

DCU - FIRE ALARM SYSTEM REPLACEMENT

3000 AIRPORT ROAD #109

PENTICTON, BC

ELECTRICAL SYMBOL LEGEND	
ABBREVIATIONS	
NOTE	EQUIPMENT SHOWN DOTTED IS EXISTING
ND	NEW DEVICE, NO EXISTING SERVICE TO LOCATION
R	EXISTING DEVICE TO BE REMOVED
FIRE ALARM	
	DUCT MOUNTED SMOKE DETECTOR
	THERMAL DETECTOR
	SMOKE DETECTOR
	FIRE ALARM PULL STATION
	FIRE ALARM GONG
	FIRE ALARM GONG W/ STROBE
	FIRE ALARM STROBE
	KNOWN END OF LINE RESISTOR
	FIRE ALARM PANEL
	FIRE ALARM ANNUNCIATOR
	MAGNETIC DOOR HOLD OPEN
	FLOW SWITCH
	TAMPER SWITCH
	PA MICROPHONE STATION
	MAGNETIC DOOR LOCK

DRAWING LIST

E000	COVER SHEET, LEGEND AND DRAWINGS LIST
E100	EXISTING FIRE ALARM IN ATB AND FSS
E200	REVISED FIRE ALARM SYSTEM IN ATB AND FSS REVISED FIRE ALARM ZONE AND SCHEDULES
E300	SITE PLAN WITH REVISED FIRE ALARM ZONES AND SYSTEM RISER

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2	ISSUED FOR DESIGN DEVELOPMENT	2016-01-16
1	ISSUED FOR SD REVIEW	2015-12-04

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PUBLIC WORKS AND GOVERNMENT SERVICES CANADA
3000 AIRPORT ROAD #109
PENTICTON, BC

Project title/Titre du projet
3000 AIRPORT ROAD #109
PENTICTON, BC
GOVERNMENT OF CANADA BUILDING
DCU - FIRE ALARM SYSTEM REPLACEMENT

Consultant Signature Box Only

Designed by/Concept par
I. BARNES

Drawn by/Dessine par
N. HORVERS

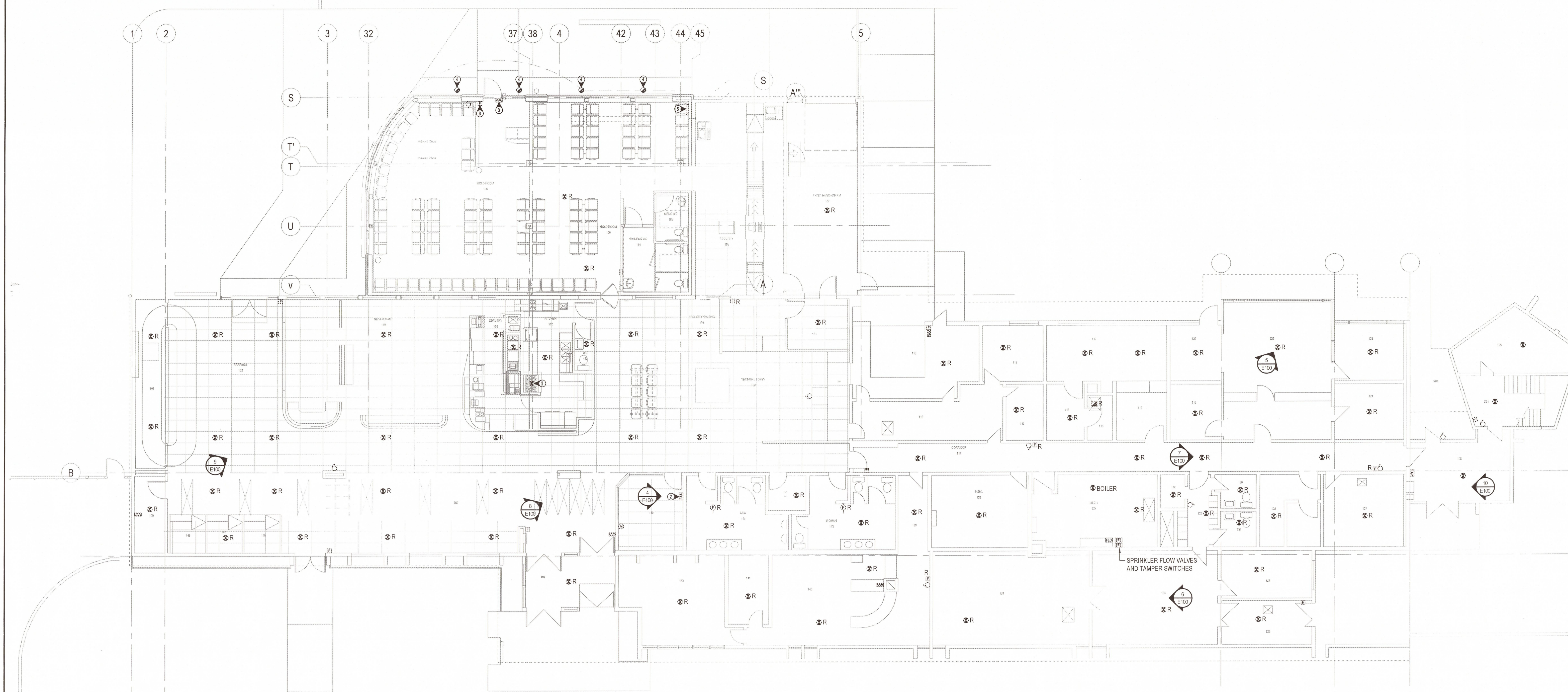
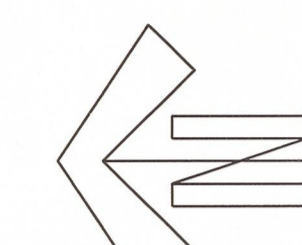
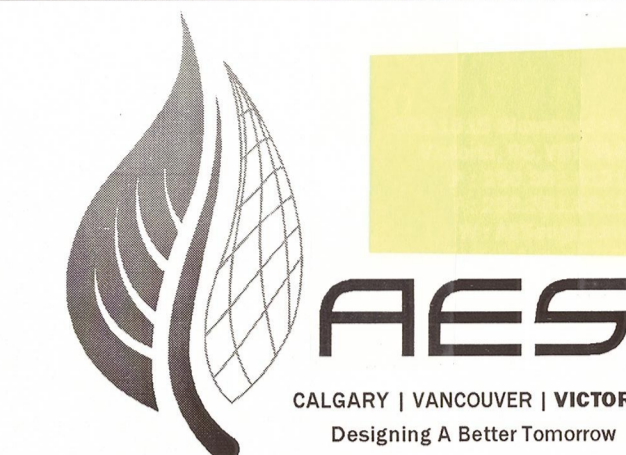
PWGSC Project Manager/Administrateur de Projets TPSGC
JULIAN HO

PWGSC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSGC
PREETIPAL PAUL

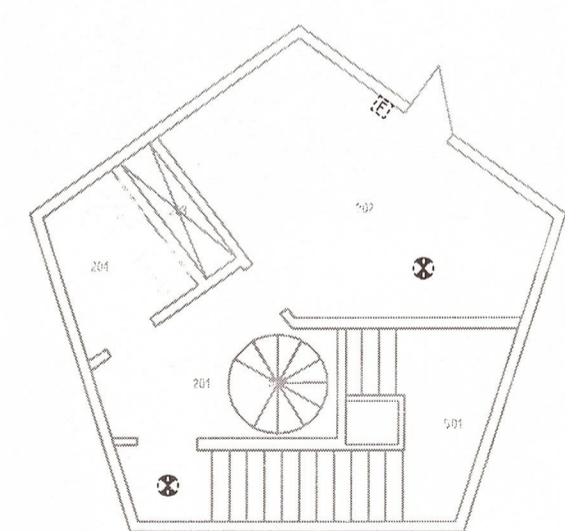
Drawing title/Titre du dessin
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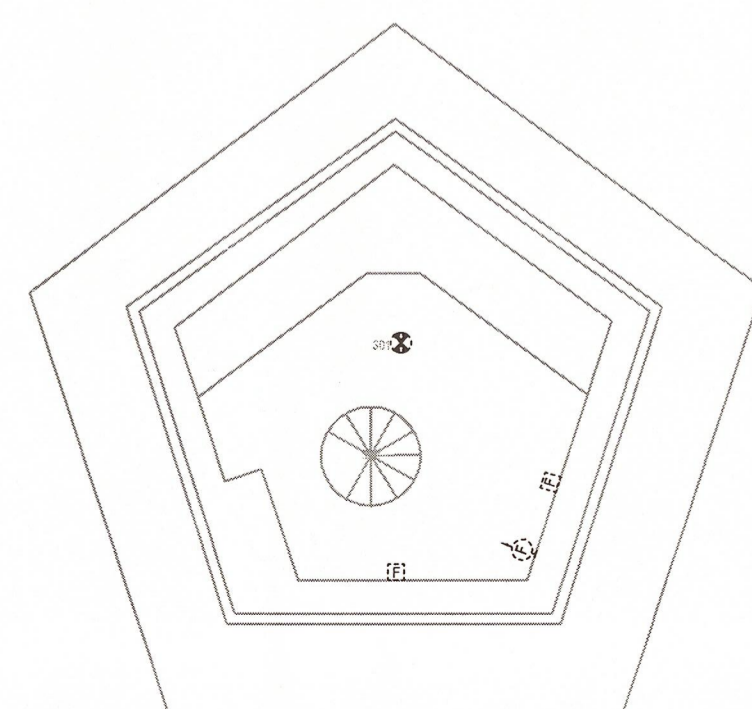




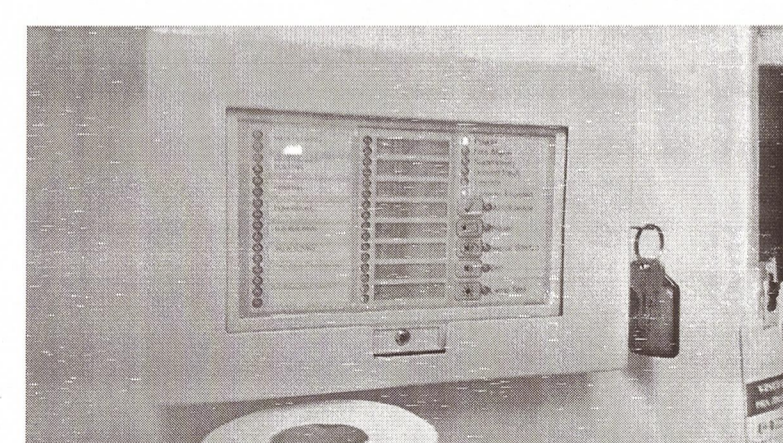
1 ATB AND FSS TOWER MAIN LEVEL
EXISTING FIRE ALARM LAYOUT
E100



2 FSS TOWER LEVEL 2
EXISTING FIRE ALARM LAYOUT
E100



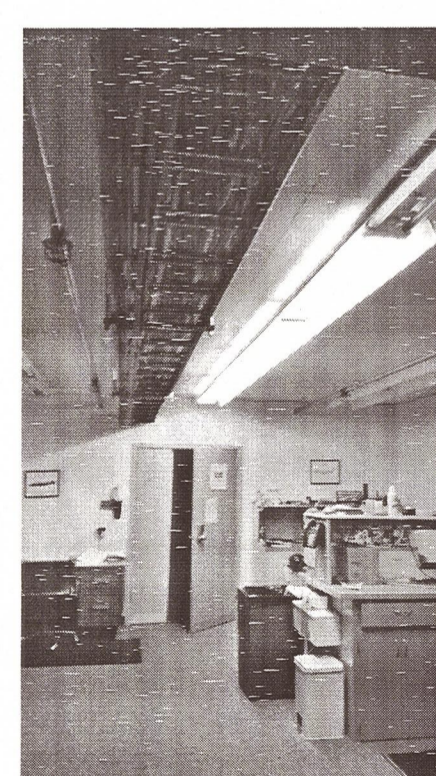
3 FSS TOWER LEVEL 3
EXISTING FIRE ALARM LAYOUT
E100



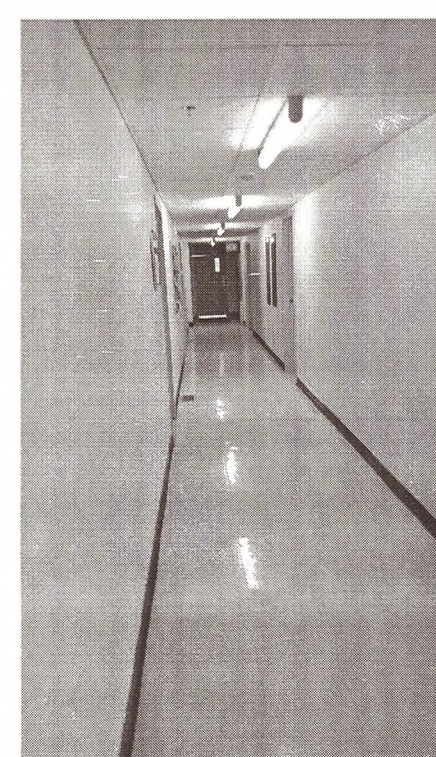
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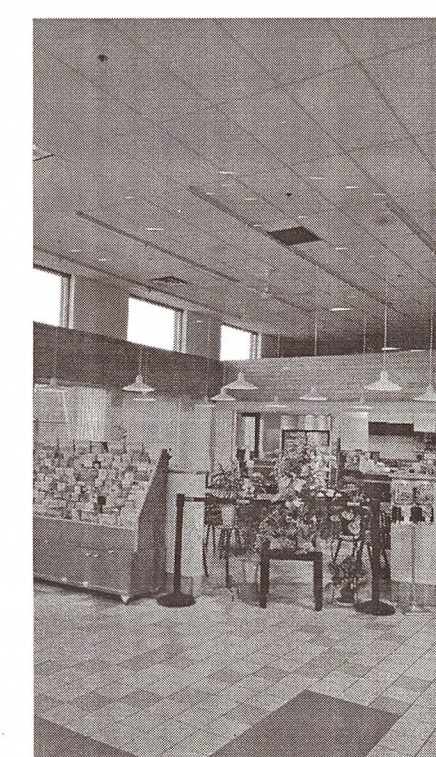
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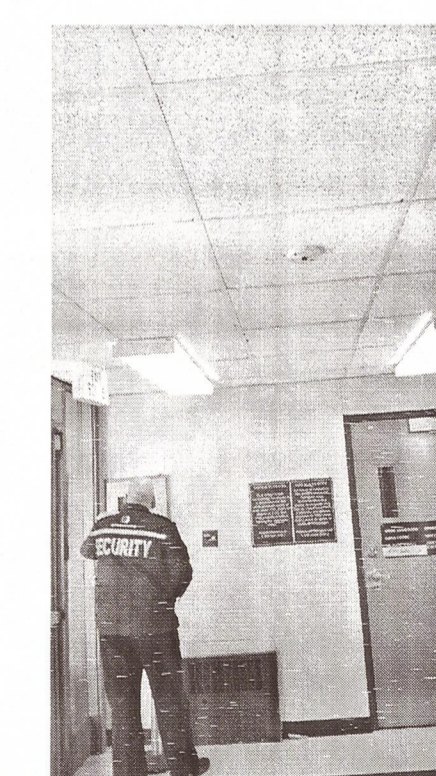
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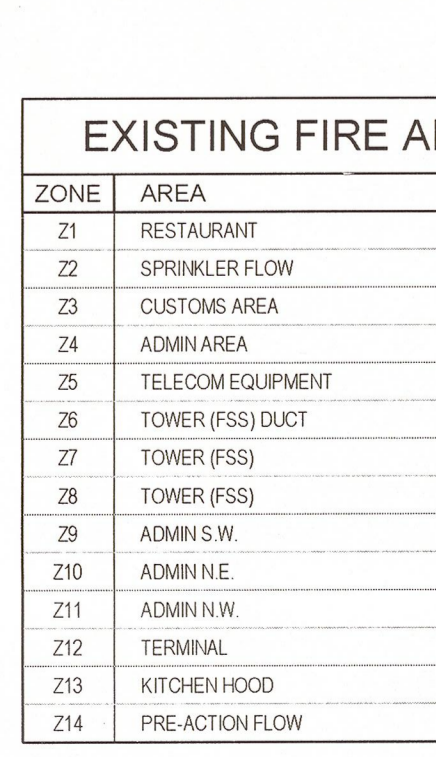
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- KEYNOTES**
- ① EXISTING KITCHEN HOOD SUPPRESSION SYSTEMS (x2). TIE INTO NEW FIRE ZONES ON NEW SYSTEM.
 - ② EXISTING ANNUNCIATOR FROM SITESIDE FIRE ALARM IN MAINTENANCE BUILDING TO BE REPLACED WITH NEW.
 - ③ EXISTING MAGNETIC DOOR LOCK CONNECTED TO RELEASE ON FIRE ALARM SIGNAL.
 - ④ EXISTING HEAT DETECTORS IN SOFFIT OVERHANG CONNECTED TO PRE-ACTION SPRINKLER SYSTEM. PRE-ACTION SYSTEM CONTROLS ON DRY SPRINKLER SYSTEM IN THE SOFFIT.
 - ⑤ EXISTING PRE-ACTION CONTROL PANEL, MIRCOP FR-320.
 - ⑥ EXISTING TWO STAGE PULLSTATION, EDWARDS SIGA-270-PB.
 - ⑦ REPLACE EXISTING DUCT SMOKE IN SUPPLY DUCT WITH NEW. DUCT IS 500mm x 500mm. RECONNECT TO SHUT DOWN AHU-4 (ON ROOF ABOVE).
 - ⑧ INSTALL NEW DUCT SMOKE TO EXISTING.

- NOTES**
1. NEW FIRE ALARM SYSTEM TO BE INSTALLED PARALLEL TO EXISTING SYSTEM. EXISTING SYSTEM TO BE MAINTAINED IN OPERATING CONDITION UNTIL NEW SYSTEM IS COMMISSIONED AT WHICH POINT OLD SYSTEM IS TO BE DECOMMISSIONED AND DEMOLISHED. ALL EXISTING DEMOLITION DEVICES AND WIRING TO BE REMOVED AND DISPOSED OF.
 2. NEW FIRE ALARM SYSTEM TO BE FULLY ADDRESSABLE, SUPERVISED AND INTEGRATED WITH EXISTING SPRINKLER SYSTEM.
 3. BOTH NEW FIRE ALARM PANELS TO BE INTERCONNECTED TO FACILITATE CROSS ZONE ALARMING AND ANNUNCIATION.
 4. ALL OUT BUILDINGS AND OTHER ZONES TO TERMINATE ON NEW FIRE ALARM PANEL IN TERMINAL BUILDING ELECTRICAL ROOM.
 5. NEW PANEL IN FSS TOWER ENTRY WAY TO SERVE FSS TOWER DEVICES ONLY.
 6. ALL PULL STATIONS TO BE RELOCATED AND REPLACED WITH NEW TO MEET CODE COMPLIANCE FOR PULL STATION HEIGHT AS MEASURED TO CENTRE OF DEVICE (1200mm).
 7. ALL EXISTING GONGS TO BE REPLACED WITH NEW GONGS CW STROBE. MINIMUM 88dB SOUND PRESSURE WHEN MEASURED AT 3m FROM DEVICE.
 8. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF T-BAR TILE. CONTRACTOR SHALL REPLACE ALL TILES DAMAGED AS PART OF THIS PROJECT. ALLOW FOR 40 TILES AS PART OF THIS PROJECT. REPLACE ALL CEILING TILES WITH NEW, WHERE DEVICES HAVE BEEN REMOVED.
 9. END OF LINE RESISTORS LOCATED BEHIND SOME DEVICES.

EXISTING FIRE ALARM SCHEDULE

ZONE	AREA
Z1	RESTAURANT
Z2	SPRINKLER FLOW
Z3	CUSTOMS AREA
Z4	ADMIN AREA
Z5	TELECOM EQUIPMENT
Z6	TOWER (FSS) DUCT
Z7	TOWER (FSS)
Z8	TOWER (FSS)
Z9	ADMIN'S W
Z10	ADMIN'S E
Z11	ADMIN'S W
Z12	TERMINAL
Z13	KITCHEN HOOD
Z14	PRE-ACTION FLOW

EXISTING FIRE ALARM ZONE SCHEDULE
NTS
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Drawn by/Dessiné par
N. HORVERS

PWSCC Project Manager/Administrateur de Projets TPSCC
JULIAN HO

PWSCC Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architectural et de génie, TPSCC
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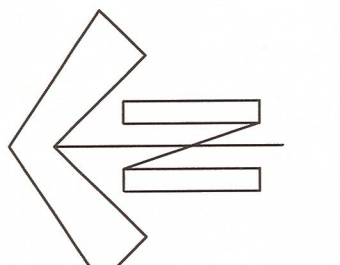
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EXISTING FIRE ALARM IN ATB AND FSS

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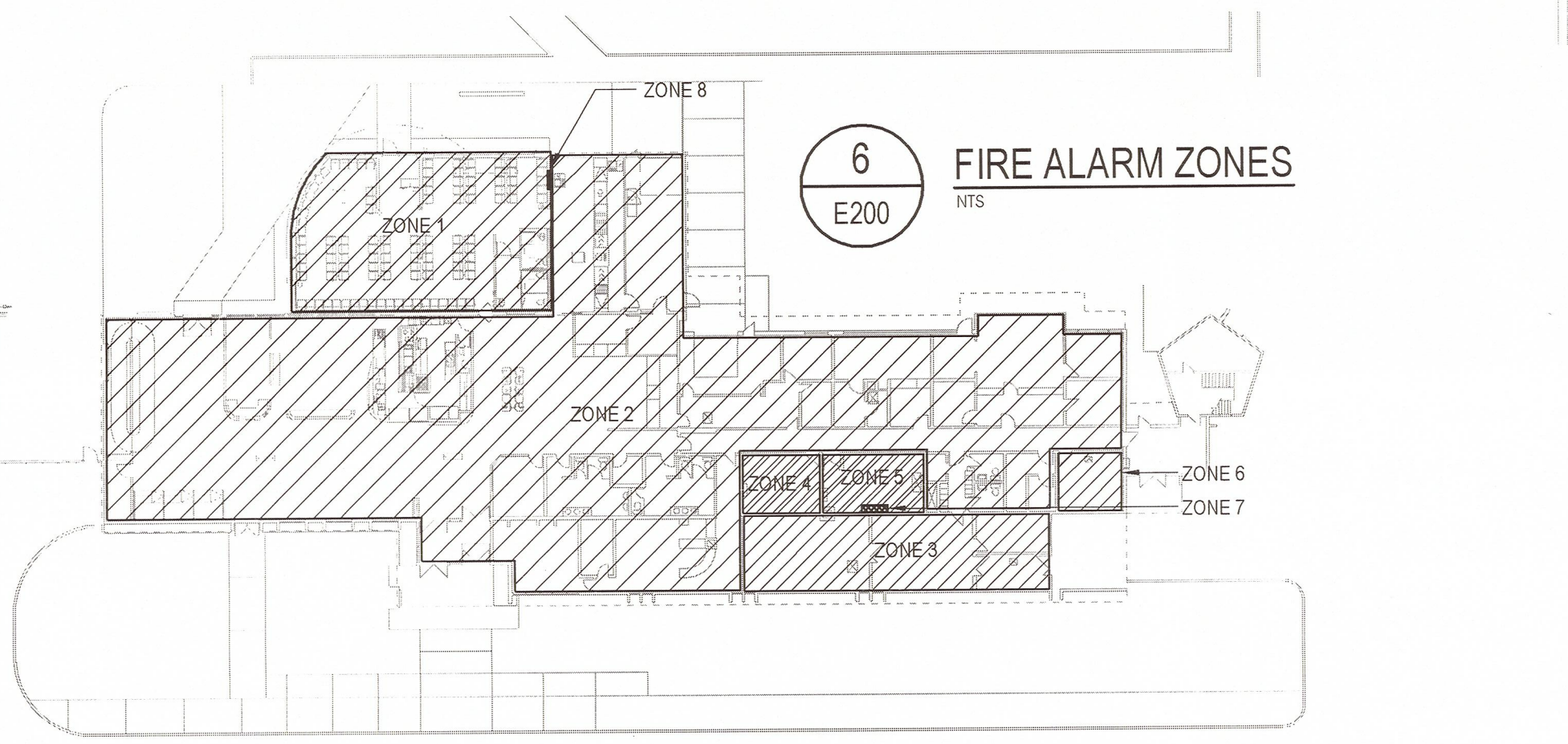
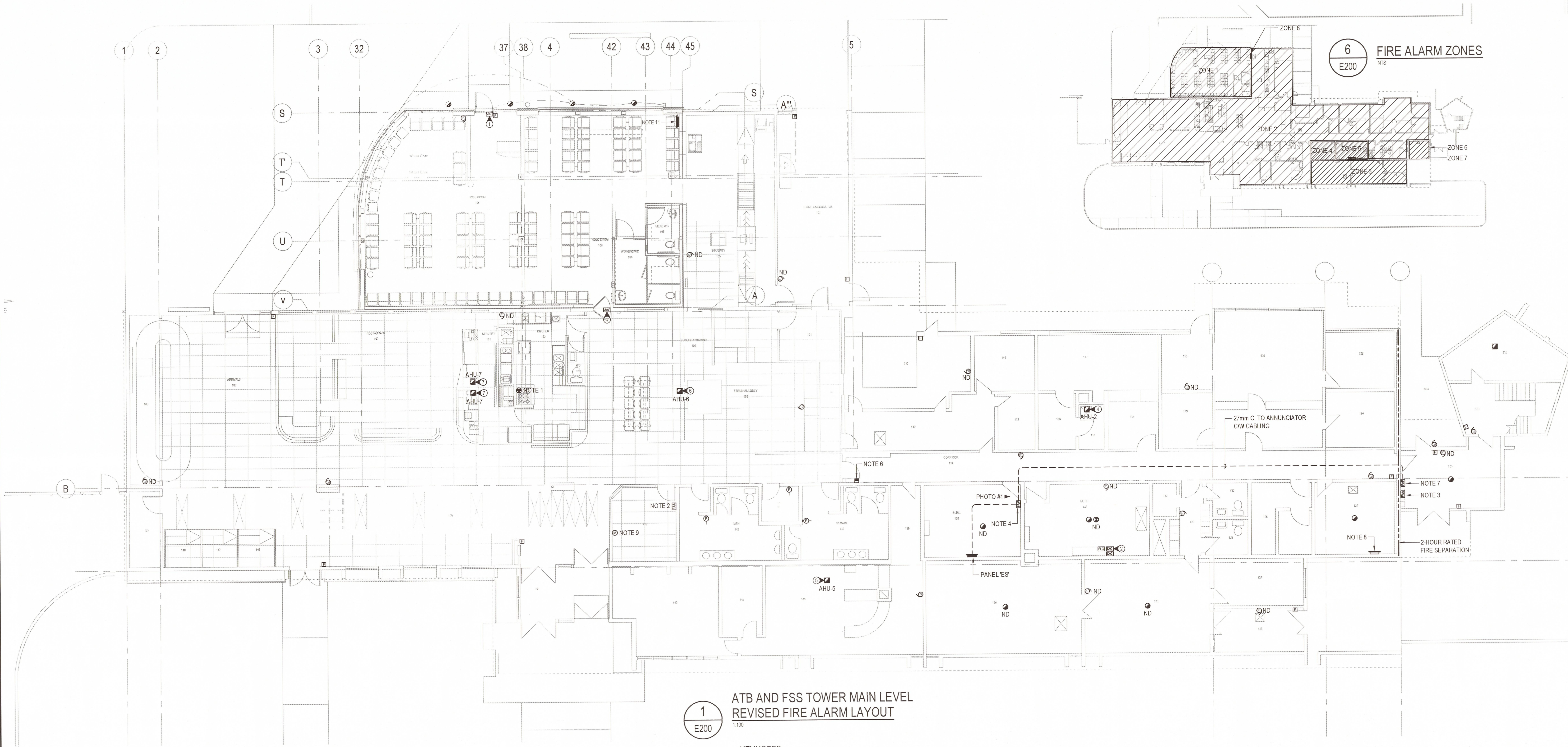
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DCU - FIRE ALARM
SYSTEM REPLACEMENT**

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Designed by/Concept par
I. BARNES
Drawn by/Dessiné par
N. HORVERS
PWSC Project Manager/Administrateur de Projets TPSGC
JULIAN HO
PWSC, Regional Manager, Architectural and Engineering Services/
Gestionnaire régionale, Services d'architecture et de génie, TPSGC
PREETIPAL PAUL

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**REVISED FIRE ALARM SYSTEM
IN ATB AND FSS REVISED
FIRE ALARM ZONES AND
SCHEDULES**

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1
E200
**ATB AND FSS TOWER MAIN LEVEL
REVISED FIRE ALARM LAYOUT**
1:100

- KEYNOTES:**
- RECONNECT EXISTING MAGNETIC DOOR LOCK TO RELEASE ON FIRE ALARM GENERAL ALARM (SECOND STAGE).
 - CONNECT EXISTING TAMPER AND FLOW SWITCHES TO NEW FIRE ALARM SYSTEM.
 - 2 HOUR FIRE SEPARATION. PROVIDE SUITABLE FIRE STOPPING FOR ALL PENETRATIONS.
 - REPLACE EXISTING DUCT SMOKE WITH NEW AND RECONNECT. SHUTDOWN CONTACTS FROM FIRE ALARM PANEL TO AHU-2 ON ROOF ABOVE. EXISTING DUCT IS 500mm x 500mm.
 - INSTALL NEW DUCT SMOKE WITH SHUTDOWN CONTACTS FROM FIRE ALARM PANEL TO AHU-5 ON ROOF ABOVE. EXISTING SUPPLY DUCT IS 500mm x 500mm.
 - INSTALL NEW DUCT SMOKE WITH SHUTDOWN CONTACTS FROM FIRE ALARM PANEL TO AHU-6 ON ROOF ABOVE. EXISTING SUPPLY DUCT IS 600mm x 600mm.
 - INSTALL NEW DUCT SMOKE WITH SHUTDOWN CONTACTS FROM FIRE ALARM PANEL TOP AHU-7 ON ROOF ABOVE. EXISTING SUPPLY DUCTS ARE 2x 300mm x 500mm, BOTH OF WHICH ARE TO BE SAMPLED.

- NOTES**
- EXISTING HOOD FIRE SUPPRESSION ZONE TO BE RECONNECTED.
 - ANNUNCIATOR #1 FOR 24 HOUR SECURITY STAFF. SURFACE MOUNT ON EXISTING GYPROC WALL.
 - ANNUNCIATOR #2 FOR FIRE FIGHTERS RESPONSE. SURFACE MOUNT ON EXISTING BLOCK WALL.
 - NEW ATB FIRE ALARM PANEL. CONNECT TO NEW CIRCUIT BREAKER ON PANEL 'ES' TYPE NBOP.
 - ALL PULL STATIONS ARE TWO STAGE, KEYED FOR GENERAL ALARM.
 - CONNECT NEW 120VAC MAGNETIC DOOR HOLDER FOR RELEASE ON GENERAL ALARM. NOTE: DOOR IS NOT RATED.
 - FSS TOWER FIRE ALARM PANEL. ALL SITE ZONES TO ANNUNCIATE, ONLY FSS TOWER DEVICES WILL RING BELLS IN FSS TWO STAGE SYSTEM. CONNECT TO EXISTING FIRE ALARM SYSTEM POWER CIRCUIT.
 - EXISTING MONITORING CONNECTION FOR FIRE ALARM. CONNECT NEW SYSTEM TO EXISTING MONITORING SYSTEM AND VERIFY CORRECT OPERATION.
 - EXISTING PA MICROPHONE HANDSET TO BE USED FOR VOICE PAGING IN FIRST STAGE ALARM CONDITIONS.
 - PULLSTATIONS TO BE WITHIN 1.5m OF DOOR.
 - EXISTING PRE-ACTION SPRINKLER CONTROL PANEL C/W HEAT DETECTORS CONNECTED TO NEW FIRE ALARM SYSTEM FOR ZONE AND TROUBLE. GENERAL ALARM TO SOUND ON FLOW DETECTION.

SITE FIRE ALARM SCHEDULE

ZONE	AREA
11	AIR TERMINAL BUILDING
12	MAINTENANCE BUILDINGS
13	FIREHALL
14	PUMPHOUSE
15	FEC BUILDING
16	FSS TOWER

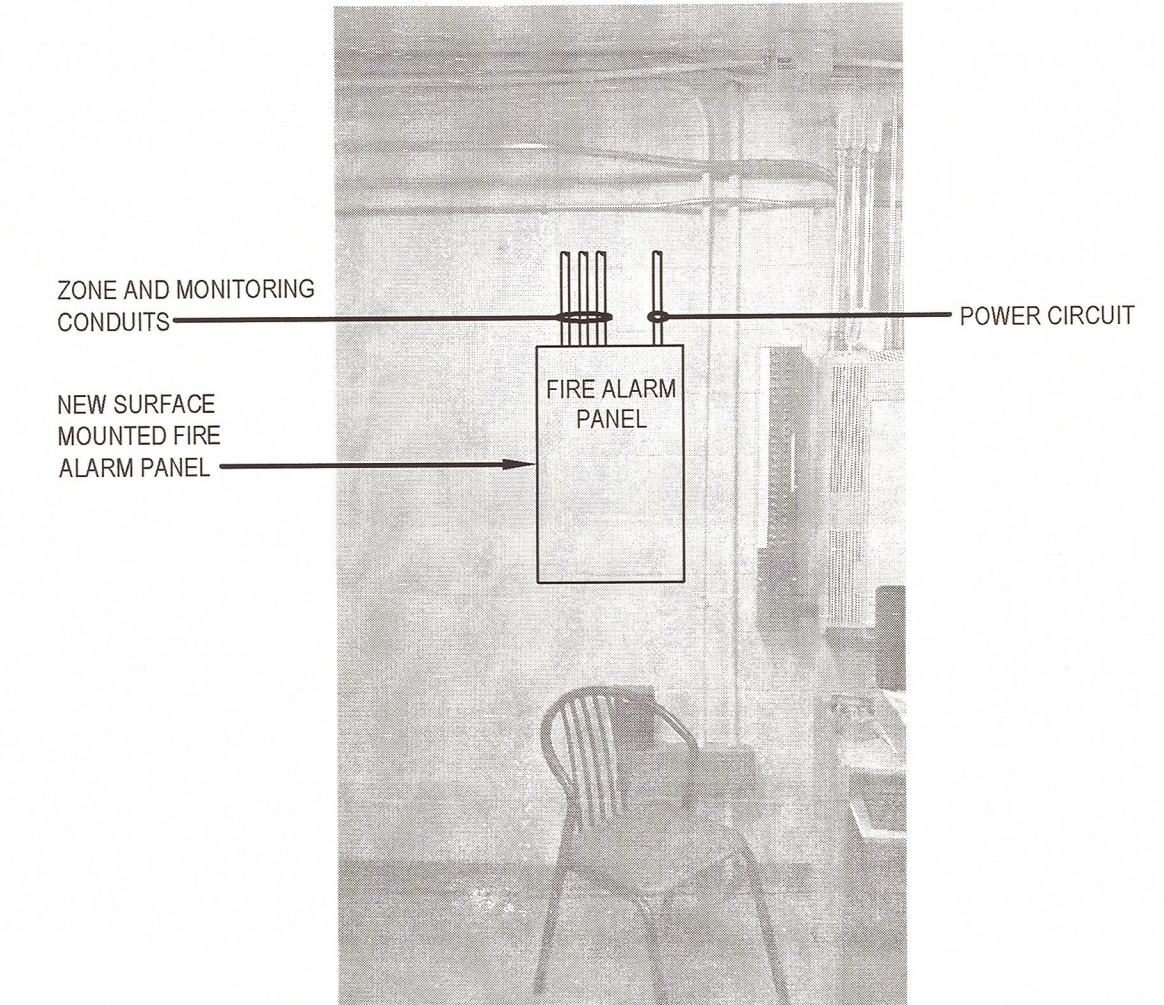
ATB FIRE ALARM SCHEDULE

ZONE	AREA
21	HOLD ROOM
22	ARRIVALS, TERMINAL AND ADMIN
23	NAV CATV EQUIPMENT ROOMS
24	ELECTRICAL ROOM
25	MECHANICAL ROOM
26	TELECOM ROOM
27	SPRINKLER FLOW
28	HOLD ROOM FIRE-ACTION FLOW
29	AHU-2 DUCT SMOKE
210	AHU-5 DUCT SMOKE
211	AHU-6 DUCT SMOKE
212	AHU-7 DUCT SMOKE

FSS FIRE ALARM SCHEDULE

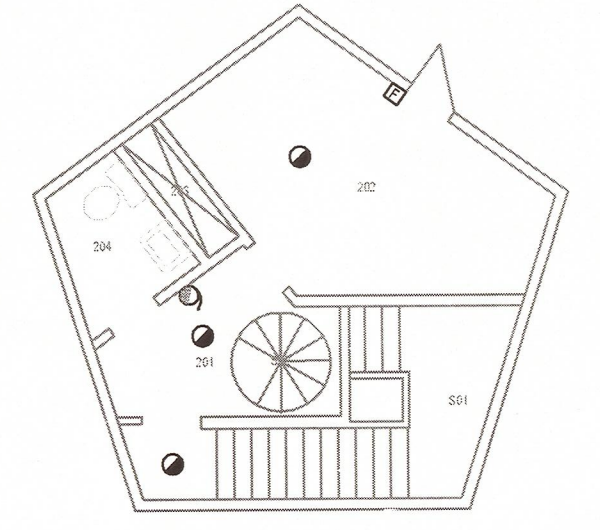
ZONE	AREA
21	FSS TOWER MAIN LEVEL
22	FSS TOWER LEVEL 2
23	FSS TOWER LEVEL 3
24	FSS TOWER DUCT SMOKE DETECTOR

4
E200
**ATB AND FSS TOWER
PROPOSED FIRE ALARM SCHEDULE**
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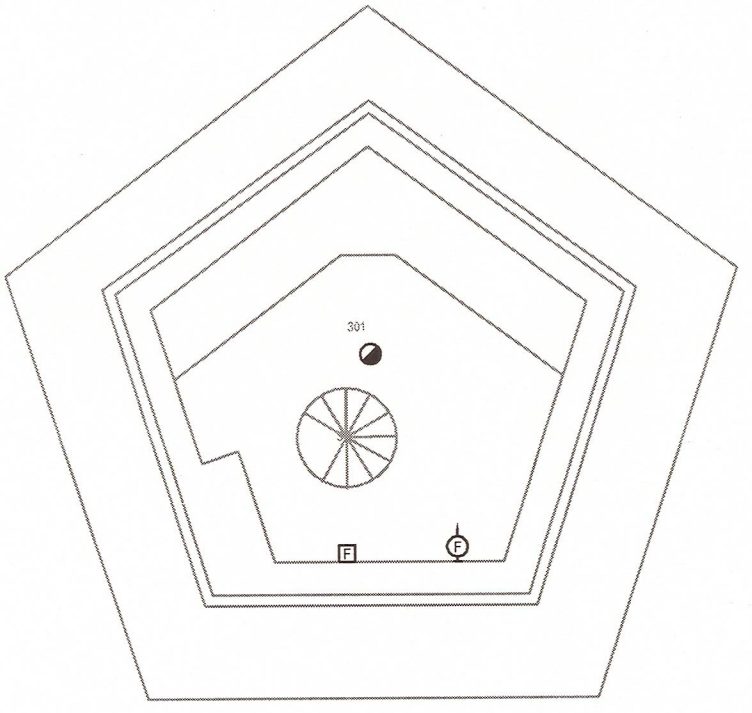


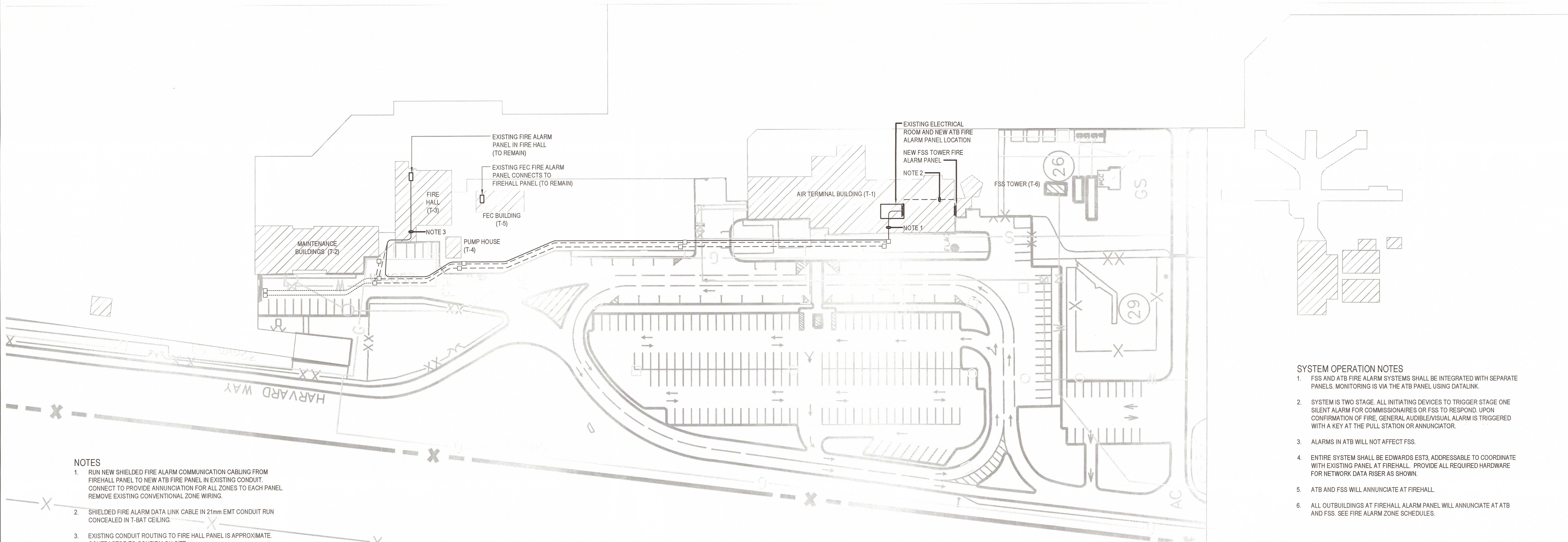
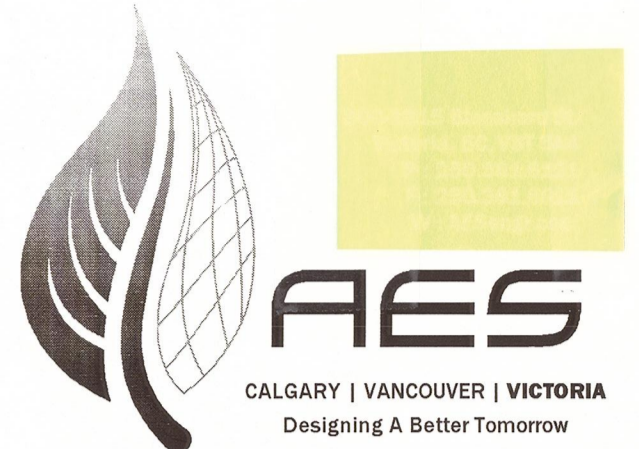
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E200
PHOTO #1
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2
E200
**FSS TOWER LEVEL 2
REVISED FIRE ALARM LAYOUT**
1:100



3
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**FSS TOWER LEVEL 3
REVISED FIRE ALARM LAYOUT**
1:100

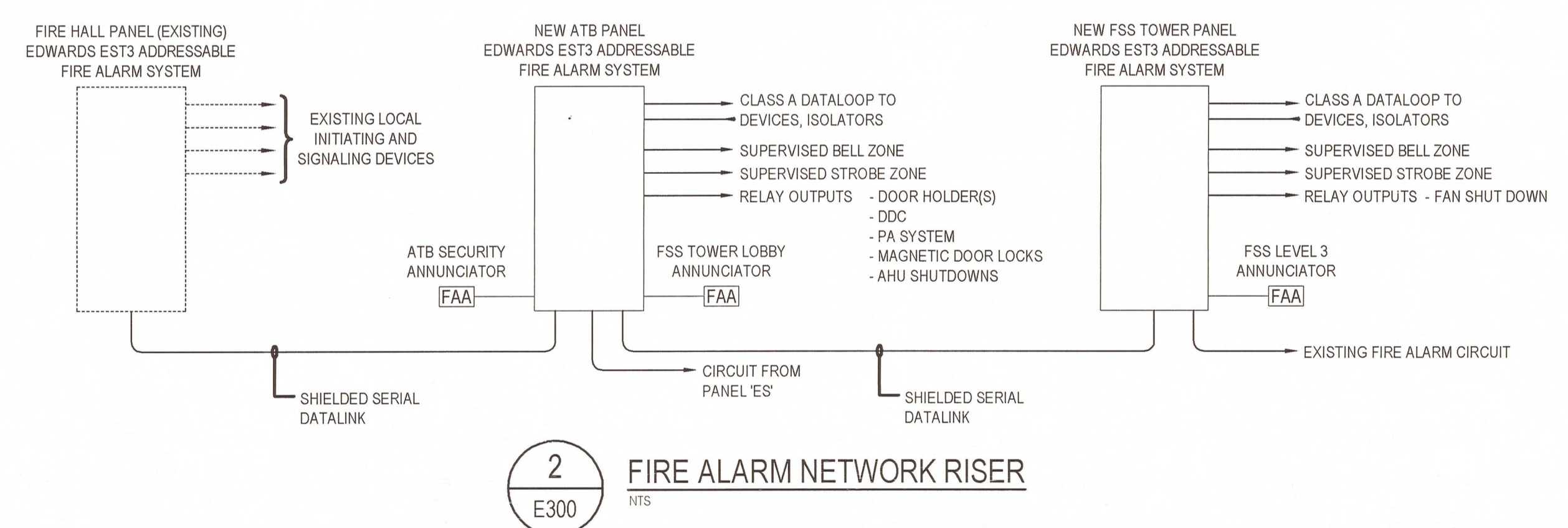




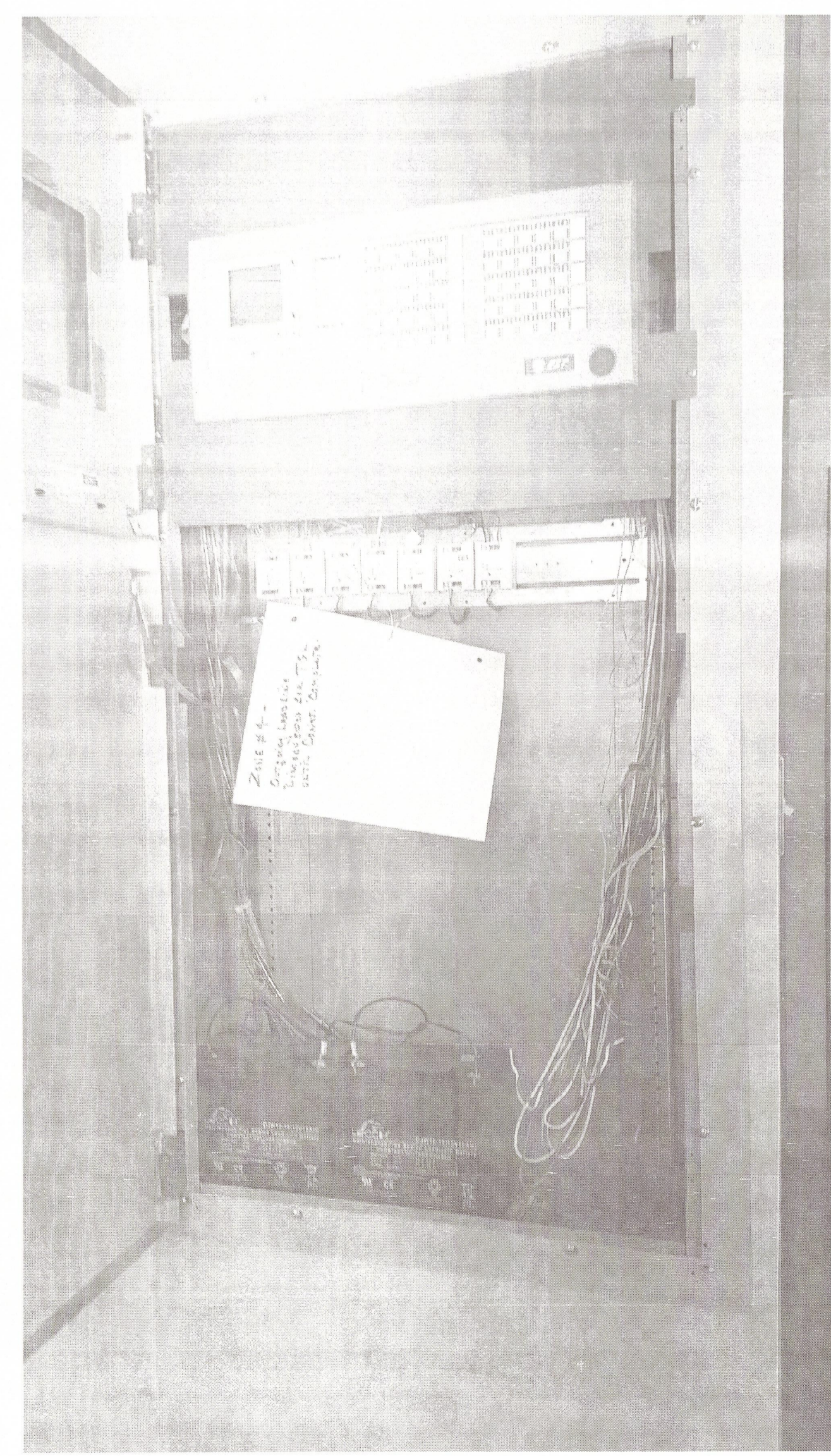
- NOTES**
1. RUN NEW SHIELDED FIRE ALARM COMMUNICATION CABLING FROM FIREHALL PANEL TO NEW ATB FIRE PANEL IN EXISTING CONDUIT. CONNECT TO PROVIDE ANNUNCIATION FOR ALL ZONES TO EACH PANEL. REMOVE EXISTING CONVENTIONAL ZONE WIRING.
 2. SHIELDED FIRE ALARM DATA LINK CABLE IN 21mm EMT CONDUIT RUN CONCEALED IN T-BAT CEILING.
 3. EXISTING CONDUIT ROUTING TO FIRE HALL PANEL IS APPROXIMATE. CONTRACTOR TO CONFIRM ON SITE.

- SYSTEM OPERATION NOTES**
1. FSS AND ATB FIRE ALARM SYSTEMS SHALL BE INTEGRATED WITH SEPARATE PANELS. MONITORING IS VIA THE ATB PANEL USING DATALINK.
 2. SYSTEM IS TWO STAGE. ALL INITIATING DEVICES TO TRIGGER STAGE ONE SILENT ALARM FOR COMMISSIONAIRES OR FSS TO RESPOND. UPON CONFIRMATION OF FIRE, GENERAL AUDIBLE/VISUAL ALARM IS TRIGGERED WITH A KEY AT THE PULL STATION OR ANNUNCIATOR.
 3. ALARMS IN ATB WILL NOT AFFECT FSS.
 4. ENTIRE SYSTEM SHALL BE EDWARDS EST3, ADDRESSABLE TO COORDINATE WITH EXISTING PANEL AT FIREHALL. PROVIDE ALL REQUIRED HARDWARE FOR NETWORK DATA RISER AS SHOWN.
 5. ATB AND FSS WILL ANNUNCIATE AT FIREHALL.
 6. ALL OUTBUILDINGS AT FIREHALL ALARM PANEL WILL ANNUNCIATE AT ATB AND FSS. SEE FIRE ALARM ZONE SCHEDULES.

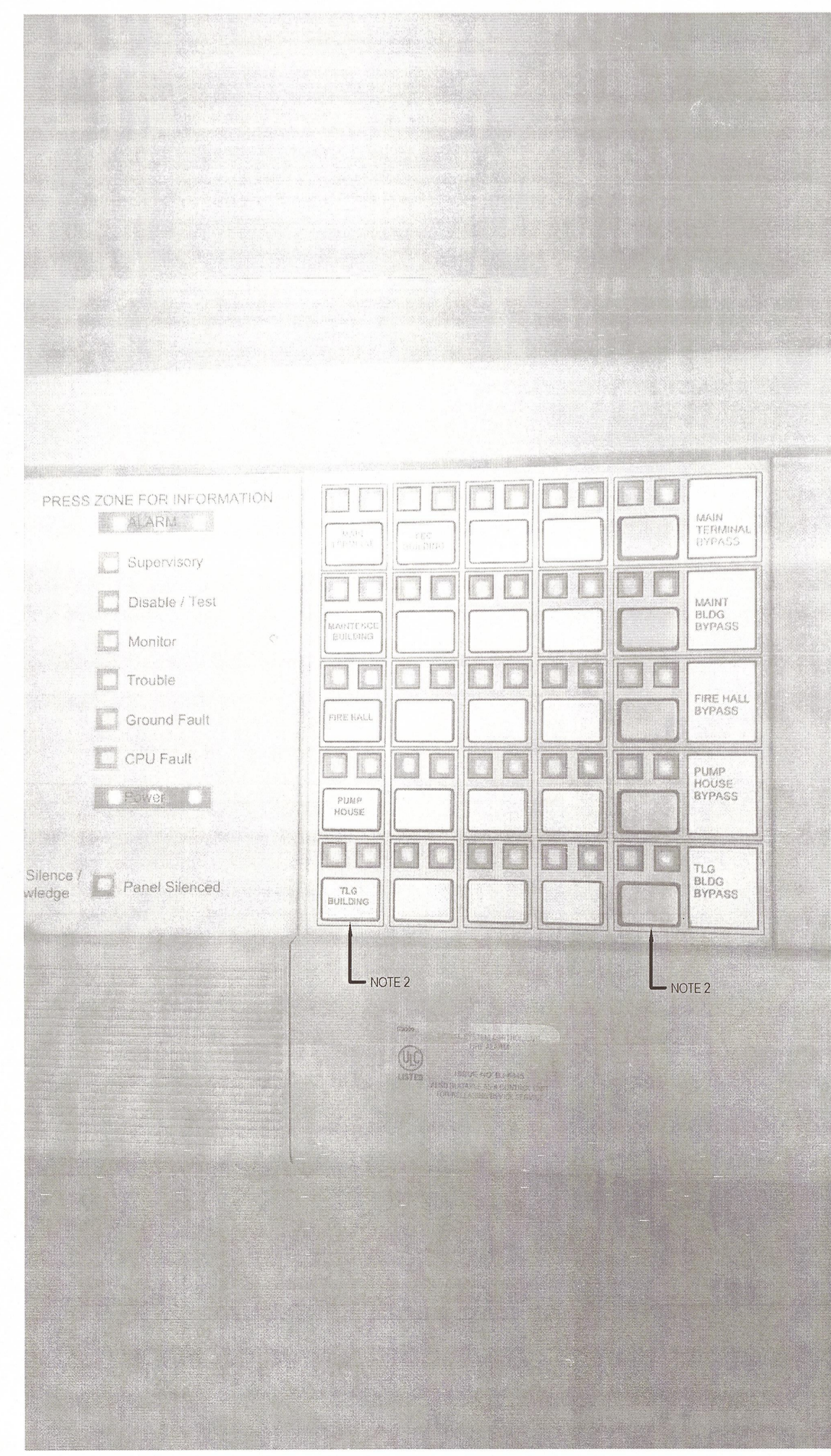
1 SITE PLAN
E300
1:500



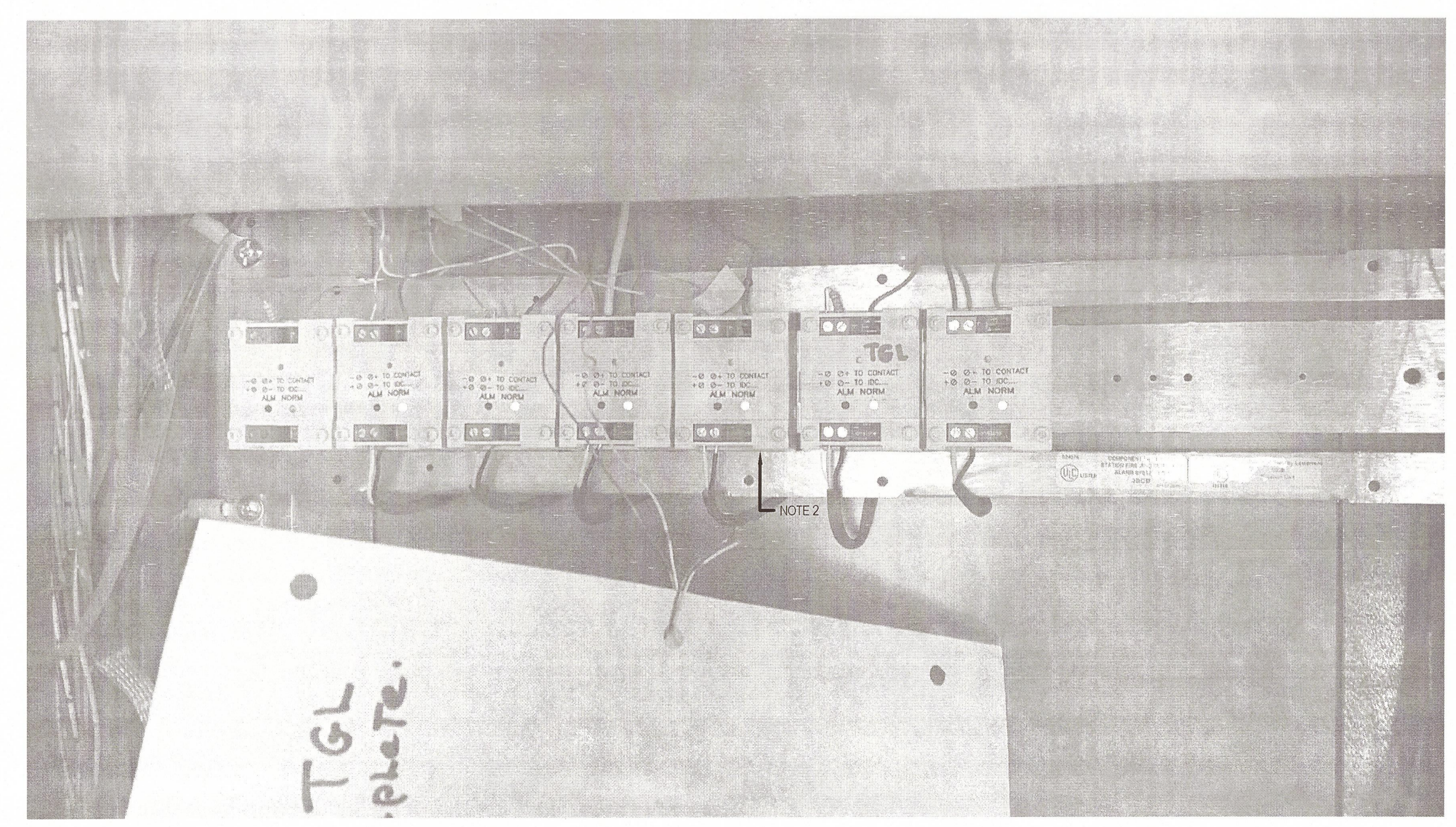
2 FIRE ALARM NETWORK RISER
E300
NTS



3 EXISTING FIREHALL FIRE ALARM PANEL
E300
NTS



4 EXISTING FIREHALL FIRE ALARM PANEL
E300
NTS



5 EXISTING FIREHALL FIRE ALARM PANEL
E300
NTS

- EXISTING FIRE HALL FIRE ALARM NOTES:**
1. EXISTING PANEL TO BE UPGRADED WITH NETWORK LINK TO CONNECT NEW FSS TOWER AND ATB PANELS. VERIFY SYSTEM AFTER NEW CONNECTIONS AND UPDATES ARE COMPLETE.
 2. UPDATE EXISTING ZONES AND ANNUNCIATOR TO SHOW ZONING AS SHOWN IN THESE DRAWINGS. REMOVE 'TGL' FROM LISTINGS.

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Drawn by/Dessiné par
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SITE PLAN WITH REVISED FIRE ALARM ZONES AND SYSTEM RISER

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