15100 BASIC REQUIREMENTS

1.0 SCOPE OF WORK

- 1.1 The work includes the supply and installation of materials, equipment and services to upgrade the plumbing and HVAC systems as shown on the drawings.
- 1.2 The work consists of but is not necessarily limited to:
- Modify the plumbing system
- Provide a new furnace and air conditioner forthe building.
- Install ducting, grilles and diffusers for the HVAC system.
- Clean all existing ducting. - Modify the sprinkler system throughout the building and certify design and installation.
- 1.3 Upon completion of the work leave all systems in proper operating order and the premises in a clean and tidy condition to the satisfaction of the Consultant.
- 2.0 REGULATIONS, CODES AND STANDARDS
- 2.1 The work shall accord strictly with all rules, regulations, by—laws and the requirements and interpretations of all authorities having jurisdiction.
- 2.2 Drawings and specifications should not conflict with the above regulations, but where there are apparent discrepancies the Contractor shall notify the Consultant in writing and obtain clarification before proceeding with the work.
- 2.3 The work of the mechanical division shall conform to the following Codes, Regulations and Standards including, unless referenced otherwise. latest revisions issued up to date of tender submission.
 - 1. The Ontario Building Code, to Ontario Regulation 332/12 with amendments.
- 2. NFPA 90A with respect to Air Conditioning and Ventilating Systems. 3. NFPA 90B with respect to Warm Air Heating and Air Conditioning Systems.
- 4. ASHRAE Guide and Data Books.
- 6. All other codes, standards, regulations referred to in the above documents, adopted by the authorities
- 5. SMACNA "HVAC Duct Construction Standards"
- having jurisdiction and/or applicable to the work of this Division as shown on the contract documents. 7. Ontario Natural Gas Utilization Code CGA/CSA B149.1.
- 3.0 EXAMINATION OF SITE
- 3.1 The actual location of existing services shall be verified in the field before work is commenced.
- 4.0 DRAWINGS. CHANGES AND INSTALLATIONS
- 4.1 The drawings shall be considered to show the general character and scope of the work and not the exact details of the installation. The installation shall be complete with all accessories required for a complete and operative installation. The Consultant reserves the right to make reasonable changes required to accommodate conditions arising during the progress of the work, at no extra cost to the Owner.
- 5.0 <u>RECORD DRAWINGS</u>
- 5.1 The Contractor shall clearly mark, as the job progresses, all changes and deviations from that shown on contract drawings. On project completion, the Contractor shall forward to the Consultant one set of drawings indicating the as-built conditions.
- 6.0 SHOP DRAWINGS
- 6.1 Submit three copies of shop drawings or digital pdfs which indicate clearly the materials and/or equipment actually being supplied, all details of construction, accurate dimensions, capacity, operating characteristics and performance shall be submitted to the Consultant for approval. Each shop drawing shall give the identifying number of the specific pump, fan, etc. for which it was prepared (e.g. Fan F-7) Shop Drawings in pdf format are acceptable.
- 6.2 Prior to submission to the Consultant, THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS AND APPROVE THEM, indicating that the drawings have been checked and the described equipment has been co-ordinated.
- 6.3 Installation of any equipment shall not be commenced until after shop drawings have been reviewed by the Consultant.
- 6.4 Bind one complete set of reviewed Shop Drawings into each operating and maintenance instruction manual.
- 7.0 QUALIFICATION OF TRADESMEN
- 7.1 The Contractor shall maintain at the job site, at all times, qualified personnel and supporting staff, with proven experience in erecting, supervising, testing and adjusting projects of comparable nature and complexity.
- 8.0 PRODUCT DELIVERY, STORAGE AND HANDLING
- 8.1 Inspect products delivered to the site, and before acceptance ensure that the product is: new, the best of its respective kind, free from defects, is as specified, and is as per reviewed shop drawings, all in accordance with the Contract Documents.
- 8.2 Store materials only in designated areas and protect as necessary to maintain materials in new condition.
- 8.3 Any unpainted steel surface shall be prime coated under this Division.
- 9.0 WARRANTY
- 9.1 The Contractor shall provide a warranty of one year for all systems and equipment installed under this contract. The Contractor agrees to correct promptly, at his own expense, defects or deficiencies in the Work which appear prior to and during the period of one year from the date of acceptance by the Owner of the Work or portions of the work.
- 10.0 OPERATION AND MAINTENANCE INSTRUCTIONS
- 10.1 Three (3) copies of complete operating and maintenance instructions for all mechanical equipment and systems. bound in hard covered manuals, shall be supplied.
- 11.0 INSTRUCTIONS TO OWNER
- 11.1 Instruct the Owner's representative(s) in all respects of the operation and maintenance of systems and equipment. Obtain in writing from the Consultant a list of the Owner's representative(s) qualified to receive instructions.

15200 BASIC MATERIALS AND METHODS

- 1.0 MATERIALS
- 1.1 Make and quality of materials in the construction of this project shall be subject to the approval of the Consultant. 1.2 Materials and equipment supplied by this Division shall be new and free from defects and shall be equivalent in physical characteristics and performance to that specified by the manufacturer's name and catalogue number.
- 2.0 CUTTING, PATCHING, SLEEVES AND ESCUTCHEONS
- 2.1 The Contractor shall co-ordinate on site the position of all sleeves and openings required for the work. 2.2 Openings shall be made at the expense of the mechanical division, except for louver openings which shall be co-ordinated with the general contractor. Cutting of structural members shall not be permitted without specified written approval by the Consultant.
- 2.3 All drilling for hangers, rod inserts and work of similar nature shall be done under this contract. 2.4 It shall be the responsibility of the mechanical division to locate and provide anchor bolts, equipment bases and curbs.
- 3.0 HANGERS AND EQUIPMENT SUPPORTS
- 3.1 Piping and equipment provided under the mechanical division shall be complete with all necessary supports and hangers required for a safe and workmanlike installation. Auxiliary structural members shall be provided under the mechanical section concerned, where piping, ducts or equipment must be suspended between the joists or beams of the structure.
- 4.0 ELECTRICAL CHARACTERISTICS
- 4.1 Electric motors for all driven equipment supplied under the mechanical division shall be provided and installed under this
- 4.2 Motors shall have the following electrical characteristics, unless otherwise specified:
- For 1/3 HP or larger 240 volt 1 ph 60 Hz For 1/4 HP and smaller - 120 volt - 1 ph - 60 Hz

15200 BASIC MATERIALS AND METHODS (CON'T)

5.0 ACCESS PANELS AND ACCESSIBILITY

5.1 All parts of the installation requiring periodic maintenance shall be accessible. Wherever valves, dampers, etc. are concealed by the building construction, access doors or panels shall be furnished by this section and installed under this contract. The mechanical division shall be responsible for their proper location.

6.0 CLEANING

6.1 Clean thoroughly all fixtures and equipment from grease, dirt, plaster or any other foreign material. Any dirt, rubbish or grease on walls, floors or fixtures accumulated from the work of the mechanical division shall be removed promptly from the premises by this division.

7.0 COOPERATION WITH OTHER DIVISIONS

7.1 Each section shall confine itself to installing all materials in the spaces shown without encroaching upon space for materials installed under other sections or divisions. Where the space allotted to another section or division is encroached upon, the materials shall be relocated to their proper space allotments in such a manner to complete the work using space allotted to the various sections and divisions. Relocation of materials and work involved shall be paid for by the section responsible for the encroachment at no extra cost to the Owner.

8.0 DUCT CLEANING

8.1 The interiors of all existing plenums, casings and ductwork, shall be clean at the completion of substantial performance. Work to be done by a company specializing in duct cleaning.

15300 INSULATION AND LININGS

- 1.1 Acoustic Lining in return air plenum by the furnace to be 1" thick rigid, coated liner conforming to NFPA 90A and 90B. Increase duct sizes to compensate for increased thickness. Fasten lining with welded pins and self locking washers.
- 1.2 Supply ducting in cold storage area is to be insulated with 2" thick fibreglass, equal to Manson Alley Wrap FSK. Fasten with wire bands at 12" centres. Tape all joints with foil tape.
- 2.1 Refrigeration insulation to be flexible closed cell elastomeric pipe insulation, and must conform to ASTM C534 Grade 1, Type 1 All liquid and suction lines are to be insulated continuously.
- 2.2 Thickness to be a minimum of $\frac{3}{3}$ wall thickness for suction and $\frac{3}{3}$ for discharge.
- 2.3 Install insulation according to manufacturer's requirements. Use adhesive to join butt joints.

15400 PLUMBING SPECIFICATIONS

- 1.1 Reference: Ontario Building Code
- 1.2 Submit product data for plumbing fixtures, floor drains, etc.
- 1.3 Architectural drawings to govern the number and location of fixtures.
- 1.4 Fixtures to be the product of one manufacturer and of the same type.
- 1.5 Trim in any one washroom to be the product of one manufacturer.
- 1.6 Exposed plumbing brass to be chrome plated. 1.7 DCW and DHW above ground main piping to be copper tube, hard drawn, type L to ASTM B88M. Bronze or copper
- fittings, soldering with lead free solder or PEX piping to CAN/CSA-B137.10
- 1.8 Isolation valves: Class 150, screwed or soldered, bronze body, chrome plated brass ball, PTFE teflon adjustable packing, brass gland, PTFE teflon seat, plastic coated steel handle.
- 1.9 Check valves: 200 lb, class, bronze body, Watts CV or equal.
- 1.10 Below Grade Sanitary: PVC to CAN/CSA B181.2, solvent welded to ASTM D2235.
- 1.11 Above Grade Sanitary and Venting: PVC to CAN/CSA B182.2, solvent welded to ASTM D2235 with a flame spread rating of 25
- or less. Pipe to be IPEX System 15.
- 1.12 Pipe insulation to be 1" thick rigid fibre glass with factory applied vapour barrier and self seal lap joint equal to Manson Alley K with APT jacket. Use premolded PVC covers for fittings over 1" in size.

2.0 Execution

- 2.1 Install buried pipe on a 6" bed of clean washed sand, shaped to accommodate fittings and to line and grade as indicated.
- Backfill with a further 6" layer of sand. 2.2 Install clean—outs as indicated and as required by code at base of soil stacks.
- 2.3 Sanitary and floor drains are to be trap seal primed from the nearest cold potable water supply.
- 2.4 Assemble piping using Code and ANSI standards. Maintain straight lines along walls for pipe routing. 2.5 Install isolation valves on each plumbing fixture supply line.
- 2.6 Pipe hot water relief lines to nearest floor drain or janitor's sink. Provide drain and vent if no floor drain is nearby. 2.7 Insulate all plumbing supply lines with fibrous glass split sectional pipe insulation as noted above.
- 2.8 Flush out and rinse systems. Clean out aerator screens and strainers. Leak test according to plumbing code before
- plumbing is closed in or buried. Notify Consultant 48 hours in advance. 2.9 Connect trap seal primer to floor drains from nearby faucet. Provide metering valve.

15500 <u>GAS PIPING</u>

- 1.1 Gas Piping will be threaded, ASTM A53, Grade B, Schedule 40, size as indicated on drawing.
- 1.2 Fittings to be malleable iron, screwed, Class 150 to ANSI B16.3
- 1.3 Unions to be malleable iron, brass to iron seat, to ASTM A47M. 1.4 Valves to be ball type, Class 600, WOG, to be installed at each appliance.
- 1.5 Install in accordance with provincial code and CGA/CSA B149.1. Slope pipe in direction of flow, install drip pockets at low points and at connection to equipment.
- 1.6 Support piping from hangers according to code.
- 1.7 Pressure test piping in accordance with CSA/CGA B149.1.
- 1.8 Paint gas piping yellow with enamel based paint, where exposed. Where pipe is hidden, band pipe with labels.

15600 SHEET METAL DUCTWORK AND SPECIALTIES

- 1.1 Make all ductwork, unless specifically noted otherwise, of galvanized sheet steel to ASTM A525-83, and according to the requirements of SMACNA for a 1" wg pressure class and a seal class of 'C'. Provide reinforcements fabricated from angles, zees, or channels as per SMACNA. Support ducts with hangers and tie-rods. Ductwork will be painted in this
- 1.2 Where ductwork passes through a wall or floor, other than when a fire damper is required, pack around the duct using a fire resistant material to ensure a sound and air—tight joint.
- 1.3 Make changes in direction of horizontal ducts with elbows having an inside radius not less than the width of the duct. Make a change of direction from horizontal to vertical duct with elbows having an inside radius equal to the depth of the duct. Where this is not possible due to the building construction, use turning vanes. These shall be hollow "Duro
- Vane Rail" manufactured by Duro Dyne or similar turning vanes acceptable to the Consultant. 1.4 Provide flexible connections at each air handling unit and fan to duct connection. The frame shall be galvanized sheet metal with fire—resistant neoprene coated glass fabric, clenched by double locked seams. Temperature rating shall be
- 1.5 Provide duct access panels at all gravity dampers, fire dampers, motorized dampers, coils, fan bearings or similar equipment requiring occasional maintenance or inspections Panels shall be 1" thick, insulated, low leakage, cam lock closure, and equal to Nailor Series 0800. Minimum size to be 12"x12" or 2" less than the duct width squared, unless duct dimensions do not allow. This Contractor shall also supply drywall access doors.
- 1.6 For duct expansions, the angle formed at each side of the duct shall not exceed 20°. For contractions, the angle formed at each side of the duct shall not exceed 30°.
- 1.7 Provide take—off boots and balancing dampers at all branches, and to SMACNA standards.
- 1.8 Grilles and Diffusers: Refer to schedules on drawings for size, colour and supplier. 1.9 Insulated flexible ducting is to be used to connect ductwork to ceiling diffusers. The maximum length of flexible ducting is to be 4'-0". Ducting and insulation to meet NFPA requirements for to flame spread and smoke developed,
- 1.10 Fire Dampers, where indicated, (FD) shall be installed at all fire separations, which includes the walls of any mechanical room. Dampers shall have a 165oF fusible link, be Type B, ULC listed and be rated for 1½ hours.

15700 EXHAUST FANS (EF-1)

- 1.1 Ceiling exhaust fans shall be as indicated on schedule.
- 1.2 Fan shall be with true centrifugal wheel, in acoustically insulated metal housing with integral back draft damper. 1.3 Fan shall be complete with disconnect consisting of cord plug and receptacle in fan casing. Fan, motor and wheel assembly
- shall be removable from casing without disturbing the housing.
- 1.4 Install where shown on drawings. Seal exhaust duct to prevent the escape of vapours.

15750 HEAT RECOVERY VENTILATORS HRV-1

- 1.1 Provide a heat recovery ventilator equal to Lifebreath 205 MAX, rated for 150 cfm. 1.2 HRV shall have a horizontal configuration, an insulated pre-painted galvanized steel casing, a washable set of filters, 5 speed PSC
- motor, and an aluminum core, and operate on 120 VAC.
- 1.3 The unit shall be designed with defrost capabilities by using indoor air. 1.4 Provide Lifebreath Controller #99-DXPLO2 wall mounted controller. Internal controls and bypass damper shall provide automatic
- 1.5 Install the units according to the manufacturer's recommendations using hanging straps and weatherhoods supplied with the unit. 1.6 Pipe ¾ condensate drain to nearest drain.
- 15800 HEATING AND AIR CONDITIONING UNITS

1.0 GENERAL

1.1 A split furnace /AC system will be used to heat/cool the residence. 1.2 Design Conditions: Summer Inside: 78oFDB, 50% RH, Summer Outside: 85oFDB, 72oFWB, 95oF on Condenser

2.0 PRODUCTS

Furnace:

2.1 Split Systems - F/AC-1

Furnace System F1

York TM9V080C16MP11C

80,000 BTU/hr input capacity, propane fired 2 Stage, variable speed high efficiency motor and fan, 700 cfm nominal at .5" wc

2" Filter, side filter rack Concentric Vent Kit Natural gas

Condenser: YORK YCE30B21H 2.5 ton, 14.5 SEER, R410, 1 stage, scroll compressor, 208/230-1-60

YORK CF30C 2.5 ton Fully cased up-flow coil

TX Valves to be included Honeywell Focus Pro thermostat

2.1.1 Indoor unit shall be natural gas fired, condensing furnace suitable for upright installation, c/w direct expansion cooling coil, tubular aluminized steel heat exchanger, 2 stage gas burner, variable speed direct drive ECM motor, centrifugal fan, vibration isolation, piping connections, and controls. The furnace shall be high efficiency (+95%), have CSA/CGA certification, one year warranty on the unit, 20 years on the exchanger, direct vent sealed combustion with thru—the—wall venting capability.

- 2.1.2 Unit casing shall be painted, zinc coated steel. Cabinet to be insulated.
- 2.1.3 Filters to be MERV 8. Provide side return filter racks 2.1.4 Evaporator Coil to be direct expansion fully cased type, with copper tubing and aluminum fins, c/w thermal expansion valve. Coil to
- have condensate drip pans with drain connection. 2.1.5 Furnace controls shall include a microprocessor based integrated electronic control board with LED diagnostic display, fuse, and be
- capable of multiple operational speeds. 2.1.6 F/AC-2 shall have 24/7 programmable heating and cooling thermostat, with automatic change over, c/w temperature sensor.
- Controls to be 24v. Acceptable Product: Honeywell Focus Pro 6000 TB8220U1003. 2.1.7 Outdoor Unit shall be a factory assembled unit consisting of scroll compressor, air cooled coil, direct drive propeller type condenser fan, coil guard, and control box, and have a minimum SEER rating of 14.5. Unit shall contain all factory wiring, controls, compressor. Compressor shall be installed on rubber vibration isolators. Refrigeration components shall include compressor oil, high pressure switch, low pressure switch. Power to be 240-1-60; control circuit to be 24v. Accessories to include crankcase heater, anti-short cycling protection, ball bearing fan motor and thermostatic expansion valve, outdoor air temperature sensor.
- 2.1.8 Warranty to include 10 years on the compressor and 10 year parts warranty. 2.1.9 Options to include York Side Wall termination kit for intake and exhaust

- 3.1 Install equipment where shown on drawings according to manufacturer's recommendations. Units shall be mounted straight and
- level, aligned with structure, for a neat and workmanlike arrangement. 3.2 Disconnects and power wiring shall be provided by Division 16. All power wiring by Division 16. All control wiring is by Division 15
- and will be 24 volt.
- 3.3 Provide 3/4" PVC drain line from the evaporator and furnace to condensate pump and route $\frac{1}{2}$ " tube to the hub drain. 3.4 Install thermostats in locations indicated.
- 3.5 Route refrigerant tubing to condenser locations outside. Insulate refrigerant tubing as per section 15300. Seal wall penetrations 3.6 Install fresh air and flue gas venting, 2". Use long radius sweep elbows. Venting to meet the requirements of CSA B149.1, ULC S636, and the manufacturer's recommendations. Venting to be equal to IPEX System 636. Install as per manufacturer's
- 3.7 Start-up the systems, balance the air flows, and demonstrate the units to the Owner.

being started up. 48 hours prior. The Consultant may choose to attend.

to the Owner and Consultant to verify that the equipment is operating satisfactory.

15900 CONTROLS

1.1 Wall mounted thermostat is to be provided with the AC-1 unit as noted above. Mount thermostat where indicated. Program for

operation on call ofr heating or cooling. Demonstrate to Owner. 15950 BALANCING AND TESTING & COMMISSIONING

1.0 Hire an independent balancing contractor and balance and test the existing fresh air ventilation HVAC system according to the most recent SMACNA standards. Prepare a written air balance report and submit for approval. All air flows are to be measured on

4.0 Once the equipment is operating and according to requirements, the Contractor shall arrange for a demonstration of the equipment

- forced air systems, along with motor HP, rpm, amperage draw, static pressures, fresh air intake, exhaust air, etc. 2.0 The mechanical contractor shall not start up new equipment until the site has been cleaned and dust and dirt has been removed. 3.0 Start up of equipment shall be as per the manufacturer's instructions. The Contractor shall notify the Consultant that equipment is
- By App

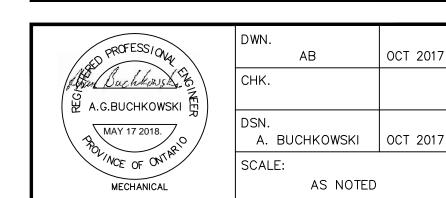
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NOVADYNE 269 North Indian Road Tel: (705) 696-2119 Hastings, ON, Canada Fax: (705) 696-2912



STEWART HOMES PICKERING RENOVATIONS & ADDITIONS 1907 Valley Farm Road, Pickering, ON

SPECIFICATIONS

CLIENT

DWG. No. Rev. No. 0528-M1 CLIENT FILE No.

DRAWING LIST - MECHANICAL

M1 TITLE AND SPECIFICATIONS M2 PLUMBING BASEMENT PLAN HVAC BASEMENT PLAN

MAIN FLOOR PLAN М4 M5 SPRINKLER SYSTEM М6 SCHEDULES

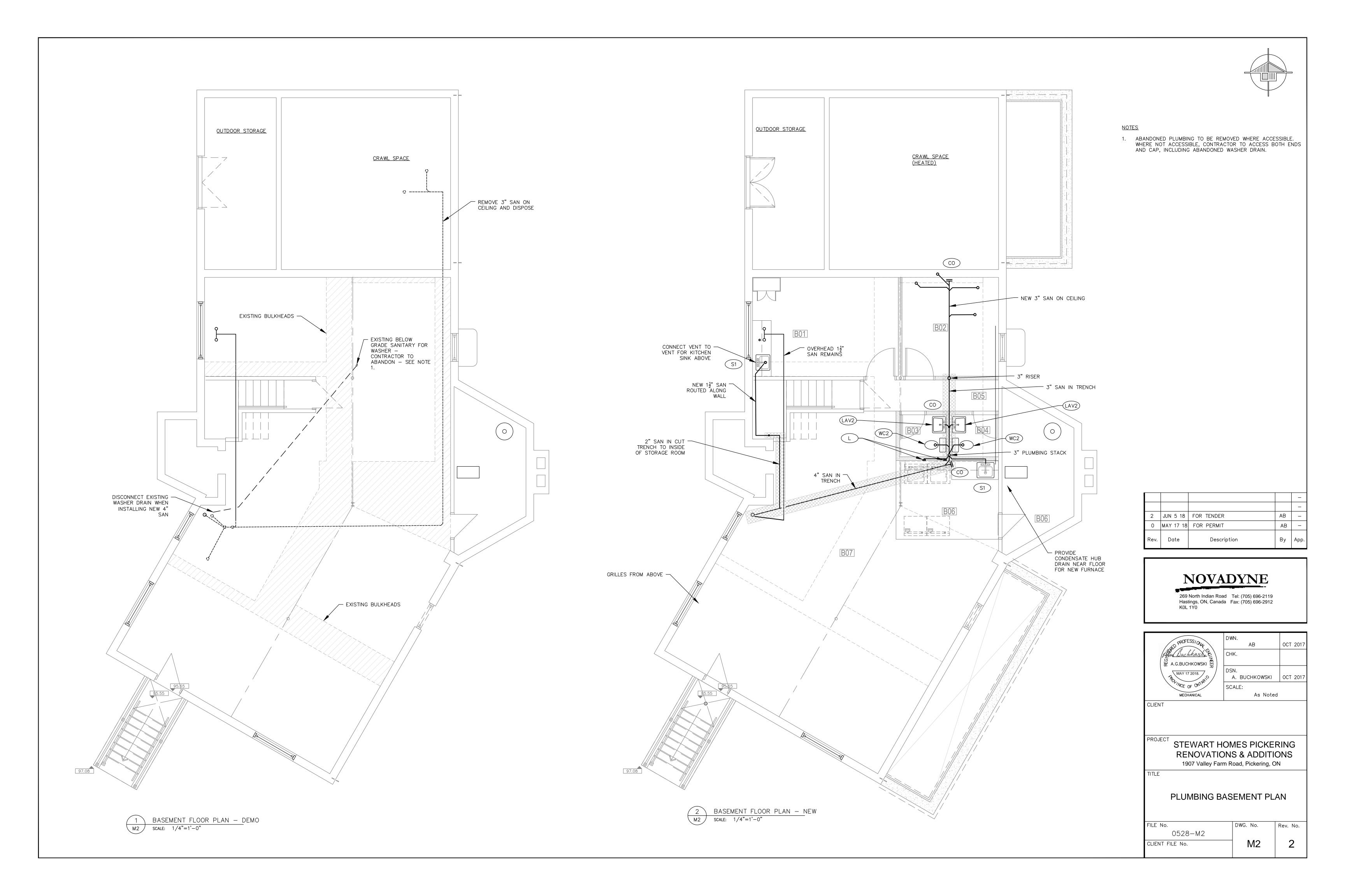
GENERAL NOTES

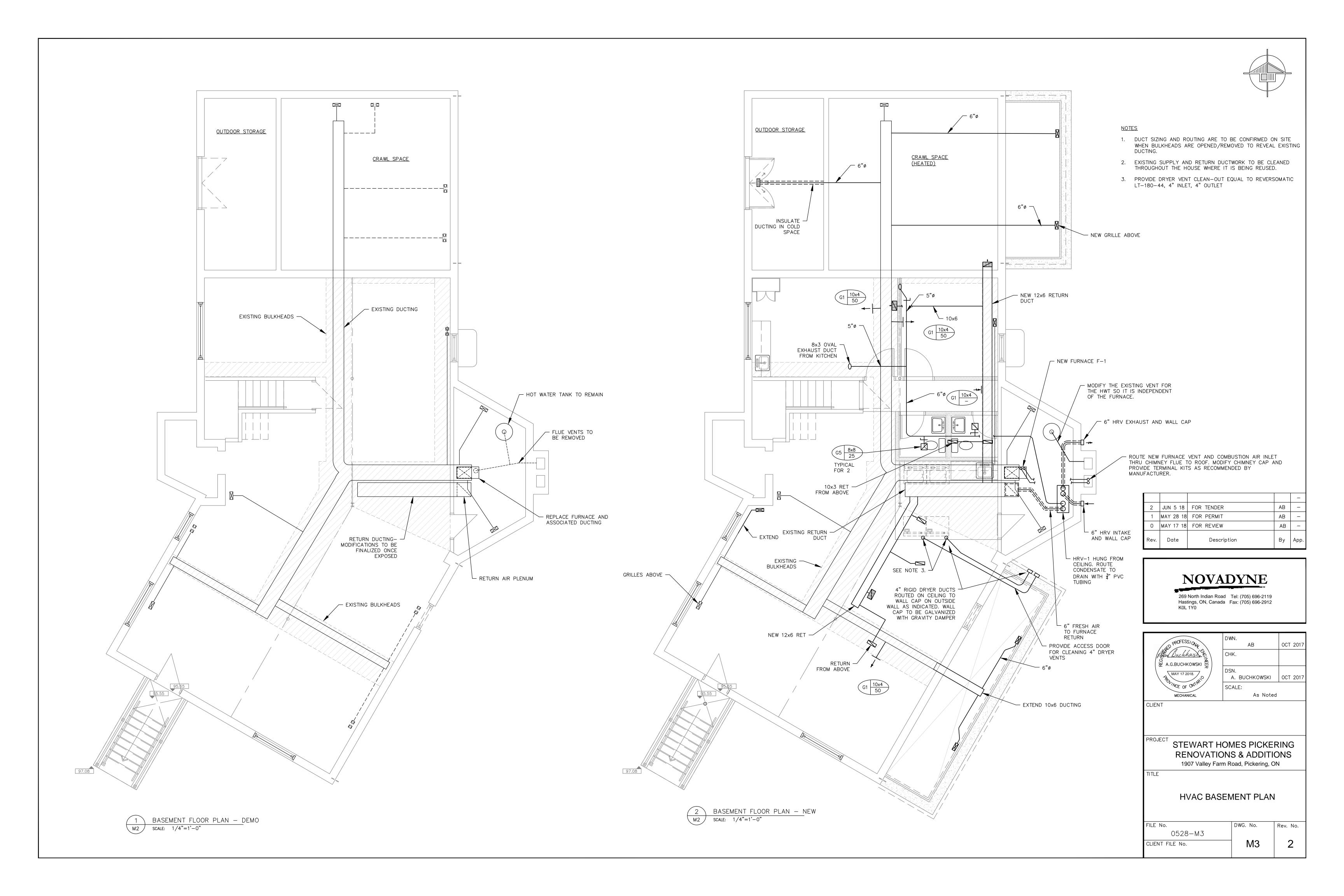
- PLAN, SECTION OR DETAIL NUMBER - DRAWING WHERE DETAILED M2 / (- MEANS THIS DRAWING)

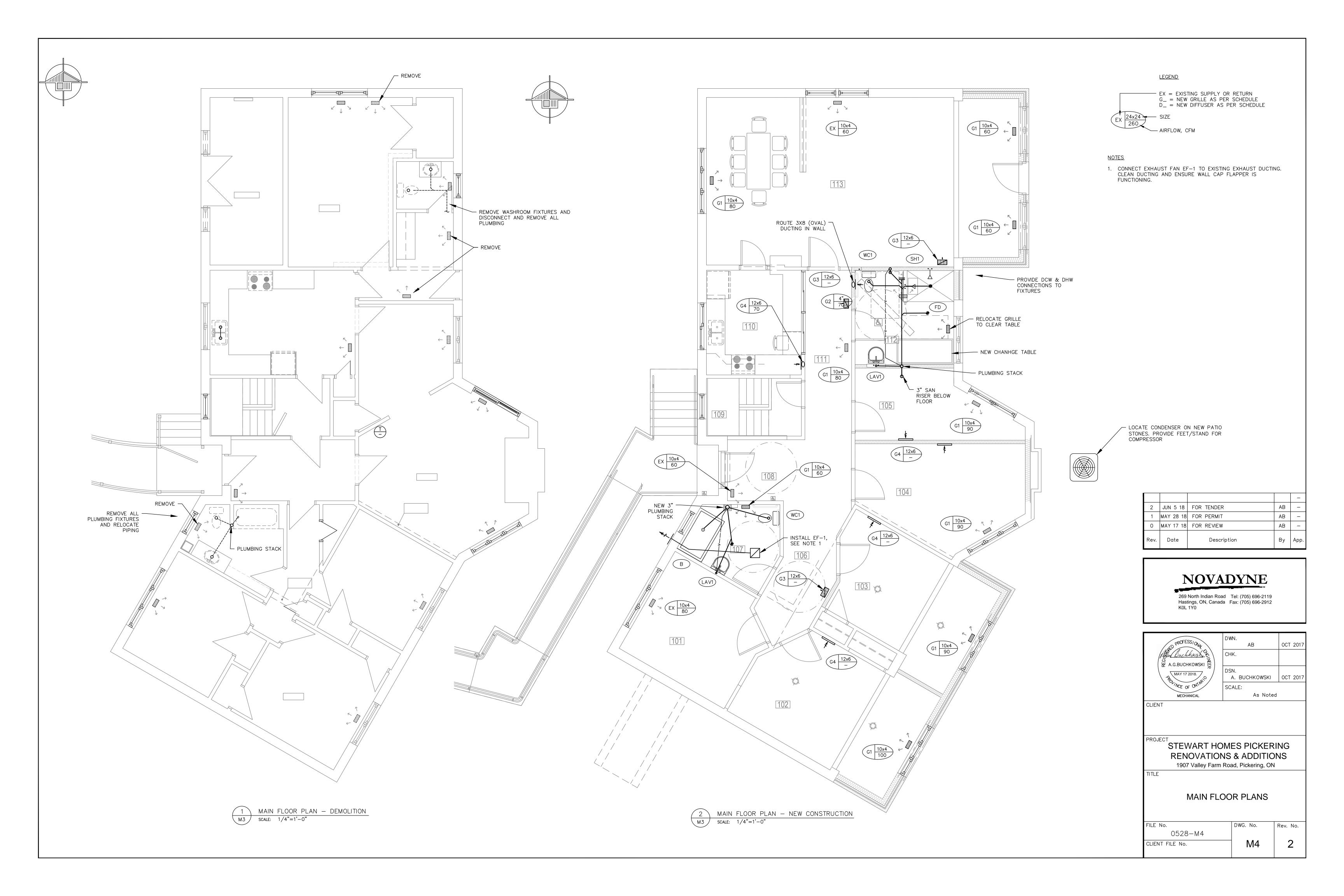
2. CONTRACTOR SHALL VERIFY SITE CONDITIONS AND REPORT ANY DISCREPANCIES AND INCONSISTENCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE

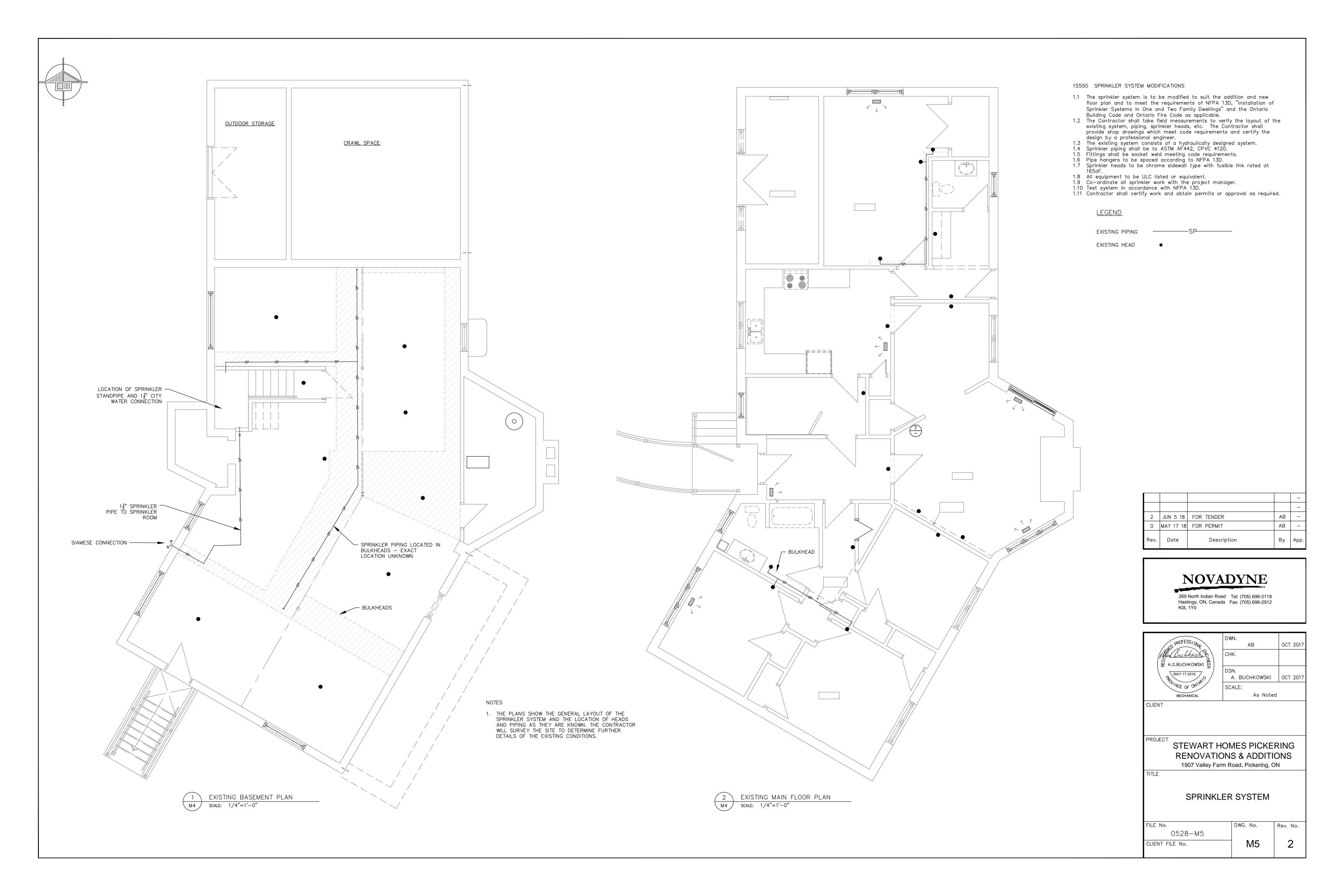
LOCATION AND SETTING OUT IS THE RESPONSIBILITY OF THE CONTRACTOR.

UNLESS NOTED OTHERWISE, DIMENSIONS ARE IN IMPERIAL UNITS.









	DIFFUSER & GRILLE SCHEDULE								
Item	Size	Type Nozzle		Colour	Description	Remarks			
G1	10x4	SUP	_	WHITE	10X4 FLOOR REGISTER				
G2	4"ø	SUP/RET	4"	WHITE	ROUND, POLYPROPYLENE CONSTRUCTION, ADJUSTABLE				
G3	12X6	RET	_	WHITE	12X6 FLOOR RETURN				
G4	12X6	RET	_	WHITE	12X6 WALL RETURN				
G5	8x8	RET	_	WHITE	8x8 WALL RETURN, 450 BLADES c/w REGISTER				

	FAN SCHEDULE							
Item	Name	Airflow (cfm)	ESP (wc")	Motor	Power (v-ph-hz)	Model	Description	
EF-1	WASHROOM EXHAUST FAN	90	.25	81 watts	120-1-60	PANASONIC WHISPER CEILING FAN FV-11VQS	CEILING MOUNTED EXHAUST FAN, CENTRIFUGAL, DIRECT DRIVE, HOUSING MADE OF GALVANIZED STEEL WITH ½" ACOUSTICAL LINING, FAN WHEEL TO BE FORWARD CURVED, AMCA RATED, WITH PLASTIC CEILING GRILLE, DISCONNECT, BACKDRAF DAMPER INSTALLATION: MOUNT IN DRYWALL CEILING, OPERATED BY WALL TIMER PROVIDED BY DIV 16.	

	PLUMBING FIXTURE SCHEDULE						
REF.	FIXTURE NAME	НОТ	COLD	DRAIN	VENT	REMARKS	
C.O.	CLEAN OUT	_	_	_	_	ZURN ZN-1602, ADJUSTABLE HEAD WITH BODY SLEEVE SEAL	
LAV1	LAVATORY	1/2"	1/2"	1½"	1¼"	ADA COMPLIANT LAVATORY: 27" X 20" LAVATORY FRONT OVERFLOW, FIRE CLAY CHINA, WALL HUNG WITH WALL HANGER, WITH ONE CENTRE HOLE FOR FAUCET, AMERICAN STANDARD #9140 947. FAUCET TO BE POLISHED CHROME PLATE FINISH, SOLID METAL CONSTRUCTION, WRIST BLADE HANDLES WITH HOT AND COLD INDICATORS, AERATOR LIMITED TO 4.5 L/MIN, EQUAL TO MOEN DURA #8278. MCGUIRE #155wc CHROME PLATED, POLISHED DRAIN, OFFSET OPEN GRID STRAINER, CAST BRASS 1\frac{1}{4}". MCGUIRE SUPPLIES: CHROME PLATED, POLISHED SHORT RIGID ANGLE WITH LOOSE KEY STOPS, ESCUTCHEONS AND BRAIDED FLEXIBLE HOSES. MCGUIRE #8872C C.P. POLISHED P TRAP, CAST BRASS, 1\frac{1}{4}" WITH CLEAN—OUT AND ESCUTCHEON.	
LAV2	LAVATORY	1/2"	1/2"	1½"	1¼"	18¼" x 20½" WHITE VITREOUS CHINA WALL HUNG SINK, 4" HOLE, FRONT OVERFLOW, EQUAL TO AMERICAN STANDARD LUCERNE 0355 012. CONTRACTOR TO PROVIDE WALL MOUNT KIT. FAUCET TO BE POLISHED CHROME PLATE FINISH, SOLID METAL CONSTRUCTION, PIVOT ACTION LEVER STYLE HANDLE, AERATOR LIMITED TO 8.3 I/MIN, EQUAL TO MOEN 8413.	
SH	SHOWER (ACCESSIBLE)	½"	1/2"	3"	1½"	SHOWER IS BUILT— IN PLACE. REFER TO ARCHITECTURAL DRAWINGS, FAUCET TO BE AMERICAN STANDARD 1662221 COMMERCIAL SHOWER SYSTEM KIT, INCLUDES: PRESSURE BALANCE VALVE AND TRIM, 59" METAL HOSE, VACUUM BREAKER, 36" SLIDE BAR WITH ADJUSTABLE HOLDER, VALVE TO HAVE CAST BRASS BODY, WITH VOLUME AND TEMPERATURE CONTROL AND HIGH TEMP STOP. INCLUDE PLASTER GUARD, FIXED HAND SHOWER (2.25 GPM) PROVIDE A SECOND SHOWER OUTLET AND VALVE IDENTICAL TO THE FIRST, WITHOUT THE HANDHELD OPTION. MOUNT ON PERPENDICULAR WALL AS INDICATED.	
В	BATH	1/2"	1/2"	2"	1½"	ACID RESISTANT PORCELAIN FINISH, SLIP RESISTANT COVERAGE, END DRAIN OUTLET, WHITE, EQUAL TO AMERICAN STANDARD STRATFORD BATHING POOL 2470.002. FAUCET TO BE AMERICAN STANDARD 1662221 COMMERCIAL SHOWER SYSTEM KIT, INCLUDES: PRESSURE BALANCE VALVE AND TRIM, 59" METAL HOSE, VACUUM BREAKER, 36" SLIDE BAR WITH ADJUSTABLE HOLDER, VALVE TO HAVE CAST BRASS BODY, WITH VOLUME AND TEMPERATURE CONTROL AND HIGH TEMP STOP. INCLUDE PLASTER GUARD, FIXED HAND SHOWER (2.25 GPM), BATH SPOUT (To be determined)	
WC1	WATER CLOSET (ACCESSIBLE)	_	1/2"	3"	1½"	ADA COMPLIANT, WHITE VITREOUS CHINA, ELONGATED BOWL, FLOOR MOUNTED, INSULATED TANK WATER CLOSET, 6 LPF TOILET, AMERICAN STANDARD CADET PRO 215AA 054 OR EQUAL. SEAT TO BE BEMIS #7850TDG COMMERCIAL HEAVY DUTY, SOLID PLASTIC, IMPACT RESISTANT, OPEN FRONT, "STA-TITE" PLASTIC HINGES WITH SS POSTS, DURAGUARD PROTECTED.	
WC2	WATER CLOSET	_	1/2"	3"	1½"	REGULAR HEIGHT, WHITE VITREOUS CHINA, ELONGATED BOWL, FLOOR MOUNTED, INSULATED TANK WATER CLOSET, 6 LPF TOILET, AMERICAN STANDARD CADET 215CA 054 OR EQUAL. SEAT TO BE BEMIS #7850TDG COMMERCIAL HEAVY DUTY, SOLID PLASTIC, IMPACT RESISTANT, OPEN FRONT, "STA—TITE" PLASTIC HINGES WITH SS POSTS, DURAGUARD PROTECTED.	
S1	KITCHEN SINK	1/2"	1/2"	1½"	1¼"	20" X 20" X 8" DP. SINGLE COMPARTMENT, 20 GAUGE LEDGEBACK STAINLESS STEEL SINK, 3 HOLES, EQUAL TO KINDRED STEELQUEEN QDL2020/8. FAUCET TO BE POLISHED CHROME PLATED, 8" CENTRES, CHROME HANDLES EQUAL TO MOEN 77920.	
FD	FLOOR DRAIN	_	_	3"	1½"	DURA-COATED, CAST IRON BODY, CLAMP COLLAR, POLISHED NICKEL BRONZE STRAINER, SEDIMENT BUCKET, 3/8" TRAP SEALER PRIMER, EQUAL TO ZURN Z-415-A.	

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Rev.	Date	Description	Ву	Арр.

NOVADYNE

269 North Indian Road Tel: (705) 696-2119 Hastings, ON, Canada Fax: (705) 696-2912 K0L 1Y0

PROFESS/ONLY	DWN.	OCT 2017
A.G.BUCHKOWSKI	CHK.	
MAY 17 2018. OLINCE OF ONT AR	DSN. A. BUCHKOWSKI	OCT 2017
MECHANICAL	SCALE: As Noted	
CLIENT		

PROJECT STEWART HOMES PICKERING **RENOVATIONS & ADDITIONS** 1907 Valley Farm Road, Pickering, ON

SCHEDULES

FILE No.	DWG. No.	Rev. No.
0528-M6		
CLIENT FILE No.	M6	2