

March 17, 2015

ADDENDUM – INVITATION TO TENDER  
FOR  
INDIAN HEAD RESEARCH FARM  
CONTRACT NO. 22 – BUILDING RENOVATIONS  
CONTRACT #465-1-4-C22

Addendum No. 2

1. Addendum #2 as detailed in the attached document prepared by Carcoana Architecture Ltd dated March 16, 2015 (4 pages)
2. There is no change to the date of receipt of tenders which is 2:00 pm Local Regina Time, Thursday March 19, 2015.
3. Instructions to Tenderers: **The tenderer shall acknowledge receipt of this Addendum #2 on the first page of the Bid and Acceptance Form.**

Melissa Smith  
Procurement Officer AAFC  
Regina, Saskatchewan S4P 0M3

# Carcoana

ARCHITECTURE LTD.

## ADDENDUM #2

**Project** : Indian Head Research Farm Maintenance Building B017 Remodeling  
**Project No.** : 4748  
**Date** : March 16, 2015

The following amendments to plans and specifications shall be incorporated into and form part of the Contract the same as if these had been written into the original plans and specifications: Reference to specifications also applies to drawings with or without specific reference thereto and vice versa. All bidders shall read the entire Addendum and take into account items affecting their respective responsibilities.

### SUBSTITUTIONS APPROVALS

The following products / product lines have been approved as equals to the ones specified. *The Contractor shall ensure that the equal product meets or exceeds the performance in all respects of the original product specified* (refer to MECHANICAL):

1. CARRIER – Furnaces (Lennox, Armstrong Specified)
2. CARRIER – Condensing Units (Lennox, Allied Specified)

See also the Mechanical Engineer signed approval sheet attached to this Addendum No. 2.

**The following revisions shall be made to the DRAWINGS:**

### MECHANICAL DRAWINGS

The following revisions shall be made to the MECHANICAL DRAWINGS issued in Addendum No. 1:

1. Replace Mechanical Drawings Sheets M6.2 through M6.4, with the Updated Drawings issued under this Addendum No. 2. NOTE: additional clarifications have been added on each one of these two mechanical drawing sheets.

**END OF ADDENDUM #2**

**REQUEST FOR EQUAL STATUS**

**FAXED**

**NU-TREND INDUSTRIES INC.**

1124 WINNIPEG Street  
REGINA, SK. S4R 1J6

PHONE: (306) 525 - 8521  
FAX: (306) 352 - 2877

TO: McGinn Engineering  
ATTENTION: Guy

DATE: March 13/15  
PROJECT: Indian Head Research Farm

BID CLOSING: March 19/15

WE REQUEST THAT THE FOLLOWING MATERIALS / EQUIPMENT BE CONSIDERED EQUAL TO THOSE SPECIFIED		
SPECIFIED	EQUAL	APPROVED
<u>Furnaces</u> Lennox	Carrier	✓
<u>Condensing Units</u> Lennox	Carrier	✓
<p>Approved as equal by McGinn Engineering Ltd. of March 13, 2015 <i>(Signature)</i> Ensure equal product meets or exceeds the performance in all respects of the original product specified.</p>		

THANK YOU FOR THIS CONSIDERATION

George Shuba

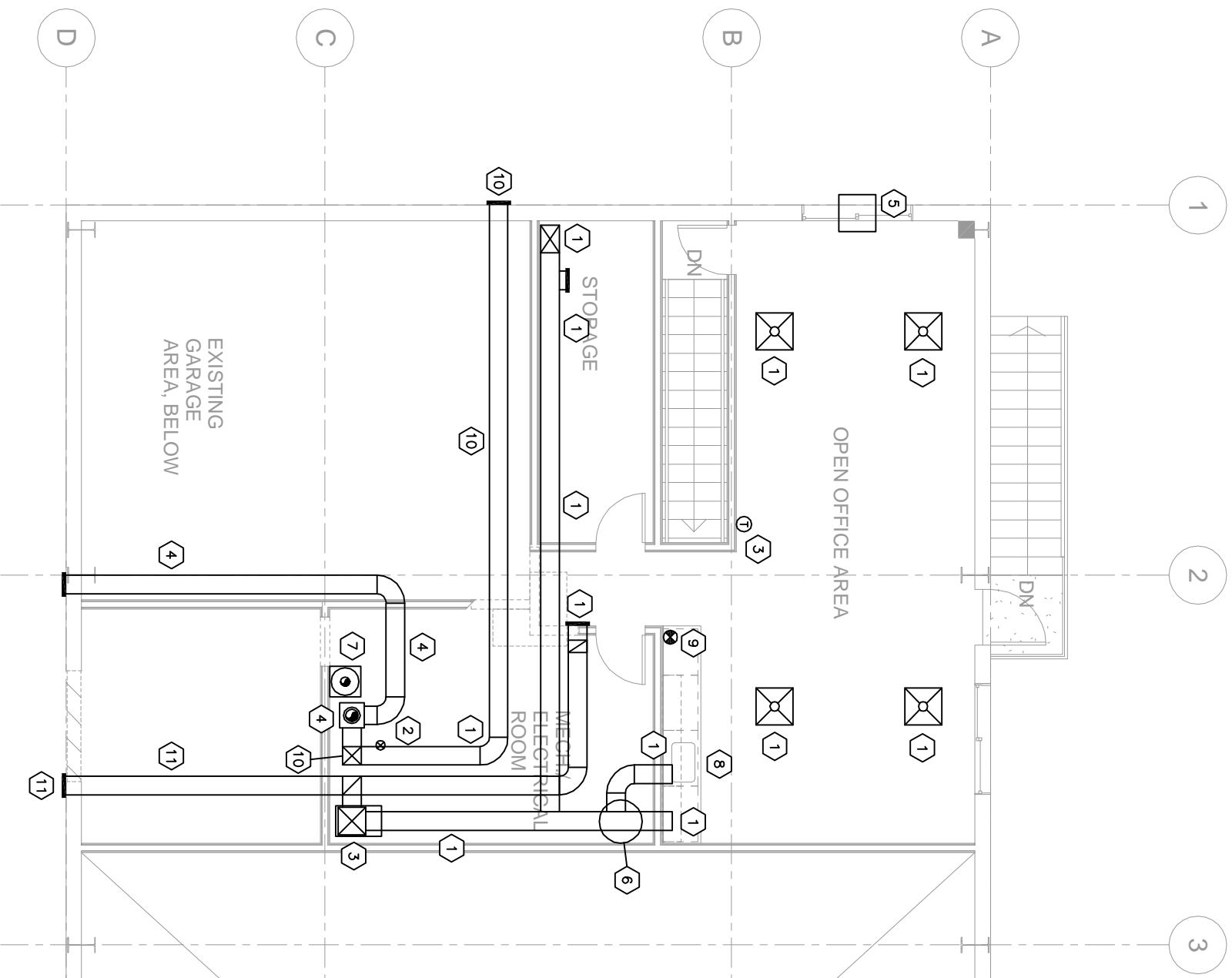
**MECHANICAL GENERAL NOTES**

1. SEE DRAWING M6.1 FOR MECHANICAL DEMOLITION NOTES.
2. SEE DRAWING M6.3 FOR MECHANICAL LEGEND AND GRILLE/LOUVER SCHEDULE.
3. SEE DRAWING M6.4 FOR MECHANICAL EQUIPMENT SCHEDULE AND MECHANICAL GENERAL NOTES.
4. SEE DRAWING M6.5 FOR MECHANICAL SPECIFICATIONS AND DETAILS.

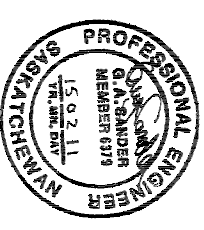
**MECHANICAL KEYNOTES**

⬡(xx) — DENOTES KEYNOTE ON DRAWING

- 1 EXISTING SUPPLY/RETURN AIR DUCT/DIFFUSER/GRILLE TO BE REMOVED. PATCH WALL AND CEILING AND MAKE GOOD AND LEVEL TO EXISTING SURROUNDINGS.
- 2 EXISTING FLOOR DRAIN TO REMAIN.
- 3 EXISTING GAS-FIRED FURNACE TO BE REMOVED C/W VENTING, ELECTRICAL, ETC. PATCH FLOOR, WALLS, AND/OR CEILING AND MAKE GOOD AND LEVEL TO EXISTING SURROUNDINGS.
- 4 EXISTING EXHAUST FAN TO REMAIN C/W DUCTWORK. SEE MAIN FLOOR MECHANICAL DEMO PLAN 1/M6.1.
- 5 EXISTING WALL AC UNIT TO BE REMOVED C/W ELECTRICAL, ETC. PATCH WALL AND MAKE GOOD AND LEVEL TO EXISTING SURROUNDINGS WEATHER TIGHT.
- 6 EXISTING AIR COMPRESSOR TO BE RELOCATED TO SHOP. SEE MAIN FLOOR RENOVATED MECHANICAL PLAN 1/M6.3.
- 7 EXISTING RHEEM 50 GALLON WATER HEATER ON METAL PAN TO REMAIN.
- 8 EXISTING SINK TO REMAIN.
- 9 EXISTING FIRE EXTINGUISHER TO REMAIN.
- 10 EXISTING COMBUSTION AIR INTAKE DUCT TO BE REMOVED. PATCH WALL AND/OR ROOF AND MAKE GOOD AND LEVEL TO EXISTING SURROUNDINGS.
- 11 EXISTING FURNACE F/A INTAKE TO BE REMOVED. PATCH WALL AND MAKE GOOD AND LEVEL TO EXISTING SURROUNDING.



**MEZZANINE PLAN**  
SCALE 1/8" = 1'-0"



### MECHANICAL GENERAL NOTES

1. ALL DUCTING SHOWN SCHEMATICALLY.
2. ALL DUCT SIZES ARE NET SIZES.
3. ALL DUCT TAKE-OFFS TO BE 45° CONICAL WITH BALANCING DAMPERS.
4. DUCTING TO BE CONNECTED TO ALL FURNACE UNITS AND FAN UNITS WITH CANVAS CONNECTIONS, EXCEPT KITCHEN CANOPY EXHAUST FANS.
5. ALL MAIN SUPPLY PLENUM ELBOWS TO BE MITERED WITH TURNING VANES.
6. DUCT ELBOW RADI TO BE MINIMUM 1.5 TIMES THE TURNING DIMENSION.
7. ALL DUCTING TO BE INSTALLED CONCEALED WITHIN CEILING SPACE IN A GOOD WORKMANSHIP LIKE MANNER AS PER SMACNA STANDARDS. ALL EXPOSED DUCTWORK TO BE PAINTED TO MATCH ARCHITECTURAL.
8. DUCTWORK WITHIN FURNACE SUPPLY PLENUMS AND/OR RETURN SHALL BE LINED WITH 1" OF ACOUSTIC INSULATION. INCREASE DUCT SIZE TO MAINTAIN INDICATED DIMENSIONS.
9. COORDINATE ROUTING OF DUCTWORK IN CEILING WITH ELECTRICAL TO ENSURE ADEQUATE ACCESS TO ELECTRICAL SYSTEMS IS MAINTAINED AT THE HIGHEST POSSIBLE LEVEL.
10. INSULATE ALL EXHAUST DUCTWORK FOR A DISTANCE OF 10FT. FROM THE BUILDING OUTLET COMPLETE WITH 1" FOILBACK FIBREGLOSS INSULATION TO BE CANVAS WRAPPED IN FINISHED AREAS ONLY.
11. ENSURE ALL FLUE GAS AND EXHAUST OUTLETS ARE AT LEAST 10FT. AWAY FROM THE NEAREST FRESH AIR INTAKE.
12. ALL EQUIPMENT TO BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
13. ALL DUCTING TO BE FIRE DAMPERED AT ALL FIRE SEPARATIONS COMPLETE WITH QUICK CLOSING HINGED ACCESS DOORS FOR MAINTENANCE OF FUSIBLE LINK.
14. RUN ALL DUCTWORK UP AS HIGH AS POSSIBLE TO UNDERSIDE OF ROOF STRUCTURE AND WITHIN ROOF JOIST WEB WHERE POSSIBLE IN EXPOSED CEILING AREAS.
15. CONTRACTOR TO CHANGE ALL UNIT FILTERS ON BUILDING HAND OVER TO COMPLETION AND PROVIDE 1 SET OF SPARE FILTERS HANDED OVER TO OWNERS TO BE STORED ON SITE.

### MECHANICAL EQUIPMENT SCHEDULE

#### F1 - GAS-FIRED FURNACE #1

SUPPLY AND INSTALL LENNOX MODEL ML193UH070XP36B GAS-FIRED, MERIT SERIES, DOWNFLOW FURNACE OR EQUAL. UNIT TO PROVIDE 66 MBH HEATING INPUT, 61 MBH HEATING OUTPUT, 93% AFUE AND 1200 cfm @ 0.5" S.P. WITH A 1/2 H.P. DIRECT DRIVE BLOWER MOTOR. UNIT TO BE COMPLETE WITH AIR FILTER AND RACK KIT, CONCENTRIC VENT KIT WITH VERTICAL VENT/AIR INTAKE TERMINATION THROUGH ROOF. CR33-50/36B-F DOWNFLOW EVAPORATOR COIL WITH FACTORY TVV, AND 7DAY/24HR PROGRAMMABLE NIGHT SETBACK THERMOSTAT WITH LOCKABLE PLASTIC COVER. UNIT ELECTRICAL TO BE 120 VOLT, SINGLE PHASE WITH A MAXIMUM OVERCURRENT PROTECTION OF 15 AMPS. SEE DETAIL 1/M/6.7.

#### F2 - GAS-FIRED FURNACE #2

SUPPLY AND INSTALL LENNOX MODEL ML193UH090XP36C GAS-FIRED, MERIT SERIES, UPFLOW FURNACE OR EQUAL. UNIT TO PROVIDE 88 MBH HEATING INPUT, 83 MBH HEATING OUTPUT, 93% AFUE AND 1200 cfm @ 0.5" S.P. WITH A 1/2 H.P. DIRECT DRIVE BLOWER MOTOR. UNIT TO BE COMPLETE WITH AIR FILTER AND RACK KIT, CONCENTRIC VENT KIT WITH VERTICAL VENT/AIR INTAKE TERMINATION THROUGH ROOF. CX34-56C-6F UPFLOW EVAPORATOR COIL WITH FACTORY TVV, AND 7DAY/24HR PROGRAMMABLE NIGHT SETBACK THERMOSTAT WITH LOCKABLE PLASTIC COVER. UNIT ELECTRICAL TO BE 120 VOLT, SINGLE PHASE WITH A MAXIMUM OVERCURRENT PROTECTION OF 15 AMPS. SEE DETAIL 2/M/6.7.

#### C1 & C2 - CONDENSING UNIT #1 & #2

SUPPLY AND INSTALL A LENNOX MODEL TSA036H4N41Y CONDENSING UNIT OR EQUAL. UNIT TO PROVIDE 3 TONS TOTAL COOLING WITH A SEER OF 14.50. UNIT TO BE C/W REFRIGERANT LINE KIT, R-410A REFRIGERANT CHARGE, HAIL GUARD, AND LOW AMBIENT KIT DOWN TO 30°F WITH FREESTAT CRANKCASE HEATER AND COMPRESSOR LOCKOUT THERMOSTAT. UNIT ELECTRICAL TO BE 208 VOLT, THREE PHASE WITH AN MCA OF 18.7 AMPS AND A MAXIMUM OVERCURRENT PROTECTION OF 30 AMPS. UNIT 'C1' TO BE PIPED TO FURNACE 'F1' DOWNFLOW EVAPORATOR COIL AND UNIT 'C2' TO BE PIPED TO FURNACE 'F2' UPFLOW EVAPORATOR COIL.

#### CM - COFFEE MACHINE

COFFEE MACHINE TO BE SUPPLIED BY OWNER. CONTRACTOR TO PROVIDE 1/2" COLD WATER CONNECTION.

#### FE - FIRE EXTINGUISHER

SUPPLY AND INSTALL A NATIONAL FIRE EQUIPMENT MODEL ABC-10G LB. DRY CHEMICAL FIRE EXTINGUISHER OR EQUAL. EXTINGUISHER WITH A RATING OF 4-A, 60-B-C. UNIT TO BE MOUNTED ON WALL WITH STEEL MOUNTING BRACKET.

16. COORDINATE INSTALLATION OF ALL DIFFUSERS AND GRILLES WITH CEILING GRID AND LIGHTING LAYOUT.

17. ALL PLUMBING LINES SHOWN SCHEMATICALLY.

18. ALL WATER PIPING TO RUN CONCEALED IN FINISHED AREAS WITHIN CEILING SPACE. PAINT ALL EXPOSED PIPING AS PER ARCHITECTURAL. ALL SEWER LINES TO RUN CONCEALED BELOW CONCRETE SLAB, IN CRAWLSPACE, AND/OR IN WALLS.

19. ALL WATER LINES TO BE COVERED WITH 13mm (1/2") INSULATION AND WITH PVC JACKET IN EXPOSED AREAS.

20. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

21. ALL PIPING TO FIXTURES AND EQUIPMENT TO RUN CONCEALED WHERE POSSIBLE.

22. ALL WATER CONNECTIONS TO FIXTURES TO BE 13mm (1/2") UNLESS OTHERWISE SPECIFIED.

23. CONTRACTOR TO SUPPLY AND INSTALL PLUMBING VENTS, TRAP SEAL PRIMERS, CLEANOUTS, AND ISOLATION VALVES AS PER CODE.

24. INSTALL ALL GAS FIRED EQUIPMENT AND PIPING IN ACCORDANCE WITH THE CANADIAN GAS CODE AND GAS UTILITY REQUIREMENTS.

25. SOLDERS AND FLUXES HAVING A LEAD CONTENT IN EXCESS OF 0.2% SHALL NOT BE USED.

26. CONTRACTOR TO FIELD DETERMINE THE EXACT LOCATION OF ALL EXISTING BUILDING SERVICES.

27. PVC AND PLASTIC PIPING MAY BE USED WHERE PERMITTED BY CODE. ALL PVC PIPING WITHIN RETURN AIR CEILING PLENUMS TO BE XFR RATED.

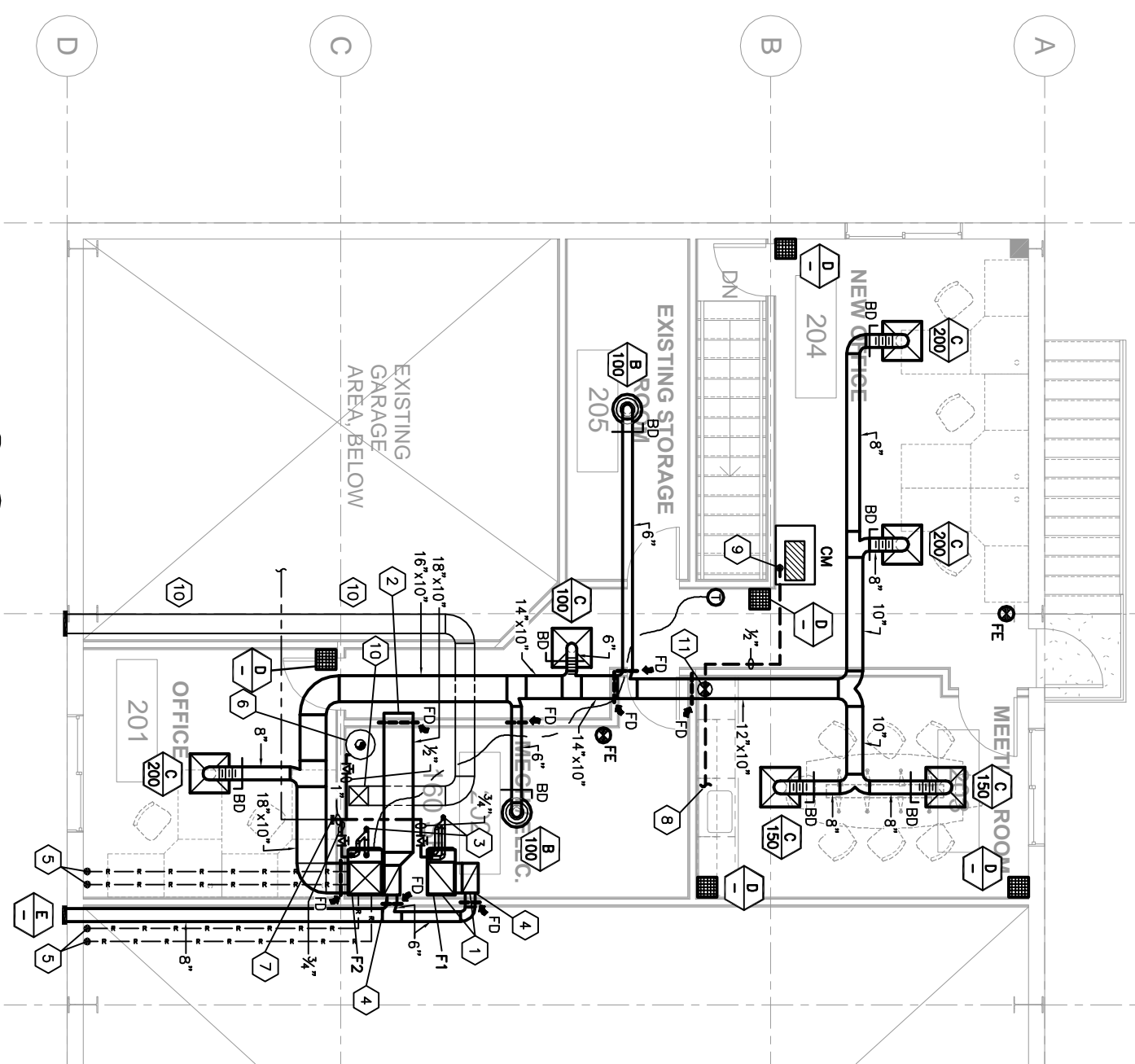
28. ALL PLUMBING TO BE INSTALLED IN ACCORDANCE WITH THE CANADIAN PLUMBING CODE, PROVINCIAL PLUMBING CODES, AND CITY BYLAWS.

29. PROVIDE FIRESTOPS AT ALL PIPING THAT PASSES THROUGH FIRE SEPARATIONS.

### MECHANICAL KEYNOTES

xx DENOTES KEYNOTE ON DRAWING

- 1 SUPPLY AND RETURN AIR DUCTS DOWN INTO MAIN FLOOR C/W FIRE DAMPER AT RATED FLOOR ASSEMBLY PENETRATION. SEE MAIN FLOOR RENOVATED HVAC PLAN 1/M/6.3 FOR CONTINUATION.
- 2 STUB 18"x10" RETURN AIR DUCT WITHIN SECOND FLOOR CEILING SPACE.
- 3 FURNACE CONCENTRIC VENT/AIR INTAKE UP THRU ROOF C/W CONCENTRIC VENT AND VERTICAL TERMINATION KIT. FLASH AND SEAL AT ROOF PENETRATION WEATHER TIGHT.
- 4 CONNECT FRESH AIR DUCT TO FURNACE RETURN AIR PLENUM C/W MANUAL DAMPER.
- 5 REFRIGERANT LINE KIT UP FROM MAIN FLOOR TIGHT ALONG WALL TO U/S OF ROOF. SEE MAIN FLOOR RENOVATED MECHANICAL PLAN 1/M/6.3 FOR CONTINUATION.
- 6 EXISTING RHEEM GAS-FIRED WATER HEATER TO REMAIN C/W VENTING. UNIT PROVIDES 50 GALLON STORAGE AND 45 MBH HEATING.
- 7 CONNECT NEW 1" GAS LINE TO EXISTING GAS LINE STUB ALONG U/S OF ROOF.
- 8 CONNECT NEW 1/2" COLD WATER LINE TO EXISTING SINK COLD WATER SUPPLY LINE WITHIN CEILING SPACE. CONTRACTOR TO DETERMINE EXACT LOCATION ON SITE.
- 9 1/2" COLD WATER LINE DOWN WITHIN FURF-IN TO COFFEE MACHINE 'CM'.
- 10 EXISTING EXHAUST DUCT TO REMAIN. SEE MAIN FLOOR PLAN 1/M/6.3 FOR CONTINUATION.
- 11 EXISTING FIRE EXTINGUISHER TO REMAIN.



MEZZANINE PLAN  
SCALE 1/8" = 1'-0"

## Carcoana ARCHITECTURE LTD.

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## RESEARCH FARM

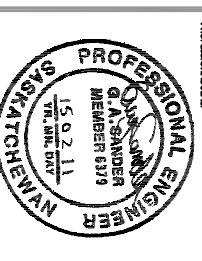
INDIAN HEAD, SASKATCHEWAN

MCGINN ENGINEERING LTD.

ASSOCIATION OF PROFESSIONAL ENGINEERS  
CERTIFICATE OF AUTHORIZATION  
NO. 234  
REG. NO. 234

PERMISSION TO CONSULT FEE BY

DISCIPLINE: MECHANICAL  
SASK. REG. NO. 1562  
SIGNATURE: [Signature]



MECHANICAL  
1. RESEARCH FARM MECH. ROOM EXHAUST DUCT.  
1. MARCH 16, 2015

# M6.4

MEZZANINE  
RENOVATED  
MECHANICAL PLAN

Designed By: DIT Scale: AS NOTED  
Drawn By: SMH Date: DEC 2014  
Checked By: GAS Date: 2015.02.10  
Project No.: 4748

Revision No.: RT Date:

Sheet No.: Date:

Client Name: Date Received: