

TAG

LOCATION

MODEL

TOTAL HEAT OUTPUT (KW)

REMARKS

(OUELLET)

MECH RM & OACO-ELECT RM 3000

 $\Box$ 

208/240/1/60

WALL MOUNTED, SEMI-RECESSED, C/W INT. THERMOSTAT

FRONT VEST.

0ACO-3000

W

208/240/1/60

CEILING MOUNTED, FULL RECESSED, C/W INT. THERMOSTAT

ELECTRIC

HEATER

SCHEDULE

CO DETECTION SYSTEM

PROVIDE A STAND ALONE CO DETECTION SYSTEM. SYSTEM TO INTERLOCK WITH HRV-1, AS NOTED ON THE DRAWINGS.
BY DIV 16.

CONDENSATE DRAIN HRV-1 TO MOP SINK IN SHOP AREA. CONDENSATE DRAIN HRV-2 TO FD-1 FLOOR DRAIN ADJACENT TO HRV SHAFT.

HRV-1 TAG HRV-2 2001 HRV 12LCDPWXSN VOLUME ( CFM ) 1300 CFM 235 CFM 120V/1/60, 11.7 A POLYPROPYLENE CORE, 3 SPEED MOTOR, WASHABLE FILTER.

120V/1/60, 202W POLYPROPYLENE CORE, 2 SPEED MOTOR, WASHABLE FILTER.

HEAT

RECOVERY

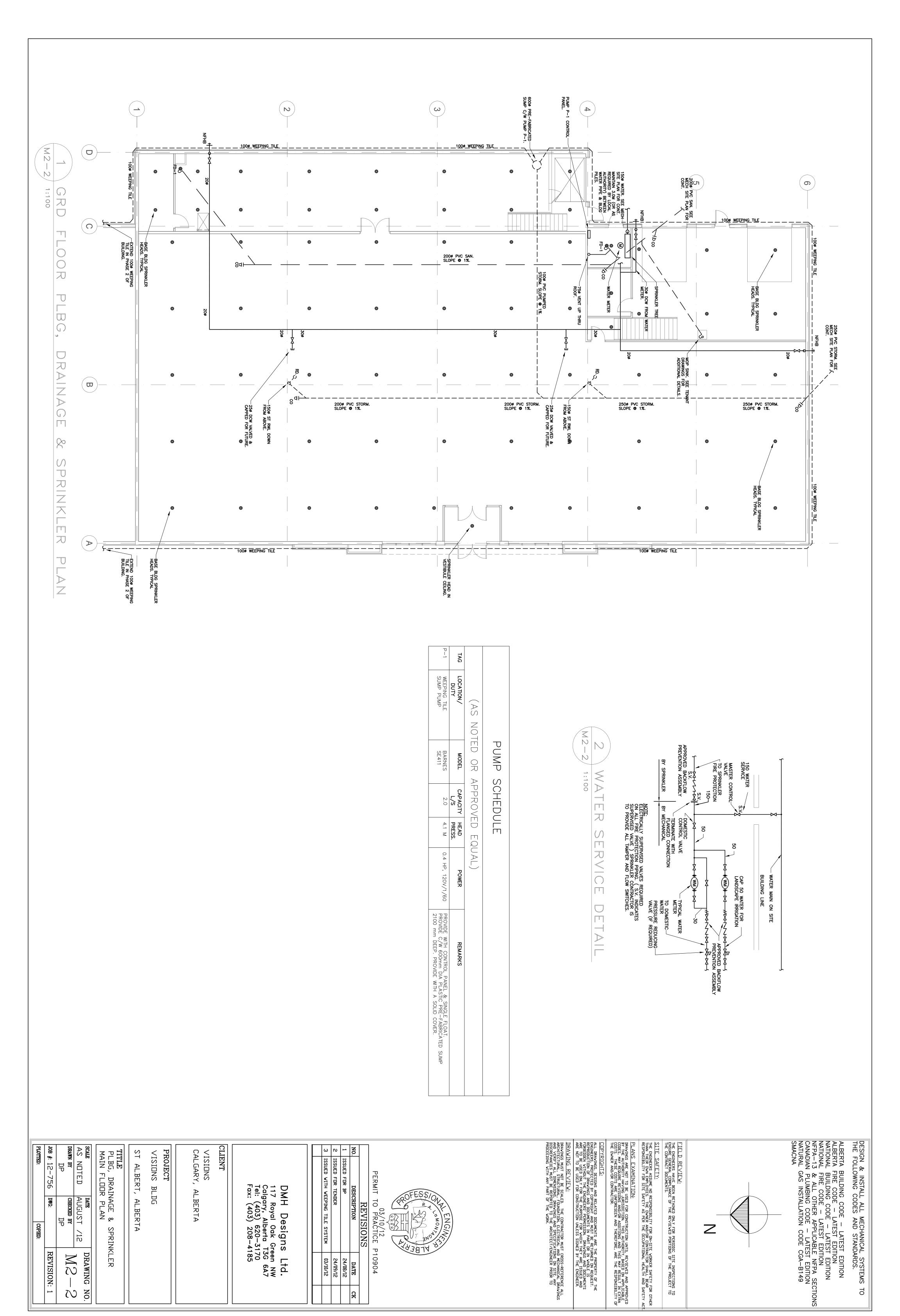
VENTILATORS

(VANEE OR APPROVED EQUAL)

		(OUELLET)			
TAG	LOCATION	MODEL	TOTAL HEAT OUTPUT (KW)	POWER	REMARKS
1.5KW	SERVICE STORAGE	0FM- 1508	1.5	208/240/1/60	ELECTRIC BASEBOARD HTR, C/WINT. THERMOSTAT
2.5KW	CRAWL SPACE	0FM- 2507	2.5	347/1/60	ELECTRIC BASEBOARD HTR, C/W

UH−1 & UH−2 UH−2		TAG MO			HVAC NOTES:  - ROOF TOP UNI:  MODEL LGC120 - ROOF TOP UNI:		AC-3 LEV	AC-2 LEV	AC-1 LEV		TAG MO		
UDAP-126		MODEL			OP UNIT ELE		LENNOX LGH120H4BH	LENNOX LGH120H4BH	LENNOX LGH120H4BH		MODEL		
120,000	(втин)	TOTAL HEAT INPUT			ECTRICAL DA AT 575V/3,		240 MBH	240 MBH	240 MBH	INPUT	HEATING	(LENNOX OR	ROOF
99,600	(втин)	TOTAL HEAT OUTPUT	(REZNOR	UNIT	NOTES: ROOF TOP UNIT ELECTRICAL DATA IS AS FOLLOWS: MODEL LGC120 — (AT 575V/3/60) MINIMUM CIRCUIT AM ROOF TOP UNIT WEIGHT IS APPROX. 1460 LBS PER UNIT		192 MBH	192 MBH	192 MBH	ОПТРП	CAPACITY		
100ø	(mmø)	VENT	OR.	HEATER	LBS PER		¥	8H	¥ 			APPR	UN.
115V/1/60	(V/PH/HZ)	MOTOR	APPROVED EQUAL)	R SCHEDULE	T AMPACITY=2 UNIT		120 MBH	120 MBH	120 MBH	(NET)	COOLING	APPROVED EC	TOP UNIT SCHEDULE
FRACT	(HP)	POWER	AL)	JLE	1, MAXIMUN		4000	4000	4000	( CFM )	AIR VOL	EQUAL)	DULE
- - 01		REMARKS			LECTRICAL DATA IS AS FOLLOWS: (AT 575V/3/60) MINIMUM CIRCUIT AMPACITY=21, MAXIMUM OVERCURRENT PR EIGHT IS APPROX. 1460 LBS PER UNIT		575V/3/60	575V/3/60	575V/3/60		POWER		
BE PROVIDED WITH: ELECTRONIC SPARK IGNITION 24V CONTROL TRANSFORMER 24V SPACE THERMOSTAT		3,			PROTECTION=25AMPS	- FACTORY INSTALLED DISCONNECT SWITCH	COOL THERMOSTAT  - BELT DRIVE  - POWER EXHAUST	<ul><li>CONTROL TRANSFORMER</li><li>24 VOLT SPACE HEAT/</li></ul>	EACH UNIT TO BE C/W - 50MM DISPOSABLE FILTER - ROOF CURB		REMARKS		

VISIONS CALGARY, ALBERTA  PROJECT  VISIONS BLDG  ST ALBERT, ALBERTA  TITLE  HVAC MAIN FLOOR PLAN  SCALE DRAWN BY DP DP JOB #: 12-756 DWG: REVISION: 1 PLOTTED: COPIED:	PERMIT TO PRACTICE P10904  REVISIONS  DESCRIPTION  DATE  1 ISSUED FOR BP 24/09/12 2 ISSUED FOR TENDER  21/09/12 2 ITS NO. DATE CK 24/09/12 2 ITS NO. DATE CK	THE LINGINGERS HAVE BEEN RETAINED DINLY FOR PERIODIC SITE INSPECTIONS TO ENSURE GENERAL COMPLIANCE OF THE REVIEWED PORTIONS OF THE PROJECT TO THE CONTRACT DICUMENTS.  SITE SAFETY.  THE ENGINEER ASSUME NO RESPONSIBILITY FOR DIN-SITE VORKER SAFETY FOR OTHER THAN THER DAY EMPLOYEES. THE DIVINE AND CONTRACTOR SHALL BEAR RESPONSIBILITY FOR SITE SAFETY AS PER THE DICUMENTIONAL HEALTH AND SAFETY ACT.  PLANS EXAMINATIONS.  BRAVINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL REVIEWED AND APPRIVED BY THE AUTHORITY HAVING JURISDUCTION. THIS JURISDUCTION WITH SAME PLAPFILICALE COMES MAY REQUIRE REVIEWED AND RELIGIOUS AND THEREFORE, ARE THE RESPONSIBILITY OF THE DAYLINGS AND THE SAME WATERS.  CORPYRIGHTS:  ALD DRAVINGS DESIGNS AND RELATED DICUMENTS ARE THE PRODERTY OF THE ENGINEERS. PROTECTOR BY CORPORATIONAL HEALTH AND SAFETICAL EXCENSION.  DRAVINGS NUTL THOU THE ENGINEERS PERMISSION. DRAVINGS AND THE ENGINEER. THE PROPER FOR MISSISSION. DRAVINGS AND THE ENGINEER PROPERTY OF THE DAYLINGS AND THE ENGINEER SAME DICUMENTS. THE PROPER FOR THE THE PROPERTY OF THE ENGINEER. BUST OR SCALED. THE CONSTRUCTION UNLESS SHOWED BY THE ENGINEER.  DRAVINGS NUTL OUT BE SCALED. THE CONTRACTOR MUST DROSS-REFERENCE ALL ARCHITECTURAL THAN PRESSURE AND SPECIFICAL AND MECHANICAL DRAVINGS AND DICUMENTS. THE PROPERTY OF THE VORK.  DRAVINGS MUST NOT BE SCALED. THE CONTRACTOR MUST DROSS-REFERENCE ALL ARCHITECTURAL THEY ARE THE ENGINEER. AND SPECIFICAL AND MECHANICAL DRAVINGS AND SPECIFICAL MAD MECHANICAL DRAVINGS A	DESIGN & INSTALL ALL MECHANICAL SYSTEMS TO THE FOLLOWING CODES AND STANDARDS.  ALBERTA BUILDING CODE — LATEST EDITION ALBERTA FIRE CODE — LATEST EDITION NATIONAL FIRE CODE — LATEST EDITION NFPA—13 & ALL OTHER APPLICABLE NFPA SECTIONS CANADIAN PLUMBING CODE — LATEST EDITION NATURAL GAS INSTALLATION CODE CGA—B149 SMACNA



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MECHANICAL **SPECIFICATIONS** 

3. ANY DISCREPANCIES BETWEEN DRAWINGS OR SPECIFICATIONS, LEAVING IN DOUBT THE INTENT OF WORK, SHALL BE BROUGHT TO THE ATTENTION OF THE CONSULTANT, IN WRITING, PRIOR TO CLOSING OF TENDERS. THE DRAWINGS AND SPECIFICATIONS ARE NOT A DETAILED SET OF INSTALLATION INSTRUCTIONS, BUT A DIDE TO ESTABLISHING QUALITY OF EQUIPMENT, MATERIAL, WORKMANSHIP, AND PERFORMANCE. REFER DIDERON STRUCTURAL, AND ELECTRICAL DRAWINGS, AS WELL AS, MECHANICAL DRAWINGS OF DETAILS AFFECTING THE MECHANICAL WORK. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY ON ONE IS AS BINDING AS THAT WHICH IS SHOWN ON BOTH SET OF THE PROVIDE" SHALL MEAN TO SUPPLY AND INSTALL. ALL WORK AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF BERTA BUILDING CODE, REVISIONS THERETO, THE LOCAL BUILDING REGULATIONS, THE FIRE ROTECTION ACT, AND AUTHORITIES HAVING JURISDICTION. INS AND DRAWINGS TO PROVIDE FOR COMPLETE AND FUES TO MEET THE OWNER'S REQUIREMENTS AS E APPLICABLE CODES AND ORDINANCES. THE WORK TO LABOUR, MATERIALS, TOOLS AND EQUIPMENT, AS WELL OWN ON THE PLANS, AS REQUIRED FOR THE 10N, THE COMPLETE SYSTEMS, AS SHOWN AND INTIONED THAT SUCH MATERIAL OR WORK IS NOT PART

9. ALL NECESSARY PIPE SLEEVES, HANGER INSERTS, EQUIPMENT SUPPORTS, ETC., SHALL BE INSTALLED AT THE PROPER TIME AND PROVIDED WHERE NECESSARY TO CARRY OUT THE MECHANICAL WORK. . MAKE ANY NECESSARY CHANGES OR ADDITIONS TO THE PLACEMENT OF EQUIPMENT AND ROUTING OF IPING AND DUCTWORK TO ACCOMMODATE STRUCTURAL, ELECTRICAL AND ARCHITECTURAL CONDITIONS. D. FLASH, COUNTER FLASH, AND PROVIDE SLEEVES FOR ALL PIPING AND DUCTWORK THROUGH ROOF, AND JPPLY AND SET SLEEVES FOR THE PROJECT. ALL CUTTING, PATCHING, ROOF REPAIR, CAULKING, ETC., EQUIRED FOR THE COMPLETION OF THE INSTALLATION,SHALL BE THE RESPONSIBILITY OF THE DITTALL OF T ONLY FIRST CLASS WORKMANSHIP WILL BE ACCEPTED, NOT ONLY AS REGARDS TO THE NEATNESS OF ... PIPEWORK AND DUCTWORK MUST BE LINED UP PARALLEL TO OR AT RIGHT ANGLES TO BUILDING S... EQUIPMENT MUST BE ACCURATELY SET, PLUMBED AND WELDED, AND HANGER RODS MUST BE IN VERTICAL ADJUSTMENT. THE ENTIRE WORK SHALL PRESENT A NEAT AND CLEAN APPEARANCE ON LETION. ALL MATERIAL USED SHALL BE NEW AND THE BEST OF THE RESPECTIVE KIND. ALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION DIRECTIONS. EQUIPMENT

13. FOLLOW THE RECOMMENDED INSTALLATION DETAILS AND PROCEDURES FOR EQUIPMENT AS FOUND IN SUPPLIERS TECHNICAL DATA, SUPPLEMENTED BY DETAILS GIVEN HEREIN AND ON PLANS, WHICH IN TURN SHALL BE SUBJECT TO THE APPROVAL OF THE CONSULTANT. 14. PROVIDE ADDITIONAL MATERIAL FOR MODIFICATIONS THAT MAY BE REQUIRED TO CORRECT MINOR JOB CONFLICTS, FOR NORMALLY ACCEPTED PROCEDURES IN THE RESPECTIVE TRADE. 12. PROVIDE ISOLATION VALVES AND MAKE CONNECTIONS TO EQUIPMENT, FIXTURES, ETC., PROVIDED AS PART OF THIS CONTRACT AND SUPPLIED BY OTHERS AND LEAVE IT IN FULL OPERATING CONDITION. 11. SUBMIT FOR REVIEW, A MINIMUM OF EIGHT COPIES OF SHOP DRAWINGS OF ALL EQUIPMENT PRIOR TO ORDERING OF EQUIPMENT. EQUIPMENT THAT HAS NOT BEEN REVIEWED BY THE CONSULTANT WILL NOT BE ACCEPTED. UPON COMPLETION OF THE PROJECT SUPPLY TO THE CONSULTANT ONE SET OF MARKED—UP RECORD INGS, AS WELL AS, THREE SETS OF APPROVED SHOP DRAWINGS AND EQUIPMENT MAINTENANCE CUCTIONS, IN THREE—RING BINDERS NEATLY BOUND AND LABELED. OPERATING AND MAINTENANCE ALS SHALL BE PREPARED SO THAT THEY ARE EASY TO USE, CONTAIN TABLE OF CONTENTS, SERED PAGES, TABBED DIVIDERS AND TYPEWRITTEN INFORMATION. MANUALS SHALL INCLUDE THE DWING INFORMATION: INDEX, LIST OF CONTRACTORS AND EQUIPMENT SUPPLIERS, SYSTEMS RIPTION, MAINTENANCE TASKS, LUBRICATION INFORMATION, PARTS AND TROUBLE SHOOTING DATA, NG AND INSPECTION CERTIFICATES, BALANCE REPORTS, SHOP DRAWINGS, AND MANUFACTURER'S LLATION AND MAINTENANCE DATA SHEETS.

17. THE DETAILED LAYOUT OF WORK WITH RESPECT TO OTHER WORK IS THE RESPONSIBILITY OF THE CONTRACTOR. NO PRICE CHANGE WILL BE CONSIDERED WHICH IS DUE TO INTERFERENCE WITH THE WORK OF OTHER TRADES, UNLESS SUCH INTERFERENCES HAVE BEEN BROUGHT TO THE ATTENTION OF THE CONSULTANT IN WRITING, FOR CLARIFICATION. 16. INSTALL ALL PIPING, DUCTWORK, ETC., GENERALLY IN LOCATIONS AND ROUTES SHOWN ON THE DRAWINGS, CLOSE TO THE BUILDING STRUCTURE TO MINIMIZE FURRING (WHERE NECESSARY) AND INTERFERENCE WITH OTHER SERVICES OR FREE SPACE. PIPING, DUCTWORK, ETC. THAT IS NOT PROPERLY INSTALLED WILL BE REMOVED AND REPLACED, TO THE SATISFACTION OF THE CONSULTANT.

19. PROVIDE ALL NECESSARY INFORMATION TO THE RESPECTIVE SUBCONTRACTORS SO THAT OPENINGS CHASES MAY BE PROVIDED FOR THE INSTALLATION OF WORK. ALL DRILLING FOR EXPANSION SHIELDS, HANGER RODS, BRACKETS, OR SLEEVES SHALL BE BY THE CONTRACTOR. GIVE ALL NECESSARY NOTICES, OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM AUTHORITIES ING JURISDICTION, AND PAY ALL FEES, IN ORDER THAT THE WORK HEREIN SPECIFIED AND SHOWN ON DRAWINGS, MAY BE CARRIED OUT. FURNISH ANY CERTIFICATES NECESSARY AS EVIDENCE THAT THE REPORT OF ALL CONFORMS WITH THE LAWS AND REGULATIONS OF ALL AUTHORITIES BEFORE FINAL STIFICATES ARE ISSUED. ALL CHANGES AND ALTERATIONS REQUIRED BY AN AUTHORIZED INSPECTOR ANY AUTHORITY, SHALL BE CARRIED OUT WITHOUT CHARGE OR EXPENSE TO THE OWNER. UPON APLETION OF THE WORK, PROVIDE A CERTIFICATE OF FINAL APPROVAL FROM THE INSPECTION HORITY.

21. BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE OF THE WORK OF THIS PROJECT UNTIL THE BUILDING HAS BEEN COMPLETED AND ACCEPTED BY THE OWNER, AND FOR THE STORING OF MATERIALS ON SITE AND THE CLEANUP ALL REFUSE CAUSED BY THIS WORK. THE USE OF AN EQUIVALENT MANUFACTURER SHALL IN NO WAY RELIEVE THE CONTRACTOR FROM THE ONSIBILITY OF FURNISHING ANY WORK THAT MAY BE REQUIRED BY REASON OF DIFFERENT SPACE, IT, ELECTRICAL REQUIREMENTS, ETC., FROM THAT OF THE SPECIFIED MANUFACTURER. IF, IN THE ON OF THE CONSULTANT, SUCH WORK IS NECESSARY AND IS NOT CARRIED OUT IN A MANNER THAT ENSURE SATISFACTORY OPERATION AND PERFORMANCE OF THE PRODUCT, THEN THE CONTRACTOR IS REQUIRED TO USE THE SPECIFIED MANUFACTURER.

24. NO ALTERATION BY MEANS OF CUTTING, DRILLING OR OTHERWISE TO COLUMNS, FLOORS, ROOF OR WALLS OF THE STRUCTURE WILL BE PERMITTED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE STRUCTURAL CONSULTANT. PROPER PROTECTION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. 23. THOROUGHLY CLEAN WALLS, CEILINGS, FLOORS, PIPING, DUCTS, CONDUITS AND EQUIPMENT OF DIRT, CUTTINGS AND OTHER FOREIGN SUBSTANCES. DISCONNECT, CLEAN AND RECONNECT WHEREVER NECESSARY, FOR THE PURPOSE OF LOCATING AND REMOVING OBSTRUCTIONS. REPAIR WORK DAMAGED IN THE COURSE OF REMOVING OBSTRUCTIONS. 25. REMOVE ALL TOOLS, SURPLUS AND WASTE MATERIAL FROM THE BUILDING UPON COMPLETION. CLEAN GREASE, DIRT AND EXCESS MATERIAL FROM WALLS, FLOORS, CEILINGS AND FIXTURES FOR WHICH THE CONTRACTOR WAS RESPONSIBLE, AND LEAVE THE PREMISES SUITABLE FOR IMMEDIATE USE. PROTECT ALL PARTS OF THE BUILDING FROM DAMAGE DUE TO THE CARRYING OUT OF THE WORK AND GOOD, OR PAY FOR, ANY DAMAGES SUSTAINED.

26. BE RESPONSIBLE FOR TRANSPORTATION, STORAGE, AND PROTECTION OF ALL MATERIAL AND EQUIPMENT SUPPLIED UNDER THIS CONTRACT, UP TO THE TIME THE PROJECT IS COMPLETE AND ACCEPTED BY THE OWNER. 27. PROVIDE ALL REQUIRED SCAFFOLDING, DELIVERY OF THE MECHANICAL WORK. EQUIPMENT SPECIFIED BY NAME, MODEL AND SIZE FOR TYPE OF MATERIAL TO BE USED, SERVES TO DARD OF QUALITY AND SHALL BE USED AS A STANDARD FOR THE CONTRACTOR'S PROPOSAL. WHERE ANUFACTURER WISHES TO TENDER HIS EQUIPMENT HE MUST MAKE APPLICATION, IN WRITING, THER WITH COMPLETE DETAILED TECHNICAL SUBMISSION TO HAVE HIS EQUIPMENT APPROVED. D SUBMISSIONS AND INFORMATION OF A GENERAL NATURE WILL NOT BE ACCEPTED. REQUESTS FOR ROYAL SHALL BE MADE TO THE CONSULTANT DURING THE TENDERING PERIOD AND THREE WORKING PRIOR TO CLOSING OF SUBCONTRACTORS TENDERS. S OPERATING AT 1800 RPM, UNLESS OTHERWISE SPECIFIED D SPECIFICATIONS FOR VOLTAGE, PHASE, AND CYCLES. CONFIRMATION SHALL BE MADE BY REFERENCE TO ORS. THE ERECTION

32. PROVIDE ALL SERVICES WITHIN THE BOUNDS OF THE SITE PROPERTY LINES. ARRANGE FOR AND PAY OF THE INSTALLATION OF ALL SERVICES AND SERVICE TIE—INS OUTSIDE THE PROPERTY LINES AND IN ALL EASEMENTS AND RIGHTS—OF—WAY.

PRIOR TO COMMENCING WORK, CHECK LOCATIONS AND INVERTS OF SERVICE LINES ENTERING OR LEAVILDING, AND THROUGH THE BUILDING AND SITE TO ENSURE THEIR PROPER FUNCTION AND THAT NOLICT OCCURS.

30. BE RESPONSIBLE FOR ALL EXCAVATION AND BACKFILLING FOR ALL UNDERGROUND MECHANICAL SUPPLY TEST REPORT TO OWNER.

33. DO NOT USE THE PERMANENT HEATING SYSTEM FOR TEMPERMISSION FROM THE CONSULTANT. ALL AIR HANDLING EQUIF THIS CONTRACT SHALL BE PROVIDED WITH NEW FILTERS PRIOR 34. REFERENCE TO 'CONSULTANT' SHALL BE TAKEN TO MEAN WELL AS, THE AUTHORIZED REPRESENTATIVE OF THE OWNER. RARY HEATING PURPOSES WITHOUT WRITTEN ENT ASSOCIATED WITH THE WORK OF TAKEOVER OF THE PROJECT. MECHANICAL DESIGN CONSULTANT, AS

THE EXCAVATING TO FACILITATE THE

2. BE RESPONSIBLE FOR ADDITIONAL BEDDING MATERIAL, BACKFILLING EXCAVATION HAS BEEN PERFORMED. 4. FROST REMOVAL DONE BY BURNING SHALL BE DONE IN ACCCREGULATIONS. THE WORK SHALL NOT UNDERMINE BUILDING FOUNDATIONS. DANCE WITH LOCAL BYLAWS AND

5. TRENCHES SHALL NOT BE OPEN FOR MORE THAN 30 M IN A LAYING. BACKFILL TRENCHES WITHOUT DELAY, SO THAT USE OF THE SITE IS AVAILABLE AS QUICKLY AS POSSIBLE. COMMENCE CONSTRUCTION OF MANHOLES AND CATCH BASINS BRACE AND SHORE EXCAVATIONS IN ACCORDANCE WITH GOVER

9. REMOVE AND DISPOSE OF WATER IN EXCAVATIONS WITHOUT D. PERSONS OR PROPERTY, IN ACCORDANCE WITH CODES AND BYLAWS AMAGE TO CONSTRUCTION WORK,

. AFTER THE WORK IS COMPLETE, BUT PRIOR TO FINAL PAYMENT, FURNISH A WRITTEN GUARANTEE STATING HAT ALL EQUIPMENT SUPPLIED AND ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM EFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF CCEPTANCE OF THE PROJECT, AND FURTHER THAT ANY DEFECTIVE MATERIALS OR WORKMANSHIP THAT ECOME EVIDENT DURING THE GUARANTEE PERIOD WILL BE CORRECTED AT NO ADDITIONAL COST TO THE WATER

12. 10. 11. CHECK AND ASCERTAIN SATISFACTORY INVERTING THE DRAINAGE SYSTEMS. PROVIDE DISINFECTION OF WATER MAINS, WHERE REQU BE RESPONSIBLE FOR ANY DAMAGE WHICH MAY OCCUR DUE TO STORM WATER ENTERING EXCAVATIONS.

15. CATCH BASIN AND MANHOLE BARRELS, FRAMES AND COVERS STANDARDS. 14. EXCAVATE TO CAUSE THE LEAST INTERRUPTION TO TRAFFIC. TRAFFIC MUST CROSS OPEN TRENCHES. 13. PROVIDE BARRICADES, GUARDS, CONSTRUCTION SIGNS, TORCH RULES AND REGULATIONS OF THE LOCAL AUTHORITIES, TO PROTECT PROPERTY DAMAGE. SHALL CONFORM TO LOCAL MUNICIPALITY PROVIDE SUITABLE BRIDGES WHERE

17. 18. TO Pf 20. USE LOOSE DRY EARTH, SAND OR GRAVEL NOT EXCEEDING 25 MM IN SIZE FOR BEDDING, THOROUGHLY COMPACT AND FORM TO GIVE THE SPECIFIED BEDDING CONDITIONS. 19. REMOVE BOULDERS AND STONES ENCOUNTERED IN THE EXCA OF 160 MM BELOW AND ON EACH SIDE OF THE PIPE. 16. BURIED PIPING SHALL BE BEDDED ON A MINIMUM 150 MM THICKNESS, APPROVED FINE GRANULAR MATERIAL, CAREFULLY SLOPED TO FIT 60 PERCENT OF THE PIPE DIAMETER. UNSTABLE SOIL SHALL BE REMOVED AND SHALL BE REPLACED WITH THOROUGHLY COMPACTED GRAVEL ROVIDE ACCEPTABLE BEDDING. USE FINE GRAVEL OR SAND WHERE THE EXISTING ATION TO PROVIDE A MINIMUM CLEARANCE NOT SUITABLE FOR BEDDING.

21. USE SUITABLE EXCAVATED MATERIAL, OR PROVIDE GRANULAR EXCAVATED MATERIAL IS UNSUITABLE. WASTE UNSUITABLE MATERIAI 23. BACKFILL SOILS TO WITHIN 1 M OF FINISHED SUBGRADES SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF THE SOILS MAXIMUM DENSITY, WITH THE MOISTURE CONTENT WITHIN 3 PERCENT OF THE SOILS OPTIMUM MOISTURE. THE UPPER 1 M SHALL HAVE A MAXIMUM DENSITY OF 90 PERCENT AND AN AVERAGE DENSITY OF NOT LESS THAN 95 PERCENT. 22. PLACE BACKFILLING BY HAND IN 150 MM LAYERS TO 300 MN MATERIAL DIRECTLY ON THE EMBEDDED PIPE. MECHANICAL MEANS THIS POINT. 25. INSTALL SEWERS WITH THE USE OF SURVEYOR'S GRADE SHEETS AND BATTER BOARDS. SHALL NOTE ACTUAL INSTALLATION AND SHALL BE SIGNED BY AN INDEPENDENT SURVEYOR. 24. TRENCHES OR CUTS IN ROADWAYS OR PROPOSED ROADWAYS SUBGRADE. EACH LIFT SHALL BE MECHANICALLY COMPACTED. M ABOVE THE PIPE, MAKING SURE NOT TO MAY BE USED TO BACKFILL ABOVE MATERIAL FOR BACKFILL, WHERE L AS DIRECTED. SHALL BE BACKFILLED IN LIFTS TO GRADE SHEETS

1. DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE L HA BRONZE OR CAST BRASS FITTINGS, JOINED WITH 95-5 LEAD FREE BELOW GRADE SHALL BE PVC (IPEX BLUE BRUTE OR EQUAL) WITH RUBBER GASKET JOINTS. ALL PIPING SHALL MEET THE APPROVAL HAVING JURISDICTION. ALL EXPOSED WATER PIPING CONNECTED TO AREAS TO BE CHROME PLATED. ING AND PIPE FITTINGS ) COPPER WITH WROUGHT COPPER,
OLDER. DOMESTIC WATER PIPING
VC FITTINGS AND HUB AND SPIGOT AND
F LOCAL CODES AND AUTHORITIES
PLUMBING FIXTURES IN FINISHED

PROVIDE REINFORCED CONCRETE OR WOODEN BRIDGES WHERE

SERVICE LINES MUST CROSS.

2. STORM DRAINAGE, SANITARY DRAINAGE, AND VENT PIPING BELGUAL) WITH PVC FITTINGS AND SOLVENT WELDED JOINTS. ALL PIFITESTED AND TESTS CERTIFIED, IN WRITING, BEFORE FLOOR SLABS A SANITARY DRAINAGE AND VENT PIPING ABOVE GRADE SHALL BE DWOOR CAST BRASS FITTINGS AND 50-50 SOLDER JOINTS. IPEX PVC-USED ABOVE GRADE IF APPROVED BY LOCAL AUTHORITIES. ALL EXTO PLUMBING FIXTURES IN FINISHED AREAS SHALL BE CHROME PLANTAGE. 3. NATURAL GAS PIPING SHALL BE STEEL SCHEDULE 40 BLACK. KPA, WITH SCREWED JOINTS, OR WELDED JOINTS, AS REQUIRED BY PIPE COVERING ON ALL BURIED GAS PIPING. FITTINGS SHALL BE MALLEABLE IRON CODE. PROVIDE YELLOW JACKET GRADE SHALL BE PVC — SDR35 (IPEX OR GENERAL BE POURED. STORM DRAINAGE, COPPER WITH WROUGHT COPPER WV (FLAME SPREAD RATING 10) MAY BE DSED DRAINAGE PIPING CONNECTED 1035

IPE AND DUCT HANGERS 1. HANGERS AND HANGER RODS SHALL BE SUPPLIED AND INSTAPERFORATED STRAP, WIRE OR CHAIN HANGERS IS NOT PERMITTED. LLED BY THIS CONTRACTOR.

USE OF

COPPER PIPES, USE HANGERS IN COPPER PLATE FINISH. CAST IRON AND STEEL PIPES, USE CLEVIS TYPE HANGERS.

6. PROVIDE HANGERS AND SUPPORTS FOR ALL DUCTWORK IN ACCORDANCE WITH SMACNA CONSTRUCTION STANDARDS — METAL AND FLEXIBLE, LATEST EDITION. PROVIDE CLEARANCES FOR PROPER INSTALLATION OF

ALL INTERIOR GAS PIPING IS TO BE PROPERLY I PRIMED CALLED FOR AND PAINTED YELLOW USING RUST RESISTANT

5. VALVES ON NATURAL GAS SERVICE: WRENCH OPERATED PLUGEQUAL. VALVES SHALL BE CGA APPROVED AND SUITABLE FOR INTEMPERATURE INSTALLATIONS. 4. FOR SHUTOFF SERVICE ON PIPING AND BRANCH LINES, OTHERWISE SPECIFIED. 3. ALL PLUMBING FIXTURES SHALL BE PROVIDED PERIMETER WHERE FIXTURES ATTACH TO WALLS OR 2. PROVIDE CHROME PLATED RIGID OR FLEXIBLE SUPPLIES REDUCERS, AND ESCUTCHEONS SECURELY ATTACHED TO WALL 1. VALVES SHALL BE INSTALLED AS INDICATED ISOLATE ALL FIXTURES, EQUIPMENT, ETC.. PRESSURE REDUCING VALVES FOR GAS SERVICE: FULL RATED CAPACITY C/W PRESSURE RELIEF. ALL PLUMBING FIXTURES WITH STOPS, FLOOR SURFACE. OVED CLEAR SILICONE SEALANT AROUND TYPE, CLASS 125, NEWMAN-MILLIKEN OR DOOR AND OUTDOOR LOW RED & WHITE BALL VALVES, UNLESS

3. INSULATE THE FIRST 3 M OF EXHAUST SUPPLY DUCTWORK FROM ROOF OR WALL TERMINAL, LOCATED INDOORS, WITH 25 MM FLEXIBLE FOIL FACED FIBREGLASS EXTERIOR DUCT INSULATION. 2. INSULATE THE FIRST 3 M OF STORM AND VENT PIPING FROM THE ROOF TERMINAL, AND ALL HORIZONTAL STORM AND VENT PIPING LOCATED IN CEILING SPACES BELOW ROOF DECK, WITH 25 MM THICK FIBREGLASS HEAVY DENSITY INSULATION WITH ALL SERVICE JACKET. 5. INSULATE VENTILATION EQUIPMENT AND CABINET EXHAUST FAN CASINGS WITH 25 MM THICK RIGID FIBREGLASS INTERIOR DUCT INSULATION. 1. INSULATE ALL DOMESTIC HOT AND COLD WATER LINES AND HYDRONIC HEATING LINES, WITH 25 MM THICK FIBREGLASS HEAVY DENSITY PIPE INSULATION, WITH ALL SERVICE JACKET. INSULATE ALL DUCTWORK LOCATED OUTDOORS OR SUBJECT TO OUTDOOR TEMPERATURES WITH 50 MM HICK RIGID FIBREGLASS INTERIOR DUCT INSULATION.

6. WHERE FIBREGLASS PIPE INSULATION IS USED, INSULATE ALL PIPE FITTINGS, ELBOWS, ETC., WITH PREFORMED FIBROUS GLASS INSULATION FITTINGS OR INSULATING CEMENT, TO THE SAME THICKNESS AS ADJACENT INSULATION. PIPE ELBOWS AND PIPE FITTINGS ON ALL EXPOSED INSULATION SHALL BE COVERED WITH PVC FITTING COVERS OR APPROVED EQUAL. UMBING GENERAL

2. PROVIDE BARRETT TYPE CLEANOUTS OF MATERIALS COMPATIBLE TO PIPING MATERIALS AT BASES OF STACKS. 1. ALL SANITARY SEWERS SHALL HAVE A MINIMUM SLOPE OF 1 PERCENT FOR LINES 100 MM AND LINES 75 MM AND UNDER USE MINIMUM 2 PERCENT SLOPE. 3. PLUMBING INSTALLATION SHALL COMPLY WITH LOCAL BUILDING REGULATIONS. SHALL HAVE PRECEDENCE OVER THE DRAWINGS AND SPECIFICATIONS. SUCH REQUIREMENTS

ALL CLEANOUTS SHALL BE ACCESSIBLE.

6. PROVIDE EPOXY COATED CAST IRON BODIED CLEANOUTS C/W CLAMPING DEVICE ON PIPING BELOW GRADE. ACCESS COVERS TO BE ROUND, BOLTED AND GASKETTED, HEAVY DUTY OR HEAVY DUTY SCORIATED CAST IRON IN UNFINISHED AREAS, EXTRA HEAVY DUTY IN WAREHOUSE AREAS, NICKEL BRONZE SCORIATED IN CONCRETE FLOORS IN FINISHED AREAS, AND POLISHED BRONZE RECESSED FOR TILE, SHEET VINYL AND SEAMLESS FLOORING (ZURN ZXN—1610—NB). 9. PROVIDE CAST IRON ROOF DRAINS, WITH INTEGRAL COLLAR AND GRAVEL GUARD, POLY-DOME, SUMP RECEIVER AND UNDERDECK CLAMP (ZURN Z-100-CR), UNLESS OTHERWISE SPECIFIED. ALL PIPES SHALL BE LOCATED AWAY FROM LOAD BEARING FOOTIN

11. WHERE STEEL PIPE IS USED, EXTREME CARE SHALL BE EXERCISED TO INSULATE BETWEEN STEEL PIPING AND COPPER PIPING OR VESSELS, BY THE USE OF DIELECTRIC UNIONS. 7. FD-1 PROVIDE EPOXY COATED CAST IRON BODY FLOOR DRAINS, C/W REVERSIBLE CLAMPING COLLAR MM ROUND, EXTRA HEAVY DUTY, NICKEL BRONZE STRAINER (ZURN ZN-210-B), UNLESS OTHERWISE NOTED 10. FIT WATER SUPPLY PIPING TO EACH FIXTURE OR GROUP OF FIXTURES WITH AN AIR CHAMBER. PROVIDE AIR CHAMBERS TWO PIPE SIZES LARGER THAN INSTALLED ON AND MINIMUM 600 MM LONG, OR PROVIDE ZURN SHOKTROL OR APPROVED EQUAL WATER HAMMER ARRESTERS SIZED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDATIONS. NON-FREEZE HOSE BIBBS SHALL BE ZURN MODEL ZN-1315-VB, 20 MM, OR APPROVED EQUAL

12. PROVIDE APPROVED POTABLE WATER PROTECTION DEVICES ON PLUMBING LINES WHERE CONTAMINATION OF POTABLE DOMESTIC WATER MAY OCCUR. THESE DEVICES SHALL BE GENERALLY PROVIDED FOR JANITOR'S SINKS, HOSE BIBBS, FLUSH VALVES, FIRE PROTECTION SYSTEMS, IRRIGATION SYSTEMS AND WHERE REQUIRED BY CODE. PROTECTION DEVICES SHALL COMPLY WITH CSA B64.

13. THE PLUMBING CONTRACTOR IS TO HAVE ALL BELOW GRADE PIPING INSPECTED BY MECHANICAL CONSULTANT PRIOR TO BACKFILLING. ADVISE CONSULTANT IN WRITING WITH 24 HOURS NOTICE OF BACKFILLING.

.V.A.C. DUCTWORK, EQUIPMENT & ACCESSOI

1. DUCTWORK SHALL BE CONSTRUCTED AND SEALED IN CONFORMANCE WITH SMACNA — CONSTRUCTION STANDARDS — METAL AND FLEXIBLE", LATEST EDITION, AND ASHRAE STANDA SIZES SHOWN ARE SHEET METAL SIZES, WHERE INTERNAL INSULATION IS SPECIFIED MAKE / FOR INSULATION THICKNESS, MAINTAIN INTERNAL DUCT SIZES SHOWN. PRIOR TO FABRICATI CEILING SPACES, HEIGHTS AND CONFLICTIONS, WITH OTHER TRADES AT THE SITE AND OFF PROVIDE ADDITIONAL OFFSETS AND CHANGES IN DIRECTION REQUIRED, WITHOUT ADDITIONAL

RECTANGULAR DUCTS SHALL HAVE OPPOSED BLADE VOLUME ROUND DUCTS SHALL HAVE BUTTERFLY DAMPERS.

4. HAND BALANCING DAMPERS SHALL BE FABRICATED OF GALVANIZED IRON, THAT OF THE DUCT IN WHICH THE DAMPER IS TO BE INSTALLED. 5. FIRE DAMPER BLADE THICKNESS AND CONSTRUCTION SHALL COMPLY WITH THE CANADIAN BOARD OF NSURANCE UNDERWRITER'S REQUIREMENTS. THESE SHALL BE INSTALLED WHERE DUCTS AND GRILLES PASS THROUGH FIRE RATED ASSEMBLIES. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL PLANS, AND CONFIRM FIRE DAMPER REQUIREMENTS. PROVIDE APPROVED ACCESS PANELS AT EACH FIRE DAMPER.

9. THE HVAC UNIT SUPPLIER AND THE MAKE-UP AIR UNIT SUPPLIER SHALL VISIT THE SITE AND INSPECT THE INSTALLATION OF ALL UNITS, THE SUPPLIER OR HIS REPRESENTATIVE SHALL TEST AND PROVIDE START-UP SERVICES FOR ALL OF THIS EQUIPMENT. THE SUPPLIER SHALL CONFIRM IN WRITING, TO THE CONSULTANT, THAT THE INSTALLATION AND OPERATION OF THIS EQUIPMENT MEETS SPECIFIED CONDITIONS, AND MANUFACTURER'S INSTALLATION AND OPERATION GUIDELINES. 8. THE CONTRACTOR SHALL SUPPLY AND INSTALL FOR EACH ROOFTOP HVAC UNIT AND EACH MAKE—UP AIR UNIT, A MINIMUM OF THREE GUM CUPS FOR SERVICE CONNECTIONS TO THE UNIT. EACH SERVICES TO THE UNIT (GAS, POWER AND CONTROL) SHALL BE RUN THROUGH A SEPARATE GUM CUP. 7. THE CONNECTIONS BETWEEN DUCTS AND AIR HANDLING UNIT FANS SHALL BE MADE WITH 150 MM LONG FLEXIBLE NEOPRENE, TO PREVENT TRANSMISSION OF VIBRATION. THE CONTRACTOR SHALL ENSURE THAT ALL CONNECTIONS ARE LEAKPROOF. 6. DUCTS SHALL NOT, UNDER ANY CIRCUMSTANCES, BE SUPPORTED BY MEANS OF PERFORATED BAND IRON, WIRE OR CHAIN. DUCTS SHALL NOT BE SUPPORTED FROM HANGERS SUPPLIED BY OTHER TRADES.

UTOMATIC CONTROLS 3. INSTALLATION OF CONTROL WORK BY THE ELECTRICAL TRADE SHALL BE DONE UNDER THE SUPERVIS OF THE MECHANICAL TRADE. PROVIDE ALL NECESSARY WIRING DIAGRAMS AND INSTRUCTIONS IN ORDER THAT THE ELECTRICAL WORK BE SATISFACTORILY COMPLETED.

5. THERMOSTATS SHALL BE MOUNTED 1.5 M ABOVE THE FLOOR LEVEL AND ON LOCK SIDE OF DOORS (IF ADJACENT THERETO) IN LINE WITH THE LIGHT SWITCH, UNLESS OTHERWISE SPECIFIED. THERMOSTATS MOUNTED ON OUTSIDE WALLS SHALL BE STOOD OFF FROM THE WALL BY INSULATED BLOCKS OR BRACKETS WHICH ALLOW FREE AIR MOVEMENT BEHIND THE THERMOSTAT. THERMOSTATS IN PUBLIC SPACES SHALL BE PROVIDED WITH CLEAR PLASTIC LOCKING COVERS. 6. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE THAT, ALL CONTROL DEVICES SERVING MECHANICAL EQUIPMENT ARE INSTALLED CORRECTLY AND FUNCTION PROPERLY AND THAT ALL MECHANICAL EQUIPMENT OPERATES AS DESIGNED AND SPECIFIED, IN CONJUNCTION WITH THE CONTROLS. CONTROL WIRING AND ELECTRICAL DEVICES SHALL COMPLY WITH THE REQUIREMENTS OF DIVISION 16.

3. MAKE CHANGES IMMEDIATELY TO CORRECT DEFECTS SHOULD TESTS INDICATE DEFECTIVE WORK. 2. TAKE CHARGE DURING TESTS, ASSUME RESPONSIBILITY FOR DAMAGES IN THE EVENT OF INJURY TO PERSONNEL BUILDING OR EQUIPMENT AND BEAR COSTS OF LIABILITY, REPAIRS AND RESTORATIONS IN THIS CONNECTION. 4. CONDUCT PERFORMANCE TESTS TO DEMONSTRATE EQUIPMENT AND SYSTEMS MEET SPECIFIED REQUIREMENTS AFTER MECHANICAL INSTALLATIONS ARE COMPLETED AND PRESSURE TESTED. CONDUCT TESTS AS SOON AS CONDITIONS PERMIT. MAKE CHANGES, REPAIRS, ADJUSTMENTS AND REPLACEMENTS REQUIRED AS TESTS MAY INDICATE, PRIOR TO OPERATING. 1. TEST EQUIPMENT, PIPING, AND MATERIALS AS REQUIRED BY SPECIFICATIONS OR AUTHORITY HAVING JURISDICTION, TO DEMONSTRATE ITS PROPER AND SAFE OPERATION. PROVIDE EQUIPMENT, MATERIAL, AND LABOUR FOR TESTS AND PAY EXPENSES.

2. DOMESTIC WATER PIPING: TEST TO 1035 KPA WATER PRESSURE MEASURED AT SYSTEM LOW 3. SANITARY DRAINAGE SYSTEMS: TEST BY FILLING WITH WATER TO PRODUCE M. CHECK FOR PROPER GRADE AND OBSTRUCTION BY BALL TEST. . CARRY OUT HYDRAULIC TESTS FOR 8 HOUR PERIOD AND MAINTAIN PRESSURE WITH NOT APPRECIABLE PRESSURE DROP. WHERE LEAKAGE OCCURS, REPAIR AND RETEST. LOW VELOCITY DUCTS: TEST FOR TIGHTNESS SUCH THAT LEAKAGE IS DETECTABLE BY FEEL. STORM DRAINAGE SYSTEMS: TEST BY FILLING WITH WATER TO PRODUCE WATER PRESSURE I. CHECK FOR PROPER GRADE AND OBSTRUCTION BY BALL TEST. TEST AS REQUIRED BY AUTHORITIES HAVING 9 P POINT

CONFORM TO: ENT AND INSTALLATION SHALL BE APPROVED BY AS THE OWNER'S INSURANCE UNDERWRITER.

PAL CODES AND AUTHORITIES ING JUR

4. SUBMIT SHOP DRAWINGS AN HAVING JURISDICTION, AND TO THE AGENCIES HAVING JURISDICTION SHALL NOT COMMENCE UNTIL SHAUTHORITIES, AGENCIES AND THE AND CALCULATIONS FOR APPROVAL, TO THE AUTHORITIES AND AGENCIES THE CONSULTANT. CHANGES REQUIRED BY THE AUTHORITIES AND SHALL BE MADE WITHOUT ADDITIONAL COST TO THE CONTRACT. WORK HOP DRAWINGS AND CALCULATIONS HAVE BEEN APPROVED BY E CONSULTANT.

6. PROVIDE AUTOMATIC SPRINKLER FIRE PROTECTION THROUGHOUT THE COMPLETE FACILITY, WHERE REQUIRED BY CODES BY SPECIFIED AUTHORITIES, AND WHERE INDICATED IN CONTRACT DOCUMENTS. ER ZONES WITH ELECTRIC ALARM ZONES.

COORDINATE THE SPRINKLER SYSTEMS LAYOUT WITH THE WORK OF ALL OTHER TRADES, TO ENSU PROVIDE FIRE PROTECTION SYSTEM VERIFICATION AFTER COMPLETION OF WORK

PLANS EXAMINATION:

PLANS EXAMINATION:

BE USED FOR CONSTRUCTION UNTIL REVIEWED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION. THIS AUTHORITY, BASED ON APPLICABLE CODES, MAY REQUIRE REVISIONS AND/OR ADDITIONS AND THIS MAY RESULT IN EXTRA COSTS. THESE COSTS ARE UNFORESEEN AND THEREFORE, ARE THE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR.

THE ENGINEERS ASSUME NO RESPONSIBILITY FOR ON-SITE WORKER SAFETY FOR OTHER THAN THEIR OWN EMPLOYEES. THE OWNER AND/OR CONTRACTOR SHALL BEAR RESPONSIBILITY FOR SITE SAFETY AS PER THE OCCUPATIONAL HEALTH AND SAFETY AS

ALL DRAWINGS, DESIGNS AND RELATED DOCUMENTS ARE THE PRODERTY OF THE ENGINEERS, PROTECTED BY COPYRIGHT AND MUST BE RETURNED ON REQUEST. REPRODUCTION OF DRAWINGS AND DOCUMENTS IN PART OR IN WHOLE IS FORBIDDEN WITHOUT THE ENGINEERS' PERMISSION. DRAWINGS AND DOCUMENTS ARE TO BE USED ONLY FOR THE PURPOSE FOR WHICH THEY ARE ISSUED AND ARE NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER.

DRAWING REVIEW:

DRAWINGS MUST NOT BE SCALED. THE CONTRACTOR MUST CROSS-REFERENCE ALL ARCHITECTURAL, STRUCTURAL, FOUNDATION, ELECTRICAL AND MECHANICAL DRAWING: AND VERIFY ALL DIMENSIONS, DRAWINGS AND SPECIFICATIONS ON SITE, ANY DISCREPANCIES MUST BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK.

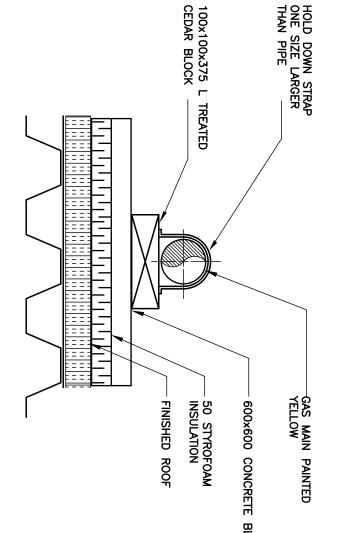
LOCATE SPRINKLER HEADS Y ESTABLISHED. LOCATE 'S, ETC. AND INSTALL TO ( AND PIPING AFTER OTHER EQUIPMENT HAS BEEN INSTALLED OR ITS LOCATION HEADS AND PIPING TO CLEAR OTHER PIPING, DUCTWORK, CONDUIT, CONSERVE HEADROOM AND SPACE. MAINTAIN MAXIMUM POSSIBLE CLEAR

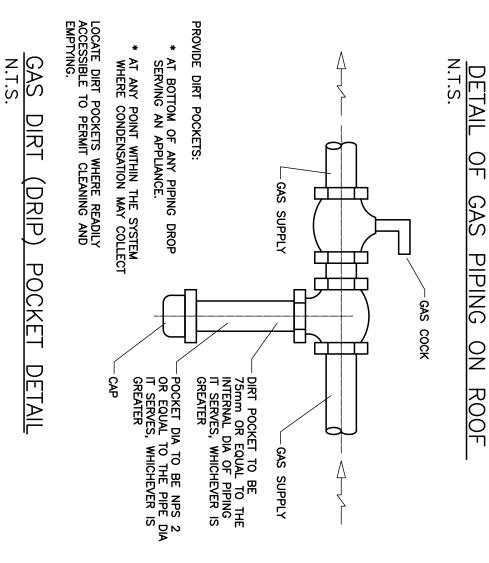
13. SPRINKLER LAYOUT AND APPLICABLE CODES. INSTALL, TEST AND HAVE INE SIZING SHALL BE IN ACCORDANCE WITH N.F.P.A. #13, 231 AND OTHER OVED PRIOR TO FINISHED CEILIN IGS BEING ERECTED.

a) PENDANT TYPE CH IROME PLATED FINISH WITH ESCUTCHEON, FOR SUSPENDED CEILINGS

c) TEMPERATURE RATINGS TO SUIT SPECIFIC AREAS, WITH A MINIMUM SAFETY MARGIN OF 28 DEG. C. IDE SCREW AND YOKE, 2 POLE, ONE N.O. AND ONE N.C. CONTACT.

18. FIRE EXTINGUISHERS (TO DEPARTMENT) MULTI-PURPOSE SHUT-OFF NOZZLE PRESSURE 17. EXCESS PRESSURE PUMPS — PRESSURE SWITCH CONTROLLED AND SUITABLE TO PUMP SYSTEM TO  $345\,$ KPA IN EXCESS OF NORMAL PRESSURE. BE SUPPLIED AND INSTALLED BY THE TENANTS, AS DIRECTED BY THE FIRE ABC 4.5 KG, DRY CHEMICAL WITH CHARGEABLE CYLINDER, HOSE AND GAUGE, AND MOUNTING BRACKETS (WHOLESALE FIRE & RESCUE MODEL 441X) F COMPLETION' AND A 'LETTER OF COMPLIANCE' FOR THE FIRE PROTECTION AND THE AUTHORITIES HAVING JURISDICTION, SEALED BY A PROFESSIONAL PROVINCE OF ALBERTA, AS CERTIFICATION THAT THE SYSTEMS HAVE ARE OPERATING IN ACCORDANCE WITH THE REQUIREMENTS OF THE AND AUTHORITIES HAVING JURISDICTION.





TOR SHALL BE RESPONSIBLE TO BALANCE ALL AIR SYSTEMS TO WITHIN . QUIREMENTS. BALANCING SHALL BE PERFORMED BY A QUALIFIED CONSULTANT PRIOR TO CLOSING OF TENDERS. BALANCING OF CONSULTANT PRIOR TO BELTS, DAMPERS, VALVES, ETC. AT NO EXTRA CONTRACTOR SHALL PREPARE AND SUBMIT TO THE CONSULTANT THREE FOR ALL HEATING AIR HANDLING SYSTEMS IN ACCORDANCE WITH THE FOR ALL HEATING OF HEATING, VENTILATING, AND AIR CONDITIONING

ALBERTA BUILDING CODE — LATEST EDITION
ALBERTA FIRE CODE — LATEST EDITION
NATIONAL BUILDING CODE — LATEST EDITION
NATIONAL FIRE CODE — LATEST EDITION
NFPA—13 & ALL OTHER APPLICABLE NFPA SECTIONS
CANADIAN PLUMBING CODE — LATEST EDITION
NATURAL GAS INSTALLATION CODE CGA—B149
SMACNA

DESIGN & INSTALL ALL MECHANICAL SYSTEMS THE FOLLOWING CODES AND STANDARDS.

7

AND

PAMPHLETS APPLICABLE TO THIS

3. THE SPRINKLER CONTRACTOR SHALL PROVIDE THE DESIGN FOR SPRINKLER PROTECTION SYSTEMS. THE LAYOUT OF THE SPRINKLER SYSTEM, REVIEW ALL CONTRACT DOCUMENTS AND EXISTING SITE CONDITIONS, TO ENSURE THAT PIPING SYSTEMS DO NOT CONFLICT WITH THE WORK OF OTHER TRADES. SPRINKLER SYSTEMS SHALL BE HYDRAULICALLY DESIGNED, WITH SHOP DRAWINGS SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTER IN THE PROVINCE OF ALBERTA, SUBMITTED SHOWING THE COMPLETE SYSTEM LAYOUT.

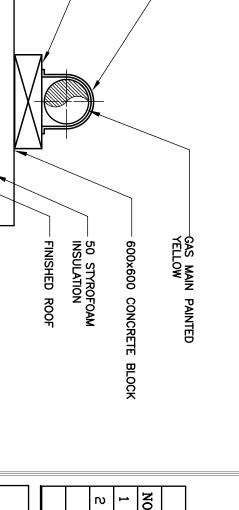
. FIRE PROTECTION SYSTEMS SHALL BE INSTALLED BY A LICENSED AND QUALIFIED FIRE PROTECTION ONTRACTOR REGULARLY ENGAGED IN THE ENGINEERING AND INSTALLATION OF FIRE PROTECTION YSTEMS.

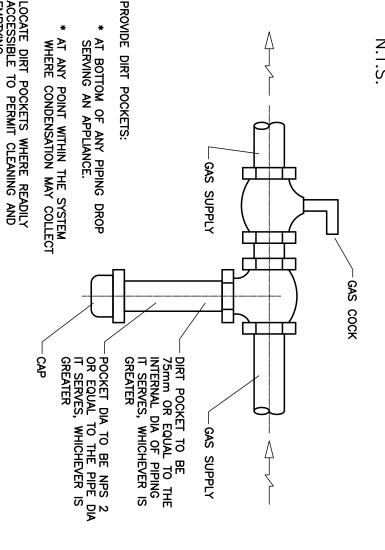
11. RUN SYSTEM DRAINS TO FLOOR DRAINS, RUN AUTHORITIES HAVING JURISDICTION AND THE CONSUDRAINS DISCHARGING TO THE OUTSIDE SHALL BE LURROUNDINGS. N AUXILIARY DRAINS TO A POINT ACCEPTABLE TO THE SULTANT AND EQUIP WITH VALVE, NIPPLE, AND CAP. LOCATED TO PREVENT DAMAGE TO THE BUILDING OR

RINKLER HEADS:

b) STANDARD UPRIGINDICATED ON DRAV AND

FLOW SWITCHES: PNEUMATIC TIME DELAY, TWO N.O. CONTACTS.





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24/09/12 ) PRACTICE

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PLOTTED:	JOB #: 12-756	DP	DRAWN BY	AS NOTED	SCALE
COPIED:	DWG:	DP	CHECKED BY	AUGUST /12	DATE
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