DRAWING LIST

M001 DRAWING LIST & LEGEND

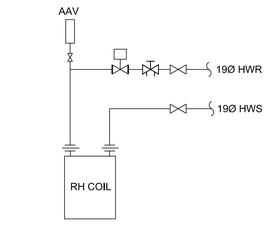
M010 MECHANICAL – GROUND FLOOR – BELOW GRADE
M011 MECHANICAL – TEST FACILITY – BELOW GRADE

M100 PLUMBING – TEST FACILITY PLAN
M101 PLUMBING – GROUND FLOOR PLAN
M102 PLUMBING – SECOND FLOOR PLAN
M103 PLUMBING – THIRD FLOOR PLAN
M104 PLUMBING – FOURTH FLOOR PLAN
M105 PLUMBING – MECHANICAL PENTHOUSE PLAN
M106 PLUMBING – MECHANICAL PENTHOUSE ROOF PLAN

M120 HVAC – TEST FACILITY PLAN
M121 HVAC – GROUND FLOOR PLAN
M122 HVAC – SECOND FLOOR PLAN
M123 HVAC – THIRD FLOOR PLAN
M124 HVAC – FOURTH FLOOR PLAN
M125 HVAC – MECHANICAL PENTHOUSE PLAN

M200 HVAC SYSTEM SCHEMATIC
M201 DHCW & SANITARY RISER DIAGRAM
M202 SMOKE CONTROL SCHEMATIC & SEQUENCE OF OPERATIONS

M300 MECHANICAL EQUIPMENT SCHEDULES



1 / M001 TYPICAL VAV RH COIL PIPING

MECHANICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER SUPPLY (DHW)
	DOMESTIC HOT WATER RECIRC (DHWR)
	BURIED/UNDER FLOOR/ UNDER SLAB SANITARY
	ABOVE GROUND/FLOOR/SLAB SANITARY
P-SAN	PUMPED SANITARY
	BURIED/UNDER FLOOR/ UNDER SLAB STORM (STM)
	ABOVE GROUND/FLOOR/SLAB STORM (STM)
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
G	NATURAL GAS
S	SPRINKLER PIPING
F	FIRE LINE (STANDPIPE)
CH-GLYS	CHILLED GLYCOL SUPPLY
CH-GLYR	CHILLED GLYCOL RETURN
H-GLYS	HEATING GLYCOL SUPPLY
H-GLYR	HEATING GLYCOL RETURN

SYMBOL	DESCRIPTION
HB	HOSE BIBB
CO	CLEAN OUT
CO	FLOOR CLEAN OUT
	DRAIN VALVE
	LOCKSHIELD VALVE
F.H.C.	FIRE HOSE CABINET
	FIRE DEPARTMENT CONNECTION
	BALL VALVE
	PLUG VALVE
	CIRCUIT BALANCING VALVE
M	WATER METER
GM	GAS METER
	FLEXIBLE PIPE CONNECTOR
BFP	BACKFLOW PREVENTER
FD	FLOOR DRAIN
RD	ROOF DRAIN
	PRESSURE REDUCING VALVE
	STRAINER
	REDUCER
	PIPE DOWN
	PIPE UP
	PIPE CAP
	UNION
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	TEMPERATURE / PRESSURE RELIEF VALVE

SYMBOL	DESCRIPTION
BD	DUCT BRANCH WITH BALANCING DAMPER
MD	MOTORIZED DAMPER
SD	SMOKE DAMPER
FD	FIRE DAMPER
T	THERMOSTAT / SENSOR
H	HUMIDISTAT
AD	ACCESS DOOR
HS	HUMIDITY SENSOR
SA	SUPPLY AIR
RA	RETURN AIR
EA	EXHAUST AIR
OA	OUTSIDE AIR
	THROAT SIZE(mm) / DIFFUSER TYPE / FLOW(cfm)
	DETAIL / LOCATION OF DETAIL
0-150 CFM A 200mm DEEP	"A" SIZE TRANSFER DUCT, ACOUSTICALLY LINED
160-300 CFM B 200mm DEEP	"B" SIZE TRANSFER DUCT, ACOUSTICALLY LINED
310-500 CFM C 200mm DEEP	"C" SIZE TRANSFER DUCT, ACOUSTICALLY LINED

NOTE : ALL TRANSFER DUCTS TO TERMINATE ON FINISHED END WITH A TYPE 'G' 80 SERIES EGG CRATE GRILLE.
SIZE AS PER THE TRANSFER DUCT.

JRP ENGINEERING
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Optimum Mechanical Solutions Inc.
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www.optimummech.com

No	DESCRIPTION	DATE
5	UPDATED CONSTRUCTION	MAY 31 2017
4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
3	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

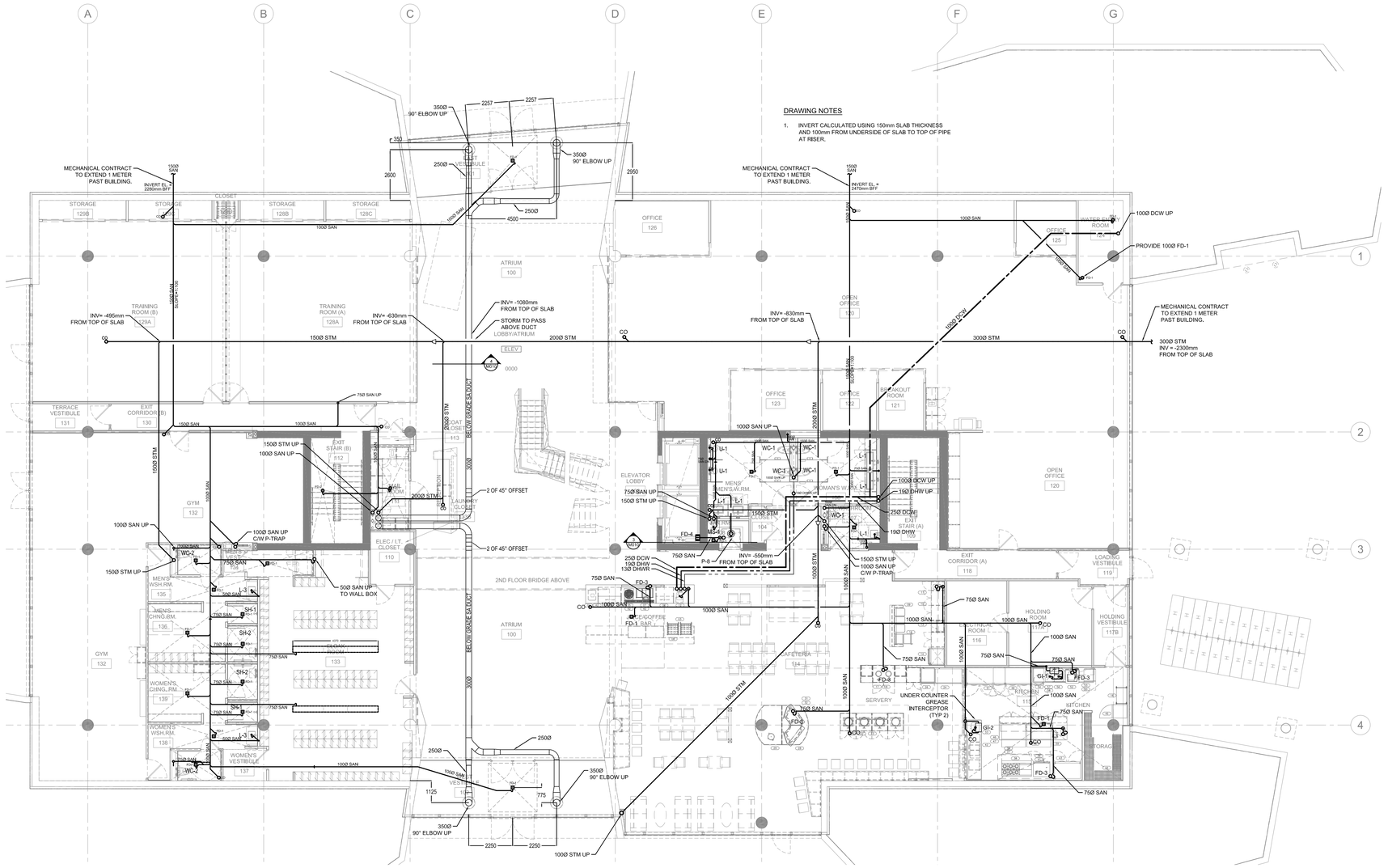
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

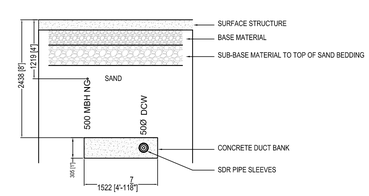
drawing title:
MECHANICAL
DRAWING LIST &
SYMBOL LEGEND

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

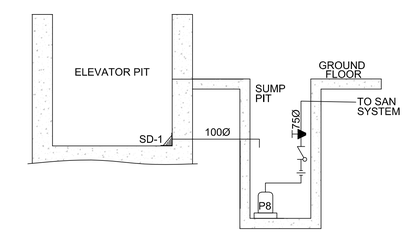
project no.: 1570	drawing no.: M001
revision: 0	



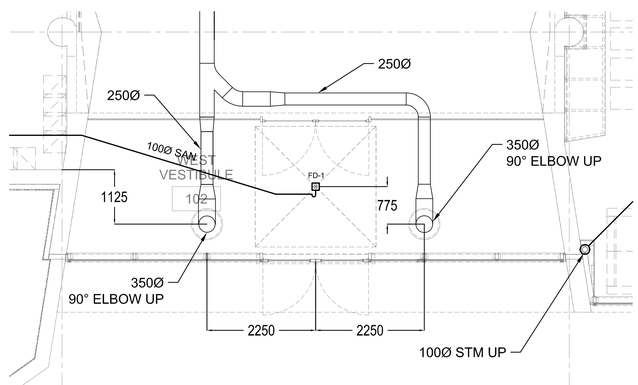
1 M010 MECHANICAL - GROUND FLOOR - BELOW GRADE
1:100



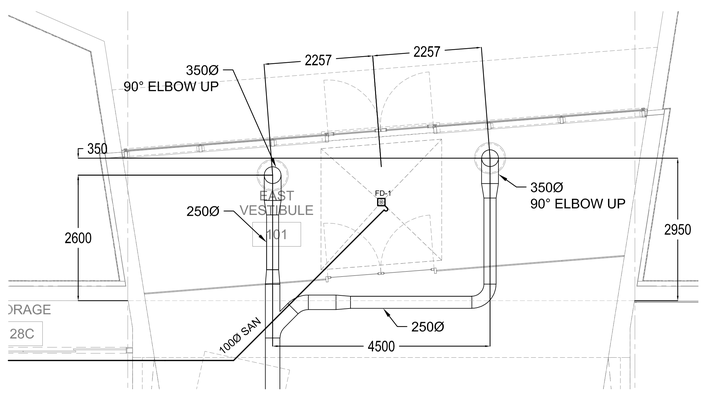
2 M010 DUCT BANK ACROSS DRIVE AISLE DETAIL



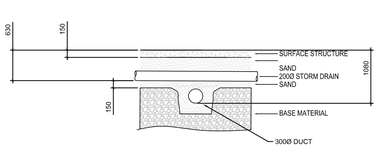
3 M010 ELEVATOR SUMP SYSTEM DETAIL



5 M010 MECHANICAL - GROUND FLOOR - WEST VESTIBULE
1:50



6 M010 MECHANICAL - GROUND FLOOR - EAST VESTIBULE
1:50



4 M010 BELOW GRADE DUCT DETAIL

LEGEND

STM	STORM
SAN	SANITARY
MBH NG	NATURAL GAS
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CWS	COLD WATER SUPPLY
CWR	COLD WATER RETURN
DCW	DOMESTIC WATER SUPPLY
	PIPE EXPANSION JOINT
FD-1	FLOOR DRAIN
HD-1	HUB DRAIN
CO	CLEAN OUT
SI	SEDIMENT INTERCEPTOR (ABOVE GRADE ONLY AND SHOWN FOR CLARITY)
NT	NEUTRALIZING TANK (ABOVE GRADE ONLY AND SHOWN FOR CLARITY)
GI	GREASE INTERCEPTOR (ABOVE GRADE ONLY AND SHOWN FOR CLARITY)
SUPPLY AIR DUCT	DUCT
M	DETAIL NUMBER / SHEET NUMBER

GENERAL NOTES:

1. BELOW GRADE PIPE TO BE PVC, ABS, CAST IRON OR DWV COPPER, CSA CERTIFIED.
2. BELOW GRADE PIPE TO BE INSTALLED ON A 150 MM BED OF GRANULAR OR SAND AND BACKFILLED TO 150 MM ABOVE PIPE WITH SAME.
3. SANITARY VENTING NOT SHOWN. COMPLETE VENTING IN STRICT ACCORDANCE WITH PART 7 OF O.B.C.
4. PROVIDE TRAP SEALS AND TRAP SEAL PRIMERS AS REQUIRED.
5. SLOPE ALL DRAINAGE & SANITARY PIPING ACCORDING TO CODE.
6. ELEVATOR PIT SUMP PUMP TO BE INSTALLED IN ACCORDANCE WITH CSA B44 "SAFETY CODE FOR ELEVATORS".
7. ALL DIMENSIONS IN MILLIMETERS
8. EXTERIOR AREA DRAINS BY OTHERS
9. GANG TRAP SANITARY WHERE APPLICABLE BY OBC
10. INVERT ELEVATIONS AS PER SITE SERVICING AND UTILITY PLAN, DWG #C102, SHT 2 OF 2, REVISION 9, JULY 22, 2016

MATERIAL NOTES:

1. STORM WATER PIPE TO BE PVC-BDS, SOLVENT WELDED
2. SANITARY PIPE TO BE PVC-BDS, SOLVENT WELDED
3. NATURAL GAS PIPE TO BE POLYPIPE (YELLOW)
4. HWS/HWR/CWS/CWR/ TO BE PRE-INSULATED PEX
5. DCW PIPE TO BE UPVC (UNPLASTICIZED PVC)
6. SUPPLY AIR DUCT TO BE POLYVINYL COATED STEEL DUCT

JRP ENGINEERING
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No	DESCRIPTION	DATE
9	UPDATED CONSTRUCTION	MAY 31 2017
8	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
7	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
6	ISSUED FOR STORM PIPING - FINAL	FEB 9 2017
5	ISSUED FOR CONSTRUCTION	OCT 7 2016
4	ISSUED FOR TENDER	SEPT 13 2016
3	RE-ISSUED FOR CONSTRUCTION - PIPE ROUTES	AUG 5 2016
2	RE-ISSUED FOR CONSTRUCTION - PIPE ROUTES & ELEVATIONS	JULY 25 2016
1	ISSUED FOR CONSTRUCTION	JULY 14 2016
0	ISSUED FOR FOUNDATION PERMIT	MAY 31 2016

REVISIONS

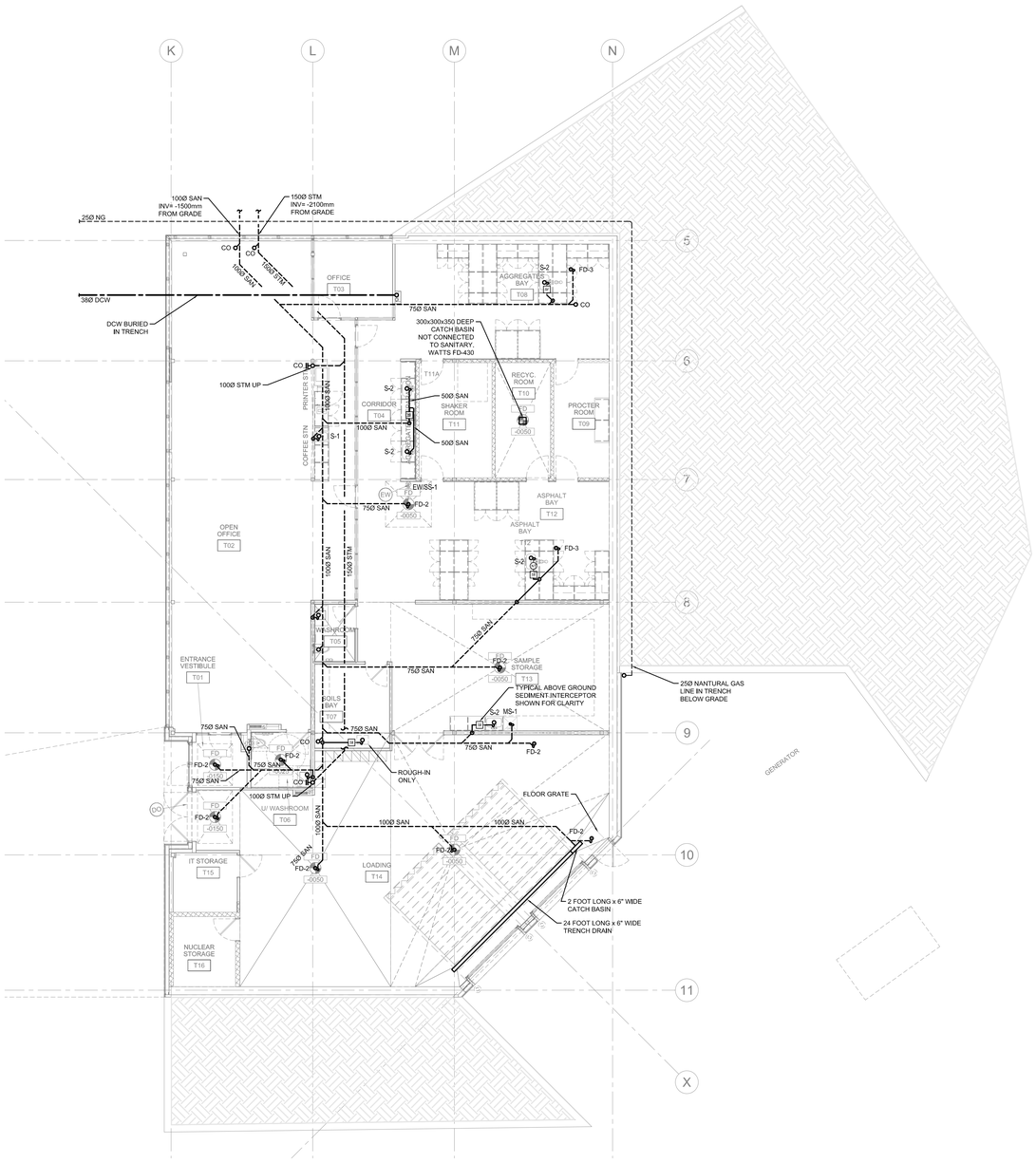
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
GROUND FLOOR
BELOW GRADE

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	MAY 2016

project no.: 1570	drawing no.: M010
revision: 3	



1 / M011 MECHANICAL - TEST FACILITY - BELOW GRADE SANITARY & STORM
1:100

LEGEND

Ø STM	STORM
Ø SAN / MBH NG	SANITARY / NATURAL GAS
Ø HWR / Ø HWS	HEATING WATER SUPPLY / HEATING WATER RETURN
Ø CWS / Ø CWR	COLD WATER SUPPLY / COLD WATER RETURN
Ø DOW	DOMESTIC WATER SUPPLY
	PIPE EXPANSION JOINT
FD-#	FLOOR DRAIN
HD-#	HUB DRAIN
CO	CLEAN OUT
SI	SEDIMENT INTERCEPTOR (ABOVE GRADE ONLY AND SHOWN FOR CLARITY)
NT	NEUTRALIZING TANK (ABOVE GRADE ONLY AND SHOWN FOR CLARITY)
GI	GREASE INTERCEPTOR (ABOVE GRADE ONLY AND SHOWN FOR CLARITY)
Ø SUPPLY AIR DUCT	DUCT
# / M	DETAIL NUMBER / SHEET NUMBER

GENERAL NOTES:

1. BELOW GRADE PIPE TO BE PVC, ABS, CAST IRON OR DWV COPPER, CSA CERTIFIED.
2. BELOW GRADE PIPE TO BE INSTALLED ON A 150 MM BED OF GRANULAR OR SAND AND BACKFILLED TO 150 MM ABOVE PIPE WITH SAME.
3. SANITARY VENTING NOT SHOWN. COMPLETE VENTING IN STRICT ACCORDANCE WITH PART 7 OF O.B.C.
4. PROVIDE TRAP SEALS AND TRAP SEAL PRIMERS AS REQUIRED.
5. SLOPE ALL DRAINAGE & SANITARY PIPING ACCORDING TO CODE.
6. ELEVATOR PIT SUMP PUMP TO BE INSTALLED IN ACCORDANCE WITH CSA B44 "SAFETY CODE FOR ELEVATORS".
7. ALL DIMENSIONS IN MILLIMETERS
8. EXTERIOR AREA DRAINS BY OTHERS
9. GANG TRAP SANITARY WHERE APPLICABLE BY OBC
10. INVERT ELEVATIONS AS PER SITE SERVICING AND UTILITY PLAN, DWG #C102, SHT 2 OF 2, REVISION 9, JULY 22, 2016

MATERIAL NOTES:

1. STORM WATER PIPE TO BE PVC-BDS, SOLVENT WELDED
2. SANITARY PIPE TO BE PVC-BDS, SOLVENT WELDED
3. NATURAL GAS PIPE TO BE POLYPIPE (YELLOW)
4. HWS/HWR/CWS/CWR/ TO BE PRE-INSULATED PEX
5. DCW PIPE TO BE UPVC (UNPLASTICIZED PVC)
6. SUPPLY AIR DUCT TO BE POLYVINYL COATED STEEL DUCT

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No	DESCRIPTION	DATE
5	UPDATED CONSTRUCTION	MAY 31 2017
4	ISSUED FOR CONSTRUCTION	OCT 7 2016
3	ISSUED FOR TENDER	SEPT 13 2016
2	RE-ISSUED FOR CONSTRUCTION-PIPE ROUTES AND ELEVATIONS	JULY 25 2016
1	ISSUED FOR CONSTRUCTION	JULY 14 2016
0	ISSUED FOR FOUNDATION PERMIT	MAY 31 2016

REVISIONS

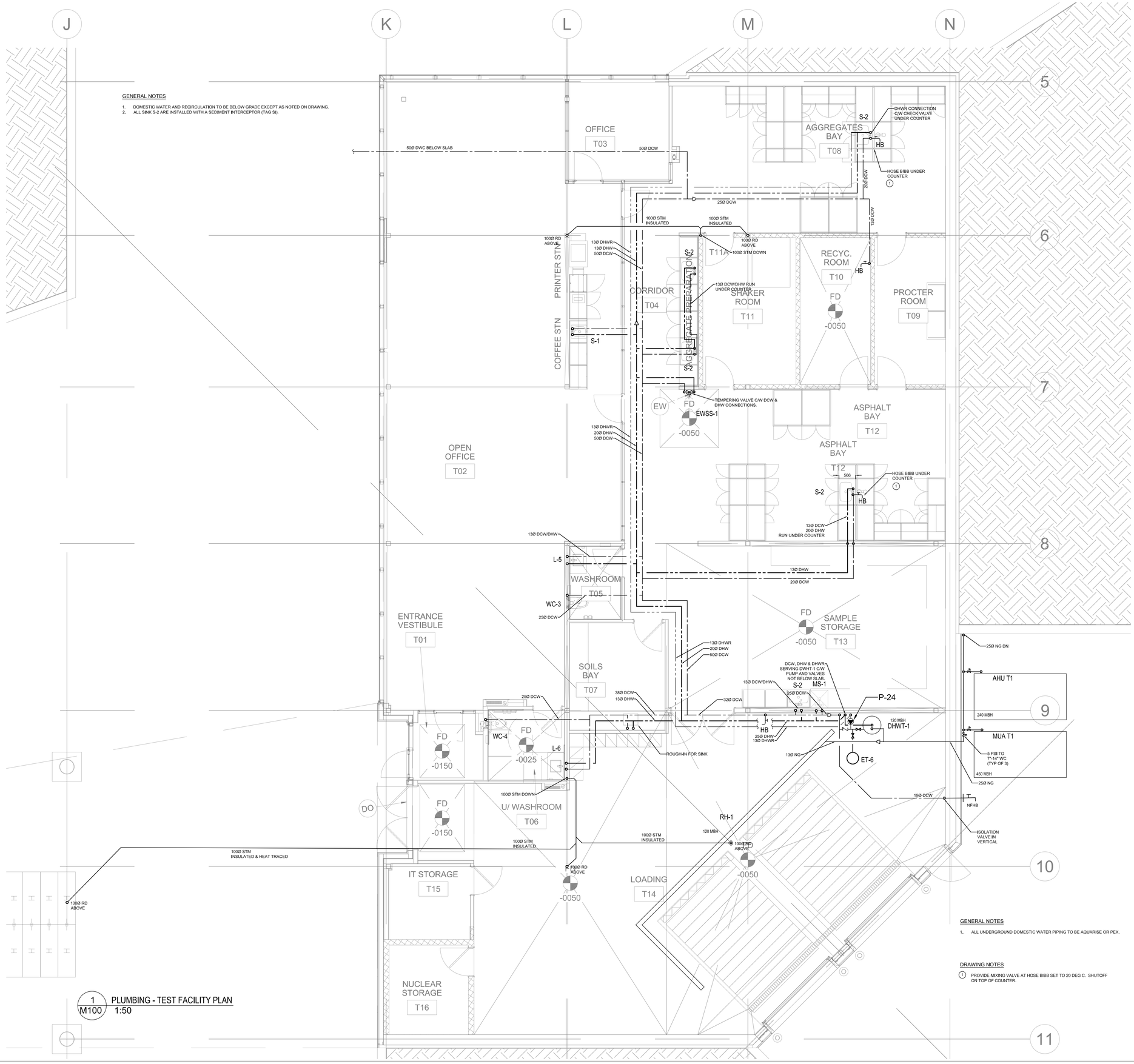
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
TEST FACILITY
BELOW GRADE
SANITARY & STORM

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	MAY 2016

project no.: 1570	drawing no.: M011
revision: 2	



1 M100 PLUMBING - TEST FACILITY PLAN
1:50

GENERAL NOTES

1. ALL UNDERGROUND DOMESTIC WATER PIPING TO BE AQUARISE OR PEX.

DRAWING NOTES

1. PROVIDE MIXING VALVE AT HOSE BIBB SET TO 20 DEG C. SHUTOFF ON TOP OF COUNTER.

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No	DESCRIPTION	DATE
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

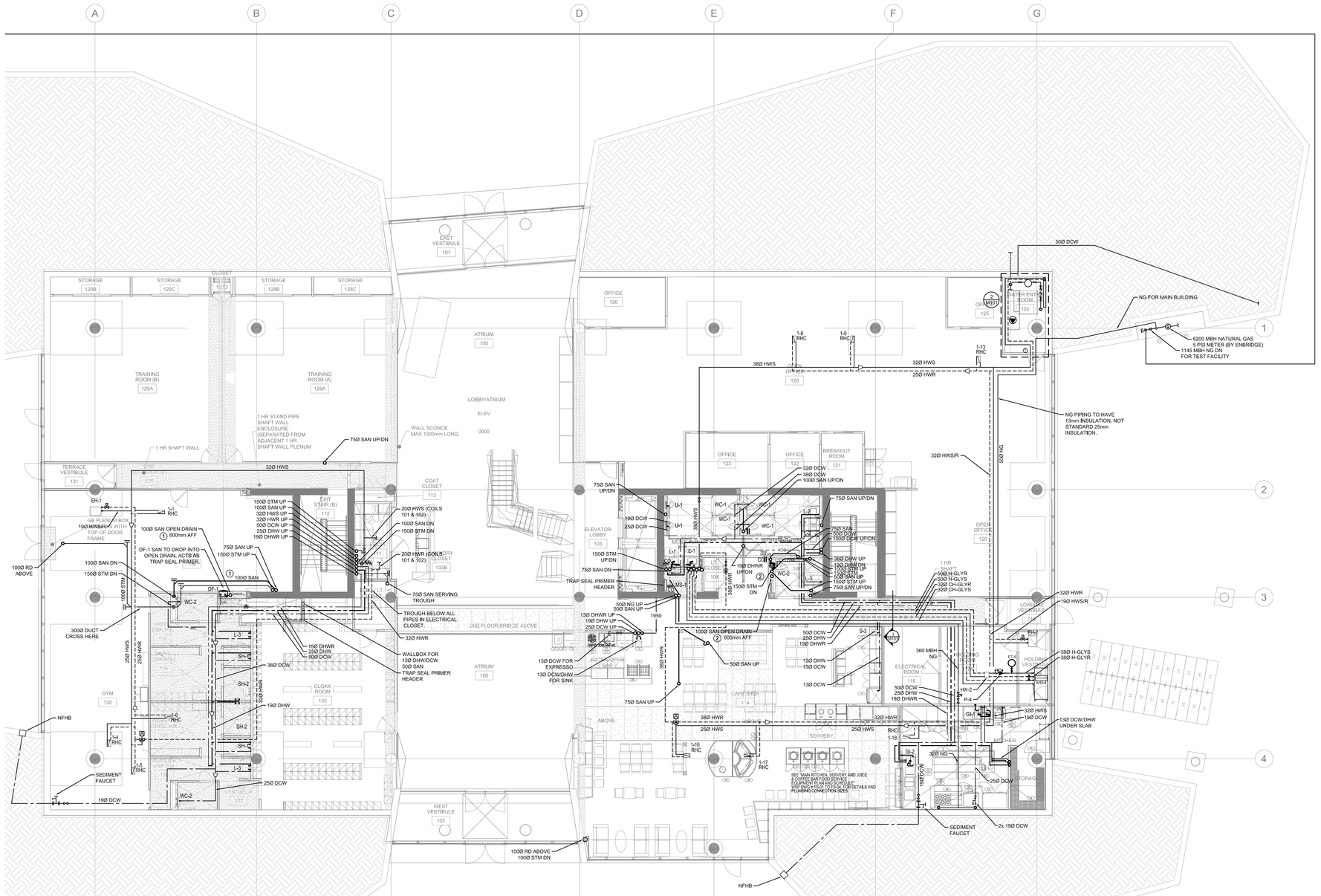
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

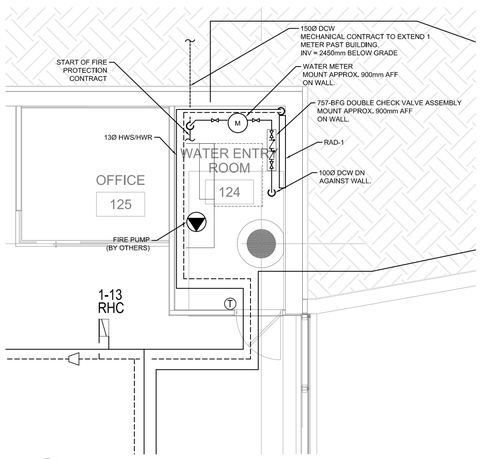
drawing title:
MECHANICAL
PLUMBING
TEST FACILITY PLAN

scale:	1:50	drawn by:	CLM
designed by:	CLM	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	MAY 2017

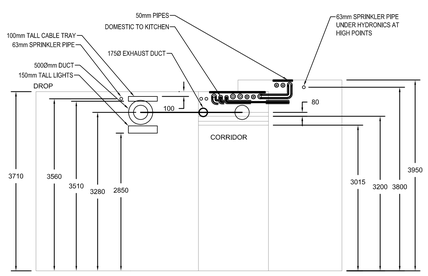
project no.: 1570	drawing no.: M100
revision: 0	



1 M101 PLUMBING - GROUND FLOOR PLAN
1:100



2 M101 PLUMBING - WATER ENTRY ROOM LAYOUT
1:50



3 M101 TYPICAL SECTION - EXIT CORRIDOR 118
1:50

GROUND FLOOR VAV SCHEDULE					
TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
1-1	12	419	1395	53.0	5.3
1-2	12	360	1200		
1-3	10	240	800		
1-4	10	240	800	30.4	3.0
1-5	5	60	200	7.6	0.8
1-6	4	45	150	5.7	0.6
1-7	6	105	350		
1-8	6	102	340	12.9	1.3
1-9	6	129	430	16.3	1.6
1-10	10	288	960		
1-11	6	93	310		
1-12	8	144	480		
1-13	10	252	840	31.9	3.2
1-14	10	270	900		
1-15	8	150	500		
1-16	8	180	600	22.8	2.3
1-17	10	302	1005	38.2	3.8
1-18	8	180	600	22.8	2.3

4 M101 VAV SCHEDULE FOR RE-HEAT COILS (RHC)
NTS

DRAWING NOTES

1. MECHANICAL CONTRACTOR TO PROVIDE 300x300 ACCESS DOOR INSTALLED CENTERED ON 100mm OPEN SANITARY PIPE.
DOOR TO BE INSTALLED IN MENS VESTIBULE 134.

2. MECHANICAL CONTRACTOR TO PROVIDE 300x300 ACCESS DOOR INSTALLED CENTERED ON 100mm OPEN SANITARY PIPE.
DOOR TO BE INSTALLED ON WALL IN ENTRANCE TO WOMENS WASHROOM 106.

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No	DESCRIPTION	DATE
6	UPDATED CONSTRUCTION	MAY 31 2017
5	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
3	ISSUED FOR CONSTRUCTION 2	OCT 28 2016
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

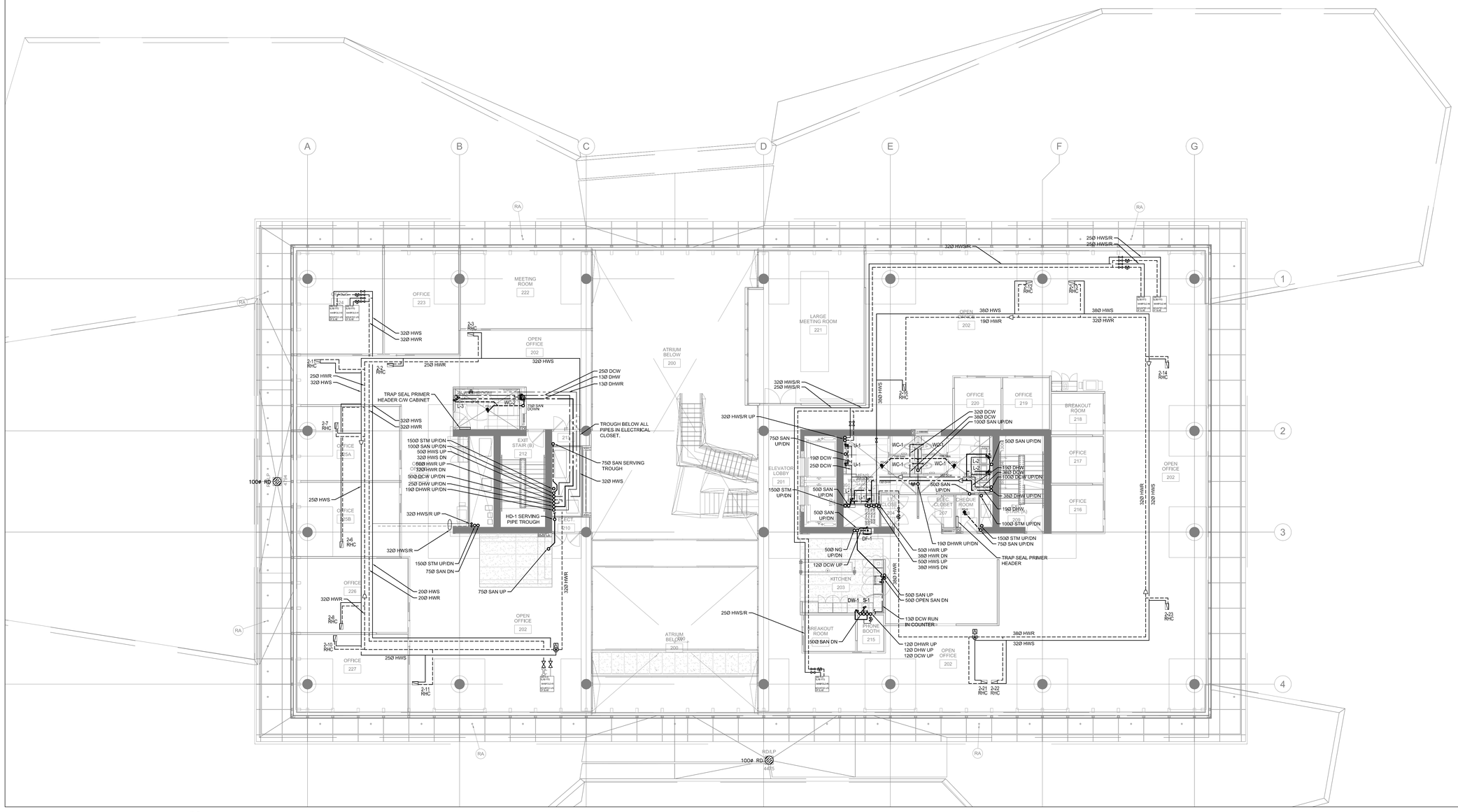
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
PLUMBING
GROUND FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570	drawing no.: M101
revision: 0	



1 M102 PLUMBING - SECOND FLOOR PLAN
1:100

SECOND FLOOR VAV SCHEDULE

TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
2-1	8	128	425	16.1	1.6
2-2	8	108	360	13.7	1.4
2-3	8	138	460	17.5	1.7
2-4	8	123	410		
2-5	5	62	205		
2-6	7	75	250	6.8	0.7
2-7	10	102	340	11.8	1.2
2-8	8	105	350	13.3	1.3
2-9	8	123	410		
2-10	10	171	570	21.6	2.2
2-11	10	212	705	26.8	2.7
2-12	10	153	510	19.4	1.9
2-13	10	153	510	19.4	1.9
2-14	10	180	600	22.8	2.3
2-15	12	320	1065		
2-16	12	183	610	23.2	2.3
2-17	8	77	255		
2-18	6	51	170		
2-19	12	320	1065		
2-20	4	41	135		
2-21	12	270	900	34.2	3.4
2-22	12	270	900	34.2	3.4
2-23	10	180	600	22.8	2.3

2 M102 VAV SCHEDULE FOR RE-HEAT COILS (RHC)
NTS

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Professional Engineers
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Optimum Mechanical Solutions Inc.
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www.optimummech.com

No	DESCRIPTION	DATE
5	UPDATED CONSTRUCTION	MAY 31 2017
4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
3	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

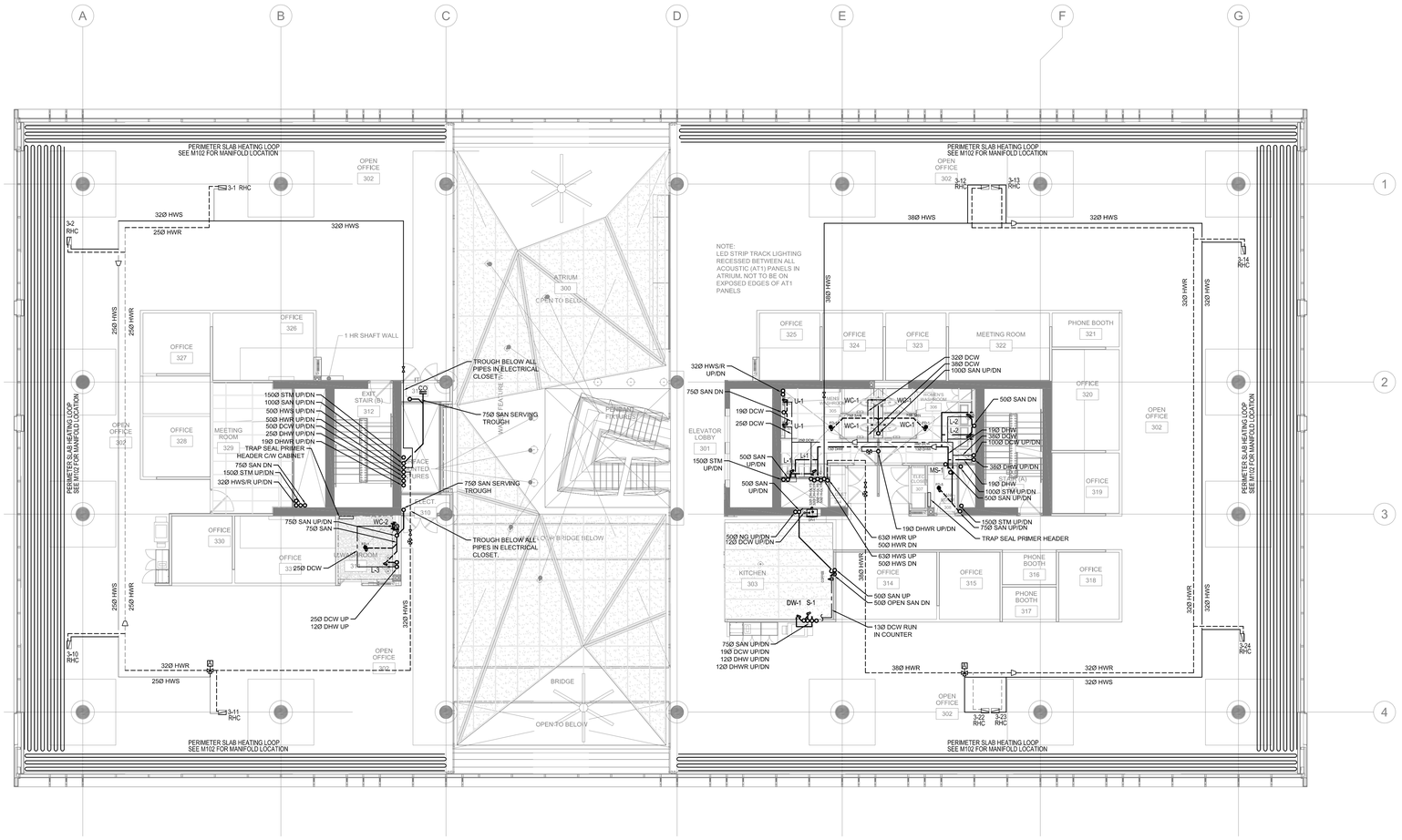
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

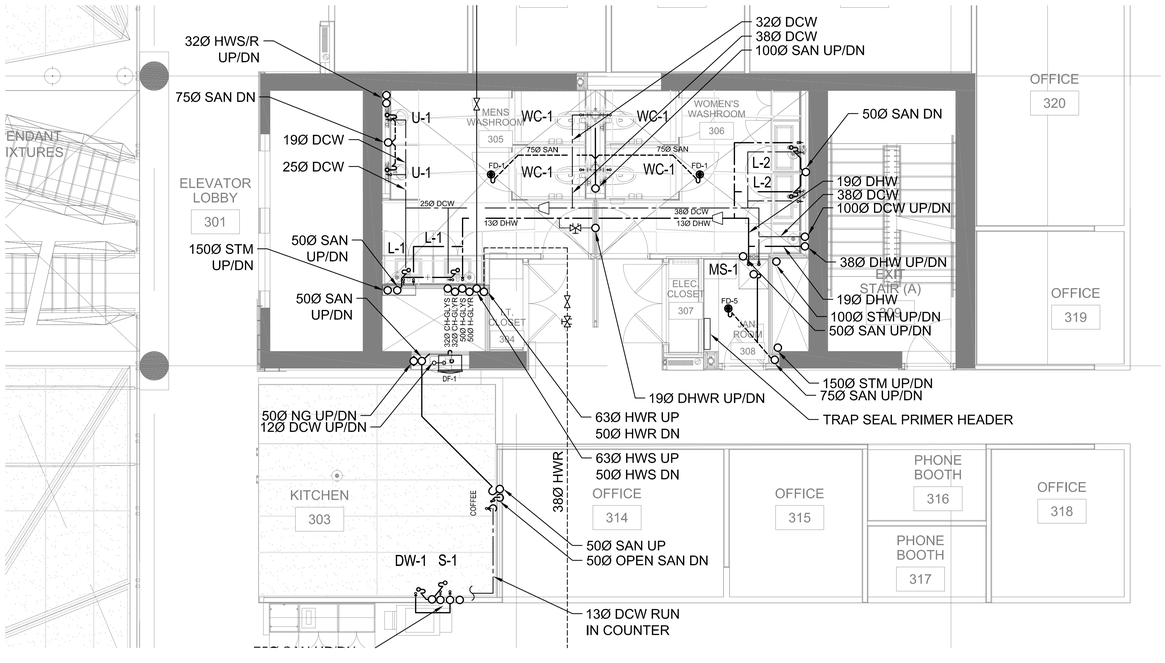
drawing title:
MECHANICAL
PLUMBING
SECOND FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570	drawing no.: M102
revision: 0	



1 M103 PLUMBING - THIRD FLOOR PLAN
1:100



2 M103 PLUMBING - 3RD FLOOR MAIN WASHROOM AND KITCHEN DETAIL
1:50

THIRD FLOOR VAV SCHEDULE

TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
3-1	10	282	940	35.7	3.6
3-2	7	122	405	15.4	1.5
3-3	6	108	360		
3-4	8	162	540		
3-5	6	110	365		
3-6	5	84	280		
3-7	5	68	225		
3-8	6	108	360		
3-9	6	108	360		
3-10	8	162	540	20.5	2.1
3-11	12	423	1410	53.5	5.4
3-12	8	204	680	25.8	2.6
3-13	8	204	680	25.8	2.6
3-14	8	180	600	22.8	2.3
3-15	10	288	960		
3-16	6	77	255		
3-17	7	135	450		
3-18	9	216	720		
3-19	5	68	225		
3-20	4	56	185		
3-21	10	288	960		
3-22	10	300	1000	38.0	3.8
3-23	10	300	1000	38.0	3.8
3-24	10	240	800	30.4	3.0

3 M103 VAV SCHEDULE FOR RE-HEAT COILS (RHC)
NTS

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4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
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2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 **2016**

REVISIONS

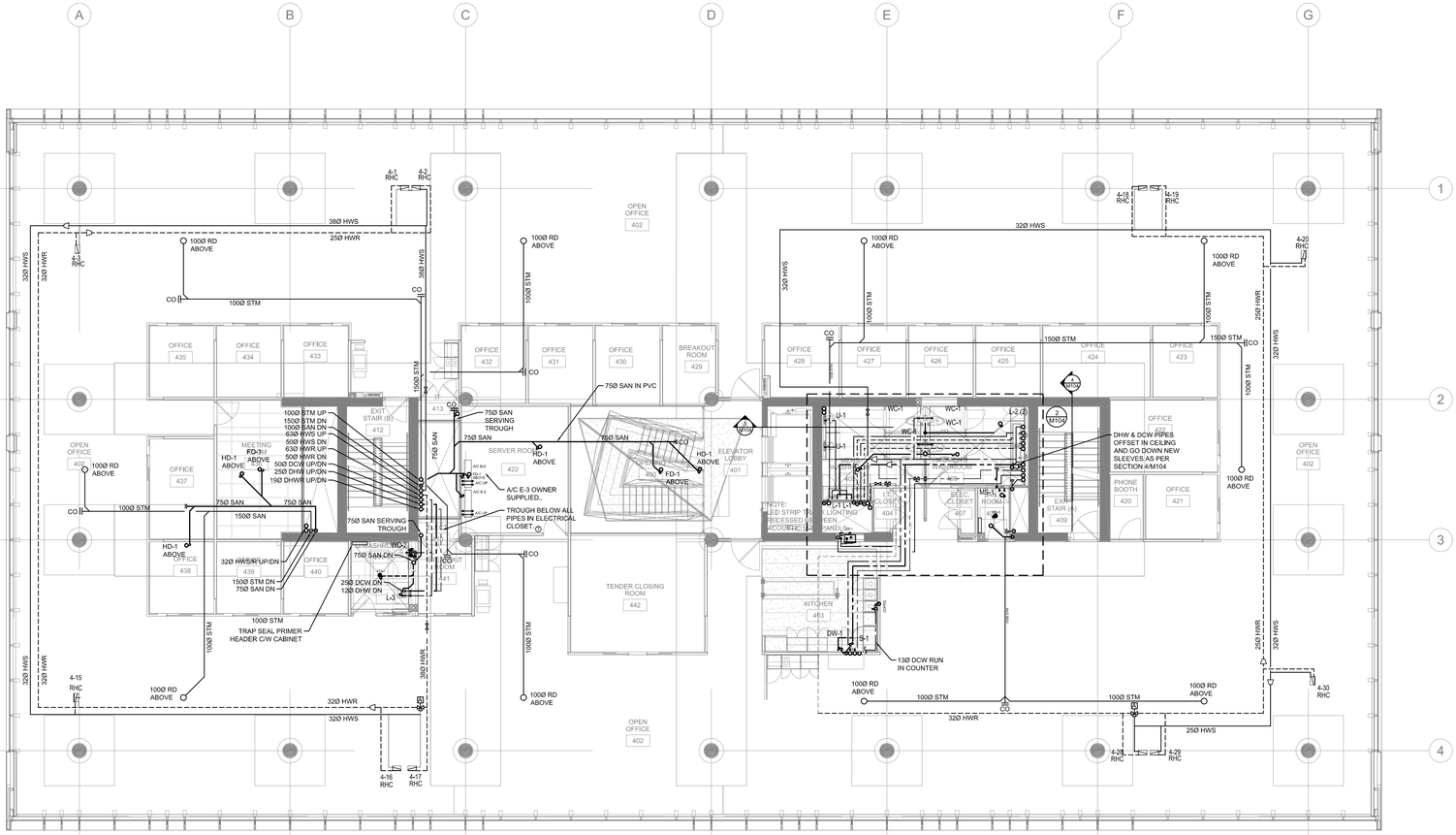
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

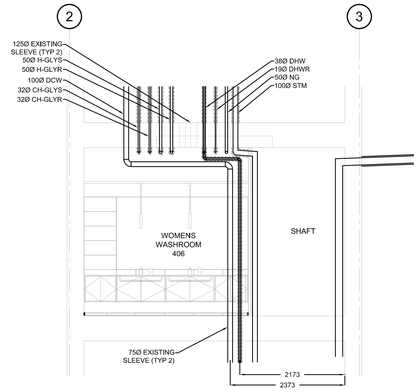
drawing title:
MECHANICAL
PLUMBING
THIRD FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

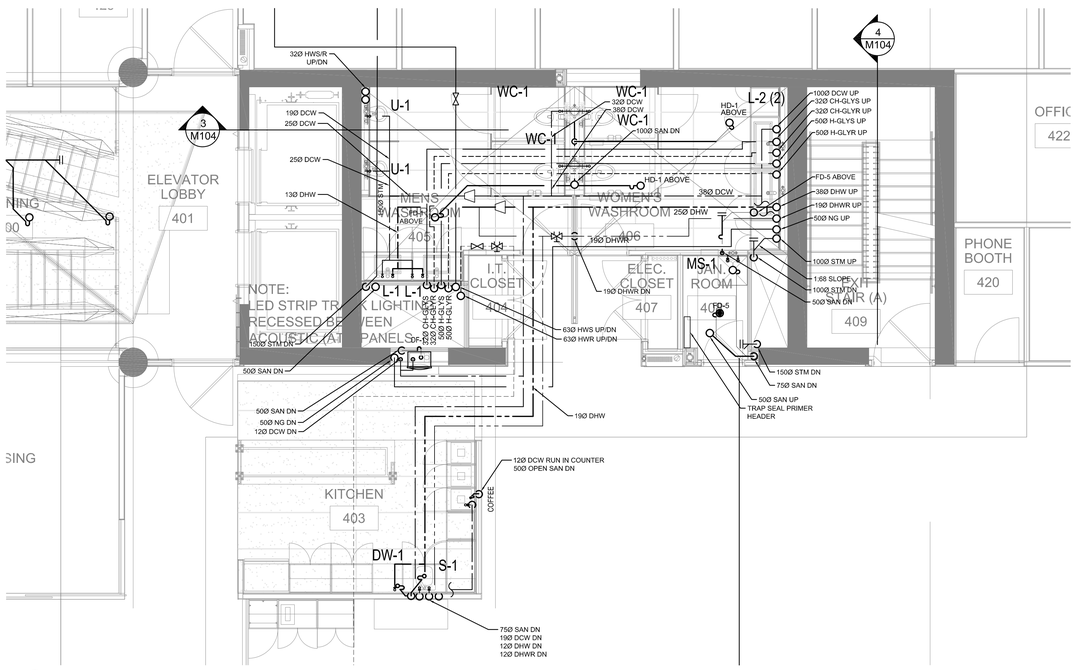
project no.: 1570	drawing no.: M103
revision: 0	



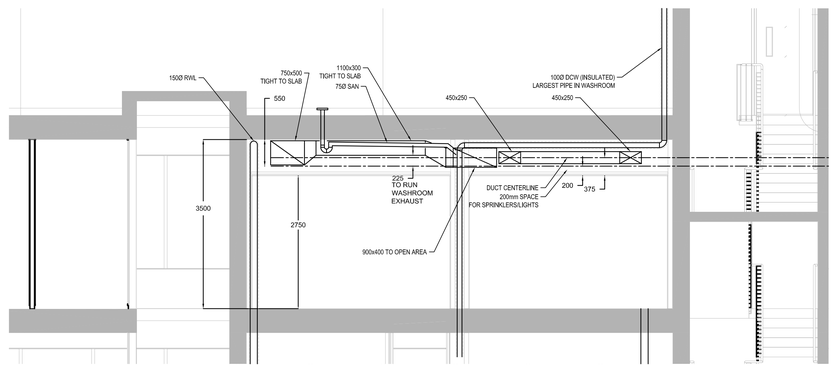
1 M104 PLUMBING - FOURTH FLOOR PLAN
1:100



4 M104 PLUMBING - 4TH FLOOR MAIN WASHROOM SECTION
1:50



2 M104 PLUMBING -4TH FLOOR MAIN WASHROOM AND KITCHEN DETAIL
1:50



3 M104 PLUMBING - 4TH FLOOR MAIN WASHROOM SECTION
1:50

FOURTH FLOOR VAV SCHEDULE

TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
4-1	10	255	850	32.3	3.2
4-2	10	255	850	32.3	3.2
4-3	7	122	405	15.4	1.5
4-4	9	234	780		
4-5	5	77	255		
4-6	5	51	170		
4-7	9	234	780		
4-8	5	51	170		
4-9	6	87	290		
4-10	6	84	280		
4-11	5	51	170		
4-12	6	84	280		
4-13	9	234	780		
4-14	9	234	780		
4-15	8	162	540	20.5	2.1
4-16	12	383	1275	48.4	4.8
4-17	12	383	1275	48.4	4.8
4-18	8	153	510	19.4	1.9
4-19	8	153	510	19.4	1.9
4-20	8	180	600	22.8	2.3
4-21	8	156	520		
4-22	6	81	270		
4-23	6	93	310		
4-24	6	83	275		
4-25	N/A				
4-26	N/A				
4-27	12	312	1040		
4-28	9	230	765	29.1	2.9
4-29	9	230	765	29.1	2.9
4-30	9	240	800	30.4	3.0

5 M104 VAV SCHEDULE FOR RE-HEAT COILS (RHC)
NTS

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No	DESCRIPTION	DATE
5	UPDATED CONSTRUCTION	MAY 31 2017
4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
3	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 **2016**

REVISIONS

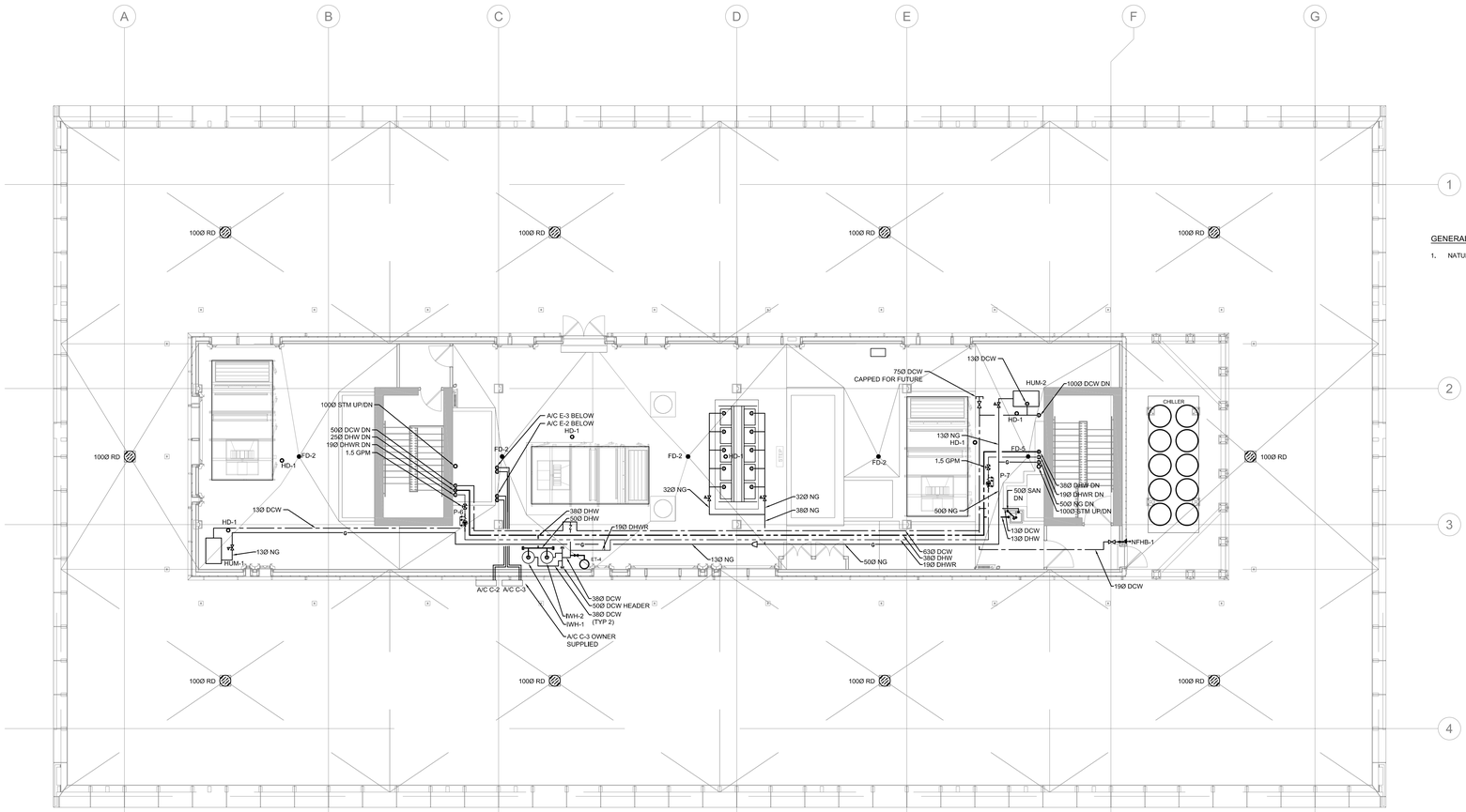
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
PLUMBING
FOURTH FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

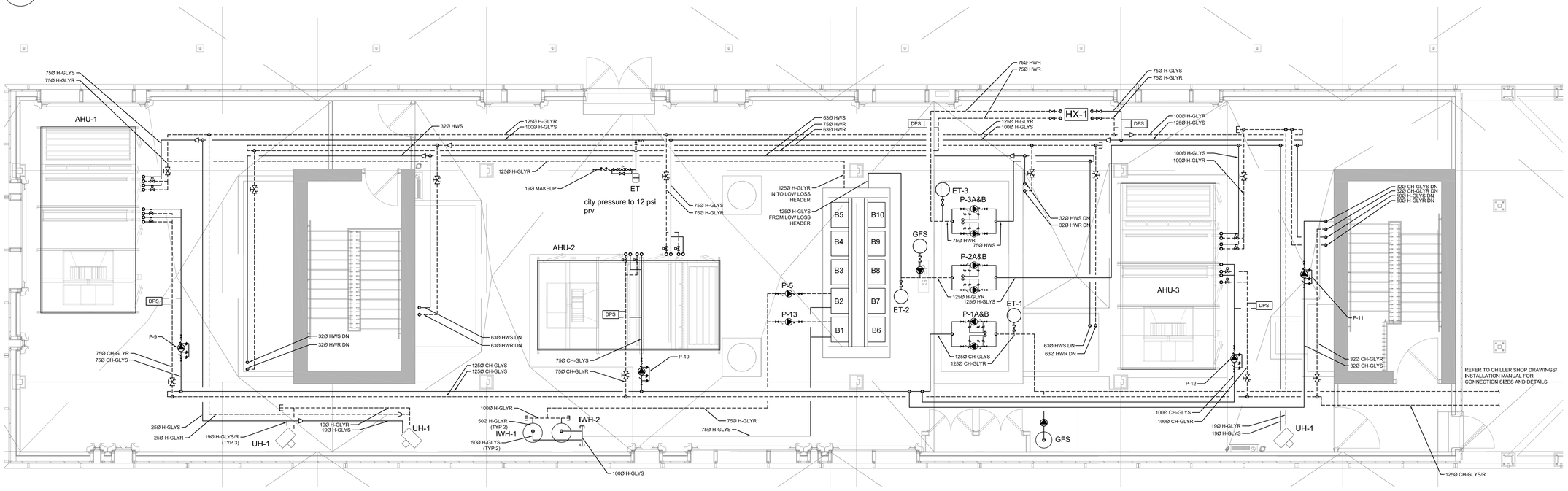
project no.: 1570	drawing no.: M104
revision: 0	



GENERAL NOTES

1. NATURAL GAS (5 PSI) SIZED FOR 2,000 MBH FUTURE LOAD.

1 M105 PLUMBING - MECHANICAL PENTHOUSE PLAN
1:100



2 M105 HEATING/COOLING PIPING - MECHANICAL PENTHOUSE DETAIL
1:50

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1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

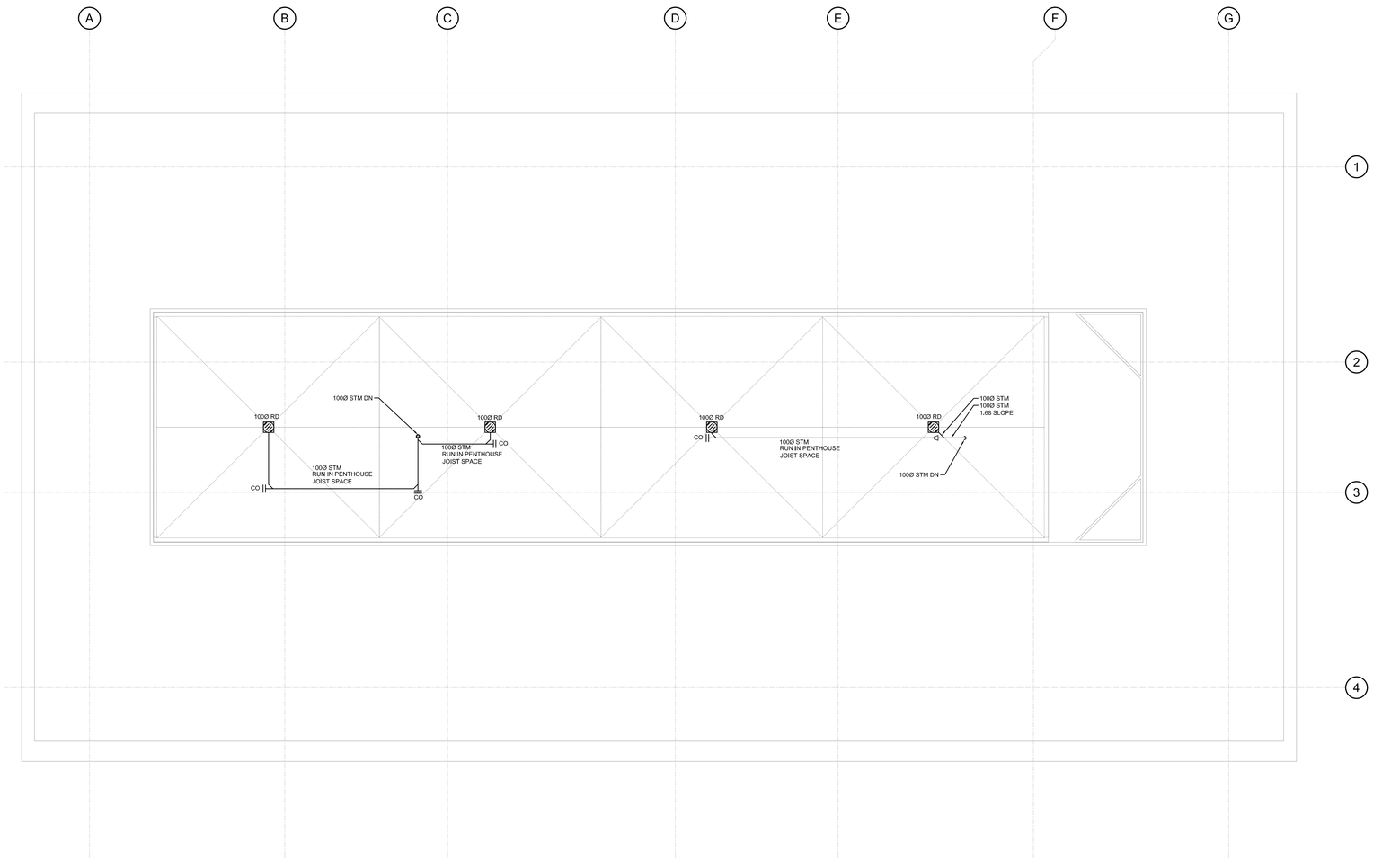
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
PLUMBING
MECHANICAL PENTHOUSE PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570
drawing no.: M105
revision: 0



1 / M106 PLUMBING - MECHANICAL PENTHOUSE ROOF PLAN
1:100

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No	DESCRIPTION	DATE
5	UPDATED CONSTRUCTION	MAY 31 2017
4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
3	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 **2016**

REVISIONS

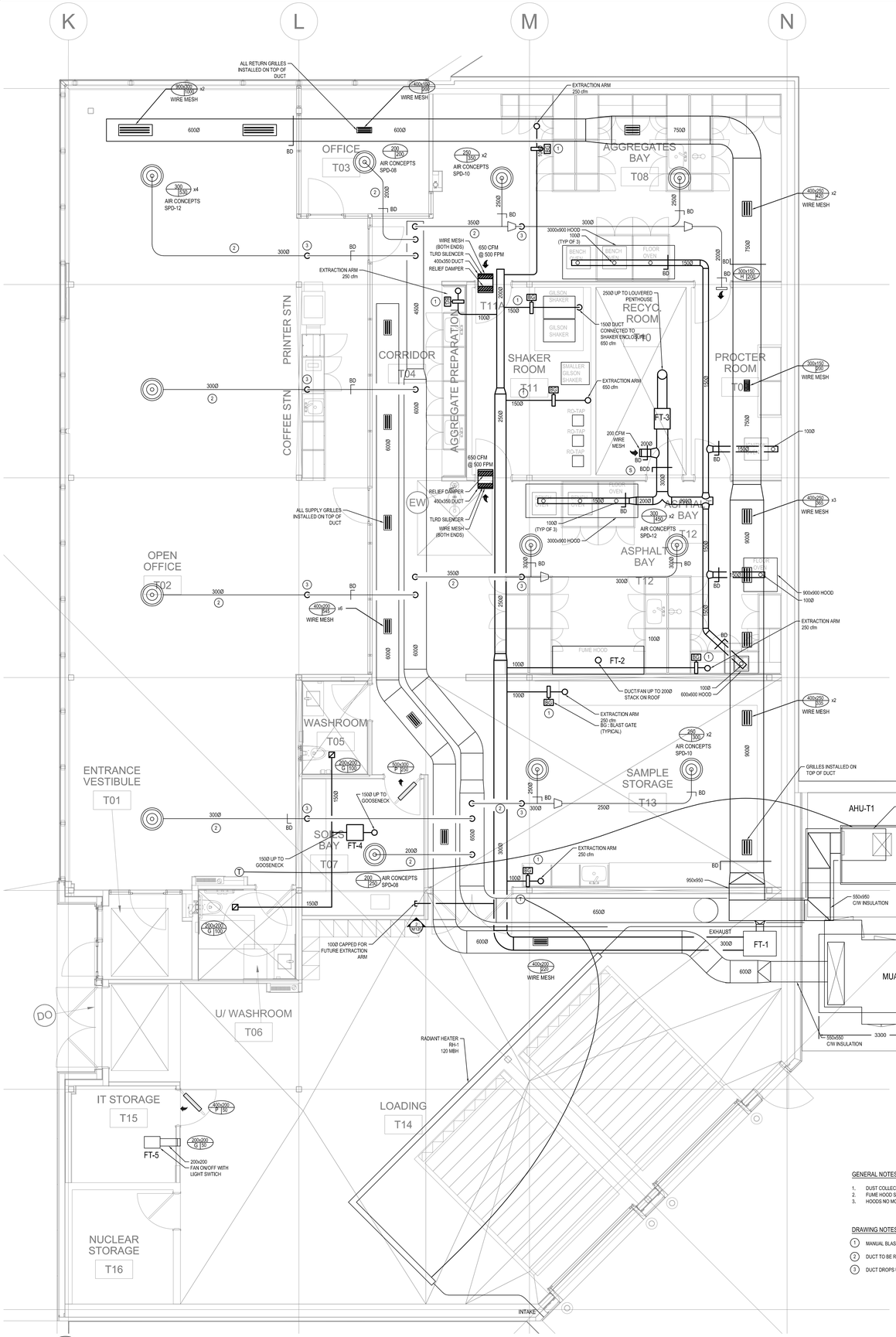
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

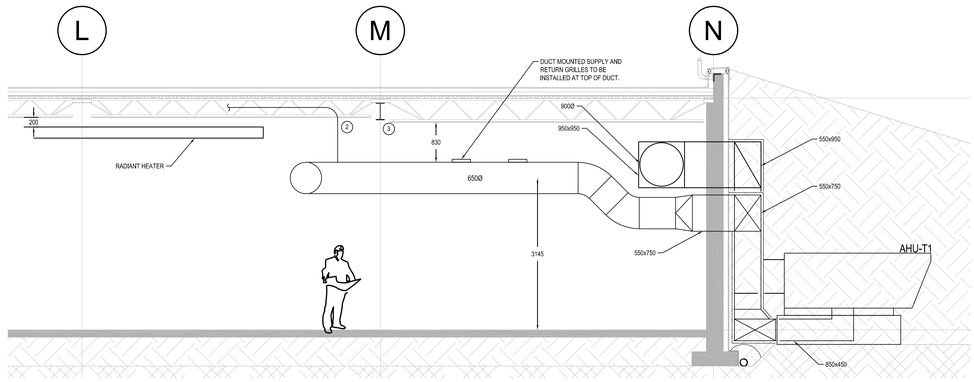
drawing title:
MECHANICAL
PLUMBING
MECHANICAL PENTHOUSE
ROOF PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

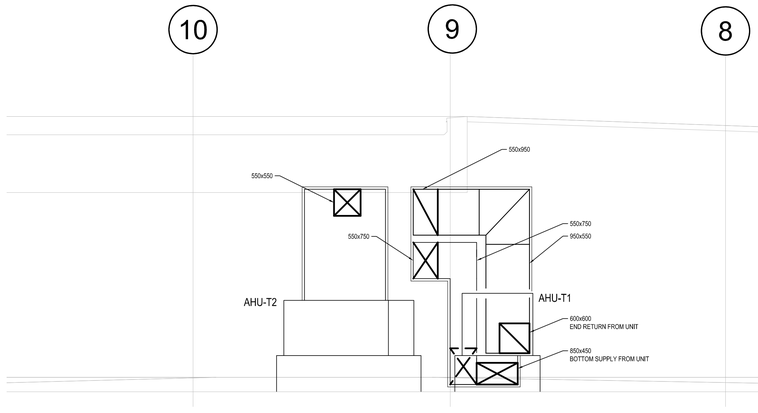
project no.:	drawing no.:
1570	M106
revision: 0	



1 M120 HVAC - TEST FACILITY PLAN
1:50



2 M120 HVAC - TEST FACILITY PLAN SECTION
1:50



3 M120 HVAC - TEST FACILITY PLAN SECTION
1:50

GENERAL NOTES

1. DUST COLLECTOR EXHAUST DUCT VELOCITY AT 3500 FPM.
2. FUME HOOD STACK VELOCITY AT 3000 FPM.
3. HOODS NO MORE THAN 1 METER AWAY FROM SOURCE.

DRAWING NOTES

1. MANUAL BLAST GATE INSTALLED AT EACH EXTRACTION ARM AS INDICATED.
2. DUCT TO BE RUN IN JOIST SPACE.
3. DUCT DROPS UNDER FULL LENGTH BEAM AT GRIDS 'L' & 'M'.

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No	DESCRIPTION	DATE
4	UPDATED CONSTRUCTION	MAY 31 2017
3	ISSUED FOR CONSTRUCTION 2	NOV 10 2016
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

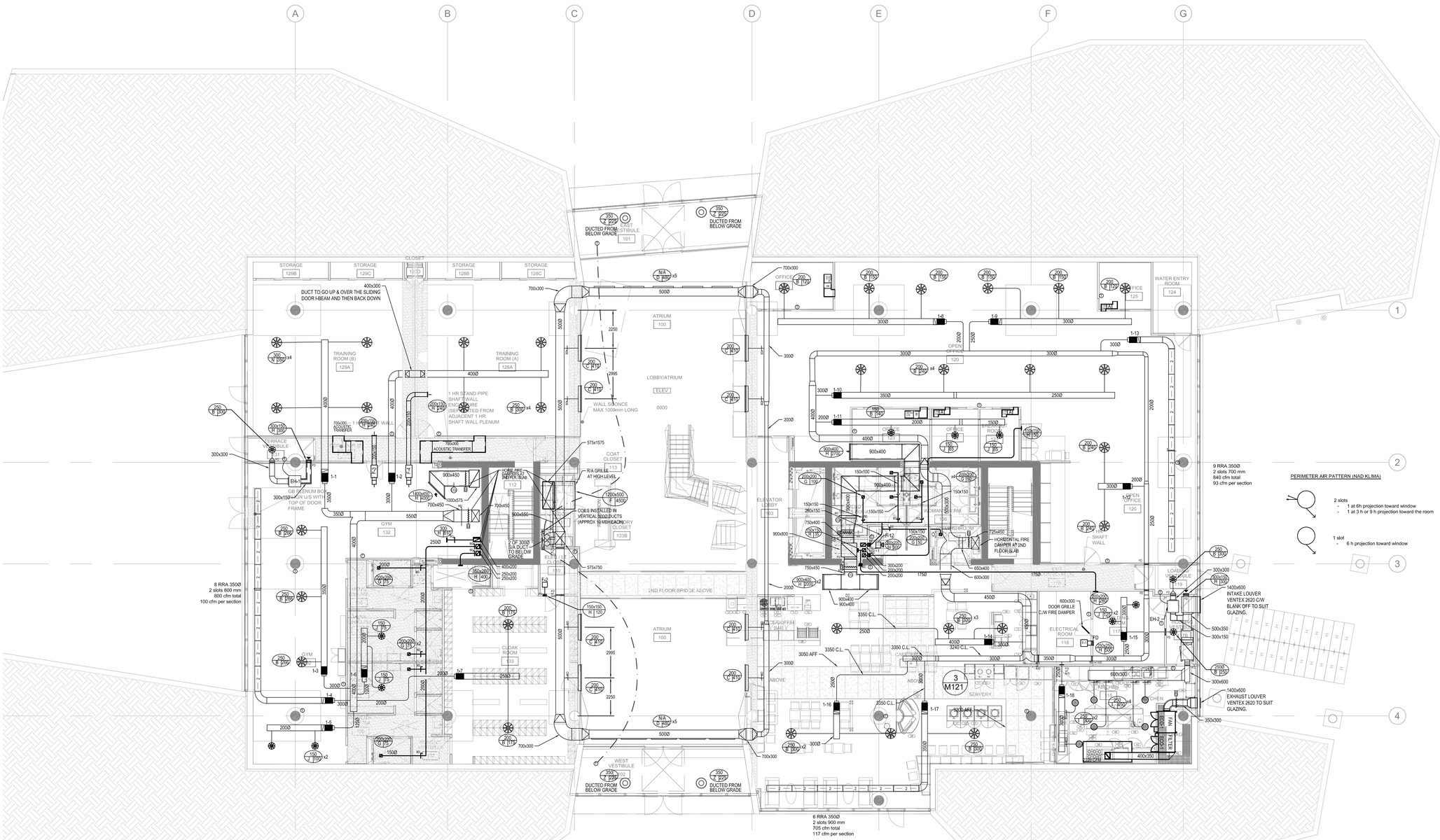
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

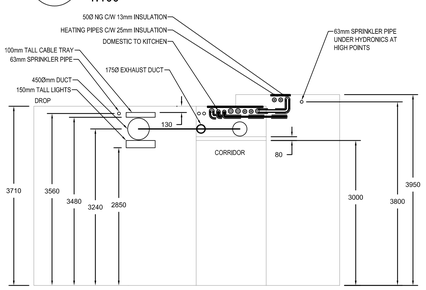
drawing title:
MECHANICAL
HVAC
TEST FACILITY PLAN

scale:	AS NOTED	drawn by:	CLM
designed by:	CLM	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2017

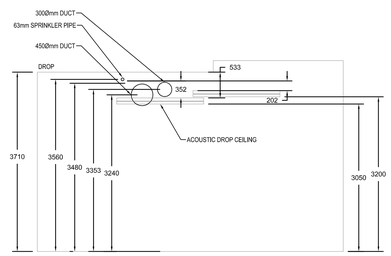
project no.: 1570	drawing no.: M120
revision: 0	



1 M121 HVAC - GROUND FLOOR PLAN
1:100



2 M121 TYPICAL SECTION - EXIT CORRIDOR 118
1:50



3 M121 CAFETERIA SECTION - GROUND
1:50

GROUND FLOOR VAV SCHEDULE

TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
1-1	14	419	1395	53.0	5.3
1-2	12	360	1200		
1-3	12	240	800		
1-4	12	240	800	30.4	3.0
1-5	5	60	200	7.6	0.8
1-6	4	45	150	5.7	0.6
1-7	8	105	350		
1-8	8	102	340	12.9	1.3
1-9	10	129	430	16.3	1.6
1-10	12	288	960		
1-11	8	93	310		
1-12	8	144	480		
1-13	12	252	840	31.9	3.2
1-14	12	270	900		
1-15	10	150	500		
1-16	10	180	600	22.8	2.3
1-17	12	302	1005	38.2	3.8
1-18	10	180	600	22.8	2.3

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No	DESCRIPTION	DATE
8	RE-ISSUED FOR HVAC REVISIONS	AUG. 9 2017
7	UPDATED CONSTRUCTION	MAY. 31 2017
6	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY. 18 2017
5	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB. 16 2017
4	ISSUED FOR MECHANICAL REVIEW	JAN. 24 2017
3	ISSUED FOR CONSTRUCTION 2	OCT. 28 2016
2	ISSUED FOR CONSTRUCTION	OCT. 7 2016
1	ISSUED FOR TENDER	SEPT. 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST. 5 2016

REVISIONS

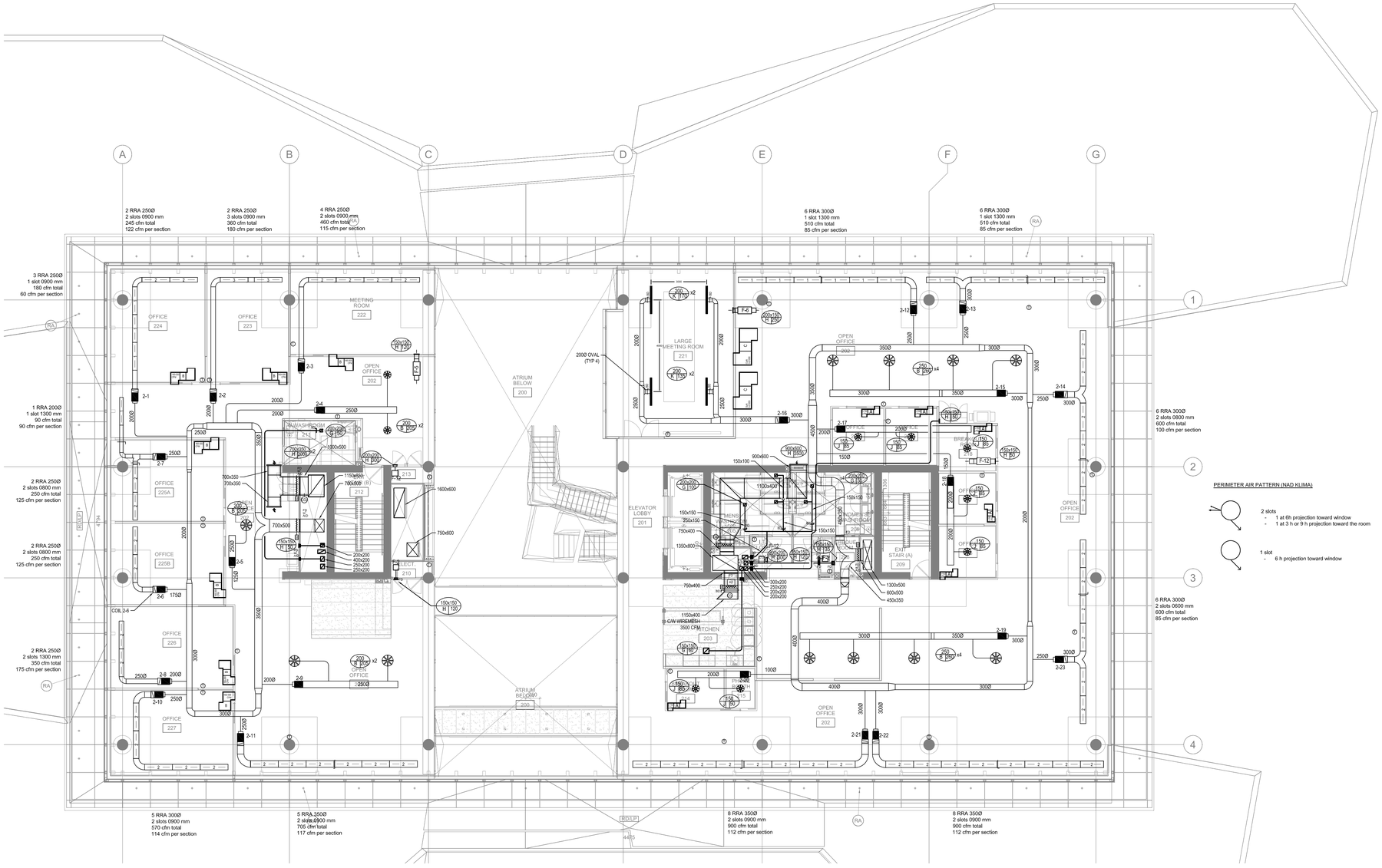
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

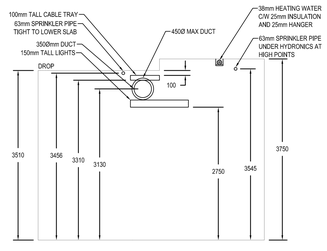
drawing title:
MECHANICAL
HVAC
GROUND FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570
drawing no.: M121
revision: 0



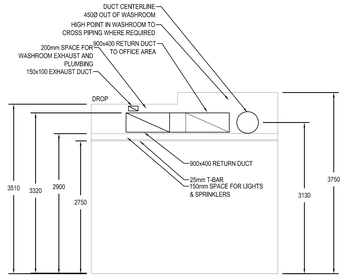
1 M122 HVAC - SECOND FLOOR PLAN
1:100



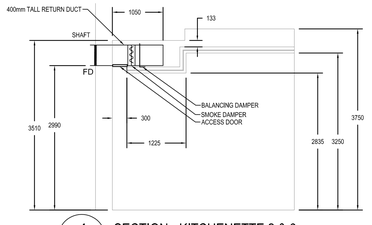
2 M123 TYPICAL SECTION - 2nd & 3rd FLOORS
1:50

DRAWING NOTES

1. ALL SPRINKLER PIPING TO BE RUN TIGHT TO THE DROP (LOWER CEILING SLAB). ACCOUNT FOR 75mm.
2. ALL PLUMBING & HYDRONICS TO BE RUN BELOW SPRINKLER PIPING AT LOWER CEILING SLAB. ACCOUNT FOR 140mm.
3. ALL PLUMBING & HYDRONICS TO BE RUN TIGHT TO CEILING SLAB AT THE HIGH POINTS. ACCOUNT FOR 140mm.
4. ALL SPRINKLER PIPING TO BE RUN BELOW PLUMBING AND HYDRONIC PIPING AT THE CEILING SLAB HIGH POINTS. ACCOUNT FOR 75mm.
5. LARGEST DUCT SIZE CROSSING CABLE TRAY IS 350Ø.



3 M123 SECTION - 2nd & 3rd FLOOR SOUTH WASHROOM CORE
1:50



4 M12X SECTION - KITCHENETTE 2 & 3
1:50

SECOND FLOOR VAV SCHEDULE

TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
2-1	8	128	425	16.1	1.6
2-2	8	108	360	13.7	1.4
2-3	8	138	460	17.5	1.7
2-4	8	123	410		
2-5	5	62	205		
2-6	7	75	250	6.8	0.7
2-7	10	102	340	11.8	1.2
2-8	8	105	350	13.3	1.3
2-9	8	123	410		
2-10	10	171	570	21.6	2.2
2-11	10	212	705	26.8	2.7
2-12	10	153	510	19.4	1.9
2-13	10	153	510	19.4	1.9
2-14	10	180	600	22.8	2.3
2-15	12	320	1065		
2-16	12	183	610	23.2	2.3
2-17	8	77	255		
2-18	6	51	170		
2-19	12	320	1065		
2-20	4	41	135		
2-21	12	270	900	34.2	3.4
2-22	12	270	900	34.2	3.4
2-23	10	180	600	22.8	2.3

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84 Bentley Avenue
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www.optimummech.com

No	DESCRIPTION	DATE
7	RE-ISSUED FOR HVAC REVISIONS	AUG 9 2017
6	UPDATED CONSTRUCTION	MAY 31 2017
5	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
3	ISSUED FOR MECHANICAL REVIEW	JAN 24 2017
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

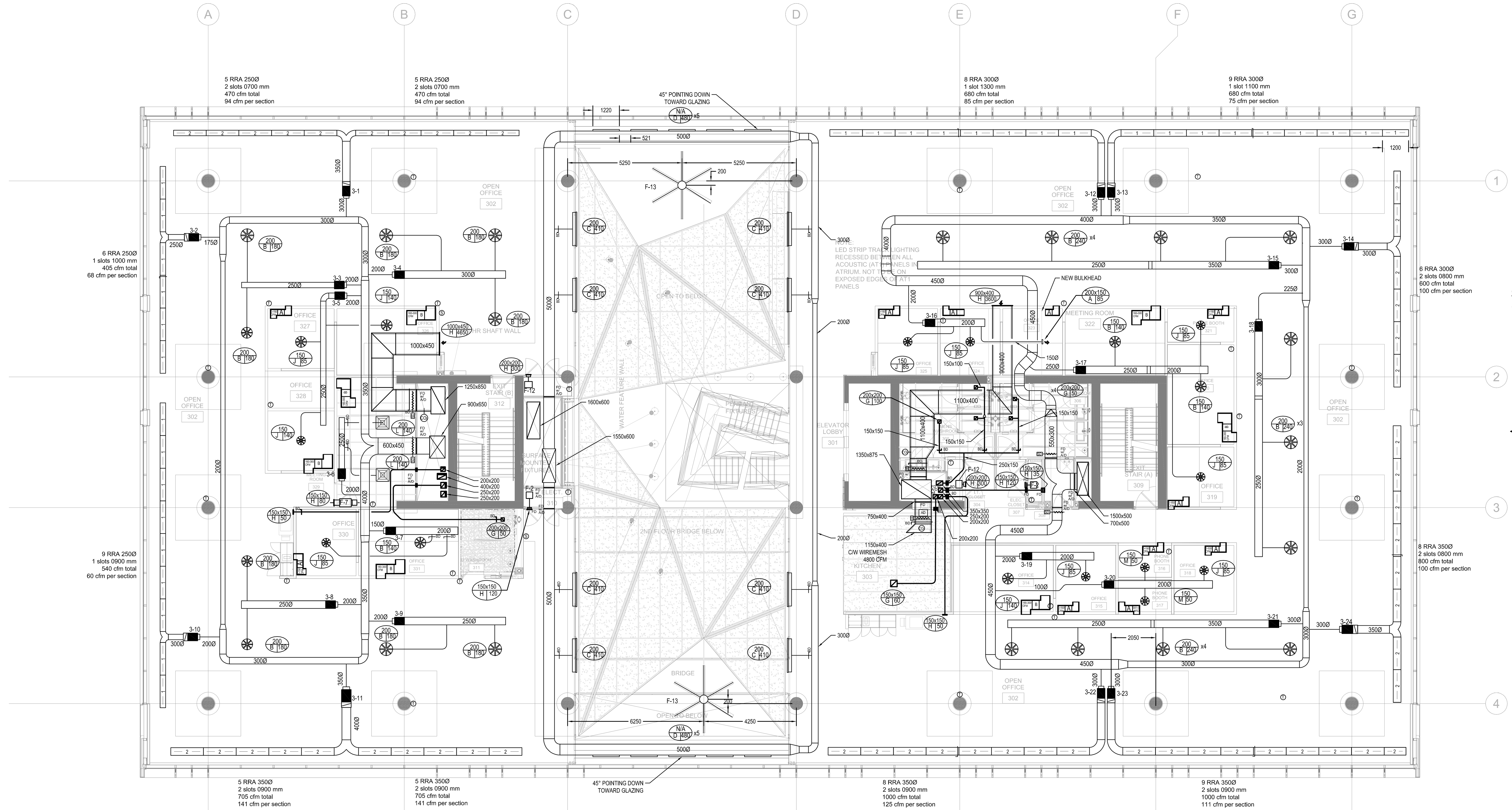
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
HVAC
SECOND FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570
drawing no.: M122
revision: 0

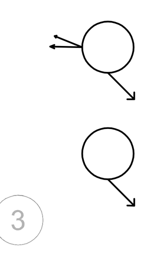


1 M123 HVAC - THIRD FLOOR PLAN
1:100

GENERAL NOTES

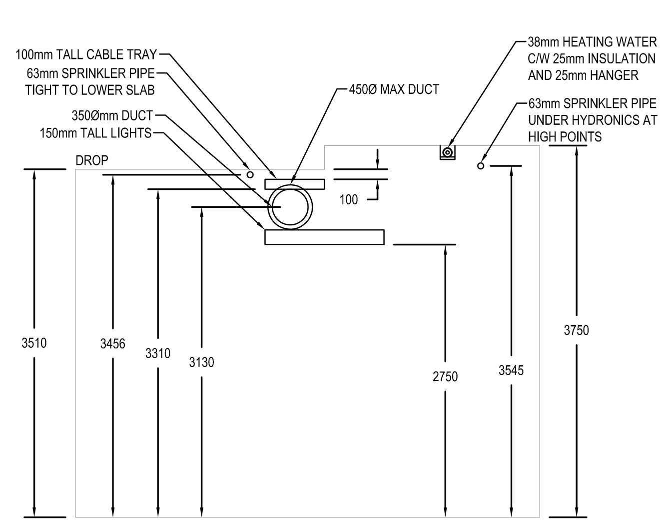
1. PROVIDE QTY:2 600 x 300 EGG CRATE RETURN GRILLES IN MEETING ROOM #329. INSTALL AWAY FROM EXHAUST FAN AND SUPPLY GRILLES. NOT SHOWN ON DRAWING FOR CLARITY.

PERIMETER AIR PATTERN (NAD KLIMA)



2 slots
- 1 at 6h projection toward window
- 1 at 3 h or 9 h projection toward the room

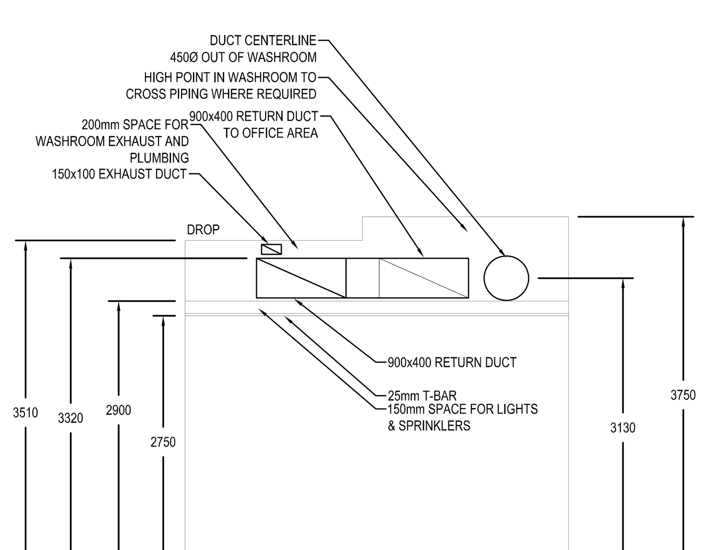
1 slot
- 6 h projection toward window



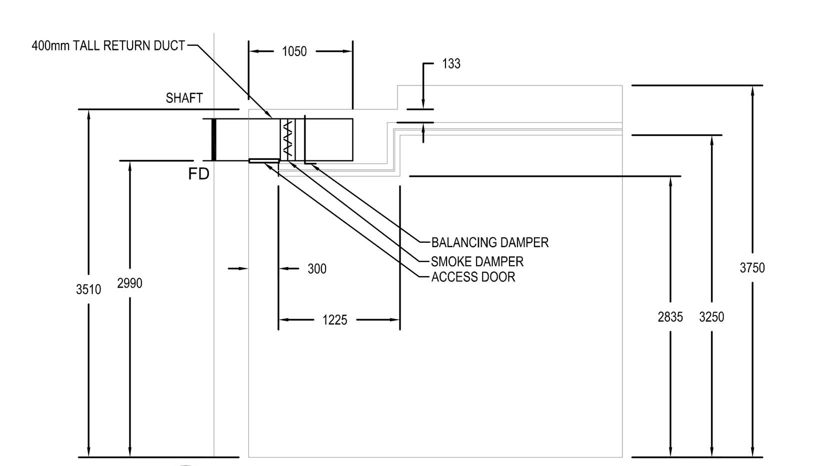
2 M123 TYPICAL SECTION - 2nd & 3rd FLOORS
1:50

DRAWING NOTES

1. ALL SPRINKLER PIPING TO BE RUN TIGHT TO THE DROP (LOWER CEILING SLAB). ACCOUNT FOR 75mm.
2. ALL PLUMBING & HYDRONICS TO BE RUN BELOW SPRINKLER PIPING AT LOWER CEILING SLAB. ACCOUNT FOR 140mm.
3. ALL PLUMBING & HYDRONICS TO BE RUN TIGHT TO CEILING SLAB AT THE HIGH POINTS. ACCOUNT FOR 140mm.
4. ALL SPRINKLER PIPING TO BE RUN BELOW PLUMBING AND HYDRONIC PIPING AT THE CEILING SLAB HIGH POINTS. ACCOUNT FOR 75mm.
5. LARGEST DUCT SIZE CROSSING CABLE TRAY IS 350Ø.



3 M123 SECTION - 2nd & 3rd FLOOR SOUTH WASHROOM CORE
1:50



4 M12X SECTION - KITCHENETTE 2 & 3
1:50

THIRD FLOOR VAV SCHEDULE

TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
3-1	12	282	940	35.7	3.6
3-2	7	122	405	15.4	1.5
3-3	8	108	360		
3-4	8	162	540		
3-5	8	110	365		
3-6	8	84	280		
3-7	6	68	225		
3-8	8	108	360		
3-9	8	108	360		
3-10	8	162	540	20.5	2.1
3-11	14	423	1410	53.5	5.4
3-12	12	204	680	25.8	2.6
3-13	12	204	680	25.8	2.6
3-14	12	180	600	22.8	2.3
3-15	12	288	960		
3-16	8	77	255		
3-17	10	135	450		
3-18	9	216	720		
3-19	8	68	225		
3-20	4	56	185		
3-21	12	288	960		
3-22	12	300	1000	38.0	3.8
3-23	12	300	1000	38.0	3.8
3-24	12	240	800	30.4	3.0

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1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

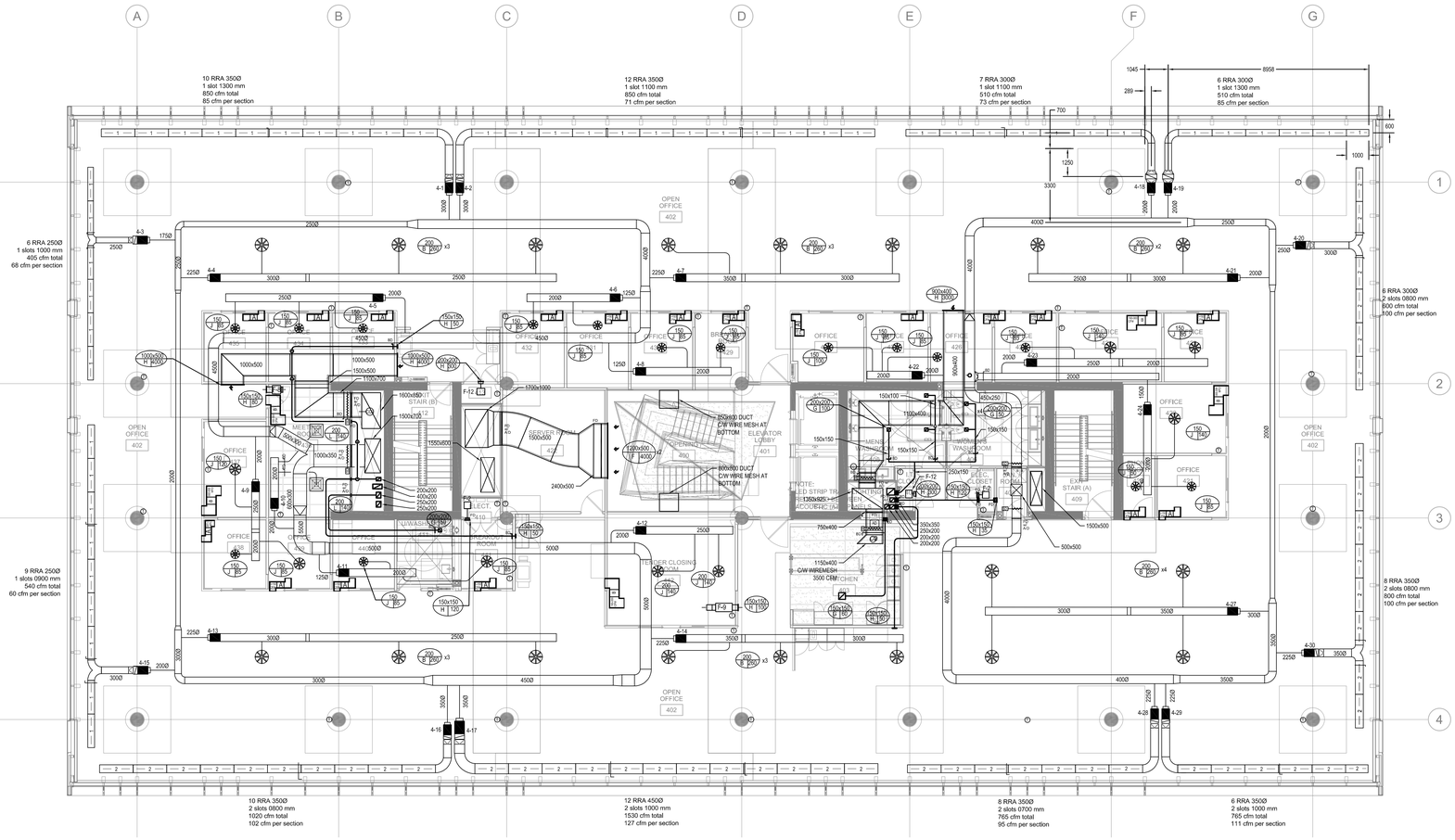
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

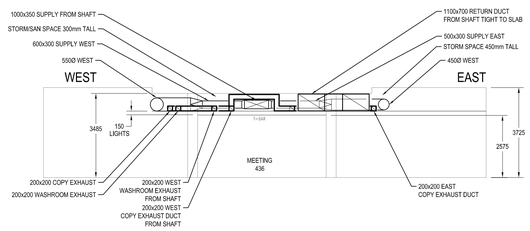
drawing title:
MECHANICAL
HVAC
THIRD FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

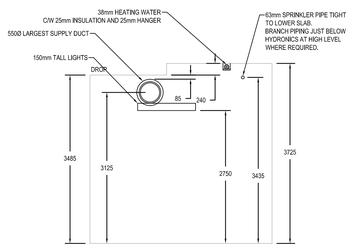
project no.: 1570
drawing no.: M123
revision: 0



1 M124 HVAC - FOURTH FLOOR PLAN 1:100



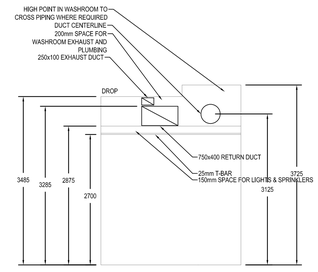
2 M124 SECTION AT NORTH SHAFT LOOKING NORTH - MEETING ROOM 436 1:100



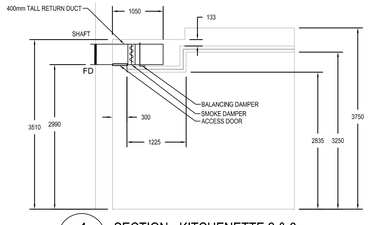
3 M124 TYPICAL SECTION - 4th FLOOR 1:50

DRAWING NOTES

1. ALL SPRINKLER PIPING TO BE RUN TIGHT TO THE DROP (LOWER CEILING SLAB). ACCOUNT FOR 75mm.
2. ALL PLUMBING & HYDRONICS TO BE RUN BELOW SPRINKLER PIPING AT LOWER CEILING SLAB. ACCOUNT FOR 140mm.
3. ALL PLUMBING & HYDRONICS TO BE RUN TIGHT TO CEILING SLAB AT THE HIGH POINTS. ACCOUNT FOR 140mm.
4. ALL SPRINKLER PIPING TO BE RUN BELOW PLUMBING AND HYDRONIC PIPING AT THE CEILING SLAB HIGH POINTS. ACCOUNT FOR 75mm.



4 M124 SECTION - 4th FLOOR SOUTH WASHROOM CORE 1:50

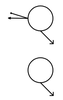


4 M12X SECTION - KITCHENETTE 2 & 3 1:50

GENERAL NOTES

1. PROVIDE QTY:2 600 x 300 EGG CRATE RETURN GRILLES IN MEETING ROOM #436. INSTALL AWAY FROM EXHAUST FAN AND SUPPLY GRILLES. NOT SHOWN ON DRAWING FOR CLARITY.

PERIMETER AIR PATTERN (NAD KLIMA)



2 slots
- 1 at 6h projection toward window
- 1 at 3 h or 9 h projection toward the room

1 slot
- 6 h projection toward window

FOURTH FLOOR VAV SCHEDULE					
TAG	UNIT SIZE	MIN. CFM	MAX. CFM	MBH @ MAX. CFM	GPM @ MAX. CFM
4-1	12	255	850	32.3	3.2
4-2	12	255	850	32.3	3.2
4-3	7	122	405	15.4	1.5
4-4	9	234	780		
4-5	8	77	255		
4-6	5	51	170		
4-7	9	234	780		
4-8	5	51	170		
4-9	8	87	290		
4-10	8	84	280		
4-11	5	51	170		
4-12	8	84	280		
4-13	9	234	780		
4-14	9	234	780		
4-15	8	162	540	20.5	2.1
4-16	14	383	1275	48.4	4.8
4-17	14	383	1275	48.4	4.8
4-18	8	153	510	19.4	1.9
4-19	8	153	510	19.4	1.9
4-20	10	180	600	22.8	2.3
4-21	8	156	520		
4-22	8	81	270		
4-23	8	93	310		
4-24	8	83	275		
4-25	N/A				
4-26	N/A				
4-27	12	312	1040		
4-28	9	230	765	29.1	2.9
4-29	9	230	765	29.1	2.9
4-30	9	240	800	30.4	3.0

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7	RE-ISSUED FOR HVAC REVISIONS	AUG 9 2017
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2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

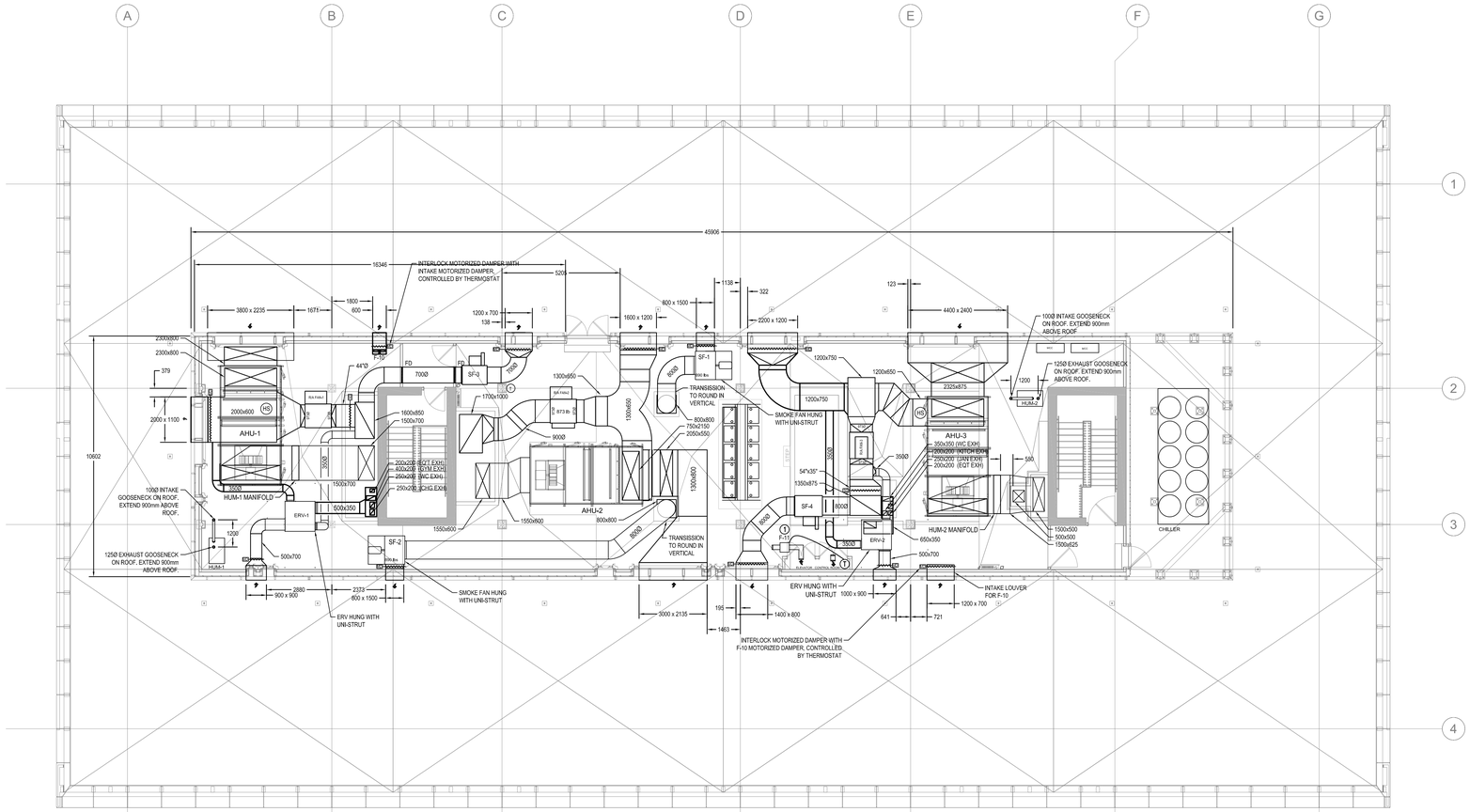
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

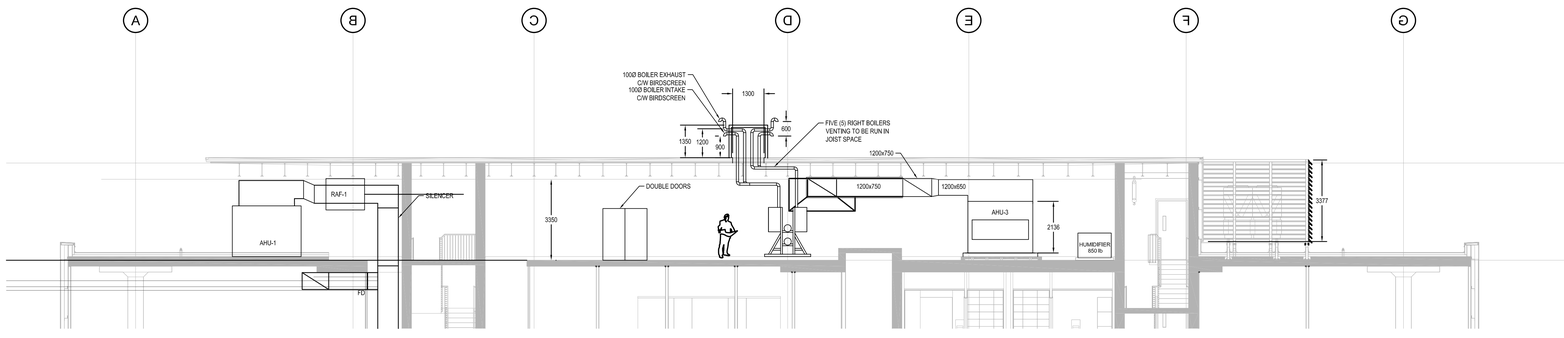
drawing title:
MECHANICAL
HVAC
FOURTH FLOOR PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

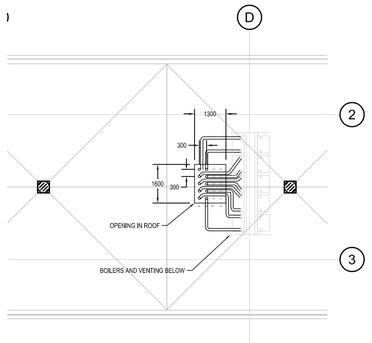
project no.: 1570
drawing no.: M124
revision: 0



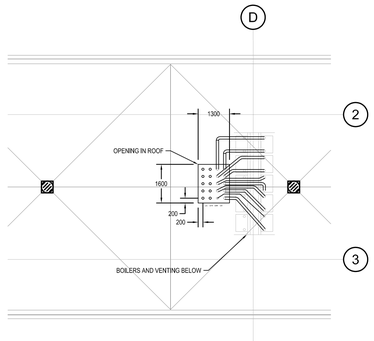
1 M125 HVAC - MECHANICAL PENTHOUSE PLAN
1:100



2 M125 HVAC - MECHANICAL PENTHOUSE SECTION
1:100



3 M125 HVAC - BOILER VENTING
1:100



4 M125 HVAC - BOILER VENTING
1:100

DRAWING NOTES

1. PROVIDE 300 CFM INLINE CABINET FAN (F-11) C/W REVERSE ACTING T-STAT SET TO 77° F. 200 x 200 DUCTWORK AND WIRE MESH AT BOTH ENDS AS GRILLES.

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0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

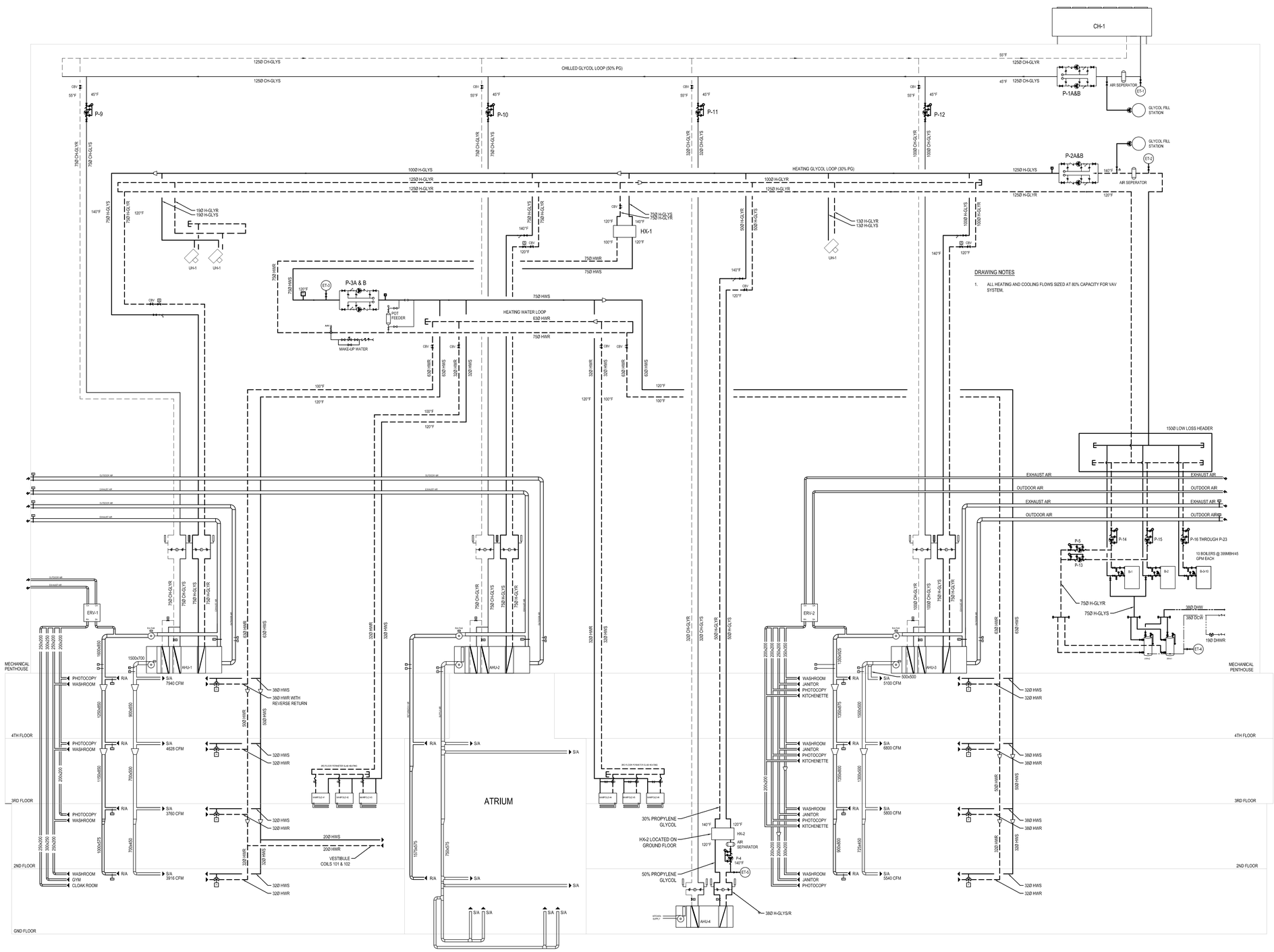
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
HVAC
MECHANICAL PENTHOUSE PLAN

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570	drawing no.: M125
revision: 1	



1 M200 SYSTEM SCHEMATIC - MAIN OFFICE BUILDING

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REVISIONS

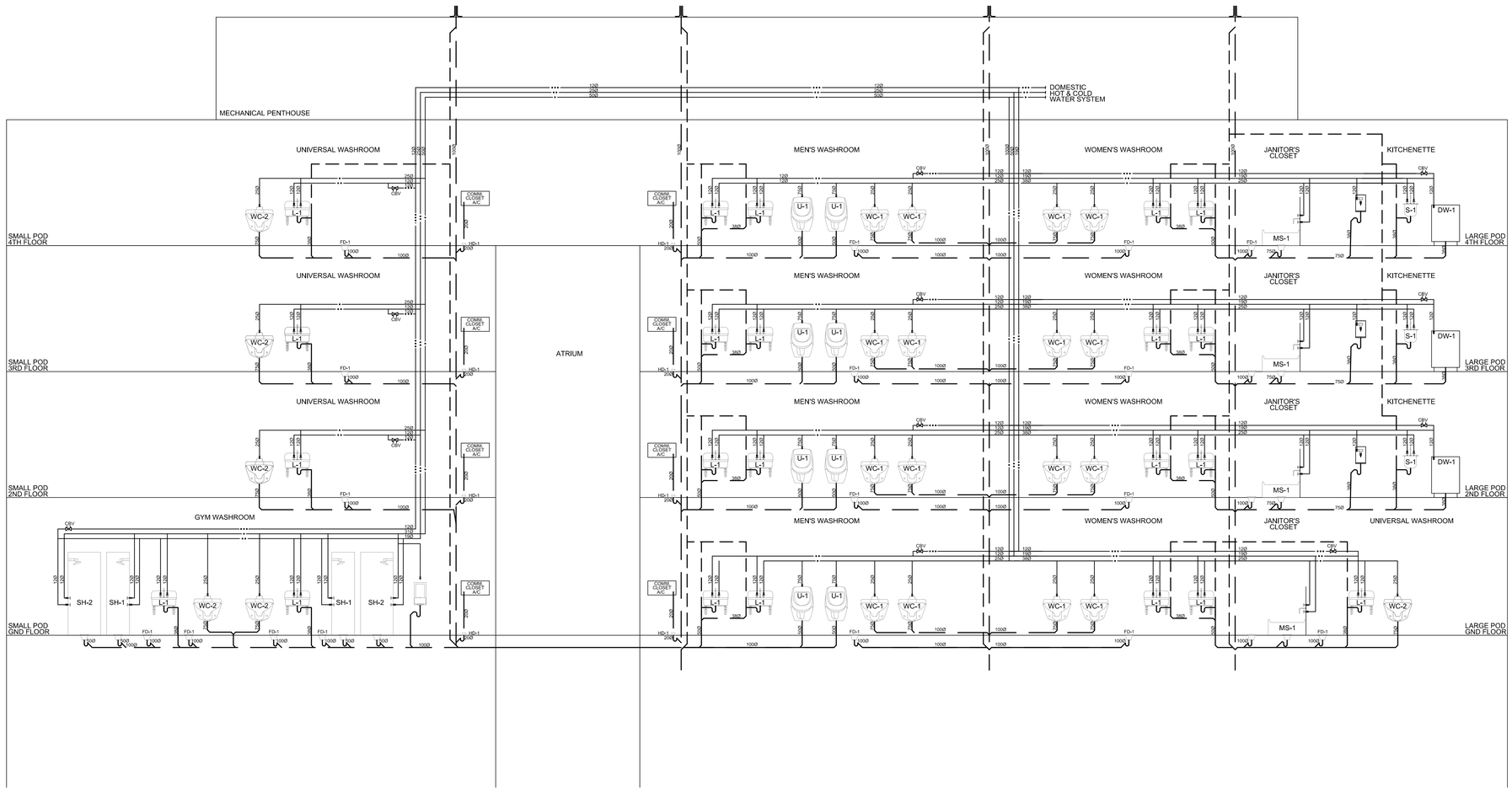
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
HVAC
SYSTEM SCHEMATIC

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570	drawing no.: M200
revision: 1	



1 M201 DHCW & SANITARY RISER DIAGRAM

JRP ENGINEERING
Professional Engineers
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Tel: 613-627-2464 Email: admin@jrpeng.com

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REVISIONS

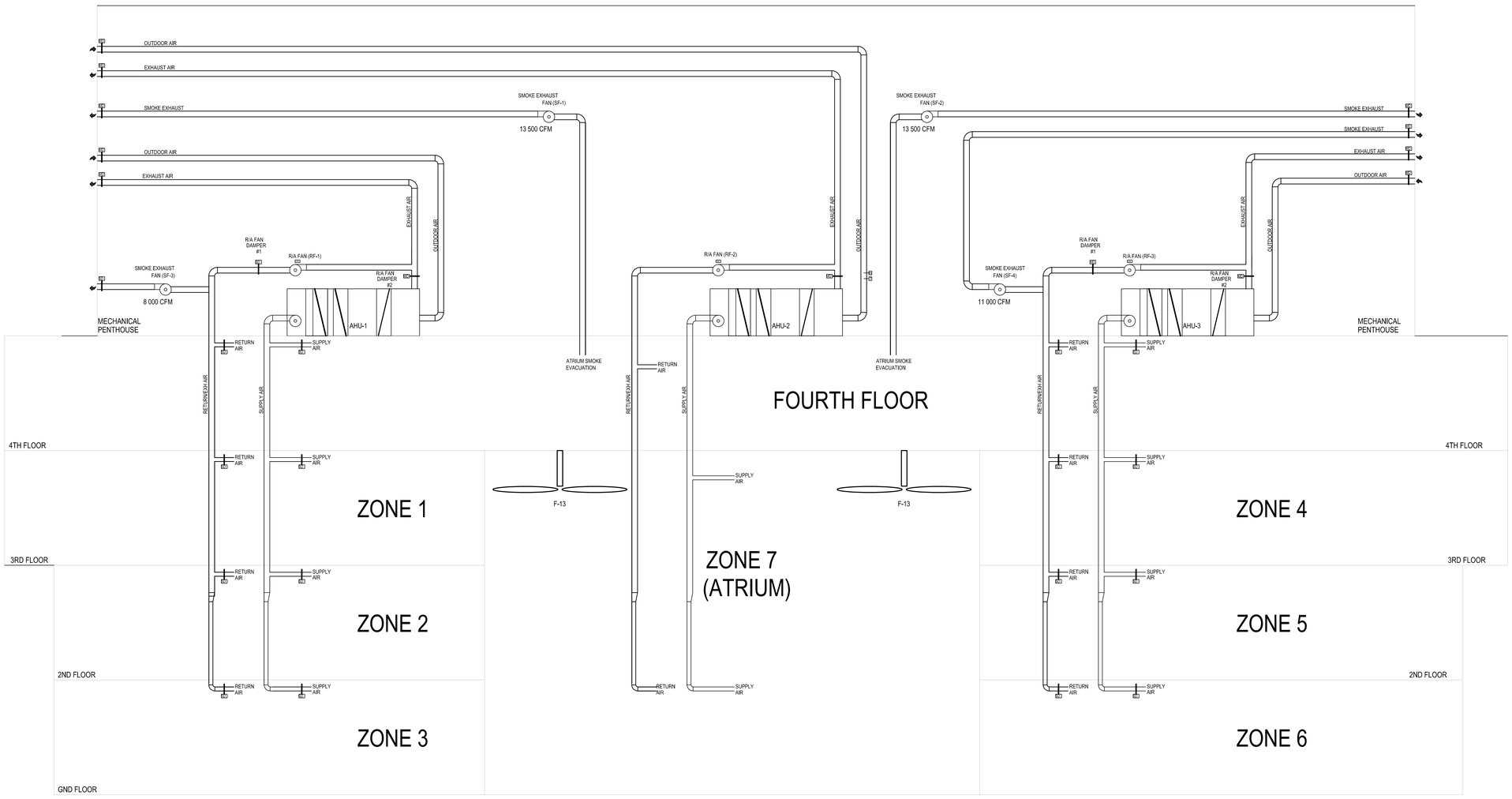
client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
K1G 3N4

project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
DHCW & SANITARY
RISER DIAGRAM

scale:	1:100	drawn by:	JST
designed by:	JST	reviewed by:	J.R.P.
approved by:	J.R.P.	date:	JULY 2016

project no.: 1570	drawing no.: M201
revision: 0	



Sequence of Operations is as follows:

1. Smoke is Detected in Zone X
2. Atrium Doors Open
3. AHU #2 SA Fan Off
4. RA Fan Off at AHU #2
5. Atrium Smoke Exhaust Fans On
6. AHU SA Fan Serving Zone X Off
7. RA Fan Serving Zone X Off
8. Zone X RA Damper Remains Open
9. Zone X SA Damper Remains Open
10. Zone X VAV Dampers to Full Open
11. All other RA and SA Dampers Close on floors above and below Zone X, including fourth floor RA and SA dampers
12. RA Fan Damper #1 Closes at AHU Serving Zone X
13. RA Fan Damper #2 Closes at AHU Serving Zone X
14. EA Damper Closes at AHU Serving Zone X
15. Main OA Damper Opens 100% at AHU Serving Zone X
16. Smoke Exhaust Damper Opens at AHU Serving Zone X
17. Smoke Exhaust Fan On at AHU Serving Zone X
18. AHU SA Fan Serving Zone X On and set to Smoke Control Speed Setpoint
19. AHU SA Fan Serving Opposite Side of Atrium to Zone X Off

1 / M202 SMOKE CONTROL SCHEMATIC & SEQUENCE OF OPERATIONS

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No	DESCRIPTION	DATE
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4	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
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2	ISSUED FOR CONSTRUCTION	OCT 7 2016
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REVISIONS

client:
TOMLINSON
5597 POWER RD
OTTAWA, ON
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project:
TOMLINSON
NEW BUILDING
CITIGATE, OTTAWA

drawing title:
MECHANICAL
SMOKE CONTROL SCHEMATIC & SEQUENCE OF OPERATIONS

scale:	1:100	drawn by:	JST
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1570	M202
revision: 0	

AIR HANDLING UNIT SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	DESIGN CFM	EXTERNAL STATIC PRESSURE ("WG)	HEATING								COOLING											ELECTRICAL			CONTROL	E-POWER	FILTER	
								FLUID TYPE	EAT (oF)	LAT (oF)	MBH OUTPUT	EWT (oF)	LWT (oF)	FLOW RATE (GPM)	COIL PD (FT)	FLUID TYPE	ENT WB (oF)	ENT DB (oF)	LVG WB (oF)	LVG DB (oF)	SEN MBH	TOTAL MBH	EWT (oF)	LWT (oF)	FLOW RATE (GPM)	COIL PD (FT)	VOLTS	AMPS or HP	RPM			PRE-FILTER	FILTER
AHU-1	AIR HANDLING UNIT	SMALL POD	MECH. PH	DAIKIN	CAH045GDGM	20000	3.00	50 %PG	40	85.9	1005	140	122	125	5.6	30% PG	67	80	53.8	54	567.7	809.4	45	55.1	167	19.4	575/3/60	30 HP	1200	VFD	Y	PLEATED MERV-8	CARTRIDGE MERV-14
AHU-2	AIR HANDLING UNIT	ATRIUM	MECH. PH	DAIKIN	CAH040GDGM	17000	1.50	50 %PG	40	89	916	140	121	106	18.7	30% PG	67	80	54.1	54.3	475	670	45	54.9	140	8.8	575/3/60	30 HP	1750	VFD	Y	PLEATED MERV-8	CARTRIDGE MERV-14
AHU-3	AIR HANDLING UNIT	LARGE POD	MECH. PH	DAIKIN	CAH049GDGM	23500	3.00	50 %PG	40	85.5	1170	140	122	148	7.2	30% PG	67	80	53.8	54	664	943	45	55.1	194	22.2	575/3/60	40 HP	1160	VFD	Y	PLEATED MERV-8	CARTRIDGE MERV-14
AHU-4	MAKEUP AIR UNIT	KITCHEN MUA	HOLDING ROOM, GND FLR	ENGINEERED AIR	LM-2/CI/I	1800	0.80	50 %PG	-20	89	215	135	111	20	4.2	30% PG	72	90	50.3	50.5	49	58.3	45	55.1	16	4.8	575/3/60	2 HP	3209	VFD		N/A	2" MERV-8
AHU-T1	AIR HANDLING UNIT	TEST FACILITY MAIN	TEST FACILITY OUTSIDE	YORK	ZJ150S24R5B2BCA3A1	5000	1.50	GAS	50	96.1	240 IN / 192 OUT	-	-	-	-	DX	66	79	56.4	57.4	118	149	-	-	-	-	575/3/60	7.5 HP	2276	VFD	Y	N/A	4" MERV-13
MUA-T1	AIR HANDLING UNIT	TEST FACILITY MUA	TEST FACILITY OUTSIDE	ENGINEERED AIR	FWE113/DJE60/O/MV	3500	1.50	GAS	-20	97.6	450 IN / 360 OUT	-	-	-	-	DX	66	79	56.8	57.8	81.2	100.3	-	-	-	-	575/3/60	7.5	3565	VFD	Y	N/A	2" MERV-8

RETURN AIR FAN SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	FLOW (CFM)	FEG	SP ("WG)	FAN RPM	BHP	ELECTRICAL VOLTS	AMPS or HP		CONTROL	E-POWER
RAF-1		RETURN AIR - AHU-1	MECH PH	PENN BARRY	ESI-330	20000	80	1.8	1800	9.28	575/3/60	10 HP		VFD	N
RAF-2		RETURN AIR - AHU-2	MECH PH	PENN BARRY	SX420BC	17000	53	1.5	584	9.1	575/3/60	10 HP		VFD	N
RAF-3		RETURN AIR - AHU-3	MECH PH	PENN BARRY	ESI-330	23500	80	1.8	1020	11.93	575/3/60	15 HP		VFD	N

SMOKE CONTROL FAN SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	FLOW (CFM)	SP ("WG)	FAN RPM	BHP	ELECTRICAL VOLTS	AMPS or HP	RPM	CONTROL	E-POWER
SF-1	DOWNBLAST FAN	ATRIUM SMOKE EXH.	MECH PH EAST	PENN BARRY	VCR-SWSI-BI-300	13500	1	864	4.36	575/3/60	7.5HP	865	FIRE ALM	
SF-2	DOWNBLAST FAN	ATRIUM SMOKE EXH. STANDBY	MECH PH WEST	PENN BARRY	VCR-SWSI-BI-300	13500	1	864	4.36	575/3/60	7.5HP	865	FIRE ALM	
SF-3	DOWNBLAST FAN	NORTH POD SMOKE EXH.	MECH PH EAST	PENN BARRY	ESI 245	8000	1	1123	2.29	575/3/60	3 HP	924	FIRE ALM	
SF-4	DOWNBLAST FAN	SOUTH POD SMOKE EXH.	MECH PH WEST	PENN BARRY	ESI 270	11000	1	999	3.02	575/3/60	5 HP	888	FIRE ALM	

FAN SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	FLOW (CFM)	SP ("WG)	FAN RPM	BHP	ELECTRICAL VOLTS	AMPS or HP	CONTROL	E-POWER
F-1		MAIN ELECTRICAL ROOM TRANSFER	GROUND FLOOR	PENN BARRY	Z102STDA	500	0.25	871	0.06	120/1/60	N/A		
F-2		ELECTRICAL CLOSETS TRANSFER	7 REQUIRED THROUGHOUT	PENN BARRY	Z5HTDA	150	0.01	1167	0.01	120/1/60	N/A		
F-3		TRAINING ROOM TRANSFER	GROUND FLOOR	PENN BARRY	Z81STDA	250	0.25	1044	0.03	120/1/60	N/A		
F-4		TRAINING ROOM TRANSFER	GROUND FLOOR	PENN BARRY	Z81STDA	250	0.25	1044	0.03	120/1/60	N/A		
F-5		MEETING ROOM	SECOND FLOOR	PENN BARRY	Z5HTDA	100	0.25	1323	0.01	120/1/60	N/A		
F-6		MEETING ROOM	SECOND FLOOR	PENN BARRY	Z81STDA	250	0.25	1044	0.03	120/1/60	N/A		
F-7		MEETING ROOM	THIRD FLOOR	PENN BARRY	Z5HTDA	100	0.25	1323	0.01	120/1/60	N/A		
F-8		MEETING ROOM	FOURTH FLOOR	PENN BARRY	Z5HTDA	100	0.25	1323	0.01	120/1/60	N/A		
F-9		MEETING ROOM	FOURTH FLOOR	PENN BARRY	Z5HTDA	100	0.25	1323	0.01	120/1/60	N/A		
F-10		MECHANICAL PH VENTILATION	MECH PH NORTH	PENN BARRY	P16SA	2100	0.28	1300	0.3	120/1/60	0.5 HP		
F-11	INLINE CABINET FAN	ELEVATOR MACHINE CLOSET	MECH PH	PENN BARRY	Z8HTDA	300	0.2	1329	0.04	120/1/60	NA		
F-12		IT CLOSET TRANSFER	7 REQUIRED THROUGHOUT	PENN BARRY	Z8H	300	0.25	1299	0.04	120/1/60	N/A		
F-13		ATRIUM CEILING FAN	2 REQUIRED IN ATRIUM	BIG ASS FANS	ESSENCE - 10 FOOT	-	N/A	107	-	120/1/60	425 WATTS		
FT-1	DUST EXTRACTION FAN C/W 6 CARTRIDGE COLLECTOER	TESTING FACILITY	DUST COLLECTION	PLYMOVENT	TEV-745 C/W MDB-6	2800	8.7	2850	9.8	575/3/60	10 HP	VFD	
FT-2	FUME EXHAUST	TESTING FACILITY	FUME EXHAUST	MK PLASTICS	CNW 200	800	1.5	1730	0.42	120/1/60	0.50 HP	VFD	
FT-3	HEAT EXTRACTION	TESTING FACILITY	HEAT EXHAUST	PENN BARRY	SX-115-RC	1000	0.6	1362	0.24	120/1/60	1/3 HP	0-10 VOLT	
FT-4	WASHROOM EXHAUST	TESTING FACILITY WASHROOM	T-06	PENN BARRY	Z81-STDA	200	0.4	994	0.03	120/1/60	N/A	-	
FT-5	STORAGE TRANSFER	TESTING FACILITY STORAGE ROOM	T-15	PENN BARRY	ZT	30	0.2	812	NA	120/1/60	N/A	-	C/W WHITE EGG CRATE GRILLE

ECOLOGY UNIT SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	FLOW (CFM)	SP ("WG)	FAN RPM	BHP	ELECTRICAL VOLTS	AMPS or HP	CONTROL	E-POWER
ECO-1	ECOLOGY UNIT FOR KITCHEN	KITCHEN HOOD EXHAUST	KITCHEN	HALTON	EF3/B3	2225	4.35(int), 1.25(ext)	3600	3	575/3/60	5 HP		N

ENTHALPY RECOVERY VENTILATOR SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	DESIGN CFM	FEG	SP ("WG)	ELECTRICAL VOLTS	AMPS or HP	RPM	CONTROL	E-POWER
ERV-1	ARRANGEMENT H	BUILDING EXHAUST	MECH PH	COOK	ERV-2500	1850	56	1	575/3/60	1.5 HP	1725	TBD	N
ERV-2	ARRANGEMENT C	BUILDING EXHAUST	MECH PH	COOK	ERV-2500	2050	56	1	575/3/60	1.5 HP	1725	TBD	N

GRILLES AND DIFFUSERS SCHEDULE

TAG	DESCRIPTION	SERVICE	MANUFACTURER	MODEL #	TYPE
A	SUPPLY GRILLE	OFFICE SUPPLY AIR (INTERIOR)	EH PRICE	520D	STEEL, DOUBLE DEFLECTION , 3/4" BLADE SPACING C/W INTEGRAL DAMPER
B	GRILLE	OFFICE SUPPLY AIR (INTERIOR)	NAD-KLIMA	DAL 358-R-500	SWIRL DIFFUSER (ROUND PLENUM) C/W INTEGRAL DAMPER
C	DIFFUSER	ATRIUM SUPPLY AIR (NORTH/SOUTH)	EH PRICE	LBP	BAR GRILLE - 60" x 3" C/W 1" BORDER. DRYWALL SIDEWALL MOUNTING.
D	DIFFUSER	ATRIUM SUPPLY AIR (EAST/WEST GLAZING)	EH PRICE	SDGE-VCS3	STEEL, OPPOSED BLADE DAMPER, BLADES PARALLEL TO LONG DIMENSION
E	GRILLE	OFFICE RETURN AIR	EH PRICE	85 SERIES	C/W INTEGRAL DAMPER, 25mm FRAME, STEEL, WHITE POWDER COATED
F	GRILLE	ATRIUM RETURN AIR	EH PRICE	96 SERIES	C/W INTEGRAL DAMPER, 25mm FRAME, STEEL, WHITE POWDER COATED
G	GRILLE	W/C & JAN. CLOSET EXHAUST	EH PRICE	80 SERIES	EGG CRATE RETURN, 25mm FRAME, STEEL, WHITE POWDER COATED
H	GRILLE	ROOM SUPPLY & EXHAUST	EH PRICE	80 SERIES	EGG CRATE RETURN, 25mm FRAME, STEEL, WHITE POWDER COATED
I	DIFFUSER	THROUGHT	EH PRICE	RCD SIZE 10	ROUND NECK, ROUND CONE, SPUN ALUMINUM
J	GRILLE	OFFICE SUPPLY AIR (INTERIOR)	NAD-KLIMA	DAL 358-R-400	SWIRL DIFFUSER (ROUND PLENUM) C/W INTEGRAL DAMPER
K	DIFFUSER	MEETING ROOM 221	EH PRICE	TBD3100	LINEAR SLOT DIFFUSER, 1500mm LONG, 2 SLOTS, 1" SLOT WIDTH. C/W WHITE DRYWALL FRAME AND UNFINISHED PLENUM.
L	DIFFUSER	OFFICE SUPPLY AIR	EH PRICE	SCD	SQUARE CONE 600mm X 600mm DIFFUSER
M	GRILLE	OFFICE SUPPLY AIR (INTERIOR)	NAD-KLIMA	DAL 358-R-300	SWIRL DIFFUSER (ROUND PLENUM) C/W INTEGRAL DAMPER
N	GRILLE	OFFICE SUPPLY AIR (INTERIOR)	NAD-KLIMA	DAL 358-R-600	SWIRL DIFFUSER (ROUND PLENUM) C/W INTEGRAL DAMPER
O	DIFFUSER	TEST FACILITY	EH PRICE	RCD SIZE 12	ROUND NECK, ROUND CONE, SPUN ALUMINUM
P	DOOR GRILLE	THROUGHT	EH PRICE	STG-1	STEEL, BF STYLE BORDER, SIZE AS NOTED ON DRAWINGS
Q	SPIRAL DUCT SUPPLY DIFFUSER	TEST FACILITY MAKEUP AIR	EH PRICE	SDGE-VCS3	STEEL, OPPOSED BLADE DAMPER, BLADES PARALLEL TO LONG DIMENSION
R	SPIRAL DUCT RETURN GRILLE	TEST FACILITY RETURN AIR	EH PRICE	SDGER	ALUMINUM, PERFORATED FACE

CHILLER SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	TONS	FLUID TYPE	EFT (oF)	LFT (oF)	FLOW RATE (GPM)		COIL PD (FT)	**IPLV (EER)**	ELECTRICAL VOLTS	AMPS or HP	CONTROL	E-POWER
CH-1	CHILLER	AHU COOLING	ROOF	CARRIER	30RB170	140	50% PG	54	44	377		14.4	17.05	575/60/3	289		N

BOILER SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	**EFF. (%)**	EWT (oF)	LWT (oF)	FLOW (GPM)	HEAD LOSS (FT)	HEATING (NATURAL GAS) INPUT (MBH)	OUTPUT (MBH)	ELECTRICAL VOLTS	WATTS	CONTROL	E-POWER
B-1 TO 10	BANK OF 10 BOILERS	HEATING AND DOMESTIC INDIRECT	MECHANICAL PH	IBC	SL-399 (QTY 10)	96	120	140	20-45		399	382	120/60/1	345		N

HUMIDIFIER SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	NATURAL GAS INPUT MBH	CAPACITY (LBS/HR)	ELECTRICAL VOLTS	AMPS or HP	CONTROL	E-POWER
HUM-1		HUMIDIFIER SERVING AHU-1	MECHANICAL PH	NORTEC	GSTC-200	280	200	120/60/1	3.7 AMPS	BAS	N
HUM-2		HUMIDIFIER SERVING AHU-3	MECHANICAL PH	NORTEC	GSTC-200	280	200	120/60/1	3.7 AMPS	BAS	N

HEAT EXCHANGER SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL	COLD SIDE					HOT SIDE				
						MEDIUM	EWT (oF)	LWT (oF)	FLOW (GPM)	PD (FT)	MEDIUM	EWT (oF)	LWT (oF)	FLOW (GPM)	PD (FT)
HX-1	PLATE HEAT EXCHANGER	GLYCOL HEATING LOOP	MECHANICAL PH	ARMSTRONG	S-X13-500-45	WATER	100	120	126	11.5	30% PG	140	120	134	9.83
HX-2	PLATE HEAT EXCHANGER	GLYCOL HEATING LOOP - AHU-4	GROUND FLOOR	ARMSTRONG	ABX205-100M-NP16	50% PG	120	140	20	1	30% PG	140	130	37	2.5

EXPANSION TANK SCHEDULE

TAG	SERVICE	LOCATION	MANUFACTURER	MODEL	VOLUME (US GAL)	ACCEPTANCE VOLUME (US GAL)	PRE-CHARGE (PSI)	MAXIMUM PRESSURE (PSI)
ET-1	CHILLED WATER LOOP (50% PG)	MECHANICAL PH	CALEFACTIO	HGTV-30	3	2.2	12	55
ET-2	HEATING WATER LOOP (30% PG)	MECHANICAL PH	CALEFACTIO	HGTV-90	36	12	12	25
ET-3	HEATING WATER LOOP	MECHANICAL PH	CALEFACTIO	HGTV-30	10	8	12	75
ET-4	DOMESTIC HOT WATER LOOP	MECHANICAL PH	CALEFACTIO	HGTEV-30	8	2.5	50	75
ET-5	AHU-4 HEATING WATER (50% PG)	GROUND FLOOR	CALEFACTIO	HGTV-30	0.2	0.2	12	35
ET-6	TEST FACILITY DOMESTIC WATER	TEST FACILITY LOADING BAY	CALEFACTIO	HGTE-25	6	1.5	50	75

PLUMBING FIXTURE SCHEDULE

TAG	FUNCTION	DESCRIPTION	LOCATION	MANUFACTURER	MODEL	TRIM MANUFACTURER	TRIM MODEL	PLUMBING CONNECTIONS DHW (mm)	DCW (mm)	WASTE (mm)	NOTES
WC-1	WATER CLOSET	VITREOUS CHINA, BACK SPUD, WALL HUNG WITH FLUSH VALVE	MAIN WASHROOMS	TOTO	CT708EV	AMERICAN STANDARD AC POWER SUPPLY	SELECTRONIC 6067.222.007 1.28 GPF	-	25	75	C/W ZURN Z1201-N3 OR Z1201-ND4 CARRIER, CENTOCO 550-STSCC SEAT
WC-2	WATER CLOSET - ADA	VITREOUS CHINA, BACK SPUD, WALL HUNG WITH FLUSH VALVE	MAIN & UNIV. W/Cs	TOTO	CT708EV	AMERICAN STANDARD AC POWER SUPPLY	SELECTRONIC 6067.222.007 1.28 GPF	-	25	75	C/W ZURN Z1201-N3 CARRIER, CENTOCO 820-STSS SEAT AND GRAB BAR
WC-3	FLOOR MOUNT WATER CLOSET	VITREOUS CHINA, TOP SPUD WITH FLUSH VALVE	WASHROOM T-05	AMERICAN STANDARD	3461.001.020 RIGHT HEIGHT	SLOAN	SLOAN 111-1.28-CP-YG EXPOSED FLUSH VALVE	-	25	75	C/W CENTOCO 500STSCC SEAT
WC-4	FLOOR MOUNT WATER CLOSET - ADA	VITREOUS CHINA, TOP SPUD WITH FLUSH VALVE	WASHROOM T-06	AMERICAN STANDARD	3461.001.020 RIGHT HEIGHT	SLOAN	SLOAN 111-1.28-CP EXPOSED FLUSH VALVE	-	25	75	C/W CENTOCO AM820STS SEAT AND COVER
L-1	LAVATORY	VITREOUS CHINA, UNDERCOUNTER MOUNT	MENS WASHROOMS	WETSTYLE	VC 821U	AMERICAN STANDARD AC POWER SUPPLY	MOMENTS SELECTRONIC 2506.165 0.5 GPM	12	12	38	C/W OPTIONAL FAUCET MIXING VALVE - 605XTMV
L-2	LAVATORY	VITREOUS CHINA, UNDERCOUNTER MOUNT	WOMENS WASHROOMS	WETSTYLE	VC 836U	AMERICAN STANDARD AC POWER SUPPLY	MOMENTS SELECTRONIC 2506.165 0.5 GPM	12	12	38	C/W OPTIONAL FAUCET MIXING VALVE - 605XTMV
L-3	LAVATORY - ADA	VITREOUS CHINA, WALL MOUNT, BARRIER FREE	UNIVERSAL WASHROOMS	WETSTYLE	VC 36C & WM 3622 BRACKET SYSTEM	AMERICAN STANDARD AC POWER SUPPLY	MOMENTS SELECTRONIC 2506.165 0.5 GPM	12	12	38	C/W OPTIONAL FAUCET MIXING VALVE - 605XTMV & ADA COMPLIANT PROWRAP
L-4	LAVATORY - ADA	VITREOUS CHINA, UNDERCOUNTER MOUNT, BARRIER FREE	SHOWER ROOMS	WETSTYLE	VC 836U	AMERICAN STANDARD AC POWER SUPPLY	MOMENTS SELECTRONIC 2506.165 0.5 GPM	12	12	38	C/W OPTIONAL FAUCET MIXING VALVE - 605XTMV & ADA COMPLIANT PROWRAP
L-5	WALL HUNG LAVATORY	VITREOUS CHINA WALL HUNG BASIN	WASHROOM T-05	AMERICAN STANDARD	DECLYN 0321.026.020	CHICAGO	420-E2805-ABCP SINGLE HANDLE	12	12	38	C/W MIXING VALVE & WATTS WCA-411 CARRIER
L-6	WALL HUNG LAVATORY - ADA	VITREOUS CHINA WALL HUNG BASIN	WASHROOM T-06	AMERICAN STANDARD	DECORUM 9024.004EC.020	CHICAGO	3510-4E2805ABCP SINGLE HANDLE	12	12	38	C/W MIXING VALVE, WATTS WCA-411 CARRIER & PRO-WRAP FOR ADA COMPLIANCE
U-1	URINAL	VITREOUS CHINA, BACK SPUD, WALL HUNG WITH FLUSH VALVE	MAIN WASHROOMS	KOHLER	K-5244-ER	SLOAN AC POWER SUPPLY	SLOAN OPTIMA 195 WB ES-S 0.125 GPM	-	19	50	
S-1	KITCHEN SINK	STAINLESS STEEL KITCHEN SINK, SINGLE HANDLE FAUCET	THROUGHOUT	FRANKE	UCS4608/316 P-1	CHICAGO	2302-GN8AE72ABCP	12	12	32	C/W POINT OF USE MIXING VALVE
S-2	TEST FACILITY SINK	STAINLESS STEEL SINK, 2 BLADE HANDLE FAUCET	TEST FACILITY	FRANKE	LBS4010P-1/3	CHICAGO	1100-GN8AE3317-XK-ABCP	12	12	32	C/W BACK LEDGE AND POINT OF USE MIXING VALVE
S-3	CAFETERIA KITCHEN SINK	STAINLESS STEEL KITCHEN SINK, SINGLE HANDLE FAUCET	CAFETERIA	KINDRED STEEL QUEEN	QSA 1816/8	CHICAGO	2302-GN8AE72ABCP	12	·	32	C/W POINT OF USE MIXING VALVE
MS-1	MOP SINK	MOP SINK	JANITOR'S CLOSET	STERN WILLIAMS	MTB-2424	CHICAGO	897-RCF	12	12	75	TERRAZZO SINK. C/W BUMPER GUARD, HOSE & WALL HOOK, MOP HANGER, BACK SPLASH & VACUUM BREAKERS ON FAUCET.
SH-1	SHOWER	TILED SHOWER ENCLOSURE	GROUND FLOOR	BY ARCHITECTURAL	N/A	AMERICAN STANDARD	RELIANT 3 SQUARE TRIM T385.500 & INSTITUTIONAL SHOWER HEAD 1660.244	12	12	50	C/W SQUARE FLOOR DRAIN
SH-2	SHOWER	TILED SHOWER ENCLOSURE, BARRIER FREE	GROUND FLOOR	BY ARCHITECTURAL	N/A	AMERICAN STANDARD	RELIANT 3 SQUARE TRIM T385.500 & INSTITUTIONAL SHOWER HEAD 1660.244	12	12	50	C/W SQUARE FLOOR DRAIN, SHOWER SEAT AND GRAB BAR
EW/SS-1	EYE WASH/SAFETY SHOWER	EYE WASH/SAFETY SHOWER	TEST FACILITY	HAWS	8300	N/A	N/A	32		32	
DF-1	BOTTLE FILL STATION	BOTTLE FILL STATION	THROUGHOUT	ELKAY	LZWS(M)8K	N/A	N/A	-	12	32	C/W INTERNAL COMPRESSOR. 115V/60 & 5.0 FLA
HB-1	HOSE BIBB	HOSE BIBB	THROUGHOUT	WATTS	HB-1	N/A	N/A	-	12	-	
NFHB	NON-FREEZE HOSE BIBB - ROUND	HOSE BIBB	THROUGHOUT	WATTS	HY-725-R	N/A	N/A	-	19	-	C/W INTEGRAL NON-FREEZE VACUUM BREAKER & LOCKABLE COVER
RD-1	ROOF DRAIN	ROOF DRAIN	ROOF	WATTS	RD-100	N/A	N/A	-	-	100	
FD-1	FLOOR DRAIN	SQUARE FLOOR DRAIN	THROUGHOUT	WATTS	FD-100-CL	N/A	N/A	-	-	75	NO HUB, NICKEL BRONZE
FD-2	FLOOR DRAIN	ROUND FLOOR DRAIN	THROUGHOUT	WATTS	FD-100-CA	N/A	N/A	-	-	75	NO HUB, NICKEL BRONZE
FD-3	FLOOR DRAIN (INDIRECT)	FLOOR DRAIN (INDIRECT)	KITCHEN	WATTS	FD-100-C-DD	N/A	N/A	-	-	75	
FD-4	ELEVATOR FLOOR DRAIN	FLOOR DRAIN	ELEVATOR PIT	WATTS	BV-600	N/A	N/A	-	-	75	C/W BACKWATER VALVE
FD-5	FLOOR DRAIN	ROUND FLOOR DRAIN	THROUGHOUT	WATTS	FD-100-CA	N/A	N/A	-	-	50	NO HUB, NICKEL BRONZE
CO-1	SQUARE CLEAN OUT	CLEAN OUT	THROUGHOUT	WATTS	CO-100-C-S	N/A	N/A	-	-	-	

PUMP SCHEDULE

TAG	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	CAPACITY FLOW (GPM)	HEAD (FT)	ELECTRICAL VOLTS	HP	PH.	CONTROL	E-POWER	NOTES
P1a/b	DUPLEX BASE 50% PG CHILLED LOOP	PRIMARY CHILLED GLYCOL LOOP	MECHANICAL PH	ARMSTRONG	4030-4x3x10	377	75	575	15	3	-	N	
P2a/b	DUPLEX BASE 30% PG HEATING LOOP	PRIMARY HEATING GLYCOL LOOP	MECHANICAL PH	ARMSTRONG	4200H 2506-015.0	450	88	575	15	3	VFD	N	
P3a/b	DUPLEX BASE HEATING WATER LOOP	PRIMARY HEATING WATER LOOP	MECHANICAL PH	ARMSTRONG	4200H 1506-007.5	129	112	575	7.5	3	VFD	N	
P4	INLINE 50% PG HEATING LOOP	HX-2 TO AHU-4 HEATING	HOLDING VESTIBULE 117B	ARMSTRONG	4380-1.5x1.5x6-0.5 HP	20	30	575	0.5	3	VFD	N	
P5	30% PG HEATING RETURN TO BOILERS	SERVING IWT 1 & 2	MECHANICAL PH	BY BOILER MANUFACTURER	WILO TOP-S 2x25	40	15	115	0.5	1	-	N	
P-6	INLINE RECIRCULATION PUMP	DHWR NORTH	MECHANICAL PH	ARMSTRONG	ASTRO 225BS 1/2" SWT	1.5	11	115	0.1	1	-	N	
P-7	INLINE RECIRCULATION PUMP	DHWR SOUTH	MECHANICAL PH	ARMSTRONG	ASTRO 225BS 1/2" SWT	1.5	11	115	0.1	1	-	N	
P-8	SUMP	ELEVATOR SUMP	JAN. CLOSET - GND FLOOR	ZOELLER	M-53-0001 AUTO	40	15	115	9.7 AMPS	1	-	N	C/W ALARM PANEL
P-9	INLINE 50% PG COOLING LOOP	AHU-1 COOLING	MECHANICAL PH	ARMSTRONG	4380 0310-005.0	167	47	575	5	3	VFD	N	
P-10	INLINE 50% PG COOLING LOOP	AHU-2 COOLING	MECHANICAL PH	ARMSTRONG	4380 0208-003.0	140	34	575	3	3	VFD	N	
P-11	INLINE 50% PG COOLING LOOP	AHU-4 COOLING	MECHANICAL PH	WILO	STRATOS 1.25x3-30	16	27	240	0.5	1	VFD	N	
P-12	INLINE 50% PG COOLING LOOP	AHU-3 COOLING	MECHANICAL PH	ARMSTRONG	4380-0310-005.0	194	52	575	5	3	VFD	N	
P-13	30% PG HEATING RETURN TO BOILERS	SERVING IWT 1 & 2	MECHANICAL PH	BY BOILER MANUFACTURER	WILO TOP-S 2x25	40	15	115	0.5	1	-	N	
P-14 TO 23	BOILER RETURN	SERVING BOILERS B-1 TO B-10	MECHANICAL PH	BY BOILER MANUFACTURER	GRUNFOS UPS 43-44	-	-	115	203 WATTS	1	-	N	
P-24	INLINE RECIRCULATION PUMP	TEST FACILITY DHWR	LOADING BAY T-14	ARMSTRONG	ASTRO 225BS 1/2" SWT	1.5	11	115	0.1	1	-	N	

WATER HEATER SCHEDULE

TAG		FUNCTION	LOCATION	MANUFACTURER	MODEL	CAPACITY
IWH-1		DOMESTIC WATER HEATING	MECHANICAL PH.	THERMO 2000	TURBOMAX 44	48 GALLON
IWH-2		DOMESTIC WATER HEATING	MECHANICAL PH.	THERMO 2000	TURBOMAX 44	48 GALLON

DOMESTIC HOT WATER TANK SCHEDULE

TAG	FUNCTION	LOCATION	MANUFACTURER	MODEL	CAPACITY	NATURAL GAS INPUT
DHWT-1	DHW FOR TEST FACILITY	TEST FACILITY	GIANT	UG75-76MPEV1-N2U	75 US GALLONS	76 MBH

ENTRANCE HEATER SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL #	MOUNTING ARRANGEMENT	FLOW RATE (GPM)	CAPACITY (MBH)	FLOW (CFM)	EWT (oF)	LWT (oF)	MAX PD (FT)	VOLTS	AMPS
EH-1	VESTIBULE 131	ENGINEERED AIR	CUH-3	EXPOSED CEILING	1.5	15	300	140	120	2.4	120/1/60	0.6
EH-2	VESTIBULE 119	ENGINEERED AIR	CUH-3	EXPOSED CEILING	1.5	15	300	140	120	2.4	120/1/60	0.6

AIR CONDITIONING UNIT SCHEDULE

TAG	DESCRIPTION	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	TOTAL MBH	VOLTS	AMPS or HP	CONTROL	E-POWER
	NOT USED										
	NOT USED										
A/C E-2		A/C EVAPORATOR (INDOOR)	SERVER ROOM	4TH FLR SERVER ROOM	MITSUBISHI	PKA-A36KA6.TH	34.2	208/1/60	1A	T-STAT	Y
A/C C-2		A/C CONDENSER (OUTDOOR)	SERVER ROOM	ROOF TOP	MITSUBISHI	PUY-A36NHA6	34.2	208/1/60	25 A	T-STAT	Y
A/C E-3	OWNER SUPPLIED	A/C EVAPORATOR (INDOOR)	SERVER ROOM	4TH FLR SERVER ROOM	MITSUBISHI	PKA-A36KA6.TH	34.2	208/1/60	1A	T-STAT	Y
A/C C-3	OWNER SUPPLIED	A/C CONDENSER (OUTDOOR)	SERVER ROOM	ROOF TOP	MITSUBISHI	PUY-A36NHA6	34.2	208/1/60	25 A	T-STAT	Y

INTERCEPTOR AND NEUTRALIZATION TANK SCHEDULE

TAG	DESCRIPTION	DESCRIPTION	SERVICE	LOCATION	MANUFACTURER	MODEL #	LxWxH
SI		SEDIMENT INTERCEPTOR - 5 REQUIRED	TEST FACILITY SINKS	TEST FACILITY	WATTS	SI-740-M	11.5x11.5x13
NT-1		NEUTRALIZATION TANK	BOILERS	MECH. PENTHOUSE	AXIOM	NT25-P	445 x 345 x 400 TALL
NT-2		NEUTRALIZATION TANK - 2 REQUIRED	TEST FACILITY SINK	TEST FACILITY	ZURN	Z9A-NT-15	457DIAM.x381H
GI-1	FOR DOUBLE SINK	GREASE INTERCEPTOR	KITCHEN SINK	KITCHEN	WATTS	WD-CSA-115	560 x 381 x 420 TALL
GI-2	FOR SINGLE SINK	GREASE INTERCEPTOR	KITCHEN SINK	KITCHEN	WATTS	WD-CSA-104	406 x 254 x 350 TALL

UNIT/RADIANT HEATER SCHEDULE

TAG		SERVICE	LOCATION	MANUFACTURER	MODEL #	FLOW RATE (GPM)	NG CAPACITY (MBH)	EWT (oF)	LWT (oF)	MAX PD (FT)	VOLTS	AMPS
RAD-1	FIN TUBE RADIATOR WITH NO ENCLOSURE	WATER ENTRY ROOM	WATER ENTRY ROOM	ENGINEERED AIR	3 ROW 12" CL ELEMENT	0.5	4	120	100	0.5	120/1/60	5
UH-1	HYDRONIC UNIT HEATER	MECHANICAL PENTHOUSE (3 REQUIRED)	MECHANICAL PENTHOUSE	ENGINEERED AIR	H1	4	20	140	120	0.5	120/1/60	5
UH-2	NOT USED											
RH-1	GAS FIRED RADIANT HEATER	TEST FACILITY	LOADING DOCK	SCHWANK	STS-JZ-130-30	-	160 MBH IN / 120 MBH OUT	-	-	-	120/1/60	

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No	DESCRIPTION	DATE
7	UPDATED CONSTRUCTION	MAY 31 2017
6	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	MAY 18 2017
5	RE-ISSUED FOR CONSTRUCTION MAIN BUILDING	FEB 16 2017
4	ISSUED FOR MECHANICAL REVIEW	JAN 24 2017
3	ISSUED FOR CONSTRUCTION 2	OCT 25 2016
2	ISSUED FOR CONSTRUCTION	OCT 7 2016
1	ISSUED FOR TENDER	SEPT 13 2016
0	ISSUED FOR BUILDING PERMIT	AUGUST 5 2016

REVISIONS

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