ANNACIS AUTO TERMINAL OPTIMIZATION PROJECT

VANCOUVER FRASER PORT AUTHORITY (VFPA)
WALLENIUS WILHELMSEN VEHICLE SERVICES (WWS)

LOCATION PLAN

No.	Date	REVISION	Dr'n	Ch'd
A	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST

PRELIMINARY

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DESIGN BY	ST
DRAWN BY	NM
APPROVED	TH
DATE	2021-10-27
SCALE	1 : 5000
PMV SITE	365-039

ANNACIS AUTO TERMINAL
COVER SHEET

SIZE D | DWG. 365-039- A-000 | SHEET | REV.

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C-001	SERVICE PLAN	
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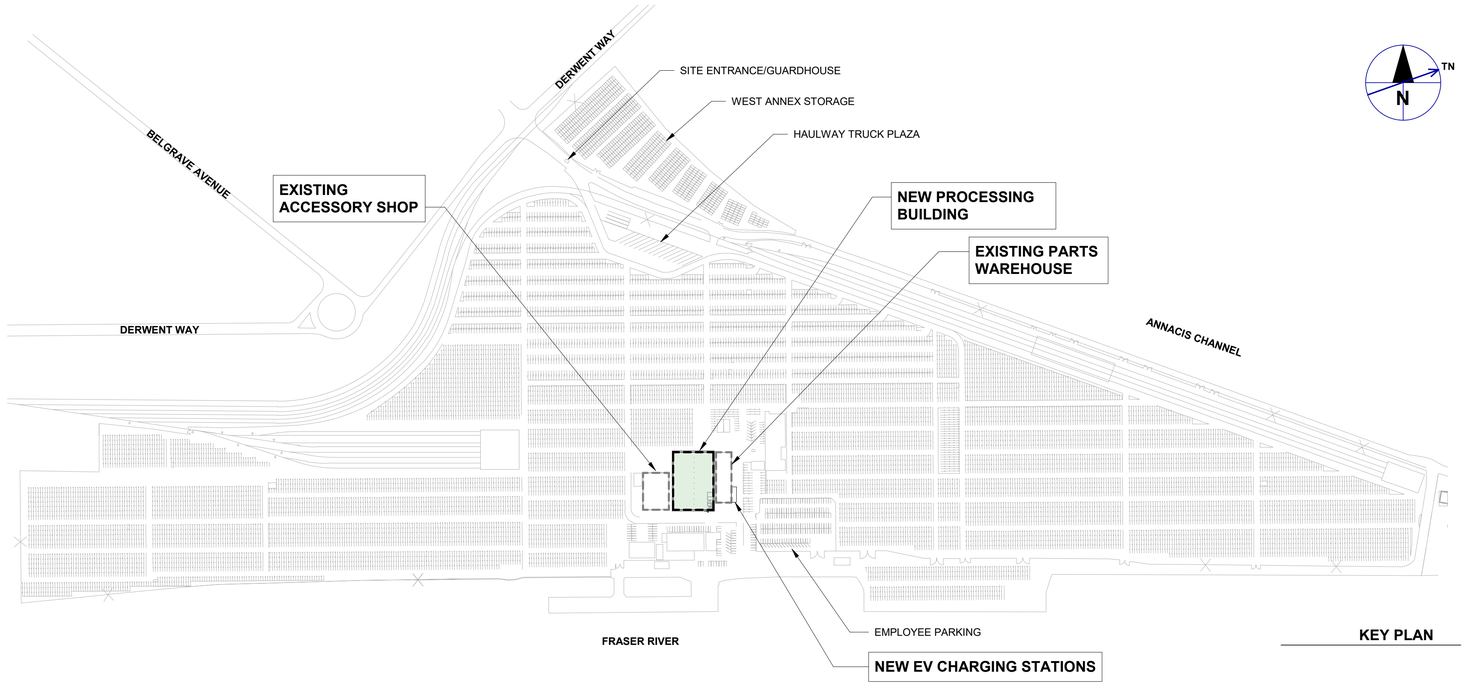

KEY PLAN

NATIONAL BUILDING CODE (2015) DATA MATRIX		
1.	**PROJECT DESCRIPTION:**	NEW BUILDING
2.	**MAJOR OCCUPANCY:**	GROUP F, DIVISION 2, MEDIUM HAZARD INDUSTRIAL BUILDING
3.	**BUILDING AREA:**	3185 m^2
4.	**GROSS AREA:**	3185 m^2
5.	**NUMBER OF STOREYS:**	1 STOREYS
6.	**BUILDING HEIGHT:**	7.23 m (ABOVE GRADE)
7.	**NUMBER OF STREETS/ ACCESS ROUTES:**	2
8.	**BUILDING CLASSIFICATION:**	F, DIVISION 2, UP TO 2 STOREYS
9.	**SPRINKLER SYSTEM PROPOSED:**	REQUIRED
10.	**STANDPIPE REQUIRED**	NO
11.	**FIRE ALARM REQUIRED**	YES
12.	**WATER SERVICE/ SUPPLY IS ADEQUATE:**	YES
13.	**HIGH BUILDING:**	NO
14.	**PERMITTED CONSTRUCTION:** **ACTUAL CONSTRUCTION:**	COMBUSTIBLE & NONCOMBUSTIBLE NONCOMBUSTIBLE
15.	**MEZZANINE AREA:**	134 m^2
16.	**OCCUPANT LOAD BASED ON:**	46 m^2/PERSON, 70 PERSONS
17.	**BARRIER FREE DESIGN (ACCESSIBILITY):**	NO
18.	**HAZARDOUS SUBSTANCES:**	NO

NATIONAL BUILDING CODE (2015) DATA MATRIX							
19.	**REQUIRED FIRE RESISTANCE RATING (FRR):**					**FLOOR ASSEMBLIES:** SHALL BE FIRE SEPARATIONS AND, IF OF COMBUSTIBLE CONSTRUCTION, SHALL HAVE A FIRE-RESISTANCE RATING NOT LESS THAN 45 min **SUPPORTING MEMBERS:** LOADBEARING WALLS, COLUMNS AND ARCHES SUPPORTING AN ASSEMBLY REQUIRED TO HAVE A FIRE-RESISTANCE RATING NOT LESS THAN 45 min OR BE OF NONCOMBUSTIBLE CONSTRUCTION **REPAIR GARAGE SEPARATION:** A REPAIR GARAGE AND ANY ANCILLARY SPACES SERVING IT SHALL BE SEPARATED FROM OTHER OCCUPANCIES BY A FIRE SEPARATION HAVING A FIRE-RESISTANCE RATING NOT LESS THAN 2HR. **FRR BETWEEN SERVICE ROOMS:** 1HR	
20.	**SPATIAL SEPARATION – CONSTRUCTION OF EXTERIOR WALLS**						
	WALL	**EBF (m^2)**	**L.D. (m)**	**OPENING**	**FRR**	**TYPE OF CONSTRUCTION**	**TYPE OF CLADDING**
	NORTH	>200	>15	100%	N/A	COMBUSTIBLE OR NON-C	COMBUSTIBLE OR NON-C
	SOUTH	>200	>15	100%	N/A	COMBUSTIBLE OR NON-C	COMBUSTIBLE OR NON-C
	EAST	>200	0	0%	2 HR	NONCOMBUSTIBLE	NONCOMBUSTIBLE
	WEST	>200	0	0%	2 HR	NONCOMBUSTIBLE	NONCOMBUSTIBLE
21.	**FIRE PROTECTION RATING OF CLOSURES:**					45 min FOR 1HR FRR OF FIRE SEPARATION 90 min FOR 2HR FRR OF FIRE SEPARATION	
22.	**MINIMUM NUMBER OF EXITS:**					AT LEAST 2 EXITS	
23.	**DISTANCE BETWEEN EXITS:**					THE LEAST DISTANCE BETWEEN 2 EXITS TO BE ON HALF THE MAXIMUM DIAGONAL DIMENSION OD THE FLOOR AREA = APPROXIMATELY 41 m	
24.	**TRAVEL DISTANCE:**					45 m FROM AT LEAST ONE EXIT	
25.	**MINIMUM WIDTH OF EXITS:**					DOORWAY: 800 m STAIRS: 900 m CORRIDORS & PASSAGEWAY: 1100 mm	
26.	**DOORS WIDTH:**					NO DOOR LEAF LESS THAN 610 mm	
27.	**DIRECTION OF DOOR SWING:**					OPEN INTO THE DIRECTION OF EXIT TRAVEL	

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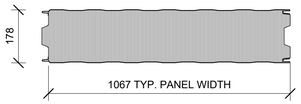
ANNACIS AUTO TERMINAL

DRAWING INDEX, KEY PLAN & CODE DATA MATRIX

SIZE: D | DWG.: 365-039- A-001 | SHEET: | REV.:

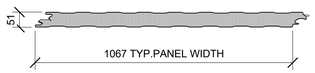
WALL ASSEMBLY



EW1 **EXTERIOR WALL ASSEMBLY TYPE 1 (2HR FIRE-RATED)**
2HR FIRE-RATING PER ULC W021

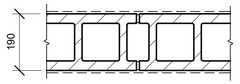
- FACTORY PREPAINTED GALVANIZED STEEL FACE
- RSI-4.45 (R-25.27) RIGID MINERAL WOOL CORE
- FACTORY PREPAINTED GALVANIZED STEEL FACE

NOTE: STRUCTURAL FRAMING THAT SUPPORTS EW1 TO HAVE INTUMESCENT FIREPROOFING COATING (2HR RATED PER ULC)



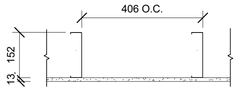
EW2 **EXTERIOR WALL ASSEMBLY TYPE 3**

- FACTORY PREPAINTED GALVANIZED STEEL FACE
- RSI-2.5 (R-14.16) RIGID MINERAL WOOL CORE
- FACTORY PREPAINTED GALVANIZED STEEL FACE



W1 **INTERNAL WALL ASSEMBLY TYPE 1**
1HR FIRE RATING PER ULC U905

- PAINT
- 190mm CONCRETE MASONRY BLOCK
- PAINT



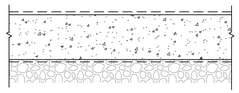
W2 **INTERNAL WALL ASSEMBLY TYPE 2**

- 152mm STEEL STUDS @ 406mm O.C.
- 12.7mm GYPSUM WALLBOARD
- FINISH PER ROOM SCHEDULE

W3 **FIRE-RATED SHAFT WALL / EXISTING BUILDINGS**
(2HR FIRE RESISTANCE RATING PER ULC W446 SYSTEM A OR C)

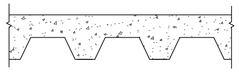
- 25.4mm GYPSUM LINER PANEL
- MIN. 64mm GALVANIZED STEEL C-T OR C-H SHAPED STUDS @ 610mm O.C.
- 2X15.9mm TYPE X GYPSUM WALLBOARD
- PAINT

FLOOR ASSEMBLY



F1 **FLOOR ASSEMBLY TYPE/ SLAB-ON-GRADE**

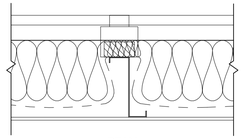
- FINISH PER ROOM SCHEDULE
- CONCRETE SLAB- SEE STRUCT.
- 6 MIL POLY VAPOUR BARRIER
- MIN. 150mm COMPACTED GRANULAR FILL



F2 **FLOOR ASSEMBLY TYPE/ SUSPENDED SLAB**
1HR FIRE-RATING PER ULC F904

- COMPOSITE METAL FLOOR DECK - SEE STRUCT.

ROOF ASSEMBLY



R1 **ROOF ASSEMBLY**

- MIN 2% SLOPED STANDING SEAM ROOF CLADDING C/W METAL CLIP
- Z-GIRT/ PERLIN - SEE STRUCT
- RSI-3.3 (R-18.7) BLANKET-TYPE INSULATION
- AIR/VAPOUR BARRIER FACING
- BEAM - SEE STRUCT.

ROOM SCHEDULE

ROOM NAME	ROOM #	BASE FINISH	FLOOR FINISH	WALL		CEILING	
				MATERIAL	FINISH	MATERIAL	FINISH
PROCESSING AREA	101	EPOXY FLOORING	EPOXY FLOORING	STEEL FRAME	PREFINISHED GALV. STEEL	EXPOSED STEEL	PAINT
MECH. ROOM	102	CONCRETE SEALER	CONCRETE SEALER	CONCRETE BLOCK	PAINT	EXPOSED STEEL	PAINT
TOOL ROOM	103	CONCRETE SEALER	CONCRETE SEALER	CONCRETE BLOCK	PAINT	EXPOSED STEEL	PAINT
STORAGE ROOM	104	CONCRETE SEALER	CONCRETE SEALER	CONCRETE BLOCK	PAINT	EXPOSED STEEL	PAINT
ELECT. ROOM	105	CONCRETE SEALER	CONCRETE SEALER	CONCRETE BLOCK/GYPSUM BOARD	PAINT	EXPOSED STEEL	PAINT
MEN'S WASHROOM	106	PORCELAIN TILES	PORCELAIN TILES	GYPSUM BOARD	PORCELAIN TILES	STEEL FRAME - GYPSUM BOARD	PAINT
WOMEN'S WASHROOM	107	PORCELAIN TILES	PORCELAIN TILES	GYPSUM BOARD	PORCELAIN TILES	STEEL FRAME - GYPSUM BOARD	PAINT

NEW BUILDING DOOR SCHEDULE

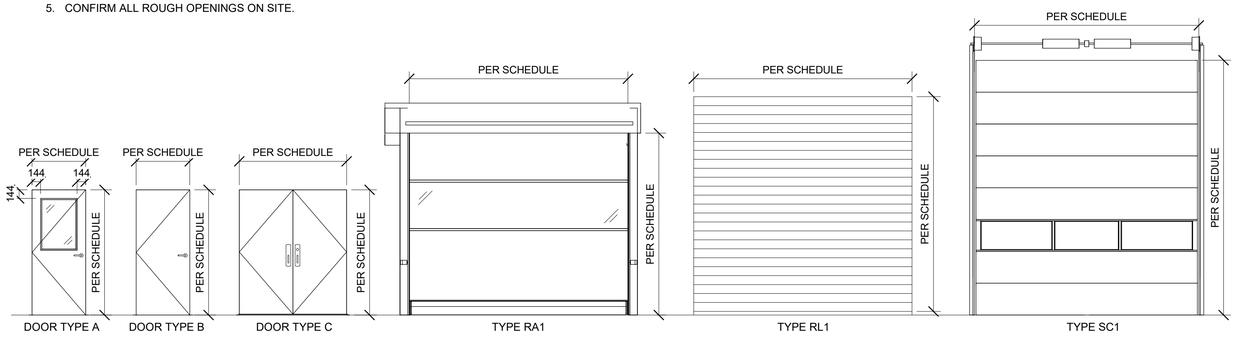
DOOR #	DOOR						FRAME			FIRE RATING	INSULATED	REMARKS
	TYPE	WIDTH	HEIGHT	MATERIAL	FINISH	GLAZING TYPE	TYPE	MATERIAL	FINISH			
DR1	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	90 MIN	YES	
DR2	A	900	2100	HOLLOW METAL	PAINT	GL1	F1	PRESSED STEEL	PAINT	N/A	YES	
DR3	A	900	2100	HOLLOW METAL	PAINT	GL1	F1	PRESSED STEEL	PAINT	N/A	YES	
DR4	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	90 MIN	YES	
DR5	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	90 MIN	YES	
DR6	C	1800	2100	HOLLOW METAL	PAINT	-	F3	PRESSED STEEL	PAINT	90 MIN	YES	
DR7	A	900	2100	HOLLOW METAL	PAINT	GL1	F2	PRESSED STEEL	PAINT	N/A	YES	SIDELITE WILL BE THE SAME GLAZING AS DOOR PANEL
DR8	A	900	2100	HOLLOW METAL	PAINT	GL1	F1	PRESSED STEEL	PAINT	N/A	YES	
DR9	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	90 MIN	YES	
DR10	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	90 MIN	YES	
DR11	B	900	2100	HOLLOW METAL	PAINT	-	F1	PRESSED STEEL	PAINT	N/A	-	
DR12	B	900	2100	HOLLOW METAL	PAINT	-	F1	PRESSED STEEL	PAINT	N/A	-	
DR13	A	900	2100	HOLLOW METAL	PAINT	GL1	F1	PRESSED STEEL	PAINT	N/A	-	
DR14	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	45 MIN	-	
DR15	A	900	2100	HOLLOW METAL	PAINT	GL1	F1	PRESSED STEEL	PAINT	N/A	-	
DR16	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	45 MIN	-	
OH1	SC1	3660	4270	GALV. STEEL	PREFINISHED	STD*	-	STEEL	PAINT	N/A	YES	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH2	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH3	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH4	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH5	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH6	RA1	3660	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH7	SC1	3660	4270	GALV. STEEL	PREFINISHED	STD*	-	STEEL	PAINT	N/A	YES	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH8	RL1	3660	3660	GALV. STEEL	PREFINISHED	-	-	STEEL	PAINT	90 MIN	YES	
OH10	RA1	3660	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH11	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH12	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH13	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH14	RA1	3050	3050	FABRIC PANELS	-	STD*	-	STEEL	PAINT	N/A	-	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH15	SC1	3660	4270	GALV. STEEL	PREFINISHED	STD*	-	STEEL	PAINT	N/A	YES	* VISION PANEL PER DOOR SUPPLIER STANDARDS
OH16	RL1	3660	3660	GALV. STEEL	PREFINISHED	-	-	STEEL	PAINT	90 MIN	YES	

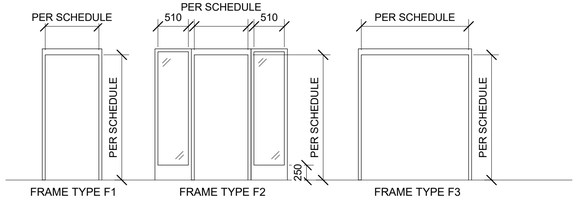
EXISTING BUILDING DOOR SCHEDULE

DOOR #	DOOR						FRAME			FIRE RATING	INSULATED	REMARKS
	TYPE	WIDTH	HEIGHT	MATERIAL	FINISH	GLAZING TYPE	TYPE	MATERIAL	FINISH			
AD1	A	900	2100	HOLLOW METAL	PAINT	GL2	F1	PRESSED STEEL	PAINT	90 MIN	YES	VERIFY DOOR OPENING DIMENSIONS ON SITE
POH1	RL1	4267	4267	GALV. STEEL	PREFINISHED	-	-	STEEL	PAINT	90 MIN	YES	VERIFY DOOR OPENING DIMENSIONS ON SITE

DOOR & FRAME TYPES SCHEDULE

NOTES:
1. REFER TO DRAWINGS & DOOR SCHEDULE FOR DOOR SIZES, FINISH, MATERIALS, FIRE-RATING, ETC.
2. DOORS, INSTALLATION, HARDWARE & GLAZING TO COMPLY W/ REQUIREMENT OF BC BUILDING CODE.
3. INSTALL DOOR FRAMES AS PER DETAILS & MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. SEE ALSO PROJECT SPECIFICATION.
5. CONFIRM ALL ROUGH OPENINGS ON SITE.





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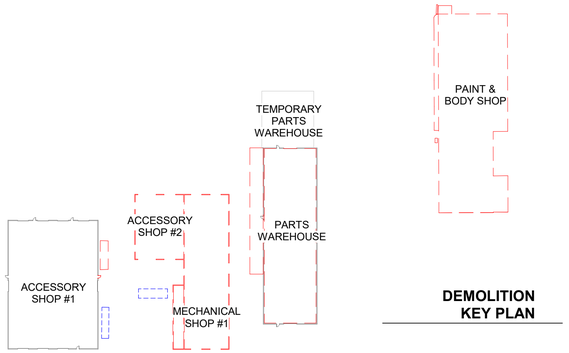
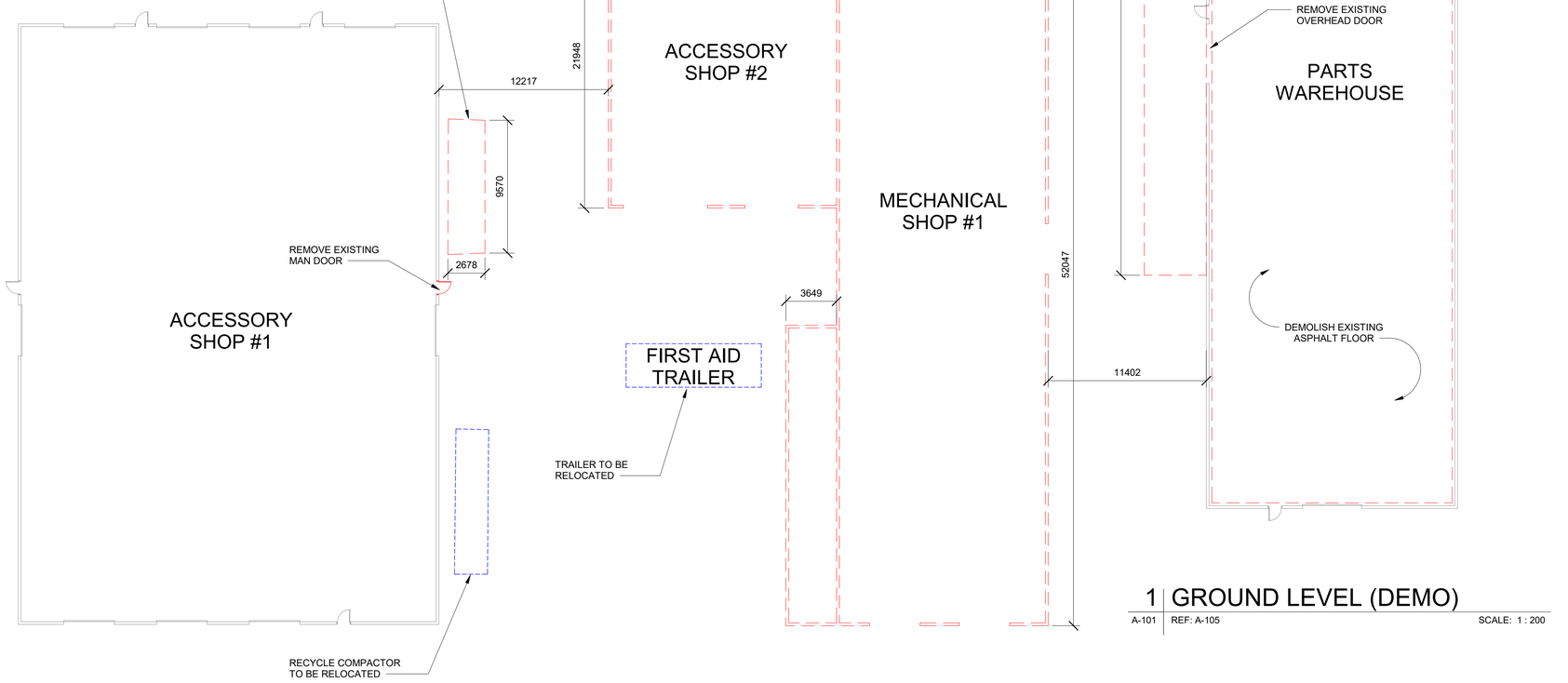
ANNACIS AUTO TERMINAL
ASSEMBLIES & SCHEDULES

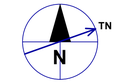


DEMOLITION KEY PLAN



1 | GROUND LEVEL (DEMO)

A-101 | REF: A-105 | SCALE: 1 : 200



LEGEND

- EXISTING
- REMOVED TEMPORARILY
- DEMOLITION
- NEW CONSTRUCTION

THIS DRAWING TO BE PRINTED IN COLOR

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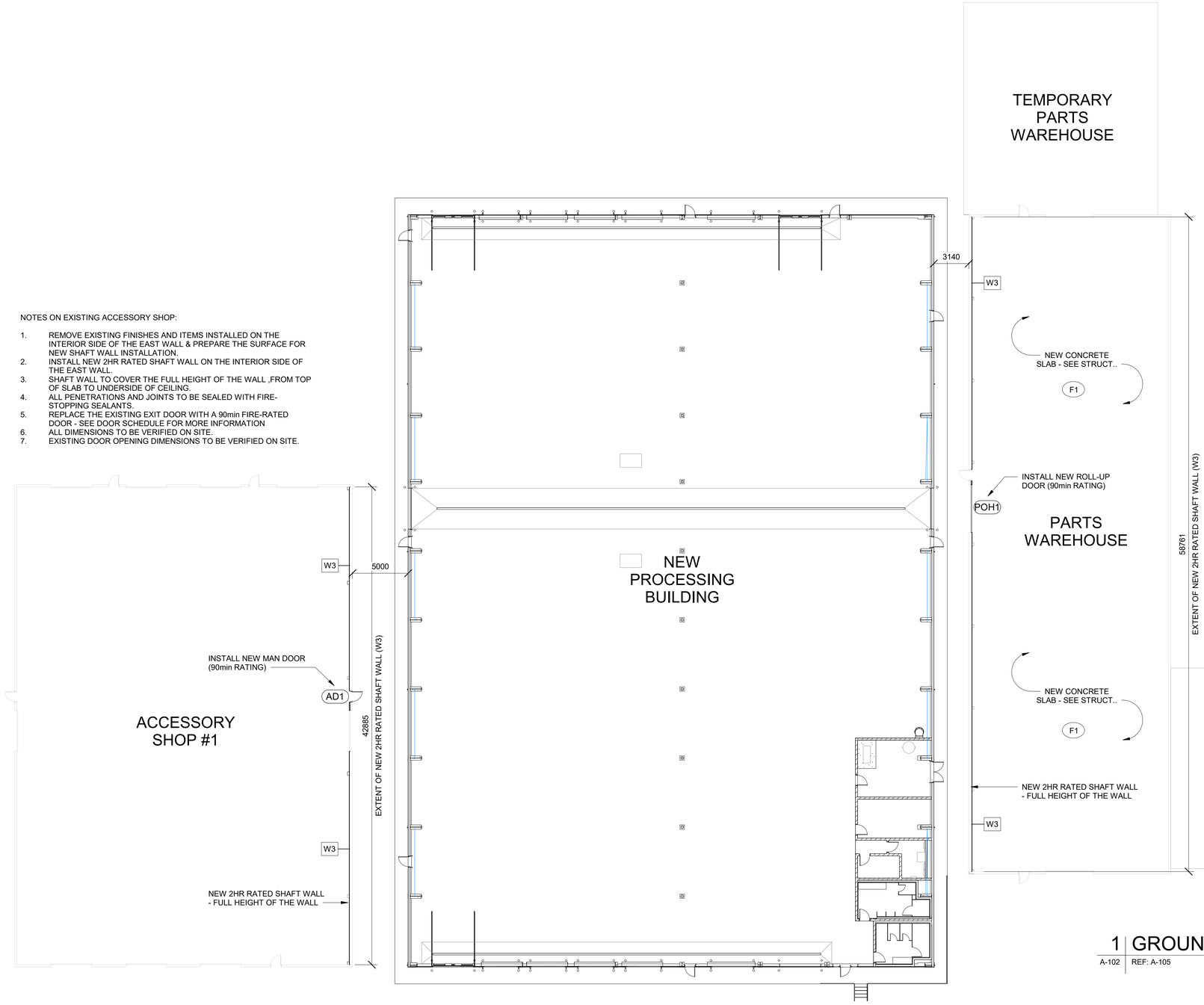
ANNACIS AUTO TERMINAL

FLOOR PLAN (DEMO)



NOTES ON EXISTING ACCESSORY SHOP:

1. REMOVE EXISTING FINISHES AND ITEMS INSTALLED ON THE INTERIOR SIDE OF THE EAST WALL & PREPARE THE SURFACE FOR NEW SHAFT WALL INSTALLATION.
2. INSTALL NEW 2HR RATED SHAFT WALL ON THE INTERIOR SIDE OF THE EAST WALL.
3. SHAFT WALL TO COVER THE FULL HEIGHT OF THE WALL ,FROM TOP OF SLAB TO UNDERSIDE OF CEILING.
4. ALL PENETRATIONS AND JOINTS TO BE SEALED WITH FIRE-STOPPING SEALANTS.
5. REPLACE THE EXISTING EXIT DOOR WITH A 90min FIRE-RATED DOOR - SEE DOOR SCHEDULE FOR MORE INFORMATION
6. ALL DIMENSIONS TO BE VERIFIED ON SITE.
7. EXISTING DOOR OPENING DIMENSIONS TO BE VERIFIED ON SITE.

TN
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LEGEND

- EXISTING
- REMOVED TEMPORARILY
- DEMOLITION
- NEW CONSTRUCTION

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NOTES ON EXISTING PARTS WAREHOUSE:

1. DEMOLISH EXISTING PARTS WAREHOUSE ASPHALT FLOOR AND POUR NEW 150mm REINFORCED CONCRETE SLAB - SEE STRUCT. DRAWINGS FOR MORE DETAILS.
2. REMOVE EXISTING FINISHES AND ITEMS INSTALLED ON THE INTERIOR SIDE OF THE WEST WALL & PREPARE THE SURFACE FOR NEW SHAFT WALL INSTALLATION.
3. INSTALL NEW 2HR RATED SHAFT WALL ON THE INTERIOR SIDE OF THE WEST WALL.
4. SHAFT WALL TO COVER THE FULL HEIGHT OF THE WALL ,FROM TOP OF SLAB TO UNDERSIDE OF CEILING.
5. ALL PENETRATIONS AND JOINTS TO BE SEALED WITH FIRE-STOPPING SEALANTS.
6. REPLACE THE EXISTING ROLL-UP DOOR WITH A 90min FIRE-RATED DOOR - SEE DOOR SCHEDULE FOR MORE INFORMATION.
7. ALL DIMENSIONS TO BE VERIFIED ON SITE.
8. EXISTING DOOR OPENING DIMENSIONS TO BE VERIFIED ON SITE.

1 | GROUND LEVEL (NEW/ EX. BUILDINGS)

A-102 | REF: A-105 SCALE: 1 : 200

No.	Date	REVISION	Dr'n	Ch'd
A	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

LEAD CONSULTANT

AECOM

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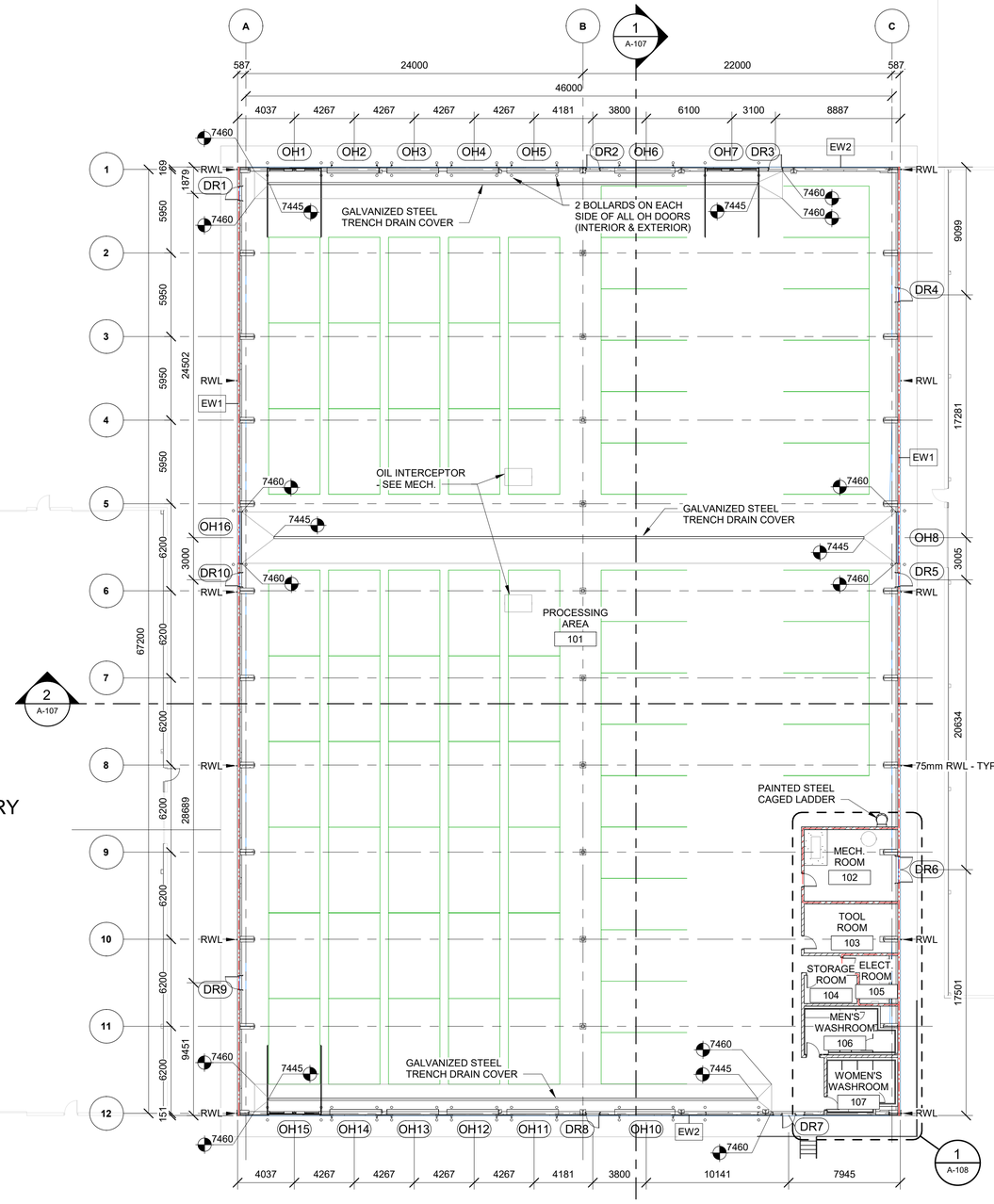
DESIGN BY	ST
DRAWN BY	NM
APPROVED	TH
DATE	2021-10-27
SCALE	1 : 200
PMV SITE	365-039

ANNACIS AUTO TERMINAL

FLOOR PLAN (NEW/ EX. BUILDINGS)

SIZE	DWG.	SHEET	REV.
D	365-039- A-102		



TEMPORARY PARTS WAREHOUSE

PARTS WAREHOUSE

ACCESSORY SHOP #1

1 | GROUND LEVEL (NEW/ PROCESSING BLDG)

A-103 | REF: A-105 | SCALE: 1 : 200

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	JB	ST
A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

1HR FIRE-RATING

2HR FIRE-RATING

LEAD CONSULTANT

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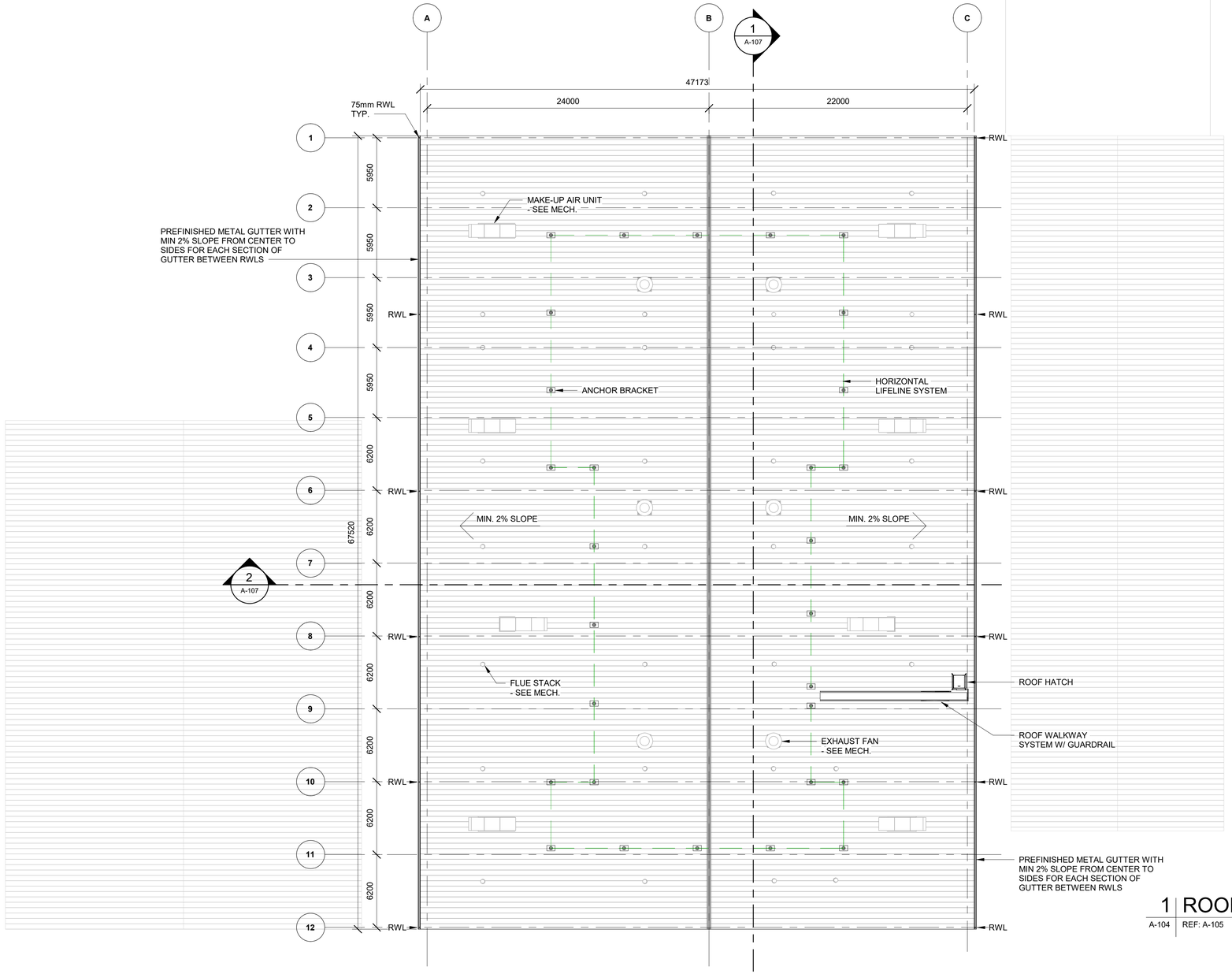
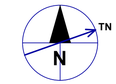
DESIGN BY	ST
DRAWN BY	NM
APPROVED	TH
DATE	2021-10-27
SCALE	1 : 200
PMV SITE	365-039
SIZE	D
DWG.	365-039- A-103
SHEET	
REV.	

ANNACIS AUTO TERMINAL

FLOOR PLAN (NEW/ PROCESSING BUILDING)





1 | ROOF PLAN

A-104 | REF: A-105 SCALE: 1 : 200

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	JB	ST
A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

HORIZONTAL LIFELINE SYSTEM

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DRAWN BY	NM
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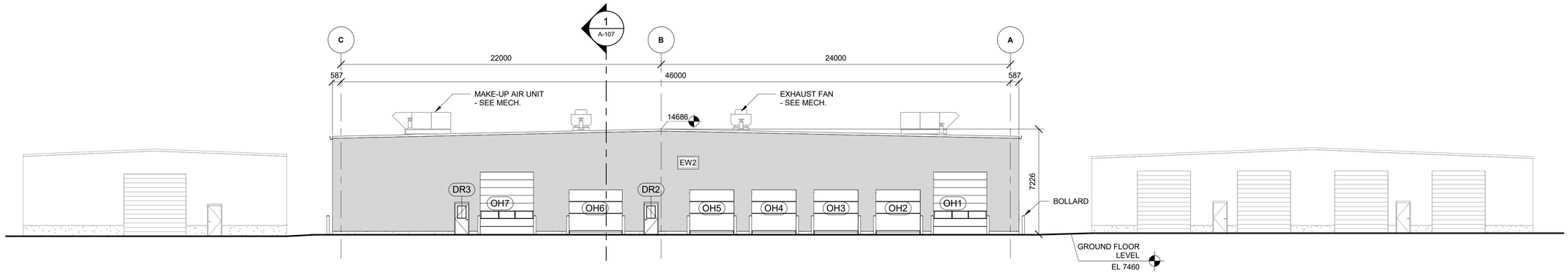
DATE	2021-10-27
SCALE	1 : 200
PMV SITE	365-039

ANNACIS AUTO TERMINAL

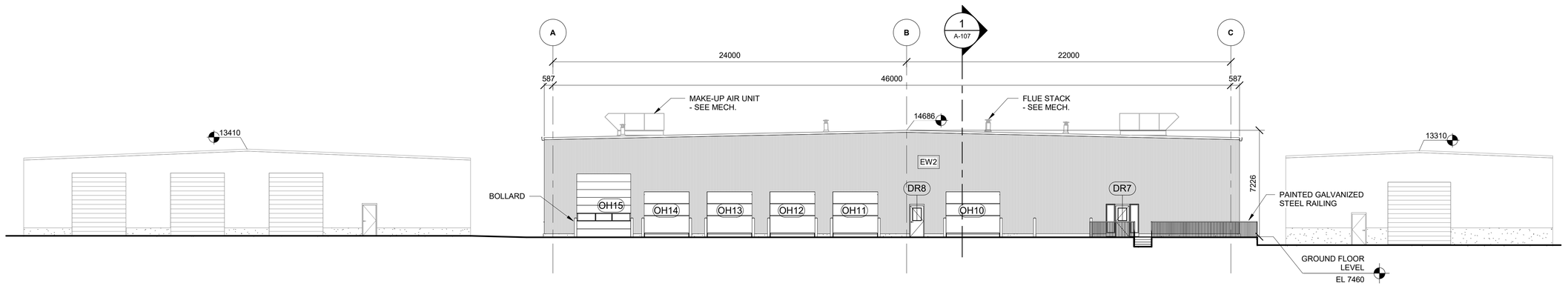
ROOF PLAN

SIZE D | DWG. 365-039- A-104 | SHEET | REV.



1 | NORTH ELEVATION

A-105 | SCALE: 1 : 150



2 | SOUTH ELEVATION

A-105 | SCALE: 1 : 150

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
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PRELIMINARY

DO NOT USE FOR CONSTRUCTION

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DESIGN BY	ST
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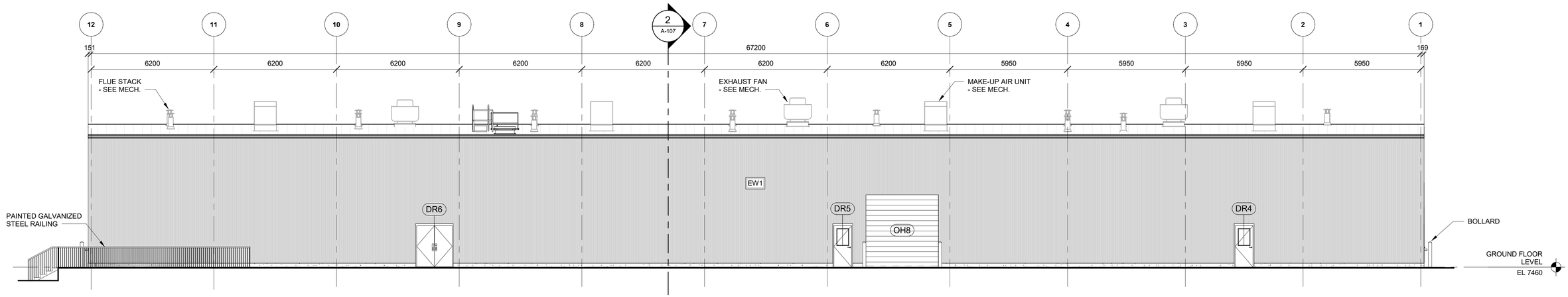
APPROVED	TH
DATE	2021-10-27
SCALE	1 : 150
PMV SITE	365-039

ANNACIS AUTO TERMINAL

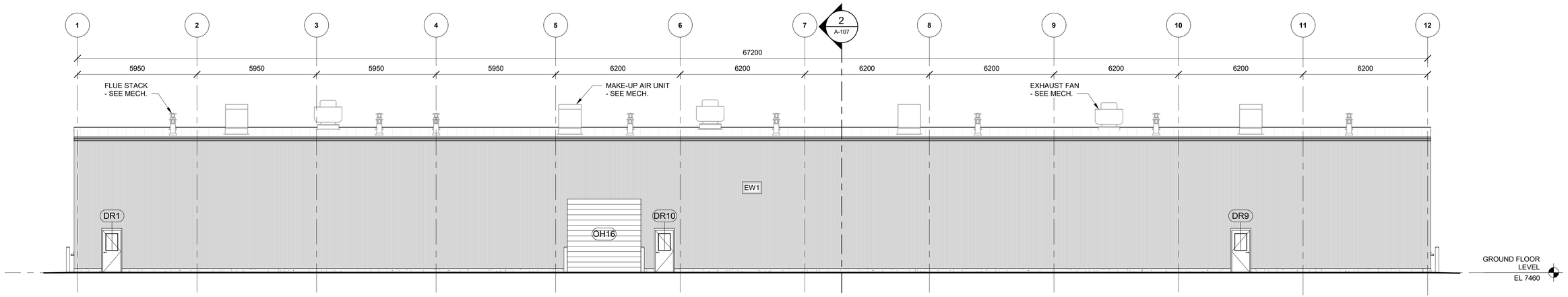
ELEVATIONS - NORTH & SOUTH

SIZE D | DWG. 365-039- A-105 | SHEET | REV.



1 | EAST ELEVATION

A-106 | SCALE: 1 : 100



2 | WEST ELEVATION

A-106 | SCALE: 1 : 100

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
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A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

LEAD CONSULTANT

AECOM

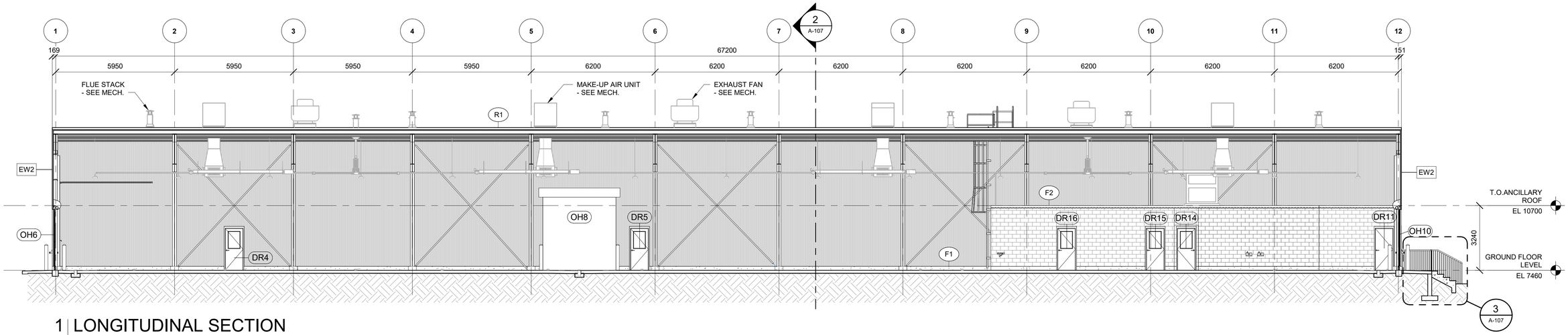
PORT of vancouver

DESIGN BY	ST
DRAWN BY	NM
APPROVED	TH
DATE	2021-10-27
SCALE	1 : 100
PMV SITE	365-039

ANNACIS AUTO TERMINAL

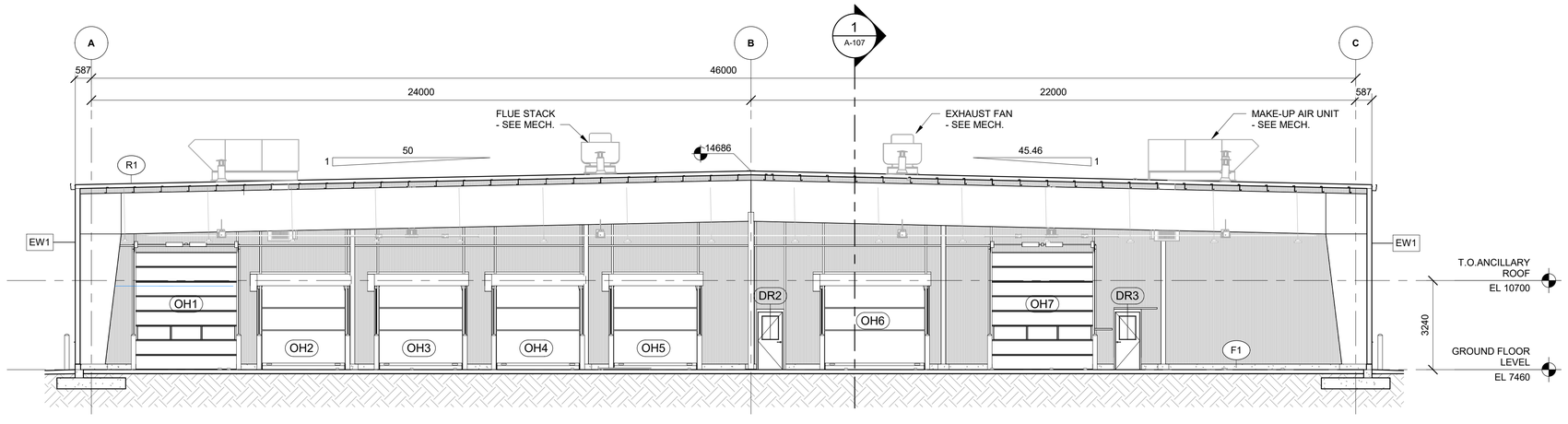
ELEVATIONS - EAST AND WEST

SIZE D | DWG. 365-039- A-106 | SHEET | REV.



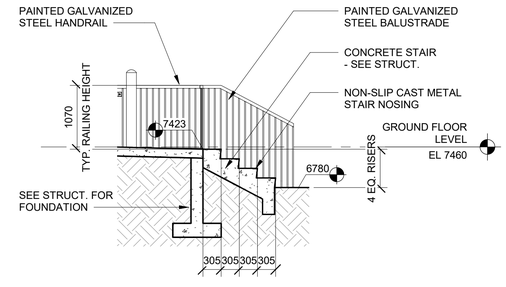
1 | LONGITUDINAL SECTION

A-107 | REF: A-103 | SCALE: 1 : 100



2 | CROSS SECTION

A-107 | REF: A-103 | SCALE: 1 : 100



3 | EXTERIOR STAIR SECTION

A-107 | REF: A-107 | SCALE: 1 : 50

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
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A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

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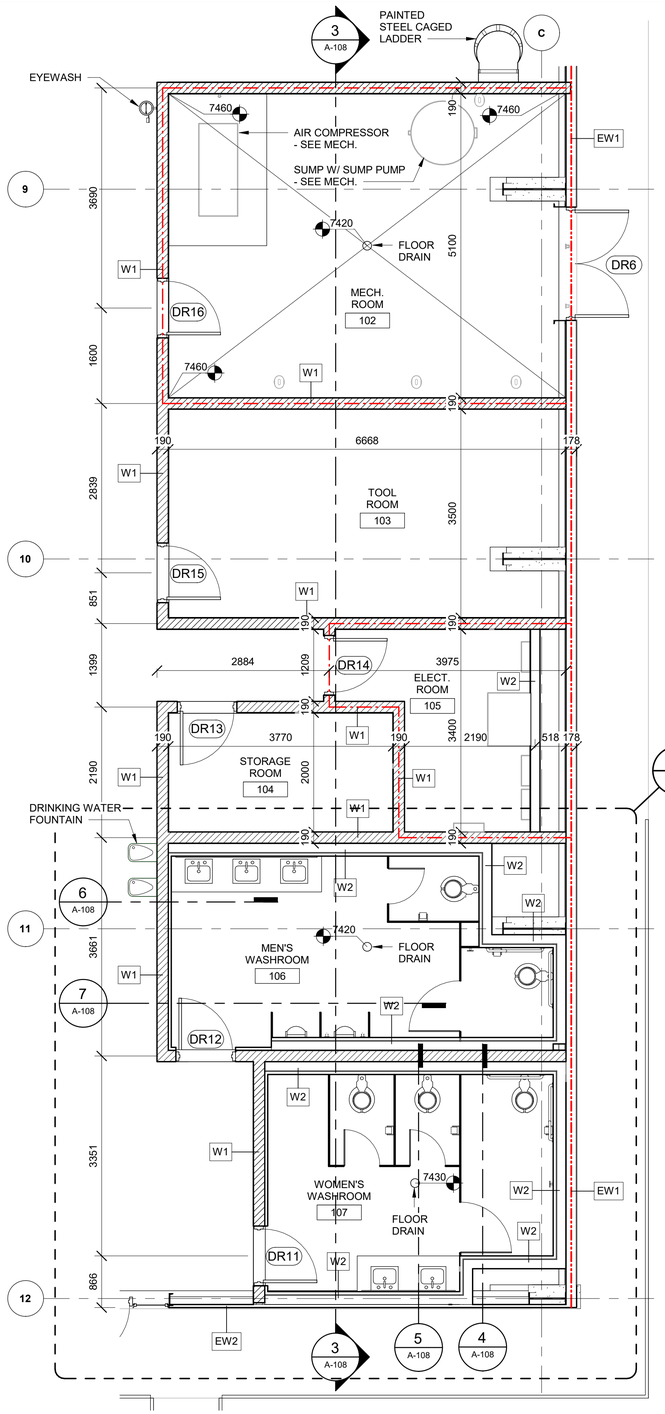
DESIGN BY	ST
DRAWN BY	NM
APPROVED	TH
DATE	2021-10-27
SCALE	As indicated
PMV SITE	365-039
SIZE	D
DWG.	365-039- A-107
SHEET	
REV.	

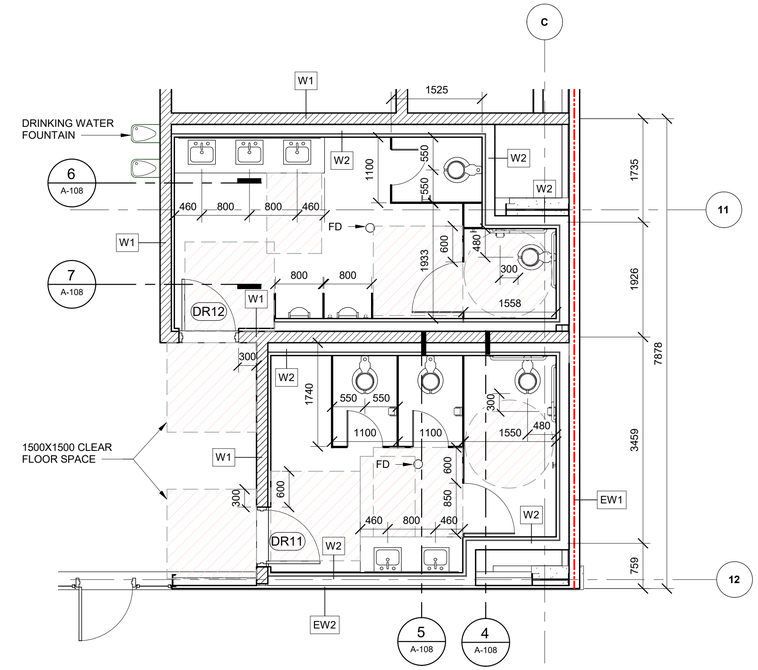
ANNACIS AUTO TERMINAL

SECTIONS



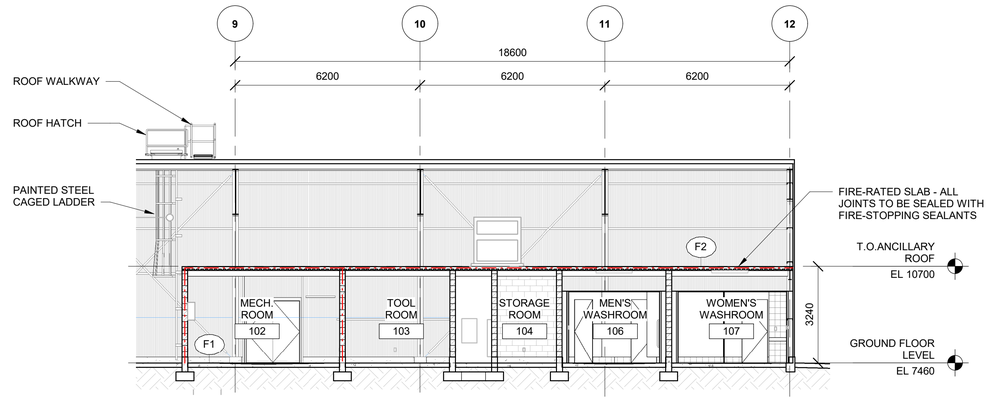
1 | LARGE SCALE FLOOR PLAN

A-108 | REF: A-103 | SCALE: 1 : 50



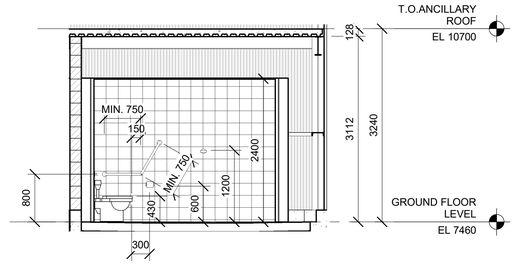
2 | WASHROOM LAYOUT

A-108 | REF: A-108 | SCALE: 1 : 50



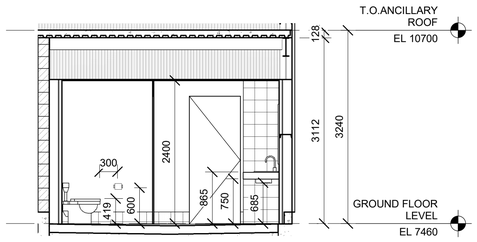
3 | ROOMS SECTION

A-108 | REF: A-108 | SCALE: 1 : 100



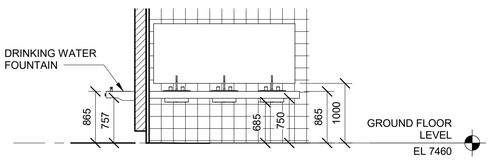
4 | ACCESSIBLE WATER-CLOSET STALL

A-108 | REF: A-108 | SCALE: 1 : 50



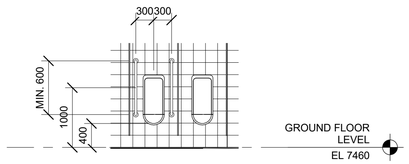
5 | WATER CLOSET STALL & LAVATORIES

A-108 | REF: A-108 | SCALE: 1 : 50



6 | ACCESSIBLE WATER FOUNTAIN

A-108 | REF: A-108 | SCALE: 1 : 50



7 | ACCESSIBLE URINAL

A-108 | REF: A-108 | SCALE: 1 : 50

11/1/2021 9:43:47 AM
BIM 360://BP-AMER (CAN) 60661425-Annacis Auto Terminal Optimization Project/60661425-ANNACIS AUTO TERMINAL_A21.rvt

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	JB	ST
A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

1HR FIRE-RATING

2HR FIRE-RATING

LEAD CONSULTANT

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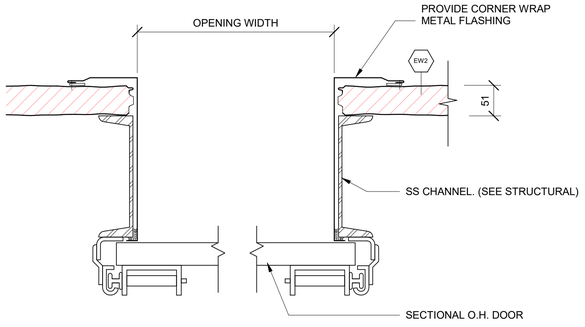
DRAWN BY	NM
APPROVED	TH
DATE	2021-10-27
SCALE	As indicated
PMV SITE	365-039
SIZE	D
DWG.	365-039- A-108
SHEET	
REV.	

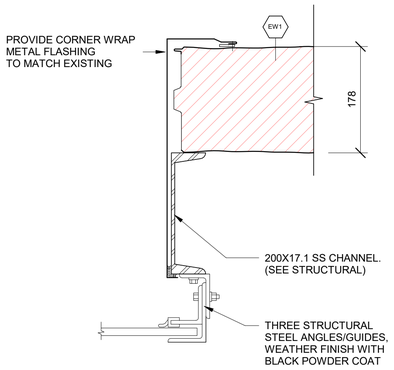
ANNACIS AUTO TERMINAL

LARGE SCALE PLANS & INTERIOR ELEVATIONS



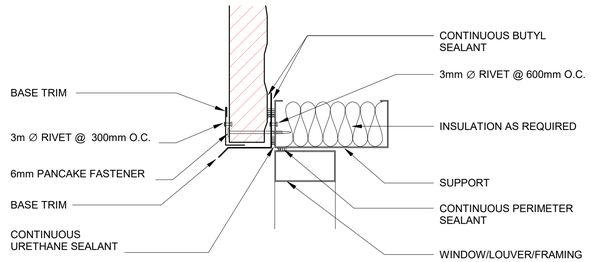
A | SECTIONAL TYPE DOOR JAMB DETAIL

A-109 SCALE: 1 : 5



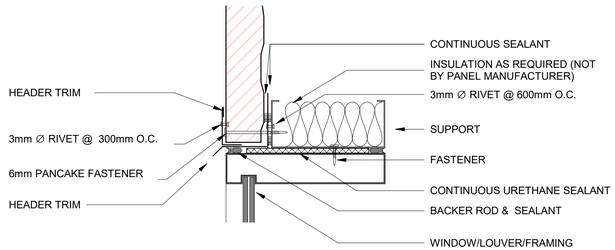
B | ROLL UP DOOR JAMB DETAIL

A-109 SCALE: 1 : 5



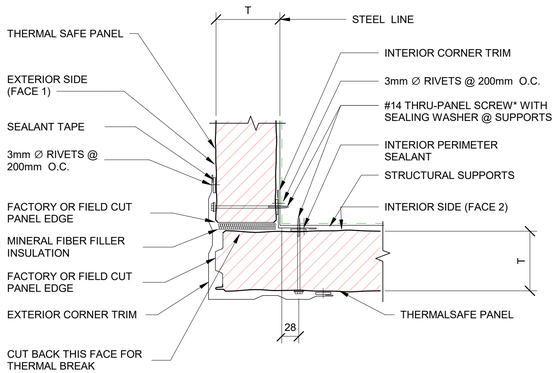
E | LOUVER HEAD DETAIL

A-109 SCALE: 1 : 5



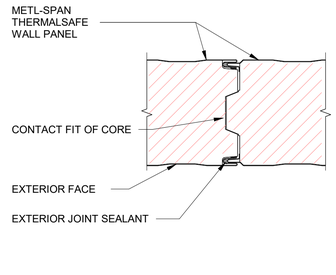
F | STOREFRONT HEAD -DETAIL

A-109 SCALE: 1 : 5



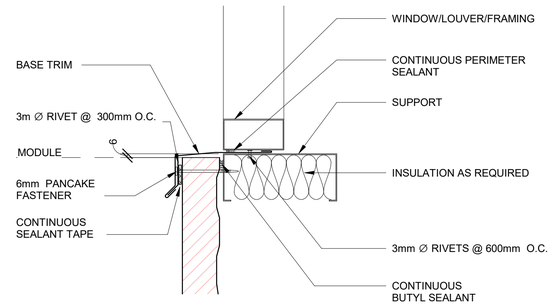
C | OUTSIDE CORNER WALL DETAIL

A-109 SCALE: 1 : 5



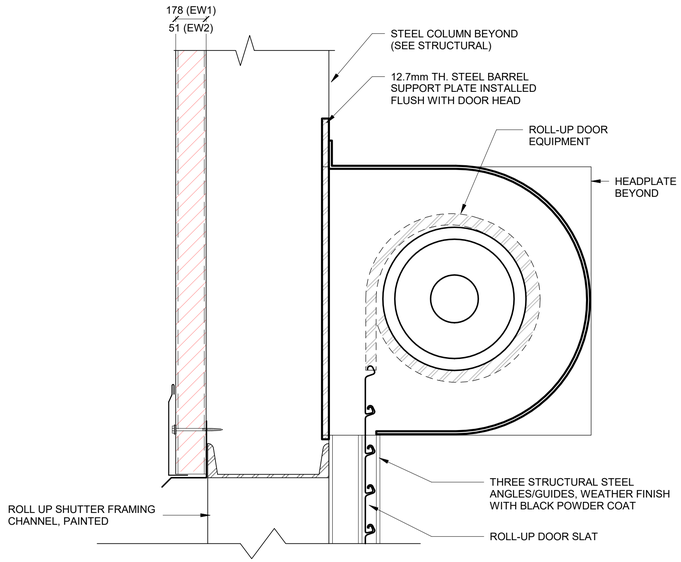
D | VERTICAL JOINT DETAIL

A-109 SCALE: 1 : 5



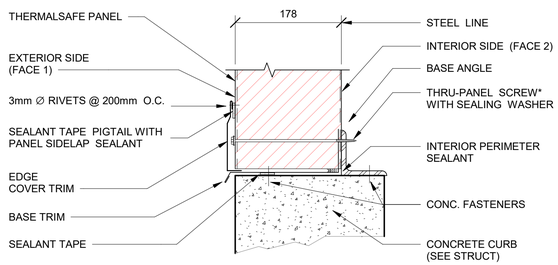
G | LOUVER SILL DETAIL

A-109 SCALE: 1 : 5



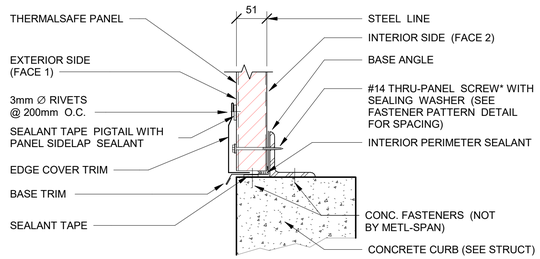
H | ROLL UP DOOR HOUSING-TYP.

A-109 SCALE: 1 : 5



J | WALL BASE DETAIL (EW1)

A-109 SCALE: 1 : 5



K | WALL BASE DETAIL (EW2)

A-109 SCALE: 1 : 5

11/1/2021 9:43:49 AM
BIM 360://BP-AMER (CAN) 60661425-Annacis Auto Terminal Optimization Project/60661425-ANNACIS AUTO TERMINAL_A21.rvt

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	JB	ST
A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

PRELIMINARY

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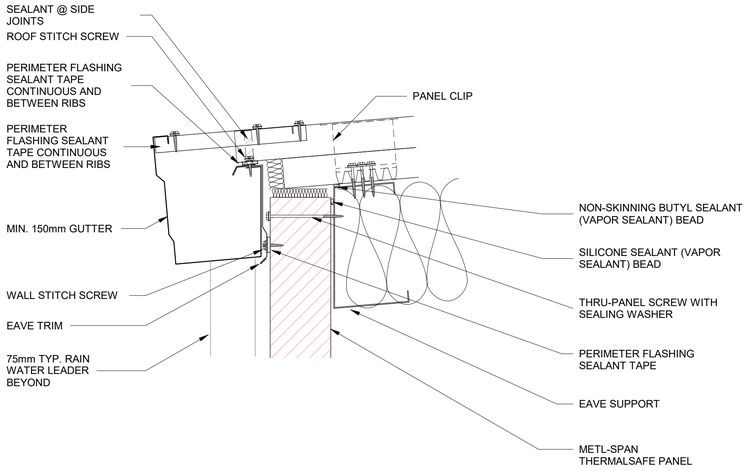
SCALE	1 : 5
PMV SITE	365-039

ANNACIS AUTO TERMINAL

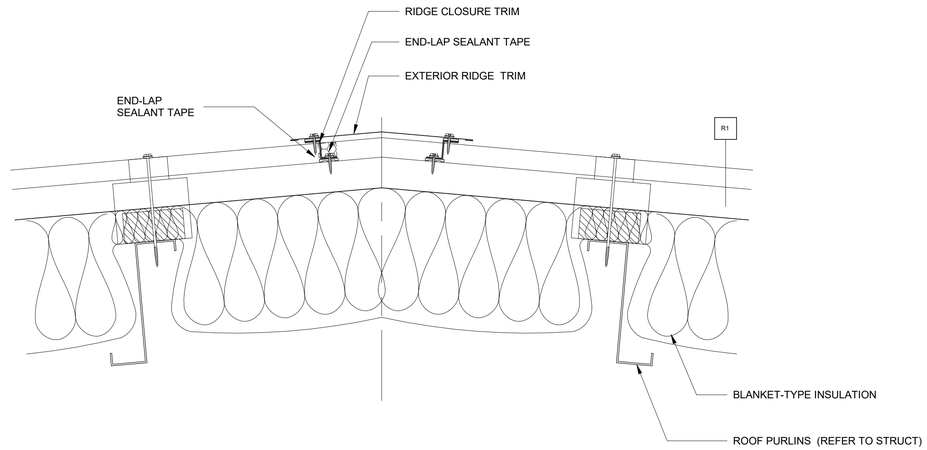
DETAILS

SIZE D | DWG. 365-039- A-109 | SHEET | REV.



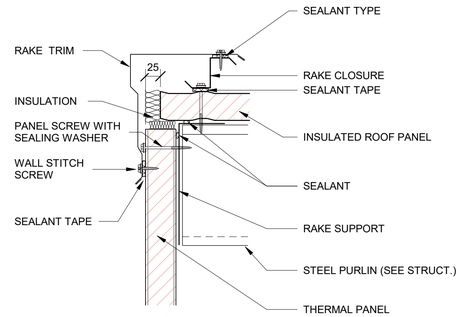
A | STANDARD GUTTER DETAIL

A-110 | SCALE: 1 : 5



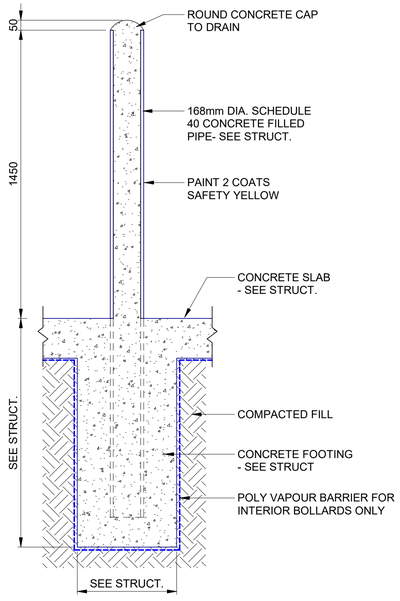
B | ROOF RIDGE DETAIL

A-110 | SCALE: 1 : 5



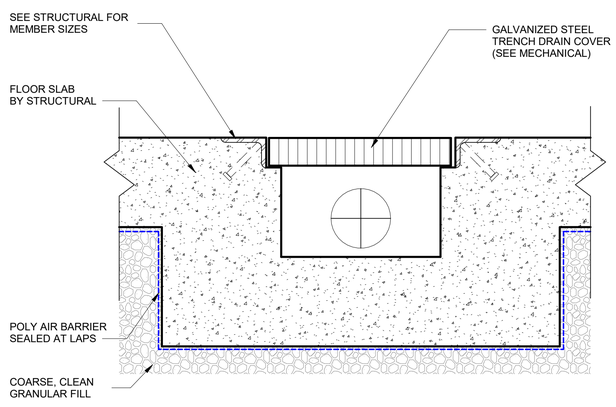
C | STANDARD RAKE DETAIL

A-110 | SCALE: 1 : 5



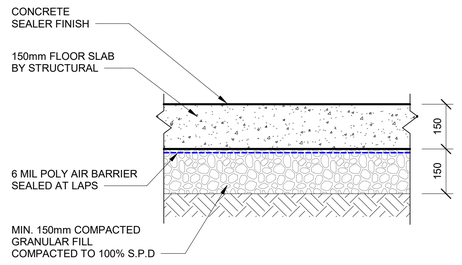
D | TYP. BOLLARD DETAIL

A-110 | SCALE: 1 : 15



E | TRENCH DETAIL

A-110 | SCALE: 1 : 5



F | EX. PARTS WAREHOUSE SLAB DETAIL

A-110 | SCALE: 1 : 10

11/1/2021 9:43:50 AM
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No.	Date	REVISION	Dr'n	Ch'd
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A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

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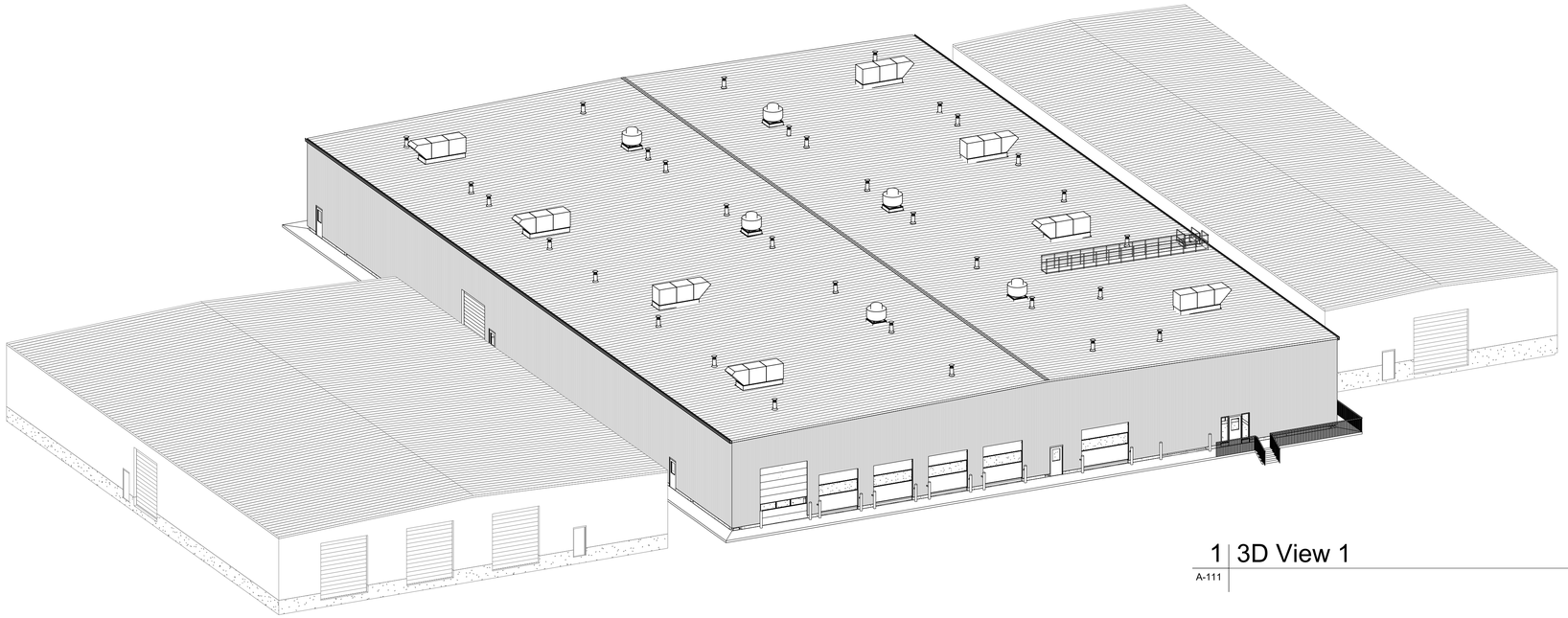
DATE	2021-10-27
SCALE	As indicated
PMV SITE	365-039
SIZE	D
DWG.	365-039- A-110
SHEET	
REV.	

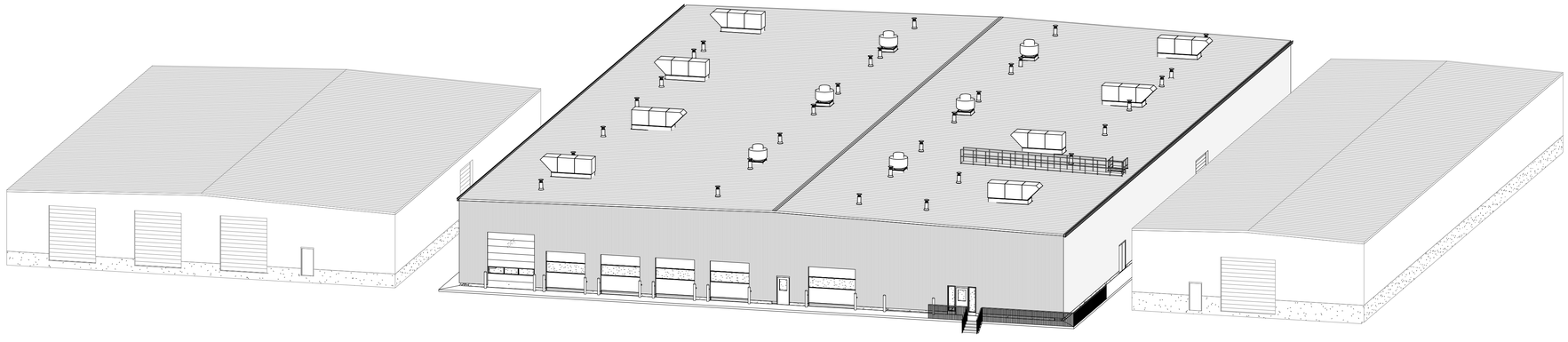
ANNACIS AUTO TERMINAL

DETAILS



1 | 3D View 1

A-111 | SCALE:



2 | 3D View 2

A-111 | SCALE:

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	NM	ST
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	JB	ST
A	2021-09-07	ISSUED FOR CLIENT REVIEW	JB	ST

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DESIGN BY:	ST
DRAWN BY:	NM
APPROVED:	TH
DATE:	2021-10-27
SCALE:	
PMV SITE:	365-039

ANNACIS AUTO TERMINAL

3D VIEWS

SIZE: D | DWG.: 365-039- A-111 | SHEET: | REV.:

SIZE AND DIRECTION OF FORCEMAIN TO OUTLET TO BE DETERMINED IN NEXT STAGE OF DESIGN

EXTENT OF 8% SLOPE

INDICATIVE LOCATION OF NEW GAS LINE FROM NEW SERVICE METER AND PRV STATION. NO NEARBY GAS MAINS TO CONNECT TO ON PORT OF VANCOUVER DRAWING '365-037-VFPAdata' DESIGN TO BE FINALIZED FOLLOWING FURTHER INVESTIGATION.

EXTENT OF FOOTPATH

EXTENT OF RETAINING WALL

NOTE -
SEE SHEET 365-039-C-002 FOR STORM DESIGN

INDICATIVE LOCATION OF EXISTING SANITARY SEWER, EXACT LOCATION NOT KNOWN.

NEW Ø150mm PVC FIRE WATER SERVICE

NEW Ø50mm PVC POTABLE WATER SERVICE

EXISTING SANITARY SHOWN INDICATIVELY, ALIGNMENT TO BE CONFIRMED

EXISTING SANITARY SUMP TO BE RELOCATED, EXISTING SANITARY PIPE TO BE REMOVED/ABANDONED

EXISTING ELECTRICAL DUCT TO BE REMOVED AND REPLACED WITH NEW.

EXISTING COMMS DUCT TO BE REMOVED AND REPLACED WITH NEW.

8.0% RAMP

EXISTING ELECTRICAL DUCTS TO BE REROUTED, SEE ELECTRICAL DRAWINGS

EXISTING WATERMAIN TO BE ABANDONED AND REMOVED WITHIN NEW BUILDING FOOTPRINT

NEW Ø50mm & Ø150mm PVC WATERMAIN TO CONNECT TO THE EXISTING Ø200mm DI WATERMAIN

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	AD	KE
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR CLIENT REVIEW	AD	KE
A	2021-09-07	ISSUED FOR CLIENT REVIEW	AD	KE

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

LEGEND -

- SAN — EXISTING SANITARY
- ST — EXISTING STORM
- T — EXISTING TELEPHONE
- W — EXISTING WATER
- E — EXISTING ELECTRICAL

LEAD CONSULTANT

AECOM

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DESIGN BY	KE
DRAWN BY	AD
APPROVED	TH
DATE	2021-10-27
SCALE	1:200
PMV SHT	365-039

ANNACIS AUTO TERMINAL

SERVICE PLAN

PMV SHT	DWG	SHEET	REV
D	365-039- C-001	1	C

MH05
NEW Ø1050mm STORM MANHOLE
C.L. 7.490
I.L. TBC

FORKLIFT ACCESS

EXTENT OF 8% SLOPE

EXTENT OF FOOTPATH

EXISTING CATCH BASIN TO BE ABANDONED/REMOVED

EXISTING CATCH BASIN LEAD AND Ø300 STORM LINE TO BE ABANDONED/REMOVED

CB01
NEW Ø600mm DOUBLE CATCH BASIN TO REPLACE EXISTING SINGLE CATCH BASIN
C.L. 7.210
I.L. 6.210

Ø200mm SDR35 PVC STORM

Ø100mm

Ø76mm

NOTE-
STORMWATER DESIGN TO BE FINALIZED FOLLOWING FURTHER INVESTIGATION AND CONFIRMATION OF EXISTING SERVICES

MH01
NEW Ø1050mm STORM MANHOLE
C.L. 7.382
I.L. 5.963 TBC

CB02
NEW Ø600mm CATCH BASIN
C.L. 7.261
I.L. 5.838

MH02
NEW Ø1050mm STORM MANHOLE
C.L. 6.813
I.L. 5.143 TBC

MH03
NEW Ø1050mm STORM MANHOLE
C.L. 6.601
I.L. TBC FOLLOWING SURVEY

CB03
NEW Ø600mm CATCH BASIN
C.L. 6.631
I.L. TBC

MH04
NEW Ø1050mm STORM MANHOLE
C.L. 6.735
I.L. TBC

NEW 1.2m HIGH HANDRAIL OVER THE EXTENT OF RETAINING WALL AND STAIRS

EXISTING CATCH BASIN TO BE ABANDONED/REMOVED

EXTENT OF RETAINING WALL

8.0% RAMP

2.5%

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	AD	KE
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR CLIENT REVIEW	AD	KE
A	2021-09-07	ISSUED FOR CLIENT REVIEW	AD	KE

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

LEGEND -

- ST — NEW STORM
- ST — EXISTING STORM
- X — X — X — EXISTING STORM TO BE ABANDONED/REMOVED
- 7.440 — NEW ELEVATION
- 7.354 MATCH± — TIE-IN TO EXISTING ELEVATION

LEAD CONSULTANT

AECOM

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DESIGN BY	KE
DRAWN BY	AD
APPROVED	TH
DATE	2021-10-27
SCALE	1:200
PMV SITE	365-039

ANNACIS AUTO TERMINAL

ELEVATION PLAN

SIZE	DWG.	SHEET	REV.
D	365-039- C-002	1	C

GENERAL NOTES

1. STRUCTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH ALL OTHER PERTINENT CONTRACT DOCUMENTS.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED. THE CONTRACTOR SHALL VERIFY DIMENSIONS BEFORE CONSTRUCTION AND REPORT DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE DRAWINGS.
3. THE DESIGN, CONSTRUCTION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA 2015.
4. REFER TO THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, SLEEVES AND OTHER BUILDING COMPONENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REPORT DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
5. CONTRACTOR TO CONFIRM WITH EQUIPMENT SUPPLIERS DIMENSIONS AND ALL OTHER CRITICAL DETAILS PRIOR TO CONSTRUCTION. REPORT DISCREPANCIES AND OBTAIN APPROVAL PRIOR TO PROCEEDING WITH CONSTRUCTION.
6. NOTIFY THE STRUCTURAL ENGINEER 24 HOURS IN ADVANCE FOR SITE REVIEW.
7. DRAWINGS SHOW COMPLETED STRUCTURES ONLY. CONTRACTOR TO PROVIDE TEMPORARY BRACING FOR CONSTRUCTION LOADING CONDITIONS AND ENSURE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS.
8. CONSTRUCTION METHODS REQUIRING TEMPORARY SHORING, OR BRACING, SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER, REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA, TO PERFORM AND TAKE RESPONSIBILITY FOR ANY SHORING OR OTHER DESIGNS REQUIRED TO COMPLETE THE CONSTRUCTION.
9. CONTRACTOR IS TO VERIFY LOCATION OF UNDERGROUND SERVICES AND BE RESPONSIBLE FOR DISRUPTIONS.
10. IF NO DATES GIVEN FOR STANDARDS REFERENCED, USE LATEST EDITION.
11. SUBMIT THE FOLLOWING SHOP DRAWINGS:
    - A) CONCRETE MIX DESIGN
    - B) REINFORCING FOR ALL CONCRETE AND REINFORCED MASONRY ELEMENTS
    - C) STRUCTURAL STEEL FRAMING, CALCULATION SHEET FOR CONNECTION DESIGN
    - D) DECKING
    - E) PRECAST CONCRETE COMPONENTS
    - F) CONSTRUCTION JOINT DETAILS
12. ALL SHOP DRAWING SUBMITTALS TO BE METRIC, INCLUDING DIMENSIONS, REINFORCING, ANCHOR BOLTS AND STRUCTURAL STEEL SIZES.

DESIGN LOADS

1. DEAD LOADS: STRUCTURE SELF WEIGHT PLUS:

   SUPERIMPOSED DEAD LOAD ROOF 1 kPa

2. LIVE LOADS .1) MECHANICAL & ELECTRICAL SERVICE ROOMS AND MACHINERY ROOMS 4.8 kPa
   .2) OFFICE AREAS 2.4 kPa + 1.2 kPa PARTITION
3. GROUND SNOW LOAD - Ss = 2.3 kPa Is = 1.00 (ULS) FOR STRENGTH
   Sr = 0.3 kPa Is = 0.90 (SLS) FOR SERVICEABILITY
4. WIND LOAD q50 = 0.45 kPa Iw = 1.00 (ULS) FOR STRENGTH
   Iw = 0.75 (SLS) FOR SERVICEABILITY
5. SEISMIC PARAMETERS Sa (0.2) = 0.814 SITE CLASSIFICATION: D
   Sa (0.5) = 0.721 DUCTILITY FACTORS: Rd = 1.5 Ro = 1.3
   Sa (1.0) = 0.408 SEISMIC FORCE RESISTING SYSTEM:
   Sa (2.0) = 0.248 BRACED FRAMES (NORTH-SOUTH);
   MOMENT FRAMES (EAST-WEST)
   Sa (5.0) = 0.079
   Sa (10.0) = 0.028 NOTE: RESULTING DESIGN
   PGA = 0.352g SPECTRUM IS REDUCED BY 20%
   Ie = 1.0 AS RECOMMENDED IN THE GEOTECHNICAL REPORT

EXISTING STRUCTURES

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL RELEVANT DIMENSIONS TO AND OF EXISTING STRUCTURES. NOTIFY AECOM IMMEDIATELY IF DISCREPANCIES ARE NOTED. UPON APPROVAL ON DISCREPANCIES, ALL CHANGES NEED TO BE INCORPORATED IN NEW CONSTRUCTION AND ADJUSTED ACCORDINGLY.
2. THE CONTRACTOR SHALL AT THIER OWN EXPENSE REPAIR AND MAKE GOOD ANY DAMAGE TO THE EXISTING STRUCTURE, EQUIPMENT AND FINISHES CAUSED BY THE CONSTRUCTION ACTIVITIES. REPAIR SHALL BE TO THE SATISFACTION OF THE OWNER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY SUPPORT OF ANY ADJACENT EXISTING STRUCTURES DURING CONSTRUCTION. UNDERPINNING OR BRACING SHALL BE DESIGNED BY QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. FORWARD COPIES OF SIGNED & SEALED DESIGN DRAWINGS TO AECOM FOR REVIEW OF CONFORMANCE WITH GENERAL DESIGN CRITERIA.

FOUNDATION

1. ALL FOUNDATION CONSTRUCTION TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN "PRELIMINARY GEOTECHNICAL REPORT (REVISION 1)", THURBER ENGINEERING LIMITED, DATED 2021-12-21.
2. SUBGRADE SHALL BE PLACED & COMPACTED AS RECOMMENDED IN THE GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION OF FOUNDATIONS AND GRADE BEAMS. ALL BEARING SURFACES TO BE APPROVED BY GEOTECHNICAL ENGINEER PRIOR TO POURING CONCRETE.

EXCAVATION & BACKFILL

1. EXCAVATE TO LINES AND LEVELS NECESSARY TO PROPERLY COMPLETE THE WORK. MINIMUM SIDE SLOPES OF TEMPORARY EXCAVATIONS SHALL NOT EXCEED 1 TO 1, OR AS RECOMMENDED IN THE GEOTECHNICAL REPORT. PROVIDE SUITABLE BRACED SHORING OR TEMPORARY EXCAVATION SUPPORT IF STEEPER EXCAVATION SLOPE IS REQUIRED. SHORING SYSTEM SHALL BE DESIGNED AND SEALED BY ENGINEER REGISTERED IN PROVINCE OF BRITISH COLUMBA. CONTROL EXCAVATION TO ENSURE BOTTOM OF EXCAVATION DOES NOT SOFTEN DUE TO EXCESS MOISTURE.
2. EXCAVATE BELOW GRADE SUPPORTED SLABS TO REMOVE TOPSOIL, ORGANIC MATTER, DEBRIS AND EXISTING FILL. PROOF ROLL SUB-GRADE TO DETECT SOFT AREAS. OVER EXCAVATE AND FILL WITH "GENERAL ENGINEERED FILL". SCARIFY NATIVE CLAY. SUBGRADE TO A DEPTH OF 150mm. COMPACT SUBGRADE TO 100% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE AS DETERMINED IN THE STANDARD PROCTOR TEST. COORDINATE WITH EARTHWORK SPECS.
3. ALL BACKFILL SHALL BE COMPACTED USING MECHANICAL EQUIPMENT. ON THE EXTERIOR OF THE STRUCTURES, THE BACKFILLING SHALL BE PLACED WITH SUFFICIENT ALLOWANCE FOR SETTLEMENT AND IN GENERAL, ITS TOP SURFACE SHALL BE NEATLY GRADED.
4. DO NOT PLACE BACKFILL AGAINST WALLS RETAINING SOIL UNTIL THE FLOOR CONSTRUCTION IS COMPLETE. PROVIDE TEMPORARY SHORING TO PERIMETER WALLS PRIOR TO SLAB PLACEMENT.
5. WHERE BACKFILL IS REQUIRED ON BOTH SIDES OF A WALL OR STRUCTURE, PLACE SIMULTANEOUSLY ON EACH SIDE.
6. DO NOT PLACE BACKFILL ON FROZEN GROUND, NOR USE FROZEN MATERIAL.
7. MAINTAIN OPTIMUM MOISTURE CONTENT TO PERMIT COMPACTION TO ATTAIN SPECIFIED DENSITIES. PROTECT BACKFILLED GRADE, DURING AND AFTER COMPLETION OF BACKFILL OPERATION, FROM SOFTENING DUE TO EXCESS MOISTURE.
8. BACKFILL TO GRADES INDICATED IN LAYERS NOT EXCEEDING 150mm.
9. GRANULAR FILL TO BE CLEAN NATURAL FREE DRAINING GRAVEL, (i.e. FREE FROM FROZEN MATERIAL, SILT, LOAM, FRIABLE OR VEGETABLE MATTER), MAXIMUM GRAIN SIZE 75mm AND LESS THAN 10% PASSING 200 SIEVE. SEE GEOTECHNICAL REPORT FOR SPECIFIC GRADING REQUIREMENTS. PROOF-ROLL PRIOR TO CONSTRUCTION ANY AREAS BELOW GRADE SUPPORTED STRUCTURES TO IDENTIFY ANY SOFT AREAS THAT MAY EXIST. ANY SOFT AREAS ENCOUNTERED SHOULD BE SUB-EXCAVATED AND THE MATERIAL REPLACED WITH ENGINEERED FILL AND RE-COMPACTED USING A HEAVY VIBRATORY COMPACTOR.
10. OTHER FILL TO BE PERVIOUS SOIL FREE FROM ORGANIC MATERIAL, ROCKS LARGER THAN 75mm AND DEBRIS. MATERIALS TO BE APPROVED BEFORE USE. COMPACTION DENSITIES AND FILL MATERIALS:

	FILL MATERIAL	STANDARD PROCTOR DENSITY
BENEATH SLAB-ON-GRADE	TOP 150mm CRUSHED GRAVEL SUB-BASE	100%
AGAINST FOUNDATION WALLS AND GRADE BEAMS	SAND, PIT RUN GRAVEL OR CRUSHED GRAVEL TO WITHIN 500mm OF SURFACE. TOP 500mm SHALL CONSIST OF LOW PLASTIC CLAY.	95%
WITHIN UTILITY TRENCHES LOCATED BENEATH ROADWAYS, SIDEWALKS OR OTHER CONCRETE SLABS	CRUSHED GRAVEL, PIT RUN GRAVEL OR SAND	98%
WITHIN UTILITY TRENCHES LOCATED BENEATH LANDSCAPED AREAS	LOW PLASTIC CLAY, PIT RUN GRAVEL OR SAND	95%

CONCRETE

1. PROVIDE CONCRETE AND PERFORM WORK TO CSA A23.1-19. THE CONTRACTOR SHALL HAVE A COPY OF THIS STANDARD ON SITE AT ALL TIMES.
2. TEST CONCRETE IN ACCORDANCE WITH CSA A23.2-19.
3. CONCRETE REQUIREMENTS:

MEMBERS	MINIMUM 28 - DAYS STRENGTH (MPa)	MAXIMUM AGGREGATE SIZE (mm)	EXPOSURE CLASS	AIR CONTENT (%)
LEAN CONCRETE	25	25	N	3 - 6
FOOTINGS & PIERS	35	20	F - 2	4 - 7
FOUNDATION WALLS	35	20	C - 1	4 - 7
COLUMNS & BEAMS - INTERIOR	35	20	N	-
COLUMNS & BEAMS - EXTERIOR	35	20	C - 1	0 - 3
SLAB ON GRADE - INTERIOR	30	20	N	-
SLAB ON GRADE - EXTERIOR	30	20	C - 1	5 - 8
STAIRS - INTERIOR	30	20	N	-
TOPPING ON METAL DECK	30	10	N	-

4. SPECIFIED SLUMPS ARE PRIOR TO THE ADDITION OF ANY APPROVED PLASTICIZING ADMIXTURE. WHEN CONCRETE IS PLACED BY PUMPING, THE LISTED SLUMPS SHALL BE AT DISCHARGE
5. ALL CONCRETE SHALL BE NORMAL WEIGHT 2400 kg/m3 UNLESS NOTED.
6. CONCRETE COVER TO REINFORCING STEEL SHALL CONFORM TO THE MOST STRINGENT REQUIREMENT LISTED BELOW, UNLESS NOTED OTHERWISE.

	EXPOSURE CONDITION			UP TO 1 1/2 HRS FIRE RATING	2 HRS FIRE RATING	3 HRS FIRE RATING	4 HRS FIRE RATING
	N	EARTH OR WEATHER F1, F2	CHLORIDE C-1, C-2				
CAST AGAINST EARTH	-	75	75	75	75	75	75
COLUMNS - TRANSV. REINF.	30	40	60	30	40	40	50
COLUMNS - PRINC. REINF.	40	50	70	40	50	50	65
WALLS & SHEARWALLS	20	40	60	75	25	25	25
SLABS - TOP & BOT. REINF.	20	40	60	20	25	30	40
BEAMS - TRANSV. REINF.	30	40	60	30	30	30	30
BEAMS - PRINC. REINF.	40	50	60	40	40	40	50

7. CONSTRUCTION JOINTS: SUBMIT PROPOSED DETAIL AND LOCATION OF ALL CONSTRUCTION JOINTS NOT SHOWN ON DRAWINGS TO ENGINEER FOR APPROVAL.
8. CONTROL JOINTS FOR SLAB ON GRADE: SAW CUT CONTROL JOINTS AS PER CSA A23.1-19 LOCATIONS AS PER DRAWINGS OR MAXIMUM 4500mm ON CENTER. CLEAN AND FILL WITH SEALANT.
9. GRADE SUPPORTED SLABS, SIDEWALKS, AND PADS: CAST OVER 6 MIL POLY AND 150mm OF GRANULAR FILL COMPACTED TO 100% STANDARD PROCTOR DENSITY. UNLESS NOTED ON DRAWINGS, SHALL BE 150mm THICK AND REINFORCED WITH 15M BARS AT 300 ON CENTER EACH WAY IN CENTER OF SLAB. PROVIDE CONTROL JOINTS IN SIDEWALKS AT 2.0 METERS ON CENTER. REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF SIDEWALKS AND PADS.
10. PROVIDE 20mm CHAMFER ON ALL EXPOSED CONCRETE CORNERS, UNLESS SHOWN OTHERWISE ON DRAWINGS.
11. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL MECHANICAL OPENINGS, CURBS, EQUIPMENT PADS WITH MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR. (MAJOR OPENINGS NOT SHOWN TO BE VERIFIED WITH ENGINEER).
12. SUBMIT SHOP DRAWINGS FOR CONCRETE MIX DESIGN FOR ALL CONCRETE ELEMENTS. SHOP DRAWINGS SHALL BE SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.

CONCRETE ACCESSORIES

1. GROUT: NON-SHRINK, NON-METALLIC GROUT WITH MINIMUM STRENGTH AT THREE DAYS OF 20 MPa AND MINIMUM STRENGTH AT 28 DAYS OF 50 MPa.
2. BONDING AGENTS: THREE COMPONENT, WATER BASED, EPOXY RESIN / CEMENT BONDING AGENT.
3. ASPHALTIC FIBREBOARD: ASPHALT SATURATED FIBRE BOARD CONFORMING TO ASTM D1751.
4. VINYL FOAM RODS: CLOSED CELL VINYL FOAM RODS AS REQUIRED BY DRAWING DETAILS. 90% RECOVERY AFTER 50% COMPRESSION @ 380 kPa PRESSURE.
5. VAPOUR BARRIER: 0.25mm CLEAR, OR BLACK, POLYETHYLENE FILM, UN-REINFORCED, WITH SELF ADHESIVE POLYETHYLENE TAPE FOR JOINTS, SUITABLE FOR BELOW GRADE USE. LAP JOINTS & REPAIRS MIN 300mm.

No.	Date	REVISION	Dr'n	Ch'd
B	2021-10-27	FINAL DRAFT SUBMISSION ISSUED FOR PDR	LP	SM
A	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	LP	SM

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

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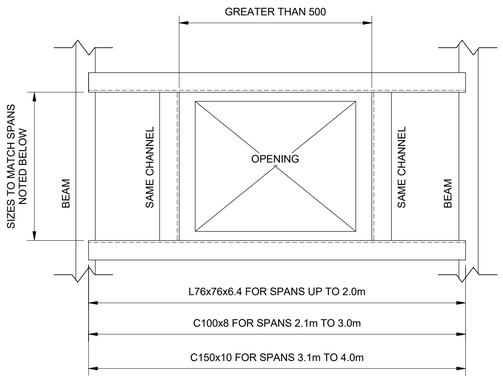
DESIGN BY	SM
DRAWN BY	LP
APPROVED	TH
DATE	2021-10-27
SCALE	1 : 10
PMV SITE	365-039
SIZE	D
DWG.	365-039- S-001
SHEET	
REV.	

ANNACIS AUTO TERMINAL

GENERAL NOTES SHEET 1 of 2

METAL DECK

1. DESIGN, FABRICATE AND INSTALL STEEL DECK TO CSA S136-16 AND THE CANADIAN SHEET STEEL BUILDING INSTITUTE STANDARDS.
2. ROOF DECKING PROFILE: 38mm OR 76mm DEEP ACOUSTICS, ZINC COATED STEEL U.N.O.
3. ZINC COATING TO ASTM A653 275 g/m^2. WIPE COAT GALVANIZING IS NOT ACCEPTABLE.
4. INSTALL DECKING CONTINUOUS OVER MINIMUM THREE SPANS EXCEPT WHERE OTHERWISE SPECIFIED. MINIMUM BEARING EQUAL TO DECK DEPTH, LAP JOINTS 75mm AT STRUCTURAL SUPPORTS.
5. WELD DECK TO SUPPORTING STEEL WITH 20mm DIAMETER FUSION WELDS USING WELD WASHERS WHERE NECESSARY. SIDE LAPS FASTENED BY BUTTON PUNCHING. CLINCHING, TRANSVERSE WELD, LONGITUDINAL WELDS AND PERIMETER WELD REQUIREMENTS AS PER DRAWINGS.
6. ALL WELDS MUST BE TOUCHED UP BY THE DECK ERECTOR WITH GALVICON OR OTHER ZINC RICH CORROSION RESISTANT PAINT SUPPLIED BY THE MANUFACTURER.
7. SUBMIT SHOP DRAWINGS SHOWING ALL DETAILS, MATERIAL SPECIFICATIONS AND DESIGN LOADS. SHOP DRAWINGS SHALL BE SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
8. CUT OPENINGS IN THE DECKING WHERE INDICATED ON THE DRAWINGS AND IN COOPERATION WITH OTHER TRADES. REINFORCE OPENINGS BETWEEN 150mm AND 500mm WITH 65 x 65 x 5 ANGLE PERPENDICULAR TO FLUTES WELDED TO DECK AND EXTENDED 2 FLUTES EACH SIDE OF OPENING. OPENINGS LARGER THAN 500mm SHALL BE FRAMED AS SHOWN BELOW.



OPENINGS UP TO 150mm DO NOT REQUIRE REINFORCING.

OPENINGS LARGER THAN 150mm BUT LESS THAN 500mm ARE TO BE REINFORCED WITH L65 X 65 X 5 PERPENDICULAR TO FLUTES WELDED TO DECK AND EXTENDED 2 FLUTES EACH SIDE OF OPENING.

FOR OPENINGS LARGER THAN 500mm REINFORCE OPENING AS SHOWN ABOVE.

STRUCTURAL STEEL

1. FABRICATE AND ERECT STRUCTURAL STEEL TO CSA S16-19.
2. PROVIDE STRUCTURAL STEEL TO CSA G40.21-LATEST EDITION WITH THE FOLLOWING GRADES:

WIDE FLANGE BEAMS & COLUMNS:	350W
ANGLES & CHANNELS:	300W
HSS SECTIONS (CLASS "C"):	350W
STRUCTURAL BARS AND PLATES:	300W
MISCELLANEOUS STEEL:	300W
ANCHOR BOLTS	TO ASTM F1554 (UNLESS OTHERWISE INDICATED ON DRAWINGS)

3. FABRICATOR TO BE CERTIFIED AS A DIVISION 1 OR 2 COMPANY UNDER CSA W47.1-19. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
4. DIMENSIONS SHOWN ARE TO CENTER LINES OF SECTIONS AND TO BACK OF CHANNELS OR ANGLES. ELEVATIONS SHOWN ARE TO TOP OF STEEL U/N.
5. PROVIDE ERECTION BOLTS TO ASTM A325M, MINIMUM M20. DESIGN BOLTED CONNECTIONS TO ASTM A325 FOR THREADS EXCLUDED FROM SHEAR PLANE. TIGHTEN BOLTS BY THE "TURN OF NUT" METHOD TO BOLT TENSIONS SPECIFIED IN CSA S16-19. ALL A325 BOLTS TO BE HOT DIP GALVANIZED. A490 BOLTS SHALL NOT BE GALVANIZED & SHALL BE PAINTED ON SITE AFTER ERECTION PER SPECIFICATIONS.
6. WELD TO CSA W59-18 BY FABRICATORS QUALIFIED TO CSA W47.1-19.
7. FIELD WELDING AND FIELD MODIFICATION OF STRUCTURAL STEEL SHALL NOT BE ALLOWED WITHOUT PRIOR REVIEW AND APPROVAL BY THE ENGINEER.
8. TEMPORARY BRACING DURING CONSTRUCTION TO BE DESIGNED BY CONTRACTOR. ERECTION BRACING SHALL BE REMOVED ONLY AFTER PERMANENT FLOOR DIAPHRAGMS, ROOF DIAPHRAGMS, SHEAR WALLS AND PERMANENT BRACING ARE COMPLETED.

STRUCTURAL STEEL (CONT.)

9. CONNECTIONS NOT FULLY DETAILED ON THE DESIGN DRAWINGS, SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN BRIDTISH COLUMBIA. SHOP DRAWINGS MUST BEAR THE SEAL AND SIGNATURE OF THIS ENGINEER. SHOP DRAWINGS SHALL BE SUBMITTED TO THE CORPORATION FOR REVIEW BEFORE FABRICATION COMMENCES. FACTORED (UNFACTORED) LOADS FOR THESE CONNECTIONS ARE SHOWN ON THE DRAWINGS. MOMENT IS DENOTED IN kN*m, TENSION IS DENOTED T, COMPRESSION IS DENOTED C. OTHERWISE LOADS ARE SHEAR LOADS. LOADS IN kN, E.E. INDICATES "EACH END".
10. UNLESS NOTED OTHERWISE, DESIGN ALL BOLTED STRUCTURAL CONNECTIONS AS BEARING TYPE IN ACCORDANCE WITH CISC STANDARDS USING A MINIMUM OF TWO M20 A325 BOLTS.
11. DESIGN CONNECTIONS IN ACCORDANCE WITH CISC HANDBOOK LIMIT STATE DESIGN.

    a, SHEAR CONNECTIONS SHALL BE DESIGNED FOR THE GREATER OF THE FOLLOWING (PLUS AXIAL LOAD IF SHOWN)
    - i. BEAM REACTIONS IF SHOWN ON THE DRAWINGS.
    - ii, HALF THE TOTAL UNIFORM LOAD CAPACITY FOR THE GIVEN LATERALLY SUPPORTED BEAM, PLUS 10% TENSION CAPACITY. CONCENTRATED LOADS WHERE SHOWN MUST BE TAKEN INTO ACCOUNT.

    b, MOMENT CONNECTIONS SHALL BE DESIGNED TO RESIST 100% OF THE MEMBER MOMENT CAPACITY (UNLESS OTHERWISE INDICATED ON DRAWINGS).

    c, ALL MOMENT CONNECTIONS SHALL BE PROVIDED WITH STIFFENER PLATES AT BOTH THE TENSION AND COMPRESSION REGION OF THE CONNECTION. MINIMUM THICKNESS OF STIFFENERS SHALL BE EQUAL TO FLANGE THICKNESS OF BEAM OR COLUMN DEPENDING ON FRAMING. DIAGONAL STIFFENERS AND/OR DOUBLE PLATE REQUIREMENTS SHALL BE VERIFIED BY STEEL FABRICATOR AND PROVIDED ON AN AS-REQUIRED BASIS.

    d, SPLICE CONNECTIONS SHALL BE DESIGNED TO RESIST THE FULL CAPACITY OF THE MEMBER (UNLESS OTHERWISE INDICATED ON THE DRAWINGS).
12. CONNECT ALL MAIN STRUCTURAL MEMBERS WITH SYMMETRICAL CONNECTIONS SUCH AS DOUBLE ANGLES OR END PLATES (UNLESS OTHERWISE INDICATED ON THE DRAWINGS).
13. BRACING CONNECTIONS SHALL BE DESIGNED TO RESIST THE AXIAL FORCES IF SHOWN ON THE DRAWINGS OR FOR THE TENSILE CAPACITY OF THE MEMBER UNDER SEISMIC LOADING CONNECTIONS GREATER THAN Ry AgFy (UNLESS OTHERWISE INDICATED ON DRAWINGS).
14. DESIGN CONNECTIONS SO THAT NO ECCENTRIC LOADS WILL BE INTRODUCED ONTO AXIALLY LOADED MEMBERS.
15. CONNECT BRACING TO MAIN MEMBERS WITH 10mm (MIN) GUSSET PLATES WELDED TO THE MAIN MEMBERS UNLESS NOTED OTHRWISE.
16. ALL BOLT HOLES SHALL BE DRILLED OR PUNCHED IN ACCORDANCE WITH CISC STANDARD PRACTICES. ALL HOLES SHALL BE 2mm LARGER THAN THE NOMIMAL DIAMETER OF THE BOLT. OVERSIZED OR SLOTTED HOLES SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.
17. CONTACT SURFACES OF CONNECTIONS WHEN ASSEMBLED IN FIELD SHALL BE FREE FROM OIL, LOOSE SCALE AND ANY FOREIGN MATERIAL THAT COULD PREVENT FIRM CONTACT OF THE PARTS.
18. PROVIDE STIFFENER/BEARING PLATES ON BOTH SIDES OF W-SHAPE AND ON ONE SIDE OF C-SHAPE BEAMS AT ALL LOCATIONS WHERE CONCENTRATED LOADS OCCUR (EXCLUDING OWSJ SEATS) AND AT BEARING SUPPORTS. EACH STIFFENER SHALL EQUAL HALF THE BEAM WIDTH, BE FULL HEIGHT BETWEEN FLANGES, AND HAVE A MINIMUMTHICKNESS OF 8mm BUT SHALL NOT BE THINNER THAN THE WEB OF THE BEAM.
19. PROVIDE CLOSURE PLATES AT ALL OPEN ENDS OF ALL HSS MEMBERS AND SEAL WELD. PLATE THICKNESS SHALL BE 6mm MINIMUM.
20. PROVIDE DRAINAGE HOLE AT LOWEST POINT OF ALL EXTERNAL HSS MEMBERS.
21. FRAME ALL OPENINGS IN ROOF, ROUND AND RECTANGULAR, THAT ARE LARGER THAN 400mm. COORDINATE WITH CONTRACT DOCUMENTS. FRAME BACK TO STRUCTURE AS PER TYPICAL ROOF OPENING FRAMING DETAIL
22. GROUT UNDER BEARING PLATES INSTALLED IN ACCORDANCE WITH SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATION.
23. CLEAN ALL STEEL PRIOR TO PAINTING TO SSPC SURFACE PREPARATION SPECIFICATION NO. 7 "BRUSH-OFF BLAST CLEANING" EXCEPT STRUCTURAL STEEL MEMBERS WHICH ARE EXPOSED IN THE COMPLETED STRUCTURE IN WHICH CASE CLEANING SHALL CONFORM TO SSPC SURFACE PREPARATION SPECIFICATION NO. 6" COMMERCIAL BLAST CLEANING".
24. PAINT STEEL SURFACES WITH ONE COAT OF PRIMER TO CISC/CPMA 1-73A (GREY). AFTER ERECTION PRIME ALL WELDS, ABRASIONS, BOLTED CONNECTIONS AND ALL OTHER SURFACES NOT SHOP PRIMED, EXCEPT SURFACES TO BE IN CONTACT WITH CONCRETE OR GALVANIZED.
25. HOT DIP GALVANIZED TO CSA G164, MIN 610g/sqm COATING ALL STRUCTURAL STEEL COMPONENTS THAT WILL BE LOCATED OUTSIDE OF THE AIR VAPOUR BARRIER IN THE FINAL CONSTRUCTION OR EXPOSED WITHIN THE BUILDING.
26. TOUCH UP GALVANIZED SURFACES USING ZINC METALLIZING TO 180 MICRONS THICK (IN ACCORDANCE WITH ASTM-A780 METHOD A3). TEST FOR ADHESION. FINISH TO MATCH ADJACENT STEEL.
27. AT LOCATIONS WHERE BLOCK WALLS ABUT OR ADJOIN STEEL COLUMNS, SHOP WELD MASONRY ANCHORS AT 400 O.C. CONSISTING OF 3mm x 40mm x 400mm + 50mm 90° HOOK METAL STRAPS, UNLESS SHOWN OTHERWISE.
28. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW PROFILES, SIZES, SPACING AND LOCATION OF STRUCTURAL MEMBERS, CONNECTIONS, ATTACHMENTS, REINFORCING, ANCHORAGE, FRAMED OPENINGS, SIZES AND TYPES OF FASTENERS CAMBER AND LOADS, ACCESSORIES, COLUMN ANCHOR BOLT LOCATIONS, SETTING DETAILS AS WELL AS FABRICATION AND ERECTION DOCUMENTS AND MATERIALS LISTS. SHOP DRAWINGS SHALL BE SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.

MASONRY

1. ALL MASONRY WORK SHALL CONFORM TO CSA S304.1-01, A371-14 AND TO DETAILS SHOWN ON DRAWINGS.
2. MASONRY BLOCK UNITS SHALL CONFORM TO CSA A165-14, CLASSIFICATION H/20/C/M WITH A MINIMUM UNIT STRENGTH OF 20 MPa, UNLESS NOTED OTHERWISE.
3. ALL MORTAR SHALL CONFORM TO CSA A179-14 AND SHALL BE TYPE 'S' UNLESS NOTED OTHERWISE.
4. ALL LINTELS AND BOND BEAMS SHALL BE FILLED WITH CONCRETE HAVING A COMPRESSIVE STRENGTH OF 20 MPa. CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 10mm AND A SLUMP OF 200±20mm
5. PLACE MASONRY UNITS IN RUNNING BOND, UNLESS NOTED. USE FACE SHELL BEDDING EXCEPT FIRST COURSES AND CELLS TO BE GROUTED WHERE FULL BED MORTARING IS TO BE USED.
6. EXTEND ALL NON-LOAD BEARING MASONRY WALLS TO FORM A 40mm GAP BETWEEN TOP OF WALL AND UNDERSIDE OF STRUCTURE ABOVE. FILL GAP WITH COMPRESSIBLE ACOUSTIC OR FIRE-STOP MATERIAL TO MAINTAIN WALL RATING.
7. TIE MASONRY UNITS TO CONCRETE WITH HOT DIP GALVANIZED DOVETAIL TRIANGULAR TIES AT 600 ON CENTER AT COLUMNS OR WALLS AND AT 1200 ON CENTER AT BEAMS OR FLOORS OVER. TIES TO BE BY DAYTON SUPERIOR OR APPROVED EQUAL.
8. HEAT MATERIALS AND PROTECT WORK IN ACCORDANCE WITH CSA S304.1-04 WHEN TEMPERATURE BELOW 5°C.
9. CORE FILLS SHALL BE DONE IN MAXIMUM 1200mm LIFTS, AND SHALL BE RODDED TO AVOID HONEYCOMBING.
10. UNLESS NOTED ON DRAWINGS, THE MINIMUM REINFORCING SHALL CONSIST OF THE FOLLOWING:

    1) HORIZONTAL MOTAR JOINT REINFORCING - 3.8mm DIAMETER (9 GAUGE) TRUSS TYPE WIRE REINFORCING
    WITH DEFORMATIONS, PLACED AT 400mm OC

    ALL SPLICES SHALL BE LAPPED MINIMUM 300mm LAP LOCATIONS SHALL BE STAGGERED MINIMUM 800mm FROM COURSE TO COURSE.

    HORIZONTAL JOINT REINFORCEMENT SHALL BE MADE CONTINUOUS AT ALL WALL CORNERS AND WALL INTERSECTIONS BY USE OF "L" AND "T" SHAPED PIECES SPECIFICALLY FABRICATED FOR THESE APPLICATIONS. (CORNER-LOK OR PARTITION LOK BY BLOK-LOK OR EQUAL.)

    2) HORIZONTAL BAR REINFORCING - DEFORMED BILLET STEEL BARS TO G30.18-09 GRADE 400W.

    PROVIDE CONCRETE FILLED AND REINFORCED BOND BEAMS AT MAX. 1200 mm O/C, UNLESS OTHERWISE NOTED. REINFORCE EACH 200 mm OF BOND BEAM WITH 2 - 15M CONTINUOUS, WITH MATCHING CORNER BARS. PROVIDE BOND BEAMS AT TOP OF THE WALLS.

    PROVIDE LINTELS OVER ALL OPENINGS OR RECESSES IN MASONRY WALLS, INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES AND EQUIPMENT. PROVIDE LINTELS AS FOLLOWS, UNLESS NOTED OTHERWISE:

SPAN (mm)	DEPTH (mm)	REINFORCEMENT
0-1200	200	2-15M BOTTOM
1200-2400	400	2-15M TOP AND BOTTOM
2400-3600	600	2-20M TOP AND BOTTOM
3600-4400	800	2-25M TOP AND BOTTOM

    EXTEND ALL LINTEL REINFORCEMENT AND CONCRETE 600 mm PAST EDGE OF OPENINGS BOTH SIDES.

    3) VERTICAL REINFORCING - DEFORMED BILLET STEEL BARS TO G30.18-09 GRADE 400W

    a) 15M AT 600 O/C MAXIMUM OR AS SHOWN ON DRAWINGS.

    b) PROVIDE ONE VERTICAL BAR TO MATCH WALL REINFORCING FULL HEIGHT AT:

    1. UNSUPPORTED ENDS OF WALLS AND AT EACH SIDE OF CONTROL JOINTS.
    2. EACH CORNER AND AT INTERSECTIONS.
    3. EACH SIDE OF DOORS. BARS TO EXTEND TO TOP OF WALLS.
    4. EACH SIDE OF OPENINGS. BARS TO EXTEND A MINIMUM 600 BEYOND CORNERS.

    c) IN ADDITION TO REINFORCING DETAILS SHOWN ON DRAWINGS, CONCRETE FILL AND REINFORCE VERTICAL CELLS ON BOTH SIDES OF ALL OPENINGS WITH 1 BAR TO MATCH VERTICAL REINFORCING IN MIDDLE OF EACH CELL AS FOLLOWS:

OPENING WIDTH	CELLS TO BE FILLED EACH SIDE OF OPENING
0-2000mm	1
2000-3000mm	2

    REINFORCEMENT TO EXTEND FULL HEIGHT OF WALL AND BE ANCHORED 200 mm INTO CONTINUOUS BOND BEAMS AT TOP OF WALL. PROVIDE DOWELS FROM SUPPORTS.

    d) PROVIDE DOWELS IN FOUNDATION TO MATCH VERTICAL MASONRY WALL REINFORCING. REFER TO DRAWINGS FOR CONNECTIONS TO EXISTING CONCRETE.

DOWEL SIZE	LENGTH (mm)	PROJECTION (mm)
15M	900	600
20M	1000	750

MASONRY (CONT.)

11. REINFORCING LAPS: (UNLESS NOTED OTHERWISE):

WIRE REINFORCING	300mm
10M BARS	400mm
15M BARS	650mm

12. PROVIDE VERTICAL CONTROL JOINTS AT MAXIMUM 6000 SPACING. BOND BEAM REINFORCING CONTINUES THROUGH CONTROL JOINT. CUT ALTERNATE WIRE JOINT REINFORCEMENT.
13. PROVIDE SOLID BLOCK OR CONCRETE FILLED BLOCK UNDER ALL CONCENTRATED LOADS BEARING ON MASONRY.
14. PROVIDE CONCRETE FILLED CORES AT ALL LOCATIONS WHERE METAL FABRICATIONS OR OTHER EQUIPMENT, UTILITIES, ETC., FASTEN TO BLOCK WALLS.
15. PROVIDE TEMPORARY BRACING FOR ALL WALLS UNTIL MASONRY HAS BEEN ANCHORED TO PERMANENT STRUCTURE.
16. BUILD MASONRY TRUE TO LINE, PLUMB, SQUARE AND LEVEL WITH VERTICAL JOINT IN PROPER ALIGNMENT.
17. MAXIMUM JOINT WIDTH 10 mm. POINT AND COMPACT JOINTS WITH ROUND BAR TOOL.
18. CUT MASONRY UNITS WITH MASONRY SAW. BROKEN UNITS NOT ACCEPTABLE.

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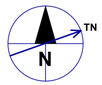
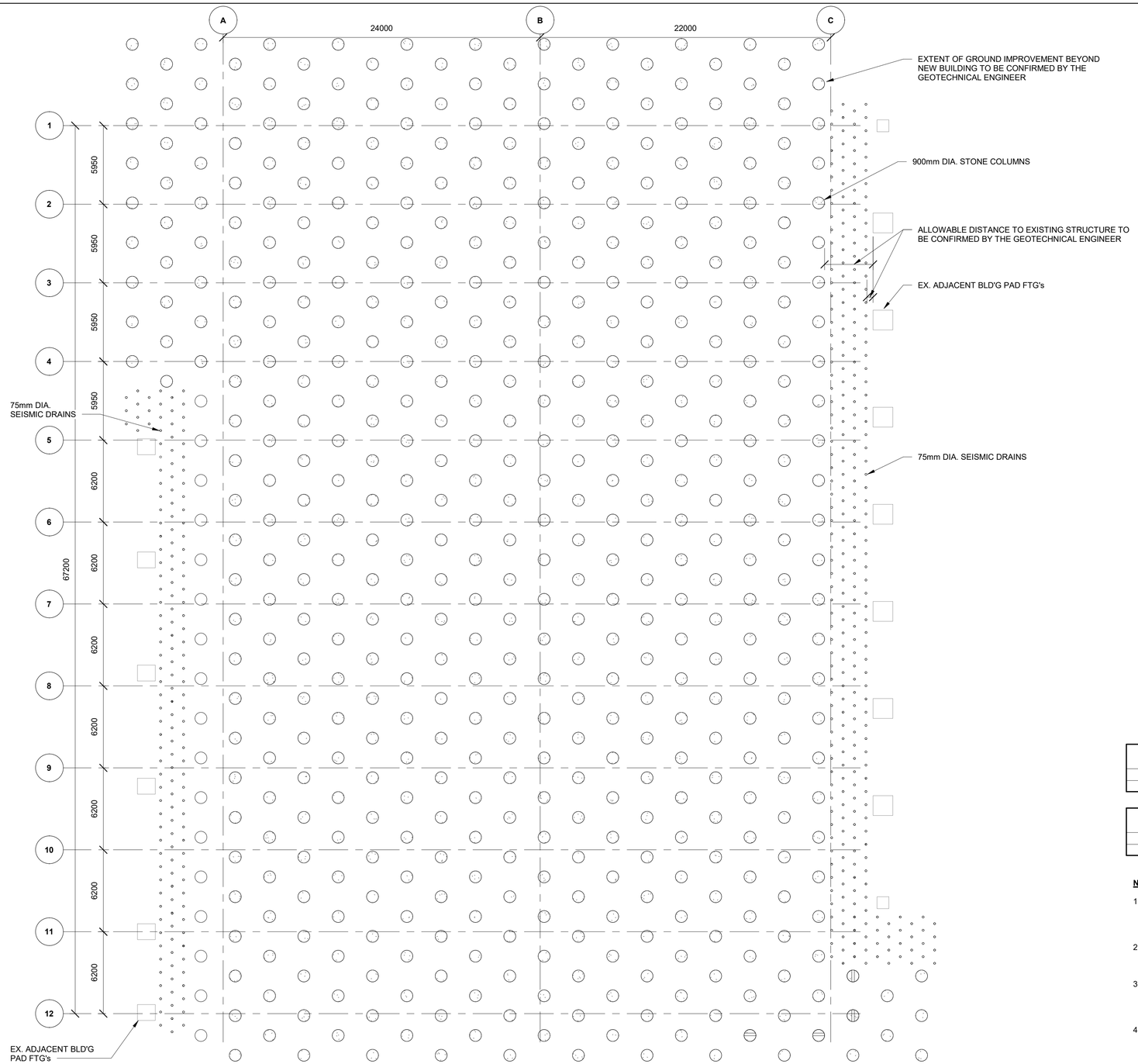
PMV SITE	365-039

ANNACIS AUTO TERMINAL

GENERAL NOTES SHEET 2 of 2

SIZE D | DWG. 365-039- S-002 | SHEET | REV.





1
S-103

GENERAL ARRANGEMENT OF GROUND DENSIFICATION

Scale: 1 : 175

STONE COLUMN QUANTITY	
TYPE	**TOTAL**
STONE COLUMN	520

SEISMIC DRAIN QUANTITY	
TYPE	**TOTAL**
SEISMIC DRAINS	442

NOTES:

1. GROUND DENSIFICATION CONCEPT SHOWN IS AN ESTIMATED LAYOUT BASED ON PRELIMINARY RECOMMENDATIONS PROVIDED IN GEOTECHNICAL REPORT. ACTUAL DESIGN MAY VARY AND IS THE RESPONSIBILITY OF THE REGISTERED GEOTECHNICAL ENGINEER.
2. THE PRELIMINARY GEOTECHNICAL REPORT RECOMMENDS STONE COLUMN GROUND IMPROVEMENT SPACED 2.5m TO 3.0m IN A TRIANGULAR GRID, AND EXTENDING TO A DEPTH OF 20m.
3. THE GEOTECHNICAL REPORT RECOMMENDS THAT THE ZONE OF IMPROVEMENT EXTENDS 10m TO 20m BEYOND THE BUILDING FOOTPRINT, AND WHERE NOT FEASIBLE DUE TO EXISTING STRUCTURES, 75mm DIAMETER PERFORATED SEISMIC DRAINS ARE TO BE USED AT A 1m SPACING TO A DEPTH OF 20m to 25m.
4. REFER TO THE PRELIMINARY GEOTECHNICAL REPORT BY THURBER ENGINEERING DATED DECEMBER 21,2020 FOR MORE INFORMATION.

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SIZE	D
DWG.	365-039- S-101
SHEET	
REV.	

ANNACIS AUTO TERMINAL

CONCEPTUAL LAYOUT OF GROUND DENSIFICATION

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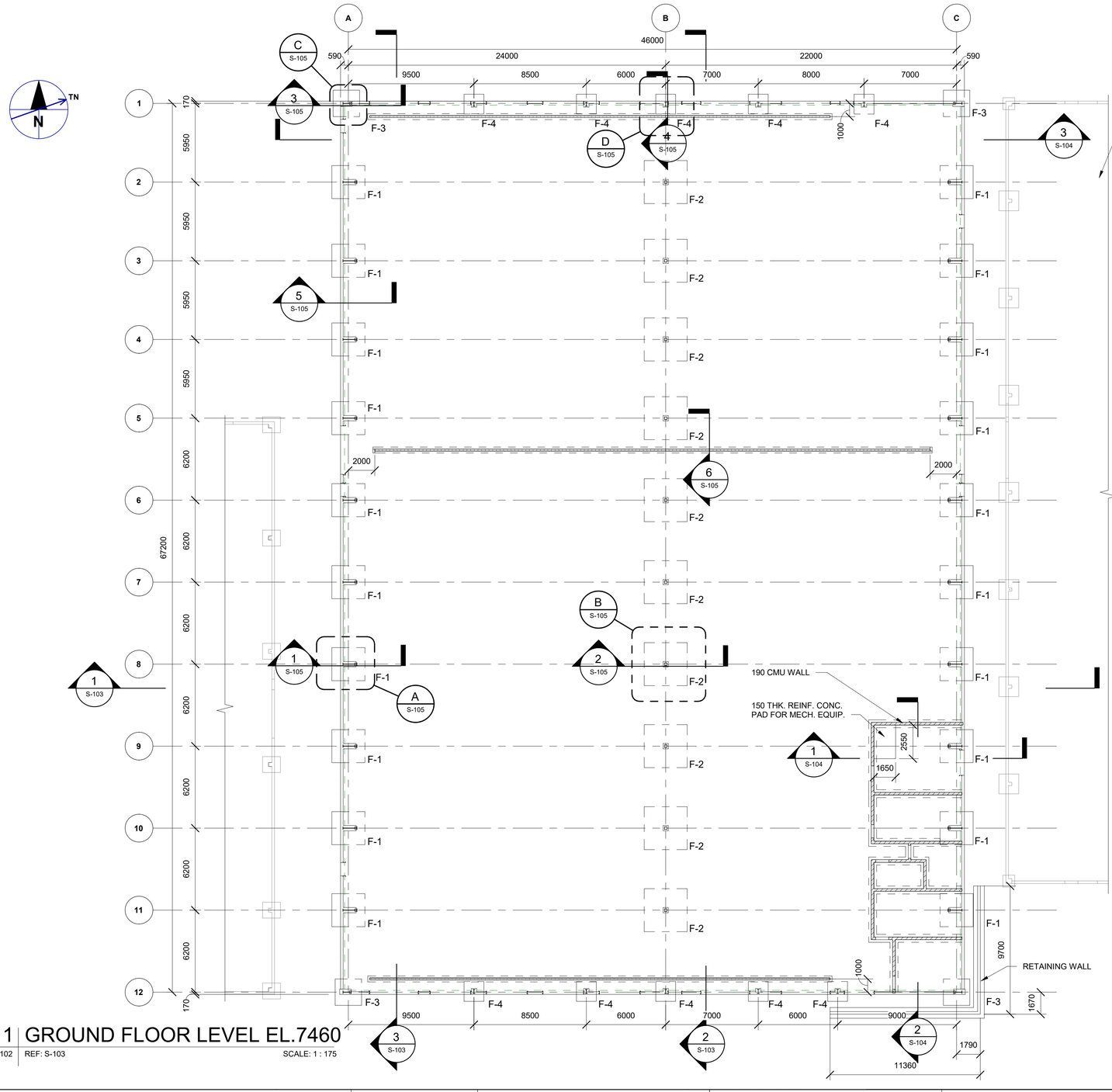
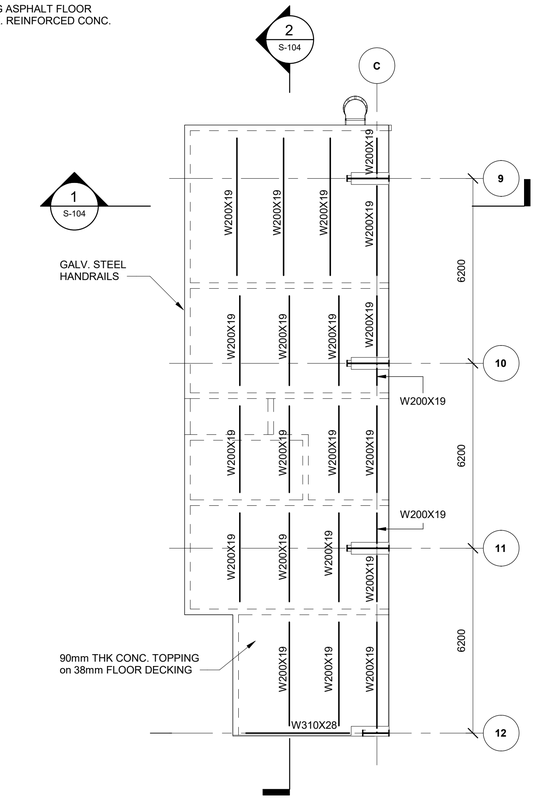


1 | GROUND FLOOR LEVEL EL.7460

S-102 | REF: S-103 | SCALE: 1 : 175

PAD FOOTING SCHEDULE						
FOOTING TYPE	WIDTH (mm)	LENGTH (mm)	DEPTH (mm)	TOP REINFORCING	BOTTOM REINFORCING	TOTAL
F-1	2500	2500	400			20
F-2	3250	3250	500			10
F-3	2000	2000	400			4
F-4	1500	1500	400			10



2 | ANCILLARY ROOF EL.10700

S-102 | SCALE: 1 : 100

GENERAL NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATION FOR PRE-ENGINEERED METAL BUILDING SUPPL AND INSTALLATION DETAILS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR SLOPES AND ELEVATIONS.

FOUNDATION DESIGN NOTES:

1. FOUNDATION DESIGN BEARING CAPACITY = 75 kPa ULS, 50 kPa SLS.
2. GROUND IMPROVEMENT IS REQUIRED TO ACHIEVE STATED BEARING CAPACITIES.
3. PRELIMINARY FOUNDATION DESIGN IS SUBJECT TO CHANGE PENDING FINAL DESIGN AND DETAILING BY THE PRE-ENGINEERED BUILDING DESIGNER.
4. SLAB-ON-GRADE IS DESIGNED AS A STRUCTURAL DIAPHRAGM TO TRANSFER LATERAL LOADING FROM THE PRE-ENGINEERED BUILDING.

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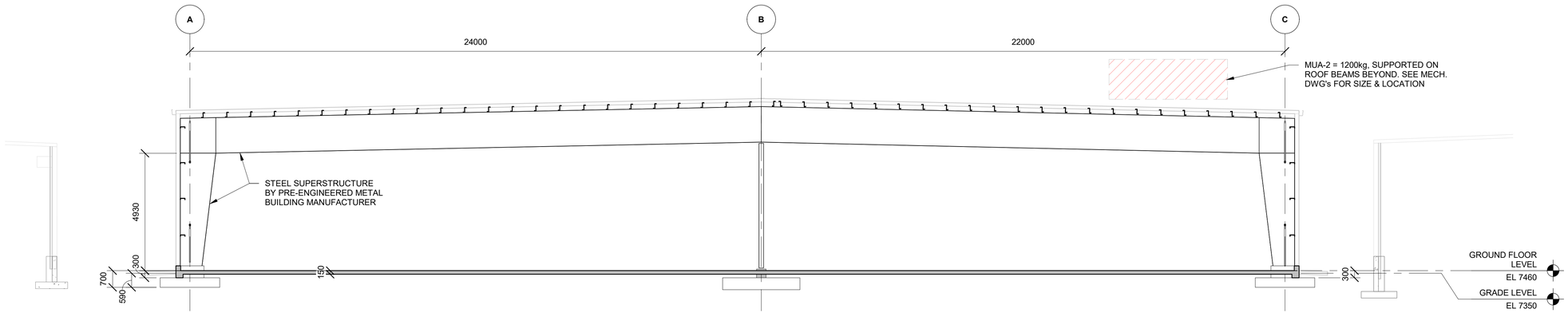
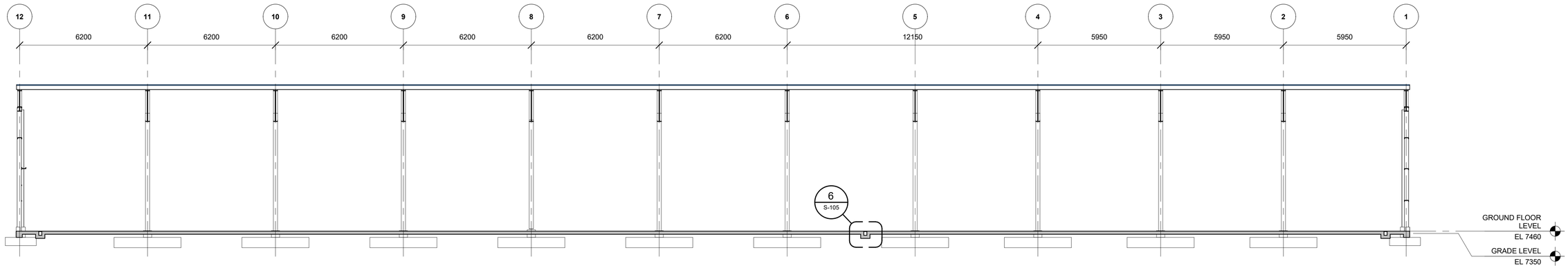
ANNACIS AUTO TERMINAL

GROUND FLOOR LEVEL

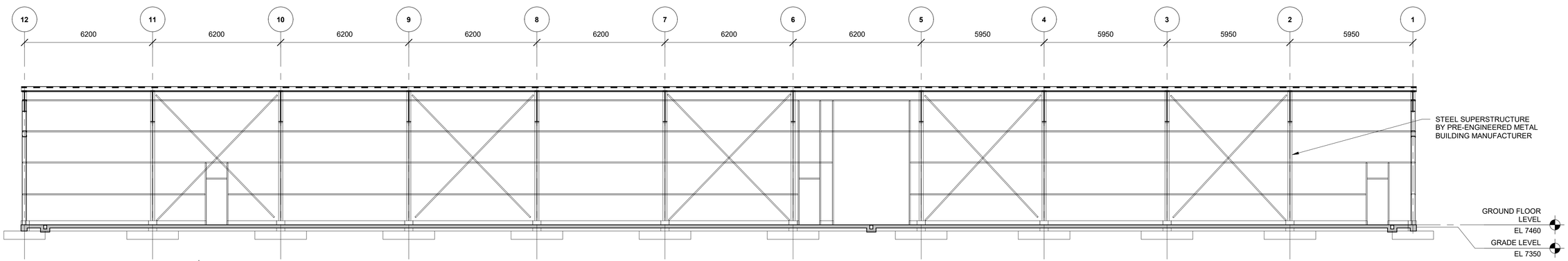
SIZE	DWG.	SHEET	REV.
D	365-039- S-102		



1 S-102 **BUILDING SECTION AT GRID 8**
Scale: 1 : 100



2 S-102 **BUILDING SECTION AT GRID B**
Scale: 1 : 100



3 S-102 **BUILDING SECTION AT GRID A**
Scale: 1 : 100

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DWG.	365-039- S-103
SHEET	
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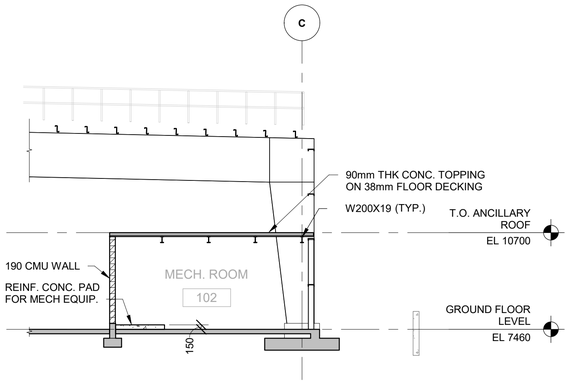
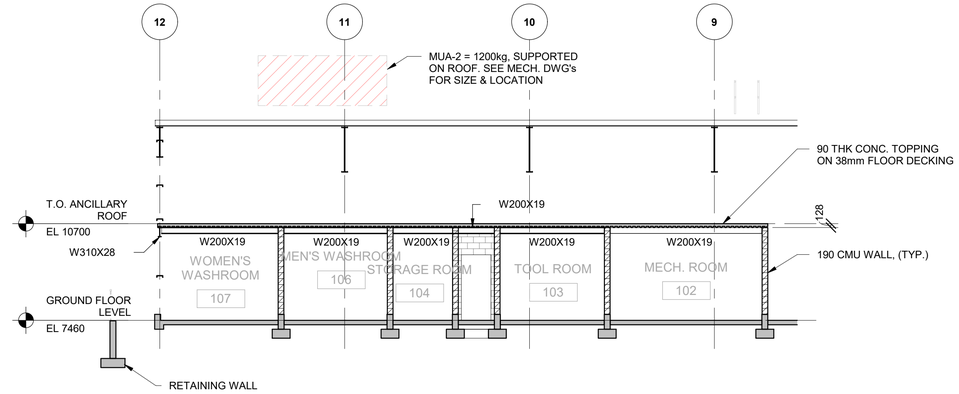
ANNACIS AUTO TERMINAL

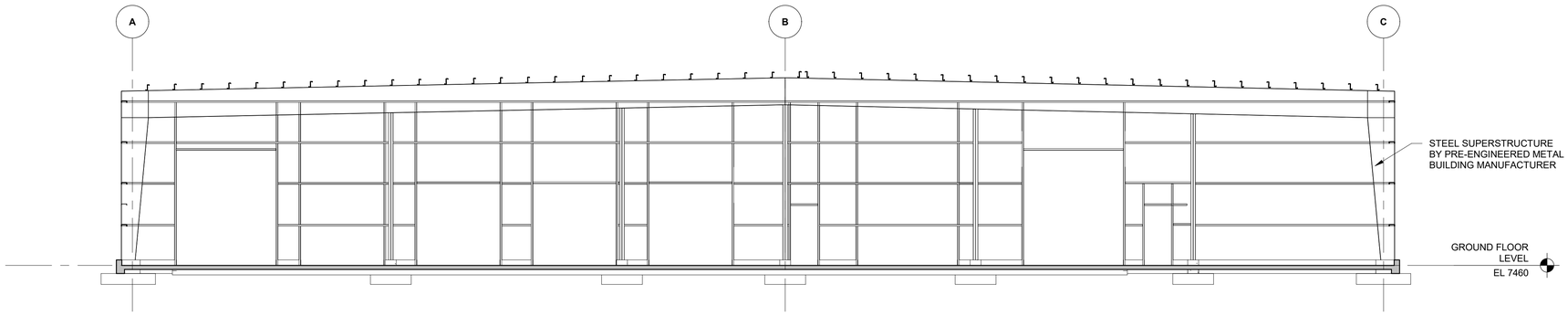
BUILDING SECTIONS SHEET 1 OF 2



1 | SECTION AT GRID 9
S-102 | Scale: 1 : 100



2 | SECTION THRU- UTILITIY ROOMS
S-102 | Scale: 1 : 100



3 | BUILDING SECTION AT GRID 1
S-102 | Scale: 1 : 100

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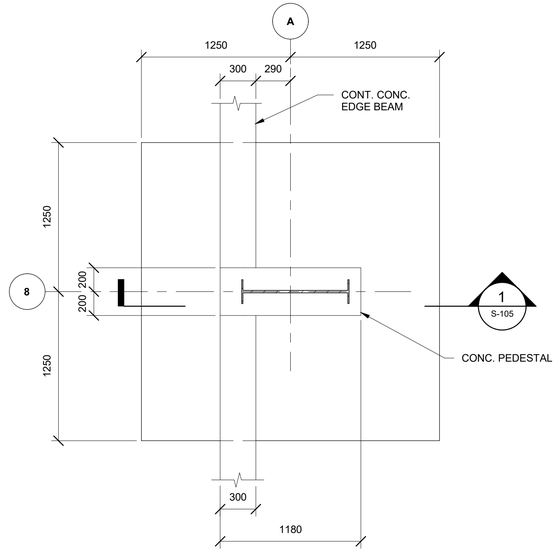
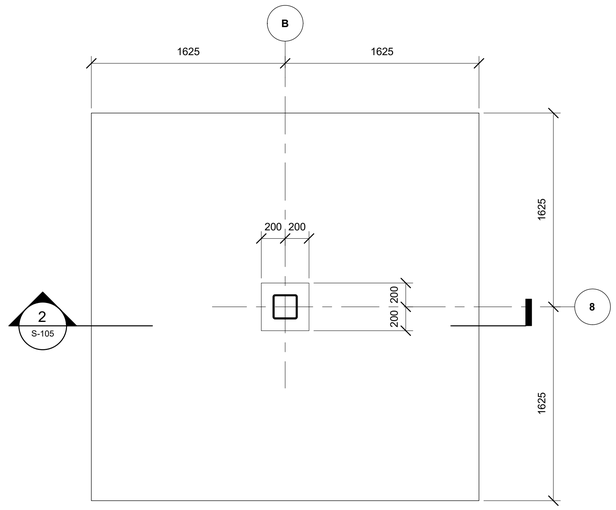
BUILDING SECTIONS SHEET 2 OF 2

SIZE	DWG.	SHEET	REV.
D	365-039- S-104		



A | F-1 PAD FTG DETAIL
S-102 | Scale: 1 : 25



B | F-2 PAD FTG DETAIL
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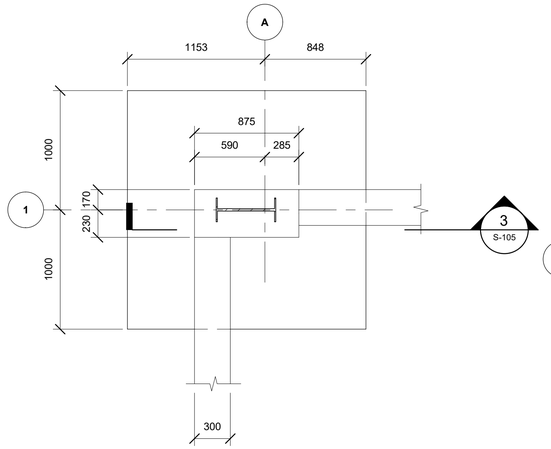

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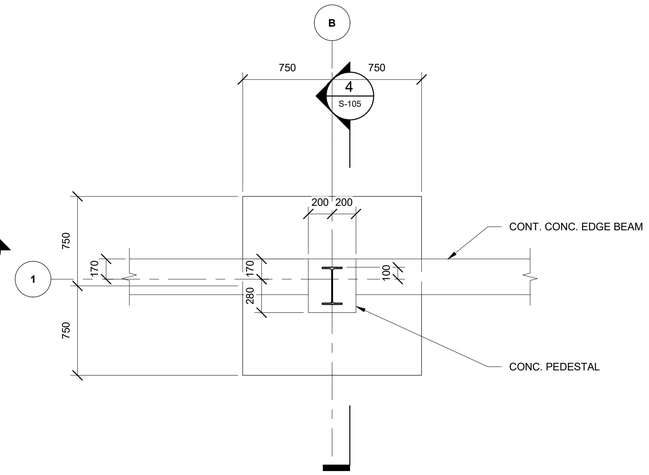

D | F-4 PAD FTG DETAIL
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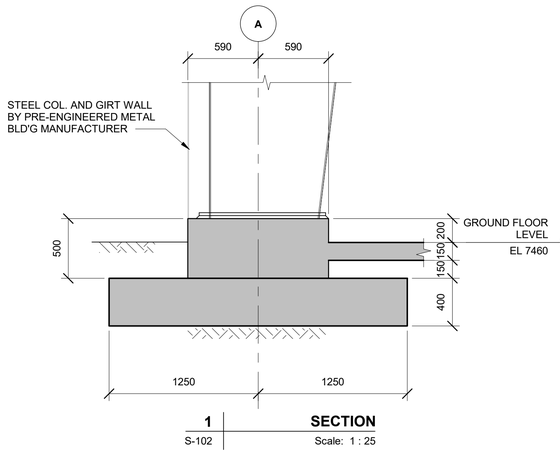

1 | SECTION
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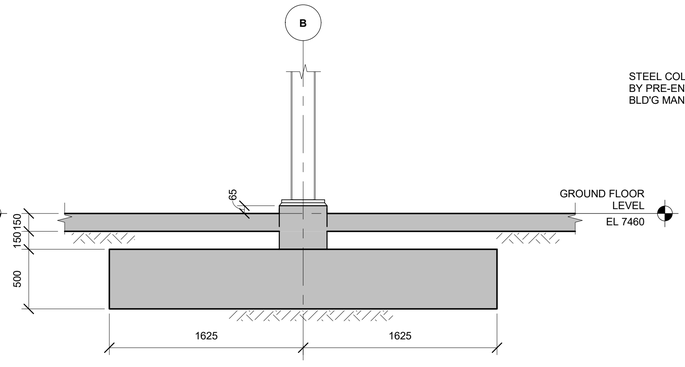

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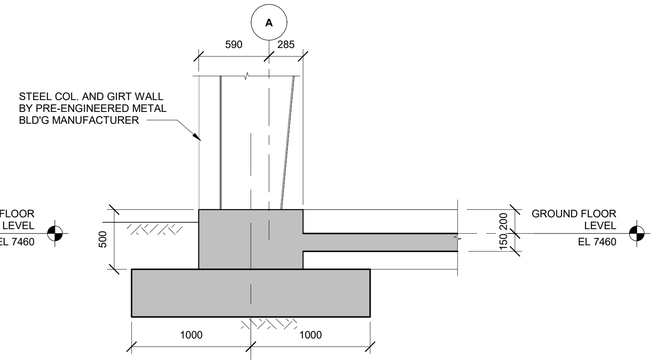

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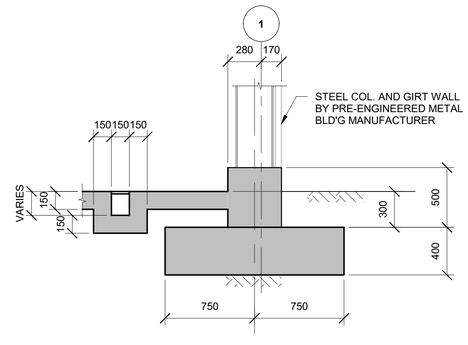

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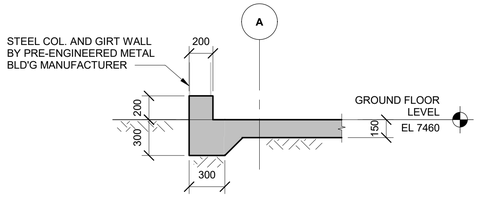
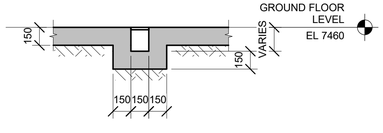


5 | TYPICAL SLAB EDGE DETAIL
S-102 | Scale: 1 : 25



6 | TYPICAL TRENCH DETAIL
S-102 | Scale: 1 : 25

NOTES:

1. PEDESTAL SIZES TO BE FINALIZED PENDING DESIGN AND DETAILING BY PRE-ENGINEERED BUILDING MANUFACTURER

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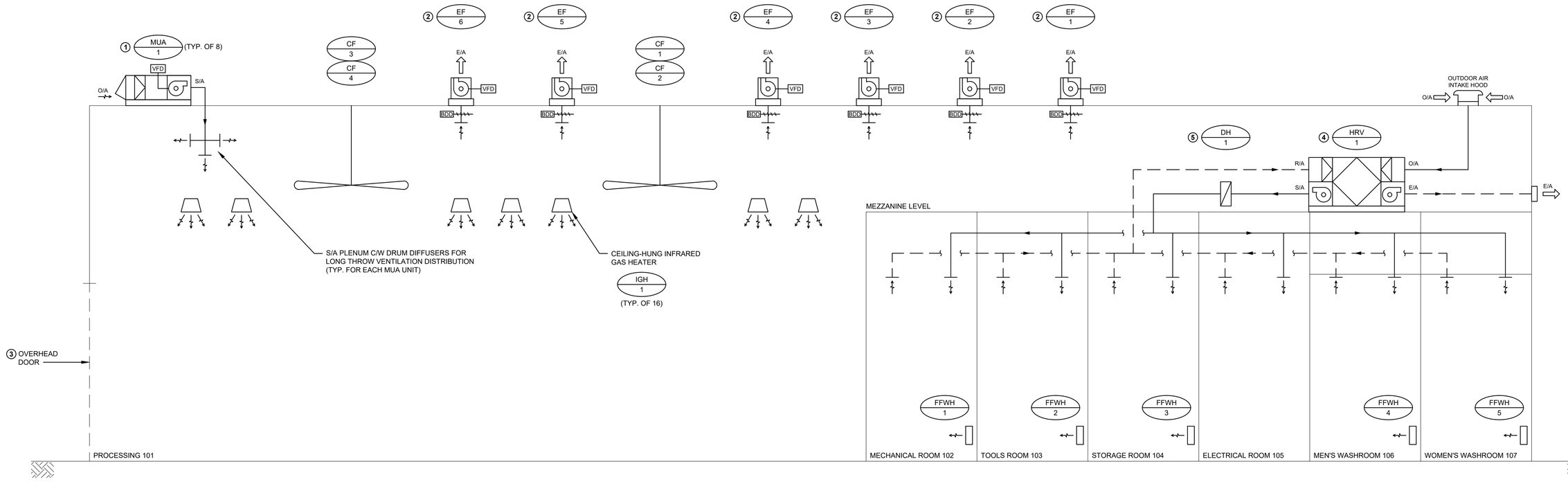
DWG.	365-039- S-105
SHEET	
REV.	

ANNACIS AUTO TERMINAL
SECTIONS AND DETAIL

SPECIFIC NOTES:

1. MAKE-UP AIR UNIT C/W VARIABLE-SPEED SUPPLY FAN, DIRECT GAS-FIRED HEATER, MERV 8 FILTER, INLET MOTORIZED DAMPER, LOCAL CONTROL PANEL, AND REMOTE HMI PANEL TO COMMUNICATE UNIT STATUS.
2. ROOFTOP EXHAUST FANS C/W VARIABLE-SPEED CONTROLS TO PROVIDE ADDITIONAL VENTILATION WHEN HIGH CONCENTRATION LEVELS OF CARBON MONOXIDE OR NITROGEN OXIDES ARE DETECTED.
3. WHEN ADDITIONAL VENTILATION IS REQUIRED (i.e. WHEN ROOFTOP EXHAUST FANS ARE ENERGIZED), THE OVERHEAD DOORS WILL OPEN TO ALLOW ADDITIONAL OUTDOOR AIRFLOW DRAWN INTO THE BUILDING AS REQUIRED.
4. HEAT RECOVERY VENTILATOR C/W ALUMINUM HEAT EXCHANGER CORE, CONSTANT-SPEED SUPPLY & EXHAUST FANS, INLET & OUTLET MERV 8 FILTERS, INLET & OUTLET MOTORIZED DAMPERS, LOCAL CONTROL PANEL, AND REMOTE HMI PANEL TO COMMUNICATE UNIT STATUS.
5. ELECTRIC DUCT HEATER FOR TEMPERING DISCHARGE S/A C/W DUCT-MOUNTED S/A TEMPERATURE SENSOR AND REMOTE THERMOSTAT.



VEHICLE PROCESSING FACILITY HVAC AIRLOW SCHEMATIC

N.T.S.

GENERAL NOTES:

1. AIRFLOW SCHEMATIC IS TO SHOW GENERAL PROCESS OF THE VENTILATION DESIGN. THE EXACT LOCATION, CONFIGURATION, AIRFLOW DISTRIBUTION, AND NUMBER OF EQUIPMENT AND AIRFLOW TERMINALS SHALL BE DETERMINED DURING THE DETAILED DESIGN STAGE.
2. REFER TO THE HVAC FLOOR PLANS FOR INTENDED PRELIMINARY LAYOUT OF EQUIPMENT AND ASSOCIATED DUCTWORK AND PIPING.

PRELIMINARY VENTILATION SIZING INFORMATION:

PRELIMINARY SIZING BASED ON THE PROVIDED PRELIMINARY ARCHITECTURAL DESIGN.

	MINIMUM VENTILATION	MAXIMUM VENTILATION
PROCESSING 101:	5.6 L/s·m² (1.1 cfm/ft²) TOTAL = 17,000 L/s (36,000 cfm)	11.2 L/s·m² (2.2 cfm/ft²) TOTAL = 34,000 L/s (72,000 cfm)
MECHANICAL ROOM 102:	6.0 AC/hr, TOTAL = 620 L/s (1,315 cfm)	N/A
TOOLS ROOM 103:	3.0 AC/hr, TOTAL = 210 L/s (445 cfm)	N/A
STORAGE ROOM 104:	3.0 AC/hr, TOTAL = 110 L/s (235 cfm)	N/A
ELECTRICAL ROOM 105:	2.0 AC/hr, TOTAL = 50 L/s (105 cfm)	N/A
MEN'S WASHROOM 106:	3.0 AC/hr, TOTAL = 210 L/s (445 cfm)	N/A
WOMEN'S WASHROOM 107:	3.0 AC/hr, TOTAL = 190 L/s (405 cfm)	N/A
TOTAL FOR NEW BUILDING:	18,390 L/s (38,950 cfm)	34,000 L/s (72,000 cfm)

PRELIMINARY EQUIPMENT SIZING INFORMATION:

PRELIMINARY HVAC EQUIPMENT SIZING BASED ON THE PRELIMINARY VENTILATION CALCULATIONS AND ARCHITECTURAL DESIGN.

	AIRFLOW CAPACITY	HEATING CAPACITY
MUA-1 [x8] (MAKE-UP AIR UNITS):	2,125 L/s	75.0 kW (GAS-FIRED OUTPUT)
HRV-1 (HEAT RECOVERY VENTILATOR):	1,390 L/s	(~55% HEAT RECOVERY)
DH-1 (ELECTRIC DUCT HEATER):	1,390 L/s	40.0 kW (ELECTRIC-RESISTANT OUTPUT)
EF-1 to 6 (ROOFTOP EXHAUST FANS):	5,667 L/s	N/A
CF-1 to 4 (CEILING FANS):	(VARIABLE)	N/A
IGH-1 (INFRARED GAS HEATER):	N/A	8.8 kW (OUTPUT BASED ON 60% RADIANT EFFICIENCY)
FFWH-1 to 5 (FORCED-FLOW WALL HEATERS):	24 L/s	0.5 kW (ELECTRIC)

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No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	SK	SP
B	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	SK	SP
A	2021-09-07	ISSUED FOR CLIENT REVIEW	SK	SP

PRELIMINARY

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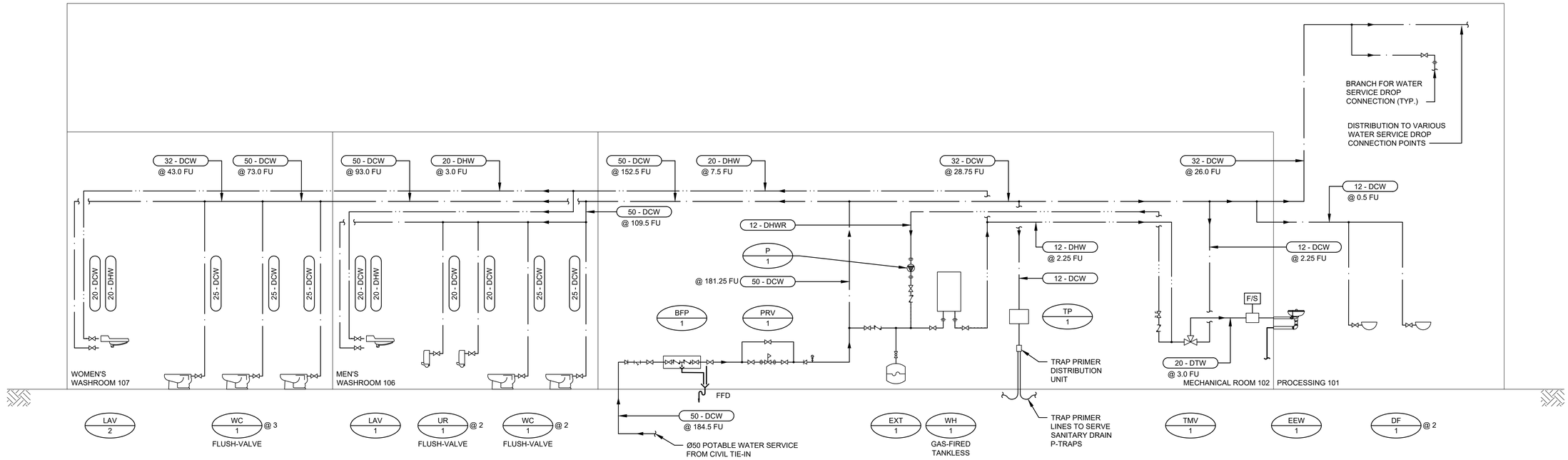
DESIGN BY	SK
DRAWN BY	SK
APPROVED	TH
DATE	2021-10-27
SCALE	N/A
PROJ. NBR.	365-039
SIZE	D

ANNACIS AUTO TERMINAL

HVAC, AIRFLOW SCHEMATICS

DWG. 365-039-M-001 | SHEET | REV.

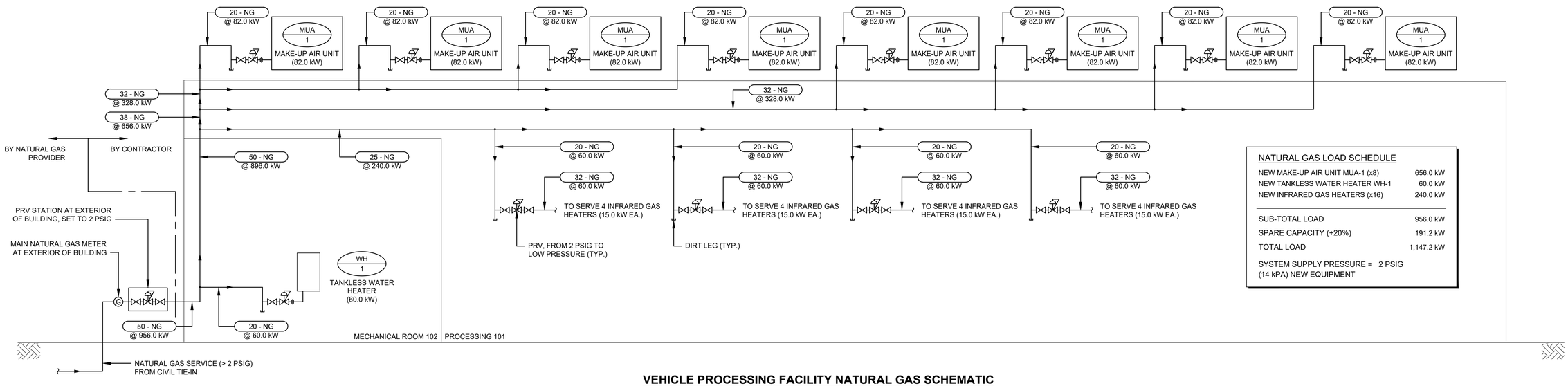


VEHICLE PROCESSING FACILITY POTABLE WATER SCHEMATIC

N.T.S.

GENERAL NOTES:

1. PLUMBING SCHEMATICS ARE TO SHOW GENERAL PROCESS OF THE PLUMBING DESIGNS. THE EXACT LOCATION, CONFIGURATION, DISTRIBUTION, AND NUMBER OF EQUIPMENT AND FIXTURES SHALL BE DETERMINED DURING THE DETAILED DESIGN STAGE.



NATURAL GAS LOAD SCHEDULE

NEW MAKE-UP AIR UNIT MUA-1 (x8)	656.0 kW
NEW TANKLESS WATER HEATER WH-1	60.0 kW
NEW INFRARED GAS HEATERS (x16)	240.0 kW
SUB-TOTAL LOAD	956.0 kW
SPARE CAPACITY (+20%)	191.2 kW
TOTAL LOAD	1,147.2 kW

SYSTEM SUPPLY PRESSURE = 2 PSIG
(14 kPA) NEW EQUIPMENT

VEHICLE PROCESSING FACILITY NATURAL GAS SCHEMATIC

N.T.S.

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SCALE	N/A
PMV SITE	365-039

ANNACIS AUTO TERMINAL

PLUMBING, SINGLE-LINE SCHEMATICS
1 OF 2

DWG.	SHEET	REV.
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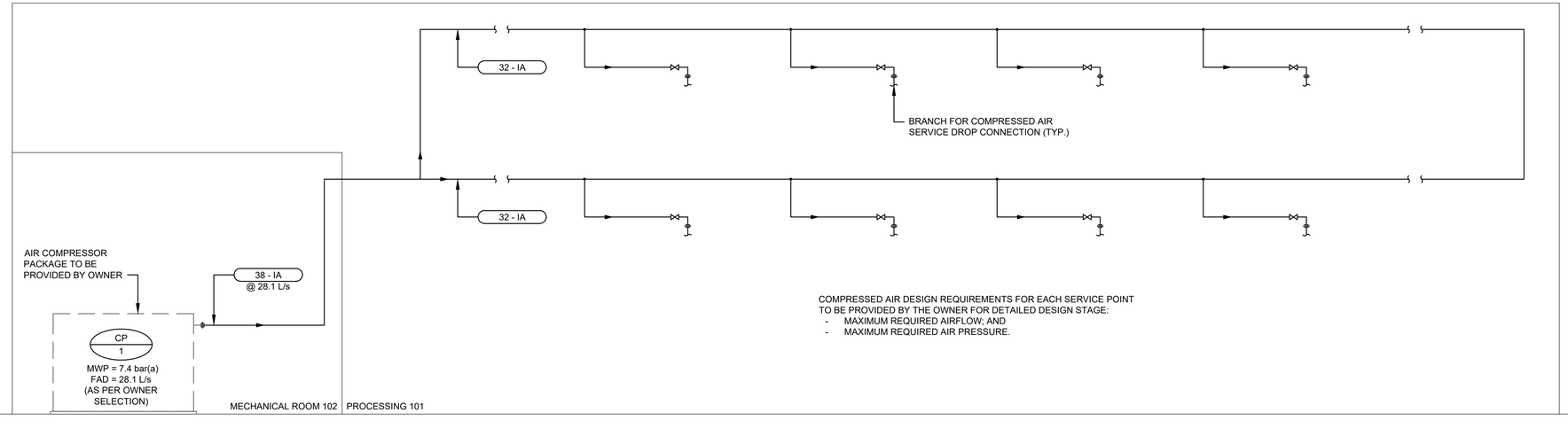

VEHICLE PROCESSING FACILITY COMPRESSED AIR SCHEMATIC

N.T.S.

GENERAL NOTES:

1. PLUMBING SCHEMATICS ARE TO SHOW GENERAL PROCESS OF THE PLUMBING DESIGNS. THE EXACT LOCATION, CONFIGURATION, DISTRIBUTION, AND NUMBER OF EQUIPMENT AND FIXTURES SHALL BE DETERMINED DURING THE DETAILED DESIGN STAGE.
2. THE LISTED PERFORMANCES FOR OWNER-PROVIDED EQUIPMENT HAVE BEEN TAKEN FROM THE PRELIMINARY SELECTION CUTSHEETS PROVIDED BY THE OWNER DURING THE PRELIMINARY DESIGN STAGE.

No.	Date	REVISION	Dr'n	Ch'd
C	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	SK	SP
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DATE	2021-10-27
SCALE	N/A
PROJ. SITE	365-039
SIZE	D
Dwg.	365-039-M-003
SHEET	
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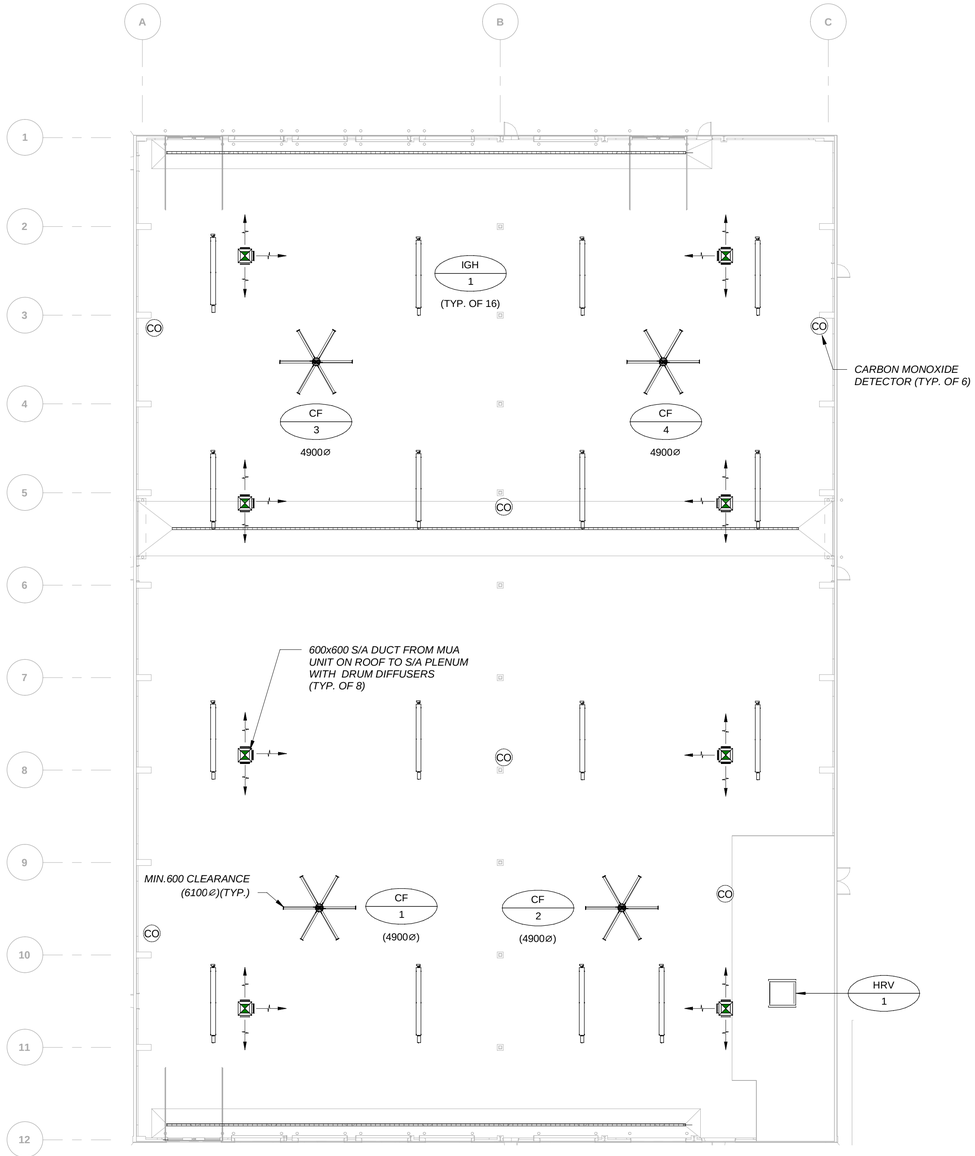
ANNACIS AUTO TERMINAL

PLUMBING, SINGLE-LINE SCHEMATICS
2 OF 2



1 HVAC MEZZANINE PLAN

M-100 SCALE: 1 : 200

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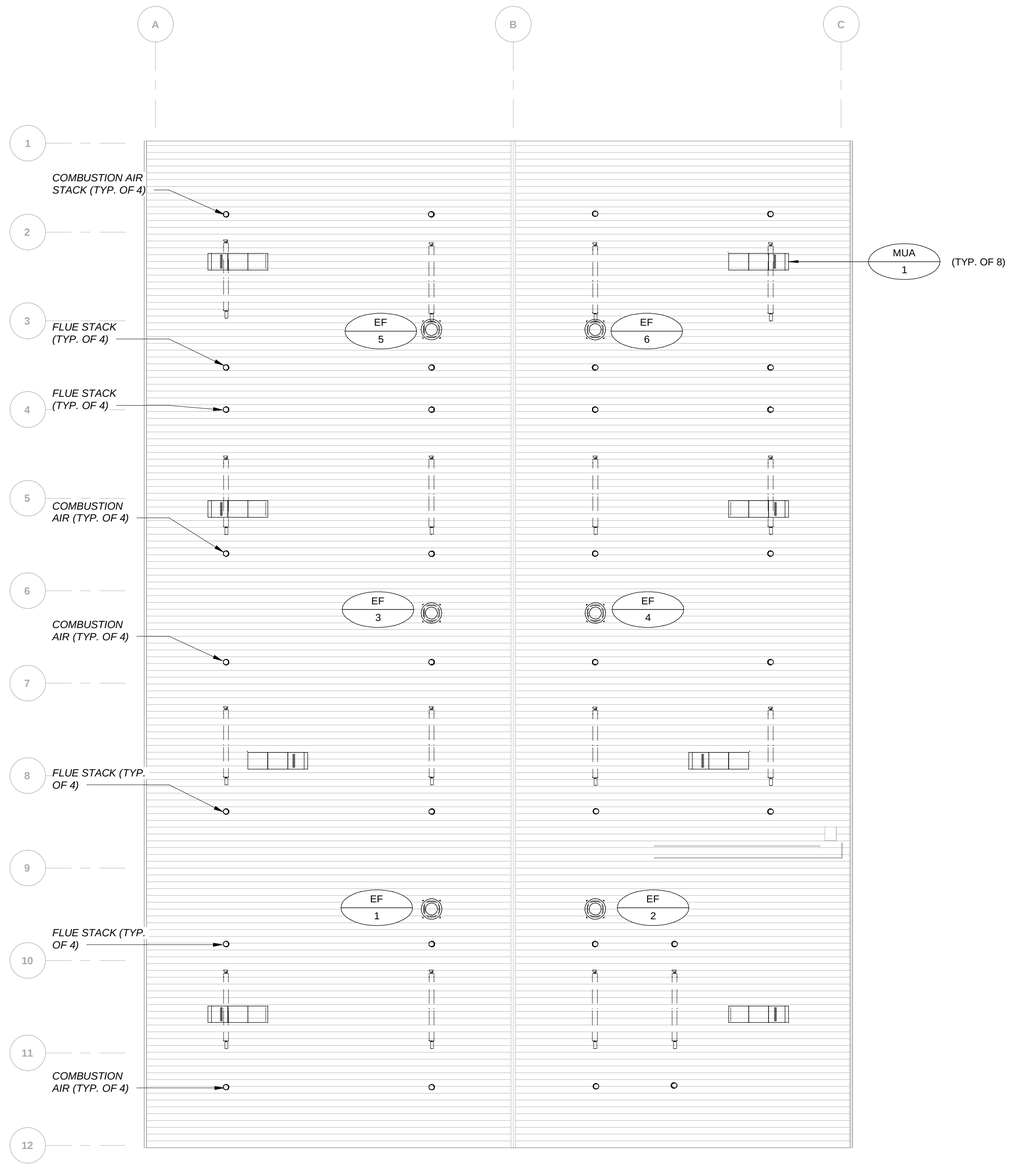
ANNACIS AUTO TERMINAL

HVAC MEZZANINE PLAN



1 | HVAC ROOF PLAN

M-101

SCALE: 1 : 200

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DATE	2021-10-27
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PMV SITE	365-039
SIZE	D
DWG.	365-039- M-101
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REV.	C

ANNACIS AUTO TERMINAL

HVAC ROOF PLAN

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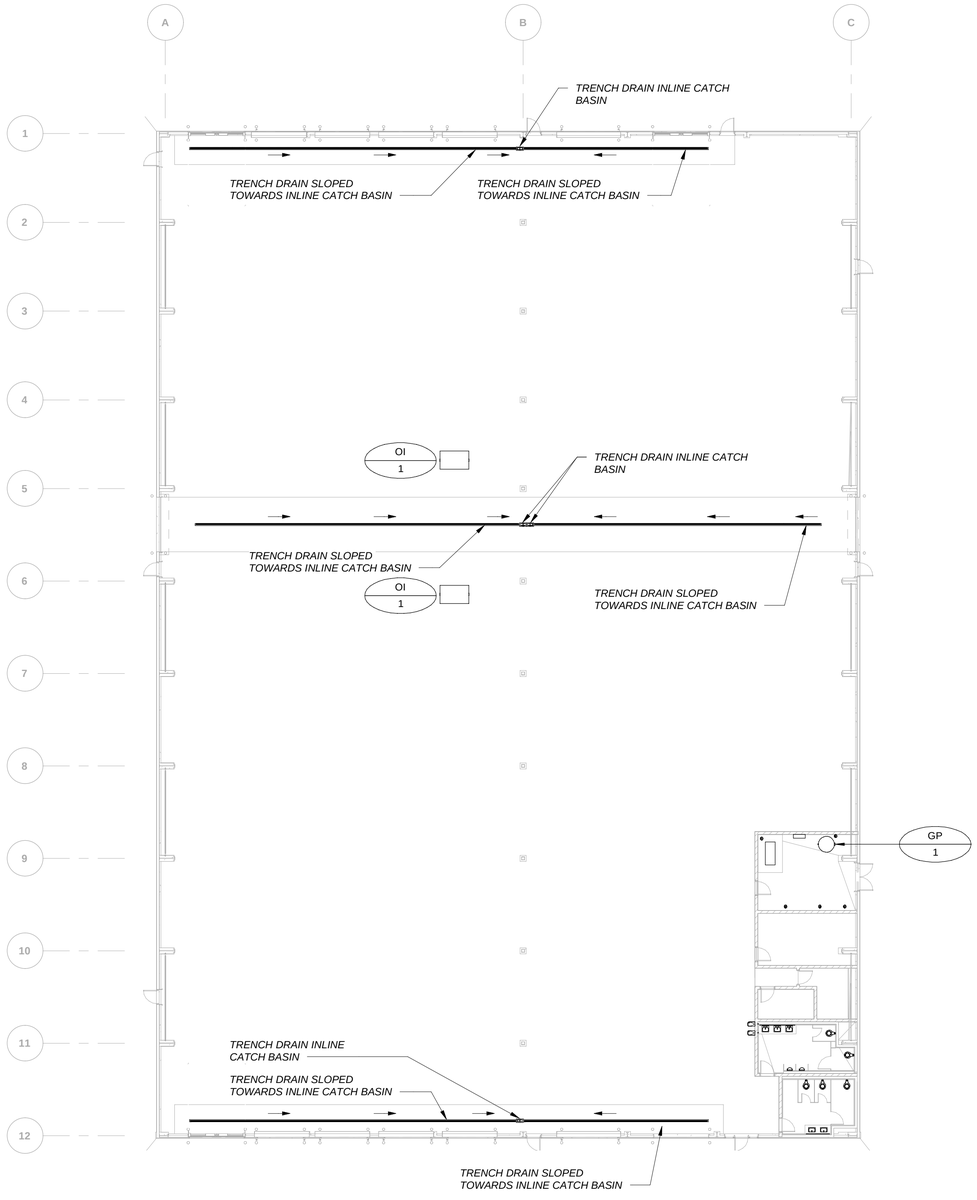

1 PLUMBING FOUNDATION PLAN

M-200 SCALE: 1 : 200

No.	Date	REVISION	Dr'n	Ch'd
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SCALE	1 : 200
PMV SITE	365-039
SIZE	D
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ANNACIS AUTO TERMINAL

PLUMBING FOUNDATION PLAN

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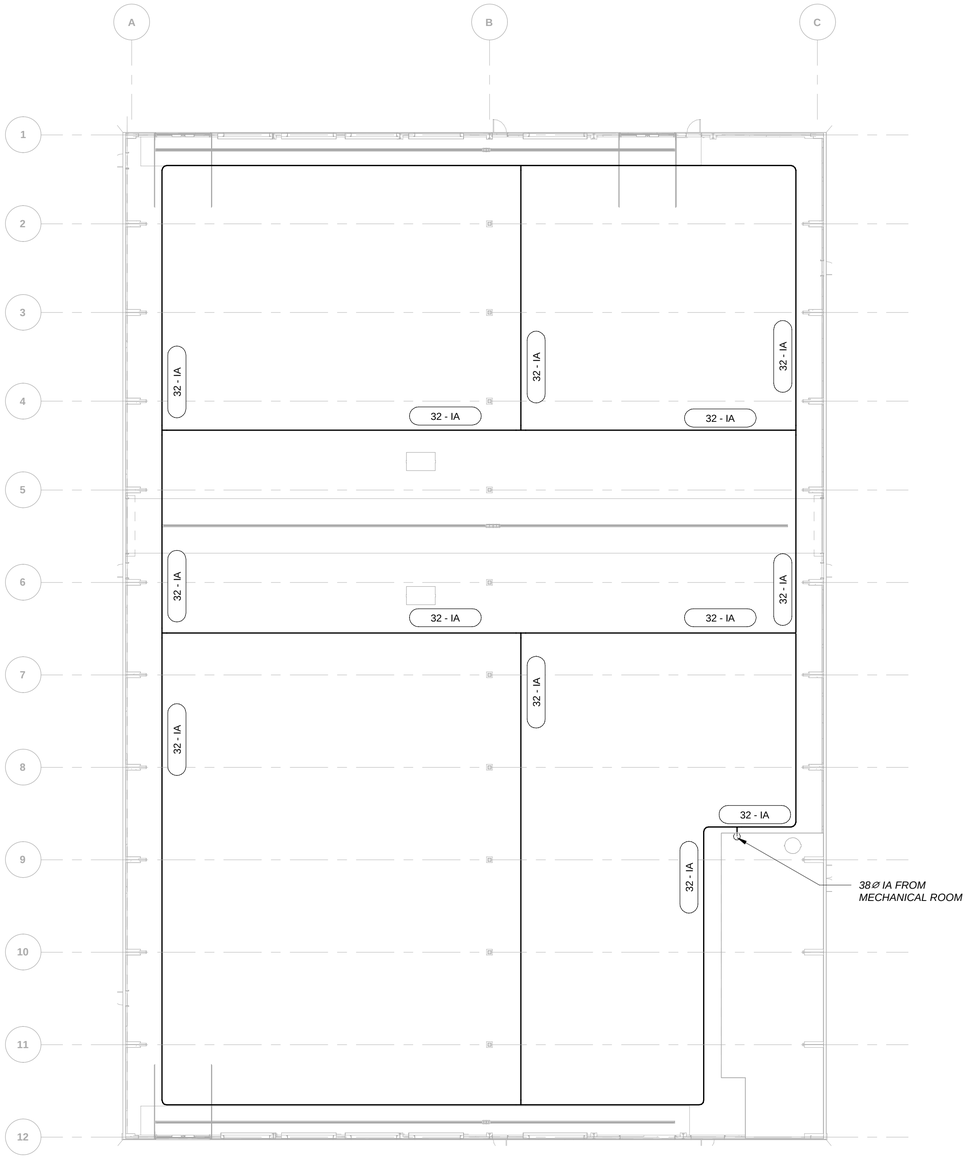

1 | PLUMBING FLOOR PLAN

M-201 | SCALE: 1 : 200

No.	Date	REVISION	Dr'n	Ch'd
A	2021-10-27	FINAL SUBMISSION ISSUED FOR PDR	HK	SK

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DATE	2021-10-27
SCALE	1 : 200
PMV SITE	365-039
SIZE	D
DWG.	365-039- M-201
SHEET	
REV.	A

ANNACIS AUTO TERMINAL

PLUMBING FLOOR PLAN

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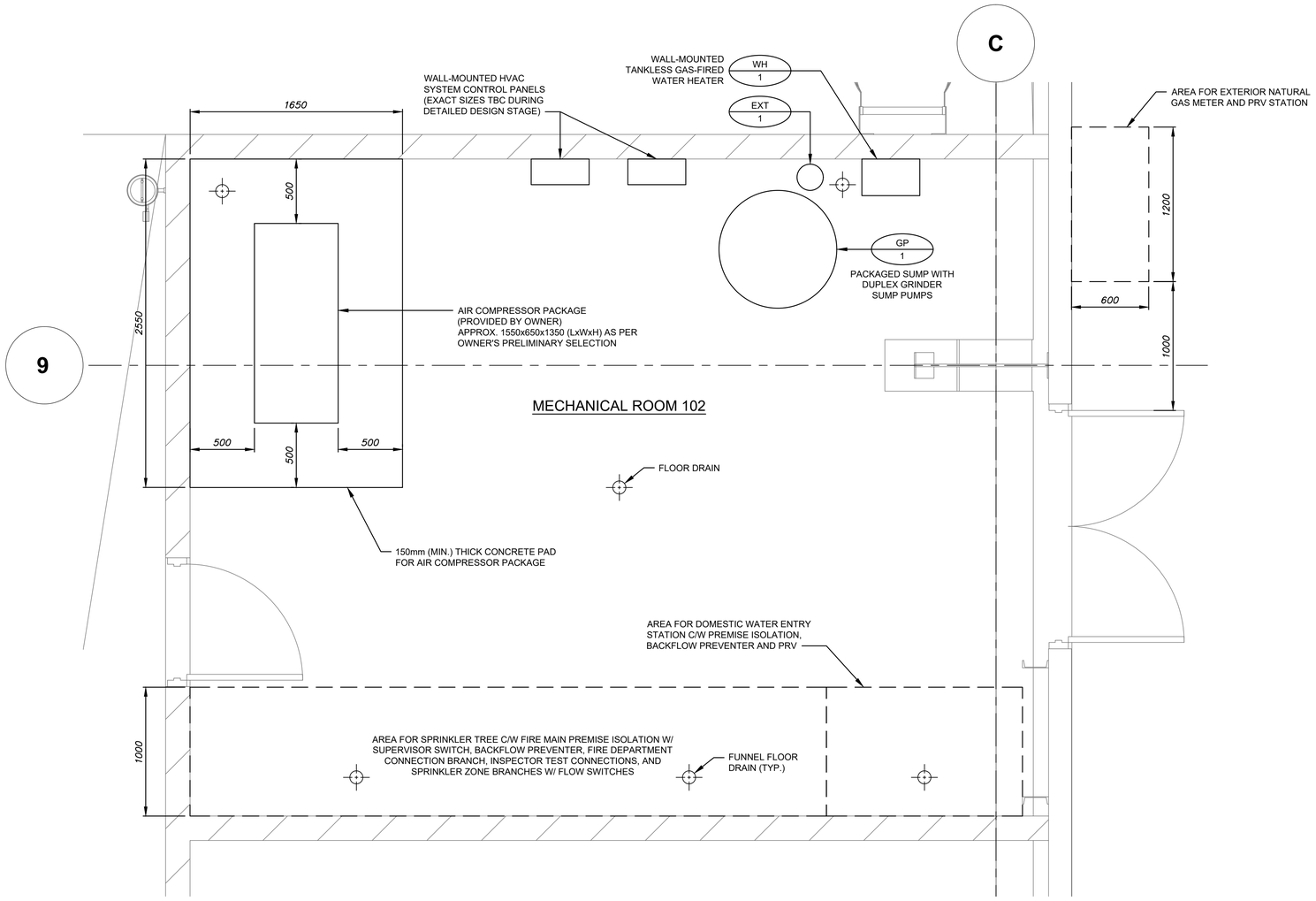

MECHANICAL ROOM EQUIPMENT LAYOUT

1:20

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SCALE	1:20
PMV SITE	365-039
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DWG.	365-039-M-300
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ANNACIS AUTO TERMINAL

MECHANICAL ROOM EQUIPMENT LAYOUT

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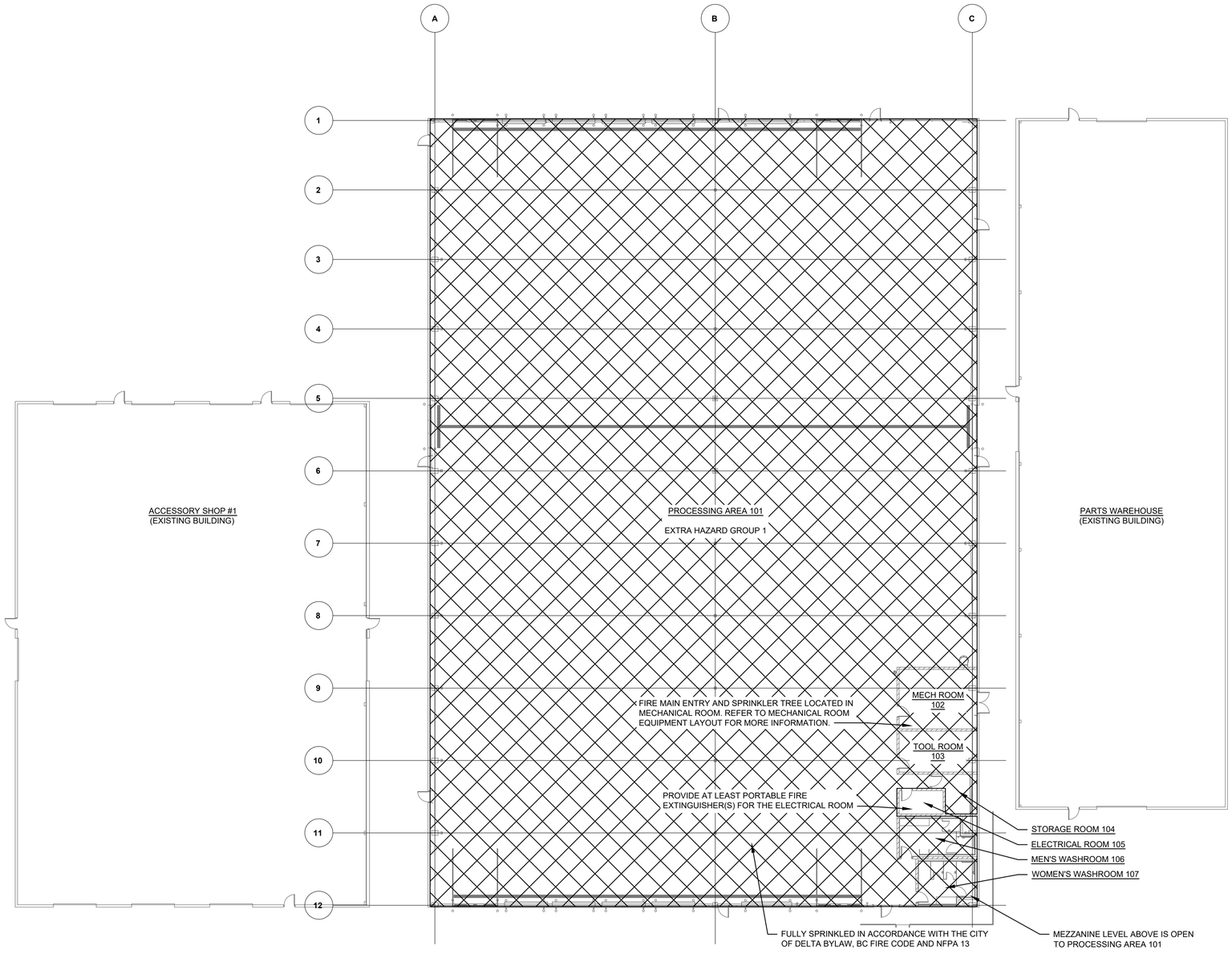
GENERAL NOTES:

1. CONTRACTOR IS TO PROVIDE A FIRE PROTECTION DESIGN THAT HAS BEEN PRODUCED BY A REGISTERED PROFESSIONAL ENGINEER IN BC WHO IS QUALIFIED IN FIRE PROTECTION SYSTEMS DESIGN.
2. CONTRACTOR IS TO PROVIDE FIRE PROTECTION SPRINKLER SYSTEMS IN ACCORDANCE WITH THE LATEST APPLICABLE CITY OF DELTA BYLAW, THE LATEST EDITION OF THE BC FIRE CODE, AND THE LATEST EDITION OF NFPA 13.
3. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR DETAILS, LAYOUTS AND STRUCTURE DESIGN.



GROUND LEVEL FLOOR PLAN
1:200

No.	Date	REVISION	Dr'n	Ch'd
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A	2021-09-07	ISSUED FOR CLIENT REVIEW	SK	SP

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SCALE	1:200
JOB SITE	365-039

ANNACIS AUTO TERMINAL
FIRE PROTECTION FLOOR PLANS

SIZE	DWG	SHEET	REV.
D	365-039-M-301		

ELECTRICAL SYMBOL LEGEND

SINGLE LINE

- LOAD BREAK SWITCH
- DISCONNECT SWITCH
- FUSED CUTOUT SWITCH
- FUSED DISCONNECT SWITCH
- DISTRIBUTION TRANSFORMER
- DRAW OUT CIRCUIT BREAKER (3P)
- CIRCUIT BREAKER
- SHUNT TRIP CIRCUIT BREAKER (ST)
- CIRCUIT BREAKER C/W CURRENT LIMITERS
- POWER CIRCUIT BREAKER C/W FRAME SIZE INDICATION (52 / 800A)
- LIGHTNING ARRESTER
- SURGE ARRESTER
- CURRENT TRANSFORMER C/W RATIO AND QUANTITY (3 / 400/5)
- ZERO SEQUENCE CURRENT TRANSFORMER (ZSCT)
- POTENTIAL TRANSFORMER C/W VOLTAGE RATIO AND QUANTITY (2 / 120V)
- CONTACT
- THERMAL OVERLOAD DEVICE
- CAPACITOR C/W KVAR RATING (125KVAR)
- DIGITAL METERING (DM)
- STARTER
- FUSE
- SPECIAL OUTLET
- STAB TYPE DISCONNECT
- ELECTRIC MOTOR C/W kW RATING (7.5 kW)
- ELECTRIC MOTOR C/W hp RATING (10 HP)
- GENERATOR C/W kW RATING (GEN 7.5kW)
- GENERATOR C/W hp RATING (GEN 10hp)
- HARMONIC FILTER kW RATED
- TERMINAL
- CABLE TERMINATION
- WEATHERHEAD
- BUS BAR WITH CONNECTION
- HAND-OFF-AUTO SWITCH (HOA)
- ON/OFF SWITCH (O/O)
- LOCAL CONTROL PANEL (LCP)
- FORWARD / REVERSING SWITCH (F/R)
- SURGE PROTECTIVE DEVICE (SPD)
- VARIABLE FREQUENCY DRIVE (VFD)
- POWER METER (M)

3 PHASE TRANSFORMER CONNECTION SYMBOLS

- DELTA
- WYE OR STAR WITH SOLID GROUNDED NEUTRAL
- WYE OR STAR WITH RESISTANCE GROUNDED NEUTRAL AND MAXIMUM CURRENT INDICATED (5A)
- FEEDER IDENTIFICATION SYMBOL (15A)
- KEY INTERLOCKING (K)

SWITCH GEAR DEVICE NUMBER AND FUNCTIONS

- 3 CHECKING OR INTERLOCKING RELAY
- 12 OVERSPEED PROTECTION
- 21P PHASE DISTANCE
- 24 VOLTS / Hz
- 25 SYNCHRONIZATION CHECK RELAY
- 26Q APPARATUS THERMAL DEVICE (Q-OIL)
- 27 AC UNDER VOLTAGE
- 27P PHASE UNDER VOLTAGE
- 27/50 ACCIDENTAL GENERATOR ENERGIZATION
- 27TN/59N 100% STATOR EARTH FAULT
- 32 DIRECTIONAL POWER RELAY
- 38 BEARING OVERTEMPERATURE (RTD)
- 39 BEARING VIBRATION
- 40 LOSS OF FIELD PROTECTION RELAY
- 46 PHASE BALANCE CURRENT RELAY
- 47 PHASE SEQUENCE RELAY
- 48 INCOMPLETE SEQUENCE RELAY
- 49 AC THERMAL OVERLOAD RELAY
- 50 AC INSTANTANEOUS OVERCURRENT RELAY
- 50BF AC BREAKER FAILURE RELAY
- 50P AC INSTANTANEOUS OVERCURRENT RELAY - PHASE
- 50G AC INSTANTANEOUS OVERCURRENT RELAY - GROUND
- 51 AC TIME DELAY OVERCURRENT RELAY
- 51P AC TIME OVERCURRENT RELAY - PHASE
- 51G AC TIME OVERCURRENT RELAY - GROUND
- 51V AC VOLTAGE RESTRAINED TIME OVERCURRENT RELAY
- 52 AC CIRCUIT BREAKER
- 59 AC OVER VOLTAGE RELAY
- 59P AC PHASE OVERVOLTAGE RELAY
- 63 SUDDEN PRESSURE RELAY
- 63 FPX LIQUID OR GAS PRESSURE RELAY F-FAULT, P-PRESSURE, X-AUXILIARY RELAY
- 67G GROUND DIRECTIONAL OVERCURRENT
- 68 BLOCKING RELAY
- 71Q LIQUID LEVEL RELAY (Q-OIL)
- 74 ALARM RELAY
- 78 PHASE ANGLE MEASURING RELAY
- 79 A-C RECLOSING RELAY
- 81 UNDER FREQUENCY RELAY
- 81O OVER FREQUENCY RELAY
- 81U UNDER FREQUENCY RELAY
- 86 LOCKOUT RELAY
- 87 DIFFERENTIAL CURRENT RELAY

SCHEMATIC

- CR 1248 CONTROL RELAY 284 (TYP.) COIL
- M MOTOR CONTROL RELAY (TYP.) COIL
- TD TIME - DELAY RELAY (TYP.) COIL
- N.O. CONTACT
- N.C. CONTACT
- TIME DELAY CLOSE ON ENERGIZE
- TIME DELAY OPEN ON ENERGIZE
- TIME DELAY OPEN ON DE-ENERGIZE
- TIME DELAY CLOSE ON DE-ENERGIZE
- LEVEL SWITCH (N.C.)
- LEVEL SWITCH (N.O.)
- FLOW SWITCH (N.C.)
- FLOW SWITCH (N.O.)
- PRESSURE SWITCH (N.C.)
- PRESSURE SWITCH (N.O.)
- TEMPERATURE SWITCH (N.C.)
- TEMPERATURE SWITCH (N.O.)
- VIBRATION SWITCH (N.C.)
- VIBRATION SWITCH (N.O.)
- LIMIT SWITCH (N.C.)
- LIMIT SWITCH (N.O.)

SWITCH FUNCTION DESCRIPTOR, PLACED BELOW SWITCH SYMBOL

FIRST LETTER:	C (CLOSE) OR O (OPEN)
SECOND LETTER:	O (ON)
THIRD LETTER:	H (HIGH) OR L (LOW) OPTIONAL VARIABLE, e.g. L (LEVEL), P (PRESSURE), ETC.
FOURTH LETTER:	

- MOMENTARY PUSHBUTTON (N.C.)
- MOMENTARY PUSHBUTTON (N.O.)
- 2 POSITION MAINTAINED SELECTOR SWITCH
- 3 POSITION MAINTAINED SELECTOR SWITCH (OFF / HAND / AUTO; A, O, M)
- FUSE
- BREAKER
- PANEL WIRING
- FIELD WIRING
- CONTROL PANEL TERMINAL
- MCC TERMINAL
- FIELD TERMINAL
- SWITCH GEAR
- EQUIPMENT CONTROL PANEL
- FIELD JUNCTION BOX TERMINAL

LIGHTING

- 610x1220mm LUMINAIRE - SURFACE OR SUSPENDED
- 610x1220mm EMERGENCY LUMINAIRE - SURFACE OR SUSPENDED
- 610x1220mm LUMINAIRE - RECESSED
- 610x1220mm EMERGENCY LUMINAIRE - RECESSED
- 610x610mm LUMINAIRE - SURFACE OR SUSPENDED
- 610x610mm EMERGENCY LUMINAIRE - SURFACE OR SUSPENDED
- 610x610mm LUMINAIRE - RECESSED
- 610x610mm EMERGENCY LUMINAIRE - RECESSED
- 305x1220mm LUMINAIRE - RECESSED
- 305x1220mm EMERGENCY LUMINAIRE - RECESSED
- 1220mm LUMINAIRE - WALL MOUNTED
- 1220mm EMERGENCY LUMINAIRE - WALL MOUNTED
- STRIPLIGHT LUMINAIRE
- STRIPLIGHT EMERGENCY LUMINAIRE
- CEILING POT OR LED LUMINAIRE - SURFACE OR SUSPENDED
- CEILING POT OR LED LUMINAIRE - EMERGENCY - SURFACE OR SUSPENDED
- RECESSED POT OR LED LUMINAIRE - RECESSED
- RECESSED POT OR LED LUMINAIRE - NIGHT LIGHT
- WALL SCONCE OR LED LUMINAIRE
- WALL MOUNTED SECURITY SYSTEM BEACON LIGHT
- POLE MOUNTED LUMINAIRE
- POLE MOUNTED LUMINAIRE - DOUBLE HEADS
- BOLLARD/LIGHT COLUMN LUMINAIRE
- SINGLE POLE SWITCH
- THREE WAY SWITCH
- DIMMER SWITCH
- KEY SWITCH
- THREE WAY KEY SWITCH
- LOW VOLTAGE SWITCH
- PILOT LIGHT SWITCH
- WALL MOUNTED VACANCY SENSOR OFF/ MANUAL SWITCH ON
- CEILING MOUNTED RUNNING MAN LIGHT - ARROWS AS INDICATED
- WALL MOUNTED RUNNING MAN LIGHT - ARROWS AS INDICATED
- BATTERY PACK C/W HEADS AND RUNNING MAN SIGN
- BATTERY PACK C/W HEADS AS INDICATED
- WALL MOUNTED EMERGENCY REMOTE HEADS
- CEILING MOUNTED EMERGENCY REMOTE HEADS
- MLC MASTER LIGHTING CONTROL TOUCH SURFACE
- 101 LUMINAIRE TYPE
- PC PHOTO ELECTRIC CELL
- TC TIME CLOCK
- NL NIGHT LIGHT
- C CORRIDOR CEILING MOUNTED VACANCY SENSOR
- CEILING MOUNTED VACANCY SENSOR
- D CEILING MOUNTED VACANCY DAYLIGHT SENSOR
- L CEILING MOUNTED VACANCY SENSOR WITH LONG RANGE
- DC DIMMING/NON-DIMMING LIGHTING CONTROL STATION
- PC PHOTO CELL (INTERIOR)
- TRACK LIGHTING SYSTEM

POWER

- DUPLEX RECEPTACLE
- CEILING MOUNTED RECEPTACLE
- SINGLE RECEPTACLE
- FOUR-PLEX RECEPTACLE
- ISOLATED GROUND RECEPTACLE
- SPLIT-FEED RECEPTACLE
- GROUND FAULT RECEPTACLE (T-SLOT 20A)
- TWIST LOCK RECEPTACLE
- SPECIAL 208V 1Ø RECEPTACLE
- SPECIAL 208V 3Ø RECEPTACLE
- SW STICK WELDER 3Ø, 208V, 60A OUTLET
- W WIRE FEED WELDER 1Ø, 208V, 50A OUTLET
- SPECIAL 347V RECEPTACLE
- SPECIAL 600V RECEPTACLE
- DUPLEX RECEPTACLE - MOUNTED ABOVE COUNTER
- SPLIT-FEED RECEPTACLE - MOUNTED ABOVE COUNTER
- GFI RECEPTACLE - MOUNTED ABOVE COUNTER (T-SLOT 20A)
- FLOOR MOUNTED DUPLEX RECEPTACLE
- FLOOR MOUNTED FOUR-PLEX RECEPTACLE
- FLOOR MOUNTED SPECIAL RECEPTACLE
- DIRECT CONNECTION
- SPLIT-FEED RECEPTACLE C/W CAR POST
- EQUAL POTENTIAL GROUND RECEPTACLE
- ISOLATED GROUND FOUR-PLEX RECEPTACLE
- ISOLATED/EQUAL POTENTIAL GROUND RECEPTACLE
- POWER/TELECOM - PACPOLE
- MOTOR
- MOTOR WITH UNFUSED DISCONNECT SWITCH
- UNFUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- HOA HAND-OFF-AUTO SWITCH
- O/O ON/OFF SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION UNFUSED DISCONNECT/MAGNETIC MOTOR STARTER
- COMBINATION FUSED DISCONNECT/MAGNETIC MOTOR STARTER
- MANUAL MOTOR STARTER C/W PILOT LIGHT
- WALL MOUNTED CLOCK OUTLET ONLY
- WALL MOUNTED SINGLE FACE CLOCK
- WALL MOUNTED DOUBLE FACE CLOCK
- CEILING MOUNTED CLOCK OUTLET ONLY
- CEILING MOUNTED SINGLE FACE CLOCK
- CEILING MOUNTED DOUBLE FACE CLOCK
- B BELL
- PUSHBUTTON
- BUZZER
- H HORN
- KILL SWITCH
- PANEL BOARD - SURFACE MOUNTED
- MISC. PANEL BOARD - FLUSH MOUNTED
- MISC. PANEL BOARD - SURFACE MOUNTED
- T THERMOSTAT
- J WALL MOUNTED JUNCTION BOX
- J CEILING MOUNTED JUNCTION BOX
- J FLOOR MOUNTED JUNCTION BOX

CONDUIT AND WIRE

LINE SYMBOLS

- CONDUCTOR
- UNDERGROUND CONDUCTOR
- OVERHEAD CONDUCTOR
- CONDUIT STUB
- HOME RUN
- VERTICAL LEVEL CHANGE (ON PLAN) OR RECEDING CONDUIT (ON ELEVATION)
- CONDUIT FITTING
- CONDUIT BREATHER/DRAIN
- CONDUIT SEAL
- CONDUIT DRAIN SEAL
- CONDUIT CAP
- GROUND ROD C/W WELL
- GROUND ROD WITHOUT WELL

OTHER

- ? KEYNOTE TAG

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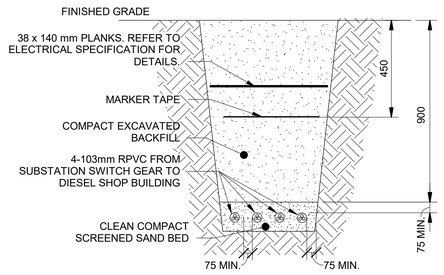
ANNACIS AUTO TERMINAL

SYMBOL LEGEND

SIZE D | DWG. 365-039- E-001 | SHEET | REV.

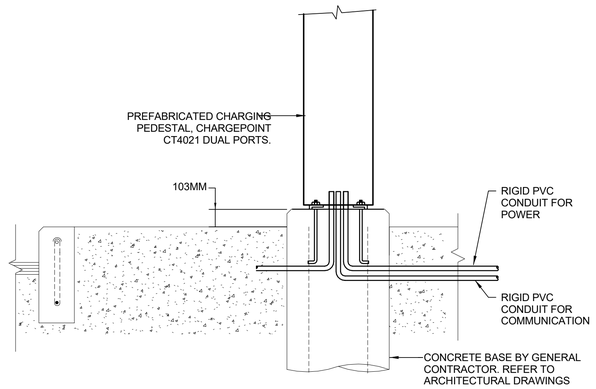


NOTES:

1. ALL UNDERGROUND RACEWAYS SHALL MEET THE REQUIREMENTS DEFINED IN THE CEC.
2. USE DUCT SPACERS WHERE REQUIRED.

1 ELECTRICAL SERVICE TRENCH DETAIL

1 : 20

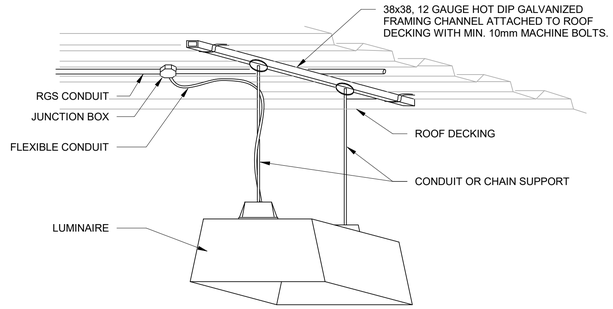


ELECTRIC VEHICLE CHARGING STATION PEDESTAL

SCALE = NTS

2 EV CHARGING DETAIL

1 : 1



3 TYPICAL CEILING MOUNTED FIXTURE DETAIL

1 : 20

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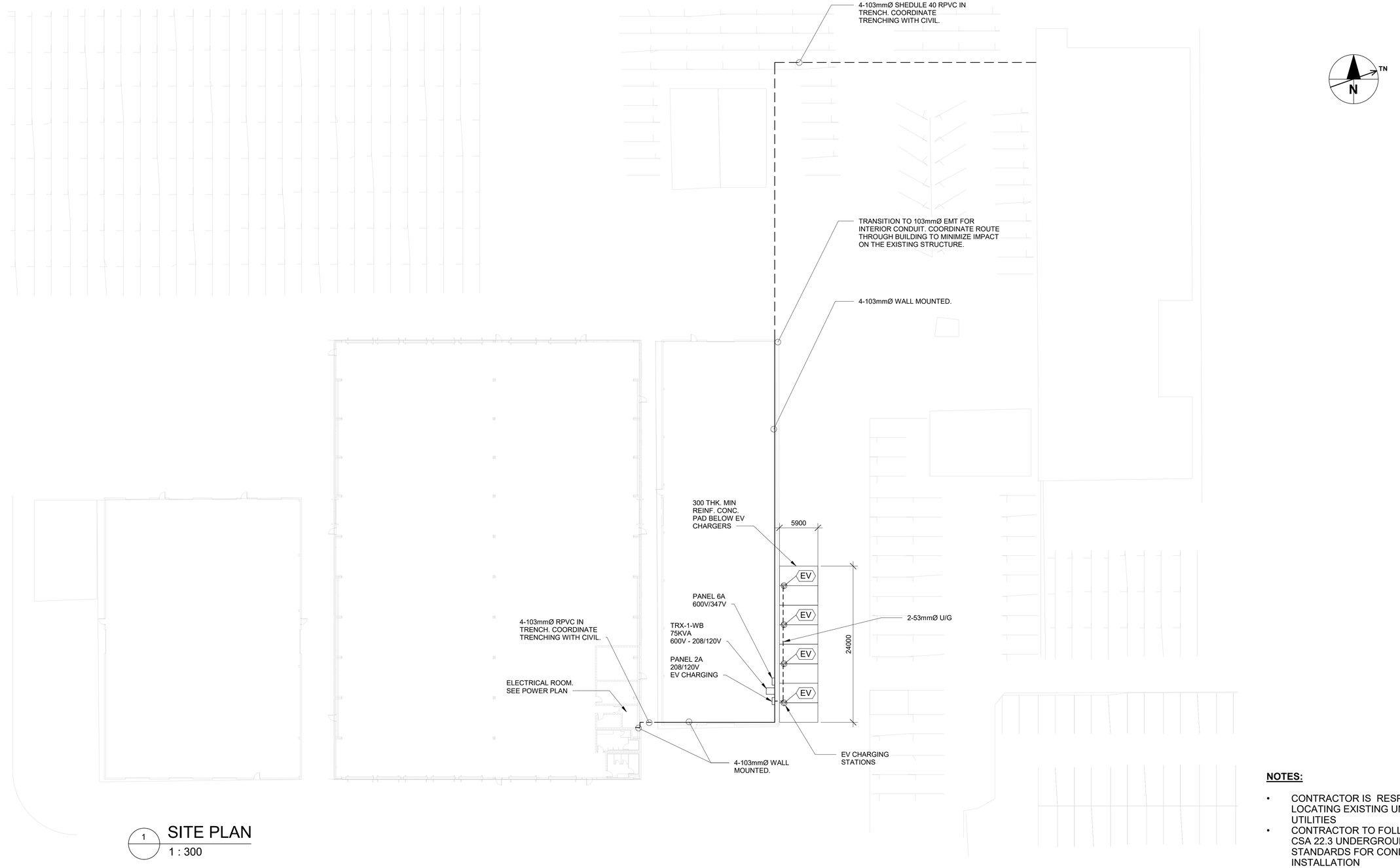
ANNACIS AUTO TERMINAL

STANDARD DETAILS

SIZE	DWG.	SHEET	REV.
D	365-039- E-002		



1 SITE PLAN
1 : 300

NOTES:

- CONTRACTOR IS RESPONSIBILE FOR LOCATING EXISTING UNDERGROUND UTILITIES
- CONTRACTOR TO FOLLOW CEC AND CSA 22.3 UNDERGROUND WORKS STANDARDS FOR CONDUIT INSTALLATION

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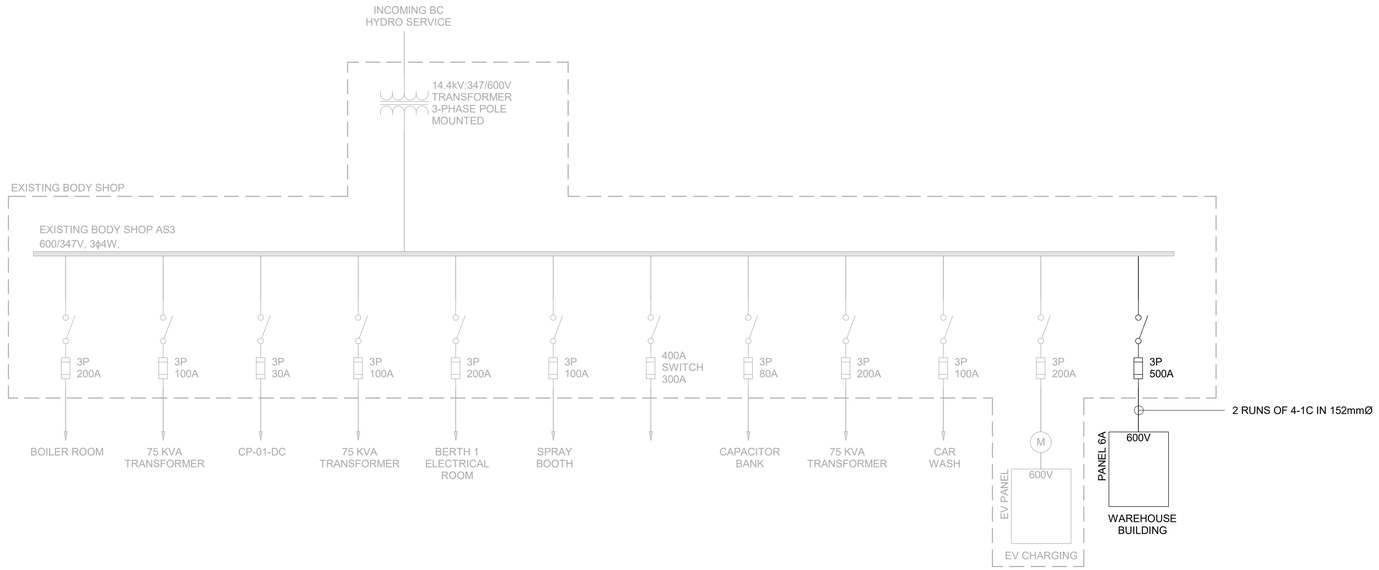
ANNACIS AUTO TERMINAL

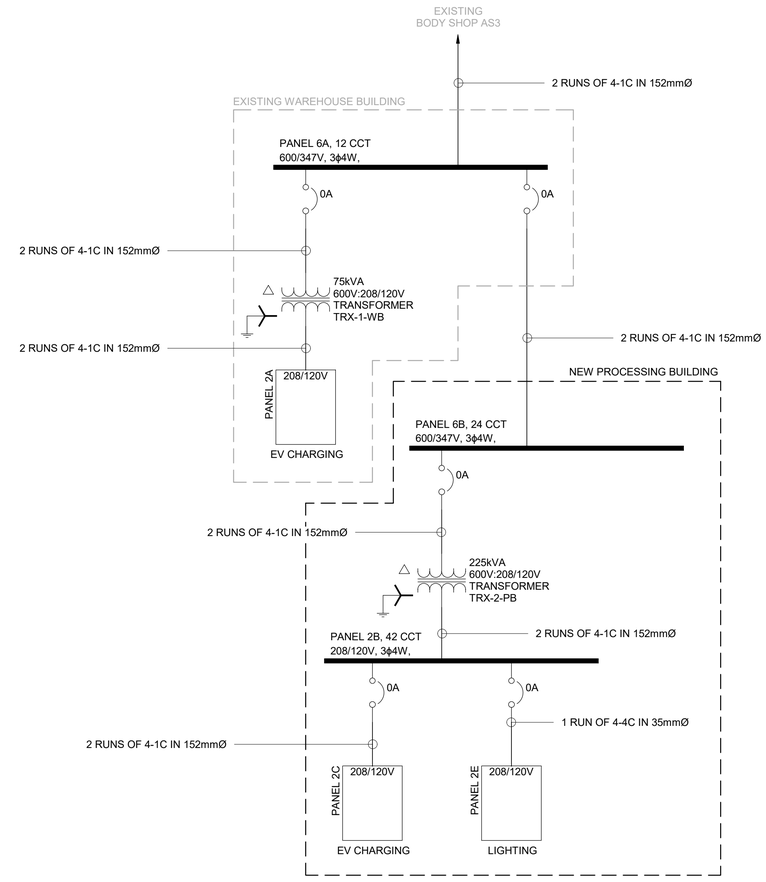
SITE PLAN

SIZE: D | DWG.: 365-040- E-003 | SHEET: | REV.:



1 SINGLE LINE FOR ELECTRICAL ROOM IN BODY SHOP

1 : 1



2 SINGLE LINE FOR PROCESSING BUILDING ELEC ROOM

1 : 1

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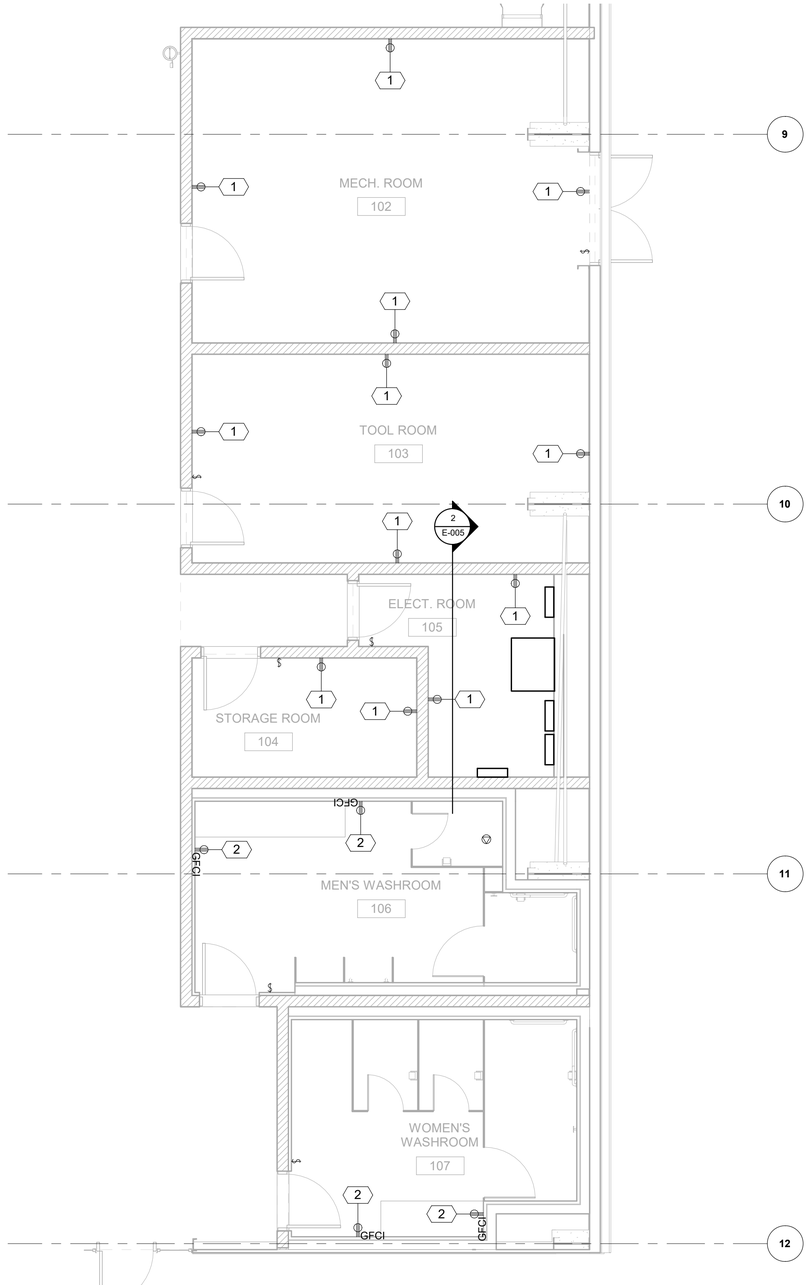
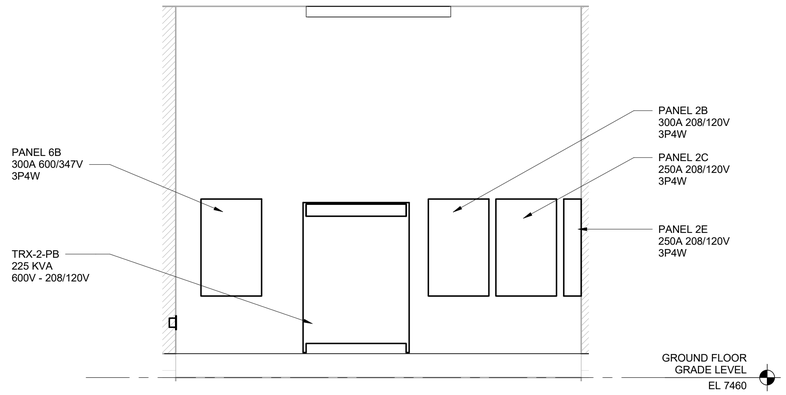
SINGLE LINE DIAGRAMS

SIZE D | DWG. 365-039- E-004 | SHEET | REV.



1 POWER PLAN
1 : 50



2 ELECTRICAL ROOM EQUIPMENT LAYOUT
1 : 25

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ANNACIS AUTO TERMINAL
POWER PLAN

SIZE	DWG.	SHEET	REV.
D	365-039- E-005		

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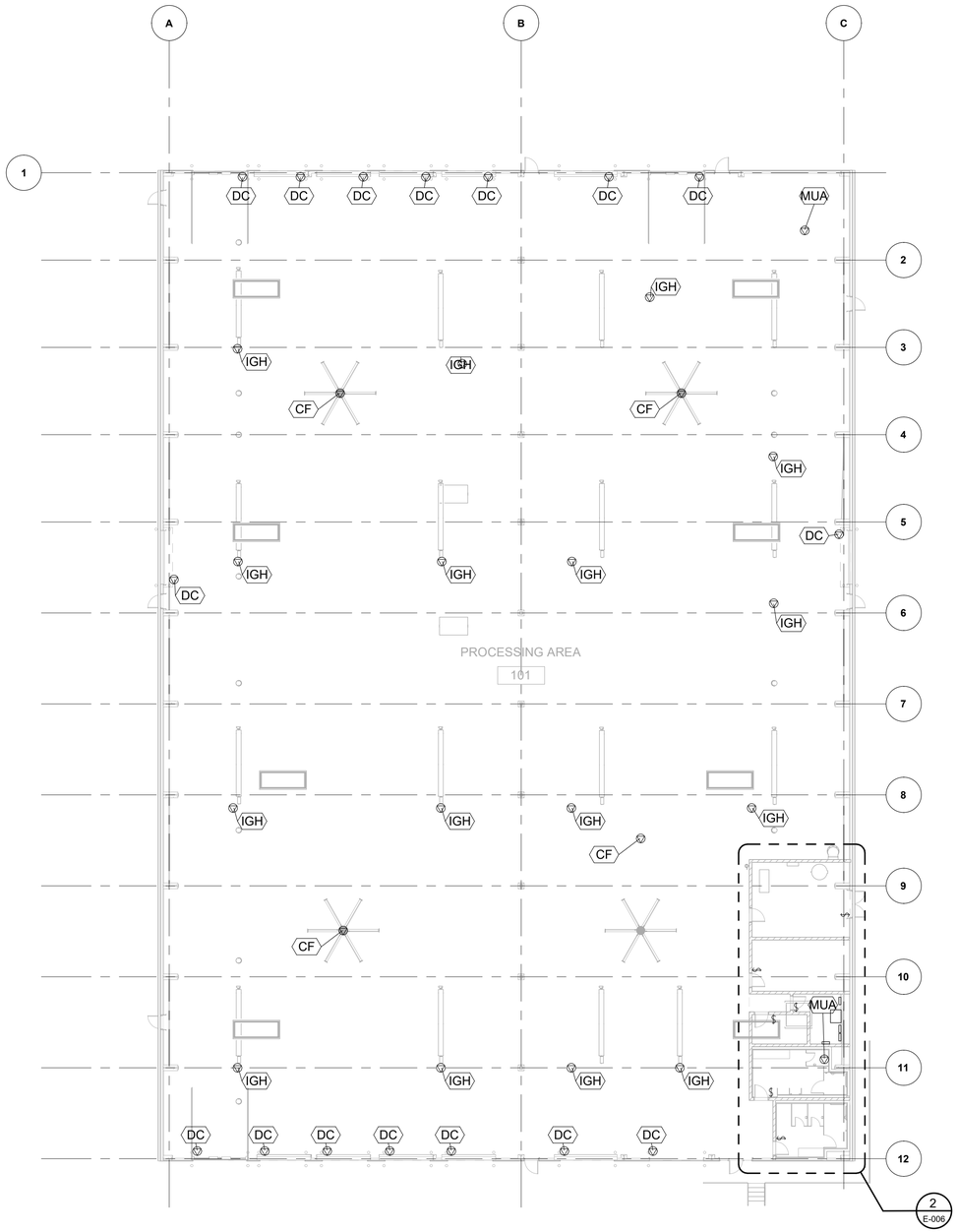
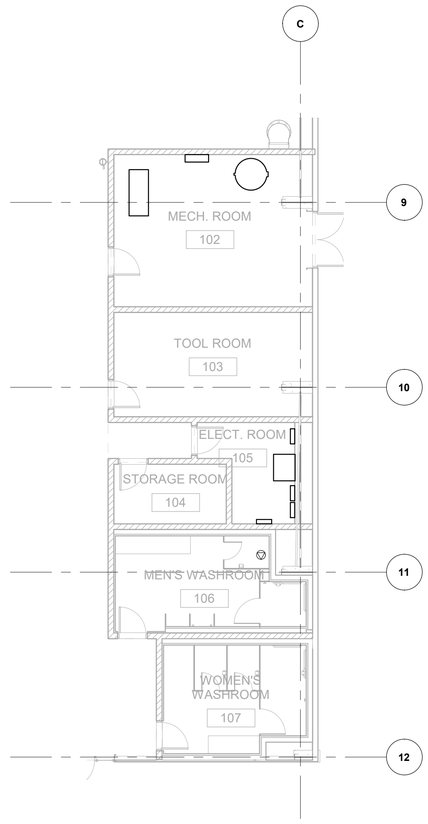
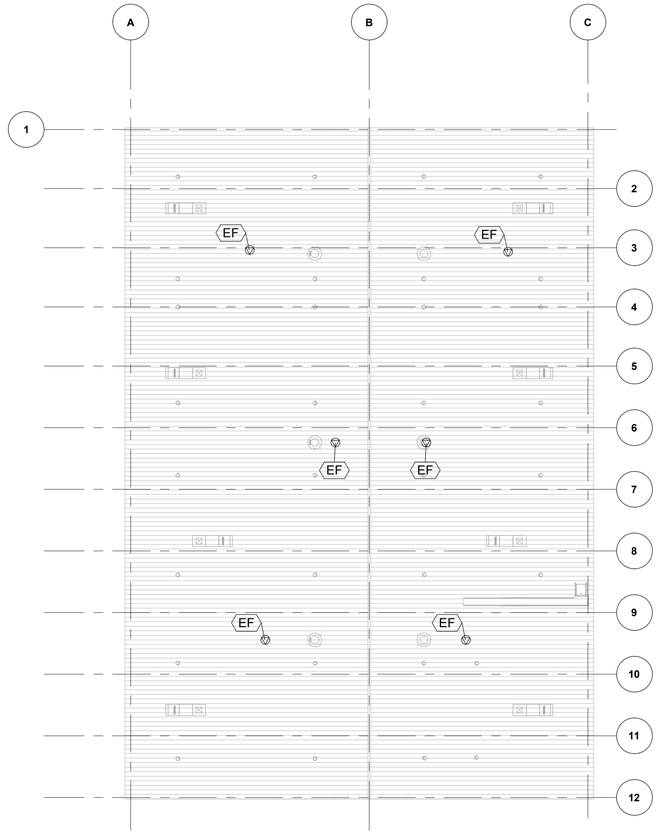


1 MECHANICAL POWER PLAN
1 : 200



2 E-006 ENLARGED MECHANICAL POWER PLAN
1 : 100



3 ROOF PLAN
1 : 300

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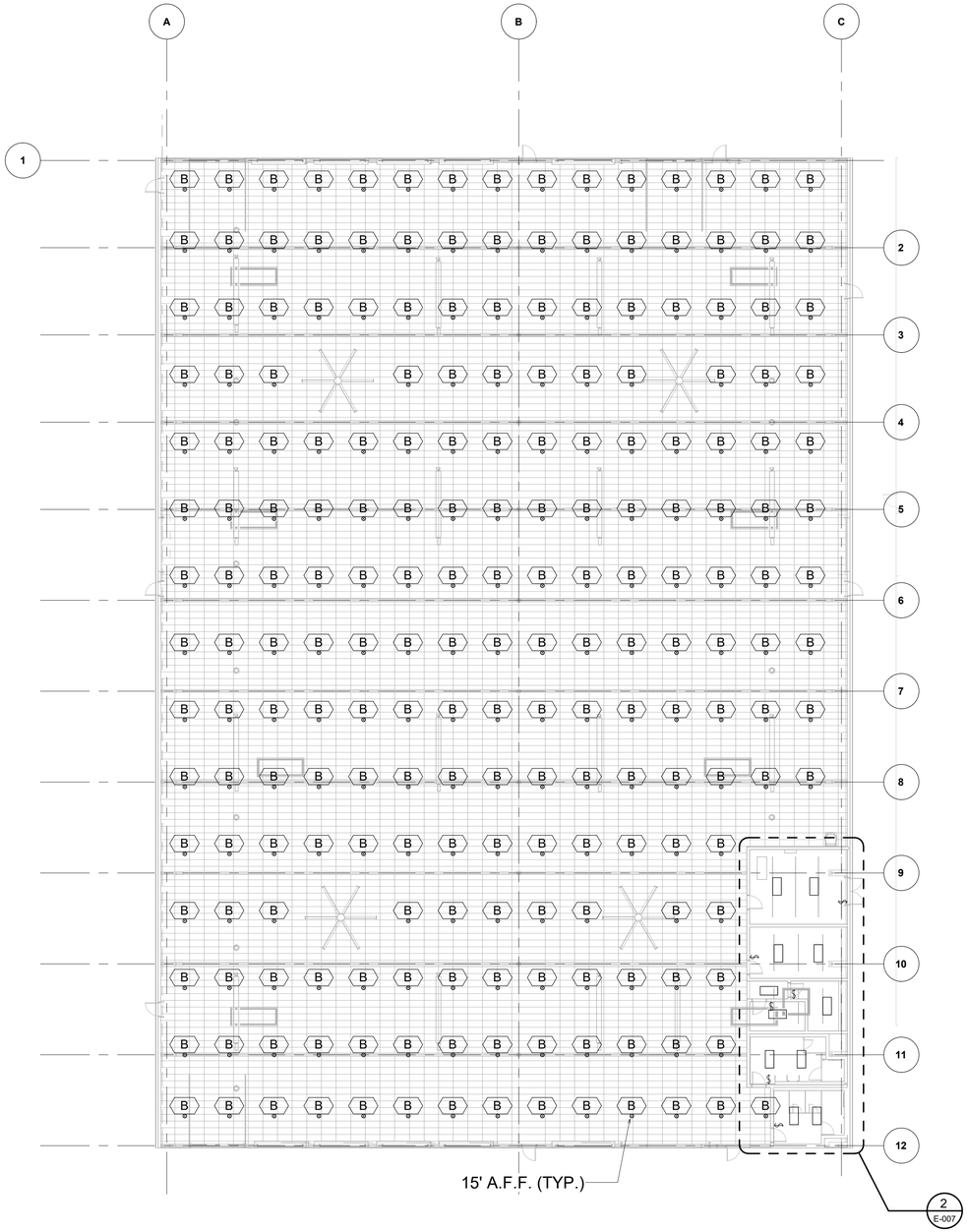
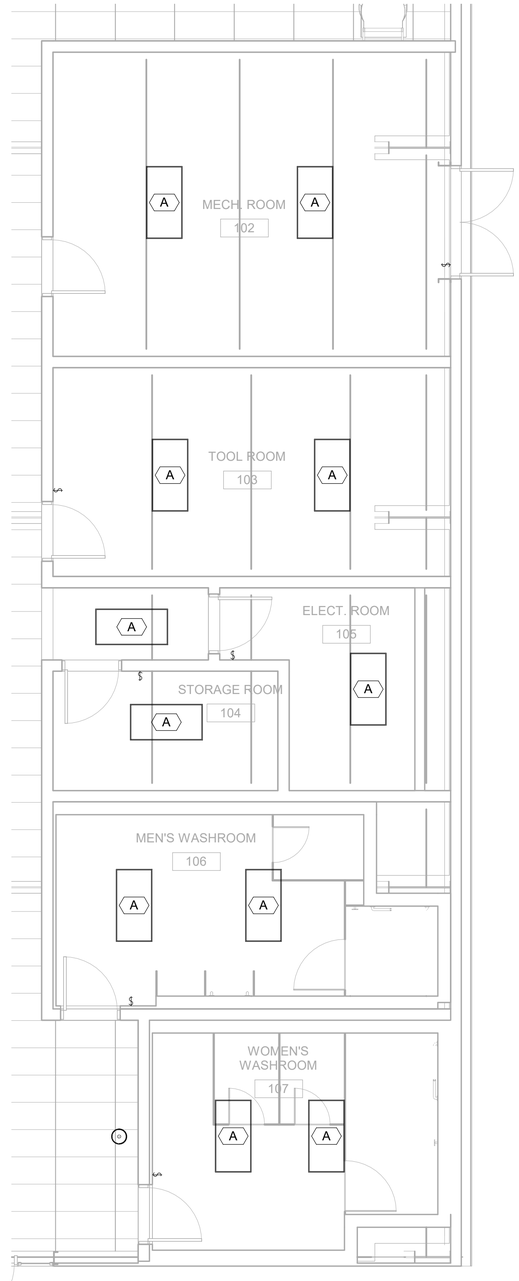
ANNACIS AUTO TERMINAL
MECHANICAL POWER PLAN

SIZE	DWG.	SHEET	REV.
D	365-039- E-006		



1 ELECTRICAL CEILING PLAN
1 : 200



2 E-007 ELECTRICAL CEILING PLAN ENLARGED
1 : 50

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SIZE	D
DWG.	365-039- E-007
SHEET	
REV.	

ANNACIS AUTO TERMINAL
LIGHTING PLAN

PANEL 6A

Load (kW)	Description	Brkr	CCT No.	Ph	CCT No.	Brkr	Description	Load (kW)
75	Transformer (TRX-1-WB)	250A	1	A	2			
			3	B	4	400A	Panel 6B (Processing Building)	300
			5	C	6			
			7	A	8			

Mains: 500A
Volts: 600/347V
Ph: 3
Wire: 4

Mounting: Wall Mounted
Location: Warehouse Building
Fed from: AS-3 Electrical Room
Feeder:
Estimated connected load:

PANEL 2A

Load (kW)	Description	Brkr	CCT No.	Ph	CCT No.	Brkr	Description	Load (kW)
14.4	EV Charger 1 Dual Port	40A	1	A	2			
			3	B	4	40A	EV Charger 2 Dual Port	14.4
			5	C	6			
14.4	EV Charger 3 Dual Port	40A	7	A	8			
			9	B	10	40A	EV Charger 4 Dual Port	14.4
			11	C	12			
			13	A	14			
			15	B	16			
			17	C	18			
			19	A	20			
			21	B	22			
			23	C	24			

Mains: 250A
Volts: 208/120V
Ph: 3
Wire: 4

Mounting: Wall Mounted
Location: Warehouse Building
Fed from: TRX 1- Warehouse Building
Feeder:
Estimated connected load:

PANEL 2C

Load (kW)	Description	Brkr	CCT No.	Ph	CCT No.	Brkr	Description	Load (kW)
14.4	EV Charger 1 Dual Port	40A	1	A	2			
			3	B	4	40A	EV Charger 2 Dual Port	14.4
			5	C	6			
14.4	EV Charger 3 Dual Port	40A	7	A	8			
			9	B	10	40A	EV Charger 4 Dual Port	14.4
			11	C	12			
			13	A	14			
			15	B	16			
			17	C	18			
			19	A	20			
			21	B	22			
			23	C	24			

Mains: 250A
Volts: 208/120V
Ph: 3
Wire: 4

Mounting: Wall Mounted
Location: Electrical Room Processing Building
Fed from: Panel 2B
Feeder:
Estimated connected load:

PANEL 6B

Load (kW)	Description	Brkr	CCT No.	Ph	CCT No.	Brkr	Description	Load (kW)
225	Transformer (TRX-2-PB)	250A	1	A	2			
			3	B	4	50A	Duct Heater	40
			5	C	6			
20	Gas Fired Make-Up Air Unit 1,2,3,4	40A	7	A	8			
			9	B	10	15A	Rooftop Exhaust Fan 1,2	7.5
			11	C	12			
20	Gas Fired Make-Up Air Unit 5,6,7,8	40A	13	A	14			
			15	B	16	15A	Rooftop Exhaust Fan 3,4	7.5
			17	C	18			
12	Compressed Air	15A	19	A	20			
			21	B	22	15A	Rooftop Exhaust Fan 5,6	7.5
			23	C	24			
12	Compressed Air	15A	25	A	26			
			27	B	28			
			29	C	30			
			31	A	32			
			33	B	34			
			35	C	36			
			37	A	38			
			39	B	40			
			41	C	42			

Mains: 300A
Volts: 600/347V
Ph: 3
Wire: 4

Mounting: Wall Mounted
Location: Electrical Room Processing Building
Fed from: Panel 6A - Warehouse Building
Feeder:
Estimated connected load:

PANEL 2B

Load (kW)	Description	Brkr	CCT No.	Ph	CCT No.	Brkr	Description	Load (kW)
10.0	Infrared Gas Fired Heater 1,2,3,4	15A	1	A	2	15A	Infrared Gas Fired Heater 9,10,11,12	10
10.0	Infrared Gas Fired Heater 5,6,7,8	15A	3	B	4	15A	Infrared Gas Fired Heater 13,14,15,16	10
1.0	Forced-Flow Wall Heater (Room 102, 103)	15A	5	C	6	15A	Tankless Water Heater	1.0
1.0	Forced-Flow Wall Heater (Room 104,106)	15A	7	A	8	15A	Domestic Hot Water Recirculation Pump	0.5
0.5	Forced-Flow Wall Heater (Room 106)	15A	9	B	10	15A	Flow Switch High for Emergency Shower Station	0.5
10	Heat Recovery Ventilator	30A	11	C	12			
			13	A	14			
			15	B	16			
1.0	Ceiling Fan 1	15A	17	C	18	15A	Ceiling Fan 3	1.0
1.0	Ceiling Fan 2	15A	19	A	20	15A	Ceiling Fan 4	1.0
2.3	Panel 2E	60A	21	B	22			
			23	C	24	200A	Panel 2C	58
			25	A	26			
			27	B	28			
			29	C	30			

Mains: 300A
Volts: 600/347V
Ph: 3
Wire: 4

Mounting: Wall Mounted
Location: Electrical Room Processing Building
Fed from: Panel 6A - Warehouse Building
Feeder:
Estimated connected load:

Notes:

PANEL 2E

Load (kW)	Description	Brkr	CCT No.	Ph	CCT No.	Brkr	Description	Load (kW)
1.0	Light Fixtures High Bay N	15A	1	A	2			
			3	B	4	15A	Light Fixtures Service Rooms	0.33
			5	C	6			
1.0	Light Fixtures High Bay S	15A	7	A	8			
			9	B	10			
			11	C	12			
			13	A	14			
			15	B	16			
			17	C	18			
			19	A	20			
			21	B	22			
			23	C	24			

Mains: 60A
Volts: 208/120V
Ph: 3
Wire: 4

Mounting: Wall Mounted
Location: Electrical Room Processing Building
Fed from: Panel 2B
Feeder:
Estimated connected load:

Notes:

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ANNACIS AUTO TERMINAL
PANEL SCHEDULES

SIZE D | DWG. 365-039- E-008 | SHEET | REV.

Equipment							Power Requirements					Starter						Disconnect				Interlock			Control Device				
Tag	Unit No.	Unit Description	Location	Serving	Explosion Proof	Drawing #	Power Value	Units	Voltage	Phase	Emergency	Type (b)	Location	Supply By (a)	Install By (a)	Wiring By (e)	Control (c)	Aux. Contacts (d)	Supply By (a)	Install By (a)	Wiring By (e)	Equipment #	Install By (a)	Wiring By (e)	Type (e)	Supply By (a)	Install By (a)	Wiring By (e)	Notes
		HVAC System Equipment																											
MUA	1	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				Single point connection; Vendor-provided self-contained controls; 0-10 VDC contacts for external unit on/off control
MUA	2	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				[Same as MUA-1]
MUA	3	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				[Same as MUA-1]
MUA	4	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				[Same as MUA-1]
MUA	5	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				[Same as MUA-1]
MUA	6	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				[Same as MUA-1]
MUA	7	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				[Same as MUA-1]
MUA	8	Gas-Fired Make-up Air Unit	Roof	Processing 101	N		5.00	MCA	575	3	No														O (Vendor)				[Same as MUA-1]
HRV	1	Heat Recovery Ventilator	Mezzanine Level of Processing 101	Ancillary Spaces	N		25.50	MCA	208	3	No														O (Vendor)				Single point connection; Vendor-provided self-contained controls; 0-10 VDC contacts for external unit on/off control
DH	1	Duct Heater, Electric	Mezzanine Level of Processing 101	HRV-1 S/A discharge airflow	N		40.00	kW	575	3	No														T, O (Vendor)				Single point connection; Vendor-provided self-contained controls, duct temperature sensor & remote thermostat
CF	1	Ceiling Fan	Processing 101	Processing 101	N		15.00	MCA	208	3	No	VFD													O (Vendor)				Vendor-provided VFD and remote controller c/w sensors
CF	2	Ceiling Fan	Processing 101	Processing 101	N		15.00	MCA	208	3	No	VFD													O (Vendor)				Vendor-provided VFD and remote controller c/w sensors
CF	3	Ceiling Fan	Processing 101	Processing 101	N		15.00	MCA	208	3	No	VFD													O (Vendor)				Vendor-provided VFD and remote controller c/w sensors
CF	4	Ceiling Fan	Processing 101	Processing 101	N		15.00	MCA	208	3	No	VFD													O (Vendor)				Vendor-provided VFD and remote controller c/w sensors
EF	1	Rooftop Exhaust Fan	Roof	Processing 101	N		5.00	HP	575	3	No	VFD													T, CO				Vendor-provided VFD; 0-10 VDC contacts for external VFD control
EF	2	Rooftop Exhaust Fan	Roof	Processing 101	N		5.00	HP	575	3	No	VFD													T, CO				[Same as EF-1]
EF	3	Rooftop Exhaust Fan	Roof	Processing 101	N		5.00	HP	575	3	No	VFD													T, CO				[Same as EF-1]
EF	4	Rooftop Exhaust Fan	Roof	Processing 101	N		5.00	HP	575	3	No	VFD													T, CO				[Same as EF-1]
EF	5	Rooftop Exhaust Fan	Roof	Processing 101	N		5.00	HP	575	3	No	VFD													T, CO				[Same as EF-1]
EF	6	Rooftop Exhaust Fan	Roof	Processing 101	N		5.00	HP	575	3	No	VFD													T, CO				[Same as EF-1]
IGH	1	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	2	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	3	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	4	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	5	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	6	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	7	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	8	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	9	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	10	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	11	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	12	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	13	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	14	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	15	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
IGH	16	Infrared Gas-Fired Heater	Processing 101	Processing 101	N		2.60	FLA	120	1	No														T				Unit c/w remote thermostat.
		Electrical Equipment (Heaters, etc)																											
FFWH	1	Forced-Flow Wall Heater	Mechanical Room 102	Mechanical Room 102	N		0.50	kW	120	1	No														T				Unit c/w remote thermostat.
FFWH	2	Forced-Flow Wall Heater	Tools Room 103	Tools Room 103	N		0.50	kW	120	1	No														T				Unit c/w remote thermostat.
FFWH	3	Forced-Flow Wall Heater	Storage Room 104	Storage Room 104	N		0.50	kW	120	1	No														T				Unit c/w remote thermostat.
FFWH	4	Forced-Flow Wall Heater	Men's Washroom 106	Men's Washroom 106	N		0.50	kW	120	1	No														T				Unit c/w remote thermostat.
FFWH	5	Forced-Flow Wall Heater	Women's Washroom 106	Women's Washroom 106	N		0.50	kW	120	1	No														T				Unit c/w remote thermostat.
		Plumbing Equipment																											
WH	1	Gas-Fired Tankless Water Heater	Mechanical Room 102	Plumbing Fixtures in Processing 101 & Washrooms	N		1.50	FLA	120	1	No																		Single point connection; self-contained.
P	1	Domestic Hot Water Recirculation Pump	Mechanical Room 102	Domestic Hot Water Distribution	N		0.25	HP	120	1	No														C, O (Vendor)				Single-speed pump; on/off operation.
TP	1	Electric Trap Primer	Mechanical Room 102	Below-grade p-traps	N		2.00	MCA	120	1	No														O (Vendor)				Single point connection; self-contained.
FSH	1	Flow Switch High for Emergency Shower Station	Mechanical Room 102	Emergency Eyewash Station	N		3.00	FLA	120	1	No														O (Vendor)				Single point connection; self-contained visual and audible alarming.
		Owner-Provided Equipment																											
CP	1	Air Compressor Package	Mechanical Room 102	Compressed Air Distribution	N		15.00	HP	575	3	No														O (Vendor)				

Legend

Notes:

1. *Line voltage thermostats for unit heaters, etc. to be supplied and installed by Div. 15. Refer to Div.15 drawings for locations.*
2. *Include fire alarm signals, such as sprinkler flow switches, monitored valves, pressure switches, etc.*
3. *Heat tracing to be supplied and installed by Div.16. Div.15 to specify requirements (extent, pipe size & temperature). Heat traced equipment & piping insulation by Div.15.*
4. *Div. 16 to provide unfusible disconnect switch at unit unless unit supplied with factory installed disconnect switch (to be specified).*
5. *For double speed motors, always specify double winding. Div.16 to provide two separate power feeds to motor and install appropriate starters to suit.*
6. *Pressure switch for sprinkler excess pressure pump to be supplied and installed by Div.15 and wired by Div.16.*
7. *Provide a separate 120V/1ph circuit for marine lights and service plugs inside air handling units.*
8. *For package units, such as chillers, compressors, heat pumps, fire pumps, etc which are c/w its own integral starter/control, send copy of electrical data to Div.16.*
9. *Duct smoke detectors to be provided by Div.16 at locations as directed by Div.15.*
10. *Electric heaters to be supplied and installed by Div.16 . Capacities to be specified by Div.15.*
11. *Provide 120V/1ph power supply to CO and other gas detection/monitoring system.*
12. *Provide 120V/1ph power supply to each time clock.*
13. *Confirm requirement and location of control transformer.*
14. *Confirm voltage and circuit requirements of boiler controls, power for induced/forced draft fans.*
15. *Div.16 to provide manual control switches for manually controlled exhaust fans. Refer to Div.15 drawings for locations.*
16. *Provide 120V/1ph power supply to all field control panels. Div.15 to indicate location.*
17. *For cooling tower, provide power supply for sump heaters, spray pump and heat tracing. Provide separate power supply for pony motor.*

(a) Supply, Install and Wiring	(b) Starter Type	(c) Starter Control Type
E = Electrical M = Mechanical C = Controls Ex = Existing ExR = Existing (relocated) O = Others (specify) Fr = Fractual	Ma = Manual c/w Pilot Light Mg = Magnetic Cm = Combination TS = Two speed (double winding) MMS = Manual motor switch c/w relay (for single phase motor) RL = Relay VFD = Variable Frequency Drive	SS = Start / Stop OA = Off / Auto HOA = Hand / Off / Auto
(d) Specify no. of aux. contacts.	(e) Control Device P = Pressure Switch F = Float Switch C = Time Clock T = Thermostat I = Interlock M = Manual CO = CO detector O = Other (specify) BAS=Building Automation System (DDC)	(f) Electrical data to be provided by Electrical Engineer

Lighting Fixture Schedule

Type Mark	Count	Type	Description	Manufacturer	Catalogue Number	Voltage	Lamp	Lamp Type	Wattage	Mounting
A	11	Vissioneering - 2 Lamp 186W LED 4000K - 120V	2x4 LED LUMINARE	LITHONIA LIGHTING	2BLT4-40L-ADP-EZ1-LP840	120 V	LED	LED	30 W	RECESSED
B	210	Lighting-High-Bay-Cooper-Metalux-UHB-LED	LED Round High Bay	Cooper Lighting		347 V	LED		9 W	

Grand total: 221

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No.	Date	REVISION	Dr'n	Ch'd
B	2021-10-27	FINAL SUBMISSION FOR PDR	SN	IG
A	2021-09-21	DRAFT FINAL SUBMISSION ISSUED FOR REVIEW	SN	IG

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

LEAD CONSULTANT

AECOM

PORT of vancouver

DESIGN BY	IG
DRAWN BY	SN
APPROVED	TH
DATE	2021-10-27
SCALE	1 : 1
PMV SITE	365-039

ANNACIS AUTO TERMINAL

LIGHTING AND MECHANICAL SCHEDULES

SIZE D | DWG. 365-039- E-009 | SHEET | REV.