

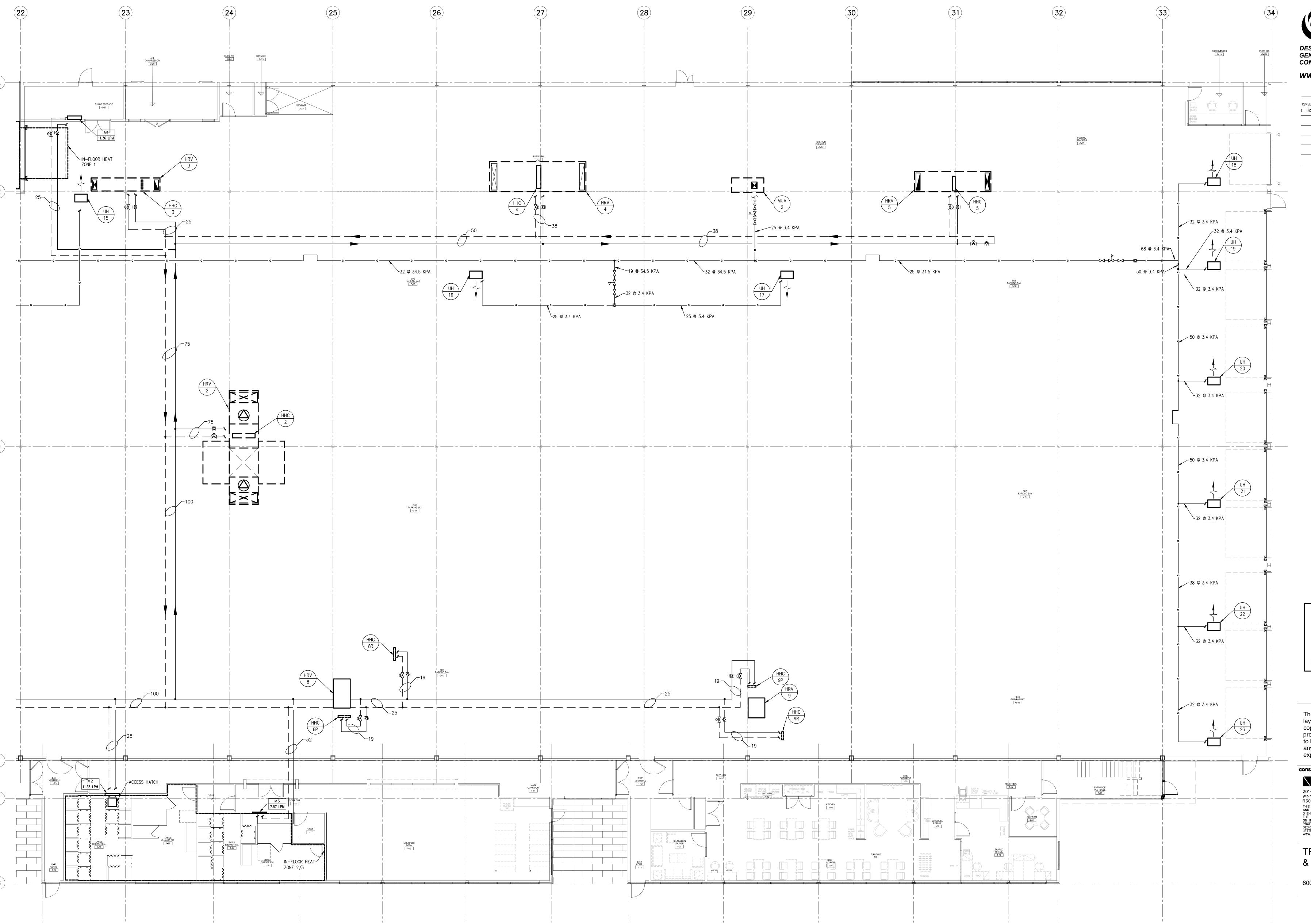
DRAWING NOTES

EXTEND INSULATED 400X200 COMBUSTION AIR DUCT FROM GOOSE NECK TO BETWEEN 150mm AND 450mm ABOVE FLOOR PLAN C/W COLD AIR TRAP.

EXTEND INSULATED 100X100 VENTILATION AIR DUCT FROM GOOSENECK ON ROOF TO HIGH LEVEL WITHIN MECHANICAL ROOM.

MECHANICAL - H.V.A.C.

Project number	2012021
Date	Feb. 27, 2013
Drawn by	B.S.D.
Checked by	P.S.G.





www.caspianconstruction.com

REVISED/ ISSUED/ PLOTTED

1. ISSUED FOR CONTRUCTION

2013-02-27







The contents of this drawing including all layouts, schemes and configuration are copyrighted and are considered the intellectual property of Caspian Projects Inc. and are not to be reproduced, readapted or redrawn for any purpose, for profit or otherwise, without explicit written permission.

consultant

NOVA 3 ENGINEERING LTD.

CONSULTING ENGINEERS

201–120 FORT STREET TEL.: (204) 943–6142 WINNIPEG, MANITOBA FAX.: (204) 942–1276 R3C 1C7 JN.: 31–363

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF NOVA 3 ENGINEERING LTD. AND MAY ONLY BE REPRODUCED WITH THE WRITTEN PERMISSION OF NOVA 3 ENGINEERING LTD.

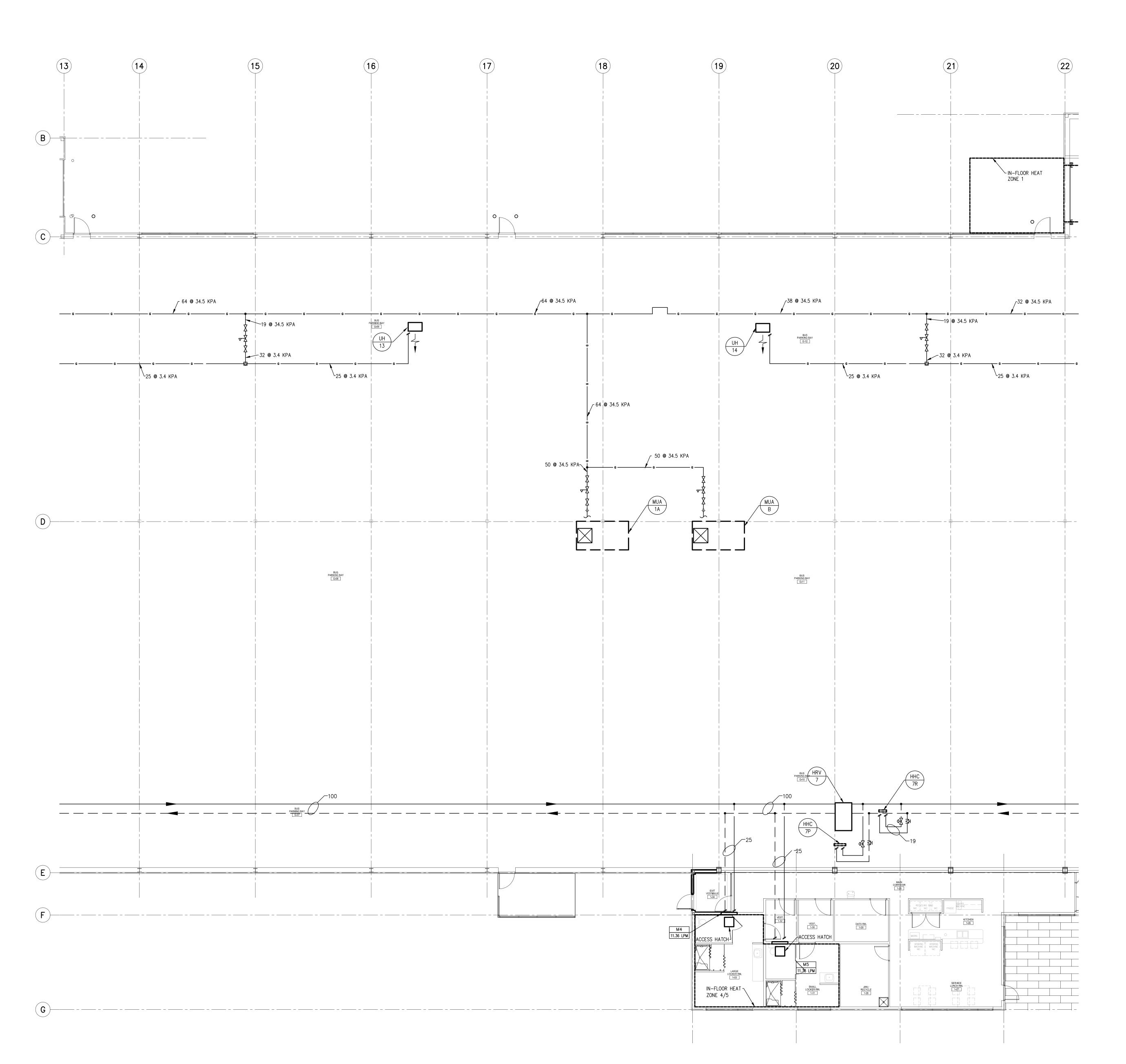
THE CONCEPT AND DESIGN INCORPORATED INTO THIS DRAWING ARE BASED ON INFORMATION PROVIDED BY THE CLIENT AND OTHER RELATED SOURCES. PROFESSIONAL ENGINEER ACCEPTS NO RESPONSIBILITY FOR DRAWING AND DESIGN UNLESS DRAWING IS ACCOMPANIED BY ORIGINAL SEALED AND SIGNED LETTER OF INTENT AND CERTIFICATE OF INSPECTION. REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.

TRANSIT BUS PARKING & SERVICE GARAGE

600 Brandon Ave, Winnipeg, Manitoba

MECHANICAL - HEATING

Project number	2012021
Date	Feb. 27, 2013
Drawn by	B.S.D.
Checked by	P.S.G.





www.caspianconstruction.com

REVISED/ ISSUED/ PLOTTED	DATE	
. ISSUED FOR CONTRUCTION		2013-02-27



GENERAL NOTES - HVAC

- 1. MECHANICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, INVERTS, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
- 2. MECHANICAL CONTRACTOR SHALL ALLOW IN HIS TENDER QUOTATION FOR ALL REQUIRED MODIFICATIONS TO EXISTING HVAC SYSTEMS AND EQUIPMENT (I.E.) RE-ROUTING AND RE-BALANCING OF EXISTING DUCTWORK AS DEEMED NECESSARY DUE TO RENOVATION WORK.
- 3. REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
- 4. MECHANICAL CONTRACTOR SHALL CAREFULLY REMOVE & RELOCATE EXISTING EQUIPMENT AS PER OWNERS REQUIREMENTS.
- 5. ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
- 6. COORDINATE THE EXACT LOCATION OF THE GRILLES AND DIFFUSERS ON SITE WITH THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR, ARCHITECTURAL CEILING PLAN, LIGHTING LAYOUT, ETC. TO ENSURE THAT THERE ARE NOT ANY CONFLICTS DURING INSTALLATION.
- 7. PROVIDE BALANCE DAMPER FOR EACH SUPPLY/EXHAUST AIR GRILLE OR DIFFUSER TO ALLOW FOR THE PROPER BALANCING OF THE SYSTEM. PROVIDE OPPOSED BLADE DAMPERS WITH THE DIFFUSER AND ADJUSTABLE FROM THE DIFFUSER FACE WHEN A DUCT MOUNTED BALANCE DAMPER WOULD NOT BE ACCESSIBLE.
- 8. ALL DUCT DIMENSIONS DENOTE INTERNAL "OPEN" AREA OF THE
- 9. ALL DUCTWORK PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED A MINIMUM 10'-0" BACK FROM THE BUILDING PENETRATION.
- 10. REFER TO ARCHITECTURAL DRAWINGS AND PROVIDE FIRE DAMPERS IN ALL WALLS DENOTED AS FIRE SEPARATIONS.
- 11. COORDINATE THE EXACT LOCATIONS OF EQUIPMENT, DUCT OPENINGS, AND DUCT LOCATIONS WITH THE EXISTING STRUCTURE AND THE STRUCTURAL CONSULTANT.
- 12. ALL WORK SHALL COMPLY IN EVERY RESPECT WITH ALL NATIONAL, PROVINCIAL AND LOCAL CODES AND BY-LAWS, WHICH SHALL BE CONSIDERED PART OF THE SPECIFICATION. IN THE CASE OF CONFLICTING REQUIREMENTS, BE GOVERNED BY THE MOST STRINGENT REGULATIONS.
- 13. THE MECHANICAL CONTRACTOR SHALL INSTALL HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS IN COMPLETE ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL/PROVINCIAL BUILDING CODE, ASHRAE, SMACNA LATEST EDITION DUCT STANDARDS, AND MANITOBA DEPT. OF LABOUR REQUIREMENTS.
- 14. ALL INSULATING MATERIALS, METHODS, SIZES AND TYPES OF INSULATION FOR ALL DUCT WORK SHALL BE INSTALLED TO THE The contents of this drawing including all REQUIREMENTS OF THE ASHRAE STANDARDS 90.1-2001 "ENERGY STANDARD FOR BUILDING EXCEPT LOW-RISE RESIDENTIAL BUILDING", STANDARD 90.2 "ENERGY EFFICIENT DESIGN OF LOW-RISE RESIDENTIAL BUILDINGS" AND THERMAL INSLULATION ASSOCIATION OF CANADA (TIAC) STANDARDS.
- 15. VENTILATION CONTRACTOR SHALL ENSURE THAT ALL DUCTWORK THAT MAY CONVEY OUTSIDE AIR BE LOCATED A MINIMUM OF 6" (150 MM) AWAY FROM ANY SPRINKLER PIPING. DUCTWORK IN SUCH LOCATIONS SHALL BE PROTECTED WITH A MINIMUM OF 2" (50MM) RIGID DUCT INSULATION WITH VAPOR RETARDING FOIL FINISH. ALTER LOCATION OF DUCTWORK TO SUIT.
- 16. FOR STRUCTURES REQUIRING OR CONTAINING EXISTING FIRE PROTECTION/SPRINKLER SYSTEMS, THE OWNER, PROPERTY MANAGER, TENANT AND/OR GENERAL CONTRACTOR SHALL RETAIN
 A SPRINKLER CONTRACTOR TO PROVIDE FREEZE PROTECTION IN
 ALL MECHANICAL AND SERVICE ROOMS UTILIZING DRY AND/OR
 GLYCOL SYSTEMS.

 THE OWNER, FROMENT OF NOVA 3 ENGINEERING LTD.
 AND MAY ONLY BE REPRODUCED WITH THE WRITTEN PERMISSION OF NOVA 3 ENGINEERING LTD.
 THE CONCEPT AND DESIGN INCORPORATED INTO THIS DRAWING ARE BASED ON INFORMATION PROVIDED THE CLIENT AND OTHER RELATED SOURCES.
 PROFESSIONAL ENGINEER ACCEPTS NO RESPONSIBILITY FOR DRAWING AND DESIGN UNLESS DRAWING IS ACCOMPANIED BY ORIGINAL SEALED AND SIGNED LETTER OF INTENT AND CERTIFICATE OF INSPECTION. REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.



layouts, schemes and configuration are copyrighted and are considered the intellectual property of Caspian Projects Inc. and are not to be reproduced, readapted or redrawn for any purpose, for profit or otherwise, without explicit written permission.

No.962 Date: 2013/02/27

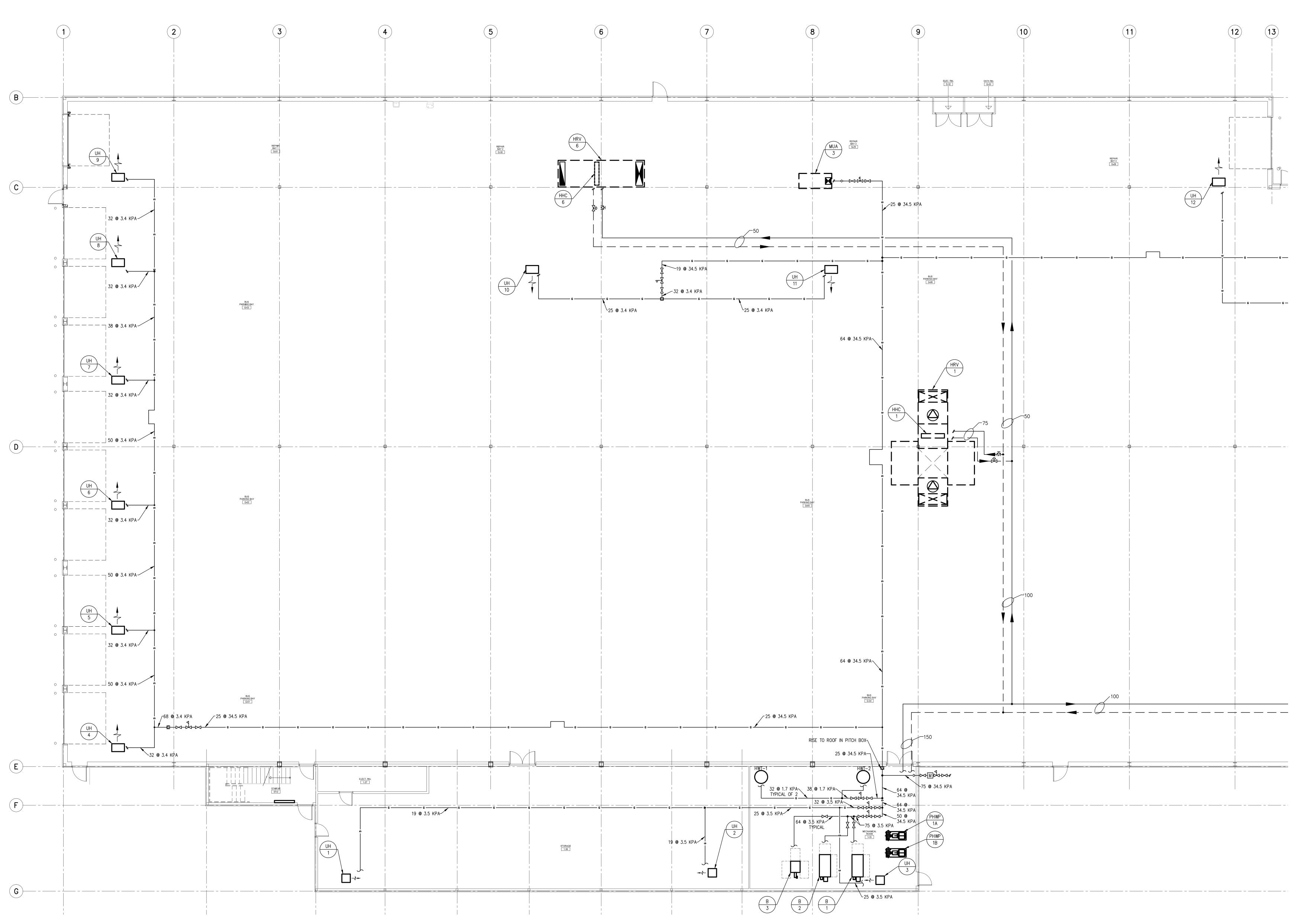
NOVA 3 ENGINEERING LTD. CONSULTING ENGINEERS 201-120 FORT STREET TEL.: (204) 943-6142 FAX.: (204) 942–1276

TRANSIT BUS PARKING & SERVICE GARAGE

600 Brandon Ave, Winnipeg, Manitoba

MECHANICAL - HEATING

	Project number	2012021
	Date	Feb. 27, 2013
	Drawn by	B.S.D.
	Checked by	P.S.G.





www.caspianconstruction.com

REVISED/ ISSUED/ PLOTTED	DATE	
1. ISSUED FOR CONTRUCTION		2013-02







The contents of this drawing including all layouts, schemes and configuration are copyrighted and are considered the intellectual property of Caspian Projects Inc. and are not to be reproduced, readapted or redrawn for any purpose, for profit or otherwise, without explicit written permission.

consultant

NOVA 3 ENGINEERING LTD.

CONSULTING ENGINEERS

201–120 FORT STREET TEL.: (204) 943–6142
WINNIPEG, MANITOBA FAX.: (204) 942–1276
R3C 1C7 JN.: 31–363

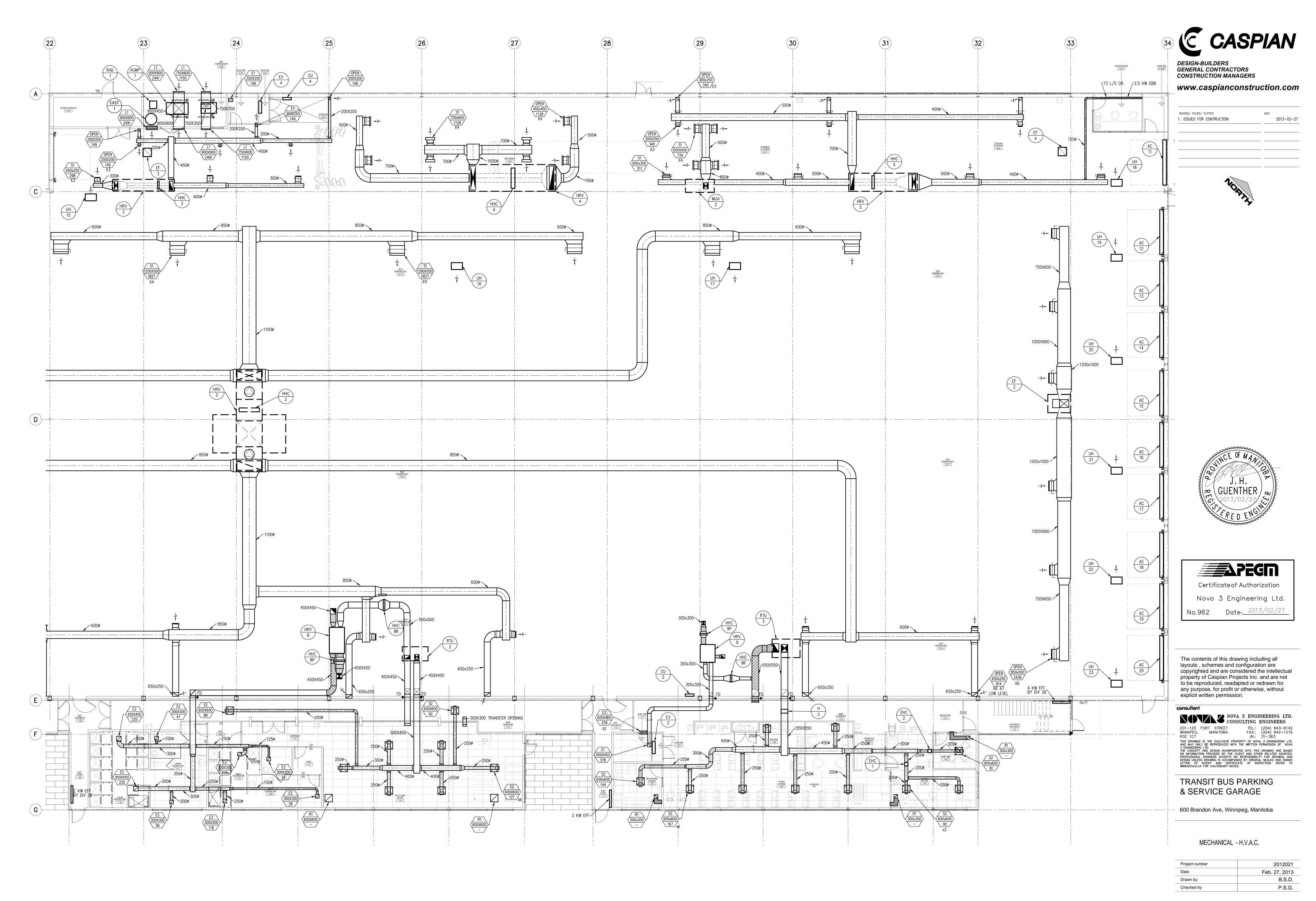
THIS DRAWING IS THE EXCLUSIVE PROPERTY OF NOVA 3 ENGINEERING LTD.
AND MAY ONLY BE REPRODUCED WITH THE WRITTEN PERMISSION OF NOVA 3 ENGINEERING LTD.
THE CONCEPT AND DESIGN INCORPORATED INTO THIS DRAWING ARE BASED ON INFORMATION PROVIDED BY THE CLIENT AND OTHER RELATED SOURCES. PROFESSIONAL ENGINEER ACCEPTS NO RESPONSIBILITY FOR DRAWING AND DESIGN UNLESS DRAWING IS ACCOMPANIED BY ORIGINAL SEALED AND SIGNED LETTER OF INTENT AND CERTIFICATE OF INSPECTION. REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.

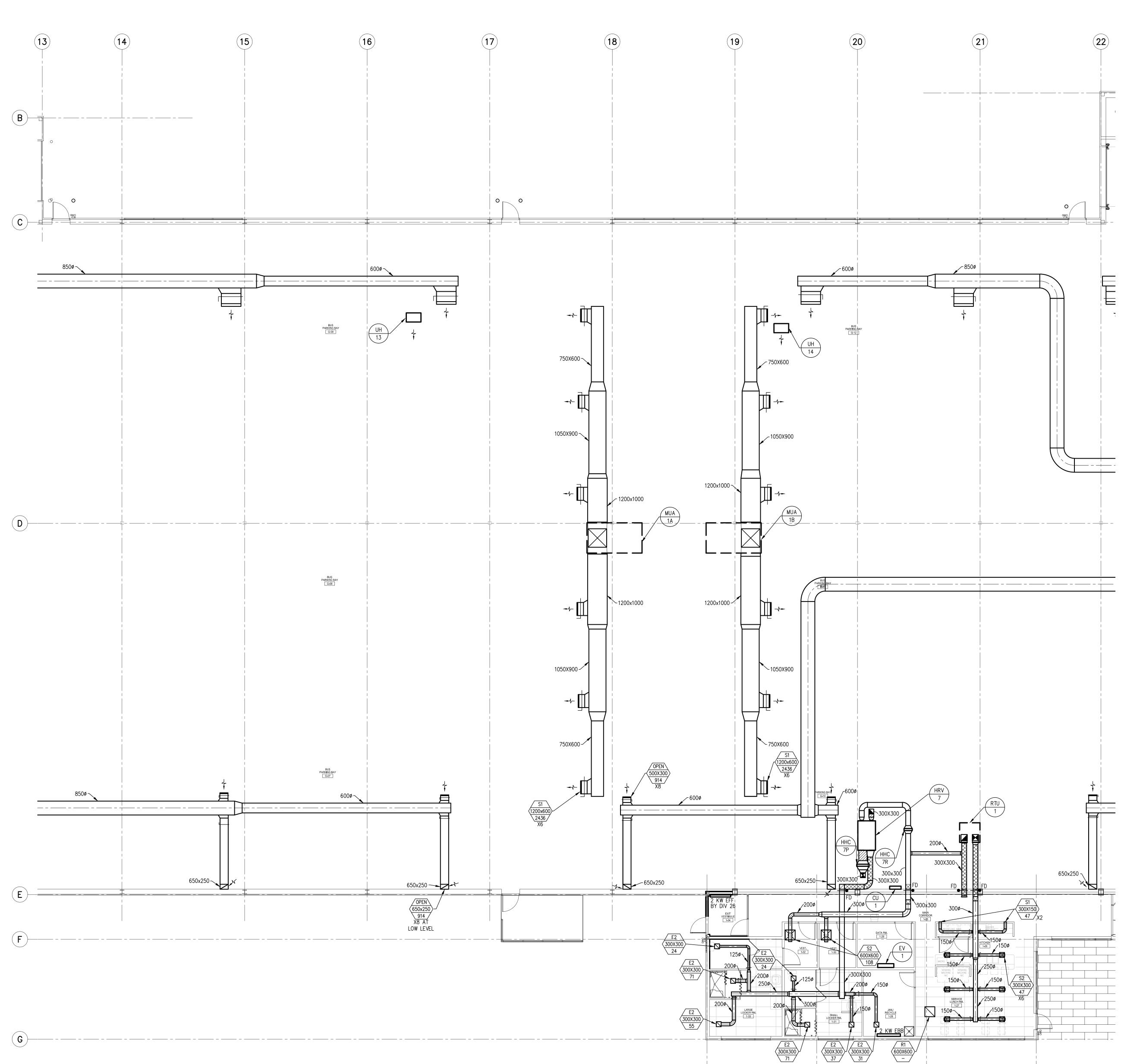
TRANSIT BUS PARKING & SERVICE GARAGE

600 Brandon Ave, Winnipeg, Manitoba

MECHANICAL - HEATING

Project number	2012021
Date	Feb. 27, 2013
Drawn by	B.S.D.
Checked by	P.S.G.







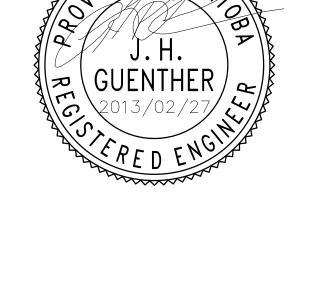
www.caspianconstruction.com

REVISED/ ISSUED/ PLOTTED	DATE	
1. ISSUED FOR CONTRUCTION		2013-02



GENERAL NOTES - HVAC

- MECHANICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, INVERTS, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
- 2. MECHANICAL CONTRACTOR SHALL ALLOW IN HIS TENDER QUOTATION FOR ALL REQUIRED MODIFICATIONS TO EXISTING HVAC SYSTEMS AND EQUIPMENT (I.E.) RE—ROUTING AND RE—BALANCING OF EXISTING DUCTWORK AS DEEMED NECESSARY DUE TO RENOVATION WORK.
- 3. REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
- 4. MECHANICAL CONTRACTOR SHALL CAREFULLY REMOVE & RELOCATE EXISTING EQUIPMENT AS PER OWNERS REQUIREMENTS.
- 5. ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
- 6. COORDINATE THE EXACT LOCATION OF THE GRILLES AND DIFFUSERS ON SITE WITH THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR, ARCHITECTURAL CEILING PLAN, LIGHTING LAYOUT, ETC. TO ENSURE THAT THERE ARE NOT ANY CONFLICTS DURING INSTALLATION.
- 7. PROVIDE BALANCE DAMPER FOR EACH SUPPLY/EXHAUST AIR GRILLE OR DIFFUSER TO ALLOW FOR THE PROPER BALANCING OF THE SYSTEM. PROVIDE OPPOSED BLADE DAMPERS WITH THE DIFFUSER AND ADJUSTABLE FROM THE DIFFUSER FACE WHEN A DUCT MOUNTED BALANCE DAMPER WOULD NOT BE ACCESSIBLE.
- 8. ALL DUCT DIMENSIONS DENOTE INTERNAL "OPEN" AREA OF THE DUCT.
- ALL DUCTWORK PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED A MINIMUM 10'-0" BACK FROM THE BUILDING PENETRATION.
- REFER TO ARCHITECTURAL DRAWINGS AND PROVIDE FIRE DAMPERS IN ALL WALLS DENOTED AS FIRE SEPARATIONS.
- 11. COORDINATE THE EXACT LOCATIONS OF EQUIPMENT, DUCT OPENINGS, AND DUCT LOCATIONS WITH THE EXISTING STRUCTURE AND THE STRUCTURAL CONSULTANT.
- 12. ALL WORK SHALL COMPLY IN EVERY RESPECT WITH ALL NATIONAL, PROVINCIAL AND LOCAL CODES AND BY—LAWS, WHICH SHALL BE CONSIDERED PART OF THE SPECIFICATION. IN THE CASE OF CONFLICTING REQUIREMENTS, BE GOVERNED BY THE MOST STRINGENT REGULATIONS.
- 13. THE MECHANICAL CONTRACTOR SHALL INSTALL HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS IN COMPLETE ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL/PROVINCIAL BUILDING CODE, ASHRAE, SMACNA LATEST EDITION DUCT STANDARDS, AND MANITOBA DEPT. OF LABOUR REQUIREMENTS.
- 14. ALL INSULATING MATERIALS, METHODS, SIZES AND TYPES OF INSULATION FOR ALL DUCT WORK SHALL BE INSTALLED TO THE REQUIREMENTS OF THE ASHRAE STANDARDS 90.1–2001 "ENERGY STANDARD FOR BUILDING EXCEPT LOW-RISE RESIDENTIAL BUILDING", STANDARD 90.2 "ENERGY EFFICIENT DESIGN OF LOW-RISE RESIDENTIAL BUILDINGS" AND THERMAL INSLULATION ASSOCIATION OF CANADA (TIAC) STANDARDS.
- 15. VENTILATION CONTRACTOR SHALL ENSURE THAT ALL DUCTWORK THAT MAY CONVEY OUTSIDE AIR BE LOCATED A MINIMUM OF 6" (150 MM) AWAY FROM ANY SPRINKLER PIPING. DUCTWORK IN SUCH LOCATIONS SHALL BE PROTECTED WITH A MINIMUM OF 2" (50MM) RIGID DUCT INSULATION WITH VAPOR RETARDING FOIL FINISH. ALTER LOCATION OF DUCTWORK TO SUIT.
- 16. FOR STRUCTURES REQUIRING OR CONTAINING EXISTING FIRE PROTECTION/SPRINKLER SYSTEMS, THE OWNER, PROPERTY MANAGER, TENANT AND/OR GENERAL CONTRACTOR SHALL RETAIN A SPRINKLER CONTRACTOR TO PROVIDE FREEZE PROTECTION IN ALL MECHANICAL AND SERVICE ROOMS UTILIZING DRY AND/OR GLYCOL SYSTEMS.





The contents of this drawing including all layouts, schemes and configuration are copyrighted and are considered the intellectual property of Caspian Projects Inc. and are not to be reproduced, readapted or redrawn for any purpose, for profit or otherwise, without explicit written permission.

consultant

NOVA 3 ENGINEERING LTD.

CONSULTING ENGINEERS

201–120 FORT STREET TEL.: (204) 943–6142

WINNIPEG, MANITOBA FAX.: (204) 942–1276

R3C 1C7 JN.: 31–363

THIS DRAWING IS THE EXCLUSIVE PROPERTY OF NOVA 3 ENGINEERING LTD.
AND MAY ONLY BE REPRODUCED WITH THE WRITTEN PERMISSION OF NOVA 3 ENGINEERING LTD.

THE CONCEPT AND DESIGN INCORPORATED INTO THIS DRAWING ARE BASED ON INFORMATION PROVIDED BY THE CLIENT AND OTHER RELATED SOURCES. PROFESSIONAL ENGINEER ACCEPTS NO RESPONSIBILITY FOR DRAWING AND DESIGN UNLESS DRAWING IS ACCOMPANIED BY ORIGINAL SEALED AND SIGNED LETTER OF INTENT AND CERTIFICATE OF INSPECTION. REFER TO WWW.NOVA3.CA FOR CAUTIONARY NOTES.

TRANSIT BUS PARKING

& SERVICE GARAGE

600 Brandon Ave, Winnipeg, Manitoba

MECHANICAL - H.V.A.C.

Project number	2012021
Date	Feb. 27, 2013
Drawn by	B.S.D.
Checked by	P.S.G.