

REAL PROPERTY SERVICES
Western Region

**CORRECTIONAL
SERVICES
CANADA**
SASKATCHEWAN PENITENTIARY

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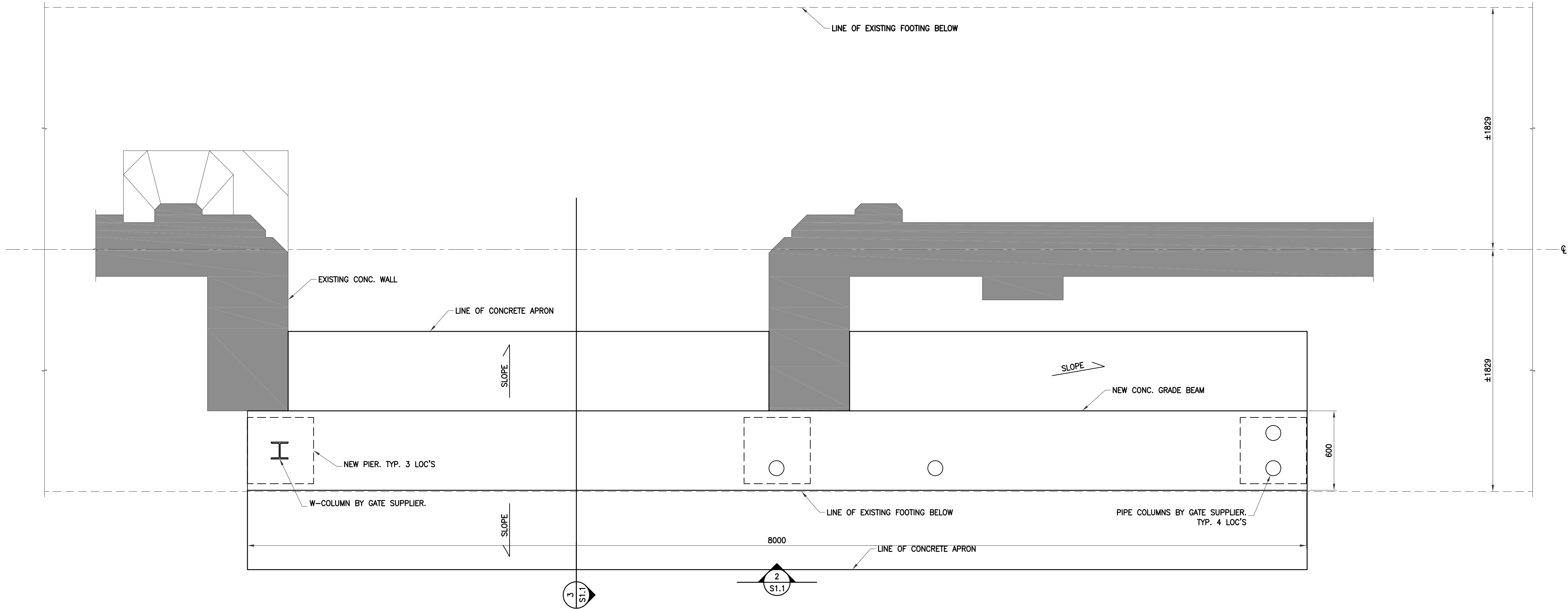
REVISIONS	DESCRIPTION	DATE
A	detail number number du detail	
B	source drawing no. de dessin no.	
C	detail on drawing no. detail sur dessin no.	

project title
**GATE AND FENCE
REPAIR AND REPLACEMENT**

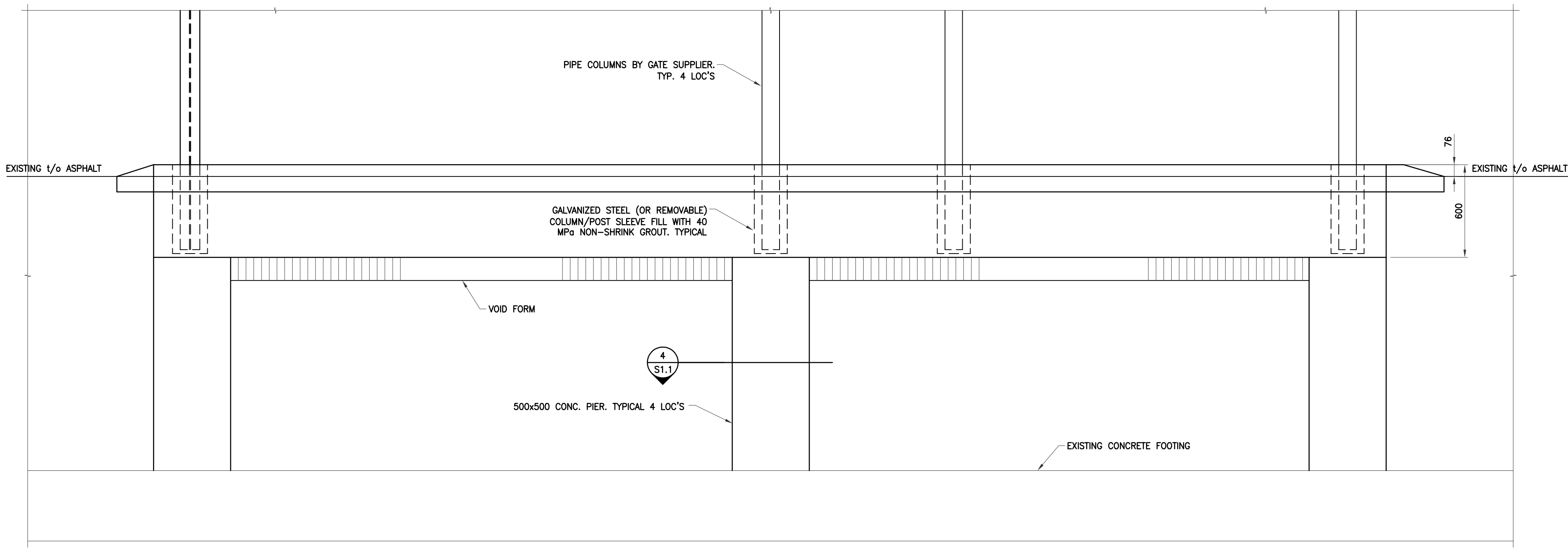
**SASKATCHEWAN PENITENTIARY
PRINCE ALBERT, SASKATCHEWAN**

drawing title
**EAST SALLYPORT
EXTERIOR GATE
STRUCTURAL
(VMG 3)**

designed by M.J.W.	conçu par
drawn by J.W.C., A.M.C.	dessiné par
approved by M.D.B.	approuvé par
PWGSC Project Manager CHAD VAN APELDOORN	Administrateur de Projets TPSGC
scale AS SHOWN	échelle selon
project no. R.058018.001	feuille S1.1
date 2017-07-04	date OF 6



1 FOUNDATION PLAN
1 : 20



2 ELEVATION
1 : 20

STRUCTURAL GENERAL NOTES

General Specifications, National Building Code of Canada, 2015.

Contractor to read Structural Drawings in conjunction with Architectural, Electrical and Gate Manufacturer's Drawings.

Do not proceed with structural work until gate structure shop drawings have been reviewed and approved.

Unless noted otherwise, typical details apply throughout.

Contractor to confirm all existing conditions and site measurements. Report any discrepancies to Consultant before proceeding.

Prior to removal of existing load bearing elements provide shoring adequately sized to support all loads likely to be imposed on the structure. Methods and sequence of shoring and demolition to the approval of the Consultant.

Existing Footings

1. Existing wall footings to be exposed and reviewed by structural consultant prior to proceeding with piers constructed on these elements.

Cast-in-Place Concrete Piles

1. Friction piles have been designed for the following allowable skin friction values: 18kPa below 2m.
2. Soils reports for adjacent sites may be reviewed at office of Consultant. Any interpretation of the soils report by the Contractor is solely the responsibility of that Contractor.

of that Contractor.

Cast-in-Place Concrete

- Perform cast-in-place concrete work in accordance with CAN/CSA-A23.1 "Concrete Materials and Methods of Concrete Construction".
- Cement to CSA A3001 - "Portland Cements" and aggregates to CAN/CSA-A23.1 "Concrete Materials and Methods of Concrete Construction".
- For all concrete in contact with soil use Symbol HS cement.
- Grout to be premixed non-shrink non-metallic grout with minimum strength at 7 days of 40 MPa.
- Concrete to be in accordance with the following table:

Type	Location	Strength f' _c (MPa)	Cement Symbol	Class of Exposure	Aggreg. max (mm)	Slump mm	Total Air%
1.	Piling	32	HS	F-2 [S-3]	20	50 to 100	4 to 7
2.	Piers, Columns, Grade Beams	32	HS	F-2 [S-3]	20	50 to 100	4 to 7
3.	Concrete Aprons	32	GU	F-2 [C-2]	20	50 to 80	5 to 8

Maximum free water/cement ratio to CAN/CSA-A23.1 table 2 for specified class of exposure.

Concrete Testing

- Concrete testing shall be carried out by an independent testing agency, certified by CSA in accordance with the requirements of CSA A23.3.
- Concrete testing shall be paid for by the Contractor.
- Concrete testing shall consist of three (3) test cylinders taken for every 50 cubic meters or less of each class of concrete placed each day. One (1) cylinder to be tested at 7 days, the remaining two (2) cylinders to be tested at 28 days.
- One (1) additional test cylinder shall be taken during cold weather concreting, and be cured on job site under same conditions of concrete it represents.
- One (1) slump test and one (1) air content test shall be taken for each set of test cylinders taken.
- One (1) slump test shall be taken before and one (1) slump test shall be taken after the addition of steel fibre and / or plasticizer to the concrete mix.
- Testing of concrete shall be performed in accordance with CAN/CSA-A23.2.
- Test results shall be issued to the Structural Engineer, Contractor, Owner and Ready-mixed Concrete Supplier. Test reports are to be numbered consecutively beginning with number one, and identify the location of the concrete placement in the report.

Reinforcing Steel to be paid for by the Contractor.

Slab-on-Grade

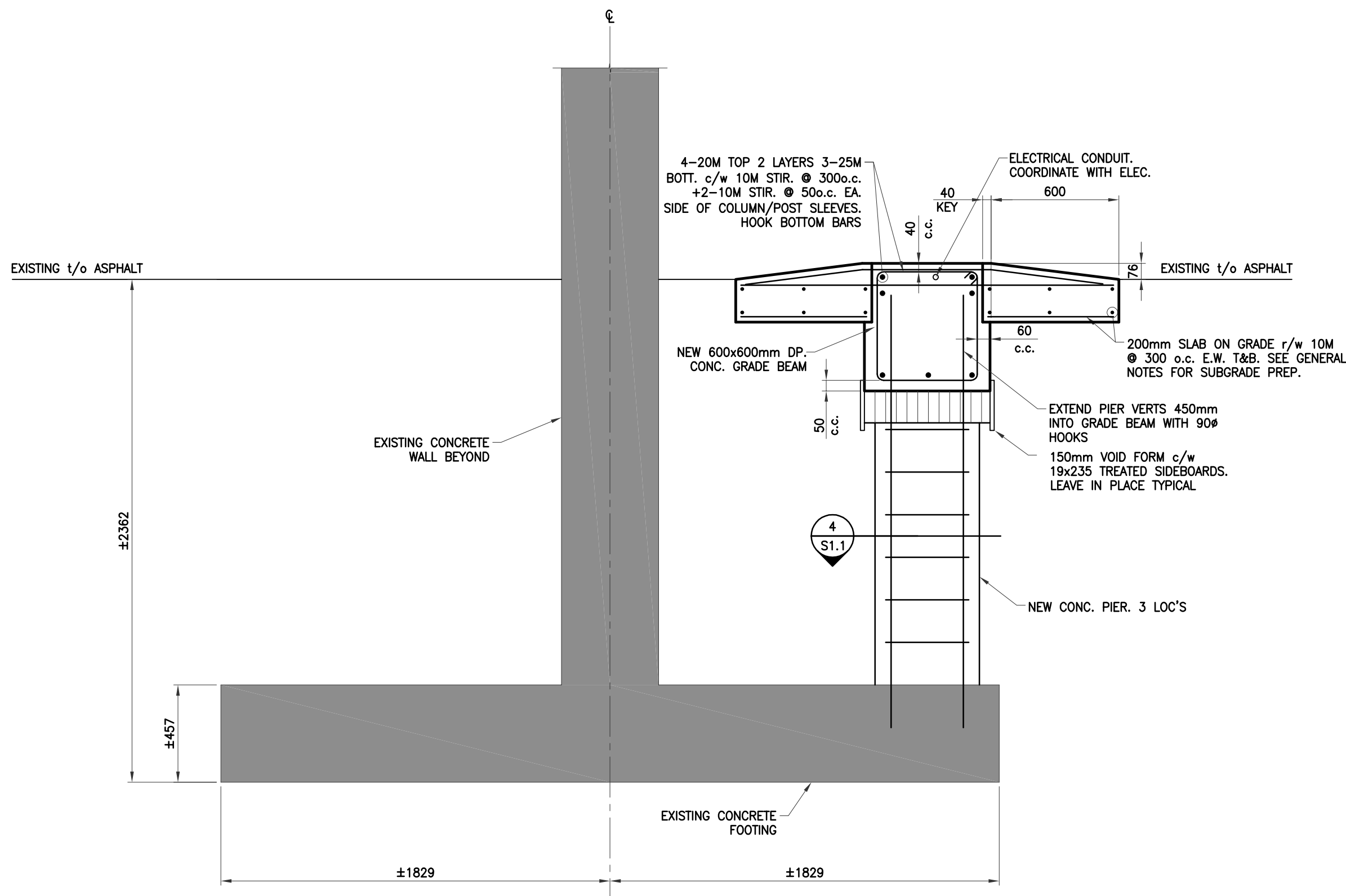
- Remove all organic and deleterious material.
- Prepall subgrade to delineate any soft areas. Any soft areas to be excavated and recompacted.
- Beneath the slab provide minimum 300mm of gravel fill compacted to 98 percent of Standard Proctor Density.
- Where more than 150 mm of granular fill is required, fill is to be placed in 150 mm lifts, each lift being compacted to 98 percent of Standard Proctor Density before placement of next lift.
- All exterior concrete slabs to be finished with light broom finish.
- Saw cut slab as located on drawings to depth of 30 mm within 24 hours of casting.
- Do not cast slab on desiccated, frozen or wet soil or base.

Void Form

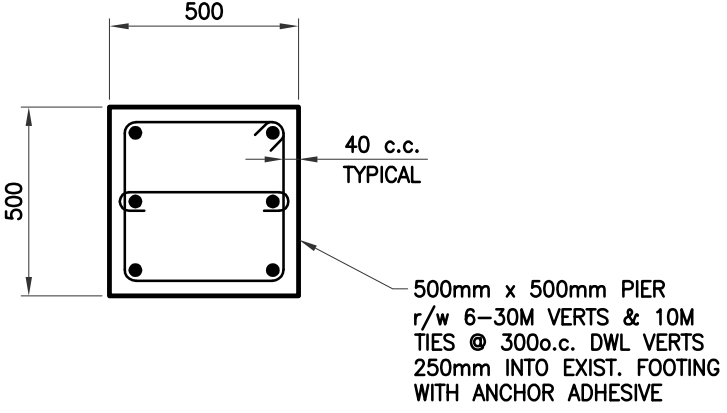
- Spotless made of decomposable cardboard honeycomb form on minimum 50mm sand screed.
- Do not support grade beam reinforcing steel on void form. Suspend all reinforcing steel from the formwork.

Reinforcing Steel

- To CSA Standard G-30.18, Grade 400, plain finish for all bars unless noted otherwise. Minimum splice for 10M bars to be 450 mm. Minimum lap splice for all other bars to be 36 bar diameter or 700 mm, whichever is greater.
- All reinforcing bars to be continuous. Splice only as detailed or approved by Consultant.
- Submit shop drawing for review prior to fabrication.
- Structural Steel
- Structural size shapes, bar size shapes and welded shapes to CSA G40.21M, 350 MPa Weldable Grade for W shapes, 300 MPa for all other shapes.
- Plates and bars to CSA G40.21M, 300 MPa Weldable Grade.
- Welding material to CSA W48.
- Bolts, nuts and washers to ASTM A325. Bolts to be tightened by "Turn-of-Nut" method.
- Design and detail connections to CSA S16 and as per drawings.
- Welding to CSA W59.
- Fabrication and erection to CSA S16 and CISC Code of Standard Practice.
- Fabricator to be certified to CSA W47.1, Class 2.
- Hot dip galvanizing where indicated, to CAN/CSA-G164, minimum zinc coating of 650g/m².



3 SECTION
1 : 20



4 SECTION
1 : 20