

Mechanical Design Report

Low rise residential



Location of Installation	Address	House Builder
	Application Number	PHOENIX
		House Model (if applicable) 43-10 MADISON 4BED
Installing Contractor	Name	HARDING MECHANICAL
	Address	2210 CAVANMORE RD
	City	OTTAWA
	Postal Code	K0A 1L0
	Telephone Number	Fax Number
	613-831-2257	613-831-9011

SYSTEM DESIGN PARAMETERS

Combustion Appliances 9.32.3.1.(1)	Heating System
a) ☒ Direct vent (sealed combustion) only	☒ Forced Air
b) ☐ Positive venting induced draft (except fireplaces)	☐ Non-Forced Air (Other - _____)
c) ☐ Natural draft, B-vent or induced draft fireplace	☐ Electric Space Heat
d) ☐ Solid Fuel (including fireplaces)	☐ Radiant Floor Heat (attach pipe details)
e) ☐ No Combustion Appliances	☐ Geothermal (attach loop, pipe & well details)
	☐ High Velocity Residential (attach duct details)
House Type 9.32.3.1.(2)	Ventilation System
☒ I Type a) or b) appliances only, no solid fuel	☐ CAN/CSA-F326
☐ II Type I except with solid fuel (including fireplace)	☐ HRV - Exhaust Ducts / Forced Air System
☐ III Any Type c) appliance = Part 6 Design	☒ HRV - Simplified Connection to Forced Air System
☐ IV Electric space heat	☐ HRV - Full Ducting / Not Coupled to Forced Air System
☐ Other: No forced air = Option 4	☐ Part 6 Design (Other - _____)

EQUIPMENT DESIGN REQUIREMENTS

Total Ventilation Capacity 9.32.3.3.(1)	TOTAL
Master Bedroom	1 x 10 L/s = 10 L/s
Unfinished Basement	1 x 10 L/s = 10
Other Habitable Rooms	12 x 5 L/s = 60
Principal Ventilation Capacity 9.32.3.4.(1)	80 T.V.C.
Master Bedroom	1 x 15 L/s = 15
Other Bedrooms	3 x 7.5 L/s = 22.5
	- 37.5 P.V.C.
Required Supplemental Ventilation Capacity (T.V.C. less P.V.C.) =	42.5

Furnace size: GMEC960603BNA 60,000 BTU'S KJ

Air conditioner size: GSX16030 2.5 TON KJ (If provided / applicable)

Heating / Cooling Equipment sized according to heat loss/gain calculations of CAN/CSA F280: Yes

Geothermal Equipment designed according to CAN/CSA-C448.2: No

Hydronic Equipment designed according to CAN/CSA-B214: No

Duct (and pipe) schematic attached including sizes, runs and material used: Yes

VENTILATION EQUIPMENT

Heat Recovery Ventilator

Model: CLEAN COMFORT VH30100RNC HRV

80 L/s High 40 L/s Low

Exhaust Fans

	Location	Model	L/s	Sones	Principal or Supplemental
1	PDRM	DX90	45	2.5	PRINCIPAL SUPP.
2	ENSUITE	EC50	25/25	3.	SUPPLEMENTAL
3	BATH1	EC50	25/25/25	3.	SUPPLEMENTAL
4					

EQUIPMENT EFFICIENCIES (Please also refer to Energy Efficiency Design Summary)

Heating system:

Cooling system (if applicable):

Water heater:

HRV: 75 % sensible efficiency at 0 degrees:

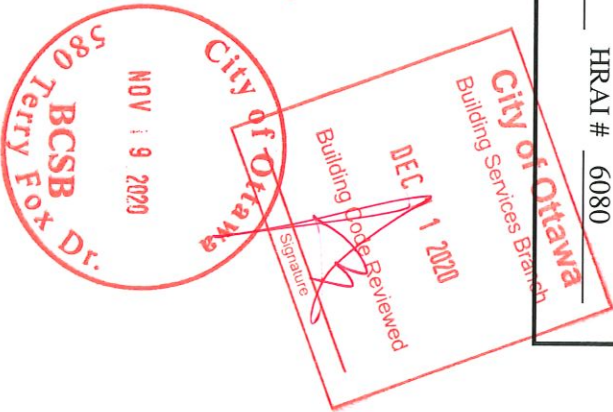
% sensible efficiency at -25 degrees:

DESIGNER CERTIFICATION

I hereby certify that this ventilation system has been designed in accordance with the 2012 Ontario Building Code.

Name: LINDA MCPARLAN Company Name: HARDING MECHANICAL

Signature: Linda McParlan Date: NOV 5/ 2020 BCIN 24379 HRAI # 6080



Furn GMEC960603BNA
Plenum 63" & CAE 10"x23 1/4" x5

Date
201112.AK Prelim Madison 3Bed

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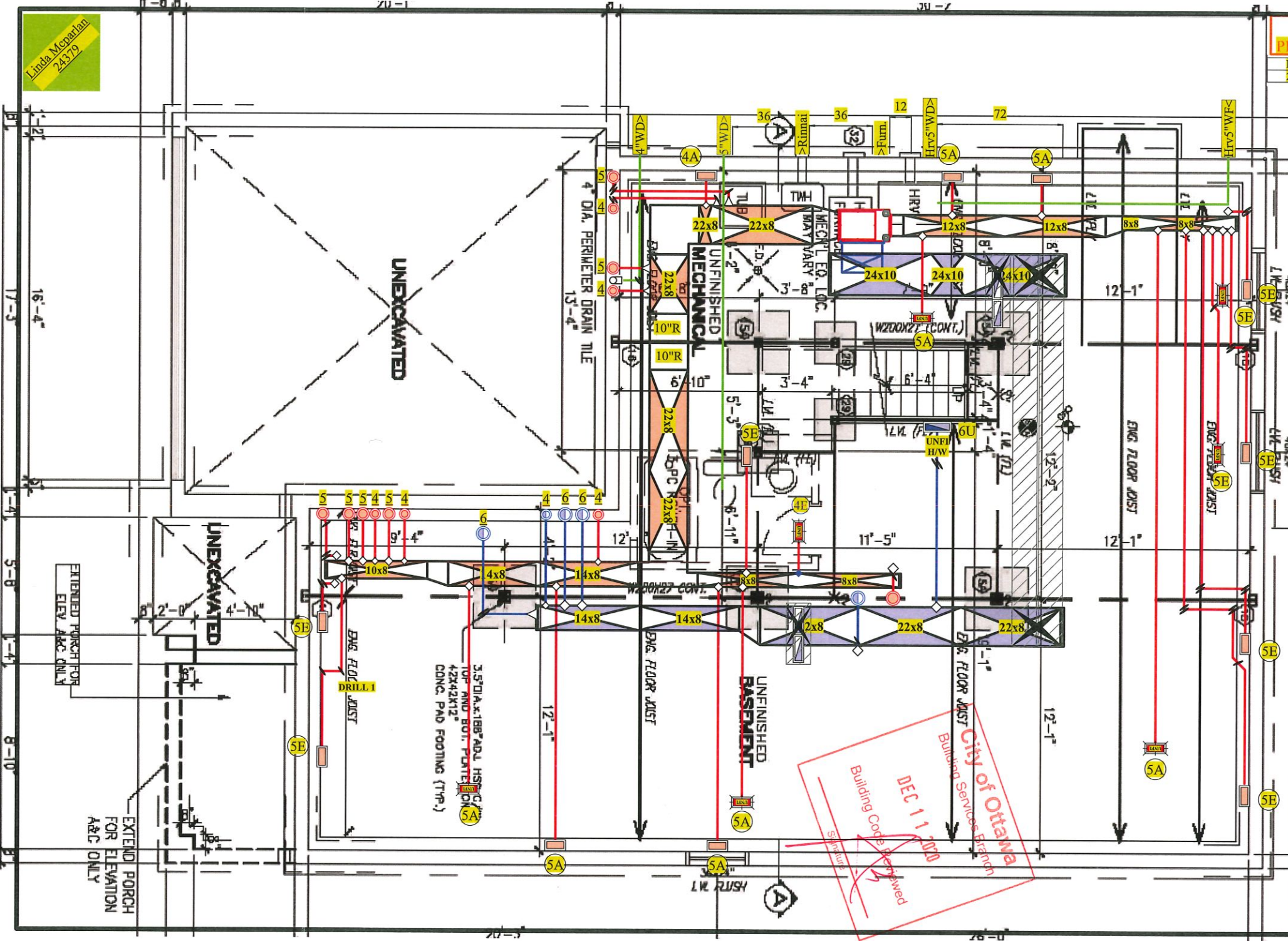
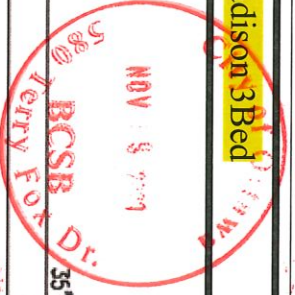
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Heat Loss			
Room Name	Htg cfm	Clg cfm	Htg btu
BASMENT	292	57	0
BATH	27	20	0
BEDROOM 2	82	56	0
BEDROOM 3	57	30	0
ENSUITE	44	27	0
FOYER	55	47	0
GREATROOM	137	162	0
KITCHEN	97	322	0
LAUNDRY	14	9	0
LIV/DININGROOM	114	104	0
MASTERBEDROOM	131	100	0
MUD	24	6	0
OFFICE	29	20	0
PDRM	26	19	0
STAIRS	26	15	0
W.I.C.	3	3	0
W.I.C. 2	10	3	0
	1168	1000	0

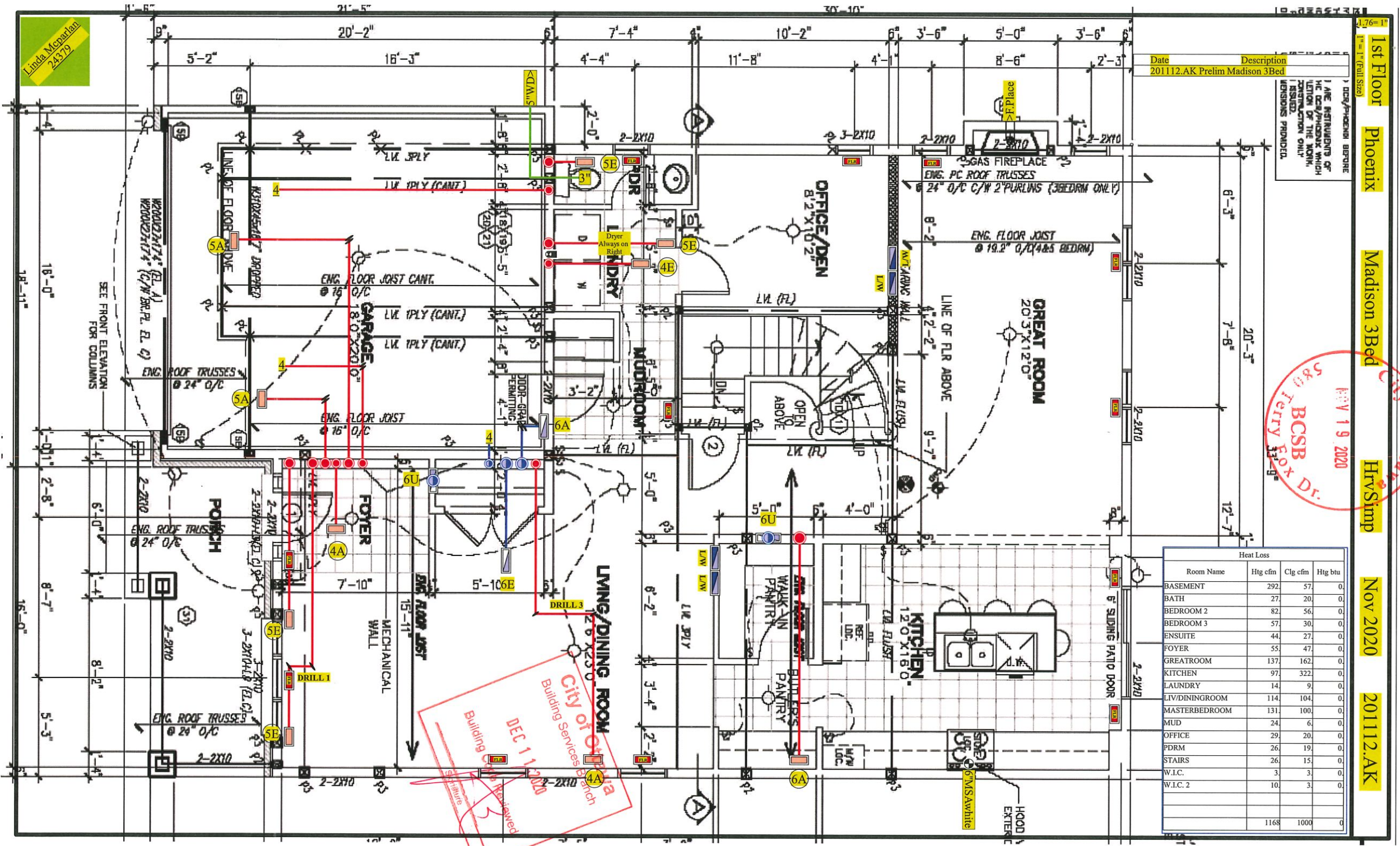


Linda Mopatan
24379

EXTEND PORCH FOR
ELEV. A&C ONLY

EXTEND PORCH
FOR ELEVATION
A&C ONLY

Linda Mearlan
24379



1st Floor
Phoenix

Madison 3Bed

HrvSimp

Nov 2020

201112.AK

Date: 201112.AK Prelim Madison 3Bed

1. ARE RETAINING OF
THE DESIGNER WHICH
SECTION OF THE ROOM
RESIDED
REVISIONS PROVIDED.

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STAIRS	26	15	0
W.I.C.	3	3	0
W.I.C. 2	10	3	0
	1168	1000	0

USE INSTRUCTIONS OF
DGR/PHODER WHICH
EXPLAIN THE WORK,
INSTRUCTIONS ONLY
ISSUED.
HSDMS PROVIDED.

Heat Loss			
Room Name	Htg cfm	Cfg cfm	Htg btu
BASEMENT	292	57	0
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BEDROOM 3	57	30	0
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FOYER	55	47	0
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PDRM	26	19	0
STAIRS	26	15	0
W.I.C.	3	3	0
W.I.C. 2	10	3	0
	1168	1000	0

ROOF BELOW

City of Ottawa
Building Services Branch
DEC 11 2020
Building Code Revisions
71

