

# THUNDER BAY FIT-UP PROJECT

## 130 SOUTH SYNDICATE AVE., THUNDER BAY, ON

### MECHANICAL

GENERAL LEGEND	
SYMBOL	DESCRIPTION
	EXISTING PIPING/DUCTWORK/EQUIPMENT
	EXISTING PIPING/DUCTWORK/EQUIPMENT TO BE REMOVED/RELOCATED
	NEW/RELOCATED PIPING/DUCTWORK/EQUIPMENT
	EXISTING PIPING/DUCTWORK/EQUIPMENT BELOW SLAB
	NEW PIPING/DUCTWORK/EQUIPMENT BELOW SLAB
(E)	DENOTES EXISTING EQUIPMENT
(R)	DENOTES RELOCATED EQUIPMENT
(N)	DENOTES NEW EQUIPMENT
(X)	DENOTES EQUIPMENT TO BE REMOVED

DRAWING LIST	
SYMBOL	DESCRIPTION
M1	MECHANICAL DRAWING LIST, LEGENDS, SCHEDULES & DETAILS
M2	MECHANICAL FIRE PROTECTION, PLUMBING & UTILITIES DEMOLITION & NEW WORK
M3	MECHANICAL HVAC DEMOLITION & NEW WORK

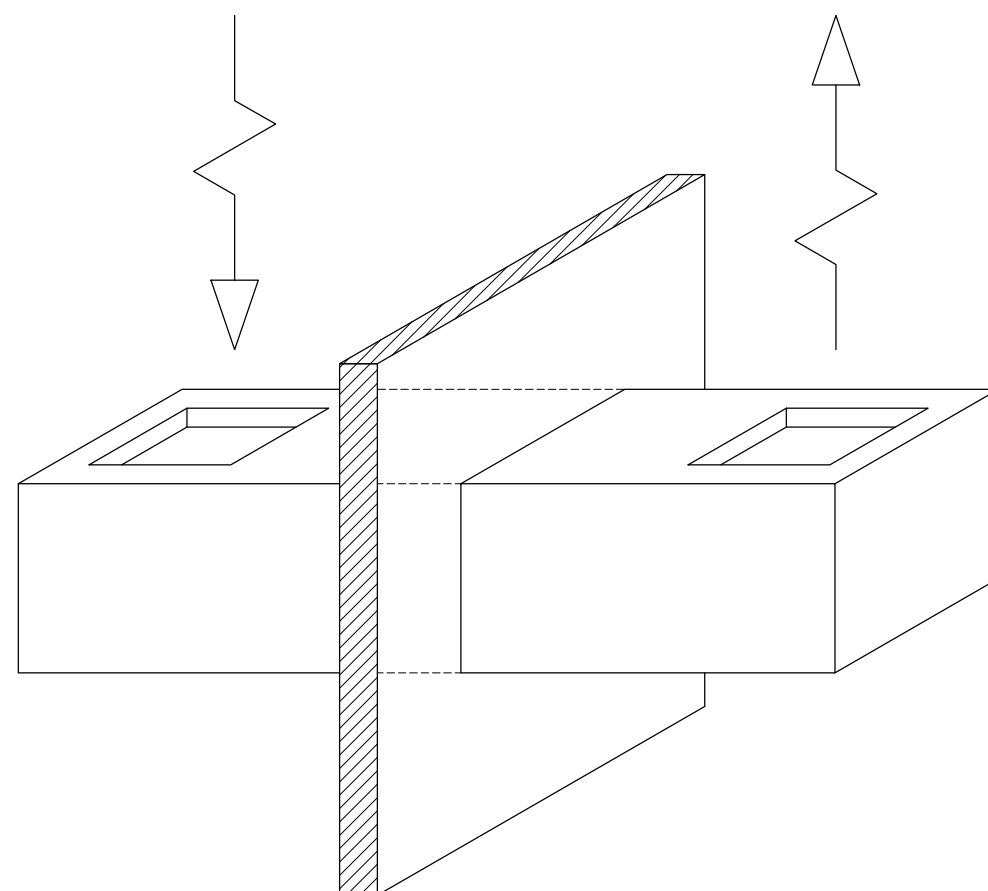
CONTROLS LEGEND	
SYMBOL	DESCRIPTION
	PNEUMATIC CONTROL TUBING
	THERMOSTAT
	TEMPERATURE SENSOR

PLUMBING LEGEND	
SYMBOL	DESCRIPTION
	PIPING BELOW GRADE/SLAB
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	SANITARY PIPING
	CONDENSATE PIPING
	PIPING OFFSET
	BRANCH PIPING DOWN
	PIPING DOWN
	PIPING UP
	REDUCER
	FLOW DIRECTION
	PIPE BREAK
	CAP
	DRAIN ASSEMBLY
	CLEAN OUT

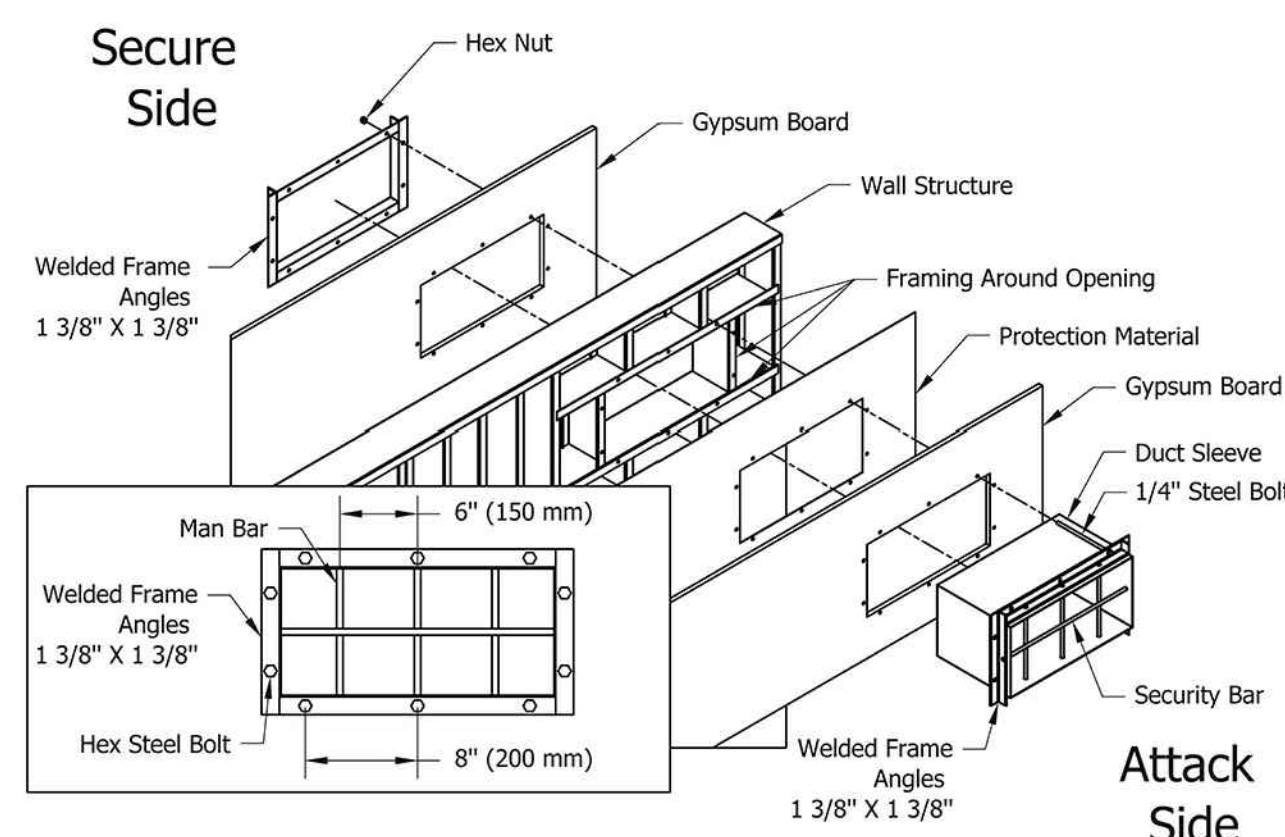
HVAC LEGEND	
SYMBOL	DESCRIPTION
	RECTANGULAR DUCTWORK
	ROUND DUCTWORK
	ACOUSTICALLY LINED DUCTWORK (RETURN OR SUPPLY)
	ROUND DUCTWORK OFFSET
	RECTANGULAR DUCTWORK OFFSET
	DUCTWORK UP
	DUCTWORK DOWN
	RECTANGULAR TO ROUND TRANSITION
	ECCENTRIC RECTANGULAR TO ROUND TRANSITION
	ECCENTRIC TRANSITION
	RECTANGULAR TAKE-OFF C/W BALANCING DAMPER
	RECTANGULAR TAKE-OFF
	ROUND TAKE-OFF C/W BALANCING DAMPER
	ROUND TAKE-OFF
	TAKE-OFF C/W BALANCING DAMPER
	TAKE-OFF
	SQUARE SUPPLY DIFFUSER (TYP)
	Round Ductwork Elbow
	RETURN GRILLE (RG)
	ACOUSTICALLY LINED TRANSFER DUCT (TD)
	FIRE DAMPER (FD)
	BALANCING DAMPER (BD)
	FLEXIBLE CONNECTION
	BYPASS BOX (BPS)
	REHEAT COIL (RH)
	TRANSFER FAN (TF)

UTILITIES LEGEND	
SYMBOL	DESCRIPTION
	HEATING WATER SUPPLY
	HEATING WATER RETURN
	PIPING OFFSET
	BRANCH PIPING DOWN
	PIPING DOWN
	PIPING UP
	REDUCER
	CAP
	ISOLATION VALVES
	2-WAY CONTROL VALVE (PNEUMATIC)
	WALL FIN RADIATOR (FT)
	HUMIDIFIER

FIRE PROTECTION LEGEND	
SYMBOL	DESCRIPTION
	FIRE EXTINGUISHER C/W MOUNTING BRACKET
	FIRE HOSE CABINET



TRANSFER DUCT  
DETAIL  
1  
M1  
N.T.S.



DUCT SECURITY BAR  
DETAIL  
2  
M1  
N.T.S.

FIXTURE CONNECTION SCHEDULE			
FIXTURE	DOMESTIC COLD WATER (mm)	DOMESTIC HOT WATER (mm)	SANITARY (mm)
LI	13	13	40
SI	13	13	40
WC1	13	-	75
FD1	-	-	75

NOTES: 1. COORDINATE EXACT PIPING LOCATIONS ON SITE.  
2. VENT TO MEET OBC REQUIREMENTS, VENTING THROUGH SLOPED ROOFS NOT PERMITTED.

FAN SCHEDULE										
UNIT NO.	LOCATION	FUNCTION	FAN DATA				ELECTRICAL DATA			
			TYPE	DRIVE (BELT/DIRECT)	AIR FLOW (L/A)	ESP (Pa)	FAN SPEED (RPM)	SONES	V/PH/Hz	MOTOR (WATTS)
TF-1.01	C1 KITCHEN 135	TRANSFER	INLINE	DIRECT	180	62.5	1070	2.0	120/1/60	207.0
TF-1.02	C1 MEETING ROOM 128	TRANSFER	INLINE	DIRECT	150	62.5	1350	2.5	120/1/60	152.4
TF-1.03	C1 FILE ROOM 125	TRANSFER	INLINE	DIRECT	85	62.5	1000	3.0	120/1/60	64.0
TF-1.04	C1 INTERVIEW ROOM 121	TRANSFER	INLINE	DIRECT	140	62.5	1350	2.5	120/1/60	152.4
TF-1.05	C2 MEETING ROOM 108	TRANSFER	INLINE	DIRECT	150	62.5	1350	2.5	120/1/60	152.4
TF-1	BASEMENT LINEN ROOM	WASHROOM EXHAUST	INLINE	DIRECT	75	125	1000	3.0	120/1/60	61.2

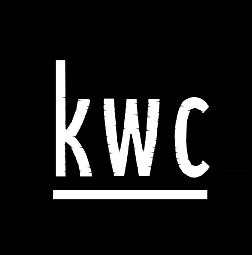
NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.  
2. DISCONNECT SWITCH BY DW 16.

DX SPLIT AC UNIT SCHEDULE						CONDENSING UNIT SCHEDULE					
UNIT NO.	LOCATION	CAPACITY (KW)	EVAPORATOR DATA (INDOOR UNIT)			UNIT NO.	LOCATION	SYSTEM	AMBIENT TEMP (°C)	CAPACITY (KW)	REMARKS
			INDOOR DESIGN TEMP (DB/WS)(°C)	V/PH/Hz	MCA/MOP						
AC-1.01	C1 SERVER ROOM 134	5.25	27/19	208/1/60	13/-	CU-1.01	ROOF	AC-1.01	35	5.25	C/W -40°C LOW AMBIENT KIT & WALL THERMOSTAT/CONTROLLER
AC-1.02	C2 LAN ROOM 109	5.25	27/19	208/1/60	13/-	CU-1.02	ROOF	AC-1.02	35	5.25	C/W -40°C LOW AMBIENT KIT & WALL THERMOSTAT/CONTROLLER

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.  
2. MATERIALS MAY BE APPROVED AFTER REVIEW OF TECHNICAL INFORMATION BY DEPARTMENTAL REPRESENTATIVE.

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KWC no. 1548

383 Parkdale Avenue, Suite 201  
Ottawa Ontario Canada K1J 4B4

KWC ARCHITECTS INC.

PHONE: (613) 238-2117  
FAX: (613) 238-0595  
E-MAIL: kwc@kwc-arch.com

Goodkey Weedmark  
Consulting Engineers

GOODKEY WEEDMARK & ASSOCIATES LIMITED  
1408 Broadview Dr. 613 723-5111 Voice  
Ottawa Ontario 813 723-5115 Fax  
Canada K2C 3S8 www.gwcl.com M65  
OWA #2015-481

04		
03	ISSUED FOR TENDER	2016/09/23
02	ISSUED FOR 90% REVIEW	2016/07/22
01	ISSUED FOR 66% REVIEW	2016/06/30

revision date

Do not scale drawings. Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

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project title  
titre du projet  
THUNDER BAY Ontario

130 SYNDICATE  
THUNDER BAY  
C1 / C2 INTERIOR RENOVATIONS  
GROUND FLOOR - FEDERAL BUILDING

drawing title  
titre de dessin  
MECHANICAL  
DRAWING LIST, LEGENDS,  
SCHEDULES & DETAILS

drawn by  
dessiné par  
T.REGLI

designed by  
conçu par  
T.REGLI

approved by  
approuvé par  
S.HAMILTON

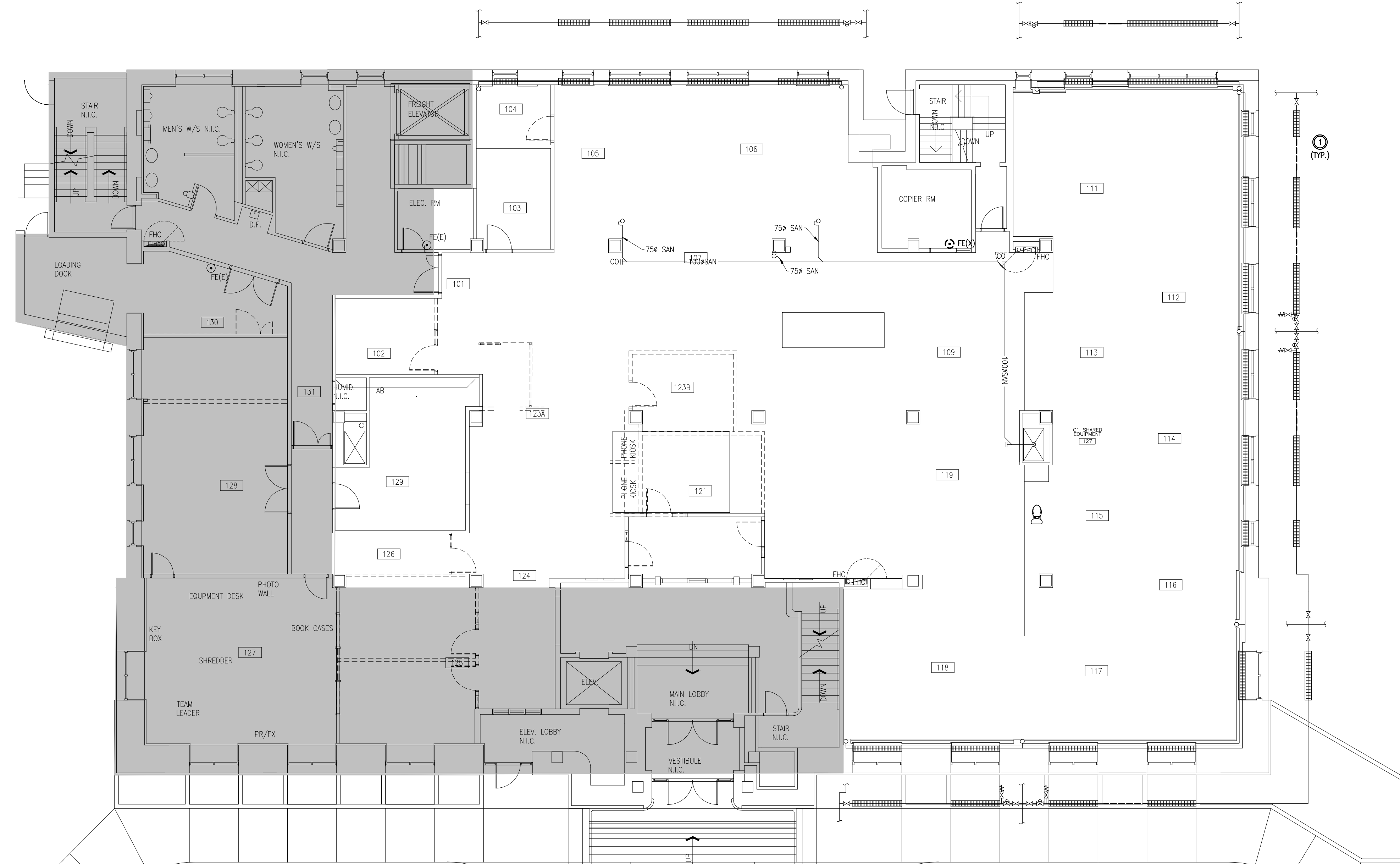
tender submission  
D. AGUSTIN project manager  
administrateur de projets

project date  
date du projet  
2015/09/10

project no.  
no. du projet  
R.079363.042

drawing no.  
dessiné no.  
M1



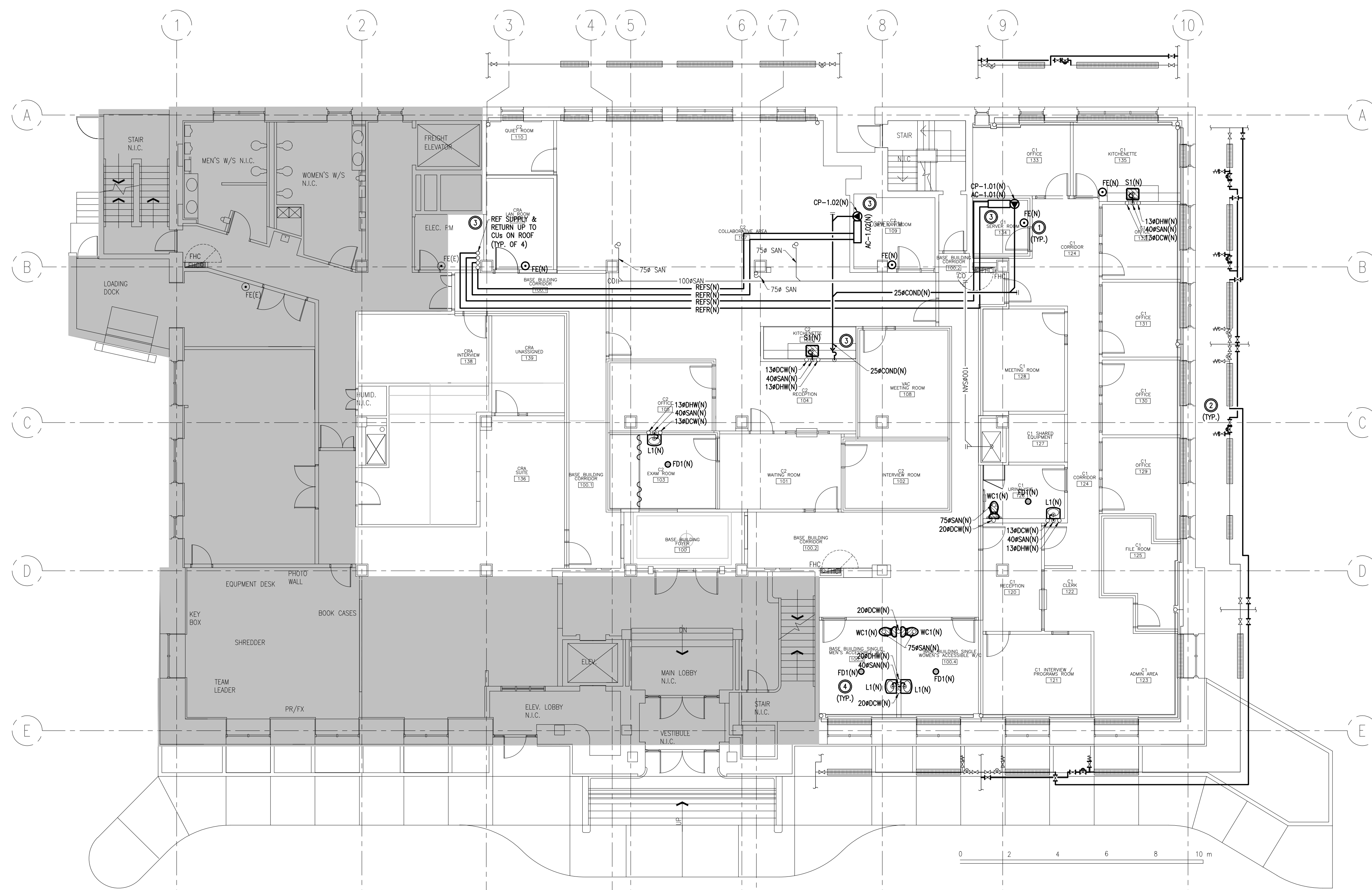


**FIRE PROTECTION, PLUMBING & UTILITIES  
GROUND FLOOR - DEMOLITION WORK**

1  
M2  
1:100

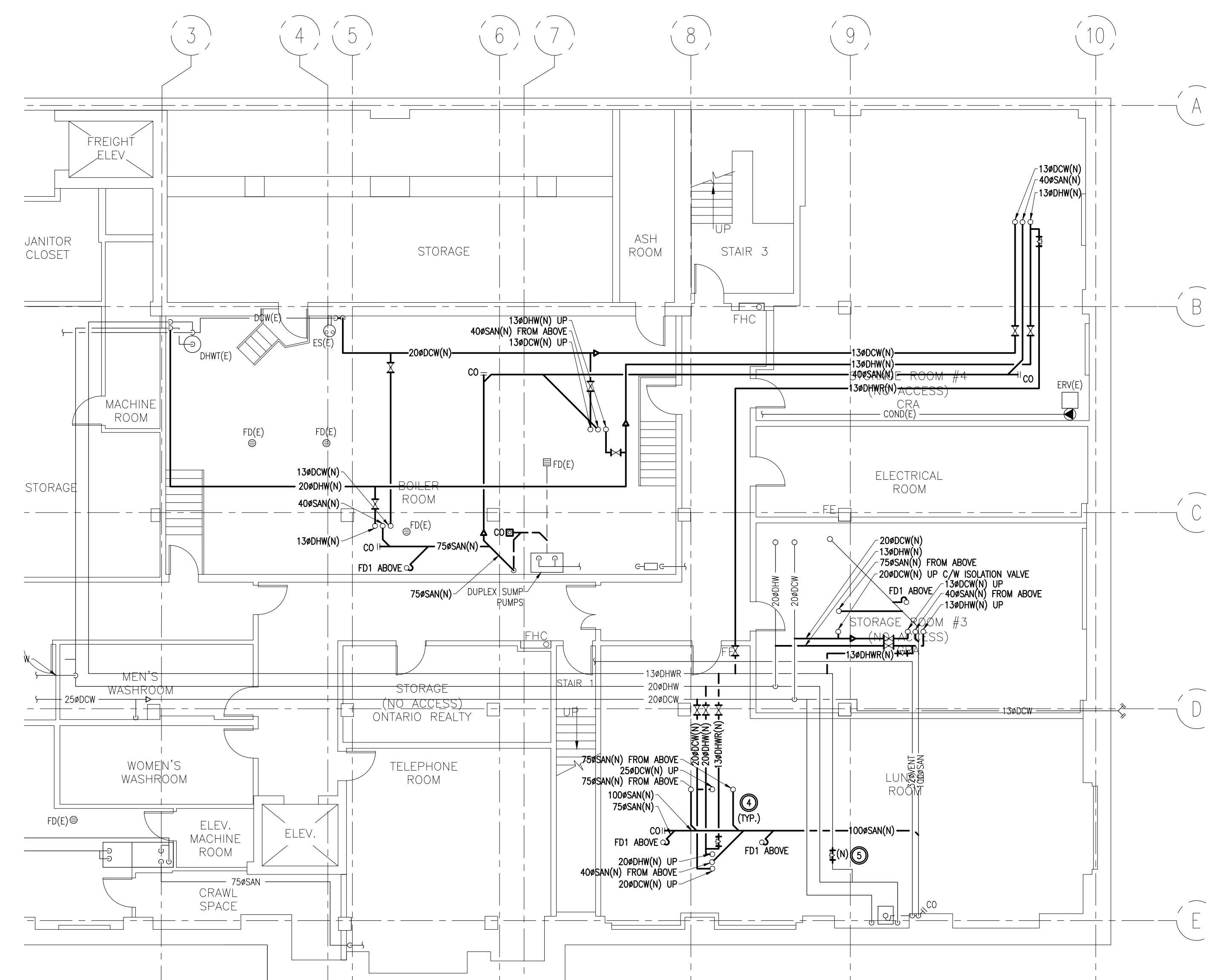
**DESCRIPTION OF WORK - DEMOLITION WORK**

- ① REMOVE EXISTING HEATING WATER PIPING AS INDICATED. CUT BASEBOARD CABINET AND REMOVE FINS AT WALL. COORDINATE WITH GENERAL TRADES ON SITE.



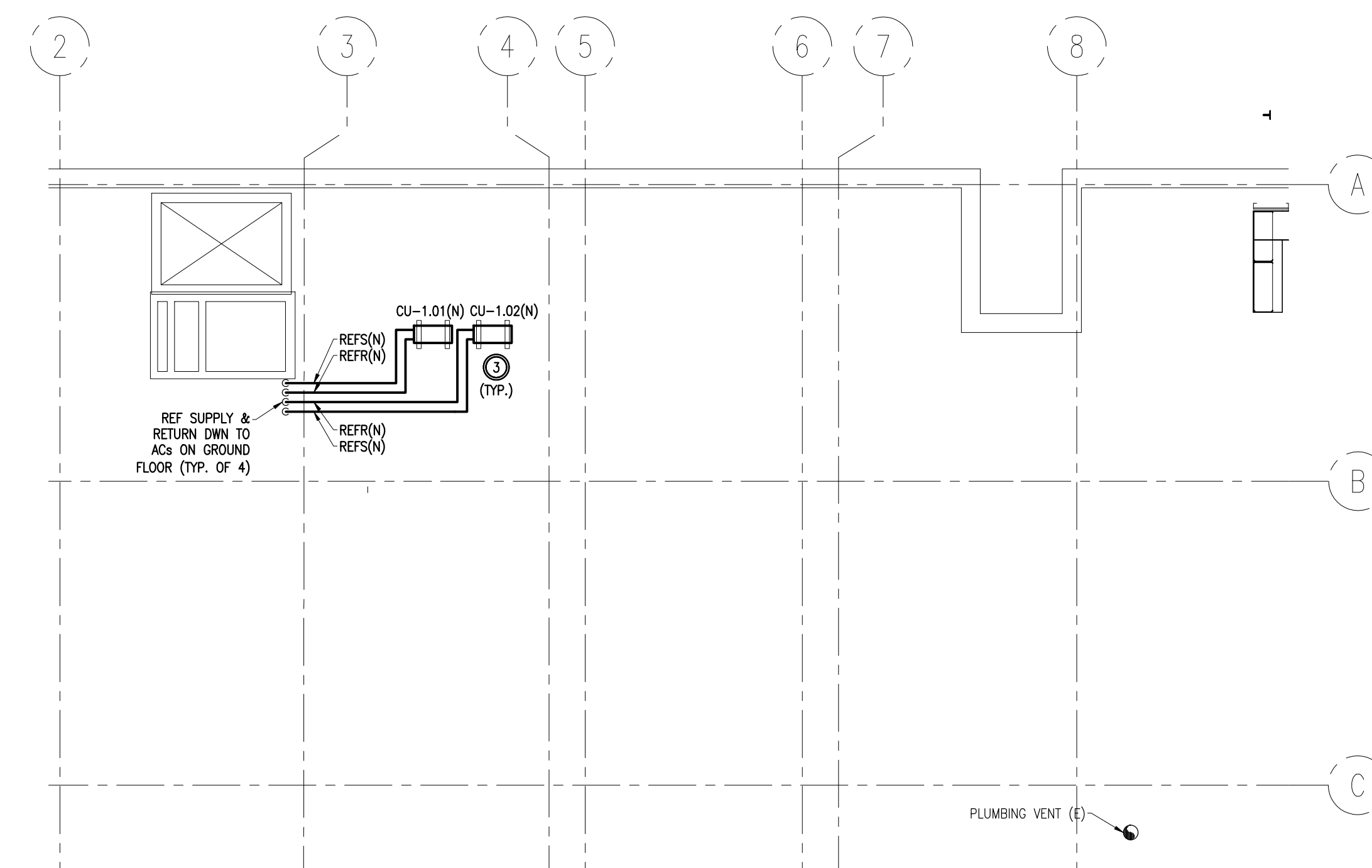
**FIRE PROTECTION, PLUMBING & UTILITIES  
GROUND FLOOR - NEW WORK**

3  
M2  
1:100



**FIRE PROTECTION & PLUMBING  
BASEMENT - NEW WORK**

2  
M2  
1:100



**PLUMBING & UTILITIES  
ROOF - NEW WORK**

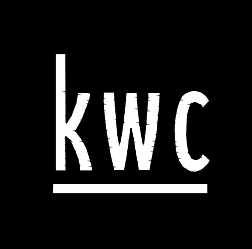
4  
M2  
1:100

**DESCRIPTION OF WORK NEW WORK**

- ① PROVIDE NEW FIRE EXTINGUISHER C/W WALL BRACKET AS INDICATED.  
② PROVIDE NEW HEATING WATER PIPING C/W CONTROL VALVES & ISOLATION VALVES AS INDICATED. PROVIDE NEW INSULATION & REPAIR EXISTING WHERE REMOVED FOR NEW CONNECTIONS. REFER TO DRAWING S/MS FOR CONTROL WIRING FOR CONTROL VALVES. ALLOW FOR CLEANING OF BASEBOARD FINS AFTER COMPLETION OF CONSTRUCTION. PROVIDE LETTER OF CLEANING TO ENGINEER.  
③ PROVIDE NEW DX SPLIT UNITS C/W REFRIGERANT PIPING, CONDENSATE PUMP, CONDENSATE PIPING, CONTROLS & ALL ASSOCIATED ACCESSORIES. REFRIGERANT PIPING TO BE OFFSET ON 3RD FLOOR TO ALLOW FOR INTERFERENCES. COORDINATE EXISTING REFRIGERANT PIPING ROUTING WITH GENERAL TRADES ON SITE. ASSOCIATED CONDENSING UNITS TO BE LOCATED ON THE ROOF AS INDICATED. CONNECT CONDENSATE PIPING TO SINK DRAIN C/W INDIRECT CONNECTION IN CEILING SPACE AND TRAP SEAL PRIMER.  
④ PROVIDE NEW PLUMBING FIXTURES AS INDICATED C/W ASSOCIATED ACCESSORIES. DOWN, DOWN, SAN & VENT PIPING. CONNECT PIPING C/W VALVES TO EXISTING PIPING AS INDICATED.  
⑤ REMOVE SECTION OF EXISTING DOWN PIPING & PROVIDE NEW C/W PIPING AS INDICATED.

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KWC no. 1548



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C1 / C2 INTERIOR RENOVATIONS  
GROUND FLOOR - FEDERAL BUILDING

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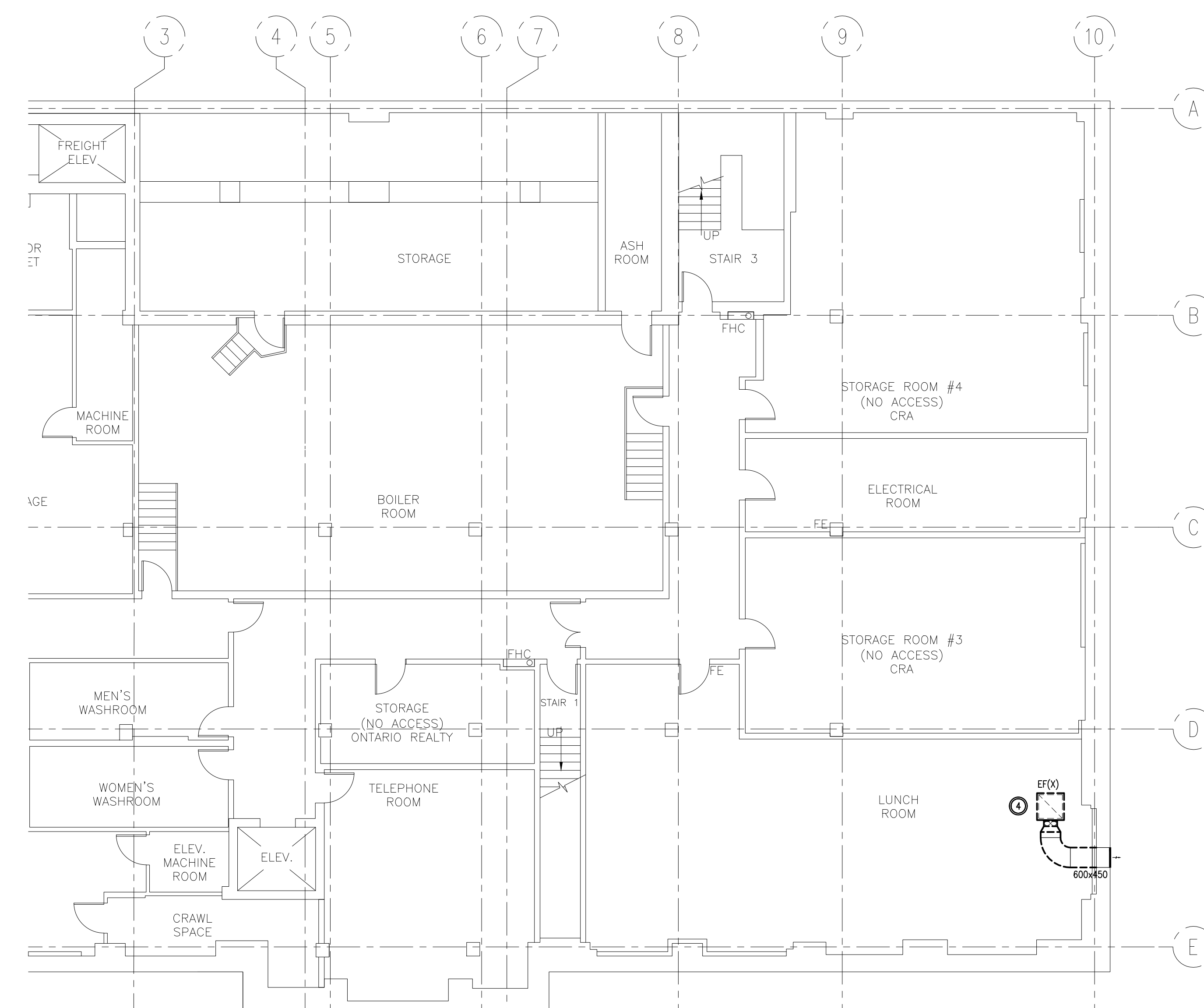
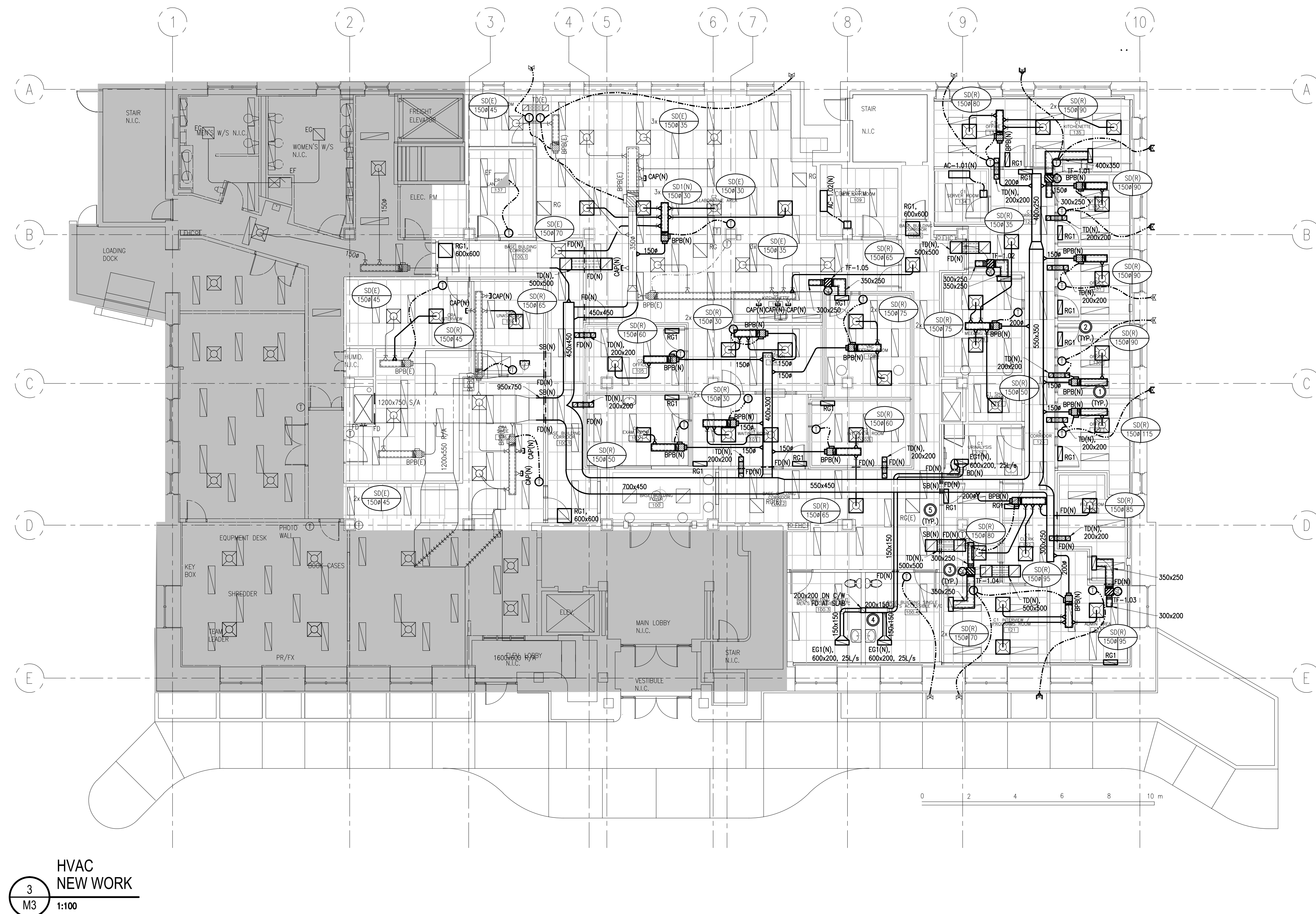
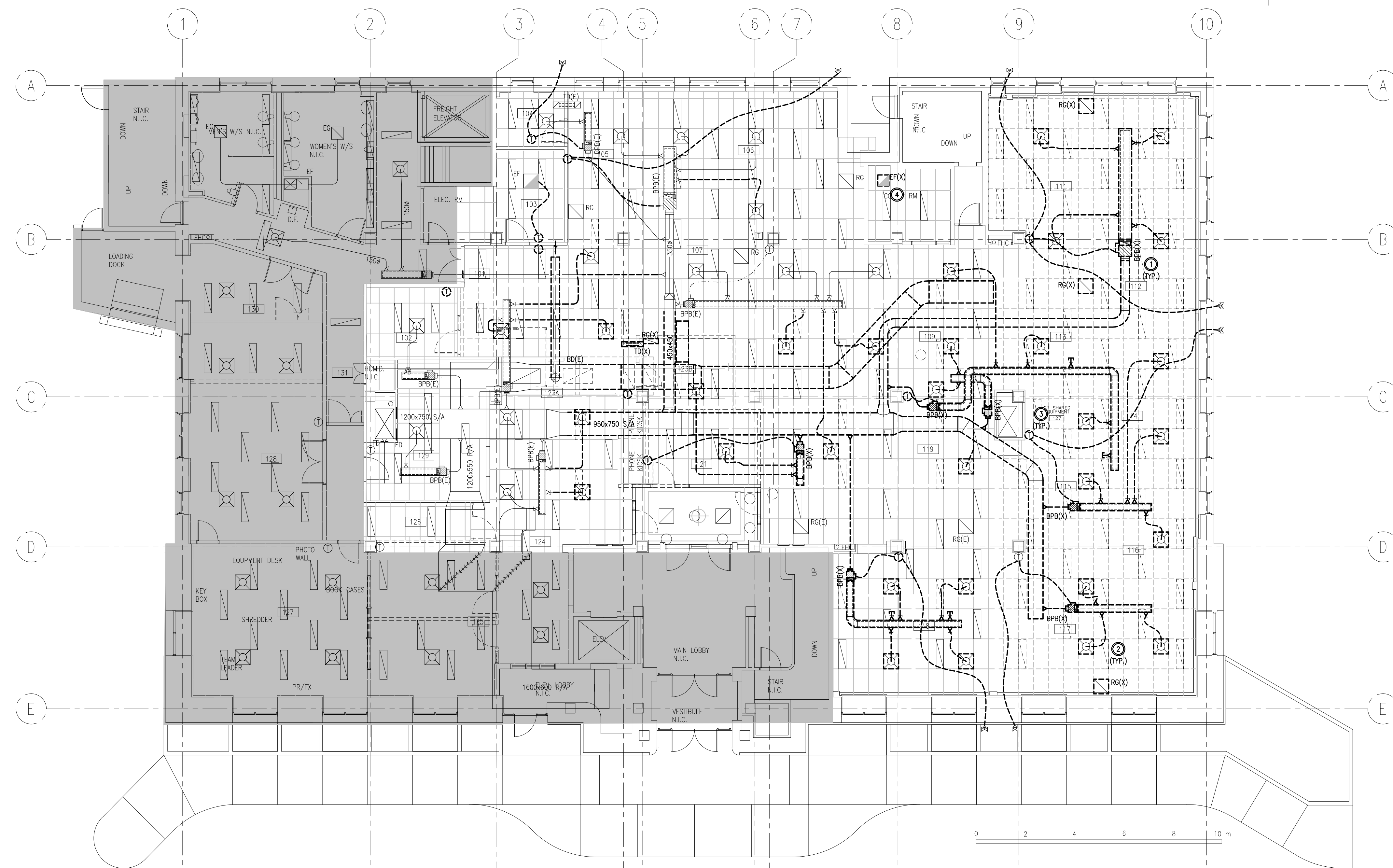
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**D. AGUSTIN** project manager  
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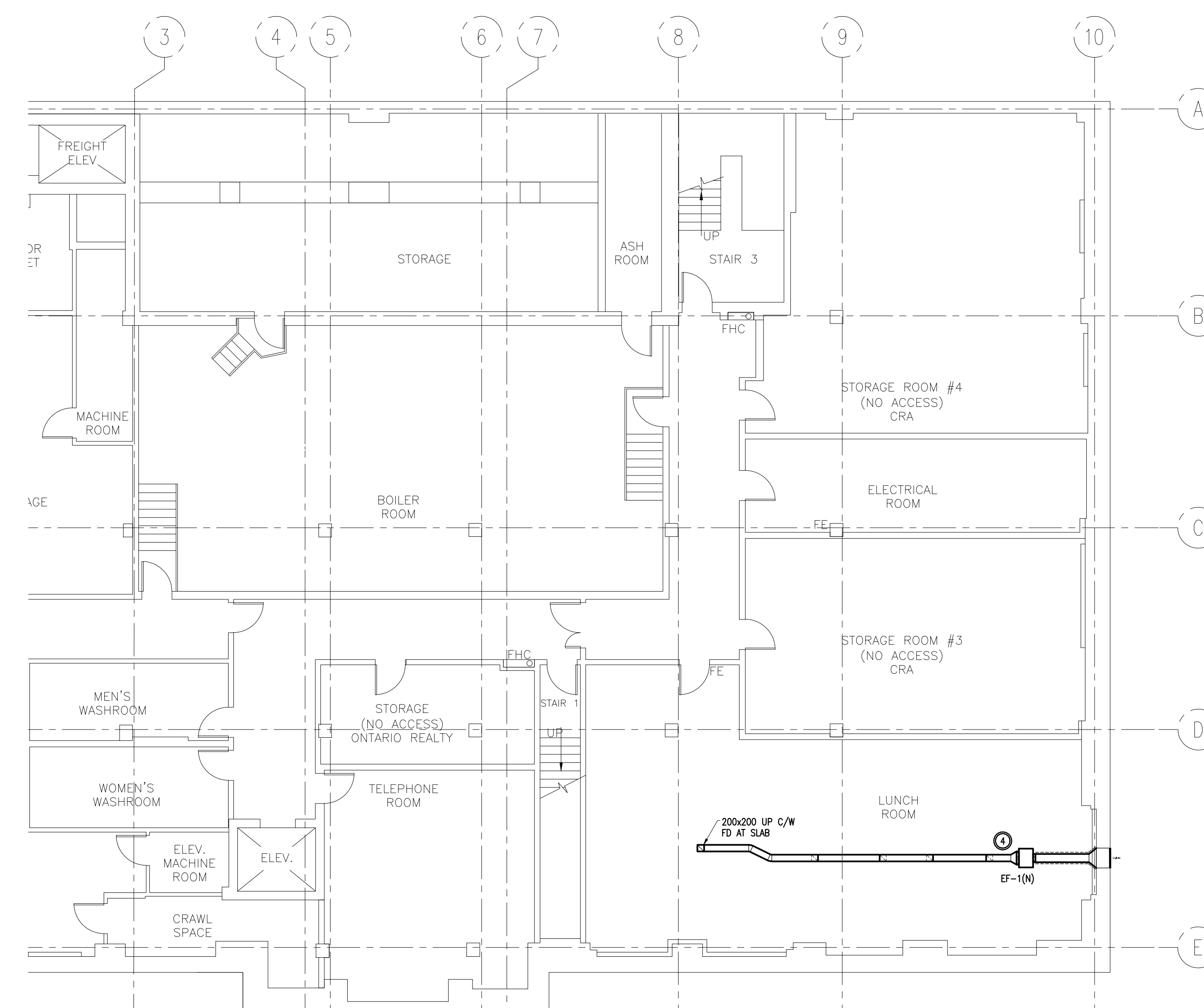
drawing no.  
dessiné no.  
**M2**





## DESCRIPTION OF WORK – DEMOLITION WORK

- 1 REMOVE EXISTING DUCTWORK AS INDICATED.
- 2 REMOVE EXISTING BYPASS BOXES, DIFFUSERS & GRILLES C/W ASSOCIATED DUCTWORK & ACCESSORIES AS INDICATED. RETAIN FOR REUSE IN NEW WORK.
- 3 REMOVE EXISTING THERMOSTATS C/W CONTROL TUBING AS INDICATED. RETAIN FOR REUSE IN NEW WORK.
- 4 REMOVE EXISTING SERVER ROOM & KITCHEN EXHAUST FANS (EF) C/W ASSOCIATED DUCTWORK & ACCESSORIES AS INDICATED.

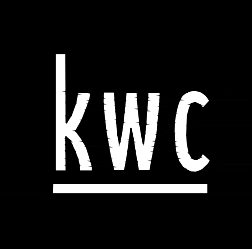


## DESCRIPTION OF WORK – NEW WORK

- 1 PROVIDE NEW/RELOCATE EXISTING WW BYPASS BOXES C/W ASSOCIATED DUCTWORK & CONTROLS AS INDICATED. PROVIDE NEW/RELOCATE EXISTING THERMOSTATS AS INDICATED. EXTEND PNEUMATIC TUBING AND WIRING AS REQUIRED.
- 2 PROVIDE NEW/RELOCATE EXISTING DIFFUSERS, GRILLES & TRANSFER DUCTS AS INDICATED.
- 3 PROVIDE NEW TRANSFER FANS C/W ACOUSTIC LINING, GRILLES, ASSOCIATED DUCTWORK AND ACCESSORIES AS INDICATED.
- 4 PROVIDE NEW WASHROOM EXHAUST FAN C/W DUCTWORK, GRILLES & ASSOCIATED ACCESSORIES AS INDICATED. CONNECT TO EXISTING DRAINAGE.
- 5 PROVIDE FIRE DAMPERS (FD) & SECURITY BARS (SB) FOR DUCTWORK AS INDICATED. REFER TO DETAIL 2.041 FOR SECURITY BAR DETAILS.

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DEMOLITION & NEW WORK**

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designed by  
conçu par **T.REGLI**

approved by  
approuvé par **S.HAMILTON**

tender  
soumission **D. AGUSTIN** project manager  
administrateur de projets

project date  
date du projet **2015/09/10**

project no.  
no. du projet **R.079363.042**

drawing no.  
dessiné no. **M3**