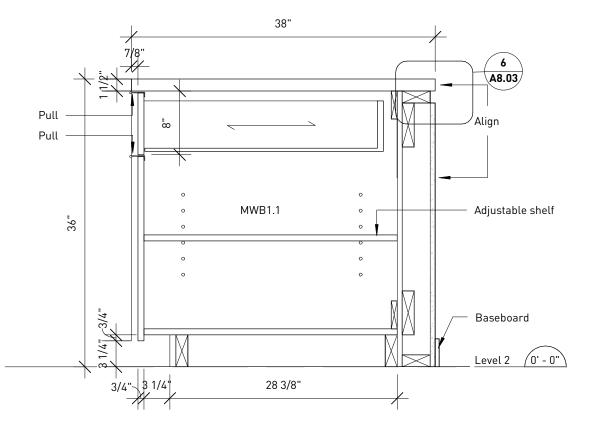












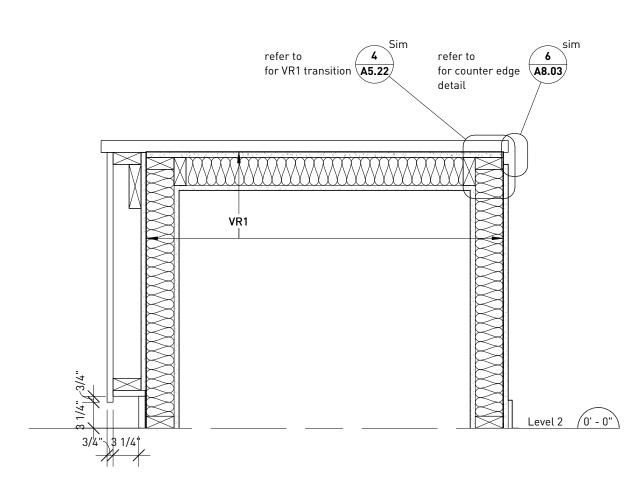
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3 Casework section - Cabinet c/w drawer 1/A8.01 1" = 1'-0"

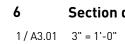


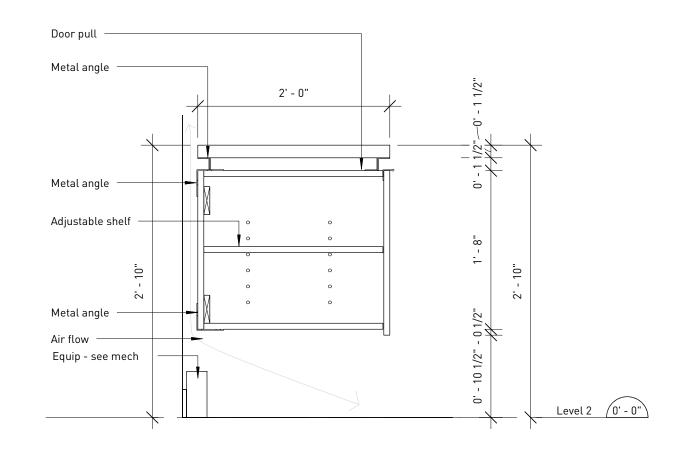
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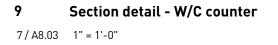
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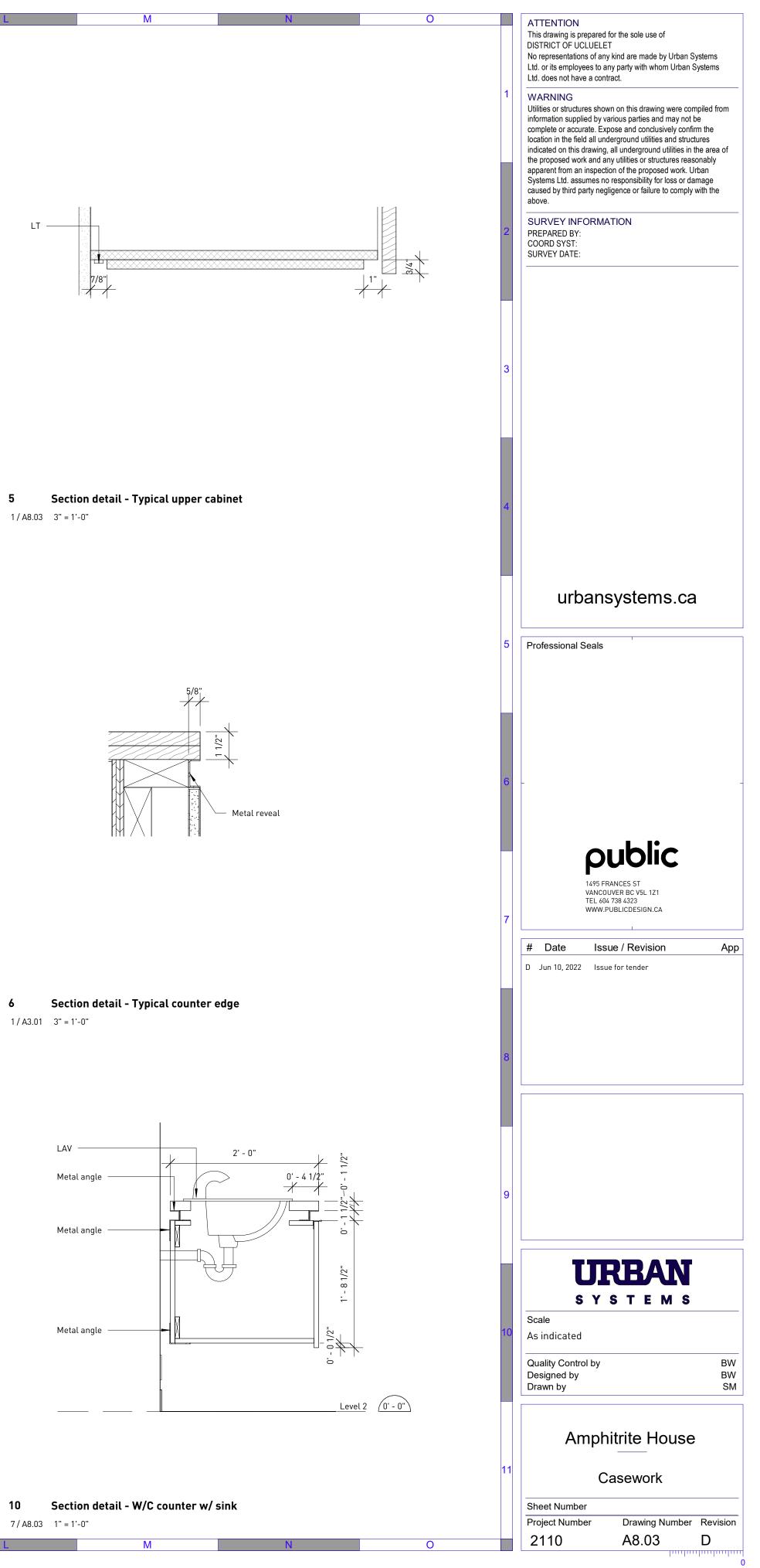


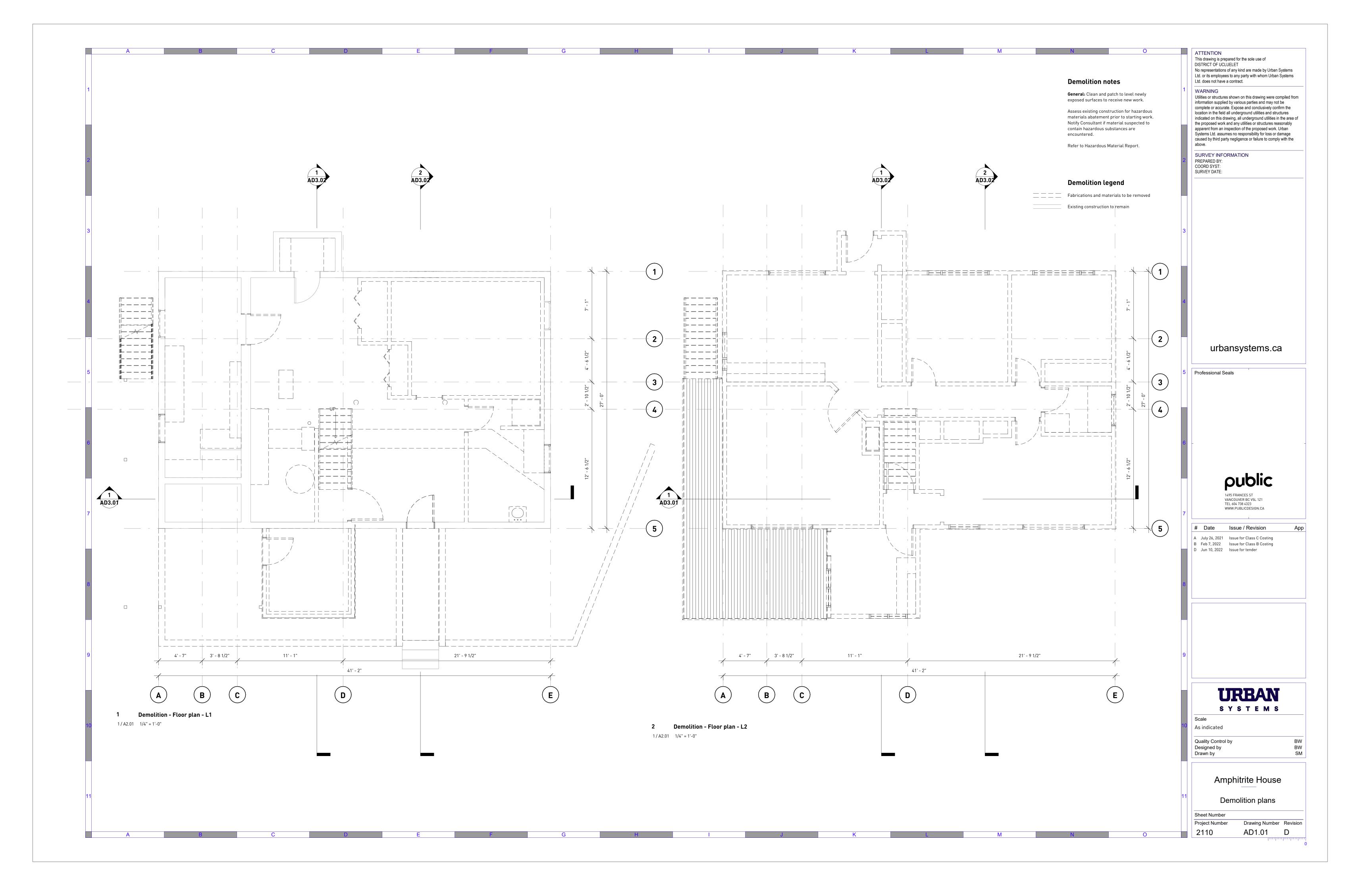
4 Casework section - transaction counter 2/A7.01 1" = 1'-0"

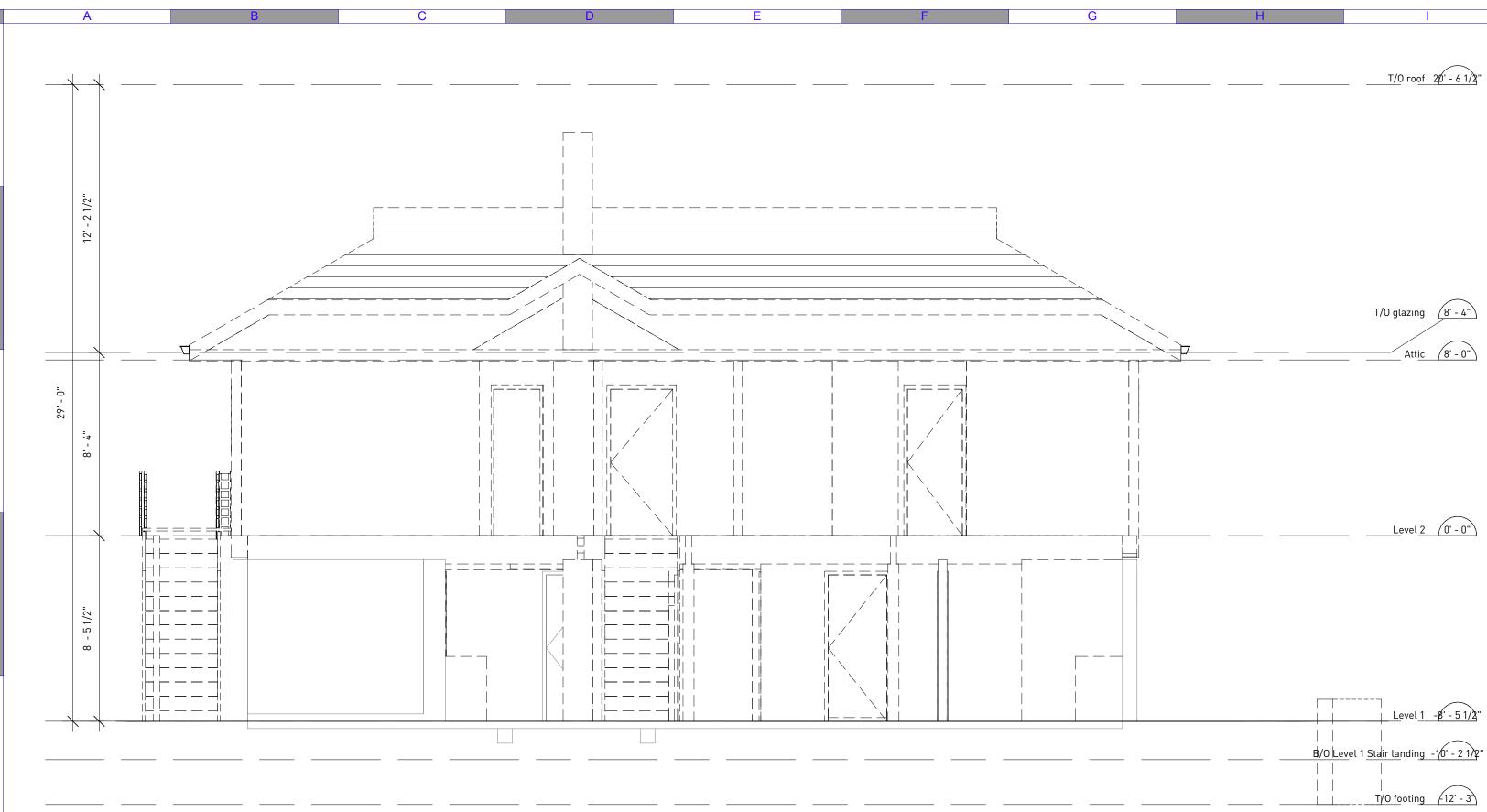












1 Demolition section 1 E-W

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1/AD1.01 1/4" = 1'-0"

Demolition notes

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General: Clean and patch to level newly exposed surfaces to receive new work.

ATTENTION

This drawing is prepared for the sole use of DISTRICT OF UCLUELET

No representations of any kind are made by Urban Systems

Assess existing construction for hazardous materials abatement prior to starting work. Notify Consultant if material suspected to contain hazardous substances are encountered.

Refer to Hazardous Material Report.

Demolition legend

_____ Fabrications and materials to be removed Existing construction to remain

Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION PREPARED BY: COORD SYST: SURVEY DATE: urbansystems.ca Professional Seals public 1495 FRANCES ST VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA # Date Issue / Revision Арр D Jun 10, 2022 Issue for tender URBAN SYSTEMS Scale As indicated Quality Control by BW Designed by Drawn by BW SM Amphitrite House **Demolition Sections** Sheet Number

Drawing Number Revision

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AD3.01 D

Project Number

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ATTENTION

This drawing is prepared for the sole use of DISTRICT OF UCLUELET No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.

WARNING

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SURVEY INFORMATION PREPARED BY: COORD SYST:

_____ Fabrications and materials to be removed

encountered.

N

Existing construction to remain

Demolition legend

Demolition notes

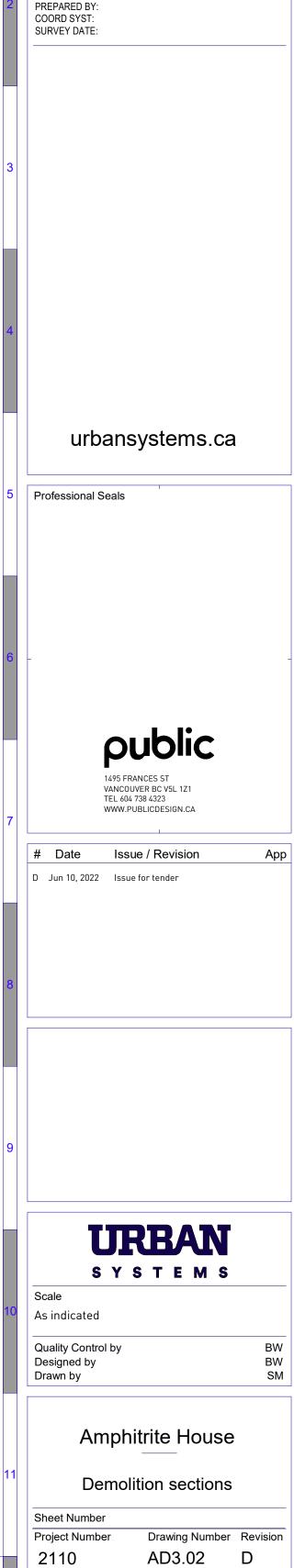
General: Clean and patch to level newly

exposed surfaces to receive new work.

Assess existing construction for hazardous materials abatement prior to starting work.

Notify Consultant if material suspected to contain hazardous substances are

Refer to Hazardous Material Report.



GENERAL

- 1. ALL DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA.
- ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA, ALL REFERENCED CODES AND ALL FEDERAL AND MUNICIPAL REGULATIONS AND BY-LAWS.
- 3. ALL REFERENCED CODES AND STANDARDS SHALL BE AS REFERENCED IN THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE.
- 4. DESIGN CRITERIA: kPa (psf) UCLUELET SITE CLASS SNOW LOADS WIND LOADS 1.0 kPa (22.9 psf) q10 0.53kPa (11.10 psf) ASSUMED Ss 0.4 kPa (8.40 psf) q50 0.68kPa (14.20 psf) Sr ULS 1.0/SLS 0.90 ULS 1.0/SLS 0.75 l w SEISMIC LOADS SPECTRAL ACCELERATION Sa (0.2) Sa (0.5) Sa (1.0) Sa (2.0) Sa (5.0) Sa (10.0) PGA PGV Rd 3.0 Ro 1.7 1.480 | 1.380 | 0.897 | 0.539 | 0.171 | 0.060 | 0.708 | 0.949 le ULS 1.0 SPECIFIED FLOOR LOADING SPECIFIED ROOF LOADING FLOOR DL = 0.72kPa (15psf) = 0.72kPa (15.04psf) DEAD LOAD FLOOR L = 4.8kPa (100psf) SNOW LOAD = 1.20kPa (25.06psf) = 0.72kPa (15psf) NET WIND UPLIFT = 1.00kPa (20.9psf) DECK DL DECK LL = 4.8kPa (100psf) DEFLECTION CRITERIA DEFLECTION CRITERIA LIVE LOAD LIVE LOAD = L/360 = L/360
- 5. THESE DRAWINGS INCLUDING DIMENSIONS SHALL BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER FOR CLARIFICATION PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL BE FAMILIAR WITH ALL PROJECT DRAWINGS INCLUDING THOSE OF OTHER DISCIPLINES AND SHALL MAKE ALLOWANCES FOR ALL ITEMS SHOWN ON OTHER DRAWINGS THAT AFFECT THIS CONTRACTOR'S WORK.

TOTAL LOAD

= L/240

- 6. THESE DRAWINGS SHOW THE COMPLETED STRUCTURE ONLY. PROVIDE TEMPORARY BRACING AND SHORING FOR THE CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LOADS.
- 7. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA TO DESIGN AND TAKE RESPONSIBILITY FOR ANY TEMPORARY SHORING, BRACING OR OTHER DESIGNS REQUIRED TO COMPLETE CONSTRUCTION.
- 8. THE CONTRACTOR SHALL SUBMIT WRITTEN RECOMMENDATIONS FOR FLATWORK PERFORMED DURING COLD (BELOW +5°C) AND HOT (ABOVE +25°C) WEATHER. THE RECOMMENDATIONS SHALL BE PREPARED, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. A SCHEDULE 'S' SHALL ALSO BE SUBMITTED UPON REQUEST. FLATWORK INCLUDES SLABS ON GRADE, SUSPENDED SLABS, TILT-UP PANELS, MASONRY AND CONCRETE TOPPING.
- 9. UNDER NO CIRCUMSTANCES SHALL DRAWINGS BE SCALED.

= L/240

10. CONTRACTOR AND ALL SUB-TRADES SHALL VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING FABRICATION.

REFERENCE PUBLICATIONS

TOTAL LOAD

THESE DRAWINGS REFER TO THE FOLLOWING PUBLICATIONS, AND WHERE SUCH REFERENCE IS MADE, IT SHALL BE TO THE EDITION LISTED BELOW, INCLUDING ALL AMENDMENTS PUBLISHED THERETO.

ACI SP-4-2005 ACI 355.4-11

ANSI/APA PRG 320-2012 ANSI/NAAMM MBG 531-17

ASTM 653/A653M-11

ASTM F1554-07ae1

ASTM G180-13

ASTM G109-07 (2013)

ASME B18.6.1-1981 (R2016)

 Δ STM Δ 53/ Δ 53M-18 ASTM A123/A123M-13JAE J429-1999 CSA 112.10-08 (R2017) ASTM A193/A193M-17 ASTM A252-10 (2018) ASTM A307-12 ASTM A325-10e1 ASTM A416/A416M-12a ASTM A421/A421M-05 ASTM A497/A497M-07 ASTM A615/A615M-18e1 ASTM A722/A722M-12 ASTM A992/A992M-11 (2015) ASTM A1011/A1011M-12b ASTM A1064/A1064M-13 ASTM C957/C957M-14 ASTM D1751-18 ASTM D5055-13e1 ASTM D5456-13a ASTM F1136-11

CGSB 1.181-99 CGSB 19.24-M90 CGSB 27.50-M89 CGSB 37.50-M89 CISC/CPMA 1-73a (1975)

CISC/CPMA 2-75 (1975)

A23.1-14 A23.2-14 A23.4-09 A165-14 A179-14 A370-14 A371-14
A3/1-14 A3000-13

CSA B111-1974 (R2003) CSA B167-16

CSA G30.14-M1983 (R1998) CSA G30.18-09 (R2014) CSA G40.20/G40.21-13 CSA G164-M92 (R2003)

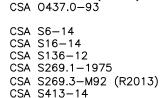
CSA 056-10(R2015) CSA 080-08 (R2012) CSA 086-14

CSA 0112-M1977 (R2006) CSA 0112.7-M1977

CSA 0112.9-10 (R2014) CSA 0121-08 (R2013) CSA 0122-06 (R2011) CSA 0122.6-M1977 CSA 0141-05 (R2014) CSA 0151-09 (R2014) CSA 0153-13 (R2017) CSA 0177-06 (R2015

CSA 0325-07 (R2012)

<u>_HEL-002</u>



CSA W47.1-09 (R2014) CSA W48-14 CSA W55.3-08 (R2018) CSA W59-13 CSA_W178.1-14 CSA W178.2-14

CSA W186-M1990 (R2016) CSSBI 10M-18/12M-18 CSSBI 101M-84

ULC S701-11

<u>SUBMITTALS</u>

- LOADS.
- 2. IF HARD COPY FORMAT IS USED FIVE PAPER COPIES SHALL BE SUBMITTED. UNLESS NOTED OTHERWISE THEY COLUMBIA.
- AND DRAWING LIST ARE TO BE SIGNED AND SEALED BY THE SPECIALTY ENGINEER.
- OF BRITISH COLUMBIA.
- 5. THE FOLLOWING SUBMISSIONS ARE REQUIRED FOR THIS PROJECT:
 - CONCRETE MIX DESIGNS REINFORCING BAR MILL CERTIFICATES IF REQUESTED WELDABLE REINFORCING BAR MILL CERTIFICATES IF REQUESTED EPOXY REINFORCING BAR PERFORMANCE TEST CERTIFICATES IF REQUESTED STRUCTURAL STEEL MILL CERTIFICATES IF REQUESTED MASONRY TIE SHOP DRAWINGS* STRUCTURAL STEEL SHOP DRAWINGS*
 - STRUCTURAL STEEL CONNECTION DESIGN NOTES* CHARPY V-NOTCH TEST REPORT NON-DESTRUCTIVE TEST (NDT) WELD TEST REPORTS
 - CWB PRE-QUALIFIED WELDING CERTIFICATES IF REQUESTED* PREFABRICATED WOOD TRUSS SHOP DRAWINGS*
 - PREFABRICATED WOOD JOIST SHOP DRAWINGS* STRUCTURAL COMPOSITE LUMBER SHOP DRAWINGS* GLULAM SHOP DRAWINGS* GLULAM CONNECTION DESIGN NOTES*
 - POST AND BEAM TIMBER FRAMING* MULLION, SPANDREL AND GLAZING SUPPORT SHOP DRAWINGS
- 6. SHOP DRAWINGS WHICH ARE REQUIRED TO, BUT DO NOT HAVE THE APPROPRIATE ENGINEERS SEAL AND SIGNATURE WILL NOT BE REVIEWED.
- RESPONSIBLE FOR ERRORS AND OMISSIONS ON THE SHOP DRAWINGS.
- SECTION.
- CONTRACTOR AND HIS SPECIALTY ENGINEER.
- SIGNATURE OF THE SPECIALTY ENGINEER.

FIELD REVIEWS

- NOTICE FOR FIELD REVIEWS.
- 2. THE FOLLOWING FIELD REVIEWS ARE CONSIDERED TO BE THE MINIMUM NUMBER OF STRUCTURAL FIELD REVIEWS REQUIRED FOR THE PROJECT: CONCRETE: REINFORCING STEEL SHALL BE REVIEWED PRIOR TO PLACING CONCRETE. REINFORCING IN
- CONCRETE WALLS SHALL BE REVIEWED PRIOR TO "BUTTONING UP" WALL FORMS. TIMBER LOADS SUCH AS CONCRETE TOPPING AND MECHANICAL EQUIPMENT ARE APPLIED.
- 3. IF THE ENGINEER IS NOT PROVIDED WITH THE OPPORTUNITY TO PERFORM THE REQUIRED FIELD REVIEWS, FINAL CERTIFICATION OF THE PROJECT WILL NOT BE ISSUED.

- MECHANICAL AND ADHESIVE ANCHORS
- ANCHOR INSTALLATION, AND IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- PRIOR TO USE.
- DRAWINGS FOR ANCHOR LOCATIONS, SIZES, CENTRES AND EMBEDMENT LENGTH.
 - USE HILTI HIT-HY200 WHEN: A QUICK CURE IS REQUIRED CONDITIONS ARE DRY. OR SATURATED HOLES ARE HAMMER DRILLED. HOLES ARE NOT OVER-SIZED BASE MATERIAL TEMPERATURE IS ABOVE MINUS 10' CELCIUS.
 - TO BE STATURATED.
 - USE HILTI HIT RE500-V3 WHEN: DEEP EMBEDMENT IS SPECIFIED. THE APPLICATION IS UNDERWATER, OR HOLES ARE OVERSIZED.
- 5. HOLES FOR MECHANICAL ANCHORS SHALL BE CLEANED OUT WITH HIGH PRESSURE AIR OR BRUSH PRIOR TO ANCHOR INSTALLATION.
- STATING THAT THIS TRAINING HAS BEEN COMPLETED.
- THE MANUFACTURER'S WRITTEN INSTRUCTIONS.

<u>HEL-003</u>

WHERE SHOP DRAWINGS ARE REQUESTED IN THE GENERAL NOTES THE CONTRACTOR SHALL PROVIDE THEM IN EITHER HARD COPY OR DIGITAL FORMAT TO THE FOLLOWING REQUIREMENTS FOR THE ENGINEER'S REVIEW PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL INDICATE DETAILS, DIMENSIONS, MATERIALS AND DESIGN

SHALL BE SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH

3. DRAWINGS NOT SEALED BY THE SPECIALTY ENGINEER SHALL BE ACCOMPANIED BY A LETTER WITH A DRAWING LIST IDENTIFYING ALL DRAWING NUMBERS, TITLES, MOST RECENT REVISION NUMBERS AND DATES. THE LETTER

4. IF A DIGITAL SUBMISSION IS MADE THE FILES SHALL BE IN PDF FORMAT ON A DISC OR TRANSMITTED VIA E-MAIL. THE SUBMISSION SHALL CONTAIN A LETTER WITH A DRAWING LIST AS DESCRIBED ABOVE SIGNED AND SEALED BY THE SPECIALTY ENGINEER. THE FINAL SUBMISSION SHALL BE MADE AS A HARD COPY BEARING THE ORIGINAL SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER REGISTERED IN THE PROVINCE

* INDICATES THE REQUIREMENT THAT SUBMISSION BE SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA AND PROVIDE A SCHEDULE 'S' UPON COMPLETION OF THE WORK.

7. SHOP DRAWINGS WILL BE REVIEWED ONLY FOR GENERAL CONFORMITY WITH THE PROJECT DRAWINGS AND SPECIFICATIONS. QUANTITIES AND DETAILED DIMENSIONS ARE THE CONTRACTORS RESPONSIBILITY. THE REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS INCLUDING COORDINATION WITH OTHER TRADES AND DISCIPLINES. THE CONTRACTOR IS

8. SHOP DRAWING SUBMISSIONS FOR THE WORK OF SPECIALTY ENGINEERS SHALL BE AS SET OUT IN THIS

9. THE QUALITY ASSURANCE FOR MATERIALS, FABRICATION AND INSTALLATION IS THE RESPONSIBILITY OF THE

10. THE SPECIALTY ENGINEER OR HIS REPRESENTATIVE SHALL VISIT THE SITE AND REVIEW THE COMPLETED WORK DESIGNED AND DETAILED ON HIS SHOP DRAWINGS TO SATISFY HIMSELF THAT THE FINISHED COMPONENTS AND ASSEMBLIES ARE IN COMPLIANCE WITH THE ENGINEERED DESIGN. THE SPECIALTY ENGINEER SHALL THEN PROVIDE THE PROJECT ENGINEER OF RECORD WITH A COMPLETED SCHEDULE 'S' FOR THIS WORK ALONG WITH ANY SKETCHES SHOWING FIELD MODIFICATIONS. THESE SKETCHES SHALL BEAR THE SEAL AND

<u>HEL-005</u>

1. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A MINIMUM OF 24 HOURS (1 WORKING DAY) ADVANCE

FRAMING SHALL BE REVIEWED PRIOR TO COVERING ANY FRAMING AND BEFORE ADDITIONAL

STRUCTURAL STEEL SHALL BE REVIEWED AFTER THE MEMBERS HAVE BEEN FABRICATED AND ARE IN THEIR FINAL POSITION WITH ALL CONNECTIONS COMPLETE AND ALL BOLTS INSTALLED AND TIGHTENED.

<u>HEL-046</u> 1. ALL ANCHORS ARE TO BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT THE TIME OF

2. ALL ANCHORS ARE TO BE THE ADHESIVE TYPE. MECHANICAL ANCHORS ARE ONLY TO BE USED WHEN SPECIFICALLY CALLED-UP ON THE DRAWINGS. SUBSTITUTIONS MUST BE APPROVED BY THE PROJECT ENGINEER

3. UNLESS NOTED OTHERWISE ADHESIVE ANCHORS SHALL BE ASTM F1554 GRADE 36 THREADED ROD. REFER TO

NOTE; CONCRETE THAT HAS BEEN EXPOSED TO WATER IN THE PRECEEDING 14 DAYS IS ASSUMED

EXTENDED WORKING TIME IS REQUIRED AND CURE TIME IS NOT CRITICAL HOLES ARE DRILLED USING DIAMOND CORE, PNEUMATIC OR HAMMER DRILLS,

4. REFER TO DRAWINGS FOR MECHANICAL ANCHOR LOCATIONS, SIZES, CENTRES AND EMBEDMENT LENGTH.

6. INSTALLERS OF HILTI PRODUCTS SHALL HAVE RECEIVED TRAINING BY HILTI (CANADA) CORP. IN THE USE OF THE SPECIFIED PRODUCTS. THE GENERAL CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER WITH A LETTER

7. ALL ADHESIVE ANCHORS ARE TO HAVE A PERIODIC SPECIAL INSPECTION PERFORMED IN ACCORDANCE WITH ACI 355.4. THE SPECIAL INSPECTION SHALL BE PERFORMED BY A CERTIFIED ACI/CRSI ADHESIVE ANCHOR INSTALLATION INSPECTOR, OR EQUIVALENT. THE SPECIAL INSPECTOR MUST BE HIRED BY THE OWNER, OR AN OWNER'S REPRESENTATIVE (THE CONTRACTOR IS NOT ALLOWED TO HIRE THE SPECIAL INSPECTOR THEMSELVES). THE SPECIAL INSPECTOR SHALL SUBMIT A REPORT TO THE ENGINEER OF RECORD THAT THE MATERIALS USED, AND THE INSTALLATION PROCEDURES USED CONFORM WITH THE CONTRACT DOCUMENTS AND

FOUNDATIONS

1. ASSUMED DESIGN VALUES:

FACTORED BEARING PRESSURE BEARING RESISTANCE FOR SETTLEMENT

PAD FOOTINGS 100 kPa (2100 psf) 100 kPa (2100 psf) ALLOWABLE BEARING CAPACITY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

2. CENTRE ALL FOOTINGS UNDER COLUMNS AND WALLS UNLESS NOTED OTHERWISE.

3. FOUNDATION BEARING MATERIAL SHALL BE PROTECTED FROM RAIN, FROST, SNOW AND WATER INFILTRATION. 4. FOOTING ELEVATIONS INDICATED ON THE DRAWINGS REPRESENT MINIMUM VALUES TO BE USED. VARIABLE SITE SOIL CONDITIONS, UNDERGROUND SERVICES AND EXISTING STRUCTURES MAY REQUIRE ADJUSTMENT OF

FOOTING ELEVATIONS. THE CONTRACTOR SHALL MAKE ALLOWANCES FOR MINOR VARIATIONS IN FOOTING ELEVATIONS IN THE BID. CONTACT STRUCTURAL ENGINEER FOR INSTRUCTIONS REGARDING SITE CONDITIONS THAT DIFFER FROM WHAT IS SHOWN ON DRAWINGS. 5. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF FOUNDATIONS WITH UNDERGROUND SERVICES AS SHOWN

- ON CIVIL, MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS. CONFLICTS SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION. 6. UNLESS NOTED OTHERWISE, MINIMUM ASSUMED COMPACTION UNDER ALL FOOTINGS AND SLABS FOR
- COMPACTED GRANULAR FILLS IS 98% STANDARD CORRECTED PROCTOR DENSITY. GEOTECHNICAL ENGINEER OR TESTING AGENCY TO CONFIRM PRIOR TO PLACING CONCRETE.
- 7. THE BASE COURSE BELOW SLABS ON GRADE SHALL BE COMPOSED OF INERT, CLEAN, TOUGH, DURABLE CRUSHED AGGREGATE, UNIFORM IN QUALITY AND FREE FROM SOFT OR DISINTEGRATED PIECES. THE AGGREGATE PARTICLES SHALL BE UNIFORM IN QUALITY AND FREE FROM AN EXCESS OF FLAT OR ELONGATED PARTICLES. IN THE ABSENCE OF SATISFACTORY PERFORMANCE RECORDS OVER A 5 YEAR PERIOD OF THE PARTICLE SOURCE OF AGGREGATE, IT'S SOUNDNESS SHALL BE TESTED IN ACCORDANCE WITH ASTM C88 USING MAGNESIUM SULPHATE. MAXIMUM WEIGHTED AVERAGE LOSSES FOR COURSE AGGREGATE SHALL BE 20% AND FOR FINE AGGREGATE 25%. THE SAND EQUIVALENT VALUE WHEN TESTED IN ACCORDANCE WITH ASTM D2419 SHALL NOT BE LESS THAN 40. THE LOS ANGELES ABRASION VALUE WHEN TESTED IN ACCORDANCE WITH ASTM C131 SHALL HAVE A MAXIMUM LOSS BY MASS OF 25%. THE AGGREGATE GRADATION SHALL FALL WITHIN THE FOLLOWING LIMITS WHEN TESTED IN ACCORDANCE WITH ASTM C136;
- SIEVE SIZE (US STD.) 25mm 19 9.5 4.75 2.36 1.18 0.3 0.075 % PASSING BY WEIGHT 100 80-100 50-100 35-70 25-50 15-35 5-20 0-5

SUB-BASE BELOW THE BASE COURSE SHALL BE PIT RUN GRAVEL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.

CAST-IN-PLACE CONCRETE

- 1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF CSA A23.1 AND A23.2.
- 2. CONCRETE MIXES, AGGREGATES AND CEMENTITIOUS MATERIALS, INCLUDING PORTLAND CEMENT AND PORTLAND LIMESTONE CEMENT, SHALL CONFORM TO CAN/CSA A23.1 AND A23.2 AND CAN/CSA-A3000 AND SHALL HAVE RIA PROPORTIONING:

THE FOLLOWING P	ROPERTIES BASE	D UPON PERFO	RMANCE CRITERIA
CLASS	28 DAY STRENGTH	EXPOSURE	CEMENT TYPE
FOOTINGS	25MPa (3500 psi)	F-2	GU
FOUNDATION WALLS & PIERS	25 MPa (3500 psi)	F-2	GU
WALLS ABOVE GRADE	30 MPa (4000 psi)	F-2	GU
EXT. SLAB ON GRADE	32 MPa (4600 psi)	C-2	GU
INT. SLAB ON GRADE	30 MPa (4000 psi)	Ν	GU
INTERIOR TOPPING	25 MPa (3500 psi)	Ν	GU

3. PORTLAND LIMESTONE CEMENT (PLC) SHALL MEET THE REQUIREMENTS OF CSA A3000 FOR LIMESTONE CEMENTS. 4. CONCRETE TESTING SHALL BE CARRIED OUT BY THE CONTRACTOR AND PAID FOR BY THE OWNER AND SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND A23.2. THE MINIMUM NUMBER OF TESTS PERFORMED SHALL BE AS PER CSA A23.2. ADDITIONAL TESTING SHALL BE PERFORMED AT THE DIRECTION OF THE STRUCTURAL ENGINEER. CONTRACTOR SHALL PROVIDE TESTING AGENCY WITH ADEQUATE NOTICE TO PROVIDE TESTING AS

5. CHAMFER ALL EXPOSED EDGES OF CONCRETE WITH A 19mm (3/4") CHAMFER UNLESS NOTED OTHERWISE.

6. CONCRETE FINISHES SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND AS FOLLOWS UNLESS NOTED

OTHERWISE:	
INTERIOR SLABS;	TROWELED FINISH
EXTERIOR SLABS;	BROOM FINISH
WALLS (TYPICAL);	FILL ALL DEFECTS

ROOM FINISH LL ALL DEFECTS LARGER THAN 25mm (1") DIAMETER AND GRIND RIDGES FLUSH WITH SURROUNDING SURFACES EXPOSED AGGREGATE; SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS

7. ALL CONCRETE CURING SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1. SPECIAL PRECAUTIONS SHALL BE TAKEN PER CSA A23.1 FOR PLACING AND CURING CONCRETE AT OR ABOVE 27° C AND AT OR BELOW 5° C.

8. UNLESS NOTED OTHERWISE, OR REQUIRED FOR FIRE RESISTANCE RATING, ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER DISTANCES: CAST ACAINST AND DEDMANIENTLY

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	75	mm	(3")
EXTERIOR MEMBERS	40	mm	(1.5")
INTERIOR BEAMS, GIRDERS, COLUMNS, AND PILES	30	mm	(1.25")
INTERIOR SLABS, WALLS, JOISTS, SHELLS AND FOLDED PLATES	20	mm	(0.75")

* IN ADDITION, COVER MUST BE AT LEAST 1.0x THE BAR DIAMETER FOR INTERIOR EXPOSURE, AND 1.5x THE BAR DIAMETER FOR EXTERIOR EXPOSURE

9. MINIMUM CONCRETE COVER TO PRINCIPLE REINFORCING (EXCLUDING STIRRUPS AND TIES) FOR THE APPROPRIATE FIRE RATING SHALL BE:

FIRE RESISTANCE RATING	0-1 HOUR	2 HOURS	3 HOURS
SUSPENDED SLABS	20 mm (<mark>3</mark> ")	25 mm (1")	30 mm (1 1 ")
WALLS	25 mm (1")	50 mm (2")	50 mm (2")
COLUMNS	25 mm (1")	50 mm (2")	50 mm (2")
BEAMS	20 mm (<mark>3</mark> ")	25 mm (1")	40 mm (1.5")

* SEE ARCHITECTURAL DRAWINGS FOR FIRE RATINGS, THEIR LOCATIONS AND EXTENTS.

10. CONTROL JOINTS SHALL BE PROVIDED IN BOTH DIRECTIONS IN ALL SLABS-ON-GRADE AT A MAXIMUM SPACING OF 3660mm (12'-0") FOR UNREINFORCED SLABS AND 6100mm (20'-0") FOR REINFORCED SLABS, UNLESS NOTED OTHERWISE ON DRAWINGS.

11. WATER STOPS SHALL BE INSTALLED WHERE INDICATED, WITH ALL JOINTS WELDED, IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THE STOPS SHALL BE RIGIDLY TIED IN PLACE. DO NOT DISTORT OR PUNCTURE WATER STOP. DO NOT DISPLACE REINFORCING BAR DURING PLACEMENT.

12. JOINT FILLER SHALL BE INSTALLED IN ALL EXPANSION AND CONSTRUCTION JOINTS.

13. EMBEDDED PLATES AND ANCHOR BOLTS FOR STRUCTURAL STEEL SHALL BE SECURELY TIED OR FASTENED IN PLACE PRIOR TO POURING CONCRETE. ALL ANCHOR BOLTS SHALL BE LAID OUT USING A TEMPLATE. "WET DOWELING" OF ANCHOR BOLTS AND EMBEDDED PLATES IS NOT PERMITTED.

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STR S101 S102 S201 S203

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<u>HEL-015</u>

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<u>HEL-006</u>

LIST OF ABBREVIATIONS

	ALTERNATE	LVL	 LAMINATED VENEER LUMBER
	ARCHITECTURAL	LV	 LENGTH VARIES
	BOTTOM CHORD EXTENSION	MAX	 MAXIMUM
	BOTH SIDES	MECH	 MECHANICAL
	BOTTOM LOWER LAYER	MIN	 MINIMUM
	BOTTOM UPPER LAYER	NIC	 NOT IN CONTRACT
	COMPLETE WITH	NF	 NEAR FACE
	CENTRE LINE	No	 NUMBER
	CLEAR	NTS	 NOT TO SCALE
	CAST IN PLACE	0/A	 OVERALL
	CONCRETE	o/c	 ON CENTRE
	COLUMN	0/F	 OUTSIDE FACE
	CONTINUOUS	OPP	 OPPOSITE
	CONTROL JOINT	OWSJ	 OPEN WEB STEEL JOIST
	COMPLETE PENETRATION	PL	 PLATE
	DRAG JOIST	PP	 PARTIAL PENETRATION
	DEEP	PT	 PRESSURE TREATED (LUMBER)
	DEAD LOAD	PSL	 PARALLEL STRAND LUMBER
	DRAG STRUT	RD	 ROOF DRAIN
	DRAG TRUSS	REINF	 REINFORCE(MENT)
	DRAWING	R/W	 REINFORCE WITH
	EACH END	SCL	 STRUCTURAL COMPOSITE LUMB
	EACH FACE	SDL	 SUPERIMPOSED DEAD LOAD
	EACH SIDE	STIR	 STIRRUP
	ELECTRICAL	STL	 STEEL
	ELEVATION	SIM	 SIMILAR
	EMBEDDED PLATE	s/w	 SHORT WAY
	EACH WAY	SWL	 SAFE WORKING LOAD
	EXTERIOR	ТНК	 THICK
	EXISTING	T&B	 TOP AND BOTTOM
	FLOOR DRAIN	T&C	 TENSION AND COMPRESSION
	FAR FACE	T&G	 TONGUE AND GROOVE
	GALVANIZED	TJ	 TIE JOIST
	GIRDER TRUSS	THK	 THICK
	HOOKED ONE END	TLL	 TOP LOWER LAYER
	HOOKED TWO ENDS	TUL	 TOP UPPER LAYER
	HORIZONTAL	T.O.	 TOP OF
	INTERIOR	TYP	 TYPICAL
	LONG	U/S	 UNDERSIDE
	LIVE LOAD	UNO	 UNLESS NOTED OTHERWISE
	LONG LEG HORIZONTAL	VERT	 VERTICAL
	LONG LEG VERTICAL	VIF	 VERIFY IN FIELD
	LONG WAY	W/	 WITH
		WP	 WORK POINT

IBER

SYMBOLS LEGEND

SF1)			SECTION/ELEVATION SYMBOL
	NEW STRIP FOOTING		— SECTION/ELEVATION NUMBER — SHEET WHERE DRAWN
PF1)			PLAN DETAIL SYMBOL
	NEW PAD FOOTING	1 5402	— DETAIL NUMBER — SHEET WHERE DRAWN
	NEW CONCRETE WALL	Z1	ZONE TYPE
//////	CONCRETE BLOCK WALL	CW1)	CONCRETE WALL TYPE
	LOAD BEARING STUD WALL	(CC1)	CONCRETE COLUMN TYPE
	NON-LOAD BEARING STUD WALL	CP1)	CONCRETE PIER TYPE
	WALL BELOW	CB1	CONCRETE BEAM TYPE
SW1	WOOD STUD SUFAR WALL	(ST1)	SLAB THICKENING
	WOOD STUD SHEAR WALL	(BP1)	BASE PLATE TYPE
ł	SHEAR WALL HOLD-DOWN	(SC1)	STEEL COLUMN TYPE
2B3	WOOD BEAM		
18) 3	WOOD POST	1	REVISION NUMBER
	WOOD GIRDER TRUSS	00.00	TOP OF FOOTING ELEVATION (PLANS ONLY)
5kN	DRAG STRUT LOAD	● 100.00 T.O. SLAB	
S WP	WORK POINT		
\times	POINT LOAD		
RUCTU	IRAL DRAWING LIST		
	RAL NOTES RAL NOTES		

22 GENERAL NO 23 GENERAL NO 201 FOUNDATION 22 DECK AND 23 MAIN FLOOR 201 STRUCTURAL 23 MISCELLANEO	DTES AND DETA PLAN FLOOR FRAMING AND ROOF FF SECTIONS DETAILS	G PLAN															
RUCTURAL DRAWING ISSUE RECORD																	
									D	RAW	ING	NUI	MBE	R			
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REINFORCING STEEI

2. ABOVE.

<u>HEL-014</u>

WOOD FRAME CONSTRUCTION

- STRUCTURAL DRAWINGS AND COMPLY WITH CAN/CSA-086 AND THE CURRENT BRITISH COLUMBIA BUILDING
- 2. ALL NAILS SHALL MEET ASTM F1667 REQUIREMENTS FOR ENGINEERED CONSTRUCTION NAILS.
- 3. WOOD SCREWS SHALL MEET THE REQUIREMENTS OF ASME B18.61.
- 4. BOLTS SHALL HAVE PRE-DRILLED HOLES 1-2mm LARGER THAN THE BOLT DIAMETER.
- 5. LAG SCREWS SHALL CONFORM TO CSA B34. PRE-DRILLED HOLES FOR LAG SCREWS MAY BE LUBRICATED WITH SOAP OR OTHER NON-PETROLEUM BASED LUBRICANT.
- INSTRUCTIONS AND/OR SHOP DRAWINGS.
- 7. THE USE OF FINGER JOINTED WOOD SHALL BE RESTRICTED TO VERTICAL MEMBERS UNLESS PRIOR APPROVAL IS GIVEN BY THE ENGINEER OF RECORD. FINGER JOINTED WOOD SHALL BE GRADE STAMPED IN ACCORDANCE WITH NLGA SPS 1
- 8. SHEAR WALLS SHALL BE CONSTRUCTED AS DETAILED ON THE DRAWINGS. ALL COUPLERS FOR HOLD DOWN RODS SHALL HAVE MIN 125% CAPACITY OF CONNECTING RODS AND SHALL HAVE "WITNESS" HOLES AS PER SIMPSON STRONG-TIE CNW COUPLER NUTS OR EQUIVALENT.
- 9. FLOOR SHEATHING AND ROOF SHEATHING TO BE AS DETAILED ON THE DRAWINGS. PANEL EDGE NAILING PATTERN SHALL ALSO APPLY TO DRAG STRUTS AND DIAPHRAGM EDGES.
- 10. THE FOLLOWING MINIMUM SHANK DIAMETERS SHALL APPLY TO NAILS SPECIFIED ON THE STRUCTURAL DRAWINGS. IN PARTICULAR SHEAR WALL SHEATHING, AND FLOOR AND ROOF DIAPHRAGMS:

NAIL S	ZE	MINIM	IUM	SHANI
65mm 76mm 83mm	(2.25") (2.50") (3.00") (3.25") (3.50")	3.33 3.76 3.76	mm mm mm	(0.09 (0.13 (0.14 (0.14 (0.14

- 11. DIAPHRAGM AND SHEARWALL NAILS SHALL BE FULL HEADED NAILS. 12. DIAPHRAGM AND SHEARWALL NAILS SHALL NOT BE LESS THAN 10mm (%") FROM THE EDGE OF THE PANEL
- OR EDGE OF THE FRAMING MEMBER.
- 13. DIAPHRAGM AND SHEARWALL NAILING SHALL NOT BE OVER-DRIVEN BY MORE THAN THE FOLLOWING: PANEL THICKNESS OVER-DRIVE

9.5mm	(%")	1.4mm	(0.056")
12.5mm	(½")		(0.075")
15.9mm	(5%")	2.4mm	(0.094"
19.0mm	(3/4")	2.9mm	(0.113"

- 14. ALL STRUCTURAL LUMBER SHALL COMPLY WITH CSA-0141 AND SHALL BE KILN DRIED TO MAXIMUM 19% MOISTURE CONTENT PRIOR TO INSTALLATION.
- 15. ALL WOOD FRAMING TO BE SPF#2 OR BETTER UNLESS NOTED OTHERWISE, BEARING THE GRADE STAMP OF AN AGENCY CERTIFIED BY THE CANADIAN LUMBER STANDARDS ACCREDITATION BOARD.
- 16. PLYWOOD FOR ROOFS, FLOORS AND WALLS SHALL BE EXTERIOR GRADE DOUGLAS FIR PLYWOOD TO CSA-0121 OR CANADIAN SOFTWOOD PLYWOOD TO CSA-0151. OSB MAY BE SUBSTITUTED FOR PLYWOOD ON INTERIOR SHEAR WALLS ONLY. OSB SHALL BE EXTERIOR GRADE CONFORMING TO CSA 0325. SUBSTITUTION MUST BE APPROVED BY THE PROJECT ENGINEER IN WRITING.

ירתנ	VED BI THE PROJECT	ENGINEER IN WRI
	PLYWOOD THICKNESS	EQUIVALENT OSB MARK
	³ ∕8"	2R24
	1/2"	2R32 /2F16 OR
	5⁄8"	2R40 /2F20

- 17. PLYWOOD PANELS FOR FLOORS AND ROOFS SHALL BE LAID WITH A HALF-SHEET STAGGER AND BE FASTENED TO SUPPORTS WITH 65mm ($2\frac{1}{2}$) COMMON NAILS AT 150mm o/c (6") ALONG PANEL EDGES AND 300mm (12") o/c ALONG INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE ON THE PLANS. THICKNESS AS NOTED ON THE DRAWINGS.
- 18. PLYWOOD PANELS FOR WALLS SHALL BE LAID WITH A HALF-SHEET STAGGER AND BE FASTENED TO SUPPORTS WITH 65mm $(2\frac{1}{2})$ COMMON NAILS AT 75mm o/c (3") ALONG PANEL EDGES FOR BLOCKED EDGES, 150mm o/c (6") FOR UNBLOCKED EDGES, AND 300mm (12") o/c ALONG INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE ON THE PLANS. PLYWOOD THICKNESS AS NOTED ON THE DRAWINGS.
- 19. SHEARWALL PANELS SHALL NOT BE GLUED IN PLACE UNLESS PRIOR APPROVAL IS RECEIVED FROM THE ENGINEER OF RECORD.
- 20. PLYWOOD FOR DIAPHRAGMS AND SHEARWALLS SHALL HAVE A 2mm GAP BETWEEN PANELS.
- 21. EXTERIOR WALLS TALLER THAN 2400mm (8'-0") SHALL HAVE ALL PANEL EDGES BLOCKED WITH 38x89 (2x4) ON THE FLAT.
- 22. 'ACQ' (AMINE COPPER QUAT) PRESSURE TREATED WOOD SHALL BE USED WHERE SPECIFIED ON THE DRAWINGS. WHERE TIMBER COMES IN DIRECT CONTACT WITH CONCRETE OR MASONRY, AND WHERE IT IS EXPOSED TO THE WEATHER. CUT SURFACES OF TREATED TIMBER ARE TO RECEIVE A BRUSH APPLIED COAT OF COLOURED PRESERVATIVE. WORK SHALL BE IN ACCORDANCE WITH CSA-080 SERIES-08. 'CCA' (CHROMATED COPPER ARSENATE) IS NOT TO BE USED. TREATED WOOD PRODUCTS SHALL BEAR THE STAMP OF THE CANADIAN WOOD PRESERVERS BUREAU (CWPB).
- 23. FASTENERS FOR USE IN ACQ TREATED TIMBER SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A653, CONNECTORS SHALL HAVE A G185 GALVANIZED DESIGNATION OR MEET ASTM A123. ALTERNATIVELY ALL METAL CONNECTORS INCLUDING NAILS. BOLTS. HANGERS. HOLD-DOWNS. STEEL STRAPS. POST BASES. ETC. SHALL BE STAINLESS STEEL TYPES 304 OR 316. REFER ALSO TO THE PRESERVATIVE MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- 24. WALL STUDS SHALL NOT BE NOTCHED, DRILLED OR OTHERWISE DAMAGED SO THAT THE UNDAMAGED PORTION OF THE STUD IS LESS THAN TWO-THIRDS OF THE DEPTH OF THE STUD IF THE STUD IS LOADBEARING OR 40mm (13") IF THE STUD IS NON-BEARING, UNLESS THE WEAKENED STUDS ARE SUITABLY REINFORCED. SUCH REIÑFORCEMENT SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO THE REINFORCING BEING CARRIED OUT.
- 25. TOP AND BOTTOM PLATES IN WALLS SHALL NOT BE NOTCHED, DRILLED OR OTHERWISE DAMAGED SO THAT THE UNDAMAGED WIDTH IS LESS THAN 50mm (2"), UNLESS THE WEAKENED PLATES ARE SUITABLY REINFORCED. SUCH REINFORCEMENT SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO THE REINFORCING BEING CARRIED OUT. IF PLATES ARE TO BE USED AS DRAG STRUTS SEE DETAILS.
- 26. ALL POSTS, INCLUDING 2-PLY POSTS, ARE TO BE CARRIED DOWN TO BEARING AND SOLID BLOCKED AT EACH FLOOR LEVEL.
- 27. EXCEPT AT SHEARWALLS, ANCHOR BOLTS SHALL BE 160x200 LONG @ 1200o/c (5%"0x8" @ 48"o/c) MAXIMUM. LOCATE BOLTS WITHIN 300mm OF EACH WALL END AND EACH SIDE OF OPENINGS WHICH EXTEND TO THE TOP OF CONCRETE. REFER TO SHEARWALL SCHEDULE FOR SHEARWALL ANCHOR BOLTS. 28. ALL BOLTS USED IN WOOD FRAME CONSTRUCTION SHALL CONFORM TO ASTM A307 OR SAE J429 GRADE 2.
- THREADED ROD SHALL BE TO ASTM F1554 GRADE 36 (36 ksi YIELD STRENGTH). USE OF OTHER BOLTS MUST BE PRE-APPROVED BY THE ENGINEER OF RECORD.

3. WELDED WIRE FABRIC, DEFORMED, SHALL CONFORM TO ASTM 1064/1064M OR ASTM A497/A497M. 4. WELDING OF REINFORCING STEEL SHALL CONFORM TO CSA W186-M "WELDING OF REINFORCING BARS IN REINFORCED CONCRETE CONSTRUCTION". WELDING OF REINFORCING SHALL BE ALLOWED ONLY AS NOTED ON PLANS. WHERE WELDING OF REINFORCING IS REQUIRED MILL CERTIFICATES FOR WELDABLE REINFORCING SHALL BE PROVIDED PRIOR TO WELDING. WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER IS REQUIRED FOR ANY ADDITIONAL WELDING.

1. REINFORCING STEEL SHALL BE DEFORMED STEEL 400 GRADE AND SHALL CONFORM TO CAN/CSA-G30.18

CAN/CSA-G30.18. MILL CERTIFICATES SHALL BE SUPPLIED TO THE STRUCTURAL ENGINEER FOR ALL

2. WELDABLE LOW ALLOY DEFORMED STEEL REINFORCING BARS, GRADE 400W, SHALL CONFORM TO

5. ALL REINFORCING BARS SHALL BE TIED SECURELY TO PREVENT DISPLACEMENT.

WELDABLE REINFORCING STEEL USED IN THE PROJECT.

6. UNLESS NOTED OTHERWISE ON PLANS, LAP LENGTHS FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

REINFORCING BAR LAP LENGTHS						
CONCRETE MPa	BAR SIZE					
MPO	10M	15M	20M	25M	30M	35M
20	430 (17")	635 (25")	840 (33")	1320 (52")	1575 (62")	1855 (73")
25	380 (15")	560 (22")	760 (30")	1195 (47")	1370 (54")	1650 (65")
30	355 (14")	510 (20")	710 (28")	1065 (42")	1295 (51")	1500 (59")
35	330 (13")	480 (19")	660 (26")	990 (39")	1195 (47")	1395 (55")
40	305 (12")	455 (18")	610 (24")	940 (37")	1120 (44")	1320 (52")
45	280 (11")	430 (17")	560 (22")	890 (35")	1040 (41")	1245 (49")
NOTES; 1. MULTIPLY VALUES BY 1.3 FOR HORIZONTAL REINFORCEMENT PLACED IN SUCH A WAY THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.						
3. MUTLIPLY VALUES BY 1.2 FOR ALL EPOXY COATED REINFORCEMENT OTHER THAN IN						

7. NO SPLICES OTHER THAN THOSE NOTED ON THE DRAWINGS ARE PERMITTED WITHOUT WRITTEN PERMISSION

- FROM THE STRUCTURAL ENGINEER. 8. WHERE CONCRETE SURFACES ARE TO BE EXPOSED ONLY NON-CORROSIVE TYPE REINFORCING CHAIRS SHALL
- BE USED TO SUPPORT THE REINFORCING STEEL.
- 9. DOWELS ARE TO BE TIED IN PLACE PRIOR TO POURING CONCRETE "WET DOWELING" OF ANY REINFORCING STEEL IS NOT PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER. 10. HOOKS ON ALL TIES SHALL BE BENT AT LEAST 135" AND HAVE A MINIMUM LEG OF 6 TIMES THE TIE BAR DIAMETER.
- 11. PROVIDE CORNER BARS TO MATCH HORIZONTAL WALL REINFORCEMENT.
- 12. ALL VERTICAL REINFORCING TO FOUNDATION WALLS AND PIERS SHALL HAVE A STANDARD HOOK AND BE EMBEDDED IN THE FOOTING.
- 13. ALL BARS SHALL BE BENT AT TEMPERATURES GREATER THAN 10°C.
- 14. NO BARS WHICH ARE PARTIALLY EMBEDDED IN CONCRETE SHALL BE FIELD BENT EXCEPT AS SHOWN ON THE DRAWINGS OR APPROVED IN WRITING BY THE PROJECT STRUCTURAL ENGINEER.

1. ALL WOOD FRAMING, INCLUDING BRIDGING, NAILING AND OTHER DETAILS SHALL BE AS INDICATED ON THE

<u>HEL-029</u>

6. ALL CONNECTORS AND FRAMING ANCHORS SPECIFIED ON THE DRAWINGS ARE BY SIMPSON STRONG-TIE, UNLESS NOTED OTHERWISE. ALTERNATES MUST BE PRE-APPROVED IN WRITING BY THE ENGINEER OF RECORD PRIOR TO ORDERING. INSTALLATION OF COMPONENTS AND ASSEMBLIES, INCLUDING STRONG-WALL SHEAR WALLS AND STRONG FRAMES, SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN

- IK DIAMETER
- 99") .31") 48") 48"

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PRE-ENGINEERED WOOD TRUSSES

- 1. DESIGN OF PREFABRICATED TRUSSES SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA-086.
- 2. FABRICATION OF PREFABRICATED TRUSSES SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA 3-086 AND THE REVIEWED SHOP DRAWINGS.
- 3. PREFABRICATED TRUSSES SHALL BE TRANSPORTED, STORED AND ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS IN SUCH A MANNER THAT BENDING, WARPING, AND OVERTURNING ARE PREVENTED.
- 4. TEMPORARY HORIZONTAL AND VERTICAL BRACING OF TRUSSES SHALL BE IMPLEMENTED UNTIL PERMANENT BRACING AND DECKING ARE INSTALLED.
- 5. THE PREFABRICATED TRUSS MANUFACTURER SHALL ACCOMMODATE ALL OPENINGS IN ACCORDANCE WITH THE ARCHITECTURAL PLANS WITH APPROPRIATE GIRDERS. PROVIDE FOR ALL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL EQUIPMENT SUPPORTED BY THE ROOF OR FLOORS. REFER TO THE DRAWINGS OF THESE DISCIPLINES.
- 6. THE TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE MANUFACTURER SHALL INSPECT THE ERECTED TRUSSES TO VERIFY CORRECT INSTALLATION AND PROVIDE THE STRUCTURAL ENGINEER WITH WRITTEN CONFIRMATION OF SUCH PRIOR TO THE STRUCTURAL ENGINEER CERTIFYING THE FRAMING AS BEING COMPLETE.
- 7. LATERAL SPLAY OF TRUSSES TO BE LIMITED TO 19mm (3/4") TOTAL FROM TRUE ALIGNMENT UNLESS NOTED OTHERWISE.
- 8. DO NOT STACK PLYWOOD OR OTHER MATERIALS ON TRUSSES BEFORE TEMPORARY BRACING OR SHEATHING HAS BEEN INSTALLED. UNDER NO CIRCUMSTANCES ARE APPLIED CONSTRUCTION LOADS TO EXCEED DESIGN
- 9. LUMBER USED IN THE FABRICATION OF THE TRUSSES IS TO BE SPF#2 OR BETTER COMPLYING WITH CAN/CSA-0141 AND NLGA STANDARD RULES FOR CANADIAN LUMBER.
- 10. DO NOT CUT OR REMOVE TRUSS MATERIAL WITHOUT THE PRIOR WRITTEN APPROVAL OF THE SPECIALTY STRUCTURAL ENGINEER.
- 11. THE TRUSS MANUFACTURER SHALL PROVIDE FULL-HEIGHT BLOCKING BETWEEN TRUSSES AT ALL EXTERIOR WALLS AND OVER SHEAR WALLS PERPENDICULAR TO TRUSS SPANS. TRUSSES SHALL BE ALIGNED OVER SHEAR WALLS WHEN SHEAR WALLS RUN PARALLEL TO TRUSSES TO FACILITATE CONNECTION BETWEEN DIAPHRAGM AND SHEAR WALL. CHECK DRAWINGS FOR OTHER SIMILAR LOCATIONS.

PRE-ENGINEERED WOOD JOISTS

DISCIPLINES

- 1. DESIGN OF PREFABRICATED JOISTS SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA-086.
- 2. PREFABRICATED JOISTS SHALL MEET THE REQUIREMENTS OF AND BE DESIGNED TO ASTM D-5055. ADHESIVES USED IN THEIR MANUFACTURE SHALL MEET CSA 0112.6 OR CSA 0112.7. ALTERNATE ADHESIVES MEETING CSA 0112.9 OR CSA 0112.10 MAY BE USED.
- 3. UNDER NO CIRCUMSTANCES SHALL FLANGES OF PREFABRICATED JOISTS BE NOTCHED OR CUT.
- 4. WEB OPENINGS, BEARING LENGTHS AND WEB STIFFENER REQUIREMENTS ARE THE RESPONSIBILITY OF THE MANUFACTURER. 5. FABRICATION OF PREFABRICATED JOISTS SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA 3-086 AND
- THE REVIEWED SHOP DRAWINGS. 6. PREFABRICATED JOISTS SHALL BE TRANSPORTED, STORED AND ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS IN SUCH A MANNER THAT BENDING, WARPING, AND OVERTURNING
- ARE PREVENTED 7. TEMPORARY HORIZONTAL AND VERTICAL BRACING OF JOISTS SHALL BE IMPLEMENTED UNTIL PERMANENT
- BRACING AND DECKING ARE INSTALLED. 8. THE PREFABRICATED JOIST MANUFACTURER SHALL ACCOMMODATE ALL OPENINGS IN ACCORDANCE WITH THE ARCHITECTURAL PLANS WITH APPROPRIATE GIRDERS. PROVIDE FOR ALL ARCHITECTURAL, MECHANICAL, AND ELECTRICAL EQUIPMENT SUPPORTED BY THE ROOF OR FLOORS. REFER TO THE DRAWINGS OF THESE
- 9. THE JOIST MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE MANUFACTURER SHALL INSPECT THE ERECTED JOISTS TO VERIFY CORRECT INSTALLATION AND PROVIDE THE STRUCTURAL ENGINEER WITH WRITTEN CONFIRMATION OF SUCH PRIOR TO THE STRUCTURAL ENGINEER CERTIFYING THE FRAMING AS BEING COMPLETE.
- 10. LATERAL SPLAY OF JOISTS TO BE LIMITED TO 13mm $(\frac{1}{2}")$ FROM TRUE ALIGNMENT.
- 11. DO NOT STACK PLYWOOD OR OTHER MATERIALS ON JOISTS BEFORE TEMPORARY BRACING OR SHEATHING HAS BEEN INSTALLED. UNDER NO CIRCUMSTANCES ARE APPLIED CONSTRUCTION LOADS TO EXCEED DESIGN I OADS
- 12. LUMBER USED IN THE FABRICATION OF THE JOISTS IS TO BE SPF#2 OR BETTER COMPLYING WITH CAN/CSA-0141 AND NLGA STANDARD RULES FOR CANADIAN LUMBER.
- 13. DO NOT CUT OR REMOVE JOIST MATERIAL WITHOUT THE PRIOR WRITTEN APPROVAL OF THE SPECIALTY STRUCTURAL ENGINEER
- 14. THE JOIST MANUFACTURER SHALL PROVIDE FULL-HEIGHT BLOCKING BETWEEN JOISTS AT ALL EXTERIOR WALLS AND OVER SHEAR WALLS PERPENDICULAR TO JOIST SPANS. JOISTS SHALL BE ALIGNED OVER SHEAR WALLS WHEN SHEAR WALLS RUN PARALLEL TO JOISTS TO FACILITATE CONNECTION BETWEEN DIAPHRAGM AND SHEAR WALL. CHECK THE DRAWINGS FOR OTHER SIMILAR LOCATIONS.
- STRUCTURAL COMPOSITE LUMBER (SCL)
- 1. ALL SCL MEMBERS SHALL BE DESIGNED AND MANUFACTURED TO ASTM D5456
- 2. LAMINATED VENEER LUMBER (LVL) AND PARALLEL STRAND LUMBER (PSL) SHALL CONFORM TO CAN/CSA-086.
- 3. THE MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE MANUFACTURER SHALL INSPECT THE INSTALLED PRODUCT O VERIFY CORRECT INSTALLATION AND PROVIDE THE STRUCTURAL ENGINEER WITH WRITTEN CONFIRMATION OF SUCH PRIOR TO THE STRUCTURAL ENGINEER CERTIFYING THE FRAMING AS BEING COMPLETE.
- 4. STRUCTURAL COMPOSITE LUMBER (SCL) MEMBERS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. MEMBERS SHALL BE PROTECTED FROM MOISTURE AS PER THE MANUFACTURER'S WRITTEN REQUIREMENTS WHEN STORED ON SITE AND AFTER INSTALLATION.
- 5. LVL MEMBERS SHALL BE GRADE 1.9E UNLESS NOTED OTHERWISE. BEAMS UP TO 3 PLY WIDE SHALL BE NAILED TOGETHER AND 4 PLY BEAMS BOLTED TOGETHER IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 6. PSL MEMBERS SHALL BE GRADE 2.0E UNLESS NOTED OTHERWISE.
- 7. DRILLING, NOTCHING AND CUTTING OF MEMBERS IS NOT PERMITTED UNLESS APPROVED BY THE PROJECT ENGINEER. SUCH APPROVAL SHOULD BE REQUESTED WITH THE SHOP DRAWING SUBMISSION.
- SUPPLIERS OF FRAMING MATERIALS USING SYSTEMS NOT CALLED FOR ON THE STRUCTURAL DRAWINGS SHALL RECEIVE APPROVAL FROM THE STRUCTURAL ENGINEER PRIOR TO SHOP DRAWING PRODUCTION. THE APPLICATION SHALL INCLUDE THE PRODUCTS TECHNICAL LITERATURE WHICH SHALL BE SUFFICIENT FOR THE ENGINEER TO DETERMINE THE SYSTEM AND PRODUCT SUITABILITY ON THE PROJECT.

<u>HEL-031</u>

- INSTRUCTIONS

<u>HEL-030</u>

- CODE.

- BOWING

- SYSTEM.

- MEMBERS.

<u>HEL-033</u>

GLULAM MEMBERS

1. GLULAM MEMBERS ARE TO BE DESIGNED IN ACCORDANCE WITH CAN/CSA-086 AND CSA-0122 TO RESIST MOMENTS, SHEARS AND FORCES INDICATED.

2. LUMBER USED IN THE MANUFACTURE OF GLULAM MEMBERS SHALL BE KILN DRIED TO MAXIMUM 19% MOISTURE CONTENT PRIOR TO FABRICATION.

3. GLULAMS SHALL BE FABRICATED TO CAN/CSA-0122 USING ADHESIVE SUITABLE FOR THE GRADE OF SERVICE AND MEETING THE REQUIREMENTS OF CAN/CSA-0112. SEE PLANS FOR TIMBER SPECIES AND SERVICE CLASSIFICATION

4. MEMBERS SHALL BE FABRICATED IN ACCORDANCE WITH CSA-0122 AND IN A PLANT CERTIFIED BY CSA TO THE REQUIREMENTS OF CAN/CSA-0177. THEY SHALL CARRY AUTHORIZATION LABELS TO INDICATE MANUFACTURE IN A CERTIFIED PLANT.

5. THE MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. THE MANUFACTURER SHALL INSPECT THE INSTALLED PRODUCT TO VERIFY CORRECT INSTALLATION AND PROVIDE THE STRUCTURAL ENGINEER WITH WRITTEN CONFIRMATION OF SUCH PRIOR TO THE STRUCTURAL ENGINEER CERTIFYING THE STRUCTURE AS BEING COMPLETE. 6. GLULAMS EXPOSED TO VIEW SHALL BE APPEARANCE GRADE WITH SANDED SURFACES.

7. ALL GLULAMS ARE TO RECEIVE A CLEAR, NON-YELLOWING SEAL COAT EXCEPT WHERE A STAINED FINISH OR PRESERVATIVE TREATMENT IS REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR FINISHING REQUIREMENTS, 8. MEMBERS ARE TO BE PROTECTED AGAINST DAMAGE FROM MOISTURE DURING TRANSPORTATION, STORAGE ON SITE AND AFTER ERECTION. CORNERS SHALL BE PROTECTED AGAINST PHYSICAL DAMAGE WITH WOOD BLOCKING. STORE AND HANDLE MEMBERS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN

9. GLULAM TO GLULAM CONNECTIONS ARE TO BE DESIGNED BY THE MANUFACTURER. CONNECTIONS TO OTHER MATERIALS SHALL BE AS DETAILED ON THE STRUCTURAL DESIGN DRAWINGS AND COORDINATED WITH THE WORK OF OTHER TRADES.

10. THE MANUFACTURER IS TO INCLUDE ALL REQUIRED FASTENERS SUCH AS SPLIT RING AND SHEAR PLATE CONNECTORS, SIDE PLATES, DRIFT PINS, BOLTS AND GLULAM RIVETS. BOLTS AND DRIFT PINS SHALL BE TO ASTM A307. THREADED ROD SHALL BE TO ASTM F1554 GRADE 36 (36 ksi YIELD STRENGTH).

11. GLULAMS SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S ERECTION DRAWING. PROVIDE TEMPORARY BRACES AND ANCHORS UNTIL PERMANENTLY SECURED BY THE STRUCTURE. ADEQUATE PROVISIONS SHALL BE MADE FOR ERECTION STRESSES.

12. DO NOT FIELD CUT OR OTHERWISE ALTER GLULAM MEMBERS WITHOUT THE ENGINEERS PRIOR WRITTEN CONSENT. IF APPROVAL IS GIVEN TOUCH-UP END CUTS WITH PRESERVATIVE, SEALER OR FINISH.

13. ALL CONNECTIONS NOT DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED FOR THE UNFACTORED LOADS INDICATED ON THE DRAWINGS. CONNECTION DETAILS ARE SCHEMATIC ONLY UNLESS NOTED OTHERWISE. FINAL CONNECTION CONFIGURATION IS THE RESPONSIBILITY OF THE FABRICATOR. USE A MINIMUM OF 2-M20 (3/4") A307 BOLTS PER CONNECTION. CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. CONNECTIONS SHALL BE DESIGNED TO CSA-S16-09 TO RESIST FORCES, MOMENTS AND SHEARS INDICATED ON THE PLANS. IN INSTANCES OF NON-COMPLIANCE THE FABRICATOR SHALL BE RESPONSIBLE FOR ADDITIONAL COSTS ASSOCIATED WITH ACHIEVING COMPLIANCE WITH THE STANDARD.

14. CONNECTORS SHALL BE FABRICATED FROM STEEL CONFORMING TO CAN/CSA-G40.21 AND SHOP PRIMED. WHERE SPECIFIED, CONNECTORS SHALL BE HOT DIP GALVANIZED TO CAN/CSA-G164.

15. ALL WELDING SHALL BE IN ACCORDANCE WITH CSA W59 AND SHALL BE PERFORMED BY FABRICATORS "FULLY APPROVED" BY THE CANADIAN WELDING BUREAU UNDER CSA W55.3. FABRICATING SHOP TO HAVE A MINIMUM DIVISION 2.1 CERTIFICATION BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1 AND CSA W55.3 FOR RESISTANCE WELDING OF STRUCTURAL COMPONENTS. THE FABRICATOR SHALL SUBMIT PROOF OF CERTIFICATION PRIOR TO START OF WORK.

HEAVY TIMBER FRAMING

<u>HEL-035</u>

<u>HEL-034</u>

1. ALL TIMBER FRAMING AND HEAVY TIMBER TRUSSES, INCLUDING CONNECTIONS, SHALL BE AS INDICATED ON THE STRUCTURAL DRAWINGS AND COMPLY WITH CAN/CSA-086 AND THE CURRENT BRITISH COLUMBIA BUILDING

2. THE TIMBER FRAMER SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL INDICATE COMPONENT SIZES AND SHAPES, CONNECTION DETAILS INCLUDING ANY REQUIRED STEEL WORK, FINISHES, METHODS OF ASSEMBLY, MATERIALS SPECIFICATIONS AND DESIGN LOADS. INCLUDE DETAILED CALCULATIONS IF REQUIRED TO DO SO BY THE PROJECT ENGINEER.

3. ALL CONNECTIONS NOT DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED FOR THE UNFACTORED LOADS INDICATED ON THE DRAWINGS. CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. CONNECTIONS SHALL BE DESIGNED TO CAN/CSA-086 TO RESIST FORCES, MOMENTS AND SHEARS INDICATED ON THE PLANS. CONNECTION DESIGN SHALL ALLOW FOR SHRINKAGE, CHECKING AND TWISTING. IN INSTANCES OF NON-COMPLIANCE THE FABRICATOR SHALL BE RESPONSIBLE FOR ADDITIONAL COSTS ASSOCIATED WITH ACHIEVING COMPLIANCE WITH THE STANDARD.

4. SITE VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO SHOP DRAWINGS PRODUCTION.

5. PROTECT TIMBER COMPONENTS FROM DAMAGE DURING SHIPPING, STORAGE ON SITE AND ERECTION. STORE IN A DRY AND WELL VENTILATED AREA. DAMAGED MEMBERS SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER.

6. UNLESS NOTED OTHERWISE ALL TIMBER SHALL BE DOUGLAS FIR #1 OR BETTER, S4S. TIMBER SHALL BE GRADED ACCORDING TO THE NATIONAL LUMBER GRADING ASSOCIATION (NLGA). GRADE STAMPS SHALL BE LOCATED SO AS NOT TO BE VISIBLE IN THE FINAL ASSEMBLY. THE CONTRACTOR SHALL MAINTAIN RECORDS OF GRADE MARKS AND CERTIFICATES INDICATING CONFORMANCE WITH THE DRAWINGS.

7. IT IS ASSUMED THAT TIMBERS ARE TO BE CUT AND ASSEMBLED IN THEIR "GREEN" STATE. THE CONTRACTOR IS TO CONFIRM WITH THE BUILDING OWNER IF KILN DRYING IS DESIRED. UNDER EITHER CONDITION THE OWNER MUST EXPECT MOVEMENT OF THE MEMBERS WHICH COULD INCLUDE SHRINKAGE, CHECKING, TWISTING AND/OR

8. ALL JOINERY SHALL BE ACCURATELY CUT SO AS TO MAKE A NEAT, SNUG FIT. EXPOSED EDGES OF MEMBERS SHALL HAVE A MICRO-BEVEL

9. SUPPLY AND INSTALL ALL MISCELLANEOUS METALS AND FASTENERS REQUIRED FOR ASSEMBLY AND ERECTION. STEEL PLATE SHALL BE 300W (44W) GRADE. ERECTION BOLTS SHALL BE ASTM A307. THREADED ROD SHALL BE ASTM F1554, GRADE 36 OR ASTM A193 GRADE B7. BOLTS, NUTS AND WASHERS IN CONTACT WITH HOT DIPPED GALVANIZED STEEL SHALL BE HOT DIPPED GALVANIZED.

10. EXCEPT PARTS OF MEMBERS TO BE GALVANIZED OR UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL STEEL WORK SHALL BE SHOP PRIMED. PRIMING SHALL BE IN ACCORDANCE WITH CISC/CPMA-1-73a "QUICK DRYING PRIMER" WHEN NO TOP COAT IS REQUIRED AND IN ACCORDANCE WITH CISC/CPMA-2-75 WHEN A TOP COAT IS SPECIFIED. IF A TOP COAT IS SPECIFIED THE PRIMER SHALL BE SELECTED ENSURING COMPATIBILITY WITH THE SPECIFIED SYSTEM. ITEMS SPECIFIED TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED TO ASTM A123, G185 OR A653 MINIMUM ZINC COATING OF 600g/sq.m. FIELD TOUCH-UP ALL ABRASIONS, SCRATCHES, WELDS OR BOLTS.

11. TIMBERS SHALL RECEIVE ONE COAT OF SHOP APPLIED CLEAR SEALER COMPATIBLE WITH THE FINAL FINISH

12. TIMBERS AND HEAVY TIMBER TRUSSES SHALL BE ERECTED IN CONFORMANCE WITH THE REVIEWED SHOP DRAWINGS, CODE REQUIREMENTS AND BEST TRADE PRACTICE. USE TEMPORARY BRACING AND GUY LINES TO ENSURE SAFETY AND PROPER ALIGNMENT. USE PADDING, BLOCKING AND NON-MARKING SLINGS TO PROTECT THE WORK DURING ERECTION.

13. ASSEMBLED MEMBERS SHALL BE STRAIGHT, PLUMB, LEVEL AND SQUARE. PORTIONS OF THE STRUCTURE NOT ADEQUATELY BRACED BY DESIGN SHALL HAVE TEMPORARY BRACES UNTIL DECKING IS APPLIED. ALL JOINTS SHALL BE TIGHT.

14. TOOLS USED TO DRIVE OR PULL JOINTS TOGETHER SHALL NOT PERMANENTLY MAR THE SURFACE OF THE

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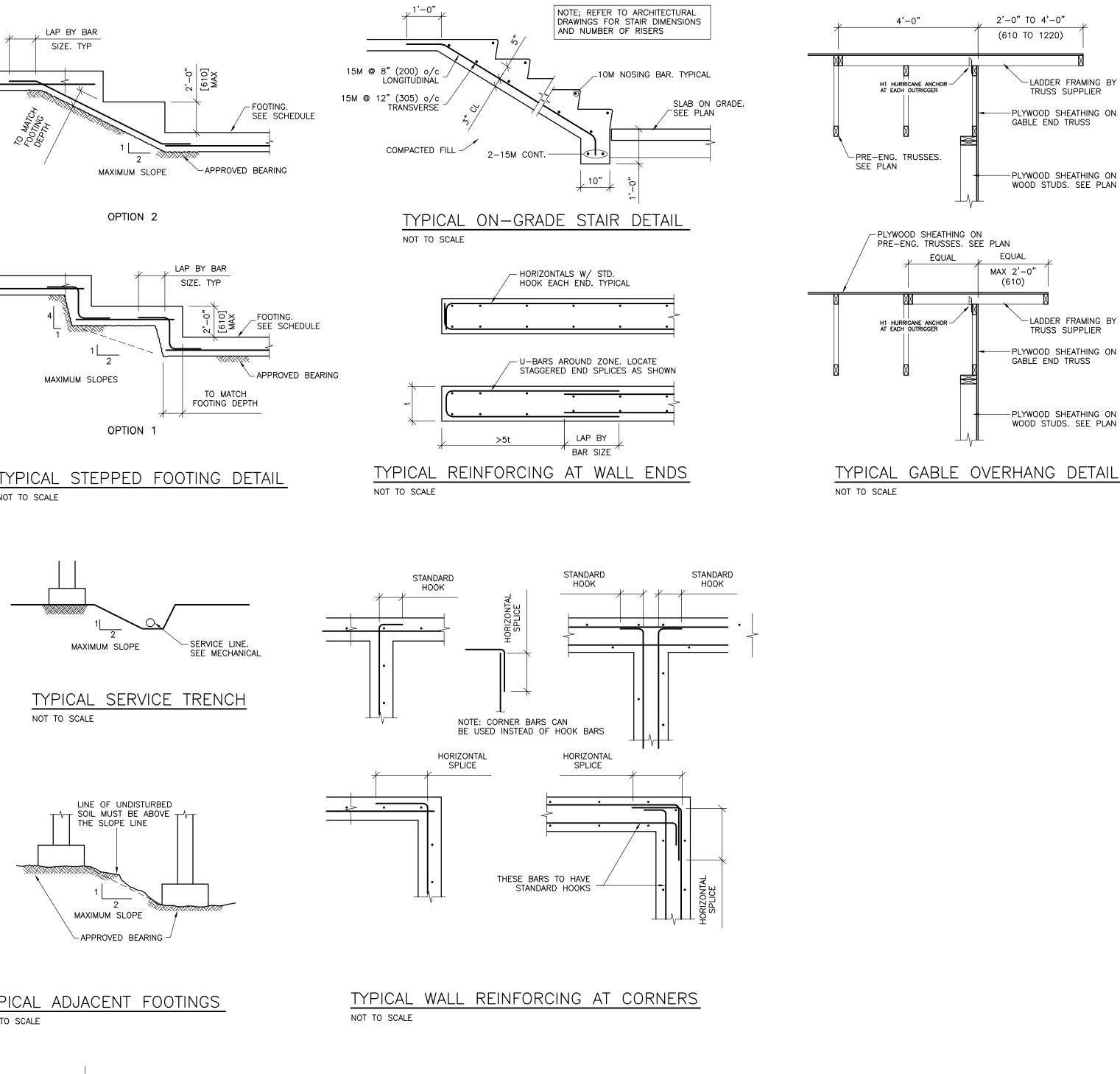
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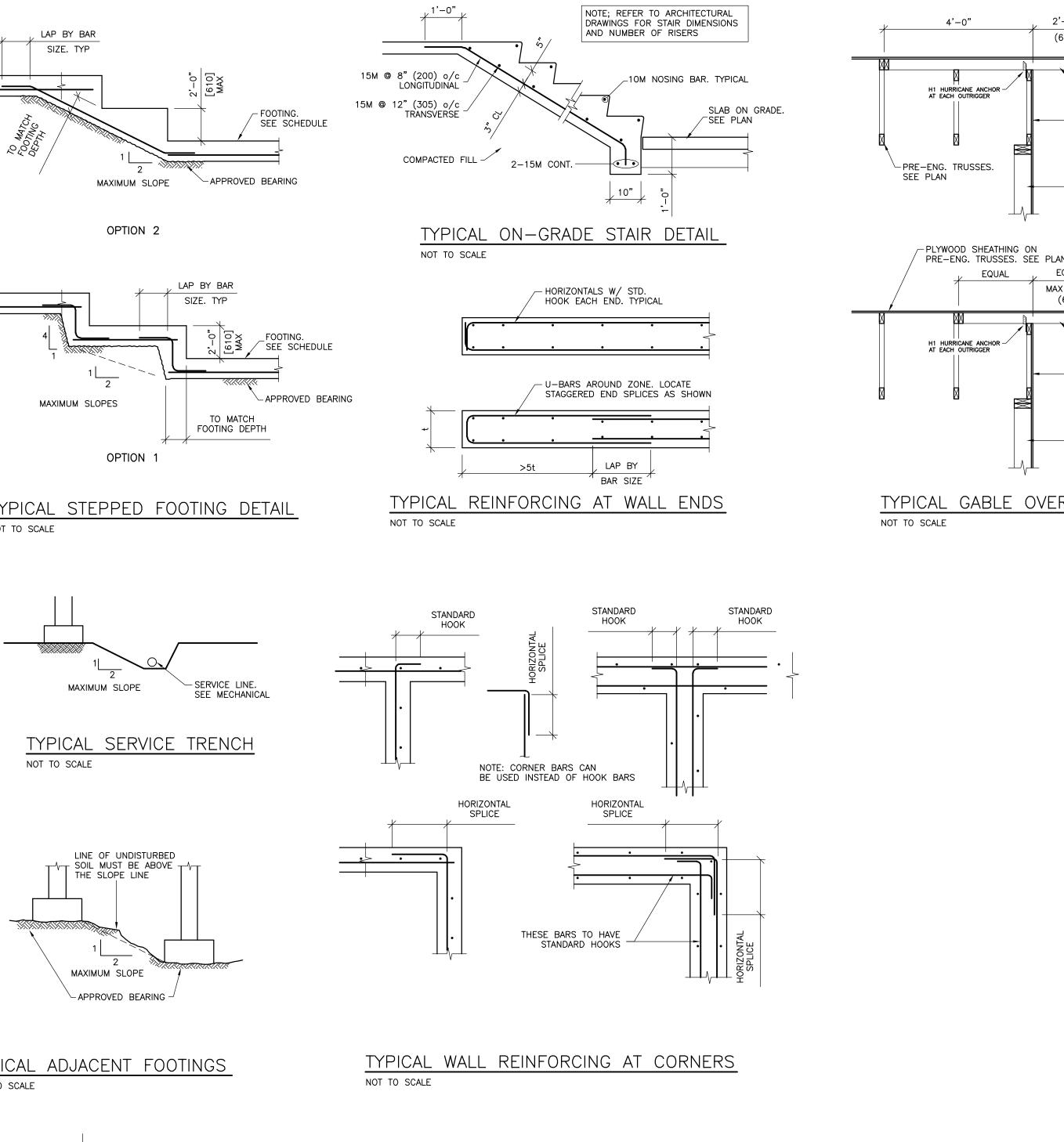
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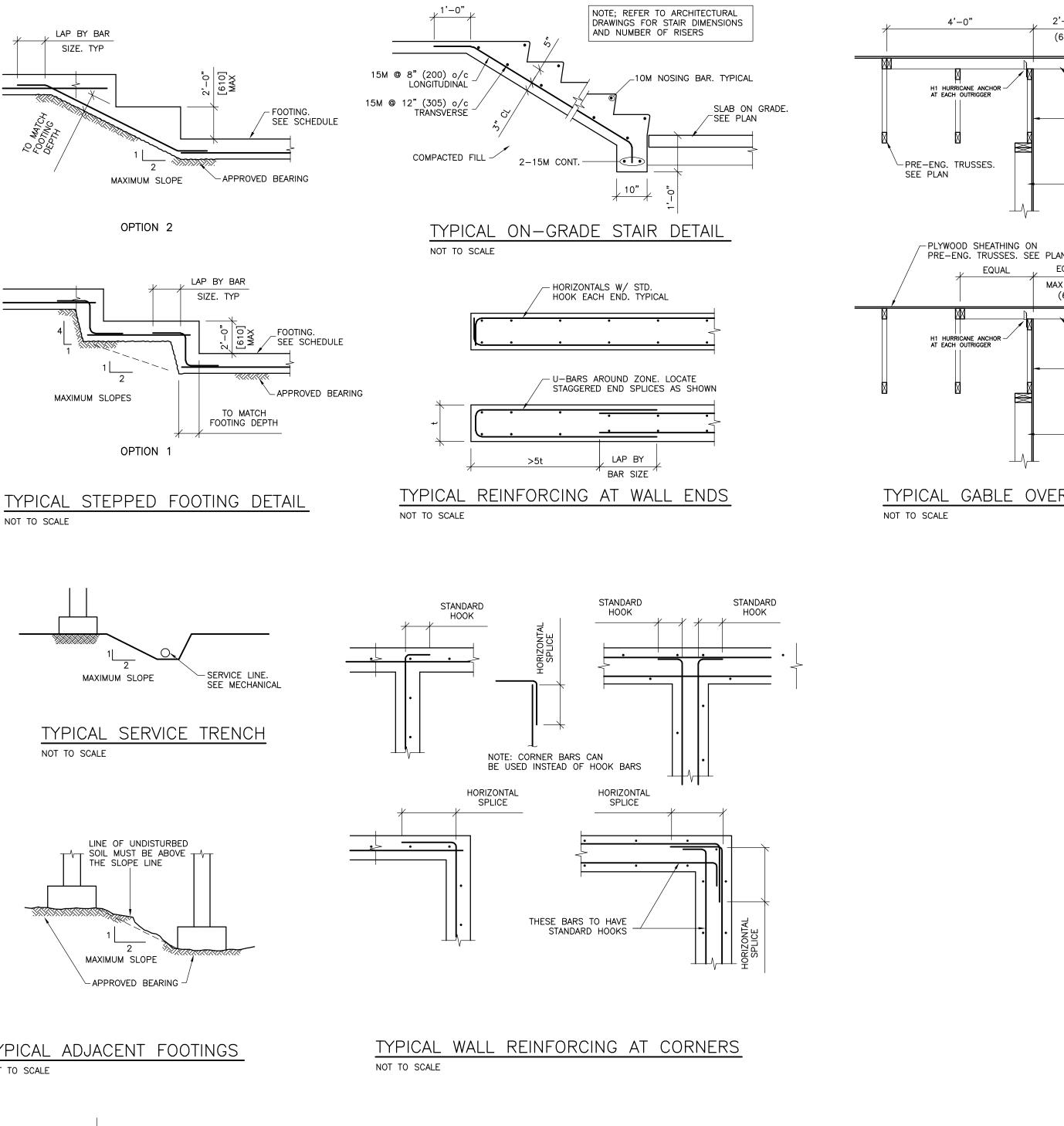
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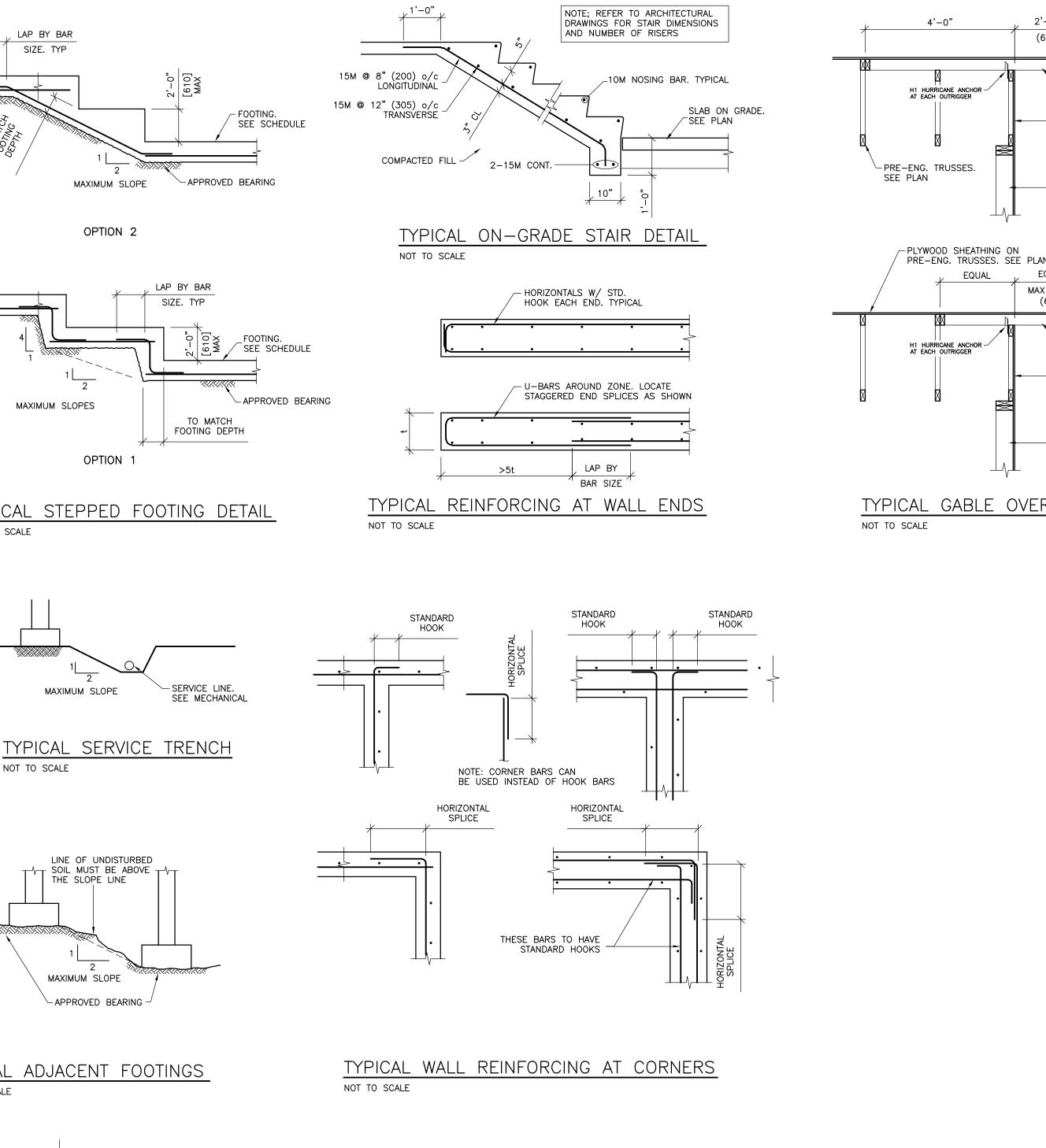
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	ALL STEEL WORK SHALL BE IN ACCORDANCE WITH CSA-S16 AND THE REVIEWED SHOP DRAWINGS. THE STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL INDICATE ALL DETAILS, FASTENERS, MATERIAL SPECIFICATIONS, FINISHES AND DESIGN LOADS.	7
3.	A COPY OF THE FABRICATOR'S CANADIAN WELDING BUREAU CERTIFICATES SHALL BE INCLUDED WITH THE SHO DRAWING SUBMISSION.	P
4.	ALL WELDING SHALL BE IN ACCORDANCE WITH CSA W59 AND SHALL BE PERFORMED BY FABRICATORS "FULLY APPROVED" BY THE CANADIAN WELDING BUREAU UNDER CSA W55.3. FABRICATING SHOP TO HAVE A MINIMUM DIVISION 2.1 CERTIFICATION BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1 AND CSA W55.3 FOR RESISTANCE WELDING OF STRUCTURAL COMPONENTS. THE FABRICATOR SHALL SUBMIT PROOF OF CERTIFICATION PRIOR TO START OF WORK.	
	ALL WELDING ELECTRODES SHALL CONFORM TO CSA W48. JOINTS THAT ARE TO BE WELDED SHALL BE KEPT FREE OF ALL FOREIGN MATTER INCLUDING PAINT, PRIMER OR OTHER COATINGS WHICH COULD BE DETRIMENTAL TO ACHIEVING A SOUND WELDMENT.	
7.	CONNECTIONS NOT DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED FOR THE LOADS INDICATED ON THE DRAWINGS. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS CONNECTION DETAILS ARE SCHEMATIC ONLY AND FINAL CONNECTION CONFIGURATION IS THE RESPONSIBILITY OF THE FABRICATOR. USE A MINIMUM OF 2-M20 (3/4") A325 BOLTS PER CONNECTION. CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. CONNECTIONS SHALL BE DESIGNED TO CSA-S16 TO RESIST FORCES, MOMENTS AND SHEARS INDICATED ON THE PLANS. IN INSTANCES OF NON-COMPLIANCE THE FABRICATOR SHALL BE RESPONSIBLE FOR ADDITIONAL COSTS ASSOCIATED WITH ACHIEVING COMPLIANCE WITH THE STANDARD.	
8.	CONNECTIONS DETAILED ON THESE STRUCTURAL DRAWINGS SHALL BE FABRICATED AND ERECTED AS SHOWN. ALTERNATIVES MAY BE CONSIDERED AT THE SOLE DISCRETION OF THE STRUCTURAL ENGINEER OF RECORD BUT MUST BE PRE-APPROVED BY SAME. WHERE AN ALTERNATIVE IS APPROVED IT SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND SHALL NOT NEGATIVELY IMPACT THE CONSTRUCTION SCHEDULE.	=
9.	FABRICATOR SHALL INCREASE WELD SIZES TO ACCOMMODATE SLOT WIDTHS SO THAT LEG SIZE AS SPECIFIED IS FULLY ON STEEL CONNECTION ELEMENT. FINAL WELD SIZE TO BE SHOWN ON THE SHOP DRAWINGS.	
10.	STEEL USED IN THE SEISMIC FORCE RESISTING SYSTEM (SFRS) SHALL BE LIMITED TO CSA G40.20/G40.21, ASTM A913/A913M. ASTM A992/A992M, OR ASTM 1085.	
	BOLTS AND ANCHOR RODS SHALL BE LONG ENOUGH THAT THE END OF THE BOLT OR ROD IS OUTSIDE THE FACE OF THE NUT.	
	ALL BOLTS WITH OVERSIZED BOLT HOLES SHALL BE SLIP CRITICAL. SECONDARY STRUCTURAL ELEMENTS ARE TO BE DETAILED SUCH THAT THEY DO NOT IMPOSE DIRECT LOAD TRANSFER TO THE SFRS (SEISMIC FORCE RESISTING SYSTEM) WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.	- T`
14.	ALL WELDED, HEADED STUDS, AND WELDED DEFORMED BAR ANCHORS SHALL BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS IN ACCORDANCE WITH CSA W55.3.	NO
15.	DO NOT FIELD BURN BASE PLATE HOLES OR CONNECTION BOLT HOLES UNLESS APPROVED IN WRITING BY THE ENGINEER. NO FIELD CUTTING OR ALTERATION OF STRUCTURAL MEMBERS IS TO OCCUR WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER	
	IF ANCHOR BOLTS ARE MISPLACED OR BOLT HOLES MISALIGNED, INFORM THE ENGINEER. EXCEPT PARTS OF MEMBERS TO BE EMBEDDED IN CONCRETE OR GALVANIZED OR UNLESS NOTED OTHERWISE	
17.	ON THE DRAWINGS, ALL STEEL WORK SHALL BE SHOP PRIMED. PRIMING SHALL BE IN ACCORDANCE WITH CISC/CPMA-1-73a "QUICK DRYING PRIMER" WHEN NO TOP COAT IS REQUIRED AND IN ACCORDANCE WITH CISC/CPMA-2-75 WHEN A TOP COAT IS SPECIFIED. IF A TOP COAT IS SPECIFIED THE PRIMER SHALL BE SELECTED ENSURING COMPATIBILITY WITH THE SPECIFIED SYSTEM. ITEMS SPECIFIED TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED TO ASTM A123/A123M, MINIMUM ZINC COATING OF 600g/sq.m. FIELD TOUCH-UP ALL ABRASIONS, SCRATCHES, WELDS OR BOLTS WITH GALVACON OR EQUIVALENT.	
18.	ALL EXTERIOR STEEL WORK AND STEEL PROTRUDING THROUGH THE BUILDING ENVELOPE SHALL BE HOT DIP GALVANIZED.	
	GROUT UNDER BASE PLATES TO BE NON-SHRINK 48 MPa (7000 psi) AT 28 DAYS.	
20.	PROVIDE STRUCTURAL STEEL TO CSA G40.20-04/G40.21-04 OR ASTM A992 WITH THE FOLLOWING GRADES:PIPE RAILINGS WIDE FLANGE BEAMS AND COLUMNS240W (35W) TO ASTM A53 350W (50W) OR ASTM A992/A992M OR ASTM A913/A913M	
	GRADE 50 CHANNELS AND ANGLES 300W (44W) HSS SECTIONS 350W (50W) CLASS 'C' OR ASTM 1085 MISCELLANEOUS STEEL PLATES 300W (44W)	
21.	BOLT SIZING SHALL BE AS NOTED ON DRAWINGS AND DETAILS. PROVIDE BOLTS TO CSA G40.21-04 WITH THE FOLLOWING GRADES:	Ξ
	ERECTION BOLTS TO ASTM A325 FINAL BOLTED CONNECTIONS; ASTM A325 UNLESS NOTED OTHERWISE ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 36 (36ksi YIELD STRENGTH)	
22.	WHEN ASTM 490/490M BOLTS ARE USED, THEY SHALL HAVE A ZINC/ALUMINUM COATING MEETING THE REQUIREMENTS OF ASTM F1136 GRADE 3. CORRESPONDING WASHERS SHALL BE COATED AS PER ASTM F1136 GRADE 5 DIP-SPIN.	
	THREADED ROD SHALL BE TO ASTM F1554 GRADE 36 (36 ksi YIELD STRENGTH)	
2	DIAPHRAGM. PERIMETER ANGLE CONTINUITY SHALL BE MAINTAINED THROUGH THE USE OF FULL STRENGTH BUTT WELD OR SPLICE PLATES SIZED AND WELDED TO DEVELOP FULL TENSION CAPACITY OF ANGLE. UNLESS NOTED ON PLANS OR IN DETAILS THE PERIMETER ANGLE SHALL BE A MINIMUM SIZE OF L75x75x6 (L3"x3"x0.25").	3
	THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING DURING CONSTRUCTION. THE BRACING SHALL BE DESIGNED, INSTALLED AND MAINTAINED BY THE CONTRACTOR. THE BRACING SHALL BE REMOVED ONLY AFTER PERMANENT ROOF AND FLOOR DIAPHRAGMS, SHEAR WALLS AND BRACING ARE COMPLETE.	TYP
	THE CONTRACTOR SHALL PROVIDE SEAL WELDED CLOSURE PLATES AT ALL OPEN ENDS OF EXTERIOR HSS COLUMNS. PLATE THICKNESS SHALL BE A MINIMUM OF 6 mm (1/4") UNLESS NOTED OTHERWISE. THE ARCHITECT IS RESPONSIBLE FOR ENSURING ADEQUATE FIRE PROTECTION FOR ALL STRUCTURAL STEEL IN	NOT TO
28.	ACCORDANCE WITH CAN/ULC-S101. WELDING OF STEEL USED IN THE 'SFRS' SHALL BE MADE WITH FILLER METALS THAT HAVE A MINIMUM AVERAGE CHARPY V-NOTCH IMPACT TEST VALUE OF 27J AT -18°C. THE IMPACT TESTS SHALL BE CERTIFIED IN ACCORDANCE WITH CSA W48-06. IN ADDITION, DEMAND CRITICAL WELDS SHALL BE MADE WITH FILLER	,
29.	METALS THAT HAVE A MINIMUM AVERAGE CHARPY V-NOTCH IMPACT TEST VALUE OF 54J ATC. DEMAND CRITICAL WELDS SHALL BE INDICATED ON THE DRAWINGS. ALL BOLTS USED IN CONNECTIONS OF THE 'SFRS' SHALL BE PRE-TENSIONED AND HAVE SURFACES OF CLAS	S
30.	'A' OR BETTER. AT EVERY STOREY, THE TWO DISCONTINUOUS FRAMING MEMBERS IN EVERY CROSS BRACING BAY SHALL BE	
31.	FABRICATED FROM THE SAME HEAT. "PROTECTED ZONES" OF THE 'SFRS' AS INDICATED ON THE DRAWINGS SHALL NOT HAVE ANY ATTACHMENTS O PENETRATIONS WITHIN THE ZONE. THIS INCLUDES BUT IS NOT LIMITED TO; WELDING, BOLTING, SCREWING, POWDER ACTUATED PIN CONNECTIONS, FACADES, PARTITIONS, DUCTWORK AND PIPING. PUDDLE WELDING TO SECURE DECKING IS THE ONLY EXCEPTION ALLOWED. PROTECTED ZONES MUST BE CLEARLY INDICATED ON SITE BY MEANS OF COATINGS AND LABELS ON BOTH SIDES OF THE MEMBER WITH LARGE LETTERING	R
	CONVEYING THE RESTRICTIONS.	
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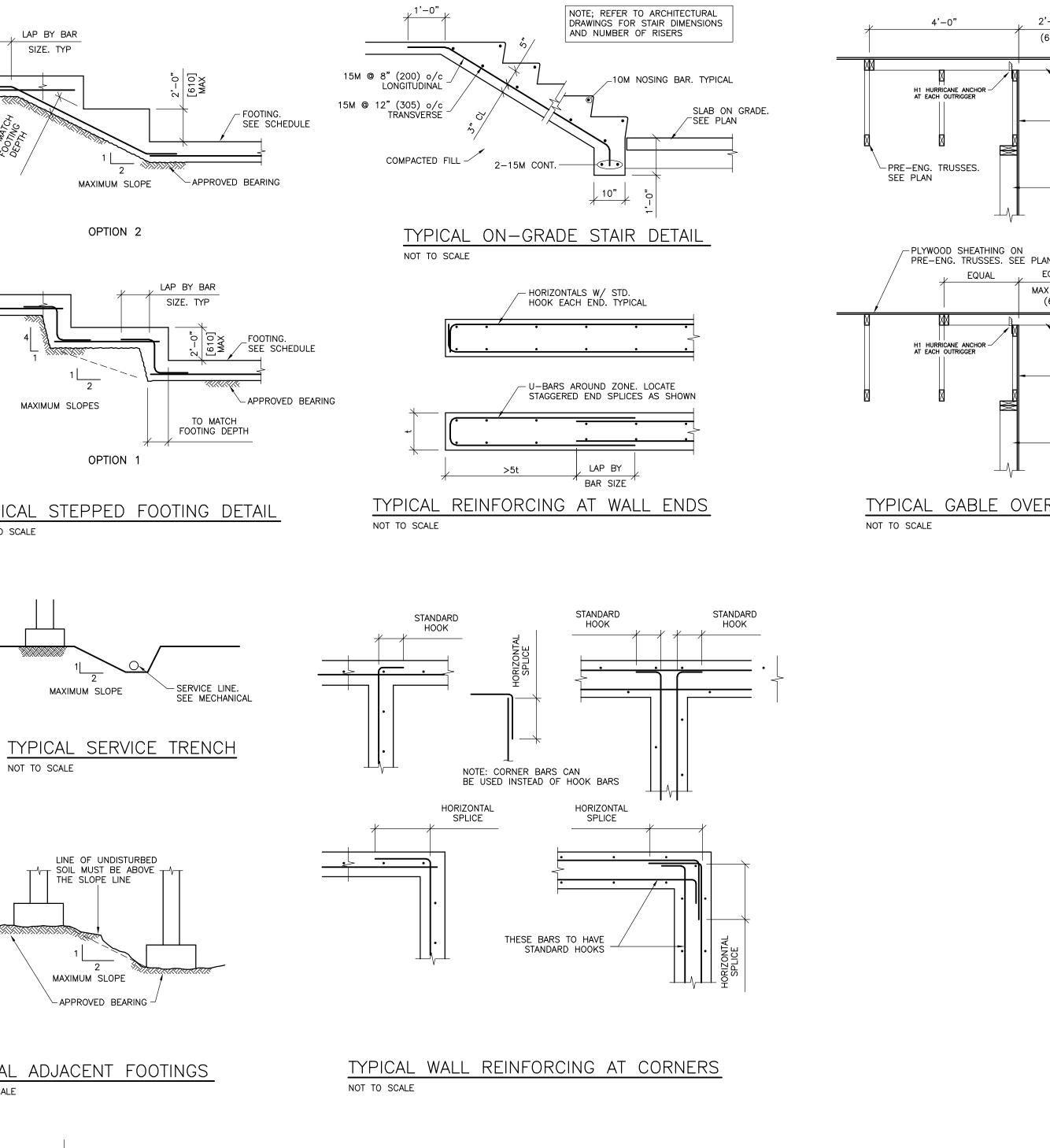


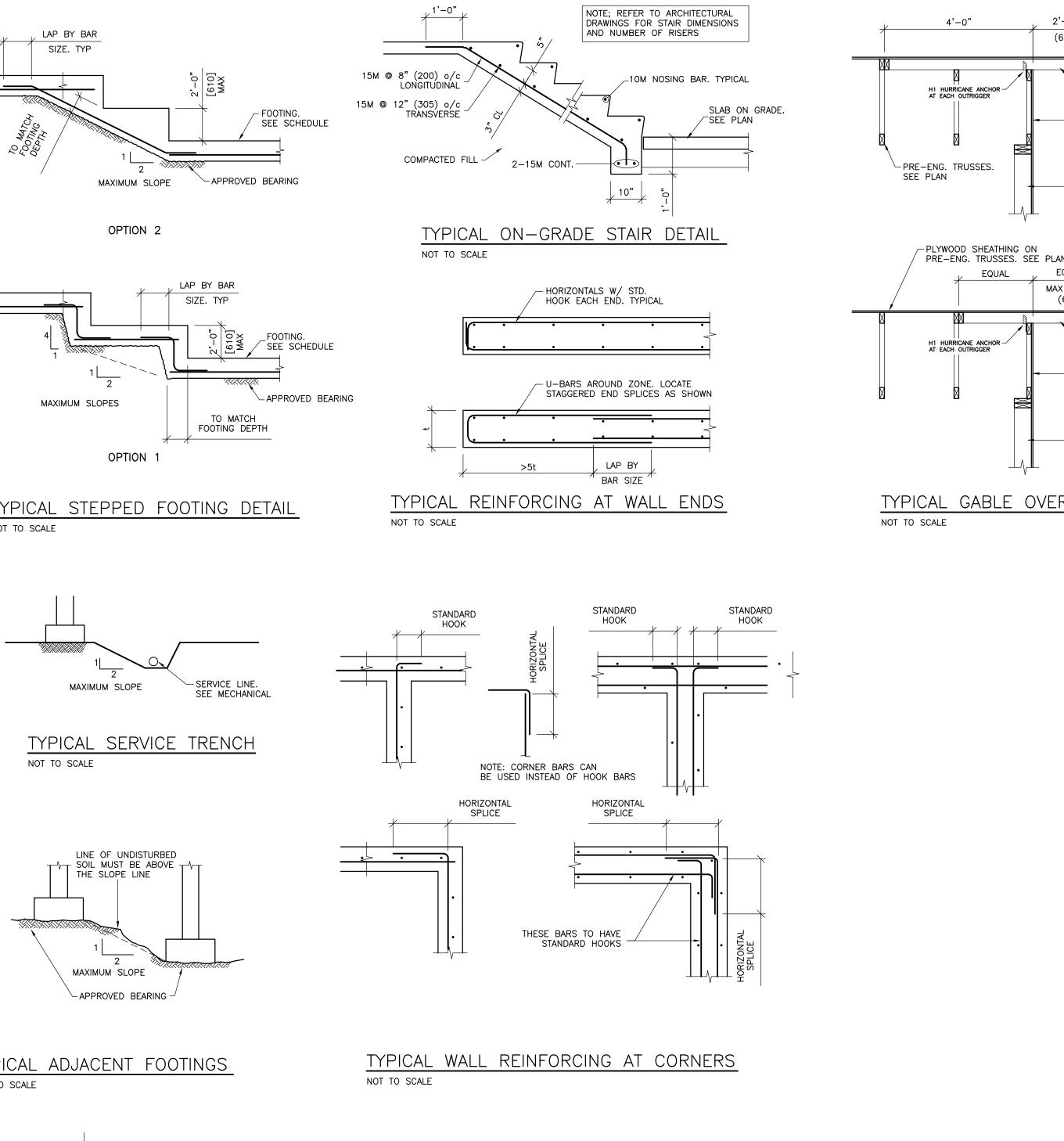


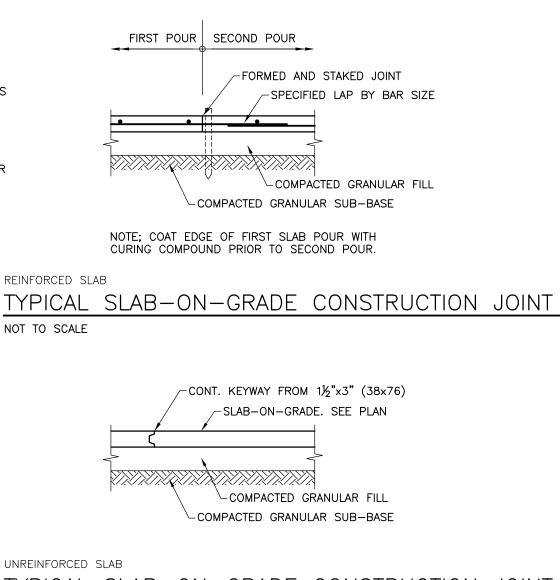




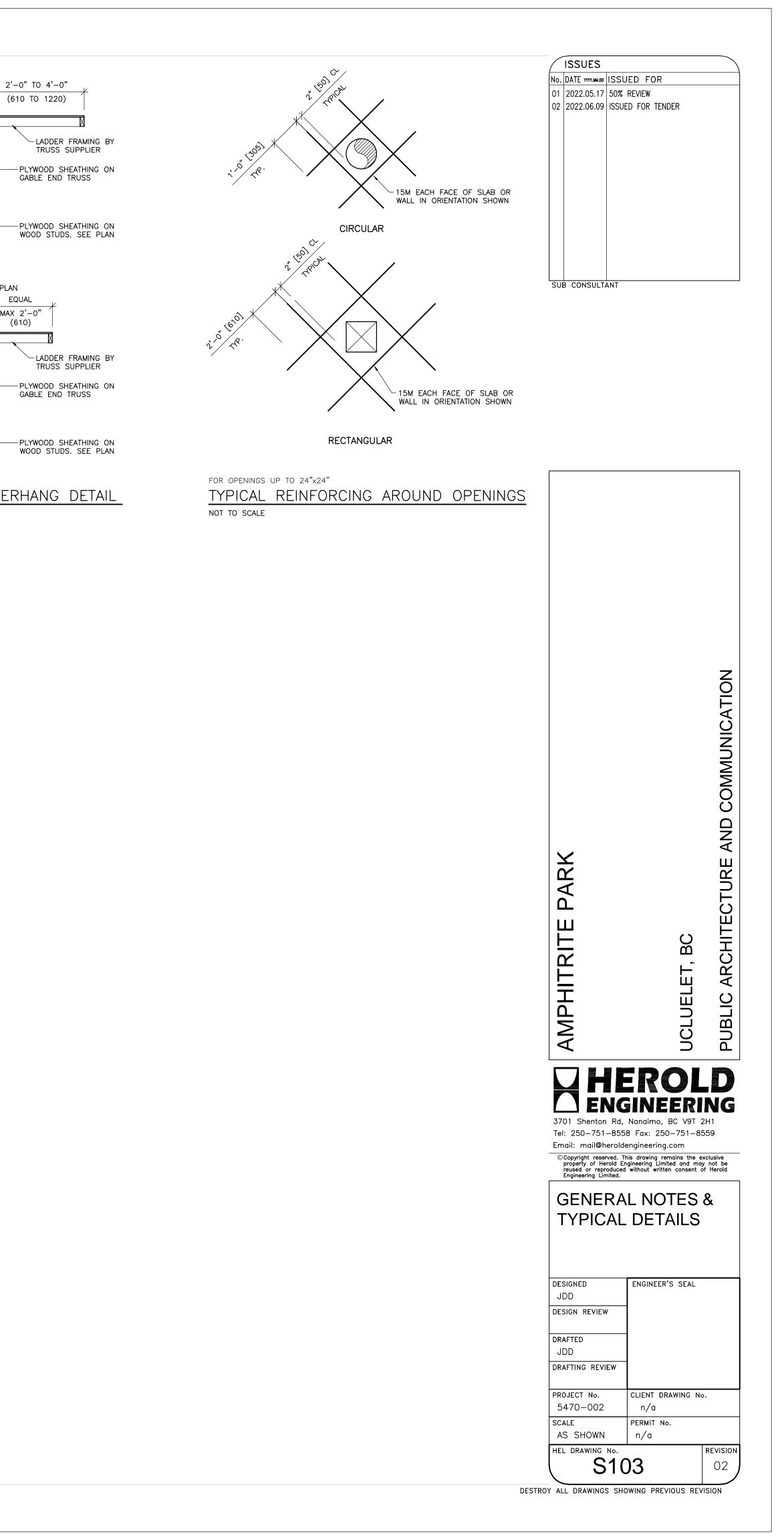




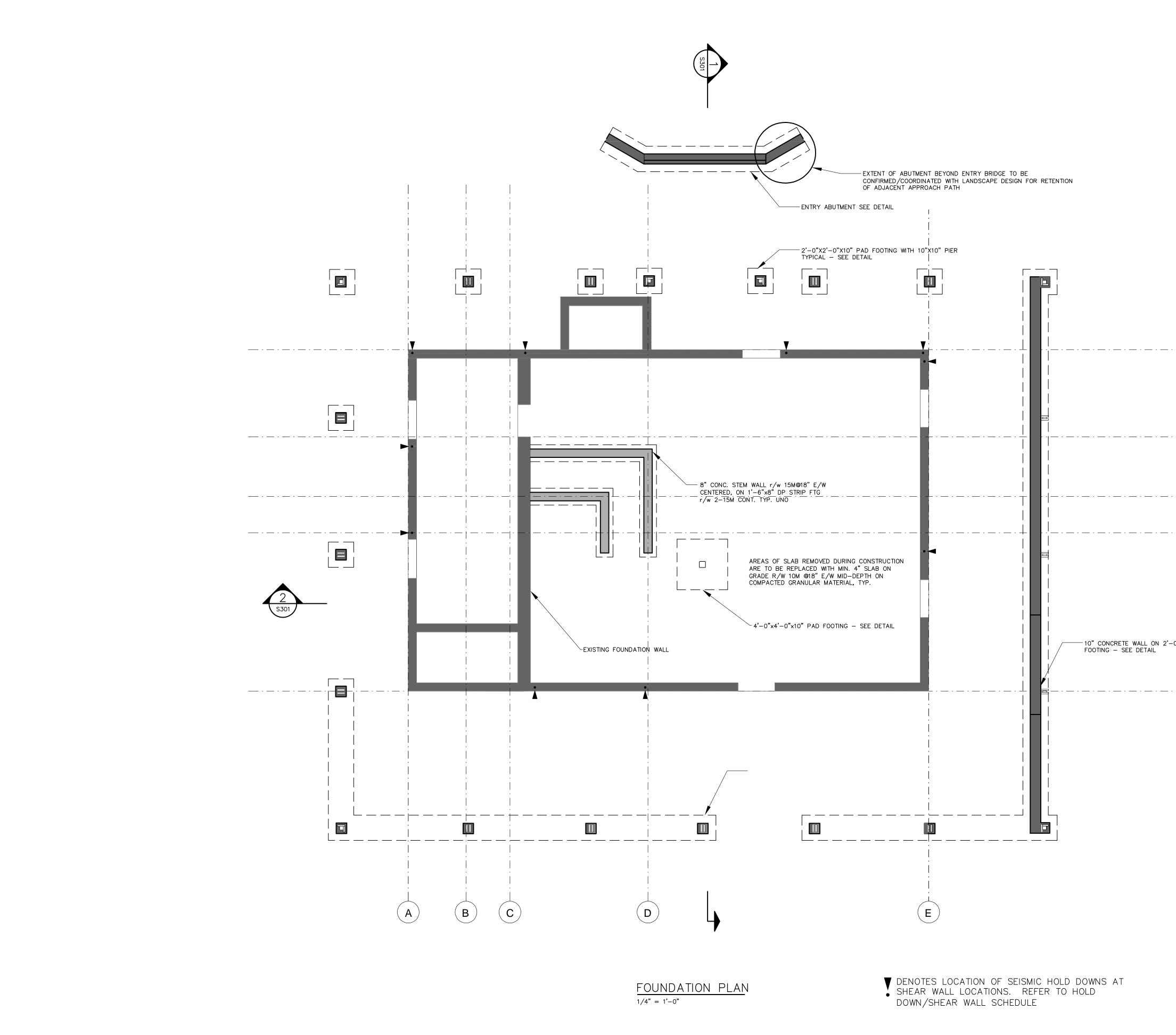




SLAB-ON-GRADE CONSTRUCTION JOINT



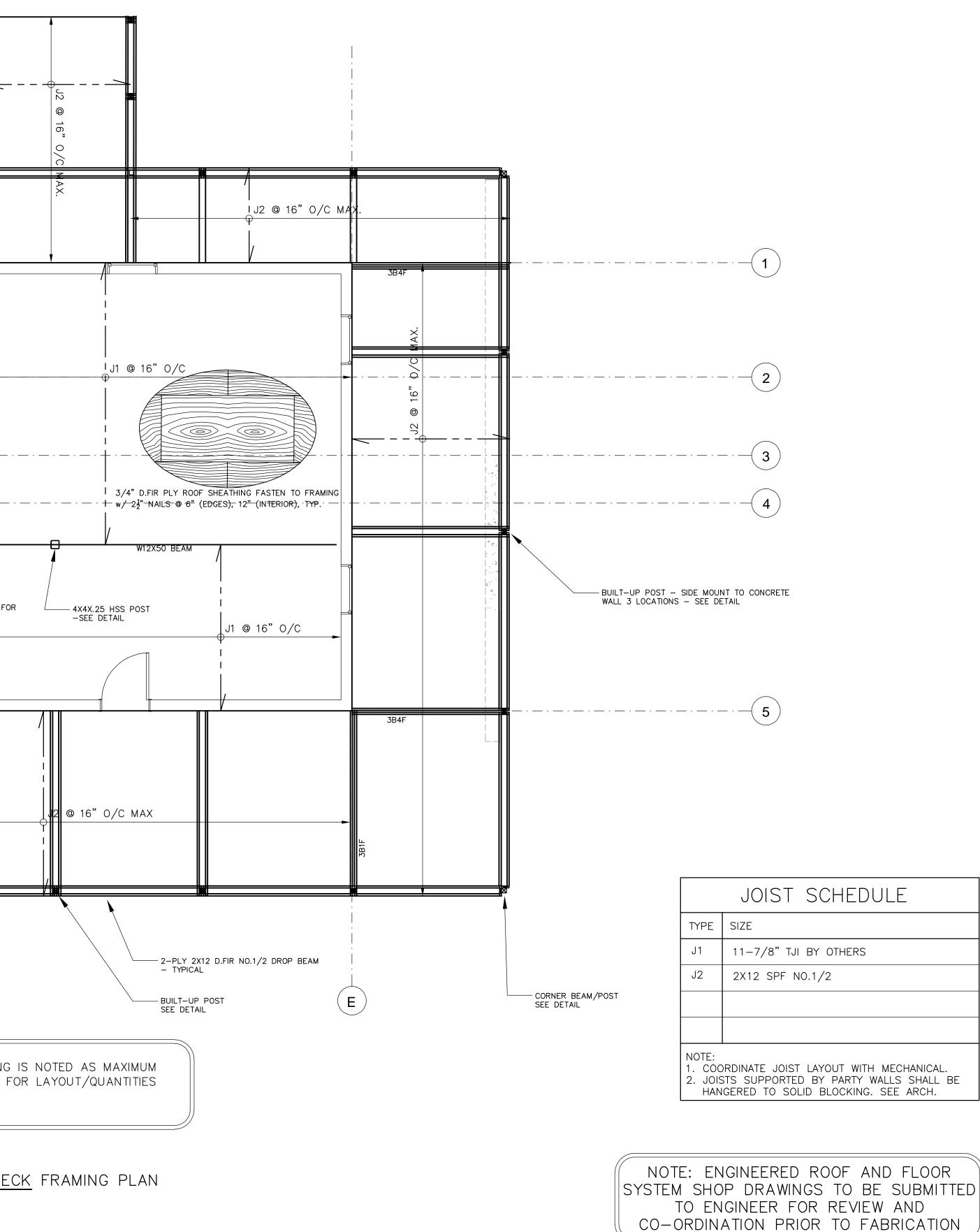
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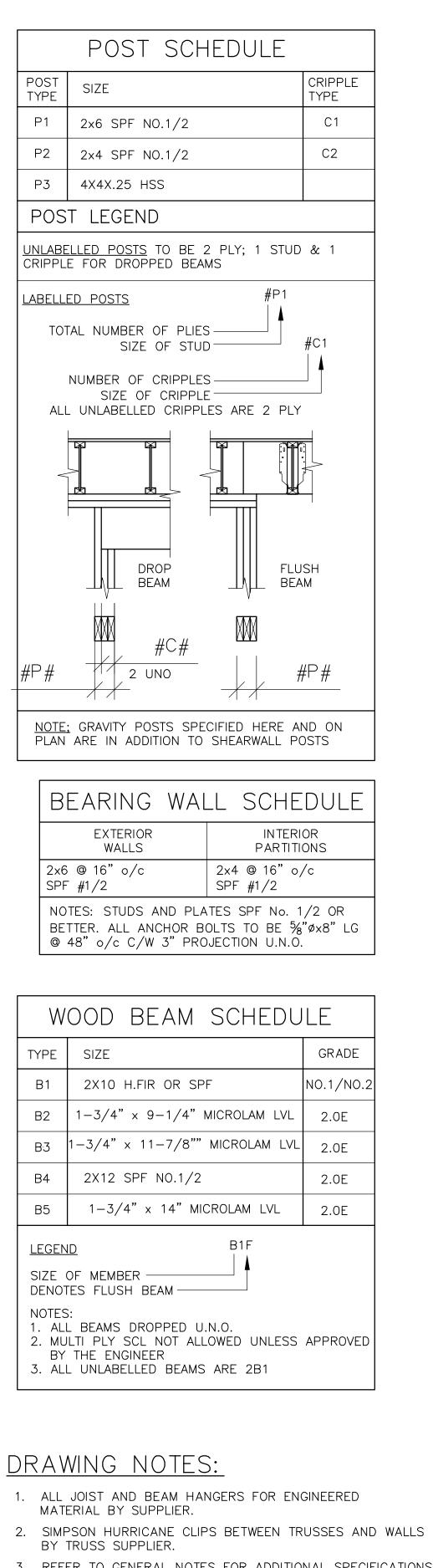


ARCHITECTURAL D 24" x 36

	ISSUES No. DATE YYYYAMUD ISSUED FOR 01 2022.05.17 50% REVIEW 02 2022.06.09 ISSUED FOR TENDER Image: I
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-0"X10" STRIP	AMPHITRITE PARK UCLUELET, BC PUBLIC ARCHITECTURE + COMM
	AT SHOUL DRAWING SHOWING PREVIOUS REVISION

EXISTING CONCRETE WALL TO BE CUT TO SUIT HEIGHT FOR 2X4 ROOF STRUCTURE ABOVE EXISTING ENCLOSURE. LEDGER TO EXISTING CONCRETE WALL TO SUIT 16 2X4 LOWER JOISTS @ 16" O/C-0 IJ2 @ 16" 0/C MAX; <u>J1 @ 1</u>6" O/C Ø AΑ –⊕⇒+-Q 0 - @- \sim J1 @ 16" 0/C -2X6 BEARING WALLS FOR STAIR CORRIDOR 3B4 2-PLY 2X12 FLUSH BEAM - TYPICAL AT POST LOCATIONS (B) (C) (A) NOTE: DECK JOIST SPACING IS NOTED AS MAXIMUM SPACING. REFER TO A1.1 FOR LAYOUT/QUANTITIES FLOOR AND DECK FRAMING PLAN 1/4" = 1'-0"



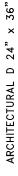




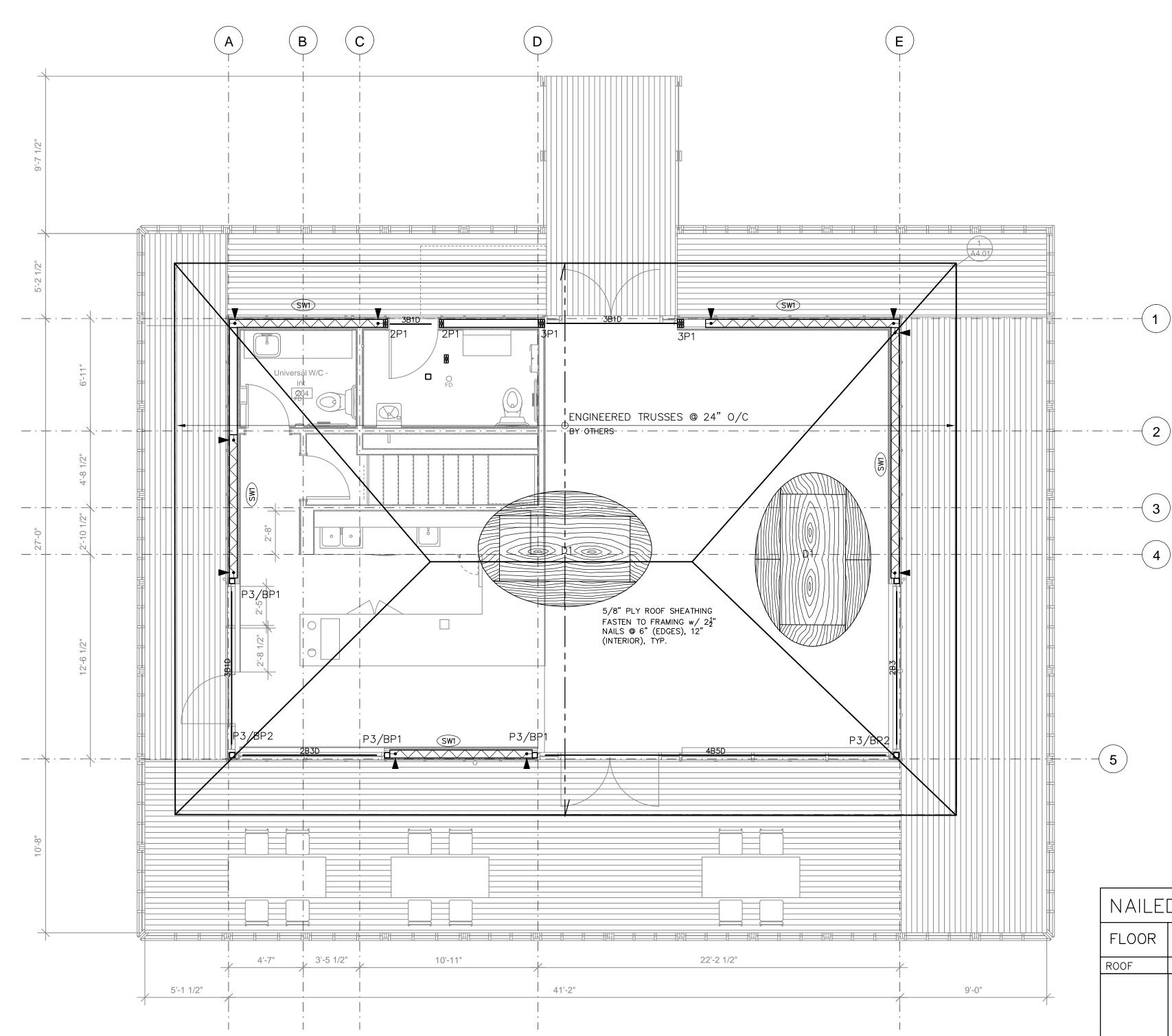
NOTE: THESE PLANS HAVE BEEN PREPARED FROM ARCHITECTURAL BASE PLANS. ALL DIMENSIONS ARE TO BE CONFIRMED WITH CURRENT ARCHITECTURAL DRAWINGS AND DISCREPANCIES REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION FOR EVALUATION.

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DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION







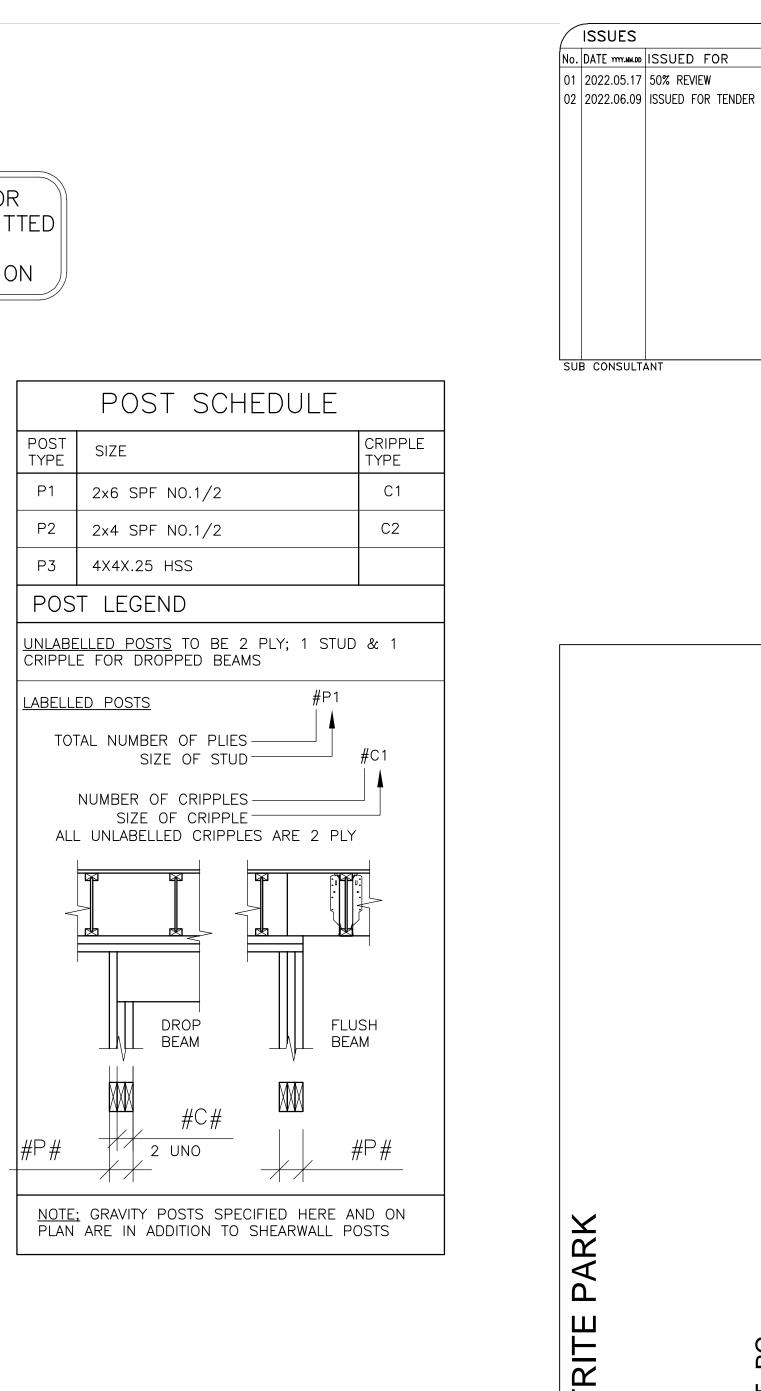
SHEAR WALL AND ROOF FRAMING PLAN 1/4" = 1'-0"

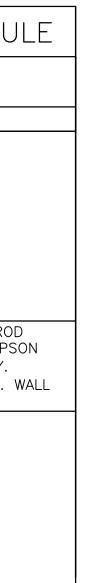
NOTE: ENGINEERED ROOF AND FLOOR SYSTEM SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR REVIEW AND CO-ORDINATION PRIOR TO FABRICATION

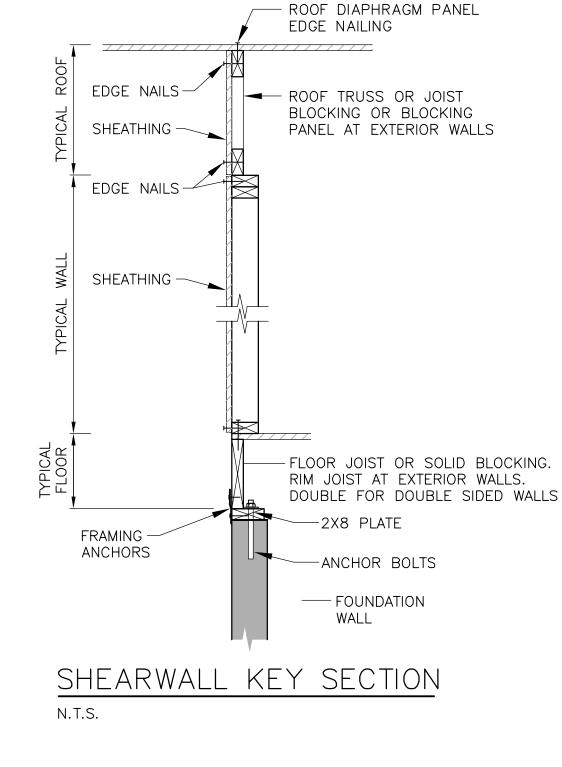
BEARING WAL	L SCHEDULE
EXTERIOR	INTERIOR
WALLS	PARTITIONS
2x6 @ 16" o/c	2x4 @ 16" o/c
SPF #1/2	SPF #1/2
NOTES: STUDS AND PLA BETTER. ALL ANCHOR B @ 48" o/c C/W 3" PRC	OLTS TO BE %"øx8" LG

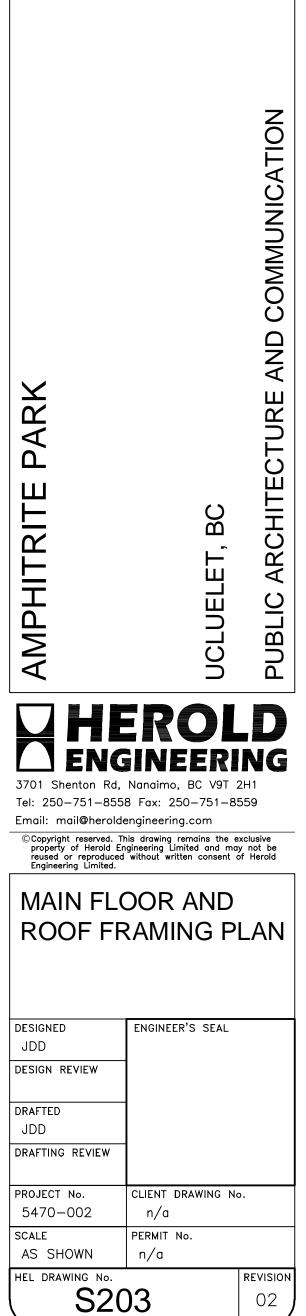
WOOD BEAM SCHEDULE				
TYPE	SIZE	GRADE		
B1	2X10 H.FIR OR SPF	NO.1/NO.2		
B2	1-3/4" x 9-1/4" MICROLAM LVL	2.0E		
B-3	1-3/4" x 11-7/8"" MICROLAM LVL	2.0E		
B4	2X12 SPF NO.1/2	2.0E		
B5	1-3/4" x 14" MICROLAM LVL	2.0E		
LEGEND B1F SIZE OF MEMBER Image: straight straigh				
 ALL BLAMS DROTTED 0.N.O. MULTI PLY SCL NOT ALLOWED UNLESS APPROVED BY THE ENGINEER ALL UNLABELLED BEAMS ARE 2B1 				

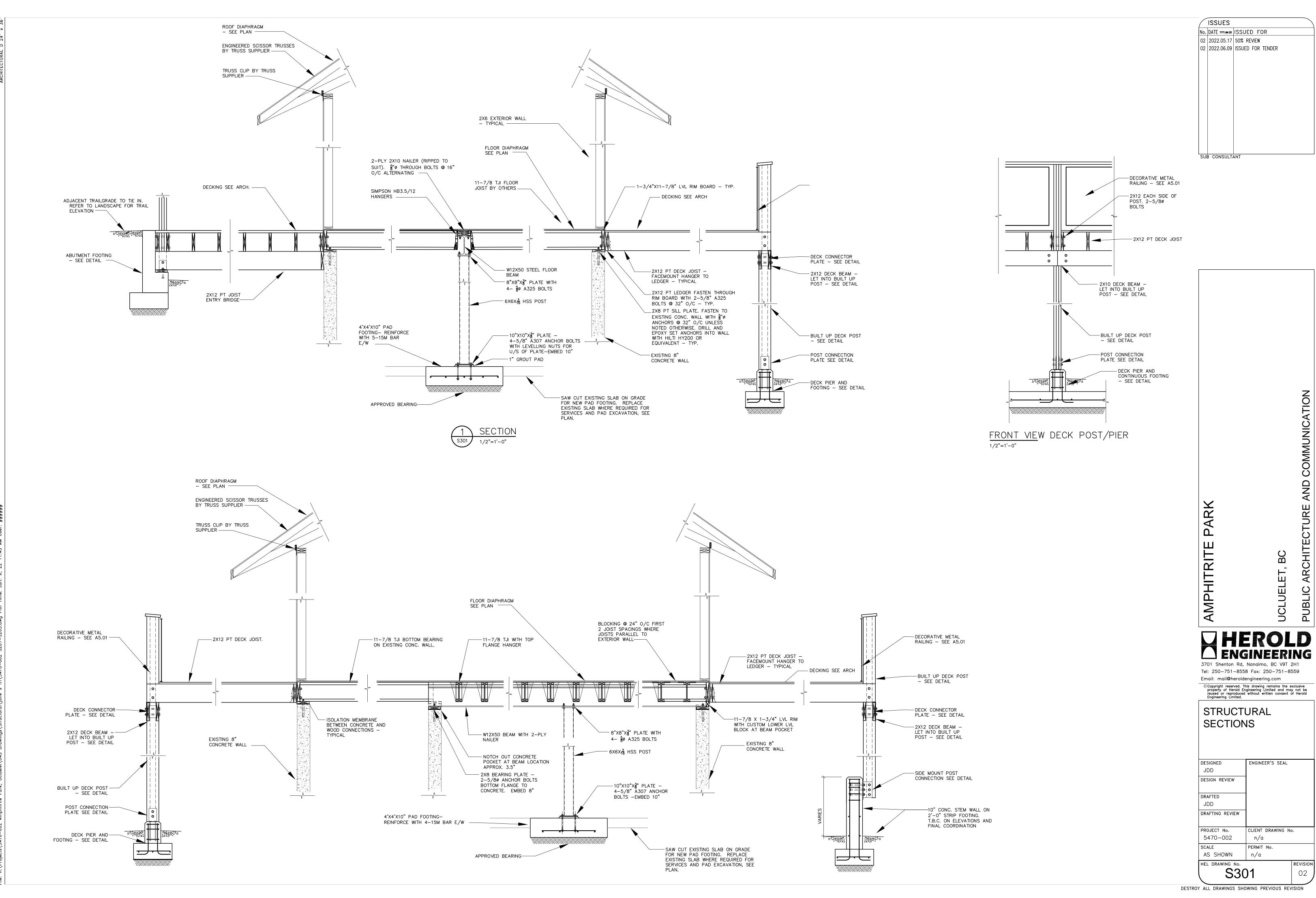
NAILE	D PLYWOOD SH	ear wall	SCHEDL		
FLOOR	LEGEND	(SW1)			
ROOF					
MAIN FLOOR	FRAMING ANCHORS END POSTS EDGE NAILS SHEATHING STUD SIZE & SPACING BOTTOM PLATE ANCHOR BOLTS HOLD-DOWN TYPE H.D. ANCHOR ROD	A35 @ 4" o/c 3-2x6 ∭ 2 1/2" @ 2" o/c 1/2", 1 SIDE 2x6 @ 16" o/c SPF #1/2 STUDS 5/8"ø @ 8" o/c 8" LG, 5" EMBED SIMPSON HDU11. 1" DRILL AND EPOXY SI "SET XP" HIGH STRE EMBED 16" INTO EXI	Ø ANCHOR RO ET WITH SIMPS NGTH EPOXY.		
NOTE; SEE DRAWING NOTES ON SHEAR WALL DETAIL SHEET. ALL TIE-DOWNS, HOLD-DOWNS AND FRAMING ANCHORS ARE BY SIMPSON STRONG-TIE UNLESS NOTED OTHERWISE. ALTERNATES ARE TO BE APPROVED BY THE ENGINEER PRIOR TO MATERIAL ORDERING. POSTS SPECIFIED HERE ARE IN ADDITION TO GRAVITY POSTS SPECIFIED ON PLAN. REFER TO SIMPSON CATALOG FOR INSTALLATION REQUIREMENTS.					

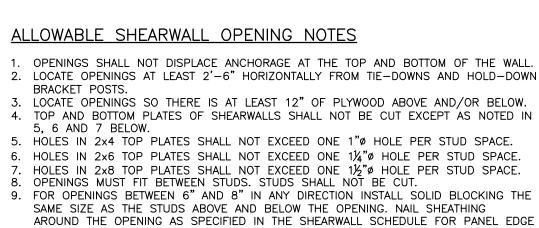












NAILING.

OPENINGS SHALL NOT DISPLACE ANCHORAGE AT THE TOP AND BOTTOM OF THE WALL. 2. LOCATE OPENINGS AT LEAST 2'-6" HORIZONTALLY FROM TIE-DOWNS AND HOLD-DOWN

10. WHERE THERE IS NOT A SPECIFIC STRUCTURAL INSTRUCTION OR DRAWING, AND

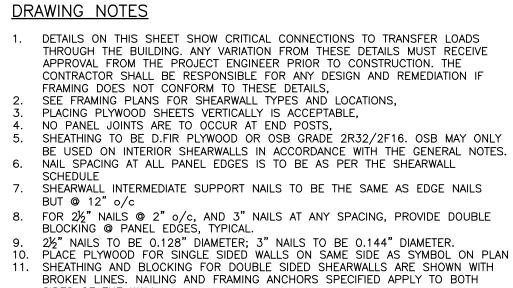
CLEAR SPACING FOR 4"x4" AND 4'-0" CLEAR SPACING FOR 8"x8".

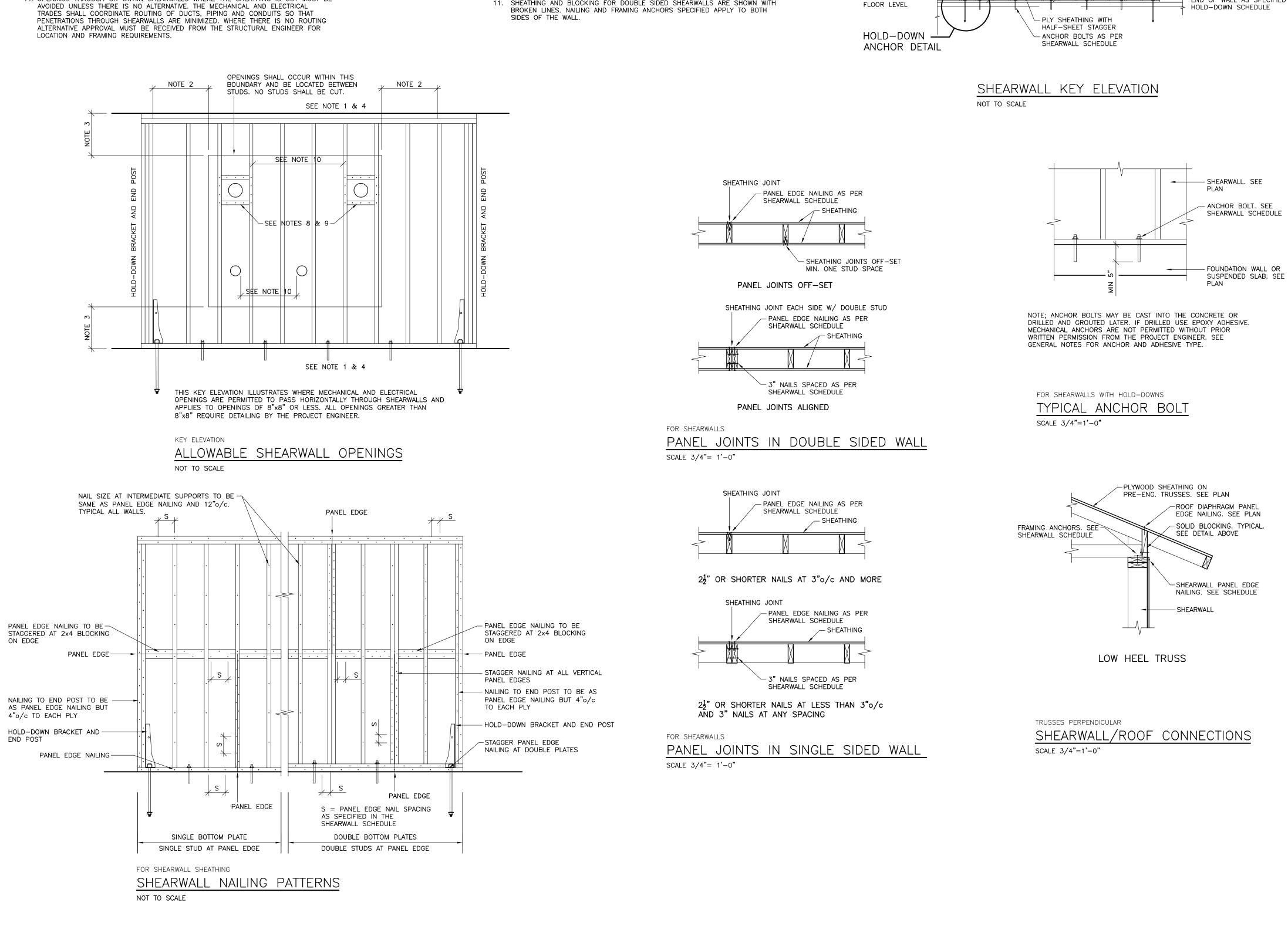
WHERE THERE IS MORE THAN ONE 8"x8" DUCT OPENING, THE OPENINGS SHALL BE

MIN. 4'-0" APART. WHERE ELECTRICAL CONDUITS OR PLUMBING PIPES, IN THE SAME

PLANE, REQUIRE OPENINGS BETWEEN 4" AND 8" THERE SHALL BE AT LEAST 2'-O"

11. OPENINGS THROUGH OR WITHIN SHEARWALLS WHERE THE SHEATHING IS CUT MUST BE





TRUSSES PARALLEL

AS PER DIAPHRAGM SCHEDULE

END OF WALL AS SPECIFIED IN

DETAILS THIS SHEET

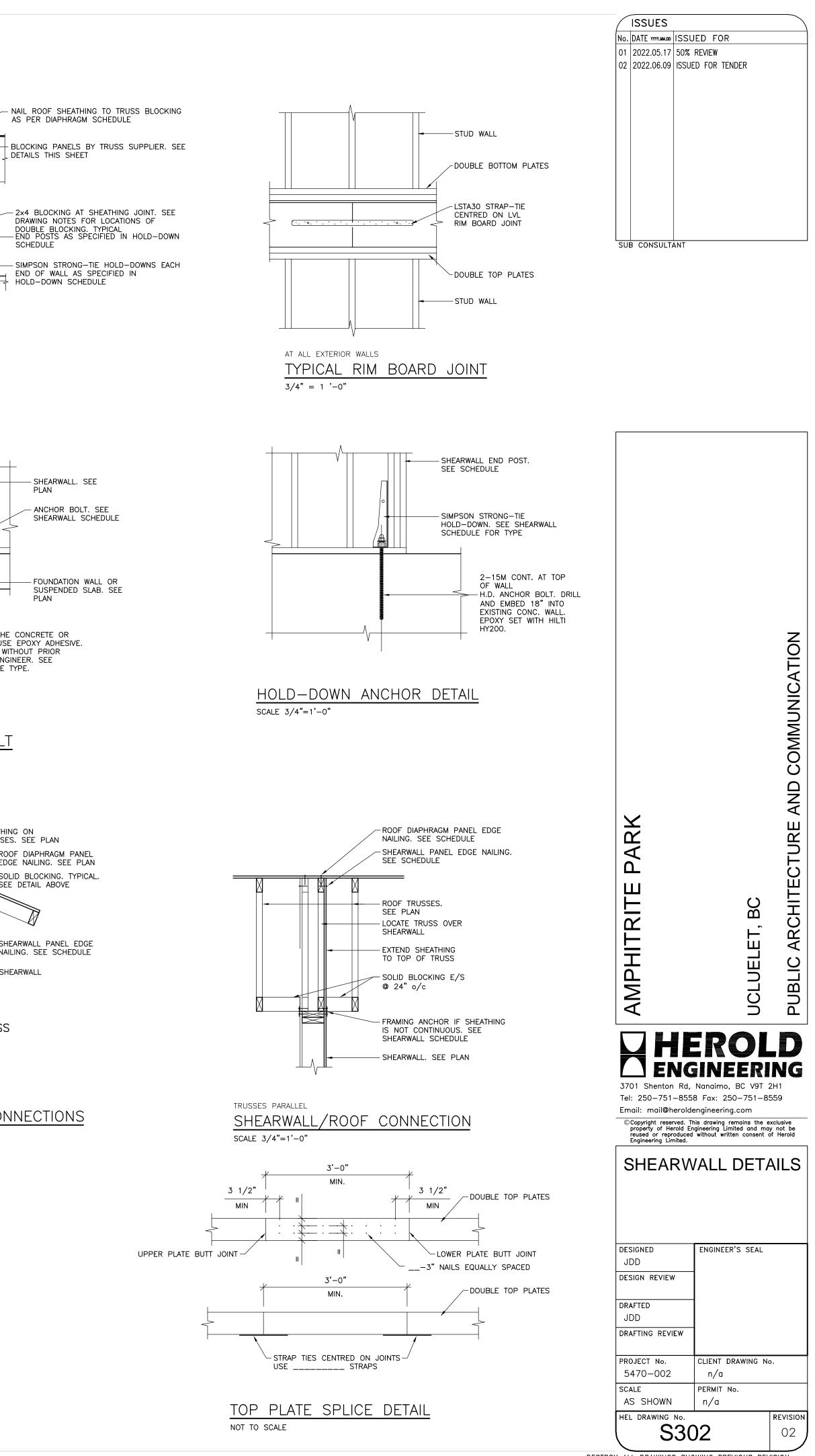
SCHEDULE

SHEARWALL SHEATHING TO

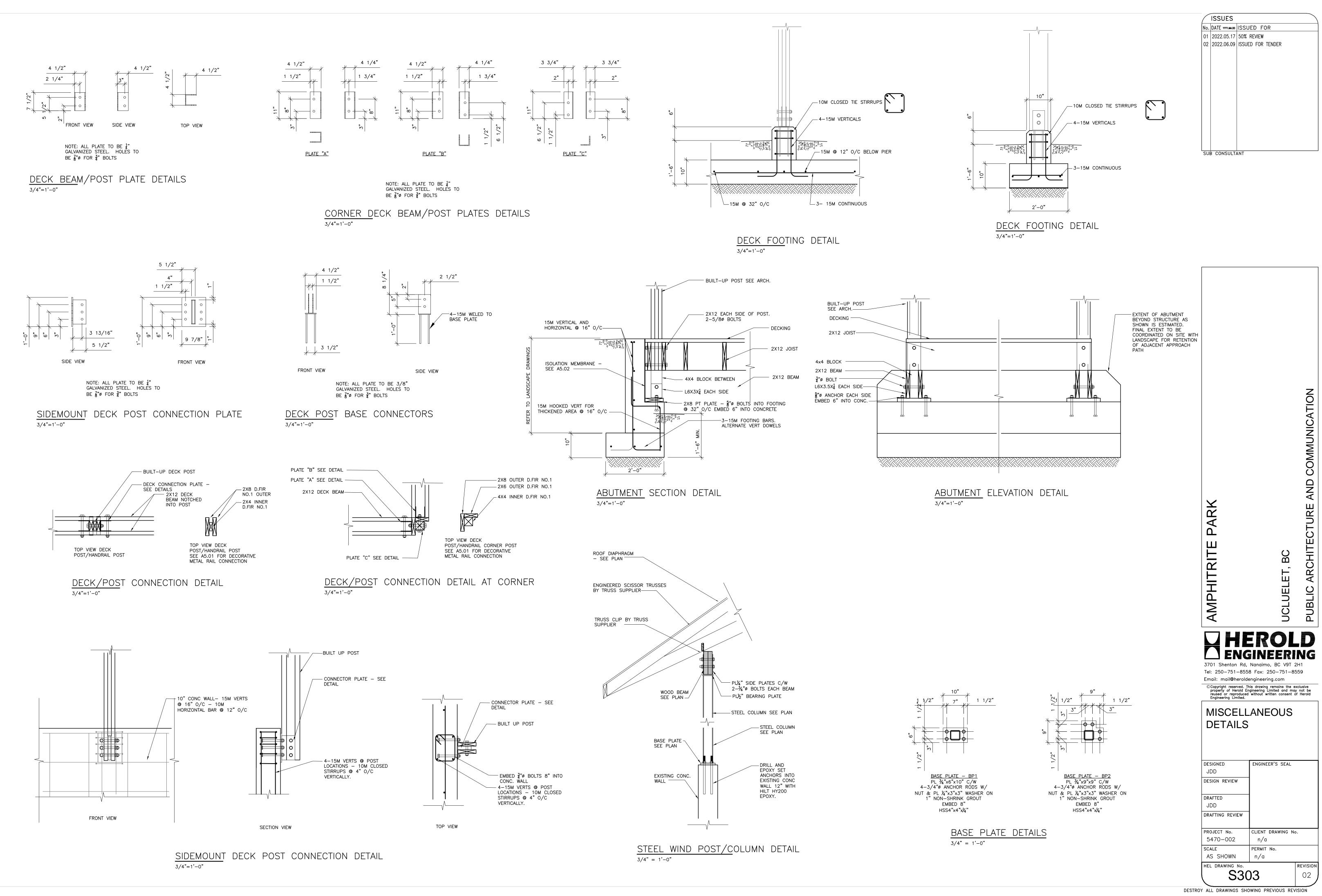
TRUSS OVER SHEARWALL

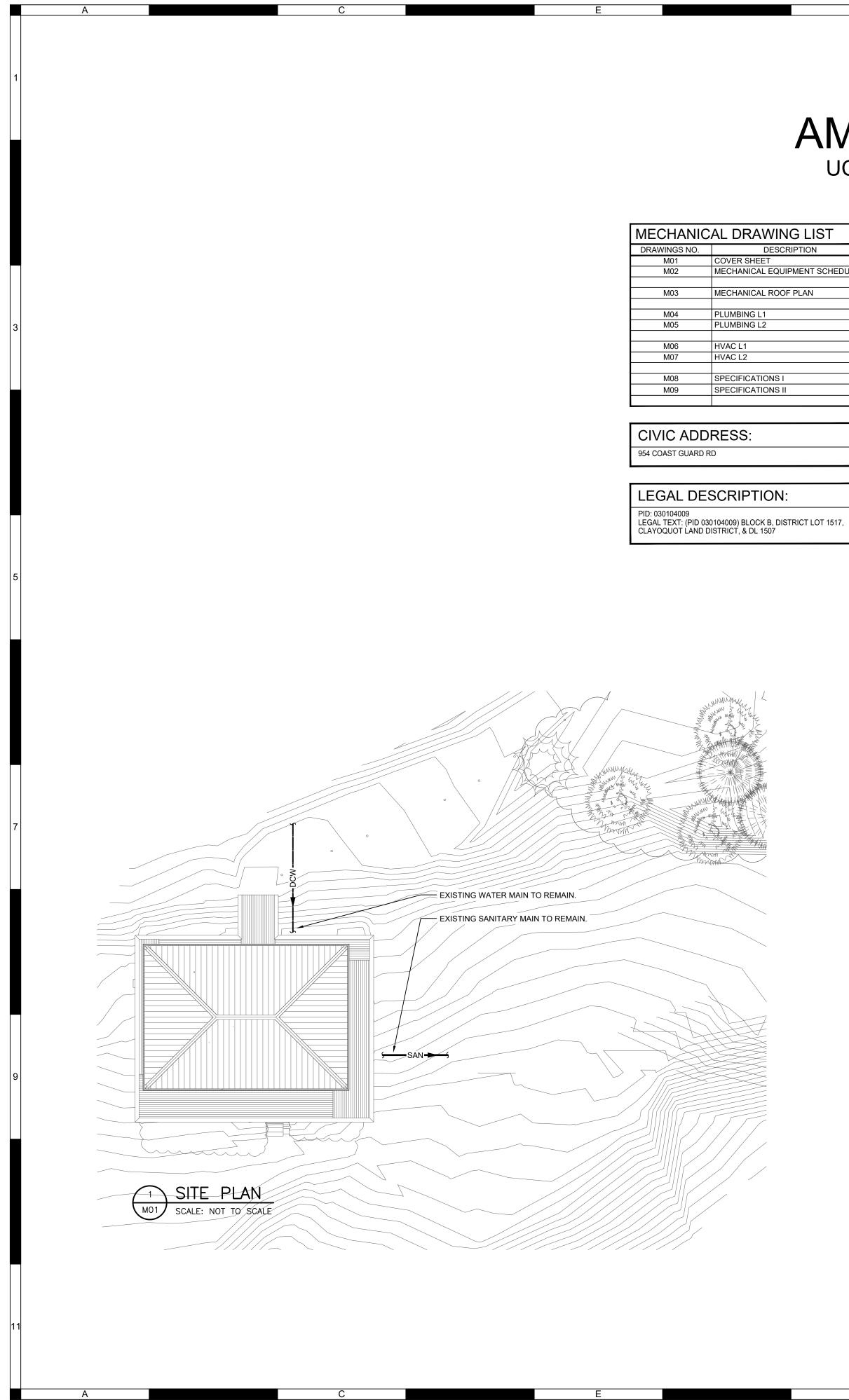
FRAMING ANCHORS -

FLOOR OR ROOF LEVEL



DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION





AMPHITRITE PARK UCLUELET, BRITISH COLUMBIA

DESCRIPTION MECHANICAL EQUIPMENT SCHEDULES MECHANICAL ROOF PLAN

PIPING		DUCTW	ORK	
·	DOMESTIC COLD WATER (DCW)		•	SUPPLY OR OUTDOOR AIR DUCT UP
· ·	DOMESTIC HOT WATER (DHW)	CES	¢	SUPPLY OR OUTDOOR AIR DUCT DOWN
<u> </u>	SANITARY VENT		•	RETURN AIR DUCT UP
SAN	SANITARY SEWER ABOVE GRADE	C23	©	RETURN AIR DUCT DOWN
SAN	SANITARY SEWER BELOW FLOOR		•	EXHAUST AIR DUCT UP
+I	PIPE CLEAN-OUT	[Z]	¢	EXHAUST AIR DUCT DOWN
$-\!\!\!-\!\!\!-\!\!\!\!-\!\!\!\!-$	PIPE CLEAN-OUT TO GRADE	l f		TURNING VANES
C	CONDENSATE DRAIN		X	ACOUSTIC INSULATION
FITTINGS AND	VALVES		=	BALANCING DAMPER (BD)
	- DIRECTION OF FLOW		BDD	BACKDRAFT DAMPER (BDD)
	PIPE DROP		<u>-</u>	MOTORIZED DAMPER (MD)
 0	PIPE RISE			DUCT OR PIPE CAP-OFF
o			1	RETURN OR EXHAUST AIR GRILLE
 \$	PIPE TEE DOWN		Ē►	DOOR GRILLE
	PIPE UNION	_		
→NO	- ISOLATION VALVE (NORMALLY OPEN)		_	FIRE DAMPER
→ ^{NC}	- ISOLATION VALVE (NORMALLY CLOSED)	EQUIPM	IENT TA	AGS
	- CHECK VALVE			
	BALANCING VALVE			GRILLE TYPE NECK / GRILLE SIZE
▶ 🕅	PRESSURE REDUCING VALVE (PRV)			AIR VOLUME (L/s)
	- HEAT TRACE			EQUIPMENT / FIXTURE TYPE
►	- STRAINER			GENERAL NOTE
\$	- RELIEF VALVE			
	BACKFLOW PREVENTOR (BFP)		<u>.</u>	DRAWING REVISION
∇	AUTOMATIC AIR VENT (AAV)		<u> </u>	DETAIL NUMBER
			-)	DRAWING NUMBER
SYSTEM MONI	TORING			SECTION NUMBER
T	ROOM TEMPERATURE SENSOR		シ	DRAWING NUMBER
OUTLETS AND	DRAINS			
θ	FLOOR DRAIN (FD)			
\$	FUNNEL FLOOR DRAIN			

MECHANICAL RENOVATION NOTES:

AREA DRAIN

- CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND VERIFYING ACTUAL ONSITE CONDITIONS AND EQUIPMENT LOCATIONS PRIOR TO ANY AND ALL DEMOLITION WORK AND/OR EQUIPMENT REMOVAL.
- CONTRACTOR TO INCLUDE AS A PART OF THE BID ALL COSTS ASSOCIATED WITH CUTTING AND PATCHING THAT IS REQUIRED TO INSTALL ALL NEW MECHANICAL SYSTEMS AS REQUIRED TO MEET THE SITE CONDITIONS AS SHOWN ON THE DRAWINGS. PATCHING SHALL MEET THE AESTHETIC CONDITIONS WHICH WAS THE CONDITION PRIOR TO ANY CUTTING BEING PREFORMED.
- CONTRACTOR TO PROPERLY SEAL AND REPAIR ANY AND ALL DAMAGE THAT IS A RESULT OF REMOVAL OR DEMOLITION OF MECHANICAL EQUIPMENT. THIS INCLUDES BUT IS NOT LIMITED TO WALL, DOOR, CEILINGS.
- THE EXISTING DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY OTHERS. AS A RESULT, THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THIS DOCUMENT
- ALL EXISTING DUCTWORK INDICATED ON PLAN WAS TAKEN FROM EXISTING MECHANICAL PLANS AND SHALL NOT BE CONSIDERED 100% ACCURATE. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING SYSTEMS PRIOR TO CONSTRUCTION.
- DURING REMOVAL OF ITEMS SO INDICATED. CAUTION SHOULD BE USED TO PREVENT DAMAGE TO ANY EQUIPMENT REQUESTED FOR SALVAGE (IF ANY). ALL REUSABLE SALVAGED MATERIAL SHALL REMAIN THE PROPERTY OF THE OWNER AND BE RETAINED FOR THEIR INSPECTION. ONLY ITEMS AGREED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR
- DEMOLITION CONTRACTOR SHALL REFER TO FRONT END SPECIFICATION FOR WASTE REMOVAL GUIDELINES.

MECHANICAL GENERAL NO

- 1. THESE DRAWINGS SHALL BE READ IN CO
- 2. THE MECHANICAL SYSTEMS CONSIST OF DIAGRAMS, AND AS DESCRIBED IN THE
- 3. REFER TO ARCHITECTURAL DRAWINGS I SETBACKS.
- 4. THE MECHANICAL DRAWINGS ARE DIAGE REQUIRED OFFSETS. REFER TO ARCHITE CONSTRUCTION DETAILS.
- 5. WHERE THERE IS A CONFLICT BETWEEN STRINGENT REQUIREMENT SHALL APPLY
- 6. COORDINATE ALL MECHANICAL WORK W INTERFACE WITH THE WORK OUTLINED 7. PROVIDE CANADIAN ELECTRICAL CODE
- EQUIPMENT. OFFSET MECHANICAL WOR 8. MECHANICAL EQUIPMENT SHALL NOT BE CONSTRUCTION PROCESS WITHOUT A W
- 9. INSTALL MECHANICAL WORK AS HIGH AS BUILDING LINES.
- 10. COORDINATE EXACT LOCATIONS OF ALL ARCHITECT BEFORE FINAL ROUGH-IN.

FIRESTOPPING:

- 1. ALL PENETRATIONS OF FIRE RATED SEP SUBSECTION 3.1.9 OF THE BRITISH COLU REQUIRE 'F' RATED FIRESOPPING IN ACC PENETRATED.
- 2. THE MECHANICAL CONTRACTOR SHALL REGISTERED IN THE PROVINCE OF BRITI REVIEW OF ALL FIRESTOPPING SYSTEMS SUPPRESSION SYSTEMS. THE CONTRAC OF RECORD" FOR THE FIRESTOPPING SY REQUIREMENTS.
- 3. FIRESTOP CUSTOM DETAILS GENERATE SYSTEM TESTED TO CAN/ULC-S115-11 IS HAVING JURISDICTION FOR REVIEW AND
- 4. CONTRACTOR IS RESPONSIBLE FOR FIR SYSTEMS (DUCTS & PIPES) THAT PENET

SEISMIC RESTRAINTS:

- 1. THE MECHANICAL CONTRACTOR SHALL REGISTERED IN THE PROVINCE OF BRITI AND DETAILING OF ALL ANCHORS, SUPP PLUMBING AND FIRE SUPPRESSION SYS **"REGISTERED PROFESSIONAL OF RECOF** SPECIFICATIONS FOR ADDITIONAL REQU
- 2. POST-INSTALLED DROP-IN OR POWER D
- DUCTWORK 1. ALL DUCTWORK SIZES NOTED ON DRAW DIMENSIONS FOR DUCT LINER TO OBTAI
- 2. REFER TO ARCHITECTURAL REFLECTED AND ELEVATION OF DIFFUSERS AND GRI 3. MAXIMUM FLEXIBLE DUCT LENGTH SHAL
- FOR SPECIFIC APPLICATION. DO NOT USI THAN 60°. ENSURE FLEXIBLE DUCTWORK 4. PROVIDE SIMILAR TYPE DUCT CONSTRU
- SNAP-LOCK DUCTWORK ARE PROHIBITE 5. PROVIDE METAL DUCTWORK TRANSITION
- 6. PROVIDE DIFFUSERS AND GRILLES COM REFER TO ARCHITECTURAL REFLECTED
- 7. PROVIDE BALANCING DAMPERS FOR EAC MORE OPENINGS OR BRANCH LINES. REF LOCATIONS AND REQUIREMENTS.
- 8. PROVIDE 1" THICK DUCT LINER ON ALL T OTHERWISE ON THE DRAWINGS.
- 9. REFER TO SPECIFICATION FOR DUCT PR PRESSURE CLASSIFICATIONS ARE NOT N
- MECHANICAL CONSULTANT DURING TEN 10. ALL DUCTWORK AND PLENUMS SHALL E SPECIFICATIONS FOR DETAILS.
- 11. LEAK TEST REPRESENTATIVE SECTION W.G. AND ALL OUTDOOR DUCTWORK. RE

		1	DISTRICT OF UCLUELET No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION PREPARED BY: COORD SYST:
TES]		SURVEY DATE:
ONJUNCTION WITH THE PROJECT SPECIFICATIONS. F ALL WORK INDICATED ON THE DRAWINGS, SCHEMATICS, SPECIFICATIONS. FOR SPECIFIC DIMENSIONS, BENCHMARKS, ELEVATIONS AND RAMMATIC IN NATURE AND DO NOT ATTEMPT TO SHOW ALL		3	
ECTURAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL			
I THE DRAWINGS AND THE SPECIFICATIONS THE MOST Y. WITH OTHER TRADES TO ENSURE PROPER AND ADEQUATE FOR THIS PROJECT. (CEC) REQUIRED CLEARANCES FOR ALL INSTALLED RK AS REQUIRED TO SUIT THIS REQUIREMENT. E USED FOR TEMPORARY HEATING OR COOLING DURING THE WRITTEN LETTER FROM THE OWNER. S POSSIBLE, TIGHT TO STRUCTURE AND SQUARE TO LL WALL OR CEILING MOUNTED SENSORS WITH THE			
PARATIONS WILL BE FIRESTOPPED IN ACCORDANCE WITH JMBIA BUILDING CODE 2018. ALL FIRESTOP SYSTEMS WILL CORDANCE WITH THE GRADE OF FIRE SEPARATION BEING			urbansystems.ca
RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER, ISH COLUMBIA, TO PROVIDE A COMPLETE DESIGN AND S REQUIRED FOR MECHANICAL, PLUMBING AND FIRE CTOR'S ENGINEER WILL BE THE "REGISTERED PROFESSIONAL YSTEMS. REFER TO SPECIFICATIONS FOR ADDITIONAL		5	
D BY MANUFACTURER FOR APPLICATIONS WHICH NO LISTED AVAILABLE TO BE SUBMITTED TO LOCAL AUTHORITIES APPROVAL PRIOR TO INSTALLATION.			
RE STOPPING ALL EXISTING BASE BUILDING MECHANICAL RATE NEW FIRE SEPARATIONS (I.E FILE ROOM PARTITIONS)			
RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER, ISH COLUMBIA, TO PROVIDE A COMPLETE DESIGN, SIZING PORTS AND SEISMIC RESTRAINT FOR ALL MECHANICAL, STEMS. THE CONTRACTOR'S ENGINEER WILL BE THE RD" FOR THE SEISMIC RESTRAINT SYSTEMS. REFER TO JIREMENTS. PRIVEN ANCHORS ARE NOT PERMITTED.			1495 FRANCES ST VANCOUVER BC V5L 1Z1 TEL 604 738 4323
/INGS ARE INSIDE CLEAR DIMENSIONS. ADD APPROPRIATE IN OUTSIDE DUCT DIMENSIONS.) CEILING PLANS AND ELEVATIONS FOR EXACT LOCATION ILLES.		7	# Date Issue / Revision App
LL BE NO LONGER THAN 5 FT UNLESS NOTED OTHERWISE SE FLEXIBLE DUCT FOR CHANGES IN DIRECTION GREATER K IS SUPPORTED WITHOUT SAGGING. JCTION FOR ALL EXPOSED APPLICATIONS. FLANGE TYPE AND ED IN EXPOSED AREAS.			1 Feb 07, 2022 Issue for Class B Costing 2 June 10, 2022 Issue for Tender
INS BETWEEN ALL EQUIPMENT AND DUCT CONNECTIONS. IPATIBLE WITH ARCHITECTURAL CEILING AND WALL TYPES. CEILING PLANS. CH SUPPLY, RETURN AND EXHAUST DUCT WITH TWO OR			
FER TO DRAWINGS FOR ADDITIONAL BALANCING DAMPER			Professional Seals
RESSURE CLASSIFICATIONS. WHERE DUCT NOTED FOR A SPECIFIC APPLICATION, CONFIRM WITH THE NDER. BE CONSTRUCTED TO SEAL CLASS A. REFER TO			
I OF DUCTWORK DESIGNED TO OPERATE IN EXCESS OF 3" EFER TO SPECIFICATIONS FOR DETAILS.		9	
	L		URBAN S Y S T E M S Scale NTS Quality Control by Designed by Drawn by SL
		11	Cover Sheet
Μ	0		Project Number Drawing Number Revision 047B-032-21 M01 A

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A C E	G						K		
HEAT TRACE					DIFFUSE	ERS AND GRILLES			
EQUIPMENT SERVICE LOCATION MANUFACTURER TYPE MEAN AMBIENT TEMP PIPES SIZE MODEL & NO	D. RUNS CAPACITY	MAX. CIRCUIT LENGTH	ELECTRICAL	NOTES	EQUIPMENT		DESCRIPTION/TYPE		MANUFACTURER
TAG (DEG F) (IN)	(W/FT)	(FT)	(V/Ph/Hz)	NOTES	TAG		DESCRIPTION/TIPE		MANUFACTURER
HTRC-1 DOMESTIC WATER LEVEL 1 NVENT RAYCHEM XL TRACE SYSTEM 14 VARIES 5XL2-C	· · · ·	196	208/1/60	ALL	S-1	LOUVER	ED FACE SUPPLY AIR G	GRILLE	EH PRICE
NOTES:			1		T-1		CRATE RETURN AIR GRI		EH PRICE
1 REFER TO MECHANICAL FLOOR PLANS FOR ACTUAL LENGTH OF HEAT TRACING REQUIRED.					E-1	EGG C	RATE EXHAUST AIR GR	ILLE	EH PRICE
2 PROVIDE AMBIENT AIR SENSOR CONTROL HEAT TRACE TO SHUT OFF AT 40 DEG. F AMBIENT					L-1		EEP DRAINABLE LOUVE		EH PRICE
 PROVIDE HEAT TRACE FOR ALL PIPING EXPOSED TO OUTDOOR CONDITIONS (i.e. OUTSIDE OF HEATED SPACE) SEE MECHANICAL MOTORLIST FOR HEAT TRACING ELECTRICAL LOADS 					DG-1 NOTES - COMM		OOR TRANSFER GRILLE		EH PRICE
PLUMBING FIXTURES WC-1 (FLUSH TANK, FLOOR MOUNT, ADA): TOTO ECO DRAKE CLOSE COUPLED TOILET CST744EL, ADA COMPLIANT, LOW CONSUMPTION 1.28GPF, ELONGATED FRONT BOWL AND TANK SET, COMMERCIAL SEAT, COTTON COLORS/FINISHES. MEETS ASME A112.19.2/CSA B45.1, EPA WATERSENSE CERTIFIED. TANK FLUSH SWITCH (HAND TRIP LEVER) TO BE ON THE TRANSFER SIDE OF THE TOILET. LAV-1 (COUNTERTOP): SINK: AMERICAN STANDARD COUNTERTOP SINK 'COLONY' 0346 001, VITREOUS CHINA, SELF-RIMMING, CENTRE HOLE, WHITE. FAUCET, TEL105-D10E #CP, 0.5 GPM, BRUSHED NICKEL FINISH, VANDAL RESISTANT AERATOR HOUSING, SELF-GENERATING HYDROPOWERED SELF-GENERATING ECOPOWER SYSTEM WITH MICRO SENSOR, COMES WITH SPOUT BODY, CONTROLLER BOX AND MOUNTING HARDWARE. MCGUIRE H170BVRB C.P. POLISHED BRASS SUPPLY PIPES WITH STOPS. PROVIDE PVC JACKET COVERING OFFSET P-TRAP AS PER BCBC REQUIREMENT. TOTO LEAD-FREE THERMOSTATIC MIXING VALVE TLT10R. LAV-2 (WALL HUNG, ADA): SINK: MERICAN STANDARD WALL-HUNG SINK 'LUCERNE' 0356.041, VITREOUS CHINA, FRONT OVERFLOW, CENTRE HOLE, WHITE, MEETS ADA. LAV-2 (WALL HUNG, ADA): SINK: MERICAN STANDARD WALL-HUNG SINK 'LUCERNE' 0356.041, VITREOUS CHINA, FRONT OVERFLOW, CENTRE HOLE, WHITE, MEETS ADA. LAV-2 (WALL HUNG, ADA): SINK: MERICAN STANDARD WALL-HUNG SINK 'LUCERNE' 0356.041, VITREOUS CHINA, FRONT OVERFLOW, CENTRE HOLE, WHITE, MEETS ADA. LAV-2 (WALL HUNG, ADA): SINK: MERICAN STANDARD WALL-HUNG SINK 'LUCERNE' 0356.0				UNIT TAG GI-1 NOTES: 1 A		1. LOUVRE FINISH TO ARCHIT 2. CONCEALED SCREW HOLES 3. COLOUR OF PRODUCT TO E CEPTOR TION LOCATION	PRAWINGS. SUSER NECK SIZES / GRI FUSERS AND GRILLES S ECT'S SELECTION. SIZE S. BE SELECTED BY THE AF MANUFACTURER ZURN	ILLE SIZES. SHALL BE COMPLET WITH S SHOWN IS FOR PERFORM	SEISMIC RESTRAINT CONNEC
KS-1 (KITCHEN SINK): SINK: FRANKE MODEL LBD4410P-1, STAINLESS STEEL, DOUBLE BOWL, SINGLE CENTER HOLE, INTEGRAL DRAIN AND STRAINER, 10" DEEP TUB. FAUCET: KOHLER PURIST K-7506-CP, 7" PULL-OUT SPOUT, 1.5 GPM, ADA COMPLIANT, VIBRANT STAINLESS FINISH. KS-2 (KITCHEN SINK):			HEAT REC		JNIT VENTIL LOCATION	LATOR SCHEDULE		SERVICE	EXHAUST SIDE AIR FLOW (CFM)
SINK: FRANKE MODEL ALBS2705P-1/1, STAINLESS STEEL, SINGLE COMPARTMENT, SINGLE CENTER HOLE, INTEGRAL DRAIN AND STRAINER, 5" DEEP TUB, MEETS ADA. FAUCET: KOHLER PURIST K-7509-CP, 6" SPOUT, 1.5 GPM, ADA COMPLIANT, VIBRANT STAINLESS FINISH.			IAG						
FAUCET. KOHLER FURIST R-7509-CF, 0 SFOUT, T.S GFM, ADA COMFLIANT, VIDRANT STAINLESS FINISH.			ERV-1		L1 MECHANICAL	ROOM RENIE	WAIR HE1XINH	ENTIRE BUILDI	NG 400
FD-1 (FLOOR DRAIN): WATTS FD-100-C-A5-1 FLOOR DRAIN, EPOXY COATED, CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY WEEPHOLES, NO HUB OUTLET, UNSPECIFIED. FFD-1 (FUNNEL FLOOR DRAIN): WATTS FD-100-C-EG-1-7 FLOOR DRAIN, EPOXY COATED, CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY WEEPHOLES, NO HUB OUTLET, TRAP PRIMER.			NOTES:	2. FILTER 3. INTERL	SECTION (MERV-8)	ANS WITH ECM MOTORS FOR SU) D ISOLATION DAMPERS FOR BO ME DELAY SWITCH (WALL MOUNT	TH AIRSTREAMS		
HB-1 (HOSE BIBB, NON-FREEZE):									
$\frac{1}{2}$ " WALL MOUNTED HOSE BIBB. RECESSED BOX WITH COVER AND SUITABLE FOR COLD CLIMATES WITH FREEZE PROTECTION.	EXPANSIO	N TANK							
	EQUIPMENT		CATION	г	TYPE MA	NUFACTURER MODEL	VOLUME	ACCEPTANCE VOLUM	E TANK DIAMETER
	TAG	200					(GAL)	(GAL)	
	ET-1	I 1 MECHA	NICAL ROOM	DIAF	PHRAGM	AMTROL ST-20VC		3.2	12
	2 TA 3 TA	ITI-LEGIONELLA LINER NK TO BE ASME RATE NK SUPPLIED WITH SE	D. EISMIC MOUNTING	KIT.					
	DOMES	TIC WATER H	<u> 1EATER (E</u>	,					
	EQUIPME TAG	NT	LOCATION		MANUFACTURER	MODEL		IPUT TANK CAF KW) (USC	
	DHWT-1	1 L1 M	IECHANICAL ROOM	G	SW SPACE SAVER	GSW SS630SSEB	N-30	3.0 30	14.00
	NOTES		DAN	I				I	

	UNIT DESCRIPTION
	HEAT RECOVERY VENTILATOR
ERV-1	HEAT RECOVERY VENTILATOR
	DOMESTIC HOT WATER TANK
DHWT-1	DOMESTIC HOT WATER TANK
	ELECTRIC BASEBOARD HEATERS
EBB-1	ELECTRIC BASEBOARD HEATERS
	HEAT TRACE
HTRC-1	DOMESTIC WATER
	MISCELLANEOUS
-	NO-TOUCH FAUCET SENSOR POWER
ELEC = ELECT G = GENERAL S = SUPPLIED I = INSTALLED	CONTRACTOR BY BY
ELEC = ELECT G = GENERAL S = SUPPLIED I = INSTALLED C = CONNECTI <u>STARTER COD</u> MAN = MANUA HOA = MAGNE	RICAL CONTRACTOR BY BY ED BY <u>ES:</u> L STARTER TIC STARTER W/ HAND/OFF/AUTO
ELEC = ELECT G = GENERAL S = SUPPLIED I = INSTALLED C = CONNECTI STARTER COD MAN = MANUA HOA = MAGNE SWIT MAG = MAGNE MRR = MOTOR & MO PCS = PACKAC	RICAL CONTRACTOR BY BY ED BY <u>ES:</u> L STARTER TIC STARTER W/ HAND/OFF/AUTO CH W/ AUX. CONTACTS TIC STARTER C/W AUX STATUS CONTACTS RATED RELAY, 24 VAC COIL TOR PROTECTION SWITCH GED CONTROL SYSTEM
ELEC = ELECT G = GENERAL S = SUPPLIED I = INSTALLED C = CONNECTI MAN = MANUA HOA = MAGNE SWIT MAG = MAGNE MRR = MOTOR & MO PCS = PACKAC VFD = VARIABI	RICAL CONTRACTOR BY BY ED BY <u>ES:</u> L STARTER TIC STARTER W/ HAND/OFF/AUTO CH W/ AUX. CONTACTS TIC STARTER C/W AUX STATUS CONTACTS RATED RELAY, 24 VAC COIL TOR PROTECTION SWITCH GED CONTROL SYSTEM LE FREQUENCY DRIVE ED VOLTAGE STARTER //ITCH

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	J WATER REATER (ELECT	(IC)				
EQUIPMENT	LOCATION	MANUFACTURER	MODEL	INPUT	TANK CAPACITY	RECOVE
TAG				(KW)	(USG)	TEMP RISE 9
DHWT-1	L1 MECHANICAL ROOM	GSW SPACE SAVER	GSW SS630SSEBN-30	3.0	30	14.0
NOTES:	1. C/W DRAIN PAN.		4. 6 YEARS TANK WARRANTY			
	2. C/W VACUUM RELIEF VALVE.		5. 1 YEAR PARTS WARRANTY			
	3. GLASS-LINED TANKS					

UNIT LOCATION	STANDBY	ELECTRIC	AL LOAD			VOLT	PH	E		Г	STARTER				
	PWR (YES/NO)	МСА	FLA	KW	HP			S	I	с	S	I	с	TYPE	S
L1 MECHANICAL ROOM	N	20.3	9	-	0.75	120	1	М	М	E	E	E	E	MRR	E
BASEMENT SERVICE ROOM	N	-	-	3	-	240	1	М	М	E	-	-	-	PCS	E
REFER TO DRAWINGS	N	-	-	-	-	-	-	E	E	Е	-	-	-	-	-
LEVEL 1	N	-	-	-	-	120	1	М	М	E	E	E	E	MAG	E
VARIOUS	N	-	-	-	-	120	1	М	м	E	-	-	-	-	E

CONTROL DEVICE CODES: AQUA = PUMP CONTROLLED BY AQUASTAT BMS = BLDG MANAGEMENT SYSTEM ES = END SWITCH ET = LINE VOLTAGE T'STAT FA = FIRE ALARM FAP = FIRE ALARM PANEL FS = FLOW SWITCH GS = GAS SENSOR H = HUMIDITY SENSOR I = INTERLOCK, SEE NOTES LIGHT = WIRED TO LIGHT SWITCH

LS = LEVEL SWITCH

OS = OCCUPANT SENSOR PS = PRESSURE SWITCH

R. STAT = REVERSE ACTING THERMOSTAT

TC = TIME CLOCK

T = LOW VOLTAGE T'STAT OR SENSOR TS = TAMPER SWITCH

VS = VARIABLE SPEED SWITCH

WS = WALL SWITCH

ELECTRICAL LOAD CODES:

BHP = BREAK HORSEPOWER FLA = UNIT FULL LOAD AMPS

HP = UNIT OR MOTOR HORSE POWER PH = POWER PHASE

MCA = MINIMUM CIRCUIT AMPS VOLT = REQUIRED SUPPLY VOLTAGE

MISCELLANEOUS CODES: FFCP = FIRE FIGHTERS CONTROL PANEL FRAC = FRACTIONAL HORSEPOWER

INT = INTEGRAL PART OF UNIT

GENERAL NOTES:

A. ALL FIRE ALARM DEVICES WIRED BY ELECTRICAL B. CONTROL PANELS ARE SHIPPED LOSS & REQUIRE FIELD WIRING

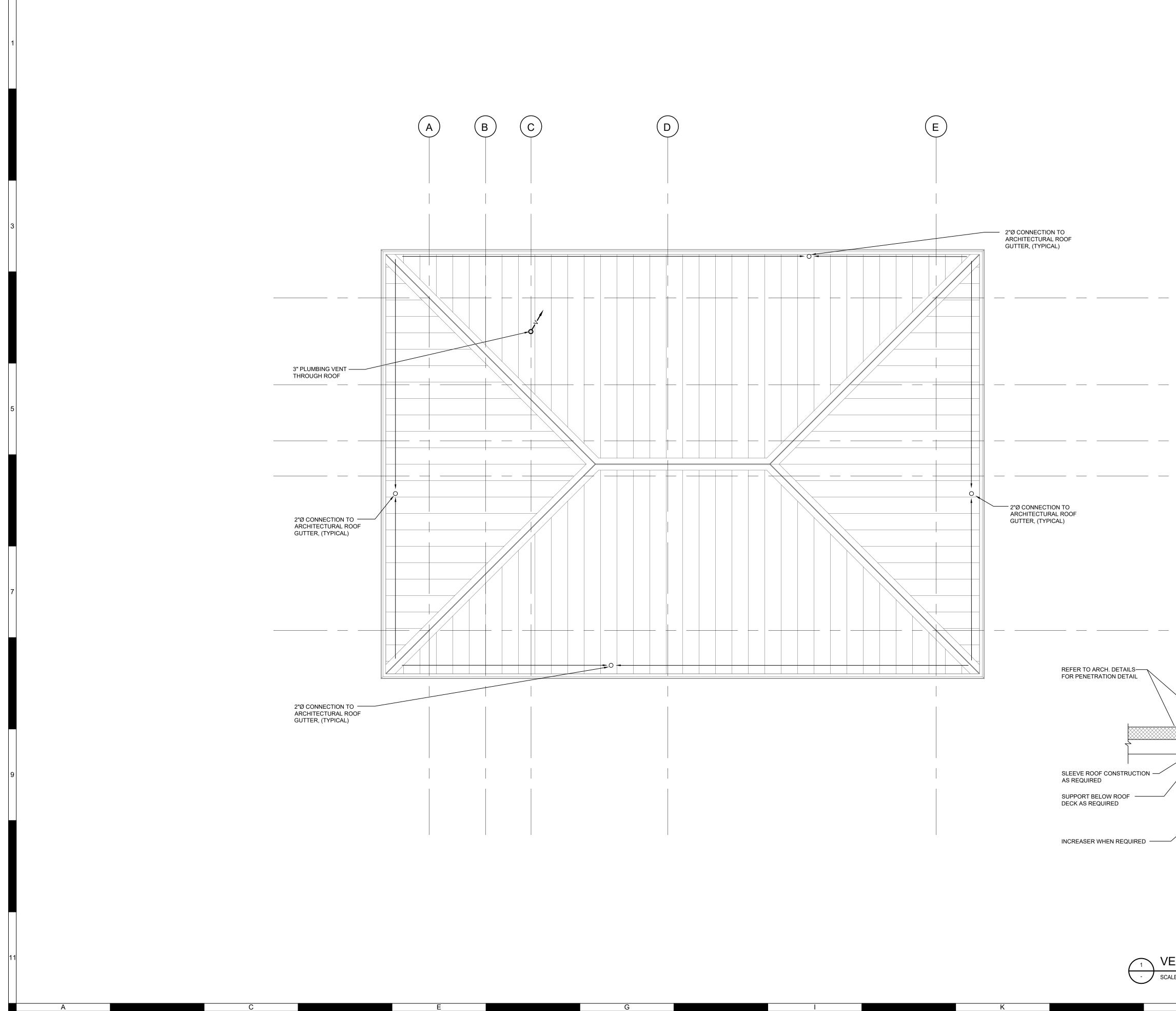
C. PCS EQUIPMENT REQUIRES SINGLE SOURCE POWER CONNECTION, UNLESS

D. CP, VFD EQUIPMENT REQUIRES POWER WIRING TO AND FROM CONTROL PANEL

NOTED OTHERWISE TO CONTROLLED EQUIPMENT

K

							0
ER		SERVICE				ER	NOTES
	TRA	JPPLY AIR			RSG/SM 80/F/A		2,3 2,3
	INTA	HAUST AIR			80/F/A DE 635		2,3 ALL
WALLS	AND CEILII	TURN AIR	MS.		STG/A		ALL
NNECT	ION CLIPS.						
L MATC	H SIZE SHO	OWN ON A	RCHITECTU	IRAL DRAV	/INGS.		
	OCESS.						
-	WATI	ER	GRI	EASE		FLOW	NOTES
N)	CAPACIT 10			ITY (LBS) 30	RA	TE (GPM 15) ALL
							NOTEO
SIDE CFM)	ESP (IN	I.WC)	SUPPLY AIR FLOW		ESP (II	N.WC)	NOTES
	0.7	5	400)	0.7	75	ALL
	_						
ER		IEIGHT		DDER		X WORKII	
		N) 9		GE (PSI) 55	PF	RESS. (PS 250	I) ALL
	′ AT = (GPH)]) ([1ENSION DxH) IN	SHIF	PPING WE (LB)	IGHT	NOTES
14.00			22x30		101		ALL
D			CONTROL				NOTES
S		C C	CONTROL S	1	C	TYPE	NOTES
	I I E			I M	C	TYPE PCS	NOTES
S E	E	E	S 		М	PCS	- - -
S	I	С	S	I 			
S E	E	E	S 		М	PCS	- - -
S E E	E E	E	S M -	-	M -	PCS PCS	
S E E	E E	E	S M -	-	M -	PCS PCS	
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S E E E E	I E E - - E	C E E - E	S M - - M M	- - M	M - - M	PCS PCS	
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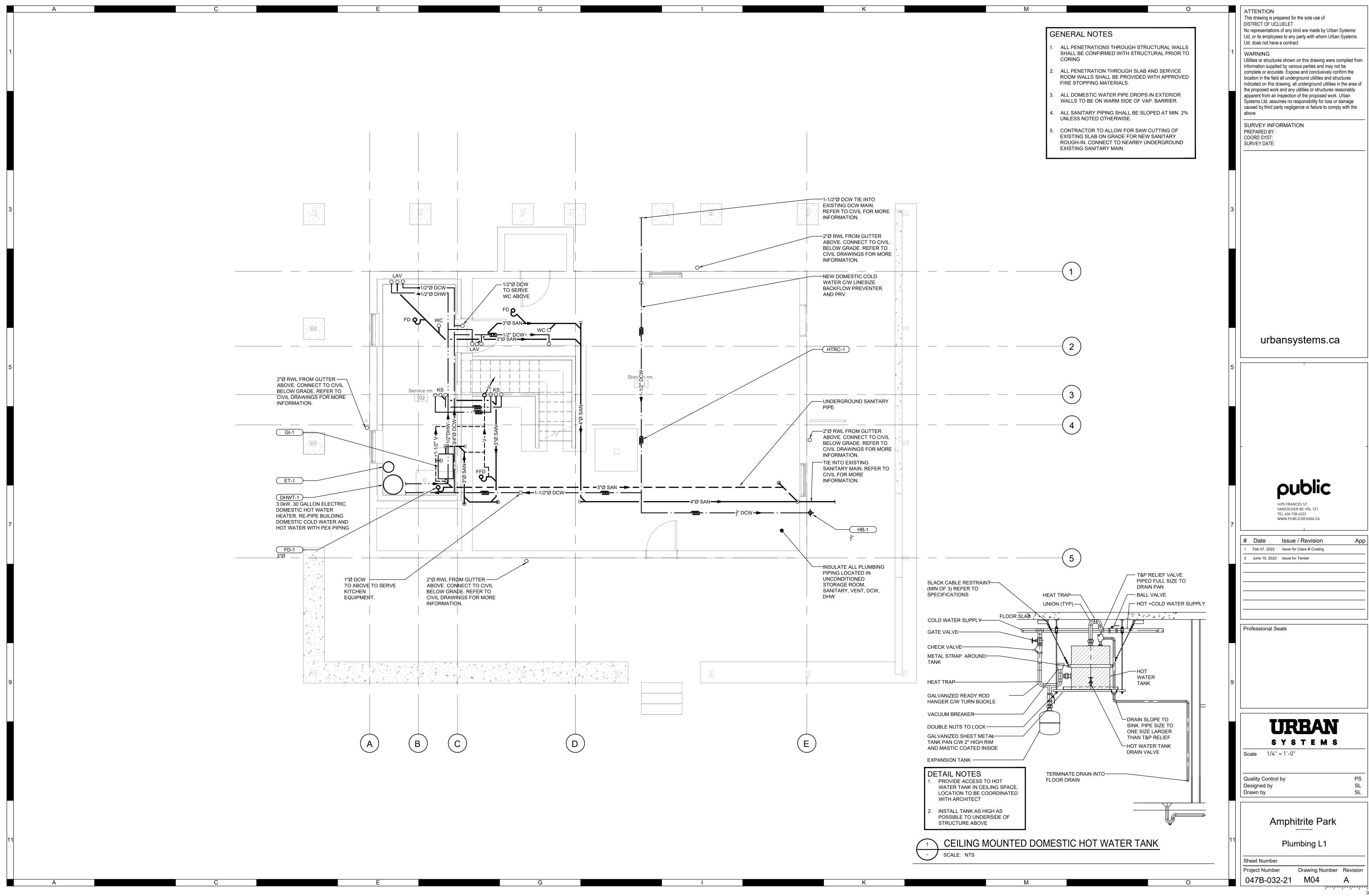


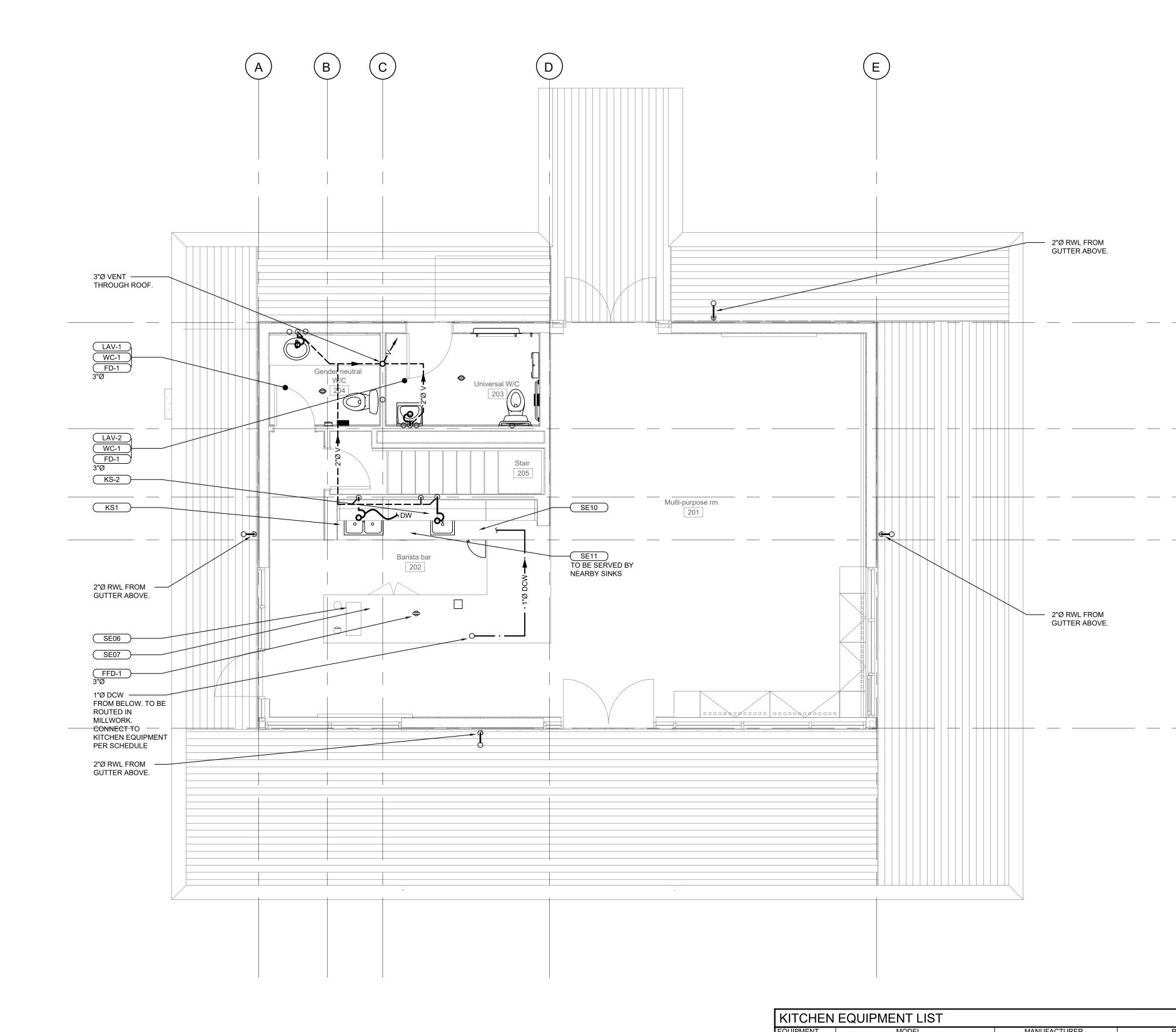
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	TURN DOWN INTO STACK		
	PLUMBING VENT CAP		
	ROOFING, REFER TO ARCH.		Professional Seals
	ROOF		
		9	
			URBAN
			SYSTEMS
	INSULATE WITHIN 3m OF ROOF PENETRATION - INSULATION THICKNESS AS SPEC'D.		Scale 1/4" = 1'-0"
			Quality Control by PS Designed by SL
	VENT		Drawn by SL
	STACK		Amphitrite Park
		11	
ENT ROOF PENETRA	ATION		Mechanical Roof Plan
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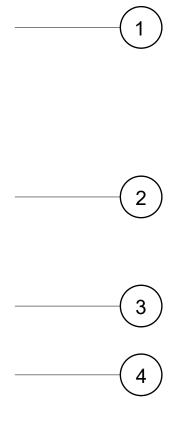




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EQUIPMENT	MODEL	MANUFACTURER		R
TAG			WASTE	V
SE07	EPPR724	EXPRESSO PARTS	1/2	
SE06	LINEA PB	LA MARZOCCO	3/4	
SE11	JET TECH EV18	JET TECH	1	
SE10	ICE MACHINE C-80BAJ-AD	HOSHIZAKI	1/2	
NOTES:			· · · · · · · · · · · · · · · · · · ·	
1	REFER TO ARCHITECTURAL/MANUFACTURER	'S DRAWINGS FOR INSTALLATIO	N DETAILS.	
2	SPECIALTY EQUIPMENT BY OTHERS.			
3	MECHANICAL SHALL CONNECT ALL PLUMBING	G NOTED IN SCHEDULE TO KITCH	HEN EQUIPMENT	. INS

- ALL PENETRATIONS THROUGH STRUCTURAL WALLS SHALL BE CONFIRMED WITH STRUCTURAL PRIOR TO CORING
- 2. ALL PENETRATION THROUGH SLAB AND SERVICE ROOM WALLS SHALL BE PROVIDED WITH APPROVED FIRE STOPPING MATERIALS.
- 3. ALL DOMESTIC WATER PIPE DROPS IN EXTERIOR WALLS TO BE ON WARM SIDE OF VAP. BARRIER.
- 4. ALL SANITARY PIPING SHALL BE SLOPED AT MIN. 2% UNLESS NOTED OTHERWISE.
- 5. CONTRACTOR TO ALLOW FOR SAW CUTTING OF EXISTING SLAB ON GRADE FOR NEW SANITARY ROUGH-IN. CONNECT TO NEARBY UNDERGROUND EXISTING SANITARY MAIN.
- . PLUMBING FIXTURES SERVED FROM BELOW, REFER TO LEVEL 1 FOR MORE INFORMATION.



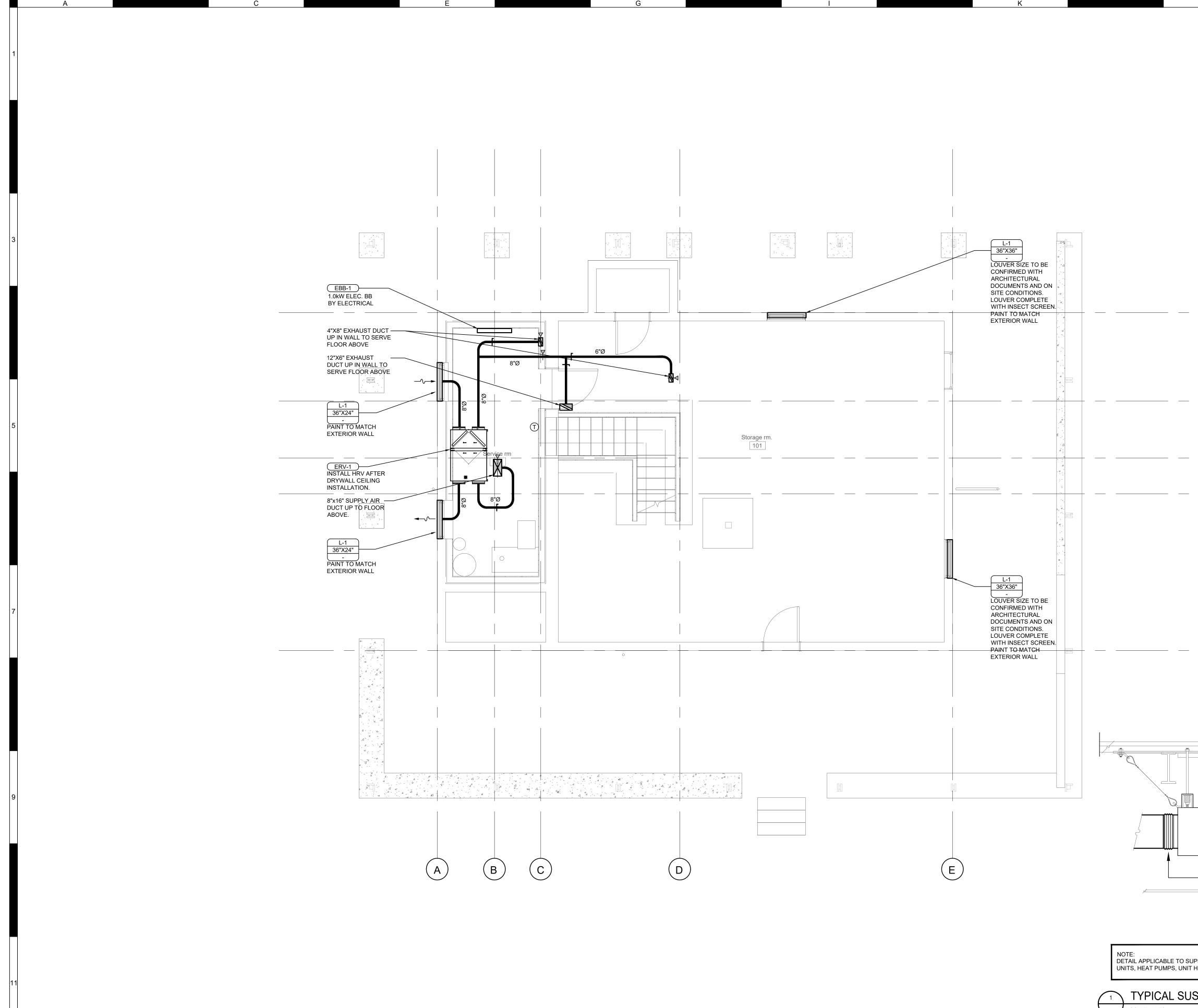
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ROUGH-I	N CONNECT	IONS (IN)		NOTES
VENT	COLD	HOT	PLUMBING	
	WATER	WATER	VALVE	
-	3/8	-	RPBP	ALL
-	3/8	-	DUAL CHECK	ALL
-	-	1/2	RPBP	ALL
-	1/2	-	RPBP	ALL

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T. INSTALL BACKWATER VALVES AS NOTED IN SCHEDULE.

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location in the field all underground utilities and struct indicated on this drawing, all underground utilities in ti the proposed work and any utilities or structures reas	he area of
apparent from an inspection of the proposed work. Un Systems Ltd. assumes no responsibility for loss or da	rban Image
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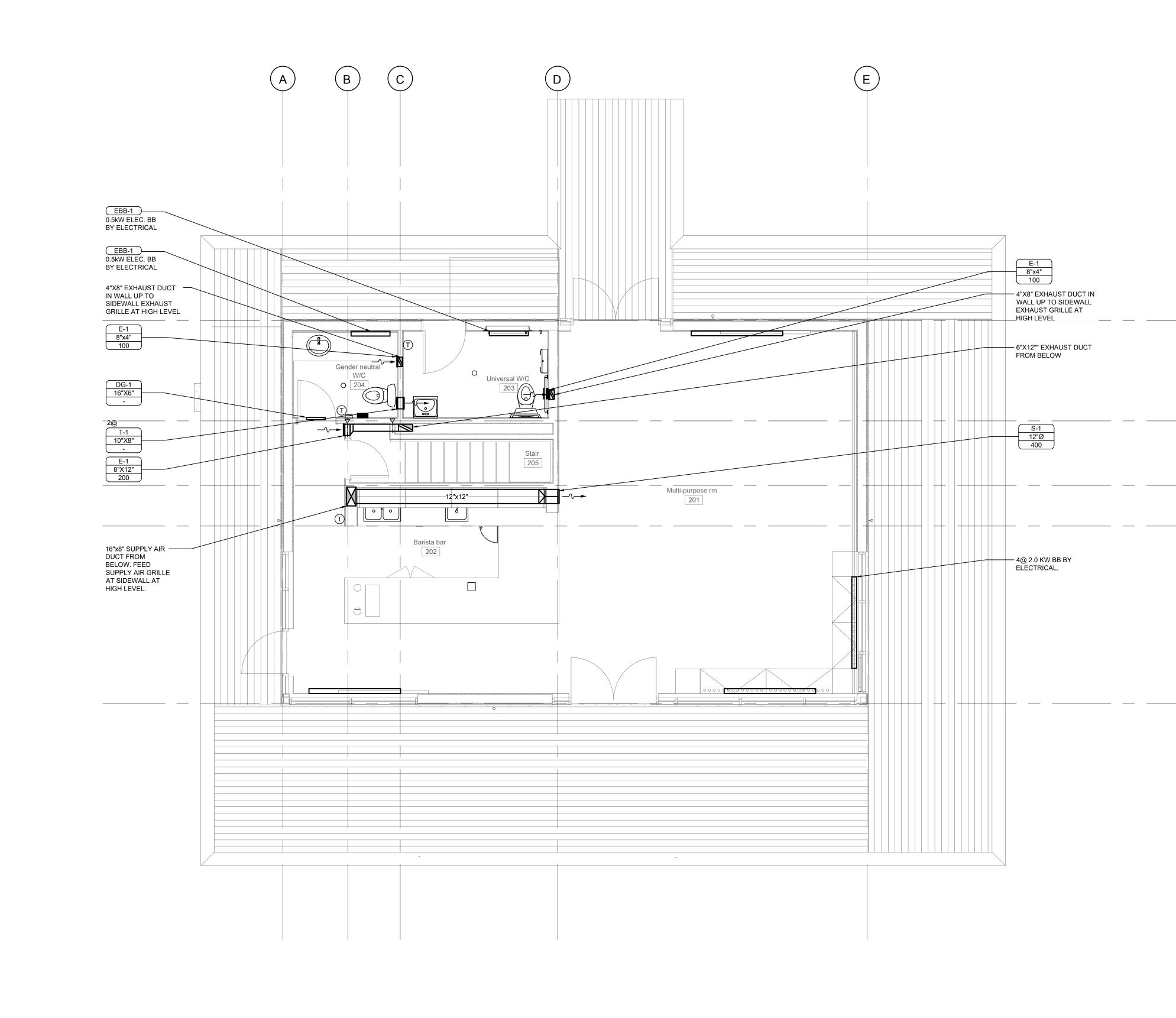
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	SUPPLY AND RETURN DUCT CONNECTIONS AT UNIT ARE TO BE MADE WITH 100mm (4") LONG DURODYNE DUROLON FLEXIBLE FABRIC HELD BY DURODYNE GRIP-LOC END CONNECTIONS. ACCESS DOOR FOR SERVICE OF EQUIPMENT AND LOCATION TO MATCH	CRBAN S Y S T E M S Scale 1/4" = 1'-0" Quality Control by PS Designed by SL Drawn by SL
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O GENERAL NOTES 1. CONTRACTOR TO COORDINATE FINAL LOCATIONS OF GRILLES & DIFFUSERS WITH ARCHITECTURAL & INTERIOR PLANS AND ELEVATIONS. 2. WALL MOUNTED CONTROL DEVICES (TEMPERATURE SENSORS, HUMIDITY SENSORS, CO2 SENSORS) TO BE MOUNTED 5 FT. UNLESS NOTED OTHERWISE. 3. BRANCH DUCT TO MATCH GRILLE/DIFFUSER SIZE UNLESS NOTED OTHERWISE 4. ALL PENETRATIONS THROUGH SHEAR WALLS SHALL BE X-RAYED/SCANNED PRIOR TO CUTTING & CORING 5. SHIFT/OFFSET ALL NEW DUCTING AROUND EXISTING SERVICES AND STRUCTURE COMPONENTS AS REQUIRED. TYP.	1	ATTENTION This drawing is prepared for the sole use of DISTRICT OF UCLUELET No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION PREPARED BY: COORD SYST: SURVEY DATE:
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	ON WORKS	The contractor shall obtain approval for the location of all restraint fixing points from the structural engineer, on site, prior to installation.	Press to connect copper and copper alloy 12mm to 50mm fittings to conform to ASM Sealing elements shall be EPDM. Pressing tools and jaws used shall be approved for
	ENERAL	Where equipment is mounted on spring or resilient mounts for vibration isolation it shall be the responsibility of the manufacturer of the mount to incorporate seismic restraint. Provide steel frame bases where necessary to achieve this and also avoid overturning. The manufacturer shall supply certificates, signed by a Professional Engineer registered within the jurisdiction, verifying the design of the seismic restraints is in accordance with this section.	Push to connect 12mm to 50mm fittings suitable for use with copper tubing and certif
11	eneral Scope s' shall mean supply and install.	1.19 Vibration Isolation	EPDM O-ring, stainless steel grab ring. High density crosslinked polyethylene pipe (PEX-a) 1 NPS and smaller (for in-suite distributio
	tant' shall mean AME Group Consulting Professional Engineers	Provide neoprene isolators for deflections 6mm (1/4") and under. Provide either neoprene or steel spring isolators for deflections between 6mm and 12mm (½").	fitting assemblies shall be by one manufacturer. For in concrete slab or sol installations, NSF water distribution systems to allow removal and replacement of the tubing.
Contra	t documents and drawings are diagrammatic. They establish scope, material and installation quality but are not detailed installation instructions.	Provide adjustable limit stops for spring isolation mounts on equipment with operating weights substantially different from the installed weights	2.2 Valves
Clarific	manufacturers' recommended installation instructions, details and procedures for equipment, supplemented by requirements of the Contract Documents. ations or requests for alternate materials or equipment must be submitted in writing to the Consultant no later than seven (7) working days prior to the Mechanical trades' closing tender date. Approval of	Select isolators in accordance with equipment weight distribution to allow for an average deflection meeting or exceeding the specified deflection requirements and so that no isolator has a deflection less than 80% of the static deflection specified. A minimum of 4 isolators are required for each piece of equipment, unless specified otherwise.	Wherever possible all valves shall be of one manufacturer. Grooved valves shall be of the same manufacturer as the adjoining couplings.
Make r	s shall only be given by addendum. eference to electrical, mechanical, structural and architectural drawings when setting out work. Consult with respective Divisions in setting out locations for ductwork, equipment, and piping, so that conflicts	1.20 Substantial and Total Performance Prior to requesting an inspection for Substantial Performance, provide a complete list of items, which are deficient.	Provide valves with manufacturer's name and pressure rating clearly marked on outside of b
	ided and symmetrical even spacing is maintained. Jointly work out all conflicts on site before fabricating or installing any materials or equipment.	A certificate of Substantial Performance will not be granted unless the following items are completed and available to the Owner's Consultant:	All valves shall have a Provincial CRN number which is current. Ball Valves 2 NPS and under shall be low lead forged brass body, 2 piece body, full port, chr
	s shall comply with current editions of the National, Provincial and Municipal Codes, Standards, Acts and Bylaws and will meet the requirements of the Authority having jurisdiction.	Final Plumbing Inspection Certificate from the Authority having Jurisdiction. Schedule C-B for seismic engineering.	(600 psi) W.O.G. Check Valves 2 NPS and smaller shall be lead free bronze swing check with bronze disc cap
	all permits and pay all fees applicable to the scope of work. Contractor shall arrange for inspections of the work by the authorities having jurisdiction and shall provide certificates indicating Final Approval.	Final Backflow Prevention test reports for all backflow devices. Draft Operating/Maintenance Manuals have been submitted for review.	Circuit Setter Valve (for domestic hot water recirculation) shall be screwed, lead free brass, r memory stop handle with graduated markings, positive shut off, 1035 kPa @ 93°C (150 psi (
	with Division 1 - Submission and Closeout Procedures and in addition the following:	All mechanical systems have been commissioned and are capable of operation with alarm controls functional and automatic controls in operation.	Pressure Reducing Valve NPS 1 and smaller shall be lead free copper silicon alloy body or le
for seis	tor shall provide and submit to the Consultant Assurance of Professional Design and Commitment for Field Review Schedule B and Assurance of Professional Field Review and Compliance Schedule C-B mic engineering.	Air and water systems have been balanced with draft report submitted to the Consultant. Operating and Maintenance demonstrations have been provided to the Owner.	for hot and cold water potable water. Rated at maximum inlet pressure of 2100 kPa (305 psi Pressure Reducing Valve NPS 1-1⁄4 NPS to NPS 2 shall be pilot operated with low flow bypa
data s	rawings: Provide shop drawings for all equipment as electronic files (file format: .dwg, .dxf, pdf, or comparable). When manufacturer's cut sheets apply to a product series rather than a specific product, the ecifically applicable to the project shall be highlighted or clearly indicated by other means. Each submitted piece of literature and drawings shall clearly reference the specification and/or drawing that the al is to cover. General catalogs shall not be accepted as cut sheets to fulfill submittal requirements.	Record drawings have been submitted. All previously identified deficiencies have been corrected and accepted.	steel or ductile iron internals. All ductile iron components including body and cover shall be li Backflow Preventers Double Check Valve Assembly (DCVA) shall be 2 NPS and smaller, lea
	ut Submittals: Provide a minimum of two (2) mechanical operation and maintenance manuals and one digital copy, prepared by the TAB Contractor.	Prior to a Total Performance Inspection provide declaration in writing that substantial performance deficiencies have been corrected and final TAB reports and O&M manuals have been submitted.	seats and discs, two isolation valves, test cocks and a bronze strainer. Comply with CSA B64 Reduced Pressure Backflow Assembly (RPBA) shall be 2 NPS and smaller, lead free cast co
Operat	on and maintenance manual approved by, and final copies deposited with the Consultant a minimum of 7-days before final inspection. on and maintenance manual to include but not limited to: Layman's description of the systems and associated controls; Operational instructions, servicing, maintenance, operation and trouble-shooting	The Consultant shall provide one (1) visitation for the purpose of total performance inspection. Subsequent visitations if required shall be at the expense of the Contractor.	valves, test cocks and a strainer. Comply with CSA B64.4 and AWWA C511. Strainers shall be $\frac{1}{4}$ - 2 NPS threaded ends, bronze body, 1034 kPa (150 psi) rating.
reports	ions for each item of equipment; Warranties; Equipment manufacturer's performance datasheets indicating point of operation as left after commissioning is complete; Testing, adjusting and balancing	2.1 Acceptable Manufacturers	Water Hammer Arrestors shall be bellows type with welded stainless steel nesting bellows o
or blac	Drawings: Consultant will provide 1 set of white prints at contractors cost to mark changes as work progresses and as changes occur. Use different colour waterproof ink for each service. Do not use pencil ink. Transfer information weekly to show work as actually installed. Drawings shall be available on a weekly basis for review by the Consultant.	Listed manufacturers are acceptable for their ability to meet the general design intent, quality and performance characteristics of the specified product. The list does not endorse the acceptability of all products available from the listed manufacturers/suppliers.	2.3 Preformed Pipe Insulation
(Signa	each drawing in lower right hand corner in letters at least 12 mm high as follows: - "AS BUILT DRAWINGS: THIS DRAWING HAS BEEN REVISED TO SHOW MECHANICAL SYSTEMS AS INSTALLED" ure of Contractor) (date).	It remains the responsibility of the Contractor to ensure the products supplied are equal to the specified products in every respect, operate as intended, and meet the performance specifications and physical dimensions of the specified product.	Preformed insulation, fine fibrous glass or formed mineral fibre pipe insulation with all service closure. Maximum "K" value at 38°C (100°F) = 0.035 W/m.°C (0.24 Btu.in/hr.ft2.°F). Accept
Submi	to Consultant for approval and make corrections as directed. completed CAD record drawings with final Operating and Maintenance Manuals within two (2) weeks of substantial completion. Failure to submit drawings will result in the work being undertaken by the	The contractor shall be fully responsible for any additional work or materials, to accommodate the use of equipment from the acceptable manufacturers and suppliers listed.	Thermocanvas finishing jacket: fire rated, 170g (6 oz.) fire retardant canvas jacket for coverir PVC finishing jacket: white, UV resistant, for indoor or outdoor applications, 25/50 fire class,
contra	and deducted from the Contractor's hold back amount. Cost to transfer record information onto reproducible media & Auto-CAD disks are this contractor's responsibility. Consultant will release drawings to tor after signing a copyright form. Should the Contractor choose to utilise this consultant for transferring as built information, allow \$400 / sheet for all drawings in the construction set. This will cover costs	2.2 Pipe Hangers and Supports Provide hangers and supports to secure equipment in place, prevent vibration, protect against damage from earthquake, maintain grade, provide for expansion and contraction, and accommodate insulation.	2.4 Cleanouts
	ting time & printing costs. uality of Work	Provide galvanized hangers and supports for all piping except hangers and supports shall be copper plated or epoxy coated for copper piping.	Floor - Unfinished Area: Cast iron floor level cleanout assembly with extra heavy duty, round, Floor - Finished Area: General areas shall be cast iron cleanout with extra heavy duty round
All wor	c shall be by qualified tradesmen with valid Provincial Trade Qualification Certificates. Spot checks will be made by the Consultant. Work which does not conform to standards may be rejected by the cant. The Contractor shall redo rejected work to the accepted standard at no cost to the Owner.	Toggle hangers and/or strap hangers shall not be used for pipe hangers. Power actuated fasteners and "drop-in" anchors shall not be used.	Floor - Finished Area: General areas shall be cast iron cleanout with extra heavy duty round be cast iron floor level cleanout assembly with a square adjustable nickel bronze top with 6rr assembly with round, adjustable, scoriated, nickel bronze top and carpet clamping frame.
	etric Conversion	Provide ring type hangers for piping up to NPS 1½ and clevis type hangers for piping over NPS 1½.	Wall - Finished Area shall be concealed drainage line in a finished wall: Cast iron cleanout to
	s are expressed in SI units. On all submittals (shop drawings etc.) use the same SI units as stated in the specification.	2.3 Access Doors Drywall Surface: Extruded aluminum frame with gypsum board inlay and structural corner elements. Hinge to be concealed 2-point hinge, non-corroding with screwdriver operated cam latch.	2.5 Floor Drains
compa	ible connections to all metric sized fittings, equipment and piping. CSA approved SI Metric pipes are provided, the Contractor shall provide at no extra cost adapters to ensure compatible connections between the SI Metric pipes and all new and existing pipes, fittings, and	Tile Surface: Universal design, stainless steel door (16ga) and stainless steel frame (18ga), door flush to frame, rounded safety corners, continuous concealed hinge, screwdriver operated cam latch, #4 satin stainless steel finish.	Provide trap seal priming connections on all drains 2.6 Trap Seal Primers
equipn		Plaster Walls and Ceiling: steel door (14ga) and steel frame (14ga), door flush to frame edge, expansion casing bead and 75 mm wide galvanized lath surround recessed 18 mm to receive plaster, continuous concealed hinge, screwdriver operated cam latch, prime coat grey painted finish.	Provide flow actuated type priming device, vacuum breaker ports and internal back-flow prot kPa (0.5 GPM @ 20 psi). ½ NPS inlet and outlet, capable of serving 1 to 4 traps.
	= NPS $\frac{1}{2}$ 20mm = NPS $\frac{3}{4}$	Ductwork: Ultra low leakage type, flat oval design, galvanized steel frame (22ga), double skin galvanized steel door (22 ga) with 25mm insulation fully enclosed in panel, bulb type seal integrally fastened to door, lever cam locks. Provide stainless steel in lieu of galvanized steel in stainless steel ductwork.	Electronic trap priming assembly, pre-assembled unit in a 16 gauge steel wall mounted cabir breaker, pre-set 24 hour adjustable timer, manual override switch, 120 volt solenoid valve, ca
	= NPS 1 30mm = NPS 1-1/4 = NPS 1-1/2 50mm = NPS 2	Acceptable manufacturers: Maxam, Acudor, Milcor, Can.Aqua, Mifab, Bilco, Baucoplus	connection. Discharge manifold shall be complete with ?? outlet ports. Provide shut off valv
	= NPS 2-1/2 75mm = NPS 3	2.4 Identification Identify piping with labels and flow arrows. Provide identification at 15m (50ft) maximum intervals, before and after pipes passing through walls, at all sides of tees, behind access doors. Use Brady B-500 vinyl	2.7 Safes, Flashing and Vent Terminals Metal Flashing: 26 gage galvanized steel. Metal Counter flashing: 22 gage galvanized steel.
	= NPS 4 150mm = NPS 6 = NPS 8	cloth labels for non insulated pipes and B-350 for insulated pipes. Provide 20mm (3/4") diameter brass tags, secure to valve stems with key chain. Provide a valve directory at all mechanical rooms, in the O&M manuals and a digital copy cross referenced with any associated	Lead Flashing: Waterproofing: 5 lb./sq ft sheet lead
	tric duct sizes are expressed as 25 mm = 1 inch.	controls nomenclature. Each piece of equipment shall be identified with its equipment schedule identification, e.g. supply fan SF-1, cooling coil CC-1, pump P-1 with lamacoid plates having 6mm (1/4") minimum letter size.	Flexible Flashing: 47 mil thick sheet butyl; compatible with roofing. Floor Drain Flashing: 40 mil thick chlorinated polyethylene (CPE), equivalent to Chloraloy.
Should	rawings and Specifications any discrepancy appear between drawings and specifications obtain written clarification from the Consultant during the tender period. Without a written clarification the better quality and/or greater quantity	Acceptable manufacturers: Brady	Caps: Steel, 22 gauge minimum; 16 gauge at fire resistant elements.
	or materials shall be estimated, performed and furnished within the tendered price. utting, Patching and Coring	2.5 Vibration Isolation Neoprene Washer/Bushing: A one piece molded bridge bearing neoprene washer/bushing. The bushing shall surround the anchor bolt and have a flat washer face to avoid metal to metal contact. Use	2.8 Expansion Tanks - Domestic Hot Water Diaphragm or bladder type expansion tank, welded steel tank, internal butyl/EPDM diaphrage
	holes and sleeves, cutting and fitting required for mechanical work. Relocate improperly located holes and sleeves. All work shall be coordinated with other trades.	washer/bushing only on light-weight equipment. Acceptable manufacturer: Mason HG hemi grommet or equal	systems. ASME rated for a working pressure of 861 kPa (125psi)
Provide	written approval from the Structural Consultant before cutting or burning structural members. X-ray of all required penetrations of the floor. X-ray use for locating in floor rebar and conduit to be done after normal working hours. Take necessary precautions to protect computer equipment when	Neoprene Pad Isolators: Neoprene or neoprene / steel / neoprene pad isolators. Minimum static deflection 2.5 mm (0.1") or greater.	3. EXECUTION
	g floors. Coordinate with Owner. Istallation of Equipment	Acceptable manufacturer: Mason WMSW or equal	3.1 Piping Pipe connections NPS 1½ and less shall be soldered or screwed joint unless noted otherwis
	and flanges shall be provided in piping or ductwork to permit easy removal of equipment.	3. EXECUTION 3.1 Painting Repairs and Restoration	Pipe connections NPS 2 shall be screwed joint for liquid systems unless noted otherwise.
	n permanent access to equipment for maintenance. onnections to Existing Services	Do painting in accordance with Division 09 - Interior Painting. Prime and touch up marred finished paintwork to match original. Restore to new condition, finishes which have been damaged.	Use dielectric type couplings when joining dissimilar metal pipes. Use lead free solder for soldering domestic water copper pipe.
Mainta	n liaison with the Owner and provide a mutually acceptable schedule to interrupt, reroute, or connect to existing building services with the minimum of interruption of those services.	Clean exposed bare metal surfaces supplied under Divisions 21, 22, 23 and 25. Apply at least one coat of corrosion resistant primer paint to all supports and equipment fabricated from ferrous metal. 3.2 Demonstration	3.2 Pressure Testing
	elective Demolition	Supply tools, equipment, personnel to demonstrate and instruct the operating, and maintenance personnel in operating, controlling, adjusting, trouble-shooting, and servicing of all systems and equipment during regular work hours, prior to acceptance.	Advise Consultant or project manager 48 hours minimum prior to performance of pressure to Use only potable water for testing of potable water systems.
	y of the Owner at his discretion.	3.3 Pipe Hangers and Supports	Test pressure shall be the greater of 1.5 times maximum system operating pressure or 860 k
site.		Pipe support spacing and hanger rod diameter shall be: Pipe Size: NPS 1/2 Rod Diameter 9mm (3/8"), Spacing 1.8m (6')	Prior to tests, isolate equipment and other parts which are not designed to withstand test pre Insulate or conceal work only after approval and certification of tests by authorities.
	quipment and Materials two or more products of the same type are required, products shall be of the same manufacturer.	Pipe Size: NPS 3/4 to 1½ Rod Diameter 9mm (3/8"), Spacing 2.4m (8') Pine Size: NPS 3/4 to 1½ Point Diameter 9mm (3/8"), Spacing 2.4m (8')	Submit copies of pressure test reports for all sections of piping.
	ne Consultant in writing ten (10) days prior to the tender close, any materials or equipment specified which is not currently available or will not be available for use as called for herein. Failing this, the twill assume that the most expensive alternate has been included in the tender price.	Pipe Size: NPS 2 to 2½ Rod Diameter 9mm (3/8"), Spacing 3m (10') 3.4 Pipe Pressure Testing	3.3 Valves Install all valves in accordance with manufacturer's recommendations.
	ed equivalents and/or alternatives to specified products shall be equal to the specified product in every respect, operate as intended, and meet the space, capacity, and noise requirements outlined. ntractor shall be fully responsible for any additional labour and materials required by any trades or other Contractors to accommodate the use of other than specified materials or equipment. The	Advise Consultant or project manager 48 hours minimum prior to performance of pressure tests. Hydrostatic test: 150% of working pressure, but not less than 860 kPa (125 psig). For PP-R piping, do not exceed 1034 kPa (150 psi). For PEX piping, do not exceed 690 kPa (100 psi). Maintain test pressure	Install valves in accessible locations with stems upright or angled 45° above horizontal unles
	stor shall be any and all costs for design/system modifications to accommodate the "alternate" equipment. Extras will not be approved to cover such work.	without loss for 4 hours minimum unless specified for longer period of time in relevant mechanical sections.	Install control valves with their stems upright unless approved otherwise and with adequate or Provide stem extensions on all insulated valves.
	elivery, Storage and Handling naterials and equipment in accordance with the manufacturer's recommendations in a clean, dry, well-ventilated area.	Prior to tests, isolate equipment and other parts which are not designed to withstand test pressure or media. Conduct tests in presence of construction manager or project manager.	Provide full port ball valves in piping 50 mm (2") and smaller and butterfly valves in piping 65
Replac	e defective or damaged materials with new.	Examine all joints for leaks and remake all leaking joints with new materials. Pay costs for repairs or replacement, retesting, and making good. Consultant to determine whether repair or replacement is appropriate.	Throttling valves are not to be used for shut-off; additional valves shall be installed for isolati Provide isolation valves at branch take-offs, to isolate each piece of equipment, upstream of
	scutcheons and Plates escutcheons and plates on all piping and ductwork passing through finished walls, floors, and ceilings.	Insulate or conceal work only after approval and certification of tests by authorities. Pressure test all gas piping in accordance with CSA B149.1. Purge all piping after pressure tests in accordance with CSA B149.1.	Use silent check valves on discharge of pumps and in vertical pipes with downward flow, and
1.14 0	uarantee / Warranty	Submit copies of pressure test reports for all sections of piping.	Use circuit setting globe valves complete with lock shield to control flow in circuits, except we Install balancing valves in return piping connections to each terminal heating and cooling uni
	a written guarantee stating that all work executed in this contract will be free from defective workmanship and materials for a period of one (1) year from the date of Substantial Performance.	3.5 Access Doors Provide all access doors required to access work installed by Divisions 21, 22, 23 and 25. Be responsible for coordinating locations, cutting opening and installing panels. Any secondary supports, blocking etc.	3.4 Piping Insulation Minimum Thickness Schedule (ASHRAE 90.1)
The ap	proved balancing agencies are: Western Mechanical; K.D. Engineering, Flotech Mechanical, Blue Collar Group.	will be by the ceiling or wall contractor. Ensure that equipment is within view and accessible for operating, inspecting, adjusting, servicing without using special tools.	Above grade exterior: Runouts up to NPS 1 = 40mm minimum thickness
	e fans and air outlets to air quantities indicated on the drawings and in this specification. Where outlet quantities are not indicated, divide capacity equally among all outlets. a PDF copy of the report to the Consultant within two (2) weeks after substantial completion. Failure to submit the report within the specified time will result in the work being done by the Owner and the	3.6 Vibration Isolation Neoprene Washer/Bushing: Isolate variable frequency drive controller using neoprene washer/bushing isolators or soft grommets such that structure borne noise transmission to occupied space is less than	Runouts up to NPS 1 = 40mm minimum thickness Pipe diameters NPS 1 to 2 = 65mm minimum thickness
costs c	educted from final payment. ng shall be performed to the following:	airborne noise transmission. Rubber Floor Mounts: Mount in-line pumps on two (2) rubber floor mount isolators under each support foot. For equipment mounted on a slab on grade mount on rubber floor mount isolators unless otherwise	Hot water 41°C to 60°C (106-141°F): Pipe diameters up to NPS 1¼ = 25mm minimum thickness
Air-Ter	ninal Outlets ±10%	specified. Provide protection of the rubber element from contact with oil in the mechanical room.	Pipe diameters up to NPS $1\frac{1}{2}$ = 25mm minimum thickness Pipe diameters NPS $1\frac{1}{2}$ and larger = 40mm minimum thickness
	tral Equipment ±5% ate with the Balancing Agency and make any corrections as required by Balancing Agency.	DIVISION 22 PLUMBING	Cold water above 5°C (41°F): All pipe diameters = 25mm minimum thickness
	balancing valves and dampers, pulleys, sheaves etc. as requested by the Balancing Agency and/or necessary to properly adjust or correct the systems to design flows, without additional cost to Owner.	1. GENERAL	All pipe diameters = 25mm minimum thickness Note: Where the thermal conductivity of a proposed insulation is greater than specified, the t
	ommissioning and Demonstration ionsible for the performance and commissioning of all equipment supplied and re-used under Divisions 22 and 23	1.1 Section Scope Piping, valves and specialties serving building water distribution systems to 1m (36") outside the building and sanitary and storm drain waste and vent piping, equipment and accessories between plumbing	U2 = proposed insulation "k" value at the table mean rating temperature. U1 = upper range limit "k" value from the table above.
	conclusion of commissioning, demonstrate the operation of the systems to the consultant and then to the owner's operating staff.	fixtures to 1m (36") from the building. 1.2 Cleanouts	3.5 Piping Finish Schedule
with th	specification and drawings.	Provide sanitary and storm piping cleanouts at all changes in direction, at the ends of all horizontal runs, at the base of every stack, where drains leave the building; where shown on the drawings and in	Indoors concealed; factory finish
	ashing and Roof Curbs curbs, flash and counter flash as required where mechanical equipment passes through weather or waterproofed walls, floors and roofs.	compliance with the local plumbing code, bylaws and ordinances. Provide caulked or threaded type cleanouts extended to finished floor wall surface.	Indoors exposed in mechanical room and elsewhere; canvas jacket Indoors, exposed in utility areas, parkade, etc.; PVC jacket
Provide	factory roof curbs for all roof mounted equipment unless noted otherwise.	Provide bolted cover plate clean outs on vertical rainwater leaders only. Ensure ample clearance at clean out for rodding of drainage system.	3.6 Safes, Flashing and Vent Terminals
1.18 \$	eismic Control seismic restraints for all required equipment, piping, and ductwork in accordance with the latest edition of the Seismic Restraints Manual for Mechanical Systems produced by SMACNA, and the latest	2. PRODUCTS	Provide flexible flashing and metal counter flashing where piping penetrates weather or wate CPE, Chloraloy 240 lining or lead material may be used at floor drains and cleanouts. Chlora
	of the ASHRAE Application Handbook Chapter 49, Seismic Restraints.	2.1 Pipe and Fittings Sanitary and Storm Drainage, and Vent (above grade) shall be DWV Copper, cast Iron class 4000, PVC-15 schedule 40 or PVC-15XFR schedule 40.	roofing material is applied by a torch-on method. Flash floor drains in floors with topping over occupied areas with lead or CPE membrane, a
edition The Co	ntractor shall retain the services of a qualified professional seismic engineer (Seismic Engineer) registered in the Province of British Columbia. The Seismic Engineer shall design and review the installation		arano in nooro with topping over occupied areas with lead of OPE Inelliptane, a f
edition The Co of all s	ismic restraint as well as mechanical equipment and mechanical system supports. The restraints and supports shall be specifically designed to fasten to the structure indicated in the contract documents talled in the field. The complete design for these systems shall comply with all applicable building code requirements.	Sanitary and Storm Drainage and Vent (below grade inside building to 1m outside) shall be cast Iron class 4000, PVC-DWV schedule 40 or ABS-DWV (solid core) schedule 40.	clamp device.
edition The Co of all s and ins Seismi	ismic restraints as well as mechanical equipment and mechanical system supports. The restraints and supports shall be specifically designed to fasten to the structure indicated in the contract documents	Sanitary and Storm Drainage and Vent (below grade inside building to 1m outside) shall be cast Iron class 4000, PVC-DWV schedule 40 or ABS-DWV (solid core) schedule 40. Domestic Water (above grade inside building) shall be: Type "K" copper for hot and type "L" copper for cold water hard drawn seamless copper tubing to ASTM B88 with cast brass or wrought copper solder joint pressure fittings with 95/5 Sn/Sb or	clamp device.

M 0	ATTENTION
ASME B16.18 or ASME B16.22 with performance criteria conforming to ASME B16.51 and IAPMO PS 117.	This drawing is prepared for the sole use of DISTRICT OF UCLUELET
ad for use by the fitting manufacturer.	No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems
certified to NSF/ANSI 61, NSF/ANSI 14 and ASSE 1061 for use with potable water. Lead free DZR brass body,	Ltd. does not have a contract.
bution downstream of a distribution manifold only) to ASTM F876, ASTM F877 CSA B137.5. All PEX-a tubing, fittings and	1 WARNING Utilities or structures shown on this drawing were compiled from
NSF 61 certified high density polyethylene (HDPE) corrugated pre-sleeved tubing for use in PEX-a hot and cold potable	information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the
	location in the field all underground utilities and structures
	indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably
of body. All valves must be suitable in all respects for service used.	apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage
	caused by third party negligence or failure to comply with the above.
chrome plated ball, PTFE seats, blow out proof stem, adjustable packing nut, for domestic water service, class 4140 kPa	SURVEY INFORMATION
capable of being reground, Y pattern, suitable for domestic water use, class 1380 kPa (200 psi) W.O.G.	PREPARED BY: COORD SYST:
s, regulating valve suitable for potable water, combination P/T test points with EPT inserts/check valves, drain port, si @ 200°F) rating.	SURVEY DATE:
or low lead bronze body, SS integral strainer, renewable SS seat, serviceable inline, built in bypass check valve, suitable psi) and 82°C (180°F) temperature.	
pass, diaphragm actuated globe valve, lead free, bronze body or ductile iron to ASTM A536. Lead free bronze, stainless	
e lined and coated with epoxy coating.	
lead free cast copper silicone alloy body, twin positive seat check modules, captured springs, replaceable check module 364.5 and AWWA C510	
copper silicone alloy body, pressure differential relief valve, replaceable check module seats and discs, two isolation	
	3
s or piston style and stainless steel casing. Air chambers are unacceptable.	
vice jacket vapour retarder (ASJ). ASJ shall be re-enforced with glass fibre, factory applied with pressure sensitive lap	
eptable manufacturers: Manson Insulation, Knauf, Roxul, Johns Manville, Fibrex	
ering mechanical insulation indoors, 25/50 fire class, plain wave cotton, no dyes. ss, minimum 0.50 mm (0.02") thick.	
ind, adjustable, scoriated, secured cast iron top and no-hub outlet. Suitable for heavy traffic	
nd, adjustable, scoriated, secured nickel bronze top, and no-hub outlet. Foot traffic areas with sheet goods flooring shall 6mm (1/8") tile recess, and no-hub outlet. Carpeted floor area subject to foot traffic shall be cast iron floor level cleanout	
it tee and cast iron countersunk plug with stainless steel round cover and screw.	
rotection, lead free brass body, stainless steel screen, factory pre-set, activation by a minimum flow rate of 0.03I/s @ 138	urbansystems.ca
abinet with screw driver access door latch, mounting anchors, lead free bronze ball valve, lead free atmospheric vacuum , calibrated manifold for equal water distribution to multiple floor drains. 3/wire single point connection. 20mm (3/4") inlet	
alve and water hammer arrestor on inlet supply.	5
el.	
ragm or butyl bladder, rigid polypropylene liner. Integral floor stand for vertical installation. Listed for potable water	
wise. For PEX, use cold expansion fittings installed with tools as recommended by the fitting manufacturer.	
	public
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e tests.	WWW.PUBLICDESIGN.CA
0 kPa for 8 hours. For PEX piping, do not exceed 690 kPa (100 psi).	
pressure or media.	# Date Issue / Revision App 1 Feb 07, 2022 Issue for Class B Costing
	2 June 10, 2022 Issue for Tender
ess approved otherwise. Valves must be accessible without removing adjacent piping.	
e clearance for removal of actuators.	
65 mm (2-1/2") and larger for shut-off, equipment isolation, throttling, bypass or manual flow control services. ation purposes.	
of all meters, gauges, automatic air vents, and as indicated.	Professional Seals
and as indicated.	
where balancing cocks are specifically specified. Init - e.g. radiators, unit heaters, fan coil units, heating and cooling coils, and radiant panels.	
	9
	URBAN
e thickness will be increased by the ratio of U2/U1.	SYSTEMS
	Scale 1/4" = 1'-0"
	Ouality Control by
	Quality Control byPSDesigned bySL
	Drawn by SL
aterproofed walls and floors.	
braloy shall be solvent welded to manufacturer's installation instructions. Lead shall not be used on roofs where the	Amphitrite Park
a minimum of 300mm (12") clear on sides with minimum 900mm x 900mm (36" x 36") sheet size. Fasten flashing to drain	
	¹¹ Specifications I
	Sheet Number Project Number Drawing Number Revision
	047B-032-21 M08 A
MOO	

1		A C E	
		DIVISION 23 HVAC	
			.1 Heat trace shall be
		1. GENERAL 1.1 Grilles, Louvres and Diffusers	
	1	Airflow tests and sound level measurement shall be made in accordance with applicable ADC equipment test codes, ASHRAE Standards and AMCA Standards.	
		Manufacturer shall certify catalogued performance and ensure correct application of air outlet types. Outside louvers shall bear AMCA seal for free area and water penetration.	
		Project Conditions: Review requirements of outlets as to size, finish and type of mounting prior to submitting shop drawings and schedules of outlets. Positions indicated are approximate only. Check locations of	
		outlets and make necessary adjustments in position to conform with Architectural features, symmetry, and lighting arrangement.	
		2. PRODUCTS	
		2.1 Ductwork and Accessories Provide ductwork constructed, reinforced, sealed, and installed to withstand 1-½ times the working static pressure.	
		Provide Low Pressure Ductwork 500 Pa (2" W.G.) for supply ductwork and plenums on systems without terminal mixing boxes or air valves, supply ductwork downstream from terminal mixing boxes or air valves, outdoor air ductwork and plenums, return air ductwork and plenums, exhaust and relief air ductwork and plenums, unless noted otherwise.	
		Low pressure insulated flexible ductwork shall be equal to Thermaflex Type M-KC.	
		2.2 Duct Sealing	
		Duct sealing low pressure ductwork 500 Pa (2" W.G.) and under shall be SMACNA seal class A. Seal all supply, return and exhaust duct joints, longitudinal as well as transverse joints as follows: Slip Joints: Apply heavy brush-on high pressure duct sealant. Apply second application after the first application has completely dried out. Where metal clearance exceeds 1.5 mm (1/16") use heavy mastic type	
		sealant.	
		Flanged Joints: Soft elastomer butyl or extruded form of sealant between flanges followed by an application of heavy brush-on high pressure duct sealant. Other Joints: Heavy mastic type sealant.	
		Duct tapes as a sealing method are not permitted, except on residential ductwork - minimum 2 wraps of 2" wide (50mm) foil duct tape is acceptable.	
	3	Do not insulate any section of the ductwork until it has been inspected and approved of duct sealant application, by the Consultant.	
	Ŭ	2.3 Duct Hangers and Supports Hangers and Supports to SMACNA standards.	
		Strap hangers: of same material as duct but next sheet metal thickness heavier than duct.	
		Maximum size duct supported by strap hanger: 500 mm.	
		Hangers: Galvanized steel angle with galvanized steel rods to SMACNA. Toggle hangers and/or strap hangers shall not be used.	
		Power actuated fasteners and "drop-in" anchors shall not be used.	
		2.4 Grilles, Louvres and Diffusers	
		Acceptable Manufactures for Air Terminals: E.H. Price, Titus, Anemostat, Nailor. Acceptable Manufacturers for Louvres: Airolite, Penn, Airstream, West Vent, Nailor, Ruskin.	
		Provide baffles to direct air away from walls, columns or other obstructions within the radius of diffuser operation.	
		Provide plaster frame for diffusers located in plaster surfaces and anti-smudge frames or plaques on diffusers located in rough textured surfaces such as acoustical plaster.	
		Provide 30 mm margin frame on grilles with [countersunk screw holes] [concealed fastening]. Provide opposed blade balance damper, accessible from grille face on all grilles located in drywall ceilings or bulkheads.	
		All grilles and dampers shall be aluminum in wet areas (i.e. showers, aquatic areas, dishwashing etc.)	
		Refer to Grilles and Diffuser schedule for types and capacities.	
		3. EXECUTION	
	5	3.1 Ductwork and Accessories Fabricate ductwork in accordance with SMACNA Duct Construction Standards - metal and flexible, NFPA 90A Standard for the Installation of Air-Conditioning and Ventilating Systems, and NFPA 90B Standard	
		for the Installation of Warm Air Heating and Air-Conditioning Systems Prior to fabrication of ductwork, check all ceiling spaces and heights and conflicts with other trades.	
		Duct sizes indicated are inside clear dimensions. For acoustically lined or internally insulated ducts allow for insulation thickness and maintain interior clear dimensions indicated.	
		Connect outlet terminals to low pressure ducts with 900mm (36") maximum length of stretched flexible duct. Hold in place with strap or clamp, caulk sealed. Do not use flexible duct to change directions.	
		Provide a flexible connection where low pressure ducts are connected to fan equipment, terminal boxes or any other apparatus. Joint shall be screwed or bolted flexible gasketed joint, minimum 50mm (2") wide. Provide balancing dampers where indicated on drawings and at points on low pressure supply, return and exhaust ducts where branches are taken from larger ducts.	
		Modify ceiling system where required to accommodate grilles and diffusers.	
		Size round ducts, installed in place of rectangular ducts, from ASHRAE table of equivalent rectangular and round ducts. No variation of duct configuration or sizes permitted except by permission from the Consultant.	
		Exposed round ductwork to be spiral lock seam type only.	
		Provide duct hangers and supports in accordance with SMACNA manuals.	
		Confirm the existing base building standards prior to submitting tender. Ductwork shall be galvanized steel unless noted otherwise.	
		3.2 Duct Hangers and Supports	
		Duct support shall be: Up to 750mm duct size: angle size 25x25x3 mm with 6mm rod size	
		Duct Insulation Minimum Thickness Table (Climatic Zone 5)	
	7	Rigid Exterior Duct Insulation DutyPlenum(4)Duct LocationInteriorExteriorConditioned SpaceUnconditioned SpaceMinimum Insulation Thickness in mm (in.)Outdoor Air Supply38 (1-1/2")38 (1-1/2")38 (1-1/2")0Exhaust Air (1)(2)25 (1")025 (1")25 (1")Tempered Air Supply or Makeup Air0025 (1")125 (5")See note (6) for factory installed duct and plenums	
		Note (1): Air temperatures 15° C to 49° C (60° F to 120° F).	
		Note (2): Provide 38mm (1-1/2") flexible duct insulation on all exhaust air ductwork from outside wall or roof to damper but a minimum of 1.5 m (5 ft.) inside building. Note (3): Mixed Air includes tempered air downstream of heat recovery units.	
		Note (4): Plenums located outside the building shall be insulated to the values listed in the exterior column.	
		Note (5): Provides 1 hour fire rating. Thickness shall be doubled for 2 hour applications. Note (6): Factory installed ductwork and plenums provided with equipment need not comply with this table provided they meet the requirements of the relevant CSA Standard for that equipment and is insulated to	
		RSI 0.58 (R3.3) or greater. Refer to NECB article 5.2.12.1 for relevant CSA Standards.	
		3.3 Duct Finishes Table Indoors concealed; factory finish	
		Indoors exposed in mechanical room and elsewhere; canvas jacket as per TIAC standard CRF/1 - CRD/1	
		3.4 Grilles, Louvres and Diffusers	
		Paint ductwork visible behind air outlets matte black. All air outlets mounted in a T-bar ceiling shall be seismically restrained by either secure attachment to solid ductwork, which is braced at the outlet or wire hangers attached to structure. Wire hangers shall be a	
		minimum of two (2) per outlet and one per 1200 mm length.	
		Air outlets other than T-bar mounting must be securely attached to the building elements.	
		DIVISION 25 INTEGRATED AUTOMATION	
	9	1. GENERAL	
		1.1 Section Scope	
		Provide a complete system of automatic controls to match the base building standard with regard to control devices, components, wiring and materials. All control work associated with the work of Divisions 22 and 23.	
		1.2 Related Requirements	
		This section of the Specification forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts. For general conditions refer to Heating, Ventilation and Air Conditioning (HVAC) section.	
		1.3 Code Compliance	
		All work shall comply with current editions of the National, Provincial and Municipal Codes, Standards, Acts and Bylaws and will meet the requirements of the Authority having jurisdiction.	
		2. PRODUCTS	
		2.1 Thermostats Provide new thermostats where indicated of building standard type. Ensure operating characteristics are compatible with control components (i.e. direct/reverse acting).	
		All thermostats to be wall or column mounted at 1500mm above finished floor unless specifically noted otherwise.	
		All thermostats, existing and new, are to be calibrated prior to air balancing. Contact building owner if an existing thermostat needs replacing.	
		3. EXECUTION	
		3.1 Sequence of Operation .1 ERV	
		.1 ERV shall run on an adjustable schedule. Provide 7-day programable thermostat for operation	
	11	.2 DHWT .1 DHWT shall be controlled by packaged controls with an adjustable setpoint	

.3 Electric Baseboards

.1 Electric baseboards shall be controlled with a temperature setpoint adjustable thermostat

.4 Heat trace

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all be controlled using packaged controls

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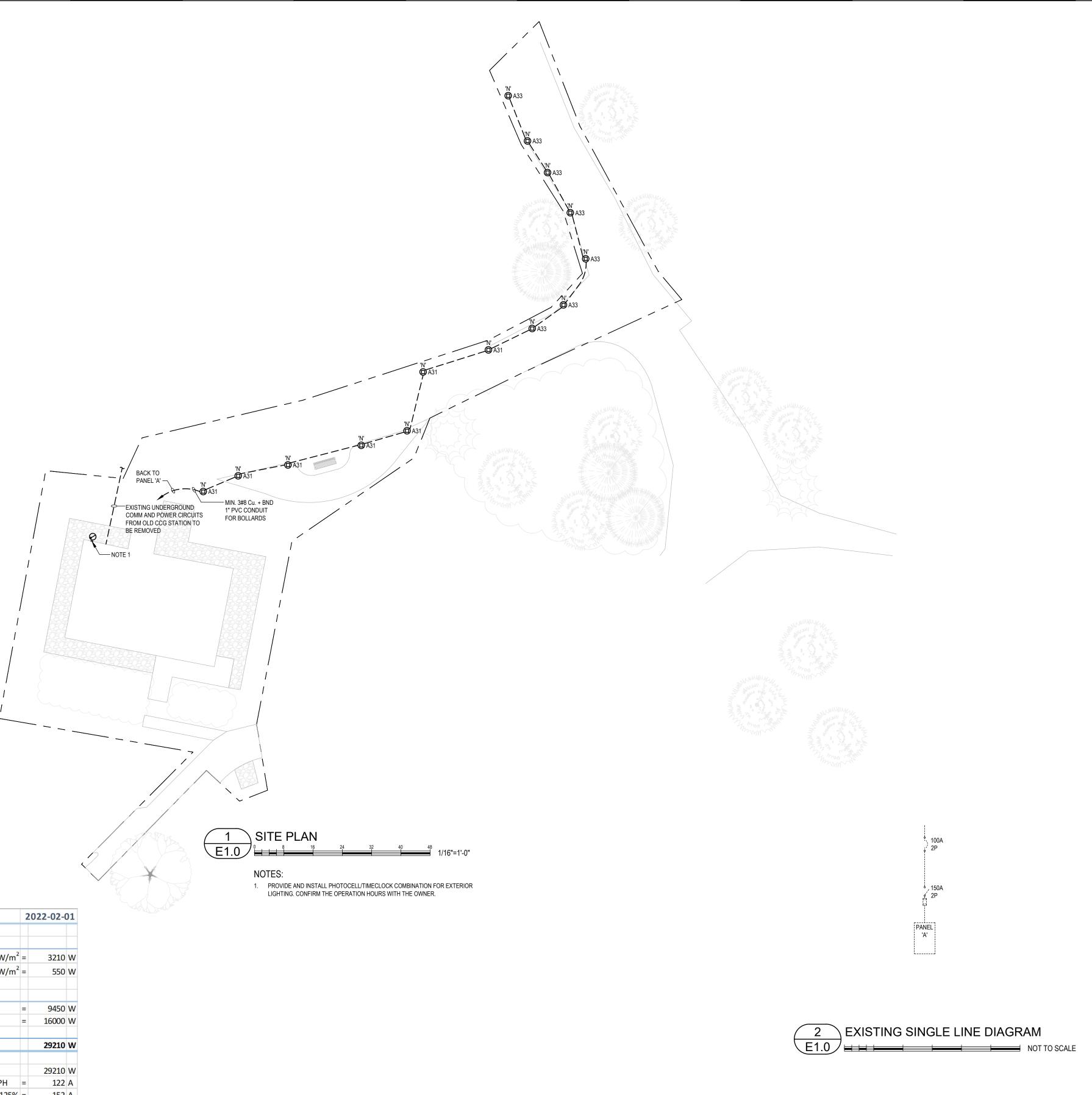
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IVI	0		ATTENTION This drawing is prepared for the sole use of DISTRICT OF UCLUELET
			No representations of any kind are made by Urban Systems
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			Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be
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			caused by third party negligence or failure to comply with the above.
			SURVEY INFORMATION
			PREPARED BY: COORD SYST:
			SURVEY DATE:
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			urbansystems.ca
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			public
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			# Date Issue / Revision App 1 Feb 07, 2022 Issue for Class B Costing
			1 Feb 07, 2022 Issue for Class B Costing 2 June 10, 2022 Issue for Tender
			Professional Seals
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			URBAN
			S Y S T E M S
			Scale 1/4" = 1'-0"
			Quality Control byPSDesigned bySL
			Drawn by SL
			Amphitrite Park
		11	Specifications II
			Specifications II
			Sheet Number
 	 		Project Number Drawing Number Revision
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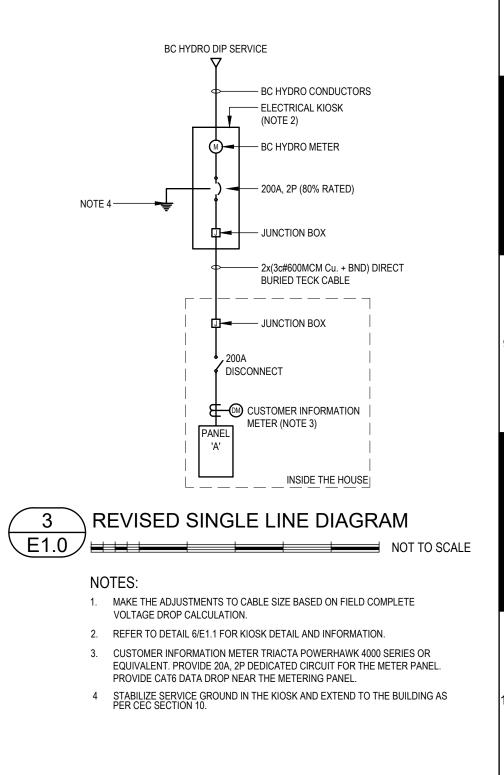
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1-21-188 Amphitrite Ho	2022-02-01								
Basic Load									
Store/Restaurant		107	m ²	@	30	W/m ²	=	3210	٧
Storage		110	m²	@	5	W/m ²	=	550	۷
Equipment									
Café Equipment							=	9450	۷
Mechanical Equipment							=	16000	V
Total Load								29210	V
SPARE	0%							29210	۷
29210	W	@	240	۷	1	PH	=	122	A
			122	A	x	125%	=	152	A
Required Service Protection							=	200	A
Existing Service Breaker							=	100	A

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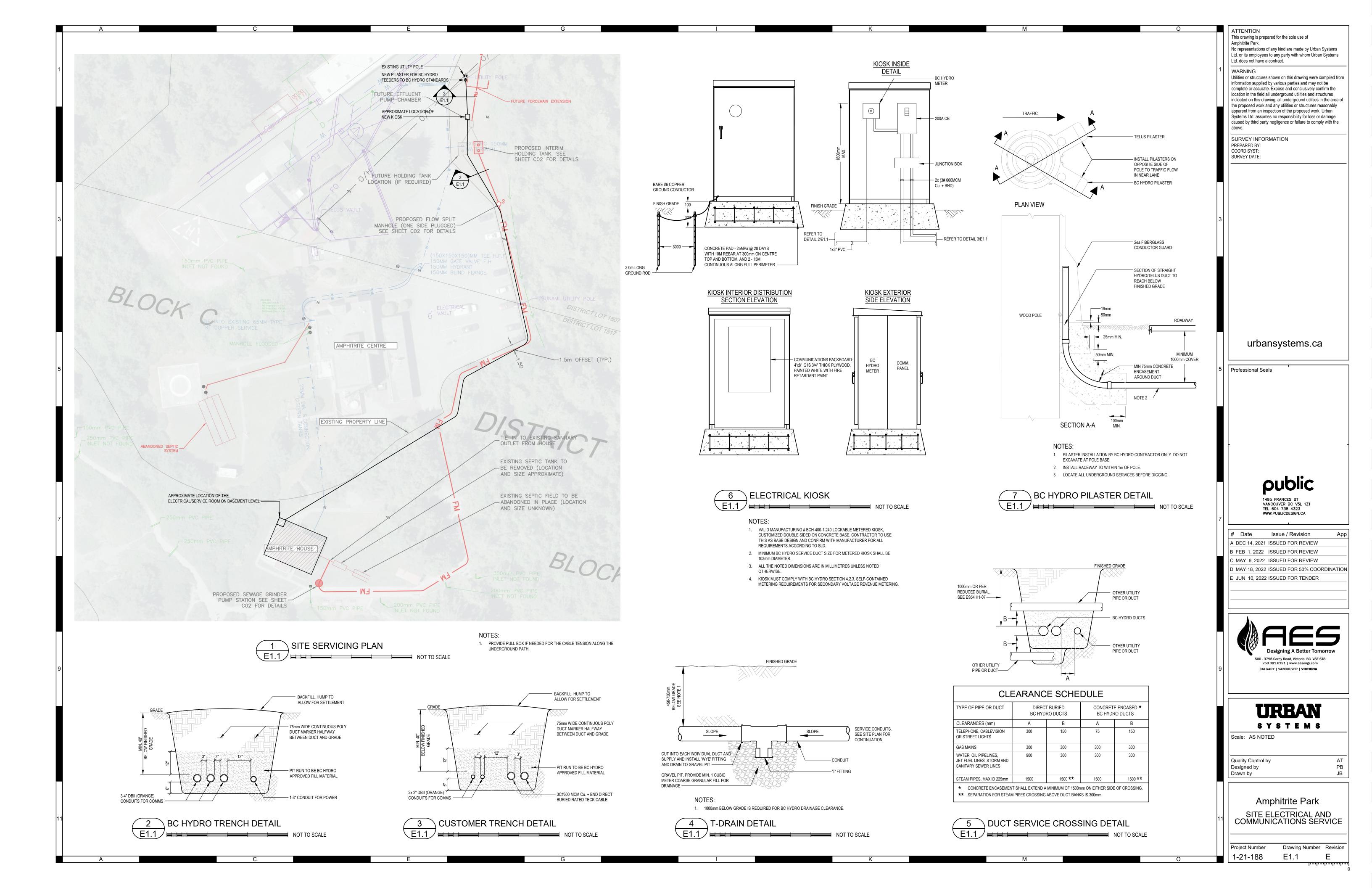
ELECTRICAL SYMBOL LEGEND						
	ABBREVIATIONS					
WP [DENOTES WEATHER PROOF DEVICE					
	LIGHTING					
	LUMINAIRE ON EMERGENCY CIRCUIT					
F	FLUORESCENT STRIP LIGHT					
	SURFACE MOUNTED LUMINAIRE					
Q V	WALL MOUNTED DOWN LIGHT					
• F	PENDANT LUMINAIRE					
O F	RECESSED DOWN LIGHT					
 E	BOLLARD LUMINAIRE					
\$ ## \$	SINGLE POLE TOGGLE SWITCH, GANGED AS SHOWN					
\$\$ L	LOW VOLTAGE SWITCH, GANGED AS SHOWN					
	DIMMER SWITCH					
⊕ (OCCUPANCY SENSOR, WALL MOUNTED					
↔ OCCUPANCY SENSOR, CEILING MOUNTED						
	VACANCY SENSOR, CEILING MOUNTED					
	VACANCY SENSOR, WALL MOUNTED					
Q ₽	PHOTOCELL					
EX E	EXIT SIGN - DIRECTION AS INDICATED ON PLANS					
	POWER					
φ 5	5-20R DUPLEX RECEPTACLE (T-SLOT)					
	5-20R DUPLEX RECEPTACLE (T-SLOT) GROUND FAULT CIRCUIT INTERRUPTER (GFCI)					
₩ 4	ABOVE COUNTER 5-20R GFCI DUPLEX RECEPTACLE (T-SLOT)					
J J	JUNCTION BOX					
<u>م</u>	MECHANICAL MOTOR CONNECTION					
	DISCONNECT SWITCH					
 F	PANEL BOARD					
	MECHANICAL EQUIPMENT CONNECTION					
● +	HEAT TRACE					
	KITCHEN EQUIPMENT CONNECTION					
	BASEBOARD HEATER WITH INTERGAL THERMOSTAT, WATTAGE AS NOTED ON PLANS					
	COMMUNICATIONS					
V (COMBINATION TELEPHONE AND DATA OUTLET WALL					
	CEILING MOUNTED COMBINATION TELEPHONE AND DATA OUTLET					
<i>۲</i>	ABOVE COUNTER COMBINATION TELEPHONE AND DATA OUTLET					
	SINGLE LINE					
M 5	SERVICE PROVIDER METER					
<u>M</u> [DIGITAL METERING UNIT					

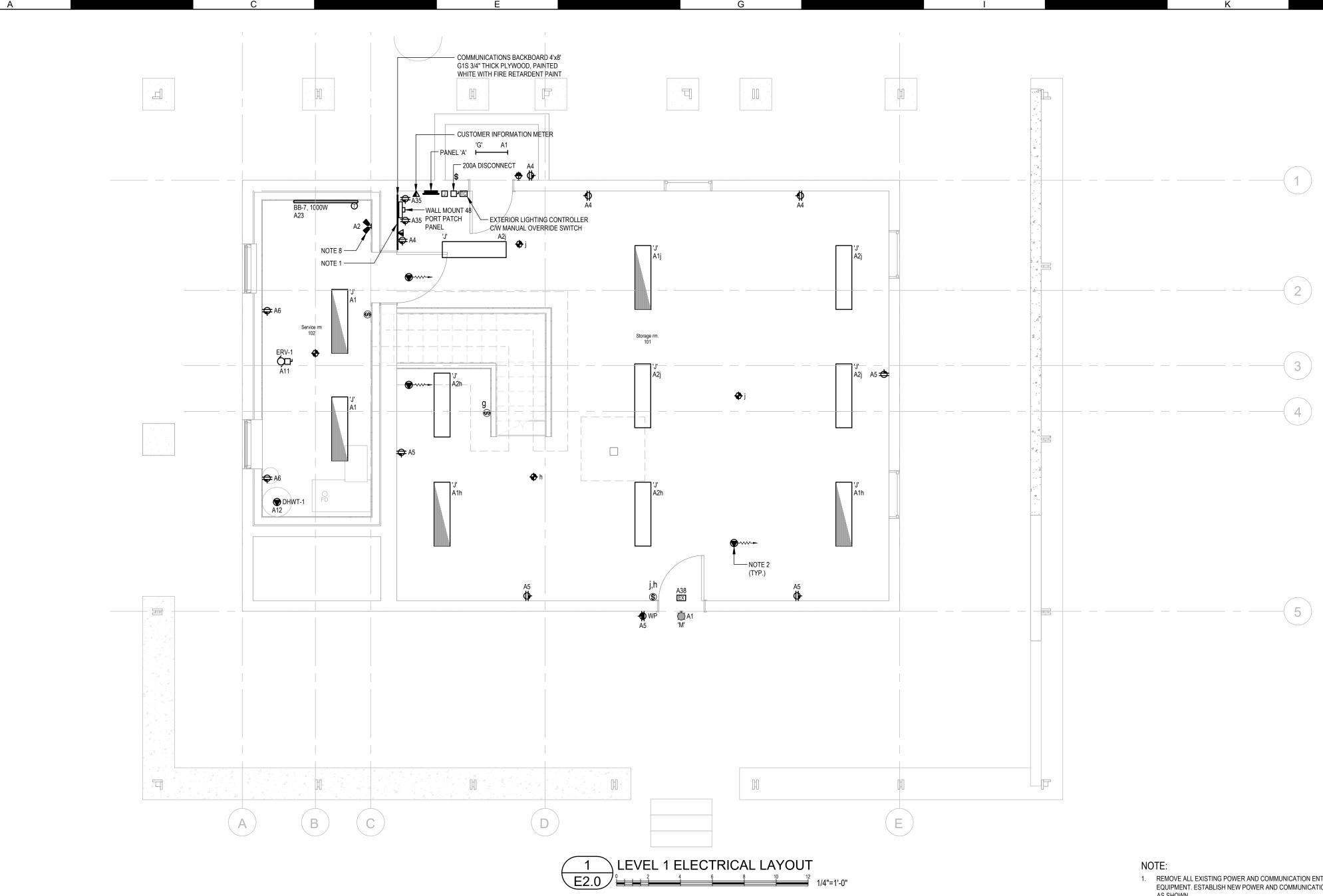


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)	Solo - 3795 Carey Road, Victoria, BC V8Z 6T8 250.381.6121 www.aesengr.com CALGARY VANCOUVER VICTORIA
	URBAN s y s t e m s Scale: AS NOTED
	Quality Control byATDesigned byPBDrawn byJB
1	Amphitrite Park SITE PLAN AND LEGEND
	Project Number Drawing Number Revision 1-21-188 E1.0 E

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				LOAD)		ш		UNIT	-		STA	RTE	R		D
\$ #	DESCRIPTION	EQUIPMENT LOCATION				VOLTS	PHASE	SUPPLY	MOUNT	CONNECT	SUPPLY	MOUNT	CONNECT	түре	SUPPLY	
			MCA	KW	HP		٩	SUP	MOI	CON	SUP	MOI	CON	≽	SUP	
ERV-1	HEAT RECOVERY VENTILATOR	L1 MECHANICAL ROOM	20.3	-	0.75	120	1	М	М	E	E	E	E	MRR	E	
DHWT-1	DOMESTIC HOT WATER TANK	BASEMENT SERVICE ROOM	-	3.0	-	240	1	М	М	E	-	-	-	PCS	E	
HTRC-1	HEAT TRACE	LEVEL 1	-	-	-	240	1	М	М	E	E	E	E	MAG	E	
LEGEN	ID														N	רכ
	DENOTES BY MECHANICAL CONTRACTOR														1.	
	DENOTES BY ELECTRICAL CONTRACTOR PACKAGED CONTROL SYSTEM														2.	
MRR =	MOTOR RATED RELAY, 24 VAC COIL AND MOTOR PR															
MAG =	MAGNETIC STARTER WITH AUX STATUS CONTACTS	;													3.	

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SCHEDULE DISC. CONTROL SUPPLY PANEL WIRE & CONDUIT BREAKER | ⊑ ′ NOTE PANEL ССТ COND SIZE (I LOCATION NO'S
 E
 M
 M
 PCS
 2
 A
 LEVEL 1 STORAGE
 30
 1
 A11
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 20
 2
 A12
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 LEVEL 1 STORAGE
 20
 2
 SEE PANELBOARD SCHEDULE
 12
 3
 21
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OTES

ALL VARIABLE SPEED DRIVES TO HAVE A DEDICATED COPPER GROUND CONDUCTOR SIZED TO MATCH PHASE CONDUCTOR. CONFIRM FINAL MECHANICAL EQUIPMENT REQUIREMENTS WITH MECHANICAL CONTRACTOR'S SHOP DRAWINGS AND ADJUST CIRCUIT WIRING AND BREAKER RATING IF REQUIRED AT NO ADDITIONAL COST. COORDINATE WITH MECHANICAL FOR CONNECTION TO HEAT TRACE. REFER TO PANELBOARD SCHEDULE FOR CIRCUITING.

1. REMOVE ALL EXISTING POWER AND COMMUNICATION ENTRANCE EQUIPMENT. ESTABLISH NEW POWER AND COMMUNICATION DISTRIBUTION AS SHOWN.

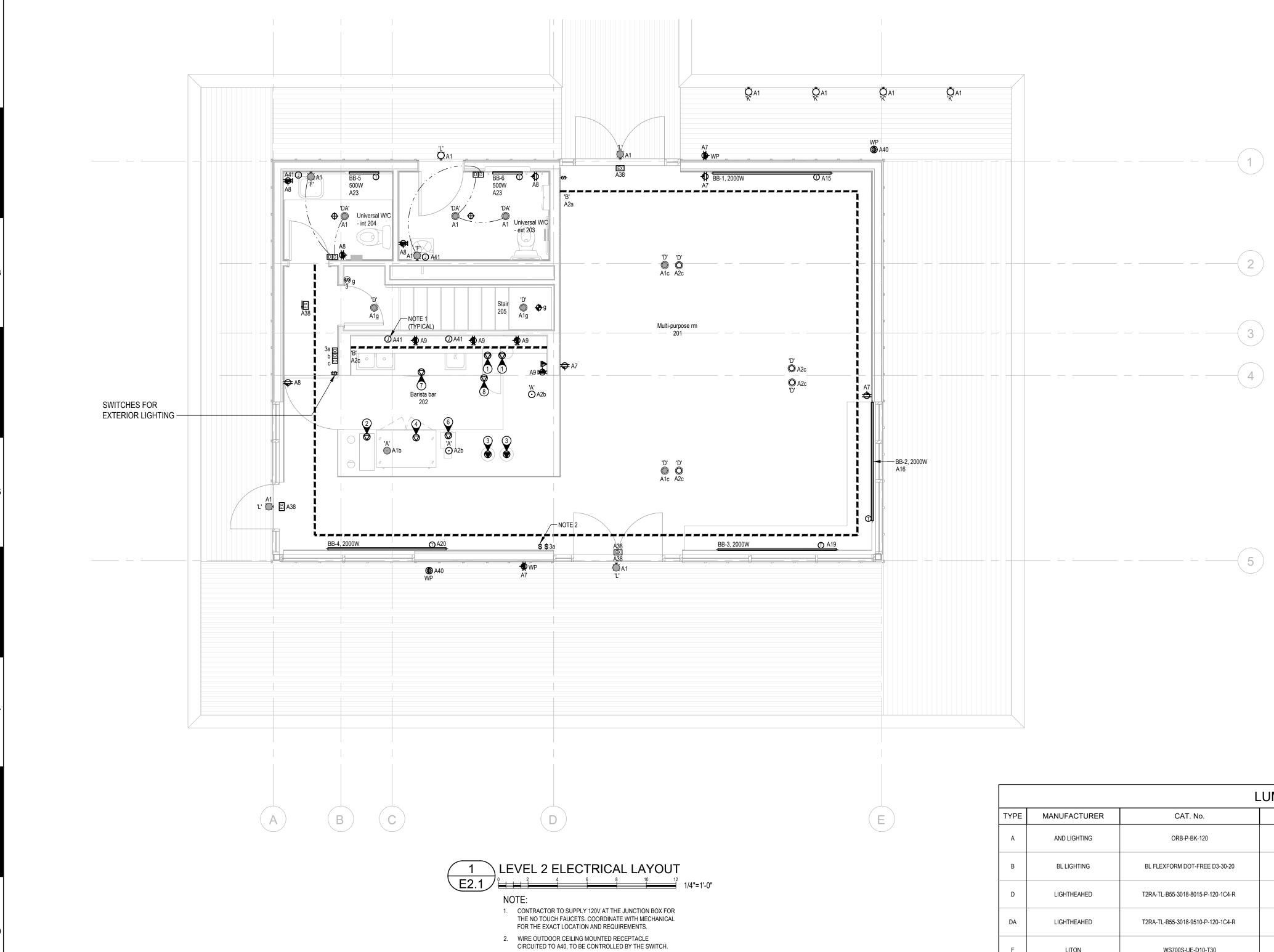
- 2. CONTRACTOR TO COORDINATE WITH MECHANICAL FOR THE CONNECTION TO THE HEAT TRACE. FOR HEAT TRACE CIRCUITING, REFER TO PANELBOARD SCHEDULE.
- 3. PROVIDE AND INSTALL EMERGENCY LIGHTING INVERTER WIRE TO CIRCUIT
- A1. READY LITE RMI-1440 OR APPROVED EQUIVALENT. 5. EXIT SIGNS SHALL BE GREEN COMMERCIAL GRADE WITH INTEGRAL BATTERY
- PACK. EXIT SIGN TO BE AIMLITE RPTE EDGELIT UNIVERSAL MOUNTING.
- 6. ELECTRICAL CONTRACTOR TO PROVIDE ALL BASEBOARD HEATERS COME WITH BUILT IN THERMOSTAT. i. 500W BASEBOARD HEATERS SHALL BE OUELLET ODL0500
- ii. 1000W BASEBOARD HEATERS SHALL BE OUELLET ODL0500 iii. 2000W BASEBOARD HEATERS SHALL BE OUELLET ODL0500
- 7. PROVIDE EMERGENCY LIGHT OVERRIDE RELAY. ELCU-200 FOR EACH SWITCH LEG OF CIRCUIT LEG. ALL THE LIGHTS SHOWN AS EMERGENCY TO TURN ON TO FULL BRIGHTNESS IN EVENTS OF LOSING CIRCUIT A1.
- 8. BATTERY PACKS SHALL BE AIMLITE EBST SERIES 24V, 320W OR EQUIVALENT. REMOTE HEADS SHALL BE AIMLITE RMSM1 SERIES 5W LED, 24V OR EQUIVALENT.

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PAN	ELE	30/	٩R	DS		IEC	DULE		
JOB NO./NAME : 1-21-188/ AMPHITRITE PARK PANEL : A									
SYSTEM : 120/	240V, 1	PH, 3W	1						
TYPE : - LOCATION : LEV	EL 1								
MOUNTING : SUF NO. CIRCUITS : 60	RFACE								
BUS SIZE : 200	4								
SYM. FAULT RATING : 10K	AIC			1					
DESCRIPTION	BRK	POLE	ССТ	ССТ	POLE	BRK	DESCRIPTION		
EMERGENCY LIGHTING *	20	1	01	02	1	15	LEVEL 1 LIGHTING		
LEVEL 2 LIGHTING	20	1	03	04	1	20	LEVEL 1 RECEPTACLE		
LEVEL 1 RECEPTACLE	20	1	05	06	1	20	LEVEL 1 RECEPTACLE		
LEVEL 2 RECEPTACLE	20	1	07	08	1	20	LEVEL 2 RECEPTACLE		
KITCHEN RECEPTACLE	20	1	09	10	1	15	EQ-2 FREEZER		
ERV-1	30	1	11	12	2	40	DHWT-1		
SPARE	20	1	13	14					
BB-1	20	2	15	16	2	20	BB-2		
			17	18					
BB-3	20	2	19	20	2	20	BB-4		
			21	22					
BB-5, BB-6, BB-7	20	2	23	24	1	15	EQ-3 GRINDER		
	40		25	26	2	50	EQ-6 ESPRESSO STATION		
EQ-7 DISHWASHER	40	2	27	28		0			
	15	1	29	30	1	20	EQ-8 REFRIGERATOR		
EXTERIOR PATH LIGHTING	15 15	1	31 33	32 34	1	15 15	SPARE SPARE		
EXTERIOR PATH LIGHTING	20	1	35 35	34 36	1	15	SPARE		
METER PANEL	20	2	35	38	1	15	EXIT SIGNS		
	20	2	39	40	1	20	SEASONAL LIGHTING		
FAUCET	15	1	41	40	2	20	HEAT TRACE (GFCI)		
SPARE	15	1	41	42		20			
SPARE	15	1	45	46	2	20	HEAT TRACE (GFCI)		
SPARE	15	1	47	48					
			49	50	2	20	HEAT TRACE (GFCI) *		
			51	52			(2-) "		
			53	54					
			55	56					
			57	58					
	1		59	60					

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	KITCHEN EQUIPMENT SCHEDULE											
⊘ #	DESCRIPTION	ELECTRICAL		ſL	CIRCUIT	BREAKER	WIRE SIZE	CONNECTION		MOUNTING	REMARKS	
₩#		V	PH	kW	hp	NUMBER	DREAKER	WIRE SIZE	JB	REC	HEIGHT	REMARKS
2	UNDERCOUNTER FREEZER	120	1	-	1/4	A-10	15A-1P	2#12	-	5-15R	-	COORDINATE THE ELVATION AND EXACT LOCATION PRIOR TO ROUGH-IN
3	FLAT BURR GRINDER	120	1	0.25	-	A-24	15A-1P	2#12	-	5-15R	-	COORDINATE THE ELVATION AND EXACT LOCATION PRIOR TO ROUGH-IN
6	ESPRESSO STATION	240	1	4.6	-	A-26	50A-2P	3#6	Х	-	-	COORDINATE THE ELVATION AND EXACT LOCATION PRIOR TO ROUGH-IN
7	UNDERCOUNTER DISHWASHER	208	1	4.9	1.0	A-27	40A-2P	3#8	X	-	-	COORDINATE THE ELVATION AND EXACT LOCATION PRIOR TO ROUGH-IN
8	UNDERCOUNTER REFRIGERATOR	120	1	-	1/3	A-30	20A-1P	2#12	-	5-20R	-	COORDINATE THE ELVATION AND EXACT LOCATION PRIOR TO ROUGH-IN

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LUMINAIRE SCHEDULE						
MANUFACTURER	CAT. No.	LAMPS	BALLAST			
AND LIGHTING	ORB-P-BK-120	4W, 350lm, 3000K	0-10V DIMMABLE			
BL LIGHTING	BL FLEXFORM DOT-FREE D3-30-20	4.4W/FT LED 420LM/FT 3000K	0-10V DIMMAB REMOTE DRIV			
LIGHTHEAHED	T2RA-TL-B55-3018-8015-P-120-1C4-R	12W, 1500lm, 3000-1800K	0-10V DIMMING			
LIGHTHEAHED	T2RA-TL-B55-3018-9510-P-120-1C4-R	10W, 1000lm, 3000-1800K	0-10V DIMMING			
LITON	WS700S-UE-D10-T30	10W LED, 600lm, 3000K	0-10V DIMMIN			
METALUX	2SNLED-LD5-30HL-SLW-UNV-L835-CD1-U	27W LED, 3077Im, 3500K	0-10V DIMMIN			
LEDALITE	VERSA FORM 41-14-S1-ST-L-8C-D-S-7-D-E	36.1W, 3500lm, 3000K	0-10V DIMMIN			
WAGNER BANTAM SQ	LULF-27K-70-5-XTS	2.2W, 116lm, 2700K	0-10V DIMMAB REMOTE DRIV			
ORIGINAL BTC	MAST LIGHT 0749	GU10 LED, 2700K	INCANDESCEI DIMMING			
COOPER LIGHTING	303-W1-LEDB1-2700K-UNV-T4-DIM10-NSS	8.5W LED, 475lm, 2700K	0-10V DIMMIN			
BEGA	BOLLARD 84 025K27 / POST 79 817	9.8W LED, 100lm, 2700K	0-10V DIMMIN			
	AND LIGHTING BL LIGHTING LIGHTHEAHED LIGHTHEAHED LITON METALUX LEDALITE WAGNER BANTAM SQ ORIGINAL BTC COOPER LIGHTING	MANUFACTURERCAT. No.AND LIGHTINGORB-P-BK-120BL LIGHTINGBL FLEXFORM DOT-FREE D3-30-20LIGHTHEAHEDT2RA-TL-B55-3018-8015-P-120-1C4-RLIGHTHEAHEDT2RA-TL-B55-3018-9510-P-120-1C4-RLITONWS700S-UE-D10-T30METALUX2SNLED-LD5-30HL-SLW-UNV-L835-CD1-ULEDALITEVERSA FORM 41-14-S1-ST-L-8C-D-S-7-D-EWAGNER BANTAM SQLULF-27K-70-5-XTSORIGINAL BTCMAST LIGHT 0749COOPER LIGHTING303-W1-LEDB1-2700K-UNV-T4-DIM10-NSS	MANUFACTURERCAT. No.LAMPSAND LIGHTINGORB.P-BK-1204W, 350lm, 3000KBL LIGHTINGBL FLEXFORM DOT-FREE D3-30-204.4W/FT LED 420LM/FT 3000KBL LIGHTINGBL FLEXFORM DOT-FREE D3-30-204.4W/FT LED 420LM/FT 3000KLIGHTHEAHEDT2RA-TL-B55-3018-8015-P-120-1C4-R12W, 1500lm, 3000-1800KLIGHTHEAHEDT2RA-TL-B55-3018-9510-P-120-1C4-R10W, 1000lm, 3000-1800KLIGHTHEAHEDT2RA-TL-B55-3018-9510-P-120-1C4-R10W, 1000lm, 3000-1800KLIGHTHEAHEDT2RA-TL-B55-3018-9510-P-120-1C4-R10W LED, 600lm, 3000-1800KLITONWS700S-UE-D10-T3010W LED, 600lm, 3000KMETALUX2SNLED-LD5-30HL-SLW-UNV-L835-CD1-U27W LED, 3077lm, 3000KLEDALITEVERSA FORM 41-14-S1-ST-L-8C-D-S-7-D-E36.1W, 3500lm, 3000KWAGNER BANTAM SQLULF-27K-70-5-XTS2.2W, 116lm, 2700KORIGINAL BTCMAST LIGHT 0749GU10 LED, 2700KORIGINAL BTCS03-W1-LEDB1-2700K-UNV-T4-DIM10-NSS8.5W LED, 475lm, 2700KBEECAPDU LAPD 84.02K/27 (POCT 70.8179.8W LED, 100lm, 2700K			

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NOTE:

1. RECEPTACLE INSTALLED IN SOFFIT FOR SEASONAL LIGHTING CONTROLLED BY SWITCH INSIDE MAIN ENTRANCE.

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ST	REMARKS
LE	PENDANT, CONTRACTOR TO CONFIRM THE FINISH BEFORE ORDERING. CONTRACTOR TO ADJUST THE PENDANT LENGTH BASED ON THE FIXTURE POSITION ON ANGLED CEILING.
ABLE RIVER	IN-DIRECT COVE LIGHT. LENGTH AS INDICATED ON DRAWING. COORDINATE EXACT MOUNTING LOCATION WITH ARCHITECT.
G	4" DOWNLIGHT TILTABLE 15-30 DEGREE. CONTRACTOR TO CONFIRM THE ANGLE OF FIXTURE WITH ARCHITECT WHILE INSTALLING.
G	4" DOWNLIGHT TILTABLE 15-30 DEGREE. CONTRACTOR TO CONFIRM THE ANGLE OF FIXTURE WITH ARCHITECT WHILE INSTALLING.
/ING	WASHROOM VANITY FIXTURE. MOUNT +6" ABOVE MIRROR. CONFIRM EXACT MOUNTING LOCATION WITH ARCHITECT.
/ING	2" LINEAR FIXTURE. SURFACE MOUNT ON WALLS AS INDICATED ON DRAWING.
/ING	SURFACE MOUNTED 1x4' STRIP LIGHT.
ABLE RIVER	POST SURFACE LUMINAIRE. COORDINATE CAREFULLY WITH LUMENRAIL MANUFACTURER / PROVIDER. CONFIRM MOUNTING PRIOR TO ORDERING.
CENT G	WALL MOUNTED LUMINAIRE. MOUNT ABOVE DOOR. SANDBLASTED BRONZE FINISH.
/ING	EXTERIOR WALL MOUNTED LUMINAIRE. TYPE 4 DISTRIBUTION. MOUNT AT +8FT. A.F.F.
/ING	180 DEGREE DISTRIBUTION DIE CAST MARINE GRADE ALUMINUM BOLLARD AND POST. OPAL CLASS DIFFUSER WITH STAINLESS STEEL HARDWARE.

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	URBAN
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	Scale: AS NOTED
	Quality Control by AT Designed by PB
	Drawn by JB
	Amphitrite Park
11	LEVEL 2 ELECTRICAL LAYOUT
	Project Number Drawing Number Revision 1-21-188 E2.1 E

1.	GENERAL	12. CUTTING AND PATCHING
	.1 GENERAL REQUIREMENTS, INSTRUCTIONS TO BIDDERS, THIS SPECIFICATION AND ANY ADDENDA HERETO FORM PART OF THE CONTRACT DOCUMENTS AND SHALL BE READ IN CONJUNCTION WITH THEM. WORK TO INCLUDE THE FURNISHING OF ALL LABOR AND MATERIALS, UNLESS SPECIFIED OTHERWISE,	.1 THE GENERAL TRADE WILL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL INSTALLATION. STRUCTURAL MEMBINOT BE CUT WITHOUT CONSENT OF THE ENGINEER.
	TO COMPLETE AND PUT INTO OPERATING CONDITION ALL ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN. .2 IT IS THE INTENT OF THE WORK TO PROVIDE COMPLETE, NEATLY FINISHED, AND OPERATIONAL SYSTEMS AND ANY LABOR, MATERIAL, PERMITS, LICENSES,	.2 WHERE WORK DONE BY THE ELECTRICAL TRADE DAMAGES THE WORK OF OTHER TRADES, THE ELECTRICAL TRADE SHALL REPAIR AND MAKE G DAMAGE TO THE SATISFACTION OF EACH TRADE CONCERNED AND THE ENGINEER.
	APPROVALS AND INSPECTIONS REQUIRED FOR COMPLETION OF THE WORK, WHETHER SPECIFICALLY MENTIONED IN THE DRAWINGS OR SPECIFICATIONS OR NOT, ARE TO BE INCLUDED IN THE TENDERED PRICE.	.3 ALL PENETRATIONS SHALL BE SEALED WITH AN APPROVED FIRE STOP SYSTEM WITH APPROVED FIRE STOP MATERIALS LISTED BY THE SYSTEM SPECIFICALLY EMPLOYED ON THE PROJECT
	.3 RESPONSIBILITY AS TO WHICH TRADE PROVIDES REQUIRED ARTICLES OR MATERIALS RESTS SOLELY WITH THE GENERAL CONTRACT TRADE. EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE OF INTERPRETATION OF SPECIFICATIONS AS TO WHICH TRADE INVOLVED SHALL PROVIDE CERTAIN SPECIALTIES OR MATERIALS.	13. CLEANUP
	.4 THE DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE WORKS, INCLUDING ALL OF THOSE RELATED TO OTHER TRADES ARE TO BE EXAMINED BEFORE SUBMITTING TENDERS. ALL ELECTRICAL AND COMMUNICATIONS REQUIREMENTS INDICATED ARE TO BE INCLUDED IN THE SCOPE OF THE WORK.	.1 THE ELECTRICAL TRADE AND THEIR SUBTRADES ARE TO KEEP THE SITE FREE DURING CONSTRUCTION OF DEBRIS, BOXES, PACKING, AND OTHE MATERIALS ASSOCIATED WITH THE WORK OF THIS TRADE. ALL WASTE MATERIAL IS TO BE DISPOSED OF IN A SAFE AND ENVIRONMENTALLY RES MANNER.
	.5 CLEAN UP AND REMOVE ALL UNUSED WIRING AND CONDUITS.	.2 UPON COMPLETION OF WORK, THE ELECTRICAL INSTALLATION SHALL BE LEFT IN A CLEAN AND FINISHED CONDITION TO THE SATISFACTION OF 1 ENGINEER.
	 REMOVE AND REINSTALL EXISTING DEVICES TO FACILITATE CONSTRUCTION AS REQUIRED. CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHT WITH PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION. 	14. ACCESS DOORS
	.8 APPLICABLE CODES AND STANDARDS .1 CANADIAN ELECTRICAL CODE - 2018 EDITION .2 [BC BUILDING CODE - 2018 EDITION] .3 CAN/ULC STANDARDS	 THE ELECTRICAL TRADE IS TO SUPPLY AND INSTALL RATED ACCESS DOORS AS REQUIRED FOR PROPER SERVICING OF ALL ELECTRICAL WORK. DOORS SHALL BE COMPLETE WITH NECESSARY FRAMES AND HINGED DOORS HELD CLOSED WITH CAPTIVE STUDS. ACCESS PANEL TO BE OF NO THAN 14 GAUGE STEEL, PRIME COAT FINISHED AND PAINTED ON THE JOB TO MATCH THE WALL OR CEILING FINISH. THE NUMBER OF ACCESS DOORS SHALL BE KEPT TO A MINIMUM.
	.4 TIA/EIA WIRING STANDARDS .5 CSA-C282:19 EMERGENCY POWER SUPPLY FOR BUILDINGS	 THE ELECTRICAL TRADE SHALL PROVIDE ACCESS PANELS IN THE DRYWALL CEILINGS FOR ALL ELECTRICAL JUNCTION BOXES AND EQUIPMENT II ACCORDANCE WITH APPLICABLE CODES.
2.	DRAWINGS AND SPECIFICATIONS	15. CODES, PERMITS AND INSPECTION
	.1 DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE IS TO BE BINDING AS IF CALLED FOR BY BOTH.	.1 THE ENTIRE INSTALLATION, INCLUSIVE OF MATERIAL AND LABOR, IS TO COMPLY WITH ALL THE REQUIREMENTS OF ALL BUILDING CODES AND AUTHORITIES HAVING JURISDICTION, THE CANADIAN ELECTRICAL CODE, AND REGULATIONS OF THE LOCAL INSPECTION DEPARTMENT.
3.	.2 SHOULD ANY DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS THAT LEAVES THE ELECTRICAL TRADE IN DOUBT AS TO TRUE INTENT AND MEANING, OBTAIN RULING FROM THE ENGINEER BEFORE SUBMITTING TENDER, OR ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE. EXAMINATION OF OTHER DRAWINGS	 .2 THE ELECTRICAL TRADE IS TO OBTAIN ALL PERMITS REQUIRED FOR EACH STAGE OF WORK, AND AFTER COMPLETION OF THE ENTIRE INSTALLAT FURNISH TO THE ENGINEER A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT. 16. MECHANICAL EQUIPMENT AND EQUIPMENT SUPPLIED BY OTHERS
	1 THE ELECTRICAL CONTRACTOR IS TO EXAMINE CAREFULLY STRUCTURAL, ARCHITECTURAL AND MECHANICAL DRAWINGS, AND THE WORK OF OTHER TRADES AND ENSURE THAT THE WORK UNDER THIS CONTRACT CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO THE BUILDING AS SHOWN	.1 UNLESS SPECIFIED OTHERWISE, THE ELECTRICAL CONTRACTOR IS TO SUPPLY AND INSTALL ALL REQUIRED CONDUIT, WIRING, ELECTRICAL FITT
4.	ON THE PLANS. SHOULD ANY DIFFICULTY ARISE SHOWING CONFLICT WITH, OR REQUIRING ADDITIONAL WORK BEYOND THE WORK OF THESE DRAWINGS, BRING THIS MATTER TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING TENDER. UNIFORMITY OF EQUIPMENT	CONNECTIONS FOR ALL MOTORS AND OTHER MECHANICAL EQUIPMENT, EVEN THOUGH SUCH MOTORS AND OTHER MECHANICAL EQUIPMENT M. SUPPLIED BY OTHERS. WHERE REQUIRED BY THE DRAWINGS OR APPLICABLE REGULATIONS, DISCONNECT SWITCHES, STARTERS, OVERLOAD R AND OTHER NECESSARY PROTECTIVE DEVICES ARE TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MOTORS AND CONTRG BE FURNISHED BY THE SUPPLIER OF THE DRIVEN EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL WORK AND CONNECTIONS RI TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL. EQUIPMENT SUPPLIED BY OTHERS SHALL BE APPROVED AND BEAR LABEL MEETING THE
	.1 UNLESS OTHERWISE SPECIFIED, UNIFORMITY OF MANUFACTURE IS TO BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT.	REQUIREMENTS OF THE CANADIAN ELECTRICAL CODE FOR THE USE IN CANADA OR AS REQUIRED BY LOCAL AUTHORITY FOR PROJECTS OUTSID CANADA.
5.	STANDARDS OF MATERIAL AND WORK .1 ALL MATERIALS ARE TO BE NEW AND OF THE QUALITY SPECIFIED, AND SHALL BE APPROVED BY CSA OR EQUIVALENT AGENCY RECOGNIZED IN [BRITISH	.2 EQUIPMENT SUPPLIED BY OTHERS MAY INCLUDE BUT NOT BE LIMITED TO SUCH ITEMS AS GRILLE MOTORS AND INTERLOCKS, STOREFRONT AND SIGNAGE, STARTING DEVICES, MOTOR CONTROLLERS, FLOAT SWITCHES, ALARM DEVICES OR SYSTEMS, PUSH BUTTONS, EXHAUST FANS, DATA
	COLUMBIA] [ALBERTA].	INTERCOMS AND STEREO SYSTEMS. .3 THE ELECTRICAL CONTRACTOR IS TO CONFIRM MOTOR (OR OTHER EQUIPMENT) LOCATION AND SIZES WITH THE TRADE SUPPLYING THE MOTOR
	FOREPERSON AND NECESSARY ASSISTANTS ON THE SITE DURING THE PROGRESS OF THE WORK. ALL MATERIAL AND INSTALLATION SHALL MATCH BUILDING STANDARD UNLESS IT IS NOTED OTHERWISE ON THE DRAWINGS.	OTHER EQUIPMENT) BEFORE COMMENCING ANY ASSOCIATED ELECTRICAL WORK.
6.	RECORD PLANS	5-20R GFCI RECEPTACLE INSTALLED WITHIN 7.5m AS PER THE CANADIAN ELECTRICAL CODE.
	.1 THE ENGINEER WILL FURNISH TO THE ELECTRICAL TRADE ONE SET OF DRAWINGS TO BE USED FOR RECORD PURPOSES. THE ELECTRICAL TRADE IS TO ACCURATELY RECORD ON THESE PRINTS ALL REVISIONS TO THE ORIGINAL PLANS THAT ARE MADE ON SITE DURING CONSTRUCTION.	.5 WHETHER INDICATED ON THE DRAWINGS OR NOT, ALL DDC PANELS ARE TO BE INSTALLED WITH ONE (1) 15A DUPLEX TVSS RECEPTACLE ON A D CIRCUIT AND ONE (1) DATA JACK.
	.2 ARRANGE AND PAY FOR THE RE-DRAWING OF THE ELECTRICAL TENDER PACKAGE INCLUDING ALL ADDENDA, CCN'S AND SITE INSTRUCTION DURING BIDDING AND CONSTRUCTION, CONTRACTOR TO INCORPORATE ANY "AS-BUILT" CHANGES TO REPRODUCIBLE PLANS AND ISSUE THEM AS "RECORD	.6 WHETHER INDICATED ON THE DRAWINGS OR NOT, ALL MECHANICAL EQUIPMENT IS TO HAVE A MINIMUM SHORT CIRCUIT CURRENT RATING (SCC MATCH THE PANEL TO WHICH IT IS CONNECTED.
	DRAWINGS". THESE CHANGES SHALL BE OF A SIMILAR QUALITY OF PRESENTATION AS THE ORIGINAL PLANS. UPON COMPLETION A SET OF *.PDF'S AND BOUND *.DWG FILES ARE TO BE INCLUDED ON DISK OR USB DRIVE FOR FINAL SUBMISSION. NOTE: ALL PLANS WHETHER REQUIRING AS-BUILT CHANGES OR NOT, SHALL BE INCLUDED IN THIS SET.	 .7 CONFIRM REQUIREMENTS FOR MECHANICAL EQUIPMENT WITH MECHANICAL TRADE PRIOR TO ROUGH-IN. ADJUST BREAKER SIZES, FEEDER SIZE DISCONNECTS AND STARTERS WHERE APPLICABLE, AT NO ADDITIONAL COST. 17. TESTS
	.3 SHOULD THE CONTRACTOR REQUIRE THE ELECTRICAL CONSULTANT TO PREPARE THE "RECORD DRAWINGS", THE COST WOULD BE \$350 PER SHEET, UNLESS MINIMAL CHANGES HAVE BEEN ACCRUED, A QUOTE FOR REVIEWING RECORD DRAWINGS COST MAY BE REQUESTED.	.1 ALL PORTIONS OF ELECTRICAL WORK ARE TO BE TESTED FOR SATISFACTORY OPERATION.
	.4 UPDATE COSTS FOR THE REVIT MODEL WILL BE DETERMINED BASED ON THE EXTENT OF THE WORK REQUIRED. CONTRACTOR TO CONFIRM THIS COST WITH THE CONSULTANT. REVIT RECORD DRAWINGS ARE TO BE SAVED IN *.DWG FORMAT. UPON COMPLETION A SET OF *.PDF'S, BOUND *.DWG FILES AND A COPY OF THE REVIT FILE (WITH VERSION NOTED) ARE TO BE INCLUDED ON DISK OR USB DRIVE FOR FINAL SUBMISSION.	.2 BEFORE ENERGIZING ANY PORTION OF THE ELECTRICAL SYSTEM, THE ELECTRICAL TRADE SHALL PERFORM MEGGER TESTS ON ALL FEEDERS A BRANCH CIRCUITS. ANY PROBLEMS DISCOVERED BY SUCH TESTING ARE TO BE CORRECTED BY THE ELECTRICAL TRADE AND THE CIRCUITS IN C RETESTED. THE RESULTS OF ALL FINAL TESTING SHALL BE PROVIDED TO THE ENGINEER IN REPORT FORM.
7.	SHOP DRAWINGS .1 THE ELECTRICAL CONTRACTOR IS TO SUBMIT TO THE ENGINEER, FOR REVIEW, SHOP DRAWINGS OF MAJOR ELECTRICAL EQUIPMENT. SUCH EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO SWITCHGEAR, PANELBOARDS, SERIES-RATED BREAKER COMBINATIONS, FIXTURES AND FITTINGS NOT PROVIDED BY THE OWNER.	.3 UPON PROJECT COMPLETION, AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER, THE ELECTRICAL TRADE SHALL CHECK THE LOAD BALANCE ON ALL FEEDERS AND AT DISTRIBUTION CENTRES, LOAD CENTRES, AND PANELS. THESE CHECKS ARE TO BE CARRIED OUT BY TURNIN LOADS AND CHECKING LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15%, THE CIRCUITS ARE TO BE RECONFIGURED AS NECESSARY BALANCE THE LOADS.
	.2 ALL DRAWINGS ARE TO BE SUBMITTED IN TRUE DIGITAL PDF FORMAT (NO SCANS) AND A REVIEWED COPY WILL BE RETURNED TO THE COORDINATING	
	PROFESSIONS FOR DISTRIBUTION TO THE ELECTRICAL TRADE. .3 THE ENGINEER'S REVIEW OF SHOP DRAWINGS IS TO BE FOR GENERAL DESIGN ONLY AND WILL NOT RELIEVE THE ELECTRICAL TRADE OR SUPPLIERS	.1 ALL ELECTRICAL FITTINGS, SUPPORTS, HANGER RODS, PULLBOXES, CHANNEL FRAMES, CONDUIT RACKS, OUTLET BOXES, BRACKETS, AND CLAN TO HAVE A GALVANIZED FINISH OR A PAINT FINISH OVER CORROSION-RESISTANT PRIMER.
	FROM RESPONSIBILITY FOR ERRORS, PROPER FITTING, CONSTRUCTION OF WORK, AND FURNISHING OF MATERIALS. REVIEW WILL NOT BE CONSTRUED AS APPROVING DEPARTURES FROM CONTRACT DOCUMENT REQUIREMENTS IF SUCH DEPARTURES ARE NOT SPECIFICALLY NOTED. THE ELECTRICAL TRADE IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. 4 PROVIDE SHOP DRAWINGS FOR THE FOLLOWING ELECTRICAL PRODUCTS:	.2 ALL PANELS ARE TO BE FACTORY-FINISHED WITH SPRAY-ON AIR DRY ENAMEL. ALL ENAMEL TO BE APPLIED OVER CORROSION-RESISTANT PRIME OR FLAT TYPE FINISH PAINT WILL NOT BE ACCEPTED. ALL PANELS OR SIMILAR FACTORY-FINISHED UNITS THAT ARE SCRATCHED OR MARKED DU INSTALLATION ARE TO BE TOUCHED UP WITH MATCHING SPRAY-ON AIR DRY LACQUER AND, IF REQUIRED TO PROVIDE A SATISFACTORY JOB, TO COMPLETELY REFINISHED.
	.1 POWER DISTRIBUTION EQUIPMENT .2 LUMINAIRES	.3 ALL 120/208V PANELBOARDS, PULLBOXES, AND OTHER ELECTRICAL CABINETS AND BOXES ARE TO BE FINISHED IN GREY ENAMEL.
	.3 LIGHTING CONTROLS .4 WIRING DEVICES .5 STRUCTURED WIRING COMPONENTS AND EQUIPMENT	19. CONDUIT AND EMT .1 WHERE REQUIRED BY THE CANADIAN ELECTRICAL CODE, ALL WIRE AND CABLE IS TO BE INSTALLED IN CONDUIT OR EMT. WHERE APPROVED, AC
	.6 FIRE STOPPING SYSTEM .7 ELECTRICAL METERING EQUIPMENT .8 EMERGENCY LIGHTING SYSTEM	TECK90 MAY BE USED.
	.9 EXIT LIGHTING SYSTEM .10 SEISMIC SYSTEM DETAILS	SURFACE UNLESS INDICATED OTHERWISE. SURFACE MOUNTED CONDUIT AND EMT ARE TO BE INSTALLED PARALLEL TO STRUCTURAL LINES, AND, WHERE BENDS OCCUR IN PARALLEL RUN
8.	.11 FLOOR BOXES GUARANTEE WARRANTY	SHALL BE CONCENTRIC.
	.1 THE ELECTRICAL TRADE SHALL FURNISH A WRITTEN GUARANTEE WARRANTY, SIGNED BY AUTHORIZED PERSONNEL, STATING: .1 THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF MATERIAL AND WORK FOR A PERIOD OF 1 YEAR FROM DATE	.4 RACEWAYS ARE TO BE INSTALLED FREE FROM DENTS AND BRUISES AND SHALL HAVE THEIR ENDS CAPPED, PLUGGED, OR SEALED AS NECESSA PREVENT ENTRANCE OF DIRT OR MOISTURE.
	OF FINAL ACCEPTANCE. 2 THE ABOVE PARTIES FURTHER AGREE TO, AT THEIR OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE WORK, AND OTHER WORK DAMAGED THEREBY, WHICH FAILS OR BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE WARRANTY PROVIDED THAT SUCH FAILURE IS	 .5 IN ALL AREAS SUBJECT TO MOISTURE, RAIN TIGHT FITTINGS MUST BE USED. .6 ALL RACEWAY. EXCEPT WHERE OTHERWISE INDICATED. SHALL BE SIZED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.
	NOT DUE TO IMPROPER USAGE. 3 THE PERIOD OF THE GUARANTEE SPECIFIED WILL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OF A LONGER PERIOD BUT BE BINDING ON WORK	.7 TECK90 OR SEAL TIGHT FLEXIBLE CONDUIT IS TO BE UTILIZED FOR CONNECTIONS TO MOTORS AND MOTOR CONTROLLERS.
9.	NOT OTHERWISE COVERED. OPERATING AND MAINTENANCE MANUALS	.8 ALL UNDERGROUND CONDUIT SYSTEMS ARE TO BE OF APPROVED RPVC SCHEDULE 40 CONDUIT, COMPLETE WITH INSTALLED BONDING CONDUC INSTALLED AT OR BELOW THE DEPTH REQUIRED BY CODE. PROVIDE 150mm CLEAN SAND BEDDING ABOVE AND 75mm BELOW CONDUITS AND CO
	.1 SUBMIT THREE (3) SETS OF OPERATING AND MAINTENANCE MANUALS FOR ELECTRICAL SYSTEMS PROVIDED IN THIS CONTRACT. INCLUDE DESCRIPTIVE AND TECHNICAL DATA, ALL SHOP DRAWINGS, OPERATING PROCEDURES, ROUTINE AND PREVENTATIVE MAINTENANCE, WIRING DIAGRAMS, SPARE PARTS LIST, WARRANTIES, SERVICE COMPANIES, SUPPLIERS OF REPLACEMENT PARTS, TEST RESULTS, FIRE ALARM CERTIFICATE OF VERIFICATION, ELECTRICAL INSPECTION AUTHORITY CERTIFICATE, CONTRACT GUARANTEE. PROJECT PERSONNEL CONTACT LIST, COMMISSIONING TEST REPORTS AND PRODUCT	MARKING TAPE HALF DISTANCE BETWEEN GRADE AND TOP OF RACEWAY OR CABLE IN TRENCH. PROVIDE SUITABLE BACKFILL AND COMPACTION 20. EXPANSION JOINTS .1 WHERE CONDUITS ARE INSTALLED IN CONCRETE SLABS OR CROSS STRUCTURAL EXPANSION JOINTS. AN APPROVED EXPANSION FITTING SHALL
	SUPPORT CONTACT INFORMATION. 2 SUBMIT DOCUMENTATION IN GREEN COLOURED HEAVY DUTY THREE RING BINDERS. WITH LETTERING ON SPINE IDENTIFYING: "OPERATING AND	INSTALLED. 21. WIRE AND CABLE
	MAINTENANCE MANUAL", PROJECT TITLE AND SYSTEM NAMES AND ALSO SUBMIT ONE DIGITAL COPY ON A USB DRIVE AS PART OF PROJECT CLOSE-OUT.	.1 ALL BUILDING WIRING IS TO BE COPPER, EXCEPT WHERE NOTED OTHERWISE.
10.	.3 SUBMIT ONE COPY FOR APPROVAL BY CONSULTANT PRIOR TO ASSEMBLY OF FINAL SETS. SETTING OUT OF THE WORK	.2 A MINIMUM CONDUCTOR SIZE OF #12 AWG COPPER IS TO BE USED, EXCEPT WHERE NOTED OTHERWISE.
	.1 THE ELECTRICAL TRADE IS RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF DRAWINGS AND SPECIFICATIONS AND SHALL BEAR ALL COSTS INVOLVED IN MAKING THE CORRECTIONS. WHERE INTENT OF DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, OBTAIN	 ALL CONDUCTORS ARE TO BE COLOR CODED THROUGHOUT THE INSTALLATION AS FOLLOWS: BONDING CONDUCTOR - GREEN NEUTRAL CONDUCTOR - WHITE
	CLARIFICATION FROM THE ENGINEER BEFORE PROCEEDING WITH WORK. .2 THE ELECTRICAL TRADE IS TO GIVE WORK THEIR PERSONAL SUPERVISION, LAY OUT THEIR OWN WORK, DO ALL NECESSARY LEVELING AND MEASURING	 120/208V PHASE WIRES - RED, BLACK, AND BLUE GROUND WIRE - BARE GREEN
	 3 THE ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE OWNER OR ANY OTHER TRADE BY IMPROPER LOCATION OR 3 THE ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE OWNER OR ANY OTHER TRADE BY IMPROPER LOCATION OR 	22. WIRING DEVICES & BOXES .1 ALIGN ALL DEVICES AND PLATES PLUMB AND LEVEL WITH BUILDING STRUCTURAL LINES.
	CARRYING OUT OF THEIR WORK.	.2 ALL OUTLET BOXES ARE TO BE FLUSH MOUNTED AND INSTALLED WITHIN 6mm OF FINISH WITHOUT THE USE OF EXTENSION SLEEVES EXCEPT WH
	.4 THE ELECTRICAL TRADE, IN THE SETTING OUT OF THEIR WORK, IS TO MAKE REFERENCE TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS. THEY SHALL CONSULT WITH ALL RELEVANT TRADES IN SETTING OUT LOCATIONS FOR CONDUIT RUNS, LIGHTING FIXTURES, PANEL ASSEMBLIES, AND ALL OTHER ELECTRICAL EQUIPMENT, SO THAT CONFLICTS ARE AVOIDED AND SYMMETRICAL SPACING IS MAINTAINED.	BOXES ARE LOCATED IN COMBUSTIBLE MATERIALS WHERE EXTENSION SLEEVES MAY BE USED. 23 LOCATION OF OUTLETS
	.5 THE ELECTRICAL TRADE SHALL CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHTS WITH THE PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.	.1 THE ENGINEER RESERVES THE RIGHT TO CHANGE THE LOCATION OF OUTLETS TO WITHIN 3 METRES OF POINTS INDICATED ON PLANS WITHOUT CHARGE, PROVIDED THE ELECTRICAL CONTRACTOR IS ADVISED BEFORE INSTALLATION IS MADE.
	.6 WHERE RECEPTACLES ARE MOUNTED ABOVE COUNTERS, BENCHES, SPLASHBACKS, OR OTHER FIXTURES, THEIR LOCATIONS AND MOUNTING HEIGHTS	.2 ELECTRICAL TRADE TO REFER TO ARCHITECTURAL ROOM ELEVATIONS FOR POSITIONS, AND MOUNTING HEIGHTS OF ALL OUTLETS, SWITCHES, INTERCOMMUNICATION, TELEPHONES, SPEAKERS, CLOCKS, ETC. POSITIONS SHOWN ON ARCHITECTURAL PLANS TO TAKE PRECEDENCE OVER F
	ARE TO BE COORDINATED WITH THE BUILT-IN UNITS. REFER TO ARCHITECTURAL DETAILS. WHERE RECEPTACLES OCCUR IN OUTSIDE WALLS WHERE HEATING UNITS ALSO OCCUR, RECEPTACLE HEIGHT TO BE ADJUSTED TO COORDINATE WITH THE HEATING UNITS.	OR MOUNTING HEIGHTS SHOWN ON ELECTRICAL PLANS.
	.7 SWITCH MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ARCHITECTURAL DETAILS AND SHALL BE ADJUSTED, IF REQUIRED, TO COORDINATE WITH PANELING, DADOS, MASONRY COURSE LINES, OR OTHER RELEVANT BUILDING FEATURES.	24. PULL BOXES .1 THE ELECTRICAL TRADE SHALL SUPPLY AND INSTALL PULLBOXES AS REQUIRED TO SUIT JOB CONDITIONS. PULLBOXES SHALL CONFORM TO CA
	.8 WHERE OUTLET BOXES OCCUR IN EXTERIOR WALLS, THE ELECTRICAL TRADE IS TO ENSURE THAT THERE IS INSULATION BEHIND THE OUTLET BOXES TO PREVENT CONDENSATION THROUGH THE BOXES.	ELECTRICAL CODE REQUIREMENTS. PULLBOXES TO BE BE FINISHED IN ENAMEL OVER CORROSION-RESISTANT PRIMER WITH SCREW-ON OR HIN COVER. IN REMOVABLE CEILING AREAS, PULLBOXES ARE TO BE INSTALLED ABOVE THE CEILING.
	.9 ALLOW FOR WORK AFTER HOURS AS REQUIRED AND COORDINATE WITH OWNER/TENANTS IF APPLICABLE.	

.10 CONTRACTOR TO COORDINATE ANY INTERRUPTIONS TO ADJOINING TENANTS IN ORDER TO AVOID ANY INCONVENIENCES TO SAID TENANT. IF NECESSARY CONTRACTOR TO DO ANY REQUIRED CONNECTIONS ON OFF HOURS.

11. EXAMINATION OF THE SITE

.1 PRIOR TO SUBMITTING TENDER, THE ELECTRICAL TRADE SHALL CAREFULLY EXAMINE THE SITE AND ASCERTAIN ALL CONDITIONS WHICH MAY AFFECT THEIR TRADE. NO ADDITIONAL MONEY WILL BE ALLOWED FOR WORK RESULTING FROM CONDITIONS THAT SHOULD HAVE BEEN NOTICED AND ACCOUNTED FOR DURING A THOROUGH EXAMINATION OF THE SITE.

- NICAL TRADE PRIOR TO ROUGH-IN. ADJUST BREAKER SIZES, FEEDER SIZES, ACTORY OPERATION. ELECTRICAL TRADE SHALL PERFORM MEGGER TESTS ON ALL FEEDERS AND E TO BE CORRECTED BY THE ELECTRICAL TRADE AND THE CIRCUITS IN QUESTION TO THE ENGINEER IN REPORT FORM. PECTION AND TAKEOVER, THE ELECTRICAL TRADE SHALL CHECK THE LOAD TRES, AND PANELS. THESE CHECKS ARE TO BE CARRIED OUT BY TURNING ON ALL E EXCEEDS 15%, THE CIRCUITS ARE TO BE RECONFIGURED AS NECESSARY TO CHANNEL FRAMES, CONDUIT RACKS, OUTLET BOXES, BRACKETS, AND CLAMPS ARE -RESISTANT PRIMER. ENAMEL, ALL ENAMEL TO BE APPLIED OVER CORROSION-RESISTANT PRIMER, MATTE SIMILAR FACTORY-FINISHED UNITS THAT ARE SCRATCHED OR MARKED DURING DRY LACQUER AND, IF REQUIRED TO PROVIDE A SATISFACTORY JOB, TO BE ABINETS AND BOXES ARE TO BE FINISHED IN GREY ENAMEL. ND CABLE IS TO BE INSTALLED IN CONDUIT OR EMT. WHERE APPROVED, AC90 OR ED IN ALL FINISHED AREAS. IN SERVICE AREAS, CONDUIT AND EMT SHALL BE RUN ON LEL TO STRUCTURAL LINES, AND, WHERE BENDS OCCUR IN PARALLEL RUNS, THEY AND SHALL HAVE THEIR ENDS CAPPED. PLUGGED. OR SEALED AS NECESSARY TO ISFD ZED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE. DNNECTIONS TO MOTORS AND MOTOR CONTROLLERS. VC SCHEDULE 40 CONDUIT, COMPLETE WITH INSTALLED BONDING CONDUCTOR, AND m CLEAN SAND BEDDING ABOVE AND 75mm BELOW CONDUITS AND CONTINUOUS NAY OR CABLE IN TRENCH. PROVIDE SUITABLE BACKFILL AND COMPACTION. TRUCTURAL EXPANSION JOINTS, AN APPROVED EXPANSION FITTING SHALL BE RWISE CEPT WHERE NOTED OTHERWISE. FALLATION AS FOLLOWS: TRUCTURAL LINES. IN 6mm OF FINISH WITHOUT THE USE OF EXTENSION SLEEVES EXCEPT WHERE SLEEVES MAY BE USED. OUTLETS TO WITHIN 3 METRES OF POINTS INDICATED ON PLANS WITHOUT EXTRA ORE INSTALLATION IS MADE. FOR POSITIONS, AND MOUNTING HEIGHTS OF ALL OUTLETS, SWITCHES, TIONS SHOWN ON ARCHITECTURAL PLANS TO TAKE PRECEDENCE OVER POSITIONS REQUIRED TO SUIT JOB CONDITIONS. PULLBOXES SHALL CONFORM TO CANADIAN NENAMEL OVER CORROSION-RESISTANT PRIMER WITH SCREW-ON OR HINGED ALLED ABOVE THE CEILING.
- SELF-POWERED SWITCHES AND SENSORS ACH STAGE OF WORK, AND AFTER COMPLETION OF THE ENTIRE INSTALLATION INDEPENDENT COMMISSIONING REQUIRED UNDER ASHRAE 90.1 AND THE BC BUILDING CODE. O SUPPLY AND INSTALL ALL REQUIRED CONDUIT, WIRING, ELECTRICAL FITTINGS AND RECHARGEABLE BATTERIES AND BUILT-IN PHOTO-VOLTAIC BATTERY CHARGING SYSTEM. T. EVEN THOUGH SUCH MOTORS AND OTHER MECHANICAL EQUIPMENT MAY BE ICABLE REGULATIONS, DISCONNECT SWITCHES, STARTERS, OVERLOAD RELAYS AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MOTORS AND CONTROLS SHALL BATTERY CHARGING SYSTEM. CTRICAL CONTRACTOR SHALL INCLUDE ALL WORK AND CONNECTIONS REQUIRED CANADA OR AS REQUIRED BY LOCAL AUTHORITY FOR PROJECTS OUTSIDE OF AND CONTROL USING COMPUTERS OR SMART DEVICES (SMART PHONES, TABLETS). TO SUCH ITEMS AS GRILLE MOTORS AND INTERLOCKS. STOREFRONT AND INTERIOR .9 ACCEPTABLE PRODUCTS: COOPER WAVELINX OR APPROVED ALTERNATE. HES, ALARM DEVICES OR SYSTEMS, PUSH BUTTONS, EXHAUST FANS, DATA SYSTEMS SUPPORTS 27. UIPMENT) LOCATION AND SIZES WITH THE TRADE SUPPLYING THE MOTOR (OR CANADIAN ELECTRICAL CODE AND THE LOCAL BUILDING CODE REQUIREMENTS. CHANICAL UNIT OR PIECE OF ROOFTOP MAINTENANCE EQUIPMENT IS TO HAVE A ARE TO BE INSTALLED WITH ONE (1) 15A DUPLEX TVSS RECEPTACLE ON A DEDICATED GROUNDING AND BONDING EQUIPMENT IS TO HAVE A MINIMUM SHORT CIRCUIT CURRENT RATING (SCCR) TO ELECTRICAL INSPECTION DEPARTMENT OTHER FITTINGS WHERE NECESSARY TO PROVIDE BONDING CONTINUITY. UNDERGROUND ASSOCIATED COMPONENTS PANELS ON THE SINGLE LINE DIAGRAM. PROVIDE 200% RATED NEUTRAL PANELBOARDS. OTHERWISE INDICATED. CODE. AND INSTALLATION HARDWARE .5 UPDATED TYPEWRITTEN PANEL DIRECTORIES SHALL BE PROVIDED FOR ALL PANELS. REQUIRED. .7 BALANCE PANEL LOAD FOR EACH PHASE A, B AND C. ALLOW FOR RELOCATING CIRCUITS WITHIN PANEL BOARD TO BALANCE THE LOAD. 30. LIGHTING LUMINAIRES AND LIGHTING CONTROLS PROVIDE A NEW LIGHTING SYSTEM COMPLETE AND FULLY OPERATIONAL AND IN CONFORMANCE WITH CANADIAN FUECTRICAL CODE AND CSA LISTING REQUIREMENTS. UNLESS NOTED OTHERWISE, ALL FIXTURES AND LAMPS ARE TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE DRAWINGS. .2 ELECTRICAL TRADE TO INSTALL ALL LIGHTING LUMINAIRES COMPLETE WITH LAMPS, MOUNTING BRACKETS, BALLASTS AND ALL NECESSARY ACCESSORIES IN ACCORDANCE WITH THE LUMINAIRE TYPES SHOWN ON THE DRAWINGS, OR OTHERWISE SPECIFIED. .3 ALL LUMINAIRES SHALL BE ALIGNED, AS APPROPRIATE, WITH ONE ANOTHER AND WITH STRUCTURAL LINES. .4 ALL LUMINAIRES SHALL BE CLEANED AND LAMPED UPON COMPLETION OF WORK AND PRIOR TO FINAL ACCEPTANCE. UTILIZE MANUFACTURER'S APPROVED OR RECOMMENDED CLEANING SOLUTIONS. .5 WHERE NO SWITCH IS INDICATED ON THE DRAWINGS FOR LIGHTING IN PUBLIC AREAS OF THE BUILDING, THE LUMINAIRES SHALL BE SWITCHED FROM THE PANEL. BREAKERS USED FOR SUCH SWITCHING SHALL BE SWITCH RATED. .6 SWITCHES SHALL HAVE A CURRENT RATING NOT LESS THAN THAT OF THE CIRCUIT TO WHICH THEY ARE CONNECTED.
 - PROVIDE COMPLETE PANELBOARDS. UNLESS OTHERWISE INDICATED PANELBOARDS ARE TO BE 120/208V, 3PH, 4W OR 120/240V, 1Ø, 3W SOLID NEUTRAL DESIGN WITH SEQUENCE STYLE BUSSING AND FULL CAPACITY NEUTRAL WITH BOLT-ON CIRCUIT BREAKERS. WHERE DOUBLE NEUTRALS ARE INDICATED PROVIDE ALL CIRCUIT BREAKERS INDICATED PLUS A MINIMUM OF 2x15A-1P IN EACH PANEL. CIRCUIT BREAKERS TO BE RATED MINIMUM 10kA I.C. UNLESS .3 FOR RESIDENTIAL RECEPTACLE CIRCUITS, PROVIDE AFCI BREAKERS, UNLESS USING AFCI RECEPTACLES, AS REQUIRED BY THE CANADIAN ELECTRICAL .4 PANELS ARE TO BE FLUSH MOUNTED IN PUBLIC AREAS AND SURFACE MOUNTED IN SERVICE ROOMS, ALL COMPLETE WITH ALL TRIM, LOCKABLE DOORS .6 UTILIZE EXISTING PANELBOARDS AS INDICATED ON THE DRAWING. REUSE EXISTING BREAKERS WHERE POSSIBLE. PROVIDE NEW BREAKERS AS
 - .3 A SEPARATE BONDING CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAY FEEDER RUNS, FLEXIBLE CONDUIT, AND IN CONDUIT INSTALLED IN SLAB OR .4 BOND ALL COMMUNICATIONS AND SECURITY SYSTEM EQUIPMENT TO GROUND INCLUDING RACKS, PATCH PANELS, CONTROL PANELS, AND OTHER
 - ALL METAL PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO, SECONDARY FEEDER CIRCUITS, EQUIPMENT AND PANELBOARD ENCLOSURES, METAL RACEWAYS, PULL AND JUNCTION BOXES, SHALL BE PROPERLY BONDED. METAL RACEWAYS SHALL UTILIZE DOUBLE LOCKNUTS AND
 - A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE AND THE
 - WHERE INSERTS ARE REQUIRED IN CONCRETE, EXPANSION INSERTS, LEAD INSERTS OR PLASTIC INSERTS ARE TO BE USED IN DRILLED HOLES. SHOT DRIVEN PINS MAY BE USED IN STRUCTURAL CONCRETE ONLY WITH THE PERMISSION OF THE ENGINEER.
 - ALL CONDUIT, RACEWAYS, AND OTHER ELECTRICAL EQUIPMENT SHALL BE SECURELY AND ADEQUATELY SUPPORTED, IN ACCORDANCE WITH THE

 - .8 THE SYSTEM SHALL BE PROVIDED WITH INTERFACES AND GATEWAYS AND REQUIRED TO PROVIDE OWNER/USERS WITH REMOTE ACCESS VIA INTERNET
 - .6 DAYLIGHT HARVESTING SENSORS SHALL BE WIRELESS, SELF-POWERED SELF-POWERED WITH RECHARGEABLE BATTERIES AND BUILT-IN PHOTO-VOLTAIC 7 CUBICLE SENSORS SHALL BE PASSIVE INFRA-RED WIRELESS WITH INTEGRATED SWITCH, POWERED THROUGH A USB CONNECTION.

 - .5 VACANCY/OCCUPANCY SENSORS SHALL BE WIRELESS AND EQUIPPED WITH 360 DEGREE COVERAGE, CEILING MOUNTED, SELF-POWERED WITH

 - RETAIN THE SERVICES OF THE MANUFACTURER'S REPRESENTATIVE TO SET-UP AND COMMISSION THE LIGHTING CONTROL SYSTEM PRIOR TO
- SWITCHES SHALL BE CAPABLE OF SWITCHING ON/OFF AND DIMMING .3 PROVIDE DMX CONTROLS WHERE LUMINAIRES WHERE INDICATED ON PLANS AND LUMINAIRE SCHEDULE. DMX INTERFACES SHALL WORK WITH
- WIRELESS SWITCH SHALL BE SINGLE OR DOUBLE DECORA STYLE. SELF-POWERED WITHOUT USE OF BATTERIES AND SHALL TRANSMIT WIRELESS SIGNALS TO CONTROLLERS AND RECEIVERS TO DISTANCES OF 30m TO 300m DEPENDING ON LINE-OF-SIGHT BETWEEN SWITCHES AND CONTROLLERS.
- .1 WHERE WIRELESS LIGHTING CONTROLS IS INDICATED ON PLANS, INSTALL DEVICES AS RECOMMENDED BY MANUFACTURER.

- RECEPTACIES IN RESIDENTIAL APPLICATIONS MAY REQUIRE ACCESSIBLE MOUNTING HEIGHTS. CHECK LOCAL BYLAWS PRIOR TO ROUGH-IN AND INSTALL AT REQUIRED MOUNTING HEIGHT.] 26. WIRELESS LIGHTING CONTROLS WALL CEILINGS FOR ALL ELECTRICAL JUNCTION BOXES AND EQUIPMENT IN
- .6 PROVIDE P-TOUCH LABELS FOR ALL RECEPTACLE LABELS. .7 FOR ALL RECEPTACLES OTHER THAN STANDARD 15A DUPLEX RECEPTACLES, PROVIDE LAMACOID NAMETAGS GIVING AMP RATING, PHASE AND VOLTAGE. .8 [RECEPTACLES IN RESIDENTIAL APPLICATION MUST BE TAMPER PROOF, WHERE REQUIRED BY CANADIAN ELECTRICAL CODE.] DOORS AS REQUIRED FOR PROPER SERVICING OF ALL ELECTRICAL WORK ACCESS DOORS HELD CLOSED WITH CAPTIVE STUDS. ACCESS PANEL TO BE OF NOT LESS JOB TO MATCH THE WALL OR CEILING FINISH.
- E FREE DURING CONSTRUCTION OF DEBRIS, BOXES, PACKING, AND OTHER MATERIAL IS TO BE DISPOSED OF IN A SAFE AND ENVIRONMENTALLY RESPONSIBLE BE LEFT IN A CLEAN AND FINISHED CONDITION TO THE SATISFACTION OF THE

- SYSTEM WITH APPROVED FIRE STOP MATERIALS LISTED BY THE SYSTEM
- ATCHING REQUIRED FOR ELECTRICAL INSTALLATION. STRUCTURAL MEMBERS MUST OF OTHER TRADES, THE ELECTRICAL TRADE SHALL REPAIR AND MAKE GOOD SUCH ENGINEER.
- DUPLEX RECEPTACLES, CSA TYPE 5-15R, OR 5-20R (AS INDICATED), 125V, SPECIFICATION GRADE U GROUND, WITH FOLLOWING FEATURES: WHITE UREA MOULDED HOUSING (EXCEPT AS NOTED)
- EXCEPT WHERE SHOWN AS WEATHERPROOF
- ALL SWITCHES AND RECEPTACLES SHALL BE SPECIFICATION GRADE IN WHITE UNLESS OTHERWISE NOTED. FACEPLATES SHALL BE HIGH IMPACT NYLON
- 25. SWITCHES AND RECEPTACLES

SUITABLE FOR NO. 10 AWG FOR BACK AND SIDE WIRING.

DOUBLE WIPE CONTACTS AND RIVETED GROUNDING CONTACTS.

ACCEPTABLE MANUFACTURERS: BRYANT, LEVITON, PASS & SEYMOUR

EIGHT BACK WIRED ENTRANCES, FOUR SIDE WIRING SCREWS OR PIGTAIL CONNECTIONS.

.4 DUPLEX GFCI RECEPTACLES SHALL BE WEATHERPROOF 15A, 125V, COMPLETE WITH LED INDICATOR LIGHT

.5 [ARC FAULT CIRCUIT INTERRUPTER (AFCI) DUPLEX RECEPTACLES, RATED 15A OR 20A, 120 VOLTS.]

BREAK-OFF LINKS FOR USE AS SPLIT RECEPTACLES.

34. COMMUNICATIONS (VOICE, DATA & TV) & SECURITY ROUGH-IN .1 NO CONDUIT RUN SHALL EXCEED TWO 90 DEGREE BENDS AND ONE 45 DEGREE SWEEPING BEND. .2 ALL COMMUNICATION BACKBOARDS ARE TO BE 21mm THICK, G1S, AND PAINTED WITH FIRE RETARDANT PAINT TO MATCH COLOR OF THE ROOM. THE REQUIREMENTS OF TELUS AND SHAW. SHOWN ON THE DRAWINGS 35. IDENTIFICATION WITH ENGRAVED LAMACOID LABELS, BLACK LETTERING ON WHITE BACKGROUND. .2 PROVIDE TYPEWRITTEN DIRECTORIES IN ALL PANELS. FEEDER .4 IDENTIFY BRANCH CIRCUIT WIRES TO MEET CODE REQUIREMENTS. 36. POWER DISTRIBUTION EQUIPMENT, AND PANELBOARDS 37. UNDERGROUND SERVICES

33. SEISMIC PROTECTION

- .4 INCLUDE ALL COSTS FOR UTILITY CONNECTIONS CHARGES IN THIS CONTRACT. 38. SERVICE ENTRANCE .1 PULL BOX IN ACCORDANCE WITH LOCAL UTILITY REQUIREMENTS. .2 MAIN BREAKER AND FUSES TO BE RATED 240V, 200A, WITH MINIMUM 22kAIC INTERRUPTING CAPACITY.
- 39. UTILITY METER(S) .1 TO BE INSTALLED IN ACCORDANCE WITH ALL LOCAL UTILITY REQUIREMENTS.
- 45. COMMUNICATION CABLING (COPPER)

- .5 CAT 3 SHALL BE 24 AWG, SOLID COPPER, CAT. 3, FT6 RATED.
- FOR WET LOCATIONS

THE CONTRACTOR SHALL RETAIN AND PAY FOR THE SERVICES OF A QUALIFIED FIRE STOPPING INSTALLER WHO IS: FM APPROVED IN ACCORDANCE WITH STANDARD 4991 - APPROVAL OF FIRE STOP CONTRACTORS. FCIA MEMBER IN GOOD STANDING.

.5 ALL SELF-CONTAINED UNIT EQUIPMENT IS TO BE CONNECTED TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCH.

LICENSED BY THE PROVINCE OF LOCAL AUTHORITY WHERE APPLICABLE. .2 CONTRACTOR SHALL PROVIDE COMPLETE FIRE STOPPING INSTALLATION IN COMPLIANCE WITH THE CURRENT EDITION OF THE BC BUILDING CODE. REFER

.7 ELECTRICAL TRADE TO SUPPLY AND INSTALL ALL LIGHTING CONTROLS WITH LINE VOLTAGE SWITCHES, DIMMER SWITCHES (RATED 1500W), LOW VOLTAGE SWITCHES, LIGHTING RELAYS, BARRIER AND ALL CONTROL WIRING AND COMPONENTS TO SUIT THE LAYOUT. ALL MATERIALS AND INSTALLATION SHALL BE

.8 LOW VOLTAGE MASTER SWITCHES AND BUILDING LIGHTING CONTROL SHALL HAVE THE CAPABILITY TO TURN ON AND OFF ALL LIGHTING (120 AND 347

.10 ALL NEW AND RELOCATED FLUORESCENT LUMINAIRES SHALL BE COMPLETE WITH A FLUORESCENT DISCONNECT SWITCH AS PER CEC RULE 30-308(4).

.1 EMERGENCY BATTERY PACKS SHALL BE LOADED SUCH THAT THE LOAD MAY BE OPERATED BY THE BATTERY PACK FOR AT LEAST 30 MINUTES.

CIRCUITING OF LIGHTS AND THE SIZE OF WIRE IS TO BE RECONFIGURED TO REDUCE THE VOLTAGE DROP TO LESS THAN 5%.

FLUORESCENT DISCONNECT SWITCH SHALL BE THOMAS AND BETTS MARRETTE FLUORESCENT LUMINAIRE DISCONNECT LD2C AND LD3C OR APPROVED

AFTER INSTALLATION OF EACH BATTERY PACK AND ALL OF ITS ASSOCIATED REMOTE HEADS, THE VOLTAGE AT EACH REMOTE HEAD AND AT THE BATTERY PACK IS TO BE MEASURED. WHERE THE VOLTAGE DROP FROM THE BATTERY TO A REMOTE HEAD EXCEEDS 5% OF THE NOMINAL BATTERY VOLTAGE, THE

.3 ALL EXIT AND EMERGENCY LIGHTING IS TO OPERATE AUTOMATICALLY AND IMMEDIATELY (FROM BATTERIES) UPON FAILURE OF NORMAL POWER SUPPLY.

.4 PROVIDE NEW EXIT LIGHTS MATCHING BUILDING STANDARD, EMERGENCY BATTERY UNITS, EMERGENCY REMOTE HEADS AND CONNECT LUMINAIRES TO

VOLT) WITH THE EXCEPTION OF LUMINAIRES ON EMERGENCY LIGHTING CIRCUITS OR UNSWITCHED NIGHT LIGHT CIRCUITS.

IN ACCORDANCE WITH THE RECOMMENDATION OF THE MANUFACTURER AND COMPLY WITH CODES.

EQUAL. FLUORESCENT DISCONNECT SWITCH SHALL BE FACTORY INSTALLED AND CSA APPROVED.

.9 COORDINATE LIGHTING CONTROL PROGRAMMING WITH THE BUILDING SUPERVISOR.

EMERGENCY LIGHTING CIRCUIT AS SHOWN ON THE DRAWINGS.

31. EXIT LIGHTING AND EMERGENCY LIGHTING

FIRE STOPPING

- TO ARCHITECTURAL DOCUMENTATION FOR LOCATIONS AND RATINGS OF ALL FIRE RATED ASSEMBLIES AND MEMBRANES. SUPPORTING FIRE-STOPPING CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD COMPLETE DESIGN DOCUMENTATION, COPIES OF REVIEWED SHOP DRAWING AND SUBMITTALS RELATED TO FIRE STOPPING INSTALLATIONS, AND COMPLETE FIELD REVIEWS, INCLUDING SUITABLE PHOTOGRAPHS. CONTRACTOR TO ENSURE ALL SHOP DRAWINGS REVIEWS. FIELD REVIEWS ETC SHALL BE PERFORMED IN A TIMELY FASHION AND ALL SUPPORTING DOCUMENTATION PROVIDED TO THE ENGINEER OF RECORD AS REQUIRED DURING THE COURSE OF THE PROJECT (FOR EXAMPLE, TO COMPLY WITH THE REQUIREMENTS OF BUILDING INSPECTION DEPARTMENT).
- .4 ALL DOCUMENTATION PROVIDED BY THE FIRE-STOPPING CONTRACTOR SHALL BE INCLUDED IN OPERATION AND MAINTENANCE MANUALS.

ATTENTION

Amphitrite Park.

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.1 THE ELECTRICAL TRADE SHALL PROVIDE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE B.C. BUILDING CODE, AND ALL APPLICABLE BUILDING BYLAWS.

2 PROVIDE CERTIFIED PROFESSIONALLY SEALED SHOP AND PLACEMENT DRAWINGS WHERE APPLICABLE FOR ALL ELECTRICAL EQUIPMENT AND EQUIPMENT ASSEMBLIES SHOWING THE METHODS OF ATTACHMENT TO THE PARTICULAR STRUCTURE FOR EACH PIECE OF EQUIPMENT AND ASSEMBLY AND PROVIDE ANCHORAGE/ATTACHMENT DETAILS APPROVED AND SEALED BY A BC REGISTERED PROFESSIONAL ENGINEER.

.3 INCLUDE IN THE TENDERED PRICE ALL SERVICES OF THE PROFESSIONAL ENGINEER INCLUDING BUT NOT LIMITED TO PROVIDING LETTERS OF ASSURANCE FOR THE PROJECT IN RESPECT OF THE SEISMIC RESTRAINT OF ALL ELECTRICAL MATERIALS AND EQUIPMENT. CONDUCTING THE NECESSARY SITE REVIEWS AND PROVIDING A LETTER AT THE CONCLUSION OF THE PROJECT, CONFIRMING THAT ALL SEISMIC RESTRAINTS FOR THE ELECTRICAL WORKS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTIONS.

.3 THE INSTALLATION OF COMMUNICATIONS EQUIPMENT, AND CONDUIT TO BE USED FOR COMMUNICATION WIRES, SHALL COMPLY IN ALL RESPECTS WITH

.4 PROVIDE DOUBLE GANG BOX C/W SINGLE GANG MUD RING, OUTLET BOXES AND EMPTY CONDUITS C/W PULL STRING FOR COMMUNICATIONS OUTLETS AS

.5 INSTALL 25mm EMT CONDUITS FROM EACH WALL MOUNTED COMMUNICATION OUTLET TO CEILING SPACE C/W BUSHING AT BOTH ENDS.

.1 IDENTIFY ALL MAJOR PIECES OF EQUIPMENT, INCLUDING BUT NOT LIMITED TO PANELBOARDS, ELECTRICAL CABINETS, AND BREAKERS IN PANELBOARDS

.3 PROVIDE LAMACOID NAMEPLATE ON EACH PANEL COVER TO IDENTIFY PANEL NAME, NUMBER OF PHASES, VOLTAGE, CURRENT RATING AND SOURCE OF

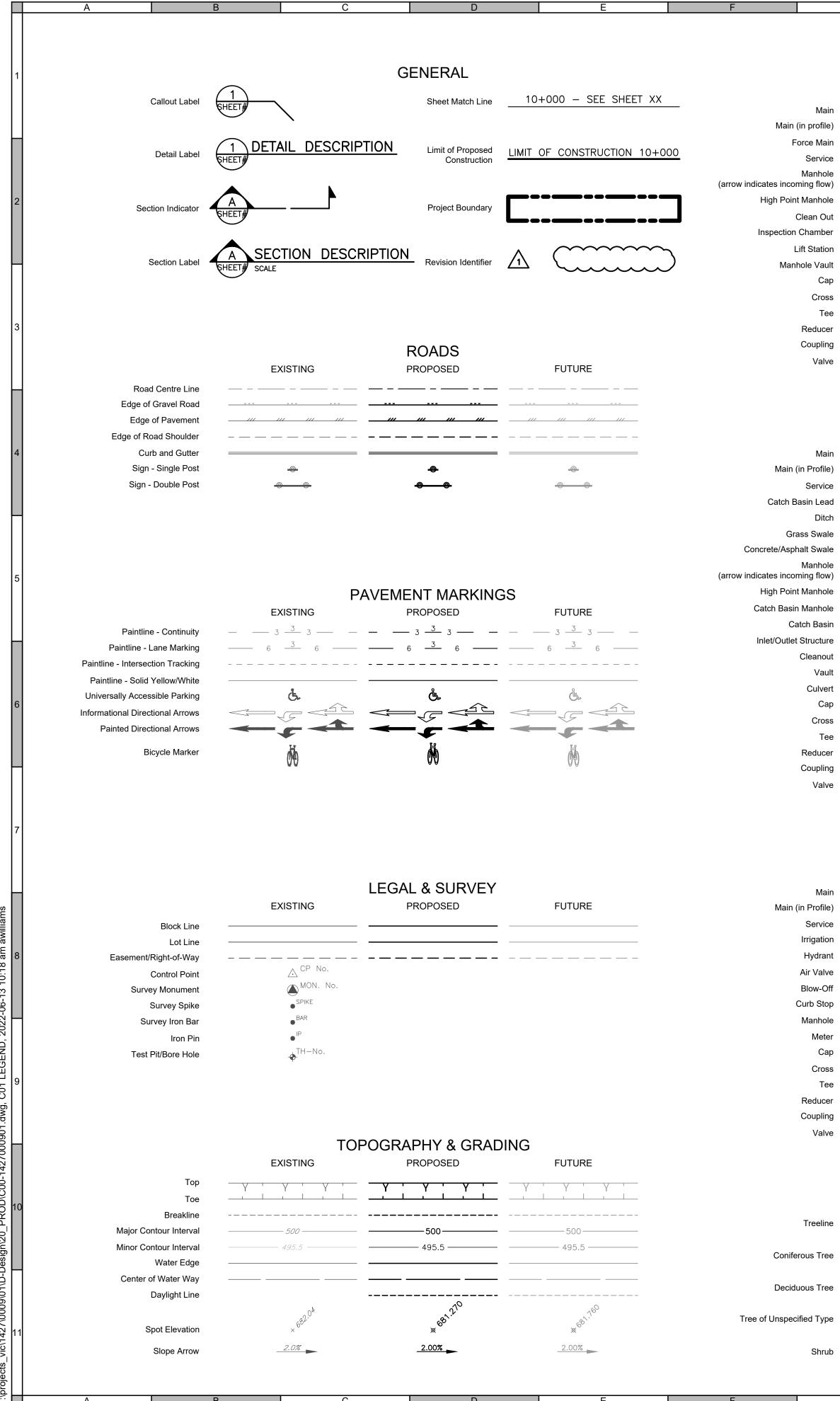
.1 INSTALL A COMPLETE POWER DISTRIBUTION SYSTEM INCLUDING UNDERGROUND CONDUIT, SERVICE CONNECTIONS, GROUNDING, DISTRIBUTION

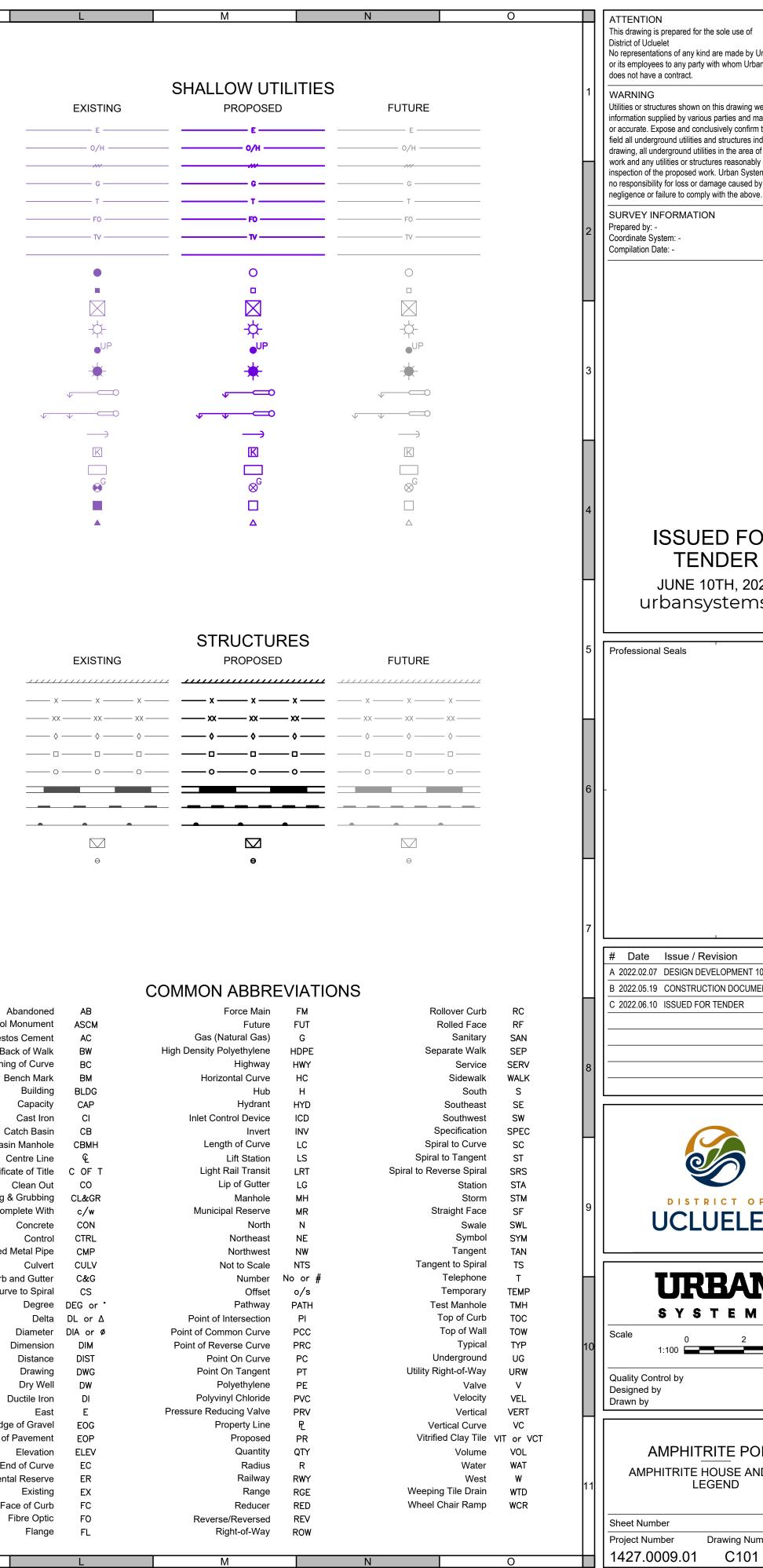
.1 A POLE MOUNTED TRANSFORMER AND POLE FOR THE SERVICE TO THE BUILDING WILL BE PROVIDED BY LOCAL UTILITY. .2 ELECTRICAL TRADE TO PROVIDE SECONDARY DUCT AND CONDUCTORS IN ACCORDANCE WITH LOCAL UTILITY REGULATIONS. .3 THREE 103mm SERVICE CONDUITS FROM TELEPHONE AND CABLE BACKBOARDS TO PROPERTY LINE FOR TELEPHONE AND CABLE TV SERVICE

.1 CAT 6 UTP CABLE SHALL BE FOUR PAIR. UNSHIELDED, TWISTED, 22 AWG TO 24 AWG, 100 OHM FT6, SOLID COPPER BY PANDUIT OR APPROVED EQUAL RANSMISSION REQUIREMENTS SHALL MEET OR EXCEED ALL REQUIREMENTS OF TIA/EIA-568-B.2 FOR CATEGORY 6 CABLING AND COMPONENTS. .2 CAT6A CABLE SHALL BE UTP FOUR PAIR TWISTED CROSS DIVIDER SEPARATED. 23 AWG TO 26 AWG, 100 OHM FT6 COPPER CABLE BY ANUIT OR APPROVED EQUIVALENT. TRANSMISSION REQUIREMENTS SHALL MEET OR EXCEED REQUIREMENTS OF ANSI/TIA-568-C.2 CATEGORY CABLING AND COMPONENTS. .3 PATCH PANELS SHALL BE MODULAR PATCH PANEL. 24-PORT OR 48-PORT, HIGH DENSITY INDIVIDUAL CUT-OUTS FOR SNAP IN TYPE FEMALE 8P/8W. 4 FREE STANDING EQUIPMENT RACKS (QUANTITY REQUIRED AS PER DRAWINGS): FREE STANDING 2133.6mm (84") HIGH RACK UNITS, GANGABLE, MUST PROVIDE 482.6mm (19") RACK MOUNTED CAPABILITY FOR RACK MOUNTABLE COMPONENTS. MUST PROVIDE 1955.8mm (77") OF VERTICAL MOUNTING SPACE. MUST HAVE THREADED MOUNTING HOLES (EIA) FRONT AND REAR. MUST BE SEISMIC ZONE 4 RATED.

.6 WHERE CABLING IS INSTALLED IN CONDUIT LOCATED UNDER OR IN A SLAB-ON-GRADE, SUCH CABLING SHALL BE INSIDE-OUTSIDE PLANT RATED SUITABLE

	Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract.
1	WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban
	apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the
	SURVEY INFORMATION
	PREPARED BY: COORD SYST: SURVEY DATE:
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	urbansystems.ca
	urbansystems.ea
5	Professional Seals
	public
	1495 FRANCES ST VANCOUVER BC V5L 1Z1 TEL 604 738 4323 WWW.PUBLICDESIGN.CA
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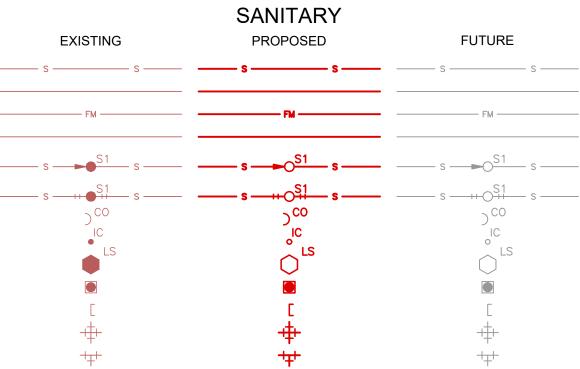


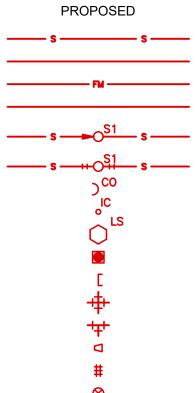
ctrical Line (Underground)
Overhead Utility Line
Conduits
Gas Line
Telephone Line
Fibre Optic Line
Cable Line
Service Line
Manhole
Junction Box
Electrical Tower Footing
Street Light
Utility Pole
Utility Pole with Light
Signal Light (Single)
Signal Light (Double)
Guy Anchor
Kiosk
Vault (Underground)
Gas Valve
Cabinet
Pedestal

Ele

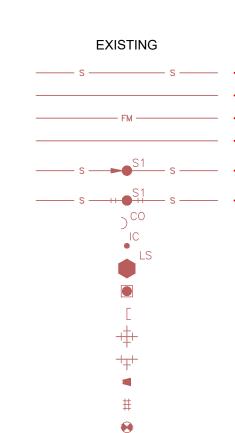
Building Face
Fence (Generic)
Fence (Barbed Wire)
Fence (Chain Link)
Fence (Wood Panel)
Fence (Post & Cable)
Railway Centre Line
Retaining Wall
Guardrail
Mailbox
Bollard

K





SANITARY



Main Main (in profile) Force Main Service Manhole (arrow indicates incoming flow) High Point Manhole Clean Out Inspection Chamber Lift Station Manhole Vault Cap Cross Tee Reducer Coupling Valve

Mair

Service

Ditch

Main (in Profile)

Catch Basin Lead

Grass Swale

Manhole

Catch Basin

Cleanout

Vault

Culvert

Cap

Tee

Valve

Cross

Reducer Coupling

EXISTING	STORM PROPOSED	FUTURE
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COMMO		
	AB	Abandoned
	ASCM	Alberta Survey Control Monument
G	AC	Asbestos Cement
High Den	BW	Back of Walk
	BC	Beginning of Curve
	BM	Bench Mark
	BLDG	Building
	CAP	Capacity
Inle	CI	Cast Iron
	СВ	Catch Basin
	СВМН	Catch Basin Manhole
	Æ	Centre Line
	C OF T	Certificate of Title
	со	Clean Out
	CL&GR	Clearing & Grubbing
М	c/w	Complete With
	CON	Concrete
	CTRL	Control
	CMP	Corrugated Metal Pipe
	CULV	Culvert
	C&G	Curb and Gutter
	CS	Curve to Spiral
•	DEG or *	Degree
A Poi	DL or Δ	Delta
Point of	DIA or Ø	Diameter
Point c	DIM	Dimension
	DIST	Distance
F	DWG	Drawing
	DW	Dry Well
P	DI	Ductile Iron
Pressure	Е	East
	EOG	Edge of Gravel
	EOP	Edge of Pavement
	ELEV	Elevation
	EC	End of Curve
	ER	Environmental Reserve
	EX	Existing
	FC	Face of Curb
P	FO	Fibre Ontic

		WATER	
	EXISTING	PROPOSED	FUTURE
Main	— · — w — · — w — · –	- · _ w _ · _ · _ w _ · _	— · — w — · — · — w — · —
Main (in Profile)	- · · · · ·		
Service			
Irrigation			
Hydrant	•	•	
Air Valve	•	♦	\diamond
Blow-Off	◆(~	\Leftrightarrow
Curb Stop	•	0	0
Manhole		0	0
Meter	M		M
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Cross		- ++ -	++++
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Reducer		D	\Box
Coupling	#	#	#
Valve	•	8	\otimes
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Treeline			
Coniferous Tree	×	*	×
Deciduous Tree	(\odot	
Unspecified Type	•	(\cdot)	•

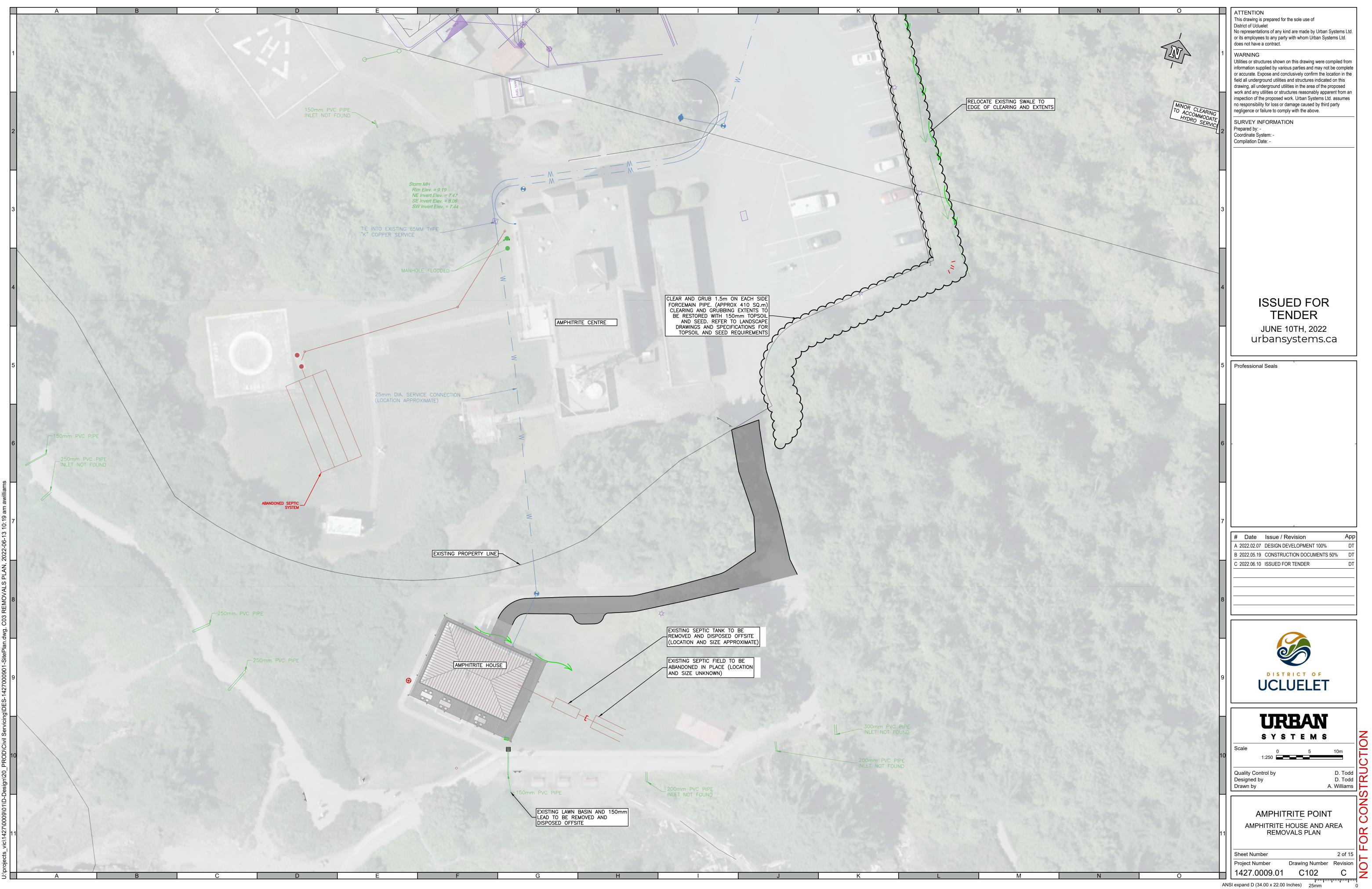
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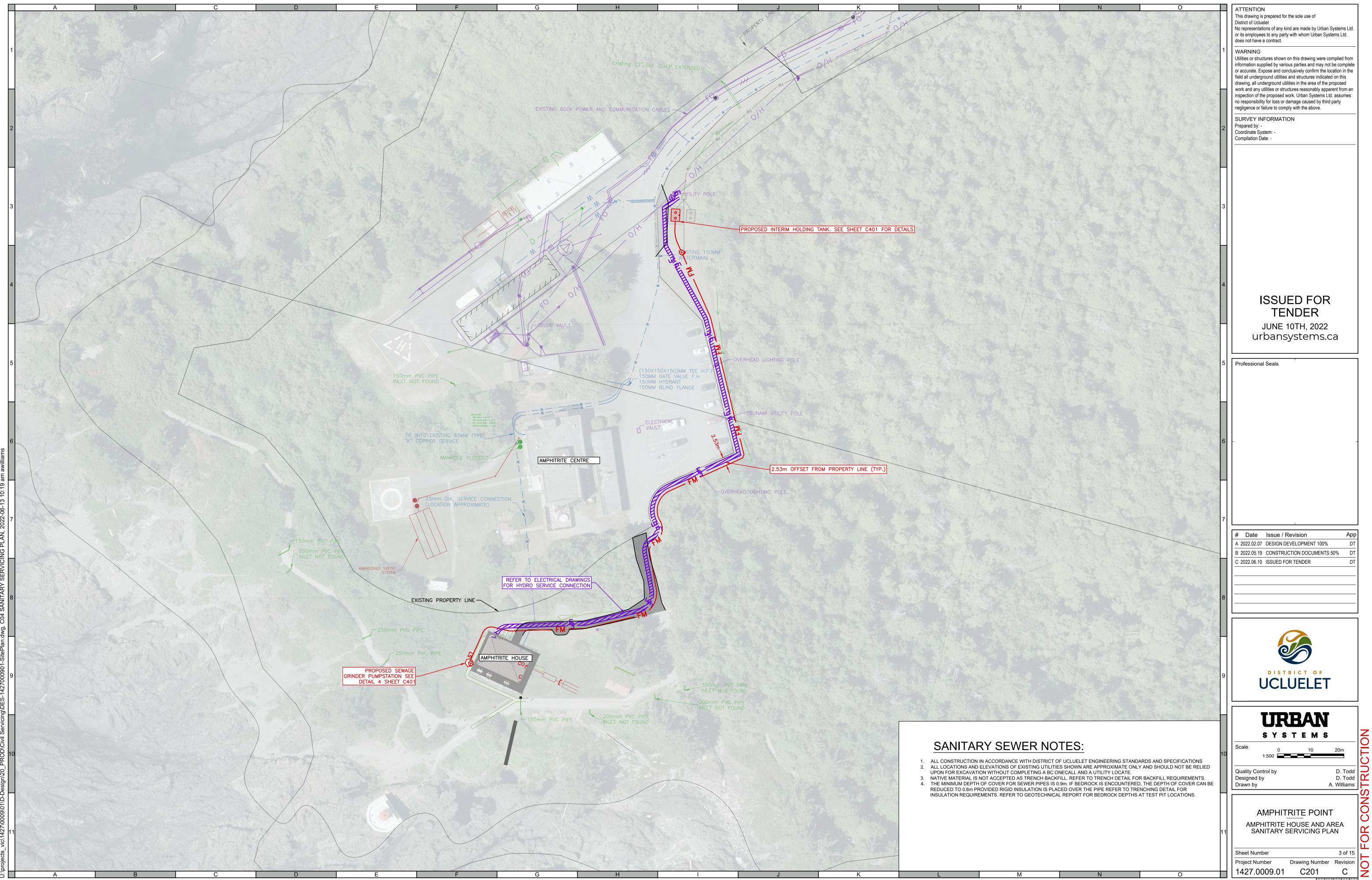
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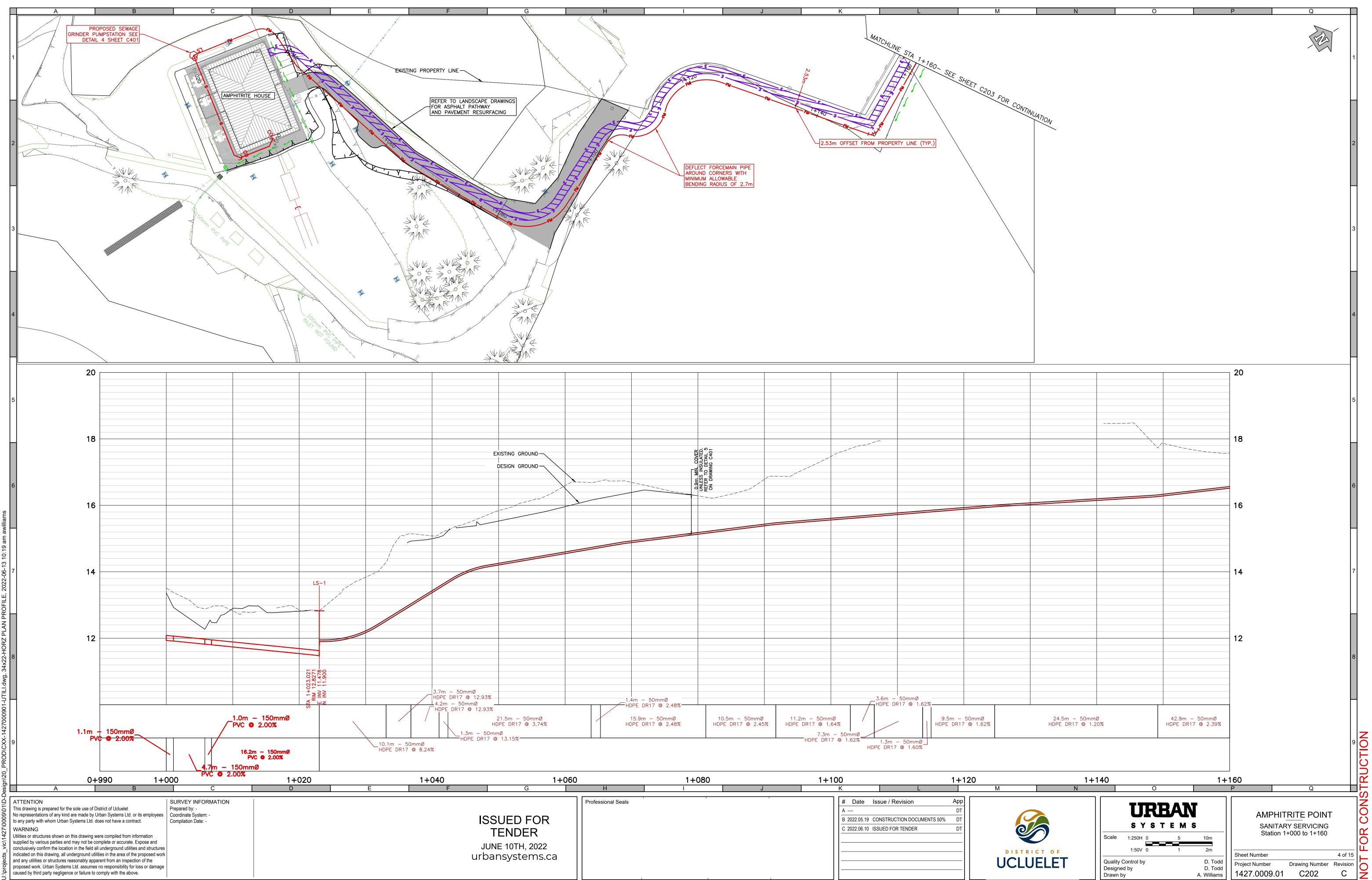
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ISSUED FOR TENDER JUNE 10TH, 2022 urbansystems.ca
Professional Seals
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B 2022.05.19 CONSTRUCTION DOCUMENTS 50% DT C 2022.06.10 ISSUED FOR TENDER DT
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Sheet Number 1 of 15 Project Number Drawing Number A 107 00000

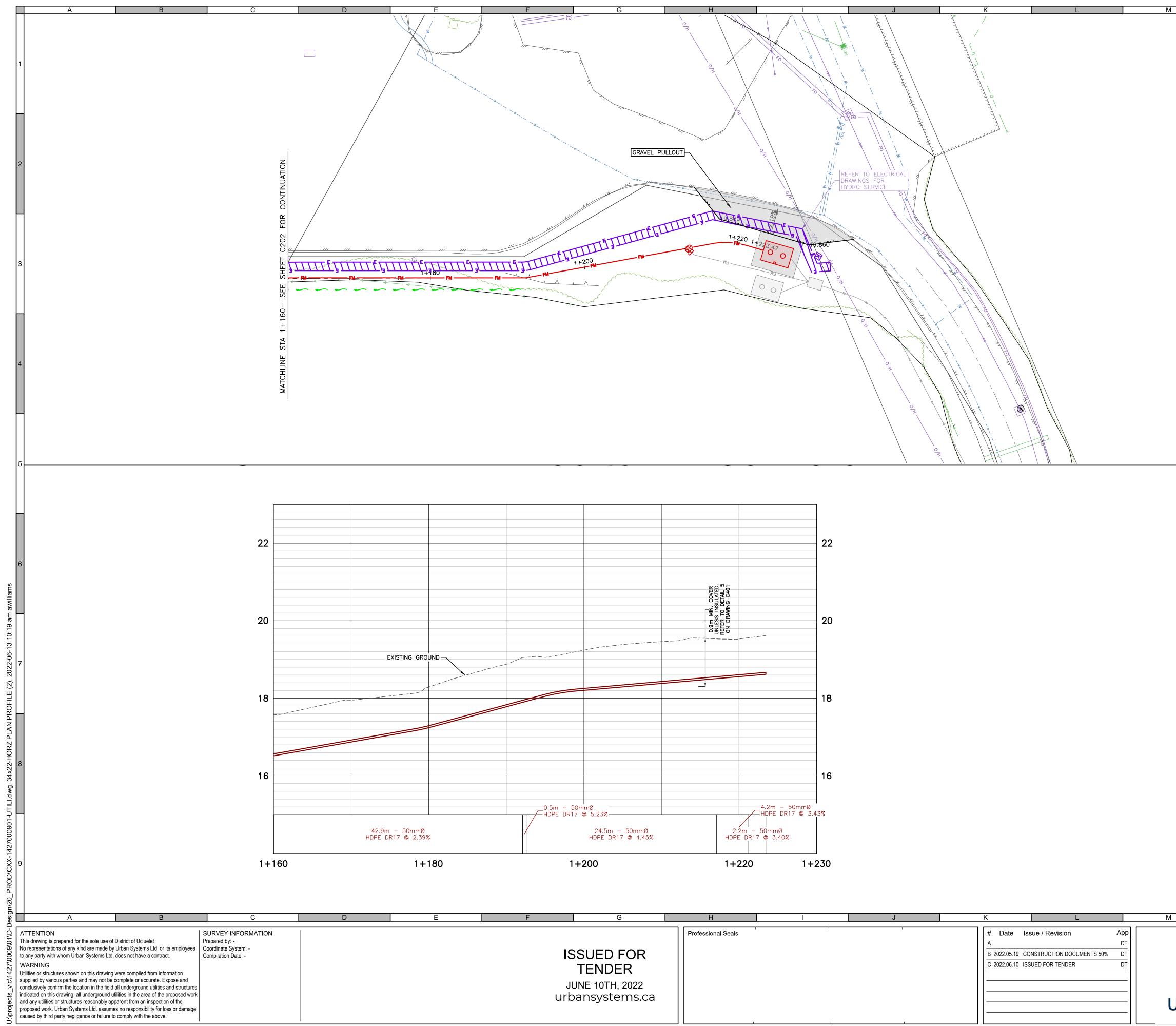


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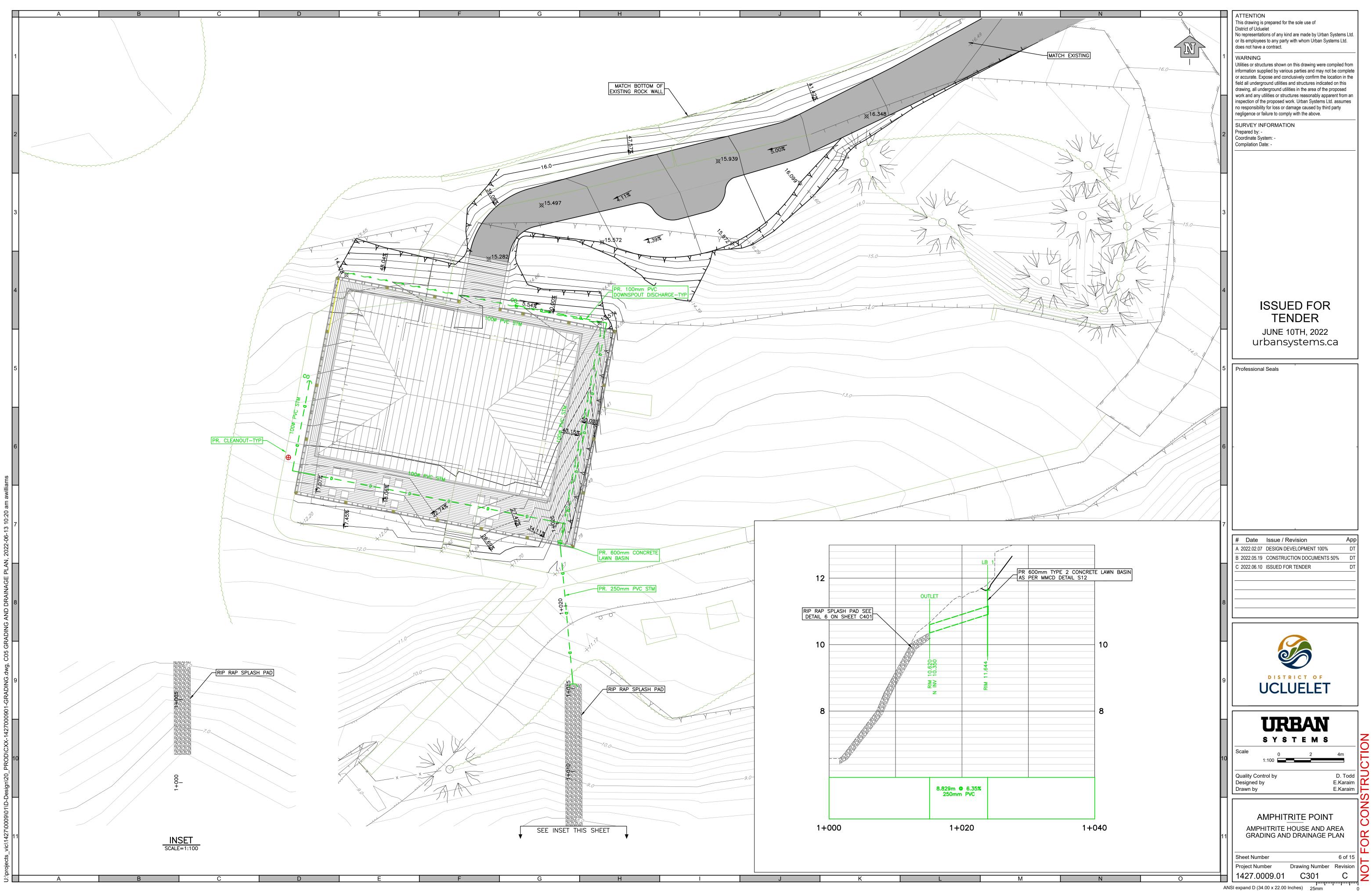


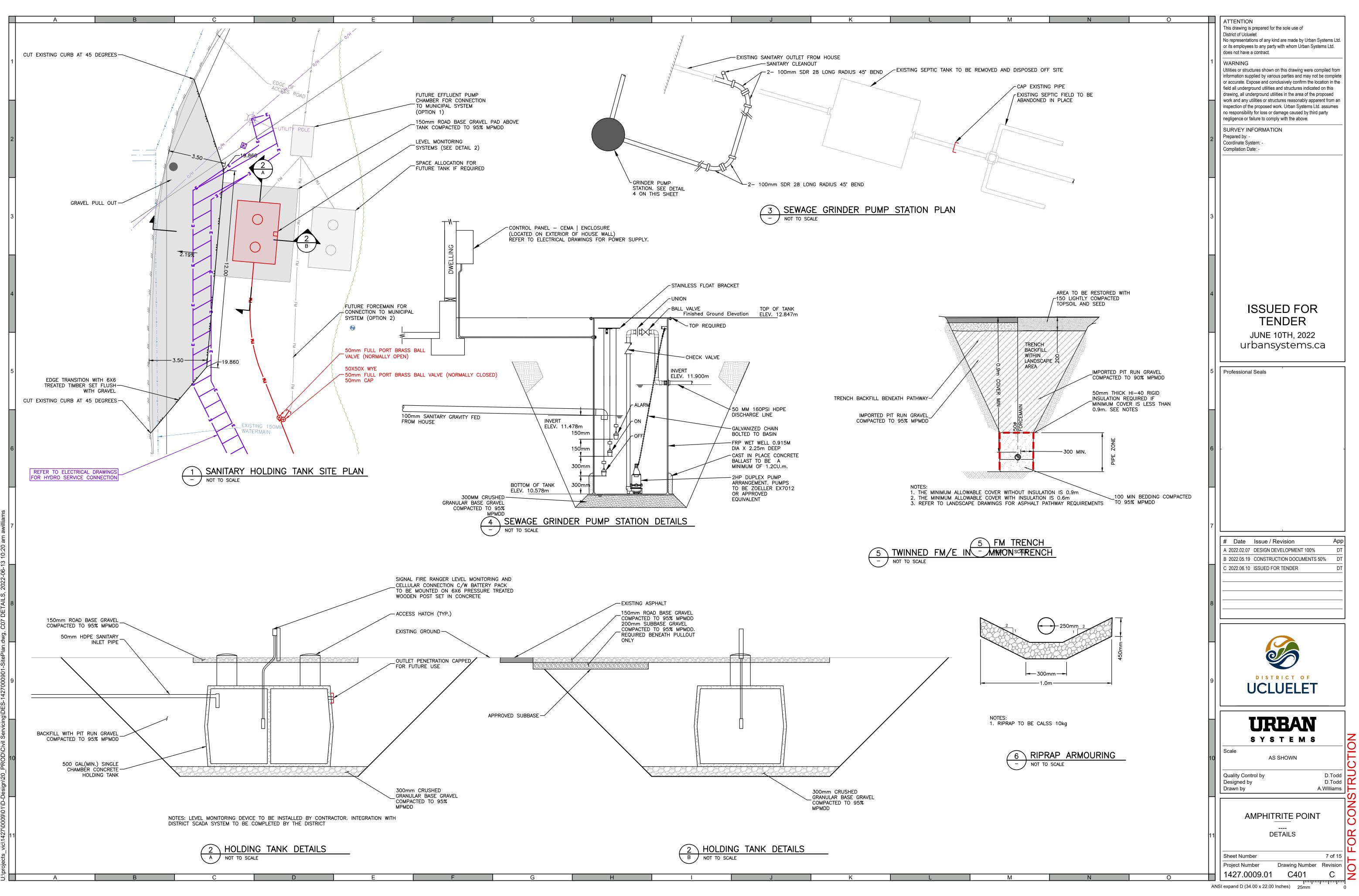


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LANDSCAPE NOTES

ALL OF THE CLAUSES STATED BELOW ARE THE MINIMUM STANDARD UNLESS A HIGHER STANDARD HAS BEEN INDICATED ELSEWHERE IN THE CONTRACT DOCUMENTS.

A. GENERAL NOTES

- 1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE WRITTEN SPECIFICATIONS, DRAWINGS, AND OTHER DETAILS AS ISSUED FOR THIS PROJECT.
- 2. THE LIMITS OF THE WORK ARE TO BE CLEARLY UNDERSTOOD BY THE CONTRACTOR PRIOR TO ANY WORK TAKING PLACE ON SITE. THE CONTRACTOR IS TO CONTACT THE CONSULTANT FOR CLARIFICATION IF REQUIRED.
- 3. ALL ANCILLARY WORK NORMALLY ASSOCIATED WITH THE TYPE OF CONSTRUCTION INDICATED ON THE CONTRACT DRAWINGS AND DOCUMENTS SHALL BE DEEMED TO BE PART OF THE CONTRACT.
- 4. ANY AMBIGUITY IN THIS DRAWING OR ACCOMPANYING DETAILS IS TO BE REPORTED TO THE CONSULTANT. THE CONTRACTOR SHALL NOT PROCEED WITHOUT A CLEAR UNDERSTANDING OF THE WORK
- 5. THE CONTRACTOR IS RESPONSIBLE, PRIOR TO THE START CONSTRUCTION, TO COORDINATE WITH LOCAL UTILITY CORPORATIONS TO LOCATE, OR ARRANGE THE LOCATION OF ALL EXISTING UTILITIES WITHIN THE LIMITS OF WORK.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR THE HOARDING AND PROTECTION OF ALL RETAINED ELEMENTS WITHIN THE LIMITS OF WORK; INCLUDING BUT NOT LIMITED TO: EXISTING CURBS, CONCRETE, ASPHALT, GRANULAR OR OTHER SURFACES, LANDSCAPE AMENITIES AND LIVE LANDSCAPE MATERIAL, INCLUDING TREES, SHRUBS, GRASSES AND GROUNDCOVERS WITHIN, OR ADJACENT TO, THE LIMITS OF CONSTRUCTION.
- . THE CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT OF ALL EXISTING CATCHBASINS, MANHOLES, WATER VALVES, HYDRANTS, ETC. TO MATCH PROPOSED GRADES. 8. THE CONTRACTOR IS RESPONSIBLE FOR THE HAULING OF ALL EXCESS MATERIALS OFF THE SITE TO
- A SUITABLE AND CONTRACT ADMINISTRATOR APPROVED LOCATION. 9. THE CONTRACTOR IS RESPONSIBLE FOR GENERAL SITE CLEAN UP.
- 10. THE CONTRACTOR SHALL REPAIR, AT THEIR OWN EXPENSE, ANY DISTURBANCE OR DAMAGE BEYOND THAT STATED EXTENTS OF WORK CAUSED DURING THE COURSE OF CONSTRUCTION. 11. ALL LANDSCAPE CONSTRUCTION SHOULD BE IN ACCORDANCE WITH THE CANADIAN LANDSCAPE
- STANDARD SECOND EDITION 12. COMPACTED BASE AND GRANULAR SUB-BASE DEPTHS TO BE CONFIRMED BY GEOTECH.

B. PERMITS, MATERIAL STANDARDS AND PRODUCT TESTING

- 1. THE CONTRACTOR SHALL ENSURE THAT ALL NECESSARY ARRANGEMENTS ARE MADE WITH APPROPRIATE REGULATORY AUTHORITIES CONCERNING THE MOVEMENT AND STORAGE OF MATERIALS AND EQUIPMENT TO, FROM AND AT THE PLACE OF WORK.
- 2. THE CONTRACTOR SHALL PROVIDE, OR DESIGNATE A QUALITY CONTROL TEST PANEL, MIN 2.0m2 IN SIZE, FOR ALL HARD SURFACE INSTALLATION AND FINISHING TREATMENTS, THESE PANELS SHALL BE COORDINATED WITH THE CONTRACT ADMINISTRATOR PRIOR TO THE START OF WORK AND USED FOR THE PURPOSE OF ESTABLISHING A MINIMUM FINISHING STANDARD FOR ALL SUBSEQUENT WORK. THE 3. THE CONTRACTOR SHALL PROVIDE PRODUCT SAMPLES FOR ALL GRANULAR SURFACING, MULCHES
- AND DECORATIVE STONE. THESE SAMPLES SHALL BE PROVIDED TO THE CONTRACT ADMINISTRATOR IN SUFFICIENT QUANTITY FOR REVIEW AND APPROVAL PRIOR TO PURCHASE AND DELIVERY TO THE SITE.
- 4. CONTRACTOR SHALL PROVIDE SOIL TEST RESULTS TO THE CONTRACT ADMINISTRATOR FOR EACH TYPE OF GROWING MEDIUM OR TOPSOIL SPECIFIED ON THE CONTRACT DOCUMENTS. SOIL TESTS SHALL BE FROM A QUALIFIED TESTING AGENCY AND SHALL INCLUDE SOIL TEXTURE AND NUTRIENT ANALYSIS AND PROVIDED PRIOR TO PURCHASE AND DELIVERY TO THE SITE. REFER TO SPECIFICATION 329119 TOPSOIL AND FINISH GRADING FOR PRODUCT STANDARDS.

C. LAYOUT

- 1. THE CONTRACTOR SHOULD UTILIZE THE ORIGIN POINTS AS THE POINT OF REFERENCE FOR ON SITE
- LAYOUT. 2. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE
- CONSULTANT FOR FURTHER DIRECTION.
- 3. ON-SITE LAYOUT SHALL BE REVIEWED AND CONFIRMED BY THE CONTRACT ADMINISTRATOR PRIOR TO IMPLEMENTATION OF WORK.

D. MATERIALS

- 1. THE CONTRACTOR SHALL SUPPLY ALL MATERIALS NEW AND IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS, ANY DISCREPANCIES IN QUANTITIES SHALL BE REPORTED TO THE CONSULTANT FOR DIRECTION.
- THERE SHALL BE NO SUBSTITUTIONS OF CONTRACT DOCUMENT SPECIFIED MATERIALS AND PRODUCTS WITHOUT PRIOR APPROVAL OR DIRECTION IN WRITING FROM THE CONTRACT ADMINISTRATOR.

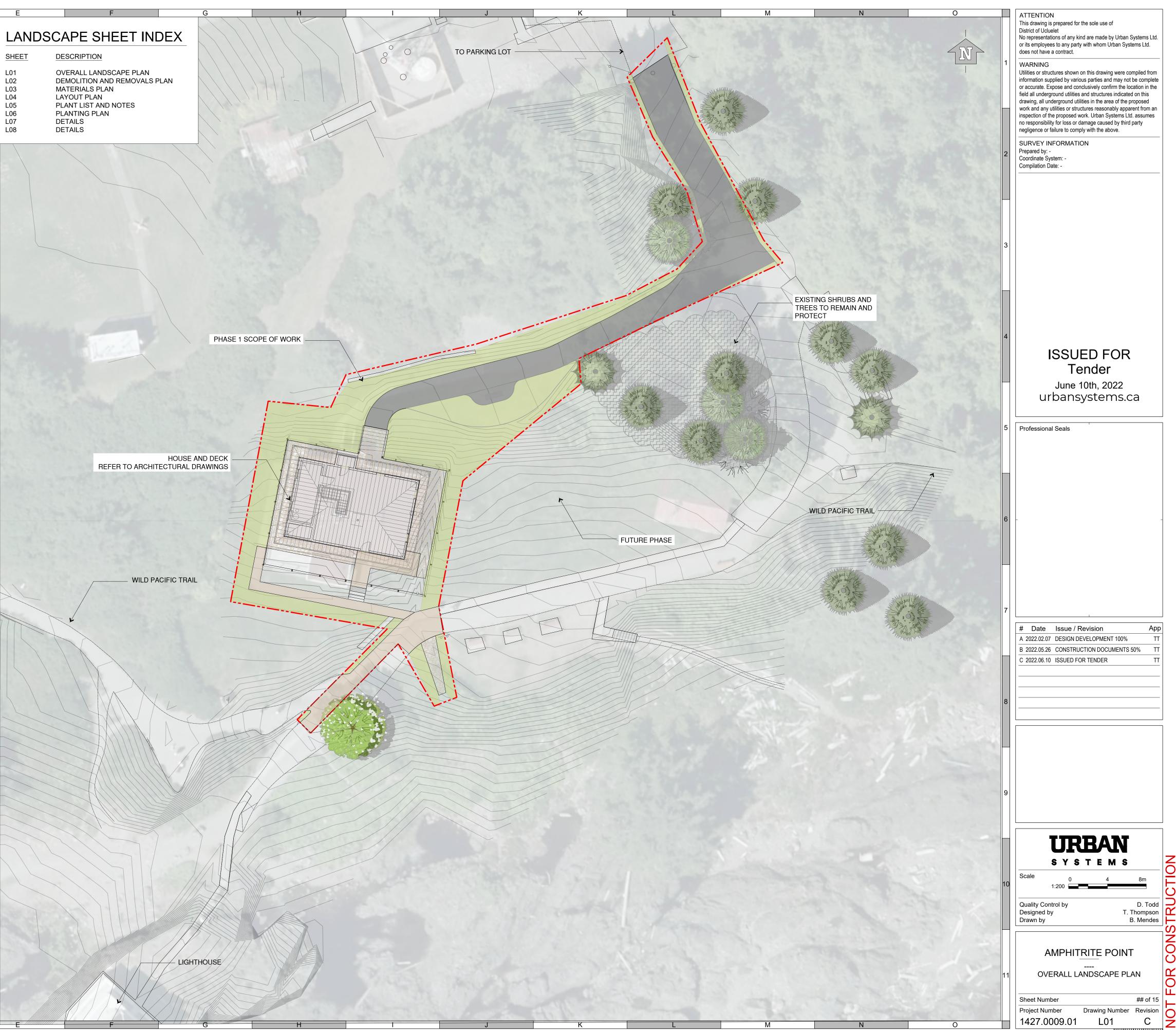
E. PLANTING

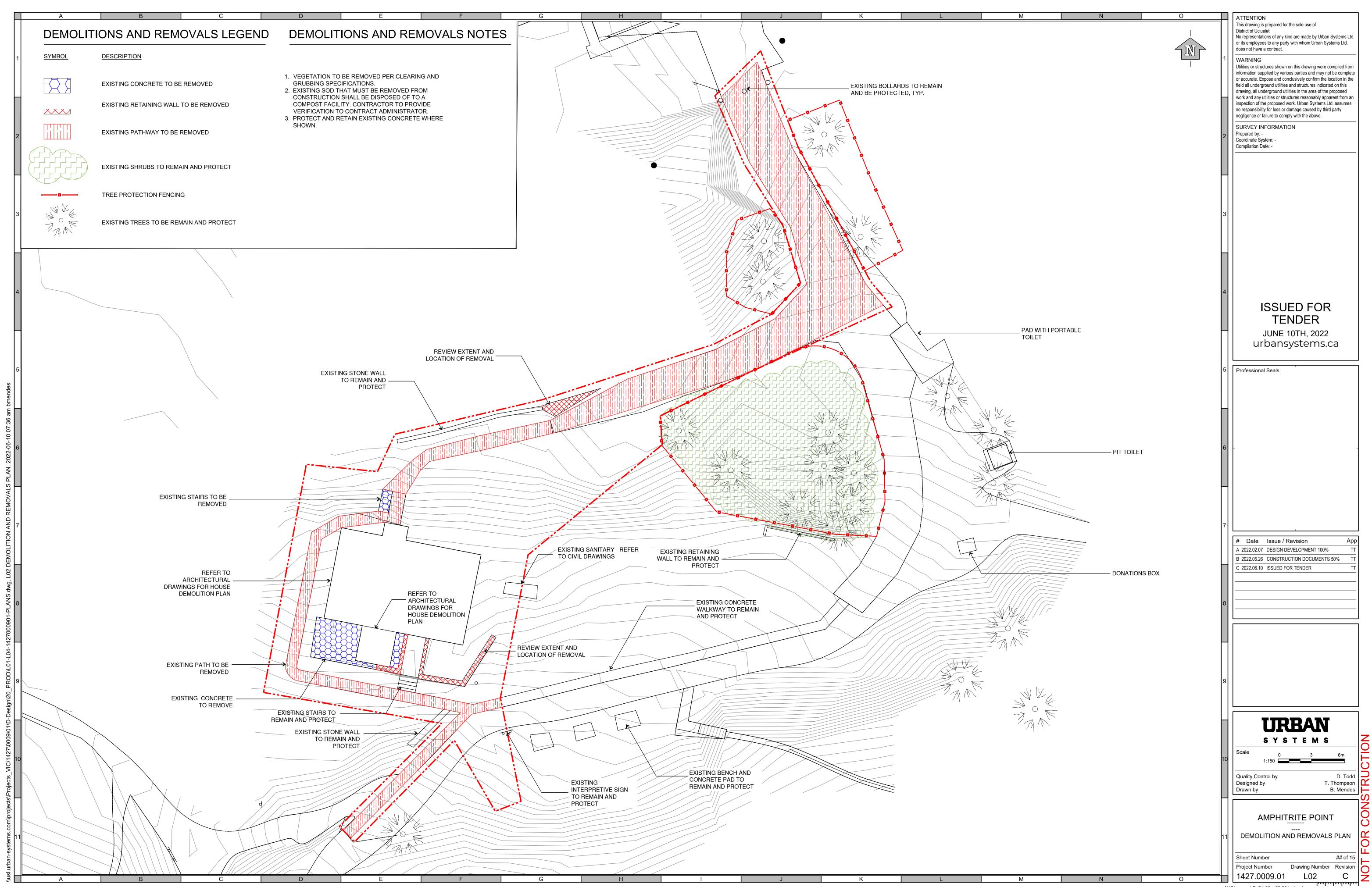
- 1. ALL PLANT MATERIAL SHALL BE NURSERY GROWN STOCK; LOCALLY HARDENED AND ACCLIMATIZED UNLESS APPROVED OTHERWISE, AND SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE CANADIAN NURSERY TRADES ASSOCIATION FOR SIZE, HEIGHT, SPREAD, GRADING, QUALITY, AND METHOD OF CULTIVATION.
- 2. ALL SOD AREAS SHALL HAVE A MINIMUM TOPSOIL/GROWING MEDIUM DEPTH OF 100mm UNLESS OTHERWISE NOTED.
- 3. ALL SEED AREAS SHALL HAVE A MINIMUM TOPSOIL/GROWING MEDIUM DEPTH OF 150mm UNLESS OTHERWISE NOTED. 4. ALL PLANTING BEDS AND TREE WELLS SHALL RECEIVE 75mm DEPTH BARK MULCH UNLESS
- OTHERWISE NOTED.
- 5. ALL PLANTING SOIL INCLUDING GROWING MEDIUM AND SITE TOPSOIL SHALL BE DEEMED AND
- GUARANTEED TO BE FREE OF WEEDS AND WEED SEEDS PRIOR TO PLACEMENT.
- 6. SITE TOPSOIL, RELOCATED OR PLACED FROM STOCKPILE, SHALL BE MANAGED AND/OR TREATED TO RENDER PRE-EXISTING SEED BANK WITHIN THE SOIL STERILE.

F. ESTABLISHMENT MAINTENANCE

- 1. ESTABLISHMENT MAINTENANCE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR INSTALLING THE LANDSCAPE MATERIAL, AND SHALL BE PERFORMED UNTIL THE CONTRACTUAL CONDITIONS OF ACCEPTANCE HAVE BEEN MET COLLECTIVELY FOR ALL LANDSCAPE WORKS, INCLUDING: TREES, SHRUBS, GROUNDCOVERS, SOD GRASS, HYDROSEED GRASS, AND NATURALIZED AREAS.
- 2. THE CONDITIONS OF ACCEPTANCE SHALL MEAN:
- 2.1. TREES, SHRUBS, GROUNDCOVERS HAVE BEEN INSTALLED AS PER THE CONTRACT DOCUMENTS. 2.2. SOD HAS BEEN INSTALLED AS PER THE CONTRACT DOCUMENTS AND THE ROOTS ARE SUFFICIENTLY KNITTING INTO THE GROWING MEDIUM.
- 2.3. HYDROSEED/SEED GRASS IRRIGATED AREAS ARE ENTIRELY FREE OF UNDESIRABLE WEEDS OR BARE SPOTS; GRASS HAS BEEN FERTILIZED AT LEAST TWICE; AND GRASS HAS BEEN MOWN AT LEAST TWICE TO A HEIGHT OF 60mm.
- 2.4. HYDROSEED UN-IRRIGATED NATURALIZED GRASS AREAS ARE ENTIRELY FREE OF UNDESIRABLE WEEDS; GRASS OF SPECIFIED SPECIES HAS GERMINATED WITH A MINIMUM 25mm GROWTH ABOVE AND BELOW GRADE; A MINIMUM OF 25 GERMINANTS ARE VISIBLE IN ANY GIVEN 1.0m2.
- 3. ON UN-IRRIGATED SITES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION OF SUPPLEMENTAL WATER AS NECESSARY TO ALL INSTALLED LANDSCAPE UNTIL THE CONDITIONS OF ACCEPTANCE HAVE BEEN MET (HAND WATER, TRUCK WATER OR TEMPORARY IRRIGATION SYSTEM). 4. THE WARRANTEE PERIOD FOR ALL PLANT MATERIAL SHALL NOT BEGIN UNTIL THE CONDITIONS OF ACCEPTANCE HAVE BEEN MET COLLECTIVELY FOR ALL LANDSCAPE WORKS, INCLUDING: TREES,
- SHRUBS, GROUNDCOVERS, SOD GRASS, HYDROSEED GRASS, AND NATURALIZED AREAS. 5. ALL TREE STAKES ARE TO BE REMOVED BY THE CONTRACTOR AT THE END OF THE WARRANTEE PERIOD. NO ADDITIONAL PAYMENT WILL BE MADE FOR STAKE REMOVAL.

DESCRIPTION MATERIALS PLAN LAYOUT PLAN PLANTING PLAN DETAILS







M 0 ATTENTION This drawing is prepared for the sole use of District of Ucluelet No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. (N) does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION Prepared by: -Coordinate System: -Compilation Date: -**ISSUED FOR** TENDER JUNE 10TH, 2022 urbansystems.ca Professional Seals # Date Issue / Revision App A 2022.02.07 DESIGN DEVELOPMENT 100% B 2022.05.26 CONSTRUCTION DOCUMENTS 50% C 2022.06.10 ISSUED FOR TENDER URBAN SYSTEMS Scale 6m 1:150 D. Todd T. Thompson B. Mendes Quality Control by Designed by Drawn by AMPHITRITE POINT ----MATERIALS PLAN Sheet Number ## of 15 Drawing Number Revision Project Number 1427.0009.01 L03 С М N 0



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	1						
		<u>PLA</u>	NT SCHED	ULE			
		SHRUE	<u>SS</u> <u>CODE</u>	COMMON NAME	BOTANICAL NAME		R SPACING (M)
	2	88	BS	DEER FERN	BLECHNUM SPICA	NT #1	0.60
		\bigcirc	GS	SALAL	GAULTHERIA SHAL	LON #1	1.00
		袋	РМ	WESTERN SWORD FE	RN POLYSTICHUM MU	NITUM #2	0.90
	3			HYDROSEED GRASS MIX REFER TO NOTES AND SPE	CIFICATIONS		
	4			STING TREES AND SHRUBS REMAIN AND PROTECT			
	5						
	Ŭ	HYDROSEEI	O GRASS MIX - (GRASS RESTORATION	l		
Z-U6-10 U/:36 am pmendes	6	2. TOPSOIL / GRC 3. SUBCONTRAC 3.1. THE SUBC INSTALLAT 3.2. EXPERIEN SCOPE, SI 3.3. THE SUBC APPLICATI 3.4. THE CONT	WING MEDIUM FOR S FOR EXPERIENCE ONTRACTOR PERFOF TON AND ESTABLISHI CE SHALL INCLUDE T ZE AND CLIMATIC CO ONTRACTOR SHALL F ON OF HYDRAULIC SI RACT ADMINISTRATC	EEDED AREAS SHALL MEET TH RMING HYDRAULIC SEEDING SI MENT OF NATURALIZED BUNCH HE SUCCESSFUL SEEDING ANI NDITIONS. PROVIDE PROOF OF EXPERIEN EEDING.) AS SPECIFIED IN THE CANADIA HE CANADIAN LANDSCAPE STAI HALL HAVE A MINIMUM 10 YEAR IGRASS USING HYDRAULIC SEE D ESTABLISHMENT OF AT LEAS CE FOR REVIEW BY THE CONTR EJECT ANY SUBCONTRACTOR	NDARD SPECIFICATIONS FO S OF EXPERIENCE AND PR EDING METHODOLOGY. T 5 PROJECTS WITHIN THE RACT ADMINISTRATOR PRIO	OR TYPE 2L. OVEN SUCCESS IN THE LAST 5 YEARS OF SIMILAR OR TO COMMENCING
00-220		QUALIFICA 4. GROWING MEE					
NU NUIES, ∠		4.2. SITE TOPS MANUFAC	OIL, IF USED, SHALL	SHALL BE TREATED WITH A PR NS. SEED APPLICATION SHALL	ALIZED GRASS AREAS SHALL C E-EMERGENT HERBICIDE, APPL . BE DELAYED AS NECESSARY 1	LIED AND INCORPORATED I	NTO THE SOIL AS PER
	7	5. SEED MIX (RIC 5.1. ALL AREAS	HLAWN SUN & SHADE S	LAWN MIX)			
U5 PLANT L		5.1.• KE 5.1.• CF 5.1.• CH	OMMON NAME INTUCKY BLUEGRASS REEPING RED FESCUE IEWINGS FESCUE	E FESTUCA CAMPESTRIS	30%		
.awg, L		6. SEEDING RATE	1				
- 1 - H	8	7. HYDRO MULCH 7.1. APPROVEI 7.1.● PR 7.1.● PR		AND HYDRAULIC MULCH FOR QUA PHIX UMPSTART	THIS PROJECT INCLUDE THE FO	OLLOWING PRODUCTS:	
JU\LU3-LU6-1427UUU9U1-PL		7.1.● PR 7.1.● PR	ROFILE PRODUCTS - F ROFILE PRODUCTS - F ROFILE PRODUCTS - F IBSTITUTES FOR SPE	LEXTERRA	LOWED		
			APPLICATION RATES	S R SOIL TEST RESULTS			
řΙ	9	8.1.● PR	DLUBLE GYPSUM (GE ROFILE AQUA PHIX ROFILE JUMPSTART	42.) KG/ ha (500lb/Ac) 5 l/ha (10 USgal/Ac) 25 l/ha (5 USgal/Ac)		
ign/zu		8.1.● PF 8.1.● PF	OFILE BIOPRIME	180 500) kg/ha (160lb/Ac))0 kg/ha (4500lb/Ac)		
				IT DEFICIENCIES AND DESIRE	50 kg/ha (3500lb/Ac) D ESTABLISHMENT PARAMETEF) KG/ha	RS	
	10	9. HYDROMULCH 9.1. THOROUG HYDRAULI	EXECUTION (TWO ST HLY MIX GYPSUM, AC C SEED TANK AND SF	EP PROCESS) QUA PHIX, FERTILIZER, JUMPST	ART, BIOPRIME, PROGANICS AI	ND ANY OTHER RECOMMEN	NDED AMENDMENTS IN
cis\Projects_VI		10.2. CONTRAC	TOR SHALL INCLUDE		T OF THE NATURALIZED GRASS CESSARY ESTABLISHMENT TAS		
ଇ		10.3. THROUGH 10.3.• VI GF	OUT THE ESTABLISHI SIT THE SITE AT 3 WE ROWTH.		OR SHALL PERFORM THE FOLL FIRST 12 WEEKS TO OBSERVE		ION AND BROADLEAF WEEL
urpan-systems.com\pro	11						

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A B

<u>)</u>	HEIGHT (MM)	SPREAD (MM)
	600	300
	450	400
	600	400

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WEED

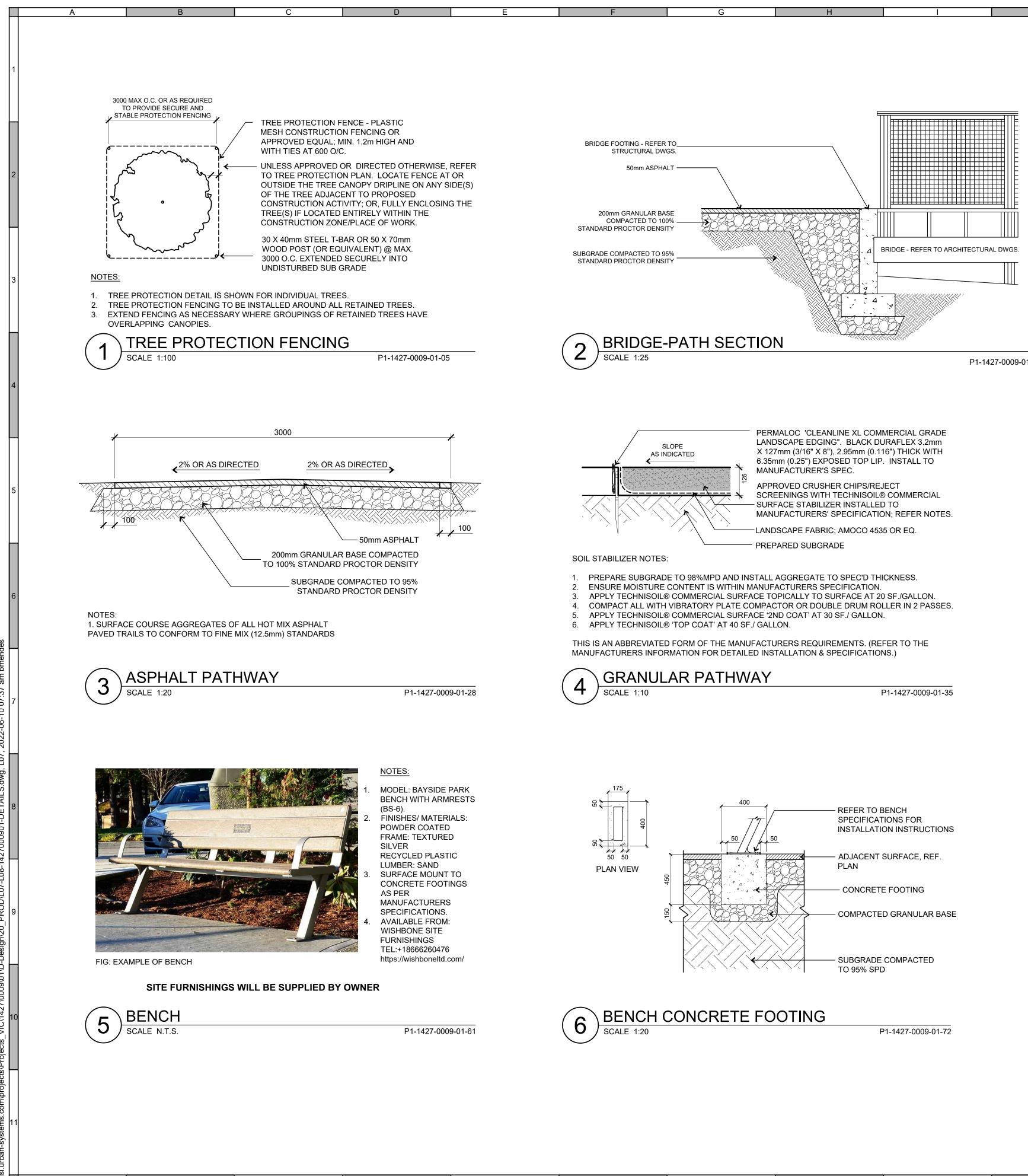
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N		2	ATTENTION This drawing is prepared for the sole use of District of Ucluelet No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION Prepared by: - Coordinate System: - Compilation Date: -	
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		4	ISSUED FOR TENDER JUNE 10TH, 2022	
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		7	# Date Issue / Revision App A 2022.02.07 DESIGN DEVELOPMENT 100% TT B 2022.05.26 CONSTRUCTION DOCUMENTS 50% TT C 2022.06.10 ISSUED FOR TENDER TT	
		8		
		9	URBAN	
		10	SYSTEMS Scale NOT TO SCALE Quality Control by D. Todd Designed by T. Thompson Drawn by B. Mendes	NSTRUCTION
Ν	Ο	11	AMPHITRITE POINT PLANT LIST AND NOTES Sheet Number ## of 15 Project Number Drawing Number Revision 1427.0009.01 ### C	NOT FOR CONS



М Ν 0 ATTENTION This drawing is prepared for the sole use of District of Ucluelet No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. íN` WARNING WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION Prepared by: -Coordinate System: -Compilation Date: -**ISSUED FOR** TENDER JUNE 10TH, 2022 urbansystems.ca Professional Seals # Date Issue / Revision App A 2022.02.07 DESIGN DEVELOPMENT 100% B 2022.05.26 CONSTRUCTION DOCUMENTS 50% C 2022.06.10 ISSUED FOR TENDER URBAN SYSTEMS Scale 6m 1:150 D. Todd T. Thompson B. Mendes Quality Control by Designed by Drawn by AMPHITRITE POINT ----PLANTING PLAN ## of 15 Sheet Number Project Number Drawing Number Revision 1427.0009.01 ### С М N 0

ANSI expand D (34.00 x 22.00 Inches) 25mm



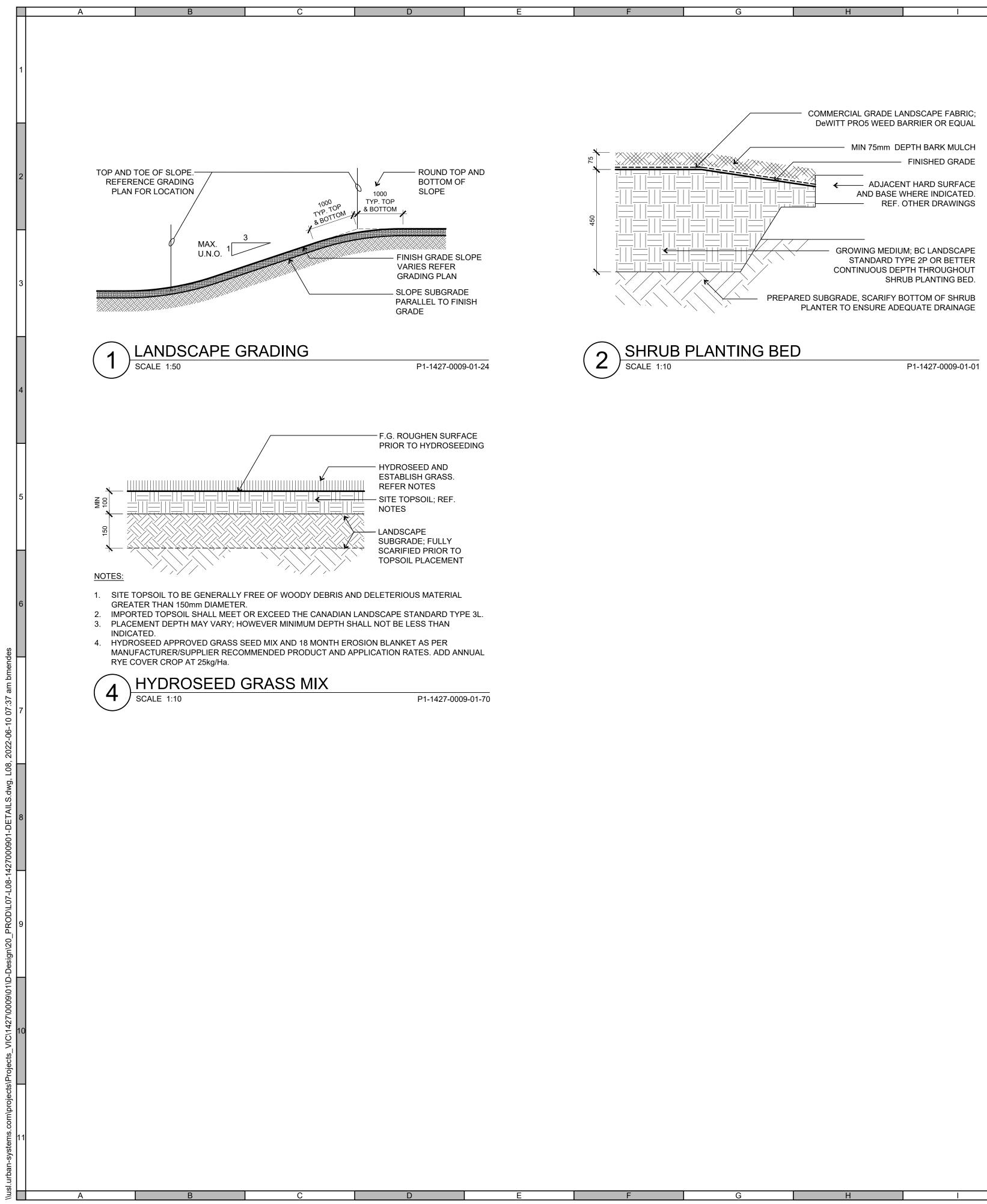
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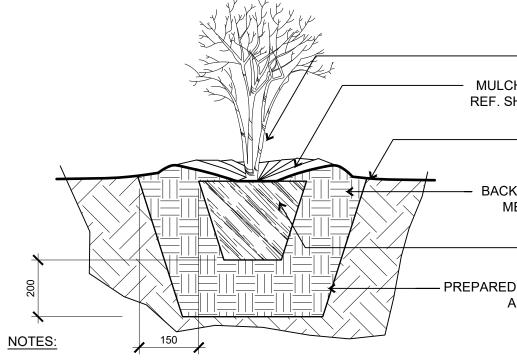
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Ν		2	ATTENTION This drawing is prepared for the sole use of District of Ucluelet No representations of any kind are made by Urban Systems Ltd. or its employees to any party with whom Urban Systems Ltd. does not have a contract. WARNING Utilities or structures shown on this drawing were compiled from information supplied by various parties and may not be complete or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION Prepared by: - Coordinate System: - Compilation Date: -
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		8	# Date Issue / Revision App A 2022.02.07 DESIGN DEVELOPMENT 100% TT B 2022.05.26 CONSTRUCTION DOCUMENTS 50% TT C 2022.06.10 ISSUED FOR TENDER TT
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		10	URBAN S Y S T E M S Scale Scale Scale Scale URBAN Scale Scale Scale Scale Quality Control by Designed by T. Thompson Drawn by B. Mendes
Ν	0	11	AMPHITRITE POINT DETAILS Sheet Number 14 of 15 Project Number Drawing Number Revision 1427.0009.01 L07 C

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1. SHRUBS SHOWN IN INDIVIDUAL PLANTING PITS FOR CLARITY ONLY. ALL SH INSTALLED IN SHRUB PLANTING BED TO DEPTHS SHOWN UNLESS OTHERWISE



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	D				2	or accurate. Expose and conclusively confirm the location in the field all underground utilities and structures indicated on this drawing, all underground utilities in the area of the proposed work and any utilities or structures reasonably apparent from an inspection of the proposed work. Urban Systems Ltd. assumes no responsibility for loss or damage caused by third party negligence or failure to comply with the above. SURVEY INFORMATION Prepared by: -
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HRUBS TO BE E INDICATED.						
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					7	 # Date Issue / Revision App
						A 2022.02.07 DESIGN DEVELOPMENT 100% TT B 2022.05.26 CONSTRUCTION DOCUMENTS 50% TT C 2022.06.10 ISSUED FOR TENDER TT
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					10	URBAN s y s t e m s Scale SCALE NOT SELECTED
						SYSTEMS Scale SCALE NOT SELECTED 1:XXX D. Todd Designed by T. Thompson Drawn by B. Mendes
					11	AMPHITRITE POINT DETAILS Sheet Number 15 of 15
М	1	N	(0		Project Number Drawing Number Revision 1427.0009.01 L08 C SI expand D (34.00 x 22.00 Inches) 25mm 0