

1 LETHBRIDGE RESEARCH CENTRE SITE PLAN
E-0.1 SCALE N.T.S.



SYMBOL LEGEND:

POWER

- ☐ MISCELLANEOUS CABINETS AS INDICATED
- ☐ 208V PANELBOARD - SURFACE MOUNTED
- ☐ DISCONNECT SWITCH
- ☐ JUNCTION BOX - CEILING MOUNTED

SECURITY

- ☐ AUDIO/ VISUAL ALARM - CEILING MOUNTED
- ☐ CARD READER
- ☐ CARD READER WITH A KEYPAD
- ☐ DOOR POSITION SWITCH
- ☐ REQUEST TO EXIT
- ☐ ELECTRIC DOOR STRIKE
- ☐ MAGNETIC DOOR LOCK
- ☐ SECURITY CAMERA
- ☐ ACCESS CONTROL PANEL

COMMUNICATION

- ☐ TELEPHONE PANEL
- ☐ FIBER OPTIC

ABBREVIATIONS

- ERL - EXISTING TO BE RELOCATED
- R - EXISTING TO BE REMOVED
- RL - NEW LOCATION OF RELOCATED DEVICE
- N - NEW
- E - EXISTING TO REMAIN

SCOPE OF WORK IDENTIFICATION

- REFER TO SPECIFICATION SECTION 260502 - SCOPES OF WORK FOR WRITTEN DESCRIPTION OF EACH DEFINED SCOPE OF WORK.
- ☐ ACCESS CONTROL SYSTEM SCOPE OF WORK
 - ☐ CCTV SCOPE OF WORK
 - ☐ MISCELLANEOUS/MIXED/OTHER SCOPE OF WORK

DRAWING LIST:

DRAWING NUMBER	DRAWING TITLE
E-0.1	SITE PLAN, DRAWING LIST, SYMBOL LEGEND
E-1.1	LRC BASEMENT SECURITY PLAN
E-1.2	LRC MAIN FLOOR (WEST) SECURITY PLAN
E-1.3	LRC MAIN FLOOR (EAST) SECURITY PLAN
E-1.4	LRC SECOND FLOOR SECURITY PLAN
E-1.5	LRC THIRD FLOOR SECURITY PLAN
E-1.6	LRC SECURITY DETAILS
E-1.7	LRC SECURITY DETAILS
E-1.8	LRC SECURITY DETAILS
E-2.1	LRC OUTBUILDINGS SECURITY PLAN
E-2.2	LRC OUTBUILDINGS SECURITY PLAN
S1	STRUCTURAL NOTES
S2	STRUCTURAL DETAILS

security consultant

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number	revision	revision	date
D	ISSUED FOR TENDER		14/06/06
C	ISSUED FOR REVIEW		14/05/30
B	ISSUED FOR REVIEW		14/04/08
A	ISSUED FOR REVIEW		14/03/26

project project

A detail number / number du detail
 B source drawing no. / de dessin no.
 C detail on drawing no. / detail sur dessin no.

ELECTRONIC SECURITY SYSTEM UPGRADES

LETHBRIDGE RESEARCH CENTRE

Lethbridge, Alberta

drawing dessin

SITE PLAN, DRAWING LIST, SYMBOL LEGEND

designed	SJJ	conçu	
date	2014/04/08	date	
drawn	LR	dessiné	
date	2014/04/08	date	
approved	SJJ	approuvé	
date	2014/06/06	date	
Tender	TBA	Soumission	
PWOSC Project Manager	Administrateur de projets TPSCC	project number	number du projet
		140103.00	
drawing number	number du dessin		
E-0.1			

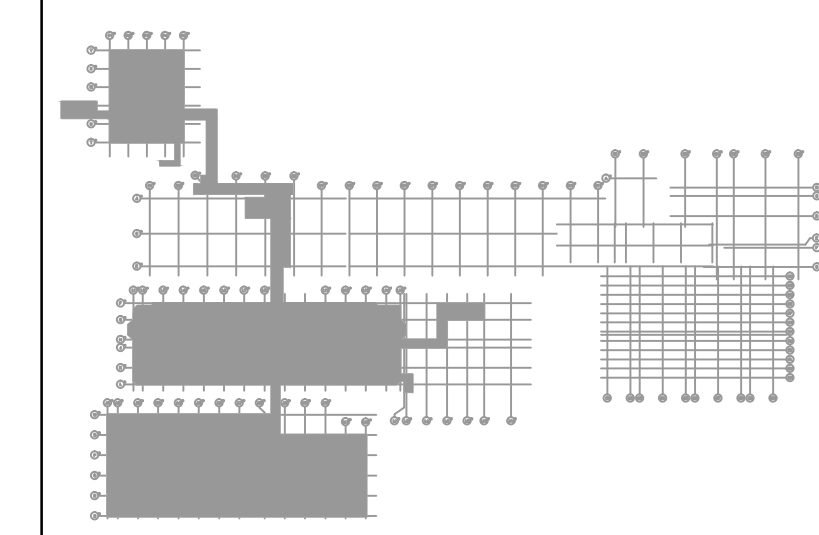


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KEY PLAN - BASEMENT
N.T.S.

number	revision	revision	date
D	ISSUED FOR TENDER		14/06/06
C	ISSUED FOR REVIEW		14/05/30
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A	B	C
A	A	A
C	B	C

project project

ELECTRONIC SECURITY SYSTEM UPGRADES

LETHBRIDGE RESEARCH CENTRE

Lethbridge, Alberta

drawing dessein

BASEMENT OVERALL PLAN - ELECTRONIC SECURITY SYSTEMS

designed **SJJ** concu

date **2014/04/08** date

drawn **LR** dessine

date **2014/04/08** date

approved **SJJ** approuve

date **2014/06/06** date

Tender **TBA** Soumission

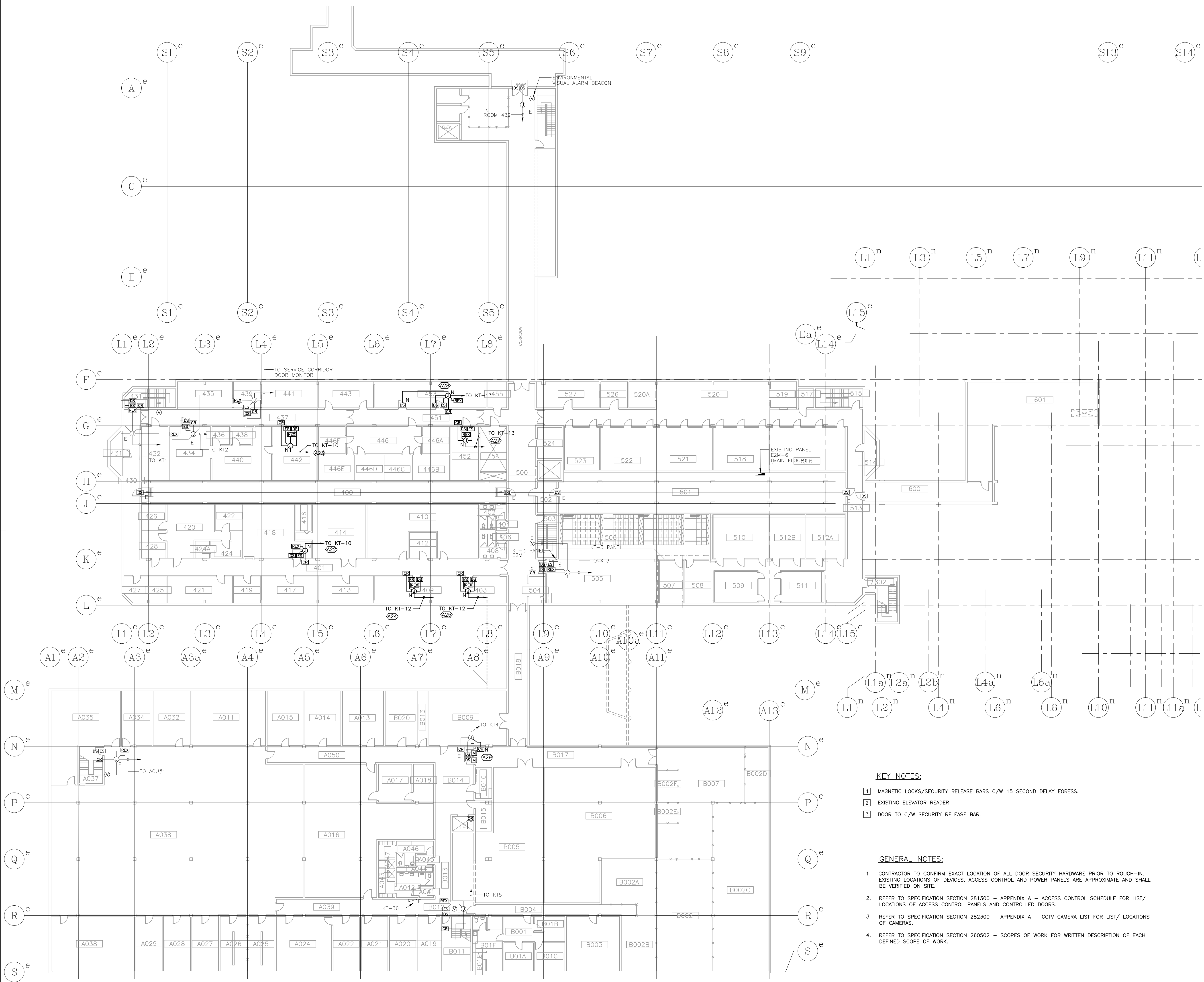
PWOSC Project Manager Administrateur de projets TPSCC

project number number du projet

140103.00

drawing number number du dessein

E-1.1



- KEY NOTES:**
- MAGNETIC LOCKS/SECURITY RELEASE BARS C/W 15 SECOND DELAY EGRESS.
 - EXISTING ELEVATOR READER.
 - DOOR TO C/W SECURITY RELEASE BAR.
- GENERAL NOTES:**
- CONTRACTOR TO CONFIRM EXACT LOCATION OF ALL DOOR SECURITY HARDWARE PRIOR TO ROUGH-IN. EXISTING LOCATIONS OF DEVICES, ACCESS CONTROL AND POWER PANELS ARE APPROXIMATE AND SHALL BE VERIFIED ON SITE.
 - REFER TO SPECIFICATION SECTION 281300 - APPENDIX A - ACCESS CONTROL SCHEDULE FOR LIST/ LOCATIONS OF ACCESS CONTROL PANELS AND CONTROLLED DOORS.
 - REFER TO SPECIFICATION SECTION 282300 - APPENDIX A - CCTV CAMERA LIST FOR LIST/ LOCATIONS OF CAMERAS.
 - REFER TO SPECIFICATION SECTION 260502 - SCOPES OF WORK FOR WRITTEN DESCRIPTION OF EACH DEFINED SCOPE OF WORK.

1 BASEMENT ELECTRONIC SECURITY SYSTEMS
E-1.1 SCALE 1:200

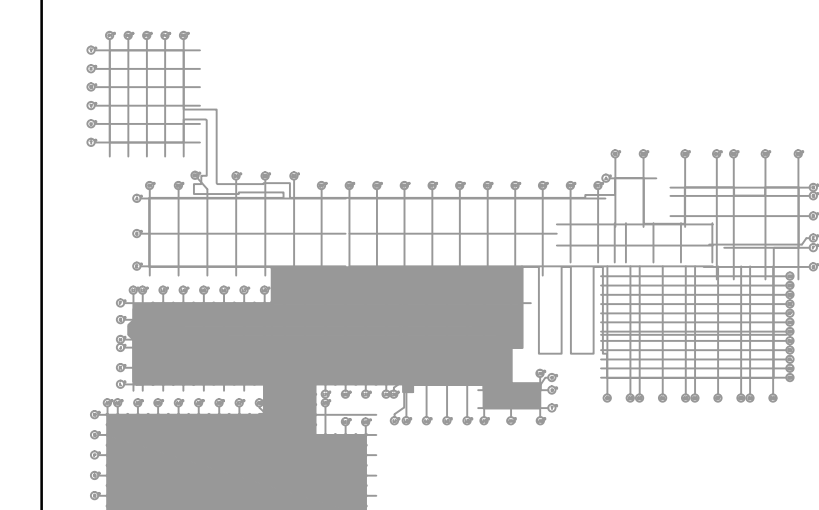


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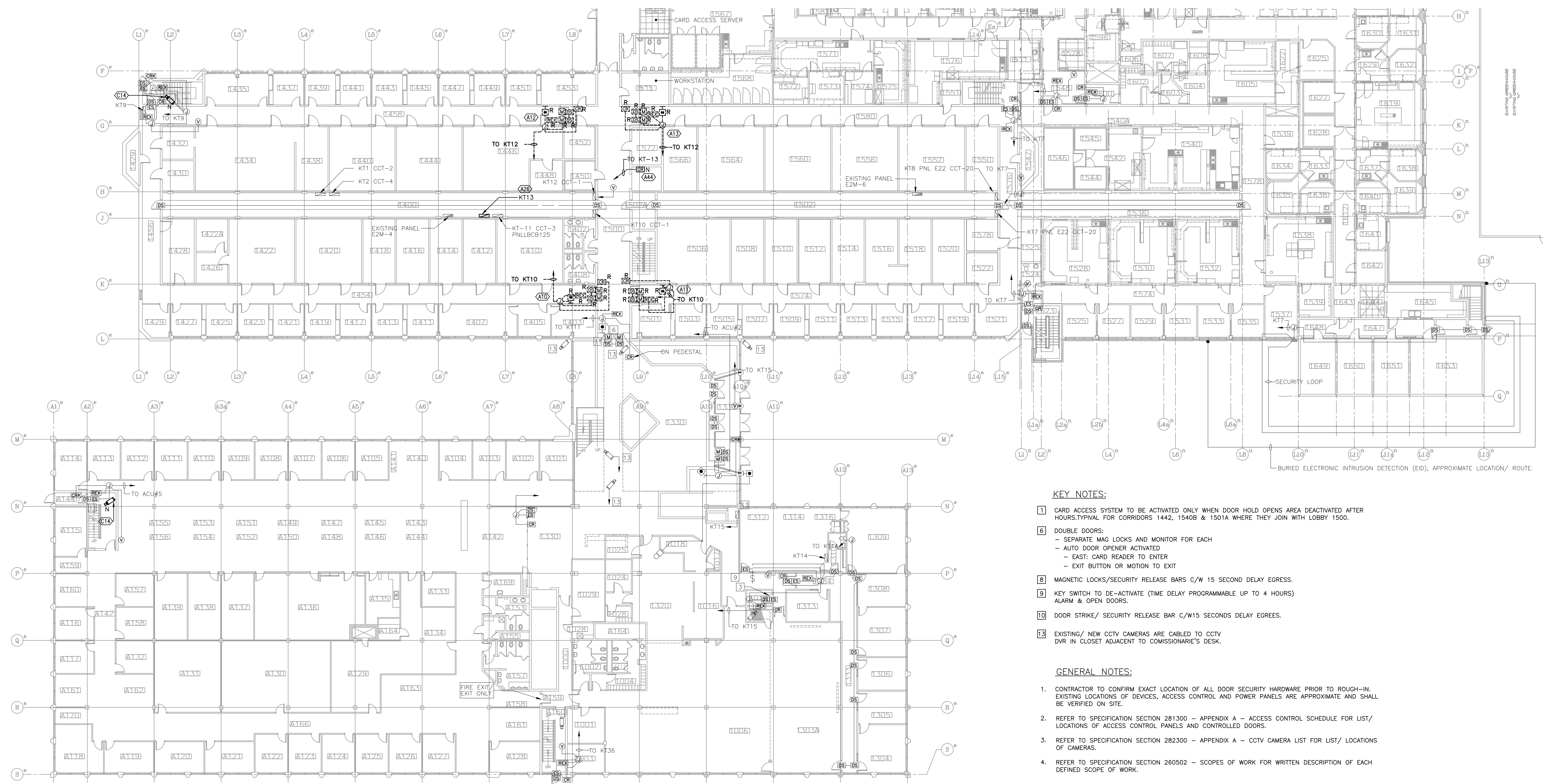


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KEY PLAN - MAIN FLOOR
N.T.S.



KEY NOTES:

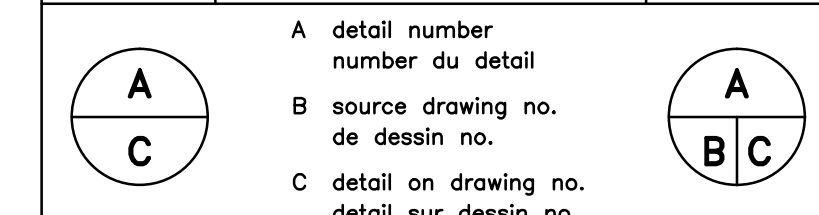
- 1 CARD ACCESS SYSTEM TO BE ACTIVATED ONLY WHEN DOOR HOLD OPENS AREA DEACTIVATED AFTER HOURS. TYPICAL FOR CORRIDORS 1442, 1540B & 1501A WHERE THEY JOIN WITH LOBBY 1500.
- 6 DOUBLE DOORS:
 - SEPARATE MAG LOCKS AND MONITOR FOR EACH
 - AUTO DOOR OPENER ACTIVATED
 - EAST, CARD READER TO ENTER
 - EXIT BUTTON OR MOTION TO EXIT
- 8 MAGNETIC LOCKS/SECURITY RELEASE BARS C/W 15 SECOND DELAY EGRESS.
- 9 KEY SWITCH TO DE-ACTIVATE (TIME DELAY PROGRAMMABLE UP TO 4 HOURS) ALARM & OPEN DOORS.
- 10 DOOR STRIKE/ SECURITY RELEASE BAR C/W15 SECONDS DELAY EGRESS.
- 13 EXISTING/ NEW CCTV CAMERAS ARE CABLED TO CCTV DVR IN CLOSET ADJACENT TO COMMISSIONAIRE'S DESK.

GENERAL NOTES:

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1 MAIN FLOOR - ADMINISTRATION & SERVICE WING
 E-1.2 SCALE 1:200

number	revision	revision	date
D	ISSUED FOR TENDER		14/06/06
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A	ISSUED FOR REVIEW		14/03/26



project
ELECTRONIC SECURITY SYSTEM UPGRADES
 projet

LETHBRIDGE RESEARCH CENTRE

Lethbridge, Alberta

drawing
MAIN FLOOR PLAN LAB BUILDING & ADMINISTRATION BUILDING - ELECTRONIC SECURITY SYSTEMS
 dessin

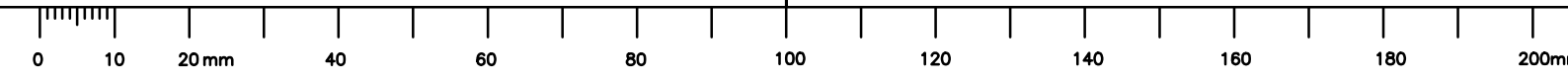
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date	2014/04/08	date
drawn	LR	dessiné
date	2014/04/08	date
approved	SJJ	approuvé
date	2014/06/06	date
Tender	TBA	Soumission

PWSC Project Manager / Administrateur de projets TPSCG
 project number / numéro du projet

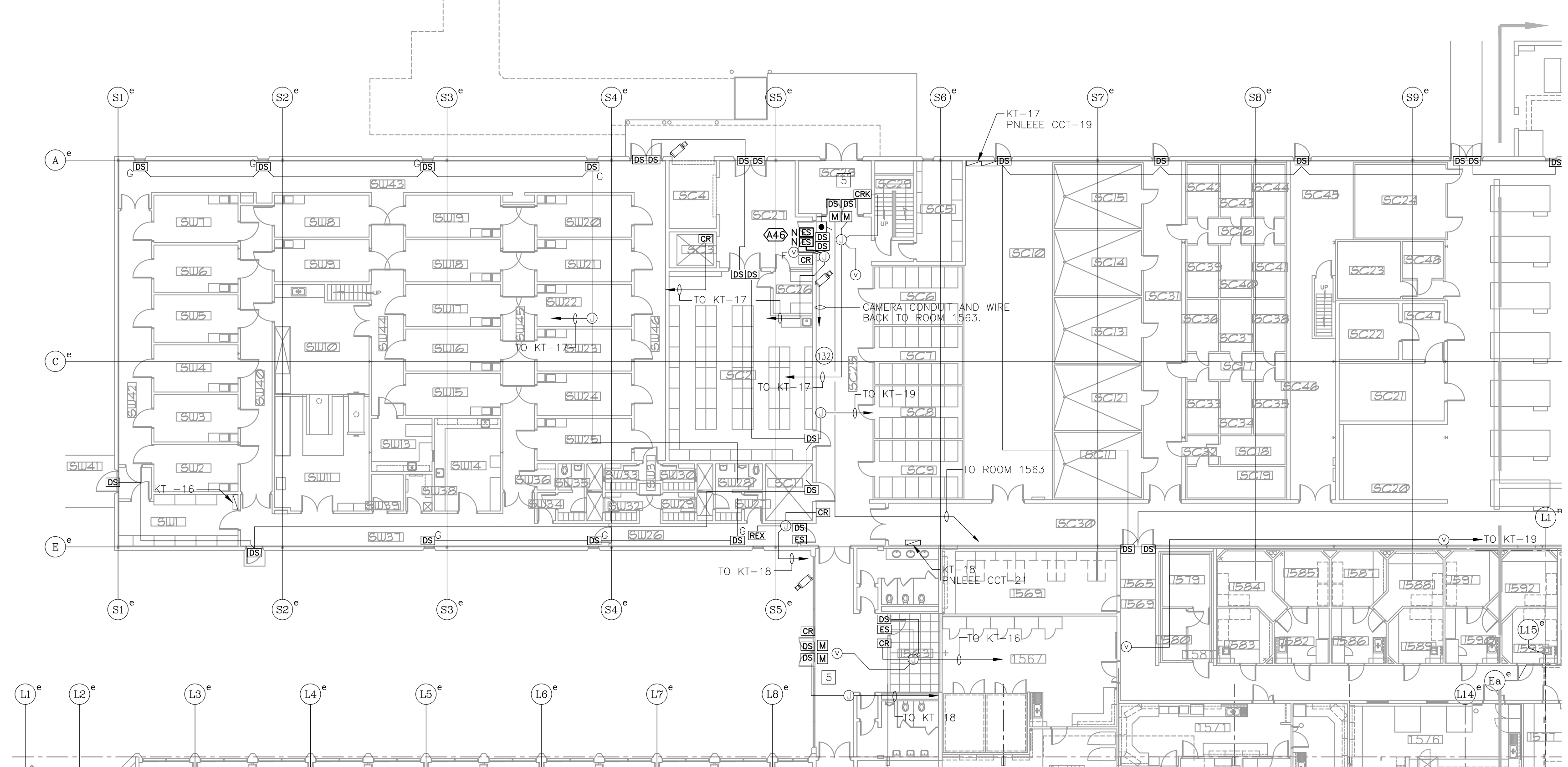
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drawing number / numéro du dessin

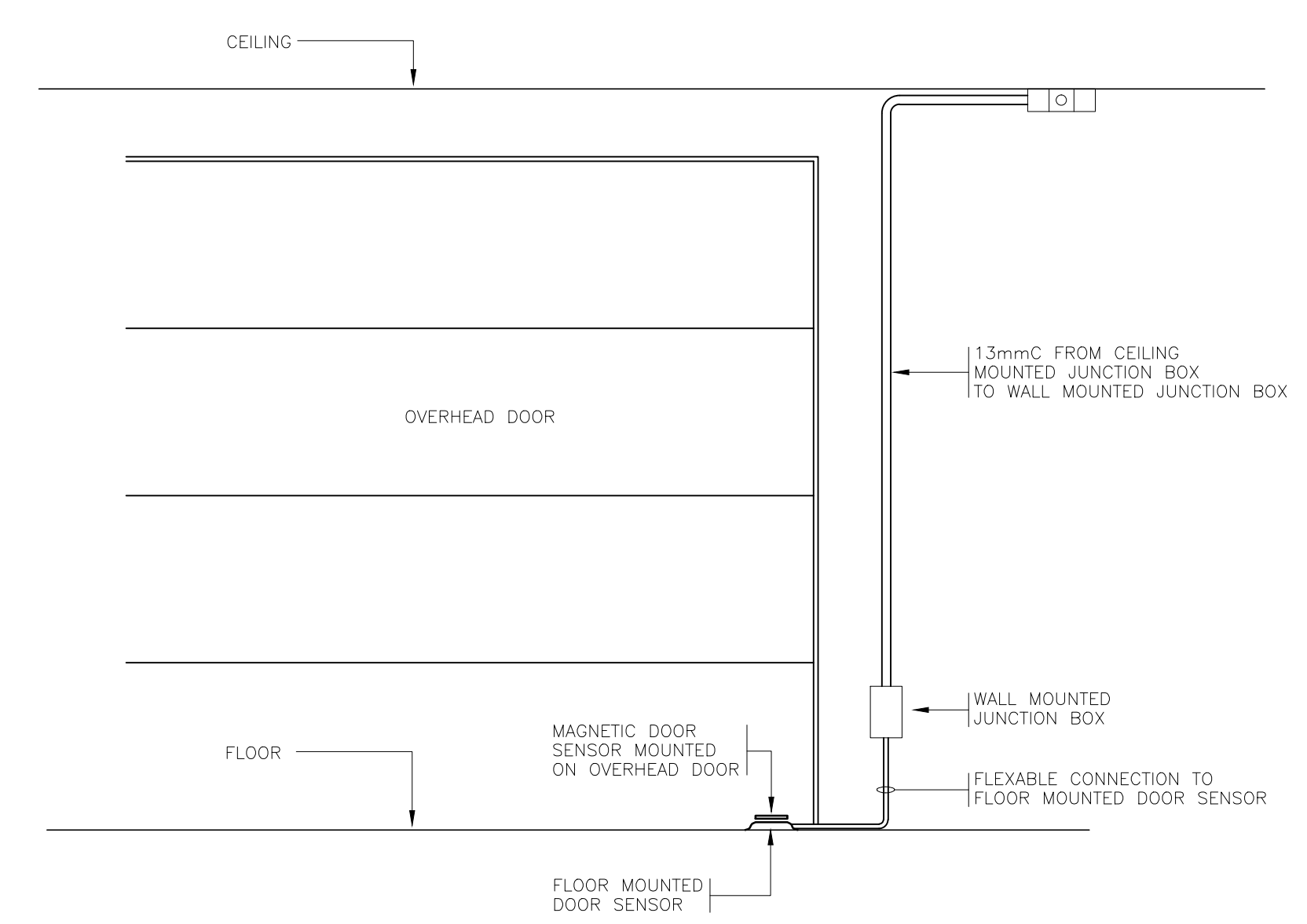
E-1.2



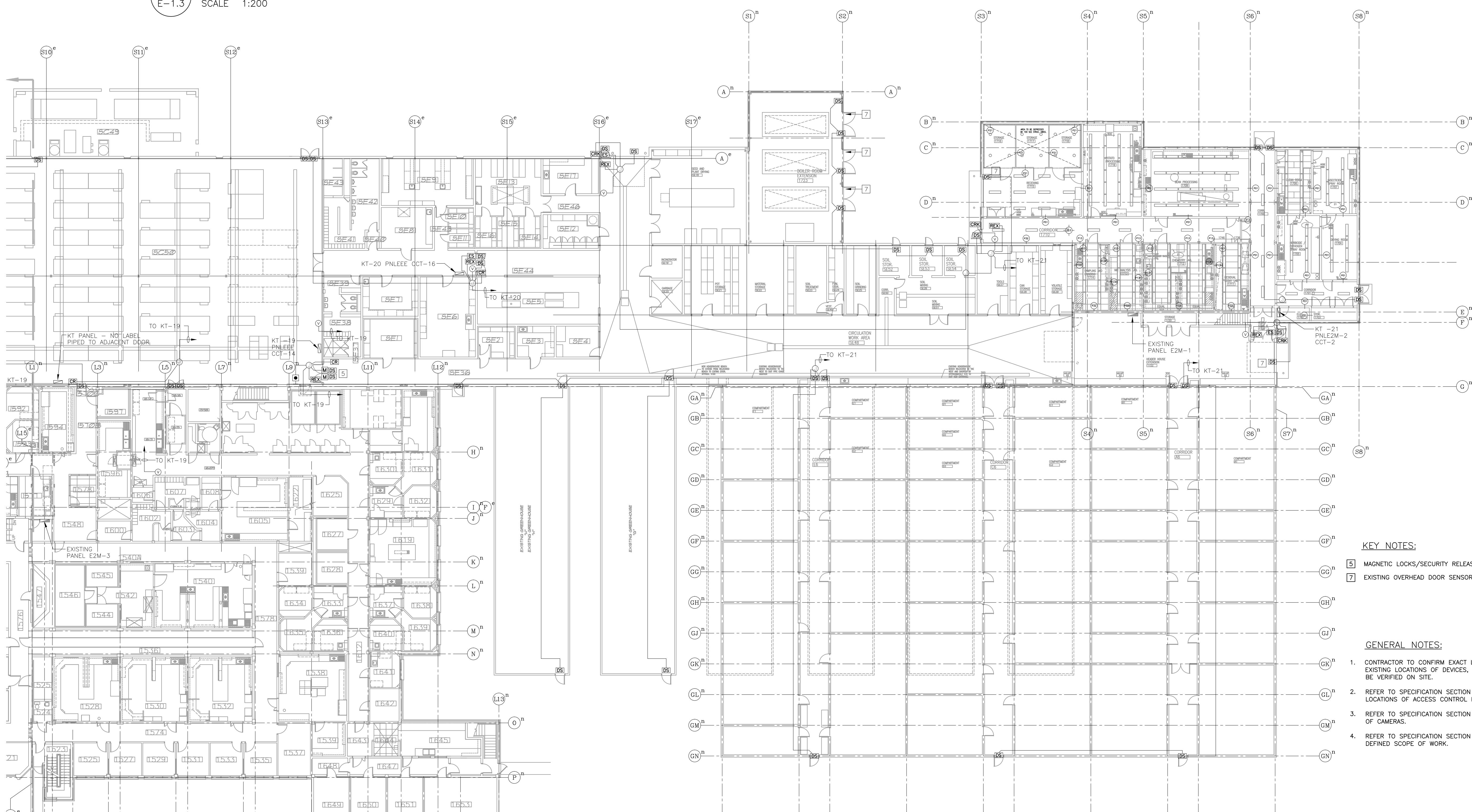
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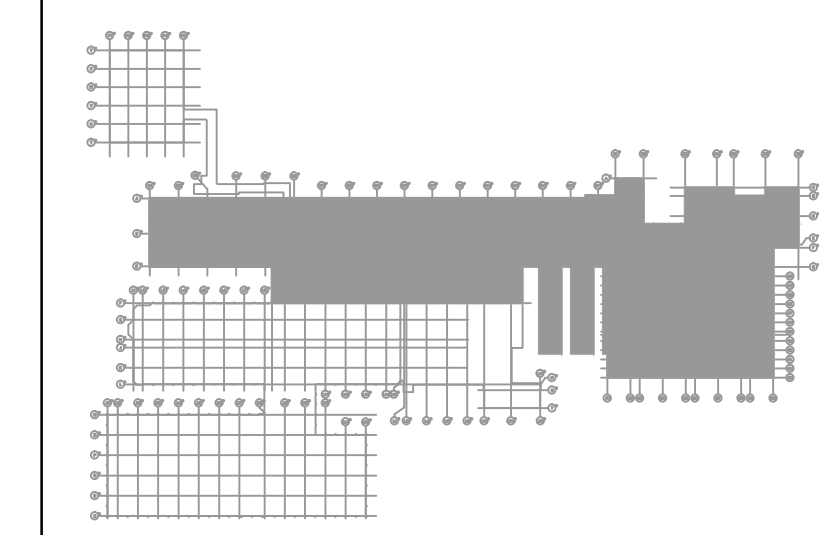
1 SERVICE WING - WEST PLAN
 E-1.3 SCALE 1:200



3 OVERHEAD DOOR SENSOR DETAIL
 E-1.3 SCALE N.T.S



2 SERVICE WING - EAST PLAN
 E-1.3 SCALE 1:200



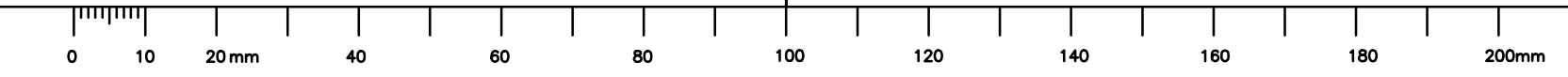
KEY PLAN - MAIN FLOOR
 N.T.S.

- KEY NOTES:**
- 5 MAGNETIC LOCKS/SECURITY RELEASE BARS C/W 15 SECOND DELAY EGRESS.
 - 7 EXISTING OVERHEAD DOOR SENSOR SEE DETAIL 3, DRAWING SHEET NO. E-1.3

- GENERAL NOTES:**
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project ELECTRONIC SECURITY SYSTEM UPGRADES
 LETHBRIDGE RESEARCH CENTRE
 Lethbridge, Alberta
 drawing MAIN FLOOR PLAN LAB BUILDING & POWERHOUSE - ELECTRONIC SECURITY SYSTEMS
 designed SJJ concu
 date 2014/04/08 date
 drawn LR desine
 date 2014/04/08 date
 approved SJJ approve
 date 2014/06/06 date
 Tender TBA Soumission
 PWSC Project Manager Administrateur de projets TPSGC
 project number number du projet
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 drawing number number du dessin
 E-1.3

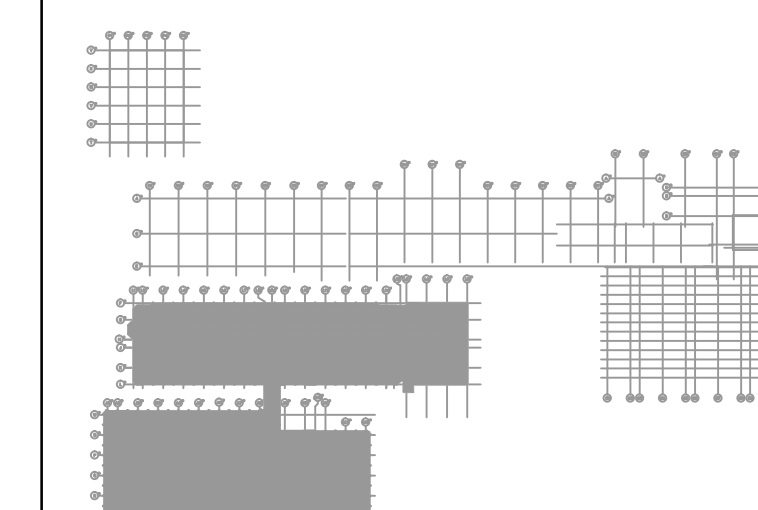


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KEY PLAN - 2ND FLOOR
N.T.S.

D	ISSUED FOR TENDER	14/06/06
C	ISSUED FOR REVIEW	14/05/30
B	ISSUED FOR REVIEW	14/04/08
A	ISSUED FOR REVIEW	14/03/26

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C	detail on drawing no.	detail sur dessin no.	

project **ELECTRONIC SECURITY SYSTEM UPGRADES** projet

LETHBRIDGE RESEARCH CENTRE

Lethbridge, Alberta

drawing **SECOND FLOOR PLAN - ELECTRONIC SECURITY SYSTEMS** dessin

designed **SJJ** concu

date **2014/04/08** date

drawn **LR** dessine

date **2014/04/08** date

approved **SJJ** approuve

date **2014/06/06** date

Tender **TBA** Soumission

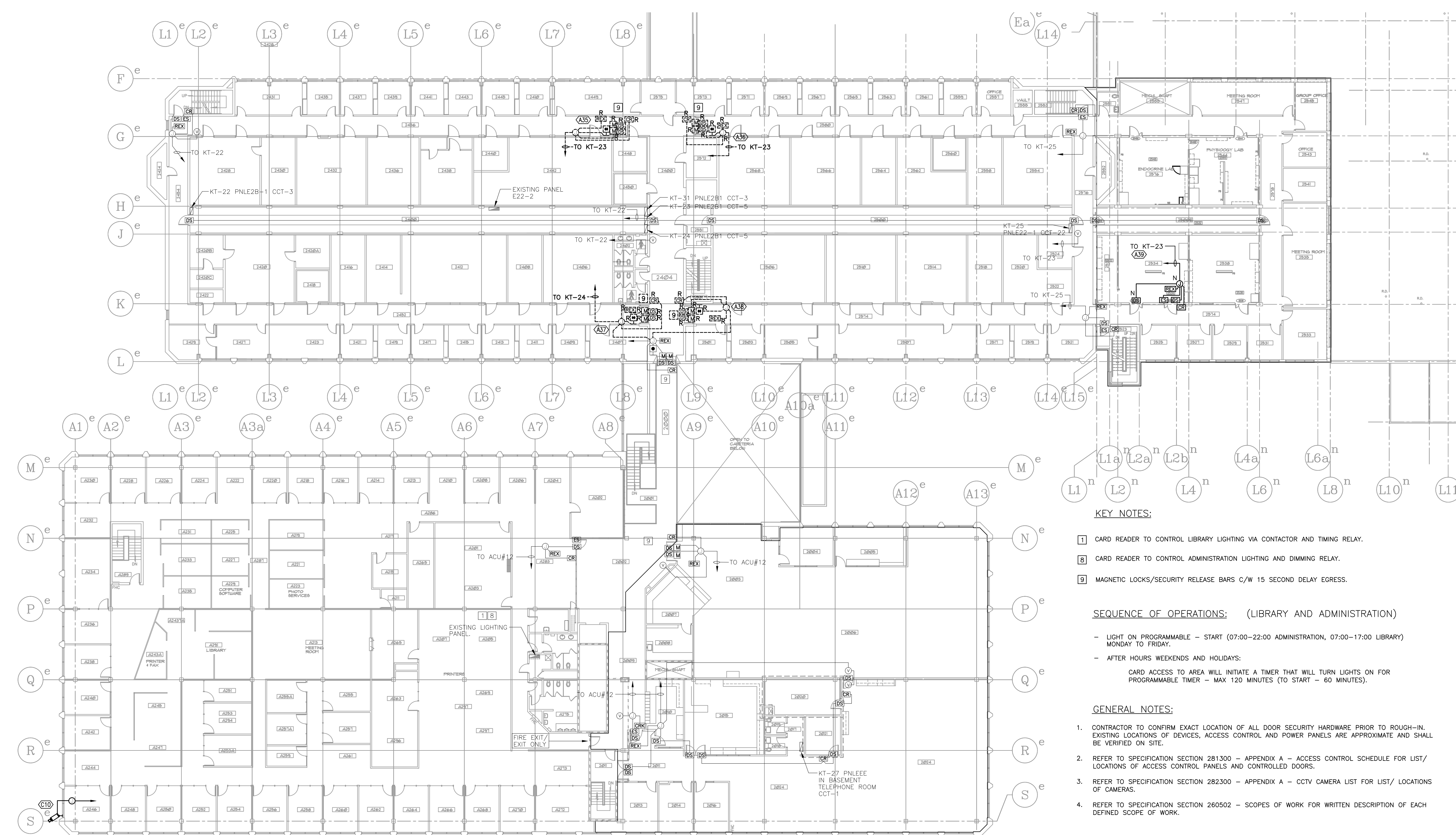
PWSC Project Manager / Administrateur de projets TPSCG

project number / number du projet

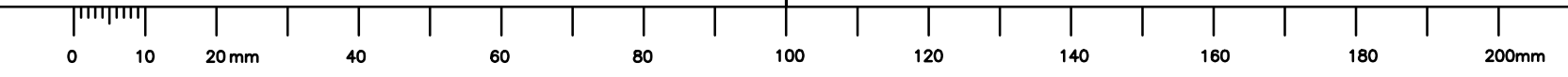
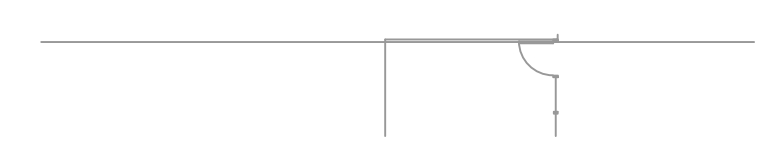
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drawing number / number du dessin

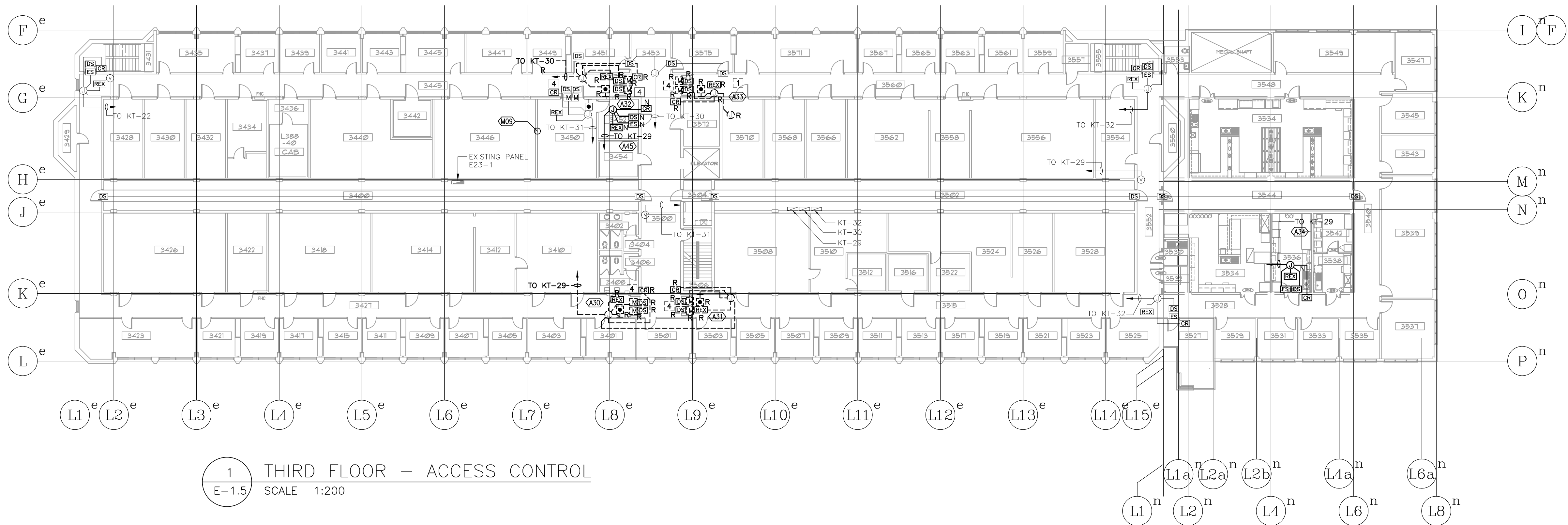
E-1.4



1 SECOND FLOOR
E-1.4 SCALE 1:200



- KEY NOTES:**
- [1] CARD READER TO CONTROL LIBRARY LIGHTING VIA CONTACTOR AND TIMING RELAY.
 - [2] CARD READER TO CONTROL ADMINISTRATION LIGHTING AND DIMMING RELAY.
 - [3] MAGNETIC LOCKS/SECURITY RELEASE BARS C/W 15 SECOND DELAY EGRESS.
- SEQUENCE OF OPERATIONS: (LIBRARY AND ADMINISTRATION)**
- LIGHT ON PROGRAMMABLE - START (07:00-22:00 ADMINISTRATION, 07:00-17:00 LIBRARY) MONDAY TO FRIDAY.
 - AFTER HOURS WEEKENDS AND HOLIDAYS:
 CARD ACCESS TO AREA WILL INITIATE A TIMER THAT WILL TURN LIGHTS ON FOR PROGRAMMABLE TIMER - MAX 120 MINUTES (TO START - 60 MINUTES).
- GENERAL NOTES:**
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1 THIRD FLOOR - ACCESS CONTROL
E-1.5 SCALE 1:200

KEY NOTES:

- 1 CARD ACCESS WHEN ACTIVATED TURNS POWER ON EXISTING CONTACTOR TO CENTRIFUGE RECEPTACLE (ROOM 3568) FOR 120 MIN. VIA EXISTING CONTROL RELAY.
- 4 MAGNETIC LOCKS/SECURITY RELEASE BARS TO C/W 15 SECOND DELAY EGRESS.

GENERAL NOTES:

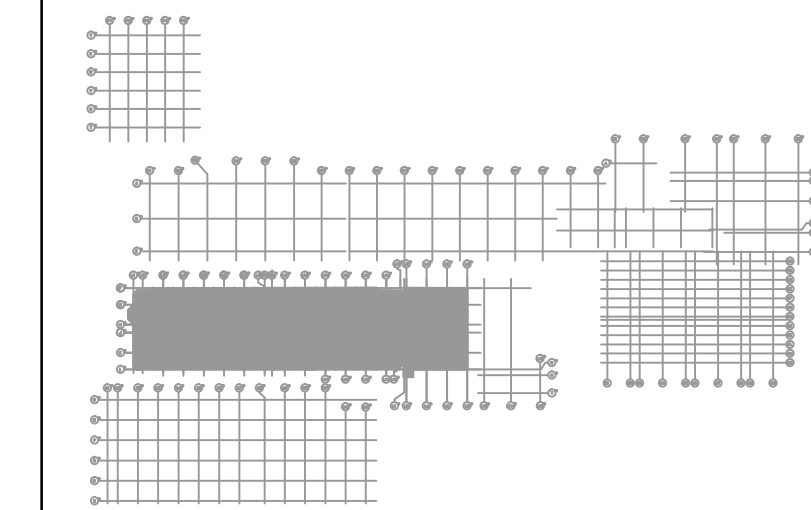
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KEY PLAN - 3RD FLOOR
N.T.S.

D	ISSUED FOR TENDER	14/06/06
C	ISSUED FOR REVIEW	14/05/30
B	ISSUED FOR REVIEW	14/04/08
A	ISSUED FOR REVIEW	14/03/26
number	revision	date

A	A detail number number du detail	A
B	B source drawing no. de dessin no.	B
C	C detail on drawing no. detail sur dessin no.	C

project / projet

ELECTRONIC SECURITY SYSTEM UPGRADES

LETHBRIDGE RESEARCH CENTRE

Lethbridge, Alberta

drawing / dessin

THIRD FLOOR PLAN - ELECTRONIC SECURITY SYSTEMS

designed / conçu SJJ

date / date 2014/04/08

drawn / dessiné LR

date / date 2014/04/08

approved / approuvé SJJ

date / date 2014/06/06

Tender / Soumission TBA

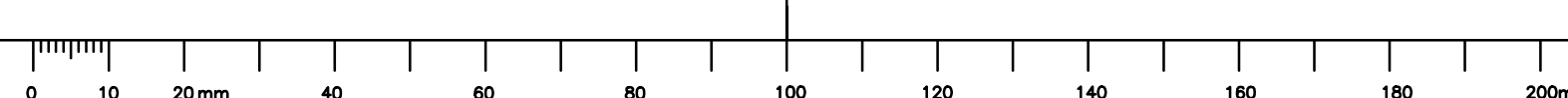
PWOSC Project Manager / Administrateur de projets TPSGC

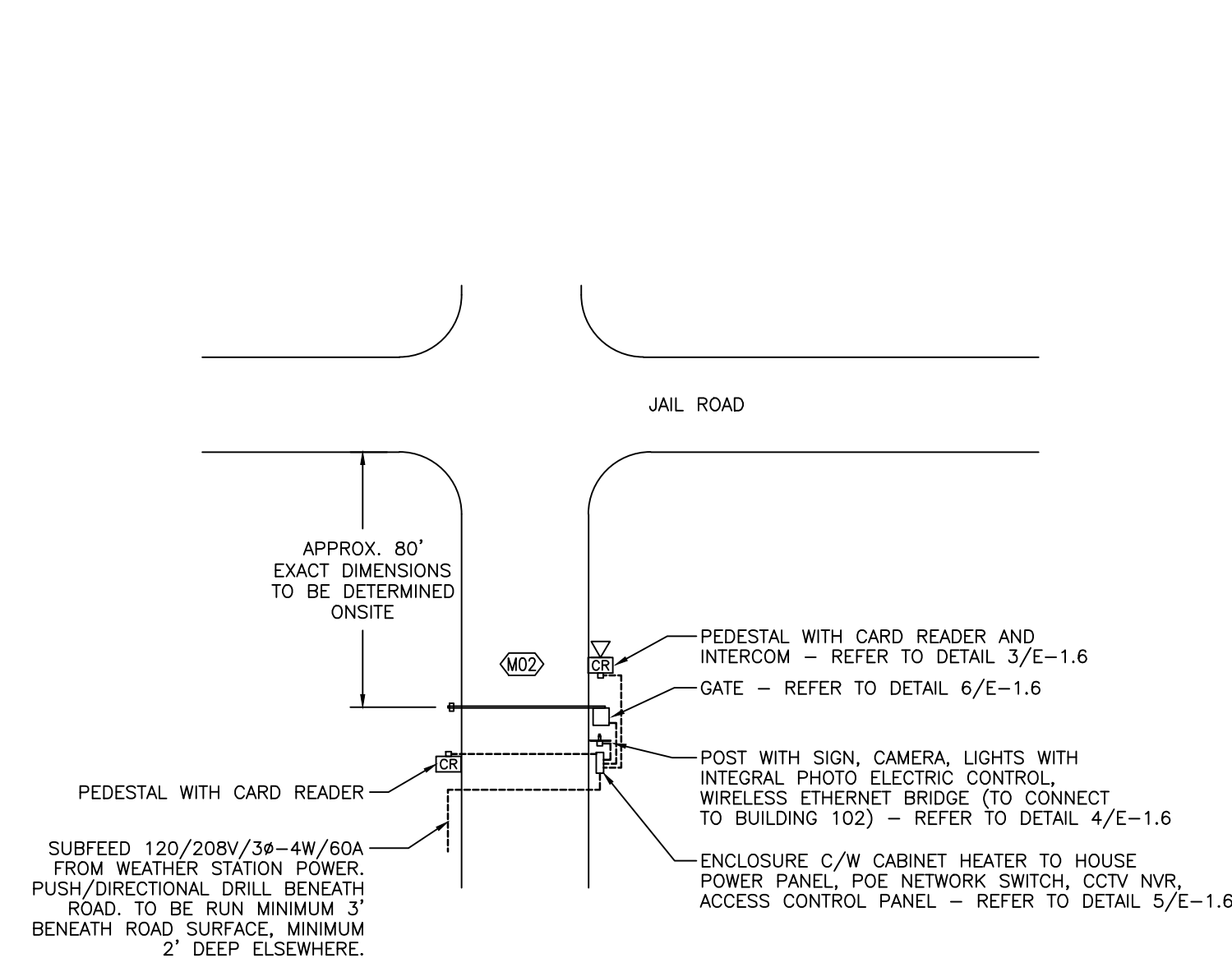
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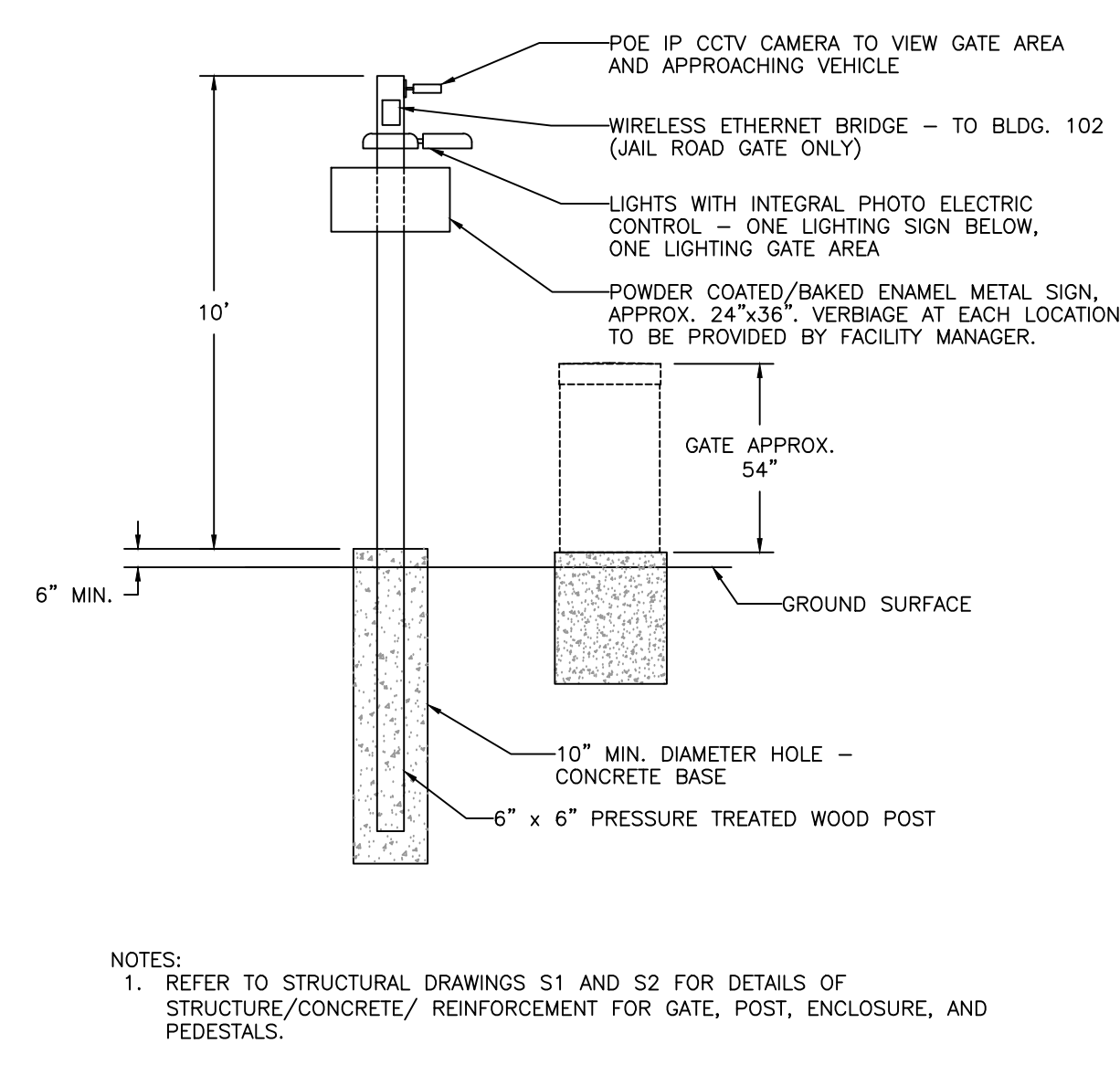
drawing number / number du dessin

E-1.5

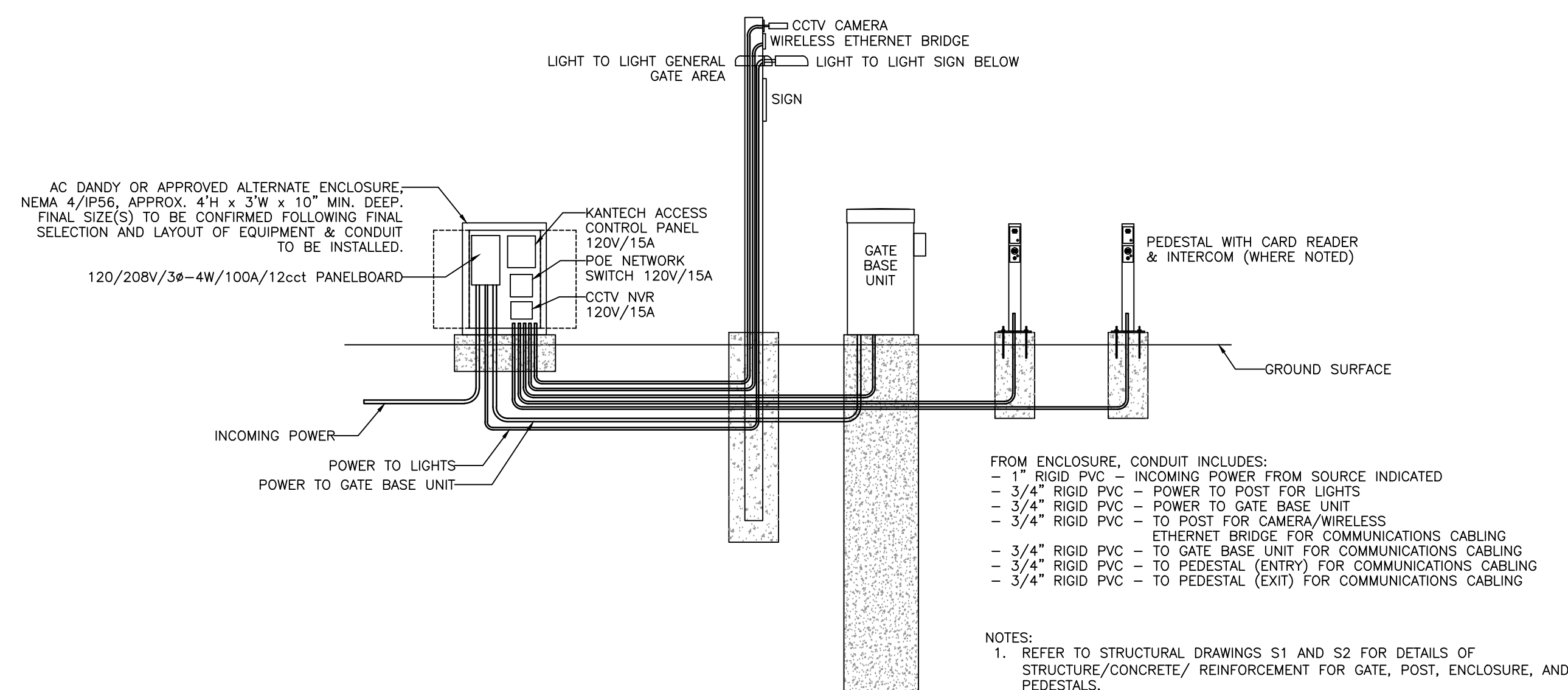




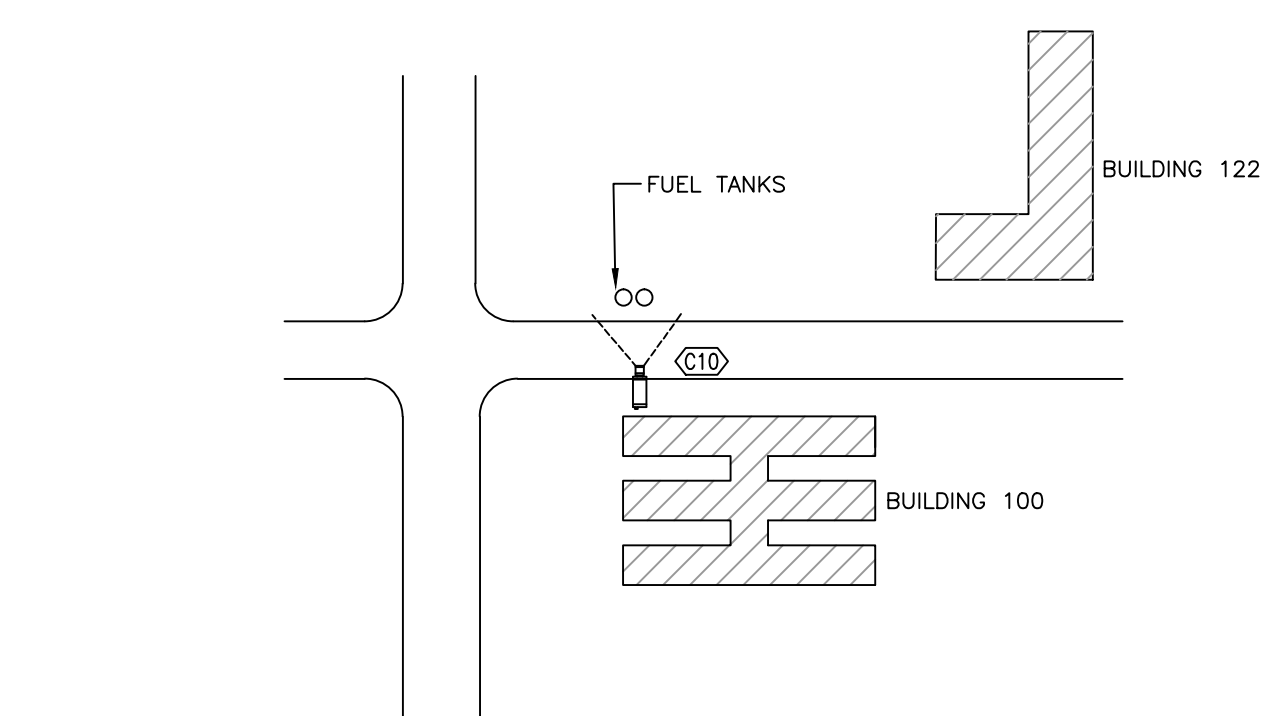
1 JAIL ROAD GATE DETAILS
 E-1.6 SCALE N.T.S.



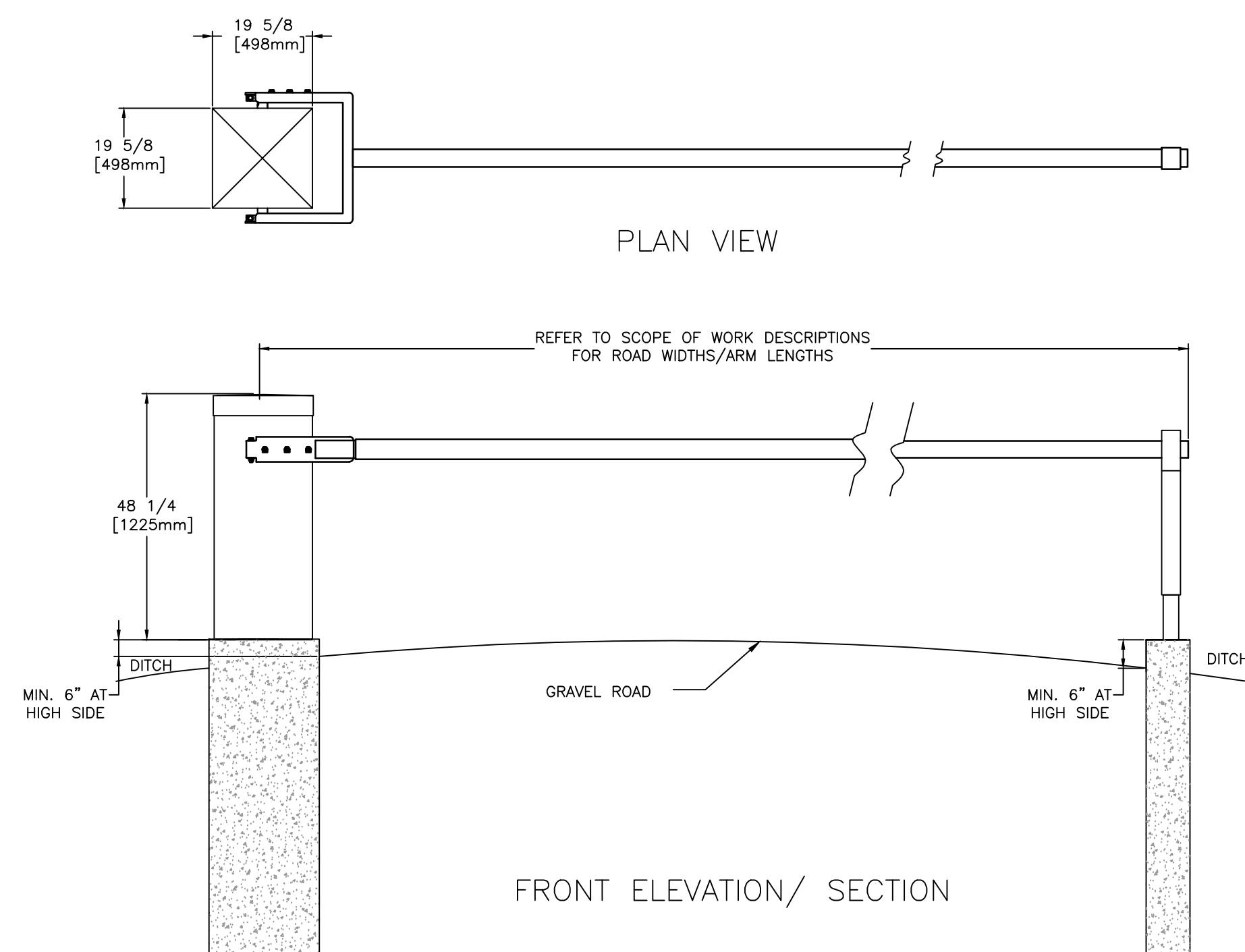
4 TYPICAL POST DETAIL
 E-1.6 SCALE N.T.S.



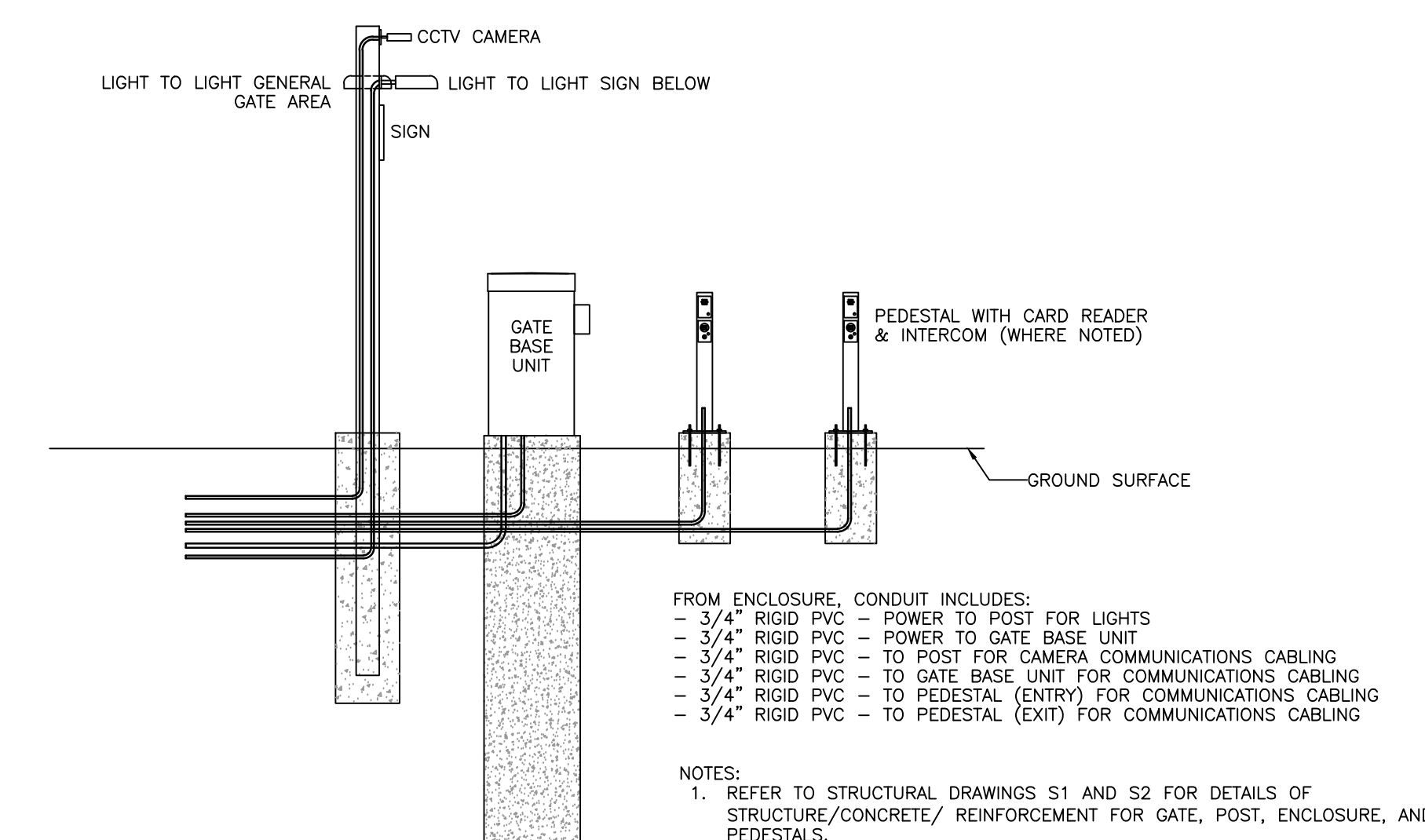
5 TYPICAL GATE ENCLOSURE/CONDUIT DETAIL
 E-1.6 SCALE N.T.S.



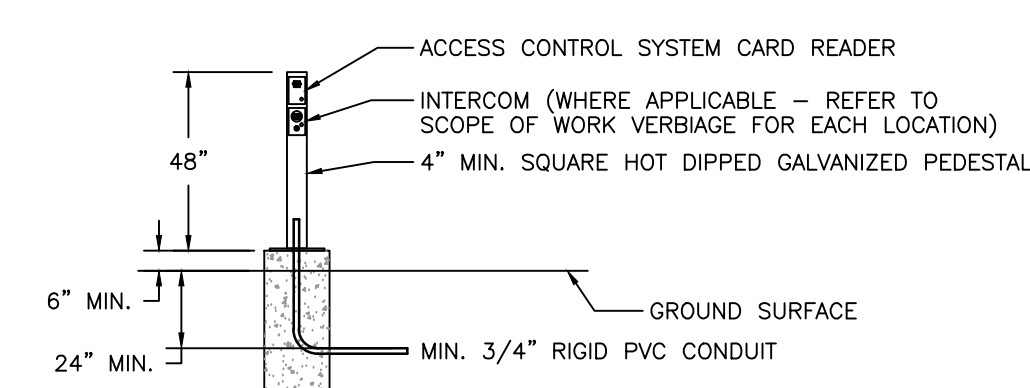
2 FUEL TANKS WEST OF BUILDING 122
 E-1.6 SCALE N.T.S.



6 TYPICAL GATE DETAIL
 E-1.6 SCALE N.T.S.



7 TYPICAL GATE WITHOUT ENCLOSURE/CONDUIT DETAIL
 E-1.6 SCALE N.T.S.

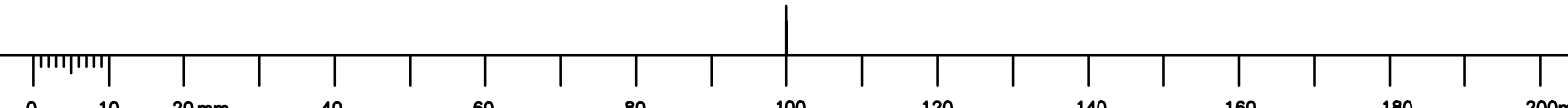


3 TYPICAL PEDESTAL DETAIL
 E-1.6 SCALE N.T.S.

D	ISSUED FOR TENDER	14/06/06	
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project / projet
ELECTRONIC SECURITY SYSTEM UPGRADES
LETHBRIDGE RESEARCH CENTRE
 Lethbridge, Alberta
 drawing / dessin
LRC OUTBUILDINGS SECURITY PLANS

designed	SJJ	conçu
date drawn	2014/04/08 LR	date dessiné
date approved	2014/04/08 SJJ	date approuvé
date Tender	2014/06/06 TBA	date Soumission
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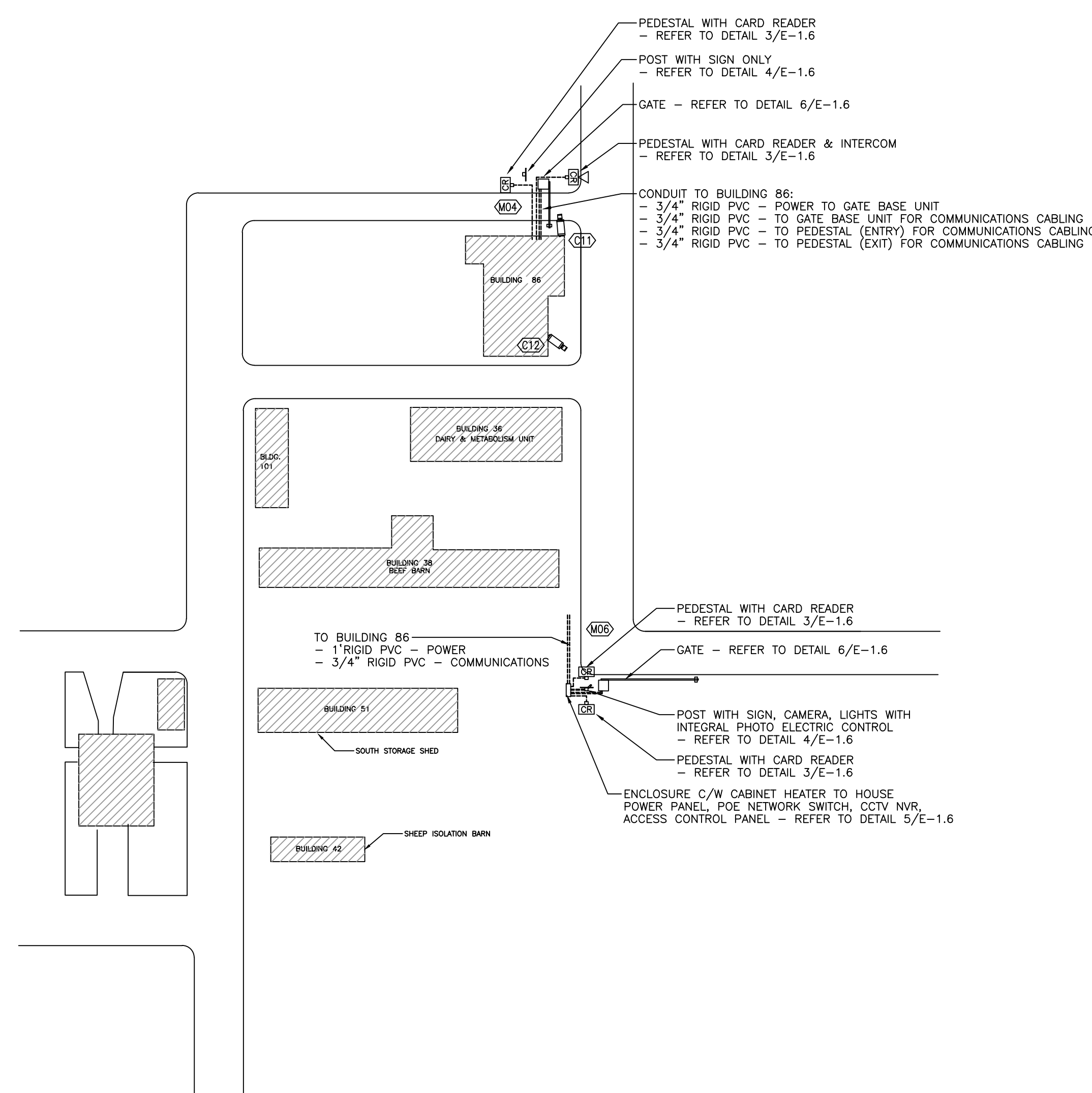


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1 DETAIL — AREA OF BUILDING 86
 E-1.7 SCALE N.T.S.

D	ISSUED FOR TENDER	14/06/06
C	ISSUED FOR REVIEW	14/05/30
B	ISSUED FOR REVIEW	14/04/08
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number	revision	revision date
A	A detail number	A
C	number du detail	B C
	B source drawing no.	
	de dessin no.	
	C detail on drawing no.	
	detail sur dessin no.	

project ELECTRONIC SECURITY SYSTEM UPGRADES
 LETHBRIDGE RESEARCH CENTRE
 Lethbridge, Alberta

drawing LRC OUTBUILDINGS SECURITY PLANS

designed	SJJ	concu
date	2014/04/08	date
drawn	LR	dessine
date	2014/04/08	date
approved	SJJ	approuve
date	2014/06/06	date
Tender	TBA	Soumission

PWOSC Project Manager Administrateur de projets TPSCG
 project number 140103.00
 drawing number E-1.7

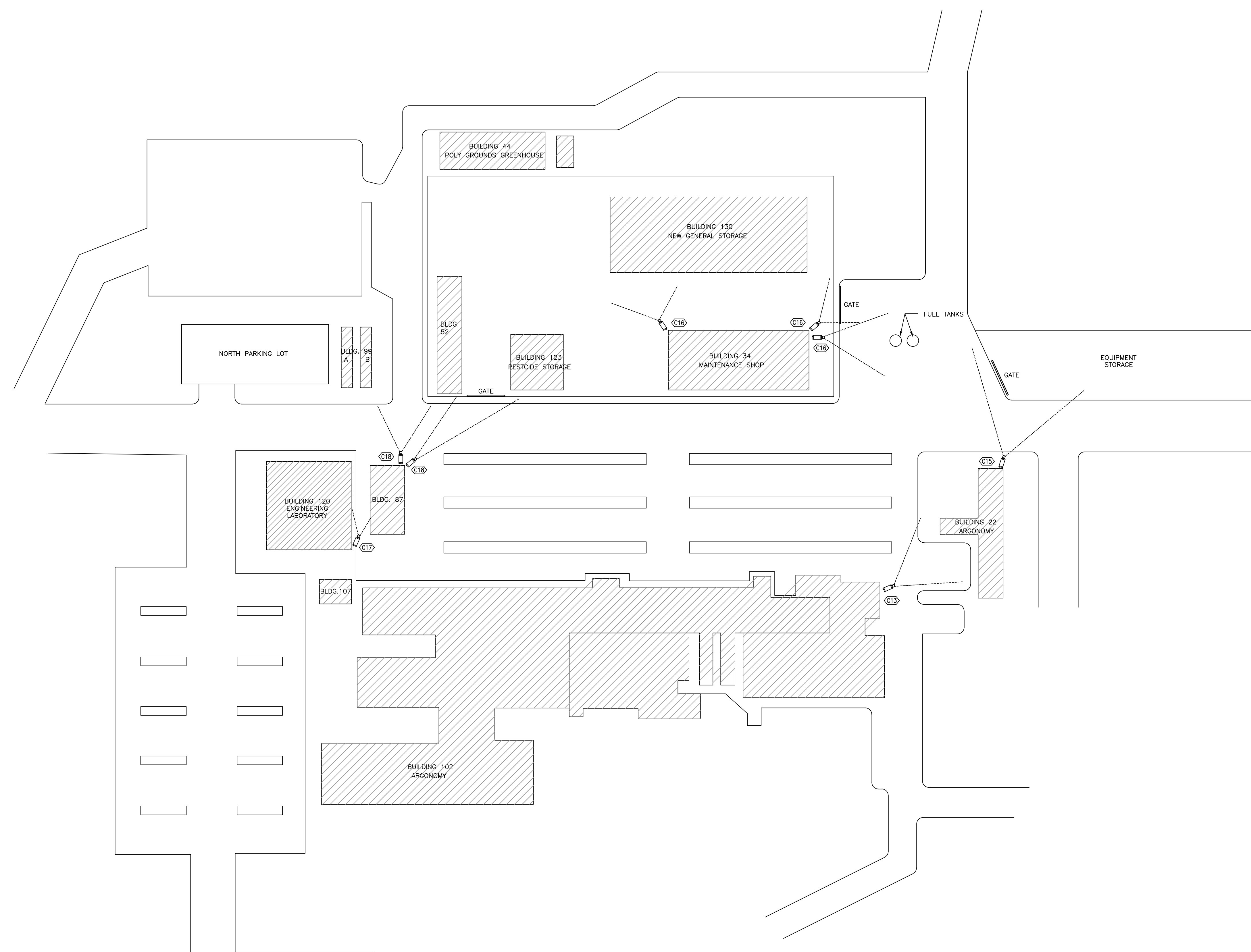


security consultant



MASKELL PLENZIK & PARTNERS ENGINEERING

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D	ISSUED FOR TENDER	14/06/06
C	ISSUED FOR REVIEW	14/05/30
B	ISSUED FOR REVIEW	14/04/08
A	ISSUED FOR REVIEW	14/03/26

number	revision	revision	date
A			
B			
C			

project ELECTRONIC SECURITY SYSTEM UPGRADES

LETHBRIDGE RESEARCH CENTRE
 Lethbridge, Alberta

drawing LRC OUTBUILDINGS SECURITY PLANS

designed	SJJ	conçu
date	2014/04/08	date
drawn	LR	dessiné
date	2014/04/08	date
approved	SJJ	approuvé
date	2014/06/06	date
Tender	TBA	Soumission

PWOSC Project Manager / Administrateur de projets TPSCC

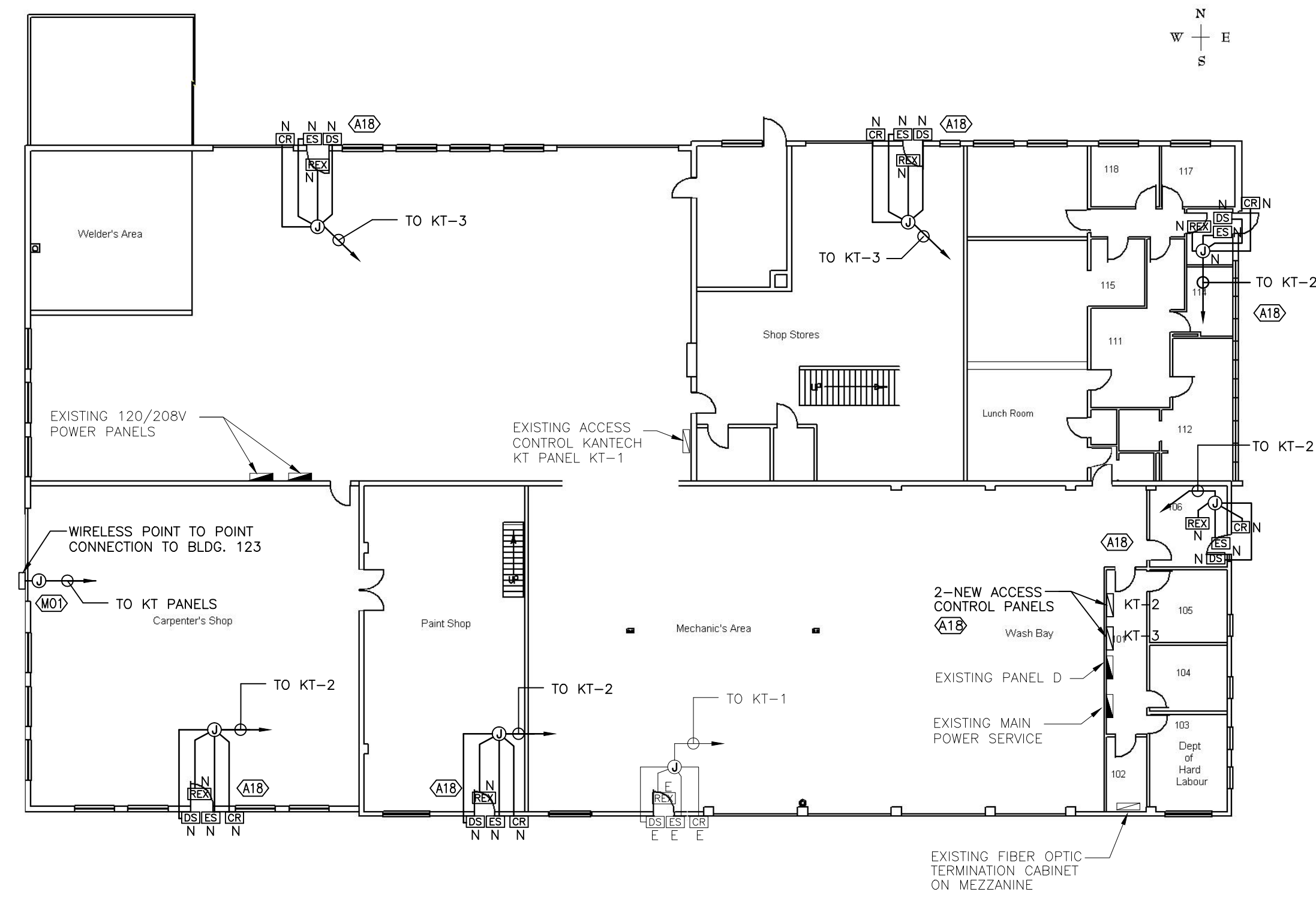
project number 140103.00

drawing number E-1.8

1 DETAIL — AREA NORTH OF BUILDING 102
 E-1.8 SCALE N.T.S.

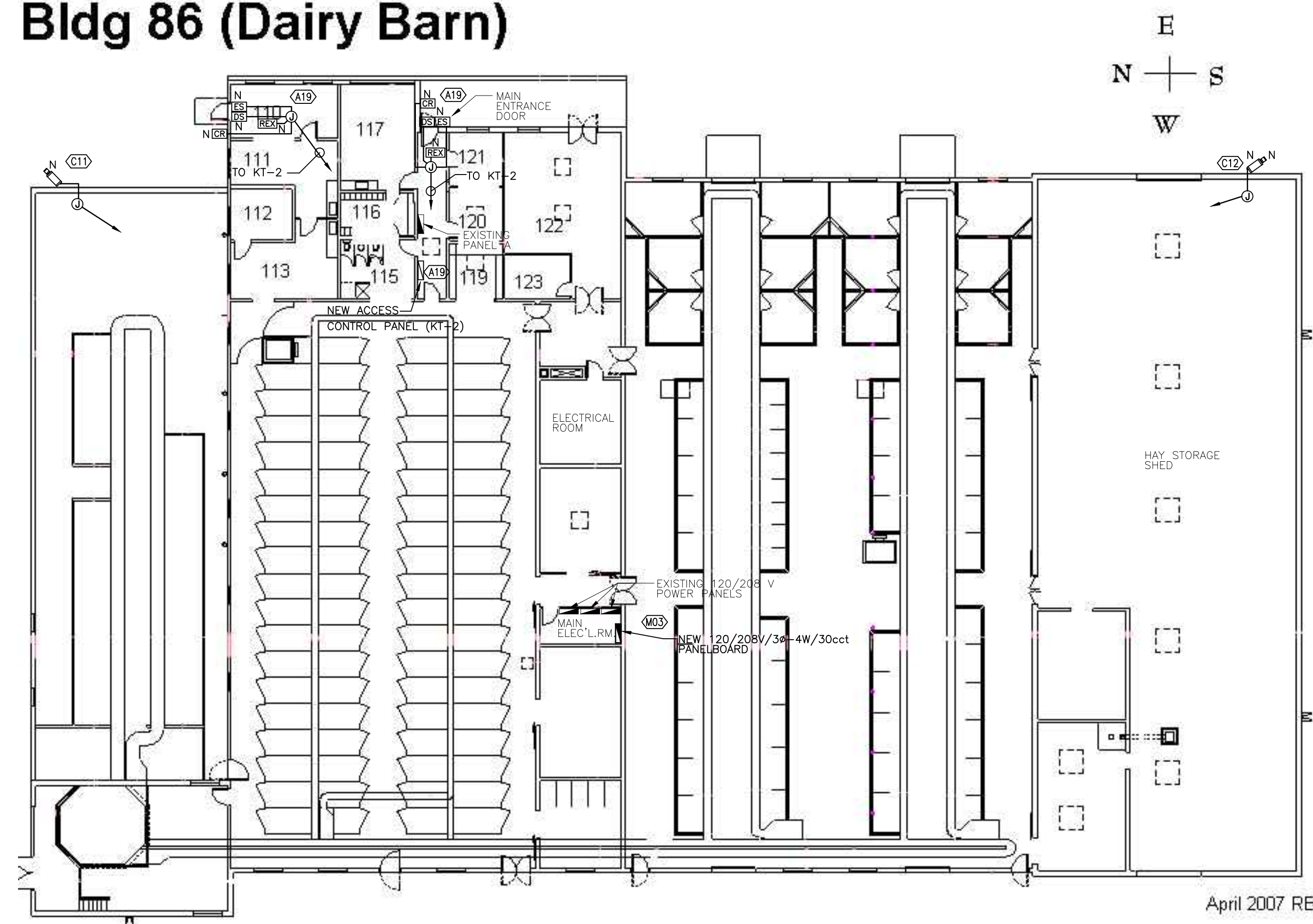


Bldg 34 (Maintenance Shop)



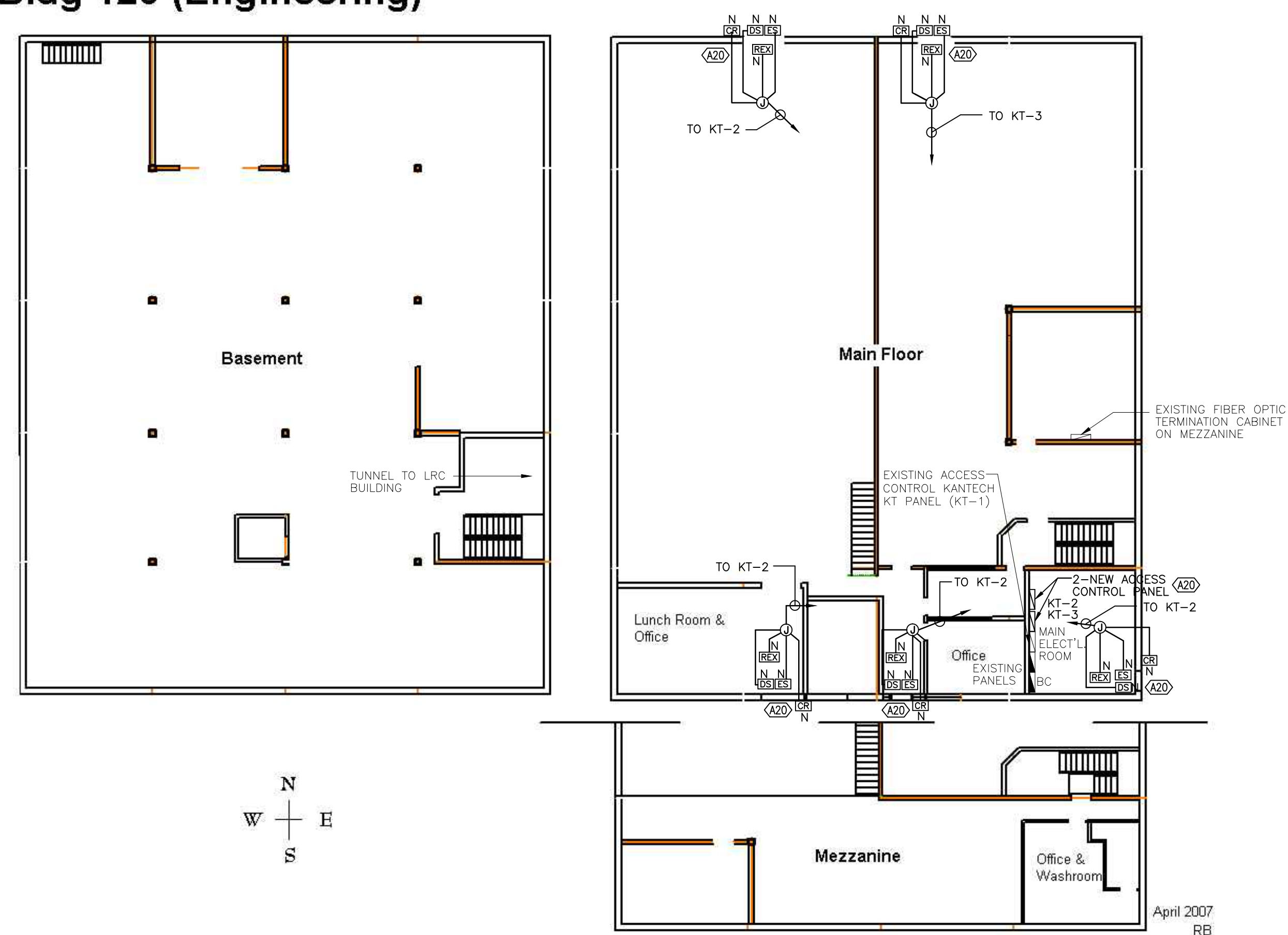
1 BLDG. 34 MAINTENANCE SHOP - SECURITY PLAN
E-2.1 SCALE 1:200

Bldg 86 (Dairy Barn)



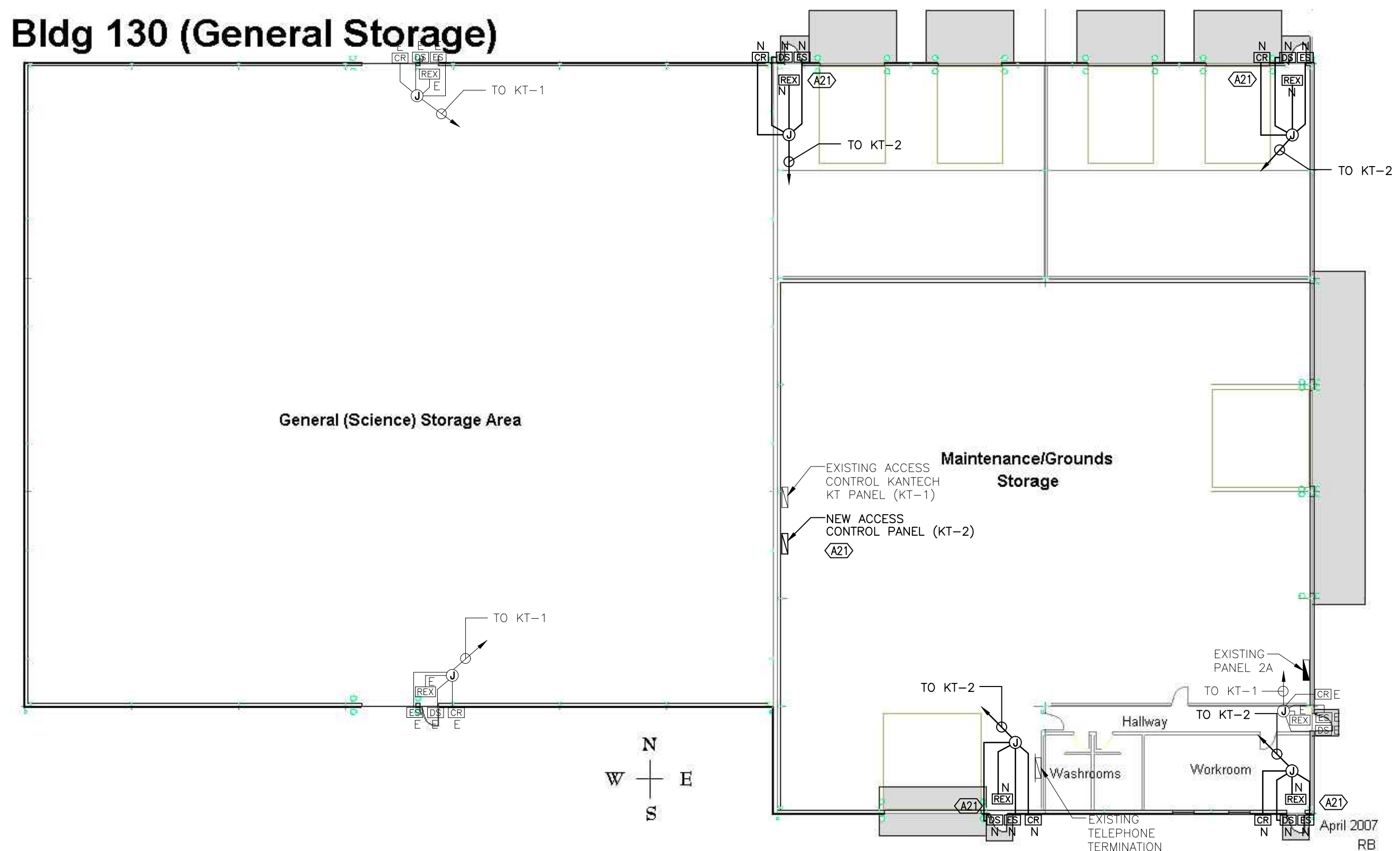
2 BLDG. 86 DAIRY BARN - SECURITY PLAN
E-2.1 SCALE 1:200

Bldg 120 (Engineering)



3 BLDG. 120 ENGINEERING - SECURITY PLAN
E-2.1 SCALE 1:200

Bldg 130 (General Storage)



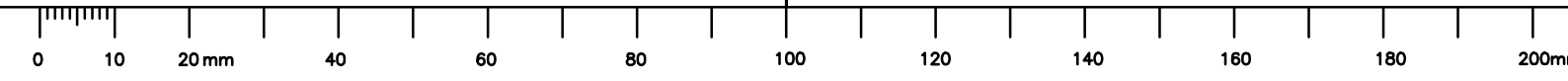
4 BLDG. 130 GENERAL STORAGE - SECURITY PLAN
E-2.1 SCALE 1:200

D	ISSUED FOR TENDER	14/06/06	
C	ISSUED FOR REVIEW	14/05/30	
B	ISSUED FOR REVIEW	14/04/08	
A	ISSUED FOR REVIEW	14/03/26	
number	revision	revision	date
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	C detail on drawing no.		
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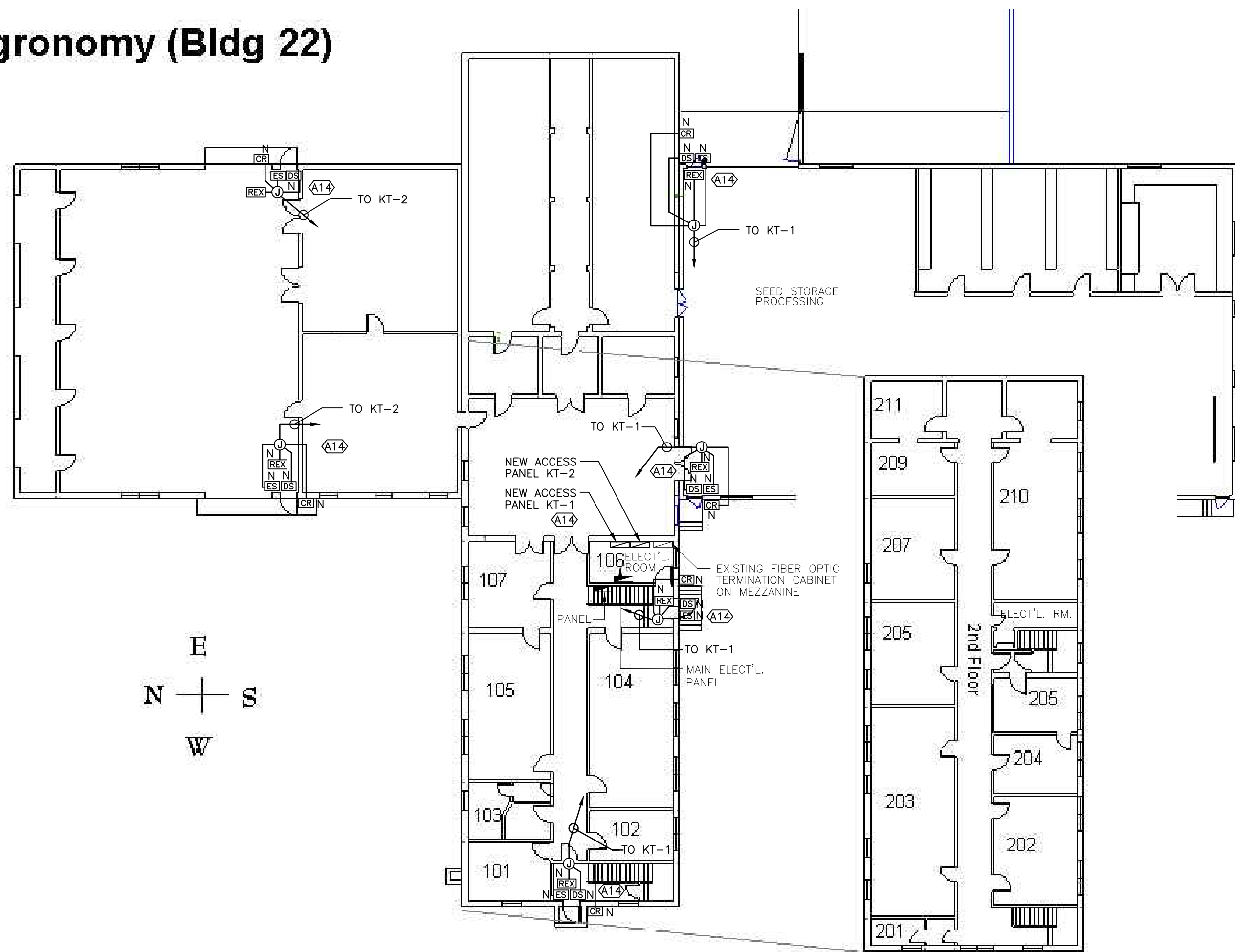
project
ELECTRONIC SECURITY SYSTEM UPGRADES
LETHBRIDGE RESEARCH CENTRE
Lethbridge, Alberta
drawing
LRC OUTBUILDINGS SECURITY PLANS

designed	SJJ	conçu
date	2014/04/08	date
drawn	LR	dessiné
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approved	SJJ	approuvé
date	2014/06/06	date
Tender	TBA	Soumission

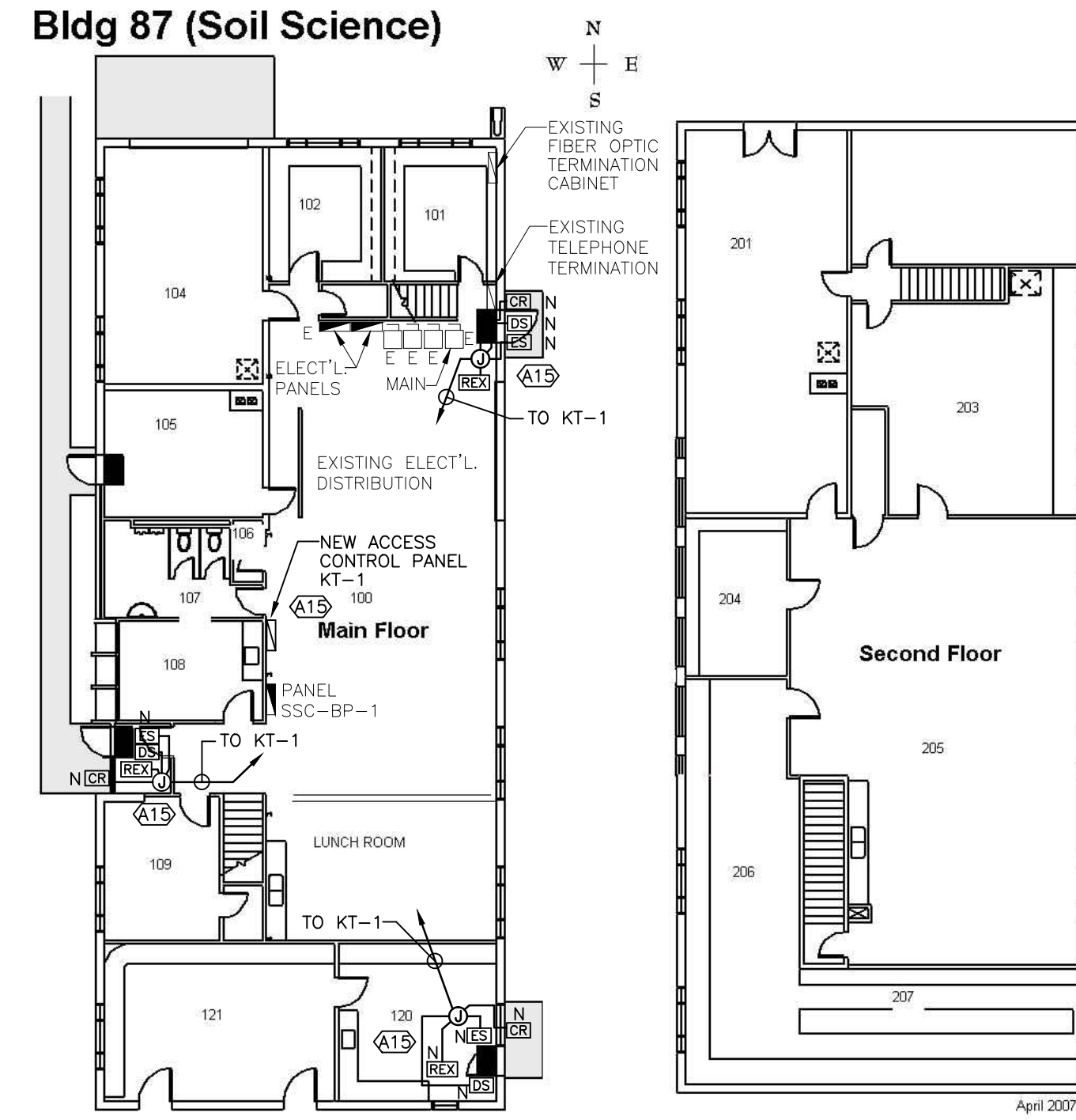
PWSC Project Manager Administrateur de projets TPSCC
project number number du projet
140103.00
drawing number number du dessin
E-2.1



Agronomy (Bldg 22)



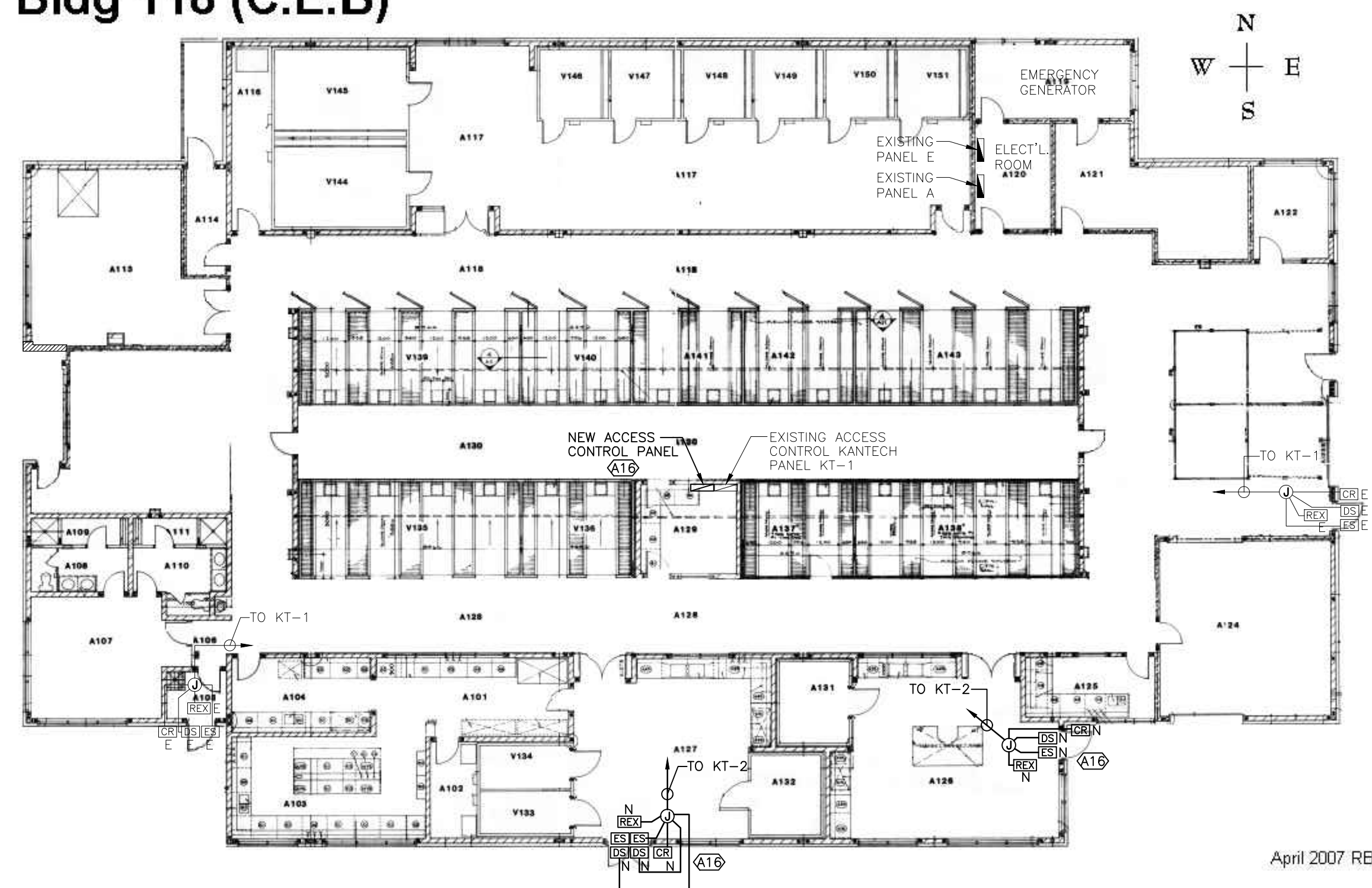
Bldg 87 (Soil Science)



1 BLDG. 22 AGRONOMY - SECURITY PLAN
E-2.2 SCALE 1:200

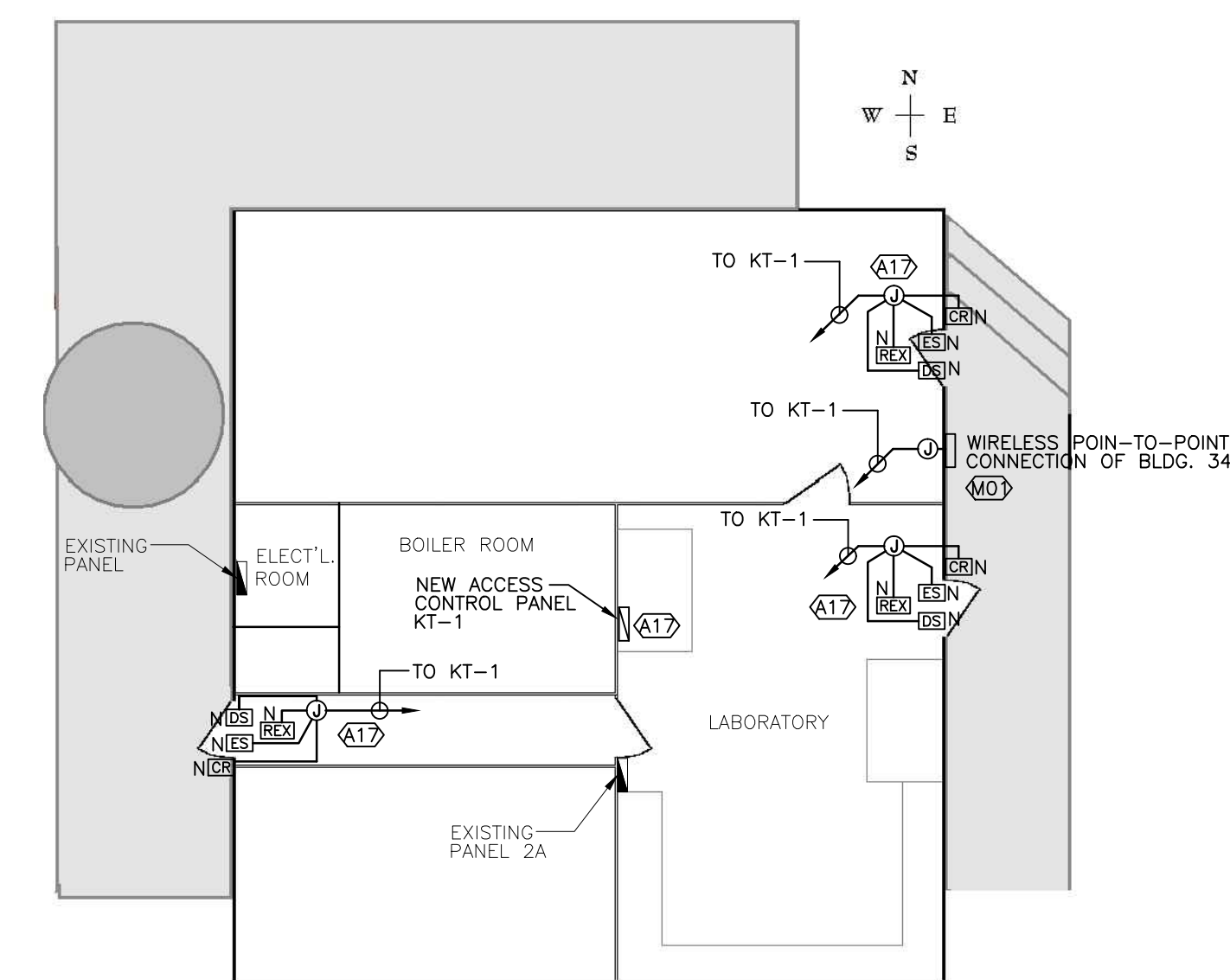
2 BLDG. 87 SOIL SCIENCE - SECURITY PLAN
E-2.2 SCALE 1:200

Bldg 118 (C.E.B)



3 BLDG. 118 CONTROLLED ENVIRONMENT BUILDING - SECURITY PLAN
E-2.2 SCALE 1:200

Bldg 123 (Pesticide Storage)



4 BLDG. 123 PESTICIDE STORAGE - SECURITY PLAN
E-2.2 SCALE 1:100

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number	revision	revision	date
A	detail number	number du detail	
B	source drawing no.	de dessin no.	
C	detail on drawing no.	detail sur dessin no.	

project ELECTRONIC SECURITY SYSTEM UPGRADES

LETHBRIDGE RESEARCH CENTRE

Lethbridge, Alberta

drawing LRC OUTBUILDINGS SECURITY PLANS

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Tender TBA Soumission

PWOSC Project Manager Administrateur de projets TPSCC

project number number du projet

140103.00

drawing number number du dessin

E-2.2



GENERAL NOTES:

- ALL WORK TO BE IN ACCORDANCE WITH ALBERTA BUILDING CODE 2006.
- READ THE CONSTRUCTION DRAWINGS IN CONJUNCTION WITH THE ARCH., MECH., AND ELECT. DRAWINGS. REPORT ANY INCONSISTENCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS.
- FOR THE PURPOSES OF THESE DRAWINGS, THE ENGINEER IS KASSIAN DYCK AND ASSOCIATES.
- THE USE OF THESE DRAWINGS IS LIMITED TO THAT IDENTIFIED IN THE REVISIONS COLUMN. DO NOT CONSTRUCT FROM THESE DRAWINGS UNLESS MARKED "ISSUED FOR CONSTRUCTION" IN THE REVISIONS COLUMN BY KASSIAN DYCK & ASSOCIATES.
- ALL EXISTING DIMENSIONS, ELEVATIONS, AND EXISTING STRUCTURAL SYSTEMS SHOWN ON THE STRUCTURAL DRAWINGS ARE TO BE VERIFIED ON SITE PRIOR TO CONSTRUCTION, AND DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER BEFORE PROCEEDING.
- ALL SECTIONS, DETAILS, AND STATEMENTS ARE TYPICAL AND APPLY TO ALL SIMILAR SITUATIONS IN THE STRUCTURE.
- ALL TEMPORARY SAFETY GUARDS SHALL BE THE CONTRACTORS RESPONSIBILITY.
- THE CONTRACTOR SHALL EXAMINE THE SITE AND THE SUBSURFACE INVESTIGATION REPORT AND ACCEPT ALL CHARACTERISTICS AND IRREGULARITIES OF THIS SITE.
- DESIGN LOADS DEAD LOAD = SELF WEIGHT
WIND $q(150) = 0.82 \text{ kPa}$ (17 PSF)

- CONTRACTOR'S CONSTRUCTION LOADS MUST NOT EXCEED THE ABOVE DESIGN LOADS. DESIGN LOADS MAY ONLY BE APPLIED AFTER THE CONCRETE REACHES ITS DESIGN STRENGTH.
- UNDERPIN WHERE NECESSARY ANY EXISTING STRUCTURE AND PROVIDE ALL BRACING, SHORING, ETC. TO SUPPORT ADJOINING SOIL, FLOORS, WALLS, ETC. AS REQUIRED TO RETAIN ALL WORK IN PLACE AND PREVENT ANY OVERSTRESSING OF THE STRUCTURE.
- THE CONTRACTOR SHALL COORDINATE ALL TESTING, INSPECTION, AND QUALITY CONTROL WITH ONSITE FACILITY MANAGER AND WILL PROVIDE CASUAL LABOUR FORCES AS REQUIRED TO ASSIST IN ALL THE FIELD REVIEW PROCEDURES. THE CONTRACTOR SHALL GIVE REASONABLE NOTICE TO THESE AGENCIES PRIOR TO REQUIRING THEIR SERVICES.
- PERIODIC SITE REVIEWS FOR WORK SHOWN ON THESE DRAWINGS TO ASCERTAIN WHETHER THE STRUCTURAL WORK IS IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS SHALL BE AS DIRECTED BY THE ONSITE FACILITY MANAGER. THE SITE REVIEWS ARE NOT FOR THE CONTRACTOR'S BENEFIT AND THE CONTRACTOR REMAINS FULLY RESPONSIBLE TO ENSURE THAT ALL STRUCTURAL WORK IS CARRIED OUT IN ACCORDANCE WITH THESE DRAWINGS AND ALL APPLICABLE CODES. THE WORK TO BE REVIEWED SHALL GENERALLY BE COMPLETE.
- PROVIDE 48 HOURS ADVANCE NOTICE OF EACH REQUIRED SITE REVIEW TO THE ONSITE FACILITY MANAGER. SITE REVIEWS SHALL BE SCHEDULED TO BE CARRIED OUT DURING NORMAL BUSINESS HOURS UNLESS SPECIAL ARRANGEMENTS ARE MADE.
- PROVIDE 48 HRS. NOTICE PRIOR TO POURING CONCRETE. ALL REINFORCEMENT SHALL BE IN PLACE AND SECURED AT THE TIME OF THE REVIEW. REINFORCEMENT SHALL BE REVIEWED IN PLACE AS DIRECTED BY THE ONSITE FACILITY MANAGER, PRIOR TO PLACING CONCRETE.
- BEFORE CONCEALING ANY STRUCTURAL ELEMENTS, PROVIDE MINIMUM 48 HRS. NOTICE TO ONSITE FACILITY MANAGER SO THE STRUCTURE CAN BE INSPECTED AS DIRECTED BY THE ONSITE FACILITY MANAGER.
- DO NOT CUT OR DRILL ANY OPENINGS INTO STRUCTURAL MEMBERS WITHOUT OBTAINING WRITTEN APPROVAL FROM THE ONSITE FACILITY MANAGER.

CONCRETE NOTES:

- ALL WORK TO BE IN ACCORDANCE WITH CSA A23.1-04, A23.2-04, AND A23.3-04.
- CEMENT: NORMAL PORTLAND CEMENT TO CAN/CSA-A5, TYPE GU OR SULPHATE RESISTANT CEMENT TO CAN/CSA-A5 TYPE HS.
- CONCRETE TO BE IN ACCORDANCE WITH FOLLOWING PERFORMANCE SCHEDULE. RESPONSIBILITIES OF OWNER, CONTRACTOR, AND SUPPLIER ARE IN ACCORDANCE WITH ALTERNATIVE 1, TABLE 5 OR CSA A23.1-04:

LOCATION	STRENGTH	EXPOSURE	AIR	MAX AGGREG.	MAX W/C
FOOTINGS + PILES, EXTERIOR	32 MPa 4600 psi	S-2 F-2	4.7%	40 mm 1 1/2 INCH	0.45

- AIR ENTRAINING ADMIXTURE TO ASTM C 260.
- CALCIUM CHLORIDE SHALL NOT BE USED AS ADMIXTURE.
- CONTRACTOR TO PREPARE AND IMPLEMENT QUALITY CONTROL PLAN TO ENSURE THAT CONCRETE PERFORMANCE CRITERIA WILL BE MET, AND SUBMIT DOCUMENTATION DEMONSTRATING THAT PERFORMANCE REQUIREMENTS HAVE BEEN MET.
- PERFORM AT LEAST ONE CONCRETE TEST (3 CYLINDERS) FOR EACH 50 CUBIC METRES OF CONCRETE, OR FRACTION THEREOF, OF EACH TYPE OF CONCRETE POURED IN ANY ONE DAY.
- CONTRACTOR TO COORDINATE CONCRETE TESTING REQUIREMENTS AND TIMING WITH FACILITY MANAGER.
- DRY PACK GROUT: NON-METALLIC, NON-SHRINK, CEMENTITIOUS GROUT, WITH MINIMUM 28 DAY STRENGTH OF 25 MPa (3600 psi).
- PLACE CONCRETE AS CLOSE AS POSSIBLE TO FINAL LOCATION TO AVOID SEGREGATION. VIBRATE ALL CONCRETE.
- BRING ALL FLOORS TO AN EVEN, LEVEL, OR SLOPING SURFACE AS INDICATED ON THE DRAWINGS, READY TO RECEIVE THE SPECIFIED FINISH.
- UNLESS NOTED OTHERWISE PROVIDE THE FOLLOWING FINISHES TO CONCRETE FLOORS:
 - EXTERIOR SIDEWALKS AND SLABS – BROOM FINISH
 - DO NOT OVERWORK SLAB SURFACE; FLOOR TO BE LEVEL WITHIN 3 mm (1/8 INCH) IN 3000 mm (10 FT).
- PROTECT CONCRETE FROM FREEZING. DO NOT PLACE CONCRETE AGAINST FROZEN GROUND. USE WINTER CONCRETING METHODS IN ACCORDANCE WITH CSA A23.1-04.
- PROTECT CONCRETE FROM EXCESSIVE HEAT AND DRYING. USE HOT WEATHER CONCRETING METHODS IN ACCORDANCE WITH CSA A23.1-04.
- CURE CONCRETE IN ACCORDANCE WITH A23.1-04, AND FOR A MINIMUM OF 7 DAYS AT A MINIMUM TEMPERATURE OF 10 DEGREES C. OR FOR THE TIME NECESSARY TO OBTAIN 70% OF THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH.

CONCRETE REINFORCEMENT NOTES:

- ALL WORK TO BE IN ACCORDANCE WITH CSA A23.1-04 AND A23.3-04.
- REINFORCING BARS: DEFORMED BARS, GRADE 400 CONFORMING TO CSA G30.18 UNLESS NOTED OTHERWISE.
- PROVIDE ADDITIONAL SUPPORT BARS AS REQUIRED TO ADEQUATELY SUPPORT AND SECURE ALL REINFORCEMENT AND PREVENT MOVEMENT WHEN PLACING CONCRETE. PROVIDE AS A MINIMUM THE FOLLOWING:
 - 10M U BAR SPACERS AT 3 m (10 FT) O/C HORIZONTALLY AND 1.5 m (5 FT) O/C VERTICALLY TO HOLD WALL REINFORCING MATS IN POSITION
 - 10M SUPPORT BARS FOR SLAB TOP REINFORCING, SPACED AT A MAXIMUM OF 800 mm (2 FT) O/C FOR 10M BARS, AND 1200 mm (4 FT) O/C FOR 15M AND LARGER BARS
 - 15M SUPPORT BARS AT A MAXIMUM OF 1200 mm (4 FT) O/C SPACING IN EACH DIRECTION FOR BOTTOM REINFORCING
 - 15 M SUPPORT BARS IN JOISTS AND EACH CORNER OF STRIPUPS UNLESS SHOWN OTHERWISE
 - SUPPORT PILE CAP REINFORCEMENT AT 900 mm (3 FT) MAXIMUM O/C
- LOCATE CHAIRS FOR REINFORCING AT A MAXIMUM OF 1200 mm (4 FT) CENTRES.
- UNLESS OTHERWISE SHOWN, CLEAR CONCRETE COVER TO REINFORCEMENT TO BE AS FOLLOWS:

CONCRETE POURED AGAINST EARTH	75 mm (3 INCH)
-------------------------------	----------------

 EXPOSED MEANS EXPOSURE TO EARTH AND/OR WEATHER
- ENSURE REINFORCING IS CLEAN, FREE OF LOOSE SCALE, OIL, DIRT, RUST, AND ANY OTHER FOREIGN COATINGS THAT AFFECT BONDING CAPACITY BEFORE PLACING REBAR.
- UNLESS NOTED OTHERWISE, ALL REBAR EMBEDMENT AND LAP SPLICE LENGTHS TO BE AS SHOWN IN FOLLOWING TABLE. ALL TENSION LAP SPLICES ARE CLASS B. WHERE NO EMBEDMENT TYPE IS INDICATED, PROVIDE TENSION LAP SPLICE.

BAR SIZE	CONCRETE STRENGTH							
	20 MPa		25 MPa		30 MPa		35 MPa	
	EMBED.	LAP	EMBED.	LAP	EMBED.	LAP	EMBED.	LAP
10M	320	420	300	390	300	390	300	390
15M	480	630	430	560	390	510	370	480
20M	640	840	580	750	530	680	490	630
25M	1010	1310	900	1170	820	1070	760	990
30M	1210	1570	1080	1400	990	1280	910	1190
35M	1410	1830	1200	1640	1150	1500	1070	1380

TENSION DEVELOPMENT (EMBEDMENT) LENGTHS / LAP SPLICE LENGTHS (mm)

BAR SIZE	CONCRETE STRENGTH							
	20 MPa		25 MPa		30 MPa		35 MPa	
	EMBED.	LAP	EMBED.	LAP	EMBED.	LAP	EMBED.	LAP
10M	320	420	300	390	300	390	300	390
15M	480	630	430	560	390	510	370	480
20M	640	840	580	750	530	680	490	630
25M	1010	1310	900	1170	820	1070	760	990
30M	1210	1570	1080	1400	990	1280	910	1190
35M	1410	1830	1200	1640	1150	1500	1070	1380

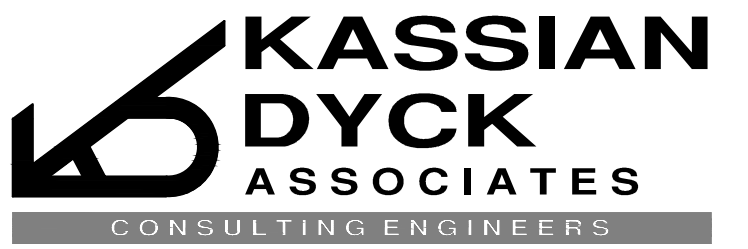
- NOTES: - ALL TOP BAR SPLICES AND EMBEDMENT LENGTHS TO BE 1.3 TIMES LONGER THAN VALUES SHOWN ABOVE.
 - TOP BARS ARE THOSE WHICH ARE CAST WITH 300 mm OR MORE CONCRETE BELOW BAR.
 - STRIPUP SPLICES NOT ALLOWED EXCEPT WHEN APPROVED BY ENGINEER.
 - SPLICES FOR EPOXY COATED REINFORCEMENT TO BE INCREASED AS PER ENGINEERS INSTRUCTIONS.

COMPRESSION LAP SPLICE LENGTHS (mm)

BAR SIZE	LAP
10M	300
15M	440
20M	580
25M	730
30M	880
35M	1020

EXCAVATION AND BACKFILL NOTES:

- ALL EARTHWORK INCLUDING EXCAVATION AND BACKFILL TO BE DONE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
- LOCATE ALL UNDERGROUND SERVICES PRIOR TO EXCAVATING OR DRILLING.
- STRIP ALL TOPSOIL, FILL, FROZEN SOIL, WET AND/OR WEAK SOILS, AND DEBRIS FROM THE BUILDING AREA.
- EXCAVATE TO ELEVATIONS SHOWN.
- TEMPORARY SLOPES FOR EXCAVATIONS NOT TO EXCEED 1 HORIZ. TO 1 VERT. IN CLAY, OR 2 HORIZ. TO 1 VERT. IN SAND. PROVIDE SHALLOWER SLOPES AS REQUIRED BY SOIL CONDITIONS.
- PRIOR TO PLACING FILL BELOW SLABS ON GRADE OR ASPHALT PAVING, PROOF ROLL THE SUBGRADE, REMOVE ANY SOFT AREAS AND REPLACE WITH COMPACTED PIT RUN GRAVEL, AND COMPACT EXISTING SUBGRADE TO OBTAIN THE SAME COMPACTION AS SPECIFIED FOR THE FILL.
- PIT RUN GRAVEL TO BE WELL GRADED, 100 mm (4 INCH) MINUS.
- CRUSHED GRAVEL TO BE 20 mm (3/4 INCH) ROAD CRUSH.
- BACKFILL AND FILL TO BE AS FOLLOWS:
 - CRUSHED GRAVEL BELOW SLAB ON GRADE
 - APPROVED NATIVE SOIL BELOW LANDSCAPED AREAS
- COMPACT ALL BACKFILL BELOW SLABS ON GRADE, ASPHALT PAVING, AND STRUCTURAL SLABS TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY. COMPACT ALL BACKFILL BELOW LANDSCAPED AREAS TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY. COMPACT IN MAXIMUM 150 mm (6 INCH) LIFTS.
- UNLESS NOTED OTHERWISE, FOUNDATIONS AND WALLS SHALL BE BACKFILLED EVENLY ON BOTH SIDES TO PREVENT LATERAL MOVEMENT. BACKFILL HEIGHTS SHALL NOT VARY BY MORE THAN 300 mm (12 INCH) FROM ONE SIDE TO THE OTHER. EXERCISE EXTREME CAUTION DURING BACKFILL OPERATIONS TO PREVENT DAMAGE TO THE CONCRETE.
- DO NOT ENCR OACH A 45-DEGREE ANGLE OF BEARING FROM ADJACENT FOOTING BOTTOMS U N O.
- KEEP EXCAVATION DRAINED AND FREE OF WATER AT ALL TIMES.
- TAKE ALL NECESSARY MEASURES AND PRECAUTIONS TO PREVENT FREEZING OF SOILS BELOW FOOTINGS.
- REMOVE FROM SITE AND DISPOSE OF ANY SURPLUS MATERIAL.



1475, 10655 SOUTHPORT ROAD S.W. CALGARY, ALBERTA, CANADA T2W 4Y1
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 www.kdassociates.com

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SCALE PERMIT TO PRACTICE NUMBER: P 5820

PERMIT

A	TENDER	14.06.06
NO.	REVISION	DATE

PROJECT TITLE

ELECTRONIC SECURITY SYSTEMS UPGRADE

DRAWING TITLE

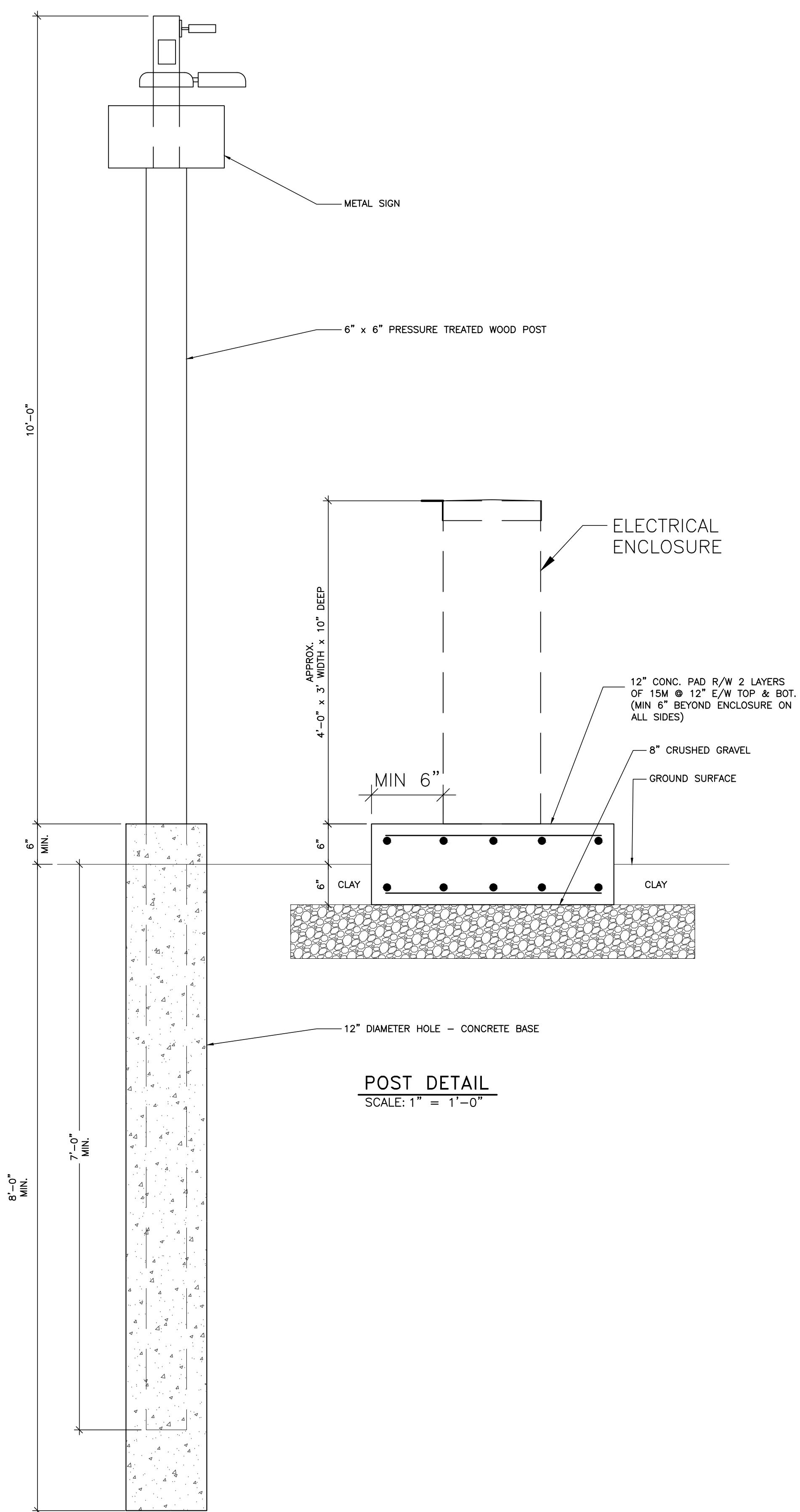
LRC OUTBUILDINGS
GENERAL NOTES

SCALE	AS SHOWN	DATE	2014-06-06	DWG. NO.	S1
BY	LM	ENG.	AR	PROJ. No. 14054 T1	

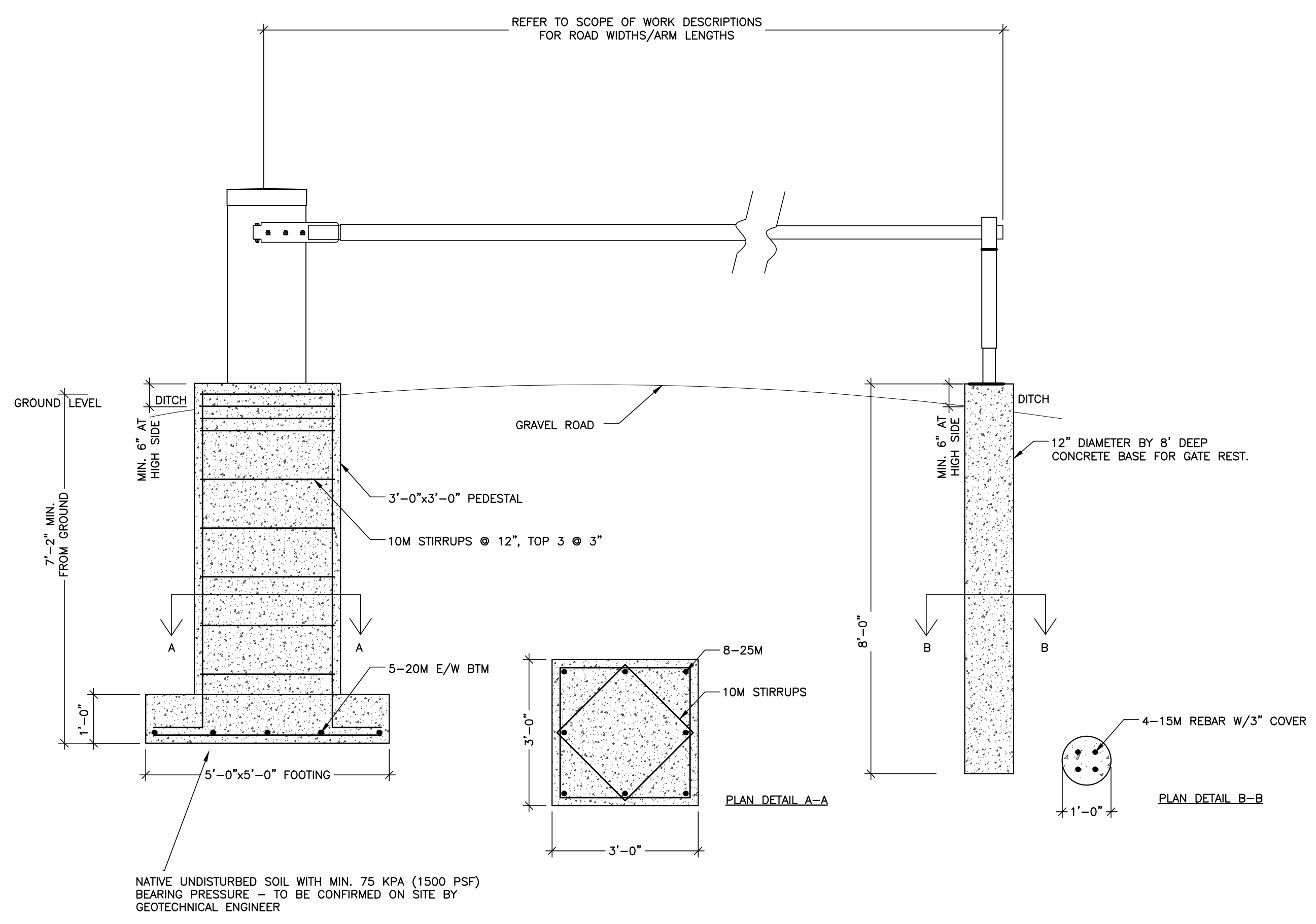
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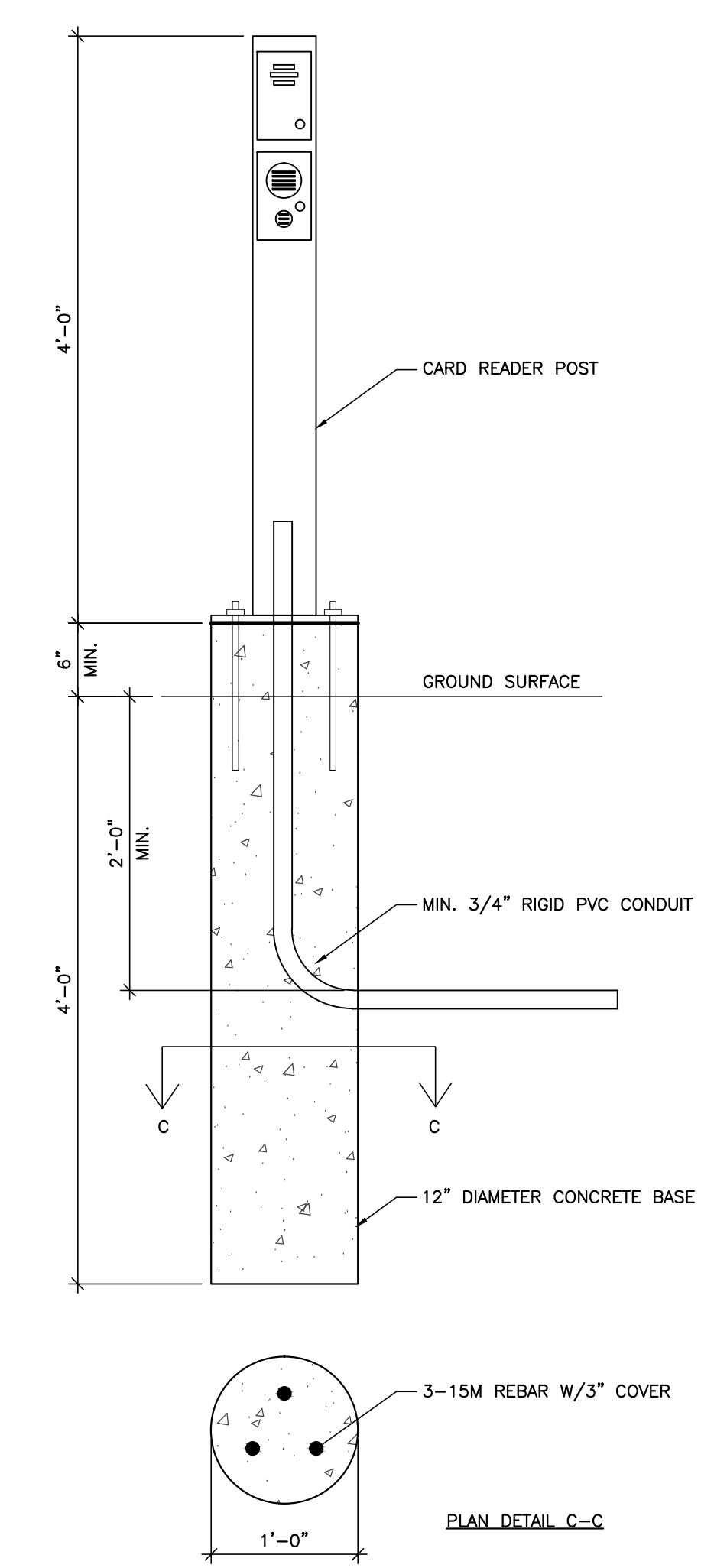
PERMIT



POST DETAIL
SCALE: 1" = 1'-0"



**GATE DETAIL
FRONT ELEVATION**
SCALE: 1/2" = 1'-0"



PEDESTAL DETAIL
SCALE: 1" = 1'-0"

NO.	REVISION	DATE
A	TENDER	14.06.06

PROJECT TITLE
**ELECTRONIC SECURITY
SYSTEMS UPGRADE**

DRAWING TITLE
**LRC OUTBUILDINGS
TYPICAL DETAILS**

SCALE	AS SHOWN	DATE	2014-06-06	DWG. NO.
BY	LM	ENG.	AR	PROJ. No. 14054 T1