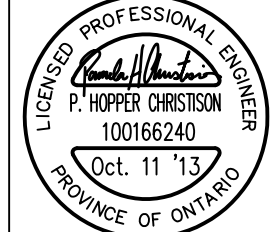
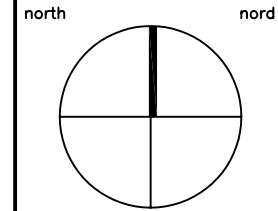


KEY PLAN 1



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 CONSULTING ENGINEERS
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 E-MAIL mailbox@jgcooke.com
 WEB SITE www.jgcooke.com
 OTTAWA, ONT. K2H 9G1
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 mail@jgcooke.com
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JCAL# 13248

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project **Canada Agriculture and Food Museum Building 88 East Ramp Rehabilitation** projet
 Ottawa, Ontario

drawing **KEY PLAN/DEMOLITION** dessin

designed _____ con?u

date **P.C.**

drawn _____ dessin?

date **J.B.**

revised _____ revis?

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approved _____ approuv?

date _____

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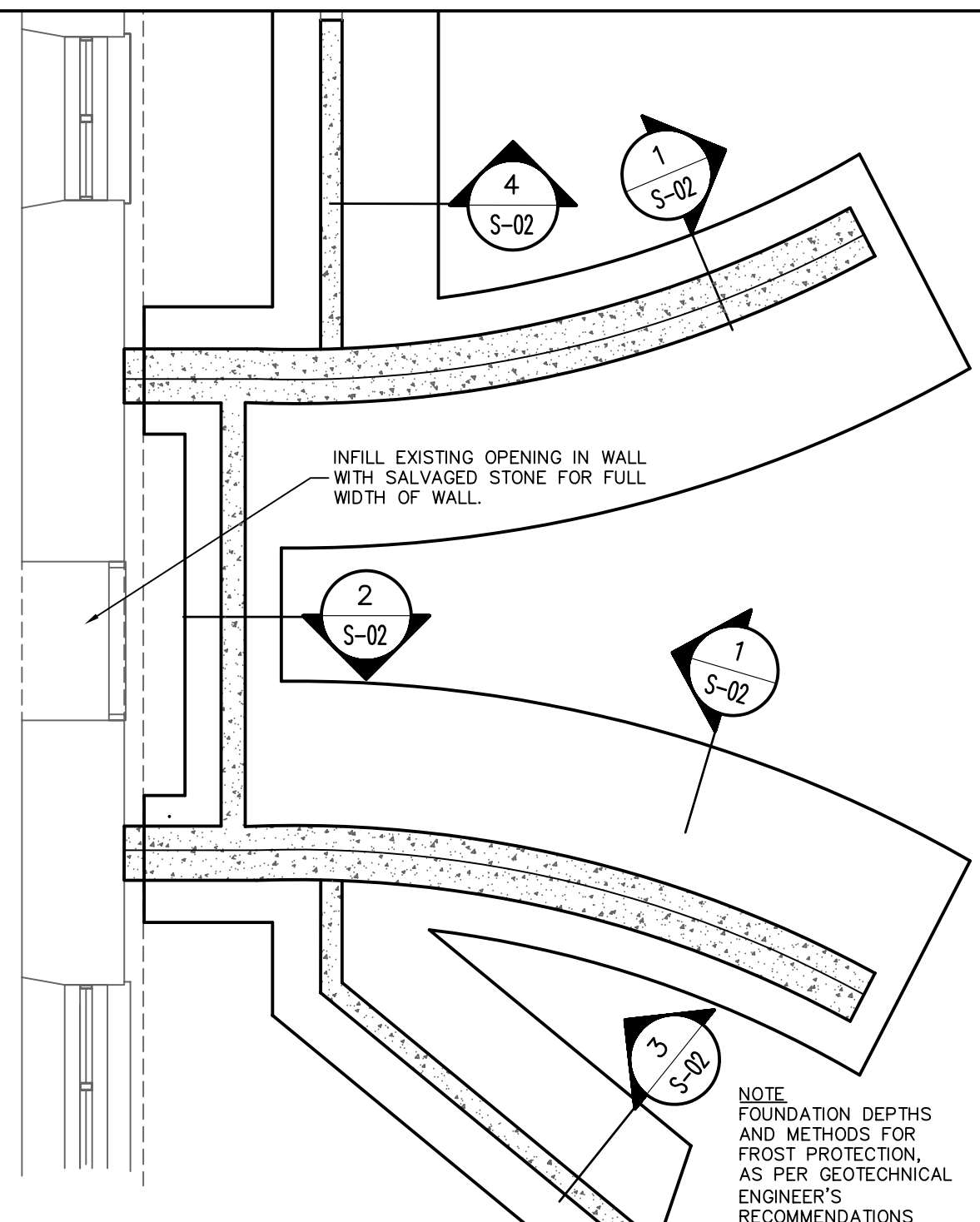
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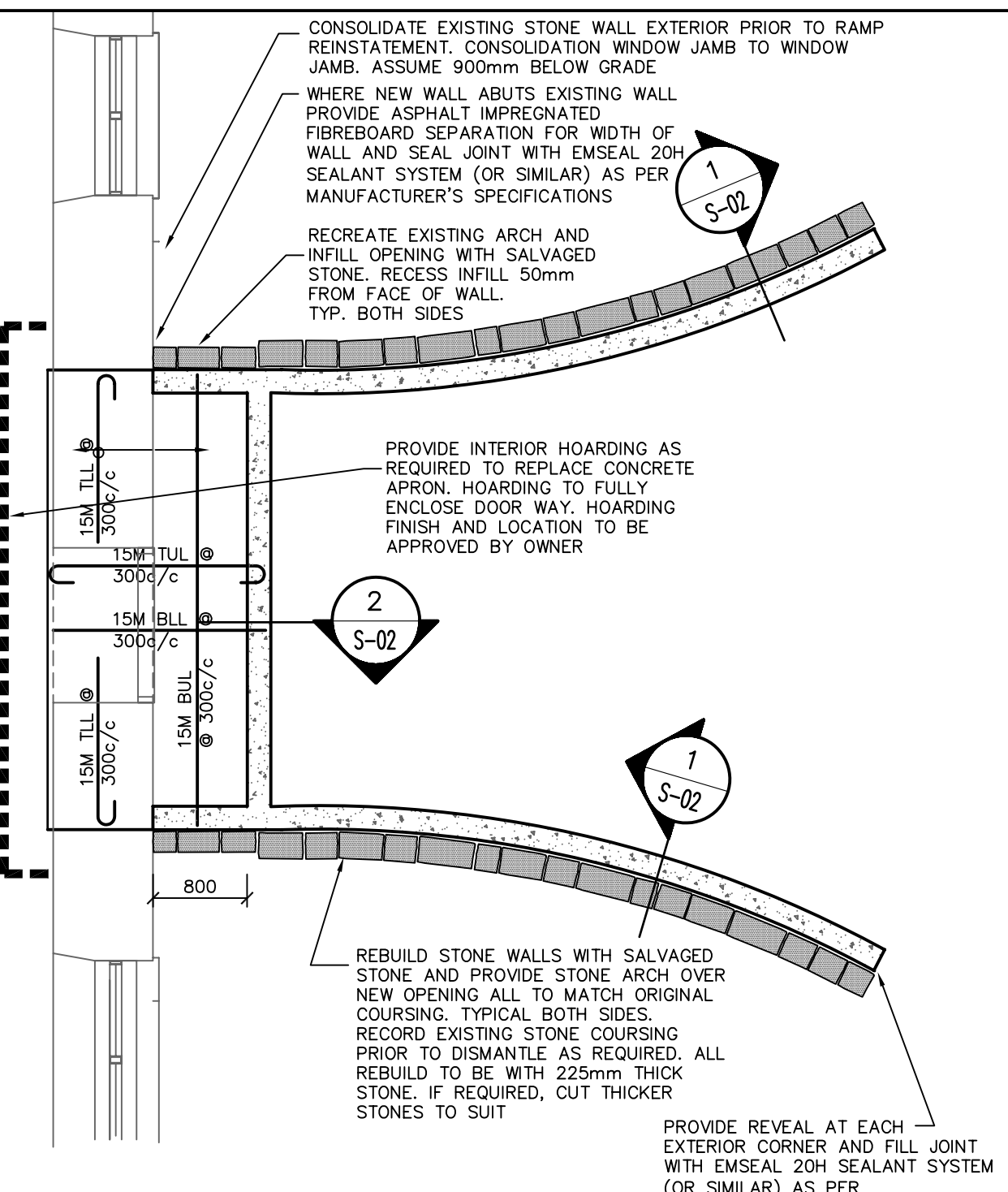
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Canada Agriculture and Food Museum Building 88 East Ramp Rehabilitation Ottawa, Ontario	
drawing	dessin
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FOUNDATION PLAN 1

ADDITIONAL STONE QUANTITIES	
CUTTING OF EXISTING	
STONE DOWN TO 225mm:	5.0m ²
NEW RUBBLE STONE:	0.5m ²
FRACTURE REPAIR	2
INSITU FRACTURE	2
REMOVE AND RESET	2.0m ²



FIRST FLOOR PLAN 2

NOTES

1, LOADS:

DEAD LOAD	
SLAB (200mm)	4.80 kPa
ASPHALT (75mm)	0.95 kPa
MEMBRANE	0.008 kPa
	5.76 kPa
LIVE LOAD	12.00 kPa
SNOW LOAD	2.32 kPa

2, SOILS CAPACITY ASSUMED TO BE 100 kPa. CAPACITY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

3, ASSUMED CONDITIONS FOR RETAINING WALL DESIGN:

Ka=0.35
q=0.5 kN/m ²
γ=16.0 kN/m ³
Kp=2.9
SOIL FRICTION COEFFICIENT=0.5

SUPPLY AND INSTALL NEW ST. MARC'S CAPSTONE, 500mm WIDE, DEPTH TO MATCH EXISTING CURVED TO MATCH RAMP. TOP SURFACE TO BE ROUGH CUT. LENGTH TO SUIT SIX EQUAL LENGTH CAPSTONES

INSTALL NEW GUARDRAIL. SEE C/S-03 ENSURE TEMPORARY GUARDRAILS ARE IN PLACE AT ALL TIMES UNTIL PERMANENT GUARDS ARE INSTALLED

PROTECT ALL WOOD FRAMING DURING DEMOLITION AND CONSTRUCTION
200mm CONCRETE SLAB
15M T&B @ 300c/c E/W

ASPHALT TOPPING TO MATCH EXISTING

15M DWLS TO SLAB @ 400c/c O/F

INFILL EXISTING OPENING WITH SALVAGED STONE. CONFIRM DIMENSIONS ON SITE

STAINLESS STEEL MASONRY ANCHORS @ 400c/c MAX. E/W

PROVIDE 25mm VOID SPACE IN COLLAR JOINT. INSTALL MORTAR NET AT BASE OF WALL. INSTALL WEEP HOLES @ 600c/c

15M H @ 400c/c E/F

200mm CONC. WALL

15M V @ 250c/c I/F

STONE LEDGE STEPS. SEE ELEVATIONS

FOR FROST PROTECTION, SEE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS

15M V&H @ 400c/c OUTER FACE

15M DWLS FROM FTG. @ 400c/c

40 COVER

15M DWLS FROM FTG. @ 250c/c

15M DWLS FROM FTG. @ 350c/c

15M T&B @ 250c/c CONT. IN FOOTING

15M T @ 250c/c

UNDERSIDE OF FOOTING ELEVATION TO MATCH EXISTING

15M DWLS FROM FTG. @ 400c/c E/F

200mm CONC. WALL 15M V&H @ 400c/c Ea. FACE

TO MATCH EXISTING ELEVATION

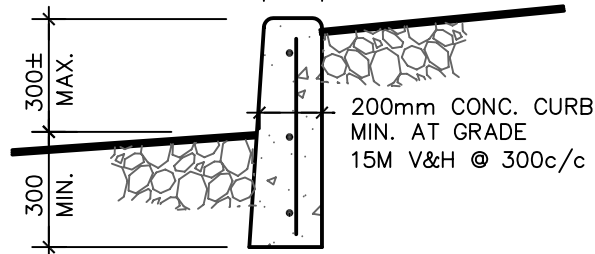
40 COVER

VOID

3-15M CONT. IN FOOTING

NOTE
TIE NEW CURB TO EXISTING WHERE APPLICABLE WITH 15M DWLS DRILLED AND GROUTED 300 INTO EXISTING.

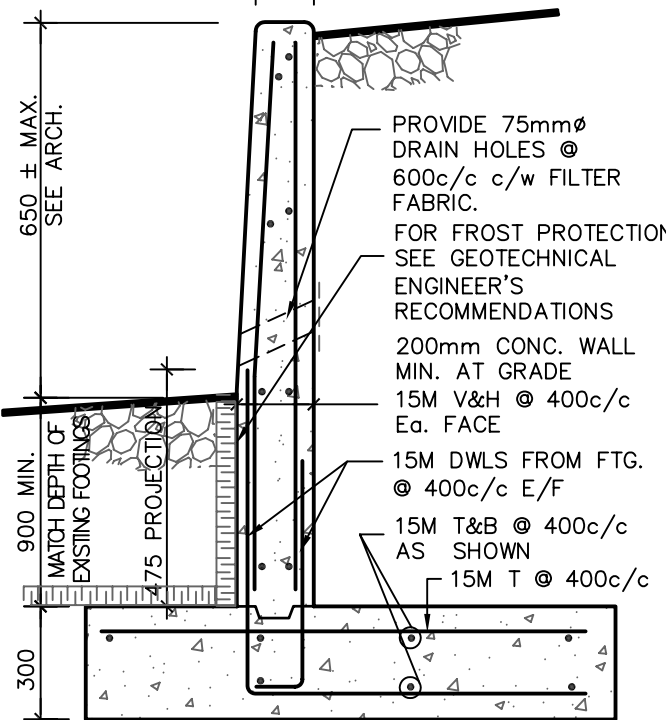
TAPER TO 150mm NEW WALL TO MATCH EXISTING IN FINISH AND PROFILE



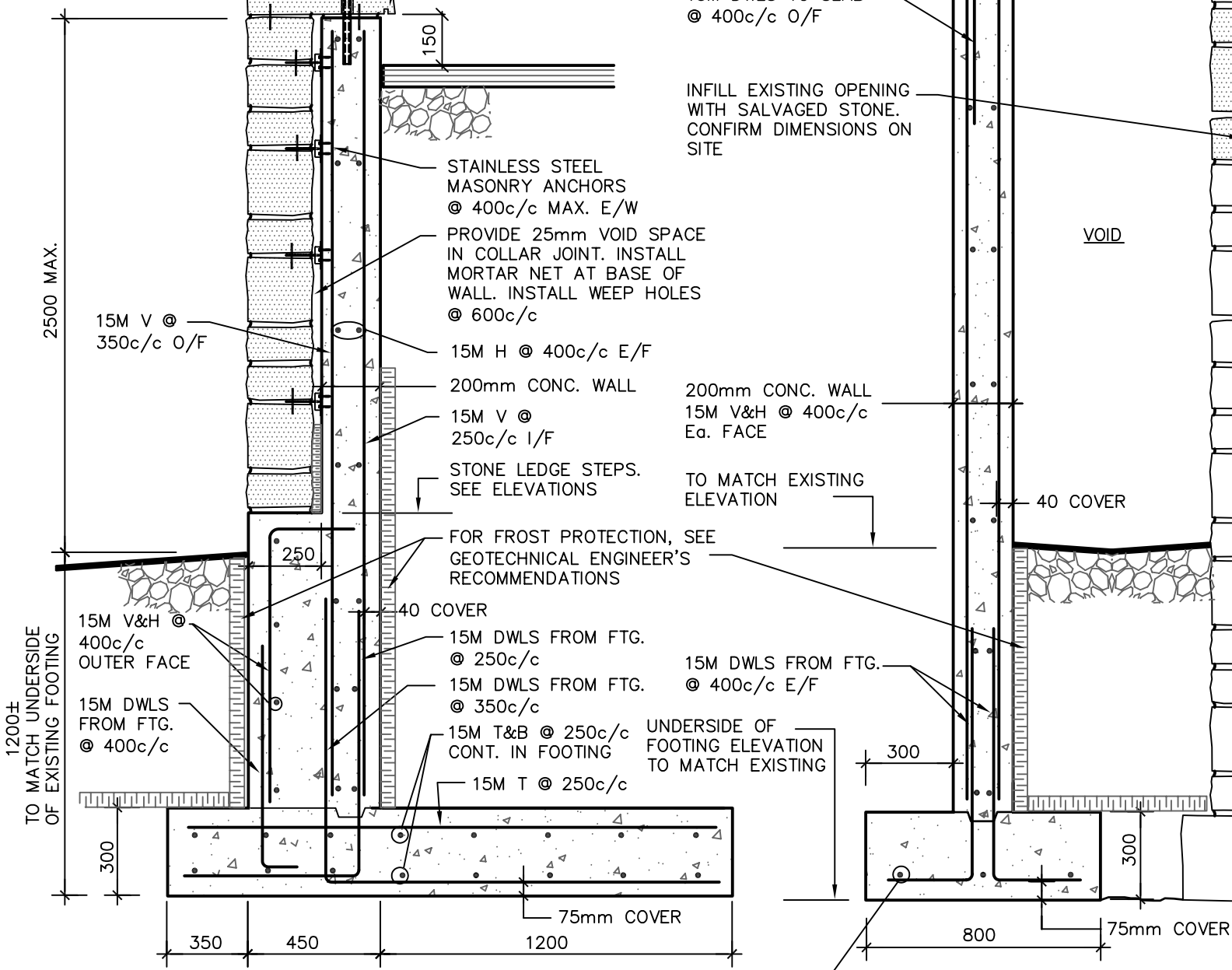
SECTION 4

NOTE
TIE NEW RETAINING WALL TO EXISTING WHERE APPLICABLE WITH 15M DWLS DRILLED AND GROUTED 300 INTO EXISTING.

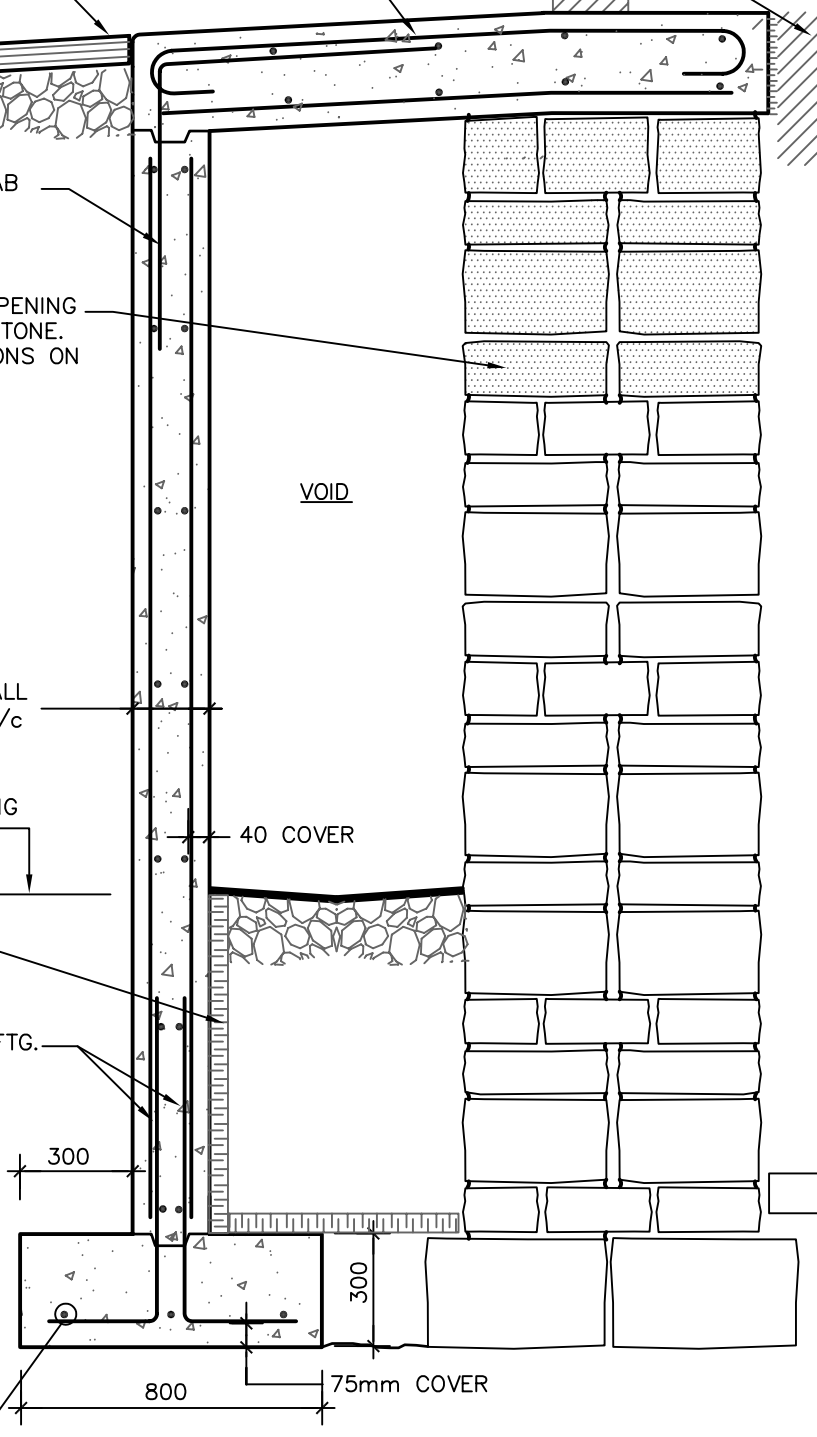
TAPER TO 150mm NEW WALL TO MATCH EXISTING IN FINISH AND PROFILE



SECTION 3



SECTION 1



SECTION 2

Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada

north / nord

LICENSED PROFESSIONAL ENGINEER
P. HOPPER CHRISTISON
100166240
Oct. 11 '13
PROVINCE OF ONTARIO

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drawing / dessin
STRUCTURAL DETAILS

designed / con?u
date / date
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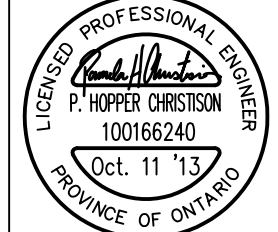
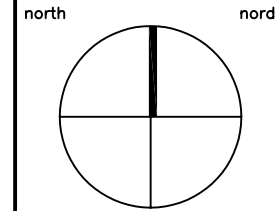
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J.B.

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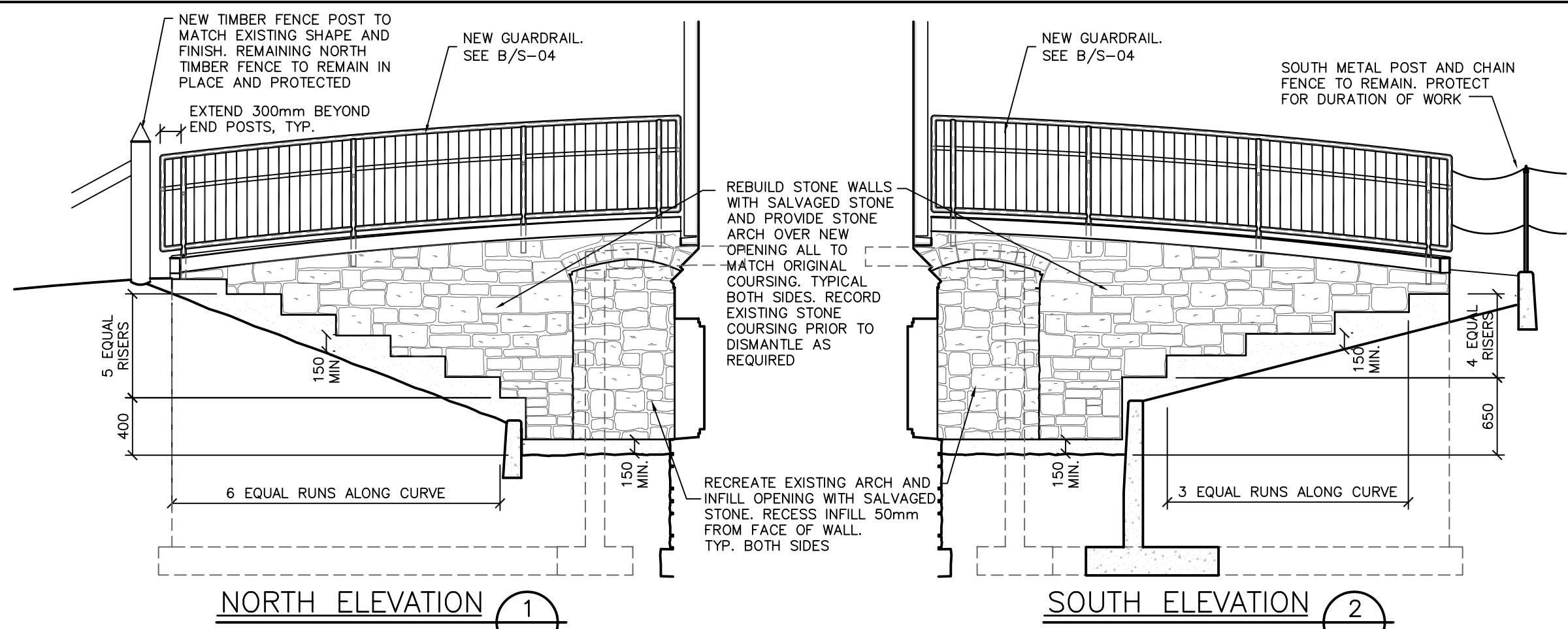
drawing **SIDE ELEVATIONS**

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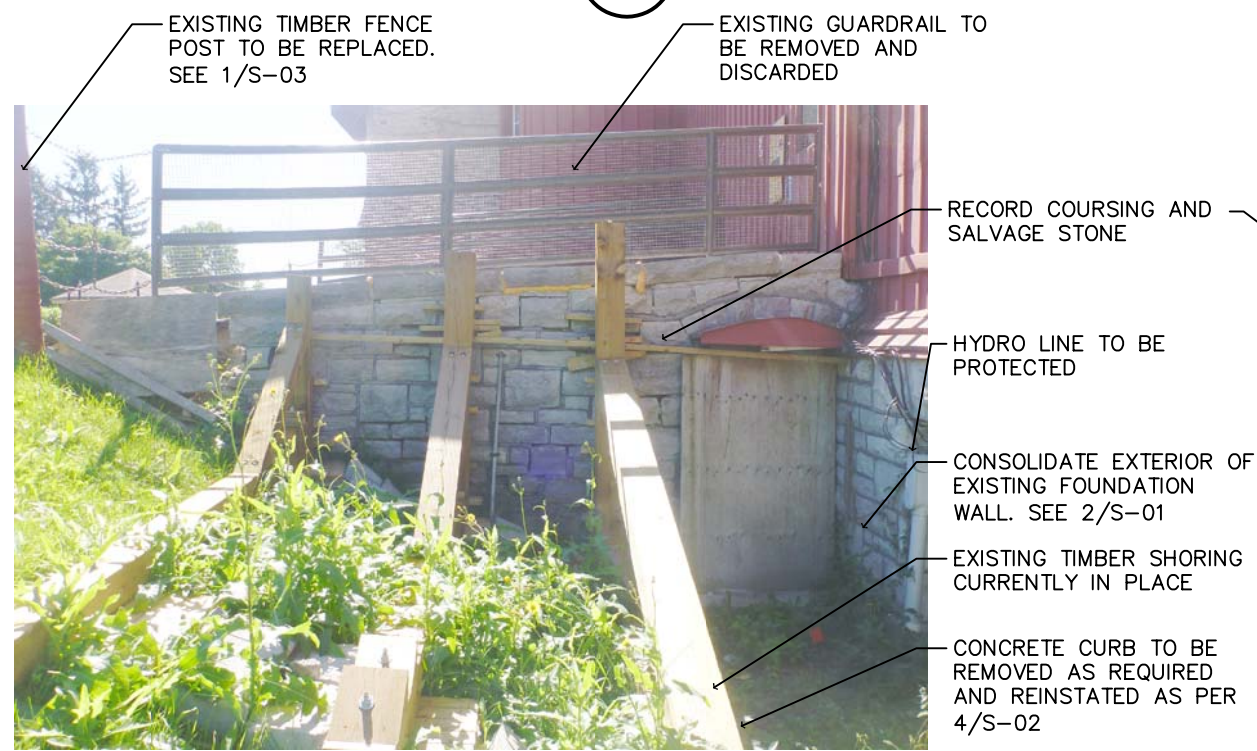
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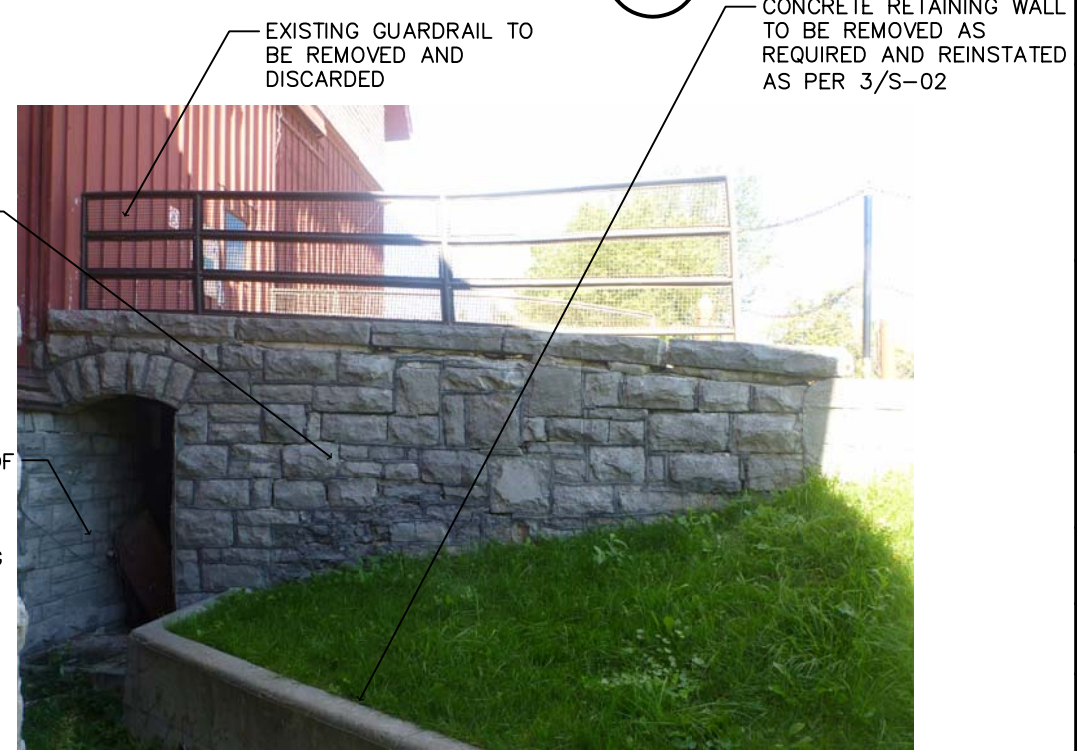


NORTH ELEVATION ①

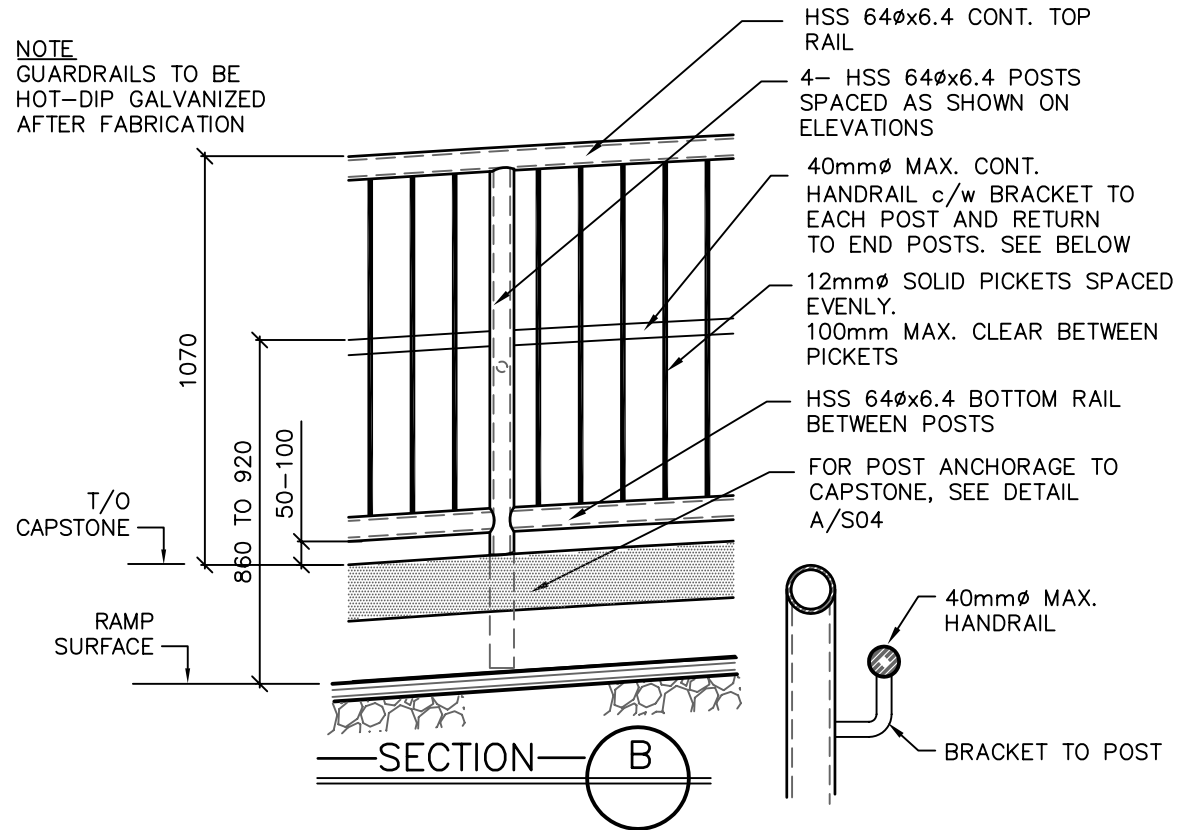
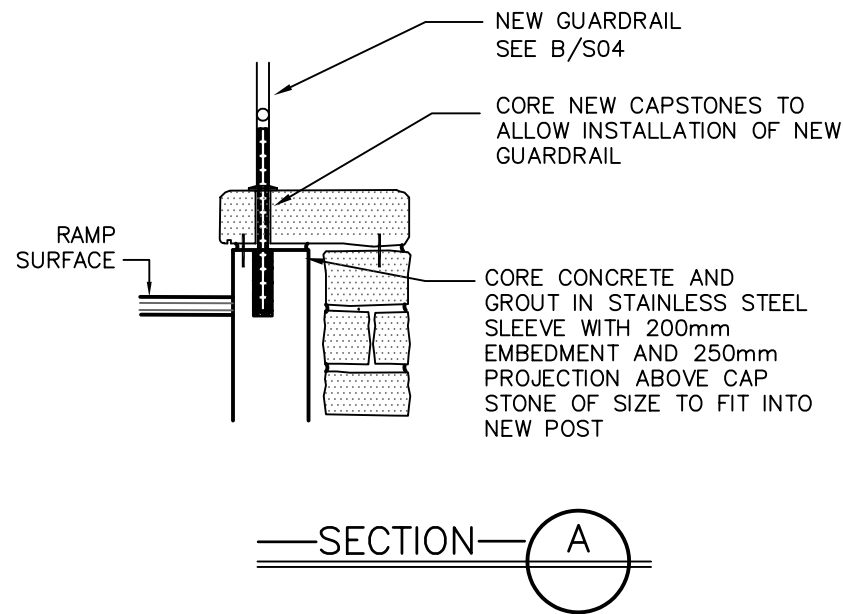
SOUTH ELEVATION ②



NORTH ELEVATION ①



SOUTH ELEVATION ②



ALL CONDUIT, WIRING, DUCTWORK ETC. WILL BE REMOVED FROM THE CONSTRUCTION AREA BY THE OWNER PRIOR TO START OF CONSTRUCTION

SALVAGE STONE FROM INTERIOR WALL FOR USE DURING REBUILD. RETURN ALL UNUSED STONE TO OWNER



north

nord

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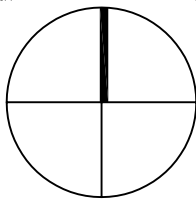
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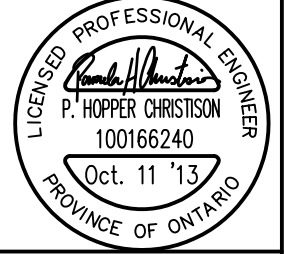
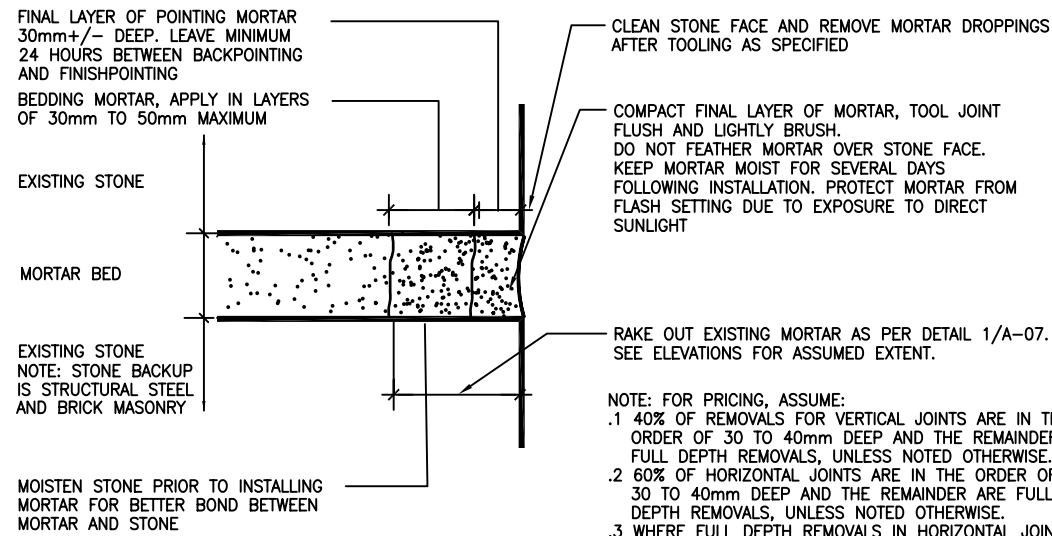
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north

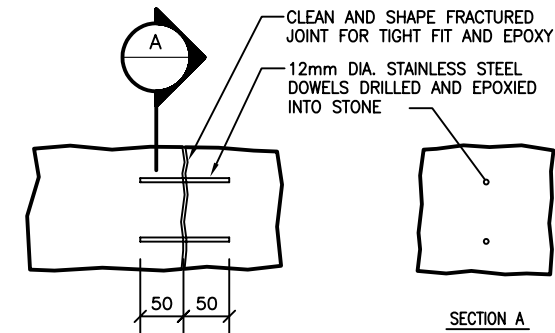


nord

- NOTE: FOR PRICING, ASSUME:
- 40% OF REMOVALS FOR VERTICAL JOINTS ARE IN THE ORDER OF 30 TO 40mm DEEP AND THE REMAINDER ARE FULL DEPTH REMOVALS, UNLESS NOTED OTHERWISE.
 - 60% OF HORIZONTAL JOINTS ARE IN THE ORDER OF 30 TO 40mm DEEP AND THE REMAINDER ARE FULL DEPTH REMOVALS, UNLESS NOTED OTHERWISE.
 - WHERE FULL DEPTH REMOVALS IN HORIZONTAL JOINTS ARE NECESSARY, THE CONTRACTOR MUST EXERCISE CAUTION SO AS NOT TO DESTABILIZE THE WALLS. IN THIS CASE, REMOVE MORTAR IN ONLY SMALL PORTIONS OF THE WALL AND REPOINT EXCEPT FOR FINAL LAYER BEFORE PROCEEDING WITH REMOVALS

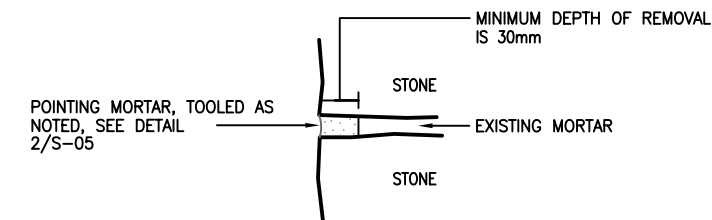
FOR PRICING, ASSUME THE FOLLOWING:
.1 AVERAGE DEPTH OF STONE: 300mm



FRACTURED STONE REPAIR PROCEDURE:

- REMOVE FRACTURED STONE WITHOUT LOSING PIECES OR WORSENING DAMAGE OR DAMAGING ADJACENT UNITS
- DRILL 13mm ϕ HOLES, 60mm LONG IN EACH SECTION, SPACED AT 300 O.C. MAXIMUM. HOLES MUST BE CENTRED IN STONE THICKNESS.
- INSERT 12mm ϕ STAINLESS STEEL DOWELS, 100mm LONG AND APPLY EPOXY ADHESIVE. GLUE STONE FACES TOGETHER USING EPOXY ADHESIVE, OR APPROVED GROUT. LET SET FOR 24 HOURS MINIMUM.
- REINSTATE REPAIRED STONE INTO WORK AND REPOINT WITH SPECIFIED MORTAR TO WITHIN 50mm OF POINTING SURFACE. ALLOW MORTAR TO SET 24 HOURS. POINT TO SURFACE IN TWO LAYERS.
- GROUT SOLID ALL VOIDS BEHIND STONE USING SPECIFIED GROUT.
- REPAIR SURFACE OF FRACTURE WITH CEMENT BASED RESTORATION MORTAR TO MATCH THE SURROUNDING STONE, AND TOOL FOR TEXTURE.

REPOINTING DETAIL



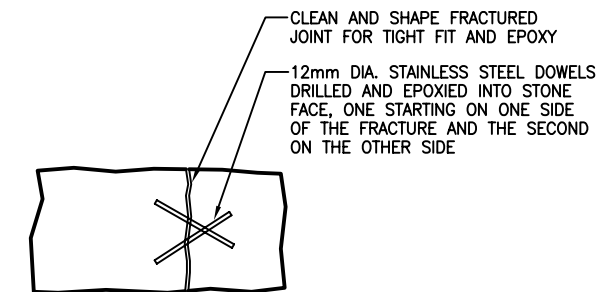
RAKING OUT PROCEDURE:

- RAKE OUT EXISTING MORTAR SQUARE TO STONE
- REMOVE ALL RESIDUE FROM STONE FACE TO ALLOW NEW MORTAR TO BOND TO STONE
- DO NOT CHIP OR OTHERWISE DAMAGE EDGE OF STONE DURING REMOVALS
- GRINDERS OR SAW BLADES MUST NOT TOUCH STONE FACE. CUT CENTRE OF JOINT CAREFULLY, WITHOUT MARKING STONE. REMOVE REMAINDER OF MORTAR USING HAND TOOLS.
- ALL CRACKED MORTAR, MORTAR DEBONDED FROM STONE, OR DETERIORATED MORTAR, MUST BE REMOVED FROM JOINT PRIOR TO REPOINTING, FOR FULL DEPTH OF THE STONE IF NECESSARY.
- CLEAN OUT JOINT USING COMPRESSED AIR, PRIOR TO REPOINTING.

RAKING OUT DETAIL

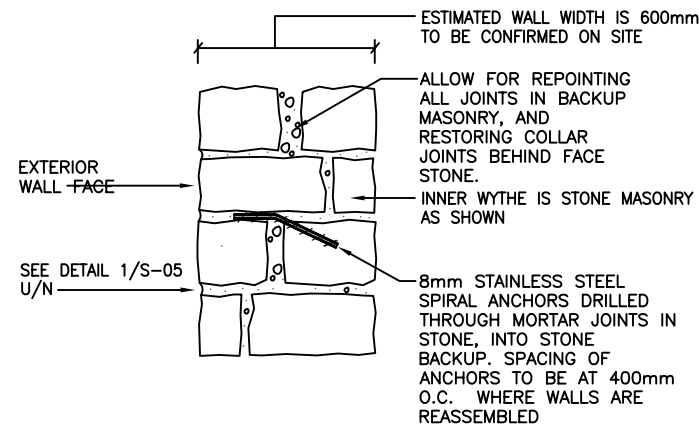


REPAIR OF FRACTURED STONE



IN-SITU FRACTURED STONE REPAIR PROCEDURE:

- DRILL 13mm ϕ HOLES, SPACED AT 300 O.C. MAXIMUM, MINIMUM 2 ANCHORS PER STONE. EXTEND 60mm BEYOND FRACTURE. MINIMUM LENGTH OF HOLE TO BE 140mm.
- INSERT 12mm ϕ STAINLESS STEEL DOWELS, 100mm LONG AND APPLY EPOXY ADHESIVE. LET SET FOR 24 HOURS MAXIMUM.
- REPAIR SURFACE OF FRACTURE AND DOWEL HOLES WITH CEMENT BASED RESTORATION MORTAR TO MATCH THE SURROUNDING STONE, AND TOOL FOR TEXTURE.



RUBBLE STONE ANCHORAGE DETAIL



IN-SITU REPAIR OF FRACTURED STONE



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project Canada Agriculture and Food Museum Building 88 East Ramp Rehabilitation Ottawa, Ontario

drawing TYPICAL DETAILS dessin?

designed P.C. con?u

date J.B. dessin?

revised J.B. revis?

date approved approuv?

project no. MCE13 A532 no. du projet

drawing no. S-05 no. du dessin

S-05

A. GENERAL NOTES

1. General

- 1.1 Check all dimensions on Structural Drawings with the site conditions, and the manufacturer's drawings. These drawings are intended to be used in conjunction with the manufacturer's drawings of the unit. Report any inconsistencies before proceeding with the work. DO NOT scale these drawings.
- 1.2 T.D. - sections on the drawings refer to Typical Detail Sheets. They show structural intent rather than actual conditions for this project.
- 1.3 All dimensions unless otherwise noted are in millimeters.
- 1.4 Conform to the requirements of the included Typical Details.
- 1.5 Independent Inspection and Testing: The Owner will appoint an independent inspection and testing agency. The cost of inspection shall be paid by the Owner. Work will be inspected as required by the Departmental Representative to determine conformance to the drawings and specifications.
- 1.6 These drawings show the completed structure. The Contractor shall have the sole responsibility for the design, erection, operation, maintenance, and removal of temporary supports, structures, and facilities, and the design and execution of construction methods required in their use.
- 1.7 The use of these drawings shall be strictly limited to the instructions in the revision block. Building from these drawings shall proceed only when "ISSUED FOR CONSTRUCTION".
- 1.8 The scope of the work depends on the site conditions. Notify the Departmental Representative where on site conditions may require modifications to the contract documents.
- 1.9 Before all excavation, the contractor must verify the existence of utilities/services and their elevations. The contractor is responsible for diverting or relocating of conduits, water, sewer or power lines which interfere with the execution of the works and obtaining the authorization of the proper organization.
- 1.10 Design and Construction to be in accordance with the Ontario Building Code 2006.
- 1.11 Repair all damaged sodded or asphalt areas upon completion of work
- 1.12 Contractor to locate all underground services prior to excavation and protect during Construction

2. Foundations

- 2.1 Bearing pressures to be verified in writing in the field by a Geotechnical Engineer registered in the Province of Ontario prior to placing concrete. Contact owner to arrange for bearing capacity testing upon removal of concrete in area of work. Allow 48 hours from concrete removal for completion of test. Cost of testing to be paid by owner.

3. Cast-in-Place Concrete

- 3.1 All concrete formwork and reinforcing steel work must be done in accordance with CSA A23.1-09 and A23.2-09.
- 3.2 Unless otherwise specified on the plans, provide temperature reinforcing for framed one way slabs in accordance with Typical Detail TD3.6.
- 3.3 Bars marked continuous shall be developed by Class B tension lap where spliced.
- 3.4 The minimum clear concrete cover for steel reinforcement, unless noted on drawings, shall conform to Clause 6.6.6., and Table 17 of CSA-A23.1-09.
- 3.5 The contractor shall notify the Departmental Representative, not less than 24 hours before placing concrete, when the reinforcing steel and formwork are ready for inspection. Do not close forms until the reinforcement has been reviewed. The contractor must give notice to the Testing Laboratory to ensure the presence of their representative for each concrete pour.
- 3.6 Submit 1 electronic copy of bar lists and placing diagrams to Departmental Representative to review prior to fabrication of reinforcing steel. Draw diagrams to a scale of not less than 1:50. Review of shop drawings is a precaution against oversight or error. It is not a detailed check and shall not be construed as relieving the Contractor of responsibility for making the work accurate and in conformity with the Contract Documents. Maintain a set of reviewed drawings on site.
- 3.7 Independent Inspection and Testing: The Departmental Representative will appoint an independent inspection and testing agency to undertake concrete strength tests. The cost of testing shall be paid by the Departmental Representative. Laboratory curing and testing of samples will be carried out in accordance with CSA A23.1-09 and CSA A23.2-09 except that strength tests, including air entrainment and slump tests, will be required for each 50 m³, but not less than one test, for each class of concrete placed each day. Provide a group of three cylinders for each standard strength test. One specimen will be tested at 7 days and two at 28 days. Provide one additional field cured cylinder for testing at 7 days when concrete is placed under cold weather conditions. Results will be on the form conforming to CSA A23.2-09, Annex B, stating the location of concrete to which tests relate and with comments on abnormal results and conditions, and will be reported to the Departmental Representative with copies to the Contractor.

4.0 Structural Steel

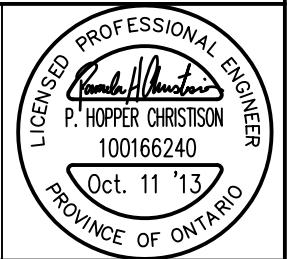
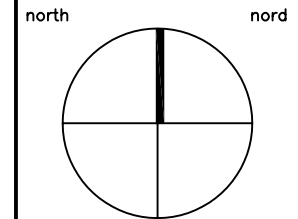
- 4.1 Structural Steel Shapes are shown in the metric designation.
- 4.2 Erect steel in accordance with CSA S16-09 and CSA-S136-07(R2012).
- 4.3 Do not splice material without the written approval of the Departmental Representative. Where granted 100% X-ray inspection will be mandatory and paid for by the contractor.
- 4.4 All railings to be hot-dip galvanized.
- 4.5 Touch up abrasions and imperfections with zinc-rich primer.
- 4.6 Submit 1 electronic copy of erection diagrams and shop fabrication details for review prior to fabrication. Review of shop drawings is a precaution against oversight or error. It is not a detailed check and shall not be construed as relieving the Contractor of responsibility for making the work accurate and in conformity with the Contract Documents. Maintain a set of reviewed drawings on site.

B. MATERIAL AND DESIGN DATA

- 1. All loads shown on drawings are unfactored service loads in kN and kN/m² unless otherwise noted.
- 2. Existing footing design bearing pressure: 100 kN/m² (Assumed), to be confirmed by a Soils Departmental Representative prior to construction.
- 3. Concrete compressive strength at 28 days:
Walls and Ramps: 30 MPa, class N exposure.
Slab: 35 MPa, class C1 exposure
- 4. Reinforcing steel: to CAN/CSA G30.18-09, Grade 400.
- 5. Structural steel: to CSA G40.20/G40.21-04 (R2009)
Welding: to CSA W59-03 (R2008).
a) Rolled shapes and plates: Grade 300W
b) Welding electrodes: E70XX (E480XX)
c) Fasteners: A325 (A325M)
d) Anchor bolts: Grade 262W

C. CODES AND STANDARDS

- 1. Conform to requirements of the Ontario Building Code 2006 and The Occupational Health and Safety Act and Regulations for Construction Projects. (Latest Edition)
- 2. Concrete Materials and Design: to CSA-A23.1-09 and A23.3-04 (R2008) Respectively.
- 3. Falsework for Construction Purposes: to CSA 5269.1 1975 (R2008).
- 4. Concrete Formwork: to CSA 5269.3 M92 (R2008).
- 5. Concrete Testing: to CSA-A23.2-09.
- 6. Concrete Construction: to CSA-A23.1-09.
- 7. Structural Steel Design, Fabrication and Erection: to CAN/CSA-S16-09.
- 8. Welding: to CSA Standards W59-03 (R2008), CSA-S16-09, and W47.1-09.
- 9. Galvanizing (Hot-Dip): to ASTM A123, minimum zinc coating of 600 g/m³



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project projet
Canada Agriculture and Food Museum Building 88 East Ramp Rehabilitation
Ottawa, Ontario

drawing dessin
GENERAL REQUIREMENTS

designed con?u
date **P.C.**

drawn dessin?
date **J.B.**

revised revis?
date

approved approuv?
date

project no. no. du projet
MCE13 A532

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S-07