



PERMIT TO PRACTICE  
ALLNORTH CONSULTANTS LIMITED  
PERMIT NUMBER: P 6366  
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

5		
4		
3		
2		
1	ISSUED FOR TENDER	13/06/08
0	Design Completion	

Revision/Description	Description/Description	Date/Date
----------------------	-------------------------	-----------

**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA**

Project title/Titre du projet  
**INNISFAIL, ALBERTA  
7-2A SYLVAIRE CLOSE**

**RCMP K-9 UNIT  
PRE-ENG  
BUILDING FOUNDATION**

Approved by/Approve par  
**D.WILLIAMS**

Designed by/Concept par  
**C.POLSON**

Drawn by/Dessiné par  
**S.NICKLIE**

PWOSC Project Manager/Administrateur de Projets TPSGC

PWOSC Architectural and Engineering Resources Manager/ Ressources Architectural et de l'ingénierie, TPSGC

Client/Client  
**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA**

Drawing title/Titre du dessin  
**STRUCTURAL**

**RCMP K-9 UNIT BUILDING  
FOUNDATION  
GENERAL NOTES**

Project No./No. du projet <b>M5000-4-0894/A</b>	Sheet/Feuille <b>S1.0</b> OF -	Revision no./La Révision <b>1</b>
----------------------------------------------------	--------------------------------------	--------------------------------------

**GENERAL NOTES:**

- THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE ALBERTA BUILDING CODE - 2006.
- CONSTRUCT TO ALBERTA BUILDING CODE REQUIREMENTS. ALL REFERENCE STANDARDS ARE TO BE THE LATEST EDITION INCLUDING SUBSEQUENT REVISIONS.
- PROJECT LOCATION: INNISFAIL ALBERTA (RED DEER COUNTY)
- SPECIFIED DESIGN LOADS:  
IMPORTANCE CATEGORY: NORMAL  
LIVE LOAD: 6.0 kPa  
DEAD LOAD: CONC = 2400kg/m<sup>3</sup>, STEEL = 7850kg/m<sup>3</sup>  
GROUND SNOW LOAD: Ss 1.9 kPa  
RAIN LOAD: Sr 0.1 kPa  
HOURLY WIND PRESSURE: 1/50Prob. = 0.42 kPa  
WIND EXPOSURE: OPEN TERRAIN  
SEISMIC DATA: Ss(0.2) = 0.12, Ss(0.5) = 0.06, Ss(1.0) = 0.03, Ss(2.0) = 0.02, Fa = 1.3, Fv = 1.4
- CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL WORKSAFE ALBERTA REGULATIONS UNDER SECTION 20.81 "SLOPING AND SHORING REQUIREMENTS" ARE MET DURING EXCAVATION AND CONSTRUCTION.

**CONCRETE:**

- GENERAL:**
  - SUPPLY CONCRETE AND PERFORM WORK TO CAN/CSA-A23.1-04.
  - CONCRETE QUALITY CONTROL IS TO BE PERFORMED BY THE OWNER'S AGENCY IN ACCORDANCE WITH CAN/CSA-A23.2-04 INCLUDING STRENGTH, AIR CONTENT AND SLUMP TESTS FOR EACH CONCRETE POUR, WITH REPORTS SUBMITTED TO THE ENGINEER.
  - EXPOSED CORNERS OF CONCRETE SHALL BE BEVELED 20mm x 20mm (3/4" x 3/4"), UNO.
  - ALL HOT AND COLD WEATHER CONCRETE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA A23.1/A23.2-04. CONTRACTOR MUST TAKE APPROPRIATE MEASURES WHEN TEMPERATURE RISES ABOVE 25°C OR FALLS BELOW 3°C.
  - TAKE ADEQUATE PRECAUTIONS TO MINIMIZE SHRINKAGE CRACKING INCLUDING COVERING AND KEEPING THE CONCRETE DAMP DURING THE INITIAL 7 DAYS OF CURING.
  - FORMWORK TO CAN/CSA-S269.3-M92.
  - CONSTRUCTION JOINTS: LOCATE CONSTRUCTION JOINTS AS SHOWN ON DRAWINGS.
  - FLOOR FINISH TO BE POWER FLOAT.
  - STEEL TROWEL FINISH EXPOSED CONCRETE (PEDESTALS, WALLS).
- PRODUCTS:**
  - CONCRETE: TYPE GU (FORMERLY TYPE 10)
  - AGGREGATE AND WATER: TO CAN/CSA-A23.1-04
  - ADMIXTURES: TO THE CSA A266 SERIES OF STANDARDS. ADMIXTURES OTHER THAN AIR ENTRAINING ARE NOT TO BE USED UNLESS ACCEPTED BY THE ENGINEER.
  - BASEPLATE GROUT: NON-SHRINK, NON-FERROUS GROUT MASTERFLOW 713 OR EQUAL.
  - MIX DESIGN AS FOLLOWS:

	MIN. 28 DAY STRENGTH	MAX. SIZE AGGREGATE	SLUMP	EXPOSURE CLASS	% AIR CONTENT	MAX. W/C RATIO
SLAB ON GRADE	25 MPa	3/4" (20mm)	80 (±20)	N	1-4	0.45
FOUNDATION	25 MPa	3/4" (20mm)	80 (±20)	F-2	4-7	0.45

- VAPOUR BARRIER TO BE 150 mil POLYETHYLENE TO CAN/CGSB-51.34-M89.
- EXTERNALLY APPLIED DAMP-PROOFER TO BE "HENRY" HE107 ASPHALT EMULSION (OR EQUIVALENT).
- WATERSTOP TO BE "GREENSTREAK" CJ-1020-2K (20mmx10mm) HYDROTITE WATERSTOP SYSTEM.

**PREPARATION FOR FOUNDATIONS:**

- GENERAL:**
  - EXCAVATION TO BE INSPECTED BY A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER.
  - TESTING AND INSPECTION OF SUBGRADE TO BE CARRIED OUT PRIOR TO PLACING SLAB ON GRADE.
  - FOLLOW ALL RECOMMENDATIONS GIVEN IN GEOTECHNICAL REPORT PREPARED BY SMITH DOW ASSOCIATES DATED MARCH 19, 2003 FOR BACKFILL, DRAINAGE, SUB-BASE, PREPARATION AND OTHER REQUIREMENTS.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY DRAINAGE DURING EXCAVATION.
- PRODUCTS:**
  - IMPORTED GRANULAR MATERIALS SHALL BE CLEAN FREE-DRAINING, NON-FROST-SUSCEPTIBLE.
- EXECUTION:**
  - ANY TOPSOIL, DELETERIOUS SOILS, SOFT/WEAK SOIL, OR UN-SUITABLE SOILS ENCOUNTERED WITHIN THE FOOTPRINT OF THE BUILDINGS SHOULD BE REMOVED. THE EXPOSED SUBGRADE SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 200mm, MOISTURE CONDITIONED TO ±2% OF THE OPTIMUM MOISTURE CONTENT (OMC), AND COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). AFTER COMPACTION THE SUBGRADE SHOULD BE PROOF-ROLLED TO IDENTIFY ANY SOFT SPOTS. THE SOFT SPOTS SHOULD BE SUBCUT TO A MINIMUM DEPTH OF 0.6m AND BACKFILLED WITH SUB-BASE COMPACTED TO 95% OF THE SPMDD.
  - GRANULAR SOILS USED AS SUB-BASE SHOULD CONSIST OF CLEAN, WELL GRADED PIT RUN GRAVEL (MAXIMUM SIZE 80mm). IN GENERAL, FILL MATERIAL SHOULD BE COMPACTED TO WITHIN ±2% OF THEIR OPTIMUM MOISTURE CONTENT (OMC).
  - BASE COURSE SHOULD CONSIST OF WELL GRADED CRUSHED GRAVEL HAVING MAXIMUM PARTICLE SIZE OF 20mm. THE BASE COURSE SHOULD BE COMPACTED TO 95% OF SPMDD.
  - THE FILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 150mm IN LOOSE THICKNESS. THE FILL SHOULD BE COMPACTED TO AT LEAST 95% OF THE SPMDD AT OR SLIGHTLY ABOVE OMC UNLESS OTHERWISE SPECIFIED. THE FILL SHOULD BE PLACED IN LIFTS THAT ARE COMPATIBLE WITH THE COMPACTION EQUIPMENT USED.

**REINFORCING STEEL:**

- GENERAL:**
  - REINFORCING WORK TO CAN/CSA-A23.1-04 AND CAN/CSA-A23.3-04.
  - REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE REINFORCING STEEL INSTITUTE OF CANADA MANUAL OF STANDARD PRACTICE.
- PRODUCTS:**
  - REINFORCING STEEL: NEW DEFORMED BARS TO CSA G30.18-M92 GRADE 400W.
- EXECUTION:**
  - PROVIDE MINIMUM CLEAR CONCRETE COVER OVER REINFORCING AS FOLLOWS U.N.O.:

CONCRETE COVER	
CAST AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH	75mm
TIES AND STIRRUPS	40mm
SLABS, WALLS, & JOISTS	50mm

**b) SPLICE BARS AS FOLLOWS:**

MINIMUM LAP SPLICE LENGTHS				
BAR Ø	10M	15M	20M	25M
"x"	360	540	725	900

MINIMUM HOOK LENGTHS				
BAR Ø	10M	15M	20M	25M
"y"	180	260	310	400



PERMIT TO PRACTICE  
 ALLNORTH CONSULTANTS LIMITED  
 PERMIT NUMBER: P 6366  
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Revision/	Description/Description	Date/Date
5		
4		
3		
2		
1	ISSUED FOR TENDER	13/05/08
0	Design Completion	

Client/Client  
**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA**

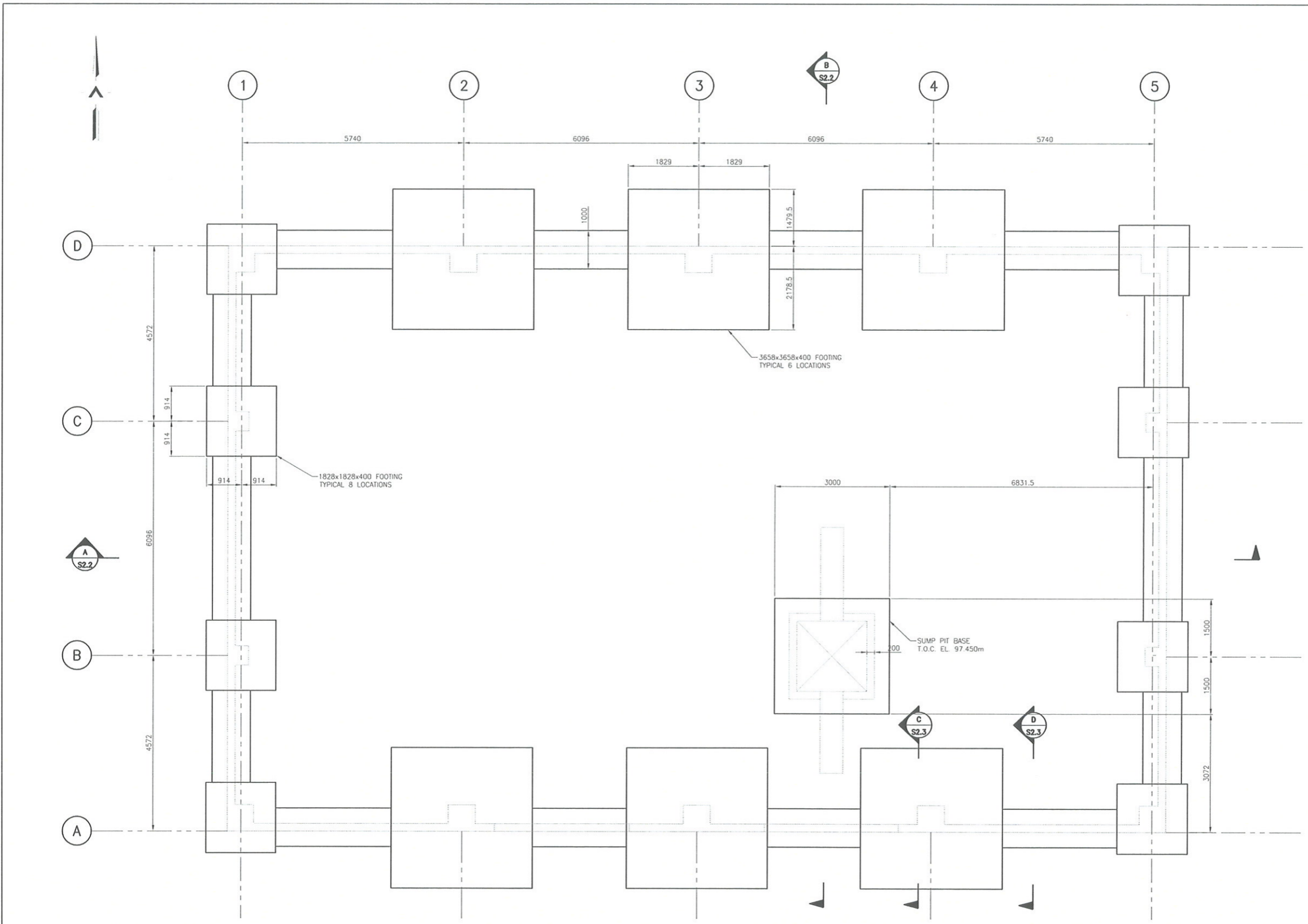
Project title/Titre du projet  
 INNISFAIL, ALBERTA  
 7-2A SYLVAIRE CLOSE  
**RCMP K-9 UNIT  
 PRE-ENG  
 BUILDING FOUNDATION**

Approved by/Approuvé par  
 D.WILLIAMS  
 Designed by/Concepté par  
 C.POLSON  
 Drawn by/Dessiné par  
 S.NICKLIE  
 PWSC Project Manager/Administrateur de Projets TPSCC  
 PWSC, Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'ingénierie, TPSCC

Client/Client  
 PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

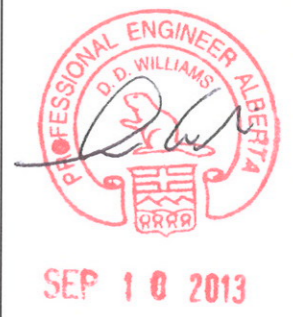
Drawing title/Titre du dessin  
**STRUCTURAL**  
**RCMP K-9 UNIT BUILDING  
 FOUNDATION  
 FOOTING PLAN**

Project No./No. du projet M5000-4-0894/A	Sheet/Feuille S2.0 OF -	Revision no./ La Révision no. 1
---------------------------------------------	-------------------------------	------------------------------------------



PLAN @ T.O.C. FOOTING EL. 97.650m U.N.O.  
 SCALE: 1:50





PERMIT TO PRACTICE  
 ALLNORTH CONSULTANTS LIMITED  
 PERMIT NUMBER: P 6366  
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

5		
4		
3		
2		
1	ISSUED FOR TENDER	13/05/08
0	Design Completion	

Revision/Description	Description/Description	Date/Date
----------------------	-------------------------	-----------

Client/Client  
**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA**

Project title/Titre du projet  
**INNISFAIL, ALBERTA  
 7-2A SYLVAIRE CLOSE**  
**RCMP K-9 UNIT  
 PRE-ENG  
 BUILDING FOUNDATION**

Approved by/Approve par  
 D.WILLIAMS

Designed by/Concept par  
 C.POLSON

Drawn by/Dessiné par  
 S.NICKLIE

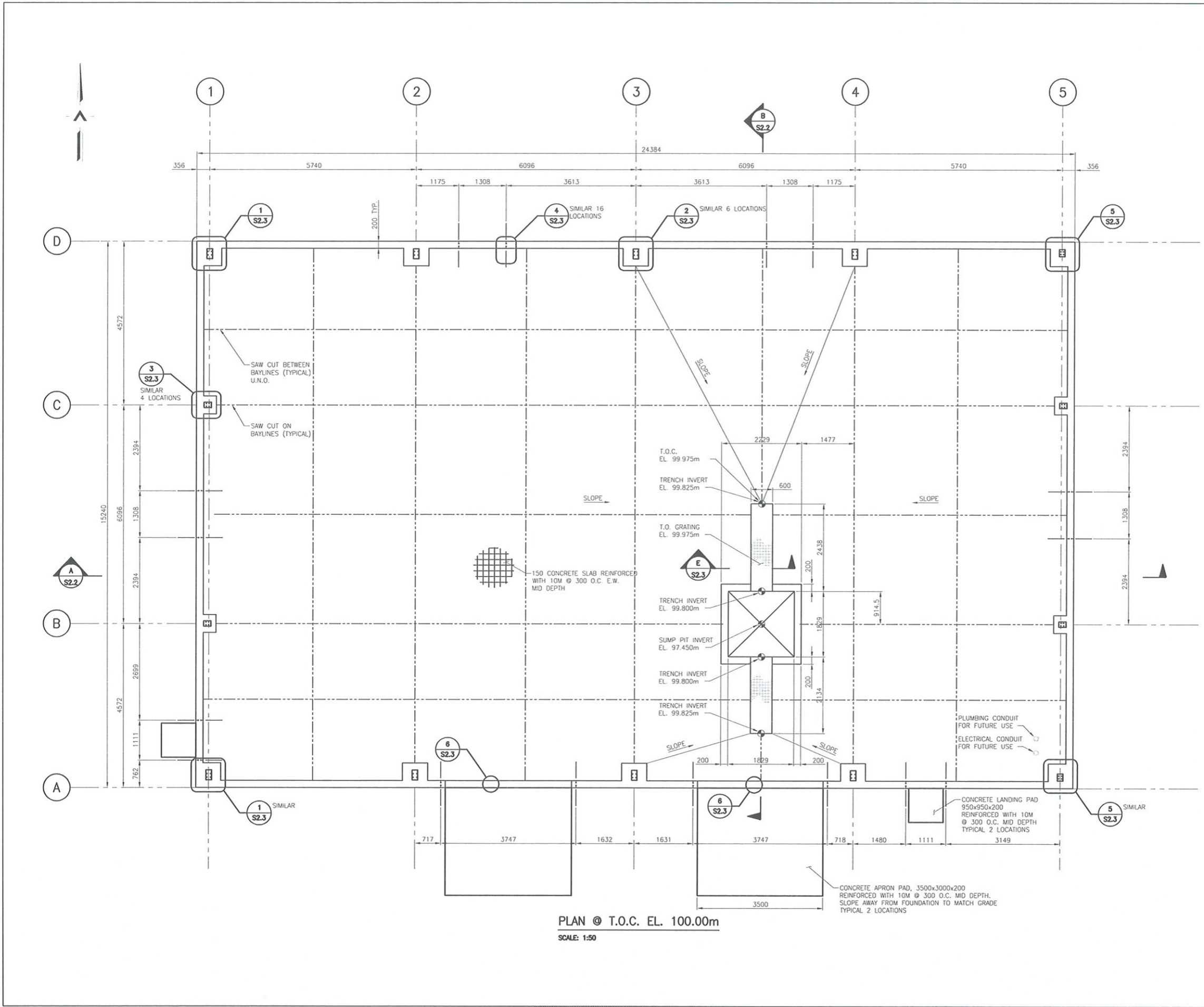
PWOSC Project Manager/Administrateur de Projets TPSCC

PWOSC, Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'ingénierie, TPSCC

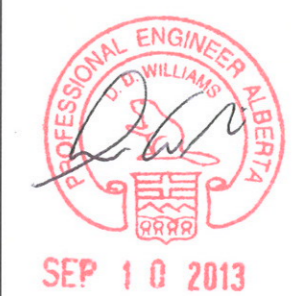
Client/Client  
 PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Drawing title/Titre du dessin  
**STRUCTURAL**  
**RCMP K-9 UNIT BUILDING  
 FOUNDATION  
 FLOOR PLAN**

Project No./No. de projet M5000-4-0894/A	Sheet/Feuille S2.1 OF -	Revision no./ La Révision no. 1
---------------------------------------------	-------------------------------	---------------------------------------



PLAN @ T.O.C. EL. 100.00m  
 SCALE: 1:50



PERMIT TO PRACTICE  
 ALLNORTH CONSULTANTS LIMITED  
 PERMIT NUMBER: P 6366  
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

5		
4		
3		
2		
1	ISSUED FOR TENDER	13/01/08
0	Design Completion	

Revision/Description/Date/Client

**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA**

Project title/Titre du projet  
**INNISFAIL, ALBERTA**  
**7-2A SYLVAIRE CLOSE**  
**RCMP K-9 UNIT**  
**PRE-ENG**  
**BUILDING FOUNDATION**

Approved by/Approve par  
 D.WILLIAMS

Designed by/Concept par  
 C.POLSOM

Drawn by/Desiné par  
 S.NICKLIE

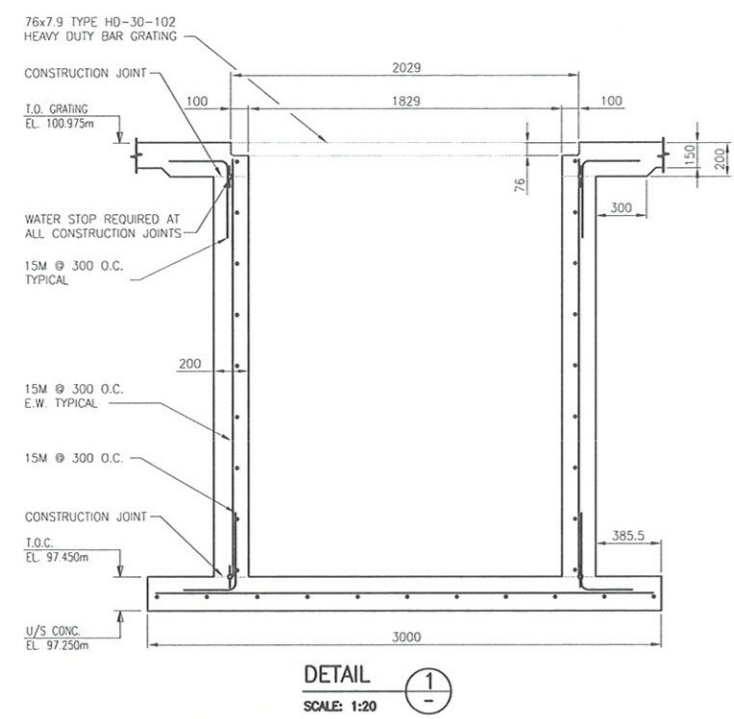
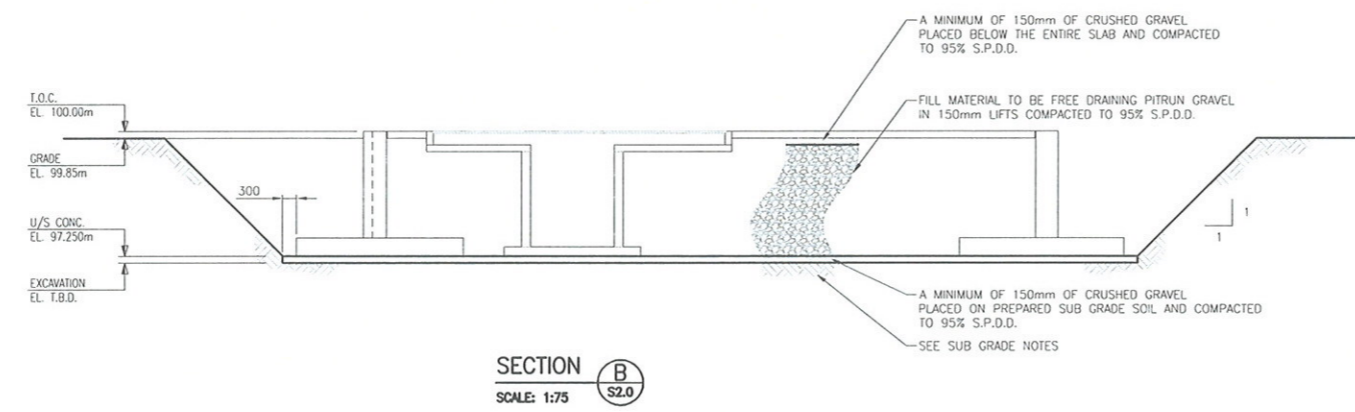
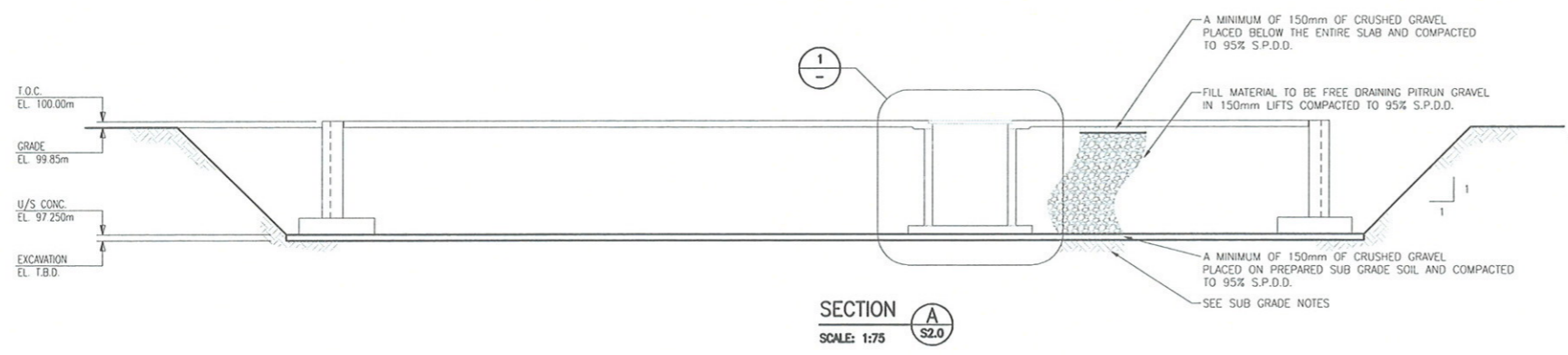
PWOSC Project Manager/Administrateur de Projets TP50C

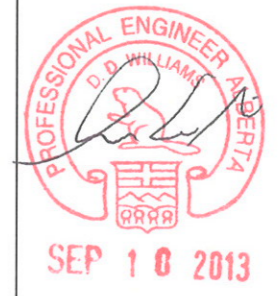
PWOSC, Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'ingénierie, TP50C

Client/Client  
 PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Drawing title/Titre du dessin  
**STRUCTURAL**  
**RCMP K-9 UNIT BUILDING**  
**FOUNDATION**  
**SECTIONS AND DETAIL**

Project No./No. du projet M5000-4-0894/A	Sheet/Fauille S2.2 OF -	Revision no./ La Révision no. 1
---------------------------------------------	-------------------------------	------------------------------------------





PERMIT TO PRACTICE  
 ALLNORTH CONSULTANTS LIMITED  
 PERMIT NUMBER: P 6366  
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

5		
4		
3		
2		
1	ISSUED FOR TENDER	13/09/08
0	Design Completion	
Revision/	Description/Description	Date/Date

Client/Client  
**PUBLIC WORKS AND GOVERNMENT SERVICES CANADA**

Project title/Titre du projet  
**INNISFAIL, ALBERTA  
 7-2A SYLVAIRE CLOSE**  
**RCMP K-9 UNIT  
 PRE-ENG  
 BUILDING FOUNDATION**

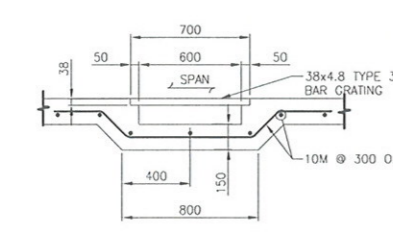
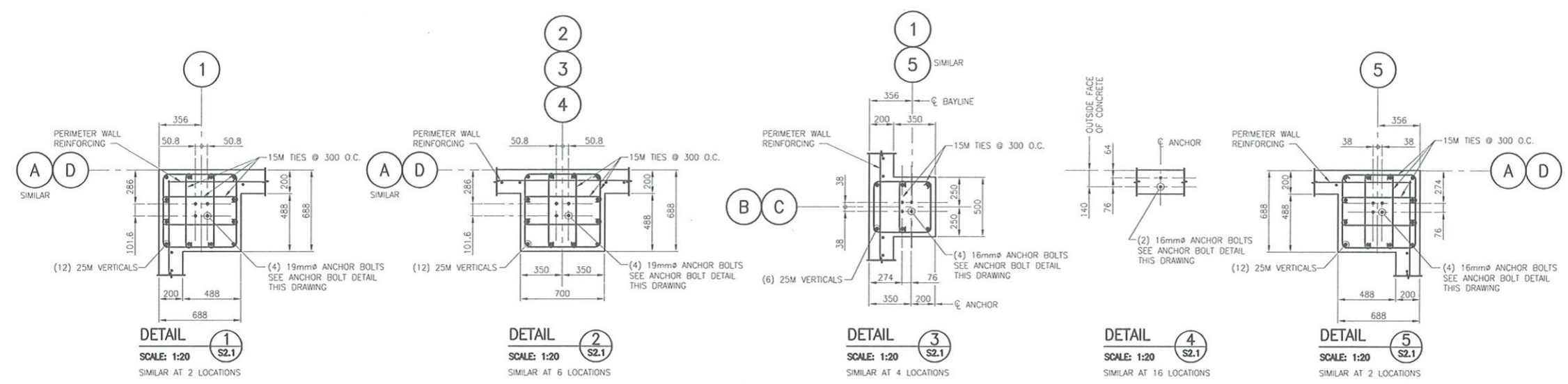
Approved by/Approuvé par  
 D.WILLIAMS  
 Designed by/Conçu par  
 C.POLSON  
 Drawn by/Dessiné par  
 S.NICKLIE  
 PWOSC Project Manager/Administrateur de Projets TPSGC

PWOSC, Architectural and Engineering Resources Manager/  
 Ressources Architectural et de Directeur d'Ingénierie, TPSGC

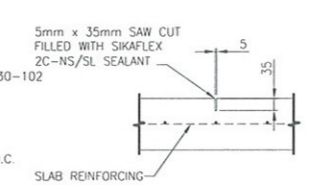
Client/Client  
 PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

Drawing title/Titre du dessin  
**STRUCTURAL**  
 RCMP K-9 UNIT BUILDING  
 FOUNDATION  
 DETAILS

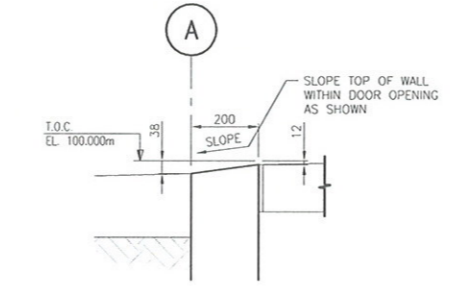
Project No./No. de projet M5000-4-0894/A	Sheet/Feuille <b>S2.3</b> OF -	Revision no./ La Révision no. <b>1</b>
---------------------------------------------	--------------------------------------	-------------------------------------------------



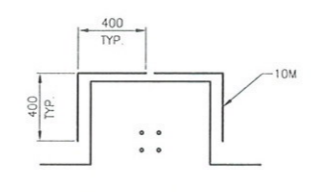
**SECTION E**  
 SCALE: 1:20



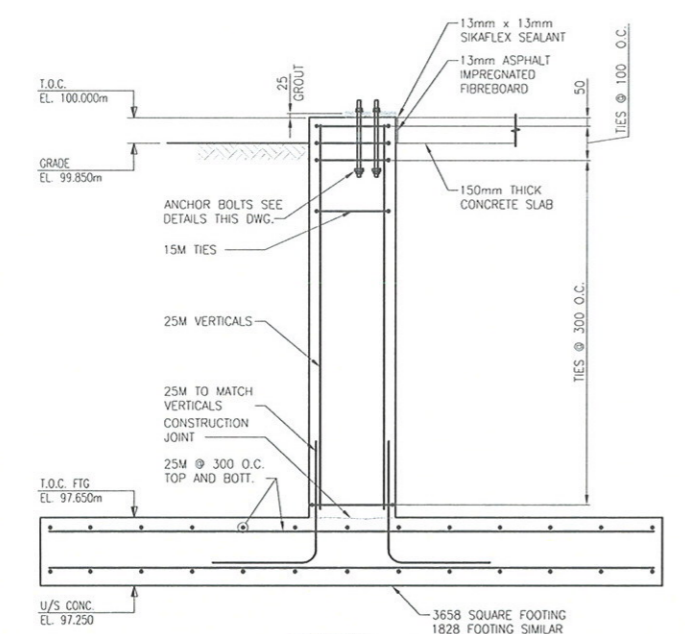
**TYPICAL SAW-CUT DETAIL**  
 SCALE: 1:10



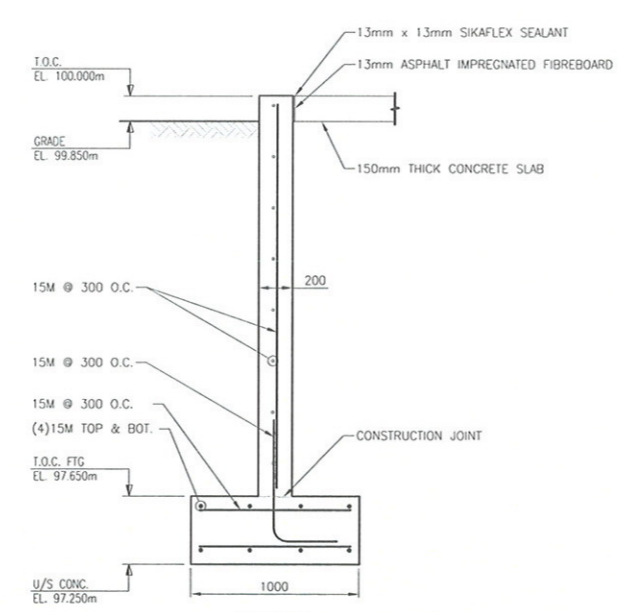
**DETAIL 6**  
 SCALE: 1:20



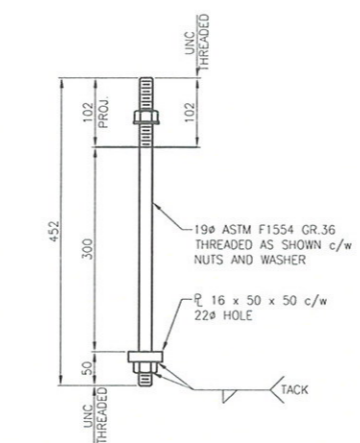
**TYPICAL SLAB REINFORCING  
 AROUND INSIDE CORNERS**  
 SCALE: 1:20



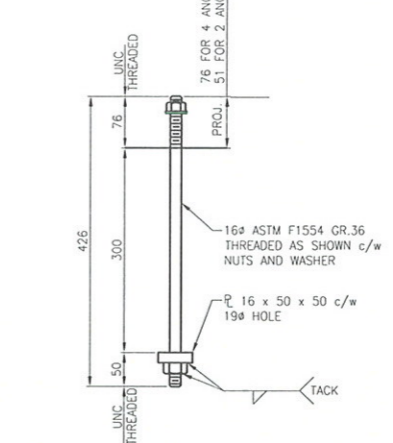
**SECTION C**  
 SCALE: 1:20



**SECTION D**  
 SCALE: 1:20



**19Ø ANCHOR BOLT - DETAIL**  
 SCALE: 1:5



**16Ø ANCHOR BOLT - DETAIL**  
 SCALE: 1:5

