EQUIPMENT LIST		
ITEM	DESCRIPTION	REMARK
1	BEER DISPENSER	
2	SOFT DRINK DISPENSER	
3	HAND WASH SINK	
4	BEVERAGE COOLER	
5	COMMERCIAL FOOD WARMER	INSTALLED ON KITCHEN OPENING
6	HAND WASH SINK	
7	STAFF LOCKER	QTY: 12
8	TABLE CLOTH SHELVING	
9	WALK IN COOLER	
10	WALK IN FREEZER	
11	TABLE & PRE-WASH DISH SINK	
12	DISH WASHER	
13	TWO COM. SINK	
14	DRYING RACK	
15	HOT WATER TANK	
16	MOP SINK	
17	VEGGIE SINK	
18	COMMERCIAL UPRIGHT COOLER	
19	VERTICAL BROILER	
20	FLAT GRIDDLE	
21	4 BURNER RANGE	
22	GRILL	
23	MIXER	
24	SHELVING RACK	
25	TABLE	
26	WALL MOUNTED SHELVING	
27	PIZZA & PASTRY OVEN	
28	SOUP WARMER	
29	COLD FRIDGE, SALAD BAR	
30	DECK MOUNTED CABINET	
31	HAND WASH	
32	MICROWAVE	
33	PREPARATION TABLE	
34	PREPARATION TABLE	
35	PREPARATION TABLE	
36	PREPARATION TABLE	
37	STEAM KETTLE	
38	GREASE INTERCEPTOR	INSTALLED ON PARKING CEILING
39	CHAFFING DISHES FOR BUFFET	
40	DRIP-DRY RACK	
41	SERVE, TABLE	
42	COFFEE MACHINE	
43	LAMPSHADE	
44	CHEMICAL STORAGE	
45	WALL MOUNTED RACK	
46	DOW SHEETER	
49	PREP. TABLE	
50	PREP. TABLE	

PROJECT DATA

Civic Address :6633 Hastings street , Burnaby, B.C.
Legal Description: LOT 94 Blk. Dist. Lot.206 PLAN NWP 57304

BUILDING AREA: 485.5 sq m. (5225.9 s.f.)

3.2.2.27. Group A, Division 2, up to 2 Storeys, Sprinklered
1) A building classified as Group A, Div. 2 is permitted to be of combustible or noncombustible construction, provided that the building is sprinklered throughout, it is not more than 2 storeys in building height, and it has a building area not more than 600 m.

Restaurant Area: 339.74 sq.m. (3657sq.f.)
70 Seats
C-2
Zoning
Building Use : A2 (MAIN)
No of Exits : 5 Exit Doors
2- EXITS TRAVEL DISTANCE IS LESS THAN 45m, REQUIRED BY 3.4.2.5(C), BCBC 2018
A TO EXIST II
B TO EXIT II,III
C TO EXIST V
D TO EXIT VI
E TO EXIT IV

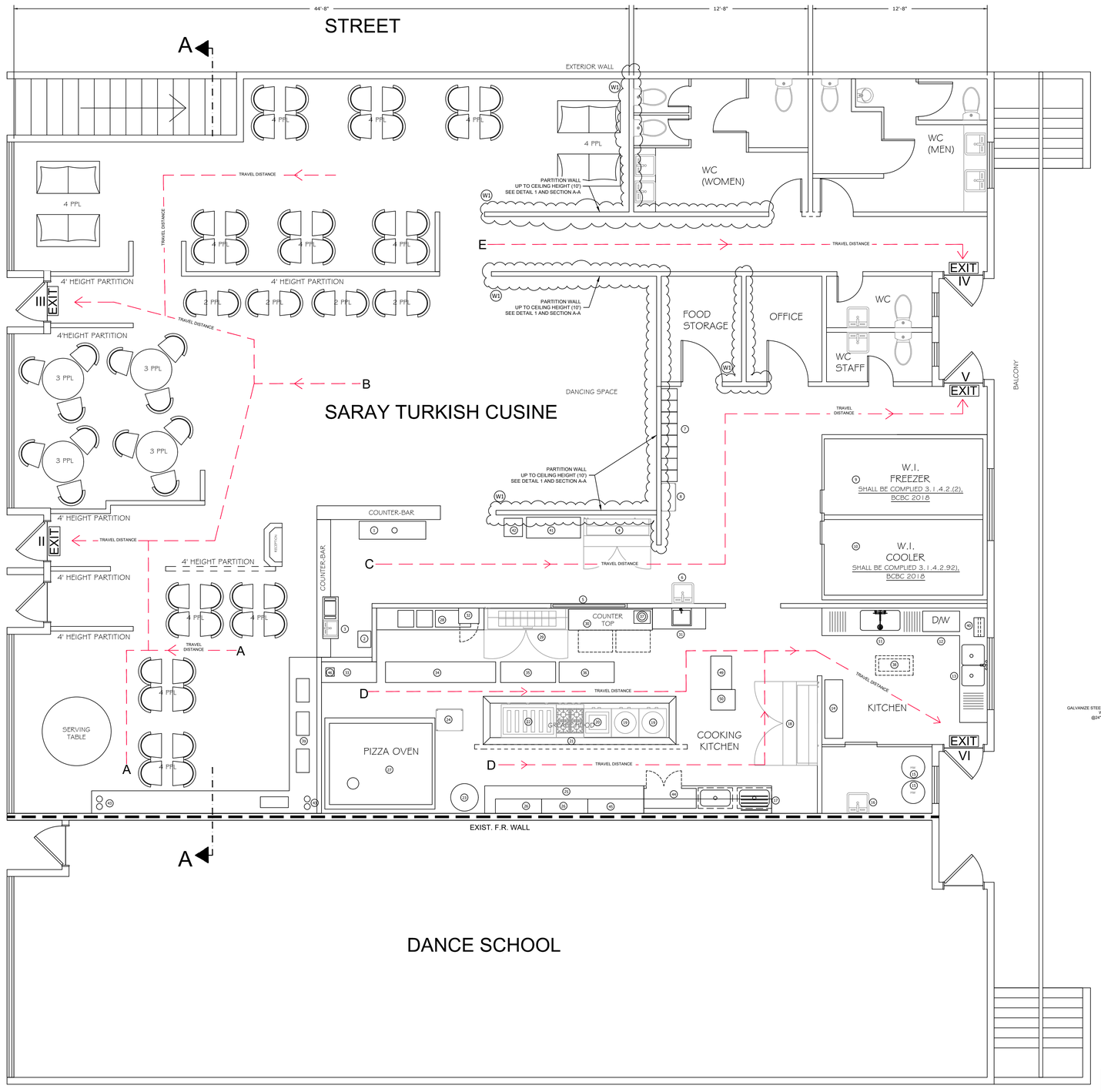
3- WATER CLOSET FOR ASSEMBLY OCCUPANCY SHALL BE COMPLIED TABLE 3.7.2.2.-A

NUMBER OF SEATS : 70 SEATS
NUMBER OF STAFF : 10 PEOPLE
2

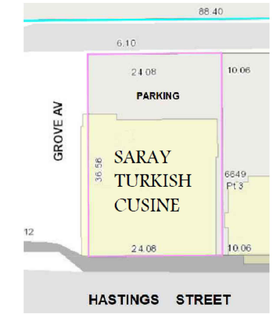
CLASSIFICATION: ASSEMBLY OCCUPANCY, GROUP A DIVISION 2

MINIMUM MALE WC : 2
MINIMUM FEMALE WC : 4

CONTRACTOR & SUB TRADES SHALL MEASURE & VERIFY EXISTING CONDITIONS BY THEMSELVES



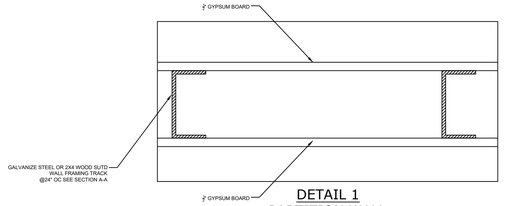
MAIN FLOOR PLAN
SCALE: 1/4"=1'-0"



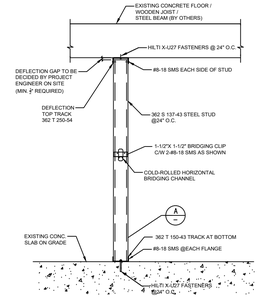
SITE PLAN

NOTES FOR STUDS:-

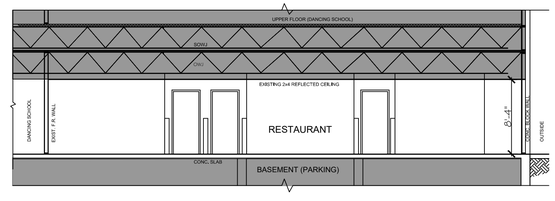
1. THIS STRUCTURAL DRAWING IS FOR INTERIOR NON-LOAD BEARING PARTITION WALL INSIDE THE BUILDING. FIRE RESISTANCE, SOUND TRANSMISSION & DURABILITY RATINGS BY OTHERS.
2. STEEL SHEET COMPONENTS SHALL COMPLY WITH ASTM C645 REQUIREMENTS FOR METAL, UNLESS OTHERWISE SPECIFIED.
3. ALL STEEL SHALL HAVE METALLIC COATING THAT CONFORMS TO ASTM A653M OR ASTM A792M WITH MINIMUM METALLIC COATING WEIGHTS OF Z120 AND AZM150 RESPECTIVELY. ALTERNATIVE COATINGS SHALL BE PERMITTED TO BE USED IF PROVEN TO HAVE EQUIVALENT CORROSION PROTECTION.
4. STEEL SHALL COMPLY WITH THE REQUIREMENTS OF CSA S136 AND SHALL HAVE MINIMUM OF 228 MPA (33 KSI) YIELD STRENGTH TO CONFORM ASTM A653M. USE MINIMUM 18 ga (0.043").
5. SHEET METAL SCREWS (SMS) SHALL HAVE A MINIMUM COATING THICKNESS OF 0.008 MM OF ZINC OR CADMIUM. OTHER COATING PROVIDING THE SAME OR BETTER CORROSION PROTECTION MAY BE USED.
6. THE MINIMUM STUD SIZE SHALL BE AS FOLLOWS: INTERIOR WALL STUDS (MAX. 12' HIGH) : 362S137-43 @ 24" O.C.(3 5/8" x 0.043" THICK STUD).
7. STUDS SHALL HAVE BRIDGING CHANNEL AT 4'-0" O.C. MAXIMUM.
8. USE MINIMUM 2 NOS. OF 8-18 SHEET METAL SCREWS FOR STUD CONNECTION.
9. PROVIDE DOUBLE STUD AT SIDE FOR ALL OPENINGS UP TO 4'-0" WIDTH.



DETAIL 1
PARTITION WALL



TYP. SECTION A-A 10' HEIGHT (W1)



PARTIAL ELEVATION A-A
SCALE:1':1/8"

DRAWING LIST

ME–1 MAIN FLOOR ARCHITECT **PLAN**
ME–2 **PLUMBING**
ME–3 **MECHANICAL VENTILATION**
ME–4 **FIRE SUPPRESSION AND EQUIPMENT SCHEDULE**
ME–5 **NOTES AND SPECIFICATIONS**

RECORD DRAWINGS

(2) USE WRITTEN DIMENSIONS OR GRID LINES, MEASUREMENTS, EXISTING WORKS TO BE CHECKED ON SITE.
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SEAM ENGINEERING Inc.
#110Z, 12830 80 AVE., BC
danyalbahrami@gmail.com

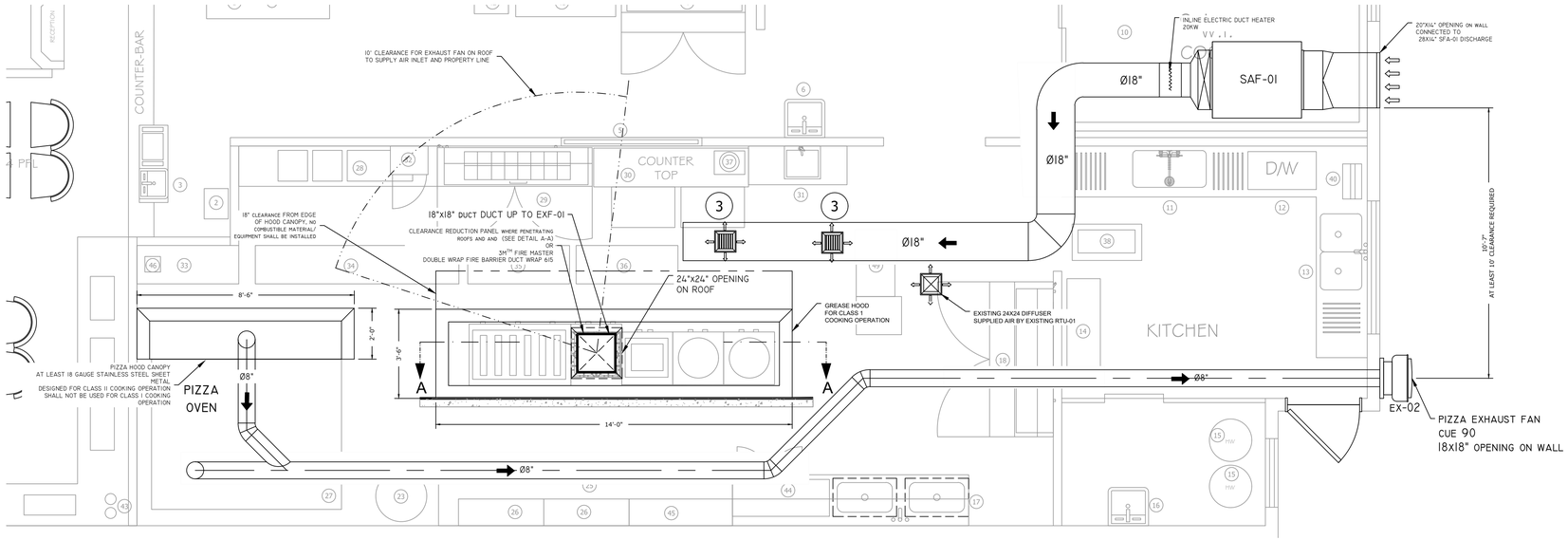
Project: **KITCHEN RESTAURANT**

ADDRESS: 6633 HASTING ST. BURNABY, BC

Client: **SARAY TURKISH CUISINE**

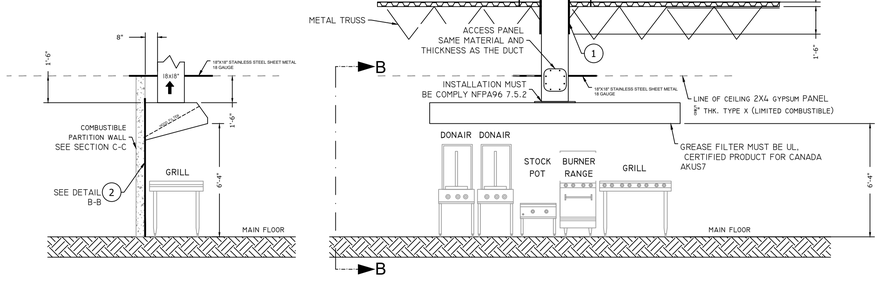
Seal:

Designed By:	AB/HS
Drawn By:	AB
Checked By:	HS
Scale:	As Shown
Issue Date:	20/JAN/2020
Project No.:	19-KR-014
Drawing Title:	ARCHITECT PLAN
Drawing No.:	ME-1



DUCTING PLAN

SCALE: 3/8"=1'-0"



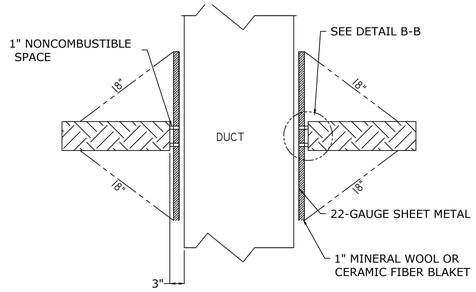
ELEVATION VIEW B-B

SCALE: 1/4"=1'-0"

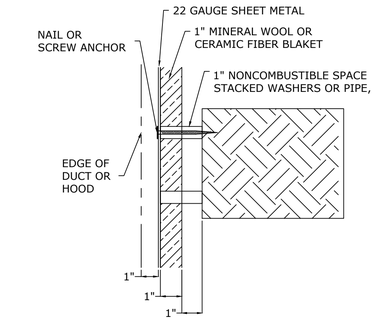
ELEVATION VIEW A-A

SCALE: 1/4"=1'-0"

CANOPY HOOD & COOKING EQUIPMENT			
EQUIPMENT NAME	SIZE	CAPACITY	QTY
GREASE HOOD	14'X3'-6"	3920CFM	1
GRILL	3'X3'-6"	87,000 BTU	1
STOK POT RANGE	2'X2'	45,000 BTU	2
4 BURNER RANGE	34"X30"	164,000 BTU	1
DONAIR MACHINE	36"X34"	30,000 BTU	1

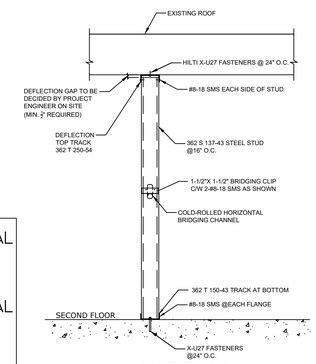


DETAIL A-A



DETAIL B-B

AIR BALANCING		
KITCHEN EXHAUST FAN EXF-01	-3920 CFM	ASHRAE 90.1
PIZZA EXHAUST FAN EXF-01	-500 CFM	
KITCHEN & LOUNGE SUPPLIED BY EXISTING ROOF TOP UNIT	+2000 CFM	EXISTING RTU HAS BEEN ALREADY INSTALLED ON ROOF RTU-01
INLINE SUPPLY FAN (SAF-01)	+2000 CFM	
BALANCE	-420 CFM	10% OF AIR SUPPLIED BY INFILTRATION



TYP. SECTION C-C
8' HEIGHT

KITCHEN HOOD CFM CALCULATION

ASHRAE 90.1, TABLE 6.5.7.1.3
1- GREASE HOOD:
WALL MOUNTED CANOPY
HEAVY DUTY:
14' LENGTH X 3'-6" WIDE= 14X280=3920CFM
2- PIZZA OVEN, CLASS II COOKING OPERATION EYEBROW HOOD, 500CFM

SUPPLY AIR REQUIRED: 4420x 90% =4000CFM
10% OF AIR IS SUPPLIED FROM INFILTRATION
MAKE UP AIR FAN SHOULD HAVE AIR FLOW OF 4000CFM

① CLEARANCE REDUCTION PANEL-VERTICAL (I8" EXTENDED BEYOND THE EDGE OF THE ROOF)
② CLEARANCE REDUCTION PANEL-VERTICAL (I8" EXTENDED BEYOND THE EDGE OF THE BACK WALL)
③ 24"x24" MODULAR CORE DIFFUSER

NFPA 96 (EDITION 2014) GENERAL NOTES COMPLIANCE:

1- HOOD MUST COMPLY ALL REQUIREMENT OF CHAPTER 5

- 5.1.1, HOOD SHALL CONSTRUCTED OF AND BE SUPPORTED BY STEEL NOT LESS THAN 18 GAUGE THICKNESS STAINLESS STEEL OR 20 GAUGE THICKNESS STEEL.
- 5.1.2, All seams, joints, and penetrations of the hood enclo-sure that direct and capture grease-laden vapors and exhaust gases shall have a liquid tight continuous external weld to the hood's lower outermost perimeter.

2- GREASE REMOVAL FILTER MUST BE UL LISTED (COMPLIED CHAPTER 6.2.3)
3- ACCESS PANEL MATERIAL AND LOCATION MUST COMPLIED 7.3
4-EXHASUT DUCT SHALL BE TERMINATED 18" ABOVE THE ROOF 7.8.2
5-EXHAUST DUCT PENETRATION ON ROOF SHALL COMPLY CHAPTER 7.
5-EXHAUST FAN SHALL BE LOCATED MINIMUM 10' AWAY TO ANY AIR INTAKES 7.8.2.
5- APPROVED UPBLAST EXHAUST FAN SHALL BE INSTALLED TO COMPLY 8.1.1.

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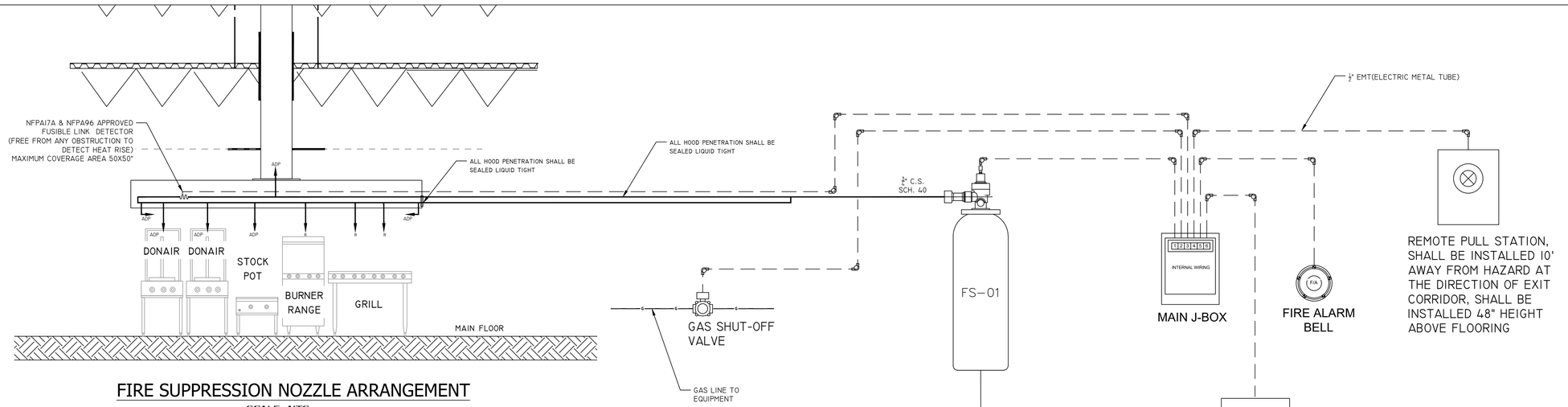
Client: **SARAY TURKISH CUISINE**

Seal:

Designed By:	AB/HS
Drawn By:	AB
Checked By:	HS
Scale:	As Shown
Issue Date:	20/JAN/2020
Project No.:	19-KR-014
Drawing Title:	MECHANICAL VENTILATION
Drawing No.:	ME-3



FIRE SUPPRESSION NOZZLE ARRANGEMENT

SCALE: NTS

FIRE SUPPRESSION TANK SCHEDULE				
TAG	MANUFACTURE	MODEL	CAPACITY	MAX NUMBER OF FLOW
FS-01	KIDDE	WHDR-600	6GAL	18

KIDDE NOZZLE SUMMARY & CHEMICAL TANK SIZING			
	NOZ. TYPE	NUMBER	FLOW NUMBER
18"X18"" DUCT	ADP	1	1
GREASE HOOD	ADP	2	2
STOCK POT BURNER 1	ADP	1	1
4 GAS BURNER	R	1	2
GRILL	R	2	4
DONAIR	ADP	1	1
DONAIR	ADP	1	1
TOTAL		12	

ELECTRICAL INTERLOCK SAF-01/RTU-01 & EXF-01

- ONCE EXHAUST FAN RUN, THE MAKE UP AIR INCLUDING SAF-01 AND EXISTING ROOF TOP UNIT (RTU-01) SHALL BE START RUNNING WITH INTERLOCKING SWITCHES.
- IN CASE OF AUTOMATIC FIRE DETECTION OR MANUAL PULL STATION

I.1. THIS SYSTEM CONTROL SHALL ACTIVATE THE FIRE ALARM SYSTEM.
I.2. ALL SOURCES OF FUEL TO ALL APPLIANCES WILL SHUT OFF UPON FIRE SUPPRESSION ACTIVATION, INCLUDING SHUT OFF OF GAS TO ALL APPLIANCES UNDER THE HOOD.
I.3. SHUT OFF OF ELECTRIC POWER TO ELECTRICAL OUTLETS UNDER HOOD.
I.4. THE MAKE-UP AIR UNIT WILL SHUT OFF AND THE HOOD EXHAUST FAN MUST BE ALLOWED TO CONTINUE TO RUN.

FIRE SUPPRESSION SYSTEM NOTES:

1. PORTABLE FIRE EXTINGUISHER SHALL BE PROVIDED WITHIN A 30-FOOT TRAVEL DISTANCE OF COMMERCIAL-TYPE COOKING EQUIPMENT.
2. CHEMICAL FIRE SUPPRESSION SYSTEM SHALL COMPLY WITH UL300 AND NFPA 17A-2017 STANDARDS.
3. THIS SYSTEM SHALL BE CONNECTED AND ANNUNCIATED AS A SEPARATE ZONE AT THE FIRE ALARM PANEL AND ANNUNCIATOR.
4. ACCORDING TO NFPA 17A-5.6.1.6.1 FUSIBLE LINK SHALL BE LOCATED AT OR WITHIN 12" INTO THE EXHAUST DUCT OPENING
5. IN NON-FIRE CONDITION, START-UP SEQUENCE WILL BE AS FOLLOWS- I) MAKE-UP AIR FAN, II) EXHAUST FAN, III) DIRECT-FIRED MAKE-UP AIR HEATER, IV) COOKING EQUIPMENT. THE SHUT-DOWN SEQUENCE IS IN REVERSE ORDER.
6. MAKE-UP AIR AND EXHAUST SHALL BE INTERLOCKED TO FIRE SUPPRESSION SYSTEM.
7. AIR OUTLET MUST BE SELECTED BASED ON ACCEPTABLE NOISE LEVEL (≤35 DBA) OF THE OCCUPIED AREA.
8. IN THE OCCUPIED ZONE, AIR VELOCITY ≤ 50FPM.
9. ALL MECHANICAL EQUIPMENTS SHALL MEET SEISMIC REQUIREMENT AS PER BCBC 2018
10. COMPLY ULC/ORD-C1254.18 LATEST STANDARD FOR SERVICING OF COOKING AREA EXTINGUISHING SYSTEM.
11. U.L. 1046 BAFFLE FILTER-EQUIPPED EXHAUST SYSTEMS SHALL NOT BE OPERATED WITH FILTERS REMOVED.
12. INSTRUCTIONS FOR MANUALLY OPERATING THE FIRE-EXTINGUISHING SYSTEM SHALL BE POSTED CONSPICUOUSLY IN THE KITCHEN AND SHALL BE REVIEWED WITH EMPLOYEES BY THE MANAGEMENT.
13. LISTED EXHAUST HOODS SHALL BE OPERATED ACCORDANCE WITH THE TERMS OF THEIR LISTINGS AND THE MANUFACTURE'S INSTRUCTIONS.
14. COOKING EQUIPMENT SHALL NOT BE OPERATED WHILE ITS FIRE-EXTINGUISHING SYSTEM OR EXHAUST SYSTEM IS NONOPERATIONAL OR OTHERWISE IMPAIRED.
15. WET CHEMICAL EXTINGUISHING SYSTEM SERVICED SEMI-ANNUALLY BY AN AUTHORIZED LICENSED SERVICE COMPANY.
16. THE HIGHEST POINT OF THE SYSTEM SHALL NOT EXCEED 12 FEET ABOVE THE CYLINDER OUTLET
17. MAXIMUM DIMENSIONS PER DETECTOR SHALL NOT EXCEED 54 IN X 54 IN

EQUIPMENT SCHEDULE

KITCHEN - HOOD

TAG	MANUFACTURE	TYPE	QTY	SERVICE LOCATION	LENGTH	WIDTH	MAXIMUM COOKING TEMP.	TOTAL EXHAUST CFM	HOOD CONSTRUCTION	EXHAUST DAMPER	REMARK
KITCHEN HOOD	CAPTIVEAIRE	FILTERED WALL MOUNTED	1	KITCHEN	14'	3'-6"	450 Deg	3920	304 SS-MIN 20 MSG STAINLESS STEEL (WHERE EXPOSED)	18"X18"	OR EQUAL
PIZZA OVEN HOOD	CAPTIVEAIRE	NON FILTERED EYEBROW	1	PIZZA OVEN	8'-6"	2'	450 Deg	500	304 SS-MIN 20 MSG STAINLESS STEEL (WHERE EXPOSED)	8"X8"	OR EQUAL

EXHAUST FAN

TAG	MANUFACTURE	TYPE	QTY	SERVICE LOCATION	MODEL	AIR FLOW (CFM)	RPM	STATIC PRESSURE (IN.)	FAN POWER (HP)	DAMPER SIZE (IN)	REMARK
EXF-01	GREENHECK	CENTRIFUGAL UP-BLAST, NFPA 96 RATED	1	KITCHEN GREASE HOOD	CUBE-180	4000	1185	0.50	1	18"X18"	OR EQUAL
EXF-02	GREENHECK	USED FOR CLASS II COOKING OPERATION	1	PIZZA HOOD	CUE-90	500	1550	0.50	½	10X10	OR EQUAL

EQUIPMENT SCHEDULE-ROOFTOP MAKE-UP UNIT

TAG NO.	QTY	MANUFACTURER	TYPE	MODEL	AIR FLOW (CFM)	STATIC PRESSURE (IN.)	SUPPLY AIR FAN(HP)
SAF-01	1	GREENHECK	INLINE FAN	BCF-112	2000	0.5	1

INDOOR ON DEMAND HOT WATER TANK OR EQUAL

MODEL	QTY	MANUFACTURER	FLOW RATE(GM)	GAS CONSU.	WEIGHT (KG)	GAS SUPPLY	INLET/OUTLET (NPT) (INCH)	DIMENSION
CU199i	1	Rinnai/Sensei	0.26–9.8	199,000	29	3/4"	3/4"	18.5X26.4X11.5

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Client: **SARAY TURKISH CUISINE**

Seal:

Designed By:	AB/HS
Drawn By:	AB
Checked By:	HS
Scale:	As Shown
Issue Date:	20/JAN/2020
Project No.:	19-KR-014
Drawing Title:	FIRE SUPPRESSION SYSTEM AND EQUIPMENT SCHEDULE
Drawing No.:	ME-4

MECHANICAL SPECIFICATIONS

1. GENERAL

1.1. THE GENERAL CONDITIONS AND INSTRUCTING TO BIDDERS AS SET FORTH IN THE GENERAL CONTRACT SPECIFICATIONS SHALL APPLY TO AND GOVERN THIS DIVISION.

1.2. PROVIDE A COMPLETE AND FULLY OPERATIONAL MECHANICAL SYSTEM WITH FACILITIES AND SERVICES TO MEET THE OWNER'S REQUIREMENTS DESCRIBED HEREIN AND IN COMPLETE ACCORD WITH ALL APPLICABLE CODES AND ORDINANCE INCLUDING BUT NOT LIMITED TO BCBC2018.

1.3. INCLUDE ALL LABOR, MATERIALS, TOOLS AND EQUIPMENTS REQUIRED TO INSTALL, TEST AND PLACE INTO OPERATION A COMPLETE MECHANICAL SYSTEM.

1.4. THESE DRAWINGS DO NOT SHOW ALL THE STRUCTURAL DETAILS AND ANY INFORMATION INVOLVING ACCURATE MEASUREMENTS OF THE BUILDING. REFER TO THE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS. COORDINATE INSTALLATION TO STRUCTURAL DRAWINGS AND STRUCTURAL CONDITIONS AT NO INCREASE IN CONTRACT PRICE.

1.5. EACH CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS WORK AND FOR ANY DAMAGE CAUSED TO THE OWNER OR OTHER CONTRACTORS BY IMPROPER EXECUTION OF HIS WORK CARRY. ALL NECESSARY INSURANCE COVERAGE.

1.6. GIVE ALL NOTICES, OBTAIN ALL PERMITS, AND PAY ALL DUES SO THAT THE WORK SPECIFIED HEREIN MAY BE CARRIED OUT. FURNISH ALL CERTIFICATES REQUESTED BY THE ENGINEER.

1.7. ALL WORK SHALL BE INSPECTED IN STRICT ACCORDANCE WITH ALL THE LAWS, RULES AND REGULATIONS OF THE LOCAL AND PROVINCIAL CODES AND ALL OTHER AUTHORITIES HAVING JURISDICTION.

1.8. CHECK AND CONFIRM CONNECTIONS, INVERT ELEVATIONS AND ALL SERVICES INCLUDING WATER, GAS AND SANITARY SEWER WITH EXISTING UTILITIES PRIOR TO COMMENCING ANY WORK ON THE SITE.

1.9. PROVIDE ALL SLEEVES AND INFORMATION ON ALL OPENINGS REQUIRED IN THE STRUCTURE TO ENABLE INSTALLATION OF ALL MECHANICAL SYSTEMS.

1.10. PROVIDE FOR ALL DRILLING FOR EXPANSION BOLTS, HANGER, RODS, BRACKETS, SUPPORTS, ETC. TO APPROVAL OF THE ARCHITECT. DO NO DAMAGE TO CRITICALLY LOADED STRUCTURAL ELEMENTS.

1.11. DO ALL NECESSARY EXCAVATION. BACKFILL WITH SAND OR OTHER APPROVED MATERIAL TO A MINIMUM OF 12" OVER PIPE OR AS NECESSARY TO PROTECT THE MECHANICAL WORK.

1.12. TEST ALL EQUIPMENT AND MATERIAL WHERE REQUIRED BY SPECIFICATION OR AUTHORITY HAVING JURISDICTION TO DEMONSTRATE ITS PROPER OPERATION.

1.13. KEEP WRITTEN LOGS AND DATA AND RECORD ON SITE ALL PRESSURE AND PERFORMANCE TESTS. INCLUDE COPIES IN MAINTENANCE MANUALS.

1.14. OBTAIN CERTIFICATES OF APPROVAL, ACCEPTANCE AND COMPLIANCE WITH RULES AND REGULATIONS FROM AUTHORITIES HAVING JURISDICTION. THE WORK WILL NOT BE CONSIDERED COMPLETE UNTIL THESE CERTIFICATES HAVE BEEN DELIVERED TO THE OWNER.

1.15. PERFORM THE FOLLOWING TESTS. CARRY OUT THE HYDRAULIC TEST FOR A PERIOD OF 8 HOURS AND MAINTAIN WATER PRESSURE WITH NON-APPRECIABLE PRESSURE DROP. MAKE ALL TESTS PRIOR TO COVERING PIPING OR DUCTS IN ANY WAY.

1.15.1. TEST DOMESTIC WATER PIPING AT 150 PSI WATER PRESSURE MEASURED AT THE LOW POINT OF THE SYSTEM.

1.15.2. TEST DRAINAGE SYSTEMS BY FILLING THEM WITH WATER, PRODUCING A MINIMUM PRESSURE OF 5 FEET AND MAXIMUM PRESSURE OF 20 FEET OF WATER COLUMN.

1.15.3. TEST GAS PIPING AS REQUIRED BY AUTHORITIES HAVING JURISDICTION.

1.16. AFTER THE MECHANICAL INSTALLATIONS ARE COMPLETED AND PRESSURE IS TESTED, CONDUCT PERFORMANCE TESTS TO DEMONSTRATE THAT EQUIPMENTS AND SYSTEMS ACTUALLY MEET THE SPECIFIED REQUIREMENTS AND CARRY OUT FINAL ADJUSTMENTS TO SUIT EXACT BUILDING CONDITIONS.

1.17. THE PERMANENT SYSTEM SHALL NOT BE USED FOR TEMPORARY HEATING PURPOSES WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT AND ENGINEER.

1.18. AS A CONDITION PRECEDENTS TO FINAL PAYMENT AFTER COMPLETION OF THIS WORK, PROVIDE THE OWNER WITH A WRITTEN GUARANTEE, WARRANTING ALL APPARATUS FURNISHED UNDER THE CONTRACT TO REMAIN IN PERFECT, AND SERVICEABLE CONDITION FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THIS WORK BY THE ARCHITECT AND ENGINEER.

1.19. WHERE EQUIPMENT HAS AN EXTENDED MANUFACTURER'S WARRANTEE, THESE DOCUMENTS SHALL BE REGISTERED IN THE OWNER'S NAME AND TURNED OVER AT THE TIME OF THE BUILDING ACCEPTANCE.

1.20. KEEP, IN THE JOB OFFICE, AN EXTRA SET OF WHITE PRINTS. CHANGES SHALL BE RECORDED DAILY. AT COMPLETION OF THE PROJECT, TURN OVER TO THE ENGINEER, TOW SETS OF NEAT "AS BUILT" RECORD DRAWINGS AND SPECIFICATIONS.

1.21. PRIOR TO FABRICATION OF ANY MATERIALS OR EQUIPMENT, SUBMIT THROUGH THE GENERAL CONTRACTOR SHOP DRAWINGS, AND DATA SHEETS COVERING ALL ITEMS EQUIPMENT FURNISHED AND INTENDED FOR INSTALLATION UNDER THIS CONTRACT. MATERIAL SHALL NOT BE ORDERED UNTIL REVIEWED SHOP DRAWINGS ARE RECEIVED BY THE CONTRACTOR FORM THE ENGINEER.

1.22. PROVIDE THREE COMPLETE BOUND MAINTENANCE AND OPERATION BROCHURES FOR ALL MAINTENANCE AND OPERATION FOR ALL EQUIPMENT. PROVIDE ON-SITE INSTRUCTIONS TO OPERATION STAFF OR OWNER REGARDING FUNCTION, GENERAL MAINTENANCE AND OPERATION OF ALL EQUIPMENT.

1.23. UTILITY SEPARATION:

1.23.1 HORIZONTAL SEPARATION SHALL CONFORM TO THE STANDARD DRAWINGS BUT A MINIMUM OF 3 METERS HORIZONTAL CLEAR SEPARATION IS TO BE MAINTAINED BETWEEN A WATER MAIN AND EITHER A SANITARY SEWER OR A STORM SEWER. IN SPECIAL CIRCUMSTANCES, LESSER SEPARATION FOR GRAVITY SEWERS MAY BE PERMITTED BY THE CITY ENGINEER PROVIDED THAT:

1.23.1.1. THE SEWER MAIN AND WATER MAIN ARE INSTALLED IN SEPARATE TRENCHES AND THE WATER MAIN INVERT IS AT LEAST 0.5M ABOVE THE CROWN OF THE SANITARY SEWER OR STORM SEWER; OR

1.23.1.2. THE SEWER MAIN AND WATER MAIN ARE INSTALLED IN THE SAME TRENCH WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH AT LEAST 0.5M ABOVE THE CROWN OF THE SANITARY SEWER OR THE STORM SEWER.

1.23.2 VERTICAL SEPARATION: WHERE A SANITARY SEWER OR STORM SEWER CROSS A WATER MAIN, THE SEWER SHALL BE BELOW THE WATER MAIN WITH A MINIMUM CLEARANCE OF 0.5M AND THE JOINTS OF THE WATER MAIN, OVER A LENGTH EXTENDING 3 METER EITHER SIDE OF THE SEWER MAIN, ARE WRAPPED WITH AN APPROVED HEAT SHRINK COMPOUND.

2. MATERIALS

2.1. PROVIDE MATERIALS IN COMPLIANCE WITH ALL CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. MATERIAL SHALL ALSO BE OF QUALITY AND FROM MANUFACTURES AS APPROVED BY THE ENGINEER.

2.2. PROVIDE SLEEVES, OPENINGS AND ESCUTCHEONS AS REQUIRED FOR ALL PIPING AND DUCTING. SLEEVES SHALL BE 18 GA. GALVANIZED IRON FOR FLOORS AND WALLS.

2.3. FOR PENETRATING FIRE RATED SUPPRESSION, PROVIDE A SEAL CONSISTING OF PACKING ON NON-COMBUSTIBLE INSULATING METAL CAPS OF 16 GA. METAL TO THE APPROVAL OF THE ENGINEER AND AUTHORITIES HAVING JURISDICTION.

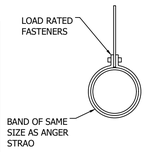
2.4. PROVIDE HANGERS AND SUPPORTS TO SECURE PIPES IN PLACE, PREVENT VIBRATION, MAINTAIN GRADE BY ADJUSTMENT PROVIDE FOR EXPANSION AND CONTRACTION AND APPEAR NEAT.

2.5. HANGER SIZE AND SPACING FOR EITHER COPPER OR STEEL PIPE, SHALL BE AS FOLLOWS:

NOMINAL PIPE SIZE (IN)	MAXIMUM DISTANCE BETWEEN SUPPORTS (FT.)	ROD DIAMETER (IN.)
1/2	6	3/8
3/4	8	3/8
1 - 2 ½	10	1/2
3 - 4	12	1/2

HANGERS STRAPS OR RODS

MAX. DUCT # (IN)	QTY/SIZE (IN)	MAX. LOAD (LBS)	MAX SPACING (IN)
26	ONE/22 GA STRAP	260	144
36	ONE/18 GA STRAP	420	144
50	ONE/16 GA STRAP	700	144
60	TWO/RODS	1320	144
84	TWO/RODS	2500	144



2.6. PROVIDE FOR ALL STRUCTURAL WORKS AND EQUIPMENTS REQUIRED TO CONTROL EXPANSION AND CONTRACTION OF PIPING. INCLUDE ANGLES OR CHANNELS AS REQUIRED TO RIGIDLY ANCHOR PIPING.

2.7. PROVIDE ACCESS DOORS FOR MAINTENANCE OR ADJUSTMENT OF ALL PARTS OF THE MECHANICAL SYSTEMS INCLUDING CLEANOUTS, ETC.

2.8. WHERE EQUIPMENT IS CONCEALED BY A CONTINUOUS STRUCTURAL OR ARCHITECTURAL SURFACE, SUPPLY ACCESS DOORS OF DESIGN TO SUIT THE SURFACE IN WHICH THEY ARE TO BE INSTALLED. WHEN LOCATED IN WALLS OR FLOORS FORMING A FIRE SEPARATION, PROVIDE WITH ULC LABEL.

2.9. PROVIDE ALL FLASHING AND COUNTER FLASHING WHERE MECHANICAL PIPES, DUCTS OR PARTS PASS THROUGH ROOFS, FLOORS WHICH MUST BE WATER PROOF, WALLS REQUIRED TO BE WEATHER-TIGHT.

3. PLUMBING

3.1. ALL PLUMBING WORK SHOULD BE DONE ACCORDING TO BC PLUMBING CODE 2018, LOCAL REGULATIONS AND TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION AND LANDLORD'S REQUIREMENTS.

3.2. ALL BUILDING SERVICES SHALL COMMENCE OR TERMINATE AT THE CONNECTION POINTS INDICATED.

3.3. STORM AND SANITARY INVERTS AT CONNECTION POINTS SHALL BE CONFIRMED BY EXCAVATION BEFORE COMMENCEMENT OF UNDERGROUND INSTALLATION WORKS SO THAT CONNECTIONS TO THE ON-SITE AND OFF-SITE SERVICES WILL BE ACHIEVED BY GRAVITY.

3.4. INSULATE ALL HOT AND COLD WATER PIPES WITH 1" RIGID FIBRE GLASS INSULATION C/W VAPOR BARRIER, PRE MOLDED TYPE AND JOINT SEAL.

3.5. STERILIZE DOMESTIC WATER SYSTEM- BEFORE BEING PLACED IN SERVICE ALL WATER LINES SHALL BE CHLORINATED TO THE SATISFACTION OF THE ENGINEER IN ACCORDANCE WITH AIWA SPEC C 60-53T.

3.6. ALL WATER PIPES TO BE PEX, CPVC OR EQUIVALENT APPROVED IN JURISDICTION WITH PERMISSION OF AUTHORITIES HAVING JURISDICTION.

3.7. PROVIDE ACCESSIBLE SHUT-OFF VALVES AT ALL PLUMBING FIXTURES.

3.8. INSTALL SHOCK ABSORBERS ON ALL HOT, COLD, AND TEMPERED WATER BRANCH LINES TO PLUMBING FIXTURES AND EQUIPMENT.

3.9. USE ONLY APPROVED PVC PIPING.

3.10. ALL SANITARY SEWERS AND VENT PIPES TO BE CAST IRON, IPEX SYSTEM 15 PIPES OR XFR WITH MECHANICAL JOINTS OR EQUIVALENT APPROVED IN JURISDICTION WITH PERMISSION OF AUTHORITIES HAVING JURISDICTION.

3.11. CLEANOUTS SHALL BE INSTALLED IN LOCATIONS INDICATED ON THE DRAWINGS IN ADDITION TO LOCATIONS REQUIRED BY THE PLUMBING CODE. CLEAN-OUTS SHALL BE ACCESSIBLE FOR SERVICING.

3.12. SANITARY FLOOR DRAINS SHALL BE SUPPLIED WITH DEEP SEAL 'P' TRAPS FITTED WITH A TRAP PRIMER. PRIMERS SHALL BE ACCESSIBLE FOR SERVICING.

3.13. WHERE PIPES ARE PASSING THROUGH FLOORS, CEILINGS, WALLS OR PARTITIONS, COVER THEM WITH CHROME PLATED CAST BRASS ESCUTCHEONS .

3.14. TRAPS: PROVED ON ALL SANITARY BARNCH WASTE CONNECTIONS FROM FIXTURE OR EQUIPMENT NOT PROVIDED WITH TRAPS.

3.15. SUPPORT HORIZONTAL DRAINAGE PIPING AT LEAST EVERY 5'-0" OR AT EVERY HUB, COPPER TUBING EVERY 7'-0" AND STEEL PIPE EVERY 10'-0" WITH CLEVIS HANGER AND INSULATION PROTECTION SHIELDS. PIPING SHALL NOT BE SUPPORTED FROM BRIDGING OR OTHER PIPING.

3.16. EXPOSED HORIZONTAL WATER PIPING SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL HEALTH DEPARTMENT CODE.

3.17. THE ENTIRE LENGTH OF ROOF DRAIN PIPES SHALL BE INSULATED.

3.18. PIPING SYSTEMS, SHALL NOT BE STRAINED OR DISTORTED BY EXPANSION AND CONTRACTION OR SETTLING.

3.19. PIPING SHALL BE INSULATED ACCORDING TO TO BCICA #1501

3.19.1. C.W.S. IN HEATED AREAS 1/2" MINERAL FIBRE WITH VAPOR BARRIER

3.19.2. C.W.S. IN UNHEATED AREAS 1 1/2" PIPE INSULATION. HEAT TRACED.

3.19.3. RWLS: IN HEATED AREAS 1/2" MINERAL FIBRE WITH VAPOR BARRIER.

3.20. SUPPLY AND INSTALL ROOF DRAINS WITH AT LEAST 38" OFFSET FROM THE VERTICAL RAIN WATER LEADERS TO ALLOW FOR EXPANSION. SLOPE AT 2% MINIMUM.

3.21. PLUMBING FIXTURES AND FITTINGS SHALL BE SELECTED WITH APPROVAL OF THE OWNER AND SHALL BE INCLUDED IN THE CONTRACT.

3.22. THE CONTRACTOR SHALL ENSURE ANY MECHANICAL SYSTEM COMPONENT ADJACENCY AND/OR PENETRATION INTO FIRE-RATED ASSEMBLIES (WALLS, FLOOR, CEILING, ETC.) MEET THE CODE AND STANDARDS REQUIREMENTS. WHERE IN DOUBT, THE ARCHITECT AND VOLTAS ENGINEERING SHALL BE CONSULTED.

4. EXHAUST AND VENTILATION

4.1. CONSTRUCT DUCTWORK TO STANDARDS AS RECOMMENCED IN THE LATEST ISSUE OF ASHRAE GUIDE. DUCT CONSTRUCTION STANDARDS ISSUED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA)

4.2. DUCTWORK AND EQUIPMENT LOCATION MAY BE SUBJECT OF CHANGE AND SHALL BE DESIGNED AND APPROVED DURING TENANT IMPROVEMENT.

4.3. PRIOR TO FABRICATION OF DUCTWORK, CHECK ALL CEILING SPACES, HEIGHTS AND CONFLICTIONS WITH OTHER TRADES.

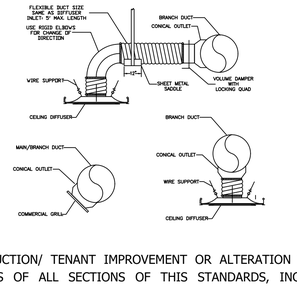
4.4. CONSTRUCT DUCTS IN ACCORDANCE WITH THE FOLLOWING:

4.4.1. DUCTWORK MINIMUM METAL THICKNESS FOR REGULAR DUCTS INCLUDING FITTINGS, ACCESS DOORS AND ACCESSORIES SHALL BE AS FOLLOWS:

ROUND DUCTWORK	
DUCT DIAMETER (IN.)	GAUGE
UP TO 12	26
13 TO 30	
RECTANGULAR DUCTWORK	
DIMENSION OF LONGEST SIDE	GAUGE
UP TO 12	26
13 TO 30	24
30 TO 54	22
54 TO 80	20

FLAT OVAL DUCTS SPECIFICATION

MINOR AXIS (IN)	MAJOR AXIS (IN)	EQUIVALENT ROUND SUCT (IN)	SPIRAL GAGE	FITTING GAGE
3	6	4	24	20
3	10	6	24	20
6	11	8	24	20
6	14	10	24	20
8	14	11	24	20
8	16	12	24	20
8	18	13	24	20
8	20	14	24	20
10	22	16	24	20



4.5. ASHRAE 90.1-2010

4.5.1. NEW BUILDING CONSTRUCTION/ TENANT IMPROVEMENT OR ALTERATION TO BUILDING MUST COMPLY WITH MINIMUM REQUIREMENTS OF ALL SECTIONS OF THIS STANDARDS, INCLUDING EFFICIENCY OF THE HVAC EQUIPMENTS.

5. SEISMIC REQUIREMENTS

5.1. SEISMIC/ STRUCTURAL ENGINEER SHALL BE RETAINED UNDER THE CONTRACTOR'S SCOPE OF WORK TO ENSURE SEISMIC INSTALLATIONS ARE APPROVED.

5.2. REFERENCE STANDARDS:

5.2.1. NATIONAL BUILDING CODE, SECTION 4. 1 .8,

5.2.2. LATEST EDITION OF PROVINCIAL BUILDING CODE. NFPA13-2013.

5.2.3. SMACNA GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS.

5.3. THE INSTALLER MUST PROVIDE "LETTERS OF ASSURANCE" FROM A STRUCTURAL ENGINEER FOR SEISMIC OF THE UNITS TO THE CURB AND THE CURB TO THE BUILDING AND THAT THE CURB HEIGHTS ARE AS REQUIRED BY ARCHITECT.

6. HEATING AND COOLING SYSTEMS ENERGY EFFICIENCY REQUIREMENTS

6.1. THE BUILDING IS IN CLIMATE ZONE 4.

6.2. THE BUILDING ENERGY REQUIREMENTS SHALL BE IN COMPLIANCE WITH THE PRESCRIPTIVE PATH WITH HRV OF BCBC 2018.

6.3. THE VENTILATION SHALL MEET THE REQUIREMENTS OF SECTIONS 9.36 AND 9.32 OF BCBC 2018.

6.4. HVAC EQUIPMENT AND COMPONENTS SHALL COMPLY WITH THE PERFORMANCE REQUIREMENTS AS SET IN TABLE 9.36.3.10 OF BCBC 2018.

6.5. THE SPACE HEATING SHALL BE PROVIDED THROUGH A RADIANT HEAT FLOORING SYSTEM, WHICH BE DESIGNED AND INSTALLED BY OTHERS PER RELATED CODES AND STANDARDS.

6.6. THE BOILER SERVING THE HEATING SYSTEM AND SERVICE HOT WATER SHALL BE OF GAS-FIRED. THE MINIMUM PERFORMANCE RATING OF THE EQUIPMENT SHALL BE PER THE ENERGY EFFICIENCY REQUIREMENT OF BCBC 2018; MORE SPECIFICALLY, TABLE 9.36.3.10 (E.G., MINIMUM SEER = 14.5).

6.7. THE COOLING SYSTEM PERCEIVED BY THE OWNER IS ESTIMATED TO BE OF A 4-TON SPLIT SYSTEM. THE MINIMUM PERFORMANCE RATING OF THE EQUIPMENT SHALL BE PER THE ENERGY EFFICIENCY REQUIREMENT OF BCBC 2018; MORE SPECIFICALLY, TABLE 9.36.3.10 (E.G., MINIMUM AFUE = 90%).

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(5) THIS DRAWING SHOWS INFORMATION RELATING TO THE RELEVANT CONTRACTS / SUB-CONTRACTS.

REVISION:

1	20JAN2020	ISSUE FOR BP
2	03MAR2020	REVISED PER CITY COMMENTS

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danyalbahrami@gmail.com

Project: KITCHEN RESTAURANT
ADDRESS: 6633 HASTING ST. BURNABY, BC

Client: SARAY TURKISH CUISINE

Seal:

Designed By:	AB/HS
Drawn By:	AB
Checked By:	HS
Scale:	As Shown
Issue Date:	20/JAN/2020
Project No.:	19-KR-014
Drawing Title:	GENERAL NOTES
Drawing No.:	ME-5