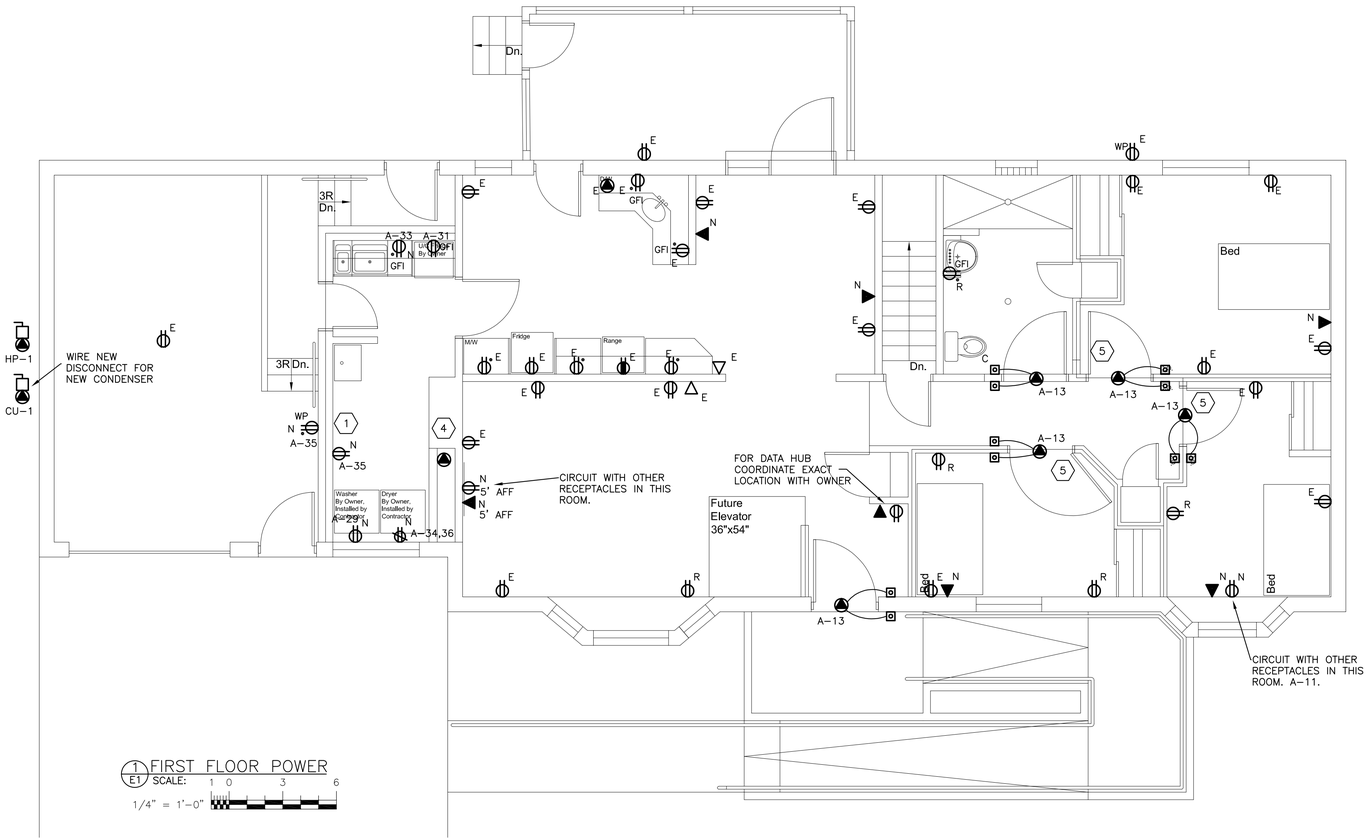
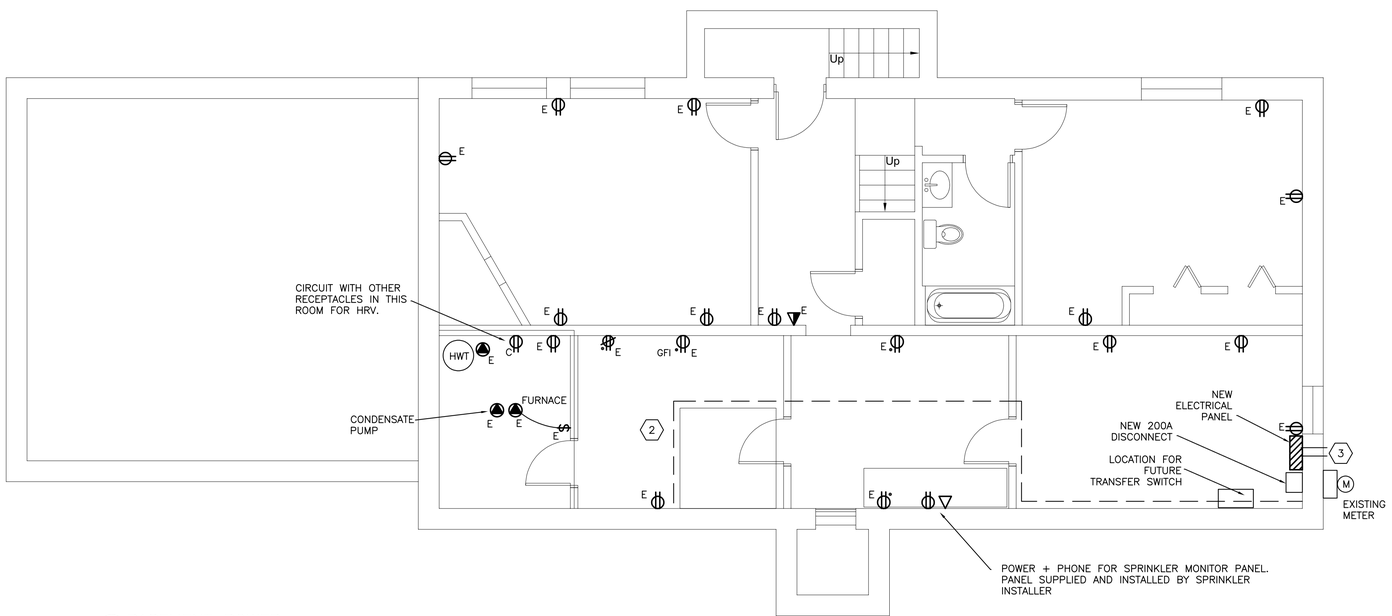


1 E1 FIRST FLOOR POWER
SCALE: 1 0 3 6
1/4" = 1'–0"



2 E1 BASEMENT POWER
SCALE: 1 0 3 6
1/4" = 1'–0"

ELECTRICAL LEGEND	
SYMBOL	SYMBOL MEANING
	RECESSED PANEL
	SURFACED MOUNTED PANEL
	DUPLEX RECEPTACLE, 120V, 15A
	DUPLEX RECEPTACLE, 120V, 15A MOUNTED ABOVE COUNTER
GFI	GROUND FAULT INTERRUPTOR RECEPTACLE MOUNTED ABOVE COUNTER
	SPLIT RECEPTACLE MOUNTED ABOVE COUNTER
C	CEILING MOUNTED RECEPTACLE
	STOVE RECEPTACLE, CSA 14–50R
	DRYER RECEPTACLE, CSA 14–30R
	SWITCHED RECEPTACLE
WP	WEATHERPROOF RECEPTACLE
	WELDING RECEPTACLE
	DIRECT CONNECTION TO EQUIPMENT VOLTAGE/PHASE/FREQUENCY AS NOTED
	MOTOR LOAD VOLTAGE/PHASE/FREQUENCY AS NOTED
	TELEPHONE OUTLET
	DATA OUTLET
	TELEVISION OUTLET
CO	CARBON MONOXIDE DETECTOR
	FIRE ALARM CONTROL PANEL
V	VIDEO CAMERA
$	TOGGLE SWITCH
$3	3–WAY TOGGLE SWITCH
$D	DIMMER SWITCH
$F	FAN SWITCH
$M	MANUAL SWITCH
	DISCONNECT

DEMOLITION LEGEND	
E	EXISTING TO REMAIN
R	EXISTING TO RELOCATE
N	NEW DEVICE

NEW PANEL 'A'

120/240V, 1 PHASE, 3 WIRE, 225A BUS, 60 CIRCUIT WITH 200A MAIN BREAKER

DESCRIPTION	LOAD	BKR	CCT	CCT	BKR	LOAD	DESCRIPTION
EXISTING	x	15A	1	2	15A	x	EXISTING
A/C	x	20A	3	4	15A	x	EXISTING
			5	6	15A	x	SPARE
HOT WATER TANK	x	30A	7	8	30A	x	DRYER BASEMENT
			9	10			
SPARE BEDROOM/SEWING ROOM	x	15A	11	12	15A	x	EXISTING
EXISTING	x	15A	13	14	15A	x	BASEMENT BATHROOM HEATER
LIVING ROOM/BASEMENT LIGHTS	x	15A	15	16			
STOVE	x	40A	17	18	15A	x	UPSTAIRS BATH/MASTER BED
			19	20	15A	x	SPARE
COMPUTER/GARAGE	x	15A	21	22	15A	x	KITCHEN LIGHTS COUNTER REC
BASEMENT BEDROOM	x	15A	23	24	15A	x	BEDROOM LIFT
FRIDGE	x	15A	25	26	15A	x	BEDROOM LIFT
MICROWAVE	x	15A	27	28	15A	x	WASHER/FURNACE
WASHING MACHINE	x	15A	29	30	15A	x	BATH LIFT
MEDICAL ROOM FRIDGE	x	15A	31	32	15A	x	BASEMENT BATHROOM
MEDICAL ROOM COUNTER REC	x	15A	33	34	30A	x	DRYER LAUNDRY ROOM
LAUNDRY/NEW GARAGE REC	x	15A	35	36			
FIRST FLOOR LIGHTING	x	15A	37	38	20A	x	HP–1
1ST FL BED/BATH LIGHTING	x	15A	39	40			
BASEMENT WEST LIGHTING		15A	41	42	15A	x	SPARE
BASEMENT EAST LIGHTING		15A	43	44	15A	x	SPARE
EXTERIOR LIGHTING		15A	45	46	15A	x	SPARE
			47	48	15A	x	SPARE
			49	50	15A	x	SPARE
			51	52	15A	x	SPARE
			53	54	15A	x	SPARE
			55	56			
			57	58			
			59	60	15A		EXITS

* USE ARC–FAULT BREAKERS AS PER OESC

NOTES:

1. WIRE EXISTING CIRCUITS INTO NEW PANEL EXISTING CIRCUITING IN PANEL SCHEDULE FOR REFERENCE ONLY.
2. RUN PHONE/NETWORK CABLE TO NEW ELECTRICAL PANEL FOR CONNECTION.

(1) OUTDOOR HEAT PUMP. INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT THROUGH FIELD–SUPPLIED INTERCONNECTED WIRING

(2) RUN 2 X 1" CONDUIT IN CEILING TO THE OLD LAUNDRY ROOM IN BASEMENT AS SHOWN FOR FUTURE USE. INTENDED FOR THE ELEVATOR PANEL AND COMMS.

(3) PROVIDE 2 X 2" CONDUITS TO THIS LOCATION FOR FUTURE GENERATOR INSTILLATION.

(4) PROVIDE DIRECT CONNECTION FOR SOAP DISPENSER. TO BE CIRCUITED WITH THE WASHING MACHINE ON CIRCUIT A–29.

(5) PROVIDE HOLD OPENS (USE POWER FROM THE POWERED DOOR OPENER TO POWER)?

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT & TENDER	12.23.2024	DRM
0	ISSUED FOR PERMIT	12.10.2024	DRM

REVISIONS

Kirkland Engineering Ltd BCIN: 28857

REGISTERED PROFESSIONAL ENGINEER
D.R.MILLEN
100134238
DEC 23/24
PROVINCE OF ONTARIO
ELECTRICAL

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KIRKLAND ENGINEERING LTD.

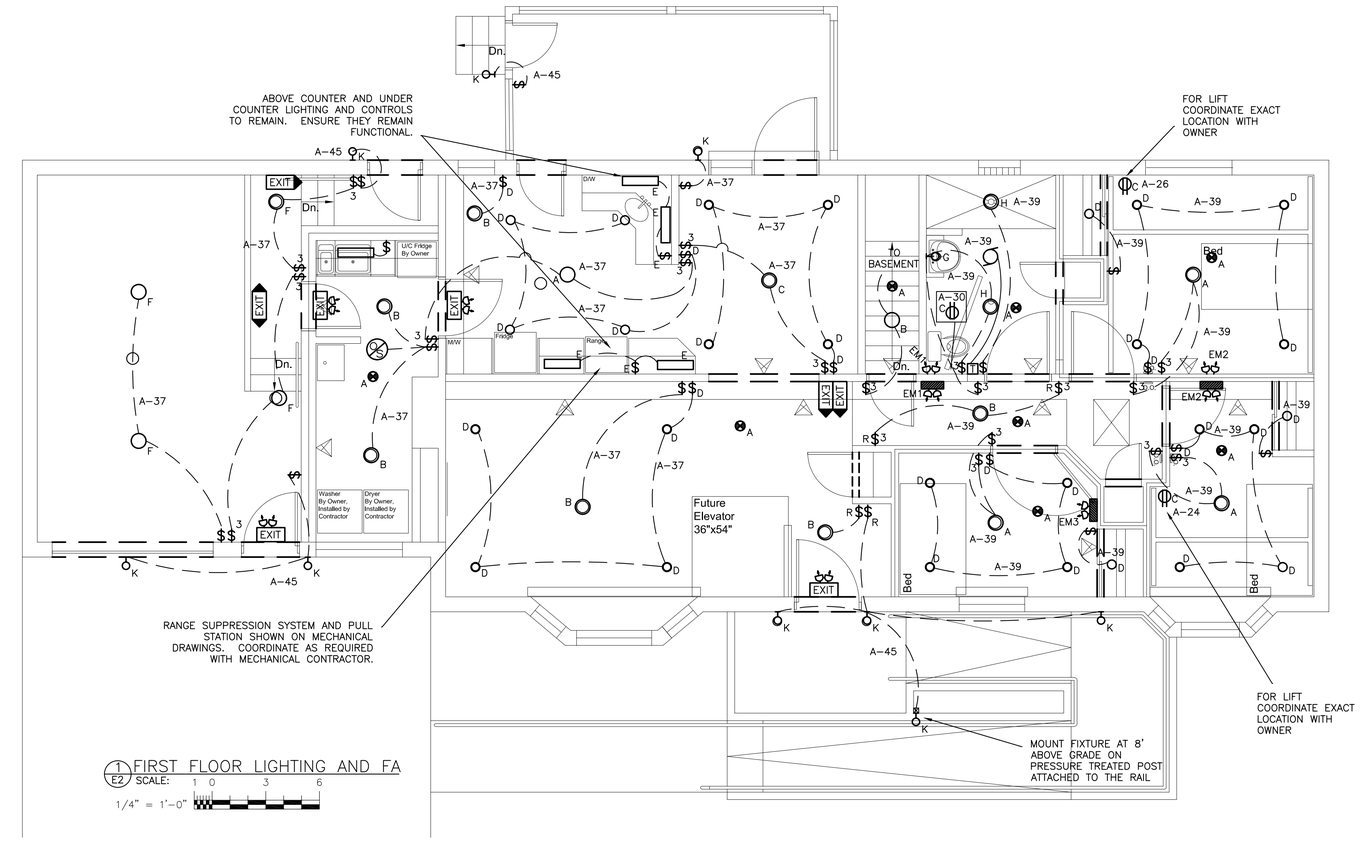
PROJECT
DEAF BLIND ONTARIO RENOVATION

711 Crowley St.
Peterborough, ON.

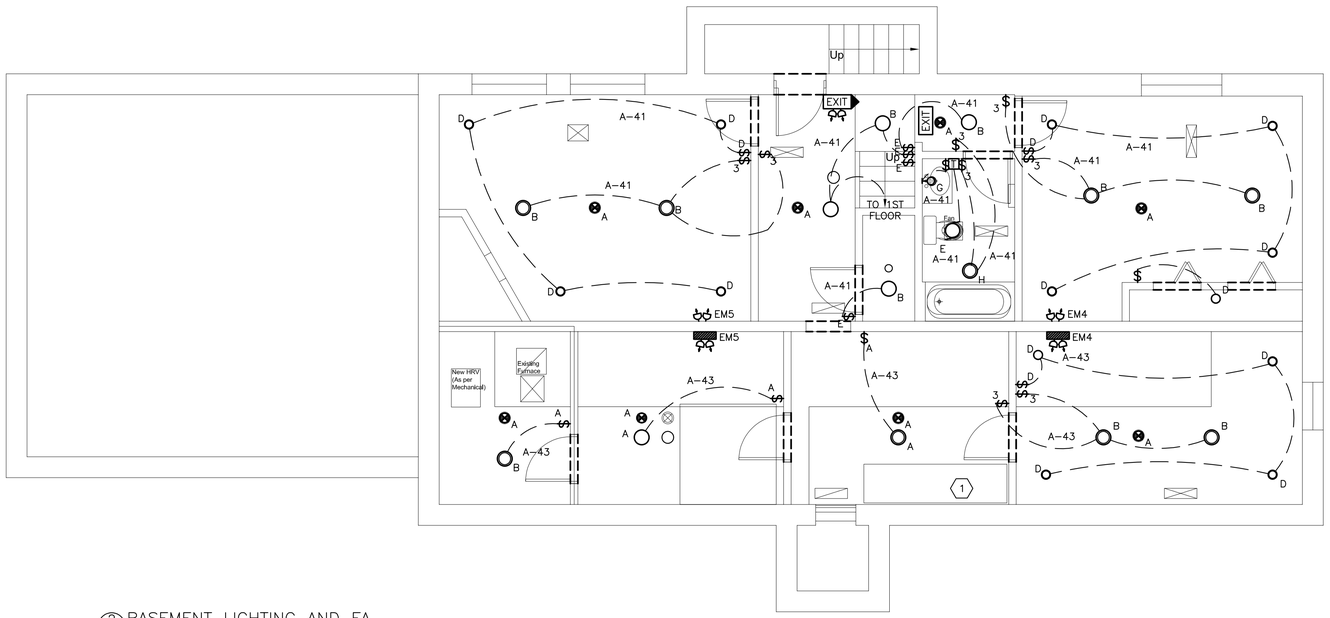
TITLE
POWER LAYOUT

DESIGN	DRM	SCALE	1/4" = 1'–0"
DRAWN	AJM	DWG NO.	E1
CHECKED	DRM		
APPROVED	DRM		
PROJECT	7471		

CADD FILE NO. 7471E1



1 FIRST FLOOR LIGHTING AND FA
E2 SCALE: 1 0 3 6
1/4" = 1'-0"



2 BASEMENT LIGHTING AND FA
E2 SCALE: 1 0 3 6
1/4" = 1'-0"

SWITCH LEGEND	
$	TOGGLE SWITCH
$3	3–WAY TOGGLE SWITCH
$D	DIMMER SWITCH
$F	FAN SWITCH
$M	MANUAL SWITCH
	BATTERY PACK
	EMERGENCY LIGHTS
	CEILING MOUNTED DUEL TECH OCCUPANCY SENSOR
T	5 BUTTON TIMER
EXIT	EXIT SIGN SELF POWERED
	EXHAUST FAN

FIRE ALARM DEVICE LEGEND	
SYMBOL	DESCRIPTION
A	SMOKE ALARM COMBO SMOKE/CO/STROBE

DEMOLITION LEGEND	
E	EXISTING TO REMAIN
R	EXISTING TO RELOCATE
N	NEW DEVICE

LIGHT FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	MANUFACTURER	MODEL NO.
A	11" DIAMETER, LOW PROFILE CEILING MOUNTED LED FIXTURE WITH WHITE ACRYLIC DIFFUSER AND 1100 LUMENS, 16 WATTS, 4000K CCT FOR OPERATION AT 120V.	LITHONIA OR APPROVED EQUAL	FMLRL 11 14840 M4
B	14" DIAMETER, LOW PROFILE CEILING MOUNTED LED FIXTURE WITH WHITE ACRYLIC DIFFUSER AND 1600 LUMENS, 24 WATTS, 4000K CCT FOR OPERATION AT 120V.	LITHONIA OR APPROVED EQUAL	FMLRL 14 20840 M4
C	16" ROUND LED PENDANT FIXTURE 22W, 1900 LUMEN, 3500K WHITE FINISH, DIMMABLE 120V	BROWNLEE OR APPROVED EQUAL	2680–16–WH–R11–WH–CC1 –WHC–35K–DTR
D	6 DIAMETER, SURFACE MOUNTED LED DISK LIGHT, 1000 LUMENS, 15 WATTS, 4000K CCT FOR OPERATION AT 120V.	LITHONIA OR APPROVED EQUAL	JSBT 6IN SWW 90CRI WL MW M6
F	2' LED LOW PROFILE WRAPAROUND FIXTURE, SURFACE MOUNTED WHITE, 3000 LUMENS, 3500K, 120V	LITHONIA OR APPROVED EQUAL	FMLWL 24 8 35 MVOLT
G	24" LONG LED VANITY WALL BRACKET C/W ACRYLIC DIFFUSER AND BRUSHED NICKLE FINISH, 27W LIGHTING, 3500K, 1550 LUMENS, 120V OPERATION.	LITHONIA OR APPROVED EQUAL	FMVCSLS 24IN MVOLT 30K35K40K 90CRI BN M6
H	6" ROUND RECESSED LED DOWNLIGHT FOR WET LOCATION, 1300 LUMEN 16 W 3500K, 120V, MATTE WHITE, 120V	LITHONIA OR APPROVED EQUAL	WF6 DREG B ALO20 SWW5 90CRI MW M6
K	WALL MOUNTED LED WALL PACK, DARK BRONZE FINISH, SELECTABLE MAX 13 W WEATHER PROOF, SELECTABLE SET AT 3000K 120V, WITH PHOTOCELL	LITHONIA OR APPROVED EQUAL	WPXO LED ALO SWW2 MVOLT PE DDBXD

DRAWING NOTES:

1 SPRINKLER TAMPER/FLOW/PRESSURE SENSORS AND MONITORING PANEL SUPPLIED AND INSTALLED BY SPRINKLER CONTRACTOR. COORDINATE ELECTRICAL REQUIREMENTS

NOTES:

1. SMOKE ALARMS TO BE 120V WITH BATTERY BACK UP SMOKE AND CO DETECTION WITH STROBE AND INTERCONNECTED AS PER ONTARIO BUILDING CODE REQUIREMENTS.
2. EMERGENCY LIGHT BATTERY PACKS TO BE ON SAME CIRCUIT AS LIGHTING IN THAT ROOM.
3. EXIT SIGNS TO BE POWERED FROM A DEDICATED CIRCUIT A–60
4. MECHANICAL TO PROVIDE DUCT TYPE SMOKE DETECTOR TO SHUTDOWN FURNACE FAN ON ACTIVATION. COORDINATE WITH MECHANICAL CONTRACTOR FOR ELECTRICAL REQUIREMENTS.

NO.	DESCRIPTION	DATE	BY
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0	ISSUED FOR PERMIT	12.10.2024	DRM

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PROJECT
DEAF BLIND
ONTARIO RENOVATION

711 Crowley St.
Peterborough, ON.

TITLE
LIGHTING AND FA LAYOUT

DESIGN	DRM
DRAWN	AJM
CHECKED	DRM
APPROVED	DRM
PROJECT	7471

SCALE 1/4" = 1'–0"
DWG NO. E2

CADD FILE NO. 7471E2

SPECIFICATION

1. GENERAL CONDITIONS
1. DO ALL WORK IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE, CURRENT EDITION, BASED UPON THE CANADIAN ELECTRICAL CODE, PART I, CSA STANDARD C22.1, AND ALL BULLETINS TO DATE.

2. SCOPE OF WORK
2.1 PROVIDE ALL MATERIALS EQUIPMENT AND LABOUR TO PROVIDE A COMPLETE OPERATING INSTALLATION AS DESIGNATED IN THIS SPECIFICATION AND AS INDICATED ON THE DRAWINGS EXCEPT WHERE OTHERWISE NOTED.
2.2 THE SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, SUPPLY AND INSTALLATION OF THE FOLLOWING ITEMS:
2.2.1 POWER DISTRIBUTION.
2.2.2 LIGHTING
2.2.3 EMERGENCY LIGHTING AND EXIT SIGNAGE.
2.2.4 FEEDERS AND OVER CURRENT PROTECTION FOR MECHANICAL EQUIPMENT.
2.2.5 EMPTY RACEWAY SYSTEM FOR TELEPHONE AND CABLE TV SYSTEMS
2.2.6 FIRE ALARM SYSTEM

3. GENERAL
3.1 ALL MATERIALS SHALL BE CSA APPROVED, NEW AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

4. IDENTIFICATION
4.1 WIRES TO BE COLORED AS FOLLOWS: 120V AC NEUTRAL WHITE
12V DC BLUE.
120V AC SWITCHED, BLACK OR RED.
120V AC LINE, BLACK.

4.2 PROVIDE LAMICOID LABELS FOR NEW OR REVISED BREAKER PANELS, SPLITTERS AND DISCONNECTS.
4.3 PROVIDE TYPED CIRCUIT LISTING FOR NEW OR REVISED BREAKER PANELS.

5. EXAMINATION OF SITE
5.1 PRIOR TO SUBMITTING TENDERS, THIS CONTRACTOR SHALL VISIT THE SITE TO DETERMINE ALL EXISTING CONDITIONS.
5.2 ALLOW FOR ALL COSTS ASSOCIATED WITH COMPLETING THE WORK OF DIVISION 16 IN ACCORDANCE WITH EXISTING SITE AND BUILDING CONDITIONS.
5.3 NO ALLOWANCE FOR EXTRA PAYMENTS TO THE CONTRACTOR WILL BE MADE BY THE OWNER FOR FAILING TO VISIT AND EXAMINE SITE CONDITIONS.

6. INSURANCE
6.1 SUB-CONTRACTOR SHALL MAINTAIN SUCH INSURANCE AS WILL FULLY PROTECT BOTH THE OWNER AND THE SUB-CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKMEN'S COMPENSATION ACT, ALSO ALL INSURANCE AS NOTED WITHIN ARCHITECTURAL GENERAL CONDITIONS.

7. AS BUILT DRAWINGS
7.1 MAINTAIN A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE DRAWINGS SHOWING ALL AS-BUILT CONDITIONS SHALL BE FORWARDED TO THE ARCHITECT AT THE COMPLETION OF THIS CONTRACT AND BEFORE APPLYING FOR FINAL PAYMENT.

8. REVISIONS AND EXTRAS
8.1 ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL NOT BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE ARCHITECT. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR , HOURLY RATES, ETC.

9. CLEAN UP
9.1 BE RESPONSIBLE TO KEEP THE AREA CLEAN AT ALL TIMES AND TO PERIODICALLY REMOVE ALL DEBRIS.

10. CUTTING AND PATCHING
10.1 ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT BY THIS DIVISION. NO CHASING BLOCK WORK WILL BE ALLOWED. CUTTING AND DRILLING SHALL BE PERFORMED IN A MANNER SO AS TO CAUSE LITTLE DAMAGE. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.

11. COORDINATION
11.1 BE RESPONSIBLE TO COORDINATE THE INSTALLATION OF EQUIPMENT, CONDUIT WORK, LIGHTING FIXTURES, ETC. WITH OTHER TRADES AND THE OWNER'S REPRESENTATIVE PRIOR TO THE ACTUAL INSTALLATION.

12. RESPONSIBILITY
12.1 BE RESPONSIBLE FOR ELECTRICAL WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.

13. WIRING MATERIALS AND METHODS
13.1 USE MATERIALS AND METHODS APPROVED BY ONTARIO ELECTRICAL CODE FOR USE IN NON-COMBUSTIBLE CONSTRUCTION.
13.2 ALL BUILDING WIRE SHALL BE COPPER TYPE RW90-XLPE WHERE APPROPRIATE EXCEPT WHERE OTHERWISE NOTED.
13.3 USE MINIMUM OF #12 AWG FOR BRANCH CIRCUIT WIRING.
13.4 ARMORED CABLE TYPE AC90 (BX) WITH INTERLOCKING ARMOUR FABRICATED FROM ALUMINUM STRIP C/W COPPER INSULATED CONDUCTORS, SIZE AS INDICATED, TO BE USED IN CONCEALED WALL AND CEILING CAVITIES.

14. SHOP DRAWINGS AND PRODUCT DATA
14.1 'SHOP DRAWINGS' MEANS DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES, PERFORMANCE, CHARTS, BROCHURES, AND OTHER DATA WHICH ARE TO BE PROVIDED BY CONTRACTOR TO ILLUSTRATE DETAILS OF A PORTION OF THE WORK.
14.2 INDICATE MATERIALS METHODS OF CONSTRUCTION AND ATTACHMENT OR ANCHORAGE, NECESSARY FOR COMPLETION OF WORK.
14.3 ADJUSTMENTS MADE ON SHOP DRAWINGS BY OWNER OR ENGINEER ARE NOT INTENDED TO CHANGE CONTRACT PRICE.
14.4 MAKE CHANGES IN SHOP DRAWINGS AS OWNER OR ENGINEER MAY REQUIRE.
14.5 SUBMIT 6 HARD COPIES, OR 1 HIGH QUALITY ELECTRONIC COPY OF PRODUCT DATA SHEETS OR BROCHURES FOR LIGHTING FIXTURES, EMERGENCY LIGHTING, EXIT SIGNS, MAIN SERVICE BOARD, MOTOR STARTERS, FIRE ALARM EQUIPMENT AND POWER DISTRIBUTION EQUIPMENT.
14.6 PROVIDE 2 MAINTENANCE MANUALS COMPLETE WITH WARRANTEE, CERTIFICATE OF INSPECTION BY ESA, FIRE ALARM VERIFICATION REPORT, AND COPY OF ALL PRODUCT LITERATURE AND MAINTENANCE INFORMATION.

15. SYSTEMS DEMONSTRATION
15.1 PRIOR TO FINAL INSPECTION DEMONSTRATE OPERATION OF EACH SYSTEM TO OWNER AND ENGINEER.
15.2 INSTRUCT PERSONNEL IN OPERATION ADJUSTMENT AND MAINTENANCE OF EQUIPMENT AND SYSTEMS, USING PROVIDED OPERATION AND MAINTENANCE DATA AS BASIS FOR INSTRUCTION.

16. PERMITS, FEES AND INSPECTION
16.1 SUBMIT TO ELECTRICAL SAFETY AUTHORITY NECESSARY NUMBER OF DRAWINGS AND SPECIFICATIONS FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
16.2 PAY ASSOCIATED FEES, INCLUDING EQUIPMENT APPROVAL INSPECTION FEE.
16.3 OWNER WILL PROVIDE DRAWINGS AND SPECIFICATIONS REQUIRED BY ELECTRICAL SAFETY AUTHORITY AT NO COST.
16.4 NOTIFY ENGINEER OF CHANGES REQUIRED BY ELECTRICAL SAFETY AUTHORITY PRIOR TO MAKING CHANGES.
16.5 FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL SAFETY AUTHORITY AND AUTHORITIES HAVING JURISDICTION OF COMPLETION OF WORK TO ENGINEER.

17. THIRD PARTY TESTING
17.1 THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THIRD PARTY TESTING OF THE LIGHTING SYSTEM IN ACCORDANCE WITH ASHRAE STANDARD 90.1-2010, SECTION 9.4.4 FUNCTIONAL TESTING. THE PARTY RESPONSIBLE FOR THE FUNCTIONAL TESTING SHALL NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT AND SHALL PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA.
17.2 LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
17.3 WHEN SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS OR PHOTOSENSORS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:
17.2.1 CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME-OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE, LIGHTS TURN OFF ONLY AFTER SPACE IS VACATED. WHERE AN AUTO-ON MODE HAS BEEN SELECTED, LIGHTS DO NOT TURN ON UNLESS SPACE IS OCCUPIED.
17.2.2 CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULE CONTROLS ARE PROGRAMMED CORRECTLY TO TURN THE LIGHTS OFF.
17.2.3 WHERE DAYLIGHT HARVESTING CAPABILITY HAS BEEN INSTALLED, CONFIRM THAT PHOTOSENSOR CONTROLS REDUCE ELECTRIC LIGHT LEVELS BASED ON THE AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED.

18. WARRANTY
18.1 AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO WORKMANSHIP OR MATERIALS WHICH IN THE OWNER'S OPINION, ARE NOT DUE TO MISUSE OR NEGLECT.

19. CONDUITS AND RACEWAYS
19.1 RIGID GALVANIZED STEEL CONDUIT TO BE USED WHERE SUBJECT TO MECHANICAL DAMAGE.
19.2 ELECTRICAL METALLIC TUBING (EMT) WITH COUPLINGS TO BE USED EXCEPT WHERE EMBEDDED IN CONCRETE OR SUBJECT TO UNDUE MOISTURE OR MECHANICAL DAMAGE.
19.3 RIGID PVC CONDUIT WHERE EMBEDDED IN CONCRETE OR BELOW GRADE.
19.4 FLEXIBLE ALUMINUM CONDUIT WITH WEATHERPROOF COVERING TO BE USED WHERE SUBJECT TO VIBRATION OR STRAIN RELIEF.
19.5 CONDUITS IN FINISHED AREA SHALL BE CONCEALED.
19.6 CONDUITS SHALL BE MINIMUM 1/2".

20. INSTALLATION OF OUTLETS
20.1 THE DRAWINGS SHOW APPROXIMATE LOCATION OF OUTLETS, EXACT LOCATION SHALL BE COORDINATED ON THE SITE WITH OTHER TRADES, ARCHITECTURAL DRAWINGS, ETC. OUTLETS INACCURATELY LOCATED SHALL BE READJUSTED OR RELOCATED AT THE CONTRACTOR'S EXPENSE. UNLESS OTHERWISE NOTED ON THE DRAWING LOCATE OUTLETS AS FOLLOWS:
20.1.1 RECEPTACLES, TELEPHONE AND DATA OUTLETS (15.7") 400mm ABOVE FINISHED FLOOR.
20.1.2 OUTLETS OVER COUNTER (45") 1143mm ABOVE FLOOR OR CO-ORDINATION.
20.1.3 OUTLETS IN MECHANICAL, ELECTRICAL AND TELEPHONE ROOMS (48") 1220mm ABOVE FLOOR.
20.1.4 LIGHT SWITCHES NOT LESS THAN (35.4") 900mm AND NOT MORE THAN (43") 1100mm ABOVE FLOOR.
20.2 RACEWAYS SHALL BE EMT UNLESS OTHERWISE NOTED.
20.3 SUPPORT OUTLET BOXES, JUNCTION BOXES, CONDUIT AND THE LIKE.

21. RECEPTACLES
21.1 WHITE DUPLEX RECEPTACLES CSA TYPE 5-15R, 125V OR CSA 5-20A 20A, T-SLOT, U GROUND.
21.2 BLACK COVER PLATES.
21.3 IF RECEPTACLE IS SURFACE MOUNTED USE CAST BOX AND STAINLESS STEEL COVER PLATE.

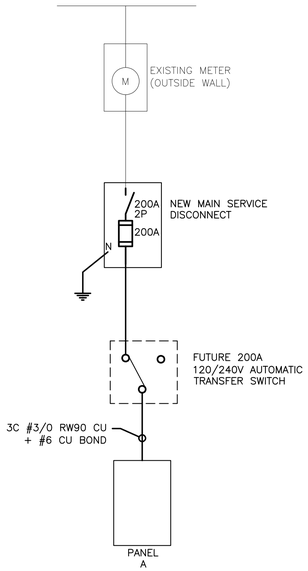
22. EXCAVATION, BACKFILL AND CONCRETE WORK
22.1 WHERE REQUIRED FOR UNDERGROUND SERVICE (POWER OR TELEPHONE) THE EXCAVATION, BACKFILL AND CONCRETE WORK SHALL BE BY THE GENERAL CONTRACTOR. THE ELECTRICAL TRADE SHALL SUPERVISE THE PROCESSING OF CONCRETE AROUND DUCT BANK, TO ENSURE THEY ARE FREE FROM VOIDS SHALL ADVISE THE GENERAL CONTRACTOR OF THIS WORK FOR INCLUSION IN THE GENERAL CONTRACTOR'S TENDER PRICE.

23. MECHANICAL EQUIPMENT
23.1 PROVIDE ALL CONDUIT, WIRING, SPLITTERS, OUTLET BOXES AND DISCONNECT SWITCHES AS SHOWN. ALL MOTORS, STARTERS AND CONTROL WIRING PROVIDED BY MECHANICAL DIVISION UNLESS OTHERWISE NOTED. INSTALL ALL STARTERS AND WIRE COMPLETE. ALL EXTERIOR DISCONNECTS TO BE WEATHERPROOF.
23.2 THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL MOTOR CONNECTION FOR PROPER PHASE ROTATION, WHERE APPLICABLE.

24. SWITCHES
24.1 20A, 120V, SINGLE POLE SWITCHES
24.2 WHITE TOGGLE
24.3 BLACK COVER PLATES.
24.4 IF SWITCH IS SURFACE MOUNTED USE CAST BOX.

25. EQUIPMENT FOR EMERGENCY LIGHTING
25.1 SUPPLY VOLTAGE: 120V AC
25.2 OUTPUT VOLTAGE: 12V DC.
25.3 OPERATIONS TIME: 30 MINUTES MINIMUM
25.4 CABINET: SUITABLE FOR DIRECT OR SHELF MOUNTING TO WALL C/W KNOCKOUTS FOR CONDUIT, REMOVABLE OR HINGED FRONT PANEL FOR EASY ACCESS TO BATTERIES.

26. TELEPHONE CABLE T.V./COMPUTER RACEWAY SYSTEM, (ETC.)
26.1 PROVIDE CONDUIT SYSTEMS FOR TELEPHONE AS SHOWN ON THE DRAWINGS.
26.2 WHERE CONDUITS NOT SHOWN ON DRAWINGS PROVIDE CONDUITS FROM OUTLET BOX TO ACCESSIBLE CEILING SPACE AS NEEDED.
26.3 THIS CONTRACTOR SHALL PROVIDE AND/OR COORDINATE THE SIZE, TYPE AND LOCATION OF THE INCOMING TELEPHONE CONDUIT WITH THE TELEPHONE COMPANY OR THE BUILDING OWNER.
26.4 RACEWAYS (OTHER THAN INCOMING) SHALL BE EMT.
26.5 A MAXIMUM OF 2 LONG RADIUS 90 DEGREE BENDS SHALL BE PROVIDED BETWEEN PULL BOXES.
26.6 A WIRE SHALL BE PULLED AND LEFT IN EACH CONDUIT RUN TO FACILITATOR THE FUTURE PULLING OF WIRES.
26.7 PROVIDE NECESSARY BOXES AND ASSOCIATED COVER PLATES AS REQUIRED FOR THE ABOVE SYSTEMS.
26.8 CONTRACTOR TO PROVIDE CAT5 CABLE, OR PLENUM RATED EQUAL WHERE REQUIRED AND TERMINATIONS AT WALL AND PANEL FOR DATA. LEAVE 5' AT PANEL TO ALLOW FOR CONNECTIONS TO NETWORKING EQUIPMENT.



1 E4 SINGLE LINE DIAGRAM
SCALE: N.T.S.

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT & TENDER	12.23.2024	DRM
0	ISSUED FOR PERMIT	12.10.2024	DRM

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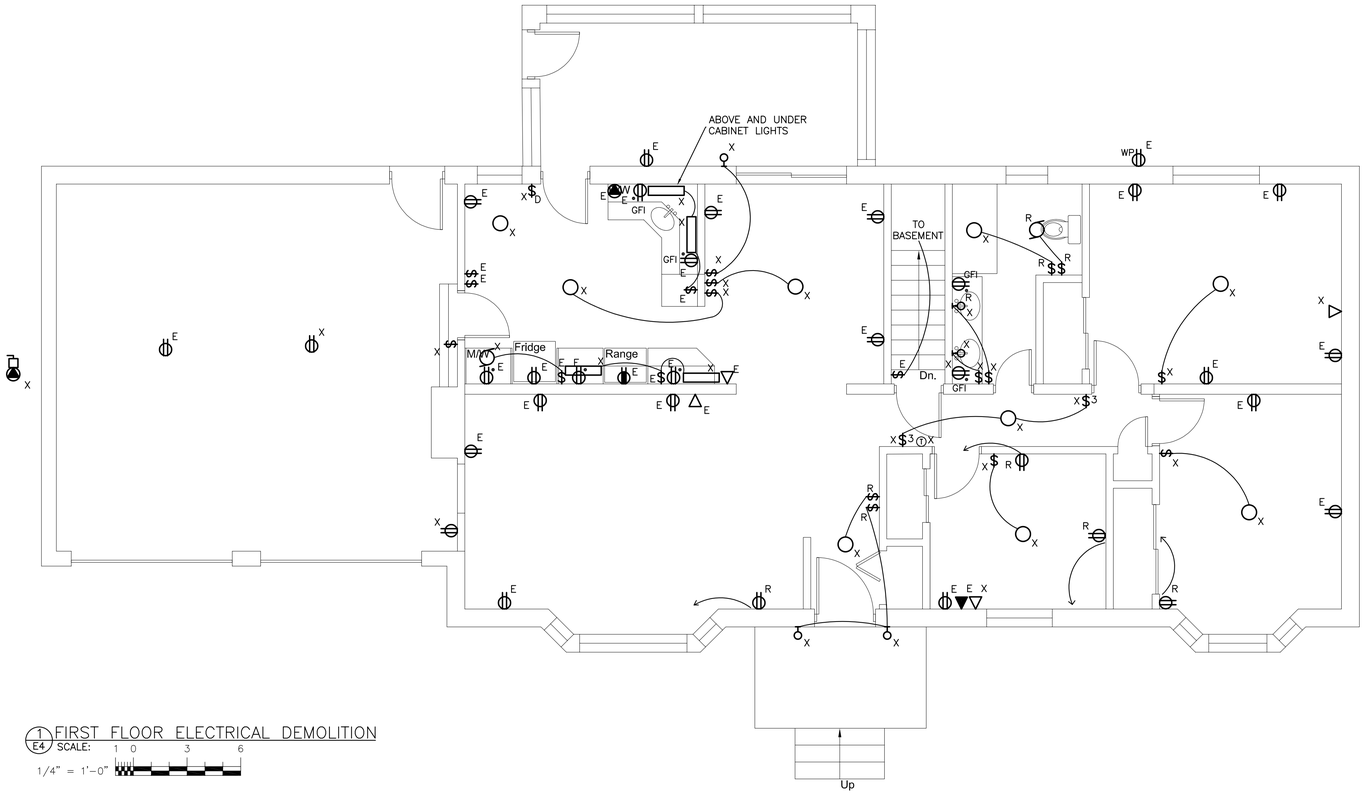
PROJECT
DEAF BLIND
ONTARIO RENOVATION

711 Crowley St.
Peterborough, ON.

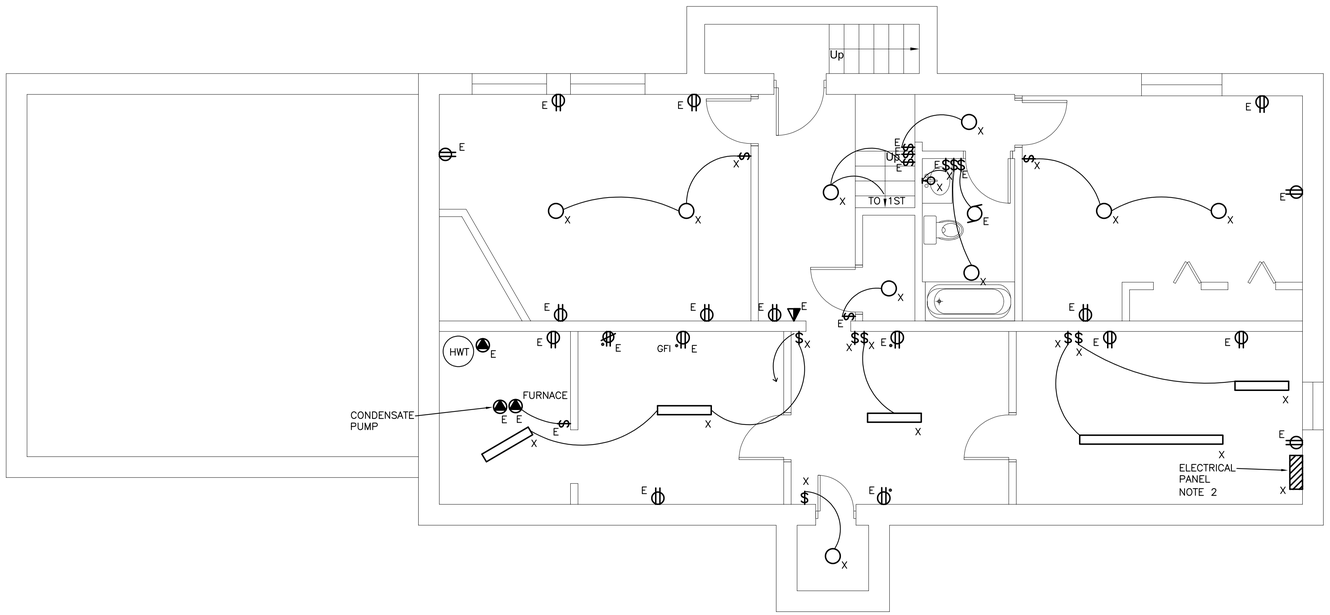
TITLE
SPECIFICATIONS

DESIGN	DRM	SCALE	N.T.S.
DRAWN	AJM	DWG NO.	E3
CHECKED	DRM		
APPROVED	DRM		
PROJECT	7471		

CADD FILE NO. 7471E3



1 E4 FIRST FLOOR ELECTRICAL DEMOLITION
SCALE: 1 0 3 6
1/4" = 1'-0"



2 E4 BASEMENT ELECTRICAL DEMOLITION
SCALE: 1 0 3 6
1/4" = 1'-0"

NOTES:

1. ELECTRICAL TO REMAIN UNLESS NOTED OTHERWISE
2. EXISTING PANEL TO BE REPLACED DISCONNECT WIRING AND KEEP FOR REUSE UNLESS NOTED OTHERWISE.
3. FACEPLATES/RECEPTACLES/SWITCHES TO BE CHANGED WHERE REQUIRED TO END UP WITH BLACK FACEPLATES AND WHITE REC/SWITCH COLOUR.

ELECTRICAL LEGEND	
SYMBOL	SYMBOL MEANING
	RECESSED PANEL
	SURFACED MOUNTED PANEL
	DUPLEX RECEPTACLE, 120V, 15A
	DUPLEX RECEPTACLE, 120V, 15A MOUNTED ABOVE COUNTER
GFI	GROUND FAULT INTERRUPTOR RECEPTACLE MOUNTED ABOVE COUNTER
	SPLIT RECEPTACLE MOUNTED ABOVE COUNTER
CH	CEILING MOUNTED RECEPTACLE
	STOVE RECEPTACLE, CSA 14-50R
	DRYER RECEPTACLE, CSA 14-30R
	SWITCHED RECEPTACLE
WP	WEATHERPROOF RECEPTACLE
	WELDING RECEPTACLE
	DIRECT CONNECTION TO EQUIPMENT VOLTAGE/PHASE/FREQUENCY AS NOTED
	MOTOR LOAD VOLTAGE/PHASE/FREQUENCY AS NOTED
	TELEPHONE OUTLET
	DATA OUTLET
	TELEVISION OUTLET
CO	CARBON MONOXIDE DETECTOR
	FIRE ALARM CONTROL PANEL
V	VIDEO CAMERA
$	TOGGLE SWITCH
$3	3-WAY TOGGLE SWITCH
$D	DIMMER SWITCH

DEMOLITION LEGEND	
E	EXISTING TO REMAIN
R	EXISTING TO RELOCATE
X	EXISTING TO REMOVE

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT & TENDER	12.23.2024	DRM
0	ISSUED FOR PERMIT	12.10.2024	DRM

REVISIONS

Kirkland Engineering Ltd BCIN: 28857

REGISTERED PROFESSIONAL ENGINEER
D.R.MILLEN
100134238
DEC 23/24
PROVINCE OF ONTARIO
ELECTRICAL

NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER.

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KIRKLAND ENGINEERING LTD.

PROJECT
DEAF BLIND
ONTARIO RENOVATION

711 Crowley St.
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TITLE
ELECTRICAL DEMOLITION

DESIGN	DRM
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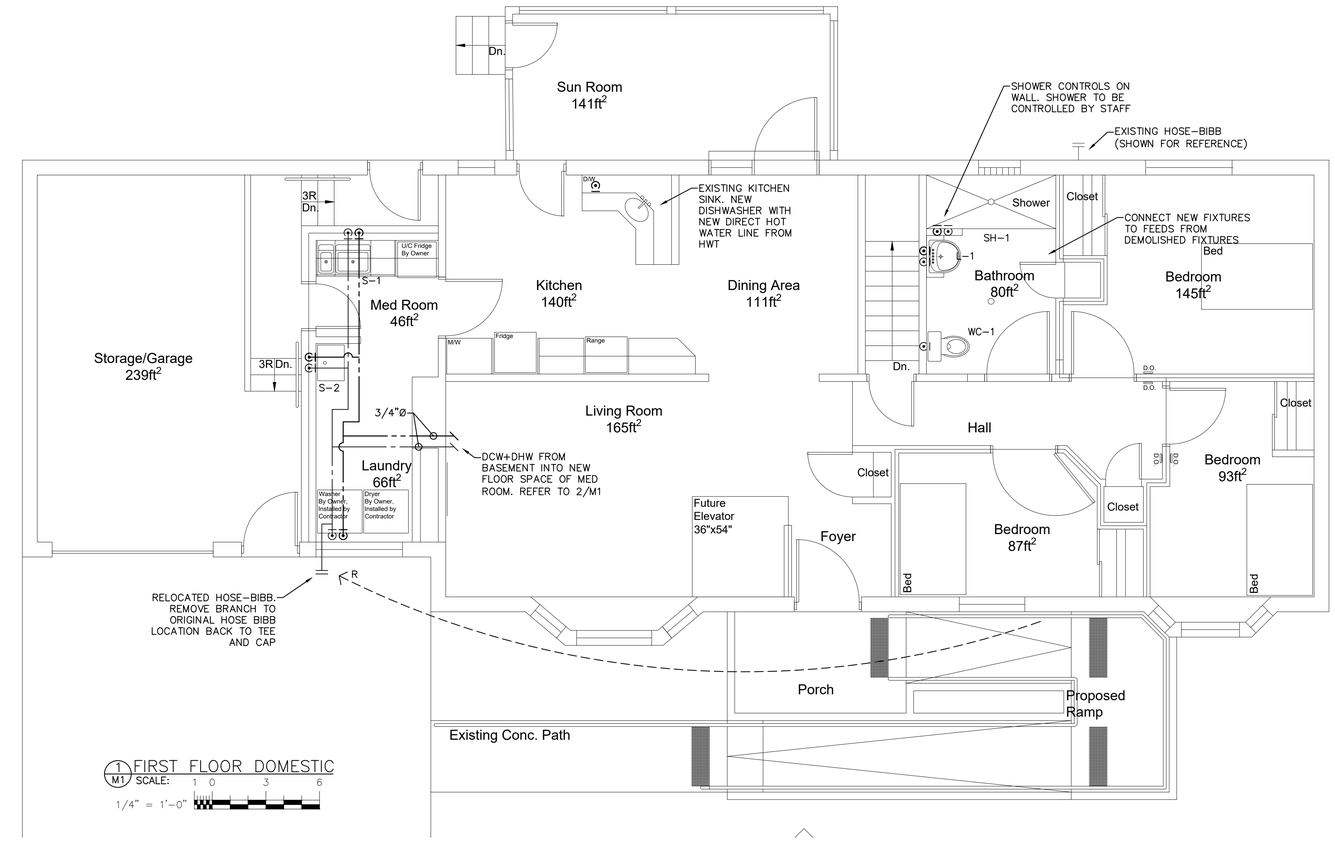
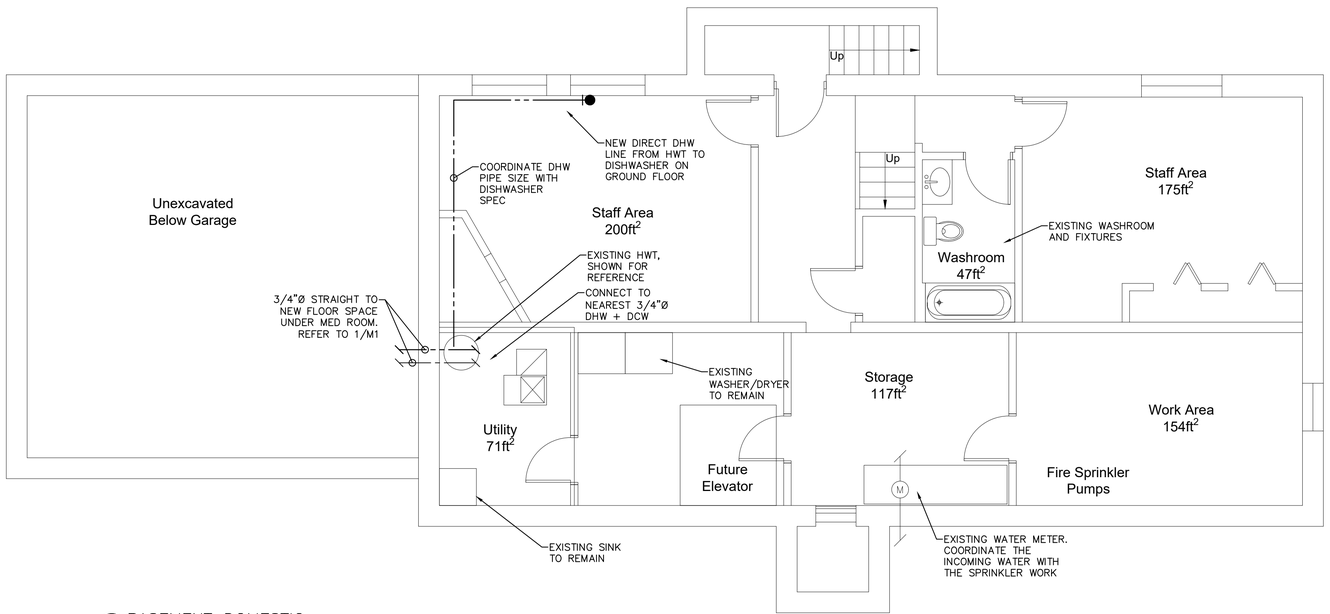
SCALE 1/4" = 1'-0"
DWG NO. E4

CADD FILE NO. 7471E4



1 M1 FIRST FLOOR DOMESTIC
SCALE: 1 0 3 6
1/4" = 1'-0"



2 M1 BASEMENT DOMESTIC
SCALE: 1 0 3 6
1/4" = 1'-0"

GENERAL NOTES

1. ALL PENETRATIONS THROUGH FIRE-RATED ASSEMBLIES TO BE COMPLETE WITH FIRE-STOP DEVICES OR COLLARS, OR FIRE-RESISTANT CAULKING IN CONFORMANCE WITH ASTM E 814.

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT AND TENDER	2024.12.23	CSM
0	ISSUED FOR PERMIT	2024.12.10	CSM

REVISIONS

Kirkland Engineering Ltd BCIN: 28857

REGISTERED PROFESSIONAL ENGINEER
C.S.MULLER
100572425
DEC 23/24
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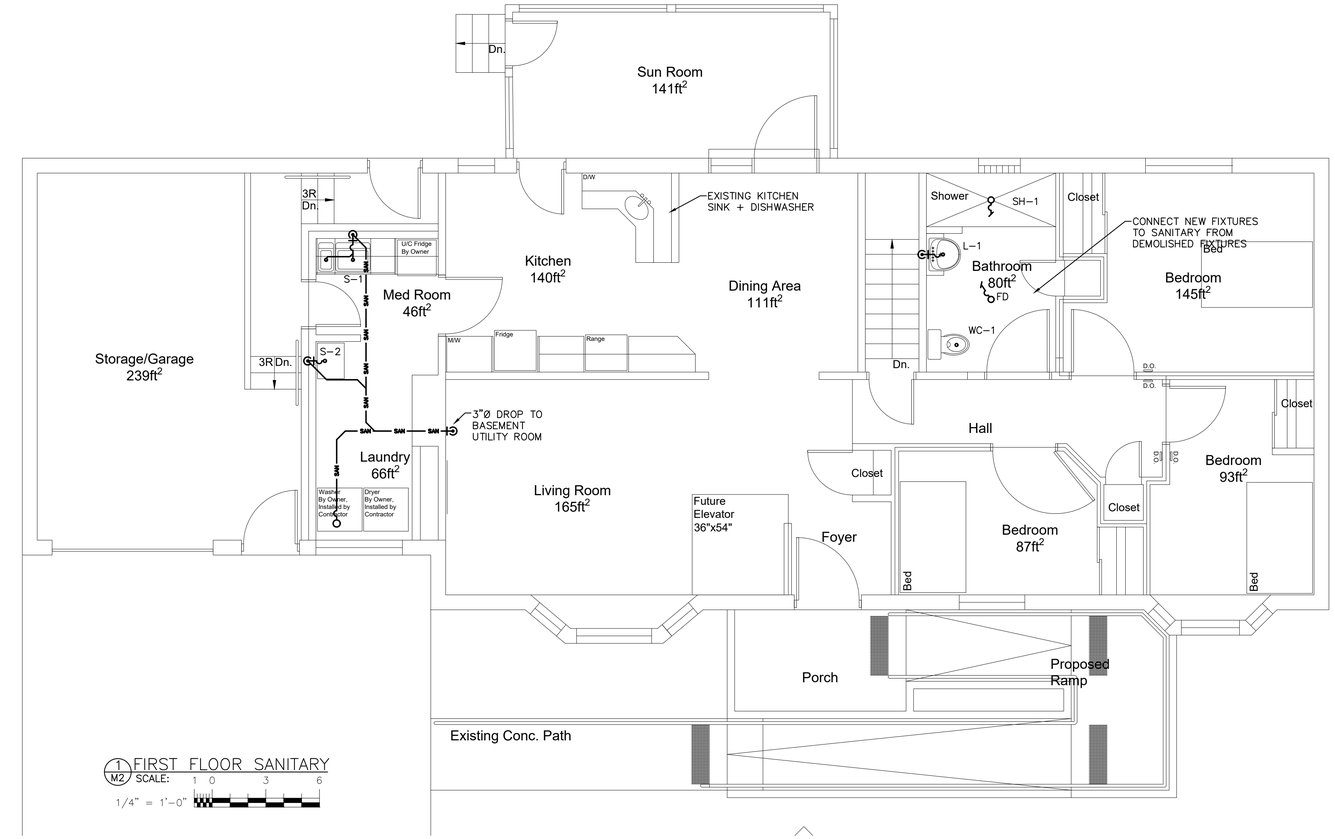
PROJECT
DEAFBLIND ONTARIO HOME CONVERSION

711 Crowley St.
Peterborough, ON.

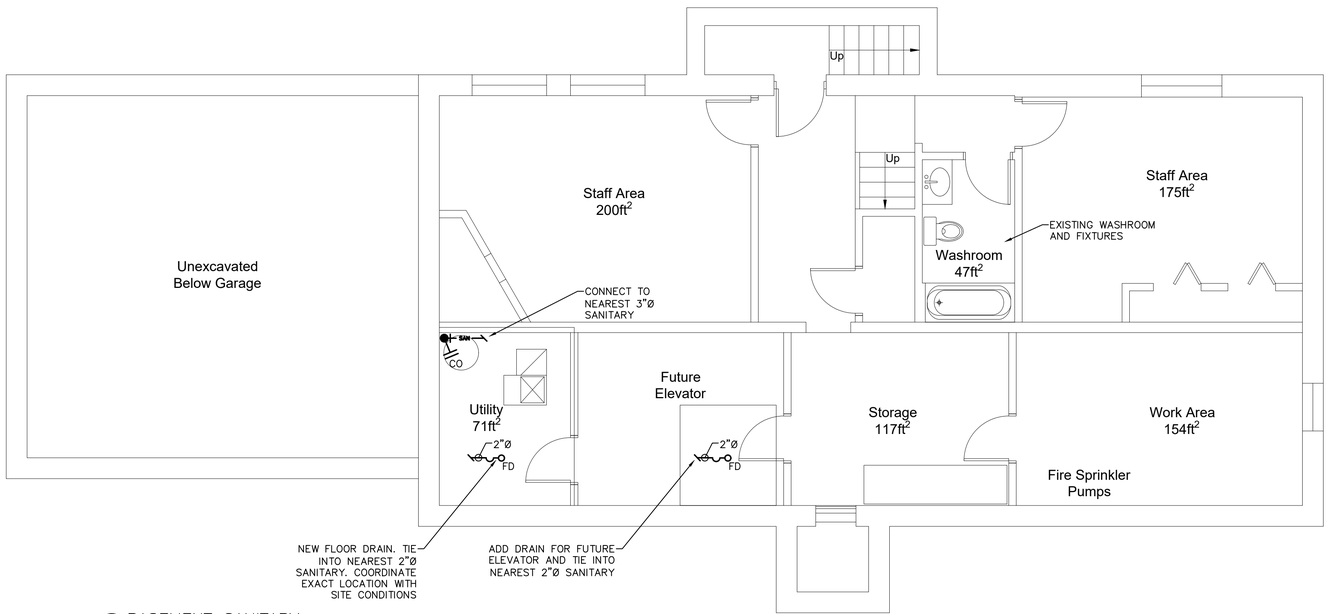
TITLE
DOMESTIC LAYOUT

DESIGN	CSM	SCALE	AS NOTED
DRAWN	CSM	DWG NO.	M1
CHECKED	CSM		
APPROVED	CSM		
PROJECT	7471		

CADD FILE NO. 7471M1



1 M2 FIRST FLOOR SANITARY
SCALE: 1 0 3 6
1/4" = 1'–0"



2 M2 BASEMENT SANITARY
SCALE: 1 0 3 6
1/4" = 1'–0"

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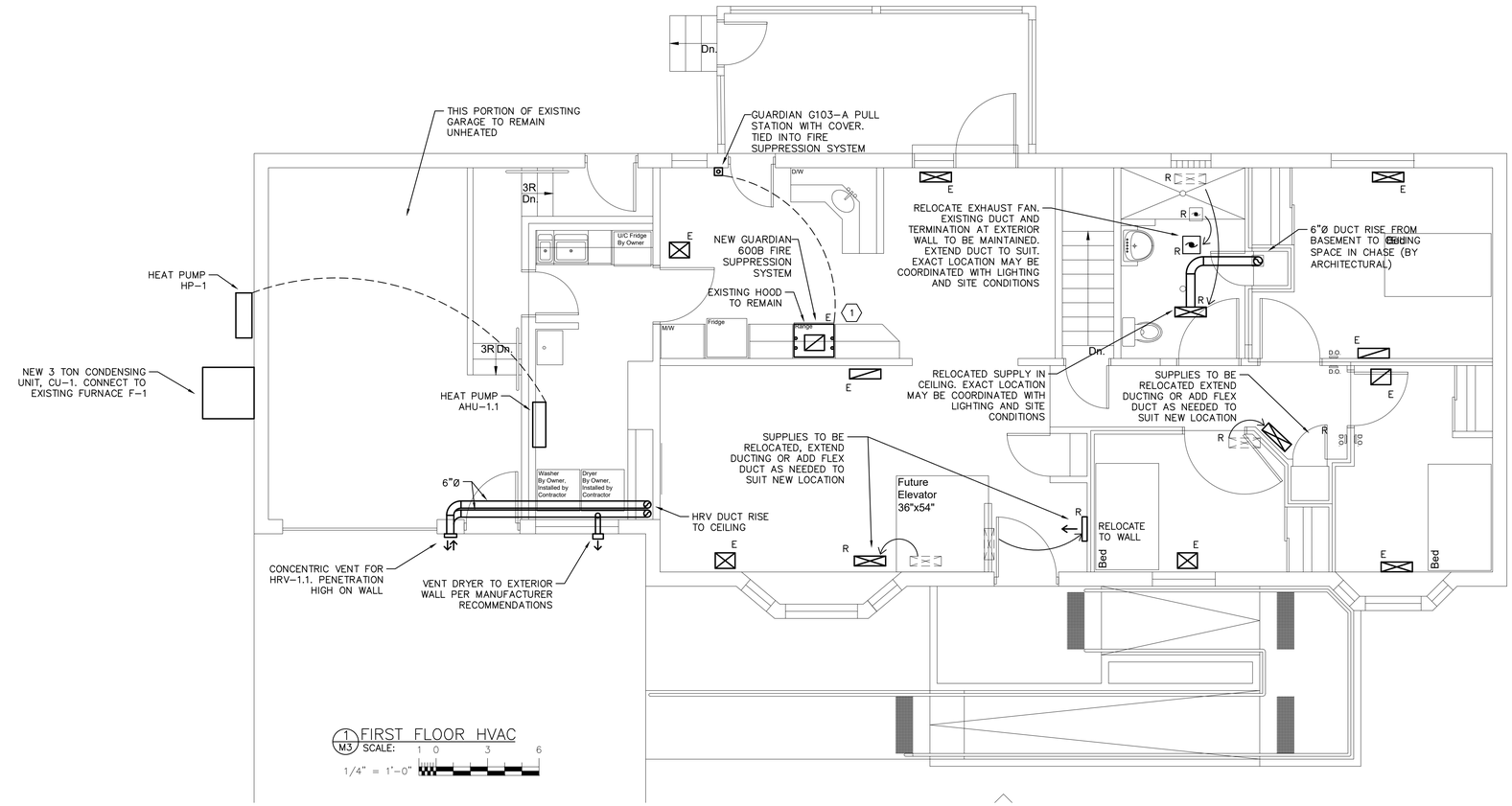
PROJECT
DEAFBLIND ONTARIO
HOME CONVERSION

711 Crowley St.
Peterborough, ON.

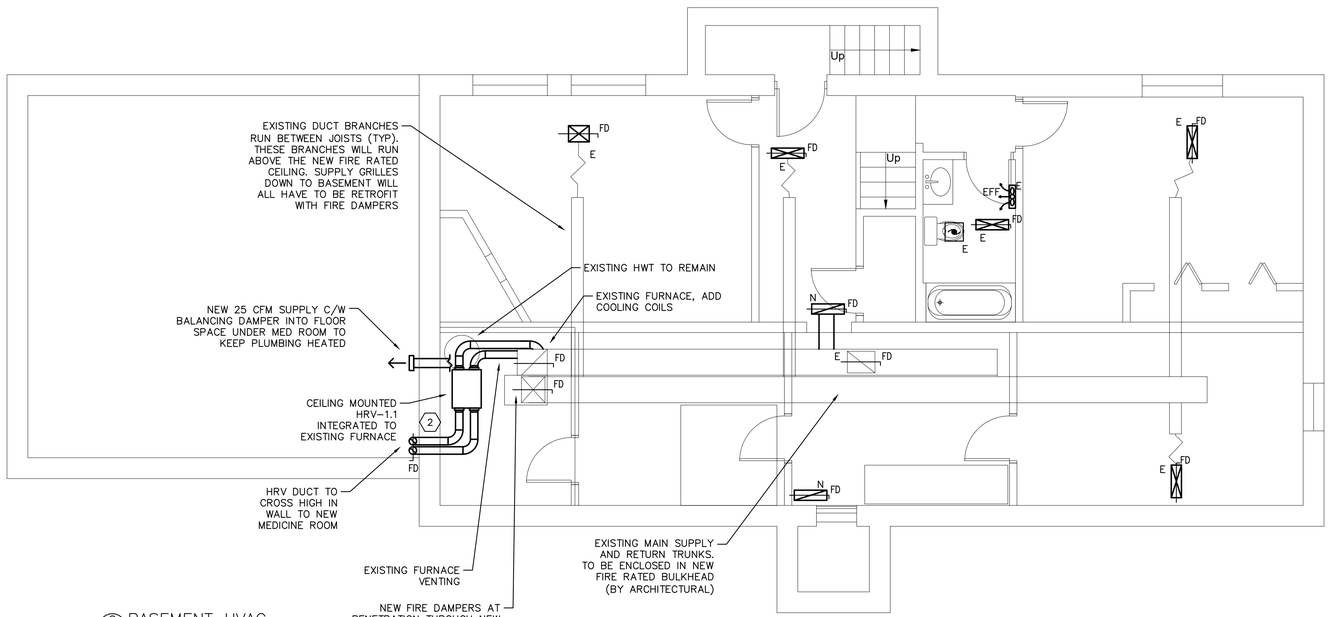
TITLE
SANITARY LAYOUT

DESIGN	CSM	SCALE	AS NOTED
DRAWN	CSM	DWG NO.	M2
CHECKED	CSM		
APPROVED	CSM		
PROJECT	7471		

CADD FILE NO. 7471M2



1 M3 FIRST FLOOR HVAC
SCALE: 1 0 3 6
1/4" = 1'-0"



2 M3 BASEMENT HVAC
SCALE: 1 0 3 6
1/4" = 1'-0"

LEGEND:

E EXISTING TO REMAIN

R EXISTING TO RELOCATE

N NEW

GENERAL NOTES:

1. BASEMENT CEILING TO BE FIRE RATED (BY ARCHITECTURAL)
2. HORIZONTAL DUCT RUNS IN BASEMENT TO BE ROUTED ABOVE FIRE RATED CEILING. FIRE DAMPERS ARE TO BE ADDED TO ANY DUCT OR GRILLE THAT PENETRATES THE NEW FIRE RATED CEILING.

DRAWING NOTES

1. EXISTING RANGE HOOD COMPLETE WITH NEW GUARDIAN 600B FIRE SUPPRESSION SYSTEM. SUPPRESSION SYSTEM FOR RANGES WITH MAX WIDTH OF 30" WIDE X 24" DEEP OR 864 SQ. NOZZLE REQUIRES A MIN HEIGHT OF 16" FROM THE NOZZLE HOUSING TO THE RANGE AND CANNOT EXCEED 27". THE SENSOR REQUIRES A MIN HEIGHT OF 16" TO THE RANGE AND A MAX OF 27". COMPLETE WITH GUARDIAN G103-1 PULL STATION WITH COVER.
2. PROVIDE FIRE DAMPER FOR THIS BRANCH WHERE IT CROSSES THE FIRE SEPARATION.

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PROJECT

DEAFBLIND ONTARIO HOME CONVERSION

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Peterborough, ON.

TITLE

HVAC LAYOUT

DESIGN	CSM	SCALE	AS NOTED
DRAWN	CSM	DWG NO.	M3
CHECKED	CSM		
APPROVED	CSM		
PROJECT	7471		

CADD FILE NO. 7471M3

GENERAL MECHANICAL SPECIFICATIONS

1. THE MECHANICAL DRAWINGS DO NOT SHOW ALL THE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL DETAILS. INFORMATION INVOLVING ACCURATE DIMENSIONING OF THE SITE CONDITIONS SHALL BE TAKEN FROM SITE BY CONTRACTOR. CONTRACTOR TO MAKE ANY NECESSARY MODIFICATIONS OR ADDITIONS, WITHOUT CHARGE, TO ACCOMMODATE THE SITE CONDITIONS.

2. EQUIPMENT TO BE AS SPECIFIED OR APPROVED EQUIVALENT. DESIGN BASED ON EQUIPMENT AS SPECIFIED IN EQUIPMENT SCHEDULE AND IS NOT INTENDED TO SHOW EQUIPMENT IN EXACT LOCATIONS. CONTRACTOR IS RESPONSIBLE TO VERIFY EQUIPMENT DIMENSIONS TO ENSURE THAT EQUIPMENT WILL FIT SITE CONDITIONS. ANY COST ASSOCIATED WITH USING EQUIPMENT OTHER THAN WHAT IS SPECIFIED IS THE FULL RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA WILL BE ALLOWED FOR THESE COSTS.

3. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, THE SPECIFICATION, AND ALL OTHER TENDER DOCUMENTS.

4. ALL PIPING AND DUCT WORK TO BE LABELED INCLUDING DIRECTION OF FLOW EVERY 8' AND EACH CHANGE IN DIRECTION.

5. CONTRACTOR IS RESPONSIBLE TO ENSURE ALL EQUIPMENT AND MATERIALS CAN FIT INTO MECHANICAL ROOM OR ITS PLACE, THROUGH FINISHED OPENINGS, OR THAT MATERIAL IS PLACED IN MECHANICAL ROOM AT APPROPRIATE PHASE OF CONSTRUCTION.

6. PRIOR TO SUBMITTING TENDERS, THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE ALL EXISTING CONDITIONS. ALLOW FOR ALL COSTS ASSOCIATED WITH COMPLETING THE WORK OF MECHANICAL DIVISION IN ACCORDANCE WITH EXISTING SITE AND BUILDING CONDITIONS. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITY CONNECTIONS WHERE CONNECTIONS ARE REQUIRED. CONTRACTOR TO VERIFY LOCATION, DEPTH, ELEVATION, AND SIZE OF INVERT. NO ALLOWANCE FOR EXTRA PAYMENTS TO THE CONTRACTOR WILL BE MADE BY THE OWNER FOR FAILING TO VISIT AND EXAMINE SITE CONDITIONS.

7. SUB–CONTRACTOR SHALL MAINTAIN SUCH INSURANCE AS WILL FULLY PROTECT BOTH THE OWNER AND THE SUB–CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKMEN'S COMPENSATION ACT, ALSO ALL INSURANCE AS NOTED WITHIN ARCHITECTURAL GENERAL CONDITIONS.

8. MAINTAIN A SEPARATE SET OF WHITE PRINTS ON THE SITE AND NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE DRAWINGS SHOWING ALL AS–BUILT CONDITIONS SHALL BE FORWARDED TO THE ARCHITECT AT THE COMPLETION OF THIS CONTRACT AND BEFORE APPLYING FOR FINAL PAYMENT.

9. ADDITIONAL MONEY OVER THE CONTRACT PRICE SHALL NOT BE PAID UNLESS AN APPROVED CHANGE ORDER IS ISSUED BY THE ARCHITECT. CLAIMS FOR EXTRAS SHALL BE SUBMITTED WITH A COMPLETE BREAKDOWN OF MATERIAL, LABOUR, HOURLY RATES, ETC.

10. BE RESPONSIBLE TO KEEP THE AREA CLEAN AT ALL TIMES AND TO PERIODICALLY REMOVE ALL DEBRIS. CONSTRUCTION AREA TO BE ISOLATED BY MEANS OF TARPS AND/OR TEMPORARY PARTITIONS.

11. ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT BY THIS DIVISION. CUTTING AND DRILLING SHALL BE PERFORMED IN A MANNER SO AS TO CAUSE LITTLE DAMAGE. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.

12. BE RESPONSIBLE TO COORDINATE THE INSTALLATION OF EQUIPMENT, DUCTING, PIPING, ETC. WITH OTHER TRADES AND THE OWNER'S REPRESENTATIVE PRIOR TO THE ACTUAL INSTALLATION.

13. BE RESPONSIBLE FOR MECHANICAL WORK UNTIL THE COMPLETION AND FINAL ACCEPTANCE, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED, LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.

14. SHOP DRAWINGS AND PRODUCT DATA. 'SHOP DRAWINGS' MEANS DRAWINGS, DIAGRAMS, ILLUSTRATIONS, SCHEDULES, PERFORMANCE, CHARTS, BROCHURES, AND OTHER DATA WHICH ARE TO BE PROVIDED BY THE CONTRACTOR TO ILLUSTRATE DETAILS OF A PORTION OF THE WORK. INDICATE MATERIALS METHODS OF CONSTRUCTION AND ATTACHMENT OR ANCHORAGE, NECESSARY FOR COMPLETION OF WORK. ADJUSTMENTS MADE ON SHOP DRAWINGS BY OWNER OR ENGINEER ARE NOT INTENDED TO CHANGE CONTRACT PRICE. MAKE CHANGES IN SHOP DRAWINGS AS OWNER OR ENGINEER MAY REQUIRE. SUBMIT 6 HARD COPIES, OR 1 HIGH QUALITY ELECTRONIC COPY OF PRODUCT DATA SHEETS OR BROCHURES FOR ALL MECHANICAL EQUIPMENT. PROVIDE 2 MAINTENANCE MANUALS COMPLETE WITH WARRANTEE, CERTIFICATE OF INSPECTIONS, AND COPY OF ALL PRODUCT LITERATURE AND MAINTENANCE INFORMATION.

15. PRIOR TO FINAL INSPECTION DEMONSTRATE OPERATION OF EACH SYSTEM TO OWNER AND ENGINEER. INSTRUCT PERSONNEL IN OPERATION ADJUSTMENT AND MAINTENANCE OF EQUIPMENT AND SYSTEMS, USING PROVIDED OPERATION AND MAINTENANCE DATA AS BASIS FOR INSTRUCTION.

16. AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO WORKMANSHIP OR MATERIALS WHICH IN THE OWNER'S OPINION, ARE NOT DUE TO MISUSE OR NEGLECT.

17. THE MECHANICAL CONTRACTOR SHALL ENSURE THAT EVERY FIXTURE, PLUMBING APPLIANCE, INTERCEPTOR, CLEANOUT, VALVE, DEVICE OR PIECE OF EQUIPMENT SHALL BE LOCATED IN A MANNER THAT IT IS READILY ACCESSIBLE FOR USE, CLEANING, MAINTENANCE OR REPAIR. MECHANICAL CONTRACTOR SHALL PROVIDE ACCESS DOORS LARGE ENOUGH TO PERMIT EASY ACCESS TO CONCEALED FIXTURES, PLUMBING APPLIANCES, FIRE DAMPERS, INTERCEPTORS, CLEANOUTS, VALVES, DEVICES OR PIECES OF EQUIPMENT.

18. CONTRACTOR SHALL CARRY THE SERVICES OF AN APPROVED FIRE STOPPING INSTALLER AND SHALL PROVIDE ALL FIRE STOPPING FOR ALL MECHANICAL AND ELECTRICAL PENETRATIONS. PROVIDE SHOP DRAWINGS FOR FIRE STOPPING MATERIALS USED.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF THEIR PROPERTY. THE OWNER BEARS NO RESPONSIBILITY FOR PROTECTION FROM THEFT, FIRE, OR ENVIRONMENTAL CONDITIONS.

20. ALL PIPING AND DUCTING SHOWN FOR SCHEMATIC AND SCOPE OF WORK PURPOSES IN GENERAL LOCATION OF USE. COORDINATE EXACT ROUTING ON SITE AND WITH BEST PRACTICES.

21. ALL EQUIPMENT (PUMPS, HVAC UNITS, ROOFTOP FANS, ETC.) TO BE PROVIDED WITH VIBRATION ISOLATION DEVICES.

GENERAL HVAC SPECIFICATIONS

1. PROVIDE DUCTWORK IN ACCORDANCE WITH A.S.H.R.A.E. AND INTERNATIONAL MECHANICAL CODES CHAPTER 5 SECTION 506,, LATEST EDITION. ALL DUCTS SHALL BE FABRICATED FROM PRIME QUALITY GALVANIZED STEEL AS PER A.S.H.R.A.E. STANDARDS. DUCTS SHALL BE INSTALLED AS HIGH AS POSSIBLE. PROPER ANGLE IRON SUPPORTS, HANGERS, ETC., SHALL BE PROVIDED FOR ALL DUCTS. SEAL ALL JOINTS OF DUCTS WITH HIGH PRESSURE SEALER. APPLY SEALANT TO OUTSIDE OF JOINTS AS PER MANUFACTURERS RECOMMENDATIONS.
   CONSTRUCT DUCTS IN ACCORDANCE WITH THE FOLLOWING:

MAX DUCT DIMENSION	U.S. GAUGE
UP TO 12"	26
13" TO 30"	24
31" TO 54"	22

   CONSTRUCT ROUND DUCTS IN ACCORDANCE WITH THE FOLLOWING:

   4" TO 8" DIAMETER – 26 GAUGE
   9" TO 24" DIAMETER – 24 GAUGE

2. EQUIVALENT DUCT SIZES MAY BE SUBSTITUTED IN LIEU OF THOSE SHOWN, IN ORDER TO AVOID INTERFERENCE WITH STRUCTURE AND OTHER MECHANICAL SERVICES. CONTRACTOR TO PROVIDE DRAWINGS OF ANY PROPOSED CHANGES TO ENGINEER FOR APPROVAL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DESIGN AIR FLOW WITH DUCT INSTALLATION. ALL SUPPLY & RETURN BRANCHES SHALL BE AT 45° TAKE OFFS.

3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO FABRICATION AND INSTALLATION OF DUCTWORK. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED ELBOWS, DUCT ACCESSORIES, ETC. TO COMPLETE THE INTENT OF THE MECHANICAL DRAWINGS.

4. HVAC EQUIPMENT MUST NOT BE USED DURING CONSTRUCTION. DUCT OPENINGS SHALL BE COVERED TO KEEP OUT DUST AND DEBRIS. COMMISSIONING MUST NOT BE PERFORMED UNTIL ALL INTERIOR FINISHES ARE COMPLETE.

5. INSULATE ALL DUCTS IN ACCORDANCE WITH ASHRAE 90.1, LATEST EDITION.

6. MECHANICAL EQUIPMENT TO BE ISOLATED FROM DUCT WORK USING 6" FLEXIBLE DUCT CONNECTORS ON BOTH THE SUPPLY AND RETURN DUCTS.

7. ALL MITERED ELBOWS TO BE COMPLETE WITH DOUBLE THICKNESS AIR VANES. ALL RADIUSED ELBOWS TO BE COMPLETE WITH SPLITTER VANES PER SMACNA DUCT CONSTRUCTION STANDARDS.

8. PROVIDE VOLUME DAMPERS AT ALL DUCT BRANCHES AND TAKE–OFFS.

9. PROVIDE AN INDEPENDENT FIRM CERTIFIED BY NEBB TO CONDUCT TESTING, ADJUSTING AND BALANCING OF ALL MECHANICAL SYSTEMS AND COMPONENTS, INCLUDING ALL DUCTS AND HYDRONIC PIPING. SUBMIT WRITTEN REPORT IN TRIPLICATE TO MECHANICAL ENGINEER UPON COMPLETION.

10. MAXIMUM LENGTH OF FLEX DUCT PERMITTED IS 10' PER DIFFUSER. NO FLEX DUCT IS PERMITTED ON EXPOSED DUCT WORK.

11. PROVIDE FIRE DAMPERS IN DUCTS AT FLOOR, WALL, CEILING, AND ROOF PENETRATIONS WHERE FIRE SEPARATIONS ARE CROSSED, AND WHERE REQUIRED BY LOCAL AUTHORITIES AND CODES. FIRE DAMPERS SHALL MAINTAIN 100% FREE AREA OF DUCTWORK (TYPE 'B' FIRE DAMPERS). RATE FIRE DAMPERS TO MATCH THE FIRE RATING OF SEPARATION CROSSED. PROVIDE ONLY ULC LABELED DAMPERS AND INSTALL AS SPECIFIED IN NFPA/CUA 90A.

12. SUPPLY AND RETURN DUCTS SHALL BE CONNECTED TO THE HVAC UNIT THROUGH A FLEXIBLE NON METALLIC DUCT.

13. 10' OF ACOUSTIC SOUND INSULATION SHALL BE PROVIDED TO THE DUCTS AT THE BEGINNING NEAR THE HVAC UNIT.

14. SMOKE DETECTORS AT SUPPLY DUCTS SHALL BE PROVIDED TO AUTOMATICALLY SHUT DOWN UNITS UPON DETECTION OF SMOKE.

GENERAL PLUMBING SPECIFICATIONS

1. UNLESS OTHERWISE NOTED ALL HOT AND COLD WATER PIPING AFTER THE MAIN BUILDING CWS ISOLATION VALVE SHALL BE HARD COPPER TYPE L PIPING WHICH SHALL CONFORM TO ASTM B42 AND ASTM B88.

2. ALL DOMESTIC WATER PIPING TO BE INSULATED c/w VAPOUR BARRIER. PIPE INSULATION TO CONFORM O.B.C. TABLE 12.3.4.5.

3. ALL DRAINAGE, WASTE, AND VENT PIPE TO BE PVC DWV WITH FLAME SPREAD RATING < 25. PIPES TO BE XFR WHERE PENETRATING FIRE RATED WALLS.

4. WATER HAMMER ARRESTORS TO BE STAINLESS STEEL BELLOWS TYPE; WATTS SS–A OR APPROVED EQUIVALENT.

5. ROUTE ABOVE GROUND PIPING IN CEILING SPACE OF WALL INTERIORS FOR CONCEALMENT WHERE EVER POSSIBLE UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS. COORDINATE PIPE INSTALLATION IN WALLS WITH MASON AND OR DRYWALLER OR APPROPRIATE TRADE INVOLVED.

6. INSTALL ISOLATION VALVES IN EACH BRANCH LINE FROM COLD AND HOT WATER MAINS, AT BASE OF EACH RISER, AND BEFORE EACH FIXTURE OR EQUIPMENT CONNECTED TO COLD/HOT WATER SYSTEM. PROVIDE A FIRE RATED ACCESS DOOR AT EACH CONCEALED VALVE.

7. INSTALL FLANGES OR UNIONS TO PERMIT REMOVAL OF EQUIPMENT WITHOUT DISTURBING PIPING SYSTEMS.

8. PROVIDE COMPLETE DRAINAGE AND VENT SYSTEMS TO SERVE FIXTURES AND ITEMS SPECIFIED AND AS SHOWN ON PLANS.

9. WHERE EXPOSED PIPES PASSES THROUGH FINISHED FLOORS, WALLS, OR CEILINGS, PROVIDE CHROME PLATED ESCUTCHEON WITH SET SCREW.

10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY MATERIALS & LABOUR TO MAINTAIN ALL FIRE SEPARATIONS AFFECTED BY THE WORK PERFORMED.

11. GRADE HORIZONTAL SANITARY DRAINAGE AND VENT PIPING AT MINIMUM 1:50.

12. ALL FAUCET AND TOILET SUPPLY LINES SHALL BE STAINLESS BRAIDED HOSE.

13. ALL FLOOR DRAINS TO BE TRAPPED, PRIMED, AND VENTED WITH STRAINER INSTALLED FLUSH WITH FINISHED FLOOR. SUPPLY AND INSTALL PRIMER AND TUBING FROM CLOSEST COLD WATER BRANCH, C/W SPECIALTY BLEED VALVE (P.P.P. OR EQUAL), UNLESS OTHERWISE SPECIFIED IN DRAWINGS.

14. EXPOSED P–TRAPS SHALL BE CHROME PLATED BRASS.

15. SIZE OF DRAINAGE PIPE SERVING FIXTURES:

DISHWASHER	1–1/2" (38mm)	LAVATORY	1–1/2" (38mm)
SINK	1–1/2" (38mm)	SHOWER	1–1/2" (38mm)
SERVICE SINK	1–1/2" (38mm)	URINAL	2" (51mm)
WC	3" (76mm)	FLOOR DRAIN	2" (51mm)

16. SIZE OF EITHER CWS & HWS ISOLATION VALVES SERVING FIXTURES:

DISHWASHER	1/2" (13mm)	LAVATORY	1/2" (13mm)
SINK	1/2" (13mm)	SHOWER	1/2" (13mm)
SERVICE SINK	1/2" (13mm)	URINAL	3/4" (19mm)
WC	1/2" (13mm)	WF	1/2" (13mm)

17. ALL PIPING FITTINGS WITH TERMINAL EQUIPMENT SHALL BE LEAD FREE.

18. THE CONTRACTOR IS RESPONSIBLE FOR THE INSULATION OF THE STORM PIPES INSIDE THE BUILDING.

19. ALL PIPING IS TO BE STRAIGHT, PARALLEL AND PERPENDICULAR TO THE BUILDING STRUCTURE. SLOPE ALL PIPING TO DRAIN POINTS.

20. WHEN PIPE LAYING NOT IN PROGRESS, CLOSE OFF OPEN ENDS OF PIPE WITH WATER TIGHT PLUG OR CAP.

21. INSTALL CLEANOUTS AS REQUIRED BY PLUMBING CODES. SIZE OF CLEANOUTS TO MATCH SIZE OF ASSOCIATED SANITARY PIPE. ENSURE CLEAN OUTS ARE MADE ACCESSIBLE.

22. CONNECT FIXTURES COMPLETE WITH SUPPLIES AND DRAINS, TRAPPED, SUPPORTED, SANITARY LEVEL AND SQUARE WITH HOT WATER FAUCETS ON THE LEFT.

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REVISIONS

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PROJECT
DEAFBLIND ONTARIO
HOME CONVERSION

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TITLE
MECHANICAL
SPECIFICATIONS

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APPROVED	CSM		
PROJECT	7471		

CADD FILE NO. 7471M4

HRV SCHEDULE							
IDENT.	MANUFACTURER	MODEL	POWER	DUCT SIZE	CFM/STATIC PRESSURE	CONTROL	NOTES
HRV–1	LIFEBREATH	METRO 120D	120/1/60 1.4A 66W	5"ø COLLARS	129 CFM @ 0.3"	WALL MOUNT CONTROLLER (H)	c/w WALL MOUNTED CONTROL, MOUNTING BRACKETS, CONCENTRIC VENT KIT. DAMPER DEFROST. TO BE ORDERED WITH PLUG.

HEAT PUMP (OUTDOOR UNIT) SCHEDULE											
IDENT.	MANUFACTURER	MODEL #	COOLING NOMIAL CAPACITY (BTUH)	HEATING NOMINAL CAPACITY (BTUH)	QTY INDOOR UNITS	ELECTRICAL INFO	MCA / MOCP	DIMENSIONS (H"XW"XD")	SEER	WEIGHT (LBS)	REMARKS
HP–1	MITSUBISHI	MUZ–HM09NA	10,000	9,000	1	230/208V, 1–PHASE, 60 HZ	9.0A/15A	21–5/8"X 31–1/2"X 11–1/4"	18.0	73	OUTDOOR HEAT PUMP TO BE ORDERED COMPLETE WITH INDOOR AIR HANDLING UNITS AHU–1.1. INDOOR UNIT RECEIVES POWER FROM OUTDOOR UNIT THROUGH FIELD–SUPPLIED INTERCONNECTED WIRING. WIRING AND CONNECTIONS BY ELECTRICAL. UNIT HEATING OPERATIONAL RANGE FROM –20°C TO 24°C. WALL BRACKET BY MANUFACTURER.

AHU SCHEDULE								
IDENT.	MANUFACTURER	MODEL #	COOLING NOMINAL CAPACITY (BTUH)	HEATING NOMINAL CAPACITY (BTUH)	MIN/MAX AIR FLOW (CFM)	DIMENSIONS (H"XW"XD")	WEIGHT (LBS)	REMARKS
AHU–1.1	MITSUBISHI	MSZ–HM09NA	9,000	10,000	170–406	11–5/8"X 31–7/16"X 9–1/8"	22	INDOOR AIR HANDLER TO BE PAIRED WITH OUTDOOR UNIT HP–1.

CONDENSER SCHEDULE						
IDENT.	MANUFACTURER	TYPE	POWER	MODEL	CAPACITY (MBH)	REMARKS
CU–1	YORK	CONDENSING UNIT	240/1/60 MCA:18.9A MOP:30A	YC2E36 SB21S	COOLING: 36MBH	TO REPLACE EXISTING CONDENSING UNIT. TO BE CONNECTED TO EXISTING FURNACE

WC–1: TOILET – BF FLOOR MOUNTED WITH FLOOR OUTLET
AMERICAN STANDARD 215AA104.020 TOILET – CADET® PRO™, TANK TYPE TOILET, FLOOR MOUNTED WITH FLOOR OUTLET, HIGH EFFICIENCY HET 4.8 LPF (1.28 GPF), WHITE FINISH VITREOUS CHINA, EVERCLEAN® ANTIMICROBIAL SURFACE, ELONGATED BOWL, RIGHT HEIGHT® RIM AT 419 MM (16–1/2"), MINIMUM 305 MM (12") ROUGH–IN FROM WALL TO THE CENTER OF WASTE OUTLET, SIPHON JET FLUSH ACTION, MANUAL, POLISHED CHROME LEFT–HAND TRIP LEVER (7381231–200.0020A), GRAVITY–ASSISTED FLUSH, CADET® FLUSHING SYSTEM, 76 MM (3") FLUSH VALVE, TOILET SEAT NOT INCLUDED, COMPLIANCES: ASME A112.19.2 COMPLIANT, CSA B45.1 COMPLIANT, EPA WATERSENSE® COMPLIANT.
CENTOCO 600–407 SEAT – FOR ELONGATED BOWL, CLOSED FRONT, LIGHT DUTY, FOR COMMERCIAL APPLICATIONS, POLYPROPYLENE, TOILET SEAT, WITH SEAT COVER, TOP–MOUNTED HINGES, SPECIFIED IN BLACK FINISH, INCLUDES PLASTIC HARDWARE, 22 MM (7/8") HIGH, 381 MM (15") WIDE.
MCGUIRE LFBV172 SUPPLY – LEAD FREE, WITH CHROME–PLATED FINISH, CONVERTIBLE QUARTER–TURN SUPPLY , TOILET, TWO 13 MM (1/2") COPPER SWEAT X 10 MM (3/8") OUTER Ø BRASS BALL VALVE CONNECTION, 2 DEEP BELL FLANGE, CONVERTIBLE LOOSE KEY HANDLE, EXTENSION IS 127 MM (5") LENGTH, 304 MM (12") COPPER FLEXIBLE RISERS.

L–1: LAVATORY – BF SEMI–COUNTERTOP LAVATORY
AMERICAN STANDARD 9960803.020 BASIN – MEZZO, SEMI–COUNTERTOP LAVATORY, FINE FIRE CLAY, WHITE FINISH, 203 MM (8") CENTERSET, REAR OVERFLOW, WITH FAUCET LEDGE,
MOUNTING KIT SUPPLIED, OVERALL DIMENSIONS: 559 MM (22") LONG, 546 MM (21–1/2") WIDE, 172 MM (6–25/32") HIGH, BOWL DIMENSIONS: 483 MM (19") LONG, 381 MM (15") WIDE, 175 MM (6–7/8") DEEP.
AMERICAN STANDARD 7075800.002 FAUCET – COLONY® PRO, COUNTER MOUNTED, MANUAL, TWO HANDLES, LAVATORY FAUCET, POLISHED CHROME FINISH, 203 MM (8") CENTERSET, LEAD FREE ANSI/NSF 61 AND ANSI/NSF 372 COMPLIANT METAL BODY, 610 MM (24") STAINLESS STEEL BRAIDED FLEXIBLE SUPPLY HOSES WITH 10 MM (3/8") COMPRESSION CONNECTIONS, 1/4 TURN WASHERLESS CERAMIC DISC VALVE CARTRIDGES, 4.5 LPM (1.2 GPM) MAXIMUM FLOWRATE, PRESSURE COMPENSATING AERATOR, FIXED MID–ARC SPOUT, 118 MM (4–5/8") SPOUT REACH, 98 MM (3–7/8") HIGH, LEVER HANDLE, METAL POP–UP DRAIN.
LAWLER 570–86820 MIXING VALVE – POINT OF USE AND MASTER CONTROLLED FIXTURES, THERMOSTATIC MASTER WATER MIXING CONTROL VALVE, THE TEMPERATURE IS ADJUSTED WITH THE HELP OF SPINDLE.
MCGUIRE 155WC FIXTURE DRAIN – OFFSET DRAIN, OFFSET LAVATORY STRAINER, LAVATORY, CAST BRASS, CHROME–PLATED FINISH, INORGANIC MICROBIAL COMPOUND, 7/32" (5.5 MM) Ø HOLES SIZE, POLISHED CHROME, CAST BRASS ELBOW, 17 GAUGE 32 MM (1–1/4") Ø TAILPIECE, 146 MM (5–3/4") OFFSET, BRASS LOCKNUT, HEAVY RUBBER BASIN WASHER FIBER FRICTION WASHER, ADA COMPLIANT, ASME A112.18.2 CSA B125.2, CSA COMPLIANT
MCGUIRE LFBV170 SUPPLY – CONVERTIBLE™ COMMERCIAL FAUCET SUPPLY KIT, CONSISTING OF (2) STOP VALVES, (2) RISERS, (2) FLANGES (STANDARD), LEAD FREE BRASS BODY, CHROME–PLATED FINISH, 138 – 862 KPA (20 – 125 PSI) OPERATING PRESSURE, 4 TO 60 °C (40 TO 140 °F) OPERATING TEMPERATURE, CONVERTIBLE LOOSE KEY/TRIANGLE HANDLE, QUARTER TURN BALL VALVE, ANGLE STOP, C.P. WROUGHT STEEL DEEP BELL WALL FLANGE (STANDARD), C.P. PREFABRICATED 127 MM (5") COPPER SWEAT TUBE EXTENSION NIPPLE, 305 MM (12") C.P. LAVATORY FLEXIBLE COPPER RISER TUBES (STANDARD), 13 MM (1/2") SWEAT INLET X 10 MM (3/8") O.D. OUTLET, 82 °C (180 °F) MAXIMUM DURING HIGH–TEMPERATURE SYSTEM FLUSH, AB 100 COMPLIANT, ASME A112.18.1 COMPLIANT, ASME A112.18.2–2 (RISERS), CSA B125.2 COMPLIANT (RISERS), CERTIFIED TO NSF/ANSI 372, CERTIFIED TO NSF/ANSI 61, UPC COMPLIANT.
MCGUIRE PW212SWC P–TRAP – MOLDED CLOSED CELL VINYL (ANTI–MICROBIAL) WRAPPED CAST BRASS, GLOSSY WHITE, WITH CLEANOUT

S–1: COUNTER MOUNTED – UNDERMOUNT – KITCHEN SINKKINDRED QCUA1831L–8 SINK – DOUBLE COMPARTMENT SINK, KITCHEN SINK, WITH OVERALL DIMENSION 785 MM (30–7/8") LONG, 451 MM (17–3/4") WIDE, 203 MM (8") HIGH, CONSTRUCTED FROM 20 GAUGE TYPE 304 STAINLESS STEEL, LEFT BOWL IS 254 (10") LONG AND RIGHT BOWL IS 457 MM (18") LONG, LEFT BOWL IS 406 MM (16") WIDE AND RIGHT BOWL IS 406 MM (16") WIDE, LEFT BOWL IS 178 MM (7") DEEP AND RIGHT BOWL IS 203 MM (8") DEEP, RADIANT SILK FINISH, COLANDER (112.0202.209), CENTER BACK WASTE LOCATION, 89 MM (3–1/2") DIAMETER WASTE OUTLET, 838 MM (33") MINIMUM CABINET SIZE.
CHICAGO FAUCETS 786–GN8FCXKABCP FAUCET – COUNTER MOUNTED, MANUAL, TWO HANDLES, SINK FAUCET, CHROME–PLATED FINISH, 203 MM (8") CENTERSET, LEAD FREE ANSI/NSF 61 AND ANSI/NSF 372 COMPLIANT ECAST® BRASS CONSTRUCTION, –377–XKAB CERAMIC 1/4 TURN CARTRIDGE, 5.7 LPM (1.5 GPM) MAXIMUM FLOWRATE, –FC 5.7 LPM (1.5 GPM) LAMINAR FLOW CONTROL INSERT IN SPOUT INLET, PLAIN END OUTLET, RIGID/SWING GOOSENECK SPOUT, 203 MM (8") SPOUT REACH, –317–PR VANDAL–RESISTANT 102 MM (4") METAL WRIST BLADE HANDLES WITH RED & BLUE INDEX, GRID DRAIN INCLUDED, 13 MM (1/2") NPSM SUPPLY INLET FOR 10 MM (3/8") OR 13 MM (1/2") FLEXIBLE RISER.
MCGUIRE LFBV170 SUPPLY – CONVERTIBLE™ COMMERCIAL FAUCET SUPPLY KIT, CONSISTING OF (2) STOP VALVES, (2) RISERS, (2) FLANGES (STANDARD), LEAD FREE BRASS BODY, CHROME–PLATED FINISH, 138 – 862 KPA (20 – 125 PSI) OPERATING PRESSURE, 4 TO 60 °C (40 TO 140 °F) OPERATING TEMPERATURE, CONVERTIBLE LOOSE KEY/TRIANGLE HANDLE, QUARTER TURN BALL VALVE, ANGLE STOP, C.P. WROUGHT STEEL DEEP BELL WALL FLANGE (STANDARD), C.P. PREFABRICATED 127 MM (5") COPPER SWEAT TUBE EXTENSION NIPPLE, 305 MM (12") C.P. LAVATORY FLEXIBLE COPPER RISER TUBES (STANDARD), 13 MM (1/2") SWEAT INLET X 10 MM (3/8") O.D. OUTLET, 82 °C (180 °F) MAXIMUM DURING HIGH–TEMPERATURE SYSTEM FLUSH, AB 100 COMPLIANT, ASME A112.18.1 COMPLIANT, ASME A112.18.2–2 (RISERS), CSA B125.2 COMPLIANT (RISERS), CERTIFIED TO NSF/ANSI 372, CERTIFIED TO NSF/ANSI 61, UPC COMPLIANT.
MCGUIRE 8912CB P–TRAP – HEAVY CAST BRASS, ADJUSTABLE P–TRAP, 292 MM (11–1/2") LENGTH, WITH CLEANOUT PLUG, STEEL BOX FLANGE, NEOPRENE GASKET, SEAMLESS TUBULAR BRASS BEND, SLIPNUTS

SH–1: BF SHOWER: LONGEVITY BARRIER–FREE WHEELCHAIR ROLL–IN SHOWER
LONGEVITY SC2366 CSA 3BAR PHENOLIC SEAT. 1–PIECE SHOWER. CENTRE DRAIN, RIGHT SEAT, H 84" W 66" D 36.5". DOMED, WHITE. CSA COMPLIANT: B45.5–11/IAPMO Z124–2011 CAN/ULC – S102.2 – M88 FLAME SPREAD FRP LAMINATE RATING.
AMERICAN STANDARD TU662SG213.002 COMPLETE SHOWER TRIM – POLISHED CHROME FINISH, HAND SHOWER, SHOWERHEAD AND VALVE TRIM, 5.7 LPM (1.5 GPM) SHOWERHEAD FLOWRATE, FLOWISE SHOWERHEAD, 3–FUNCTION HAND SHOWER WITH NON–POSITIVE SHUT OFF (1660.766), 5.7 LPM (1.5 GPM) HANDSHOWER FLOWRATE, 59" (1500 MM) SHOWER HOSE (8888.035), METAL LEVER HANDLE, PRESSURE BALANCE VALVE, ADJUSTABLE HIGH TEMPERATURE LIMIT STOP, VALVE TRIM WITH METAL HANDLE AND ESCUTCHEON, 914 MM (36") SLIDE GRAB BAR (1662.236), 2–WAY DIVERTER (R422), COMBINATION OF CERAMIC DISC MIXING VALVE AND A CERAMIC BALANCING SPOOL IN A ONE–PIECE CARTRIDGE, WATERSENSE® CERTIFIED, ADA, ASSE 1016, ASME A112.18.1016, CSA B125.16, ASME A112.18.1, CSA B125.1
AMERICAN STANDARD T105430.002 DIVERTER VALVE TRIM – STUDIO® S, IN–WALL DIVERTER VALVES, SOLID BRASS CONSTRUCTION, POLISHED CHROME FINISH, STAMPED BRASS ESCUTCHEON, LESS VALVE, VALVE TRIM ONLY, 1/2" NPT CONNECTIONS ON MIXED WATER INLET AND TWO (R422/R422S) OR THREE (R433/R433S) OUTLETS, LEVER HANDLE, MEETS THE AMERICAN DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR THE PHYSICALLY CHALLENGED., ASME A112.18.1, PERMITS CHECKING OF VALVE INSTALLATION PRIOR TO INSTALLING TRIM PARTS, CANNOT BE USED AS A SHUT–OFF VALVE
AMERICAN STANDARD 1660.505.002 W/ 95866 HAND SHOWER – GROHE 95866 VOLUME CONTROL WITH NON–POSITIVE SHUTOFF, FIXED PERSONAL SHOWER, POLISHED CHROME FINISH, HAND HELD PERSONAL SHOWERS, 9.5 LPM (2.5 GPM), FIXED CONVENTIONAL SPRAY, (2–5/8") , (5–3/4"), AMERICAN STANDARD 1662.236.002 SLIDE BAR – CONCEALED SCREW MOUNTING SYSTEM, COMMERCIAL, COMMERCIAL SHOWER SYSTEMS, SLIDE/GRAB BAR, POLISHED CHROME FINISH, 38 MM (1–1/2") DIAMETER STAINLESS STEEL BAR, 914 MM (36") STAINLESS BAR, CHROME–PLATED HAND SHOWER HOLDER, CHROME–PLATED ADJUSTABLE SLIDE MECHANISM, MEETS ANSI STANDARD 250 LB PULL TEST.MEETS AMERICAN DISABILITIES ACT (ADA) , INCLUDES MOUNTING SCREWS AND ANCHORS
AMERICAN STANDARD 8888.037.075 WALL SUPPLY – WALL SUPPLY, PVD STAINLESS STEEL FINISH, INCLUDES CHECK VALVE, 1/2" NPT FEMALE THREAD, 1/2" NPSM MALE HOSE THREAD
AMERICAN STANDARD 8888.036.002 HAND SHOWER HOLDER – FIXTURE WALL BRACKET, POLISHED CHROME FINISH
AMERICAN STANDARD 1660.400.002 VACUUM BREAKER – VACUUM BREAKER, POLISHED CHROME FINISH FOR INLINE WITH 13 MM (1/2") SIZE, ATTACHES BETWEEN SUPPLY OUTLET AND PERSONAL SHOWER HOSE.

S–2: FLOOR MOUNTED – LAUNDRY SINK
FIAT FL1100 SINK – SINGLE COMPARTMENT SINK, 102 MM (4") KNOCKOUT CENTER (FIELD DRILLED), LAUNDRY SINK, WITH OVERALL DIMENSION 584 MM (23") LONG, 546 MM (21–1/2") WIDE, 851 MM (33–1/2") HIGH, CONSTRUCTED FROM MOLDED STONE, BOWL DIMENSIONS ARE 341 MM (13–7/16") DEEP, WHITE FINISH, WHITE BAKED ENAMEL STEEL ANGLE LEGS {533 MM (21")} THAT SLIP INTO MOLDED RETAINERS AND/OR SOCKETS FOR RIGID FRICTION FIT, LEGS ARE SUPPLIED WITH LEVELING DEVICE (1898800100), INCLUDES DRAIN WITH STOPPER, CP FAUCET CLAMP–ON, CHROME–PLATED FAUCET WITH 102 MM (4") BLADE HANDLES, 203 MM (8") 360° SWING SPOUT, ANGLED HOSE CONNECTION FOR OVERHEAD SUPPLIES (A17), COMPLIANCES AND CERTIFICATIONS: UPC COMPLIANT.
FIAT A1000 FAUCET – COUNTER MOUNTED, MANUAL, TWO HANDLES, LAUNDRY FAUCET, CHROME–PLATED FINISH, 102 MM (4") CENTERSET, METAL, NO FLOW RESTRICTOR, AERATOR, SWIVEL DOUBLE–BEND SPOUT, 172 MM (6–3/4") SPOUT REACH, WRIST BLADE HANDLES.
MCGUIRE LFBV170 SUPPLY – CONVERTIBLE™ COMMERCIAL FAUCET SUPPLY KIT, CONSISTING OF (2) STOP VALVES, (2) RISERS, (2) FLANGES (STANDARD), LEAD FREE BRASS BODY, CHROME–PLATED FINISH, 138 – 862 KPA (20 – 125 PSI) OPERATING PRESSURE, 4 TO 60 °C (40 TO 140 °F) OPERATING TEMPERATURE, CONVERTIBLE LOOSE KEY/TRIANGLE HANDLE, QUARTER TURN BALL VALVE, ANGLE STOP, C.P. WROUGHT STEEL DEEP BELL WALL FLANGE (STANDARD), C.P. PREFABRICATED 127 MM (5") COPPER SWEAT TUBE EXTENSION NIPPLE, 305 MM (12") C.P. LAVATORY FLEXIBLE COPPER RISER TUBES (STANDARD), 13 MM (1/2") SWEAT INLET X 10 MM (3/8") O.D. OUTLET, 82 °C (180 °F) MAXIMUM DURING HIGH–TEMPERATURE SYSTEM FLUSH, AB 100 COMPLIANT, ASME A112.18.1 COMPLIANT, ASME A112.18.2–2 (RISERS), CSA B125.2 COMPLIANT (RISERS), CERTIFIED TO NSF/ANSI 372, CERTIFIED TO NSF/ANSI 61, UPC COMPLIANT.
MCGUIRE 8912CB P–TRAP – HEAVY CAST BRASS, ADJUSTABLE P–TRAP, 292 MM (11–1/2") LENGTH, WITH CLEANOUT PLUG, STEEL BOX FLANGE, NEOPRENE GASKET, SEAMLESS TUBULAR BRASS BEND, SLIPNUTS

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT AND TENDER	2024.12.23	CSM
0	ISSUED FOR PERMIT	2024.12.10	CSM

REVISIONS

Kirkland Engineering Ltd BCIN: 28857

REGISTERED PROFESSIONAL ENGINEER
C.S.MULLER
100572425
DEC 23/24
PROVINCE OF ONTARIO
MECHANICAL

570 Water Street
Peterborough, Ontario
K9H 3M8
p. (705) 745-2831
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www.kirklandeng.com
KIRKLAND ENGINEERING LTD.

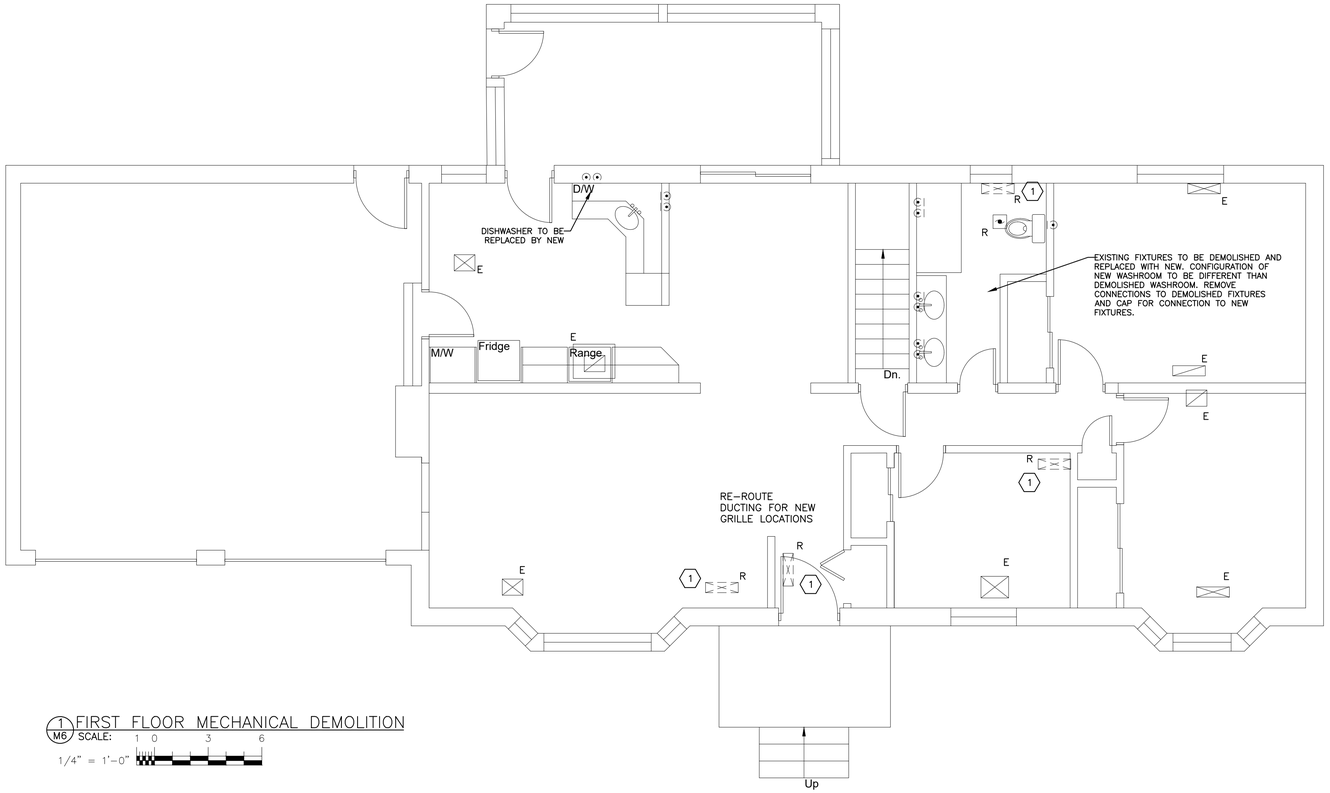
PROJECT
DEAFBLIND ONTARIO HOME CONVERSION

711 Crowley St.
Peterborough, ON.

TITLE
SCHEDULES

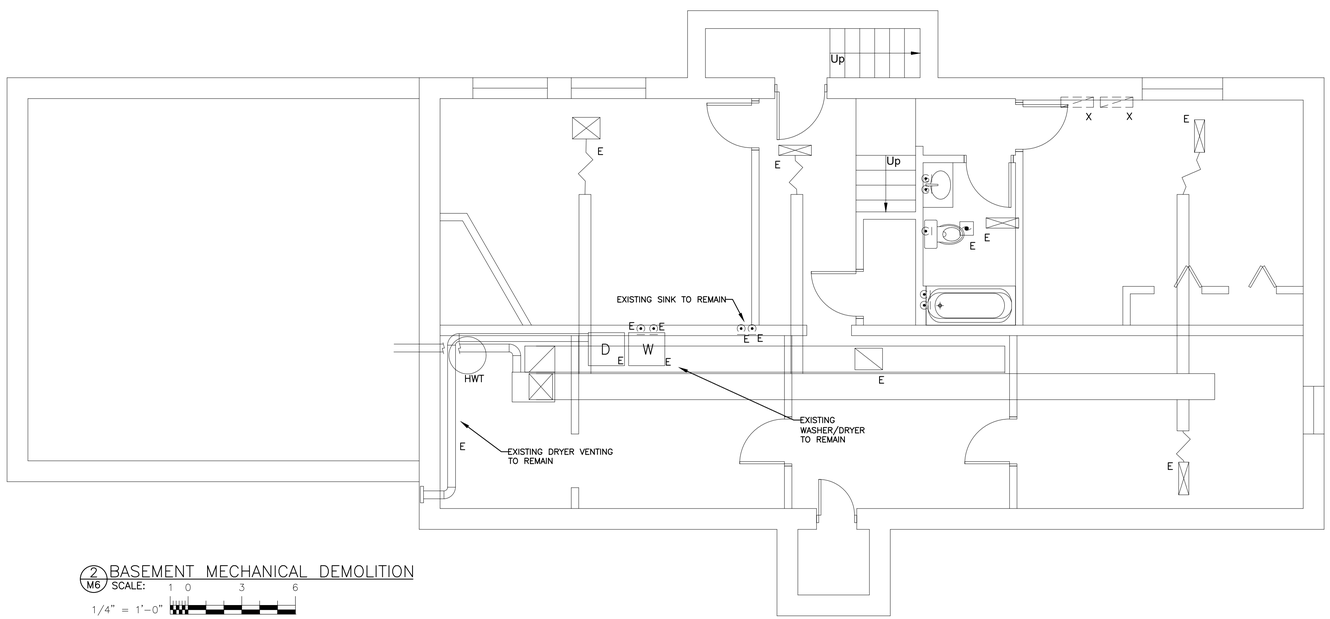
DESIGN	CSM	SCALE	N.T.S.
DRAWN	CSM	DWG NO.	M5
CHECKED	CSM		
APPROVED	CSM		
PROJECT	7471		

CADD FILE NO. 7471M5



1 M6 FIRST FLOOR MECHANICAL DEMOLITION

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



2 M6 BASEMENT MECHANICAL DEMOLITION

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

LEGEND:

E EXISTING TO REMAIN

R EXISTING TO RELOCATE

X EXISTING TO REMOVE

DRAWING NOTES:

1. SUPPLY GRILLES TO BE RELOCATED TO AVOID INTERFERENCE IN NEW LAYOUT. REFER TO M3 FOR NEW LOCATIONS.
2. EXHAUST FAN RELOCATED TO AVOID INTERFERENCE WITH NEW SHOWER. REFER TO M3 FOR NEW EF LOCATION.

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT AND TENDER	2024.12.23	CSM
0	ISSUED FOR PERMIT	2024.12.10	CSM

REVISIONS

Kirkland Engineering Ltd BCIN: 28857

REGISTERED PROFESSIONAL ENGINEER C.S.MULLER 100572425 DEC 23/24 PROVINCE OF ONTARIO

MECHANICAL

NOT TO BE USED FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER.

570 Water Street
Peterborough, Ontario
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www.kirklandeng.com

KIRKLAND ENGINEERING LTD.

PROJECT

DEAFBLIND ONTARIO HOME CONVERSION

711 Crowley St.
Peterborough, ON.

TITLE

MECHANICAL DEMOLITION

DESIGN	CSM
DRAWN	CSM
CHECKED	CSM
APPROVED	CSM
PROJECT	7471

SCALE AS NOTED

DWG NO. M6

CADD FILE NO. 7471M6

GENERAL NOTES:

1. OUR WORK CONSISTS OF CONNECTING TO THE NEW INCOMING WATER SERVICE AND PROVIDING WET SPRINKLER SYSTEM THROUGHOUT. SEE SCOPE OF WORK BOX ON RIGHT HAND SIDE OF PLANS.
2. OUR WORK STARTS IN THE SPRINKLER ROOM OF THE NEW 2" INCOMING WATER SERVICE. SITE UTILITIES AND UNDERGROUND PRIVATE FIRE MAIN ARE NEW AND NOT COVERED UNDER TROY LIFE & FIRE SAFETY SCOPE. UNDERGROUND PIPING IS REQUIRED TO BE FLUSHED BY OTHERS.
3. THE CITY WATER SUPPLY WILL BE PROTECTED WITH A DOUBLE CHECK BACKFLOW PREVENTER.
4. ALL WORK AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES (NFPA 13)(NFPA 13R), AND THE PROVINCE OF ONTARIO CODE REQUIREMENTS.
5. SPRINKLER SYSTEMS AND HYDRAULIC REQUIREMENTS ARE PER NFPA 13R, CURRENT ONTARIO BUILDING AND FIRE CODE, AND THE AUTHORITIES HAVING JURISDICTIONS. (SEE HYDRAULIC NOTES)
6. THE REMOTE AREAS SHOWN ON THE PLANS REPRESENT THE HYDRAULICALLY MOST DEMANDING REMOTE AREA OF THE BUILDING. (THIS MAY NOT ALWAYS BE THE PHYSICALLY MOST REMOTE OF THE BUILDING).
7. SEE THE SPRINKLER LEGEND ON THIS SHEET FOR SPRINKLER CHARACTERISTICS, FINISHES, AND TEMPERATURE RATINGS. ALL HEADS SHALL CONFORM TO THIS LEGEND UNLESS SPECIFICALLY NOTED ON THE PLANS.
8. SEMI-RECESSED WHITE PENDENT AND SEMI-RECESSED WHITE SIDEWALL SPRINKLER HEADS ARE TO BE INSTALLED IN FINISHED CEILING.
9. SPRINKLERS SHALL BE QUICK-RESPONSE RATED OR AS NOTED IN THE SPRINKLER LEGEND.
10. WIRE GUARDS SHALL BE PROVIDED FOR HEADS IN AREAS SUSCEPTIBLE TO DAMAGE.
11. SPARE SPRINKLERS SHALL BE PROVIDED IN ACCORDANCE WITH NFPA ADJACENT TO THE MAIN RISER. AT LEAST ONE HEAD OF ALL TYPES OF SPRINKLERS IN THE BUILDING SHALL BE FURNISHED FOR THE CABINET(S). A WRENCH FOR ALL TYPES OF HEADS SHALL ALSO BE FURNISHED (NOT INCLUDING DRY TYPE SPRINKLERS WHICH NO SPARES WILL BE PROVIDED). **THESE HEAD WRENCHES ARE FOR USE ONLY ON THE SPRINKLER HEADS FOR WHICHTHEY ARE MADE AND FOR NO OTHER USE. ANY OTHER TOOL (INCLUDING, BUT NOT LIMITED TO, "CHANNEL-LOCKS") SHALL NOT BE USED TO REMOVE OR INSTALL SPRINKLER HEADS.**
12. ALL HANGERS SHALL BE SPACED ACCORDING TO NFPA 13 (2013) CHAPTER 9 TABLE 9.2.2.1 ALL CPVC HANGERS SHALL BE SPACED ACCORDING TO TYCO BLAZEMASTER INSTALLATION INSTRUCTIONS & TECHNICAL HANDBOOK.
13. PIPING IS TO BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA. 13 FOR 2 HOURS AT 200 PSI AT THE SYSTEM RISER. ALL TESTING MUST BE WITNESSED AND SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE OWNER.
14. A BRASS EXPOSED STYLE FIRE DEPARTMENT CONNECTION IS TO BE PROVIDED PER PLANS.
15. NO COMBUSTIBLE CONSTRUCTION OR STORAGE IS ALLOWED ABOVE THE CEILING, BELOW FLOORS, OR IN ANY CONCEALED SPACE UNLESS PROTECTED BY SPRINKLERS.
16. SEISMIC PROVISIONS OF NFPA 13 ARE NOT REQUIRED AS THIS IS NOT A SEISMIC AREA AND ARE NOT INCLUDED IN TROY'S SCOPE OF WORK.
17. WHERE SPRINKLERS DO NOT MEET THE MINIMUM DISTANCE SPACING, NON-COMBUSTIBLE BAFFLES SHALL BE INSTALLED IN BETWEEN.
18. TEST/DRAIN CONNECTION TO DISCHARGE TO A SUITABLE LOCATION. (FLOOR DRAIN CAPABLE OF HANDLING DRAIN VOLUME OR TO THE OUTSIDE OF BUILDING)
19. FIRESTOPPING SHALL BE PROVIDED ON ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. REFER TO 3M FIRESTOP DETAILS ON SP-01 AND TO MANUFACTURERS DATA SHEETS LOCATED IN THE TROY LIFE & FIRE SAFETY EQUIPMENT SUBMITTAL.

SYSTEM PIPING AND FITTINGS:

WET SYSTEM, BLACK STEEL TO NFPA 13 REQUIREMENTS, C=120
WET SYSTEM, CPVC TO NFPA 13 REQUIREMENTS, C=150

1 1/4" - 1 1/2" SCHEDULE 10, GROOVED VICTAULIC FITTINGS
1" SCHEDULE 40, THREADED FITTINGS

1" - 1 1/4" CPVC PIPE / CPVC FITTINGS

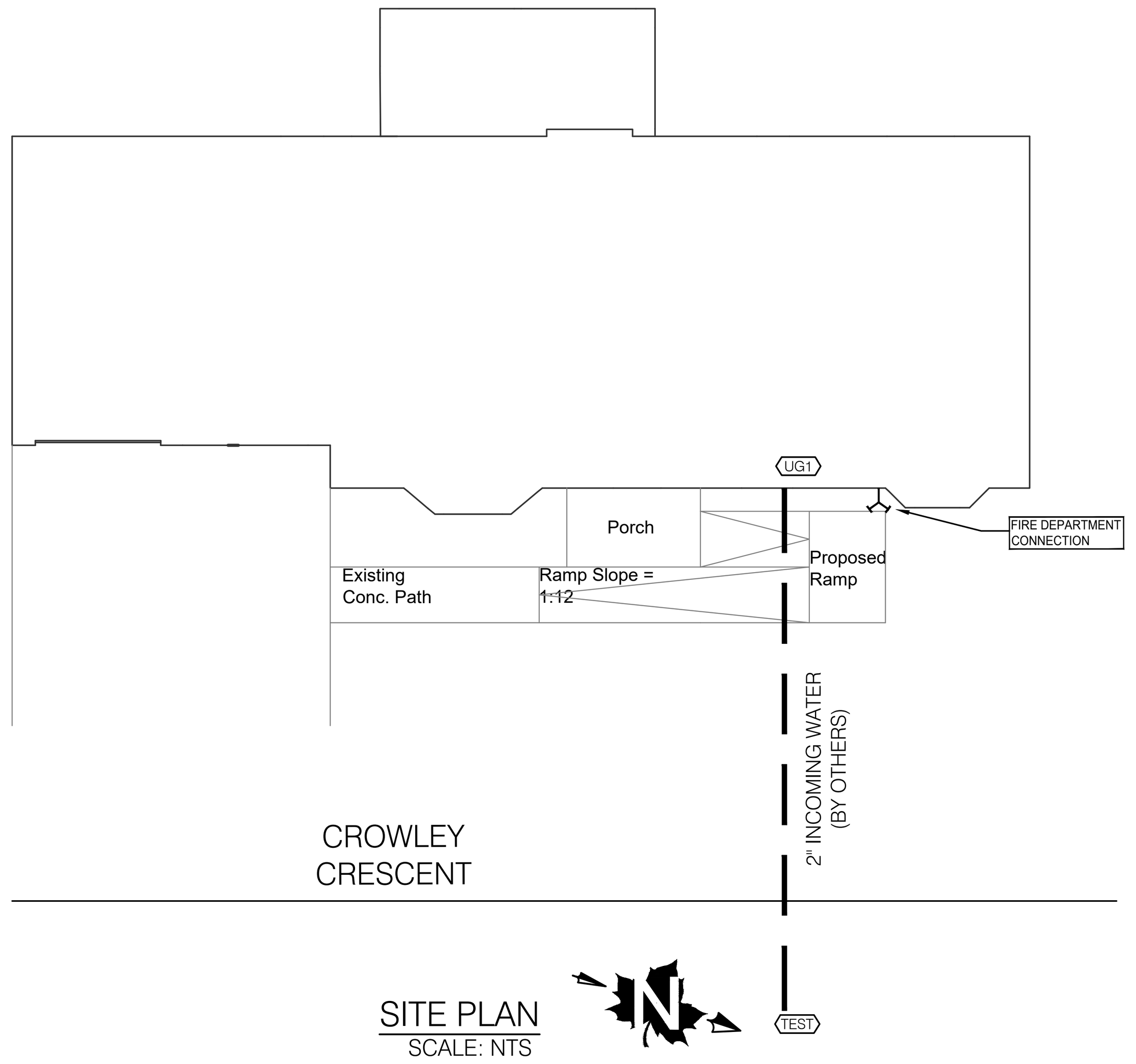
WATER FLOW INFORMATION:

STATIC = 60 PSI
RESIDUAL = 20 PSI @ 3102 USGPM

SOURCE: TROY LFS FLOW TEST
DATE: JULY, 2023

HYDRAULIC DESIGN CRITERIA:

SUITES/ DWELLING UNITS/ CORRIDORS/ LOUNGES/GARAGE
RESIDENTIAL HAZARD - RESIDENTIAL TO NFPA 13R REQUIREMENTS
DENSITY 0.05 USGPM/SQ. FT. OVER UP TO 4 SPRINKLERS IN A COMPARTMENT
INSIDE HOSE ALLOWANCE: 0 GPM

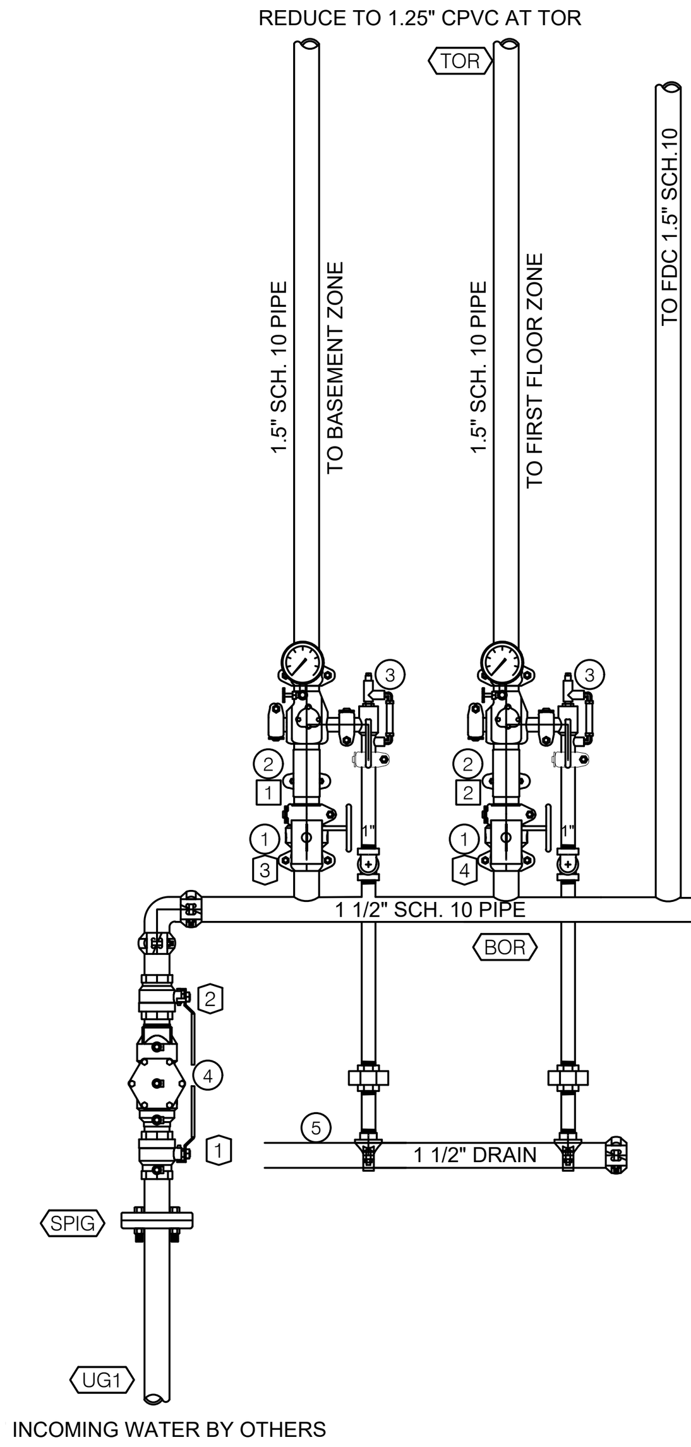


SITE PLAN
SCALE: NTS

NOTE:
SITE PLAN IS FOR INFORMATION ONLY. ALL SITE WORK IS BY OTHERS. TROY LFS SCOPE OF WORK BEGINS AT A FLANGE CONNECTION PROVIDED BY OTHERS INSIDE BUILDING.

NOTE:
FDC SIAMESE TO BE LOCATED MAX. 146 FT. FROM NEAREST FIRE HYDRANT AS PER 3.2.5.16 OF THE ONTARIO BUILDING CODE

NOTE:
FLUSHING OF UNDERGROUND PIPE TO BE DONE BEFORE SPRINKLER SYSTEM HEADER IS CONNECTED INTO IT. (BY OTHERS)

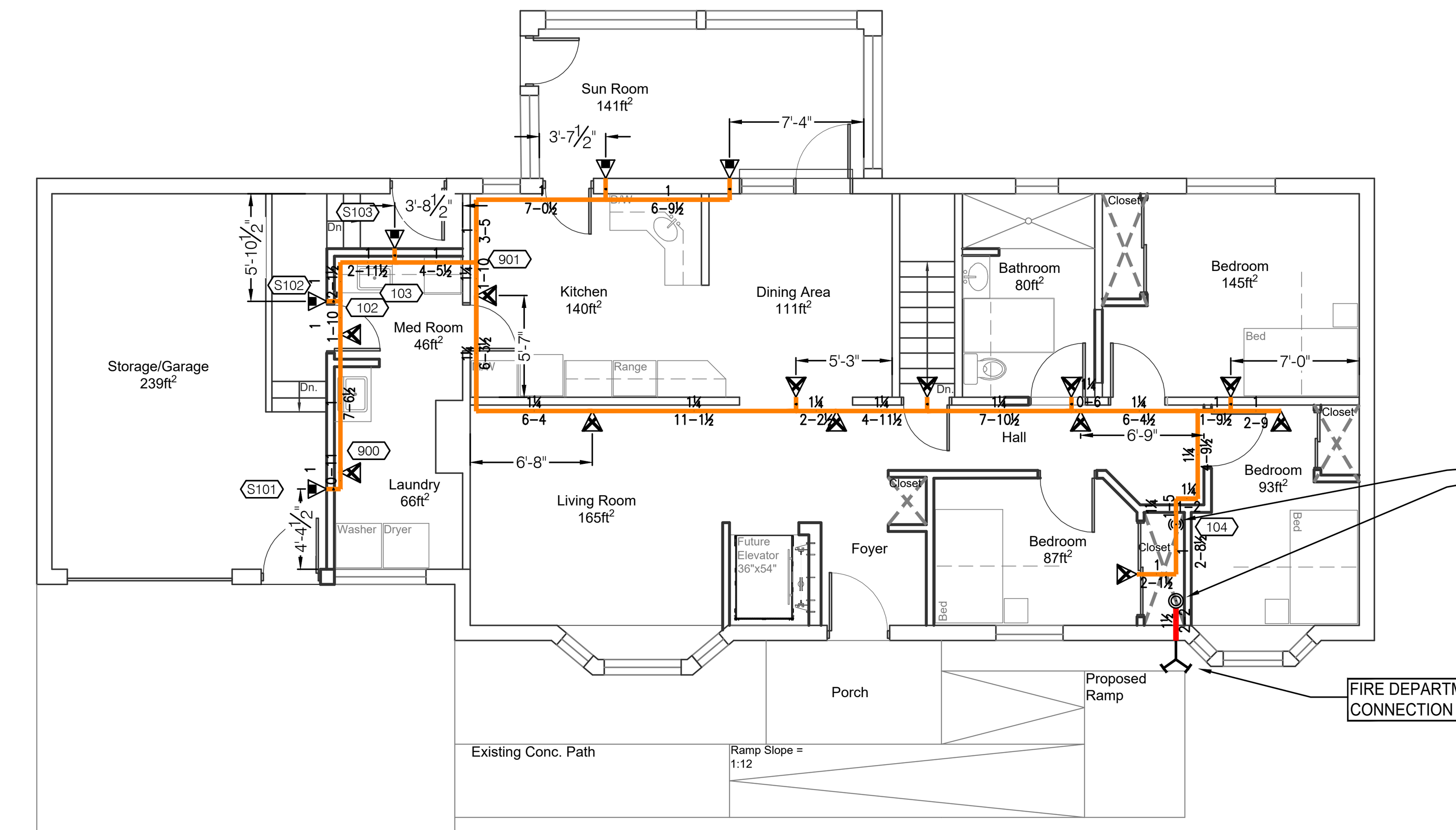


FIRE PROTECTION LEGEND
1. 1.5" BUTTERFLY VALVE -w/ TAMPER SWITCH
2. WATER FLOW SWITCH
3. SYSTEM TEST/DRAIN
4. AMES 200B BACKFLOW
5. DRAIN TO FLOOR/ DRAIN TO EXTERIOR

FIRE ALARM - SUPERVISORY POINTS
1. CV-1 BACKFLOW CITY SIDE - CONTROL VALVE
2. CV-2 BACKFLOW SYSTEM SIDE - CONTROL VALVE
3. CV-3 BASEMENT AREA - CONTROL VALVE
4. CV-4 1ST FLOOR AREA - CONTROL VALVE

FIRE ALARM - ALARM POINTS
1. FS-1 BASEMENT AREA - FLOW
2. FS-2 1ST FLOOR AREA - FLOW

3/SP1 SPRINKELR SCHEMATIC
NOT TO SCALE



1/SP1 1ST FLOOR SPRINKLER PLAN
1/8" = 1'-0"

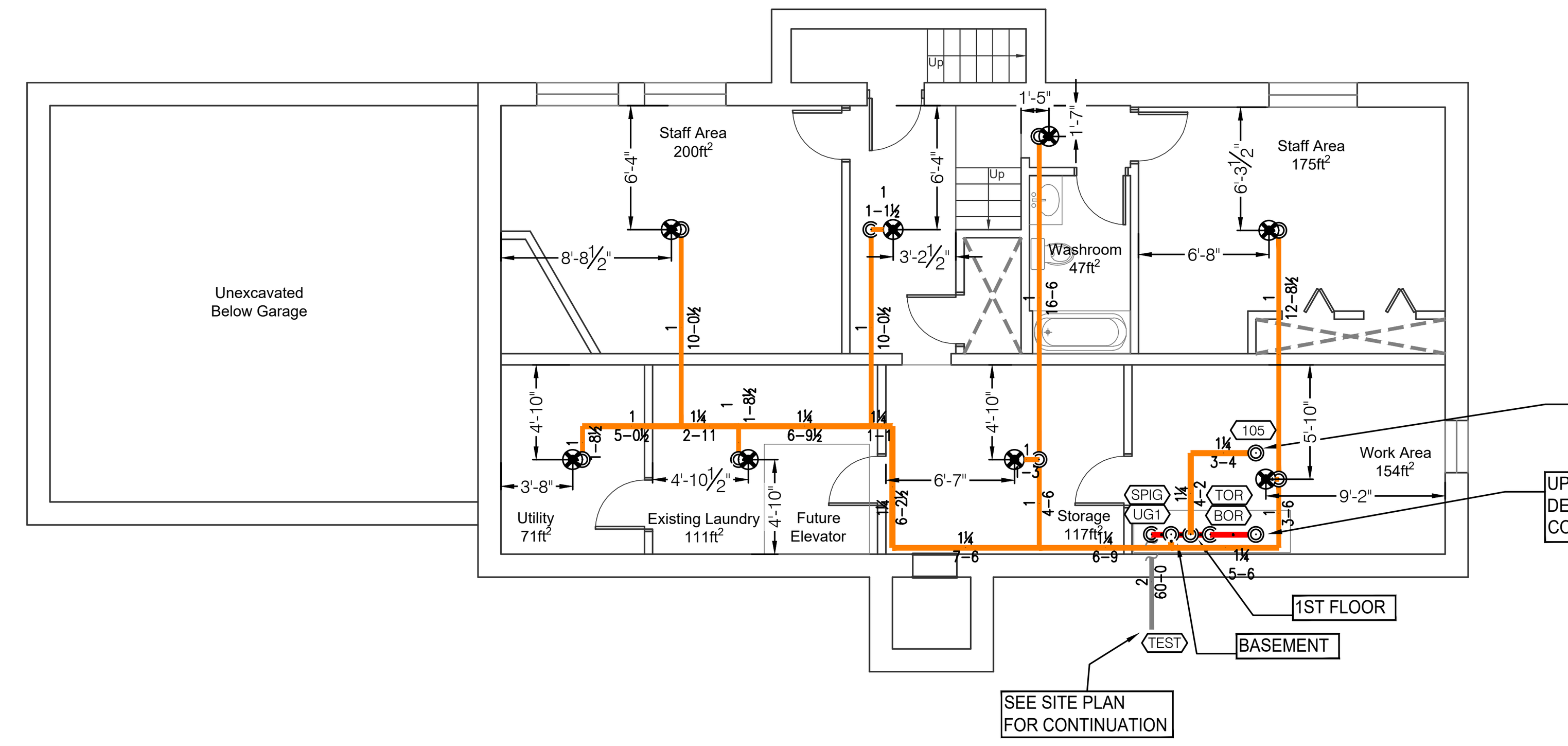
PIPE DIMENSIONS AS INDICATED ARE CENTRE LENGTH

POINT OF COMPASS

APPLICABLE CODES & STANDARDS MATRIX

☒ NFPA 13R 2013 ed.	☐	☐
☒ OBC 2012 ed.	☐	☐
☐	☐	☐

X-X PIPE ℄ ABOVE THE FINISHED FLOOR (AFF)
XX Bts PIPE ℄ FROM THE UNDERSIDE OF THE STRUCTURE ABOVE



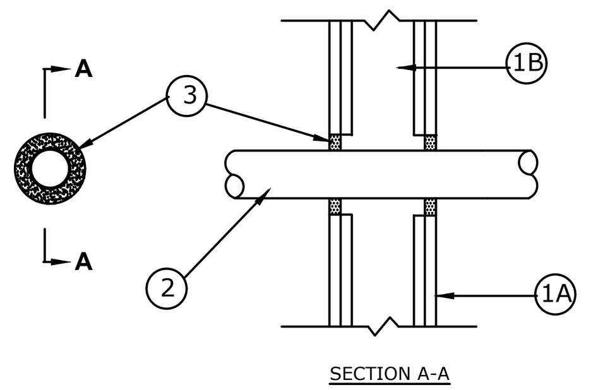
2/SP1 BASEMENT SPRINKLER PLAN
1/8" = 1'-0"

DENOTES CPVC SPRINKLER PIPING
DENOTES STEEL SPRINKLER PIPING

SPRINKLER LEGEND

	SYM	1ST	BSMT	JOB	POSITION	FINISH	TEMP	QR/SR	K	NPT	SIN	MFG	MODEL	SPARES
RESIDENTIAL PENDENT MAX 18'-0" x 18'-0" U.N.O.	⦿	0	8	8	PEND. - SEMI REC.	WHITE	155°F	RR	4.9	1/2"	TY2236	TYCO	LFII	2
RESIDENTIAL SIDEWALL MAX 16'-0" x 16'-0" U.N.O.		12	0	12	SIDEWALL - RESID	WHITE	155°F	RR	4.4	1/2"	TY2334	TYCO	LFII	2
RESIDENTIAL SIDEWALL MAX 16'-0" x 16'-0" U.N.O.		5	0	5	SIDEWALL - DRY	WHITE	200°F	RR	4.4	1"	TY2335	TYCO	LFII	0

System No.W-L-1341
November 25, 2003
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr



SECTION A-A

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 IN. BY 4 IN. (51 MM BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. (89 MM) WIDE SPACED MAX 24 IN. (610 MM) OC.
   B. GYPSUM BOARD* - THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. DIAM OF OPENING TO BE MIN 1/2 IN. (13 MM) TO MAX 4 IN. (102 MM) GREATER THAN OUTSIDE DIAM OF THROUGH-PENETRANT.

THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. THROUGH PENETRANTS - ONE METALLIC PIPE CENTERED WITHIN OPENING. ANNULAR SPACE BETWEEN PENETRANT AND PERIPHERY OF OPENING TO BE MIN 1/4 IN. (6 MM) TO MAX 2 IN. (51 MM). PENETRANT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL. THE FOLLOWING TYPES AND SIZES OF PENETRANTS MAY BE USED:
   A. STEEL PIPE - NOM 6 IN. (152 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.

3. FILL,VOID OR CAVITY MATERIAL* - SEALANT - MIN 5/8 IN. (16 MM) THICKNESS OF SEALANT APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.

3M COMPANY - FB-1000 NS

*BEARING THE UL CLASSIFICATION MARKING

RESIDENTIAL SPRINKLER NOTES:

NFPA 13R (2013) - 6.2.2.4
RESIDENTIAL SPRINKLERS SHALL BE PERMITTED TO BE USED IN ORDINARY HAZARD AREAS THAT MEET THE FOLLOWING CONDITIONS:
1) THE AREA IS COMPARTMENTED INTO 500 ft² OR LESS BY 30-MINUTE FIRE-RATED CONSTRUCTION.
2) THE SPRINKLERS ARE SPACED AT 130 ft² PER SPRINKLER.
3) OPENINGS HAVE A LINTEL AT LEAST 8 in. IN DEPTH.
4) THE TOTAL AREA OF OPENINGS, EXCLUDING ANY OVERHEAD GARAGE DOORS THAT OPEN TO THE EXTERIOR, DOES NOT EXCEED 50 ft² FOR EACH COMPARTMENT.
5) DISCHARGE DENSITIES ARE IN ACCORDANCE WITH NFPA 13 FOR ORDINARY HAZARD.

NFPA 13R (2013) - 6.4.6.3.2
IN ALL CLOSETS AND COMPARTMENTS, INCLUDING THOSE CLOSETS HOUSING MECHANICAL EQUIPMENT, THAT ARE NOT LARGER THAN 400 ft³ IN SIZE, A SINGLE SPRINKLER AT THE HIGHEST CEILING SPACE SHALL BE SUFFICIENT WITHOUT REGARD TO OBSTRUCTIONS OR MINIMUM DISTANCE TO THE WALL.

NFPA 13R (2013) - 6.4.6.3.3.2
SHADOW AREAS IN CORRIDORS UP TO 2 ft IN DEPTH AND UP TO 9 ft IN LENGTH BEHIND SIDEWALL SPRINKLERS SHALL BE PERMITTED.

NFPA 13R (2013) - 6.4.6.3.3.3
SMALL AREAS CREATED BY ARCHITECTURAL FEATURES, SUCH AS PLANTER BOX WINDOWS, BAY WINDOWS, AND SIMILAR FEATURES, SHALL BE EVALUATED AS FOLLOWS:
1) WHERE NO ADDITIONAL FLOOR AREA IS CREATED BY THE ARCHITECTURAL FEATURE, NO ADDITIONAL SPRINKLER PROTECTION IS REQUIRED.
2) WHERE ADDITIONAL FLOOR AREA IS CREATED BY AN ARCHITECTURAL FEATURE, NO ADDITIONAL SPRINKLER PROTECTION IS REQUIRED, PROVIDED ALL OF THE FOLLOWING CONDITIONS ARE MET:
   a) THE FLOOR AREA SHALL NOT EXCEED 18 ft².
   b) THE FLOOR AREA SHALL NOT BE GREATER THAN 2 ft IN DEPTH AT THE DEEPEST POINT OF THE ARCHITECTURAL FEATURE TO THE PLANE OF THE PRIMARY WALL WHERE MEASURED ALONG THE FINISHED FLOOR.
   c) THE FLOOR SHALL NOT BE GREATER THAN 9 ft IN LENGTH WHERE MEASURED ALONG THE PLANE OF THE PRIMARY WALL.
   d) MEASUREMENT FROM THE DEEPEST POINT OF THE ARCHITECTURAL FEATURE TO THE SPRINKLER SHALL NOT EXCEED THE MAXIMUM LISTED SPACING OF THE SPRINKLER.
3) THE HYDRAULIC DESIGN SHALL NOT BE REQUIRED TO CONSIDER THE AREA CREATED BY THE ARCHITECTURAL FEATURE.

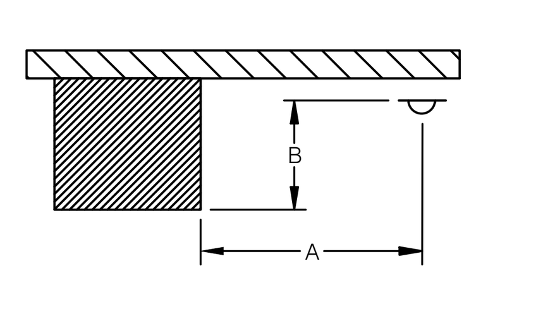
NFPA 13R (2013) - 6.4.6.3.4.1
RESIDENTIAL PENDENT SPRINKLERS TO BE LOCATED AT LEAST 3 FT. AWAY FROM OBSTRUCTIONS SUCH AS CEILING FANS & LIGHTS.

NFPA 13R (2013) - 6.4.6.3.5.1
RESIDENTIAL SIDEWALL SPRINKLERS TO BE LOCATED AT LEAST 5 FT. AWAY FROM OBSTRUCTIONS SUCH AS CEILING FANS & LIGHTS.

NFPA 13R (2013) - 6.4.7
THE FOLLOWING TYPES OF SPACES SHALL BE PERMITTED TO BE PROTECTED BY RESIDENTIAL SPRINKLERS OUTSIDE OF DWELLING UNITS:
1) LOBBIES NOT IN HOTELS AND MOTELS
2) FOYERS
3) CORRIDORS
4) HALLS
5) LOUNGES
6) OTHER AREAS WITH FIRE LOADS SIMILAR TO RESIDENTIAL FIRE LOADS

NFPA 13R (2013) - 6.6.2
SPRINKLERS ARE NOT REQUIRED IN BATHROOMS THAT DO NOT EXCEED 55 SQ. FT IN AREA.

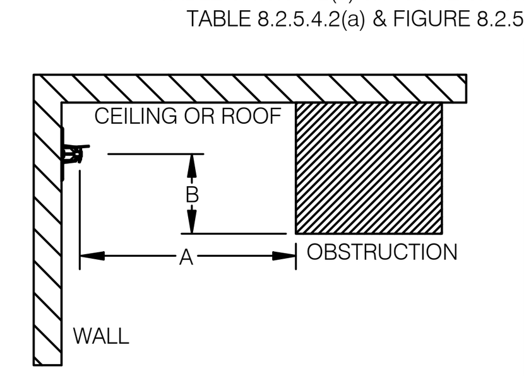
POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION ALONG WALL
PER TABLE 8.10.7.1.4 & FIGURE 8.10.7.1.4 OF NFPA 13, 2013 ED.,
TABLE 6.4.6.3.7.2(b) & FIGURE 6.4.6.3.7.2(b) OF NFPA 13R, 2013 ED. &
TABLE 8.2.5.4.2(b) & FIGURE 8.2.5.4.2(b) OF NFPA 13D, 2016 ED.



DISTANCE FROM SPRINKLER TO SIDE OF OBSTRUCTION (DIMENSION A)	MAX DISTANCE OF DEFLECTOR ABOVE OBSTRUCTION (DIMENSION B)
LESS THAN 1'-0"	0"
1'-0" TO LESS THAN 3'-0"	1"
3'-0" TO LESS THAN 4'-0"	3"
4'-0" TO LESS THAN 4'-6"	5"
4'-6" TO LESS THAN 6'-0"	7"
6'-0" TO LESS THAN 6'-6"	9"
6'-6" TO LESS THAN 7'-0"	11"
7'-0" TO LESS THAN 7'-6"	14"

RESIDENTIAL SIDEWALL SPRAY SPRINKLER OBSTRUCTIONS
SCALE: NTS

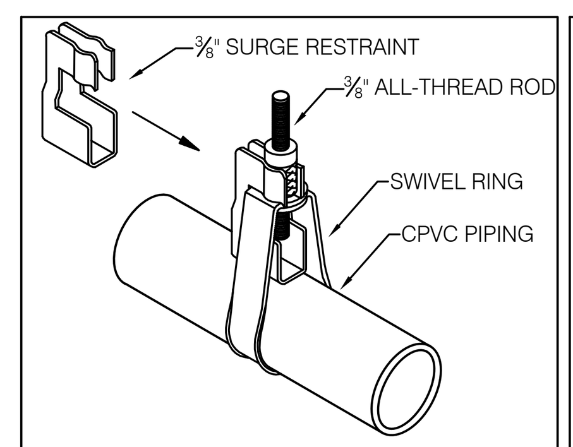
POSITIONING OF SPRINKLERS TO AVOID OBSTRUCTION
PER TABLE 8.10.7.1.3 & FIGURE 8.10.7.1.3 OF NFPA 13, 2013 ED.,
TABLE 6.4.6.3.7.2(a) & FIGURE 6.4.6.3.7.2(a) OF NFPA 13R, 2013 ED. &
TABLE 8.2.5.4.2(a) & FIGURE 8.2.5.4.2(a) OF NFPA 13D, 2016 ED.



DISTANCE FROM SPRINKLER TO SIDE OF OBSTRUCTION (DIMENSION A)	MAX DISTANCE OF DEFLECTOR ABOVE OBSTRUCTION (DIMENSION B)
LESS THAN 8'-0	NOT ALLOWED
8'-0" TO LESS THAN 10'-0"	1"
10'-0" TO LESS THAN 11'-0"	2"
11'-0" TO LESS THAN 12'-0"	3"
12'-0" TO LESS THAN 13'-0"	4"
13'-0" TO LESS THAN 14'-0"	6"
14'-0" TO LESS THAN 15'-0"	7"
15'-0" TO LESS THAN 16"-0"	9"
16'-0" TO LESS THAN 17'-0"	11"
17'-0" OR GREATER	14"

RESIDENTIAL SIDEWALL SPRAY SPRINKLER OBSTRUCTIONS
SCALE: NTS

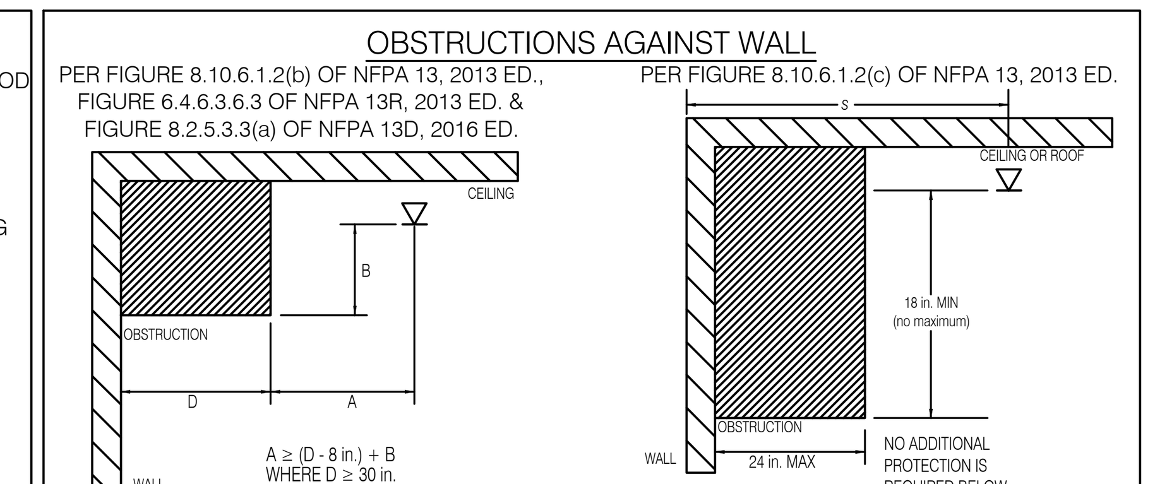
DESIGN AREA # 1	3 SPRINKLERS
CODE	NFPA 13R, 2013
HAZARD	RESDIENTIAL
DENSITY	0.05 USGPM/SQ.FT.
MAX. COVERAGE AREA	256 SQ.FT.
K - FACTOR	4.4
C - FACTOR	120/150
NUMBER OF HEADS	3
SPRINKLER DEMAND	55 USGPM
HOSE ALLOWANCE	0 USGPM
TOTAL DEMAND	55 USGPM
@ PRESSURE	@ 52 PSI
AVAILABLE WATER	
STATIC PRESSURE	60 PSI
RESIDUAL PRESSURE	20 PSI @ 3102 USGPM
SOURCE	TROY FLOW TEST



NOTE: SURGE RESTRAINTS MUST BE USED ON ALL CPVC ARMOVERS TO DROPS

CPVC SURGE RESTRAINT
SCALE: NTS

OBSTRUCTIONS AGAINST WALL



RESIDENTIAL UPRIGHT & PENDENT SPRINKLER OBSTRUCTIONS
SCALE: NTS

CPVC HANGER SPACING

NOMINAL PIPE SIZE (INCHES)	MAXIMUM DISTANCE (FEET)
3/4"	5'-6"
1"	6'-0"
1 1/4"	6'-6"
1 1/2"	7'-0"
2"	8'-0"

END OF LINE SUPPORT DISTANCE SPRINKLER DROP ELBOW

NOMINAL PIPE SIZE (INCHES)	LESS THAN 100 PSI	GREATER THAN 100 PSI
3/4"	9"	6"
1"	12"	9"
1 1/4"	16"	12"
1 1/2" - 3"	24"	12"

END OF LINE SUPPORT DISTANCE SPRINKLER DROP TEE

NOMINAL PIPE SIZE (INCHES)	LESS THAN 100 PSI	GREATER THAN 100 PSI
3/4"	4'-0"	3'-0"
1"	5'-0"	4'-0"
1 1/4"	6'-0"	5'-0"
1 1/2" - 3"	7'-0"	7'-0"

NOTE: FOR ALL SPRINKLER DROPS SUPPORTED BY RING TYPE HANGERS, HANGERS MUST BE INSTALLED COMPLETE WITH SURGE RESTRAINTS

CPVC NOTES:

PLEASE TAKE NOTE OF CPVC COMPATIBILITY MEMOS WHICH ARE INCLUDED IN TROY LFS EQUIPMENT SUBMITTAL AND POSTED ONSITE DURING INSTALLATION.

CPVC PIPE THAT IS EXPOSED MAY BE PAINTED HOWEVER THE PAINT MUST BE WATER-BASED ACRYLIC LATEX PAINT. OIL OR SOLVENT-BASED PAINTS MAY BE CHEMICALLY INCOMPATIBLE WITH TYCO CPVC. PRIOR TO PAINTING, APPROVAL MUST BE OBTAINED FROM THE AUTHORITY HAVING JURISDICTION TO COVER THE MARKINGS ON THE PRODUCT (I.E. PRODUCT IDENTIFICATION, LISTING MARKS, ETC.) AND TO CHANGE COLOR OF THE PIPE AND FITTINGS FROM ITS IDENTIFIABLE ORANGE. CONTACT THE MANUFACTURER OF THE PAINT FOR VERIFICATION OF COMPATIBILITY OF PAINTS OTHER THAN WATER-BASED ACRYLIC LATEX.

NFPA STANDARDS PERMIT THE OMISSION OF AUTOMATIC SPRINKLERS IN AREAS SUCH AS SMALL CLOSETS AND BATHROOMS. WHERE SPRINKLERS ARE NOT REQUIRED, AND WHEN APPROVED BY THE AUTHORITY HAVING JURISDICTION, IT IS ACCEPTABLE TO INSTALL BLAZEMASTER PRODUCTS EXPOSED IN THESE AREAS.

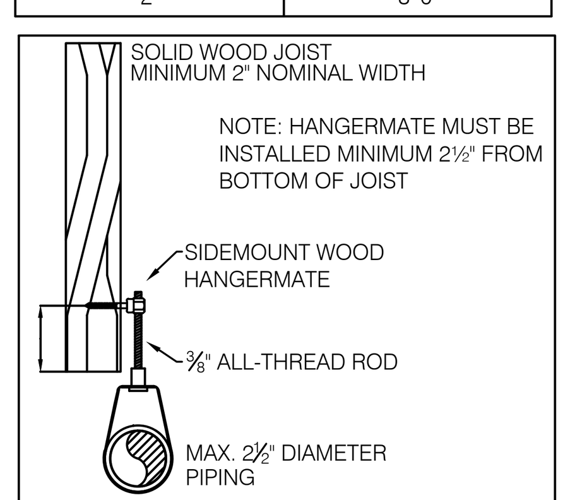
WHERE PIPING IS REQUIRED INSTALLED EXPOSED, IT SHALL BE MOUNTED DIRECTLY TO THE CEILING/WALL WITH LISTED HANGERS FOR CPVC SPRINKLER PIPING. FOR SIDEWALLS, PIPING SHALL BE MOUNTED DIRECTLY TO THE WALL. FOR PENDENTS. PIPING SHALL BE MOUNTED DIRECTLY TO THE CEILING. THE RESULTING CLEARANCE BETWEEN THE PIPE AND THE CEILING/WALL AS A FUNCTION OF USING THE LISTED HANGER IS ACCEPTABLE. THIS MEETS THE REQUIREMENTS OF OBC 3.2.5.14 AND THE CPVC PRODUCT MATERIAL DATA PAGE INSTALLATION REQUIREMENTS FOR EXPOSED CPVC.

NFPA 13R (2013) - 6.6.3
SPRINKLERS ARE NOT REQUIRED IN CLOTHES CLOSETS, LINEN CLOSETS & PANTRIES WITHIN DWELLING UNITS THAT MEET ALL OF THE FOLLOWING CONDITIONS:
(1) THE AREA OF SPACE DOES NOT EXCEED 24 SQ. FT.
(2) THE LEAST DIMENSION DOES NOT EXCEED 3 FT.
(3) THE WALLS & CEILINGS ARE SURFACED WITH NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIALS AS DEFINED BY NFPA 220.

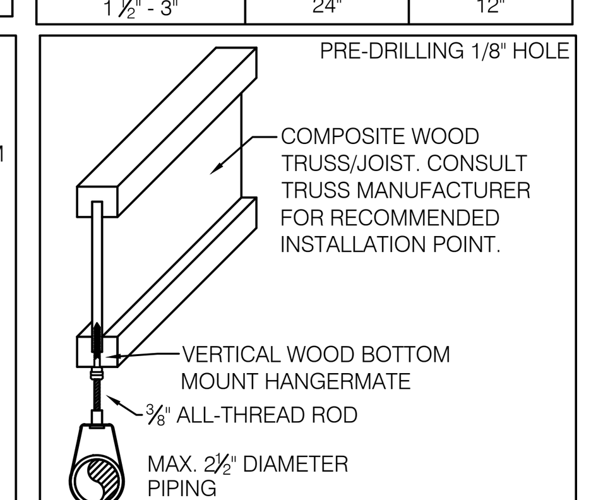
NFPA 13R (2013) - 6.6.5
SPRINKLERS SHALL NOT BE REQUIRED IN ANY PORCHES, BALCONIES, CORRIDORS, CARPORTS, PORTE COCHERES, AND STAIRS THAT ARE OPEN & ATTACHED.

WHERE A WOOD ROOF OR DECK IS PROVIDED ABOVE, SPRINKLERS SHALL BE INSTALLED TO PROTECT ATTACHED EXTERIOR BALCONIES, ATTACHED EXTERIOR DECKS, AND GROUND FLOOR PATIOS SERVING DWELLING UNITS.

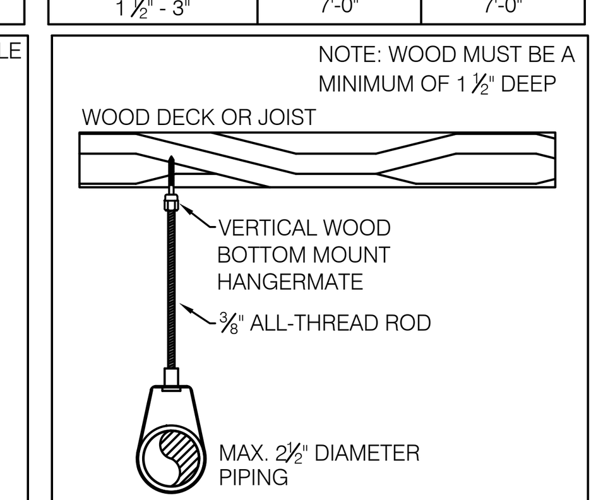
NFPA 13R (2013) - 6.6.6
SPRINKLERS ARE NOT REQUIRED IN ATTICS, PENTHOUSE EQUIPMENT ROOMS, ELEVATOR MACHINE ROOMS, CONCEALED SPACES DEDICATED EXCLUSIVELY TO AND CONTAINING ONLY DWELLING UNIT VENTILATION EQUIPMENT, CRAWL SPACES, FLOOR/CEILING SPACES, NONCOMBUSTIBLE ELEVATOR SHAFTS WHERE THE ELEVATOR CARS COMPLY WITH ANSI A17.1, AND OTHER CONCEALED SPACES THAT ARE NOT USED OR INTENDED FOR LIVING PURPOSES OR STORAGE AND DO NOT CONTAIN FUEL-FIRED EQUIPMENT.



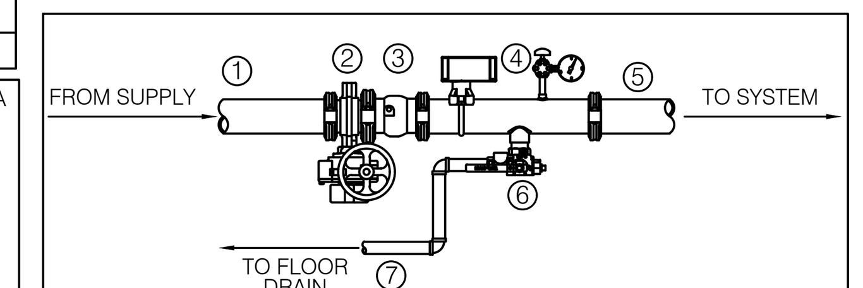
WOOD SIDE MOUNT HANGER
SCALE: NTS



WOOD BOTTOM MOUNT HANGER
SCALE: NTS

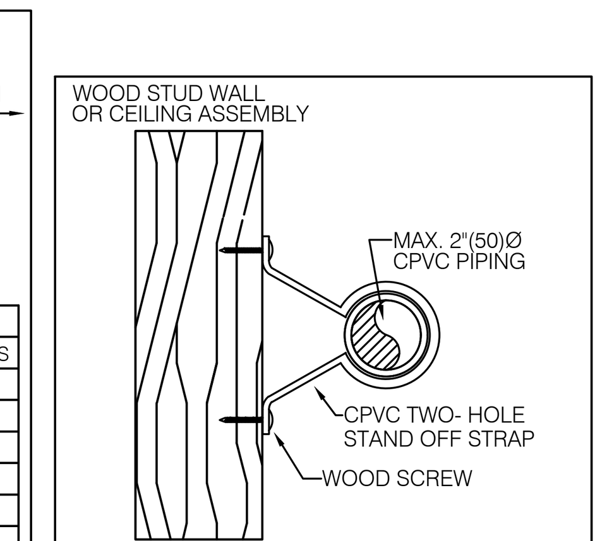


WOOD BOTTOM MOUNT HANGER
SCALE: NTS

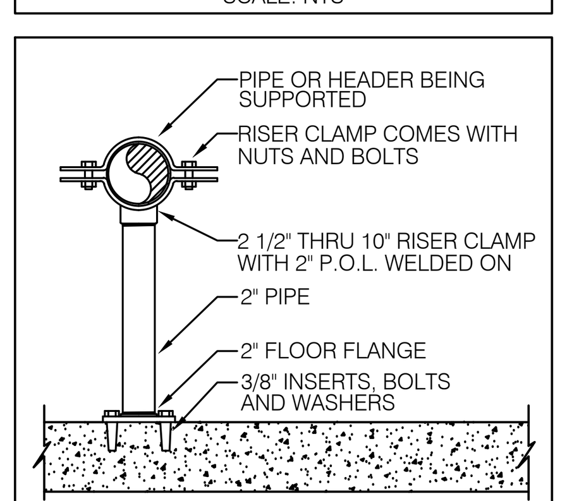


	DEVICE
1	FEED FROM RISER OR FEED MAIN - SIZING VARIES BASED ON HYDRAULICS
2	GROOVED BUTTERFLY VALVE C/W TAMPER SWITCH
3	GROOVED CHECK VALVE
4	TYCO RISER MANIFOLD ASSEMBLY C/W FLOW SWITCH AND GAUGE
5	FEED TO SPRINKLER ZONE - SIZING VARIES BASED ON HYDRAULICS
6	TEST AND DRAIN C/W TEST PORT AND FULL DRAIN PORT
7	PIPING TO FLOOR DRAIN - SIZING VARIES BASED ON MANIFOLD SIZE

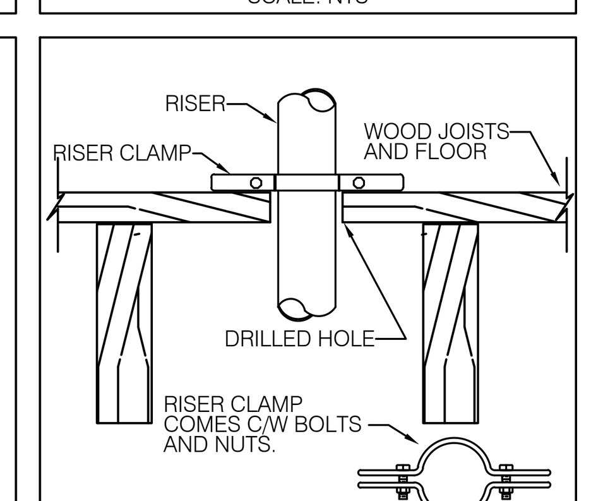
TYPICAL SPRINKLER ZONE SCHEMATIC
SCALE: NTS



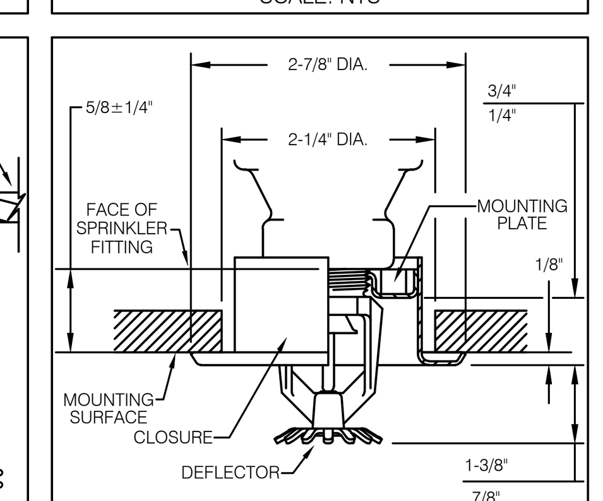
CPVC STAND OFF HANGER
SCALE: NTS



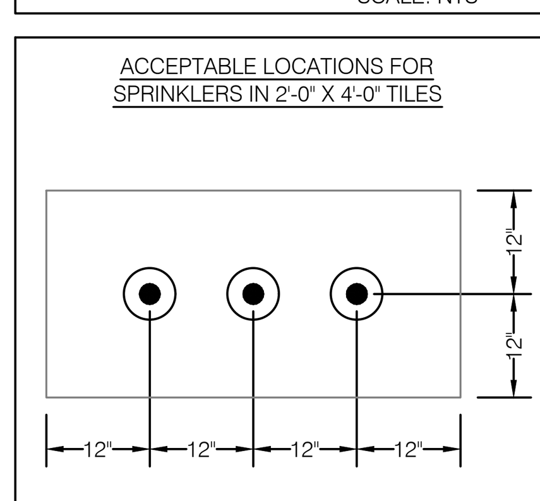
PIPE STAND DETAIL
SCALE: NTS



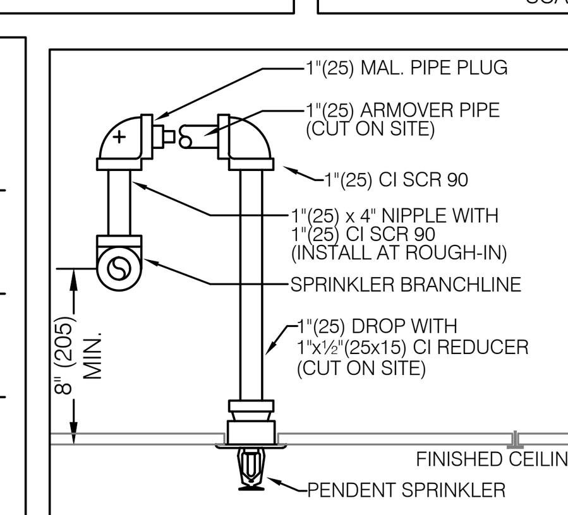
RISER CLAMP DETAIL
SCALE: NTS



SEMI-RECESSED SPRINKLER
SCALE: NTS

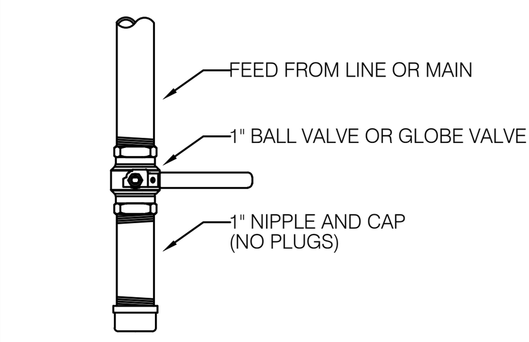


SPRINKLERS IN CEILING TILES
SCALE: NTS



GOOSENECK SWING DETAIL
SCALE: NTS

NFPA 13, 2013 EDITION:
8.16.2.5.2.2 WHERE THE CAPACITY OF ISOLATED TRAPPED SECTIONS OF PIPE IS MORE THAN 5 GALLONS AND LESS THAN 50 GALLONS, THE AUXILIARY DRAIN SHALL CONSIST OF A VALVE 3/4 INCH OR LARGER AND A PLUG OR A NIPPLE AND CAP.



AUXILARY DRAIN VALVE DETAIL
SCALE: NTS

NO.	DATE	DESCRIPTION	BY
0	28-OCT-24	ISSUED FOR CONSTRUCTION	BD

ENGINEERS STAMP

TROY LIFE & FIRE SAFETY LTD. - SCOPE OF WORK

ITEM	INCLUDED	EXCLUDED (EXISTING OR N/A)
UNDERGROUND MAIN	☐	☒
TEST/FLUSH OF UNDERGROUND	☐	☒
BACKFLOW PREVENTER	☒	☐
FIRE DEPARTMENT CONNECTION	☒	☐
DOMESTIC WATER CONNECTION	☐	☒
FIRE PUMP (AND COMPONENTS)	☐	☒
FIRE EXTINGUISHERS / CABINETS	☐	☒
HOSE VALVES / CABINETS	☐	☒
SPRINKLER ZONE VALVES	☒	☐
FIRE STOPPING & SEALING	☒	☐
PATCHING, FURRING-IN	☐	☒
BOXING OF PIPE	☐	☒
HEAT TRACING & INSULATION	☐	☒
WALL PENETRATION ESCUTCHEONS	☒	☐
HEAD GUARDS (WHERE REQUIRED)	☒	☐
CORING	☐	☒
PAINTING OF PIPE	☐	☒
BAFFLES	☐	☒
SEISMIC PROVISIONS	☐	☒
PIPE IDENTIFICATION	☐	☒

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

Troy Life & Fire Safety Ltd.
555 Wentworth Street East, Unit #7
Oshawa, ON L1H 3V8
Phone: (905) 725-5553
Fax: (905) 725-4294
www.troylfs.com

PROJECT
711 CROWLEY CRESENT
711 CROWLEY CRESCENT, PETERBOROUGH, ON K9J 6P5

DESCRIPTION
Sprinkler Drawing, Notes & Details

CONTRACT WITH	TROY LFS CONTRACT #
DEAFBLIND ONTARIO SERVICES	12-11288

DATE	SCALE	DRAWN BY	CHECKED BY	DRAWING #
OCT 2024	AS NOTED	BD	MD	SP1 Page 1 of 1