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Services d'architecture  
et de génie

Région de l'Ontario

LONDON, ONTARIO.  
PUBLIC SERVICES PROCUREMENT CANADA

LONDON CROSS CONNECTION CONTROL  
MEASURES IMPLEMENTATION PROJECT

PWGSC Proj. No.: R.106155.001



LIST OF DRAWINGS	
MECHANICAL	
M000	MECHANICAL – LEGEND AND KEY PLAN
M100	MECHANICAL – PLUMBING SCHEMATIC – DEMO AND NEW
M101	MECHANICAL – BASEMENT PART FLOOR PLAN PLUMBING – DEMO AND NEW
M102	MECHANICAL – BASEMENT PART FLOOR PLAN PLUMBING – DEMO AND NEW
M103	MECHANICAL – FIRST PART FLOOR PLAN PLUMBING – DEMO AND NEW
M104	MECHANICAL – FIRST PART FLOOR PLAN PLUMBING – DEMO AND NEW
M105	MECHANICAL – FIRST PART FLOOR PLAN PLUMBING – DEMO AND NEW
M106	MECHANICAL – FIRST PART FLOOR PLAN PLUMBING – DEMO AND NEW
M107	MECHANICAL – SECOND PART FLOOR PLAN PLUMBING – DEMO AND NEW
M108	MECHANICAL – SECOND PART FLOOR PLAN PLUMBING – DEMO AND NEW
M109	MECHANICAL – SECOND PART FLOOR PLAN PLUMBING – NEW
M110	MECHANICAL – BLDG 15 FIRST FLOOR PLAN PLUMBING – DEMO AND NEW
M111	MECHANICAL – BLDG 15 SECOND FLOOR PLAN PLUMBING – DEMO AND NEW
M112	MECHANICAL – SCHEDULES AND DETAILS
M113	MECHANICAL – SCHEDULES AND DETAILS
ELECTRICAL	
E000	ELECTRICAL – LEGEND, GENERAL NOTES, DRAWING LIST AND AND KEY PLAN
E101	ELECTRICAL – BASEMENT PART FLOOR PLAN – DEMO AND NEW
E102	ELECTRICAL – FIRST FLOOR PART PLAN – NEW
E103	ELECTRICAL – BLDG 15 FIRST & SECOND FLOOR PLAN – NEW
ARCHITECTURAL	
A100	ARCHITECTURAL – GENERAL NOTES AND DETAILS



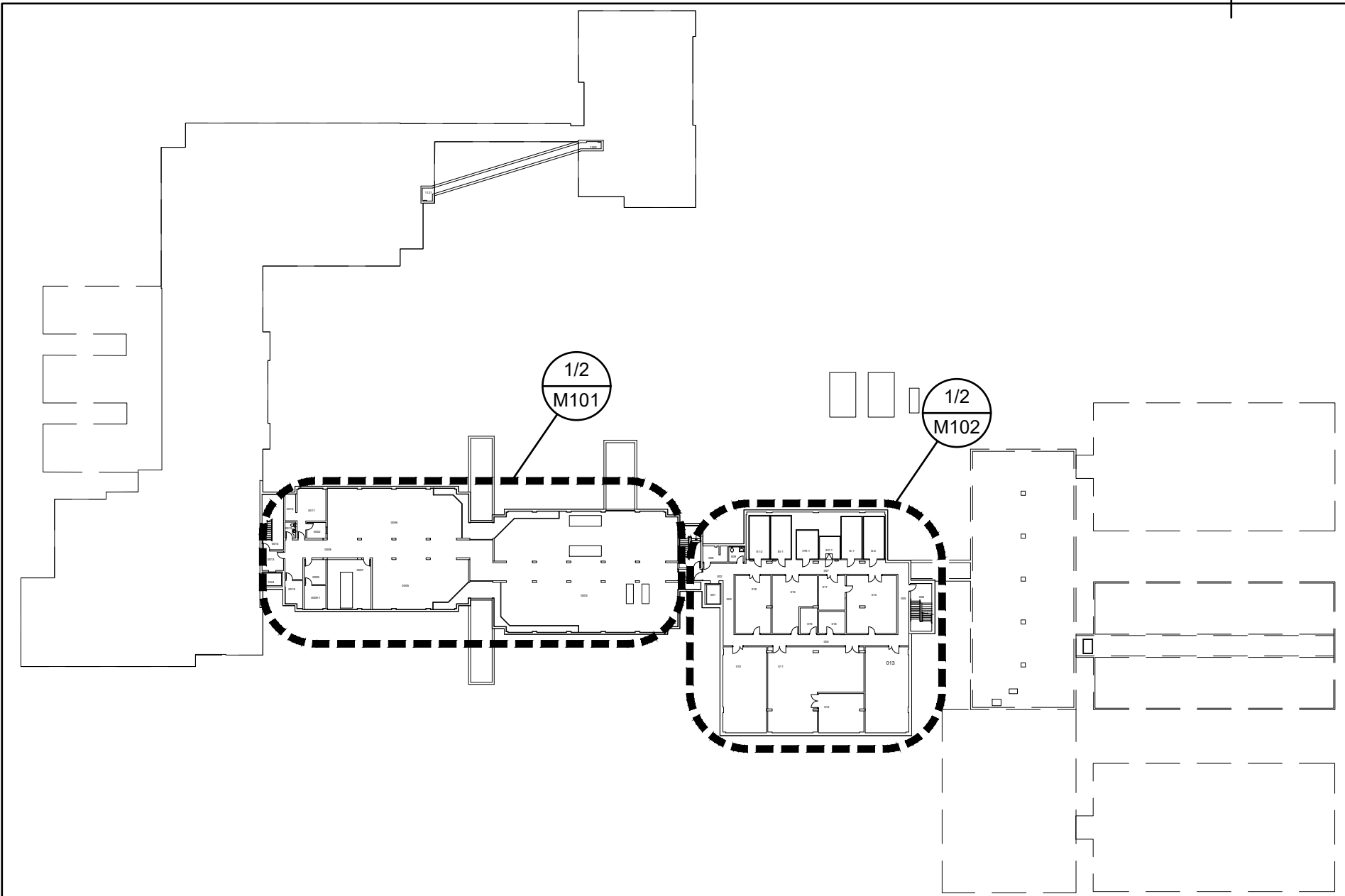
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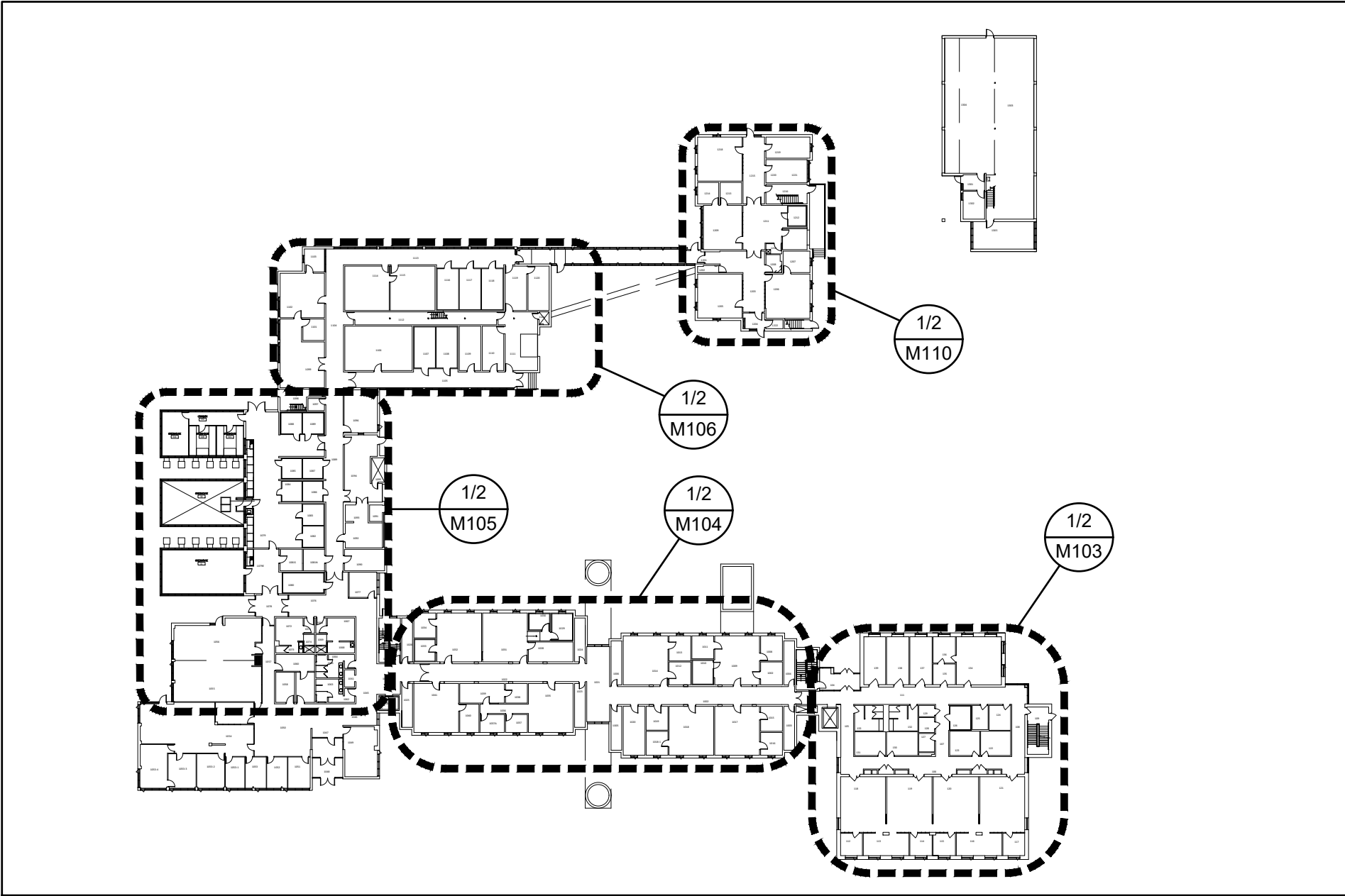
MECHANICAL LEGEND	
SYMBOL	DESCRIPTION
PLUMBING/ HEATING/ COOLING	
----	DOMESTIC COLD WATER
----	DOMESTIC HOT WATER
----	DOMESTIC HOT WATER RETURN
-NP-----NP-	DOMESTIC COLD WATER - NON POTABLE
-NP-----NP-	DOMESTIC HOT WATER - NON POTABLE
-NP-----NP-	DOMESTIC HOT WATER RETURN - NON POTABLE
-TW-----TW-	DOMESTIC TEMPERED WATER
-----EA	EXHAUST AIR PIPE
-----SA	SUPPLY AIR PIPE
-----SAN	SANITARY LINE
-----NG	NATURAL GAS
-----	PIPE CAP
-----	PIPE BREAK
-----	FLOW DIRECTION ARROW
-----	PIPING RISER
-----	PIPING ELBOW DOWN
-----	PIPING CROSSING
-----	THERMOMETER
-----	SHUT-OFF VALVE
-----	Y-STRAINER
-----	PUMP
-----	DIFFERENTIAL PRESSURE GUAGE
-----	UNION CONNECTION
-----	FLANGE CONNECTION
-----	PLUG VALVE
-----	3-WAY CONTROL VALVE
-----	AUTOMATIC AIR VENT
-----	CONCENTRIC REDUCER
-----	TEMPERATURE SENSOR
-----	AIRFLOW DIRECTION
-----	SOLENOID VALVE
-----	CHECK VALVE
-----	FLOW CONTROL VALVE
-----	BUTTERFLY VALVE
-----	HUB DRAIN
-----	BACKFLOW PREVENTER
-----	FLOW SWITCH
-----	DIFFERENTIAL PRESSURE SWITCH
-----	PRESSURE REGULATOR
-----	PRESSURE RELIEF VALVE
-----	BASKET STRAINER
-----	NORMALLY OPEN
-----	NORMALLY CLOSED

GENERAL LEGEND	
SYMBOL	DESCRIPTION
(X)	NEW DRAWING NOTE
[X]	DEMOLITION DRAWING NOTE
(X/X)	CONTROLS DETAIL
(CE)	CONNECT TO EXISTING
(1/MX)	GENERAL DETAIL
(A/MX)	SECTION DETAIL

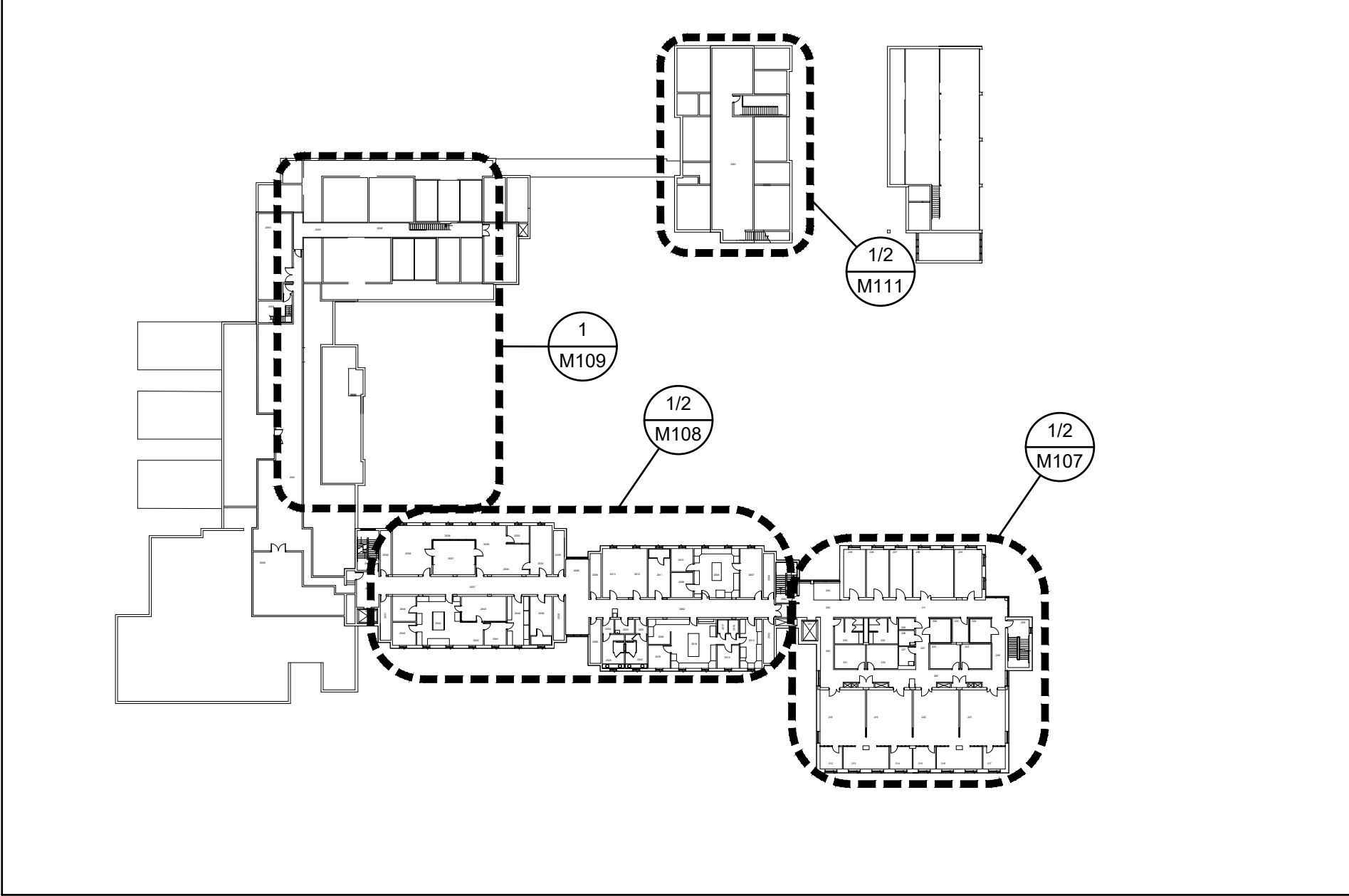
LIST OF MECHANICAL DRAWINGS	
DWG #	DRAWING DESCRIPTION
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M112	MECHANICAL - SCHEDULES AND DETAILS
M113	MECHANICAL - SCHEDULES AND DETAILS



1 BASEMENT KEY PLAN  
M000 SCALE: 1:750



2 FIRST FLOOR KEY PLAN  
M000 SCALE: 1:750



3 SECOND FLOOR KEY PLAN  
M000 SCALE: 1:750

- ### GENERAL NOTES
- IT IS THE INTENT OF THESE DRAWINGS TO SUPPLY THE CONTRACTOR WITH SUFFICIENT INFORMATION SUCH THAT THE CONTRACTOR SHALL PROVIDE FOR A COMPLETE AND FULLY OPERATING SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION. THESE DRAWINGS MAY NOT PROVIDE A COMPREHENSIVE LIST OF ALL ITEMS REQUIRED FOR THE COMPLETE INSTALLATION; THEREFORE, THE CONTRACTOR SHALL MAKE PROVISIONS FOR ALL LABOUR, MATERIALS AND EQUIPMENT DEEMED NECESSARY TO COMPLETE THE FULLY OPERATIONAL MECHANICAL.
  - CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY REMOVING AND REINSTATING CEILING TO ACCOMMODATE NEW PIPING INSTALLATION. CEILING REMOVAL SHALL INCLUDE T-BAR FRAMING AS REQUIRED.
  - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENTAL REPRESENTATIVE OF PROPOSED CHANGES OF WORK UNDER THIS CONTRACT AND SHALL PROVIDE FOR APPROVAL A FULLY ITEMIZED ESTIMATE OF THE COSTS OF THE PROPOSED CHANGES. NO CHANGES SHALL BE CARRIED OUT UNLESS AUTHORIZED IN WRITING BY THE DEPARTMENTAL REPRESENTATIVE. THE VALUE OF ADDITIONAL WORK SHALL BE REVIEWED BASED ON THE APPROXIMATE VALUES LISTED IN RS MEANS 2019 EDITION.
  - THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY UNEXPECTED DISCOVERY OF MATERIAL THAT MAY CONTAIN ASBESTOS. STOP WORK IN THE AREA UNTIL DEPARTMENTAL REPRESENTATIVE AUTHORIZES CONTINUATION OF WORK. ALL CLEAN UP REMOVAL AND DISPOSAL OF ASBESTOS, SHALL STRICTLY CONFORM TO LOCAL MINISTRY OF LABOUR REGULATIONS.
  - THESE DESIGN DOCUMENTS ARE BASED ON EXISTING AVAILABLE INFORMATION AND AS-BUILT DRAWINGS. THE CONTRACTOR SHALL VERIFY ACTUAL SITE CONDITIONS PRIOR TO COMMENCING WORK AND SHALL PREPARE FABRICATION AND INTERFERENCE DRAWINGS AS REQUIRED. SITE CONDITION SHALL BE VERIFIED FOR INTERFERENCE WITH EXISTING SERVICES, NEW WORK AND SITE CONDITION. ANY INTERFERENCE SHALL BE COMMUNICATED TO THE DEPARTMENTAL REPRESENTATIVE FOR CLARIFICATION PRIOR TO COMMENCING WORK.
  - ALL NOISY WORK (I.E. CUTTING, DRILLING, CORING) SHALL BE COMPLETED AFTER-HOURS IN CLOSE COORDINATION WITH THE DEPARTMENTAL REPRESENTATIVE. DEPARTMENTAL REPRESENTATIVE REGULAR OFFICE HOURS ARE FROM 8:30 AM TO 4:30 PM MONDAY TO FRIDAY. CONTRACTOR'S REGULAR WORK HOURS ON-SITE SHALL BE 1:00 PM TO 9:30 PM MONDAY TO FRIDAY
  - CONTRACTOR SHALL COORDINATE THE SCHEDULE OF WORK WITH OTHER TRADES WITH THE INTENT OF VERIFYING AND REVIEWING THE SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF ALL WORK. THE CONTRACTOR SHALL IDENTIFY ANY REQUIREMENTS IN WRITING TO THE DEPARTMENTAL REPRESENTATIVE PRIOR TO BEGINNING WORK.
  - CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS WORK AND FOR ANY DAMAGE CAUSED TO THE DEPARTMENTAL REPRESENTATIVE AND OTHER CONTRACTORS BY IMPROPER LOCATION OR CARRYING OUT OF THIS WORK. THE CONTRACTOR SHALL CARRY ALL NECESSARY INSURANCE COVERAGE.
  - THE DESIGN DRAWINGS ARE PARTLY DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. OFF-SETS IN PIPING MAY NOT BE INDICATED IN ALL CASES, BUT ARE TO BE INCLUDED IN CONTRACT AS REQUIRED AT NO EXTRA COST.
  - DO NOT DETERMINE LOCATIONS OF EQUIPMENT AND MATERIALS BY MEASUREMENT FROM THE DRAWINGS.
  - COORDINATE ALL WORK WITH THE DEPARTMENTAL REPRESENTATIVE AND ALL OTHER TRADES. COORDINATE WITH ELECTRICAL POWER AND COMMUNICATIONS PLAN. ENSURE ROUTING CAUSES AS MINIMAL AN IMPACT AS POSSIBLE ON EXISTING STRUCTURE AND FINISHES.
  - PROVIDE, ERECT AND MAINTAIN BARRICADES, LIGHTING, DUSTPROOF PARTITIONS AND GUARD RAILS AS REQUIRED BY APPLICABLE REGULATORY ADVISORY TO PROTECT OCCUPANTS OF BUILDING AND WORKERS.
  - PATCH AND REPAIR ALL FIREPROOFING DAMAGED OR REMOVED IN THE PERFORMANCE OF THE WORK. FIRE RESISTANCE RATING SHALL MATCH EXISTING. AFTER MAKING GOOD, CAULK GAPS BETWEEN PIPES, SLEEVES, AND OPENINGS. WHERE NEW WORK CONNECTS WITH EXISTING AND WHERE EXISTING WORK IS ALTERED, CUT, PATCH AND MAKE GOOD TO MATCH EXISTING WORK. REFER TO MECHANICAL DRAWINGS FOR FULL EXTENT OF WORK.
  - MAKE CUTS WITH CLEAN, TRUE, SMOOTH EDGES. MAKE PATCHES INCONSPICUOUS.
  - LEAVE SUBSTRATE SURFACES IN A SMOOTH, SOUND CONDITION, SUITABLE TO RECEIVE NEW FINISHES.
  - CONTRACTOR SHALL PROVIDE NEW OPENINGS IN WALLS AS NECESSARY. REINSTATE ALL AREAS AFFECTED BY THIS WORK TO MATCH EXISTING FOLLOWING COMPLETION OF WORK.
  - ALL TEMPORARILY REMOVED ITEMS SHALL BE RETAINED AND PROTECTED TO AVOID ANY DAMAGE BY CONTRACTOR UNTIL REINSTATEMENT.
  - CONTRACTOR TO PROVIDE FIRE STOPPING FOR ALL PIPE PENETRATIONS THROUGH FIRE RATED PLUMBING CHASES AND FIRE SEPARATIONS. .
  - CONTRACTOR SHALL RETAIN SERVICES OF SEISMIC RESTRAINT SYSTEMS (SRS) ENGINEER LICENSED IN THE PROVINCE OF ONTARIO, WHO SHALL SEAL AND SIGN THE SRS DESIGN DRAWINGS AS PART OF THIS CONTRACT AT NO EXTRA COST. THE DESIGN AND CONSTRUCTION OF SRS TO BE IN COMPLETE ACCORDANCE WITH ONTARIO BUILDING CODE AND NATIONAL BUILDING CODE. THE SEALED DRAWINGS SHALL BE SUBMITTED TO DEPARTMENTAL REPRESENTATIVE ALONG WITH THE MECHANICAL AND ELECTRICAL SHOP DRAWINGS FOR RECORD. SUBMIT THE COMPLIANCE LETTER SEALED BY THE SRS ENGINEER SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE (O&M) BINDER FOR RECORD. FOR SEISMIC, BALANCING, INSULATION, AND O&M MANUAL REQUIREMENTS, AND SEQUENCES OF OPERATIONS, REFER TO APPROPRIATE SECTION IN SPECIFICATIONS.

- ### GENERAL NOTES (CONTINUED)
- THE CONTRACTOR SHALL COORDINATE ALL NECESSARY SYSTEM SHUTDOWN AND DRAINING WITH THE DEPARTMENTAL REPRESENTATIVE.
  - CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS, INCLUDING BUT NOT LIMITED TO ULTRASONIC SCANNING OR X-RAY SCANNING, TO AVOID CUTTING REBAR, ELECTRICAL CABLES, OR CONDUITS BURIED IN WALLS OR FLOOR SLABS.
  - CONTRACTOR IS RESPONSIBLE FOR CRANING, OFF-LOADING, RIGGING, SETTING IN PLACE AND INSTALLATION OF ALL EQUIPMENT. HOISTING AND RIGGING OPERATIONS SHALL BE IN ACCORDANCE WITH AUTHORITY HAVING JURISDICTION. CONTRACTOR IS RESPONSIBLE TO PAY FOR ALL REQUIRED APPROVALS AND CERTIFICATES RELATED TO SUCH OPERATIONS INCLUDING STREET CLOSURE PERMIT ETC. CONTRACTOR TO COORDINATE WITH DEPARTMENTAL REPRESENTATIVE FOR BEST CRANE LOCATION AND TIME FOR CRANE WORK.
  - COORDINATE WORK WITH ELECTRICAL FOR EQUIPMENT DISCONNECTION/ RECONNECTION.
  - PROVIDE ALL MATERIAL TO PROTECT THE EXISTING STRUCTURE FROM DAMAGE AND FROM CAUSING DAMAGE TO NEW EQUIPMENT.
  - PROVIDE MINIMUM TRAINING TO DEPARTMENTAL REPRESENTATIVE'S STAFF ON OPERATION AND MAINTENANCE OF UPGRADED SYSTEMS. REFER TO SPECIFICATION SECTION 23 05 93 FOR DETAILS.
  - EXCEPT AS NOTED OTHERWISE ALL EXISTING EQUIPMENT TO REMAIN IS SHOWN IN THIN SOLID LINES.
  - EXCEPT AS NOTED OTHERWISE, THICK LINES DENOTE WORK TO BE DEMOLISHED ON DEMOLITION DRAWINGS, AND NEW WORK ON NEW DRAWINGS.
  - CONTRACTOR SHALL REVIEW AND ADHERE TO SPECIFICATIONS FOR ALL NEW WORK. ENSURE ALL PRODUCTS PROVIDED MEET SPECIFICATION REQUIREMENTS.
  - CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR FIRE WATCH WHENEVER WATER SUPPLY TO FIRE PROTECTION SYSTEM IS SHUT DOWN DURING WORK.

EQUIPMENT LEGEND	
SYMBOL	DESCRIPTION
(WH)	WATER HEATER
(ET)	EXPANSION TANK
(P)	PUMP
(BFP)	BACKFLOW PREVENTER
(WC)	WATER CLOSET
(LAV)	LAVATORY
(U)	URINAL
(EW)	EMERGENCY EYE WASH STATION
(ES)	EMERGENCY SHOWER
(ESC)	EMERGENCY EYEWASH/SHOWER
(BW)	BODYWASH STATION
(MS)	MOP SINK
(KS)	KITCHEN SINK
(HB)	HOSE BIBB
(DF)	DRINKING FOUNTAIN
(DW)	DISHWASHER
(S)	SHOWER
(PRV)	PRESSURE REGULATOR
(MX)	MIXING CABINET

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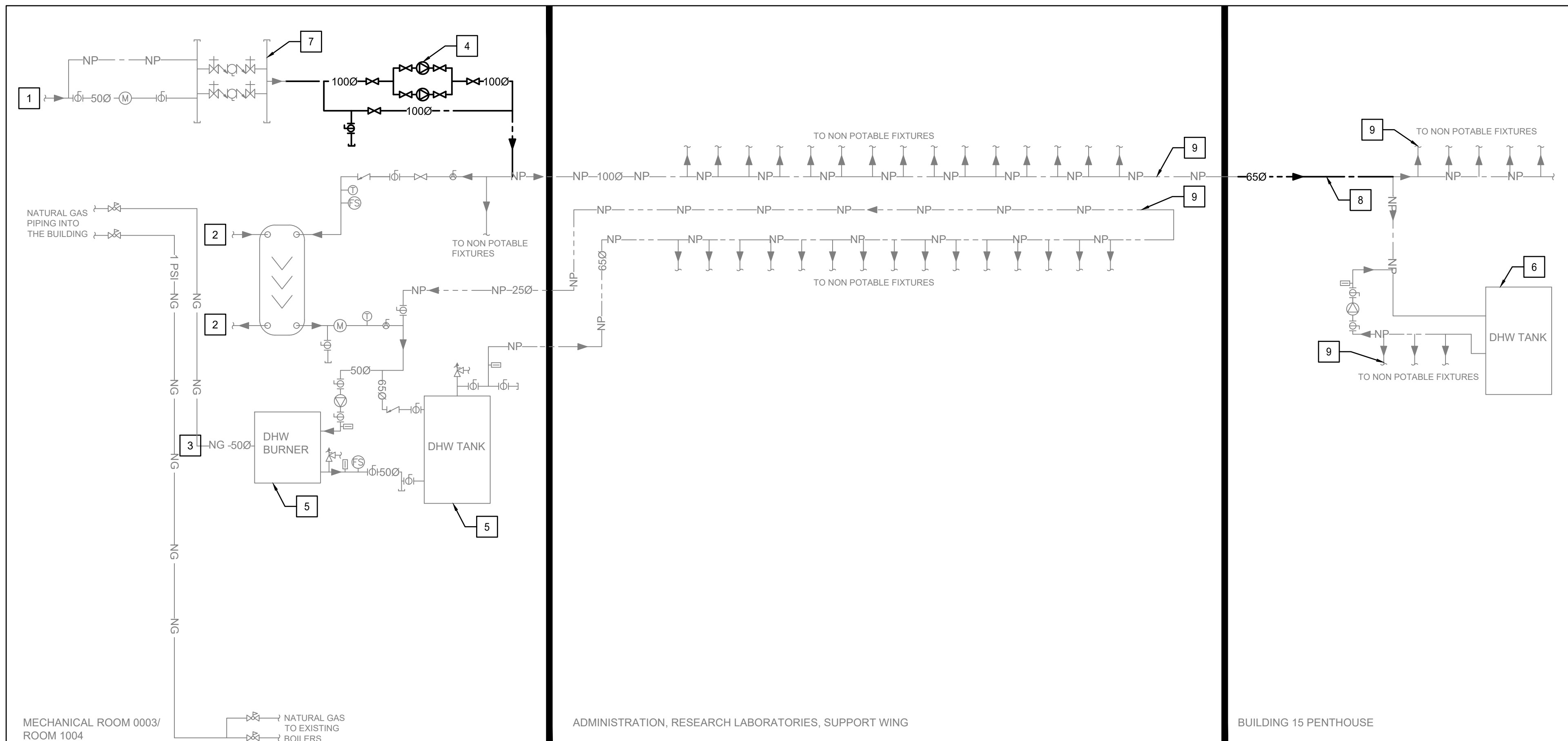
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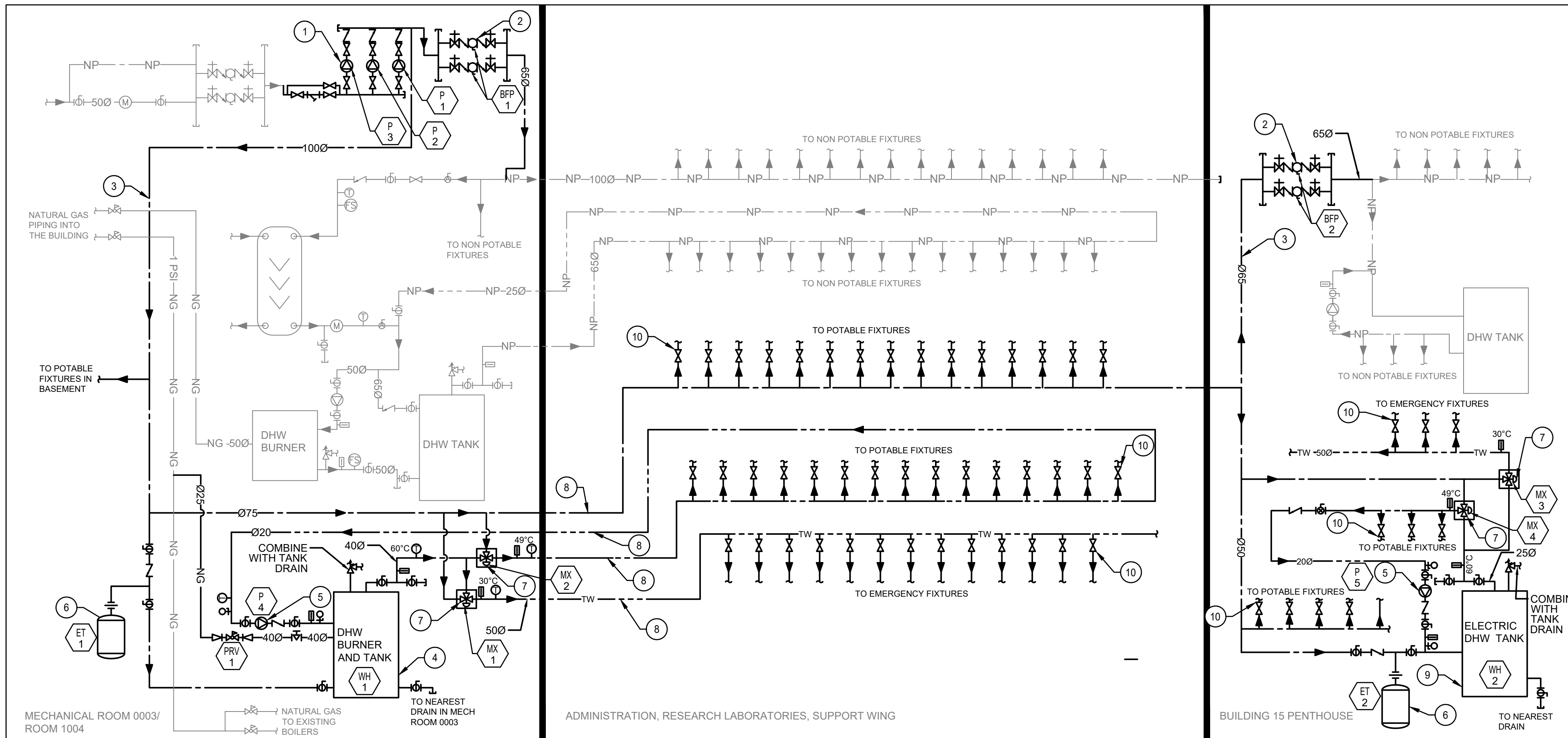
drawing title  
titre du dessin  
MECHANICAL  
LEGEND AND KEYPLAN

drawn by dessiné par	ZEYAD ABDELAZEZ	
designed by conc par	CARY MCREE	
approved by approuvé par	DAVID YIN	
bid offre	DEBI BANNON	project manager administrateur de projets
project date date du projet	2020-05-29	
project no. no. du projet	R.106155.001	
drawing no. dessiné no.	M000	





**1 PLUMBING SCHEMATIC - DEMOLITION**  
M100 SCALE: N.T.S.



**2 PLUMBING SCHEMATIC - NEW**  
M100 SCALE: N.T.S.

### DEMOLITION DRAWING NOTES

- 1 DOMESTIC WATER ENTRY POINT IN SOUTH LAB WING BASEMENT.
- 2 EXISTING SUPPLY AND RETURN PROCESS WATER INTO HEAT EXCHANGER TO REMAIN.
- 3 EXISTING NATURAL GAS LINE TO DOMESTIC WATER HEATER TO REMAIN.
- 4 DEMOLISH EXISTING DUPLEX INLINE BOOSTER PUMP SET C/W PIPING, STRAINERS, CHECK VALVES, SHUTOFF VALVES, FLEXIBLE CONNECTIONS, SUPPORTS, AND OTHER ACCESSORIES. REFER TO ELECTRICAL DRAWINGS FOR POWER DISCONNECTION.
- 5 EXISTING DOMESTIC WATER HEATER AND ASSOCIATED STORAGE TANK TO REMAIN.
- 6 EXISTING DOMESTIC ELECTRIC WATER HEATER TO REMAIN.
- 7 EXISTING BACKFLOW PREVENTER AT WATER ENTRY TO REMAIN.
- 8 DEMOLISH PIPING SEGMENT AT BUILDING 15 DOMESTIC WATER ENTRANCE POINT AS INDICATED ON DRAWING M110.
- 9 REFER TO PLAN VIEWS FOR BRANCH PIPING DEMOLITION TO ACCOMMODATE TIE-INS TO NEW PIPING.

### NEW DRAWING NOTES

- 1 PROVIDE NEW TRIPLEX INLINE BOOSTER PUMP SET C/W REDUCERS, STRAINER, CHECK VALVES, SHUT-OFF VALVES, FLEXIBLE CONNECTIONS, FITTINGS, SUPPORTS, AND OTHER ACCESSORIES REQUIRED BY MANUFACTURER. REFER TO PUMP DETAIL FOR MORE DETAILS.
- 2 PROVIDE NEW REDUCED PRESSURE (RP) BACKFLOW PREVENTER.
- 3 INSTALL NEW POTABLE WATER LINE SERVING POTABLE WATER FIXTURES AND NEW WATER HEATER.
- 4 PROVIDE NEW NATURAL GAS WATER HEATER (WH-1) SERVING POTABLE FIXTURES.
- 5 PROVIDE NEW HOT WATER CIRCULATION PUMP.
- 6 PROVIDE NEW EXPANSION TANK ON THE DCW SIDE.
- 7 PROVIDE NEW MIXING VALVE ASSEMBLY FOR WATER TEMPERATURE CONTROL. REFER TO DETAIL 5-M113 FOR REQUIRED ASSEMBLY COMPONENTS.
- 8 INSTALL NEW POTABLE WATER PIPING THROUGHOUT THE CAMPUS. CONNECT TO AND REUSE EXISTING BRANCH PIPING AS NOTED ON PLAN VIEWS.
- 9 PROVIDE NEW ELECTRIC WATER HEATER (WH-2) SERVING POTABLE FIXTURES.
- 10 PROVIDE NEW ISOLATION VALVES AT EACH NEW DCW, DHW, DTW BRANCH OFF PIPING MAIN. PROVIDE NEW WATER HAMMER ARRESTORS ON ALL NEW PIPING BRANCHES FOR EXISTING FIXTURES WHERE EXISTING WATER HAMMER ARRESTORS ARE DEMOLISHED OR SEPARATED FROM FIXTURES AS PART OF SWITCHOVER WORK. INSTALL WATER HAMMER ARRESTORS AS CLOSE TO FIXTURES AS POSSIBLE ON NEW PIPING. INSTALL SUFFICIENT ARRESTORS TO PROTECT FIXTURES.

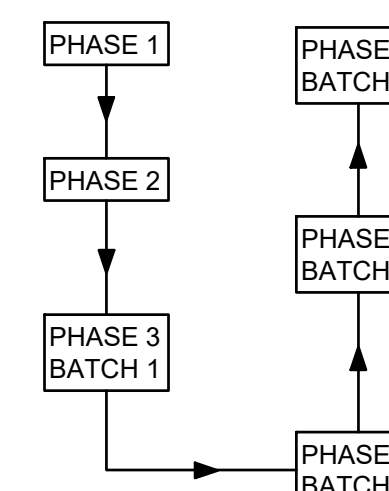
### GENERAL NOTES

1. REMOVE AND SALVAGE ALL APPLICABLE THERMOSTATIC MIXING VALVES ASSOCIATED WITH APPLICABLE EMERGENCY FIXTURES AND DELIVER TO DEPARTMENTAL REPRESENTATIVE. READY FOR REUSE.

### PHASING NOTES

PHASE 1	INSTALL NEW PIPING MAINS, HOT WATER SYSTEMS, AND PUMPSET WHILE MAINTAINING EXISTING PLUMBING NETWORK. INCLUDE BRANCH ISOLATION VALVES TO PERMIT TIE-INS DURING PHASE 3 OF INDIVIDUAL FIXTURE BRANCHES WITHOUT AFFECTING WATER SERVICE TO BUILDING, AS INDICATED IN DETAIL 6-M112. COMMISSION NEW PUMPSET AND CLEAN NEW PIPING. DO NOT TIE INTO EXISTING PIPING. INSTALL NEW PIPING MAINS AND EQUIPMENT IN BUILDING 15 WHILE MAINTAINING OLD PLUMBING NETWORK THROUGH SERVICE TUNNEL.
PHASE 2	PERFORM SHUTDOWN, COORDINATED MINIMUM 14 DAYS IN ADVANCE WITH DEPARTMENTAL REPRESENTATIVE, AND COMPLETE PIPING SWITCHOVER FROM EXISTING PUMPSET TO NEW PUMPSET. DEMOLISH EXISTING PUMPSET.
PHASE 3	INSTALL PIPING IN-ROOM AND PERFORM TIE-INS FOR FIXTURES IN BATCHES AS INDICATED IN BATCH TABLE BELOW. SCHEDULE OF EACH BATCH TIE-IN IS TO BE COORDINATED MINIMUM 14 DAYS IN ADVANCE WITH DEPARTMENTAL REPRESENTATIVE. TIE-IN ACTIVITIES TO BE SEQUENCED AS SHOWN IN DETAIL 6-M112. COMMISSION FIXTURES AFTER TIE-INS ARE COMPLETE. REPEAT PHASE 3 FOR EACH BATCH OF FIXTURES.

### CONSTRUCTION PHASING DIAGRAM



### PHASING BATCHES

BATCH	ROOMS
1	009, 010, 106, 111, 118, 119, 120, 121, 127, 129, 130, 132, 133, 206, 211, 218, 219, 220, 221, 227, 229, 230, 232, 233
2	1002, 1009, 1014, 1017, 1018, 2002, 2005, 2008, 2013, 2018, 2022, 2025
3	1026, 1025, 1031, 1032, 1035, 1041, 1045, 1063, 1065, 1068, 1073, 1079, 1094, 1102, 1112, 1121
4	1201, 1203, 1205, 1208, 1210, 1209, 1211, 1215



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**LONDON CROSS CONNECTION  
CONTROL MEASURES**

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DEMO AND NEW**

drawn by  
dessiné par **ZEYAD ABDELAZEZ**

designed by  
conc par **CARY MCGEE**

approved by  
approuvé par **DAVID YIN**

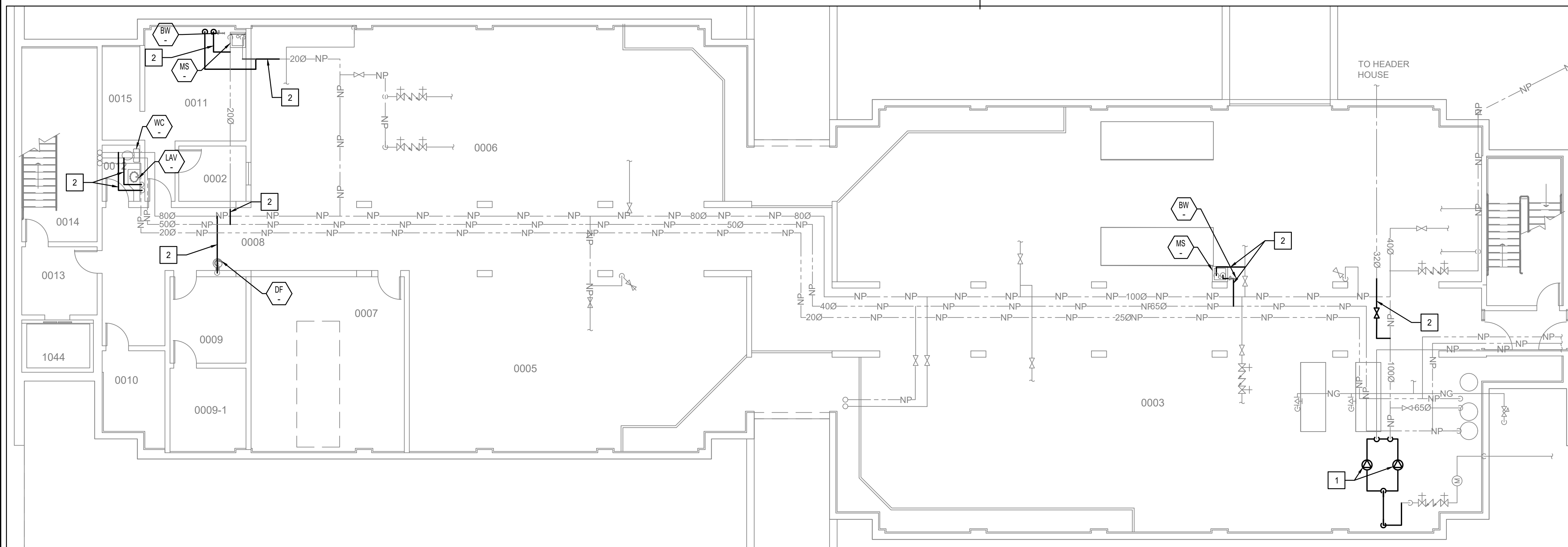
bid  
offre **DEBI BANNON** project manager  
administrateur de projets

project date  
date du projet **2020-05-29**

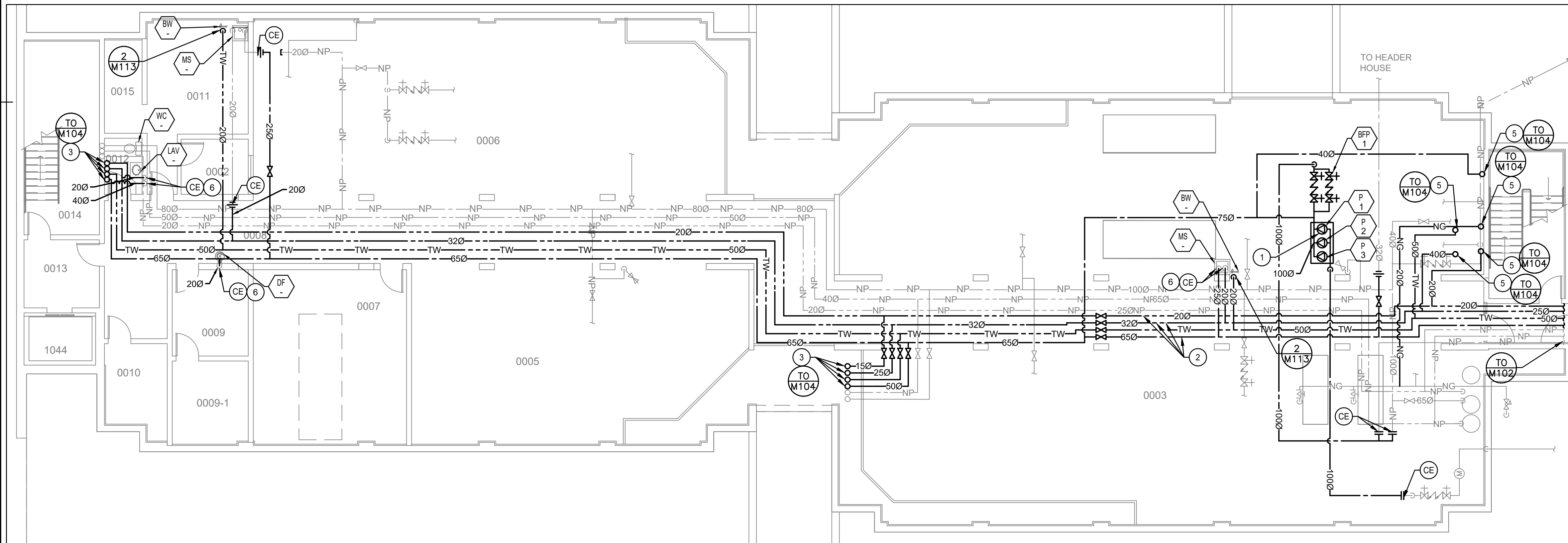
project no.  
no. du projet **R.106155.001**

drawing no.  
dessiné no. **M100**





1 BASEMENT PART FLOOR PLAN PLUMBING - DEMOLITION  
M101 SCALE: 1:100



2 BASEMENT PART FLOOR PLAN PLUMBING - NEW  
M101 SCALE: 1:100

#### DEMOLITION DRAWING NOTES

- 1 DEMOLISH EXISTING DUPLEX INLINE BOOSTER PUMP SET C/W PIPING, STRAINERS, CHECK VALVES, SHUTOFF VALVES, FLEXIBLE CONNECTIONS, SUPPORTS, AND OTHER ACCESSORIES. REFER TO ELECTRICAL DRAWINGS FOR POWER DISCONNECTION.
- 2 DEMOLISH EXISTING PIPING SEGMENT AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.

#### GENERAL NOTES

1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.

#### NEW DRAWING NOTES

- 1 PROVIDE NEW TRIPLEX INLINE BOOSTER PUMP SET C/W REDUCERS, STRAINER, CHECK VALVES, SHUT-OFF VALVES, FLEXIBLE CONNECTIONS, FITTINGS, SUPPORTS, AND OTHER ACCESSORIES REQUIRED BY MANUFACTURER. REFER TO PUMP DETAIL FOR MORE DETAILS.
- 2 PROVIDE NEW DCW, DHW, DHWR, DTW PIPING C/W ASSOCIATED FITTINGS AND ACCESSORIES AS INDICATED. INSTALL NEW PIPING AT CEILING LEVEL. ROUTE NEW PIPING TO AVOID INTERFERENCE WITH EXISTING PIPING.
- 3 NEW DCW, DHW, DHWR, DTW RISERS UP TO FIRST FLOOR WITHIN MECHANICAL CHASE.
- 4 PROVIDE NEW 250 NATURAL GAS PIPING TO THE NATURAL GAS HEATER. TAP INTO THE EXISTING 1 PSI NATURAL GAS PIPING.
- 5 NEW 400 DCW, 400 DHW, 200 DHWR, 500 DTW RISERS UP TO ROOM 1004. ROUTE NEW PIPING TO AVOID INTERFERENCE WITH EXISTING PIPING.
- 6 CONNECT EXISTING FIXTURE TO NEW DHW AND/OR DCW PIPING IN THE CEILING SPACE. REMOVE AND REINSTATE CEILING TO ACCOMMODATE PIPING CONNECTION. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS. DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.



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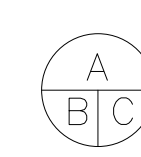


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A Detail No.  
B No. du détail  
C drawing no. - where detail required  
dessin no. - où détail exigé  
drawing no. - where detailed  
dessin no. - où détaillé

project title  
titre du projet  
LONDON ONTARIO  
PUBLIC SERVICES PROCUREMENT CANADA  
1391 SANDFORD STREET  
LONDON, ON N5V 4T3  
LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
MECHANICAL  
BASEMENT PART FLOOR PLAN  
PLUMBING - DEMO AND NEW

drawn by  
dessiné par ZEYAD ABDELAZEZ

designed by  
conc par CARY MCGEE

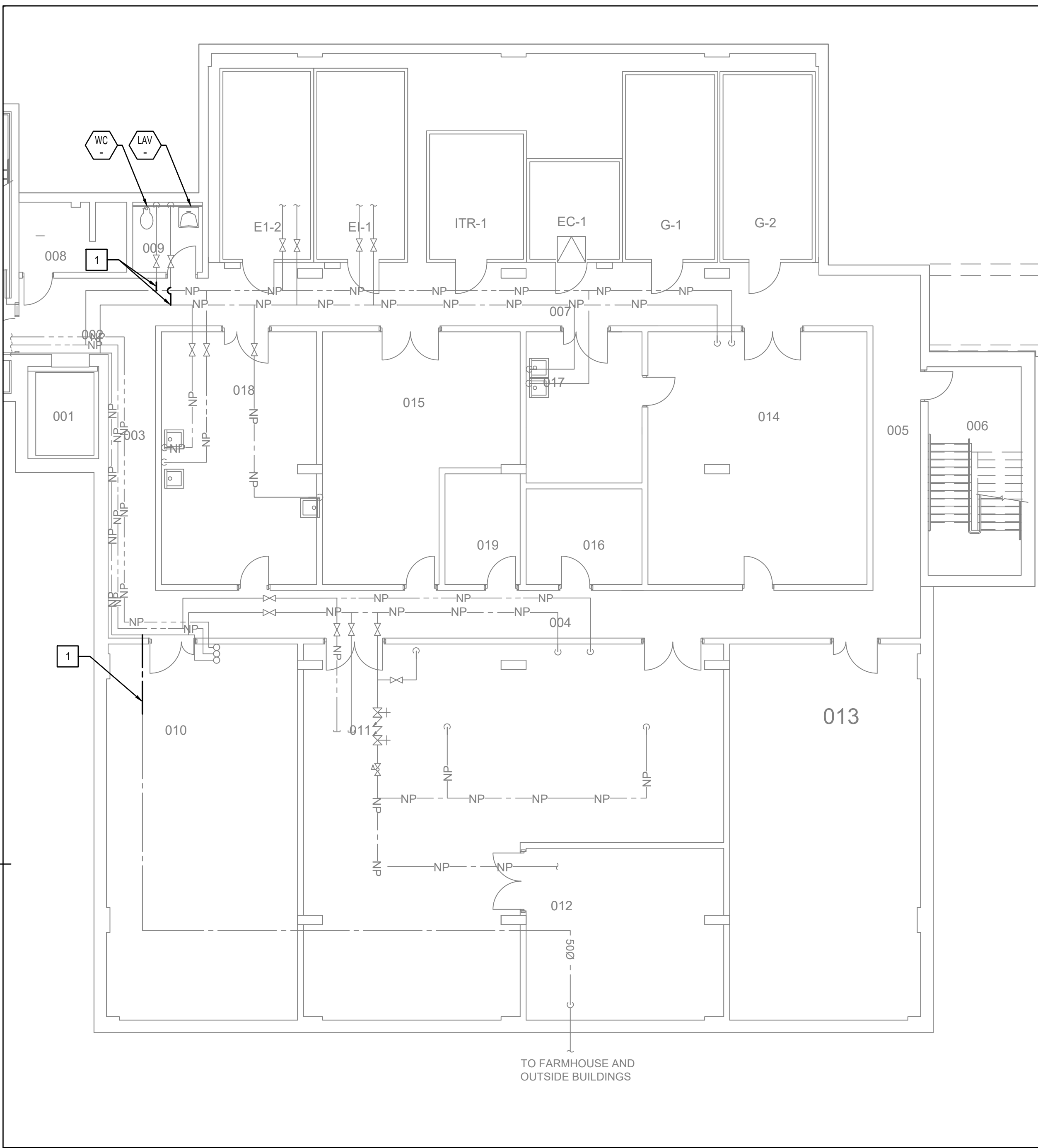
approved by  
approuvé par DAVID YIN

bid  
offre DEBI BANNON project manager  
administrateur de projets

project date  
date du projet 2020-05-29

project no.  
no. du projet R.106155.001

drawing no.  
dessiné par M101



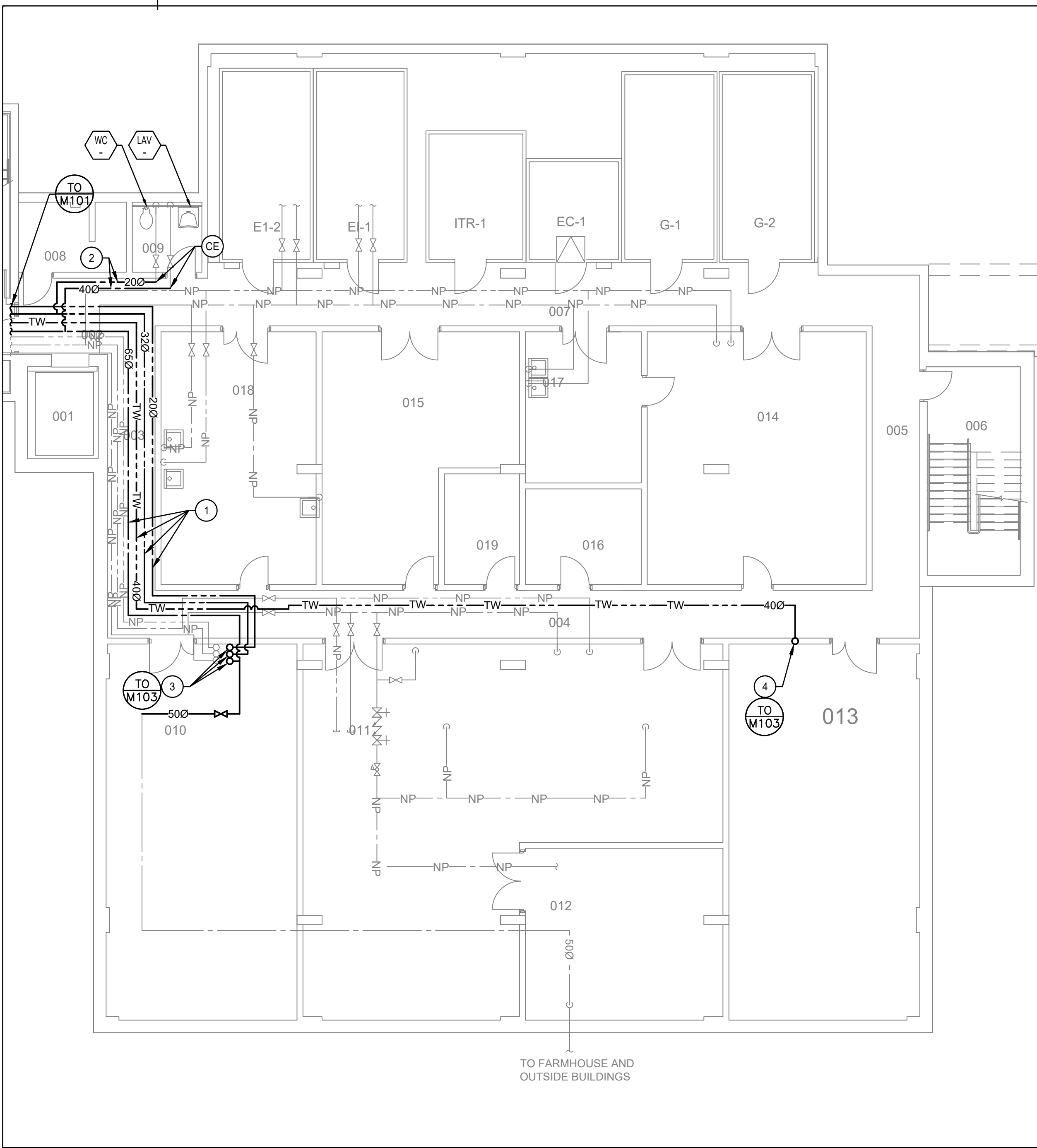
1 BASEMENT PART FLOOR PLAN PLUMBING - DEMOLITION  
M102 SCALE: 1:100

DEMOLITION DRAWING NOTES

- 1 DEMOLISH EXISTING PIPING SEGMENT AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.

GENERAL NOTES

1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.



2 BASEMENT PART FLOOR PLAN PLUMBING - NEW  
M102 SCALE: 1:100

NEW DRAWING NOTES

- 1 PROVIDE AND INSTALL NEW DCW, DHW, DHWR, DTW PIPING AT CEILING LEVEL AS INDICATED.
- 2 CONNECT EXISTING FIXTURE TO NEW DCW AND DHW PIPING AS INDICATED. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS.
- 3 NEW 650 DCW, 320 DHW, 200 DHWR RISERS UP TO FIRST FLOOR WITHIN MECHANICAL CHASE.
- 4 NEW 400 DTW RISER UP TO FIRST FLOOR WITHIN MECHANICAL CHASE.



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LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
MECHANICAL  
BASEMENT PART FLOOR PLAN  
PLUMBING - DEMO AND NEW

drawn by  
dessiné par  
ZEYAD ABDELAZEZ

designed by  
conc par  
CARY MCGEE

approved by  
approuvé par  
DAVID YIN

bid  
offre  
DEBI BANNON

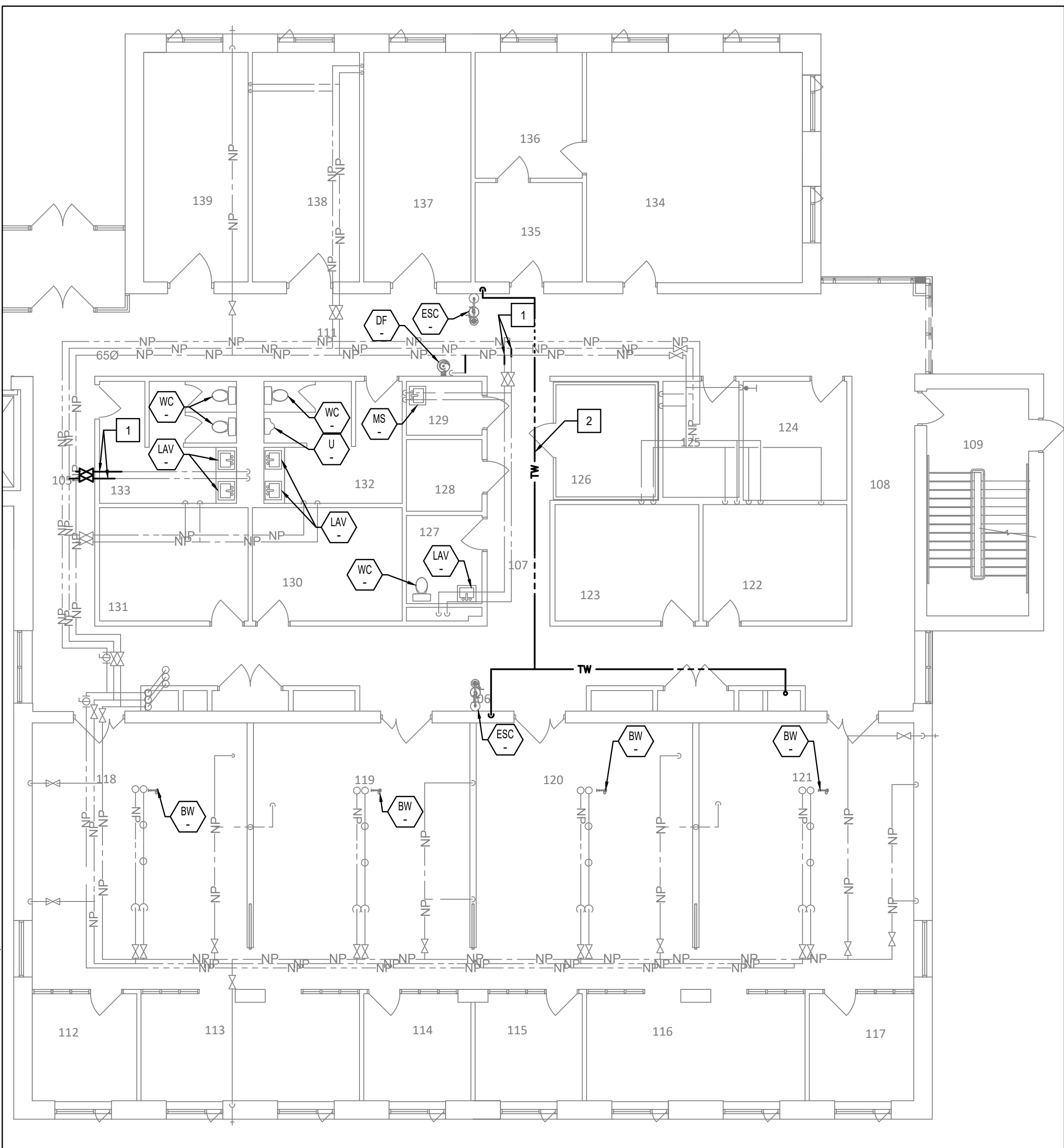
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administrateur  
de projets

project date  
date du projet  
2020-05-29

project no.  
no. du projet  
R.106155.001

drawing no.  
dessiné no.  
M102





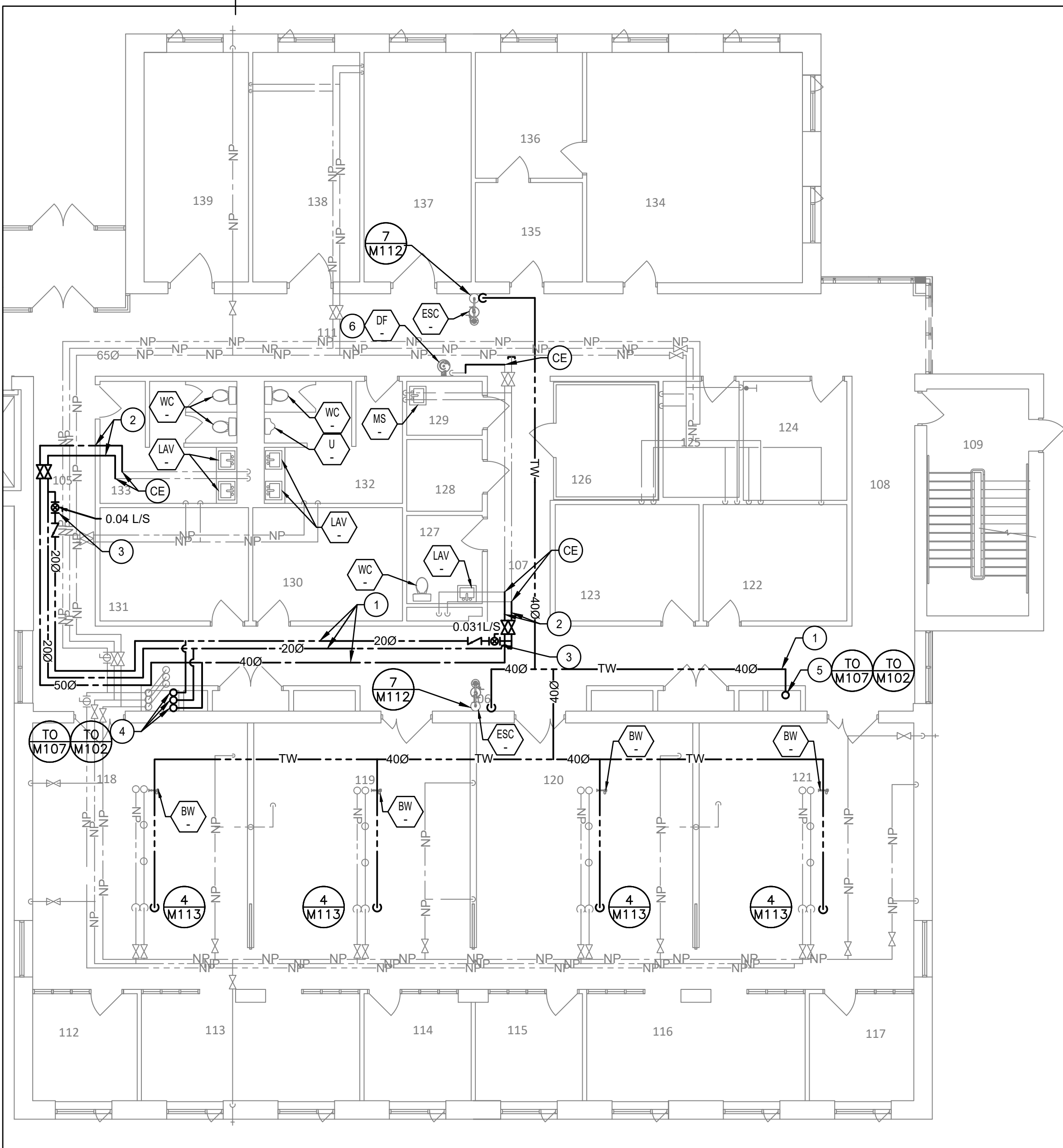
1 FIRST PART FLOOR PLAN PLUMBING - DEMOLITION  
M103 / SCALE: 1:100

DEMOLITION DRAWING NOTES

- DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.
- DEMOLISH EXISTING DTW PIPING AS INDICATED.

GENERAL NOTES

- AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
- ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.

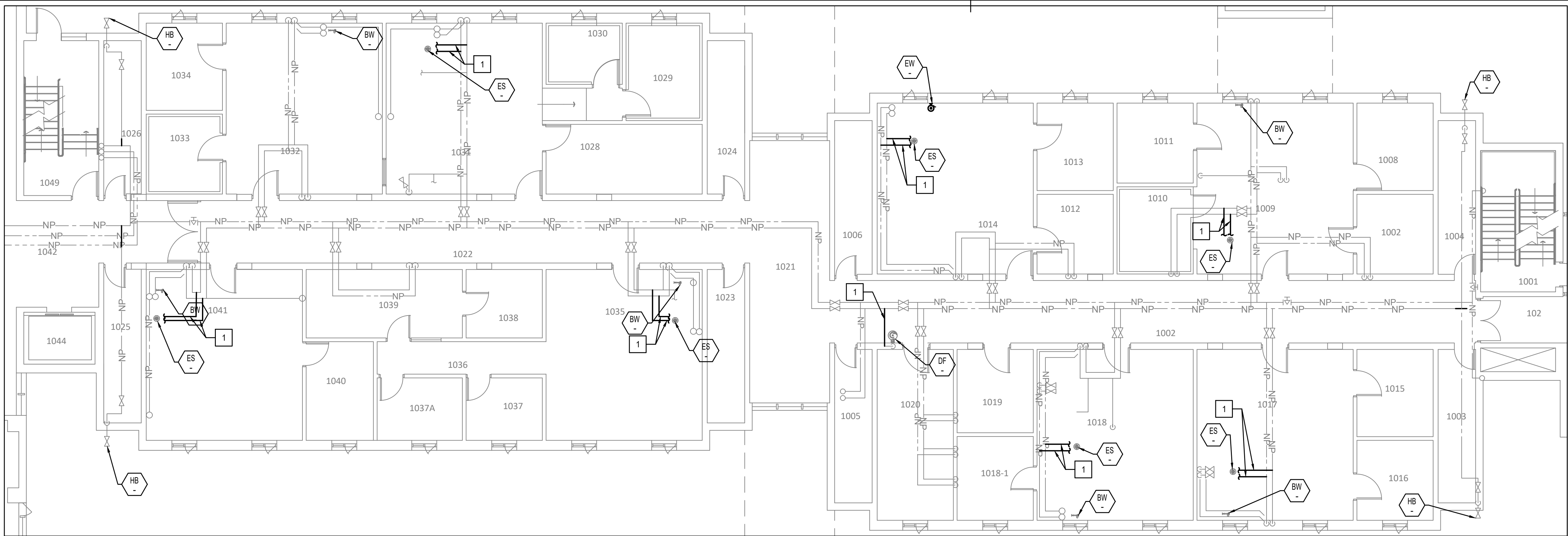


2 FIRST PART FLOOR PLAN PLUMBING - NEW  
M103 / SCALE: 1:100

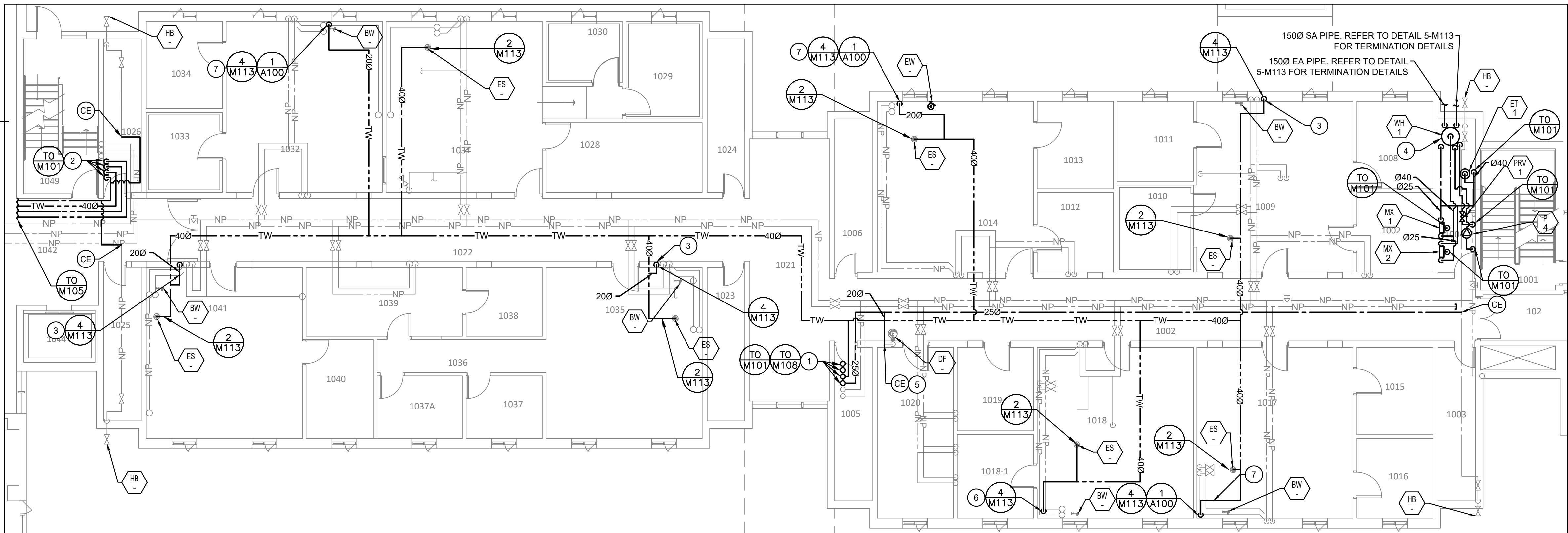
NEW DRAWING NOTES

- PROVIDE AND INSTALL NEW DCW, DHW, DHWR, DTW PIPING AT CEILING LEVEL AS INDICATED.
- CONNECT EXISTING FIXTURE TO NEW DCW AND DHW PIPING AS INDICATED. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS.
- PROVIDE AND INSTALL NEW CHECK VALVE AND CIRCUIT BALANCING VALVE ON HOT WATER CIRCULATION LINE AS INDICATED.
- NEW 650 DCW, 320 DHW, 200 DHWR RISERS UP TO SECOND FLOOR AND DOWN TO BASEMENT WITHIN MECHANICAL CHASE.
- NEW 400 DTW RISER UP TO SECOND FLOOR AND DOWN TO BASEMENT WITHIN MECHANICAL CHASE.
- CONNECT EXISTING FIXTURE TO NEW DHW AND/OR DCW PIPING IN THE CEILING SPACE. REMOVE AND REINSTATE CEILING TO ACCOMMODATE PIPING CONNECTION. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS. DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.





1 FIRST PART FLOOR PLAN PLUMBING - DEMOLITION  
M104 SCALE: 1:100



2 FIRST PART FLOOR PLAN PLUMBING - NEW  
M104 SCALE: 1:100

DEMOLITION DRAWING NOTES

1 DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.

GENERAL NOTES

1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.

2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.

NEW DRAWING NOTES

1 NEW 500 DCW, 250 DHW, 200 DHWR, 400 DTW PIPING UP TO SECOND FLOOR AND DOWN TO BASEMENT IN MECHANICAL CHASE. INSTALL BRANCH PIPING TO FIRST FLOOR WITHIN FINISHED CEILING.

2 NEW 650 DCW, 250 DHW, 200 DHWR, 200 DTW PIPING DOWN TO BASEMENT IN MECHANICAL CHASE. INSTALL BRANCH PIPING TO FIRST FLOOR WITHIN FINISHED CEILING.

3 NEW TW LINE TO BE ROUTED WITHIN EXISTING RECESSED IN WALL PIPE CHASE. REFER TO SCHEDULES AND DETAILS FOR MORE INFORMATION ON CONNECTION AND PATCHING.

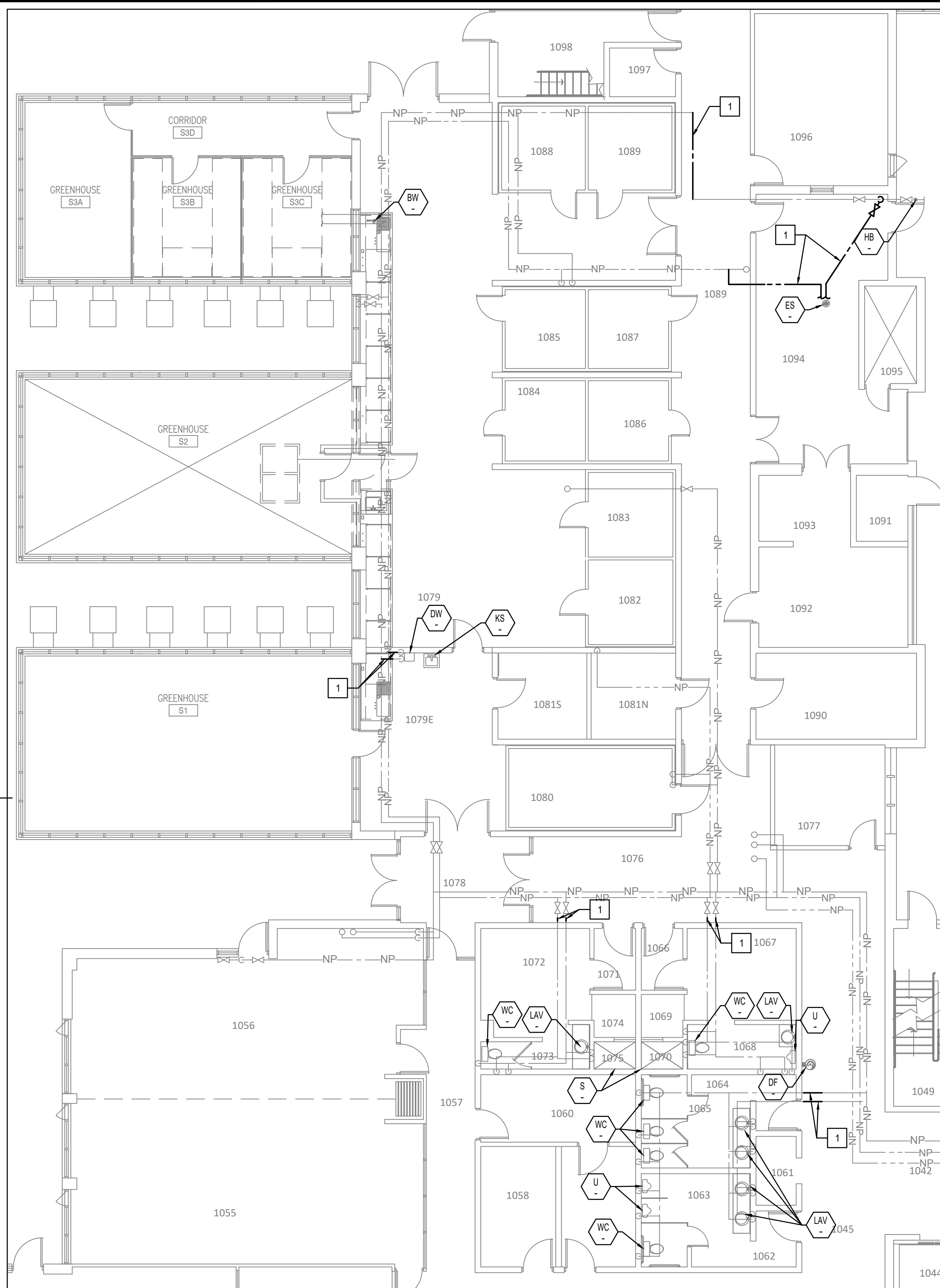
4 REFER TO 3-M112 FOR CONCRETE PAD DETAIL.

5 CONNECT EXISTING FIXTURE TO NEW DHW AND/OR DCW PIPING IN THE CEILING SPACE. REMOVE AND REINSTATE CEILING TO ACCOMMODATE PIPING CONNECTION. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS. DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.

6 NEW TW LINE TO BE ROUTED WITHIN EXISTING DRYWALL ENCLOSURE. REFER TO SCHEDULES AND DETAILS FOR MORE INFORMATION ON CONNECTION AND PATCHING.

7 NEW TW LINE TO BE ROUTED WITHIN NEW PIPE CHASE. REFER TO SCHEDULES AND DETAILS FOR MORE INFORMATION ON CONNECTION AND PATCHING.





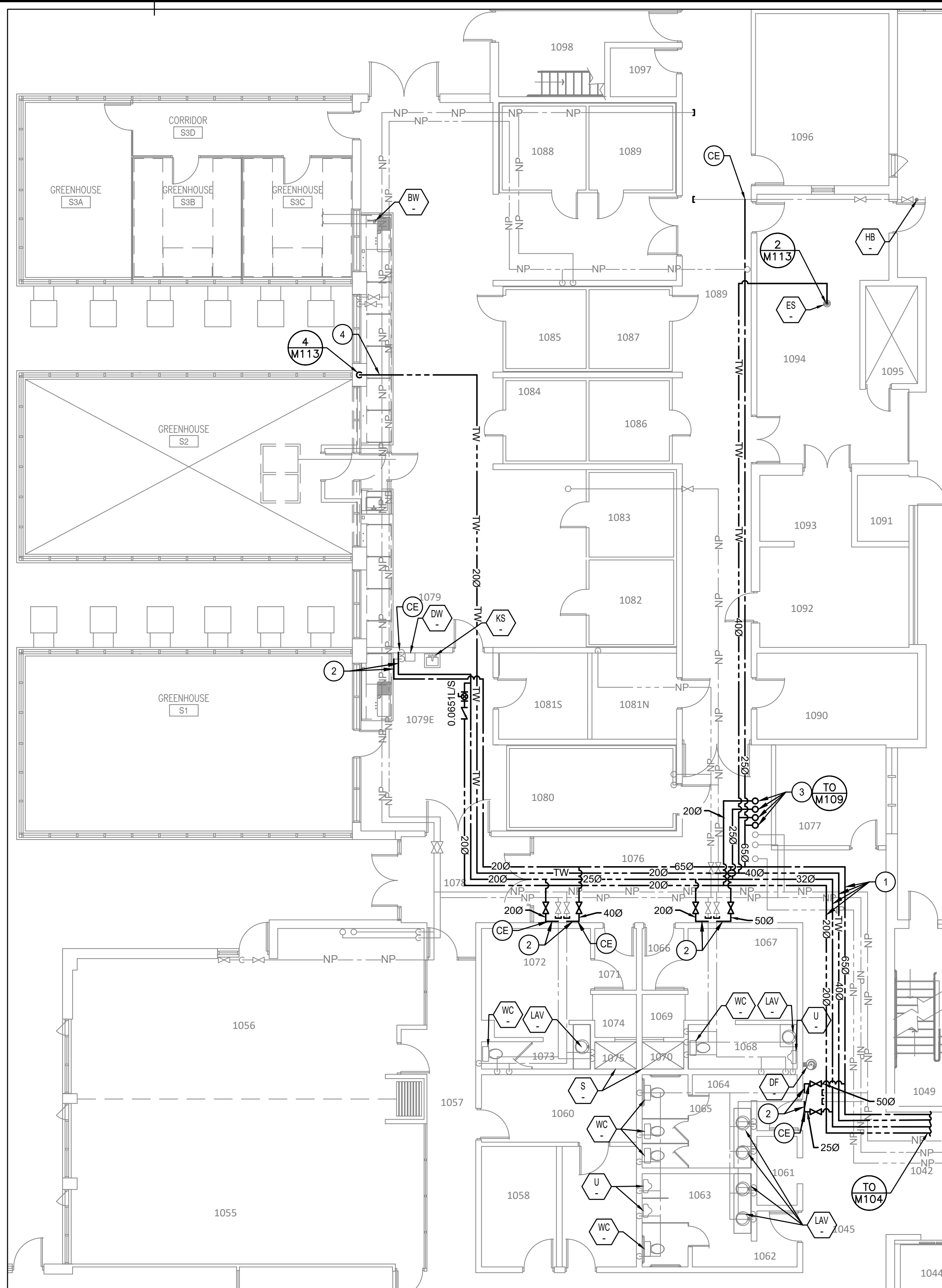
**1 FIRST PART FLOOR PLAN PLUMBING - DEMOLITION**  
M105 SCALE: 1:100

#### DEMOLITION DRAWING NOTES

- 1** DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.

#### GENERAL NOTES

- AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
- ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.



**2 FIRST PART FLOOR PLAN PLUMBING - NEW**  
M105 SCALE: 1:100

#### NEW DRAWING NOTES

- PROVIDE AND INSTALL NEW DCW, DHW, DHWR, DTW PIPING AT CEILING LEVEL AS INDICATED.
- CONNECT EXISTING FIXTURE TO NEW DHW AND/OR DCW PIPING IN THE CEILING SPACE. REMOVE AND REINSTATE CEILING TO ACCOMMODATE PIPING CONNECTION. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS. DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.
- NEW 650 DCW, 250 DHW, 200 DHWR, 400 DTW RISERS UP TO SECOND FLOOR.
- NEW TW LINE TO BE ROUTED WITHIN EXISTING PIPE CHASE. REFER TO SCHEDULES AND DETAILS FOR MORE INFORMATION ON CONNECTION AND PATCHING.



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**LONDON ONTARIO  
PUBLIC SERVICES PROCUREMENT CANADA  
1391 SANDFORD STREET  
LONDON, ON N5V 4T3**

**LONDON CROSS CONNECTION  
CONTROL MEASURES**

drawing title  
titre du dessin  
**MECHANICAL  
FIRST PART FLOOR PLAN  
PLUMBING - DEMO AND NEW**

drawn by  
dessiné par **ZEYAD ABDELAZEZ**

designed by  
conc par **CARY MCGEE**

approved by  
approuvé par **DAVID YIN**

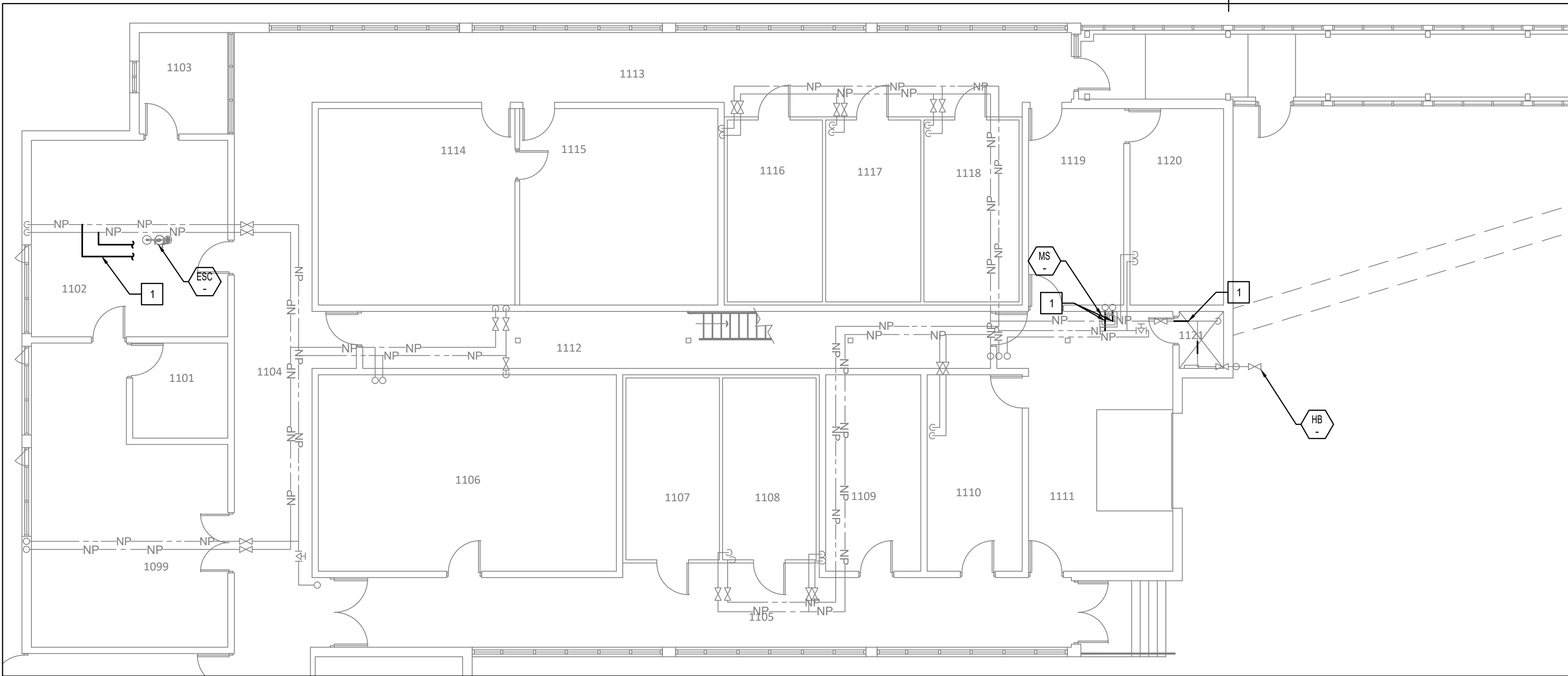
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offre **DEBI BANNON** project manager  
administrateur de projets

project date  
date du projet **2020-05-29**

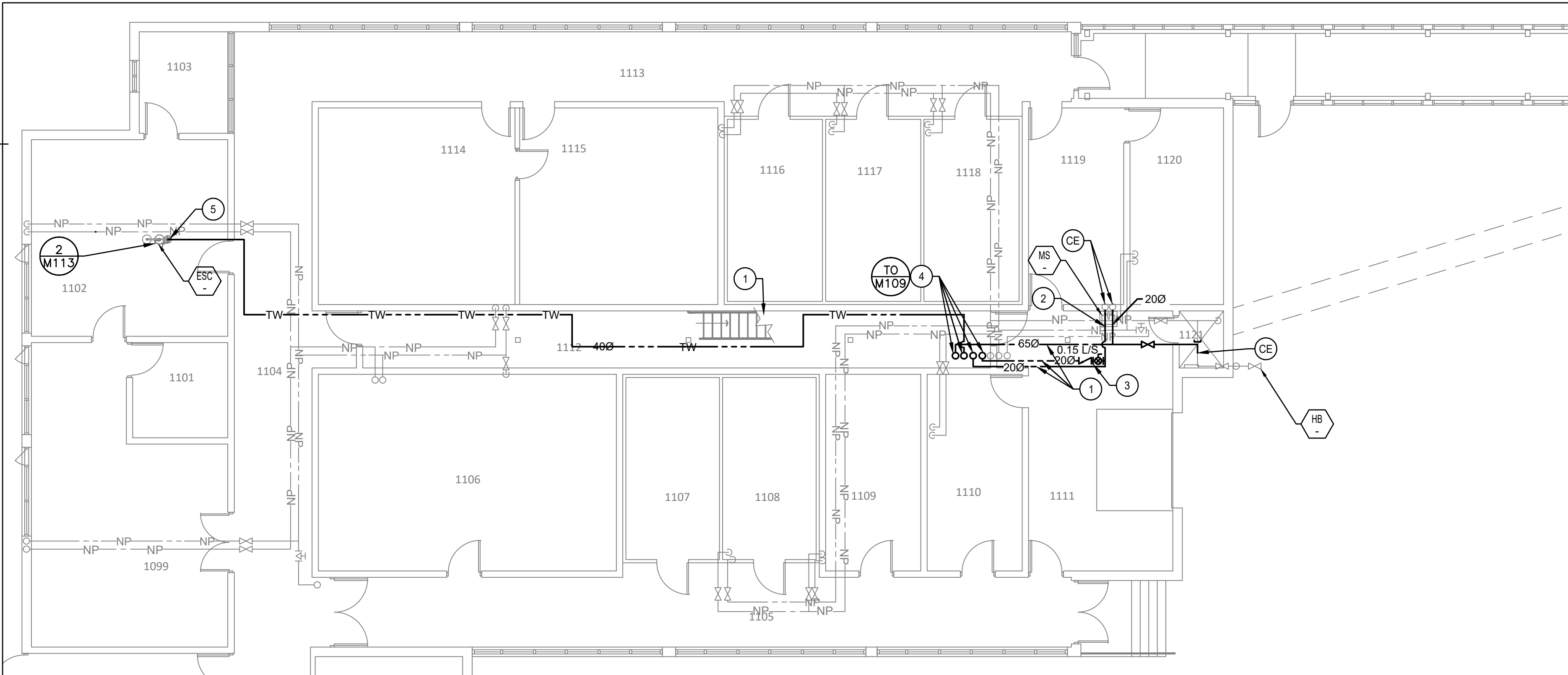
project no.  
no. du projet **R.106155.001**

drawing no.  
dessiné no. **M105**





1 FIRST PART FLOOR PLAN PLUMBING - DEMOLITION  
M106 SCALE: 1:100



2 FIRST PART FLOOR PLAN PLUMBING - NEW  
M106 SCALE: 1:100

DEMOLITION DRAWING NOTES

- 1 DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.

GENERAL NOTES

1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.

NEW DRAWING NOTES

- 1 PROVIDE AND INSTALL NEW DCW, DHW, DHWR, DTW PIPING AT CEILING LEVEL AS INDICATED.
- 2 CONNECT EXISTING FIXTURE TO NEW DCW AND DHW PIPING AS INDICATED. THE NEW PIPING SHALL BE CONNECTED TO EXISTING PIPING IN THE CEILING SPACE. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS. DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.
- 3 PROVIDE AND INSTALL NEW CHECK VALVE AND CIRCUIT BALANCING VALVE ON HOT WATER CIRCULATION LINE AS INDICATED.
- 4 NEW 65Ø DCW, 20Ø DHW, 20Ø DHWR, 40Ø DTW RISERS FROM SECOND FLOOR.
- 5 ROUTE NEW DTW PIPING IN THE CEILING SPACE.



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LONDON, ON N5V 4T3  
LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
MECHANICAL  
FIRST PART FLOOR PLAN  
PLUMBING - DEMO AND NEW

drawn by  
dessiné par  
ZEYAD ABDELAZEZ

designed by  
conc par  
CARY MCGEE

approved by  
approuvé par  
DAVID YIN

bid  
offre  
DEBI BANNON

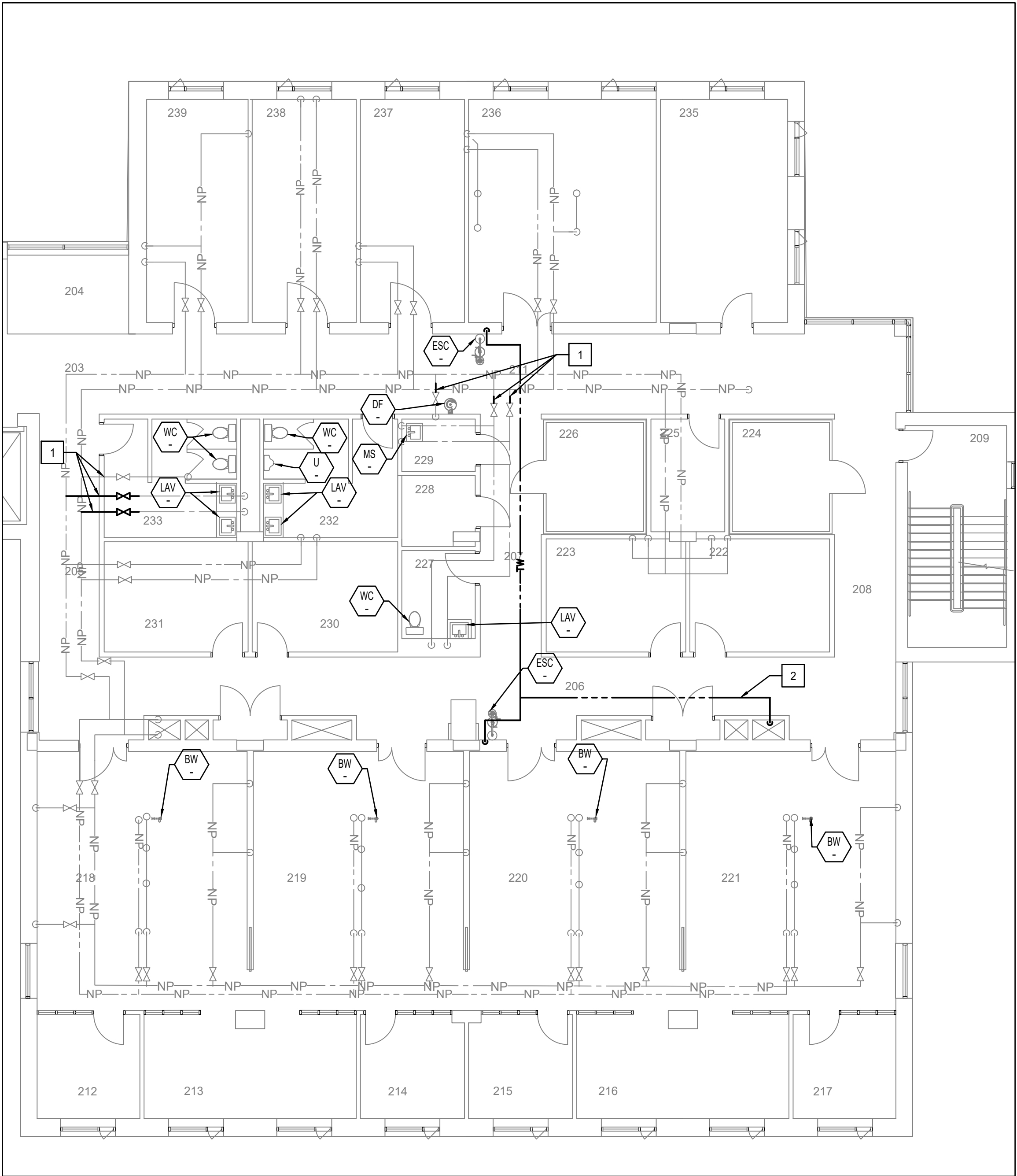
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R.106155.001

drawing no.  
dessiné no.  
M106





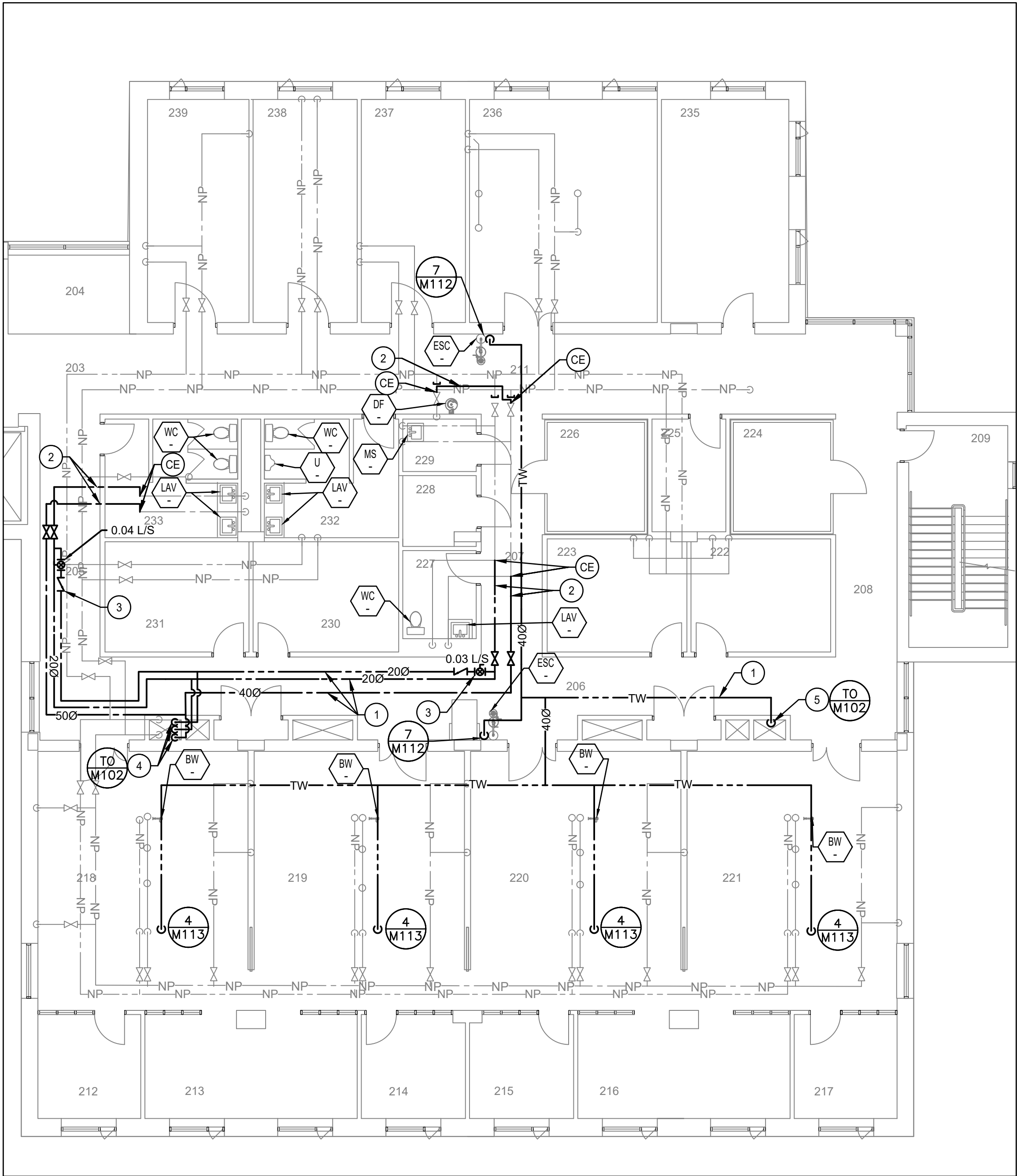
1 SECOND PART FLOOR PLAN PLUMBING - DEMOLITION  
M107 SCALE: 1:100

#### DEMOLITION DRAWING NOTES

- 1 DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.
- 2 DEMOLISH EXISTING DTW PIPING AS INDICATED.

#### GENERAL NOTES

1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.



2 SECOND PART FLOOR PLAN PLUMBING - NEW  
M107 SCALE: 1:100

#### NEW DRAWING NOTES

- 1 PROVIDE AND INSTALL NEW DCW, DHW, DHWR, DTW PIPING AT CEILING LEVEL AS INDICATED.
- 2 CONNECT EXISTING FIXTURE TO NEW DHW AND/OR DCW PIPING IN THE CEILING SPACE. REMOVE AND REINSTATE CEILING TO ACCOMMODATE PIPING CONNECTION. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS. DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.
- 3 PROVIDE AND INSTALL NEW CHECK VALVE AND CIRCUIT BALANCING VALVE ON HOT WATER CIRCULATION LINE AS INDICATED.
- 4 NEW 650 DCW, 320 DHW, 200 DHWR, RISERS UP FROM FIRST FLOOR WITHIN MECHANICAL CHASE.
- 5 NEW 400 DTW RISER UP FROM FIRST FLOOR WITHIN MECHANICAL CHASE.



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LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
MECHANICAL  
SECOND PART FLOOR PLAN  
PLUMBING - DEMO AND NEW

drawn by  
dessiné par ZEYAD ABDELAZEZ

designed by  
conc par CARY MCGEE

approved by  
approuvé par DAVID YIN

bid  
offre DEBI BANNON project manager  
administrateur de projets

project date  
date du projet 2020-05-29

project no.  
no. du projet R.106155.001

drawing no.  
dessiné no. M107





1	DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.
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1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.

- 1 NEW 500 DCW, 250 DWH, 200 DWHW, 400 DTW PIPING DOWN TO FIRST FLOOR IN MECHANICAL CHASE. INSTALL BRANCH PIPING TO SECOND FLOOR WITHIN FINISHED CEILING.
- 2 CONNECT EXISTING FIXTURE TO NEW DWH AND/OR DCW PIPING IN THE CEILING SPACE. REMOVE AND REINSTATE CEILING TO ACCOMMODATE PIPING CONNECTION. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS. DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.
- 3 NEW BW TO BE PROVIDED AND INSTALLED BY DEPARTMENTAL REPRESENTATIVE. NEW DTW PIPING TO BE PROVIDED AND INSTALLED BY MECHANICAL DIVISION.
- 4 NEW TW LINE TO BE ROUTED WITHIN EXISTING RECESSED IN WALL PIPE CHASE. REFER TO SCHEDULES AND DETAILS FOR MORE INFORMATION ON CONNECTION AND PATCHING.



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LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin

MECHANICAL  
SECOND PART FLOOR PLAN  
PLUMBING – DEMO AND NEW

drawn by  
dessine par ZEYAD ABDELAZEZ

designed by  
conc par CARY MCGEE

approved by  
approuvé par

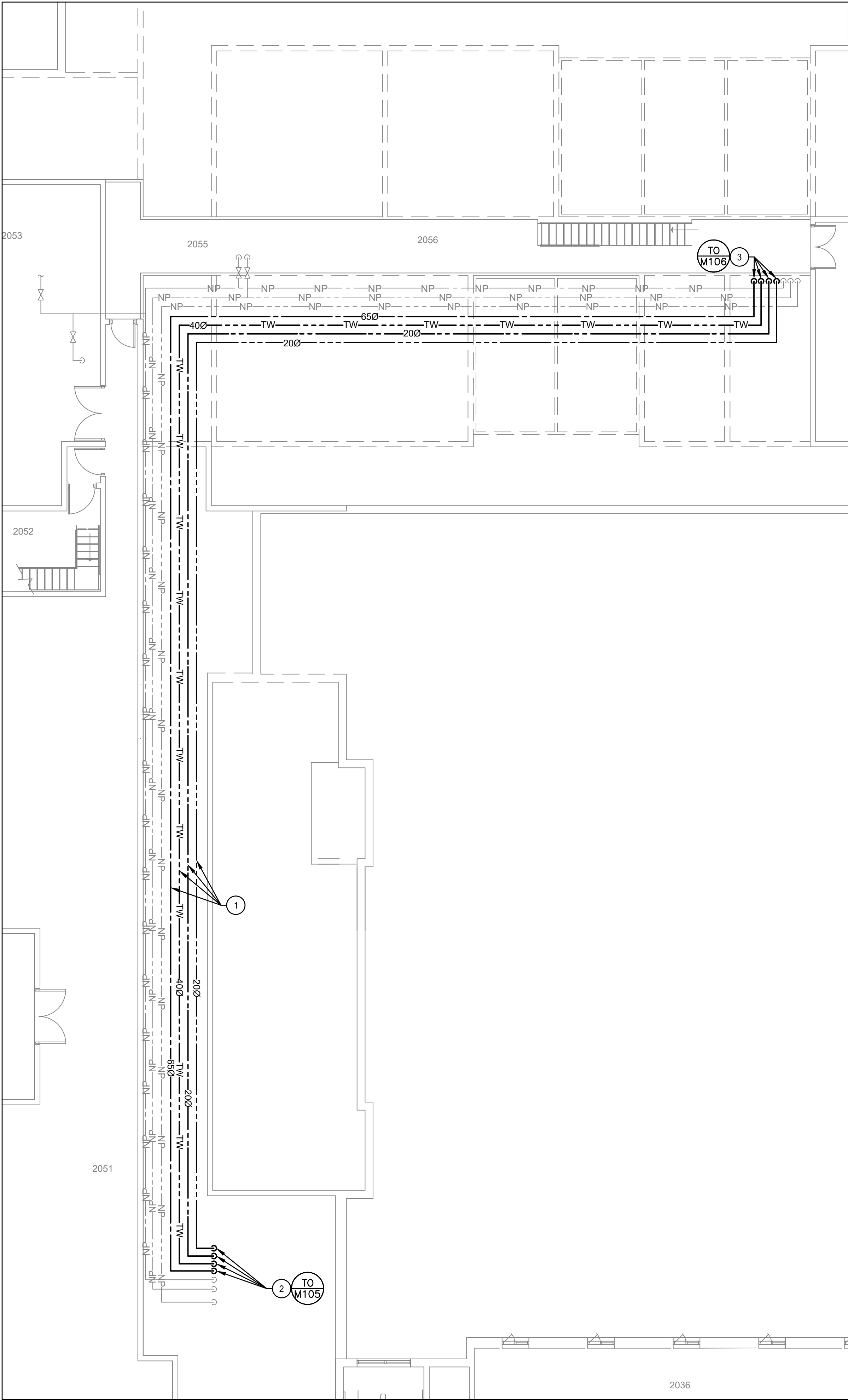
bid offre	DEBI BANNON	project manager administrateur de projet
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project date date du projet	2020-05-29
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project no. no. du projet	R.106155.001
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drawing no.  
dessine no. M108





1 SECOND PART FLOOR PLAN PLUMBING - NEW  
SCALE: 1:100


- NEW DRAWING NOTES
- 1

PROVIDE AND INSTALL NEW DCW, DHW, DHWR, DTW PIPING AT CEILING LEVEL AS INDICATED.
- 2

NEW 650 DCW, 200 DHW, 200 DHWR, 400 DTW RISERS UP FROM FIRST FLOOR.
- 3

NEW 650 DCW, 200 DHW, 200 DHWR, 400 DTW RISERS DOWN TO FIRST FLOOR.
- GENERAL NOTES
1.

AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.

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LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
MECHANICAL  
SECOND PART FLOOR PLAN  
PLUMBING – NEW

drawn by  
dessine par  
ZEYAD ABDELAZEZ

designed by  
conc par  
CARY MCGEE

approved by  
approuve par  
DAVID YIN

bid  
offre  
DEBI BANNON

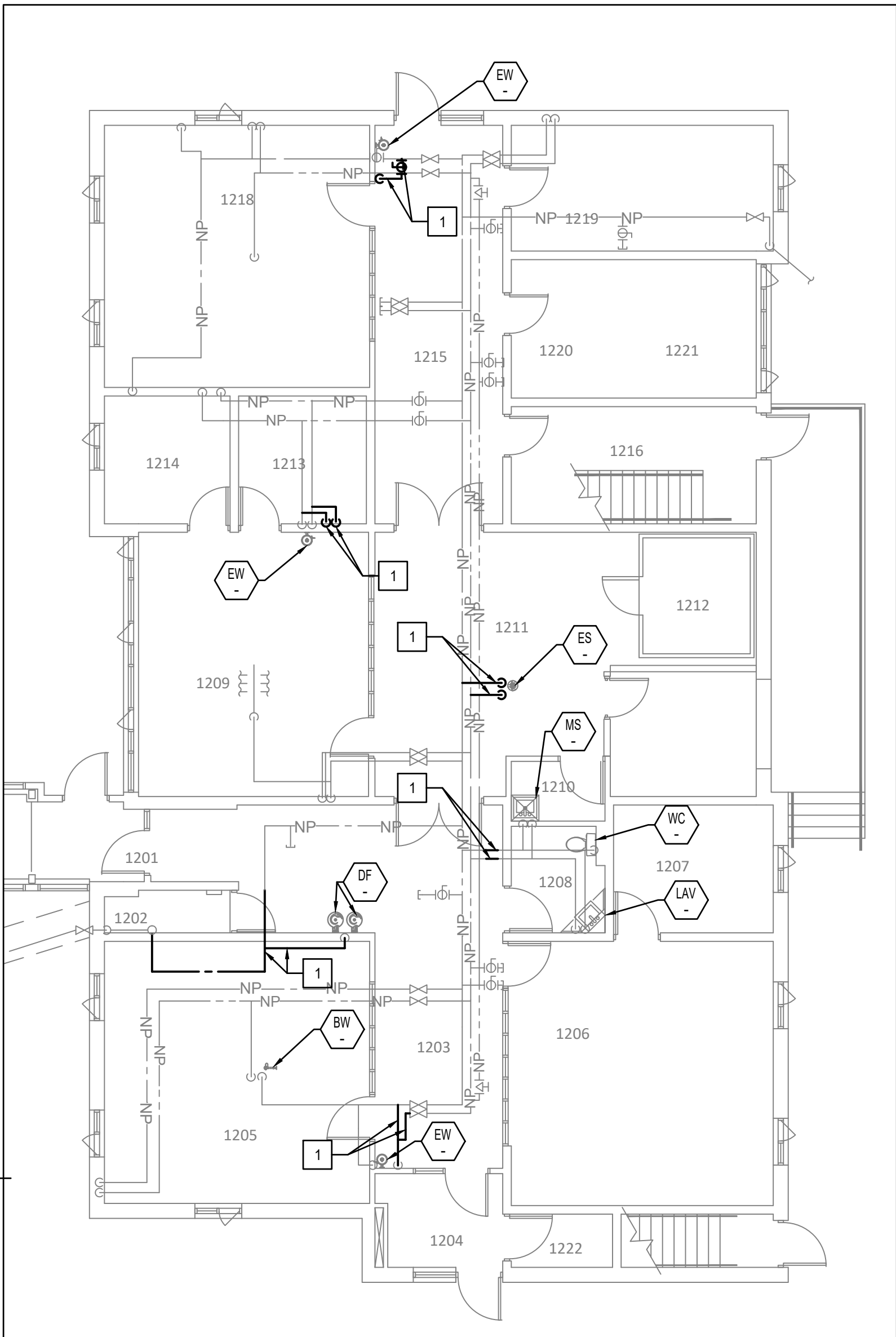
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de projets

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2020-05-29

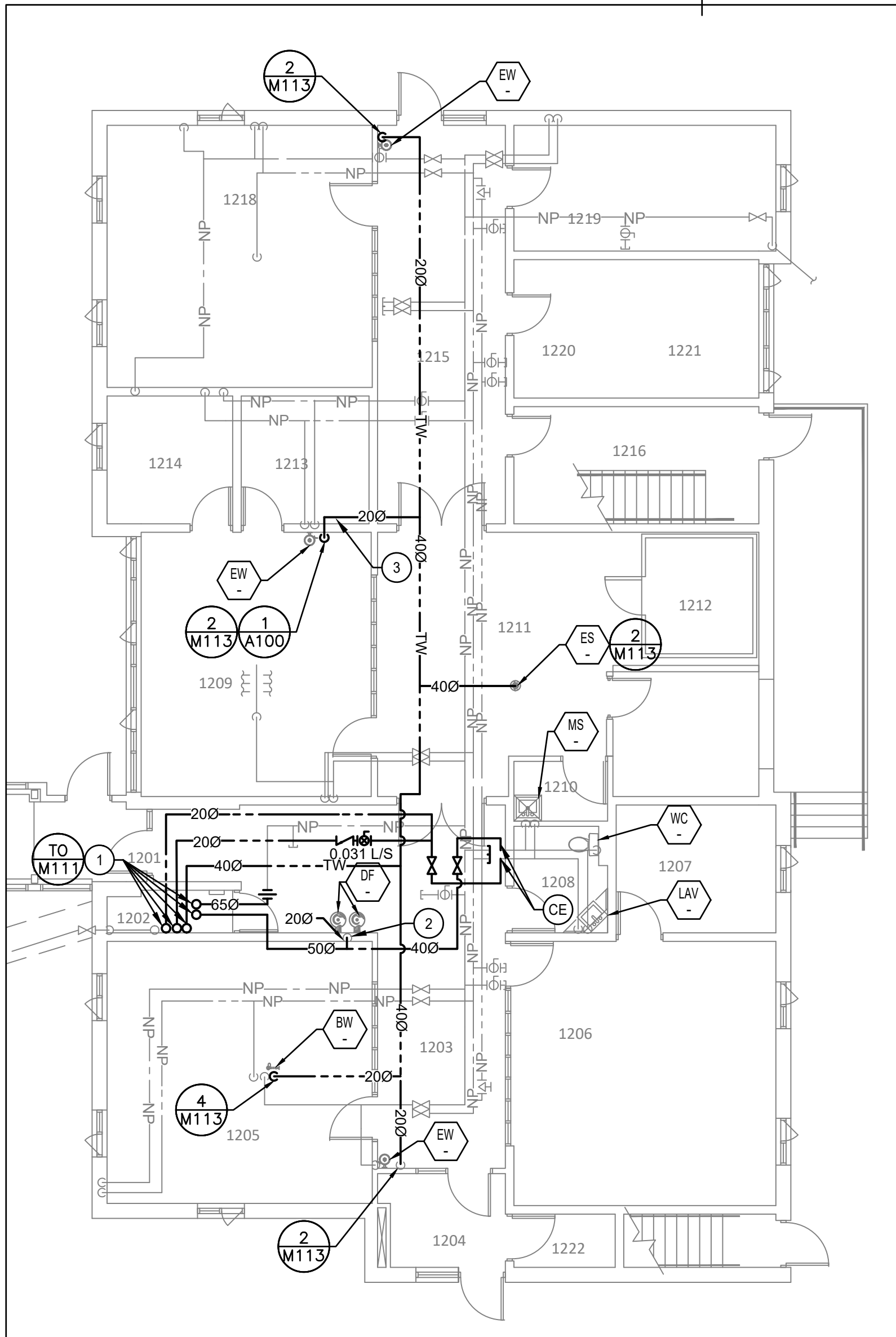
project no.  
no. du projet  
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drawing no.  
dessine no.  
M109





1 BLDG 15 FIRST FLOOR PLAN PLUMBING - DEMOLITION  
M110 SCALE: 1:100



2 BLDG 15 FIRST FLOOR PLAN PLUMBING - NEW  
M110 SCALE: 1:100

DEMOLITION DRAWING NOTES

- 1 DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.

NEW DRAWING NOTES

- 1 NEW 500 DCW, 650 NON-POTABLE DCW, 200 DHW, 200 DHWR, 400 DTW PIPING DOWN FROM SECOND FLOOR IN MECHANICAL CHASE. INSTALL BRANCH PIPING TO FIRST FLOOR WITHIN FINISHED CEILING.  
CONNECT EXISTING FIXTURE TO NEW DHW AND/OR DCW PIPING IN THE CEILING SPACE. REMOVE AND REINSTATE CEILING TO ACCOMMODATE PIPING CONNECTION. REFER TO PHASING NOTES AND DETAIL 6-M112 FOR DISCONNECTION/RECONNECTION DETAILS.  
DEMOLISH BRANCH PIPING UP TO CONCEALED DROP FOR FIXTURE. TIE IN NEW PIPING TO EXISTING DROPS. WHERE PIPE DROPS ARE EXPOSED, DEMOLISH AND REPLACE DROPS.
- 3 NEW TW LINE TO BE ROUTED WITHIN NEW PIPE CHASE. REFER TO SCHEDULES AND DETAILS FOR MORE INFORMATION ON CONNECTION AND PATCHING.

GENERAL NOTES

1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.
2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.

PHASING NOTES

REFER TO M100 FOR PHASING SUPPLEMENTED AS NOTED HERE

- 1 ENSURE ALL NEW PIPING IS INSTALLED AND CLEANED PRIOR TO ANY DEMOLITION WORK.
- 2 ONCE BATCH WORK FOR BUILDING IS STARTED AND FIXTURES ARE OFFLINE, PERFORM SWITCHOVER OF TUNNEL PIPING FROM NON-POTABLE TO POTABLE PIPING NETWORK.
- 3 AFTER SWITCHOVER, NON-POTABLE FIXTURES ARE USABLE WHILE TIE-INS OF POTABLE FIXTURES TO NEW POTABLE MAIN ARE BEING COMPLETED.

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LONDON ONTARIO  
PUBLIC SERVICES PROCUREMENT CANADA  
1391 SANDFORD STREET  
LONDON, ON N5V 4T3

LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
MECHANICAL  
BLDG 15 FIRST FLOOR PLAN  
PLUMBING - DEMO AND NEW

drawn by  
dessiné par ZEYAD ABDELAZEZ

designed by  
conc par CARY MCGEE

approved by  
approuvé par DAVID YIN

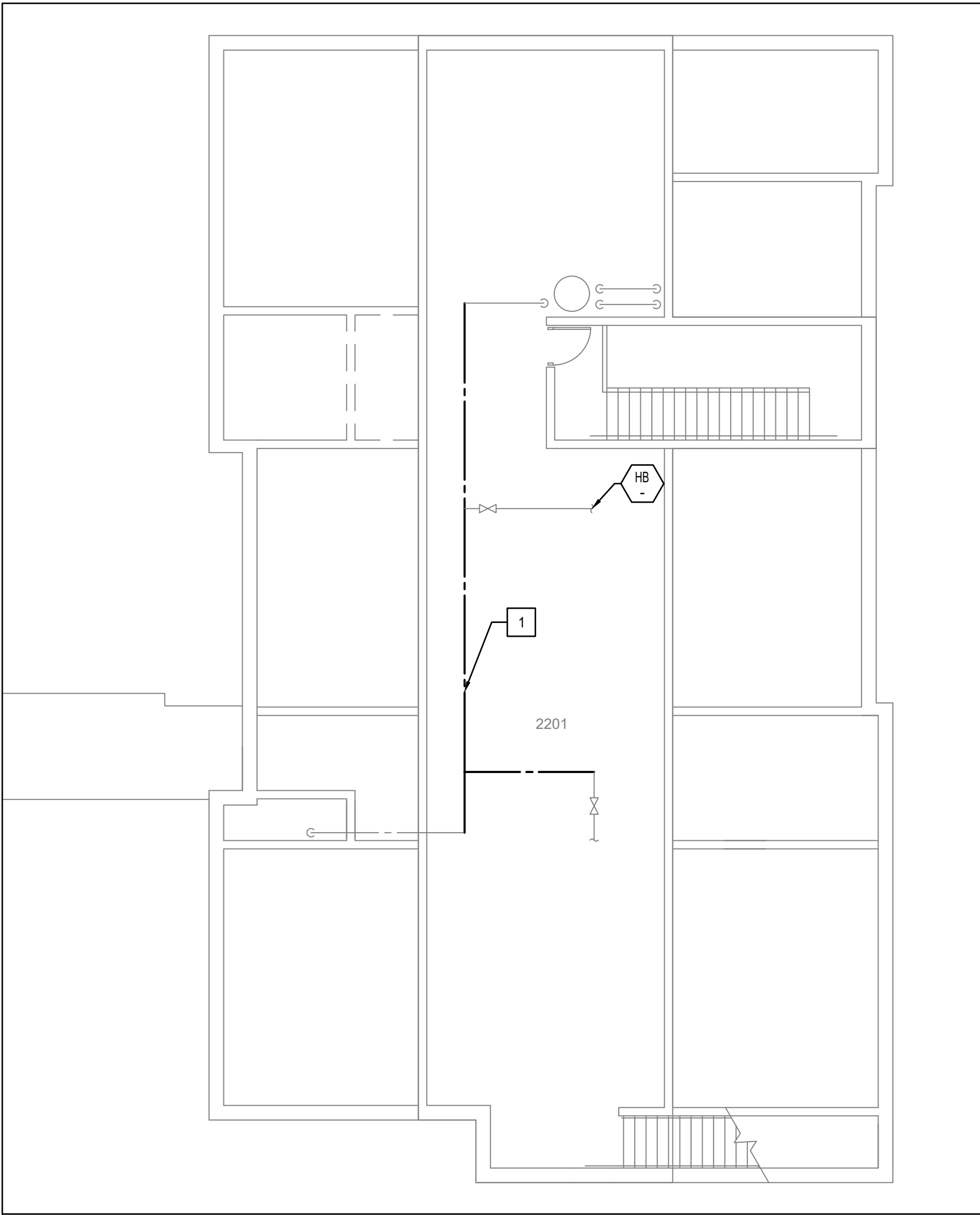
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date du projet 2020-05-29

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no. du projet R.106155.001

drawing no.  
dessiné no. M110





1 BLDG 15 SECOND FLOOR PLAN PLUMBING - DEMOLITION  
M111 SCALE: 1:100

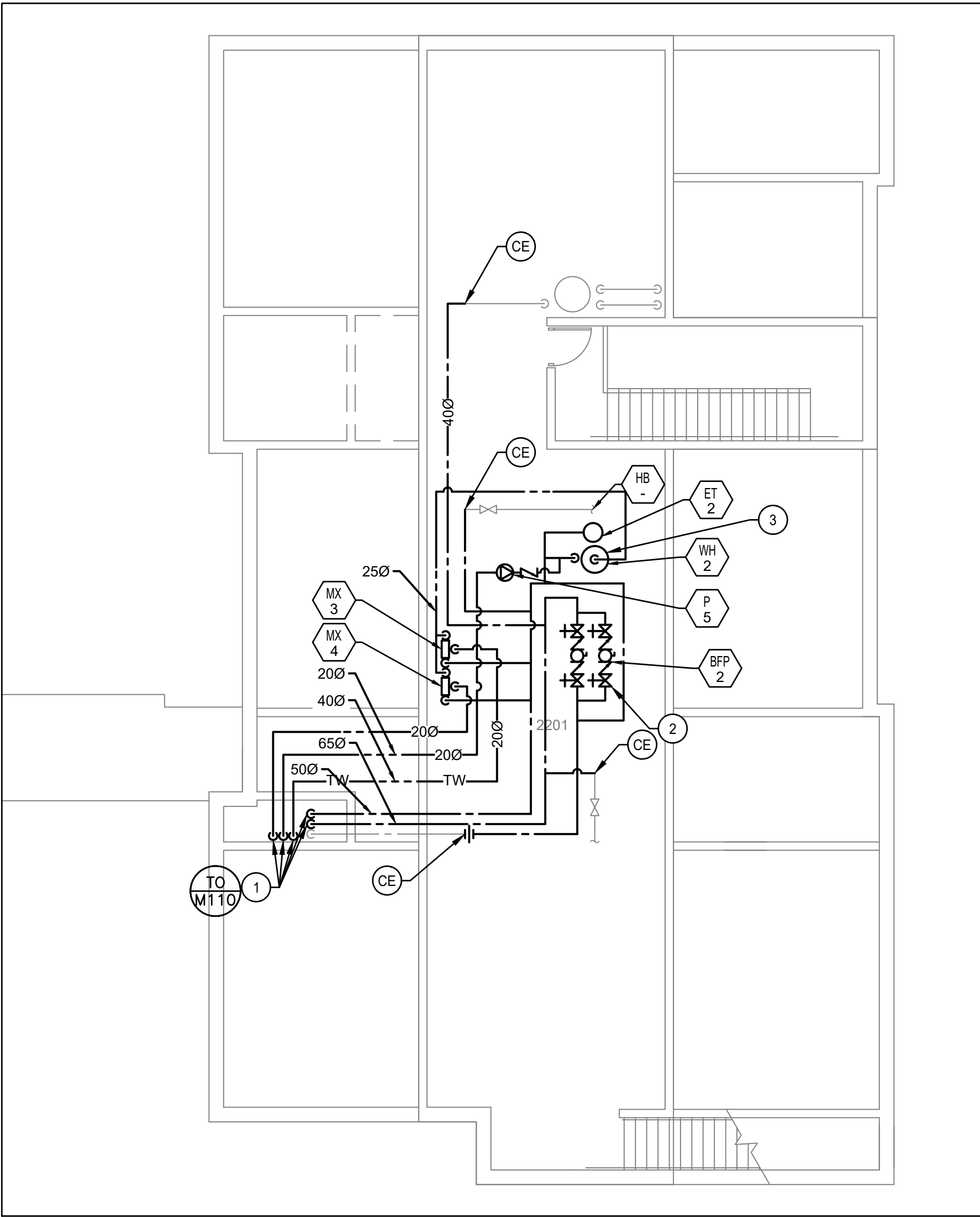
DEMOLITION DRAWING NOTES

1 DEMOLISH EXISTING DCW AND DHW PIPING SEGMENTS AS INDICATED. MAINTAIN EXISTING PIPING FOR REUSE AND RECONNECTION.

GENERAL NOTES

1. AFTER NEW PIPING IS INSTALLED AND TIED IN, REMOVE OLD LABELS AND RELABEL OLD DOMESTIC WATER PIPING THROUGHOUT, WITH LABEL SPACING AND CONTENT TO REQUIREMENTS OF SPECIFICATIONS.

2. ALL TAGGED PLUMBING FIXTURES ARE TO BE CONNECTED TO NEW POTABLE WATER PIPING SYSTEM. REFER TO DETAILS AND NOTES FOR TIE-IN POINTS AND CONFIGURATIONS, AND FOR DEMOLITION SCOPE.



2 BLDG 15 SECOND FLOOR PLAN PLUMBING - NEW  
M111 SCALE: 1:100

NEW DRAWING NOTES

1 NEW 500 DCW, 650 NON-POTABLE DCW, 200 DHW, 200 DHWR, 400 DTW PIPING DOWN TO FIRST FLOOR IN MECHANICAL CHASE.

2 INSTALL NEW BFP-2 AS IN LOCATION INDICATED. BACKFLOW PREVENTERS SHALL BE INSTALLED IN A VERTICALLY STACKED PARALLEL CONFIGURATION. REFER TO DETAIL FOR INSTALLATION CLEARANCES.

3 REFER TO 3-M112 FOR CONCRETE PAD DETAIL.

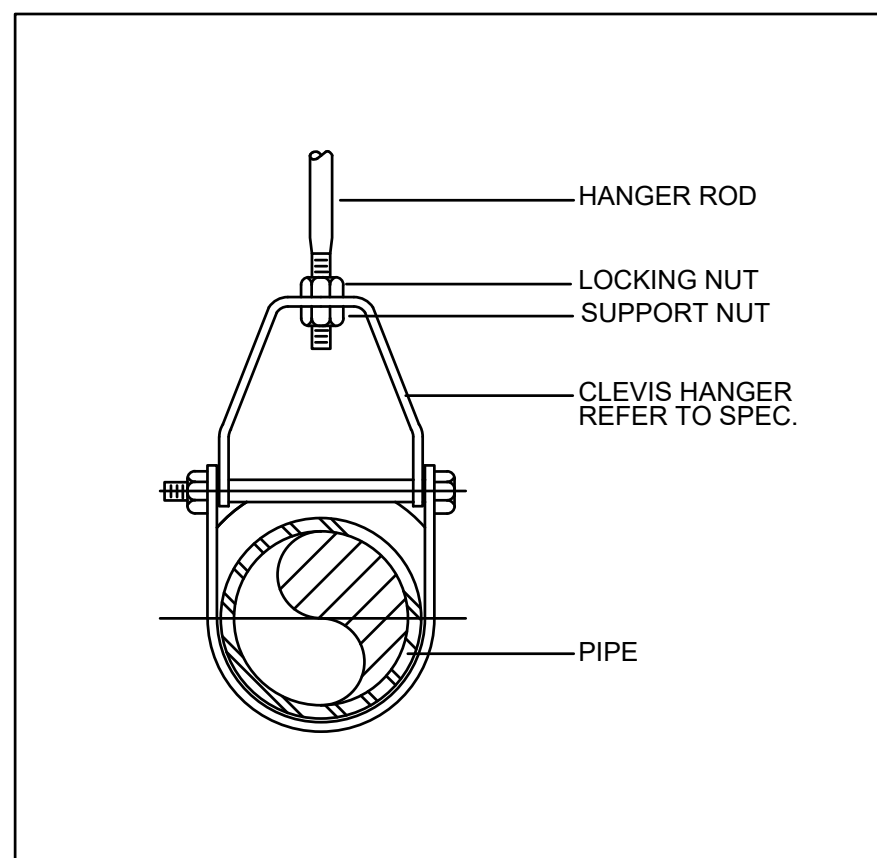
PHASING NOTES

REFER TO M100 FOR PHASING SUPPLEMENTED AS NOTED HERE

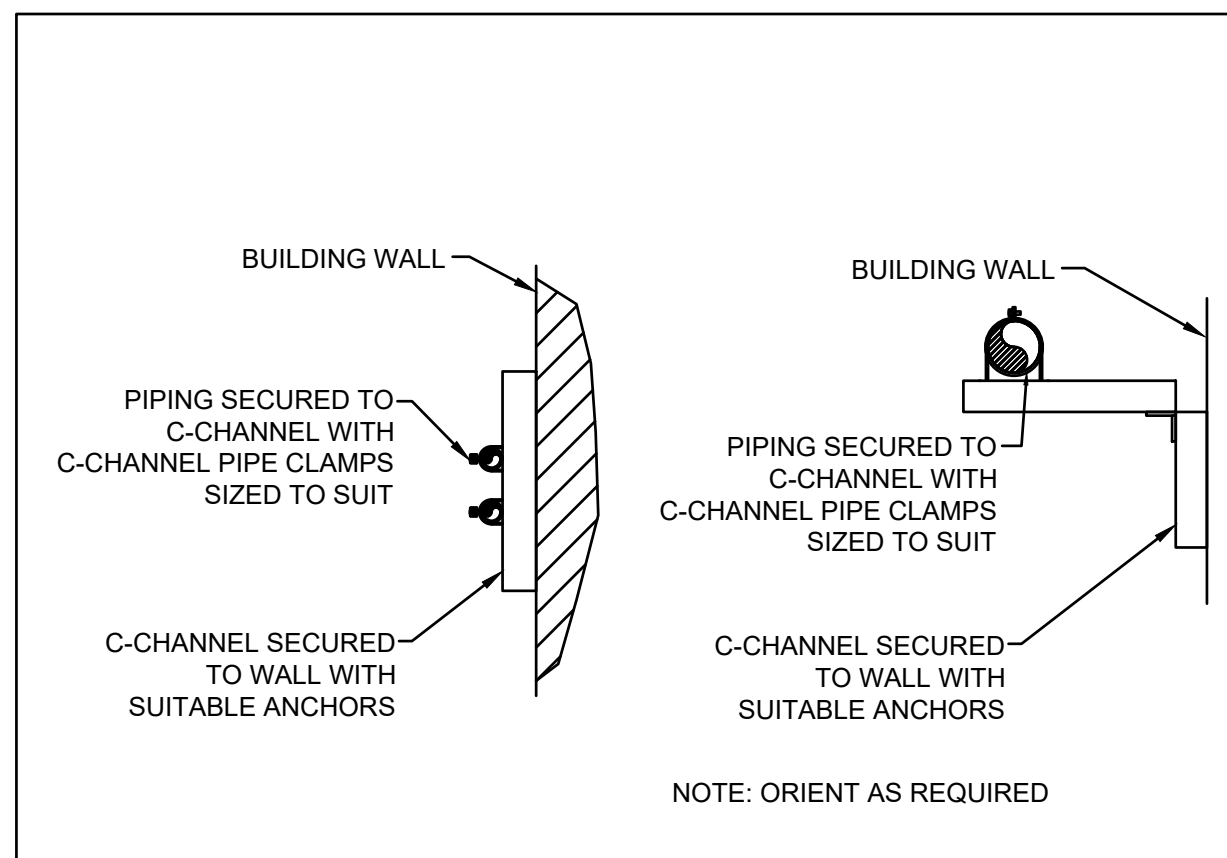
1 ENSURE ALL NEW PIPING IS INSTALLED AND CLEANED PRIOR TO ANY DEMOLITION WORK.

2 ONCE BATCH WORK FOR BUILDING IS STARTED AND FIXTURES ARE OFFLINE, PERFORM SWITCHOVER OF TUNNEL PIPING FROM NON-POTABLE TO POTABLE PIPING NETWORK.

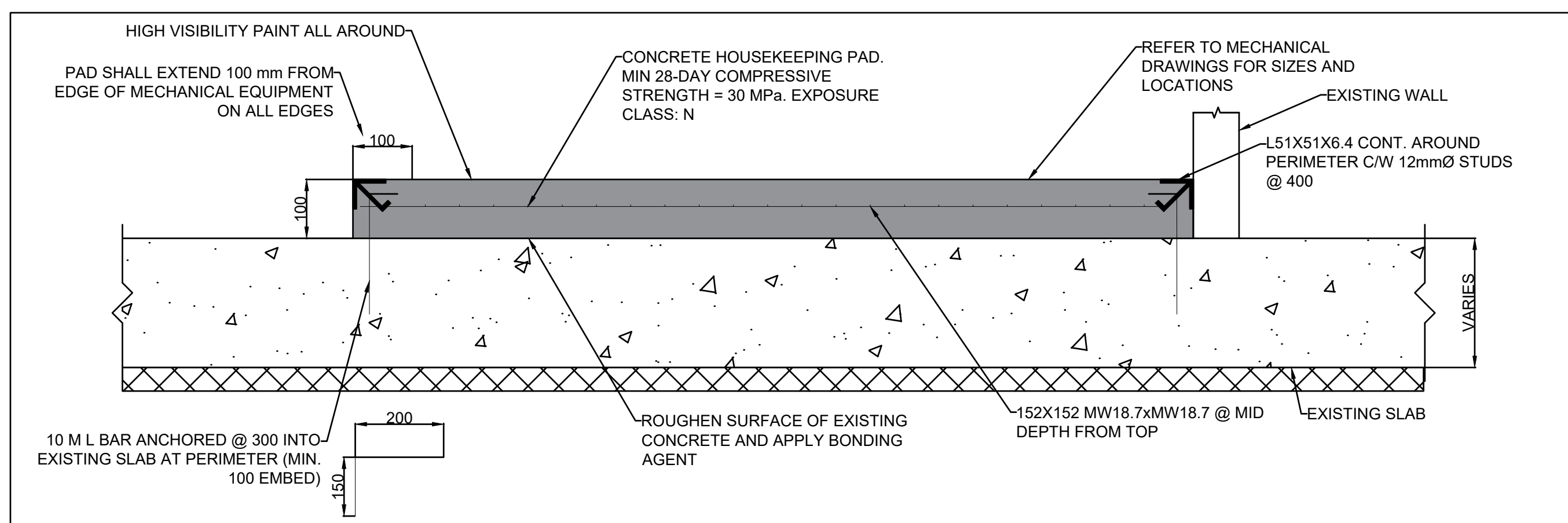
3 AFTER SWITCHOVER, NON-POTABLE FIXTURES ARE USABLE WHILE TIE-INS OF POTABLE FIXTURES TO NEW POTABLE MAIN ARE BEING COMPLETED.



1 TYPICAL PIPE HANGER DETAIL  
M112 SCALE: N.T.S.



2 TYPICAL PIPE WALL SUPPORT DETAIL  
M112 SCALE: N.T.S.



3 CONCRETE PAD DETAIL  
M112 SCALE: N.T.S.

## NOTES:

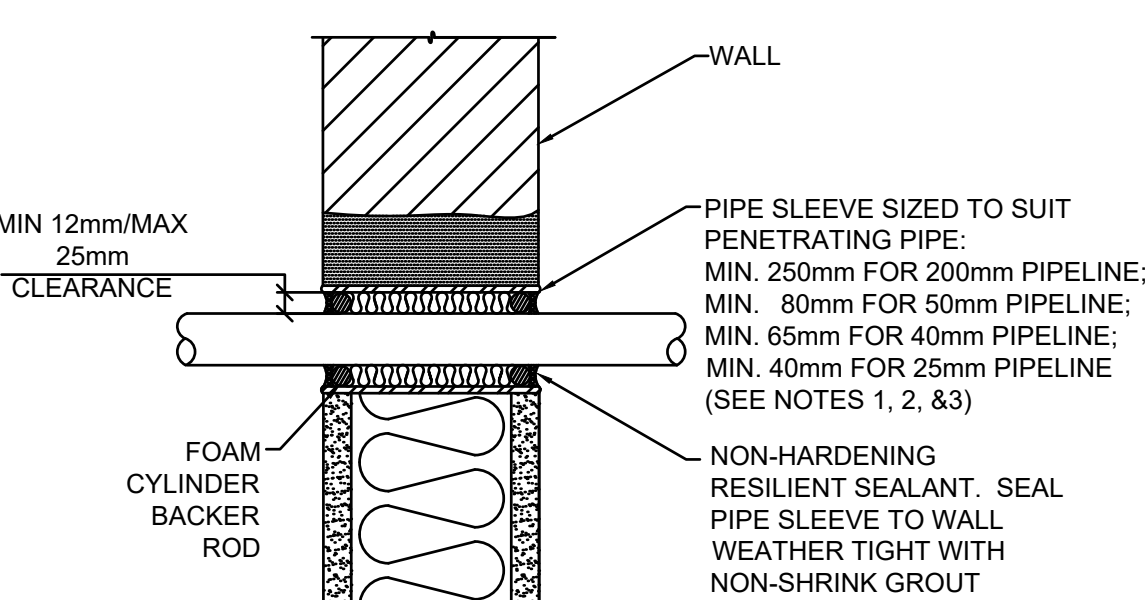
1. CONDUIT SUPPORTS SPACED SUFFICIENTLY FROM PARTITION LINE TO ALLOW ACCESS FOR INSTALLATION/SEALING.

2. FOR STUD WALLS MILD STEEL SLEEVE BEDDED IN SEALANT TO SEAL OFF STUDWORK.

3. FOR BLOCK WALLS THICKNESS OF STEEL SLEEVE SUFFICIENT TO SUPPORT MORTAR ABOVE, MINIMUM THICKNESS 1.6 mm.

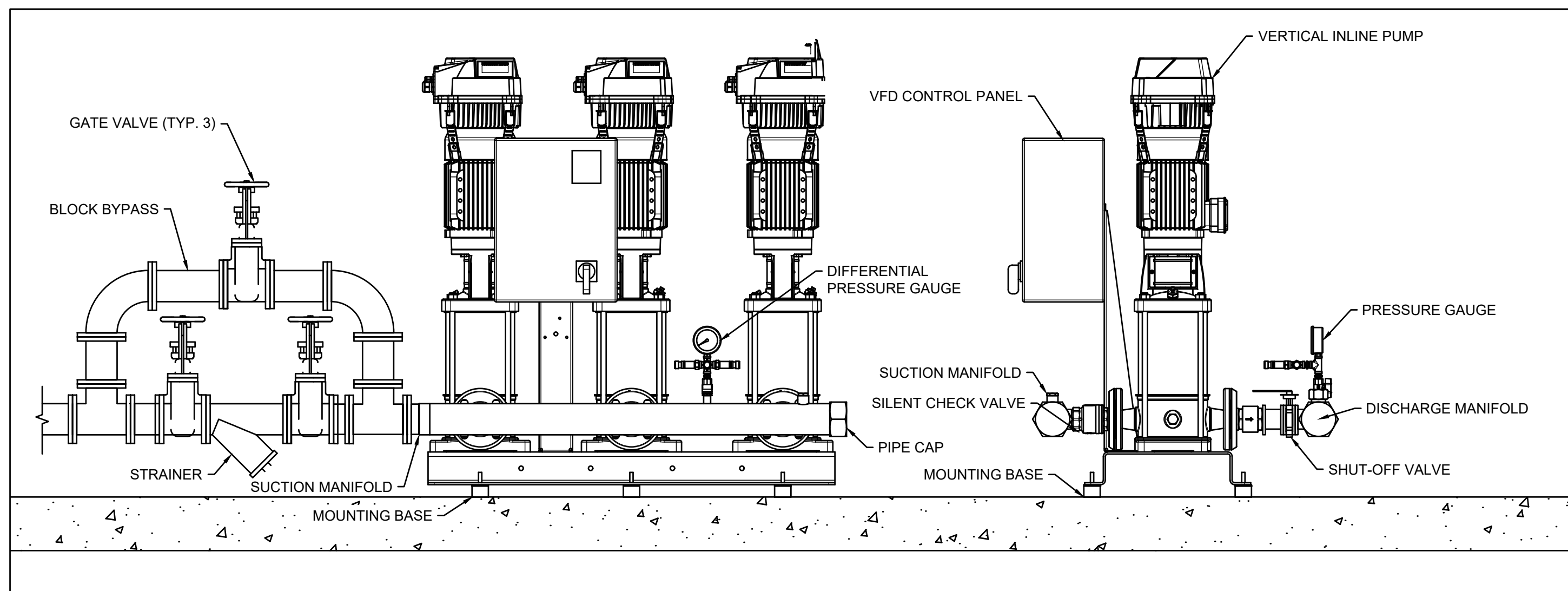
4. ALL BUILDING PENETRATIONS SCANNED PRIOR TO ALL CORING ACTIVITIES AND APPROVED BY DEPARTMENTAL REPRESENTATIVE.

5. ALL NEW PIPE PENETRATIONS THROUGH BUILDING WALLS SEALED WITH A 2 HOUR FIRE-RESISTANT RATED MATERIAL.

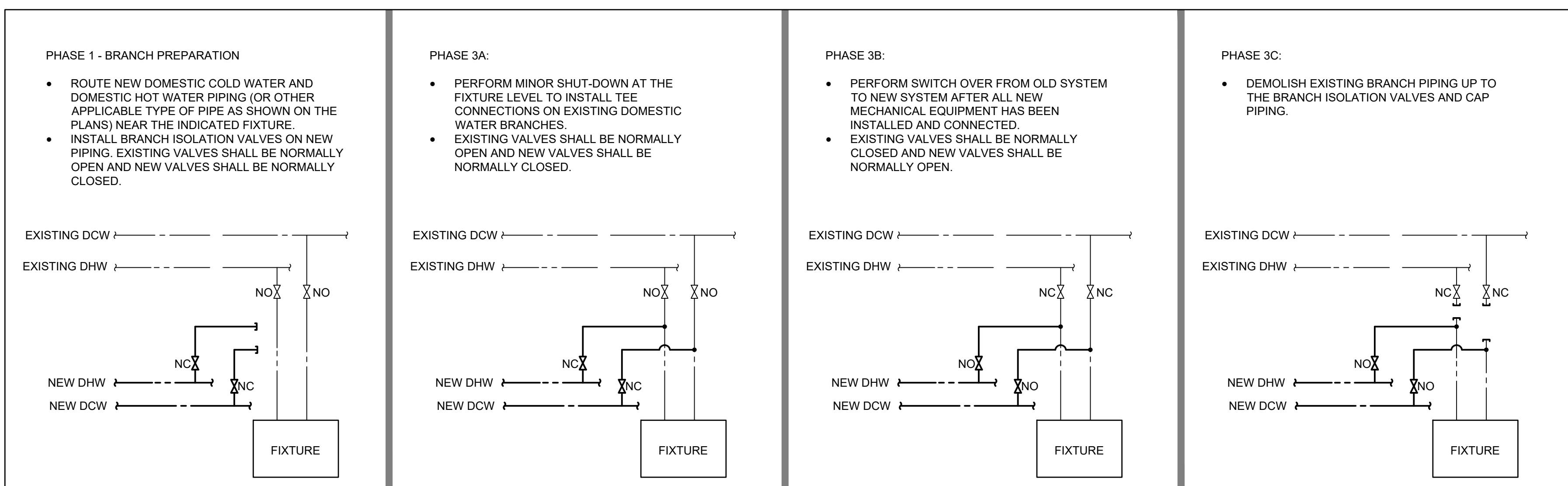


NOTE: THE PIPE PENETRATION DETAIL PROVIDED IS TYPICAL FOR REFERENCE ONLY. WHEN PIPE PENETRATES A FIRE RATED SEPARATION, IT SHALL USE A LISTED FIRESTOP DEVICE OR SYSTEM TO MAINTAIN THE RATING OF THE ASSEMBLY. FIRESTOP DEVICES SHALL BE TESTED TO ULC/CAN4-S115.

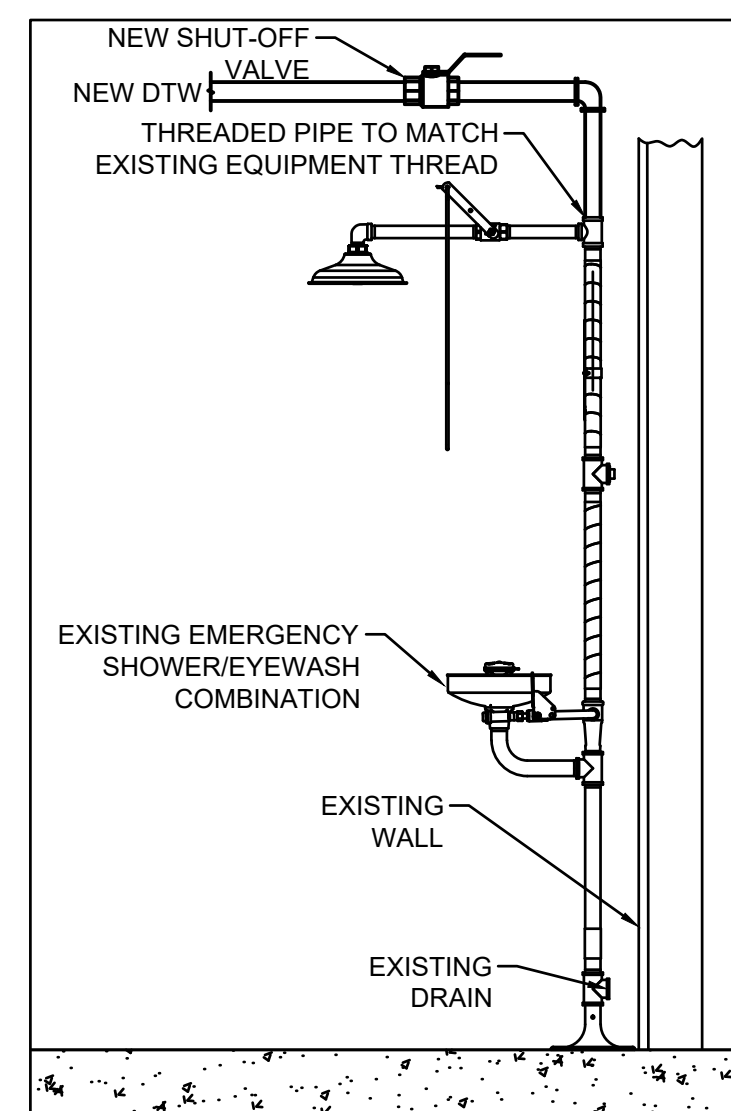
4 TYPICAL PIPE WALL PENETRATION DETAIL  
M112 SCALE: N.T.S.



5 TRIPLEX PUMPSET DETAIL  
M112 SCALE: N.T.S.



6 PHASE 3: FIXTURE CONNECTION SEQUENCE  
M112 SCALE: N.T.S.



7 SHOWER/EYEWASH COMBINATION PIPE CONNECTION DETAIL  
M112 SCALE: N.T.S.

LAB TEMPERED WATER PIPE ROUTING SCHEDULE			
LOCATION OF PIPE DROPS IN LABS		APPLICABLE LABS	NOTES
PIPE TO BE ROUTED IN EXISTING CHASE. REMOVE AND REINSTATE EXISTING CHASE COVER TO ACCOMMODATE NEW PIPE INSTALLATION.		118, 119, 120, 121, 218, 219, 220, 221, 1205, 2013, 2018	1,2
PIPE TO BE ROUTED IN EXISTING RECESSED CHASE IN WALL. REMOVE AND REINSTATE EXISTING DRYWALL CHASE COVER TO ACCOMMODATE NEW PIPE INSTALLATION. REINSTATE EXISTING DRYWALL COVER TO MATCH EXISTING AFTER MECHANICAL WORK IS COMPLETE.		1009, 1018, 1035, 1079, 2008, 2044	1,3
PIPE TO BE DROPPED IN THE SPACE THROUGH THE CEILING AND ENCLOSED IN BULKHEAD. REFER TO ARCHITECTURAL DETAILS FOR MORE DETAILS		1017, 1014, 1032, 1041, 1213, 2032	1
PIPE TO BE DROPPED IN THE SPACE THROUGH THE CEILING AND BEHIND THE UPPER MILLWORK. ENCLOSED IN BULKHEAD. REFER TO ARCHITECTURAL DETAILS FOR MORE DETAILS.		2038	1
NOTES:			
1. REFER TO MECHANICAL DRAWINGS FOR LOCATION OF PIPE DROPS IN LABS.			
2. CONTRACTOR SHALL REMOVE COLUMN PANEL TO PERMIT INSTALLATION OF NEW PIPING. ONCE PIPING IS COMMISSIONED, CONTRACTOR SHALL REINSTATE COLUMN PANEL AND PATCH TO MATCH EXISTING.			
3. CONTRACTOR SHALL REMOVE EXISTING DRYWALL COVER TO PERMIT INSTALLATION OF NEW PIPING. ONCE PIPING IS COMMISSIONED, CONTRACTOR SHALL REINSTATE EXISTING DRYWALL COVER TO MATCH EXISTING.			



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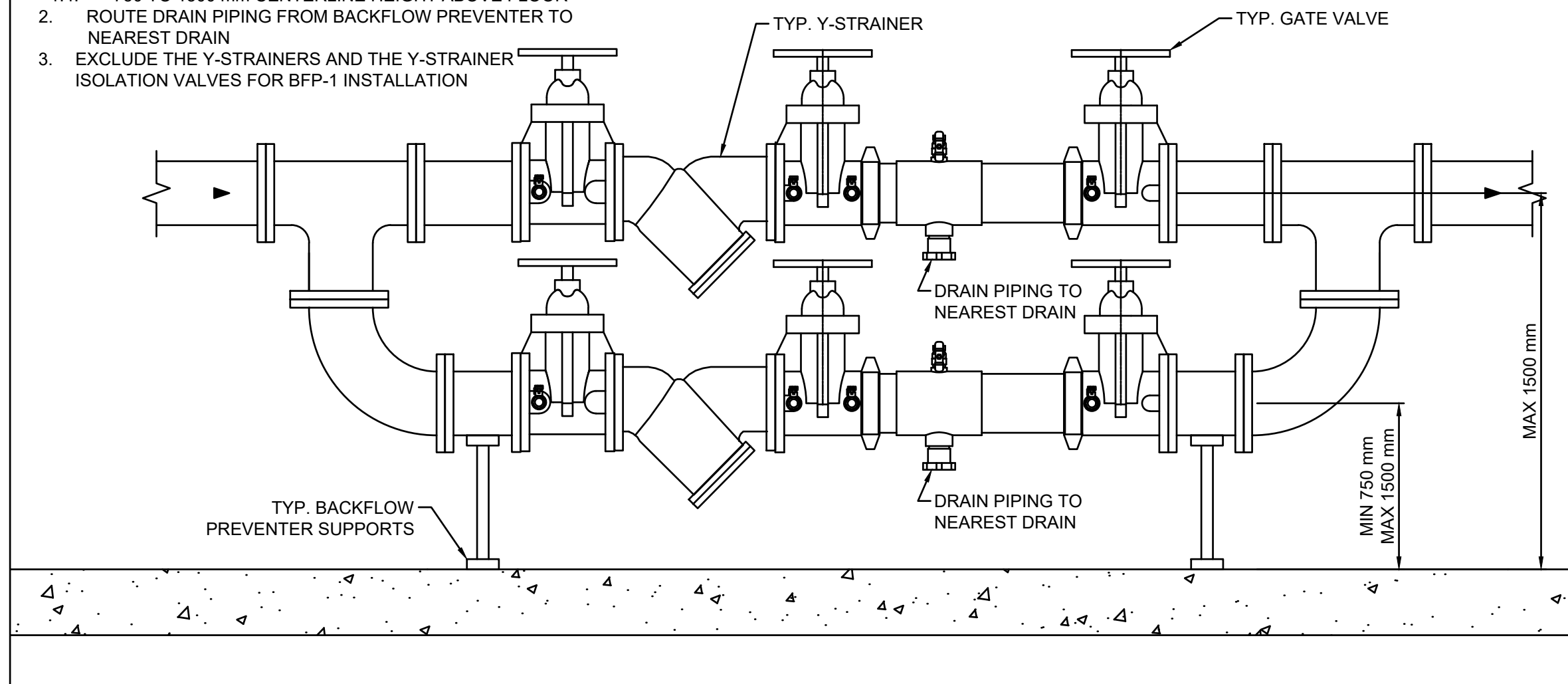
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drawing no.  
dessiné no. M112



## NOTES:

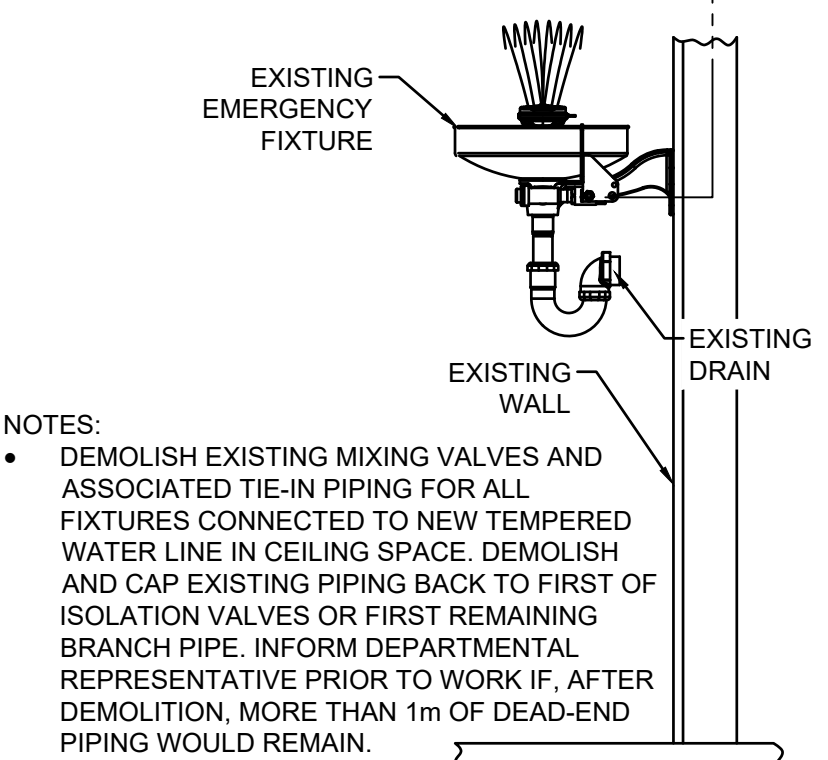
1. MAINTAIN THE FOLLOWING CLEARANCES AROUND NEW BACKFLOW PREVENTER INSTALLATIONS:
  - 1.1. 750 mm IN FRONT OF EACH BACKFLOW PREVENTER
  - 1.2. 300 mm ABOVE BACKFLOW PREVENTER
  - 1.3. 20 mm BEHIND BACKFLOW PREVENTER
  - 1.4. 750 TO 1500 mm CENTERLINE HEIGHT ABOVE FLOOR
2. ROUTE DRAIN PIPING FROM BACKFLOW PREVENTER TO NEAREST DRAIN
3. EXCLUDE THE Y-STRAINERS AND THE Y-STRAINER ISOLATION VALVES FOR BFP-1 INSTALLATION



1 BACKFLOW PREVENTER INSTALLATION DETAIL

M113 SCALE: N.T.S.

## DEMOLITION



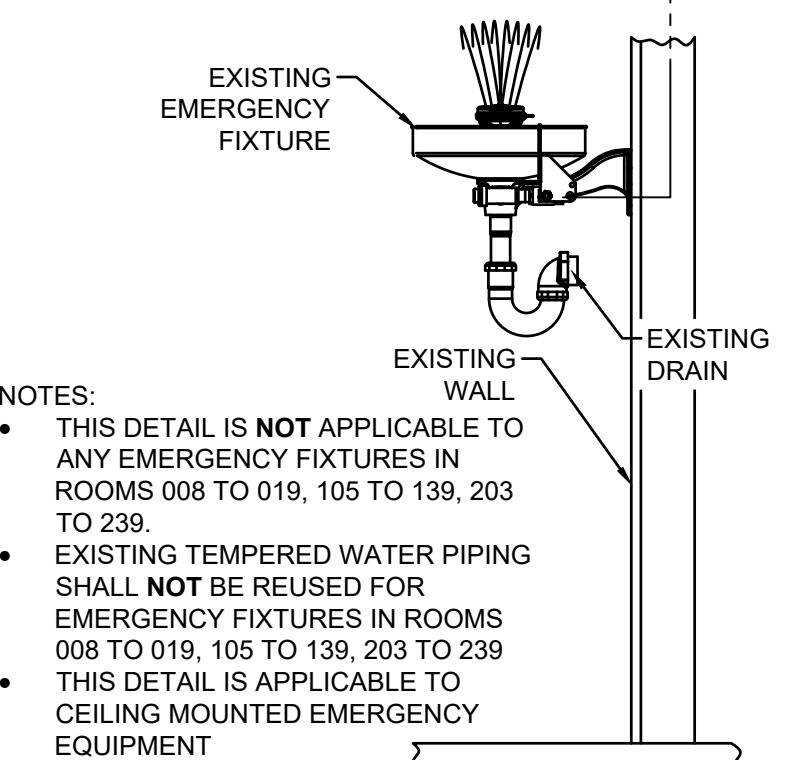
## NOTES:

- DEMOLISH EXISTING MIXING VALVES AND ASSOCIATED TIE-IN PIPING FOR ALL FIXTURES CONNECTED TO NEW TEMPERED WATER LINE IN CEILING SPACE. DEMOLISH AND CAP EXISTING PIPING BACK TO FIRST OF ISOLATION VALVES OR FIRST REMAINING BRANCH PIPE. INFORM DEPARTMENTAL REPRESENTATIVE PRIOR TO WORK IF, AFTER DEMOLITION, MORE THAN 1m OF DEAD-END PIPING WOULD REMAIN.

2 TYPICAL EMERGENCY EQUIPMENT CONNECTION

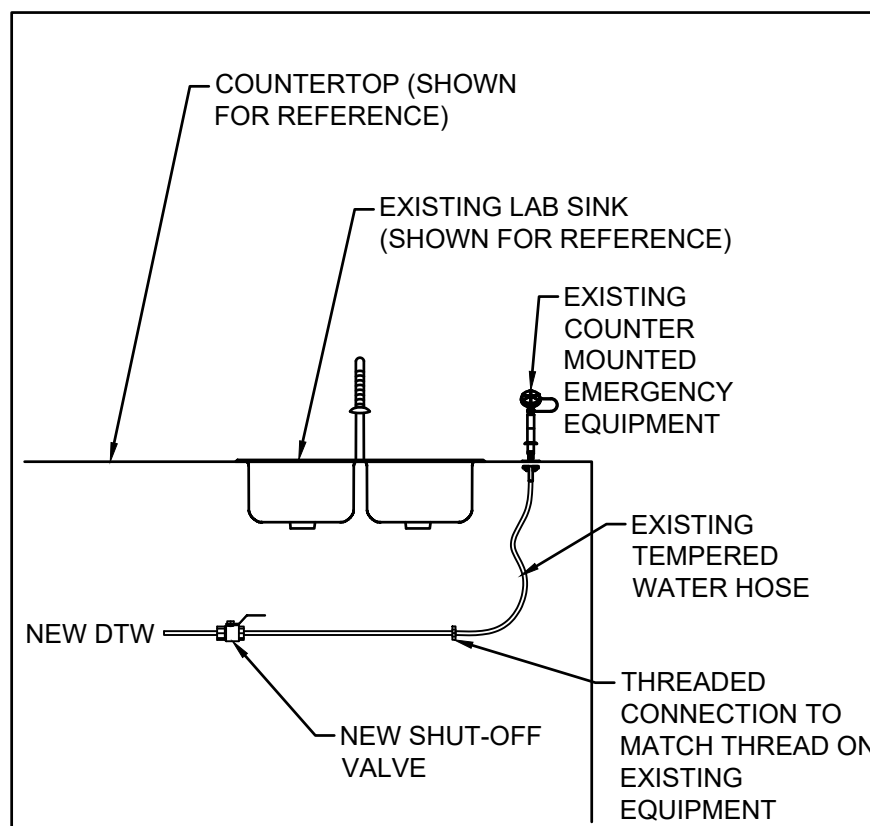
M113 SCALE: N.T.S.

## NEW



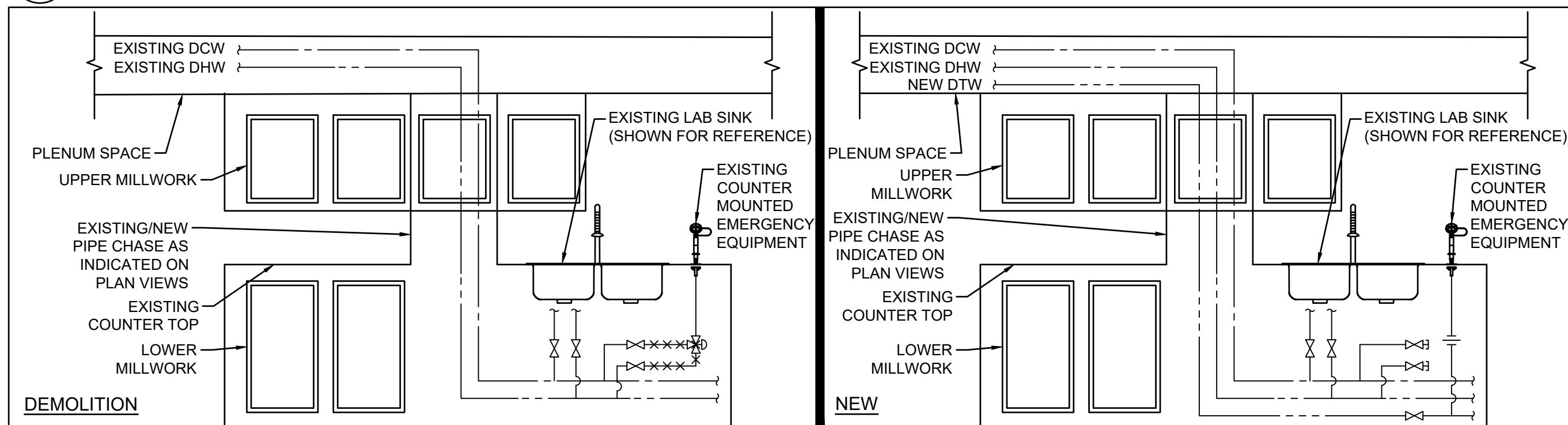
## NOTES:

- THIS DETAIL IS NOT APPLICABLE TO ANY EMERGENCY FIXTURES IN ROOMS 008 TO 019, 105 TO 139, 203 TO 239.
- EXISTING TEMPERED WATER PIPING SHALL NOT BE REUSED FOR EMERGENCY FIXTURES IN ROOMS 008 TO 019, 105 TO 139, 203 TO 239.
- THIS DETAIL IS APPLICABLE TO CEILING MOUNTED EMERGENCY EQUIPMENT



3 BW/EW PIPE CONNECTION DETAIL

M113 SCALE: N.T.S.

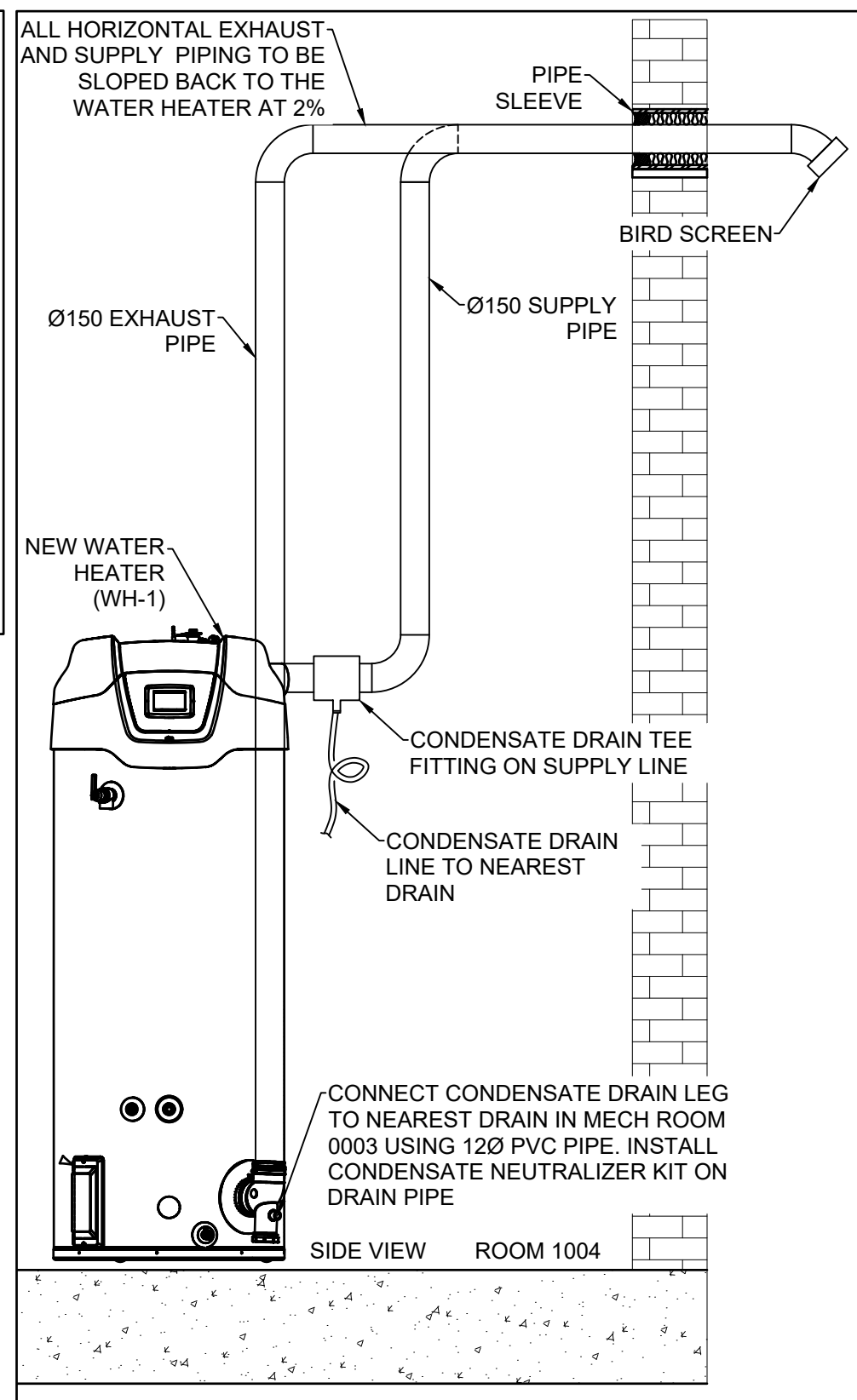


4 TYPICAL COUNTER MOUNTED EMERGENCY EQUIPMENT CONNECTION

M113 SCALE: N.T.S.

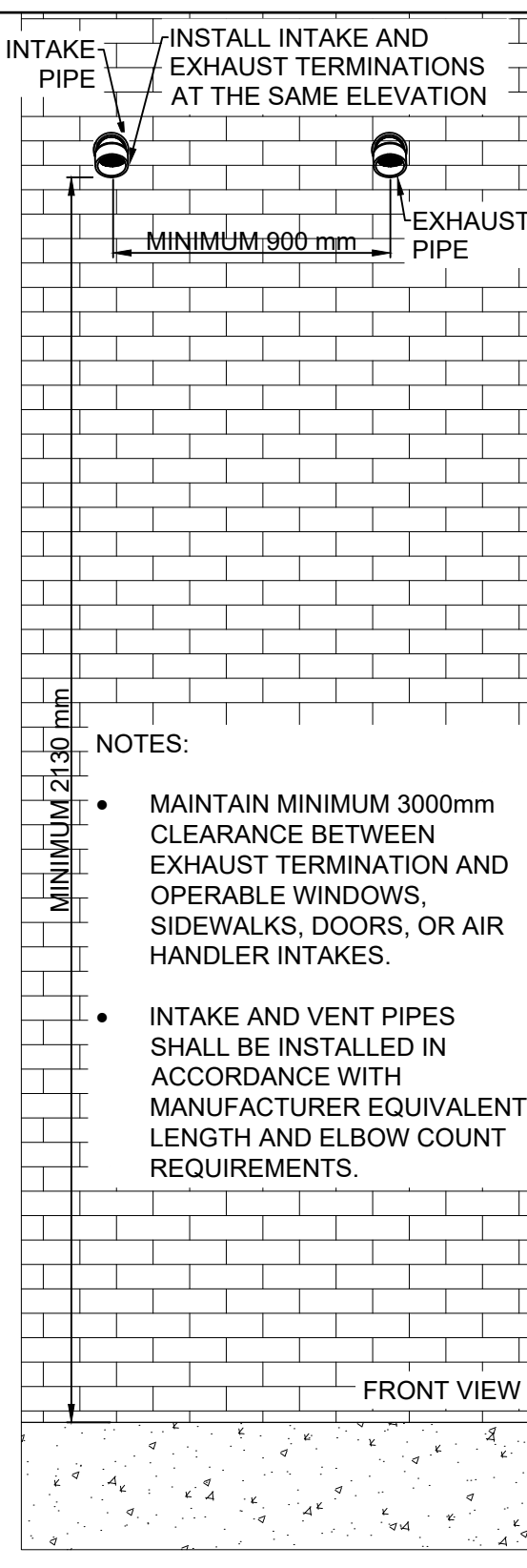
## NOTES:

- DEMOLISH EXISTING MIXING VALVES AND ASSOCIATED TIE-IN PIPING FOR ALL FIXTURES CONNECTED TO NEW TEMPERED WATER LINE. DEMOLISH AND CAP EXISTING PIPING BACK TO FIRST OF ISOLATION VALVES OR FIRST REMAINING BRANCH PIPE. INFORM DEPARTMENTAL REPRESENTATIVE PRIOR TO WORK IF, AFTER DEMOLITION, MORE THAN 1m OF DEAD-END PIPING WOULD REMAIN.
- THIS DETAIL IS ONLY APPLICABLE TO EMERGENCY EQUIPMENT LOCATED IN LABS WITH EXISTING OR NEW SERVICE DROPS. REMOVE AND REINSTATE PIPE CHASE COVER TO ACCOMMODATE NEW PIPE INSTALLATION.
- WHERE UPPER MILLWORK INTERFERES WITH EXISTING PIPE CHASE ACCESS OR NEW PIPE CHASE INSTALLATION, DEPARTMENTAL REPRESENTATIVE WILL REMOVE CABINETS AND REINSTATE WHEN WORK IS COMPLETE. CONTRACTOR SHALL MODIFY UPPER MILLWORK TO ACCOMMODATE NEW PIPE CHASES PRIOR TO REINSTATEMENT.
- WHERE NEW PIPE CHASES ARE PROVIDED, CONTRACTOR WILL DRILL THROUGH EXISTING COUNTERTOPS INTO LOWER MILLWORK FOR NEW PIPE ROUTING. CONTRACTOR TO REMOVE BACK PANEL OF LOWER MILLWORK TO INSTALL PIPING FROM CHASE TO FIXTURE. REINSTATE MILLWORK BACKING AFTER WORK IS COMPLETE AND COMMISSIONED.



5 WH-1 VENTILATION DETAIL

M113 SCALE: N.T.S.



## NOTES:

- MAINTAIN MINIMUM 3000mm CLEARANCE BETWEEN EXHAUST TERMINATION AND OPERABLE WINDOWS, SIDEWALKS, DOORS, OR AIR HANDLER INTAKES.
- INTAKE AND VENT PIPES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER EQUIVALENT LENGTH AND ELBOW COUNT REQUIREMENTS.

## BACKFLOW PREVENTER SCHEDULE

UNIT IDENTIFICATION	LOCATION	TYPE	SIZE (mm)	FLOW (L/S)	BODY MATERIAL	VALVE TYPE	NOTES
BFP-1	MECH ROOM 0003	REDUCED PRESSURE (RP)	100	-	STAINLESS STEEL	GATE VALVE	
BFP-2	MECH ROOM 2201	REDUCED PRESSURE (RP)	65	-	STAINLESS STEEL	GATE VALVE	

## NOTES:

## PRESSURE REDUCING VALVE SCHEDULE

UNIT IDENTIFICATION	SYSTEM SERVED	CAPACITY (m3/h)	INLET PRESSURE (kPa)	OUTLET PRESSURE (kPa)	NOTES
PRV 1	WH-1	9.0	7	1.7	1

## NOTES:

1. REFER TO SPECIFICATIONS FOR MORE DETAILS.

## EXPANSION TANK SCHEDULE

UNIT IDENTIFICATION	MARK	NUMBER	SYSTEM SERVED	TYPE	VOLUME (litres)	ACCEPTANCE FACTOR	DIAMETER (mm)	HEIGHT (mm)	WEIGHT (kg)	NOTES
ET	1	WH-1	DIAPHRAGM	16.4	1.0	381	483	10		
ET	2	WH-2	DIAPHRAGM	16.4	1.0	381	483	10		

## NOTES:

## MIXING VALVE SCHEDULE

MARK	NUMBER	SYSTEM SERVED	HOT WATER INLET TEMP (°C)	MIXED WATER OUTLET TEMP (°C)	NOTES
MX	1	TEMPERED WATER MIXING VALVE	60	30	1
MX	2	HOT WATER MIXING VALVE	60	49	1
MX	3	BLDG 1ST EMERGED WATER MIXING VALVE	60	30	1
MX	4	BLDG 15 HOT WATER MIXING VALVE	60	49	1

## NOTES:

1. REFER TO SPECIFICATIONS FOR DETAILS.

## PUMP SCHEDULE

UNIT IDENTIFICATION	MARK	NUMBER	LOCATION	SYSTEM SERVED	TYPE	COUPLING TYPE	FLOW (l/s)	HEAD (kPa)	HP	SPEED (RPM)	VOLTS	PHASE	NOTES
P	1	MECH ROOM 0003	DCW BOOSTER	VERTICAL INLINE	CLOSE COUPLED	10.03	303	7.5	3600	575	3	1.2	
P	2	MECH ROOM 0003	DCW BOOSTER	VERTICAL INLINE	CLOSE COUPLED	10.03	303	7.5	3600	575	3	1.2	
P	3	MECH ROOM 0003	DCW BOOSTER	VERTICAL INLINE	CLOSE COUPLED	10.03	303	7.5	3600	575	3	1.2	
P	4	MECH ROOM 0003	DHW RECIRCULATION	INLINE	CLOSE COUPLED	0.39	149.4	0.5	3700	208	1	1.2	
P	5	MECH ROOM 2201	DHW RECIRCULATION	INLINE	CLOSE COUPLED	0.03	2.9	0.05	1800	115	1	1.2	

## NOTES:

1. POWER PROVIDED BY DIVISION 26.
2. SEISMICALLY RESTRAIN PER S.R.S. ENGINEER'S REQUIREMENTS UNDER CONTRACTOR'S MANDATE

## DOMESTIC WATER HEATER SCHEDULE

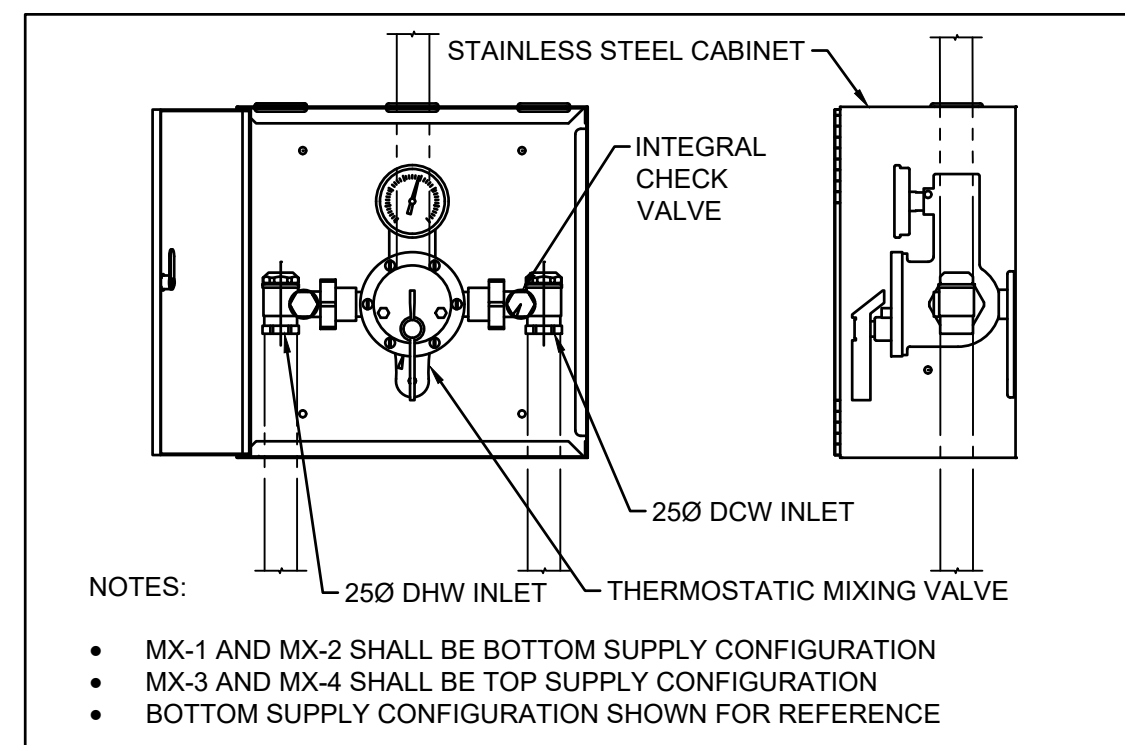
UNIT IDENTIFICATION	MARK	NUMBER	AREA SERVED	CONTROL	TYPE OF POWER INPUT	CAPACITY (kW)	STORAGE (litres)	CONTINUOUS RECOVER RATE (6 °C TO 60 °C) (l/h)	EWI (°C)	LWT (°C)	VOLTS	PHASE	DIAMETER (mm)	HEIGHT (mm)	WEIGHT (kg)	NOTES
WH	1	ALL CAMPUS	LOCAL	NATURAL GAS	79	379	1220	4.4	60	120	1	841.2	1924.1	387	-	
WH	2	BLDG 15	LOCAL	ELECTRIC	12	450	159	4.4	60	575	3	750	1581	177	-	

## NOTES:

## EMERGENCY FIXTURE TEMPERED WATER CONNECTION

UNIT IDENTIFICATION	CONNECTION SIZE	ROOMS	NOTES
EW	SIZE (Ømm) FLOW (L/s)		
EW	20 0.23	1079, 1203, 1209, 1215, 2038, 2042	-
ES	40 1.26	1009, 1014, 1017, 1018, 1031, 1035, 1041, 1094, 1211, 2018, 2032, 2038, 2040, 2042	-
ESC	40 1.45	106, 111, 1102	-
BW	20 0.23	118, 119, 120, 121, 1009, 1014, 1017, 1018, 1032, 1035, 1041, 1204, 218, 219, 220, 221, 206, 211, 2008, 2013, 2018	-

## Notes



6 MIXING VALVE CABINET

M113 SCALE: N.T.S.



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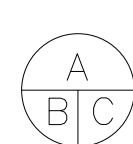
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**LONDON CROSS CONNECTION  
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SCHEDULES AND DETAILS**

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dessiné par **ZEYAD ABDELAZEZ**

designed by  
conc par **CARY MCGEE**

approved by  
approuvé par **DAVID YIN**

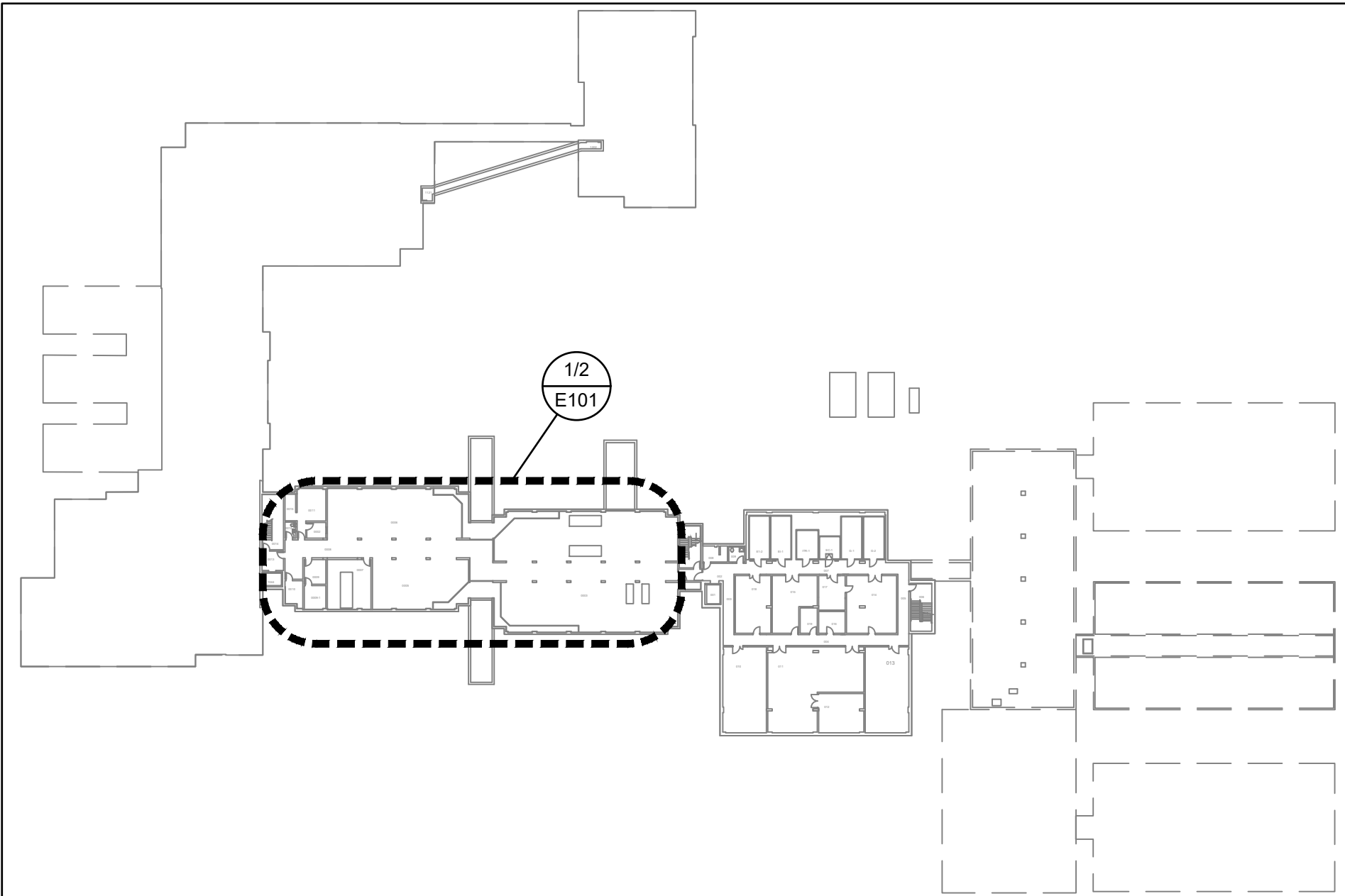
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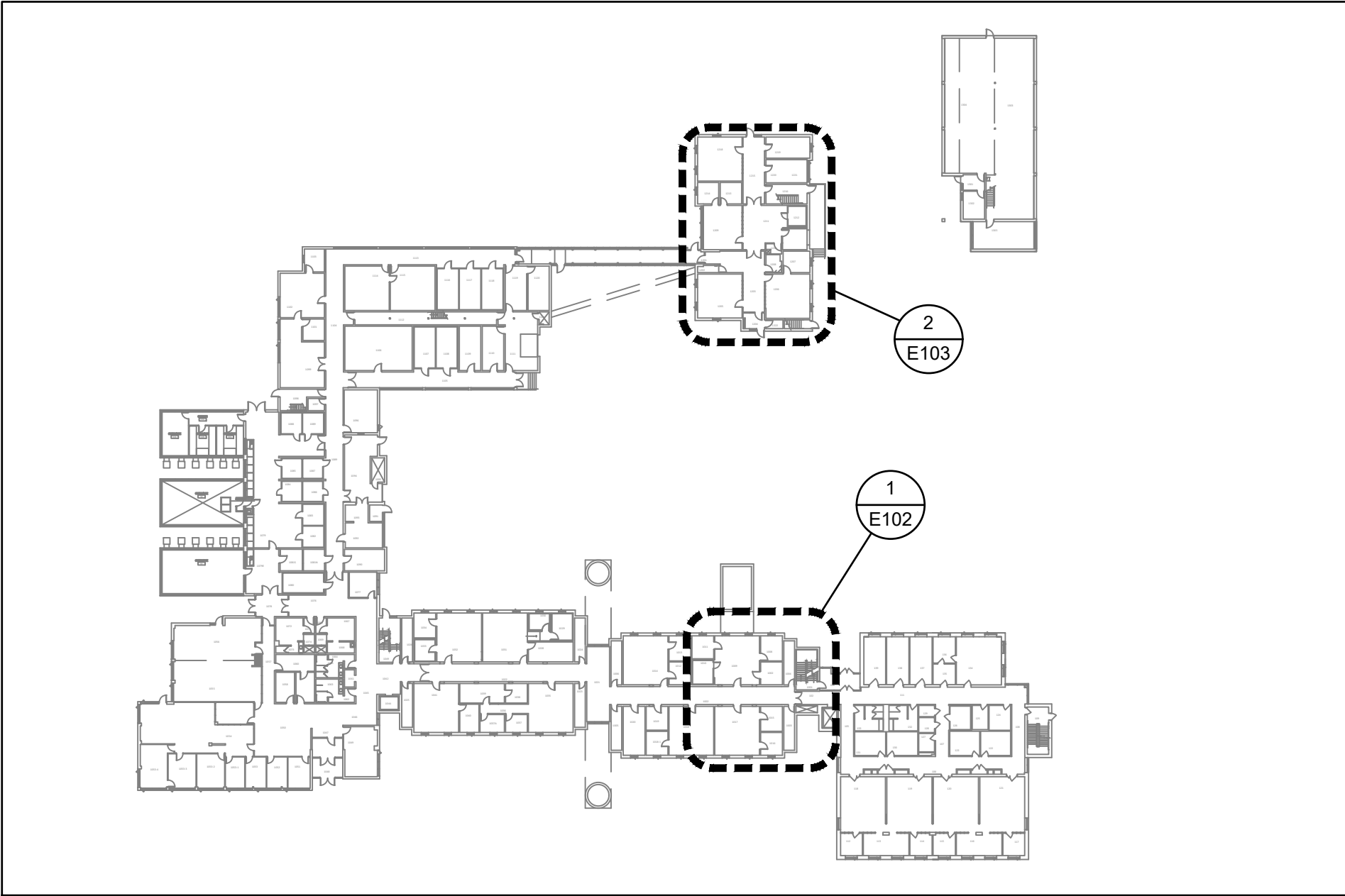
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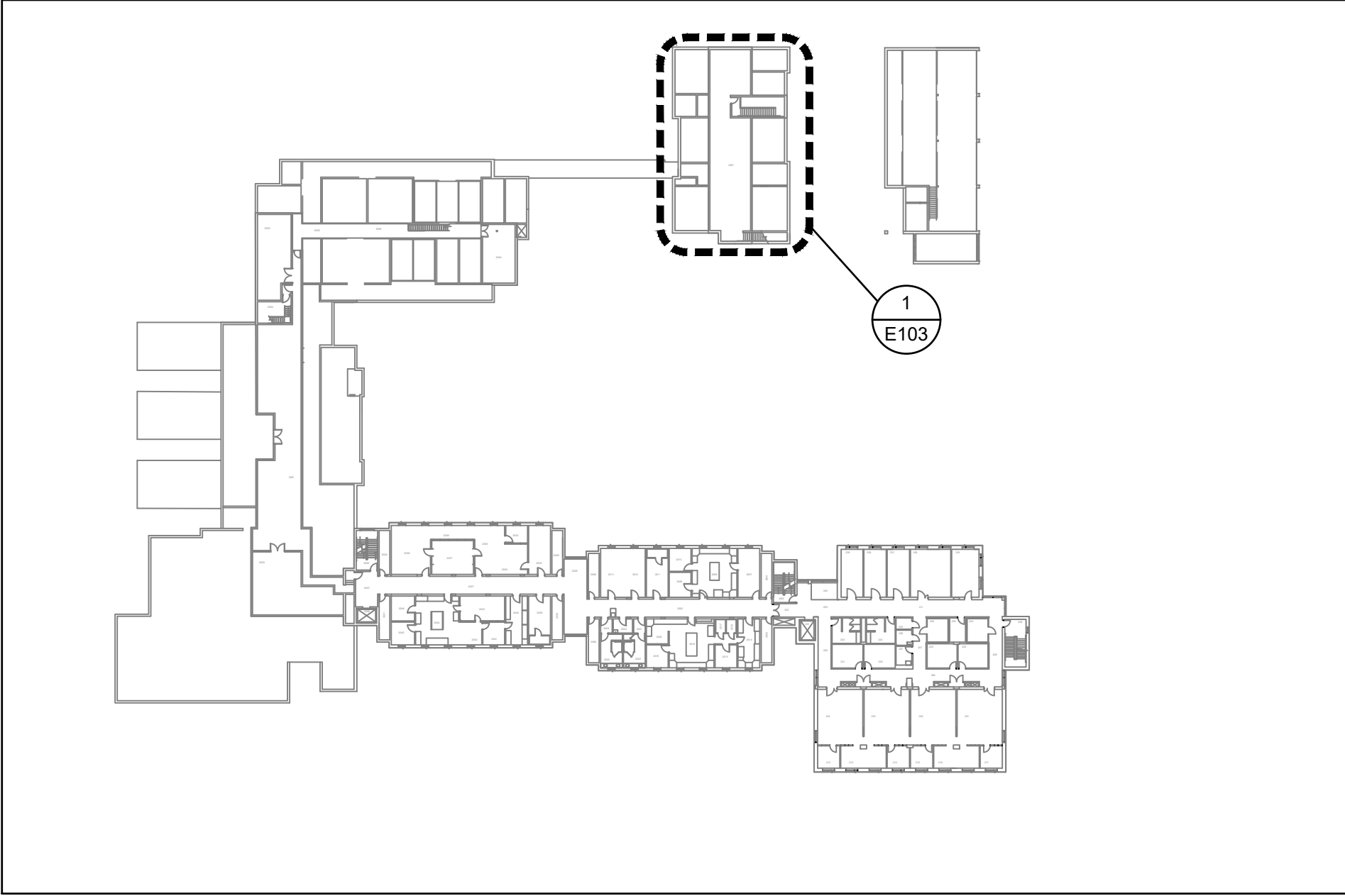




1 BASEMENT KEY PLAN  
E000 SCALE: 1:750



2 FIRST FLOOR KEY PLAN  
E000 SCALE: 1:750



3 SECOND FLOOR KEY PLAN  
E000 SCALE: 1:750

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	THREE PHASE MOTOR
	SINGLE PHASE MOTOR
	EQUIPMENT CONNECTION
	DISCONNECT SWITCH (30A)
	MANUAL MOTOR STARTER
	MOTOR RATED SWITCH
	VARIABLE FREQUENCY DRIVE
	CONTROL PANEL
	FLEXIBLE CONDUIT CONNECTION
	CONDUIT UP
	CONDUIT DOWN
	DISTRIBUTION PANEL (120/208V)
	DISTRIBUTION PANEL (347/600V)
	JUNCTION BOX

LIST OF ELECTRICAL DRAWINGS	
DWG #	DRAWING DESCRIPTION
E000	ELECTRICAL - LEGEND, GENERAL NOTES, DRAWING LIST AND KEY PLAN
E101	ELECTRICAL - BASEMENT PART FLOOR PLAN - DEMO AND NEW
E102	ELECTRICAL - BLDG 15 SECOND FLOOR PLAN - NEW

GENERAL NOTES	
1	EXISTING EQUIPMENT AND COMPONENTS SHOWN ON PLANS WERE RETRIEVED FROM AS-BUILT'S DRAWINGS AND ARE PROVIDED FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING INFORMATION AND TO CONFIRM CIRCUITS BY TRACING THEM TO THE SOURCE.
2	ELECTRICAL WIRING, CABLING AND EQUIPMENT ARE SHOWN ON PLANS DIAGRAMMATICALLY. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM FOR THEIR EXACT LOCATION AND ROUTING PRIOR TO INSTALLATION.
3	UNLESS OTHERWISE NOTED OBSOLETE CONDUITS AND CABLES SHALL BE DISCONNECTED FROM THEIR SOURCE OF SUPPLY AND REMOVED. ALL EXISTING WIRING NOT REMOVED SHALL BE DISCONNECTED, MADE SAFE, IDENTIFIED AND BLANKED-OFF.
4	PATCH AND SEAL ALL OPENINGS IN FLOORS, WALLS AND PARTITIONS. IF FLOORS, WALLS OR PARTITIONS ARE FIRE RATED, PATCH AND SEAL PENETRATIONS WITH FIRE RESISTANT INSULATION AND APPROVED FIRE STOP SYSTEMS.
5	LOCATE JUNCTION AND PULL BOXES AS REQUIRED TO ALLOW ACCESS AFTER EQUIPMENT AND APPURTANCES ARE INSTALLED. COORDINATE EXACT LOCATIONS WITH THE OTHER TRADES. COORDINATE LOCATIONS AND ELEVATIONS OF ELECTRICAL DEVICES WITH DRAWINGS AND OTHER TRADES PRIOR TO INSTALLATION.
6	ALL EXISTING EQUIPMENT TO BE REUSED AND/OR RELOCATED IS THOROUGHLY INSPECTED AND REFURBISHED TO ENSURE CORRECT OPERATION WHEN PUT BACK INTO SERVICE AND TO MEET THE REQUIREMENTS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
7	UNLESS OTHERWISE NOTED WHENEVER EXISTING SERVICES OR EQUIPMENT ARE TO BE REMOVED, ALL ELECTRICAL CONNECTIONS FOR SUCH SERVICES SHALL BE REMOVED, SECURED AND SAFELY TERMINATED. REMOVE ALL REDUNDANT WIRING AND CONDUIT BACK TO SOURCE PANEL OR NEAREST BASE BUILDING JUNCTION BOX.
8	AFTER PASSAGE OF CABLES/CONDUITS THROUGH WALL, RESTORE OPENING AND SEAL WITH A WATERPROOF SEALANT FIRE RATED TWO (2) HOURS.
9	WHERE DIRECTED TO USE OR RETAIN EXISTING CIRCUITS, AND THE CIRCUIT NUMBERS DIFFER FROM THE DRAWING, UPDATE DIRECTORIES AND RECORD DRAWINGS
10	WHERE PROJECT PHASING IS INDICATED IN ANY PART OF THE WORKING DOCUMENT PACKAGE, ELECTRICAL DIVISIONS ARE TO PLAN WORK SO AS TO FACILITATE SUCH PHASING.
11	DO NOT SCALE THE DRAWINGS. BECAUSE OF THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS OR OTHER SIMILAR ITEMS WHICH MAY BE REQUIRED TO MAKE A COMPLETE OPERATING SYSTEM. CAREFULLY INVESTIGATE CONDITIONS AFFECTING WORK AND INSTALL WORK IN SUCH MANNER THAT INTERFERENCES BETWEEN PIPES, CONDUITS, DUCTS, EQUIPMENT, ARCHITECTURAL AND STRUCTURAL FEATURES SHALL BE AVOIDED.
12	INSTALLATION DETAILS SHOWN ARE TO BE VERIFIED AND COORDINATED ON SITE BY THE CONTRACTOR. CONTRACTOR TO PROVIDE ALL REQUIRED COMPONENTS AND MATERIAL FOR INSTALLATION.
13	CONTROL WIRING AND INSTRUMENTATION TO BE DISCONNECTED AND RECONNECTED BY DIVISION 23 (MECHANICAL).
14	NO CONDUITS SHALL RUN ON THE FLOOR.
15	UNLESS OTHERWISE NOTED DEFAULT WIRING IS 12 AWG IN 21MM CONDUIT WITH INSULATED BONDING CONDUCTOR (QUANTITY AS REQUIRED).
16	TERMINATE CONNECTION TO MOTORS WITH A WATERTIGHT FLEXIBLE CONDUIT.



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project title  
titre du projet  
LONDON ONTARIO  
PUBLIC SERVICES PROCUREMENT CANADA  
1391 SANDFORD STREET  
LONDON, ON N5V 4T3  
LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
ELECTRICAL  
LEGEND, GENERAL NOTES,  
DRAWING LIST AND KEYPLAN

drawn by  
dessine par  
CHELSEA MCDONALD

designed by  
conc par  
CHELSEA MCDONALD

approved by  
approuve par  
MIKE XU

bid  
offre  
DEBI BANNON

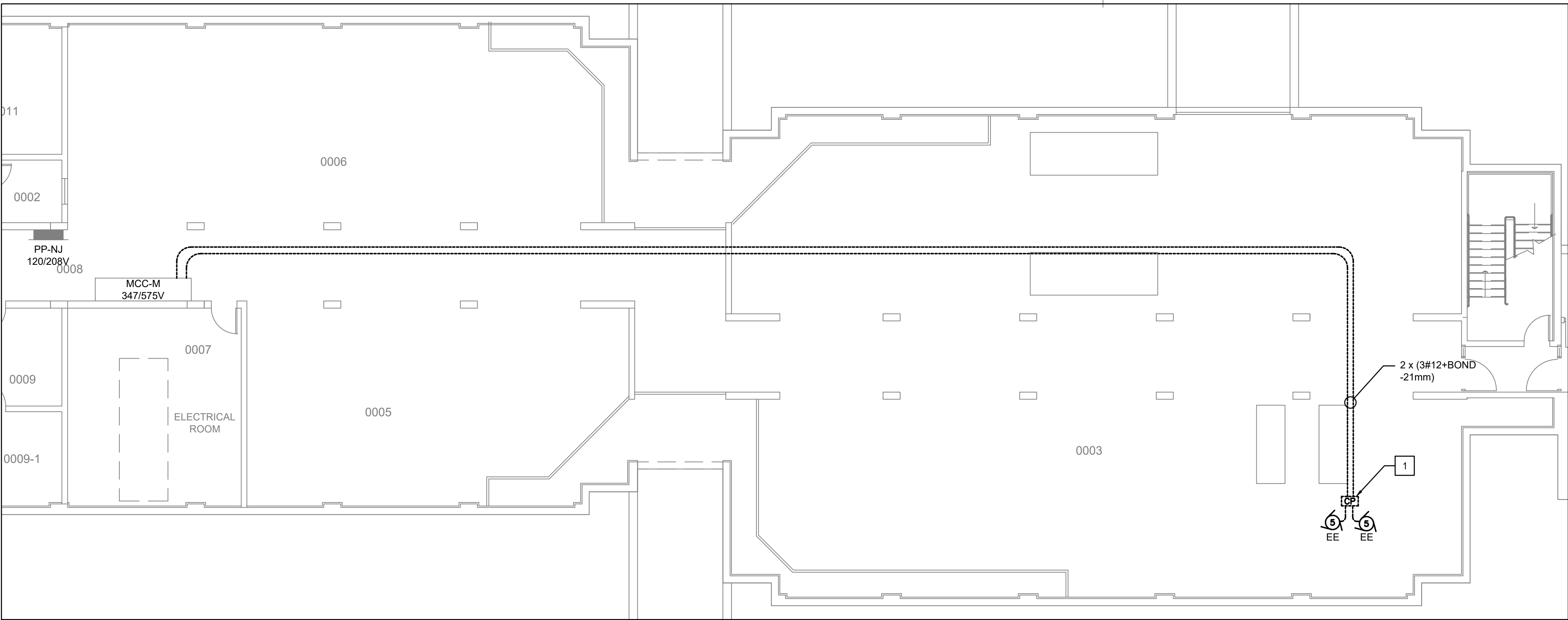
project manager  
administrateur  
de projets

project date  
date du projet  
2020–05–29

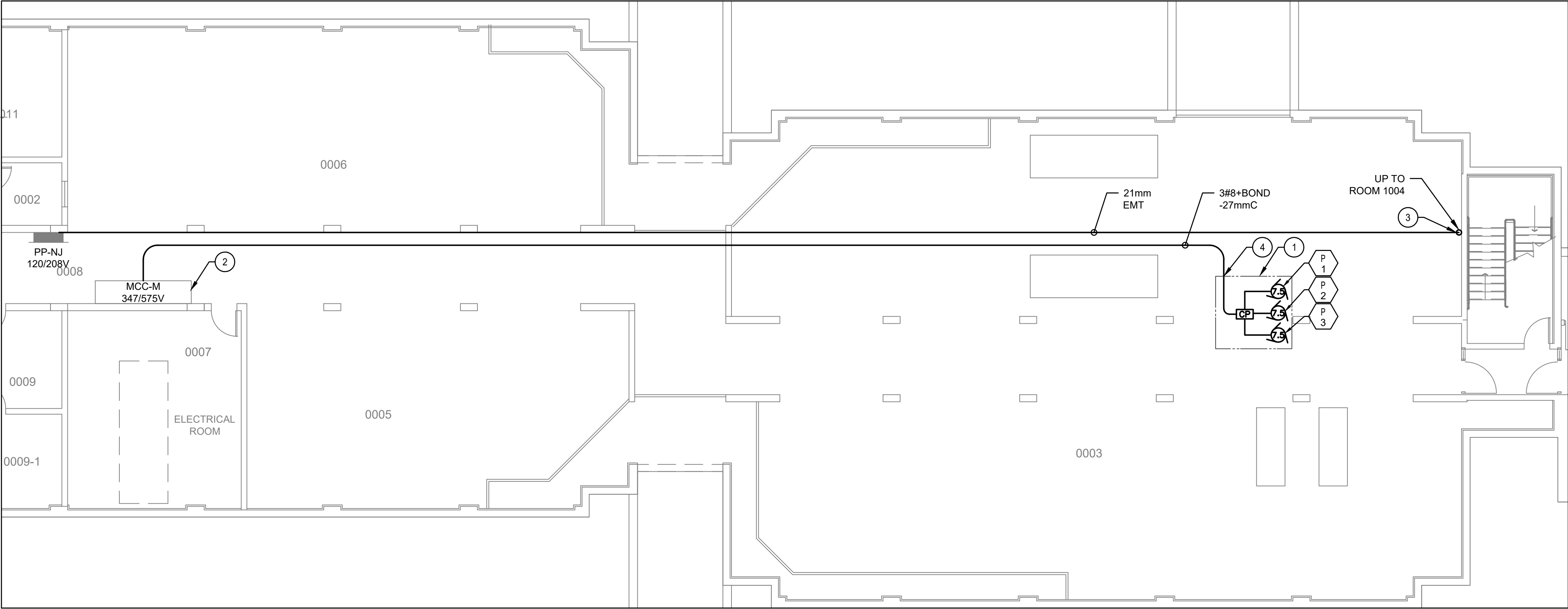
project no.  
no. du projet  
R.106155.001

drawing no.  
dessine no.  
E000





1 ELECTRICAL - DEMOLITION LAYOUT- BASEMENT (MECHANICAL ROOM 003)  
E101 SCALE: 1:100



2 ELECTRICAL - NEW LAYOUT- BASEMENT (MECHANICAL ROOM 003)  
E101 SCALE: 1:100

DEMOLITION DRAWING NOTES

- 1 EXISTING DUPLEX COLD WATER PUMPS AND CONTROL PANEL TO BE REMOVED BY MECHANICAL. ELECTRICAL TO DISCONNECT POWER AT CONTROL PANEL, REMOVE ALL DISCONNECT, CONDUIT AND CABLE ASSOCIATED WITH THE CIRCUIT BACK TO SOURCE. MARK MCC BUCKET AS SPARE.

NEW DRAWING NOTES

- 1 NEW BOOSTER PUMP SET AND CONTROL PANEL PRE-WIRED, PROVIDED AND INSTALLED BY DIVISION 23 AND CONNECTED BY DIVISION 26. FEED FROM A NEW FUSED DISCONNECT BUCKET IN MCC-M. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL.
- 2 INSTALL A NEW OR MODIFY EXISTING BUCKET TO A NEW 80A FUSED DISCONNECT (KLOCKNER-MOELLER SERIES 200 - NOW EATON) TO FEED THE NEW PUMP SET. PROVIDE TIME DELAY CURRENT LIMITING FUSES TYPE J SIZED AS PER PUMP CONTROLLER MANUFACTURERS RECOMMENDATIONS. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL.
- 3 SCAN BEFORE CORE DRILLING. INSTALL A PVC NIPPLE TO PASS CONDUIT THROUGH FLOOR AND TO EXTEND 50mm ON EACH SIDE AND SEAL AFTER WORK.
- 4 SUPPORT CONDUIT VERTICALLY WITH A GALVANIZED STEEL U-CHANNEL SECURED ON BOTH ENDS.

Public Works and  
Government Services Canada  
Travaux publics et  
Services gouvernementaux Canada



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LONDON, ON N5V 4T3  
LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin  
ELECTRICAL  
BASEMENT PART FLOOR PLAN  
DEMO AND NEW

drawn by  
dessiné par  
CHELSEA MCDONALD

designed by  
conçu par  
CHELSEA MCDONALD

approved by  
approuvé par  
MIKE XU

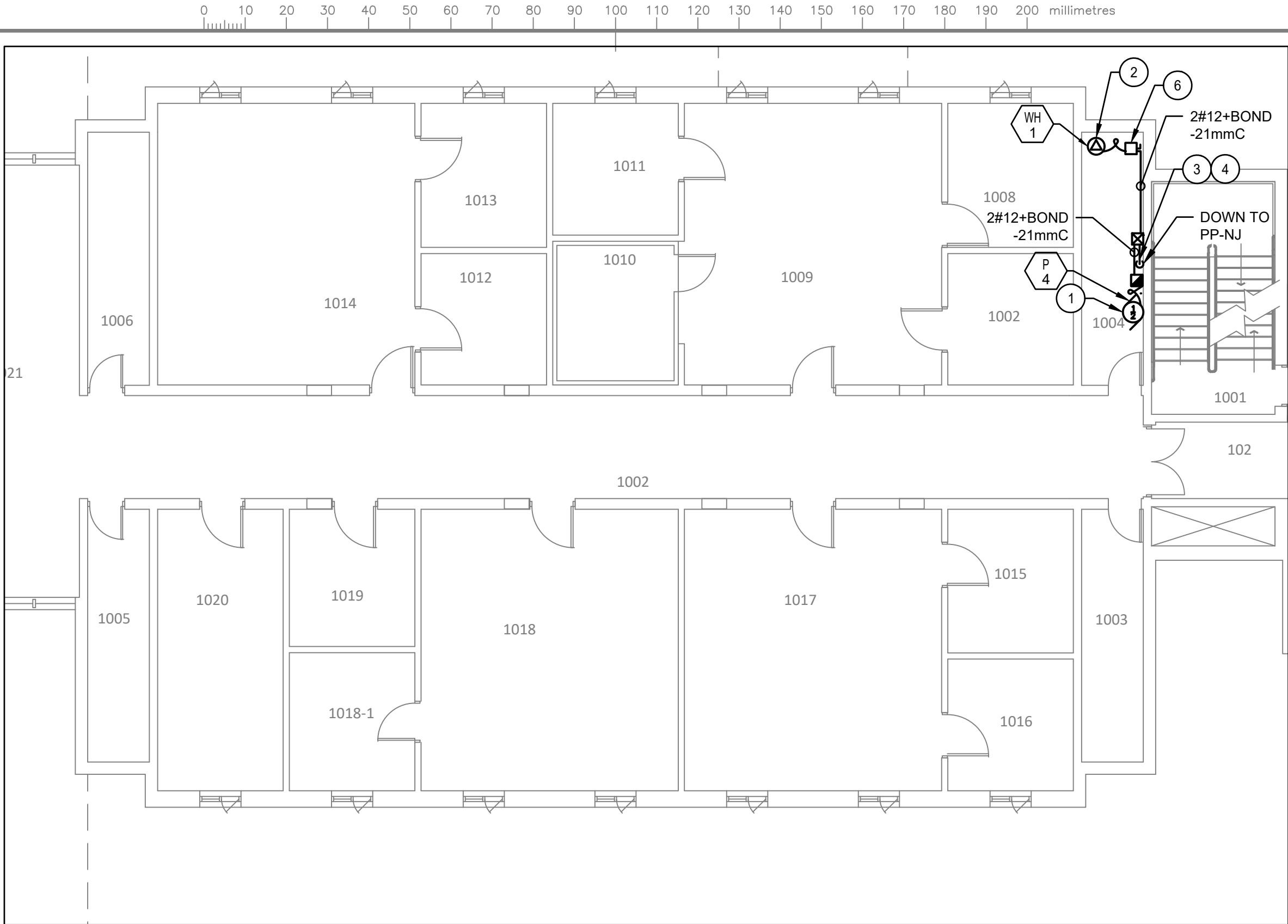
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offre  
DEBI BANNON

project manager  
administrateur  
de projets

project date  
date du projet  
2020-05-29

project no.  
no. du projet  
R.106155.001

drawing no.  
dessiné no.  
E101



1 ELECTRICAL - NEW LAYOUT- GROUND FLOOR (ROOM 1004)  
E102 SCALE: 1:100

- NEW DRAWING NOTES
- 1

NEW HOT WATER CIRCULATION PUMP PROVIDED BY DIVISION 23 AND CONNECTED BY DIVISION 26. PROVIDE AND INSTALL A NEW 15A/2P BREAKER IN PANEL PP-NJ (FPE MODEL NBLP) TO FEED THE NEW PUMP. PROVIDE AND MOUNT THE MANUAL STARTER ON THE WALL NEAR THE PUMP. CONFIRM THE CIRCUIT AND UPDATE PANEL SCHEDULE. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL.
- 2

NEW GAS HOT WATER TANK PROVIDED AND INSTALLED BY DIVISION 23 AND CONNECTED BY DIVISION 26. PROVIDE AND INSTALL A NEW 15A/1P BREAKER IN PANEL PP-NJ TO FEED NEW HOT WATER TANK CONTROLLER. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL. CONTRACTOR TO CONFIRM CIRCUIT AND UPDATE PANEL SCHEDULE.
- 3

CONDUIT DOWN THROUGH FLOOR TO EXISTING PP-NJ IN BASEMENT. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL.
- 4

SCAN BEFORE CORE DRILLING. INSTALL A PVC NIPPLE TO PASS CONDUIT THROUGH FLOOR AND SEAL AFTER WORK.
- 5

SUPPORT CONDUIT VERTICALLY WITH A GALVANIZED STEEL U-CHANNEL SECURED ON BOTH ENDS.
- 6

PROVIDE A NEW 15A DISCONNECT SWITCH MOUNTED ON WALL AT HOT WATER TANK WH-1 AND MAKE CONNECTION.



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1391 SANDFORD STREET  
LONDON, ON N5V 4T3

LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin

ELECTRICAL  
FIRST FLOOR PART PLAN  
NEW

drawn by  
dessiné par

CHELSEA MCDONALD

designed by  
conc par

CHELSEA MCDONALD

approved by  
approuvé par

MIKE XU

bid  
offre

DEBI BANNON

project manager  
administrateur  
de projets

project date  
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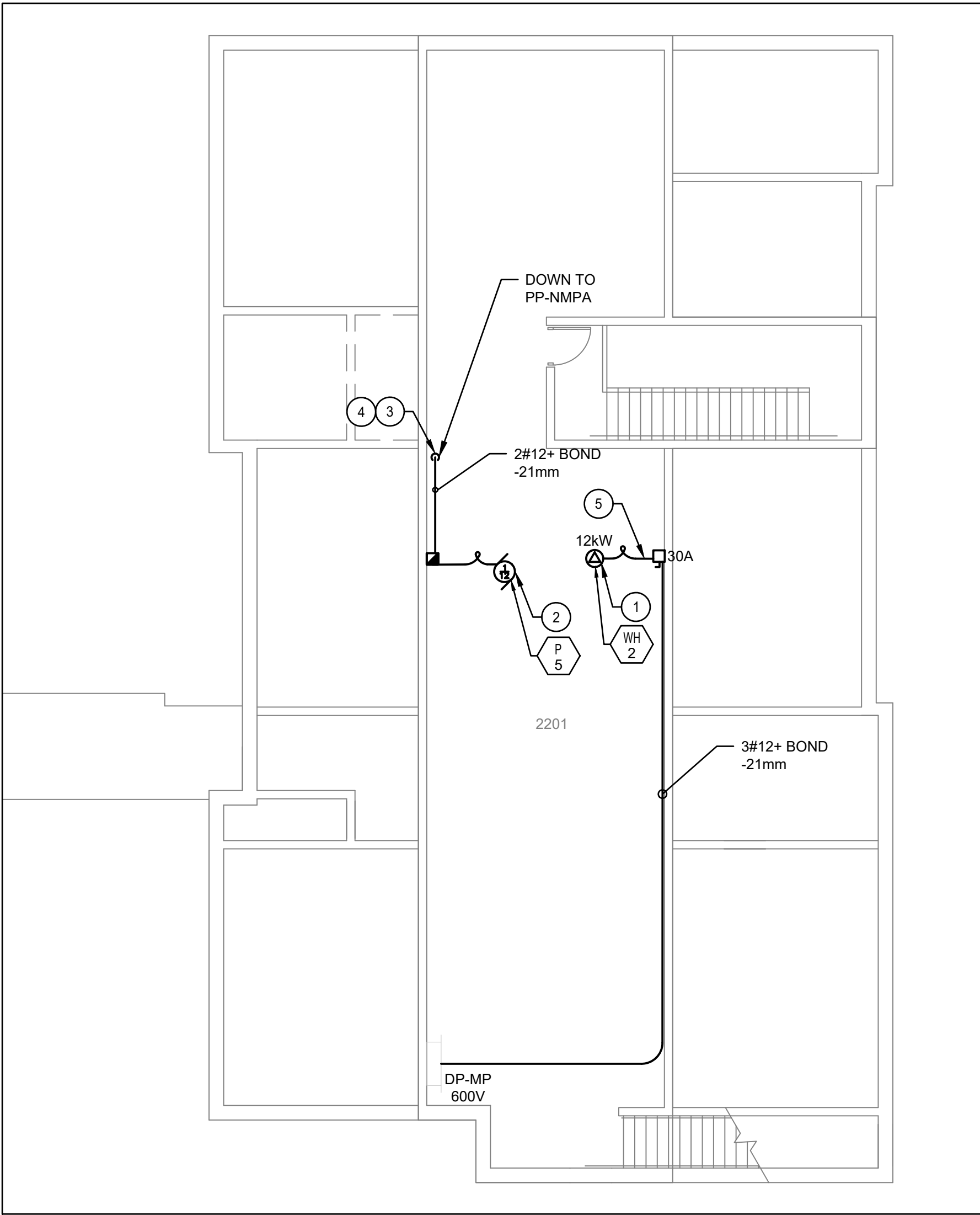
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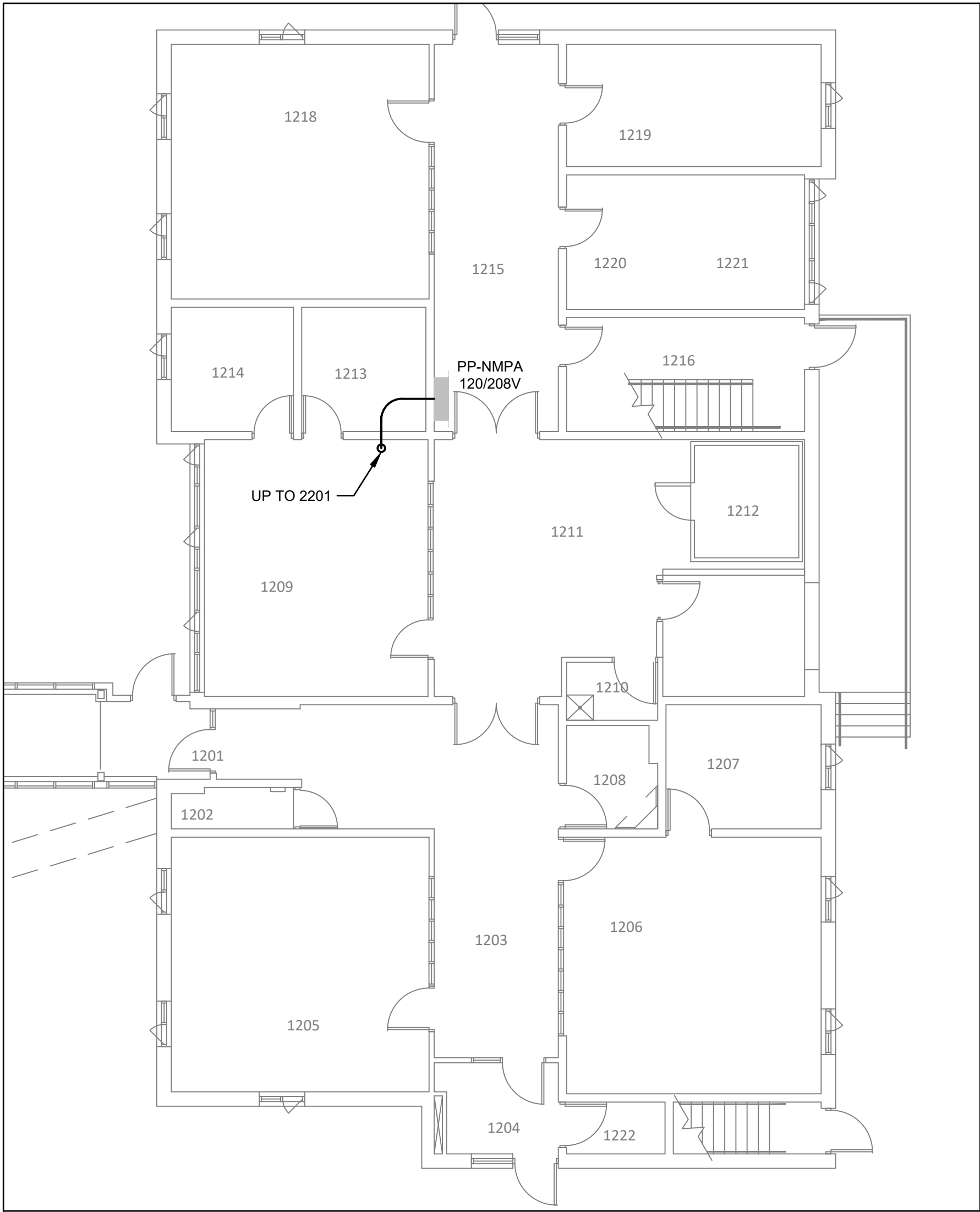
drawing no.  
dessiné no.

E102





1 ELECTRICAL - NEW LAYOUT - BLDG 15 SECOND FLOOR PLAN  
E103 / SCALE: 1:100



2 ELECTRICAL - NEW LAYOUT - BLDG 15 GROUND FLOOR PLAN  
E103 / SCALE: 1:100

- NEW DRAWING NOTES
- 1

NEW HOT WATER TANK PROVIDED AND INSTALLED BY DIVISION 23 AND CONNECTED BY DIVISION 26. FEED AS SHOWN FROM 600V PANEL DP-MP AND CONNECT TO EXISTING 15A/3P SPARE BREAKER. PROVIDE A 30A/3P/600V CSA TYPE 1 NON-FUSED DISCONNECT SWITCH MOUNTED ON THE WALL AT 1500mm FROM THE FLOOR AND CLOSE TO THE WATER TANK. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL. CONTRACTOR TO CONFIRM CIRCUIT AND UPDATE PANEL SCHEDULE.
- 2

NEW HOT WATER CIRCULATION PUMP PROVIDED AND INSTALLED BY DIVISION 23 AND CONNECTED BY DIVISION 26. FEED AS SHOWN FROM 120/208V PANEL PP-NMPA (FPE MODEL NBLP). PROVIDE AND INSTALL A NEW 15A/1P BREAKER TO FEED THE PUMP. PROVIDE A MANUAL STARTER NEAR THE PUMP AND MAKE CONNECTION. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL.
- 3

CONDUIT DOWN THROUGH FLOOR TO EXISTING PP-NMP ON GROUND FLOOR. COORDINATE EXACT LOCATIONS ON SITE WITH MECHANICAL.
- 4

SCAN BEFORE CORE DRILLING. INSTALL A PVC NIPPLE TO PASS CONDUIT THROUGH FLOOR AND SEAL AFTER WORK.
- 5

SUPPORT CONDUIT VERTICALLY WITH A GALVANIZED STEEL U-CHANNEL SECURED ON BOTH ENDS.



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1391 SANDFORD STREET  
LONDON, ON N5V 4T3

LONDON CROSS CONNECTION  
CONTROL MEASURES

drawing title  
titre du dessin

ELECTRICAL  
BLDG 15 FIRST & SECOND  
FLOOR PLAN – NEW

drawn by  
dessine par

CHELSEA MCDONALD

designed by  
conc par

CHELSEA MCDONALD

approved by  
approuve par

MIKE XU

bid  
offre

DEBI BANNON

project manager  
administrateur  
de projets

project date  
date du projet

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project no.  
no. du projet

R.106155.001

drawing no.  
dessine no.

E103

GENERAL NOTES

- 1 ANY WORK REQUIRED BY THESE DRAWINGS OR REASONABLY NECESSARY TO COMPLETE THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 2 PERFORM WORK IN ACCORDANCE WITH THE LATEST APPLICABLE BUILDING CODES, FIRE REGULATIONS AND LOCAL BUILDING REQUIREMENTS.
- 3 READ THESE DRAWINGS IN CONJUNCTION WITH OTHER DRAWINGS, SCHEDULES, SPECIFICATIONS AND DETAILS. REFER ALSO TO ENGINEERING DRAWINGS AND SPECIFICATIONS FOR COORDINATION WHERE APPLICABLE.
- 4 THE CONTRACTOR SHALL SATISFY THEMSELVES THAT ALL DIMENSIONS, DATUM AND DETAILED INFORMATION SHOWN ARE CORRECT.
- 5 THE CONTRACTOR IS TO REPORT ANY DISCREPANCIES TO THE CONSULTANT PRIOR TO COMMENCEMENT OF WORK.
- 6 REVIEW ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENING THROUGH FLOORS, WALLS AND ROOFS FOR DUCT AND PIPING RISERS, ELECTRICAL RISERS AND OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- 7 LAP AND SEAL ALL PENETRATIONS IN AIR BARRIER MEMBRANE.
- 8 INSTALL WIRING/CABLING WITHIN FLUTES OF METAL DECK. LOCATION MARKER TO BE PROVIDED ON TOP OF METAL ROOF DECK, INDICATING WIRING/CABLING LINER BELOW.
- 9 SEAL ALL PIPE PENETRATIONS AND OPENINGS THROUGH WALLS REQUIRED TO MAINTAIN NEGATIVE AIR PRESSURE.
- 10 PROVIDE SOLID WOOD BLOCKING IN PARTITIONS FOR MOUNTING ALL WALL MOUNTED EQUIPMENT, MILLWORK, FIXTURES, ACCESSORIES, ETC.
- 11 REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR CONCRETE HOUSEKEEPING PADS WHERE NOT INDICATED ON ARCHITECTURAL DRAWINGS. COORDINATE SITE AND LOCATION OF ALL PADS TO SUIT EQUIPMENT MOUNTED ON THEM.
- 12 SITE CONFIRM ALL DIMENSIONS.

REFLECTED CEILING GENERAL NOTES

- 1 THIS DRAWING TO BE READ IN CONJUNCTION WITH MECHANICAL AND ELECTRICAL ENGINEERING DRAWINGS AND SPECIFICATIONS. REPORT ANY DISCREPANCIES BETWEEN CONSULTANTS' DRAWINGS TO INFRASTRUCTURE FOR CLARIFICATION.
- 2 REFER TO ENGINEER OF RECORD'S DRAWINGS FOR ALL LIGHTING LAYOUTS AND REVISIONS TO LIFE SAFETY SYSTEMS.
- 3 ALL MECHANICAL AND ELECTRICAL WORK TO COMPLY WITH THE REQUIREMENTS OF DEPARTMENTAL REPRESENTATIVE AND ALL AUTHORITIES HAVING JURISDICTION.
- 4 THE CONTRACTOR TO CROSS REFERENCE BETWEEN ELECTRICAL DRAWINGS, MECHANICAL DRAWINGS AND SITE CONDITIONS AND REPORT ANY DISCREPANCIES IMMEDIATELY FOR RESOLUTION.

DEMOLITION GENERAL NOTES

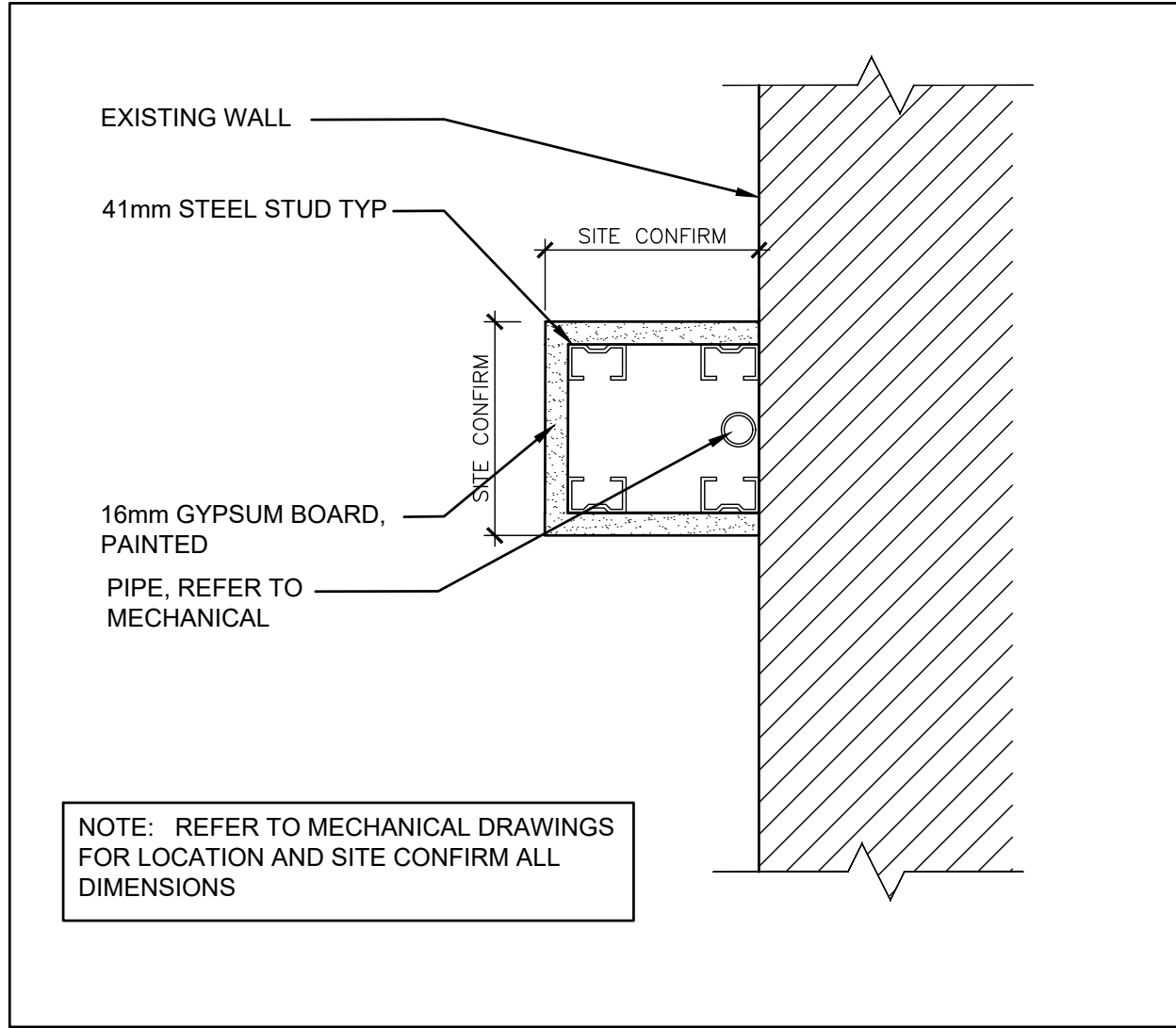
- 1 PARTITION LAYOUTS SHOWN MAY NOT REFLECT EXACT SITE CONDITIONS. VERIFY ACTUAL EXISTING PARTITION LAYOUT ON SITE.
- 2 CONFIRM WITH DEPARTMENTAL REPRESENTATIVE SCHEDULE FOR ADDITIONAL ITEMS ON WALLS TO BE REMOVED OR DEMOLISHED OR SALVAGED.
- 3 PATCH AND REPAIR WALLS, FLOOR, AND CEILING AT ALL AREAS EXPOSED WHERE MILLWORK, ELECTRICAL OUTLETS, DEVICES AND OR WALLS ARE REMOVED. CONSTRUCTION AND FINISHING TO MATCH EXISTING OR NEW ADJACENT CONSTRUCTION AND FINISH.
- 4 REFER TO MECHANICAL AND, OR ELECTRICAL DRAWINGS FOR DEMOLITION AND RENOVATION ITEMS. PATCH AND REPAIR ASSEMBLIES WHERE LOCALIZED DEMOLITION IS REQUIRED FOR MECHANICAL AND ELECTRICAL SERVICES. PREPARE FOR SCHEDULED FINISHES.

BUILDING CODE SUMMARY

- 1 APPLICABLE BUILDING INCLUDE THE NATIONAL BUILDING CODE OF CANADA 2015, NATIONAL FIRE CODE OF CANADA 2015, NATIONAL PLUMBING CODE OF CANADA 2015.
- 2 BUILDING OCCUPANCY CLASSIFICATION IS GROUP F, DIVISION 3, LOW HAZARD INDUSTRIAL.
- 3 BUILDING CLASSIFICATION 3.2.2.75 GROUP F, DIVISION 3, UP TO 6 STOREYS, SPRINKLERED.  
a. BUILDING AREA NOT MORE THAN 14 400 SQ.M. IF 3 STOREYS IN BUILDING HEIGHT.  
b. BUILDING IS PERMITTED TO BE NON COMBUSTIBLE CONSTRUCTION.  
c. FLOOR ASSEMBLIES SHALL BE FIRE SEPARATIONS WITH A FIRE RESISTANCE RATING NOT LESS THAN 1 HOUR.

ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE
ADJ	ADJUSTIBLE
AFF	ABOVE FINISH FLOOR
ALUM	ALUMINUM
BD	BOARD
BTRK	BOOT RACK
CB	CONCRETE BLOCK
CG	CORNER GUARD
CH	COAT HOOK
CONC	CONCRETE
CPT	CARPET
CR	COAT STORAGE RACK
CAF	CONCRETE AGGREGATED FINISH
CT	CERAMIC TILE
DRL	DISPLAY RAIL
DF	DRINKING FOUNTAIN
EP	EPOXY PAINT
EX	EXISTING
EIFS	EXTERIOR INSULATED FACING SYSTEM
FO	FACE OF
FD	FLOOR DRAIN
FHC	FIRE HOSE CABINET
FIN	FINISHED
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FRP	FIBREGLAS REINFORCED PANELS
GI	GALVANIZED IRON
GB	GYPSTUM BOARD
GFRG	GLASS FIBRE REINFORCED CONCRETE
GRB	GRAB BAR
GL	GLAZING
HC	HARDENED CONCRETE
HMI	HOLLOW METAL INSULATED
HR	HANDRAIL
ID	INSIDE DIMENSION
LSD	LIQUID SOAP DISPENSER
LMC	LINEAR METAL CEILING
MH	MOP HOLDER
MIR	MIRROR
MTL	METAL
MSU	METAL STORAGE UNIT
MW	MILLWORK
NIC	NOT IN CONTRACT
OC	ON CENTER
OTB	OPEN TO BELOW
OSWJ	OPEN WEB STEEL JOIST
PL	PLASTER
PLAM	PLASTIC LAMINATE
PLY	PLYWOOD
PREFIN	PREFINISHED
PSF	PRESSED STEEL FRAME
P	PAINTED
PT	PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
RWL	RAIN WATER LEADER
R	RUBBER
RB	RESILIENT BASE
RCB	RUBBER COVE BASE
RD	ROOF DRAIN
REQ	REQUIRED
RFT	RESILIENT FLOOR TILE
RSF	RESILIENT SHEET FLOORING
RT	RESILIENT TILE
REV	REVERSED
S	SINK
SD	SOAP DISPENSER
SS	STAINLESS STEEL
SF	SAFETY FLOOR
SIM	SIMILAR
STL	STEEL
SVF	SHEET VINYL FLOOR
TB	TACKBOARD
TO	TOP OF
TPD	TOILET PAPER DISPENSER
TYP	TYPICAL
U/S	UNDERSIDE
U/N	UNLESS NOTED OTHERWISE
VB	VAPOUR BARRIER
VCT	VINYL COMPOSITE TILE
VWC	VINYL WALL COVERING
WGL	WIRED GLASS
WVP	VINYL WALL PROTECTION
WB	WHITEBOARD
WD	WOOD
WSC	WOOD SOLID CORE



1 TYPICAL PIPE CHASE DETAIL AT WALL  
A100 SCALE: 1:5



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CONTROL MEASURES

drawing title  
titre du dessin  
ARCHITECTURAL  
GENERAL NOTES AND DETAILS

drawn by  
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