

ISSUED FOR TENDER 2019.03.08

GOVERNMENT OF CANADA EXISTING BUILDING RENOVATION

4300 55 Street, Red Deer, Alberta T4N 2H1

Stantec Project #: 144211605

PROJECT TEAM:

ARCHITECT:
STANTEC ARCHITECTURE LTD.

325 - 25TH STREET SE
CALGARY, AB
T2A 7H8

MECHANICAL ENGINEER:
STANTEC CONSULTING LTD.

325 - 25TH STREET SE
CALGARY, AB
T2A 7H8

ELECTRICAL ENGINEER:
STANTEC CONSULTING LTD.

325 - 25TH STREET SE
CALGARY, AB
T2A 7H8

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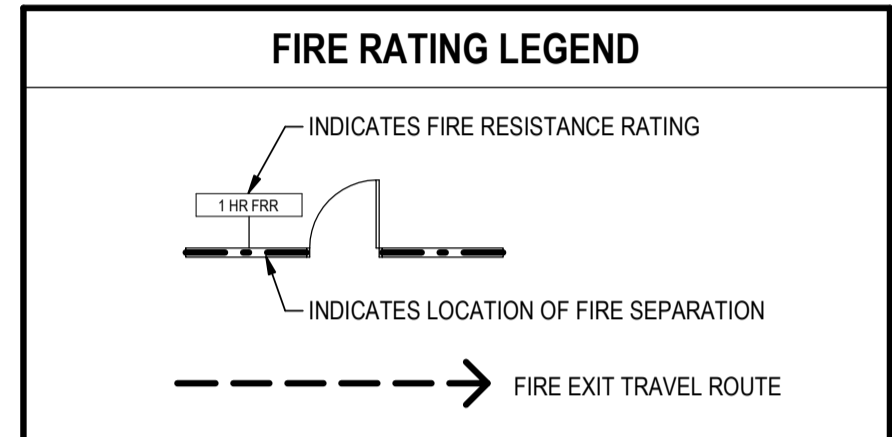
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Legend



Notes

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ISSUED FOR TENDER	AC	BN	2019.03.08
ISSUED FOR 75% CLIENT REVIEW	AC	BN	2019.01.28
ISSUED FOR 75% QA/QC REVIEW	HM	RV	2019.01.21
Issued	By	App'd	YYYY.MM.DD

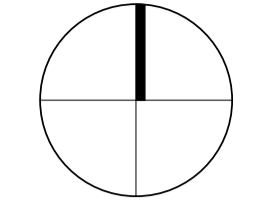
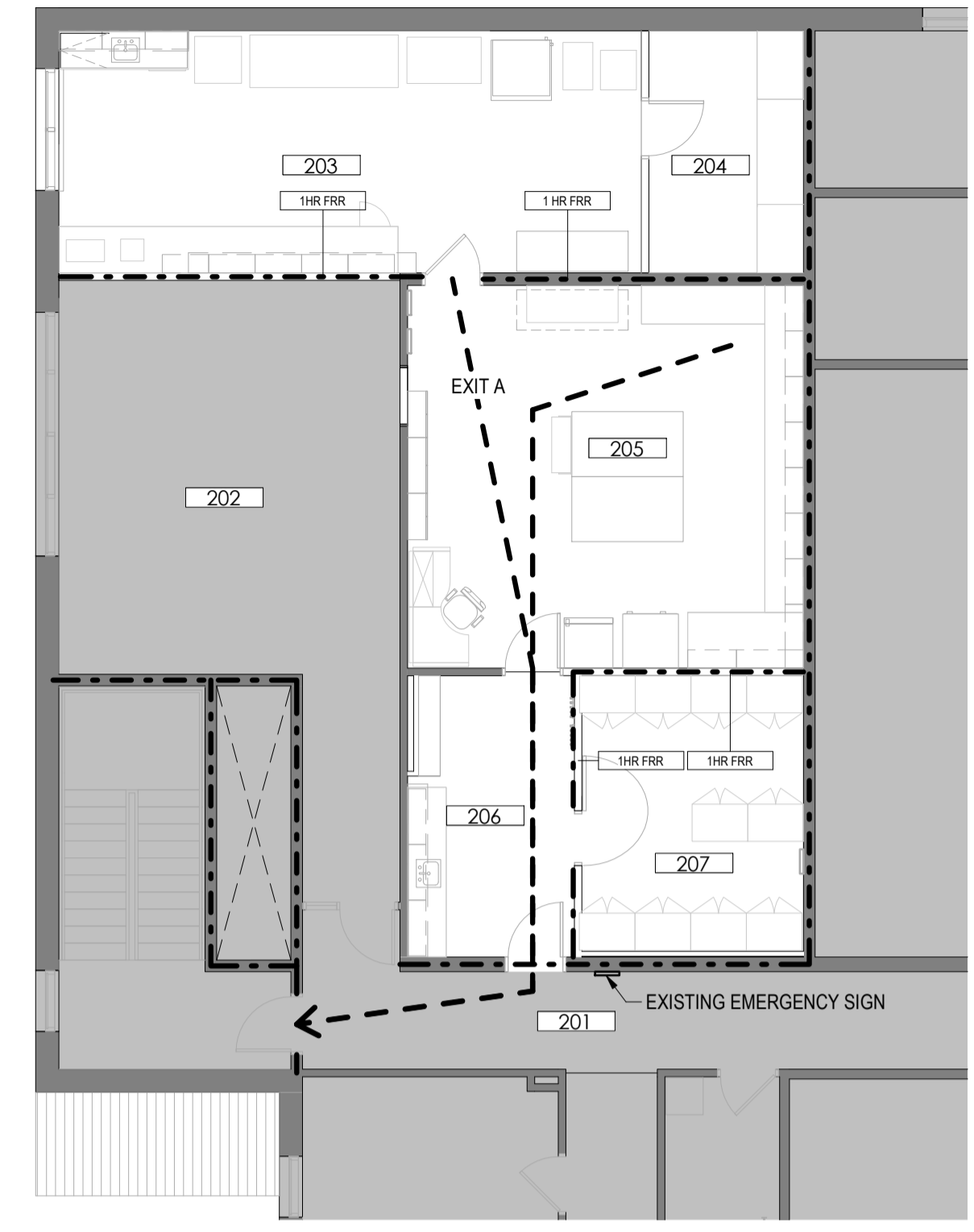
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Client/Project
GOVERNMENT OF CANADA
 EXISTING BUILDING RENOVATION
 4300 55 Street, Red Deer, Alberta T4N 2H1
 Title
CODE ANALYSIS AND LIFE SAFETY PLAN

Project No. 144211605 Scale 1 : 100
 Revision Drawing No.

Sheet **A002**
 2 of 9

BUILDING CODE SUMMARY		
ITEM	REMARKS	ARTICLE / REFERENCE
BASIS OF SUMMARY	-ALL NEW WORK TO BE DONE TO ALBERTA BUILDING CODE 2014 / NATIONAL BUILDING CODE 2015 WHICH EVER IS MORE RESTRICTIVE EXTENT OF WORK WILL BE INTERIOR RENOVATION OF THE LAB LOCATED WITHIN THE SECOND FLOOR.	
BUILDING HEIGHT	-2 STOREY	NBC/ABC 1.4.1.2.
BUILDING AREA	EXISTING BUILDING AREAS BASEMENT = 1400 sq m MAIN FLOOR = 1400 sq m SECOND FLOOR = 970 sq m TOTAL = 3770 sq m RENOVATION AREA SECOND FLOOR = 117 sq m	NBC/ABC 1.4.1.2.
BUILDING CLASSIFICATION	BUILDING WAS CONSTRUCTED TO THE 1985 ALBERTA BUILDING CODE THE EXISTING BUILDING WAS BUILT OF NON-COMBUSTIBLE MATERIALS, NOT SPRINKLERED AND DOES NOT HAVE ANY DETENTION QUARTERS PRESENT BUILDING CLASSIFICATION UNDER 2015 NATIONAL BUILDING CODE WOULD BE GROUP D UP TO 3 STOREYS -NOT MORE THAN 3 STOREYS IN HEIGHT <2 STOREYS EXISTING> -HAS A BUILDING AREA NOT MORE THAN 3,000 sq m IF 2 STOREYS IN BUILDING HEIGHT FACING 2 STREETS <1510 sq m EXISTING> -SHALL BE OF COMBUSTIBLE OR NON-COMBUSTIBLE CONSTRUCTION -FLOOR ASSEMBLIES SHALL BE FIRE SEPARATIONS AND IF OF NON-COMBUSTIBLE CONSTRUCTION HAVE A FIRE-RESISTANCE RATING NOT LESS THAN 45 MINUTES -MEZZANINES IF OF NON-COMBUSTIBLE CONSTRUCTION SHALL HAVE A FIRE RESISTANCE RATING NOT LESS THAN 1 HOUR -LOADBEARING WALLS, COLUMNS AND ARCHES SHALL HAVE A FIRE-RESISTANCE RATING NOT LESS THAN THAT REQUIRED FOR THE SUPPORTED ASSEMBLY OR BE OF NON-COMBUSTIBLE CONSTRUCTION	NBC/ABC 3.2.2.60.
FLAME-SPREAD RATING	-INTERIOR WALLS AND CEILINGS 150 MAX -EXITS 25 MAX -VERTICAL SERVICE SHAFT 25 MAX	NBC TABLE 3.1.13.7. ABC TABLE 3.1.13.2.
OCCUPANT LOAD	NO CHANGES TO EXISTING OCCUPANT LOAD	NBC/ABC TABLE 3.1.17.1.
PORTABLE FIRE EXTINGUISHERS	PORTABLE EXTINGUISHERS SHALL BE PROVIDED AND INSTALLED	NBC TABLE 3.2.5.16. ABC TABLE 3.2.5.16.
EGRESS DOORWAYS	THE LAB CAN BE SERVED BY A SINGLE MEANS OF EGRESS PROVIDED IT HAS AN OCCUPANT LOAD LESS THAN 60 PEOPLE, A MAXIMUM AREA LESS THAN 200 M2 AND A TRAVEL DISTANCE TO A SINGLE MEANS OF EGRESS OF 25 M OR LESS BASED ON AN NON-SPRINKLERED F-3 OCCUPANCY AS PER NBC 2015 ARTICLE 3.3.1.5-A IN THIS CASE THE OCCUPANT LOAD AND AREA LIMITATIONS ARE MET BUT THE TRAVEL DISTANCE TO THE SINGLE MEANS OF EGRESS EXCEEDS 15 M. TO ACCOMMODATE THIS TRAVEL DISTANCE WE SUGGEST ADDING A 1 HOUR FIRE RATED WALL AND DOOR FOR ROOM 203.	NBC/ABC 3.3.1.5-A
CORRIDORS	-MINIMUM WIDTH OF PUBLIC CORRIDOR TO BE NOT LESS THAN 1100mm	NBC/ABC 3.3.1.9.
LOCATION OF EXITS	-MAXIMUM TRAVEL DISTANCE OF 30m FROM ANY AREA WITHIN A FLOOR AREA TO AN EXIT.	NBC/ABC 3.4.2.5.1(f)
EXIT WIDTH	-EXIT CORRIDORS AND PASSAGEWAYS =1100mm MINIMUM -RAMPS =1100mm MINIMUM -STAIRS =900mm MINIMUM -DOORWAYS =800mm MINIMUM	NBC/ABC TABLE 3.4.3.2.A.
WATER CLOSET	NO CHANGE TO OCCUPANCY FIXTURES - EXISTING	
BARRIER FREE ACCESS	NO CHANGE - EXISTING BASE BUILDING CONDITIONS REMAIN	

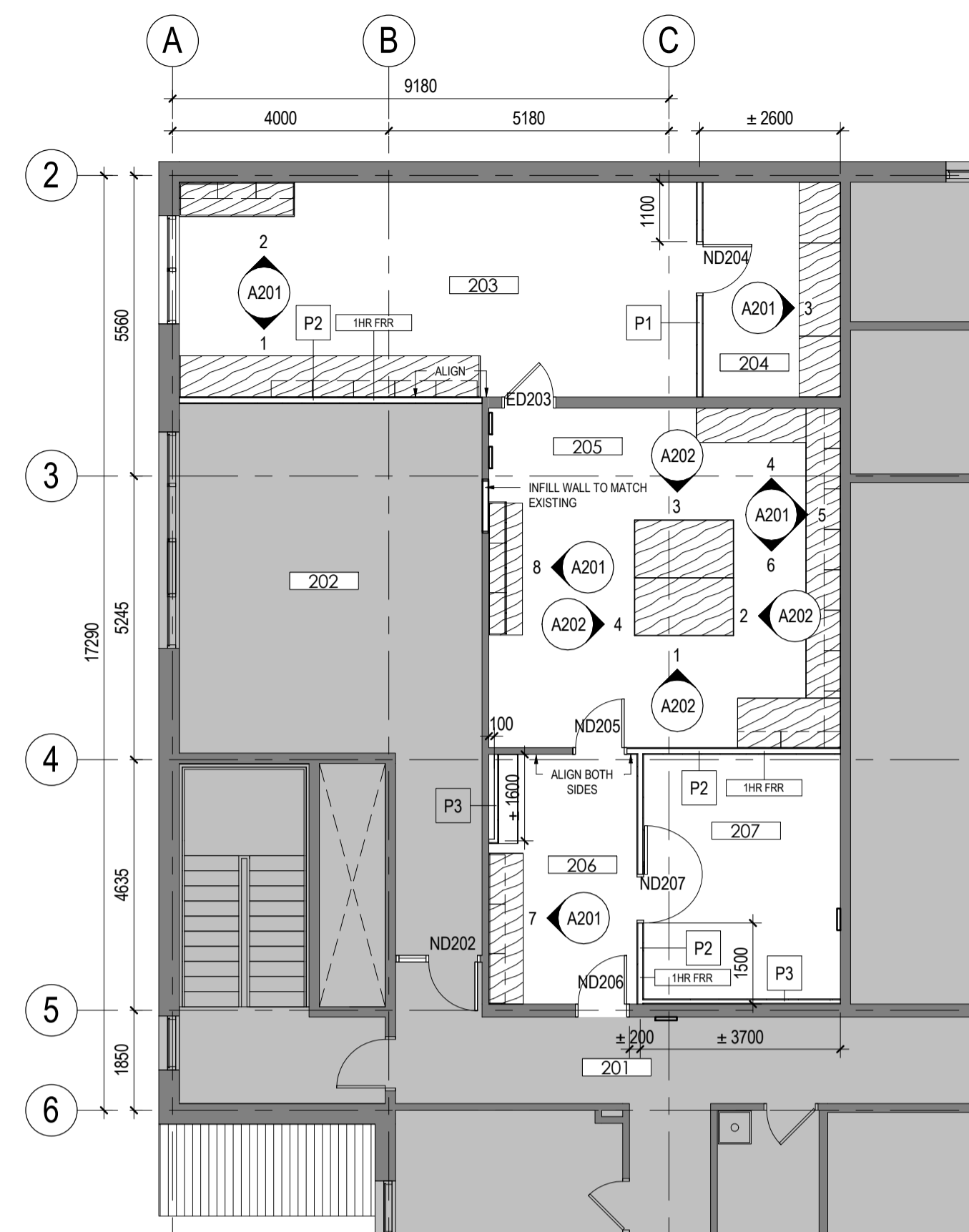
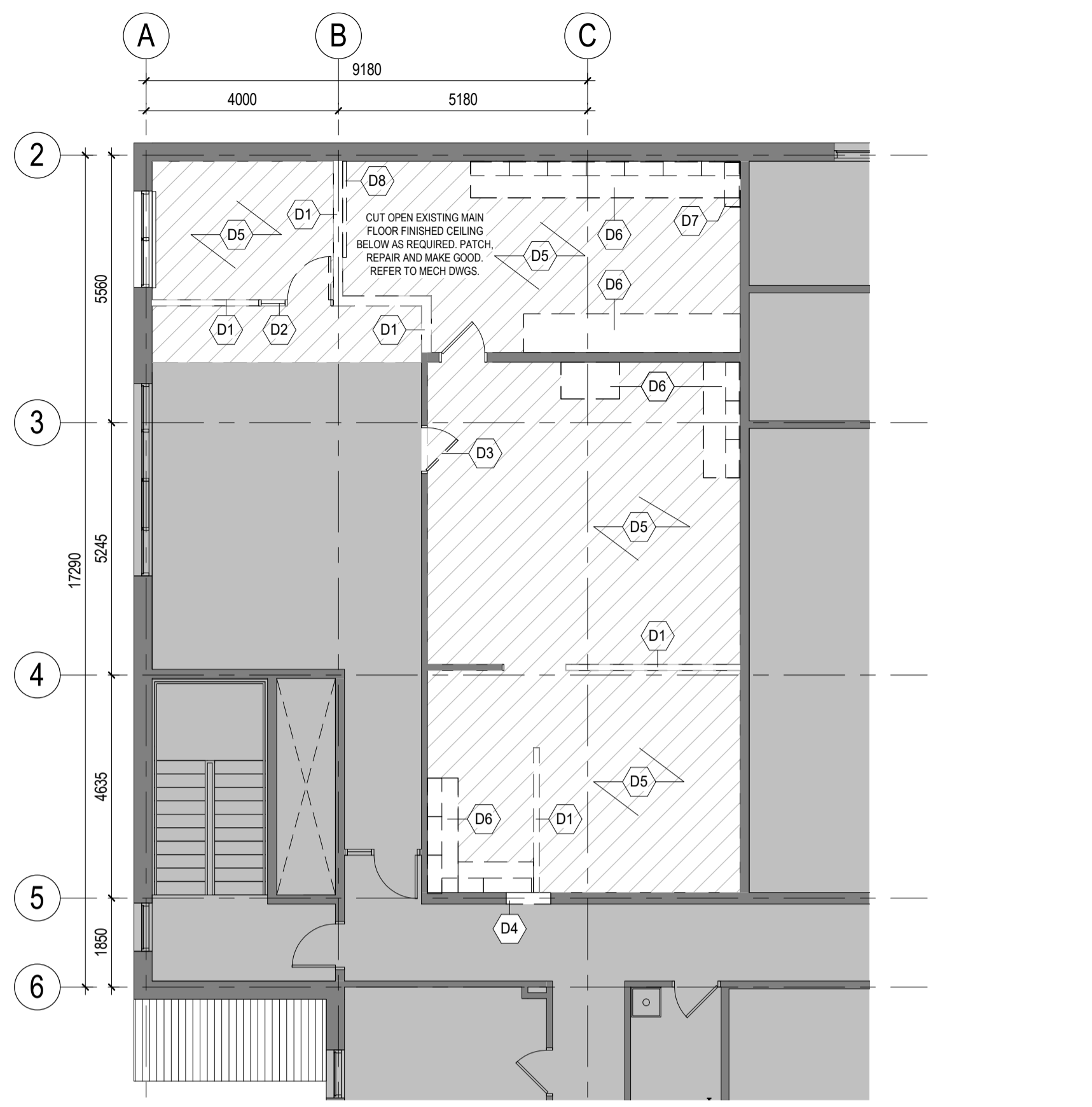


LEGAL DESCRIPTION:
 PLAN OF PARCEL C
 PLAN 837 HW
 SE 1/4
 SECTION 21, TOWNSHIP 38
 RANGE 27, W4 MERIDIAN
 RED DEER, ALBRTA

LEGAL ADDRESS:
 4300 - 55TH STREET
 RED DEER, ALBERTA

2 PARTIAL SECOND FLOOR LIFE SAFETY PLAN
 A002 1 : 100

EXIT ACCESS TRAVEL DISTANCE SUMMARY	
EXIT ROUTE	TRAVEL DISTANCE (m)
EXIT A	16
EXIT B	17



DEMOLITION KEYNOTES	
D1	REMOVE PORTION OF EXISTING PARTITION. PATCH, REPAIR AND MAKE GOOD FINISHES TO REMAIN.
D2	REMOVE EXISTING DOOR AND FRAME. PATCH, REPAIR AND MAKE GOOD FINISHES TO REMAIN.
D3	REMOVE EXISTING DOOR AND FRAME. PREPARE WALL FOR INFILL TO MATCH EXISTING.
D4	REMOVE PORTION OF EXISTING PARTITION TO SUIT NEW DOOR. PATCH, REPAIR AND MAKE GOOD FINISHES TO REMAIN.
D5	REMOVE EXISTING FLOORING. PREPARE SURFACE FOR NEW FLOORING.
D6	REMOVE EXISTING MILLWORK. PATCH, REPAIR, AND MAKE GOOD FINISHES TO REMAIN.
D7	REMOVE, SALVAGE AND RELOCATE EXISTING KRAFT PAPER ROLL.
D8	REMOVE EXISTING BASEBOARD HEATER. PATCH, REPAIR AND MAKE GOOD FINISHES TO REMAIN.
D9	REMOVE EXISTING CEILING. PATCH, REPAIR AND MAKE GOOD FINISHES TO REMAIN.
D10	REMOVE EXISTING BULKHEAD CW GWB CEILING. PATCH, REPAIR AND MAKE GOOD FINISHES TO REMAIN.

CEILING TYPES	
CEILING TYPE C 3000 → CEILING HEIGHT	
C1	C1 - ACOUSTIC CEILING TILE - 610mm x 1220mm ACOUSTIC LAY-IN TILE - T-BAR SUSPENDED SYSTEM * FINISH TO MATCH ACT-1. REFER TO FINISH SCHEDULE.
C2	C2 - ACOUSTIC CEILING TILE - 610mm x 1220mm ACOUSTIC LAY-IN TILE - T-BAR SUSPENDED SYSTEM * FINISH TO MATCH ACT-2. REFER TO FINISH SCHEDULE.
C3	C3 - EXISTING CEILING GRID - NEW 610mm x 1220mm ACOUSTIC LAY-IN TILE - EXISTING T-BAR SUSPENDED SYSTEM * FINISH TO MATCH ACT-1. REFER TO FINISH SCHEDULE.

DEMOLITION LEGEND	
	EXISTING PARTITION TO REMAIN - N.I.C.
	EXISTING PARTITION TO BE DEMOLISHED
	AREA NOT IN ARCHITECTURAL SCOPE OF WORK
	EXISTING FLOORING AND BASE TO BE DEMOLISHED UNO. PREPARE SURFACE TO RECEIVE NEW FINISH
	EXISTING ACT CEILING TO BE DEMOLISHED UNO. PREPARE SURFACE TO RECEIVE NEW FINISH
	EXISTING GYB CEILING TO BE DEMOLISHED UNO. PREPARE SURFACE TO RECEIVE NEW FINISH
	EXISTING LIGHTING FIXTURE TO BE DEMOLISHED UNO. REFER TO ELECTRICAL DWGS.
	EXISTING DUCTWORK TO BE DEMOLISHED. REFER TO MECHANICAL DWGS.
	EXISTING DOOR AND FRAME TO REMAIN
	EXISTING DOOR, FRAME AND/OR SIDELIGHT AND HARDWARE TO BE DEMOLISHED UNO.

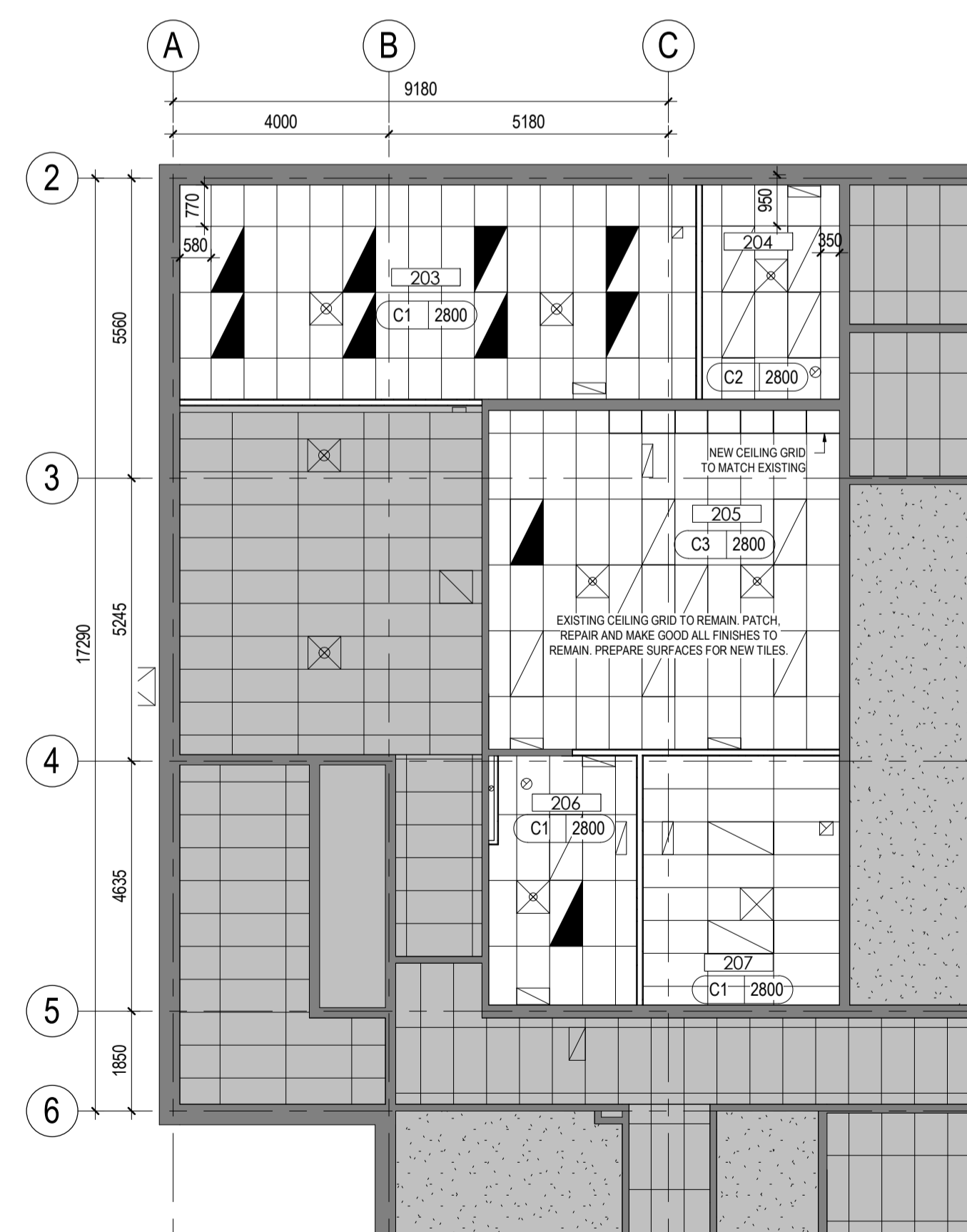
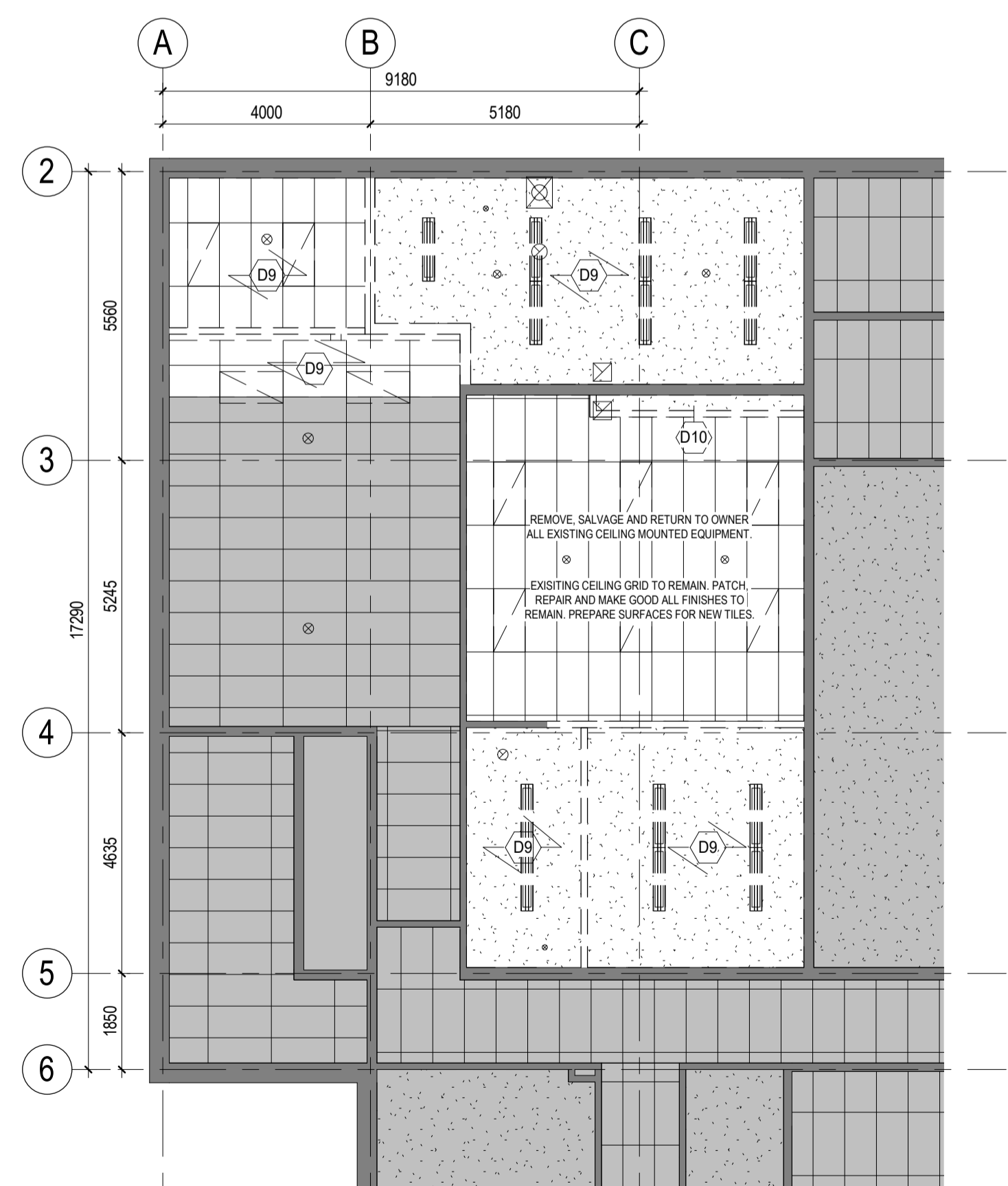
CONSTRUCTION LEGEND	
	NEW MILLWORK. REFER TO ELEVATIONS AND DETAILS.
	NEW DOOR, FRAME, SIDELIGHT AND HARDWARE. REFER TO DOOR AND HARDWARE SCHEDULE FOR MORE INFORMATION.
	EXISTING DOOR CW NEW DOOR HARDWARE. REFER TO DOOR AND HARDWARE SCHEDULE FOR MORE INFORMATION.
	NEW LIGHTING FIXTURES. REFER TO ELECTRICAL DRAWINGS.
	NEW MECHANICAL DUCTWORK. REFER TO MECHANICAL DRAWINGS.

CEILING FINISH NOTES	
1.	DRYWALL CONTRACTOR TO ALLOW FOR ALL MECHANICAL AND ELECTRICAL PENETRATIONS IN CEILING.
2.	ALL MISCELLANEOUS METALS, TRIMS AND ACCESS PANELS ON CEILINGS ETC., TO BE PAINTED TO MATCH ADJACENT CEILING SURFACE, UNLESS NOTED OTHERWISE.
3.	PAINT ALL HORIZONTAL AND VERTICAL BULKHEAD FACES TO MATCH FINISH AS NOTED.

- DEMOLITION GENERAL NOTES**
- DEMOLITION SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE REMOVAL OF EXISTING CEILINGS, BASE, DOORS, WINDOWS, FRAMES, ROUGH CARPENTRY, MILLWORK, SPECIALTY ITEMS, EQUIPMENT, HARDWARE, FURNISHINGS, ALL OTHER MATERIALS AND FINISHES REQUIRED THAT ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. REPAIR HOLES WITHIN THE EXISTING CONCRETE FLOOR SLAB AND ENSURE THAT BASIC FLOOR ELEVATIONS ARE LEVEL. EXISTING WALLS WHICH REMAIN WITHIN DEMOLITION AREAS SHALL BE PREPARED TO RECEIVE FINAL FINISHES. FOR PACKAGING AND LABELING OF TURNOVER OF FINAL ITEMS TO OWNER. REFER TO SPECIFICATION. CLEAN AND PREPARE AREA FOR COMMENCEMENT OF NEW WORK.
 - AS PER MECHANICAL AND ELECTRICAL DRAWINGS, WHERE EXISTING MECHANICAL AND ELECTRICAL SYSTEMS ARE TO BE REMOVED AND/OR RELOCATED, IT IS THE CONTRACTORS' RESPONSIBILITY TO DETERMINE THE ORIGIN OF THE MECHANICAL AND ELECTRICAL SYSTEMS AND PROVIDE FOR THEIR RELOCATION. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE DURING THE PRE-TENDER SITE REVIEW IF THERE ARE CONCEALED MECHANICAL OR ELECTRICAL SYSTEMS WITHIN THE WALLS, CEILINGS AND FLOORS OF THE EXISTING STRUCTURE AND MAKE PROVISIONS IN THE TENDER PRICE FOR THE RELOCATION AND/OR TERMINATION OF THE MECHANICAL AND ELECTRICAL SYSTEMS OF THE EXISTING BUILDING. COORDINATE, REMOVE, RELOCATE AND/OR PROVIDE NEW MECHANICAL AND ELECTRICAL SYSTEMS AND COMPONENTS AS NOTED IN CONTRACT DOCUMENTS. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
 - CONTRACTOR TO SITE CONFIRM ALL WORK REQUIRED PRIOR TO DEMOLITION. ALL DEMOLITION PROCEDURES TO BE CLARIFIED WITH BUILDING OWNER.
 - PATCH, REPAIR, AND MAKE GOOD ALL SURFACES, PARTITIONS, CEILINGS, AND ELECTRICAL ITEMS WHICH ARE AFFECTED BY DEMOLITION, READY TO RECEIVE NEW FINISHES.
 - REFER TO SPECIFICATIONS AND MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.
 - VERIFY BOUNDARIES BETWEEN DEMOLITION WORK AND EXISTING TO REMAIN ON SITE BEFORE PROCEEDING WITH WORK.
 - TEMPORARILY RELOCATE FURNISHINGS AND EQUIPMENT AS REQUIRED AND DIRECTED BY CLIENT.
 - DEMOLISH PARTITIONS, FLOORING, BASE, CEILINGS, ETC. AS INDICATED ON DRAWINGS.
 - ALL PORTIONS OF PARTITIONS SCHEDULED FOR REMOVAL SHALL BE REMOVED TO THE UNDERSIDE OF DECK U.N.O.
 - REMOVE ALL EXISTING WALL VINYL/COVERING, FLOOR AND BASE FINISHES, UNLESS OTHERWISE NOTED. PATCH AND REPAIR SUBSTRATE, AS REQUIRED, MAKING SURFACE READY TO ACCEPT NEW WALL, FLOOR, AND BASE FINISHES.
 - TURN OVER MILLWORK, FURNISHINGS, EQUIPMENT, FIXTURES, ACCESSORIES AND OTHER SALVAGEABLE ITEMS TO OWNER. CONTRACTOR SHALL DISPOSE OF UNSALVAGED ITEMS AS DETERMINED BY OWNER. CONTRACTOR TO DELIVER SALVAGED GOODS TO OWNERS SPECIFIED LOCATION.
 - GENERAL CONTRACTOR TO CONDUCT A FACILITY WALK THROUGH WITH THE OWNER & CONSULTANT PRIOR TO DEMOLITION TO IDENTIFY ALL SALVAGEABLE ITEMS.

1 EXISTING AND DEMOLITION - PARTIAL SECOND FLOOR PLAN
 A101 1:100

2 PARTIAL SECOND FLOOR PLAN
 A101 1:100



3 EXISTING AND DEMOLITION - REFLECTED CEILING PLAN
 A101 1:100

4 REFLECTED CEILING PLAN
 A101 1:100

Revision	By	Appd	YYYY.MM.DD
ISSUED FOR TENDER	AC	BN	2019.03.08
ISSUED FOR 75% CLIENT REVIEW	AC	BN	2019.01.28
ISSUED FOR 75% QA/QC REVIEW	HM	RV	2019.01.21
Issued			YYYY.MM.DD

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Client/Project
GOVERNMENT OF CANADA

EXISTING BUILDING RENOVATION

4300 55 Street, Red Deer, Alberta T4N 2H1

Title	
Project No.	Scale
144211605	As indicated
Revision	Drawing No.

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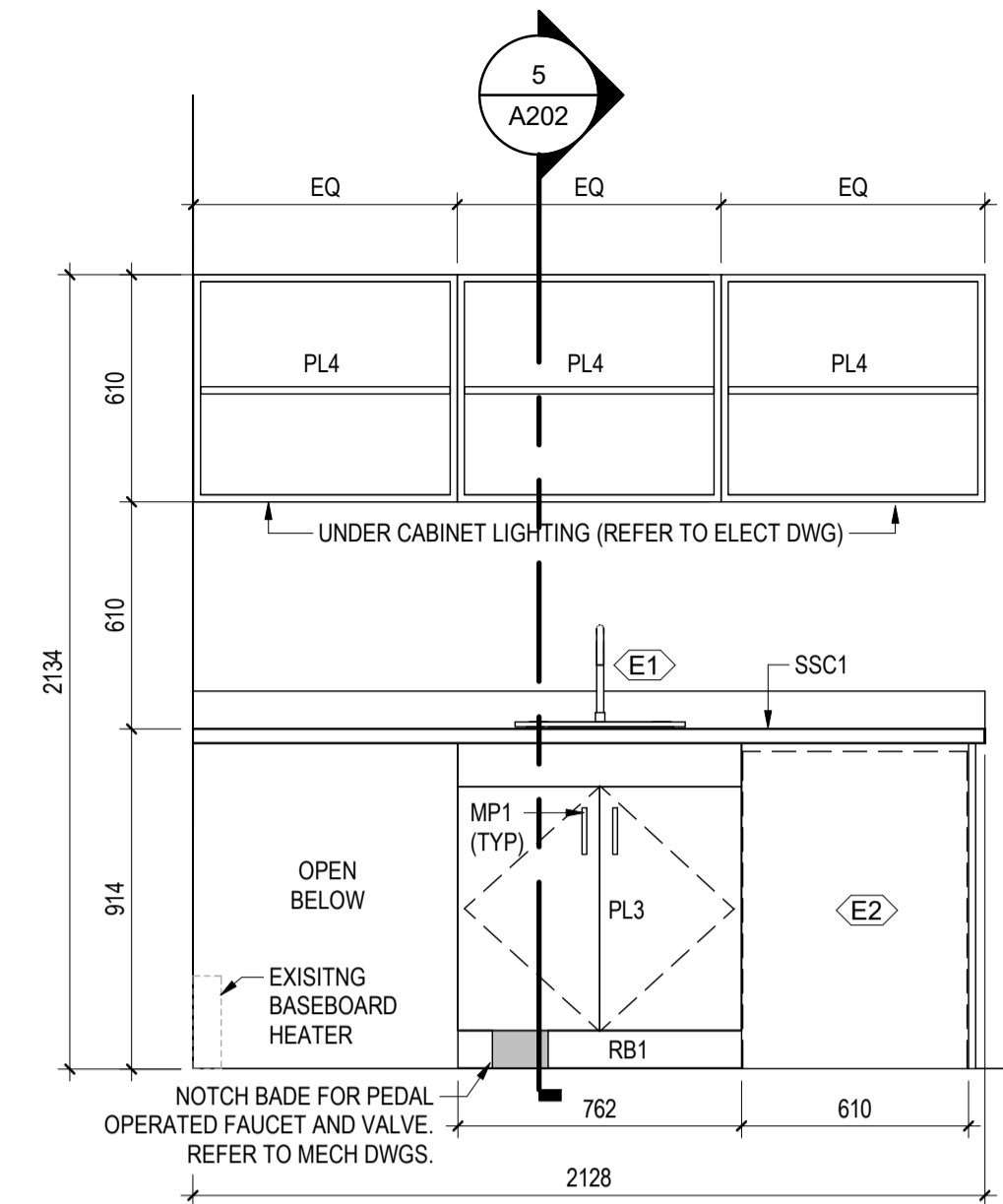
Client/Project
GOVERNMENT OF CANADA
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Title
MILLWORK

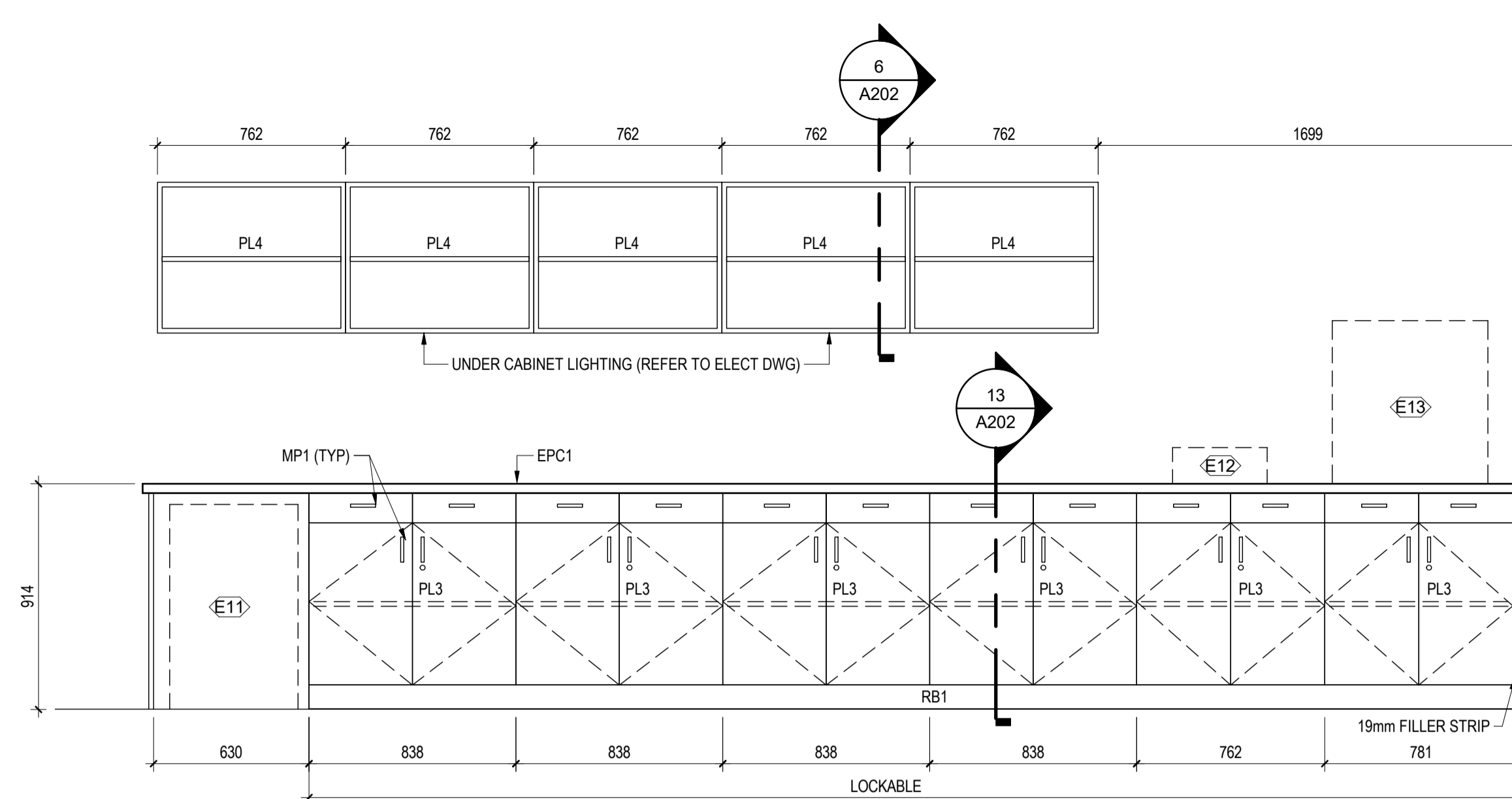
Project No. 144211605 Scale 1:20
Revision Drawing No.

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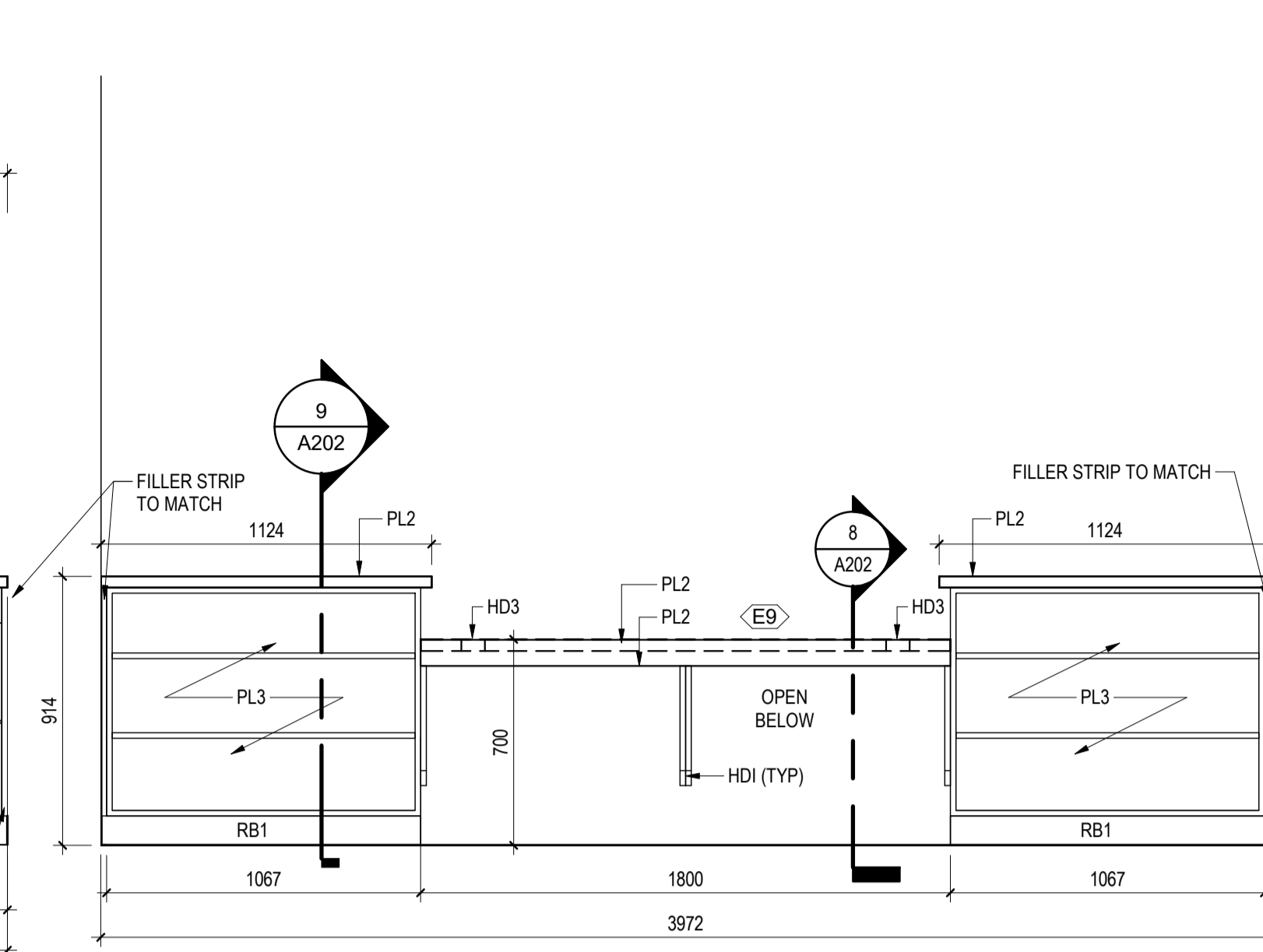
A201



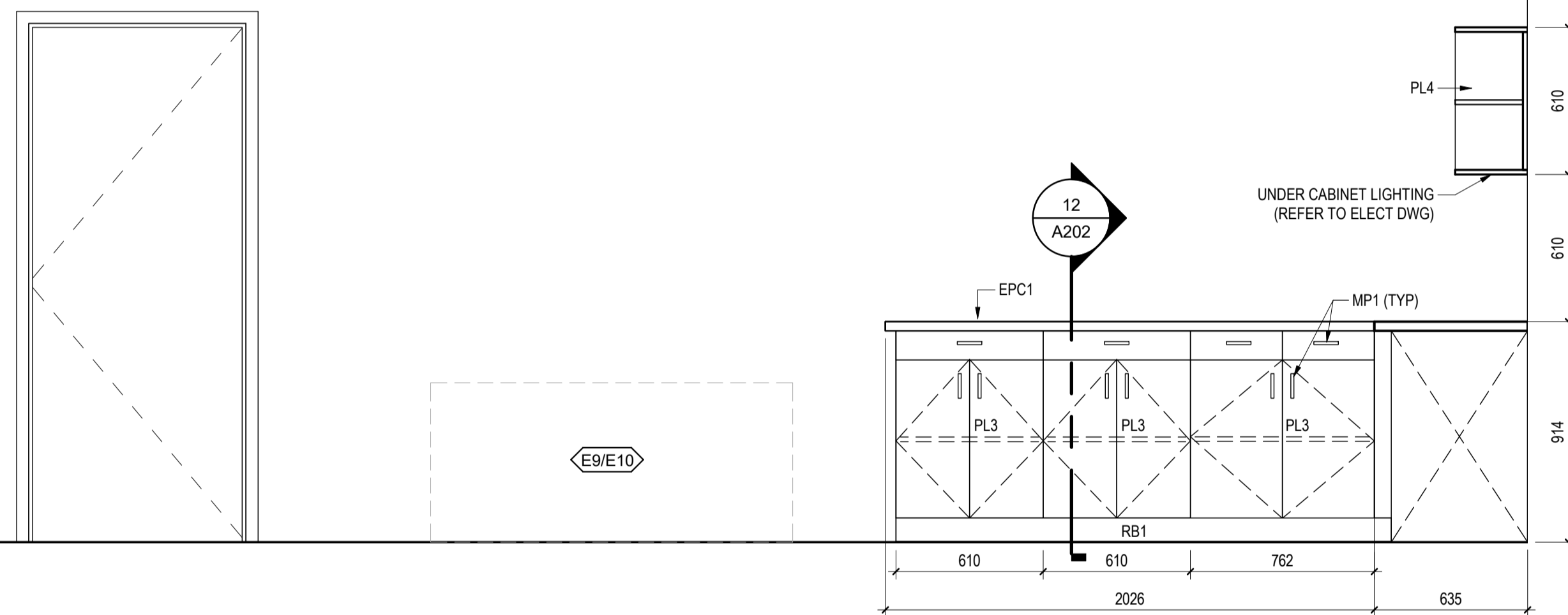
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A201 1:20



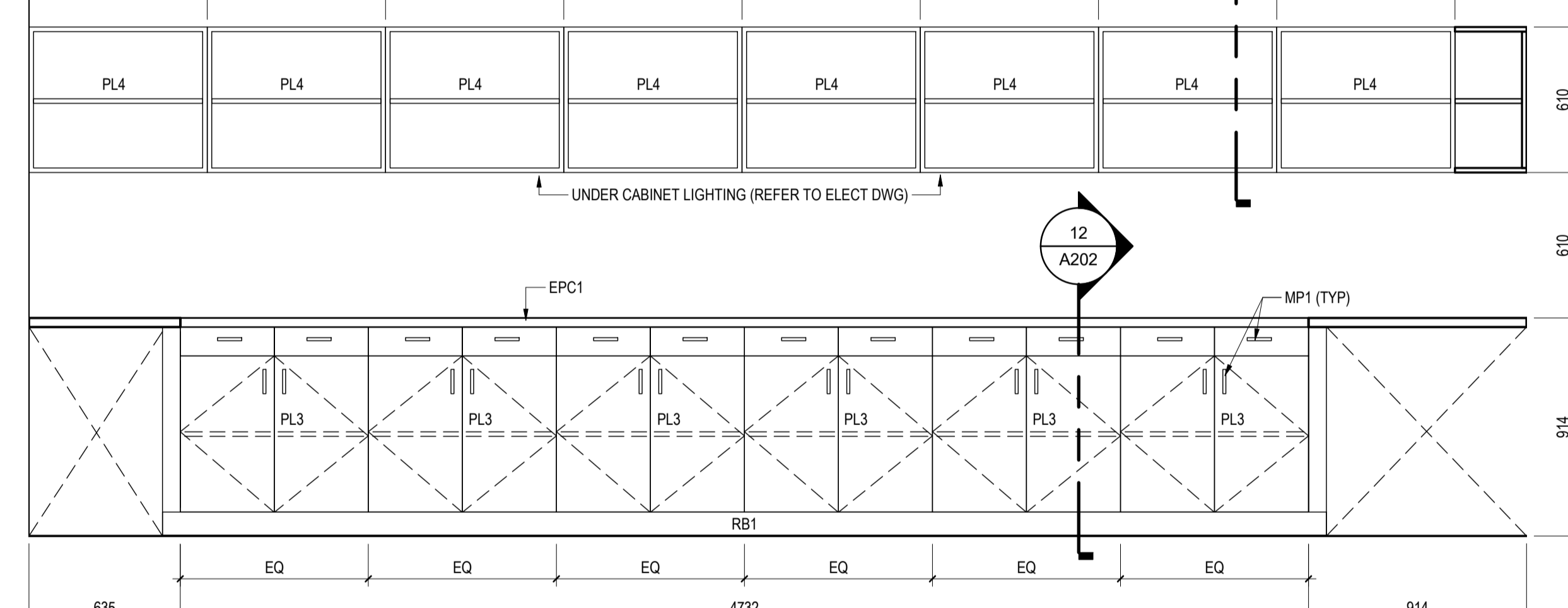
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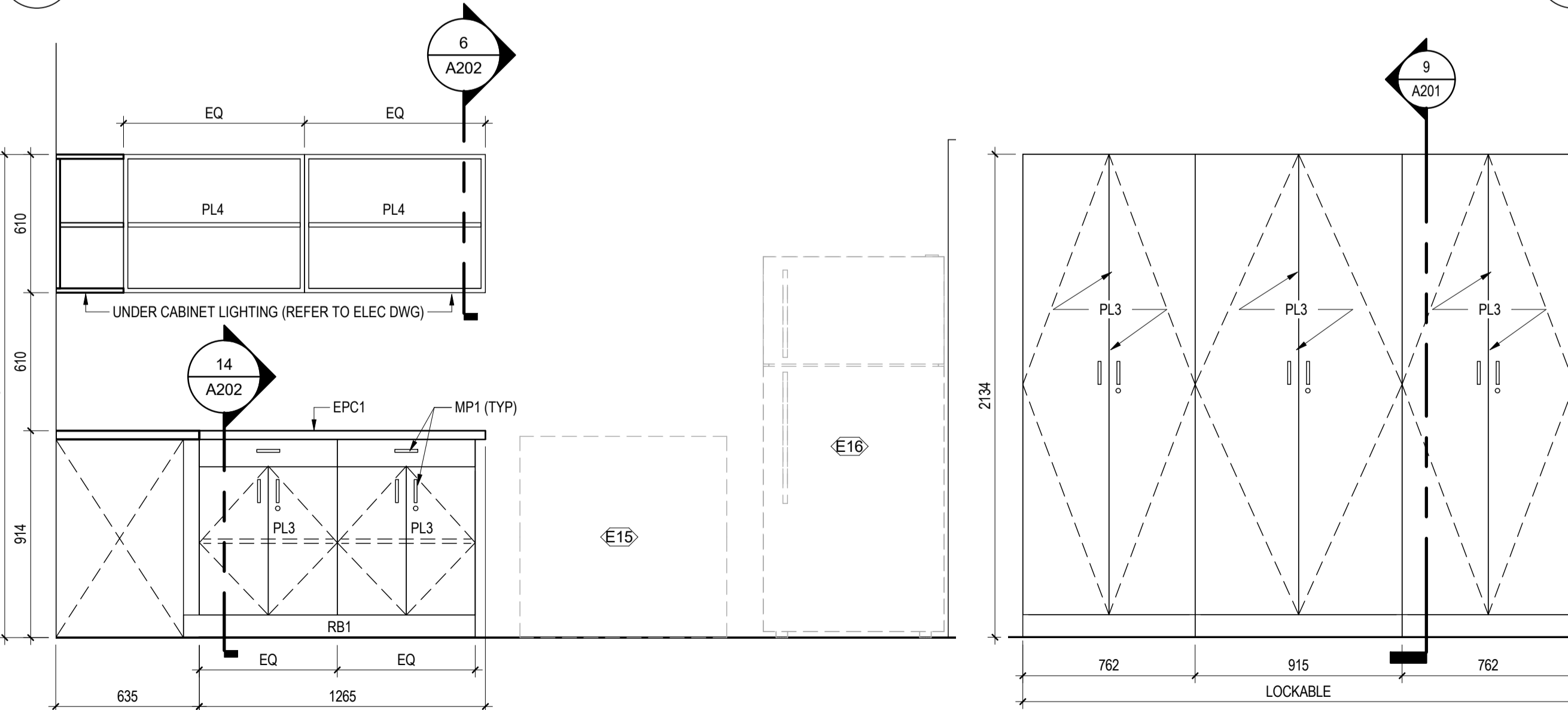
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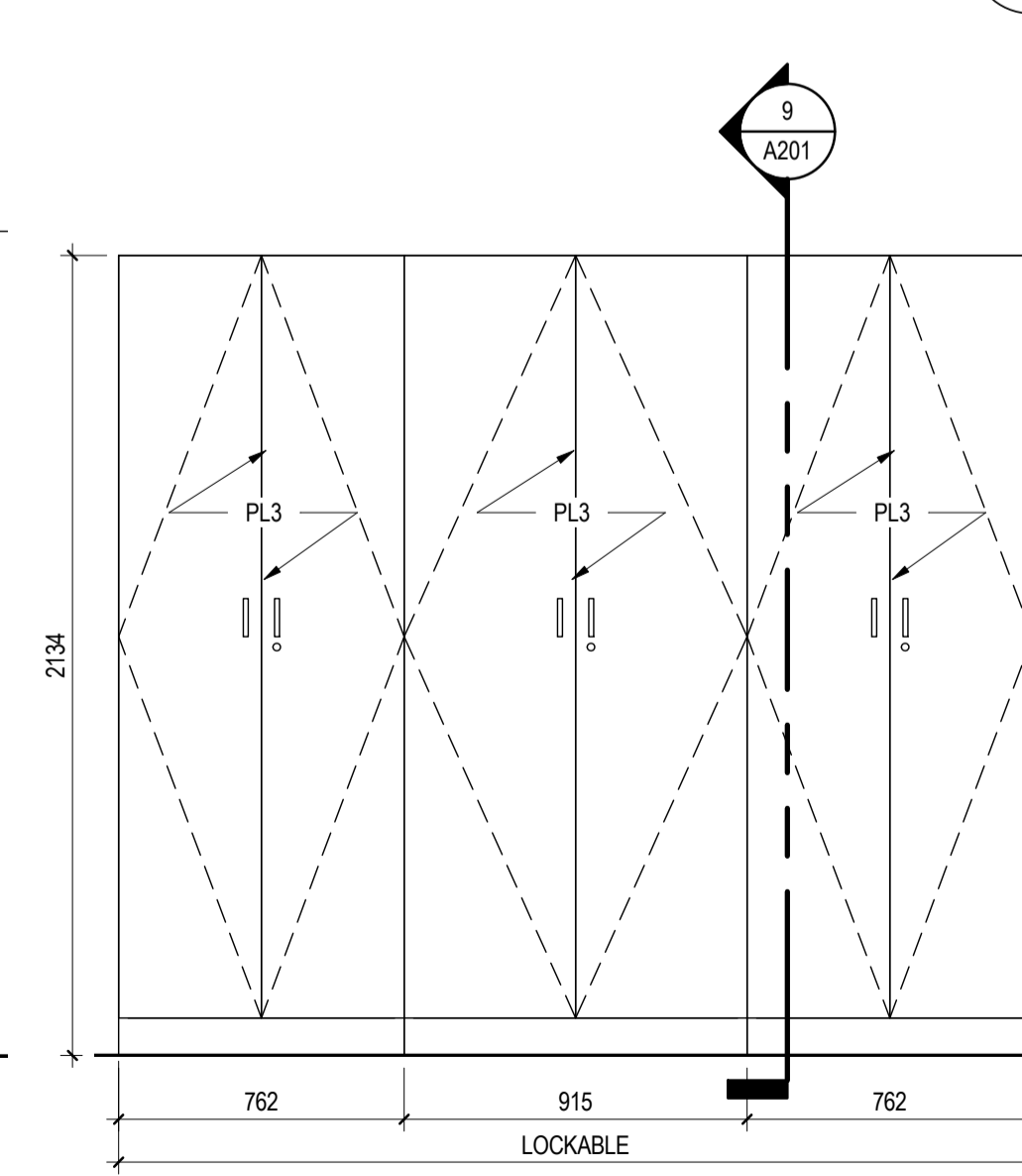
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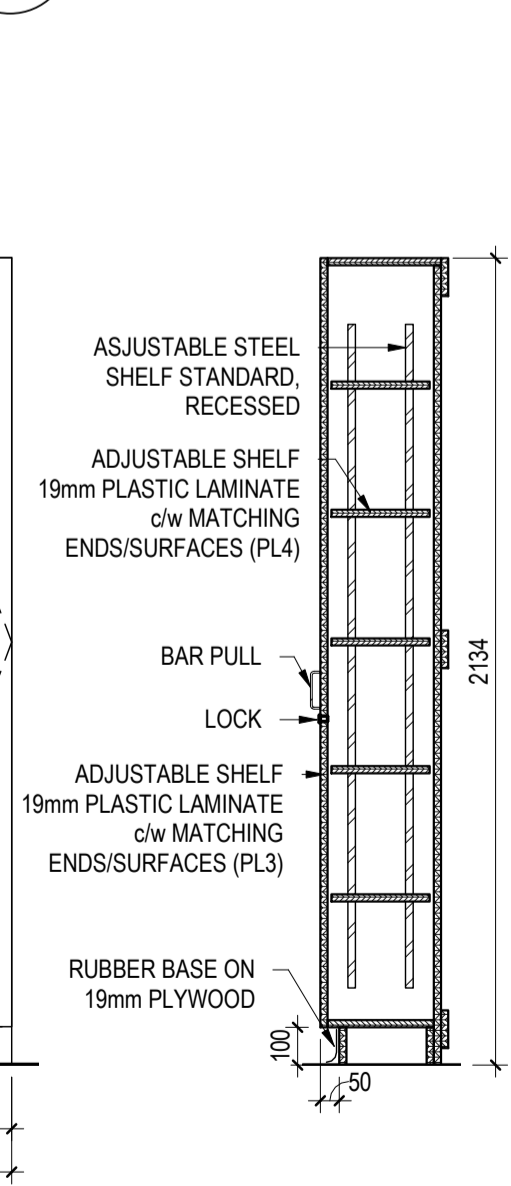
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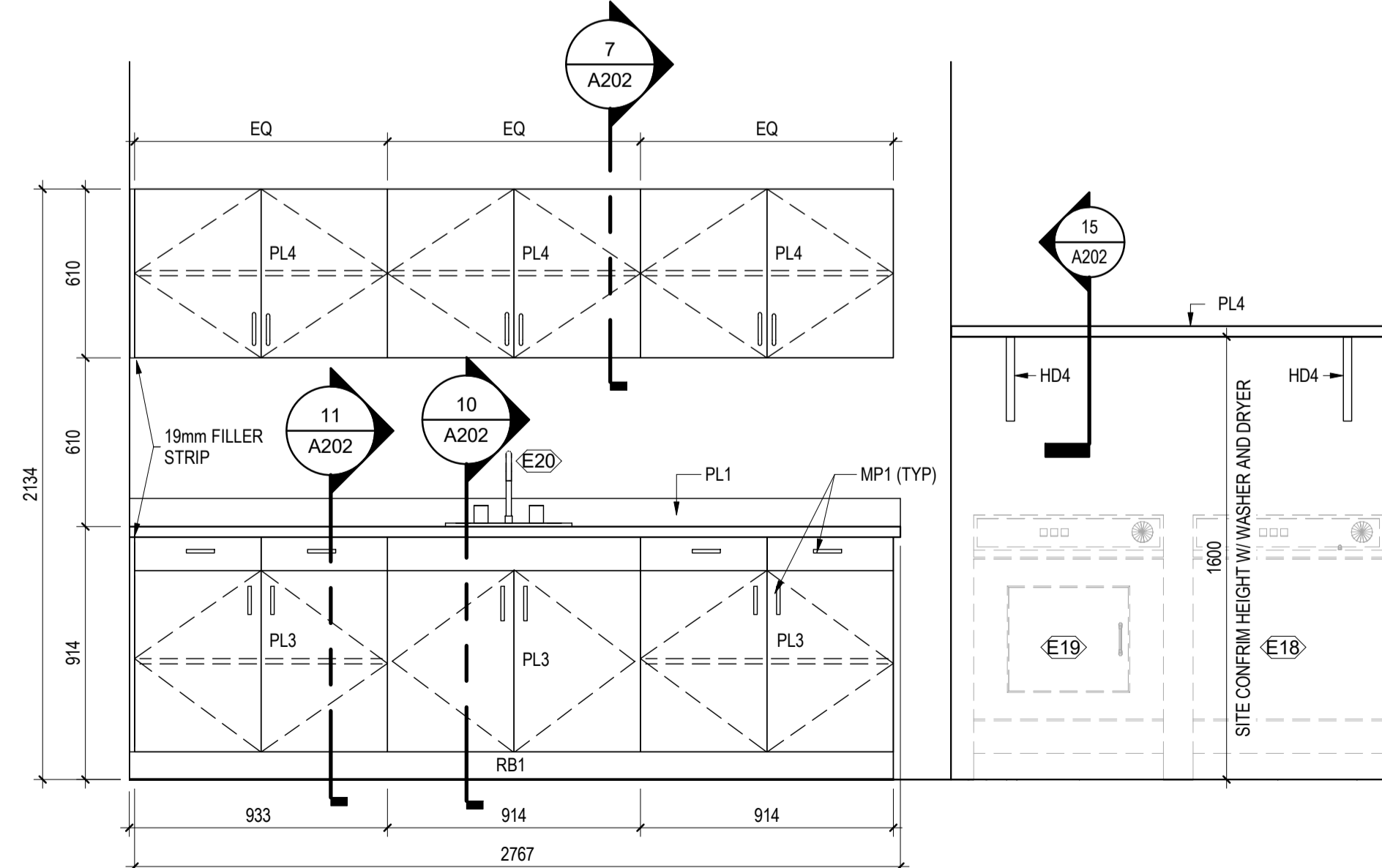
6 ROOM 205 MILLWORK - SOUTH
A201 1:20



8 ROOM 205 MILLWORK - WEST
A201 1:20



9 SECTION
A201 1:20



7 ROOM 206 MILLWORK - WEST
A201 1:20

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Client/Project
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EXISTING BUILDING RENOVATION

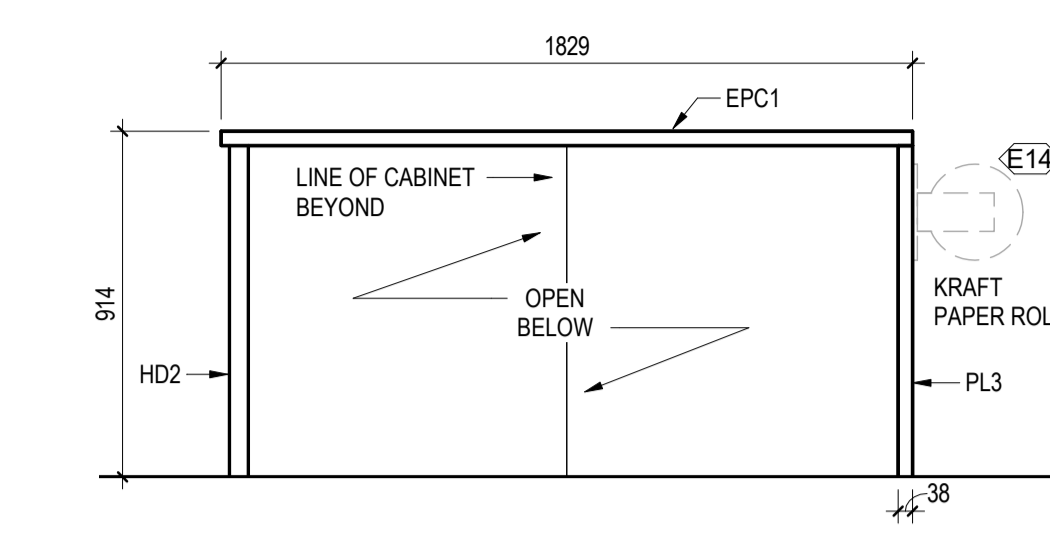
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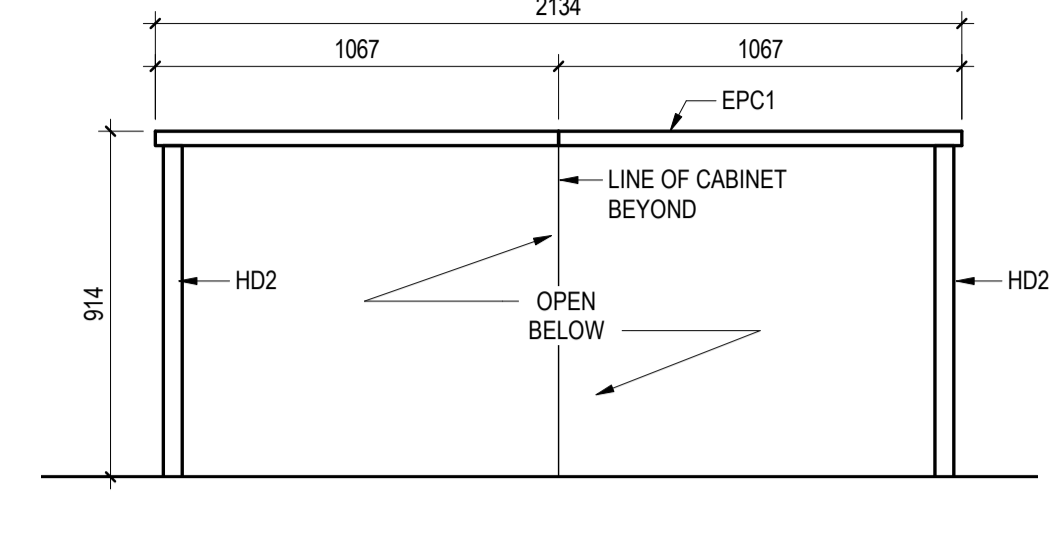
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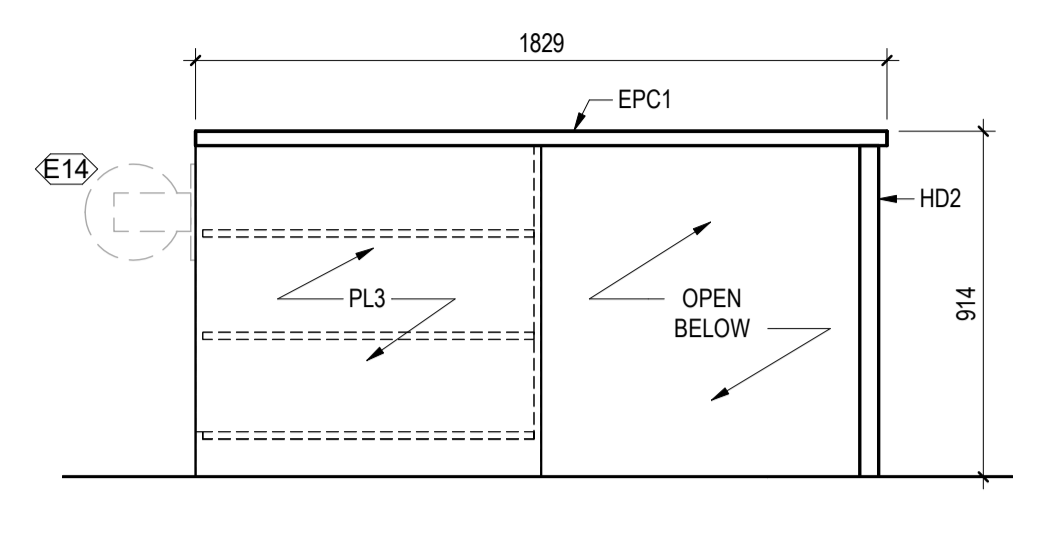
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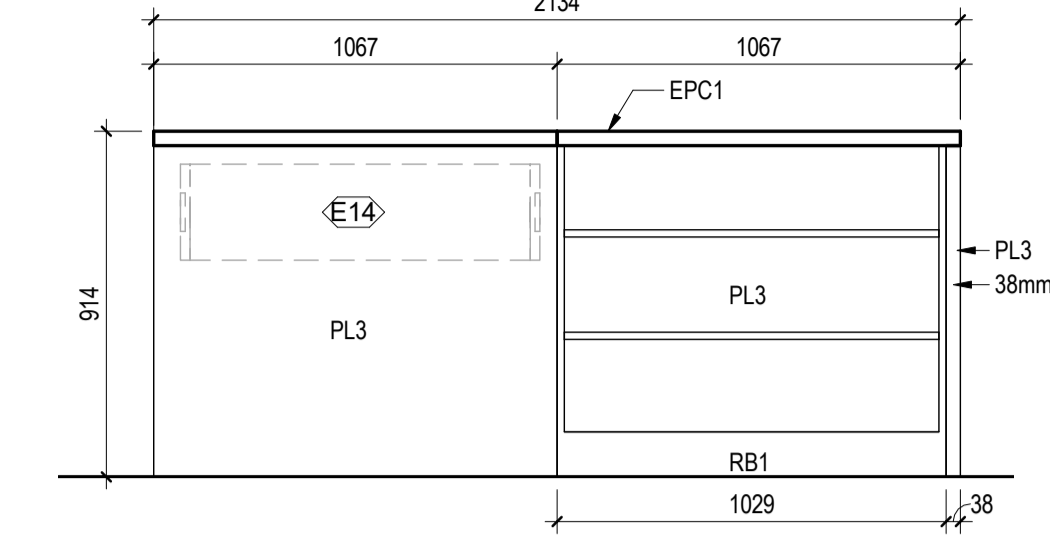
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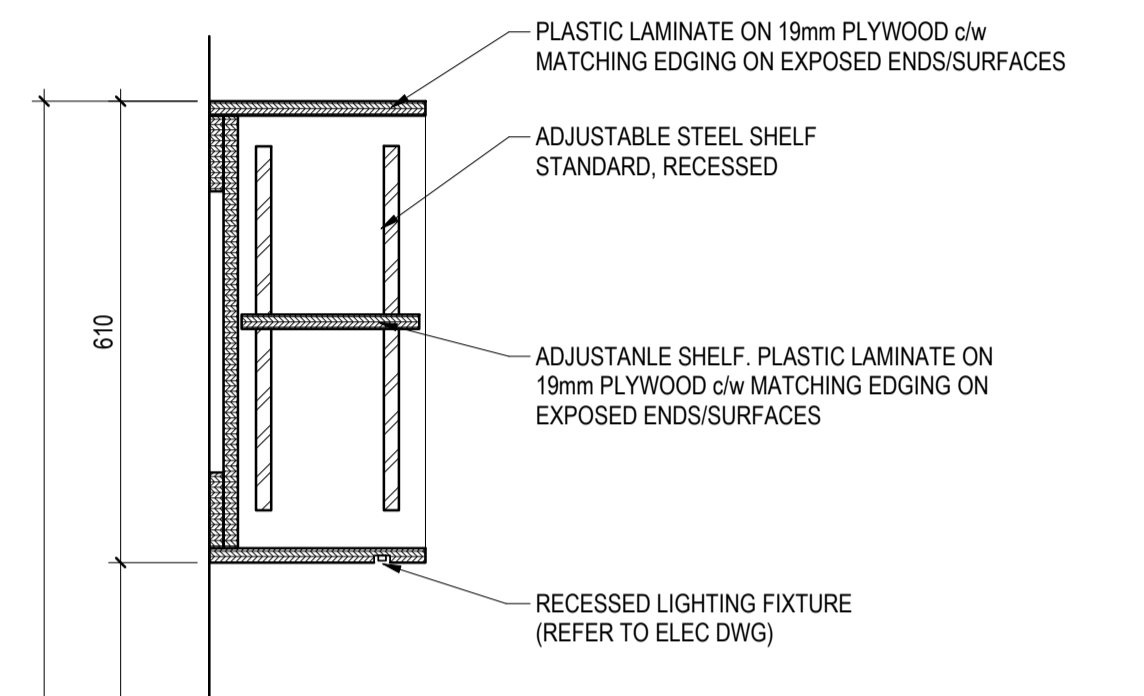
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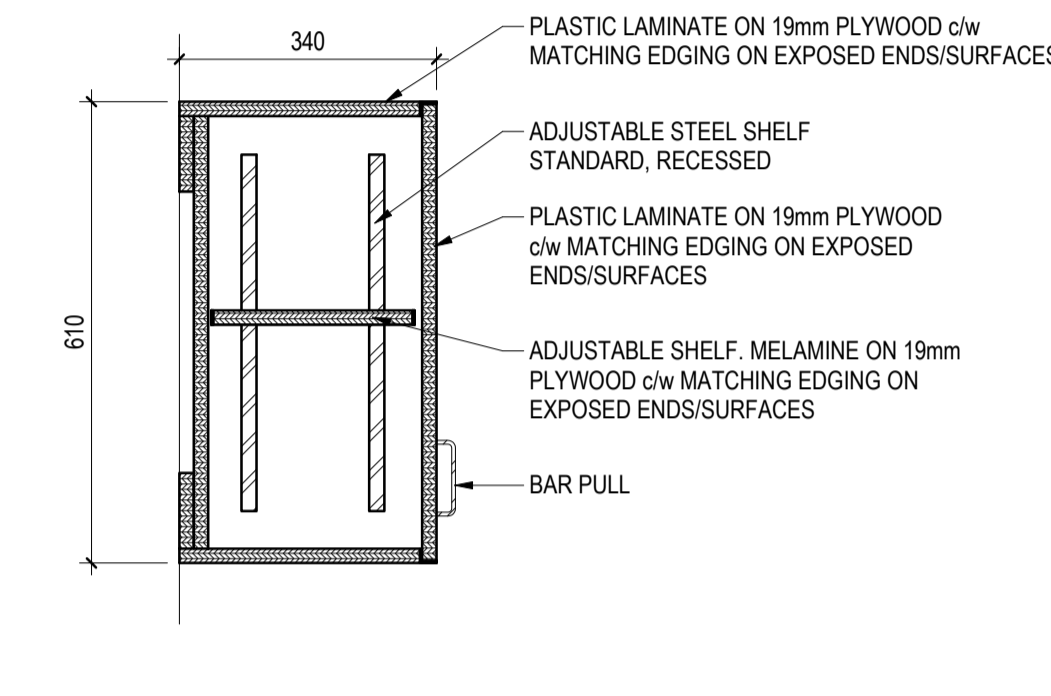
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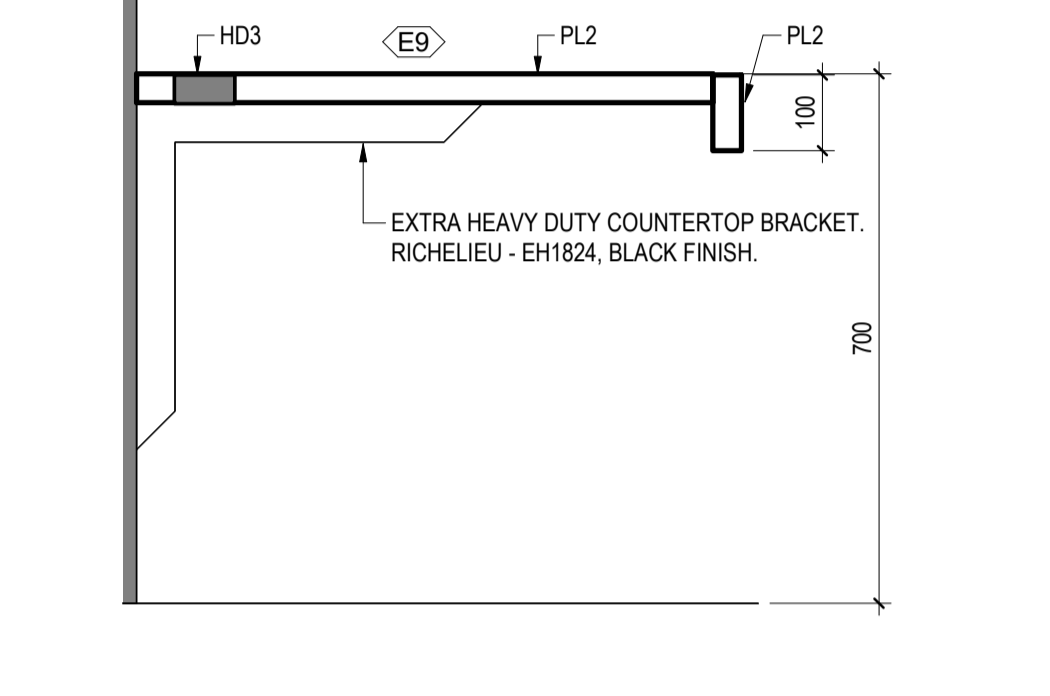
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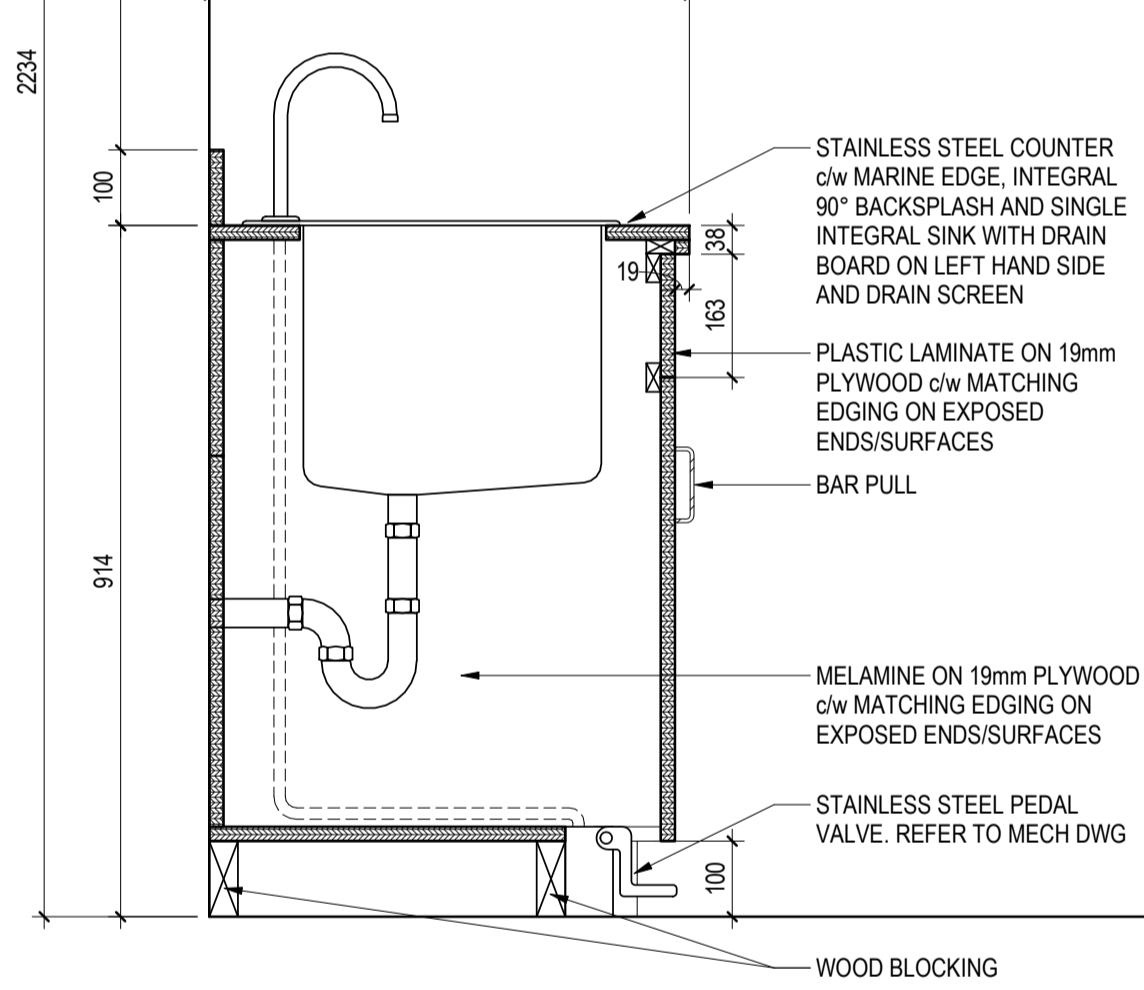
6 UPPER W/ SHELVES
A202 1:10



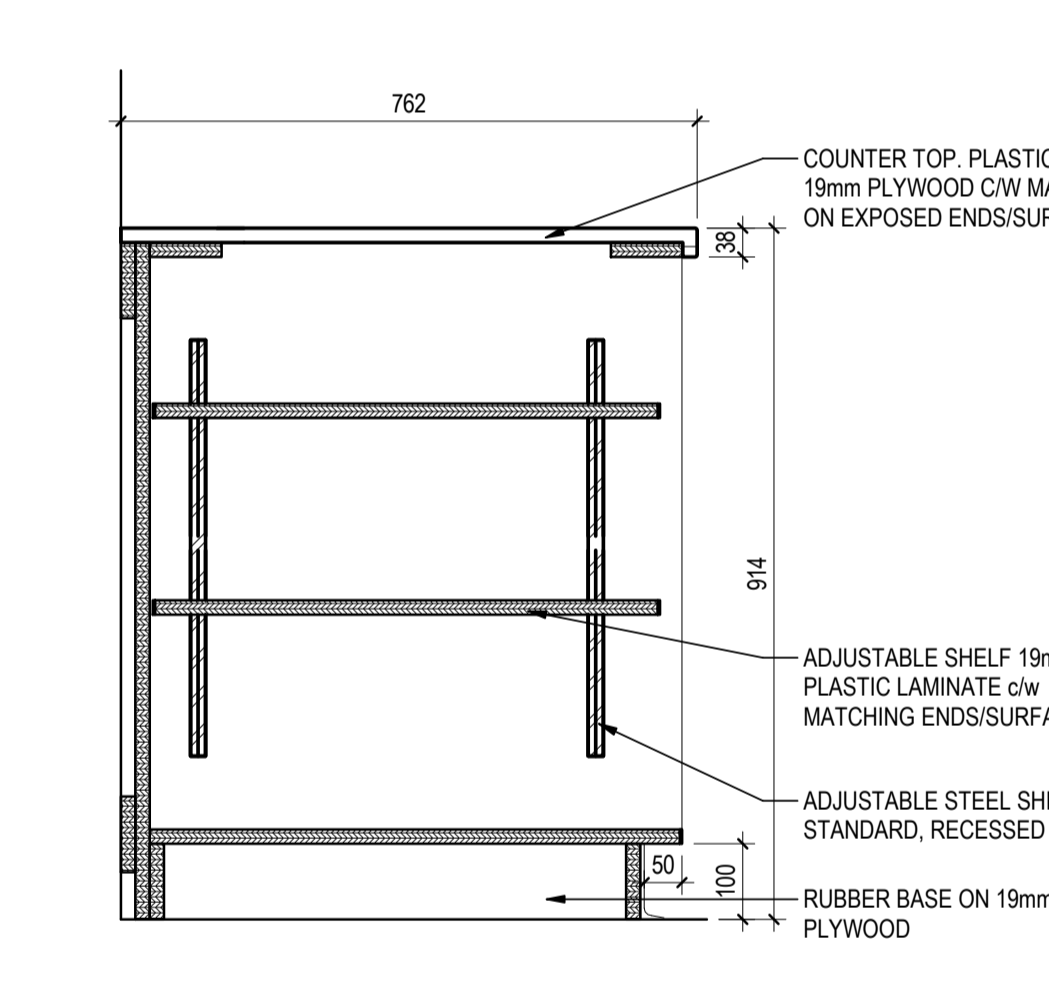
7 UPPER SHELVES W/ DOORS
A202 1:10



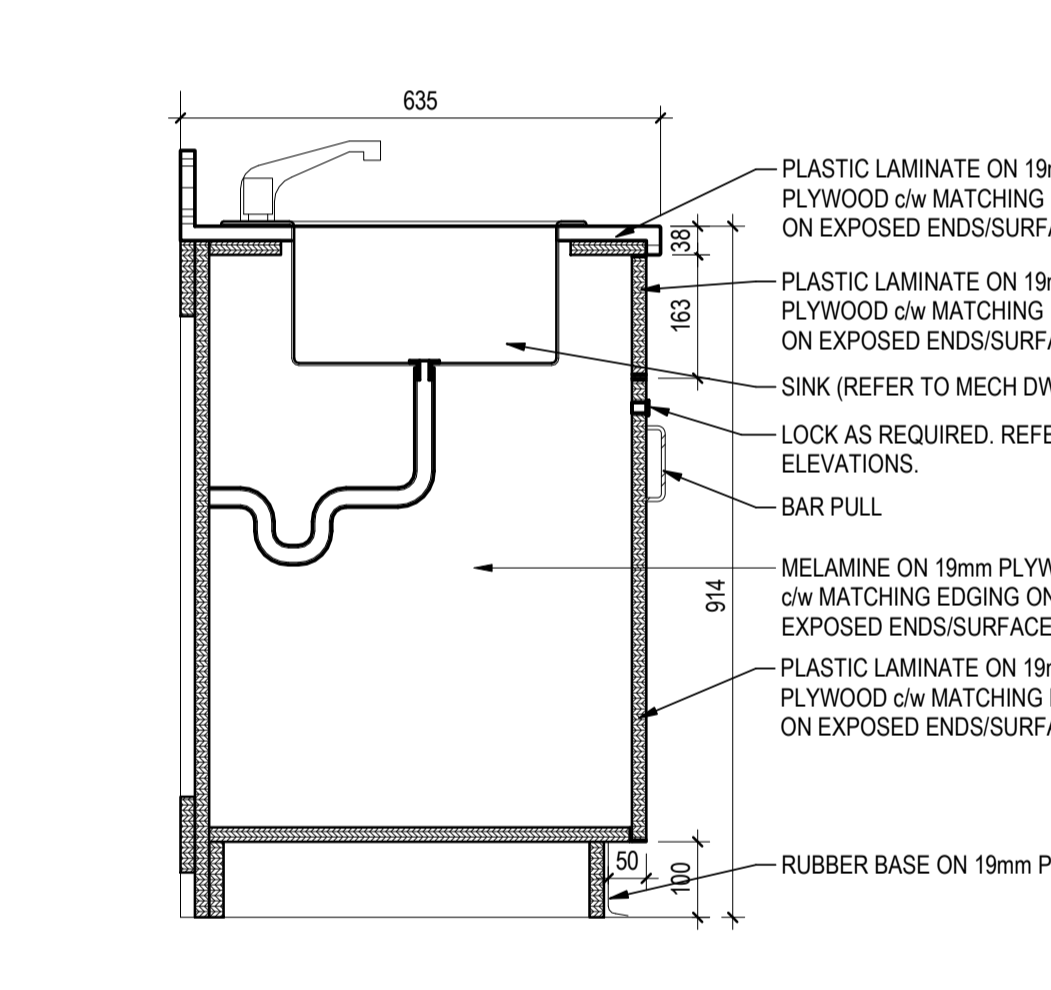
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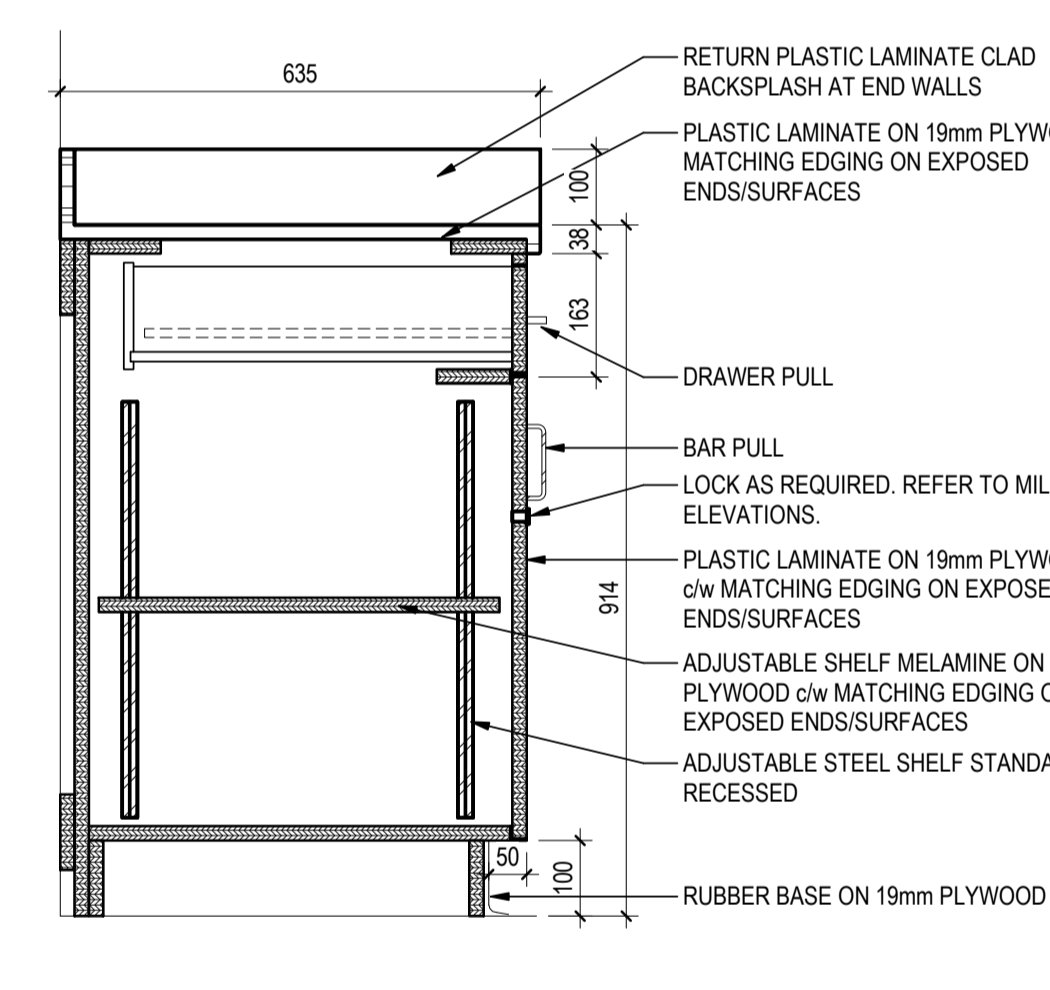
5 ROOM 203 SINK
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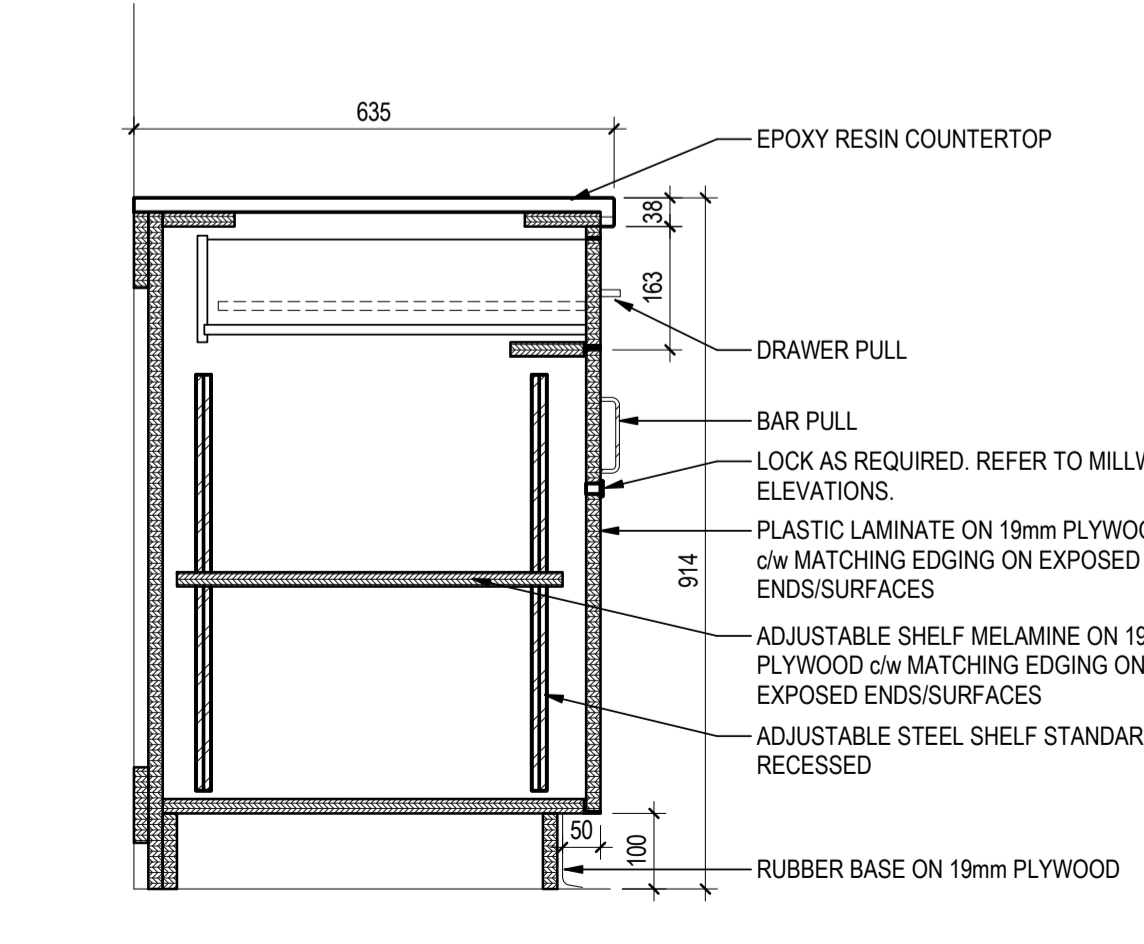
9 762mm BASE W/ SHELVES
A202 1:10



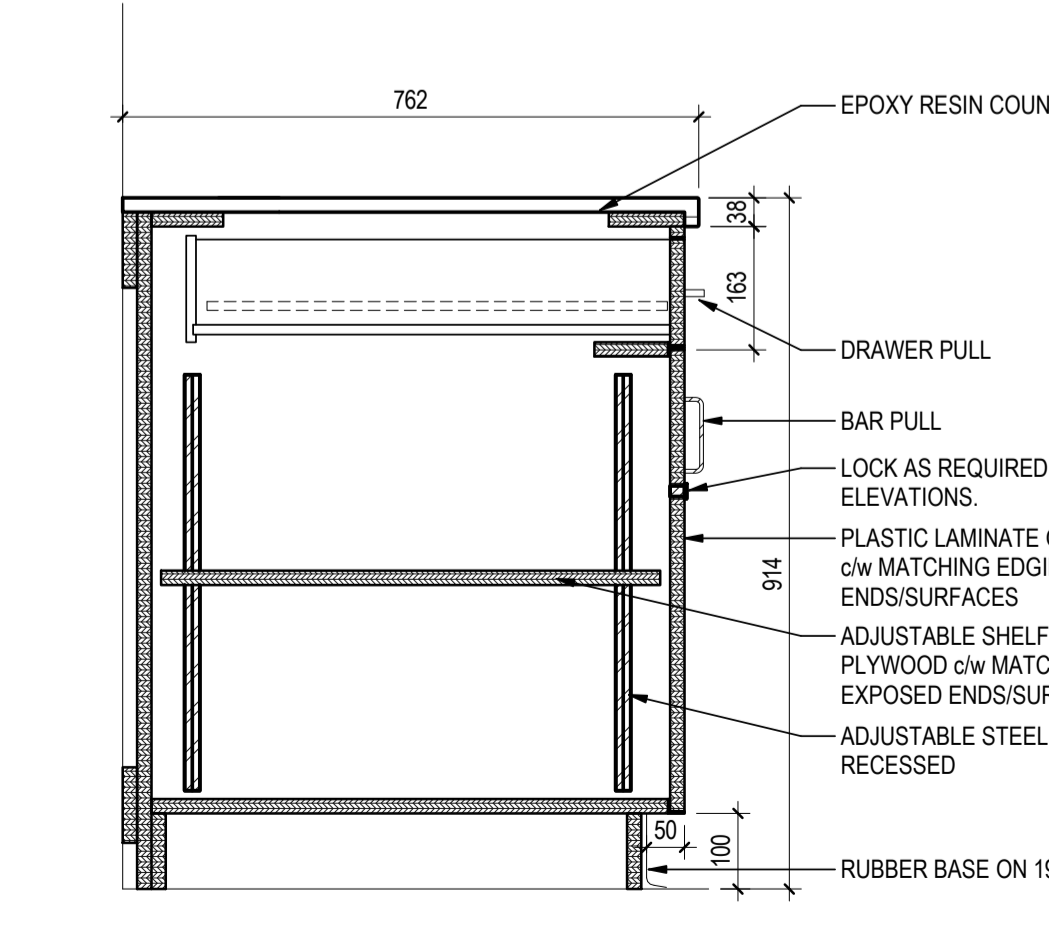
10 635mm BASE W/ SINK
A202 1:10



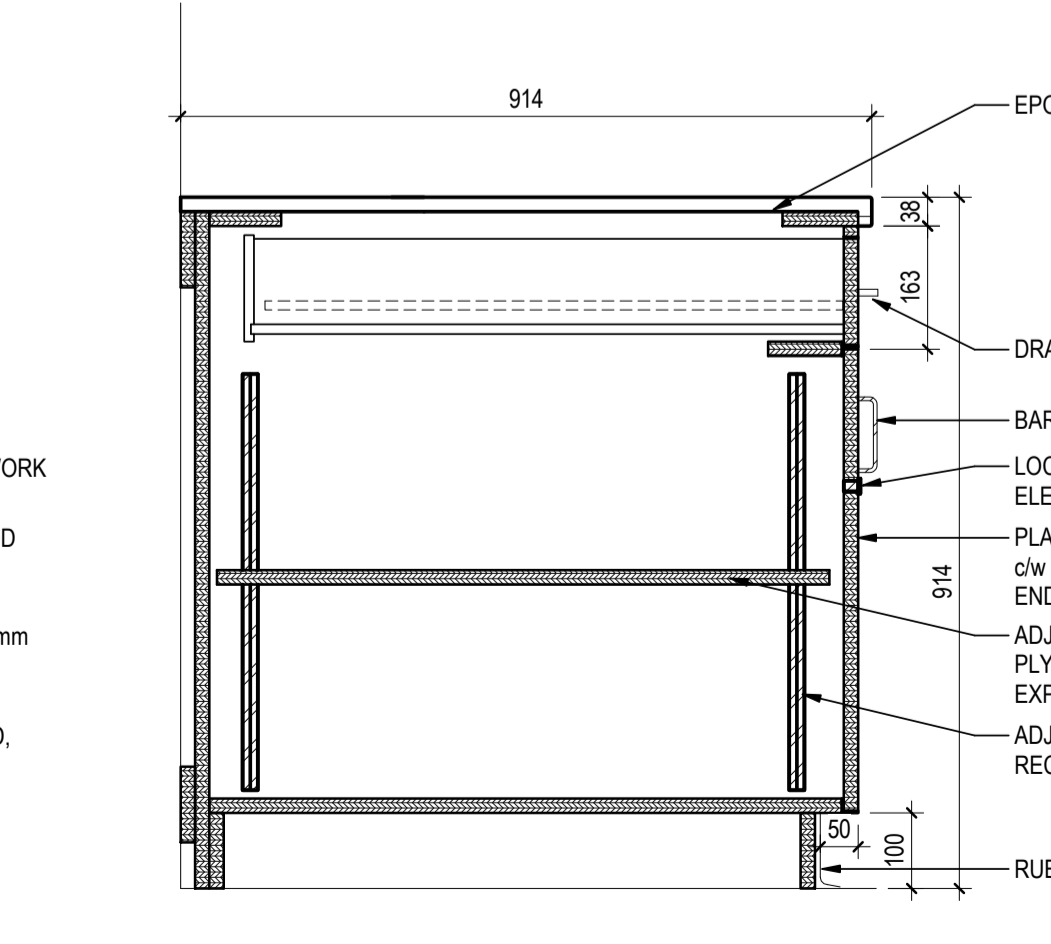
11 635mm BASE W/ BACK SPLASH
A202 1:10



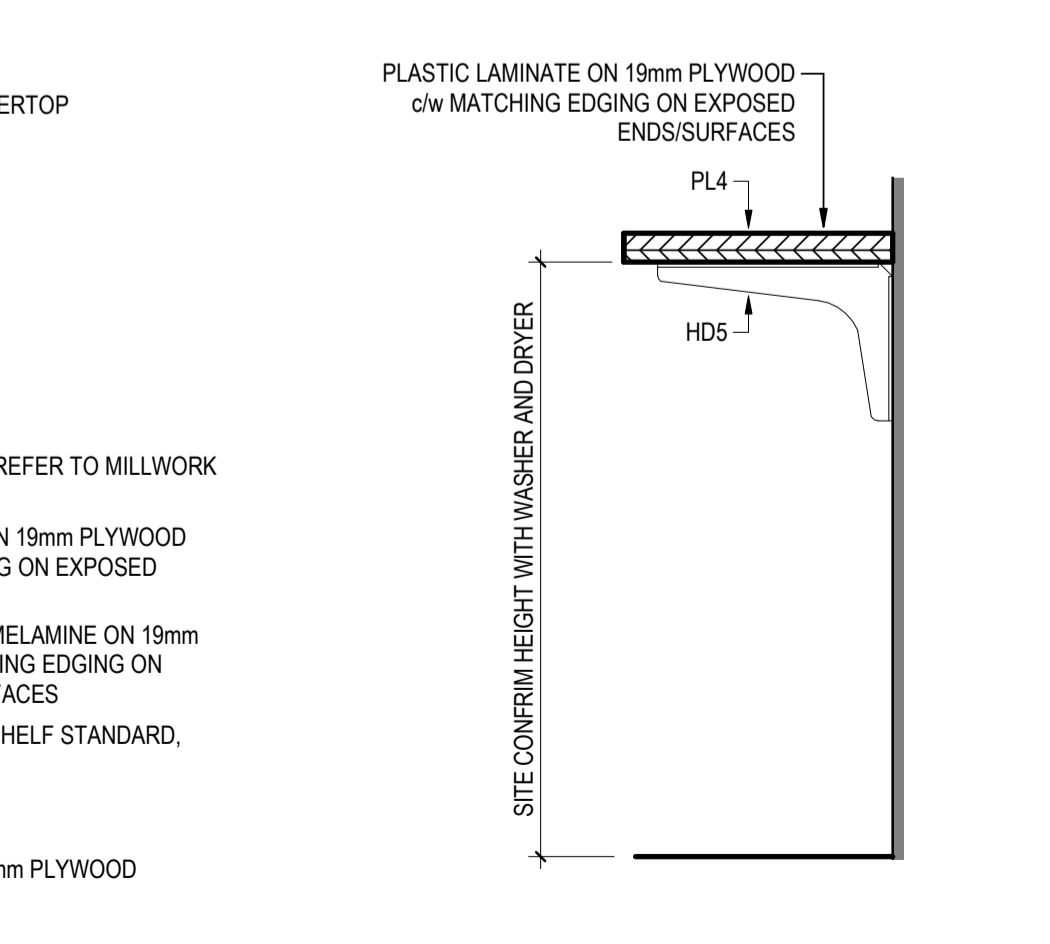
12 635mm BASE W/ DOOR AND DRAWER
A202 1:10



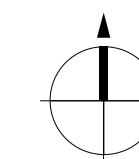
13 762mm BASE W/ DOOR AND DRAWER
A202 1:10



14 914mm BASE W/ DOOR AND DRAWER
A202 1:10



15 SHELF SECTION
A202 1:10



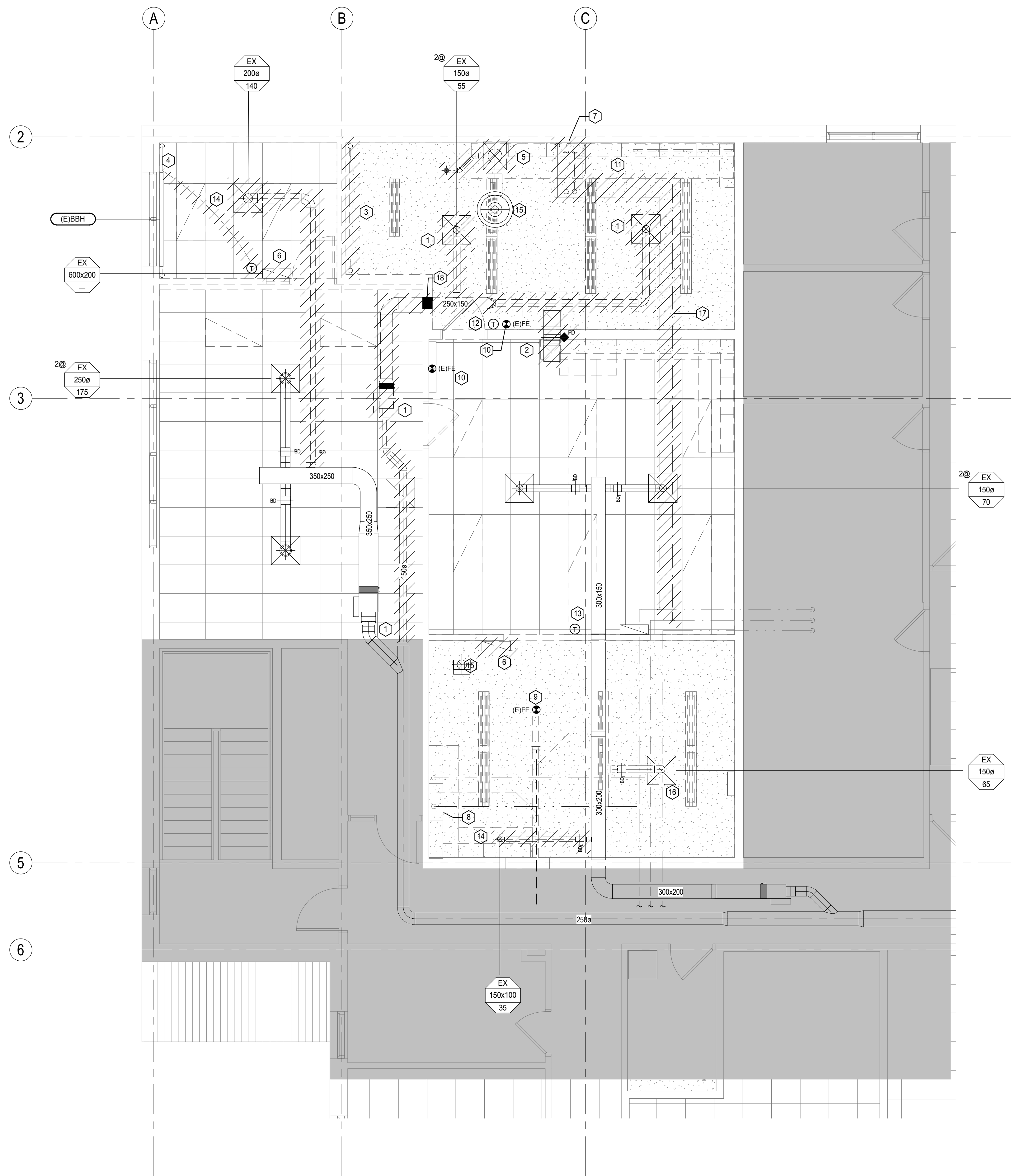
Area Not In Contract (N.I.C.)

GENERAL NOTES

1. ALL EQUIPMENT REMOVED DURING DEMOLITION TO BE TURNED OVER TO OWNER.
2. MECHANICAL CONTRACTOR IS TO CONFIRM ALL EXISTING SYSTEMS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.

KEYNOTES

1. EXISTING 250x100 SUPPLY AIR DUCT, EXISTING TERMINAL BOX AND ASSOCIATED DIFFUSERS TO BE REMOVED BACK TO LOCATION SHOWN AND CAPPED. ASSOCIATED FIRE DAMPER, DUCT ACCESSORIES, SECURITY SCREEN AND DUCT HANGERS TO BE REMOVED.
2. EXISTING TRANSFER DUCT, ASSOCIATED SECURITY SCREEN AND FIRE DAMPER TO BE REMOVED.
3. EXISTING RADIATION CABINET, ASSOCIATED PIPING AND CONTROL AIR PIPING TO BE REMOVED. CUT AND CAP PIPING IN CEILING SPACE BELOW. PATCH AND MAKE GOOD AFFECTED SERVICES.
4. EXISTING RADIATION TO REMAIN. EXISTING THERMOSTAT TO BE REMOVED. REFER TO DRAWING M201.
5. EXISTING EXHAUST FAN DUCTWORK SERVING WETSINK AND CHEMICAL CABINETS TO BE REMOVED BACK TO CEILING SPACE. EXHAUST FAN AND CONTROLS TO REMAIN.
6. EXISTING RETURN AIR GRILLE TO BE REMOVED.
7. EXISTING THERMOSTATIC MIXING VALVE TO BE REPLACED. TEMPORARILY CAP EXISTING DOMESTIC HOT AND COLD WATER LINES FOR NEW EMERGENCY SHOWER FIXTURE.
8. EXISTING FAUCET AND SINK BASIN TO BE REMOVED AND REPLACED WITH NEW. TEMPORARILY CAP DOMESTIC WATER, SANITARY AND VENT LINES. REFER TO DRAWING M200 FOR DETAILS.
9. EXISTING FIRE EXTINGUISHER TO BE RELOCATED. REFER TO DRAWING M201 FOR NEW LOCATION.
10. EXISTING FIRE EXTINGUISHER TO REMAIN.
11. EXISTING ACID NEUTRALIZATION TANK TO BE REMOVED.
12. EXISTING THERMOSTAT TO REMAIN. REFER TO DRAWING M201 FOR NEW CONNECTIONS.
13. EXISTING THERMOSTAT TO BE RELOCATED. REFER TO DRAWING M201 FOR NEW LOCATION.
14. EXISTING SUPPLY DIFFUSER, ASSOCIATED DUCTWORK AND DUCT HANGERS TO BE REMOVED BACK TO BRANCH MAIN AND CAPPED.
15. EXISTING EXHAUST FAN LOCATED IN CEILING SPACE TO REMAIN.
16. EXISTING DIFFUSER TO BE RELOCATED TO SUIT NEW CEILING. REFER TO DRAWING M201.
17. EXISTING 150 DOMESTIC HOT AND COLD WATER LINES IN CEILING SPACE OF FLOOR BELOW TO BE REMOVED.
18. EXISTING SECURITY MESH TO BE REMOVED.



1 PARTIAL SECOND FLOOR DEMOLITION PLAN
M100 1:50

B	ISSUED FOR TENDER	JPH	BH	2019.03.08
A	ISSUED FOR 75% CLIENT REVIEW	JPH	BH	2019.01.28
Revision		By	Appd	YYYY.MM.DD

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EXISTING BUILDING RENOVATION

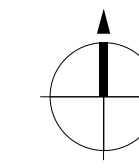
RED DEER, ALBERTA

Title
PARTIAL SECOND FLOOR DEMOLITION PLAN

Project No. 144211605 Scale As indicated

Revision B Drawing No.

Sheet 2 of 8 **M100**

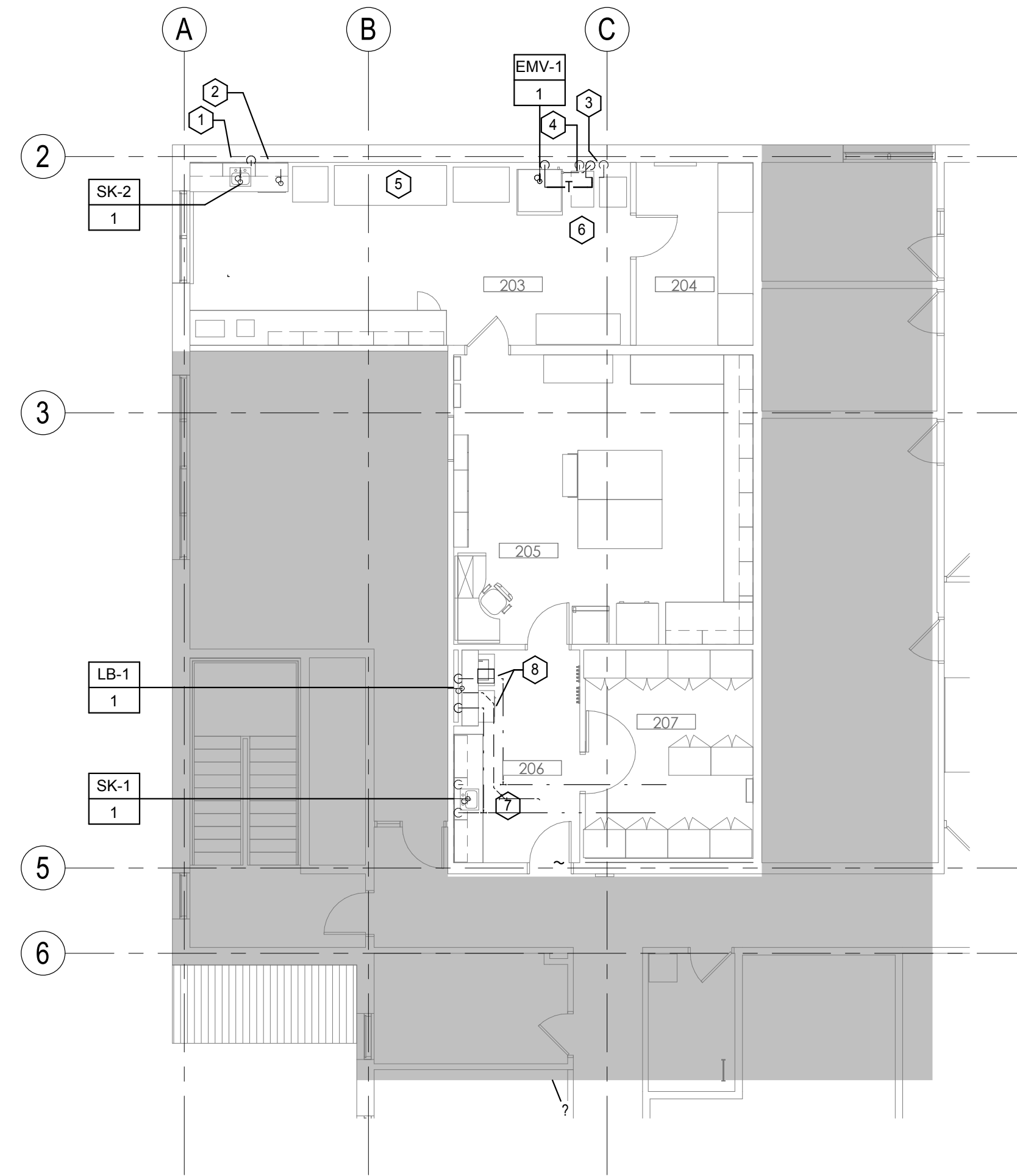


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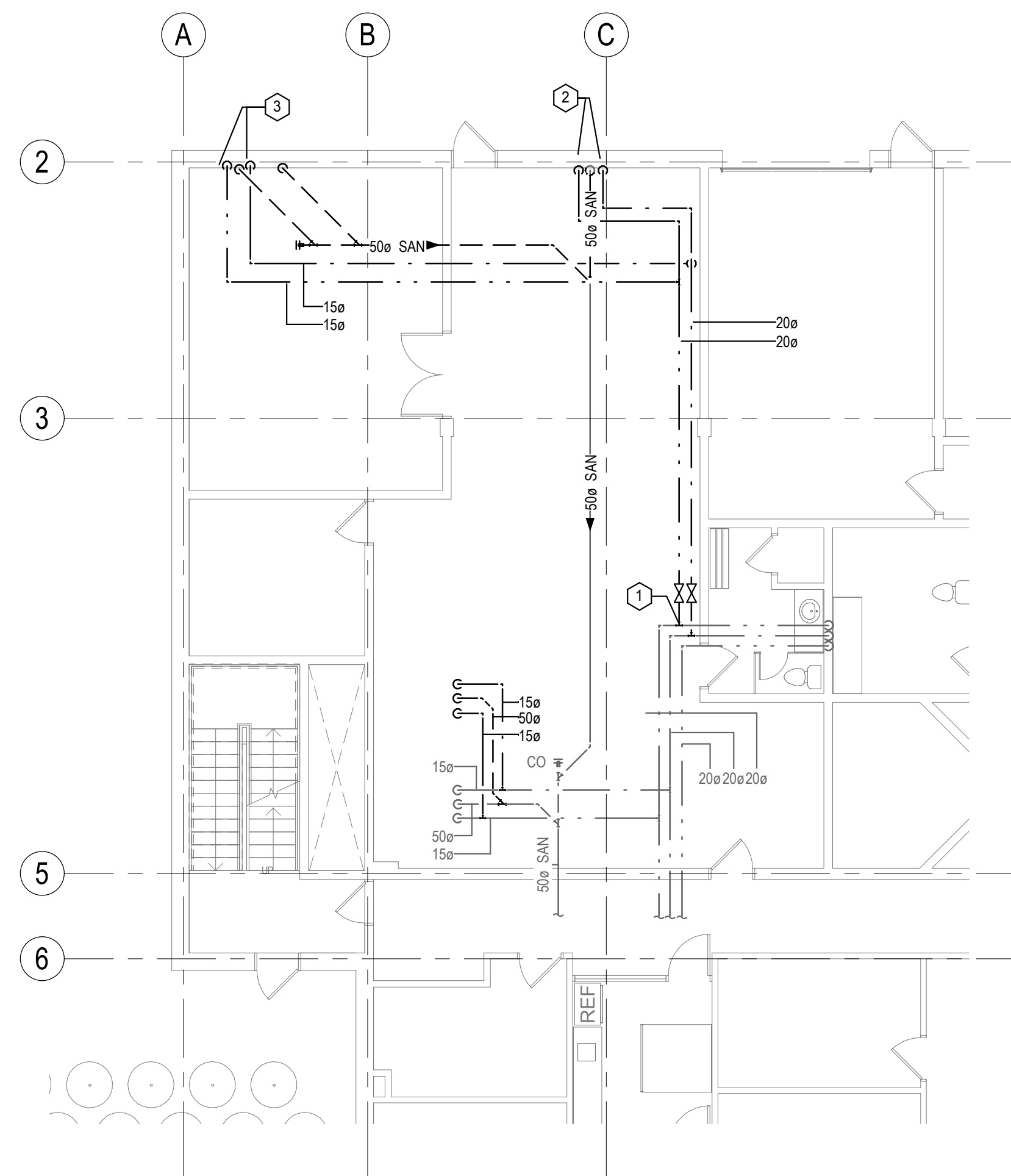
- GENERAL NOTES**
1. VENT ALL FIXTURES IN ACCORDANCE WITH THE NATIONAL PLUMBING CODE.
 2. ALL PLUMBING FIXTURES TO HAVE ISOLATION VALVES.
 3. ALL NEW PIPING TO BE COORDINATED WITH NEW AND EXISTING DUCTWORK TO AVOID CONFLICTS.
 4. INDIVIDUAL FIXTURE PIPE SIZES AS PER PLUMBING FIXTURE SCHEDULE.

- PLAN 1 KEYNOTES**
1. 150 DOMESTIC HOT AND COLD WATER FROM CEILING SPACE BELOW TO SERVE SK-2.
 2. 150 DOMESTIC HOT WATER SERVING DW-1. BRANCH OFF RISER SERVING SK-2. DW-1 DRAIN LINE TO CONNECT TO SK-2 DRAIN.
 3. EXISTING CAPPED 200 DOMESTIC HOT AND COLD WATER TO BE CONNECTED TO NEW THERMOSTATIC VALVE. NEW 250 TEMPERED WATER LINE TO SERVE EMERGENCY SHOWER SH-1.
 4. EXISTING CAPPED 500 SANITARY TO BE CONNECTED TO SH-1 DRAIN OUTLET.
 5. FUMEHOOD AND WETSINK TO BE SUPPLIED BY OWNER. CONTRACTOR TO CONNECT SANITARY FROM WETSINK TO NEW ACID DILUTION TANK.
 6. EMERGENCY SHOWER TO BE SUPPLIED BY OWNER.
 7. RECONNECT EXISTING 150 DOMESTIC HOT AND COLD WATER, SANITARY AND VENT LINES TO SERVE SK-1.
 8. WASHER AND DRYER TO BE SUPPLIED BY OWNER. PROVIDE AND INSTALL NEW LAUNDRY BOX LB-1. SANITARY STANDPIPE SERVING WASHER TO BE CW P-TRAP.

- PLAN 2 KEYNOTES**
1. CONTRACTOR TO CONNECT NEW 200 DOMESTIC HOT AND COLD WATER LINES TO EXISTING AT LOCATION SHOWN CW ISOLATION VALVES.
 2. EXISTING 200 DOMESTIC HOT AND COLD WATER RISING UP TO FLOOR ABOVE TO SERVE EMERGENCY SHOWER. SEE PLAN 1 ON THIS DRAWING.
 3. NEW 150 DOMESTIC HOT AND COLD WATER LINES RISING UP TO FLOOR ABOVE TO SERVE SK-1 AND DISHWASHER.



1 PARTIAL SECOND FLOOR PLUMBING PLAN
 M200 1:100



2 PARTIAL FIRST FLOOR PLUMBING PLAN
 M200 1:100

B	ISSUED FOR TENDER	JPH	BH	2019.03.08
A	ISSUED FOR 75% CLIENT REVIEW	JPH	BH	2019.01.28
Revision		By	Appd	YYYY.MM.DD

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 B. A. HAUGHT
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EXISTING BUILDING RENOVATION
 RED DEER, ALBERTA

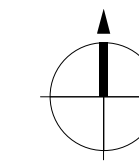
Title
 PARTIAL SECOND FLOOR PLUMBING PLAN

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144211605	As indicated
Revision	Drawing No.
B	
Sheet	M200
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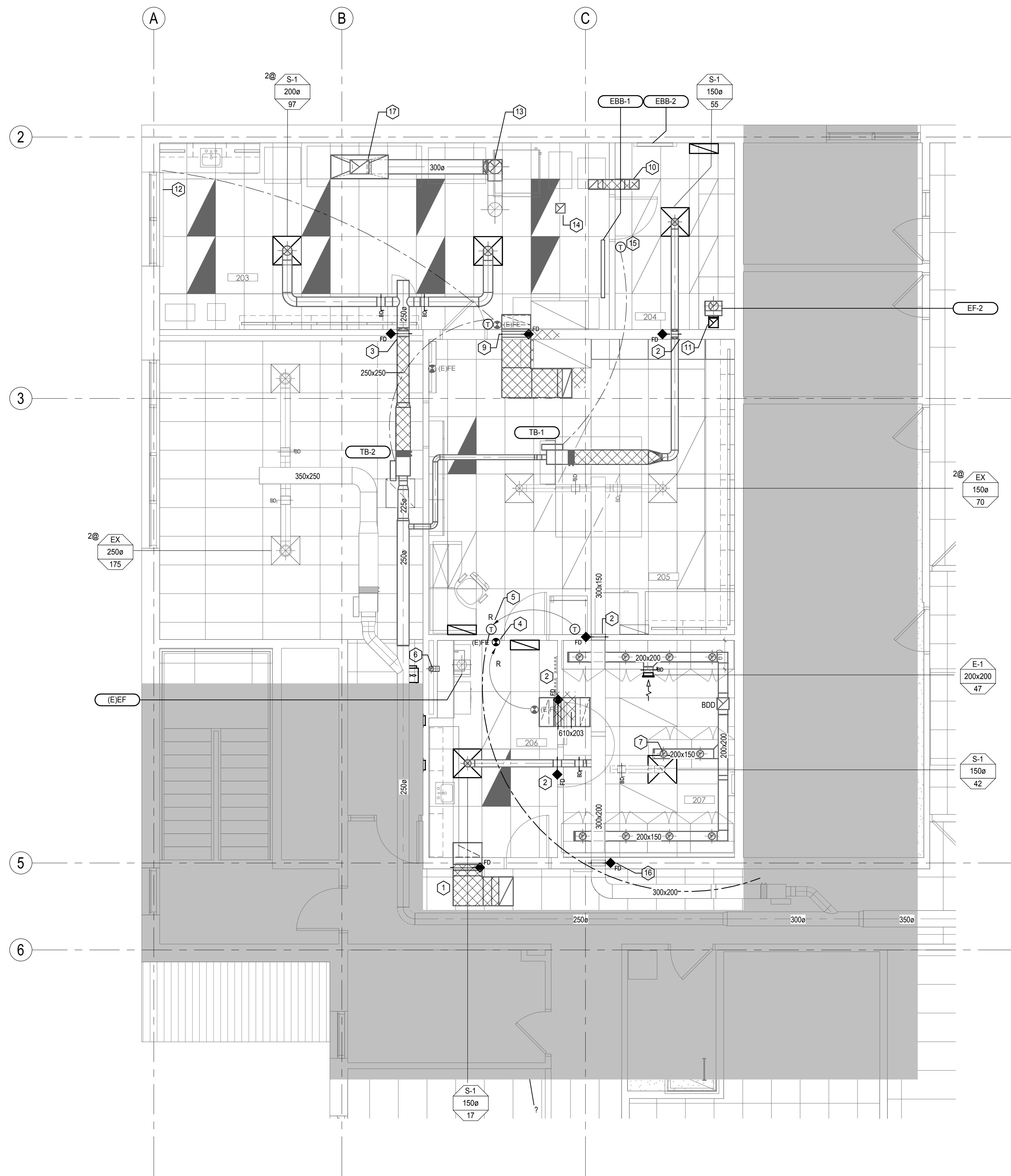
Notes

GENERAL NOTES

- BRANCH DUCTING TO DIFFUSER TO MATCH DIFFUSER NECK SIZE UNLESS NOTED OTHERWISE.
- ALL NEW DUCTWORK TO BE COORDINATED WITH EXISTING SERVICES AND STRUCTURE. INSTALL ALL NEW SERVICES AS TIGHT AS POSSIBLE TO UNDERSIDE OF STRUCTURE.
- MECHANICAL CONTRACTOR IS TO CONFIRM ALL EXISTING SYSTEMS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.
- ALL FAN SWITCHES TO BE INSTALLED NEAR LIGHT SWITCHES AND BE COORDINATED WITH ELECTRICAL.
- MAIN TRUNK DUCTS DOWNSTREAM OF TERMINAL BOXES TO BE ACOUSTICALLY INSULATED.
- ALL RETURN GRILLES TO BE 600x150, TYPE R-1 UNLESS NOTED OTHERWISE.
- ALL DUCTWORK PASSING THROUGH FIRE-RATED WALLS TO BE C/W FIRE DAMPER.
- ALL TRANSFER AIR ELBOWS SHALL BE C/W ACOUSTIC INSULATION AND TYPE T-1 GRILLES. GRILLES TO MATCH DUCT SIZE.
- ALL ELECTRIC BASEBOARD HEATERS ARE MOUNTED AT FLOOR LEVEL. CONTRACTOR TO COORDINATE WITH FURNITURE AND FINAL ARCHITECTURAL LAYOUT.

KEYNOTES

- 600x300 ACOUSTICALLY-LINED TRANSFER AIR ELBOW C/W FIRE DAMPER AND SECURITY SCREEN AT WALL PARTITION.
- INSTALL NEW FIRE DAMPER AT WALL PARTITION.
- INSTALL NEW FIRE DAMPER AND SECURITY SCREEN AT WALL PARTITION.
- EXISTING FIRE EXTINGUISHER TO BE MOUNTED ON WALL BRACKET TO LOCATION SHOWN. COORDINATE WITH ARCHITECTURE.
- EXISTING CONTROLS TO BE RELOCATED TO LOCATION SHOWN. EXTEND CONTROL AIR PIPING AS NECESSARY TO SUIT NEW LOCATION. COORDINATE WITH ARCHITECTURE AND FURNITURE.
- 750 DRYER VENT UP TO ROOF C/W LINT TRAP. REFER TO DRAWING M300 FOR CONTINUATION.
- 1000 VENT CONNECTION C/W BALANCING DAMPER. BALANCE TO 19L/s. TYPICAL FOR ALL EVIDENCE LOCKERS.
- 250x250 EXHAUST AIR DUCT UP EXHAUST FAN EE-3 ON ROOF C/W BACKDRAFT DAMPER.
- 600x200 ACOUSTICALLY-LINED TRANSFER AIR ELBOW C/W FIRE DAMPER AND SECURITY SCREEN. GRILLE TO MATCH DUCT SIZE.
- 200x200 ACOUSTICALLY-LINED TRANSFER AIR DUCT IN CEILING SPACE.
- 250x100 EXHAUST AIR DUCT UP TO ROOF C/W GRAVITY BACKDRAFT DAMPER. REFER TO DRAWING M300 FOR CONTINUATION.
- REVISE LENGTH OF RADIATION CABINET AS NECESSARY TO SUIT NEW MILLWORK. CONNECT NEW CONTROL AIR PIPING FROM EXISTING THERMOSTAT TO EXISTING CONTROL VALVE.
- CONNECT NEW EXHAUST DUCTWORK FROM WETSINK TO EXISTING DUCTWORK IN CEILING SPACE.
- NEW 200x200 EXHAUST AIR DUCT SERVING EXISTING CHEMICAL CABINETS UP TO EE-1. REFER TO DRAWING M300 FOR CONTINUATION. CONTRACTOR TO VERIFY SIZE OF EXHAUST OUTLET CONNECTION PRIOR TO FABRICATION OF DUCTWORK.
- CONTRACTOR TO PROGRAM THERMOSTAT WITH DEADBAND SETTING OF 21 - 24°C (70 - 75°F).
- INSTALL NEW FIRE DAMPER IN EXISTING SUPPLY DUCT.
- CONTRACTOR TO VERIFY SIZE OF EXHAUST OUTLET CONNECTION OF NEW WETSINK PRIOR TO FABRICATION OF DUCTWORK.



1 PARTIAL SECOND FLOOR HVAC & FIRE PROTECTION PLAN
M201 1:50

B	ISSUED FOR TENDER	JPH	BH	2019.03.08
A	ISSUED FOR 75% CLIENT REVIEW	JPH	BH	2019.01.28
Revision		By	Appd	YYYY.MM.DD

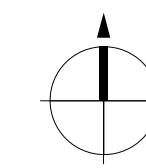
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EXISTING BUILDING RENOVATION
RED DEER, ALBERTA

Title
PARTIAL SECOND FLOOR HVAC & FIRE PROTECTION PLAN

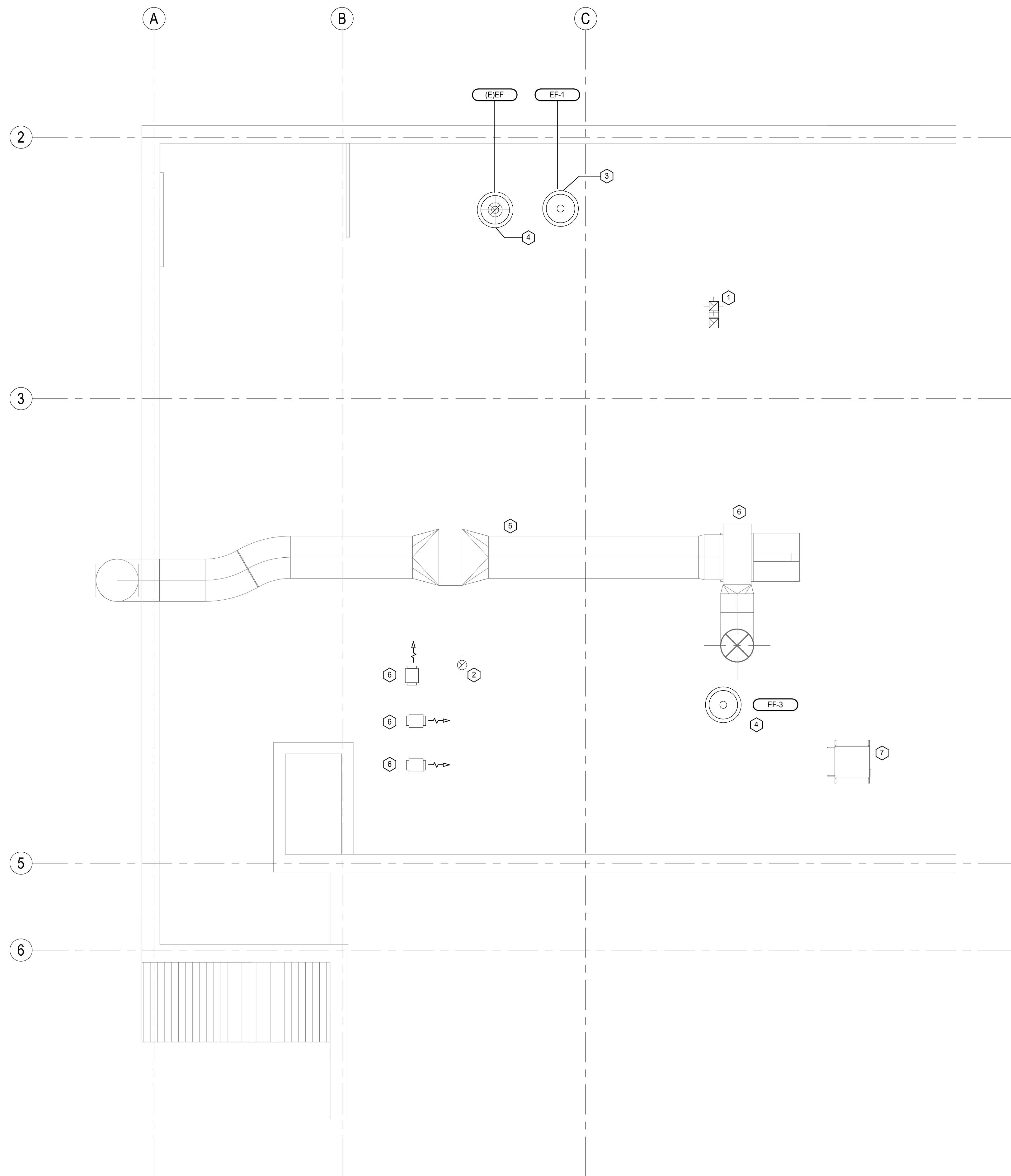
Project No.	Scale
144211605	As indicated
Revision	Drawing No.
B	
Sheet	M201
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 Area Not In Contract (N.I.C.)

GENERAL NOTES
 1. LOCATE ALL EQUIPMENT 3m FROM ROOF EDGE FOR SERVICE.


KEYNOTES
 1 INSTALL 200x200 EXHAUST GOOSENECK FOR EXHAUST FAN EF-2 C/W BIRDSCREEN.
 2 750 DRYER VENT THROUGH ROOF TO TERMINATE IN GOOSENECK C/W BIRD AND INSECT SCREEN. SEE DRAWING M201 FOR CONTINUATION.
 3 200x200 EXHAUST AIR FROM BELOW C/W BACKDRAFT DAMPER AT CEILING.
 4 250x250 EXHAUST AIR FROM BELOW C/W BACKDRAFT DAMPER AT ROOF.
 5 EXISTING EXHAUST DUCTWORK TO REMAIN.
 6 EXISTING EXHAUST FANS TO REMAIN.
 7 EXISTING AIR COOLED CHILLER TO REMAIN.



1 PARTIAL ROOF PLAN
 M300 1:50

B	ISSUED FOR TENDER	JPH	BH	2019.03.08
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 PARTIAL ROOF PLAN

Project No. 144211605 Scale As indicated
 Revision B Drawing No. M300
 Sheet 5 of 8

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RED DEER, ALBERTA

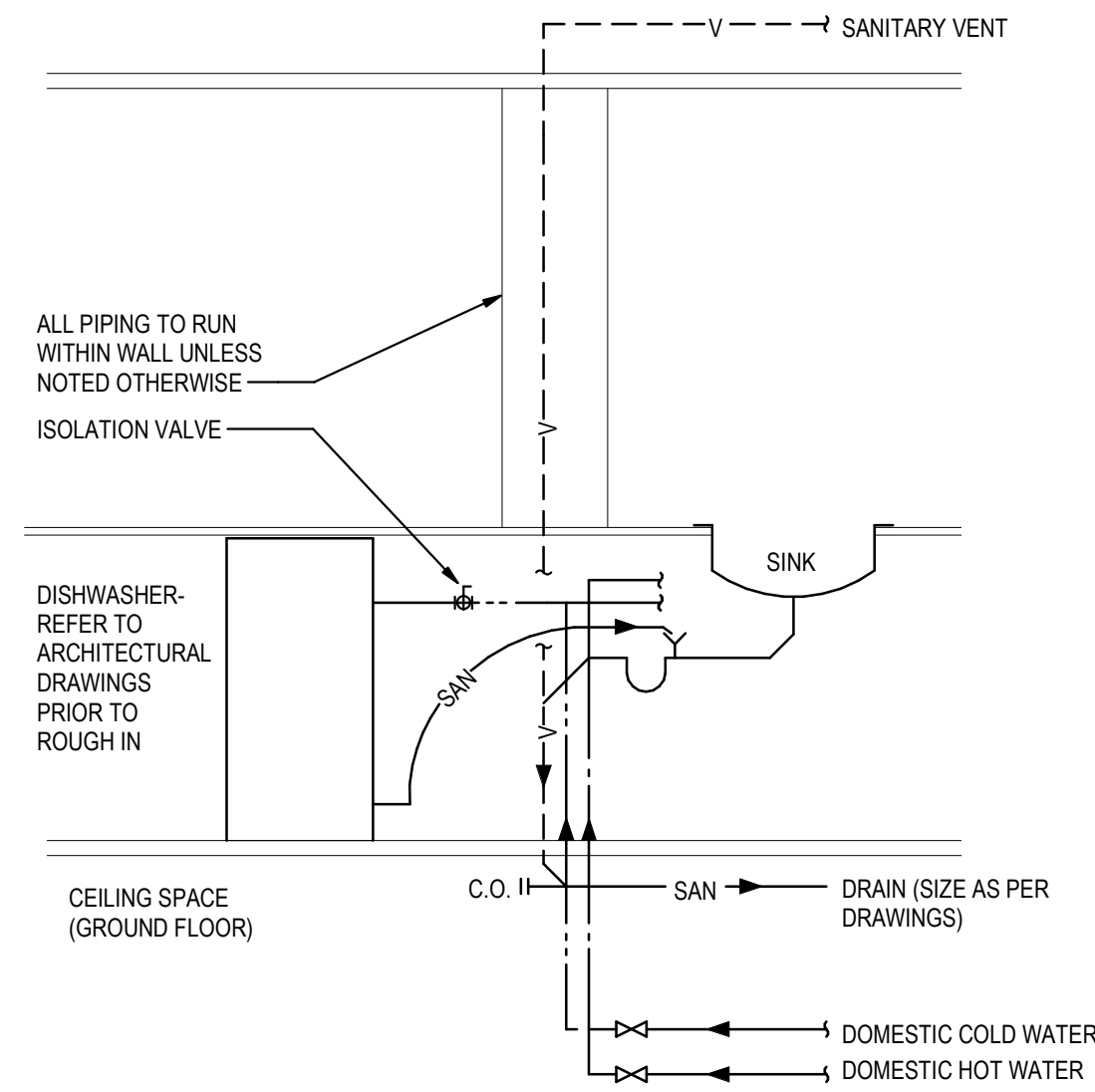
Title
MECHANICAL DETAILS

Project No. 144211605 Scale N.T.S.

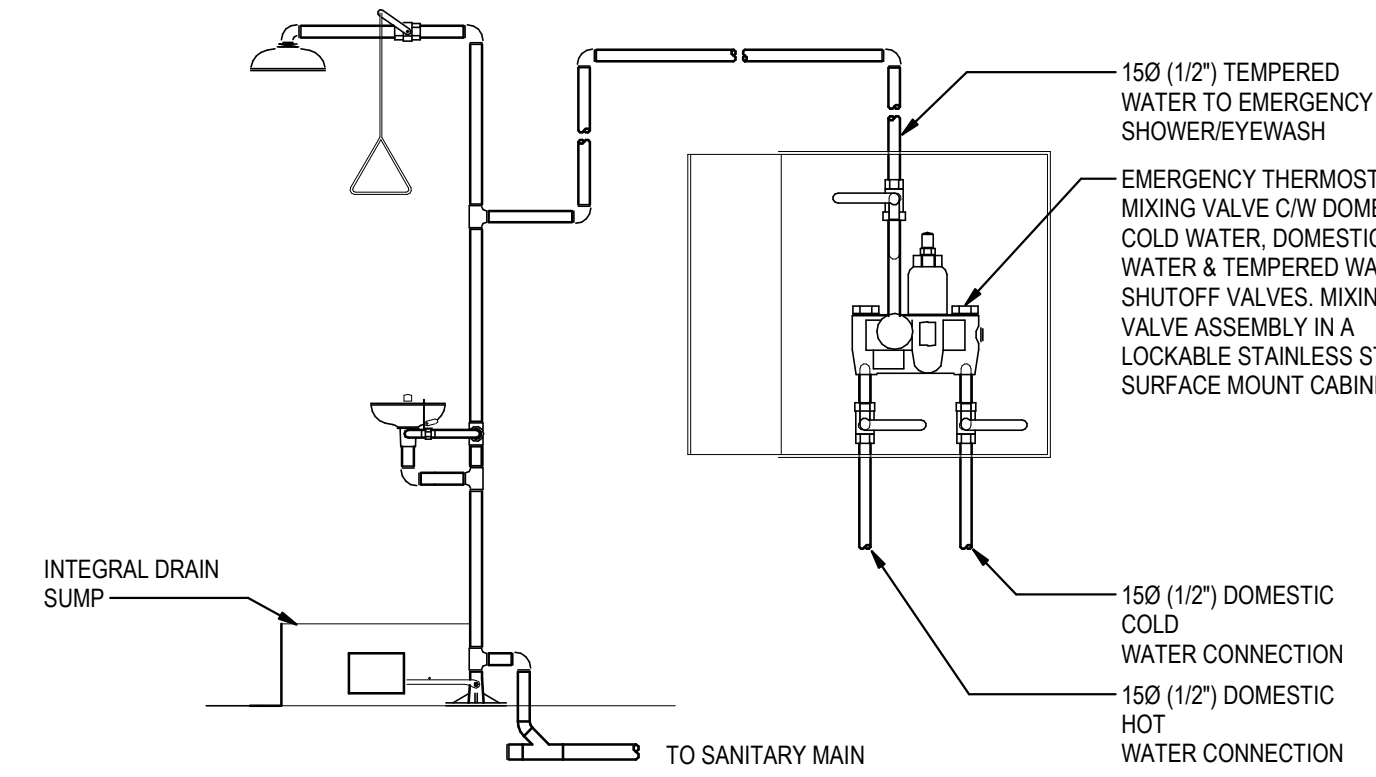
Revision B Drawing No.

Sheet 6 of 8

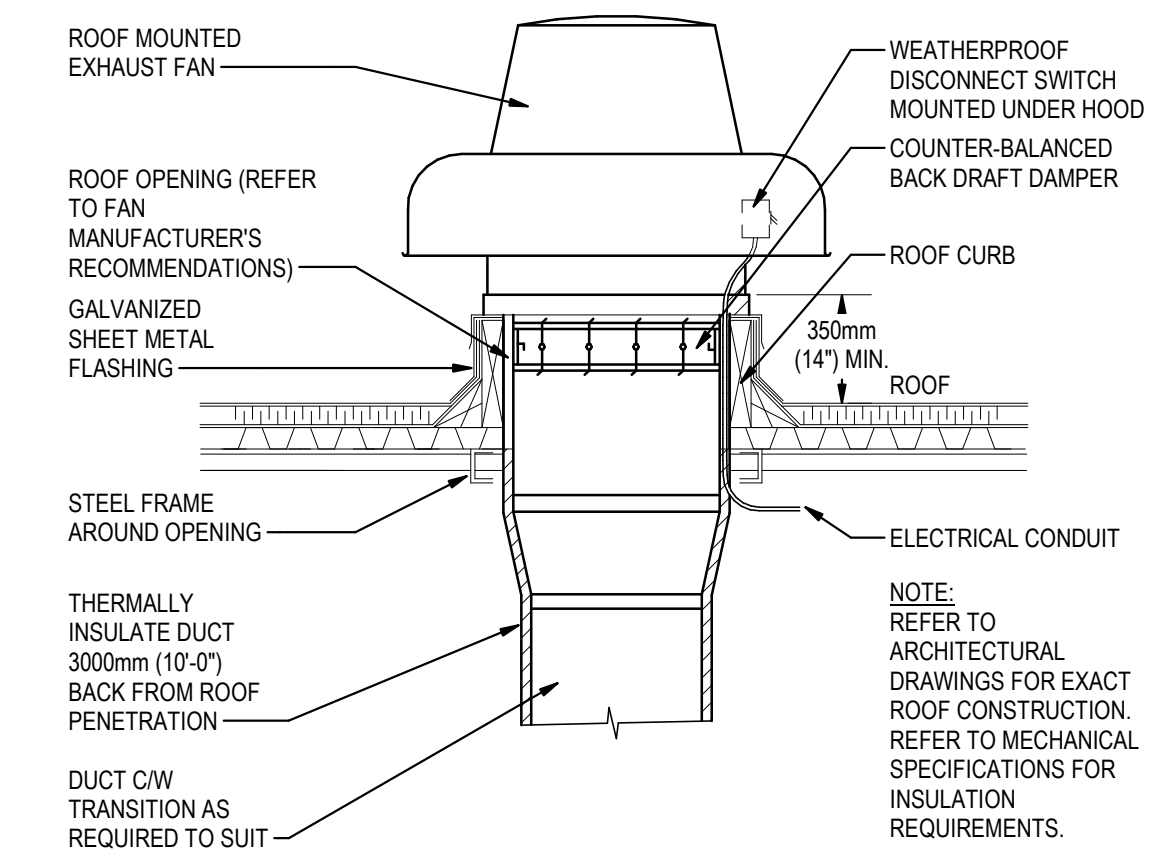
M400



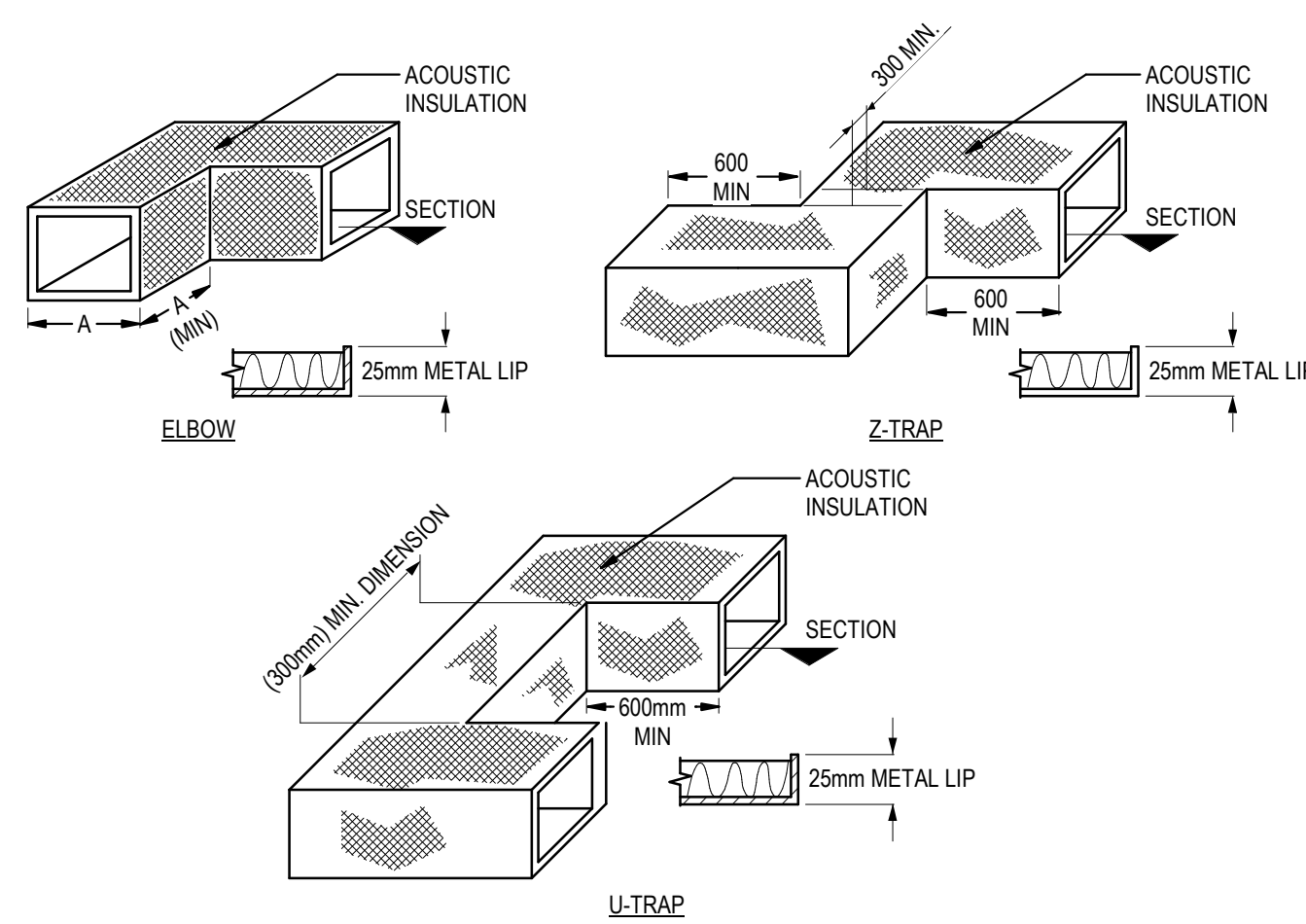
1 DISHWASHER & SINK CONNECTION DETAIL
N.T.S. M400



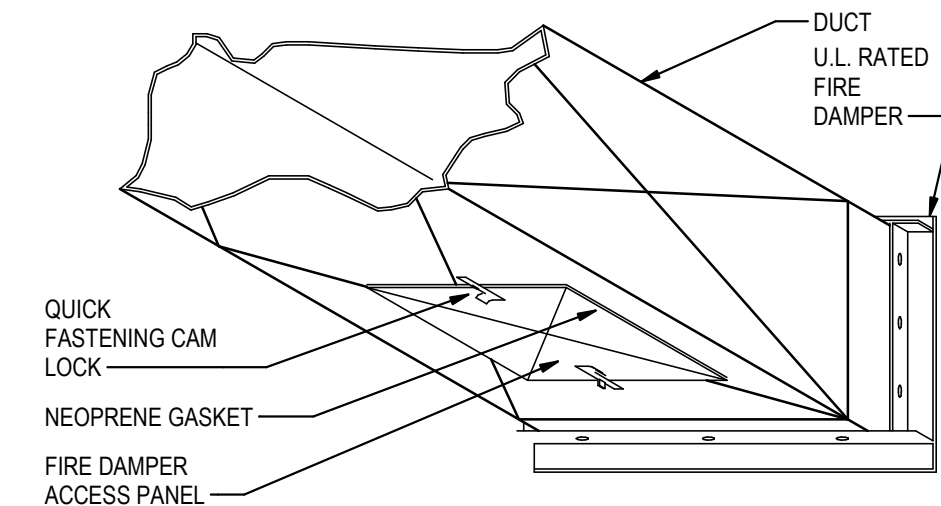
2 EMERGENCY SHOWER/EYEWASH PIPING DETAIL
N.T.S. M400



3 ROOF MOUNTED EXHAUST FAN DETAIL
N.T.S. M400

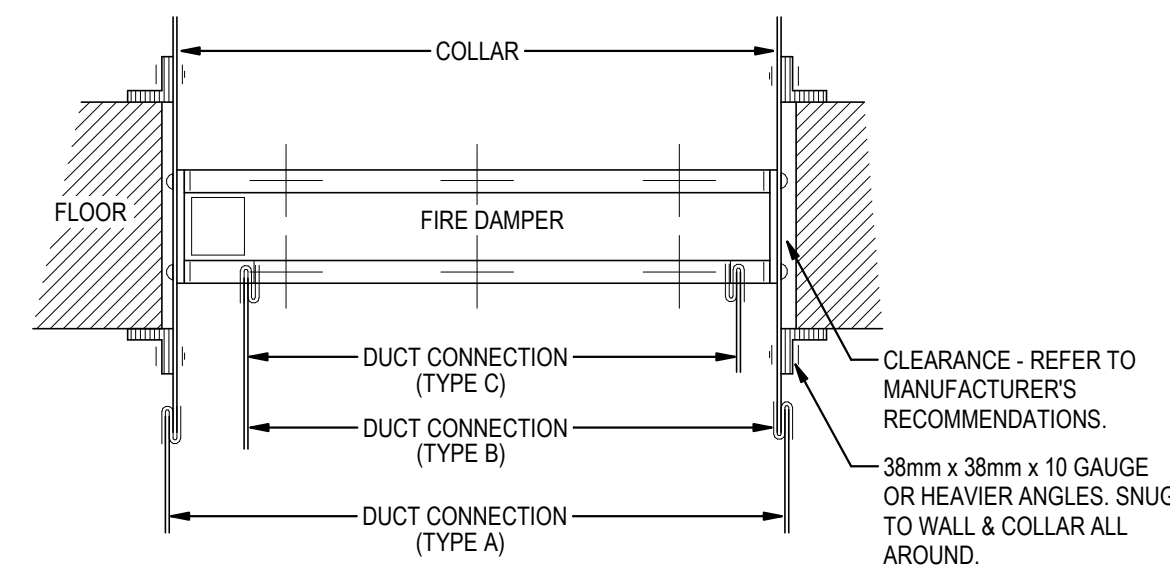


4 SOUND TRAP DETAIL
N.T.S. M400



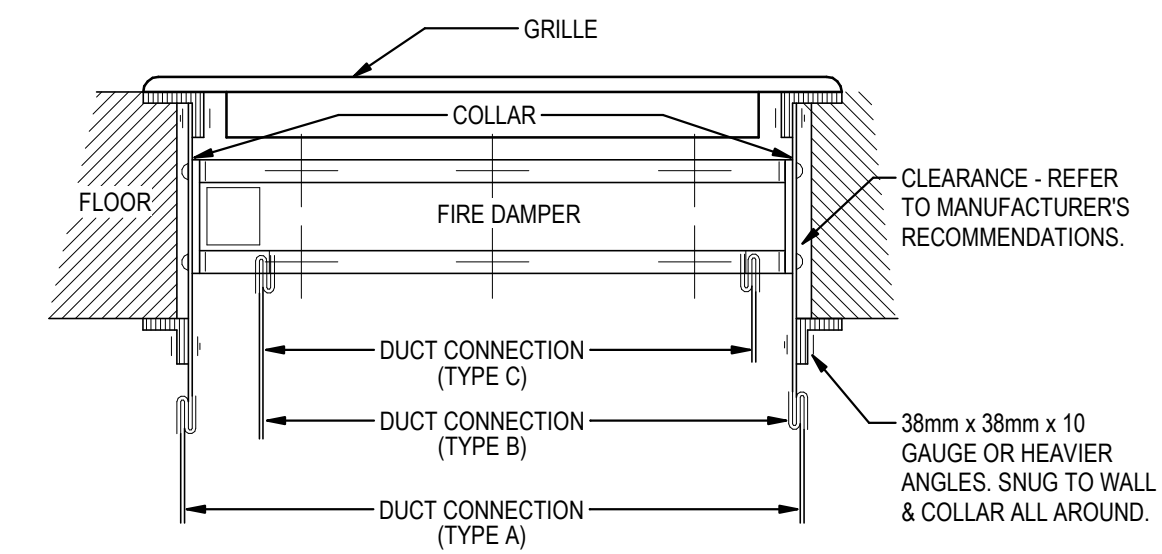
FIRE DAMPER ACCESS DETAIL

ACCESS PANEL SCHEDULE	
DUCT SIZE	ACCESS PANEL SIZE
LESS THAN 200mm WIDE	150x150 - SLEEVE MIN OF 75mm
200mm WIDE	150x150mm
250mm TO 300mm	200x200mm
300mm TO 350mm	250x250mm
OVER 350 WIDE	300x300mm



FIRE DAMPER DETAIL

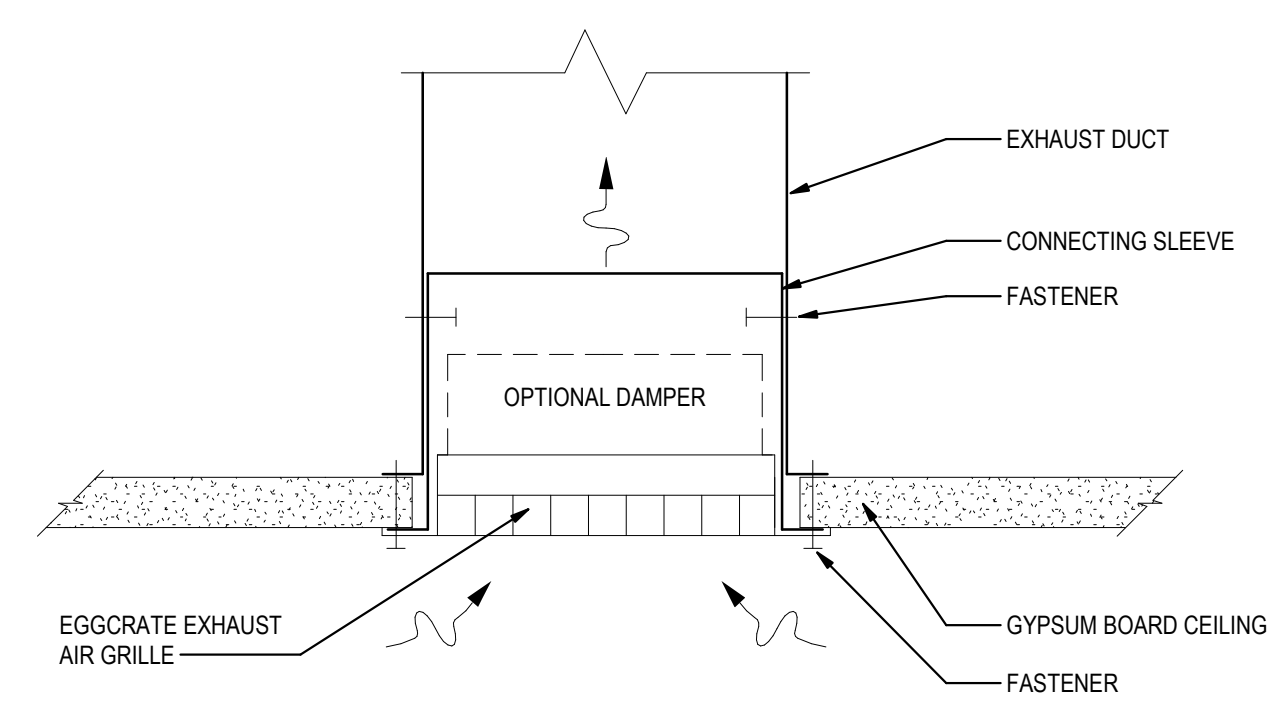
NOTE:
PROVIDE CONTINUOUS APPROVED FIRE STOPPING SEALANT BETWEEN ANGLE IRON & WALL OR FLOOR.
WHERE DUCT IS ATTACHED TO THE COLLAR WITH 'S' AND DRIVE CONNECTIONS THE GAUGE OF THE COLLAR MAY BE THE SAME AS THE GAUGE OF THE DUCT.



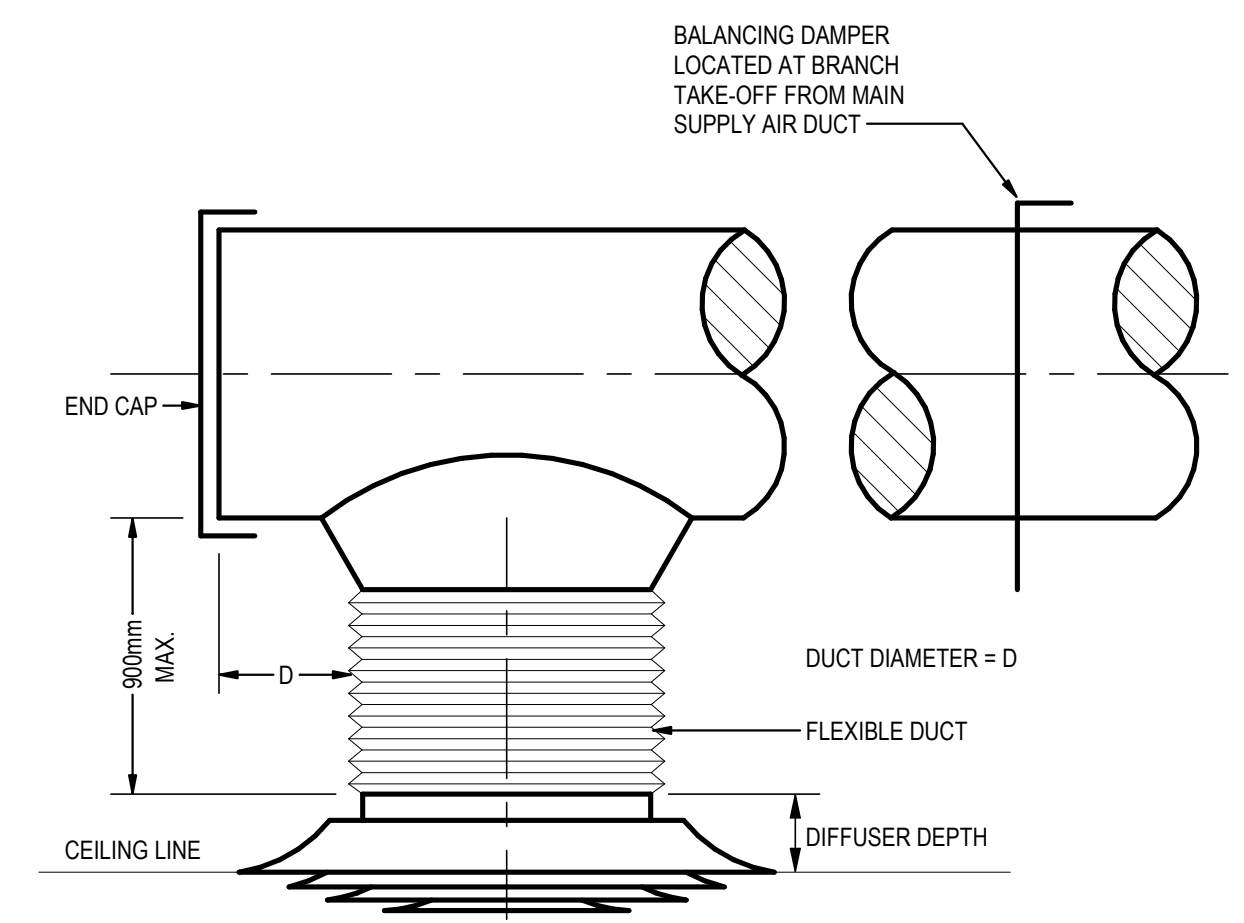
GRILLE WITH FIRE DAMPER DETAIL

NOTE:
REFER TO MANUFACTURER'S INSTALLATION DETAILS FOR VARIANCES IN DAMPER DESIGN & INSTALLATION.
WHERE DUCT IS ATTACHED TO THE COLLAR WITH 'S' AND DRIVE CONNECTIONS THE GAUGE OF THE COLLAR MAY BE THE SAME AS THE GAUGE OF THE DUCT.

5 FIRE DAMPER INSTALLATION DETAILS
N.T.S. M400



1 EXHAUST AIR GRILLE DETAIL
 M401 N.T.S.



2 DIFFUSER CONNECTION DETAIL
 M401 N.T.S.

Revision	By	Appd	YYYY.MM.DD
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A	JPH	BH	2019.01.28

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PROFESSIONAL ENGINEER
ALBERTA
B. A. HAUGT

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EXISTING BUILDING RENOVATION

RED DEER, ALBERTA

Title
 MECHANICAL DETAILS

Project No.
 144211605

Scale
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Revision
 B

Sheet
 7 of 8

M401



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200-325 25 Street SE
Calgary, AB T2A 7H8
Tel: (403) 716-8000 / Fax: (403) 716-8109
www.stantec.com

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Done At: 03.08.2019

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RED DEER, ALBERTA

Title MECHANICAL SPECIFICATIONS	
Project No. 144211605	Scale N.T.S.
Revision B	Drawing No.
Sheet 8 of 8	M500

PART 1 - GENERAL

1.1 INTENT

- THE INTENT OF THIS SPECIFICATION AND DRAWINGS IS TO PROVIDE A COMPLETE AND FULLY OPERATING MECHANICAL LAYOUT IN COMPLETE ACCORD WITH APPLICABLE CODES INCLUDING ALBERTA BUILDING CODE AND CITY BYLAWS. THE MECHANICAL CONTRACTOR SHALL MAKE PROVISIONS FOR LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE MECHANICAL WORK.
- THE MECHANICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER DRAWINGS AND SPECIFICATIONS, AS ISSUED FOR THIS PROJECT. THE DRAWINGS AND SPECIFICATIONS INDICATE INTENT ONLY. ANY DISCREPANCIES OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO TENDER CLOSE. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE LANDLORD FOR SPECIFIC INFORMATION REGARDING CONNECTIONS AND ROUGHINS.
- DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE IS TO BE BINDING AS IF CALLED FOR BY BOTH. SHOULD ANY DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS WHICH LEAVES DOUBT AS TO THE TRUE INTENT AND MEANING, OBTAIN A RULING FROM THE ENGINEER TEN (10) DAYS BEFORE SUBMITTING TENDER. FAILING THIS, ALLOW FOR MOST EXPENSIVE ALTERNATIVE.
- MECHANICAL DRAWINGS INDICATE GENERAL LOCATION AND ROUTE TO BE FOLLOWED BY MECHANICAL SYSTEMS AND DO NOT SHOW ALL STRUCTURAL AND ELECTRICAL DETAILS. IN SOME CASES, MECHANICAL SYSTEMS ARE SHOWN IN DIAGRAMMATIC OR SCHEMATIC. MECHANICAL SYSTEMS INSTALLED SHALL PROVIDE A COMPLETE OPERATING JOB. ALL PIPING, DUCTWORK, AND EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER TO CONSERVE HEADROOM, FURRING SPACES, ETC.

1.2 LIABILITY

- ASSUME RESPONSIBILITY FOR LAYOUT WORK AND FOR DAMAGE CAUSED TO THE OWNER, TENANT, OR OTHERS.
- PROTECT FINISHED AND UNFINISHED WORK FROM DAMAGE.
- TAKE RESPONSIBILITY FOR CONDITION OF MATERIALS AND EQUIPMENT SUPPLIED AND PROTECT UNTIL WORK IS COMPLETED AND ACCEPTED.

1.3 CERTIFICATES

- GIVE NOTICES, OBTAIN PERMITS, AND PAY FEES SO WORK SPECIFIED MAY BE CARRIED OUT. FURNISH CERTIFICATES IF REQUESTED, AS EVIDENCE THAT WORK CONFORMS WITH LAWS AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
- ARRANGE FOR ALL INSPECTIONS REQUIRED FOR MECHANICAL.
- NOTIFY OWNER PRIOR TO COMMENCEMENT OF WORK. OBTAIN SECURITY CLEARANCE AND WORK AUTHORIZATION PERMITS FROM OWNER FOR ALL WORKERS ENGAGED ON THIS PROJECT. MECHANICAL CONTRACTOR TO OBTAIN WORK AUTHORIZATION FROM THE LANDLORD.
- ANY INTERRUPTION OF THE MECHANICAL SERVICES TO ANY PART OF THE BUILDING SHALL BE PERFORMED AT A TIME AGREEABLE TO THE OWNER. MAKE ALL NECESSARY ARRANGEMENTS WITH THOSE CONCERNED AND INCLUDE FOR ANY OVERTIME REQUIRED TO ENSURE THERE IS NO INTERRUPTION OF SERVICES. ALL OVERTIME WORK SHALL BE CARRIED OUT WITHOUT ADDITIONAL COSTS TO THE OWNER.
- OBTAIN APPROVAL OF THE OWNER PRIOR TO CORE DRILLING THE FLOOR SLAB AND WALLS. CAULK AND SEAL SPACE BETWEEN PIPE AND SLEEVE WITH APPROVED "FIRE BARRIER" INSULATION. PROVIDE X-RAY OF CORE AREA AFTER WORKING HOURS. CUTTING AND CHIPPING MUST BE DONE AFTER WORKING HOURS.

1.4 COORDINATION OF WORK

- COOPERATE AND COORDINATE WITH OTHER TRADES ON THE PROJECT.
- REFERENCE ELECTRICAL, MECHANICAL, AND ARCHITECTURAL DRAWINGS WHEN SETTING OUT WORK. CONSULT WITH RESPECTIVE DIVISIONS IN SETTING OUT LOCATIONS FOR DUCTWORK, EQUIPMENT, AND PIPING. SO THAT CONFLICTS ARE AVOIDED AND SYMMETRICAL EVEN SPACING IS MAINTAINED. PROVIDE COORDINATION OF DRAWINGS SHOWING THE WORK OF ALL TRADES AND CONTRACTORS INVOLVED, IN AREAS OF POTENTIAL CONFLICT OR CONGESTION.
- WHERE DIMENSIONAL DETAILS ARE REQUIRED, WORK WITH THE APPLICABLE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- FULL SIZE AND DETAILED DRAWINGS SHALL TAKE PRECEDENCE OVER SCALE MEASUREMENTS FROM DRAWINGS.

1.5 CUTTING AND PATCHING

- GIVE LOCATIONS FOR HOLES FOR MECHANICAL EQUIPMENT TO THE G.C. AND PROVIDE SLEEVES REQUIRED FOR THE MECHANICAL INSTALLATIONS.
- BE RESPONSIBLE FOR THE CO-ORDINATION OF CUTTING AND PATCHING OF BUILDING STRUCTURE REQUIRED BY MECHANICAL WORK UNLESS OTHERWISE INDICATED. REVIEW EXISTING BASE BUILDING STRUCTURAL SYSTEM PRIOR TO COMMENCEMENT OF CORING AND OBTAIN APPROVAL FROM STRUCTURAL CONSULTANT IF REQUIRED FOR SPECIAL CONDITIONS (I.E. POST TENSION STRUCTURAL SLABS).
- CONFIRM WITH X-RAY, ALL REQUIRED HOLES THROUGH FLOOR. X-RAY USE FOR LOCATING IN-FLOOR REBAR AND CONDUIT TO BE DONE AFTER NORMAL WORKING HOURS. TAKE NECESSARY PRECAUTIONS TO PROTECT COMPUTER EQUIPMENT WHEN X-RAYING FLOORS.
- SEAL ALL OPENINGS AROUND PIPES THAT PENETRATE FLOORS OR FIRE RATED WALLS WITH A FIRE BARRIER MATERIAL EQUAL TO THE RATING OF THE FLOOR OR WALL.

1.6 SHOP DRAWINGS, ALTERNATIVE MATERIALS, AND EQUIPMENT

- CONTRACT DOCUMENTS ARE BASED ON MATERIALS AND EQUIPMENT SPECIFIED. APPROVAL BY ENGINEER OF EQUIPMENT SUBMITTED BY THE MECHANICAL TRADE AS EQUAL TO THAT SPECIFIED DOES NOT RELIEVE THE MECHANICAL TRADE OF ANY RESPONSIBILITY.
- CONTRACTOR TO BE COMPLETELY RESPONSIBLE FOR ASCERTAINING THAT EVERY ITEM INCLUDED IN THE TENDER COMPLIES IN ALL RESPECTS WITH THE SPECIFICATIONS AND DRAWINGS. AFTER AWARD OF TENDER, ANY ITEM OF EQUIPMENT FOUND BY THE ENGINEER NOT TO COMPLY WITH THE SPECIFICATIONS AND THE DRAWINGS, TO BE REPLACED AT NO ADDITIONAL COST WITH AN ITEM OR UNIT OF ENGINEER'S CHOICE.
- REVISIONS REQUIRED TO ADAPT ALTERNATIVES SHALL BE INCLUDED IN SUCH PROPOSALS. NO INCREASE IN THE CONTRACT PRICE WILL BE CONSIDERED TO ACCOMMODATE THE USE OF EQUIPMENT OTHER THAN THAT SPECIFIED.
- SUBMIT SHOP DRAWINGS IN PDF FORMAT TO ENGINEER ON ALL EQUIPMENT SPECIFIED IN SPECIFICATIONS OR DRAWINGS FOR ENGINEER'S REVIEW. DO NOT ORDER EQUIPMENT OR MATERIALS UNTIL ENGINEER HAS REVIEWED SHOP DRAWINGS.
- COORDINATE EXACT LOCATIONS OF NEW EQUIPMENT IN CEILING PLENUM PRIOR TO ORDERING. IF ANY DISCREPANCIES TO THAT SHOWN, COORDINATE WITH ENGINEER. ENSURE SPACE IS PROVIDED FOR COMPLETE SERVICEABLE UNITS.

1.7 GUARANTEE

- PROVIDE THE OWNER WITH A WRITTEN GUARANTEE WARRANTING APPARATUS FURNISHED TO REMAIN IN SERVICEABLE CONDITION FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE BY THE OWNER.

1.8 STANDARD OF MATERIALS AND WORKMANSHIP

- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE STANDARDS OF THE EXISTING PREMISES AS A MINIMUM AND AS SUPPLEMENTED HEREIN.
- MAKE AND QUALITY OF MATERIALS USED ARE SUBJECT TO APPROVAL BY THE ENGINEER AND TENANT. REMOVE CONDEMNED MATERIALS AND INSTALL SUITABLE MATERIALS IN THEIR PLACE.
- MATERIALS SHALL BE NEW AND OF UNIFORM PATTERN THROUGHOUT, WHEN SPECIFICALLY IDENTIFIED IN THIS SPECIFICATION. THIS IS FOR THE PURPOSE OF ESTABLISHING A STANDARD OF QUALITY OF MATERIALS AND WORKMANSHIP AND NOT TO LIMIT SELECTION.
- WORKMANSHIP SHALL FOLLOW THE BEST TRADITION AND TRADESMANSHIP. EMPLOY ONLY TRADESMEN PROPERLY LICENSED FOR WORK REQUIRING TRADESMAN WITH SPECIAL SKILL.

1.9 OWNER'S STOCK

- SOME ITEMS OF MECHANICAL EQUIPMENT MAY BE AVAILABLE FROM THE OWNER'S STOCK.

- PRIOR TO SUBMITTING THE TENDER PRICE, REVIEW WITH OWNER WITH THE LIST OF EQUIPMENT WHICH ITEMS ARE AVAILABLE FOR USE ON THIS PROJECT.

- ALL RE-USED EQUIPMENT SHALL BE FUNCTIONAL AS IF NEW, AND SHALL BE COVERED BY STANDARD ONE (1) YEAR WARRANTY.

1.10 RECORD DRAWINGS

- KEEP ON SITE AN EXTRA SET OF WHITE PRINTS AND SPECIFICATIONS, RECORDING CHANGES AND DEVIATIONS DAILY.
- UPON COMPLETION OF WORK, SUBMIT RECORD DRAWINGS TO THE ENGINEER. THESE MUST BE SUBMITTED TWO (2) WEEKS AFTER SUBSTANTIAL COMPLETION. FAILURE TO SUBMIT DRAWINGS WILL RESULT IN THE WORK BEING DONE BY THE OWNER AND THE COST DEDUCTED FROM FINAL PAYMENT.
- ONE (1) APPROVED "AS-BUILT" WILL BE FORWARDED TO THE OWNER. INCLUDE COST OF \$600.00 FOR TRANSPORTER OF "AS-BUILT" INFORMATION TO CAD AND FORWARDING OF RECORD INFORMATION BY THE CONSULTANT.

1.11 OPERATING AND MAINTENANCE MANUALS

- ONE WEEK PRIOR TO ACCEPTANCE OF THE PROJECT, PROVIDE THREE (3) 215mm X 280mm CAPACITY, EXPANDING SPINE CATALOGUE BINDERS WITH GREEN VINYL COVERS WITH PRINTED DESCRIPTION IN FRONT AND SPINE. DESCRIPTION SHALL INCLUDE: OPERATING AND MAINTENANCE MANUAL - PROJECT NAME AND LOCATION - MECHANICAL CONSULTANT - MECHANICAL CONTRACTOR - DATE.

- INDEX BINDER ACCORDING TO THE FOLLOWING SYSTEM:

- 2.1. TAB-1.0 MECHANICAL SYSTEMS:**
TITLE PAGE WITH CLEAR PLASTIC PROTECTIVE COVER.
- 2.2. TAB-1.1 LIST OF MECHANICAL DRAWINGS:**
- 2.3. TAB-1.2 SYSTEM DESCRIPTIONS:**
SYSTEMS. INCLUDE DETAILED SYSTEM DESCRIPTION, WITH INDIVIDUAL COMPONENTS DESCRIBED, EXPLANATION OF HOW COMPONENTS INTERFACE WITH OTHERS AND TO THE COMPLETE SYSTEM. LOCATION OF THERMOSTATS, CONTROLLERS OR OPERATING VARIANCES, AND CONTROLLER OPERATING SETPOINTS.
- 2.4. TAB-1.3 OPERATING DIVISION:**
PROVIDE COMPLETE AND DETAILED OPERATION OF MAJOR COMPONENTS. PROVIDE INFORMATION ON LOCATIONS OF COMPONENTS. HOW TO ENERGIZE SWITCHES AND CONTROLS. HOW COMPONENTS INTERFACE WITH OTHER COMPONENT. OPERATION OF CONTROLS INCLUDING OPERATIONAL SEQUENCE, OPERATIONAL CHANGES FOR SUMMER OR WINTER OPERATION, HOW TO ACCOMPLISH THE CHANGEOVER, COMPLETE TROUBLE SHOOTING SEQUENCE, EMERGENCY OPERATING SEQUENCES IN EVENT OF MAJOR COMPONENT FAILURE, AND SAFEGUARDS TO INDICATE IF EQUIPMENT GOES OFF-LINE.

- 2.5. TAB-1.4 MAINTENANCE AND LUBRICATION DIVISION:**
PROVIDE GENERAL MAINTENANCE AND LUBRICATION SCHEDULE FOR MAJOR COMPONENTS TO INCLUDE DAILY, WEEKLY, MONTHLY, SEMI-ANNUAL, AND YEARLY CHECKS AND TASKS. EXPLAIN HOW TO EXECUTE MAINTENANCE TASKS REQUIRED FOR TYPICAL EQUIPMENT SUCH AS BEARINGS, DRIVES, MOTORS, AND FILTERS. COMPILIE THIS INFORMATION FOR EQUIPMENT SEPARATE FROM SHOP DRAWINGS.

- 2.6. TAB-1.5 LIST OF EQUIPMENT SUPPLIERS AND CONTRACTORS:**
PROVIDE LIST OF EQUIPMENT SUPPLIERS AND CONTRACTORS, INCLUDING ADDRESS AND TELEPHONE NUMBER. OUTLINE PROCEDURES FOR PURCHASING PARTS AND EQUIPMENT.

- 2.7. TAB-CERTIFICATION (2.0, 2.1, ...):**
INCLUDE COPY OF TEST DATA ON DEGREASING AND FLUSHING OF HEATING SYSTEM, ANALYSIS OF SYSTEM WATER TAKEN AT TIME SYSTEM WAS PUT INTO OPERATION, HYDROSTATIC OR AIR TESTS PERFORMED ON PIPING SYSTEMS, EQUIPMENT ALIGNMENT CERTIFICATES, COPY OF BALANCING DATA FOR AIR AND WATER SYSTEMS, COPY OF VALVE TAG IDENTIFICATION AND PIPE COLOR CODE, INSPECTION APPROVAL CERTIFICATES FOR PLUMBING SYSTEM, BACKFLOW PREVENTION DEVICE INSTALLATION CERTIFICATION SHEETS, HEATING AND VENTILATION SYSTEMS, AND OPERATIONAL TESTS ON GAS-FIRED EQUIPMENT.

- 2.8. TAB-SHOP DRAWINGS AND MAINTENANCE BULLETINS (3.0, 3.1, ETC.):**
PROVIDE MATERIALS RECEIVED IN COMPLIANCE WITH CLAUSE "SHOP DRAWINGS".

- THE DIVIDER TABS SHALL BE LAMINATED MYLAR PLASTIC AND COLORED ACCORDING TO SECTION. THE COLORING IS AS FOLLOWS: MECHANICAL SYSTEMS - 1.0 - 1.5 ORANGE; CERTIFICATION - 2.0 - 2.4 GREEN; SHOP DRAWINGS & MAINTENANCE - 3.0 - 3.17 YELLOW. PLASTIC TABS WITH TYPEWRITTEN CARD INSERTIONS WILL NOT BE ACCEPTED.

1.12 OPERATIONAL INSTRUCTION TO OWNER

- CONTRACTOR SHALL ARRANGE FOR PRESENTATION AND DEMONSTRATION OF MECHANICAL EQUIPMENT AND SYSTEMS BY APPROPRIATE SPECIALISTS (AND SHALL ENSURE THAT REQUIRED MANUFACTURERS REPRESENTATIVES ARE IN ATTENDANCE).

1.13 SEMI FINAL AND FINAL INSPECTION

- CONTRACTOR TO ADVISE ENGINEER ONE (1) WEEK PRIOR TO CLOSING UP CEILINGS FOR SEMI FINAL INSPECTION. FAILURE TO ADVISE ENGINEER WILL RESULT IN CONTRACTOR REMOVING TILES IN ORDER THAT INSPECTION CAN BE DONE.
- ADVISE ENGINEER TWO (2) DAYS PRIOR TO THE DATE FINAL INSPECTION IS DESIRED. ALL SYSTEMS TO BE FULLY OPERATIONAL AND ANY DEFICIENCIES NOTED IN SEMI FINAL INSPECTION AND SPECIFIED AND AIR BALANCING REPORTS SUBMITTED TO THE ENGINEER PRIOR TO FINAL INSPECTION.
- ALL DEFICIENCIES SHALL BE COMPLETED WITHIN TWO (2) WEEKS AFTER FINAL INSPECTION AND LETTER SUBMITTED TO ENGINEER WITHIN THAT TIME ADVISING THAT THE WORK IS COMPLETE. FAILURE TO COMPLETE WORK WILL RESULT IN WORK BEING DONE BY THE OWNER AND THE COSTS DEDUCTED FROM FINAL PAYMENT.

1.14 EXAMINATION OF WORK

- THIS PROJECT INVOLVES RENOVATIONS TO EXISTING BUILDING. THEREFORE, EXAMINE THE SITE AND LOCAL CONDITIONS TO DETERMINE THE DIFFICULTIES IN CARRYING OUT THE WORK INDICATED AND SPECIFIED PRIOR TO SUBMITTING FINAL PRICE. EXTRAS WILL NOT BE CONSIDERED BASED ON THE GROUNDS OF DIFFERENCES ON SITE.

1.15 EXECUTION OF THE PROJECT

- SUPPLY AND INSTALL TEMPORARY FILTERS AT MECHANICAL COMPARTMENT ROOM. REPLACE MEDIA THROUGHOUT CONSTRUCTION. REMOVE PRIOR TO AIR BALANCE AND RE-OCCUPANCY. SEAL ALL OPEN ENDED DUCTS DURING CONSTRUCTION AND REMOVE PRIOR TO CONNECTION ON OCCUPANCY.

1.16 DIVISION 16 - ELECTRICAL

- CONTRACTOR SHALL REVIEW ALL EQUIPMENT REQUIRING ELECTRICAL HOOK-UP WITH ELECTRICAL CONTRACTOR AND ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT. ENSURE PROPER ELECTRICAL CHARACTERISTICS ARE DETERMINED FOR ALL AFFECTED AND RELATED WORK.

PART 2 - TESTING AND BALANCING

2.1 QUALITY ASSURANCES

- TEST EQUIPMENT AND MATERIAL WHERE REQUIRED BY SPECIFICATION OR AUTHORITY HAVING JURISDICTION TO DEMONSTRATE ITS PROPER AND SAFE OPERATION.
- TEST PROCEDURES IN ACCORDANCE WITH APPLICABLE PORTIONS OF ASME, NFPA, ASHRAE, SMACNA, AND OTHER RECOGNIZED TEST CODES AS FAR AS FIELD CONDITIONS PERMIT. PERFORM TESTS ON SITE TO THE SATISFACTION OF THE ENGINEER. COORDINATE WITH ENGINEER AT THE START OF THE PROJECT, THOSE TEST THAT WILL REQUIRE WITNESSING BY THE ENGINEER.
- PIPING, FIXTURES OR EQUIPMENT SHALL NOT BE CONCEALED OR COVERED UNTIL INSTALLATION IS INSPECTED AND APPROVED BY THE ENGINEER.

2.2 EQUIPMENT TESTS

- USE FACTORY TRAINED REPRESENTATIVES AND SUBMIT MANUFACTURER'S CHECK SHEETS FOR STARTING MECHANICAL EQUIPMENT.

- PRIOR TO STARTING EQUIPMENT OR SYSTEMS, SECURE AND REVIEW MANUFACTURER'S INSTALLATION, OPERATION, AND STARTING INSTRUCTIONS. READ IN CONJUNCTION WITH PROCEDURES DEFINED HEREIN.

2.3 SYSTEM BALANCING

- WORK SPECIFIED IN THIS SECTION SHALL BE PERFORMED BY AN INDEPENDENT CONTRACTOR SPECIALIZING IN THIS TYPE OF WORK AND SHALL BE EMPLOYED BY THE MECHANICAL CONTRACTOR. BALANCING OF BOTH AIR AND WATER SYSTEMS SHALL BE PERFORMED BY THE SAME CONTRACTOR.
- BALANCING PROCEDURES SHALL BE IN ACCORDANCE WITH NEBB, SMACNA, AND ASHRAE STANDARDS.
- BALANCE AIR HANDLING UNITS, ROOFTOP UNITS, TERMINAL UNITS, EXHAUST FANS, AND AIR OUTLETS TO AIR QUANTITIES INDICATED ON THE DRAWINGS AND IN THIS SPECIFICATION.
- SUBMIT TWO (2) COPIES OF THE REPORT TO ENGINEER WITHIN TWO (2) WEEKS AFTER SEMI FINAL INSPECTION AND/OR ONE (1) WEEK BEFORE FINAL INSPECTION. FAILURE TO SUBMIT THE REPORT WITHIN THE SPECIFIED TIME WILL RESULT IN THE WORK BEING DONE BY THE OWNER AND THE COSTS DEDUCTED FROM FINAL PAYMENT.
- ALL BALANCING TO BE DONE BY AN APPROVED BALANCING CONTRACTOR (ABC).
- BALANCING SHALL BE PERFORMED TO THE FOLLOWING ACCURACIES:
AIR - TERMINAL OUTLETS ±10%
AIR EQUIPMENT ±5%
- DURING A 90 DAY PERIOD AFTER COMPLETION OF BALANCING, ENGINEER MAY REQUEST RECHECK, OR RESETTING OF OUTLETS OR FANS AS NOTED IN BALANCING REPORT. IF RECHECK PROVES INADEQUACIES WITH BALANCING REPORT, THE BALANCING WILL BE REDONE WITHIN ONE (1) WEEK OF RECHECK AND NEW REPORT SUBMITTED. BALANCING AGENCY WILL ALSO BE LIABLE FOR ENGINEER'S TIME SPENT ON RECHECK, SHOULD A REBALANCE BE REQUIRED.
- BALANCING AGENCY IS TO CONTACT BUILDING OWNER. SHOULD A CONTROLLER NEED REPLACING IN ORDER TO BALANCE SYSTEM. DO NOT SUBMIT REPORT NOTING BOX IS NOT WORKING AND COULDN'T BE BALANCED OR REPORTS WILL BE REJECTED.

PART 3 - VENTILATION

3.1 GENERAL

- DUCTWORK SHALL BE GALVANIZED STEEL. LOCK FORMING QUALITY. FABRICATE IN ACCORDANCE WITH SMACNA DUCT MANUAL AND ASHRAE HANDBOOKS. DUCTWORK SHALL MEET THE REQUIREMENTS OF NFPA 90A AND CONFORM TO APPLICABLE CODES.
- SEALANTS AND GASKETING TO BE WATER RESISTANT, FIRE RESISTIVE, AND COMPATIBLE WITH MATING MATERIALS. NO DUCT TAPE SHALL BE ALLOWED FOR SEALING DUCTS.
- PRIOR TO FABRICATION OF DUCTWORK, CHECK ALL CEILING SPACES AND HEIGHTS AND CONFLICTIONS WITH OTHER TRADES.
- DUCT SIZES: INSIDE CLEAR DIMENSIONS. FOR ACOUSTICALLY LINED OR INTERNALLY INSULATED DUCTS MAINTAIN SIZES INSIDE DUCTS.
- DUCT HANGERS AND SPACING SHALL CONFORM TO SMACNA MANUALS.
- FIRE DAMPERS SHALL BE ULC LISTED AND CONSTRUCTED IN ACCORDANCE WITH ULC STANDARD S112 "FIRE DAMPERS". FUSIBLE LINKS SHALL BE CONSTRUCTED TO ULC STANDARD S505.
- PROVIDE BALANCING DAMPERS WHERE INDICATED ON DRAWINGS AND AT POINTS ON LOW PRESSURE SUPPLY, RETURN, AND EXHAUST DUCTS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS.
- INSULATE DUCTWORK WITH 25mm FLEXIBLE ACOUSTICAL INSULATION WHEN SHOWN.
- ALL NEW DUCTWORK TO BE COMPLETE WITH 25mm OF THERMAL INSULATION UNLESS NOTED OTHERWISE OR BY PERMISSION FROM ENGINEER.
- PROVIDE ADEQUATELY SIZED ACCESS PANELS TO MANUAL DAMPERS, EQUIPMENT, FIRE DAMPERS, VALVES, RADIATION VALVES, AND WATER METERS.
- PROVIDE RETURN AIR OPENINGS AND/OR INSULATED SOUND TRAPS WHERE INDICATED. SEE STANDARD DETAIL SECTION.
- GENERAL CONTRACTOR TO PROVIDE ACOUSTICAL SEAL AROUND DUCTS AND SOUND TRAPS AT PENETRATION THROUGH SOUND Baffles.
- GENERAL CONTRACTOR TO MODIFY CEILING SYSTEM WHERE REQUIRED TO ACCOMMODATE GRILLES AND DIFFUSERS.
- SIZE ROUND DUCTS, INSTALLED IN PLACE OF RECTANGULAR DUCTS, FROM ASHRAE TABLE OF EQUIVALENT RECTANGULAR AND ROUND DUCTS. NO VARIATION OF DUCT CONFIGURATION OR SIZES PERMITTED EXCEPT BY PERMISSION FROM ENGINEER.
- IDENTIFY DUCTWORK AS PER BASE BUILDING STANDARDS. CONFIRM PRIOR TO SUBMITTING TENDER.

3.2 LOW VELOCITY DUCTWORK

- THE MINIMUM SHEET METAL THICKNESS FOR LOW PRESSURE DUCTS INCLUDING FITTINGS, ACCESS DOORS, AND OTHER ACCESSORIES SHALL BE AS FOLLOWS:

RECTANGULAR DUCTWORK MAXIMUM WIDTH GAUGE	GAUGE	PIPE SUPPORT SPACING		
		PIPE SIZE (mm.)	ROD DIAMETER (mm)	SPACING (m)
UP TO 305mm WIDE 330mm TO 760mm WIDE	55 mm 70 mm	12	9.5	1.8
		19 to 38	9.5	2.4
		50 to 63	9.5	3
ROUND DUCTWORK DUCT DIAMETER	55 mm 70 mm	76 to 101	16	3.6
		150 to 300	22	4.2

3.3 LOW VELOCITY INSULATED FLEXIBLE DUCTWORK SHALL BE EQUAL TO THERMAFLEX TYPE M-KE.

- CONNECT DIFFUSERS OR TROFFER BOOTTS TO LOW PRESSURE DUCTS WITH 900mm MAXIMUM LENGTH OF FLEXIBLE DUCT. HOLD IN PLACE WITH CAULKING COMPOUND AND STRAP OR CLAMP. DO NOT USE FLEXIBLE DUCT TO CHANGE DIRECTIONS.

- WHERE LOW PRESSURE DUCTS ARE CONNECTED TO FAN EQUIPMENT, TERMINAL BOXES, OR ANY OTHER APPARATUS, A SCREWED OR BOLTED FLEXIBLE GASKETED JOINT SHALL BE PROVIDED BETWEEN THE DUCTWORK AND THE EQUIPMENT.

- ALL SUPPLY, RETURN, AND EXHAUST DUCT JOINTS, LONGITUDINAL AS WELL AS TRANSVERSE, SHOULD BE SEALED USING:
 - LOW PRESSURE DUCTWORK:
SLIP JOINTS: APPLY HEAVY BRUSH-ON HIGH PRESSURE DUCT SEALANT. APPLY SECOND APPLICATION AFTER THE FIRST APPLICATION HAS COMPLETELY DRIED OUT. WHERE METAL CLEARANCE EXCEEDS 1.5 mm. USE HEAVY MASTIC TYPE SEALANT.
FLANGED JOINTS: SOFT ELASTOMER BUTYL OR EXTRUDED FORM OF SEALANT BETWEEN FLANGES FOLLOWED BY AN APPLICATION OF HEAVY BRUSH-ON HIGH PRESSURE DUCT SEALANT.

- END OF SECTION

3.3 DUCT INSULATION

- EXPOSED RECTANGULAR DUCTS: 25 mm RIGID FIBROUS GLASS INSULATION, "K" VALUE AT 24°C MAXIMUM 0.035 W/M°C WITH FACTORY APPLIED REINFORCED ALUMINUM FOIL VAPOR BARRIER.
- ROUND DUCTS AND CONCEALED RECTANGULAR DUCTS: 25 mm FLEXIBLE FIBROUS GLASS INSULATION, "K" VALUE AT 24°C MAXIMUM 0.038 W/M°C WITH FACTORY APPLIED REINFORCED ALUMINUM FOIL VAPOR BARRIER.
- ACOUSTIC LINING: 25 mm FIBROUS INSULATION WITH "K" VALUE AT 24°C MAXIMUM 0.035 W/M°C. ABSOLUTE ROUGHNESS OF EXPOSED SURFACE NOT TO EXCEED 0.033 mm COATED TO PREVENT FIBER EROSION AT AIR VELOCITIES UP TO 20 M/S. 24 KG/M3 MINIMUM DENSITY FOR DUCTWORK AND 72 KG/M3 FOR PLENUMS.
- ENSURE SURFACE AND INSULATION IS CLEAN AND DRY PRIOR TO AND DURING INSTALLATION.
- INSURE INSULATION IS CONTINUOUS THROUGH INSIDE PARTITIONS.
- FINISH AND SEAL INSULATION NEATLY AT HANGERS, SUPPORTS, ACCESS DOORS, FIRE DAMPERS, AND OTHER PROTRUSIONS.
- MATERIALS SHALL MEET FIRE AND SMOKE HAZARD RATINGS AS DEFINED IN ALBERTA HEATING, VENTILATION & AIR CONDITIONING CODE.

PART 4 - PLUMBING

4.1 PLUMBING GENERAL

- PROVIDE ALL NECESSARY PIPING MATERIAL AND LABOR FOR THE SYSTEMS AS SHOWN ON THE DRAWINGS. ALL PIPING SYSTEMS TO BE INSTALLED IN COMPLIANCE WITH APPLICABLE CODES.
- PROVIDE DIELECTRIC TYPE CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS IN OPEN SYSTEMS. BRASS ADAPTERS AND VALVES ARE ACCEPTABLE.
- INSTALL VACUUM BREAKERS ON PLUMBING LINES WHERE CONTAMINATION OF DOMESTIC WATER MAY OCCUR.
- CHECK INVERT ELEVATIONS PRIOR TO SANITARY AND DRAINAGE CONNECTIONS.
- GRADE DRAINAGE LINES 2% PER 0.3m, UNLESS NOTED OTHERWISE.
- INSTALL GAS PIPING IN OPEN OR VENTILATED SPACES. PITCH LINES AND PROVIDE DRIP LEGS AT CONDENSATION COLLECTION POINTS. WHERE GAS PIPING IS RUN IN CONCEALED SPACE PROVIDE VENTILATION GRILLES, AS REQUIRED.
- TEST PIPING AT 1-1/2 TIMES SYSTEM WORKING PRESSURE, BUT MINIMUM 1035 KPA (150 PSI) FOR AT LEAST TWO (2) HOURS. ADVISE OWNER PRIOR TO TESTING TO ALLOW LANDLORD TO WITNESS TEST IF DESIRED.
- ALL DRAINAGE AND VENT PIPING 75 mm (3 INCH) AND SMALLER SHALL BE DWV COPPER WITH SOLDER FITTINGS. PVC AND ABS ARE NOT ACCEPTABLE. DRAINAGE AND VENT PIPING LARGER THAN 75 mm (3 INCH) SHALL BE CAST IRON WITH MJ FITTINGS.
- STENCIL NEW PIPING TO MATCH BASE BUILDING IDENTIFICATION SYSTEM. USE WORDING, COLOR CODE AND BANDING IN ACCORDANCE WITH BASE BUILDING STANDARDS.

4.2 PIPING

- DRAINAGE AND VENT PIPING SHALL BE TYPE "DWV" COPPER CW 50/50 SOLDER JOINTS OR CAST IRON WITH MECHANICAL JOINTS.
- DOMESTIC WATER PIPING SHALL BE TYPE "L" HARD COPPER CW 90/5 SOLDER JOINTS.
- ALL NEW COLD PIPING TO BE INSULATED WITH FACTORY APPLIED VAPOR BARRIER JACKET, MOULDED TO CONFORM TO PIPING, "K" VALUE AT 24°C MAXIMUM 0.035 W/M°C DEGREES CELSIUS.
- ALL NEW HOT PIPING TO BE INSULATED WITH FINE FIBROUS GLASS INSULATION WITH FACTORY APPLIED GENERAL PURPOSE JACKET, MOULDED TO CONFORM TO PIPING, "K" VALUE AT 24°C MAXIMUM 0.035 W/M DEGREES CELSIUS.

PIPING TO BE INSULATED	INSULATION PIPE SIZE	THICKNESS (mm)
DOMESTIC COLD WATER	ALL SIZES	12
DOMESTIC HOT AND RECIRC.	ALL SIZES	12
HOT WATER HEATING	12-20	12
(DO NOT INSULATE WITHIN RADIATION CABINET)	25-200	25

4.3 PIPE HANGERS AND SUPPORTS

- ALL PIPING SHALL BE FIRMLY SUPPORTED AND SECURELY BRACED. PROVIDE COPPER PLATED HANGERS AND SUPPORTS FOR COPPER PIPING AND GALVANIZED HANGERS AND SUPPORTS FOR GALVANIZED PIPING.
- USE OF PERFORATED STRAPS IS NOT PERMITTED FOR PIPE HANGERS.
- PROVIDE RING TYPE HANGERS FOR PIPING UP TO 38 mm AND CLEVIS TYPE HANGERS FOR PIPING OVER 139 mm.

4.4 DOMESTIC HOT AND COLD WATER SYSTEM VALVES

- BALL VALVES UP TO 50 mm: BRONZE BODY, CHROME PLATED BRONZE BALL, THREADED OR SOLDERED ENDS, TFE SEAT AND PACKING, 4134, WOG, JENKINS FIGURE 901A OR 902A.

PART 5 - CONTROLS

5.1 ACCEPTABLE CONTRACTORS

- ALL CONTROLS WORK IS TO BE DONE BY A QUALIFIED CONTROLS CONTRACTOR. ACCEPTABLE FIRMS: SIEMENS, JOHNSON, HONEYWELL.

5.2 WORK SCOPE

- RELOCATE AND RECONNECT EXISTING THERMOSTATS AS SHOWN ON THE DRAWINGS.
- PROVIDE NEW THERMOSTATS WHERE INDICATED OF BUILDING STANDARD TYPE. ENSURE OPERATING CHARACTERISTICS ARE COMPATIBLE WITH CONTROL COMPONENTS (I.E. DIRECT/REVERSE ACTING).
- ALL THERMOSTATS TO BE WALL OR COLUMN MOUNTED AT NORMAL MOUNTING HEIGHT UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL THERMOSTATS EXISTING AND NEW ARE TO BE CALIBRATED PRIOR TO AIR BALANCING. CONTACT BUILDING OWNER IF AN EXISTING THERMOSTAT NEEDS REPLACING.

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Revision	By	Appd	YYYY.MM.DD
ISSUED FOR TENDER	DM	TS	2019.03.08
ISSUED FOR TENDER, QA/QC REVIEW	DM	TS	2019.03.01
ISSUED FOR 75% CLIENT REVIEW	PC	TS	2019.01.28
ISSUED FOR 75% QA/QC REVIEW	PC	TS	2019.01.21
Issued	By	Appd	YYYY.MM.DD



2019-03-06
 PERMIT NUMBER: P 0258

Client/Project
GOVERNMENT OF CANADA

EXISTING BUILDING RENOVATION

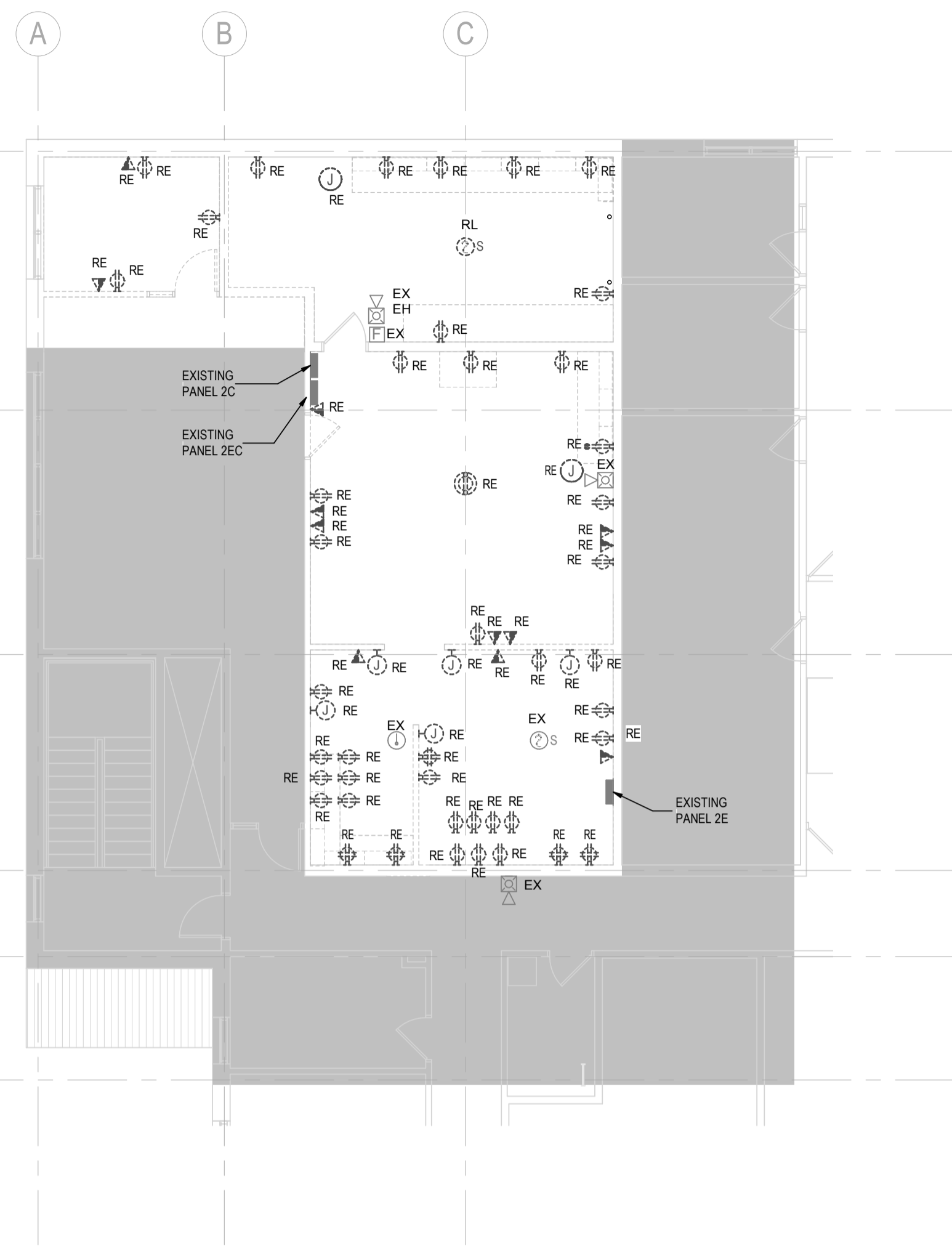
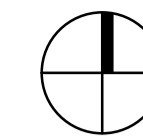
RED DEER, ALBERTA

Title
SECOND FLOOR PLAN - DEMOLITION AND RENOVATIONS POWER AND SYSTEMS

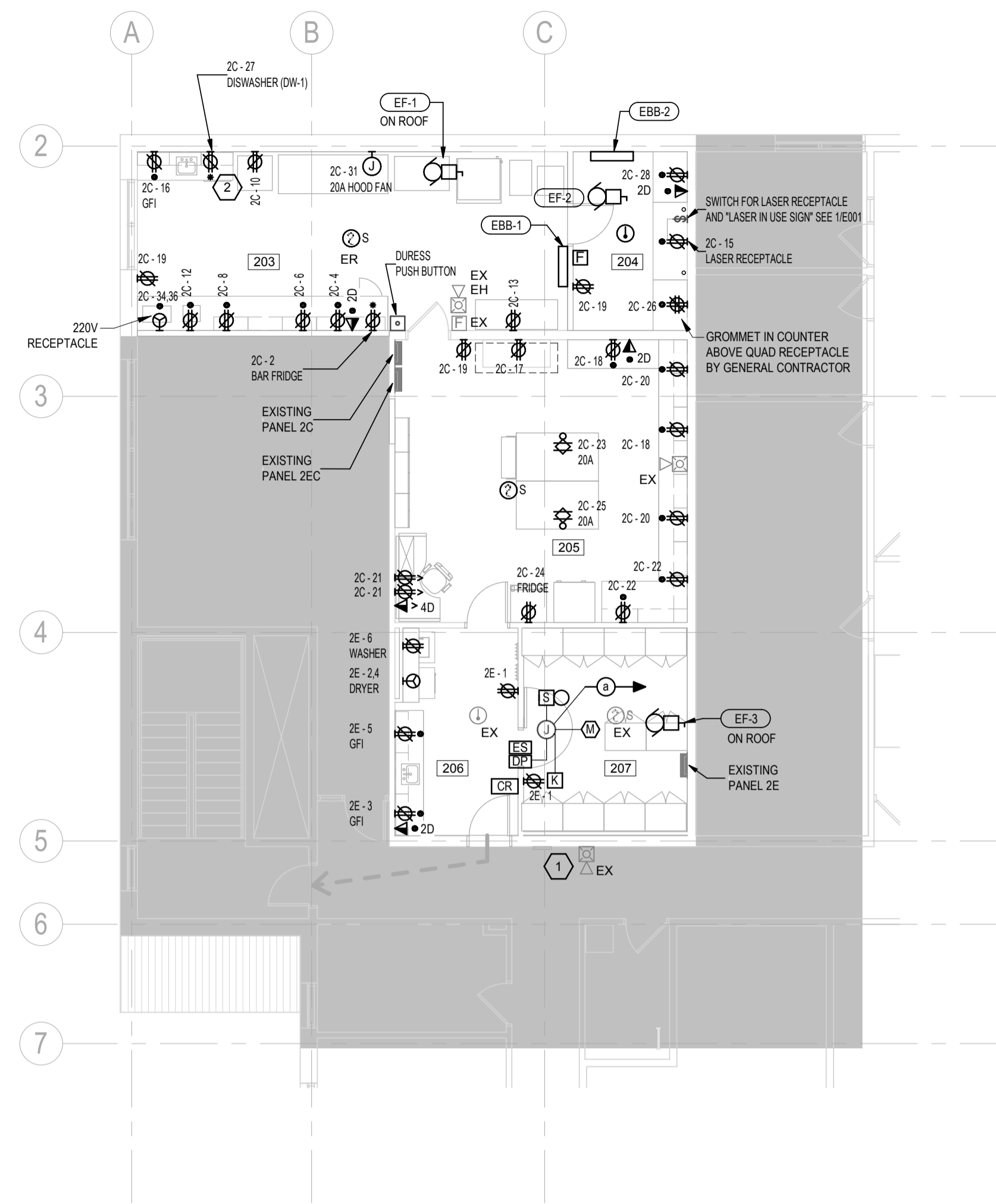
Project No. 144211605 Scale As indicated

Revision Drawing No.

Sheet **E100**
 2 of 6



1 SECOND FLOOR PLAN - DEMOLITION POWER AND SYSTEMS
 E100 1:100



2 SECOND FLOOR PLAN - RENOVATIONS POWER AND SYSTEMS
 E100 1:100

POWER DEMOLITION NOTES

1. THESE DEMOLITION DRAWINGS ARE INTENDED TO ASSIST THE ELECTRICAL CONTRACTOR IN ESTABLISHING AREAS REQUIRING DISCONNECTION, REMOVAL, OR RELOCATION OF ELECTRICAL EQUIPMENT, OUTLETS, WIRING, DEVICES, FIXTURES, ETC. AND DO NOT INDICATE ALL OUTLETS, EXACT QUANTITIES OR EXTENT OF DEMOLITION AND RECONNECTION WHICH MAY BE REQUIRED. THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOBSITE AND THOROUGHLY EXAMINE ALL REQUIRED DEMOLITION WORK AND INCLUDE ALL LABOR AND INCIDENTALS WHICH MAY BE NECESSARY TO PERFORM DEMOLITION, RECONNECTION AND TEMPORARY POWER CONNECTIONS IN THE BID.
2. THE ELECTRICAL CONTRACTOR SHALL REMOVE FROM THE PREMISES AND DISPOSE OF ALL DEMOLISHED ELECTRICAL EQUIPMENT, ETC. VERIFY LOCAL AGENCY REQUIREMENTS PRIOR TO BIDDING.
3. COORDINATE THE ELECTRICAL DEMOLITION WORK WITH THE GENERAL CONTRACTOR AND ALL OTHER TRADES AT THE JOBSITE. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARLY IDENTIFYING ALL CONDUITS, WIRING AND EQUIPMENT WHICH MUST BE MAINTAINED TO PREVENT DAMAGE TO ELECTRICAL CIRCUITS AND EQUIPMENT BY THE DEMOLITION WORK OF OTHER TRADES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR REPAIR OR REPLACEMENT OF ELECTRICAL CIRCUITS AND/OR EQUIPMENT DAMAGED BY THE DEMOLITION WORK OF OTHERS RESULTING FROM THE FAILURE OF THE ELECTRICAL CONTRACTOR TO CLEARLY IDENTIFY SAID CIRCUITS OR EQUIPMENT.
4. REFER TO MECHANICAL AND ARCHITECTURAL PLANS FOR FURTHER INDICATION OF DEMOLITION AND RENOVATION. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR TEMPORARY OR PERMANENT REMOVAL, DISCONNECTION, AND/OR RELOCATION OF EQUIPMENT AND ASSOCIATED CONTROLS (EXCLUDING MECHANICAL EQUIPMENT).
5. ELECTRICAL CONTRACTOR TO VISIT THE SITE DURING BIDDING PROCESS. INSPECT AREAS BEING RENOVATED OR DEMOLISHED AND ACQUAINT THEMSELVES FULLY WITH THE EXISTING EQUIPMENT. DISCREPANCIES TO BE REPORTED TO THE ENGINEER 7 DAYS PRIOR TO SUBMISSION OF BID FOR INCLUSION IN ADDENDA IF REQUIRED. IN THE ABSENCE OF NOTIFICATION, IT WILL BE ASSUMED THAT THE CONTRACTOR HAS INCLUDED THE MORE EXPENSIVE ALTERNATIVE IN THE TENDERED PRICE.
6. ELECTRICAL CONTRACTOR TO ALLOW FOR TEMPORARY REMOVAL AND REINSTALLATION AS REQUIRED TO ACCOMMODATE WALL, FLOOR AND CEILING REFINISHING.
7. ELECTRICAL CONTRACTOR SHALL SEAL ALL WALL AND FLOOR PENETRATIONS TO MAINTAIN RATING INTEGRITY OF BUILDING STRUCTURE.
8. ELECTRICAL CONDUIT, WIRES, AND SYSTEMS CABLING SHALL BE REMOVED FROM OUTLET BACK TO SOURCE.
9. FOR DEVICES TO BE REMOVED, REMOVE ALL WIRING AND CONDUIT BACK TO SOURCE.


POWER AND SYSTEMS KEYNOTES

1. RELOCATE EXISTING HORN/STROBE TO CLEAR THE NEW DOOR, IF AFFECTED BY NEW DOOR.
2. THE DURESS ALARM SIGNAL LOCATION SHALL BE CONFIRM WITH CLIENT PRIOR TO INSTALLATION.

FIRE ALARM NOTES

1. ELECTRICAL CONTRACTOR SHALL PERFORM AUDIBILITY TEST TO CONFIRM THAT AVERAGE SPL IS NOT LESS THAN 65dBA @ 1.5m ABOVE FFL AND 10dBA ABOVE AVERAGE NOISE LEVEL AND ALLOW FOR TWO ADDITIONAL HORN/STROBE IF REQUIRE.
2. STROBE CANDELA LEVEL SHALL BE SELECTED ACCORDING TO CANULC-524 TABLES 5, 6 AND 7. STROBES SHOULD NOT BE LESS THAN 15 cd (CANDELA) FOR UP TO 400 SQFT, 30 cd (CANDELA) FROM 400 - 800 SQFT, AND 60 cd (CANDELA) FOR OVER 800 SQFT.
3. ALL STROBE SHALL BE SYNCHRONIZED.
4. ALL FIRE ALARM CABLES SHALL BE 2HP+ FIRE RATED.
5. ALL FIRE ALARM CONDUIT SHALL BE EMT TYPE.

POWER NOTES

1. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT PRIOR TO INSTALLATION.
2. ELECTRICAL CONTRACTOR SHALL VISIT SITE PRIOR TO TENDER SUBMISSION TO DETERMINE EXISTING SITE CONDITIONS.
3. ELECTRICAL EQUIPMENT SHOWN ARE NEW UNLESS OTHERWISE NOTED.
4. ELECTRICAL EQUIPMENT DISCONNECTED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE RECONNECTED AND MADE FULLY OPERATIONAL.
5. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR ALL ELECTRICAL CONNECTIONS TO FIXTURES IN MILLWORK.
6. ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE-WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW AND EXISTING CIRCUITS.
7. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL A KROY DURATAPE TYPE 200 LABEL ON ALL JUNCTION BOXES TO IDENTIFY PANEL AND ALL CIRCUIT NUMBERS WITHIN JUNCTION BOX. LABEL SHALL BE 19mm BLACK LETTERING ON CLEAR TAPE.
8. CONDUCTOR SIZE FOR BRANCH CIRCUITS (120/208V) 23m IN LENGTH FROM BRANCH CIRCUIT PANEL TO CENTER OF LOAD, NOT SMALLER THAN No.12, UP TO 45m NOT SMALLER THAN No.10, UP TO 61m NOT SMALLER THAN No.8. CONDUCTOR SIZE FOR BRANCH CIRCUITS (347/600V) NOT SMALLER THAN No.12, UP TO 91m NOT SMALLER THAN No. 10, UP TO 122m NOT SMALLER THAN No.8.
9. ALL EXPOSED CONDUIT SHALL BE RUN PARALLEL TO BUILDING LINES. ALL CONDUIT RUNS ARE TO BE APPROVED PRIOR TO INSTALLATION.
10. THE ELECTRICAL CONTRACTOR SHALL SEAL ALL PENETRATIONS FOR RACEWAY, CABLES AND ALL OTHER PENETRATIONS MADE BY THE ELECTRICAL CONTRACTOR THROUGH FIRE RATED ASSEMBLIES TO PREVENT THE SPREAD OF SMOKE AND FIRE. A SYSTEM LISTED IN UL-C-FS, FIRESTOP SYSTEMS AND COMPONENTS SHALL BE USED TO MAINTAIN THE FIRE RATING OF THE ASSEMBLIES.
11. DRILLING OF CUTTING OF THE FLOOR SLAB IS NOT PERMITTED WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER. X-RAYING OF CORE LOCATIONS MUST BE COMPLETED PRIOR TO CORING. CO-ORDINATE WITH TRADES & OWNER.
12.  27mm CONDUIT CW GA 6A CABLE BACK TO EXISTING SECURITY PANEL IN ROOM 210. CONFIRM EXACT LOCATION OF EXISTING SECURITY PANEL ON SITE PRIOR TO INSTALLATION.

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ISSUED FOR TENDER	DM	TS	2019.03.08
ISSUED FOR TENDER, QA/QC REVIEW	DM	TS	2019.03.01
ISSUED FOR 75% CLIENT REVIEW	PC	TS	2019.01.28
ISSUED FOR 75% QA/QC REVIEW	PC	TS	2019.01.21
Issued	By	Appd	YYYY.MM.DD

Permit-Seal



PERMIT NUMBER: P 0258

Client/Project

GOVERNMENT OF CANADA

EXISTING BUILDING RENOVATION

RED DEER, ALBERTA

Title

SECOND FLOOR PLAN - DEMOLITION AND RENOVATIONS LIGHTING

Project No.

144211605

Revision

Sheet

3 of 6

E200

Scale
As indicated

Drawing No.

1 SECOND FLOOR PLAN - DEMOLITION LIGHTING
E200 1:100

2 SECOND FLOOR PLAN - RENOVATIONS LIGHTING
E200 1:100

LIGHTING DEMOLITION NOTES

- THESE DEMOLITION DRAWINGS ARE INTENDED TO ASSIST THE ELECTRICAL CONTRACTOR IN ESTABLISHING AREAS REQUIRING DISCONNECTION, REMOVAL, OR RELOCATION OF ELECTRICAL EQUIPMENT, OUTLETS, WIRING, DEVICES, FIXTURES, ETC. AND DO NOT INDICATE ALL OUTLETS, EXACT QUANTITIES OR EXTENT OF DEMOLITION AND RECONNECTION WHICH MAY BE REQUIRED. THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOBSITE AND THOROUGHLY EXAMINE ALL REQUIRING DEMOLITION WORK AND INCLUDE ALL LABOR AND INCIDENTALS WHICH MAY BE NECESSARY TO PERFORM DEMOLITION RECONNECTION AND TEMPORARY POWER CONNECTIONS IN THE BID.
- COORDINATE THE ELECTRICAL DEMOLITION WORK WITH THE GENERAL CONTRACTOR AND ALL OTHER TRADES AT THE JOBSITE. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARLY IDENTIFYING ALL CONDUITS, WIRING AND EQUIPMENT WHICH MUST BE MAINTAINED TO PREVENT DAMAGE TO ELECTRICAL CIRCUITS AND EQUIPMENT BY THE DEMOLITION WORK OF OTHER TRADES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR REPAIR OR REPLACEMENT OF ELECTRICAL CIRCUITS AND/OR EQUIPMENT DAMAGED BY THE DEMOLITION WORK OF OTHERS RESULTING FROM THE FAILURE OF THE ELECTRICAL CONTRACTOR TO CLEARLY IDENTIFY SAID CIRCUITS OR EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL REMOVE FROM THE PREMISES AND DISPOSE OF ALL DEMOLISHED ELECTRICAL EQUIPMENT, LUMINAIRES, LAMP, BALLASTS, ETC. VERIFY LOCAL AGENCY REQUIREMENTS PRIOR TO BIDDING.
- THE ELECTRICAL CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED CABLES, CONDUIT, WIRE, BOXES, FITTINGS, AND HANGING MATERIALS FOR ELECTRICAL EQUIPMENT ABOVE EXISTING CEILINGS. REMOVAL SHALL CONTINUE THROUGHOUT CONSTRUCTION AS EQUIPMENT AND CIRCUITS ARE DISCONNECTED.
- REFER TO MECHANICAL AND ARCHITECTURAL PLANS FOR FURTHER INDICATION OF DEMOLITION AND RENOVATION. ELECTRICAL CONTRACTOR TO BE RESPONSIBLE FOR TEMPORARY OR PERMANENT REMOVAL, DISCONNECTION, AND/OR RELOCATION OF EQUIPMENT AND ASSOCIATED CONTROLS (EXCLUDING MECHANICAL EQUIPMENT).
- ELECTRICAL CONTRACTOR TO VISIT THE SITE DURING BIDDING PROCESS, INSPECT AREAS BEING RENOVATED OR DEMOLISHED AND ACQUAINT THEMSELVES FULLY WITH THE EXISTING EQUIPMENT. DISCREPANCIES TO BE REPORTED TO THE ENGINEER 7 DAYS PRIOR TO SUBMISSION OF BID FOR INCLUSION IN ADDENDA IF REQUIRED. IN THE ABSENCE OF NOTIFICATION, IT WILL BE ASSUMED THAT THE CONTRACTOR HAS INCLUDED THE MORE EXPENSIVE ALTERNATIVE IN THE TENDERED PRICE.
- ELECTRICAL CONTRACTOR TO ALLOW FOR TEMPORARY REMOVAL AND REINSTALLATION AS REQUIRED TO ACCOMMODATE WALL, FLOOR AND CEILING REFINISHING.

LIGHTING NOTES

- ALL ELECTRICAL MATERIALS AND INSTALLATIONS SHOWN AND/OR SPECIFIED SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND SHALL COMPLY IN STRICT ACCORDANCE WITH THE LATEST EDITION OF C.S.A. STANDARDS AND THE C.E.C.
- ALL CONDUIT WORK AND JUNCTION BOXES AS MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL REUSE ALL ELECTRICAL COMPONENTS REMOVED DURING DEMOLITION WHERE POSSIBLE AND SALVAGE NON-REUSABLE ELECTRICAL COMPONENTS TO OWNER.
- ELECTRICAL CONTRACTOR TO CONFIRM THAT LIGHTING CIRCUITS DO NOT EXCEED 80% OF EXISTING BREAKER RATING. ELECTRICAL CONTRACTOR SHALL REPLACE EXISTING 15AMP BREAKER WITH 20AMP BREAKER WHERE APPLICABLE.
- ELECTRICAL CONTRACTOR TO INSTALL NEWLY TYPE WRITTEN DIRECTORIES IN ALL PANELS TO CLEARLY IDENTIFY ALL NEW AND EXISTING CIRCUITS.
- PROVIDE LAMACOID LABELS FOR ANY SPECIAL PURPOSE SWITCHES OR RECEPTACLES C/W PANEL FEED, VOLTAGE AND CIRCUITS.
- CONTRACTOR TO RUN CONDUIT CONCEALED WHERE POSSIBLE. ON EXISTING CEILING SYSTEMS, CONTRACTOR TO SURFACE MOUNT CONDUIT AND PAINT TO MATCH CEILING.
- ELECTRICAL EQUIPMENT SHOWN WITH NO SUBSCRIPT ARE NEW UNLESS NOTED OTHERWISE.
- EXISTING ELECTRICAL EQUIPMENT NOT SHOWN ON DRAWINGS ARE EXISTING TO REMAIN UNLESS NOTED OTHERWISE.

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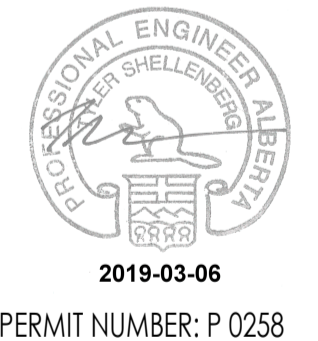
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Notes

Revision	By	Appd	YYYY.MM.DD
ISSUED FOR TENDER	DM	TS	2019.03.08
ISSUED FOR TENDER, QA/QC REVIEW	DM	TS	2019.03.01
ISSUED FOR 75% CLIENT REVIEW	PC	TS	2019.01.28
ISSUED FOR 75% QA/QC REVIEW	PC	TS	2019.01.21
Issued	By	Appd	YYYY.MM.DD

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Client/Project
GOVERNMENT OF CANADA

EXISTING BUILDING RENOVATION

RED DEER, ALBERTA

Title
MECHANICAL EQUIPMENT SCHEDULE

Project No. 144211605 Scale N.T.S.
Revision Drawing No.

Sheet E300
4 of 6

UNIT No.	UNIT	LOCATION	LOAD			STARTER & ACCESSORIES					CONTROL				CIRCUIT	BREAKER / FUSE SIZE	MOTOR DISCONNECT				FEEDER (SEE NOTES 2 & 8)	FIRE ALARM SHUTDOWN (Y/N)	FIRE ALARM STARTUP (Y/N)	EMERGENCY POWER (Y/N)	REMARKS						
			HP	Kw	FLA	MOC/ MOP (Or MCA)	MCA (AMPS)	VOLTS (Check Main Service)	PHASE	PACKAGED EQUIPMENT (Y/N)	TYPE [B]	CONTROL [C]	PILOT LIGHTS [E]	SUPPLIED BY [A]			INSTALLED BY [A]	WIRING BY [A]	TYPE [D]	SUPPLIED BY [A]						INSTALLED BY [A]	WIRING BY [A]	SUPPLIED BY [A]	INSTALLED BY [A]	WIRING BY [A]	INTEGRATED SWITCH BY MECH (Y/N)
EF-1	Exhaust Fan	On Roof	0.25					120	1	Y	MA					S	E	E	E						21mmC - 2#12 AWG Cu + #12 GRD	N		Y			
EF-2	Exhaust Fan	LightRoom - Ceiling Space		0.08	1.00			120	1	Y	MA					S	E	E	E						21mmC - 2#12 AWG Cu + #12 GRD	N		Y			
EF-3	Exhaust Fan	On Roof	0.25					120	1	Y	MA					S	E	E	E						21mmC - 2#12 AWG Cu + #12 GRD	N		Y			
DW-1	Dishwasher (TO BE SUPPLIED BY CLIENT)	Chemical Processing Lab		1.80				120	1	Y														21mmC - 2#12 AWG Cu + #12 GRD	N		N				
EX	EXISTING Wetsink Exhaust Fan	Chemical Processing Lab																													EXISTING CIRCUIT SHALL BE MOVE TO EMERGENCY PANEL 2EC
EBB-1	Electric Baseboard Heater	Chemical Processing Lab		1.00				120	1		D		E	E	E	T	E	E	E						21mmC - 2#12 AWG Cu + #12 GRD	N		N			
EBB-2	Electric Baseboard Heater	Lightroom		0.50				120	1		D		E	E	E	T	E	E	E						21mmC - 2#12 AWG Cu + #12 GRD	N		N			

<p>[A] SUPPLIED BY: D = ELECTRICAL M = MECHANICAL</p>	<p>[B] STARTER TYPE: D = DIRECT CONNECTION CM = COMBINATION MAGNETIC STARTER / SEE NOTE #3 MA = MANUAL STARTER C/W PILOT LIGHT MG = MAGNETIC STARTER / SEE NOTE #3 MG2 = MAGNETIC STARTER (2-SPEED) / SEE NOTE #4 REC = RECEPTACLE RVS = REDUCED VOLTAGE STARTER SS = SOFT START VFDD = VARIABLE FREQUENCY DRIVE / DIRECT MOUNT / SEE NOTE #1 VFDR = VARIABLE FREQUENCY DRIVE / REMOTE MOUNT / SEE NOTE #1 AR = BMS HP RATED CONTROL RELAY / SEE NOTE #7</p>	<p>[C] CONTROL TYPE: HOA = HAND/OFF/AUTO SS = START/STOP - MOM PB</p>	<p>[D] CONTROL DEVICE: BMS = BUILDING MANAGEMENT SYSTEM C = TIME CLOCK / SEE NOTE #5 ET = ELECTRONIC THERMOSTAT / SEE NOTE #5 F = FLOAT SWITCH FA = FIRE ALARM GS = GAS SENSOR / SEE NOTE #6 H = HUMIDISTAT I = INTERLOCK O = OTHER (IDENTIFY) P = PRESSURE SWITCH S = MANUAL SWITCH T = THERMOSTAT</p>	<p>[E] PILOT LIGHTS: G = GREEN (ON) R = RED (OFF)</p>
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NOTES

- VFDs are supplied by Division 22, 23 and contain a disconnect. Internal fusing is for electronic equipment in VFD unless otherwise indicated.
- Cable sizes shown on the drawings are the minimum required. Electrical contractor shall confirm sizes based on the real site routes and in accordance with the latest CEC Table 2 and Table D3 in such a manner that the overall voltage drop across motor terminals shall not exceed 5%. Electrical contractor shall allow for any cable upgrade if required.
- Magnetic starters to be complete with 120 volt control transformer, HOA Switch, 2 NO auxiliary contacts, unless otherwise indicated.
- 2-Speed Starters are to be for 2-winding motors and complete with 120 volt control transformer, HOA Switch, HI-LO Switch, 1 auxiliary contact NO - low, 1 auxiliary contact NO - high unless otherwise indicated.
- Electronic thermostats and Time Clocks require a source of 120/1/60 power.
- If Gas sensor such as CO, NO2, etc. are not part of BMS, sensor will require a control panel and a source of 120/1/60 power for panel
- For single phase loads controlled by BMS. HP rated relay normally provided by BMS contractor, unit equal to Functional Devices RIBXLV c/w 1/3 HP, 120-240 volt rated relay contact, 10-30 Vac/dc coil, 0-10 amp current transducer. Other models available for increased HP
- Cables from the VFD to the motor to be labelled and certified for VFD application with a minimum of 1000V rating.
- Single phase motors to be complete with integral oil with automatic reset, unless otherwise indicated.
- If package equipment is answered as ' Y ' assume it is complete with starters, contactors, overloads, fusing, transformers, etc. to accommodate a single power source.

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Stantec Consulting Ltd.
200-325 25 Street SE
Calgary, AB T2A 7H8
Tel: (403) 716-8000 / Fax: (403) 716-8109
www.stantec.com

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ISSUED FOR TENDER	DM	TS	2019.03.08
ISSUED FOR TENDER, QA/QC REVIEW	DM	TS	2019.03.01
ISSUED FOR 75% CLIENT REVIEW	PC	TS	2019.01.28
ISSUED FOR 75% QA/QC REVIEW	PC	TS	2019.01.21
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2019-03-06
PERMIT NUMBER: P 0258

Client/Project
GOVERNMENT OF CANADA

EXISTING BUILDING RENOVATION

RED DEER, ALBERTA

Title
PANEL SCHEDULE

Project No. 144211605 Scale N.T.S.

Revision Drawing No.

Sheet 5 of 6 **E301**

Stantec
Name: 2C
Location: EXAMINATION ROOM 205
Supply From:
Serves:
Notes: EXISTING PANEL

Volts: 208Y/120V
Phases: 3
Wires: 4

Mains Type: Mains Rating: 225 A
Type: PANELBOARD
AIC Rating: SURFACE
Mounting: SURFACE
Enclosure: NEMA 1
Lugs:

CKT	Circuit Description	Trip	Poles	CB	A	B	C	CB	Poles	Trip	Circuit Description	CKT	
1	LIGHTS Rm. 019, 020, 021, 023 & 028	15 A	1		0.72	0.50				1	20 A	BAR FRIDGE	2
3	SPARE	15 A	1			0.00	0.20			1	20 A	COUNTER RECEPTACLE	4
5	SPARE	15 A	1							1	20 A	COUNTER RECEPTACLE	6
7	EXISTING LIGHTING	15 A	1		0.00	0.20				1	20 A	COUNTER RECEPTACLE	8
9	EXISTING	15 A	1			0.00	0.20			1	20 A	FUMING CHAMBER	10
11	EXISTING	15 A	1				0.00	0.20		1	20 A	COUNTER RECEPTACLES (HEAT...	12
13	DUST STATION	20 A	1		0.60								14
15	COPY STATION	20 A	1			1.00	0.20			1	20 A	GFI COUNTER RECEPTACLE	16
17	COPY STATION	15 A	1				1.00	0.40		1	20 A	COUNTER RECEPTACLES	18
19	CONVENIENCE RECEPTACLES	15 A	1		0.60	0.40				1	20 A	COUNTER RECEPTACLES	20
21	WORK WTSWITATION (2)	20 A	1			0.60	0.40			1	20 A	COUNTER RECEPTACLES	22
23	REAL RECEPTACLE	20 A	1					0.20	1.00	1	20 A	FRIDGE	24
25	REAL RECEPTACLE	20 A	1		0.20	1.00				1	20 A	COUNTER QUAD RECEPTACLE	26
27	DISHWASHER	20 A	1			0.50	0.20			1	20 A	COUNTER RECEPTACLE	28
29	LASER IN USE SIGN	15 A	1				0.10	1.00		1	15 A	EBB-1	30
31	NEW WETSINK	20 A	1		1.40	0.50				1	15 A	EBB-2	32
33								0.50		2	15 A	208V RECEPTACLE	34
35										--	--	--	36
37										--	--	--	38
39										--	--	--	40
41										--	--	--	42
Total Load:					6.12 kVA	3.80 kVA	4.60 kVA						
Total Amps:					52 A	32 A	39 A						
Load Classification					Connected Load	Demand Factor	Estimated Demand	Panel Totals					
Lighting					821 VA	125.00%	1026 VA	Total Conn. Load: 14521 VA					
Power					1400 VA	100.00%	1400 VA	Total Est. Demand: 8951 VA					
Receptacle - Convenience					8400 VA	50.00%	4200 VA	Total Conn.: 40 A					
Receptacle - Maintenance					1000 VA	50.00%	500 VA	Total Est. Demand: 25 A					
REC					1400 VA	50.00%	700 VA						
HEATER					1500 VA	75.00%	1125 VA						

CB Legend (blank = circuit breaker):
G = GFCI S = Shunt Trip D = Switching Duty A = AFCI H = HID Rated C = HACR Rated † = Existing Circuit ‡ = Revised Circuit
Notes:

Stantec
Name: 2E
Location: EXHIBIT STG 207
Supply From:
Serves:
Notes: EXISTING PANEL

Volts: 208Y/120V
Phases: 3
Wires: 4

Mains Type: Mains Rating: 225 A
Type: PANELBOARD
AIC Rating: SURFACE
Mounting: SURFACE
Enclosure: NEMA 1
Lugs:

CKT	Circuit Description	Trip	Poles	CB	A	B	C	CB	Poles	Trip	Circuit Description	CKT	
1	RECEPTACLE RM 023 & 028	20 A	1		0.40	0.50				2	30 A	DRYER	2
3	GFI COUNTER RECEPTACLE	20 A	1			0.40	0.50			--	--	--	4
5	GFI COUNTER RECEPTACLE	20 A	1				0.40	1.00		1	20 A	WASHER	6
7					0.10					1	15 A	DO NOT ENTER SIGN	8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
Total Load:					1.00 kVA	0.90 kVA	1.40 kVA						
Total Amps:					8 A	8 A	12 A						
Load Classification					Connected Load	Demand Factor	Estimated Demand	Panel Totals					
Lighting					100 VA	125.00%	125 VA	Total Conn. Load: 3300 VA					
Receptacle - Convenience					1400 VA	50.00%	700 VA	Total Est. Demand: 1725 VA					
Receptacle - Housekeeping					800 VA	50.00%	400 VA	Total Conn.: 9 A					
REC					1000 VA	50.00%	500 VA	Total Est. Demand: 5 A					

CB Legend (blank = circuit breaker):
G = GFCI S = Shunt Trip D = Switching Duty A = AFCI H = HID Rated C = HACR Rated † = Existing Circuit ‡ = Revised Circuit
Notes:

Stantec
Name: 2EC
Location: EXAMINATION ROOM 205
Supply From:
Serves:
Notes: EXISTING PANEL

Volts: 208Y/120V
Phases: 3
Wires: 4

Mains Type: Mains Rating: 100 A
Type: PANELBOARD
AIC Rating: SURFACE
Mounting: SURFACE
Enclosure: NEMA 1
Lugs:

CKT	Circuit Description	Trip	Poles	CB	A	B	C	CB	Poles	Trip	Circuit Description	CKT	
1	LIGHTING	15 A	1		0.57	0.70				1	15 A	EF-1	2
3	EXIT SIGNS	15 A	1			0.02	0.08			1	15 A	EF-2	4
5							0.70			1	15 A	EF-3	6
7													8
9													10
11													12
13													14
15													16
17													18
19													20
21													22
23													24
25													26
27													28
29													30
31													32
33													34
35													36
37													38
39													40
41													42
Total Load:					1.27 kVA	0.10 kVA	0.70 kVA						
Total Amps:					11 A	1 A	7 A						
Load Classification					Connected Load	Demand Factor	Estimated Demand	Panel Totals					
Lighting					580 VA	125.00%	725 VA	Total Conn. Load: 2064 VA					
Other					1484 VA	100.00%	1484 VA	Total Est. Demand: 2209 VA					
								Total Conn.: 6 A					
								Total Est. Demand: 6 A					

CB Legend (blank = circuit breaker):
G = GFCI S = Shunt Trip D = Switching Duty A = AFCI H = HID Rated C = HACR Rated † = Existing Circuit ‡ = Revised Circuit
Notes:

