



Parks
Canada

Parcs
Canada

CAPE SPEAR NHSC WORLD WAR II BATTERY REHABILITATION BLACKHEAD ROAD / Route 11 CAPE SPEAR, NL

PROJECT NO. 446

DRAWING LIST

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Canada 

GENERAL NOTES:

- ALL WORK AND MATERIALS SHALL CONFORM TO THE NATIONAL BUILDING CODE OF CANADA, 2015 EDITION.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- EXISTING CONDITIONS SURVEY SUPPLIED BY CLIENT.
- ALL IDENTIFIED SECTIONS OF TUNNEL WITH TIMBER ROOF STRUCTURE, INCLUDING, SECTIONS OF ENTRANCE TUNNELS, EMBEDDED STEEL AND TIMBER SUPPORTS, TO BE REMOVED AND DISPOSED OFF SITE.
- CONTRACTOR SHALL PROVIDE DEPARTMENT REPRESENTATIVE A WORK PLAN FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY WORK. WORK PLAN TO INCLUDE PUBLIC SAFETY PROTECTION / CONSTRUCTION STAGING PLAN DESCRIBED ON DRAWING C101.
- PEDESTRIAN TRAFFIC SHALL BE MAINTAINED FOR DURATION OF PROJECT.
- TEMPORARY BARRIERS SHALL BE ERECTED TO CONTROL PEDESTRIAN AROUND THE SITE.
- CONTRACTOR REQUIRED TO OBTAIN ALL PERMITS FROM APPLICABLE REGULATORY AGENCIES, INCLUDING BUT NOT LIMITED TO PARKS CANADA, DFO ECT.
- CONTRACTOR TO INSTALL CATCHMENT DEVICES DURING WORK.
- CONTRACTOR TO SUBMIT A TRAFFIC CONTROL PLAN FOR TRAFFIC DURING CONSTRUCTION FOR APPROVAL.
- CONTRACTOR SHALL EXAMINE ALL DRAWINGS AND CHECK DIMENSIONS AGAINST SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE DEPARTMENT REPRESENTATIVE BEFORE PROCEEDING WITH WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF DAMAGE TO THE EXISTING STRUCTURES, EQUIPMENT OR FACILITIES THAT IS THE RESULT OF IT'S CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL DESIGN, INSTALL AND MAINTAIN ADEQUATE TEMPORARY BRACING AND SHORING OF STRUCTURAL ELEMENTS FOR STABILITY AND SAFETY WHERE REQUIRED DURING CONSTRUCTION (THE ABOVE WORK IS BEYOND THE SCOPE OF STANTEC CONSULTING LTD. SERVICES).
- CONTRACTOR IS RESPONSIBLE FOR WASTE REMOVAL FROM SITE.
- CAPE SPEAR IS CONSIDERED TO BE A CULTURALLY SENSITIVE AREA. CONTRACTOR SHALL NOTIFY DEPARTMENT REPRESENTATIVE A MINIMUM OF 5 DAYS PRIOR TO ANY EXCAVATION. PARKS CANADA HAS RETAINED AN ARCHAEOLOGIST TO REVIEW, CATALOG ANY ARTIFACTS LOCATED DURING CONSTRUCTION.
- ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH:
 - NL OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS
 - PARKS CANADA REGULATIONS
- REMOVE AND REPLACE EXISTING SIGNS AS REQUIRED.
- ALL WELDS TO BE 6mm FILLET WELDS UNLESS NOTED OTHERWISE.

DEMOLITION NOTES:

- ALL DEMOLITION WORK SHALL INCLUDE EQUIPMENT, CUT, REMOVAL AND DISPOSAL.
- SEE GENERAL NOTES BEFORE COMMENCING ANY DEMOLITION WORK.
- CONTRACTOR TO MAKE GOOD ANY AFFECTED AREAS TO THE ACCEPTANCE OF THE DEPARTMENT REPRESENTATIVE.
- CONTRACTOR TO LEAVE EQUIPMENT AND MACHINERY RUNNING ONLY WHILE IN USE.
- WHERE POSSIBLE USE WATER EFFICIENT WETTING EQUIPMENT TO MINIMIZE DUST.
- DISPOSE OF MATERIALS IN ACCORDANCE WITH APPLICABLE REGULATIONS
- CONFIRM DEPTH OF SLAB PRIOR TO SAW CUTTING, SET SAW DEPTH TO MATCH SLAB DEPTH.
- SAW CUTS TO BE STRAIGHT LINE AND VERTICAL.

GEOTECHNICAL NOTES:

- THE CONFIRMATION OF SUITABLE BEARING STRATA SHALL BE PROVIDED BY THE DEPARTMENT REPRESENTATIVE BEFORE BACKFILL IS PLACED, AND WHERE FOUNDATIONS ARE TO BE CONSTRUCTED.
- A 300mm LAYER OF GRAVEL FOUNDATION SHALL BE CONSTRUCTED OF CLASS B GRANULAR BACKFILL, PLACED IN LIFTS AND COMPACTED TO 95% MAXIMUM STANDARD DRY DENSITY (STANDARD PROCTOR DENSITY).
- ALL EXCAVATED SOIL SURFACES SHALL BE PROOF ROLLED PRIOR TO THE PLACEMENT OF ANY BACKFILL. ANY SOFT AREAS ENCOUNTERED SHALL BE REMOVED AND REPLACED WITH COMPACTED TYPE 2 GRANULAR BACKFILL.
- ALL SOIL MATERIALS MUST BE PLACED AND COMPACTED IN THE DRY.
- CONTRACTOR SHALL PROVIDE EXCAVATION, DRAINAGE, DEWATERING AND TEMPORARY FLOW DIVERSION THROUGHOUT THE PROJECT IN ACCORDANCE WITH NL ENVIRONMENT AND APPROVED WORK PLAN.
- ON-SITE EXCAVATED MATERIAL MAY BE REUSED AS BACKFILL, UPON APPROVAL OF THE DEPARTMENT REPRESENTATIVE.

BEARING CAPACITY NOTES:

- ALLOWABLE SOIL BEARING PRESSURE OF 400 kPa.

CONCRETE NOTES:

- ALL CONCRETE SHALL BE 35 MPa (28 DAY STRENGTH) WITH 6% ±1% AIR CONTENT AND A MAXIMUM W/C RATIO OF 0.4.
- ALL CONCRETE SHALL CONFORM TO CSA-A23.1-14 AND BE READY MIX.
- ALL CONCRETE ADDITIVES SHALL BE APPROVED BY THE DEPARTMENT REPRESENTATIVE.
- NO CONCRETE SHALL BE POURED WITHOUT PRIOR APPROVAL OF THE DEPARTMENT REPRESENTATIVE.
- ALL CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CSA-A23.2-14.
- ALL MIX DESIGNS SHALL CONFORM TO CSA-A23.1-14.
- ALL PRECAST CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH CSA-A23.4-14

REINFORCEMENT NOTES:

- ALL REINFORCING STEEL SHALL CONFORM TO CSA-630.18 WITH A MINIMUM YIELD STRENGTH OF 400 MPa.
- ALL REINFORCING SHALL BE PLACED WITH CLASS "B" TENSION LAP SPLICES.

EROSION AND SEDIMENTATION NOTES:

- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.
- CONTRACTOR SHALL PERFORM WORK IN DRY CONDITIONS AND TO COMPLY WITH ALL PERMIT REQUIREMENTS AND CONDITIONS. CONTRACTOR TO COMPLY WITH ALL APPLICABLE NL ENVIRONMENTAL REGULATIONS.
- WHERE EXISTING CONDITIONS ARE SHOWN THEY ARE NOT NECESSARILY ACCURATE OR COMPLETE. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS, ELEVATIONS AND LOCATIONS AND REPORT ANY DISCREPANCIES TO THE DEPARTMENT REPRESENTATIVE.
- TEMPORARY DIVERSION CHANNELS SHALL BE EXCAVATED AND LINED WITH POLY AND RIP RAP.
- CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF NATURAL WATERCOURSES FROM DAMAGE DUE TO SILTATION RUNOFF FROM THE CONSTRUCTION SITE AND DEWATERING PROCEDURES.
- DO NOT PUMP, DRAIN OR PERMIT WATER CONTAINING SUSPENDED MATERIALS TO ENTER WATERWAYS.
- PROTECT ALL REMAINING VEGETATION FROM DAMAGE.
- PLACE EROSION AND SEDIMENTATION CONTROL DEVICES ON THE DOWNSTREAM SIDE OF EACH WORK AREA BEFORE DISTURBING RELATED WORK AREA.
- MAINTAIN A STOCKPILE OF APPROPRIATE EROSION AND ENVIRONMENTAL PROTECTION MATERIALS (E.G. SILT FENCES, HAY BALES, MULCH/COMPOST AND CLEAR STONE) ON SITE AT ALL TIMES.
- MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES FROM THE TIME OF INSTALLATION UNTIL AFTER ALL AREAS DRAINING TOWARDS THEM HAVE BEEN STABILIZED.
- STABILIZE ALL SLOPES AND OTHER AREAS NOT SUBJECT TO REWORKING BY SODDING, AND MULCHING AS SOON AS FINISHED GRADES ARE ESTABLISHED.
- INSTALL ADDITIONAL PROTECTION BERMS, SILT FENCES CUTOFF DITCHES, ETC. AS REQUIRED BY SITE CONDITIONS TO PREVENT SEDIMENT FROM ENTERING WATER COURSES.

- REMOVE SILT ACCUMULATIONS AT SILT FENCES AND OTHER PROTECTION DEVICES BY CAREFUL HAND EXCAVATION. DISPOSE OF ACCUMULATED SILT BY REMOVING FROM SITE.
- INSPECT EROSION AND SEDIMENTATION CONTROL MEASURES ON A REGULAR BASIS, DAILY, AND MAINTAIN AS NECESSARY.
- THE CONTRACTOR SHALL REINSTATE ALL DISTURBED SURFACES TO THE SATISFACTION OF THE DEPARTMENT REPRESENTATIVE.
- HAVE PERSONNEL ON CALL TO PROVIDE EMERGENCY REPAIRS TO SEDIMENT AND EROSION CONTROL MEASURES AT ALL TIMES.
- THE CONTRACTOR SHALL PREPARE CONSTRUCTION PROCEDURES AND SEQUENCE THAT SHALL MEET WITH THE FULL APPROVAL OF THE ENGINEER AND SHALL COMPLY WITH REQUIREMENTS OF THE DEPARTMENT REPRESENTATIVE.
- ALL METHODS AND MATERIALS SHALL COMPLY WITH THE MINIMUM REQUIREMENTS OF:
 - NL DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SECTION 31 32 25 EROSION AND SEDIMENTATION CONTROL.

PRECAST STRUCTURE

- 2.80M X 2.50M (INSIDE) PRECAST CONCRETE BOX CULVERT.
- PRECAST CONCRETE UNITS SHALL BE DESIGNED IN ACCORDANCE WITH CSA-S6-14 SPECIFICATIONS. LIVE LOAD DESIGN CRITERIA SHALL BE CL625. STRUCTURAL DETAILS SHALL BE PROVIDED BY THE MANUFACTURER.
- PRECAST CONCRETE UNITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CSA-A23.4-14 BY A CSA CERTIFIED MANUFACTURER.

CONCRETE REPAIR NOTES:

- ALL CONCRETE SURFACES DESIGNATED FOR REPAIR SHALL BE SOUNDED FOR LOOSE, SPALLED, OR DETERIORATED CONCRETE AND MARKED IN FIELD WITH ORANGE PAINT. DEPARTMENT REPRESENTATIVE MUST APPROVE THE AREA FOR REPAIR BEFORE PROCEEDING.
- ALL LOOSE, SPALLED AND/OR DETERIORATED CONCRETE SHALL BE REMOVED. REMOVE CONCRETE DOWN TO SOUND CONCRETE. WHERE CORRODED REBAR IS ENCOUNTERED REMOVE CONCRETE TO NO LESS THAN 25MM BEHIND TOP MAT OF REBAR. PREPARE ALL EDGES OF AREA TO BE PATCHED WITH A CLEAN EDGE TO A DEPTH OF 25MM.
- CLEAN AND PREPARE ALL EXPOSED REBAR AND CONCRETE TO REMOVE ALL DIRT, RUST, AND BOND INHABITING MATERIAL. CREATE A ± 3MM PROFILE ON ALL CONCRETE SURFACES TO BE REPAIRED. THOROUGHLY CLEAN REBAR AND REPAIR AREAS WITH HIGH PRESSURE AIR STREAM BEFORE APPLYING BONDING AGENT/ REBAR PROTECTANT AND NEW CONCRETE. FORM REBAR AREA AS NECESSARY.
- APPLY SPECIFIED BONDING/ ANTI-CORROSION AGENT TO ALL SURFACES OF REBAR AND CONCRETE IN REPAIR AREA IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS. BONDING AGENT NOT REQUIRED FOR GALVANIZED SECTIONS. SURFACE OF CONCRETE SHALL BE SATURATED SURFACE DRY PRIOR TO APPLICATION OF BONDING AGENT/ REBAR PROTECTANT WITH NO PONDED WATER.
- APPLY PATCH MATERIAL TO REPAIR AREA AND MAKE FLUSH TO EXISTING SURFACES.
- MAINTAIN OVERHEAD PROTECTION MEASURES TO ENSURE CONCRETE DEBRIS DOES NOT INTERFERE WITH VEHICLE OR PEDESTRIAN TRAFFIC.
- ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH CSA A23.1-14.
- ALL REBAR SHALL BE IN ACCORDANCE WITH CAN/CSA G30.18-02 AND CSA A23.1-14.

BONDING AGENT AND MORTAR

BONDING AGENT: SIKATOP ARMATEC 110 EPOCEM

MORTAR:	PATCH THICKNESS
SIKA REPAIR 123 PLUS	13mm – 25mm
SIKA REPAIR 123 PLUS EXTENDED	25mm – 152mm

CONCRETE INJECTION NOTES:

- ALL CONCRETE DESIGNATED FOR INJECTION SHALL ME MARKED IN FIELD WITH ORANGE PAINT. DEPARTMENT REPRESENTATIVE MUST APPROVE THE AREA FOR INJECTION BEFORE PROCEEDING.
- CLEAN THE CONCRETE SURFACE ALONG THE LENGTH OF THE CRACK TO REMOVE EXISTING COATINGS OR SURFACE TREATMENTS, DIRT, DUST, DEBRIS, LOOSE FRIABLE MATERIAL AND OTHER SUCH CONTAMINANTS WHICH COULD IMPEDE PENETRATION AND IMPACT UPON ADHESION. BLOW OUT THE CRACK OR DEFECT WITH CLEAN, DRY AND FILTERED (OIL-FREE) COMPRESSED AIR OR VACUUM TO REMOVE ALL CONTAMINANTS. SUBSTRATES MUST BE CLEAN, SOUND AND DRY. OPTIMUM PENETRATION AND ADHESION ARE OBTAINED IN THE CORRECT CONDITIONS.
- WHERE SUBSTRATES ARE RELATIVELY FLAT AND CAN ACCOMMODATE THEM, INJECTION TEES ARE INSTALLED OVER THE CRACK, TAKING CARE NOT TO BLOCK PASSAGE WAY FOR THE INJECTED RESIN. WHERE SUBSTRATES ARE NOT FLAT OR CANNOT BE CLEANED TO THE REQUIRED STANDARD TO ALLOW ADEQUATE ADHESION OF THE INJECTION, INSTALL DRILLED PORTS.
- SEAL OR "CAP" THE FATE OF THE CRACK, DEFECT OR VOID TO PREVENT LEAKAGE WHEN INJECTION BEGINS, ENSURE THAT THE INJECTION TEES OR PORTS ARE SECURELY FIXED TO PREVENT LEAKAGE OR DISPLACEMENT, BUT THAT THE ADHESIVE DOES NOT OBSTRUCT THE PATH THROUGH WHICH THE INJECTION RESIN IS TO PASS. WHERE A CRACK IS ACCESSIBLE ON BOTH FACES OF A STRUCTURAL ELEMENT OR THE SUBSTRATE IS GREATER THAN 500MM IN CROSS SECTION, THE CRACK SHOULD BE CAPPED AND INJECTION POINTS LOCATED ON BOTH FACES.
- INJECTION PRODUCT : SIKADUR 328LT
- CAPPING PRODUCT : SIKADUT 31 HI-MOD GEL OR SIKA ANCHORFIX-3001

ESTIMATED QUANTITIES *	ESTIMATED QUANTITY	UNIT
ROCK EXCAVATION **	1000	m ³
CAST-IN-PLACE (CIP) CONCRETE	40	m ³
2.80m HIGH x 2.6M WIDE CULVERT	95	m
CONCRETE REPAIRS **	20	m ²
WATERPROOFING MEMBRANE	2700	m ²
PROTECTION BOARD	700	m ²
CONCRETE INJECTION **	150	m
FLASHING	35	m

* QUANTITIES ARE ESTIMATED ONLY. CONTRACTOR TO CONFIRM ALL QUANTITIES.

** THESE QUANTITIES ARE TO BE USED FOR UNIT RATE PRICING

STRUCTURAL STEEL

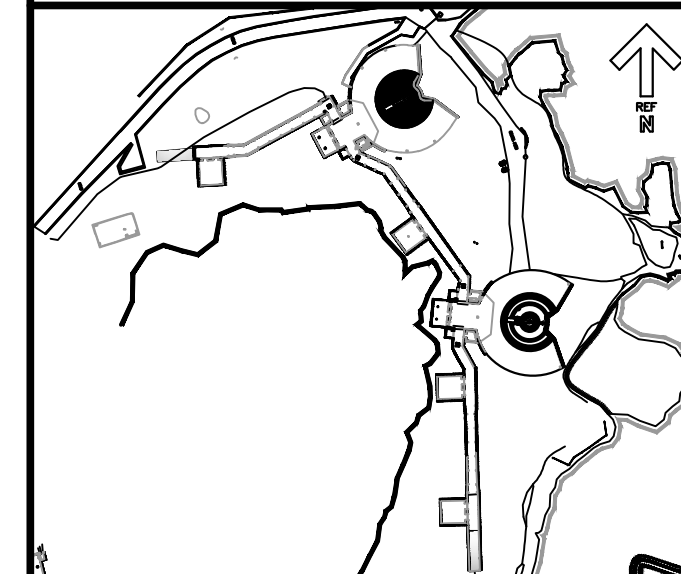
- FABRICATE AND ERECT STRUCTURAL STEEL TO MEET THE REQUIREMENTS OF CSA STANDARDS S16-14.
- PROVIDE STRUCTURAL STEEL TO MEET THE REQUIREMENTS OF CSA STANDARDS G40.21-04 WITH THE FOLLOWING GRADES:
 - CHANNELS AND ANGLES 300W
 - STRUCTURAL BARS AND PLATES 300W
 - MISCELLANEOUS STEEL 300W
 - STRUCTURAL BOLTS ASTM A325
 - ANCHOR RODS ASTM A307
- FABRICATOR TO BE CERTIFIED AS A DIVISION 2 COMPANY IN ACCORDANCE WITH CSA STANDARD W47.1-09.
- WELDING TO MEET THE REQUIREMENTS OF CSA STANDARD W59-03(R2008) BY FABRICATORS QUALIFIED TO CSA STANDARD W47.1-09
- FIELD WELDING AND FIELD MODIFICATION OF STRUCTURAL STEEL WILL NOT BE ALLOWED WITHOUT PRIOR REVIEW AND WRITTEN APPROVAL BY THE ENGINEER.
- CONNECTIONS:
 - UNLESS NOTED OTHERWISE, CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR IN ACCORDANCE WITH CAN/CSA-S16-09 AND THE CISC HANDBOOK OF STEEL CONNECTION.
 - UNLESS OTHERWISE, ALL SHOP CONNECTIONS SHALL BE WELDED AND ALL FIELD CONNECTIONS SHALL BE BOLTED. ALL FORCES THROUGH ANY CONNECTION SHALL PASS THROUGH A COMMON WORK POINT WHICH SHALL BE THE INTERSECTION OF THE PRINCIPLE AXES OF THE CONNECTED MEMBERS, UNLESS OTHERWISE APPROVED BY THE ENGINEER. BRACING SHALL BE CONNECTED TO THE MAIN MEMBERS USING GUSSET PLATES WELDED OR BOLTED TO THE MAIN MEMBERS. ALL STRUCTURAL TEES SHALL BE FLANGE CONNECTED.
 - MINIMUM WELDS FOR CONNECTIONS SHALL BE 6mm FILLET WELDS. WELDS EXPOSED IN THE FINISHED STRUCTURE SHALL BE GROUND SMOOTH.
- PROVIDE BOLT HOLES IN STRUCTURAL STEEL MEMBERS WHERE SHOWN AND WHERE REQUIRED FOR THE ATTACHMENT OF BOLTED BLOCKING OR FASTENINGS BY OTHER TRADES.
- ALL GROUT UNDER BEARING PLATES SHALL BE NON-METALLIC, NON-SHRINK TYPE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 50 MPa. GROUT MAY BE DRY PACK OR FLOWABLE CONSISTENCY AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS. PROVIDE MINIMUM 25mm GROUT UNDER BASE PLATES.
- SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW DEALS, MATERIALS, AND SHALL BE SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF NEWFOUNDLAND AND LABRADOR.
- ALL STEEL SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123M-15, STANDARD SPECIFICATION FOR ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS, AND EPOXY PAINTED BLACK.
- ALL FIELD WELDS AND DAMAGED COATINGS SHALL BE CLEANED AND TOUCHED UP USING ZINC-RICJ COLD GALVANIZED PAINT.



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CONSULTANTS PROJECT NO. - 133347244



KEYPLAN: N.T.S.

LEGEND:

0	ISSUE FOR TENDER	08/30 2016
revisions		date

project project

CAPE SPEAR NHSC WORLD WAR II BATTERY REHABILITATION

drawing dessin

NOTES

designed JJ conq

date 2016.08.09

drawn AB dessin

date 2016.08.09

approved WJP approuv

date 2016.08.09

Tender Soumission

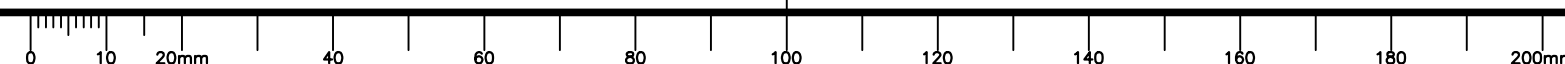
PWSC Project Manager Administrateur de projets TPSGC

project number no. du projet

446

drawing no. no. du dessin

G001





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Canada

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KEYPLAN: N.T.S.

LEGEND:

- PUBLIC ACCESS
- - - CONTRACTOR ACCESS / CLOSED TO PUBLIC
- TEMPORARY CONSTRUCTION ACCESS ROAD
- ▨ CONTRACTOR STOCKPILE / HOARDING / STOCKPILE / LAYDOWN AND PARKING AREA

PROVINCE OF NEWFOUNDLAND AND LABRADOR
PERMIT HOLDER
CHRISTOPHER W. BOGUE
16/08/31
To practice Professional Engineering in Newfoundland and Labrador.
Permit No. as issued by PEG 2021 which is valid for the year 2016.

0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

drawing	design	
designed	CB	conqu
date	2016.05.25	
drawn	CS	dessiné
date	2016.05.25	
approved		approuvé
date		
Tender		Soumission
PWSC Project Manager	Administrateur de projets TPSC	
project number	446	no. du projet
drawing no.	C101	no. du dessin

NOTES:

- CONTRACTOR IS ADVISED THAT WHILE THE BUNKER AND BATTERY AREA WILL BE CLOSED TO THE PUBLIC DURING CONSTRUCTION THE CAPE SPEAR SITE WILL REMAIN OPEN TO THE PUBLIC. THIS WILL INCLUDE MAINTAINING PUBLIC ACCESS FROM THE NORTH TO THE SOUTH SIDE OF THE BUNKER AND BATTERY AREA AS SHOWN. THEREFORE THE CONTRACTOR MAY BE REQUIRED TO ADJUST/RELOCATE TEMPORARY CONSTRUCTION BARRIERS TO MAXIMIZE SEPARATION WITH PUBLIC AREAS.
- THE CONTRACTOR IS REQUIRED TO PROVIDE A PUBLIC SAFETY PROTECTION/ CONSTRUCTION STAGING PLAN FOR REVIEW BY THE DEPARTMENTAL REPRESENTATIVE. THE PLAN SHALL INCLUDE FENCING (BOTH FOR SAFETY AND SECURITY), SIGNAGE, SECURITY, WORK STAGING, REQUIRED ACCESSES ROUTING, MATERIAL STORAGE AND ALL OTHER COMPONENTS TO ENSURE PUBLIC SAFETY AND ACCESS TO AREAS SHOWN WHILE COMPLETING THE PROJECT.
- CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROL MEASURES CONSISTING OF PERIMETER SILT FENCING OF ALL DISTURBED AREAS, PROVISION OF FILTER FABRIC FOR ALL CATCH BASINS THAT ARE TO RECEIVE RUNOFF FROM THE CONSTRUCTION SITE AND A 300mm THICK ROCK MATTRESS AT THE MAIN ACCESS AND EGRESS FOR CONSTRUCTION TRAFFIC.
- ALL EQUIPMENT ARRIVING TO SITE MUST BE FREE FROM MUD, DEBRIS AND VEGETATION. EQUIPMENT MUST BE WASHED WITH HIGH PRESSURE WATER PRIOR TO ARRIVING TO SITE.
- THE CONTRACT ADMINISTRATOR MUST APPROVE ALL EQUIPMENT PRIOR TO ENTERING THE SITE.
- CONTRACTOR TO REINSTATE ALL DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER UNLESS NOTED OTHERWISE.

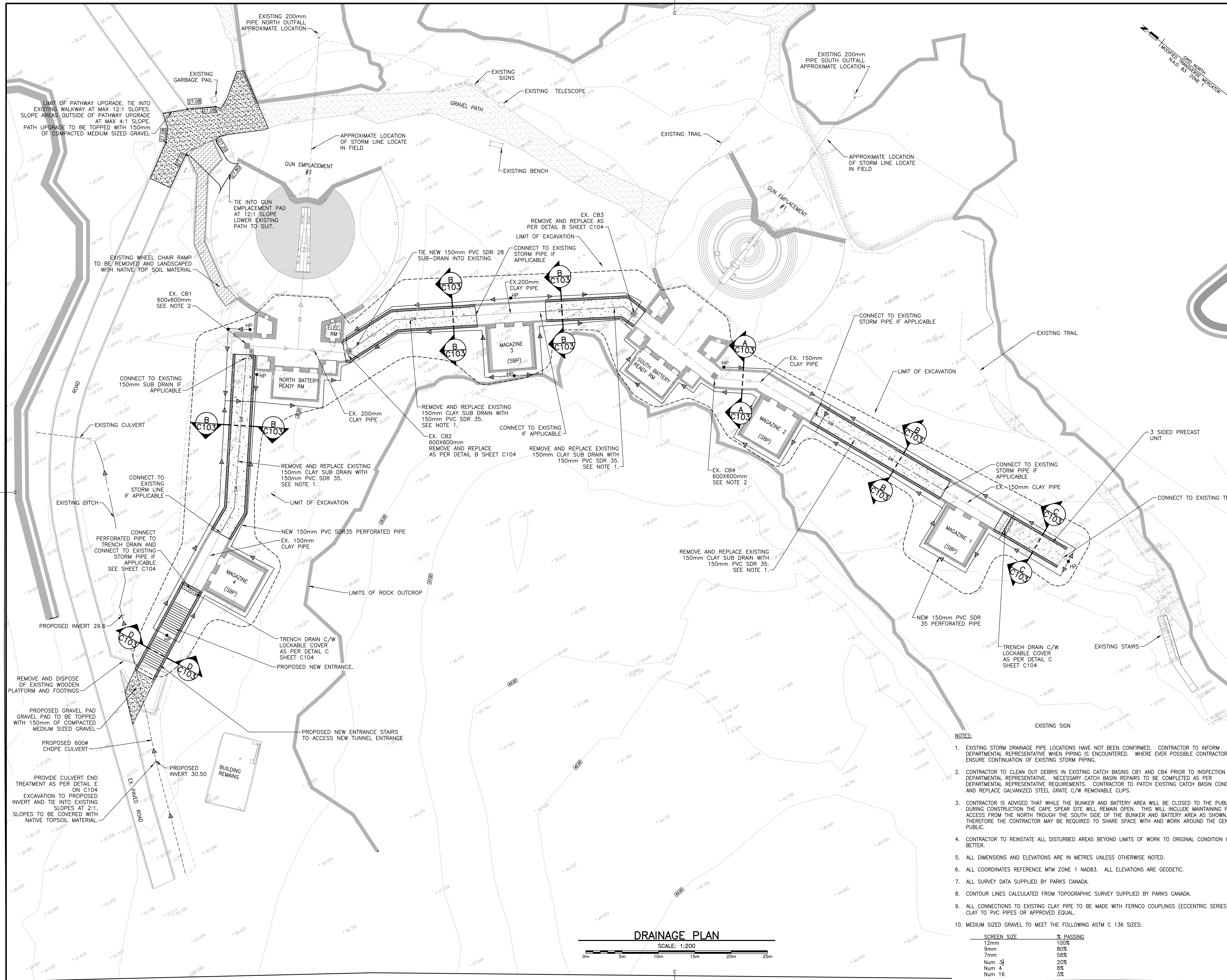
GENERAL SITE PLAN

SCALE: 1:500

0m 10m 20m 30m 40m 50m

PWSC B1 (2004)

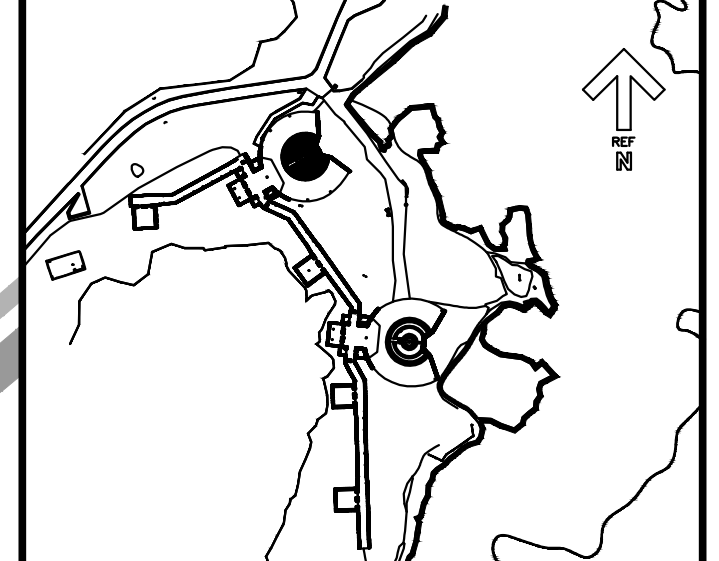
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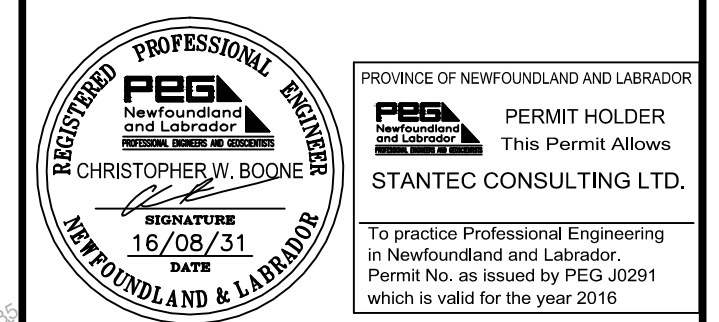
CONSULTANTS PROJECT NO. - 133347244



KEYPLAN: N.T.S.

LEGEND:

- LEGEND**
- ▶ STORM WATER FLOW DIRECTION
 - NEW STORM WATER CATCH BASIN
 - ▨ NEW CONCRETE SECTIONS
 - ▩ EXISTING BOARDWALK TO BE REMOVED
 - ▧ NEW MEDIUM SIZED GRAVEL SURFACE. SEE NOTE 10.
 - 0.00 PROPOSED SPOT ELEVATION
 - TOPOGRAPHIC SPOT ELEVATION
 - ⊕ SECTION CALL OUT



0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

CAPE SPEAR NHSC WORLD WAR II BATTERY REHABILITATION

drawing design

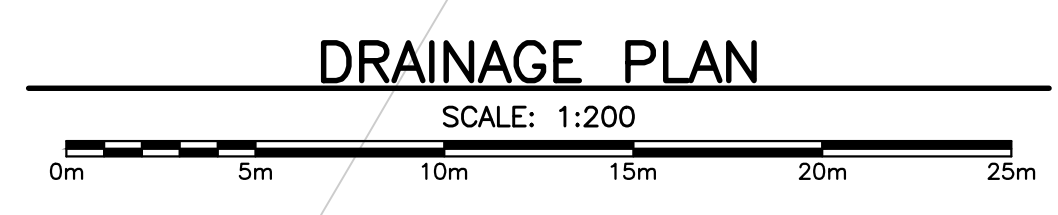
CIVIL SITE PLAN

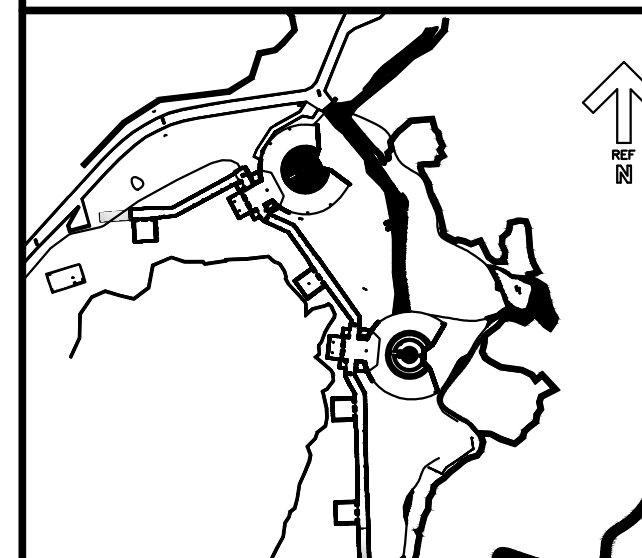
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date	2016.07.25	
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PLAN		
PWGSC Project Manager	Administrateur de projets TPSGC	
project number		no. du projet
	446	
drawing no.		no. du dessin
	C102	

NOTES:

1. EXISTING STORM DRAINAGE PIPE LOCATIONS HAVE NOT BEEN CONFIRMED. CONTRACTOR TO INFORM DEPARTMENTAL REPRESENTATIVE WHEN PIPING IS ENCOUNTERED. WHERE EVER POSSIBLE CONTRACTOR TO ENSURE CONTINUATION OF EXISTING STORM PIPING.
2. CONTRACTOR TO CLEAN OUT DEBRIS IN EXISTING CATCH BASINS CB1 AND CB4 PRIOR TO INSPECTION BY DEPARTMENTAL REPRESENTATIVE. NECESSARY CATCH BASIN REPAIRS TO BE COMPLETED AS PER DEPARTMENTAL REPRESENTATIVE REQUIREMENTS. CONTRACTOR TO PATCH EXISTING CATCH BASIN CONCRETE AND REPLACE GALVANIZED STEEL GRATE C/W REMOVABLE CLIPS.
3. CONTRACTOR IS ADVISED THAT WHILE THE BUNKER AND BATTERY AREA WILL BE CLOSED TO THE PUBLIC DURING CONSTRUCTION THE CAPE SPEAR SITE WILL REMAIN OPEN. THIS WILL INCLUDE MAINTAINING PUBLIC ACCESS FROM THE NORTH THROUGH THE SOUTH SIDE OF THE BUNKER AND BATTERY AREA AS SHOWN. THEREFORE THE CONTRACTOR MAY BE REQUIRED TO SHARE SPACE WITH AND WORK AROUND THE GENERAL PUBLIC.
4. CONTRACTOR TO REINSTATE ALL DISTURBED AREAS BEYOND LIMITS OF WORK TO ORIGINAL CONDITION OR BETTER.
5. ALL DIMENSIONS AND ELEVATIONS ARE IN METRES UNLESS OTHERWISE NOTED.
6. ALL COORDINATES REFERENCE MTM ZONE 1 NAD83. ALL ELEVATIONS ARE GEODETIC.
7. ALL SURVEY DATA SUPPLIED BY PARKS CANADA.
8. CONTOUR LINES CALCULATED FROM TOPOGRAPHIC SURVEY SUPPLIED BY PARKS CANADA.
9. ALL CONNECTIONS TO EXISTING CLAY PIPE TO BE MADE WITH FERNCO COUPLINGS (ECCENTRIC SERIES) FOR CLAY TO PVC PIPES OR APPROVED EQUAL.
10. MEDIUM SIZED GRAVEL TO MEET THE FOLLOWING ASTM C 136 SIZES:

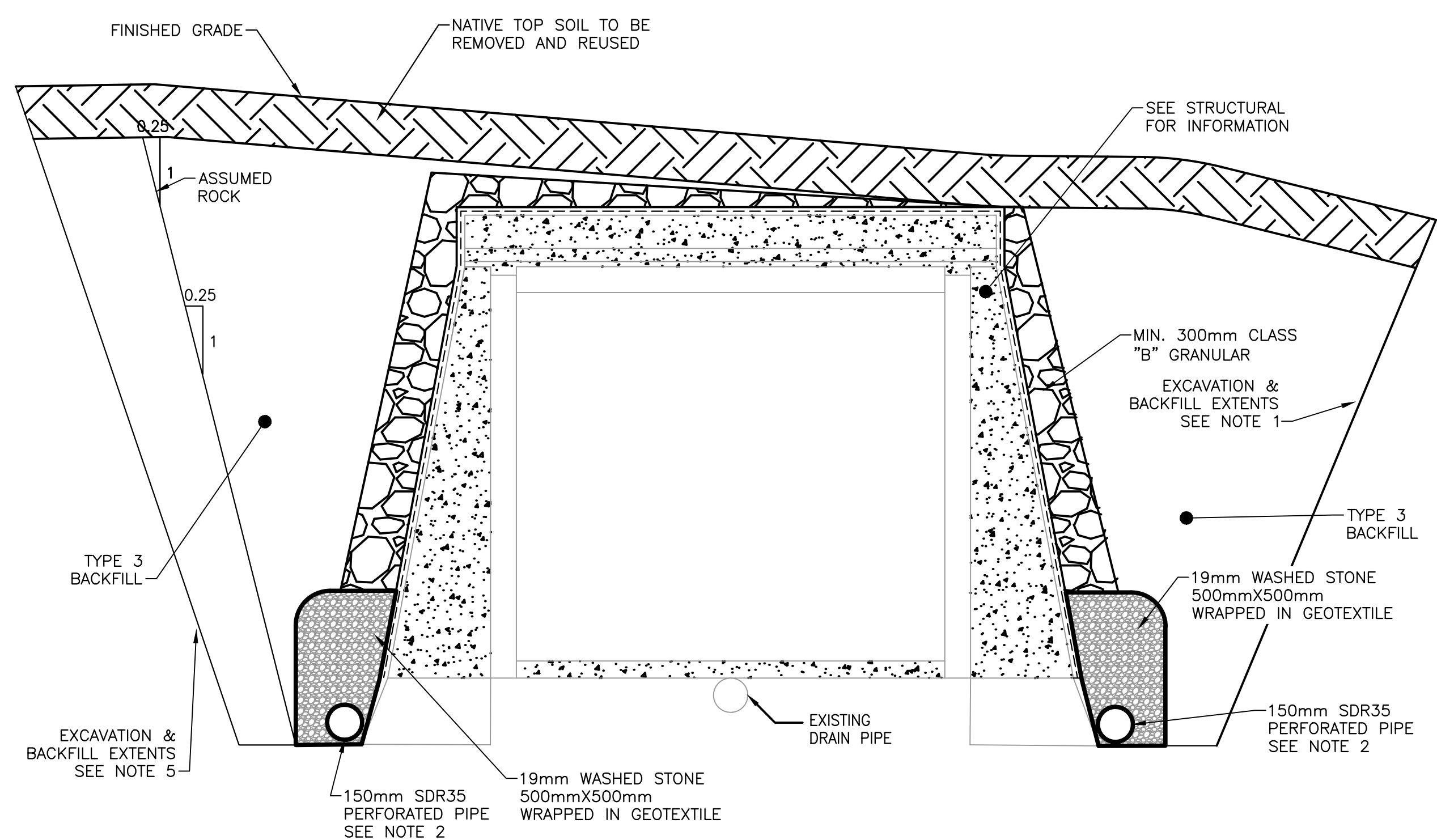
SCREEN SIZE	% PASSING
12mm	100%
9mm	80%
7mm	58%
Num 3	20%
Num 4	8%
Num 16	3%



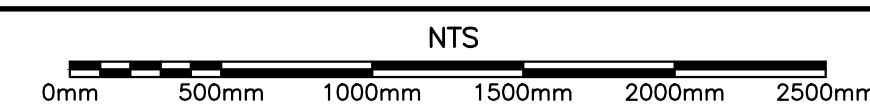


KEYPLAN: N.T.S.

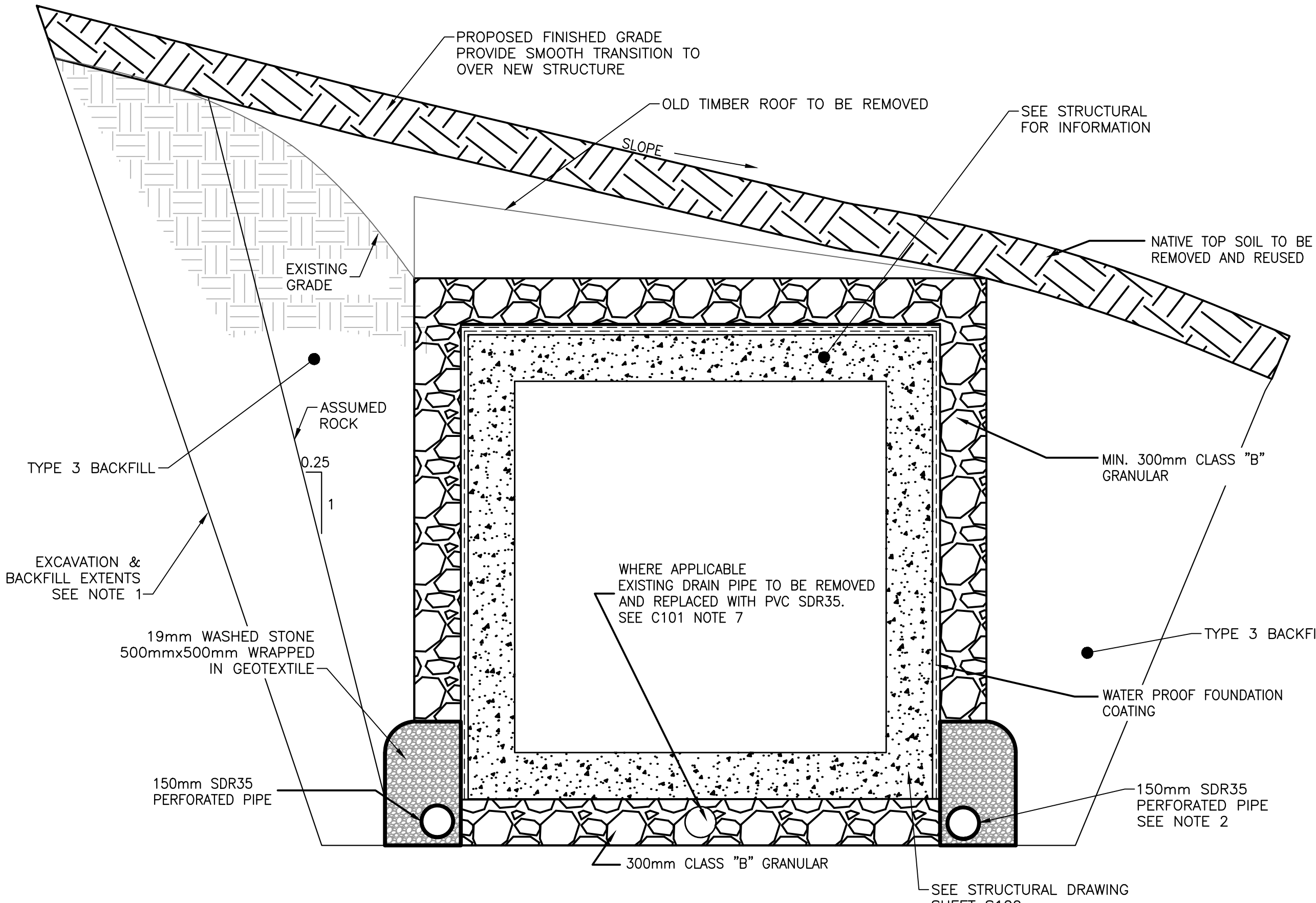
LEGEND:



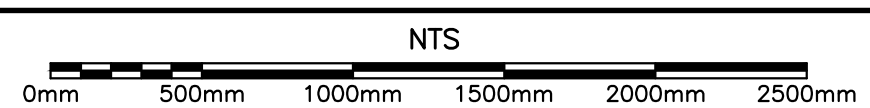
TYPICAL EXISTING (TO REMAIN) TUNNEL DRAINAGE SECTION



A
C102



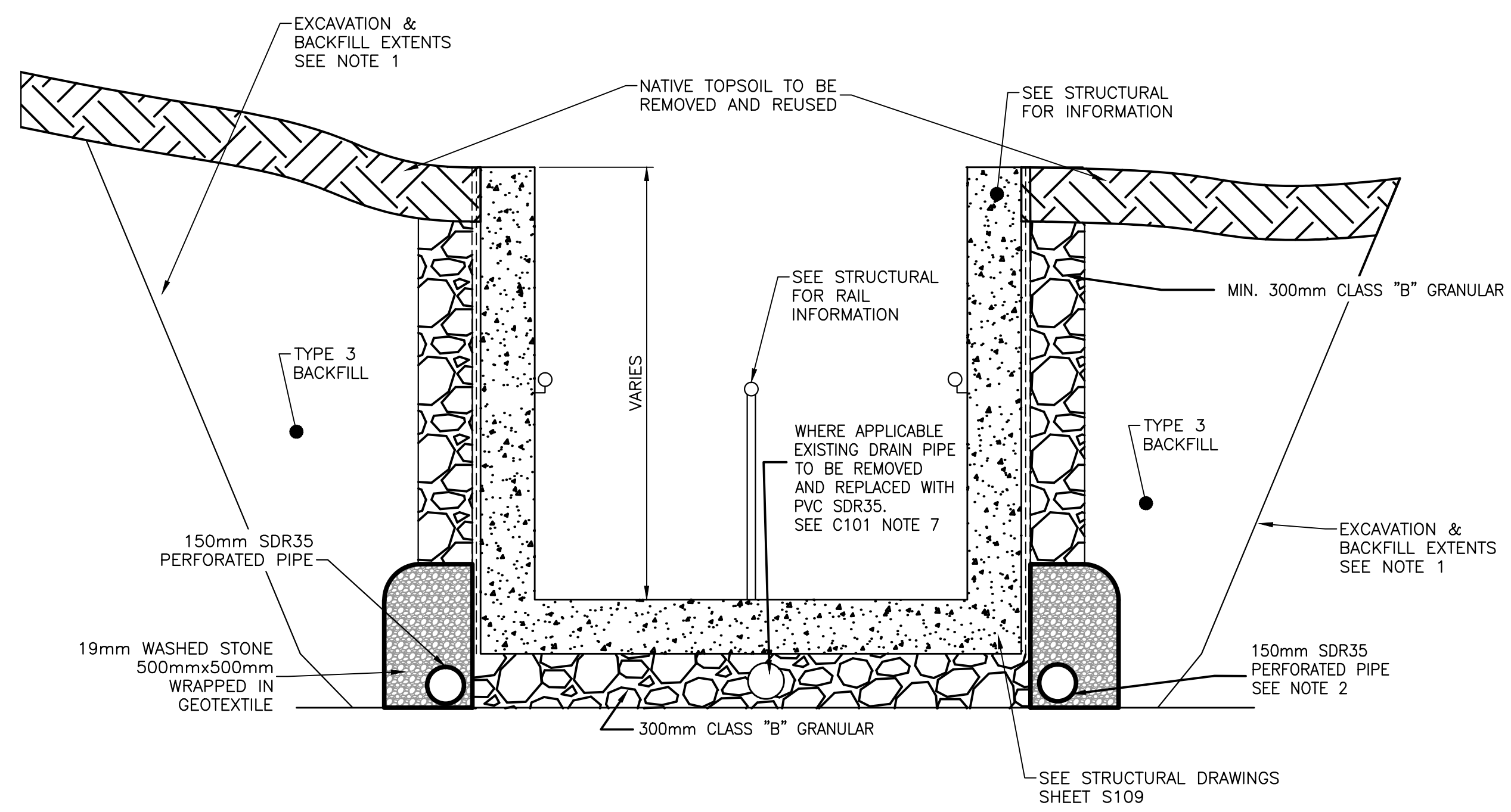
TYPICAL NEW PRECAST CONCRETE DRAINAGE SECTION



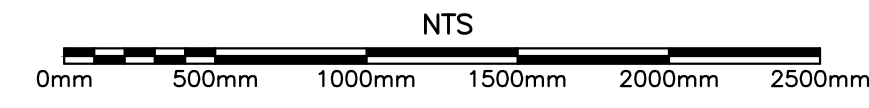
B
C102

NOTES:

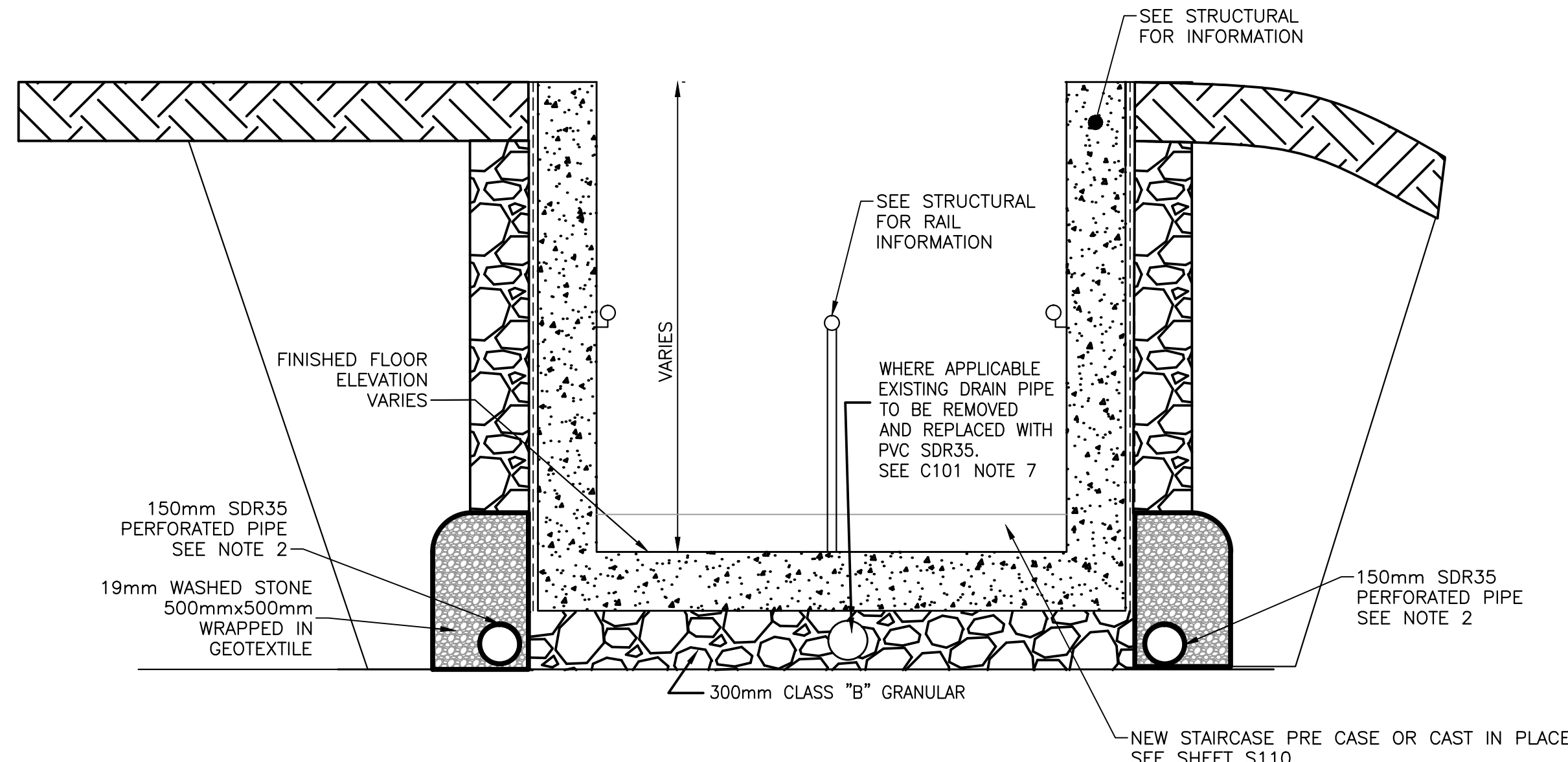
- CONTRACTOR TO PROVIDE REQUIRED EXCAVATION FOR CONCRETE STRUCTURE INSTALLATION, WATER PROOFING AND DRAINAGE. EXCAVATION TO FOLLOW REQUIRED HEALTH AND SAFETY REQUIREMENTS. CONTRACTOR TO ASSUME ROCK REMOVAL AS SHOWN.
- CONTRACTOR TO GRADE PERFORATED PIPE TO CB 2/CB 3 WHILE ENSURING POSITIVE SLOPE. SEE C102 FOR PIPE LOCATIONS.
- EXISTING STORM DRAINAGE PIPE LOCATIONS HAVE NOT BEEN CONFIRMED. CONTRACTOR TO INFORM ENGINEER WHEN PIPING IS ENCOUNTERED. WHERE EVER POSSIBLE CONTRACTOR TO ENSURE CONTINUATION OF EXISTING STORM PIPING.
- ALL CONNECTIONS TO EXISTING CLAY PIPE TO BE MADE WITH FERNCO COUPLINGS (ECCENTRIC SERIES) FOR CLAY TO PVC PIPES OR APPROVED EQUAL.



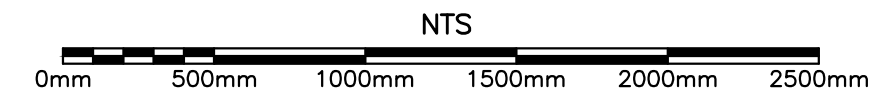
TYPICAL NEW PRECAST CONCRETE RAMP ENTRANCE DRAINAGE SECTION



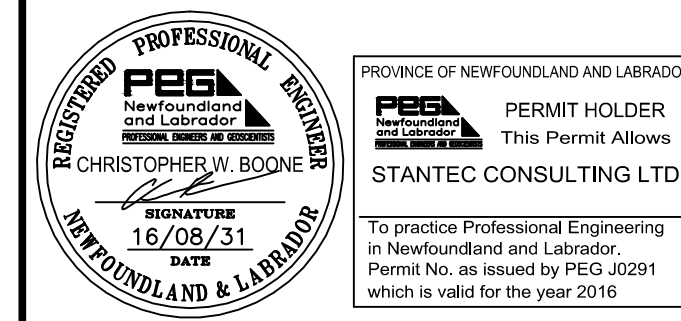
C
C102



TYPICAL NEW STAIR WELL ENTRANCE CONCRETE DRAINAGE SECTION



D
C102

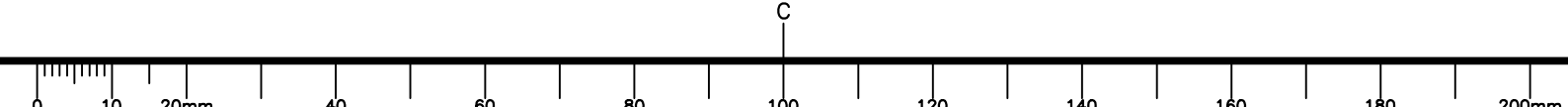


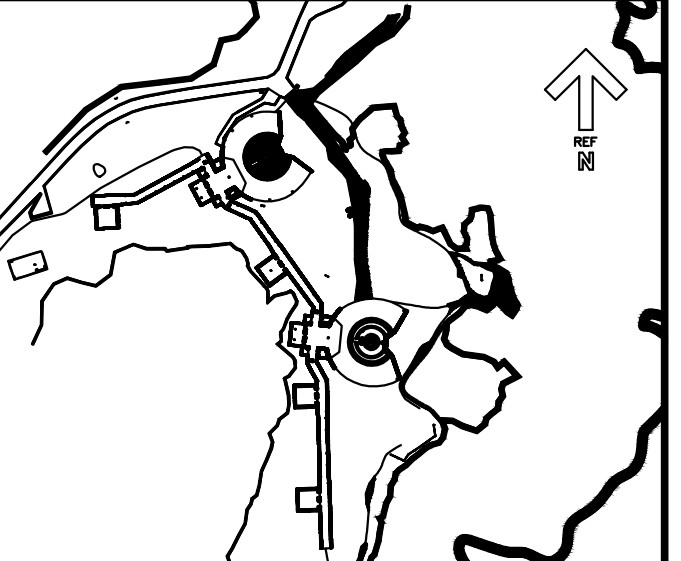
0	ISSUED FOR TENDER	08/31/2016
revisions		date

CAPE SPEAR NHSC WORLD WAR II BATTERY REHABILITATION

CONCRETE TUNNEL DRAINAGE SECTIONS

designed	CB	congr
date	2016.05.25	
drawn	CS	dessin
date	2016.05.25	
approved		approuvé
date		
Tender		Soumission
PWGSC Project Manager	Administrateur de projets TPSGC	
project number		no. du projet
	446	
drawing no.		no. du dessin
	C103	

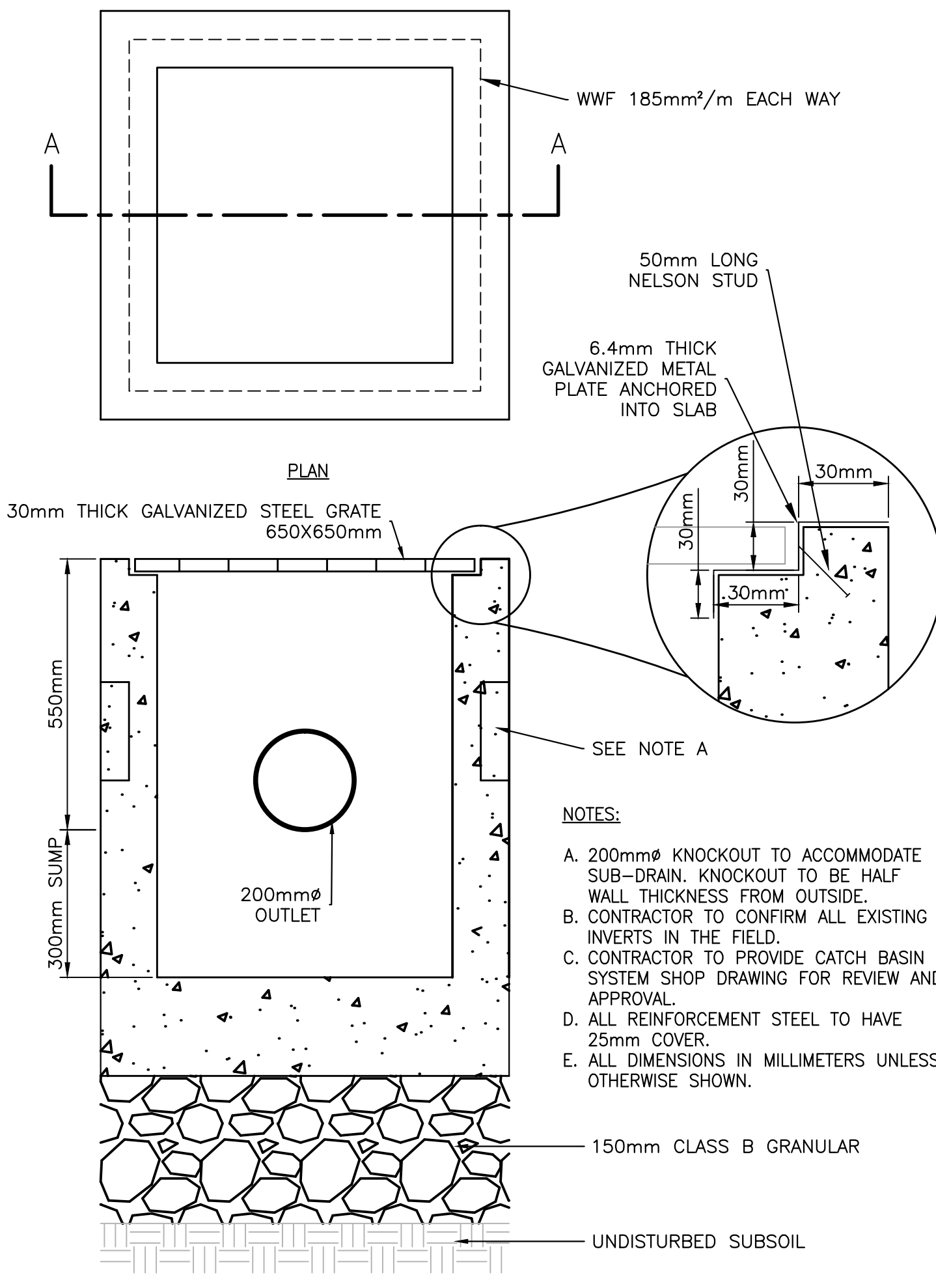




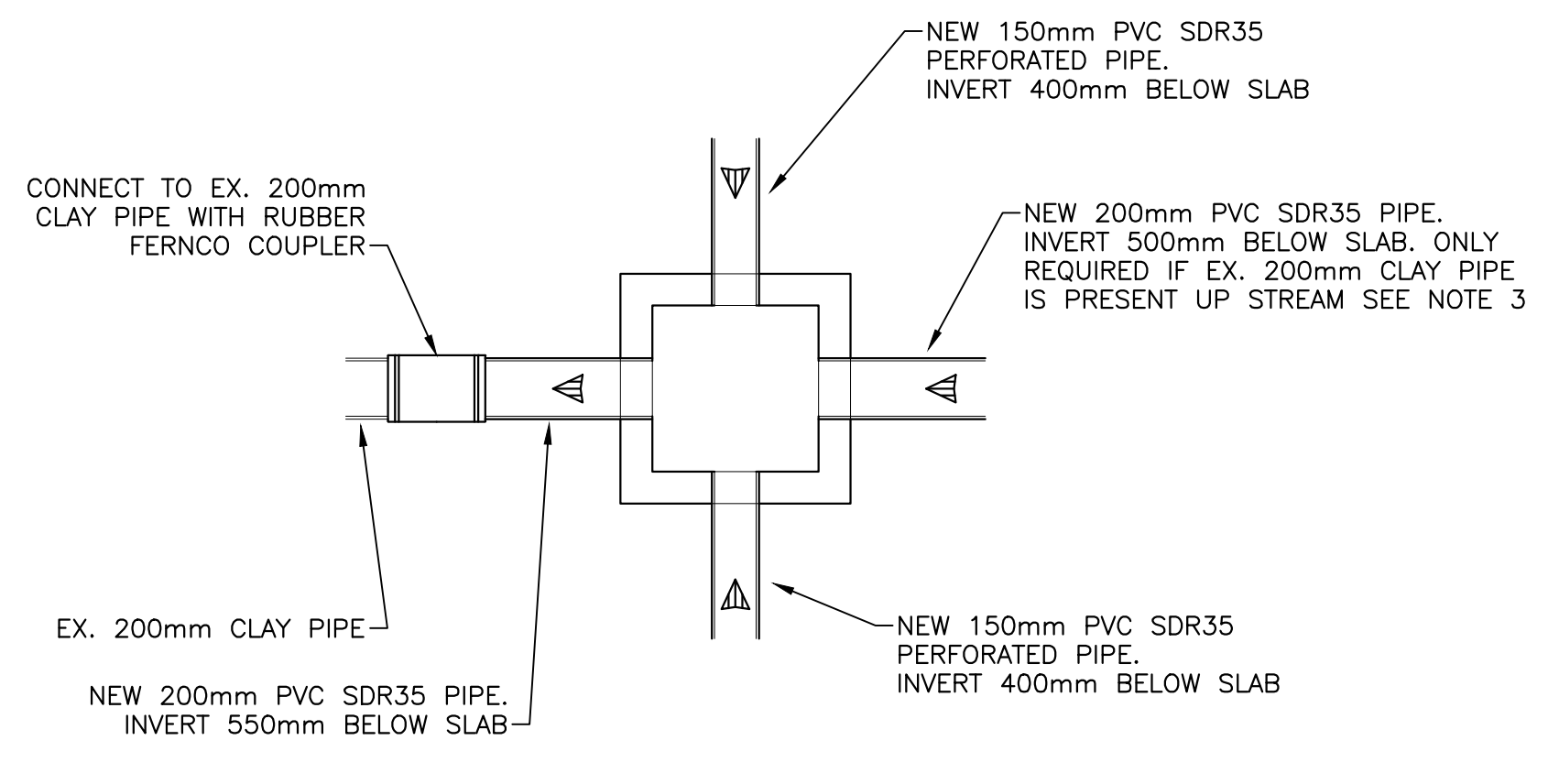
KEYPLAN: N.T.S.

LEGEND:

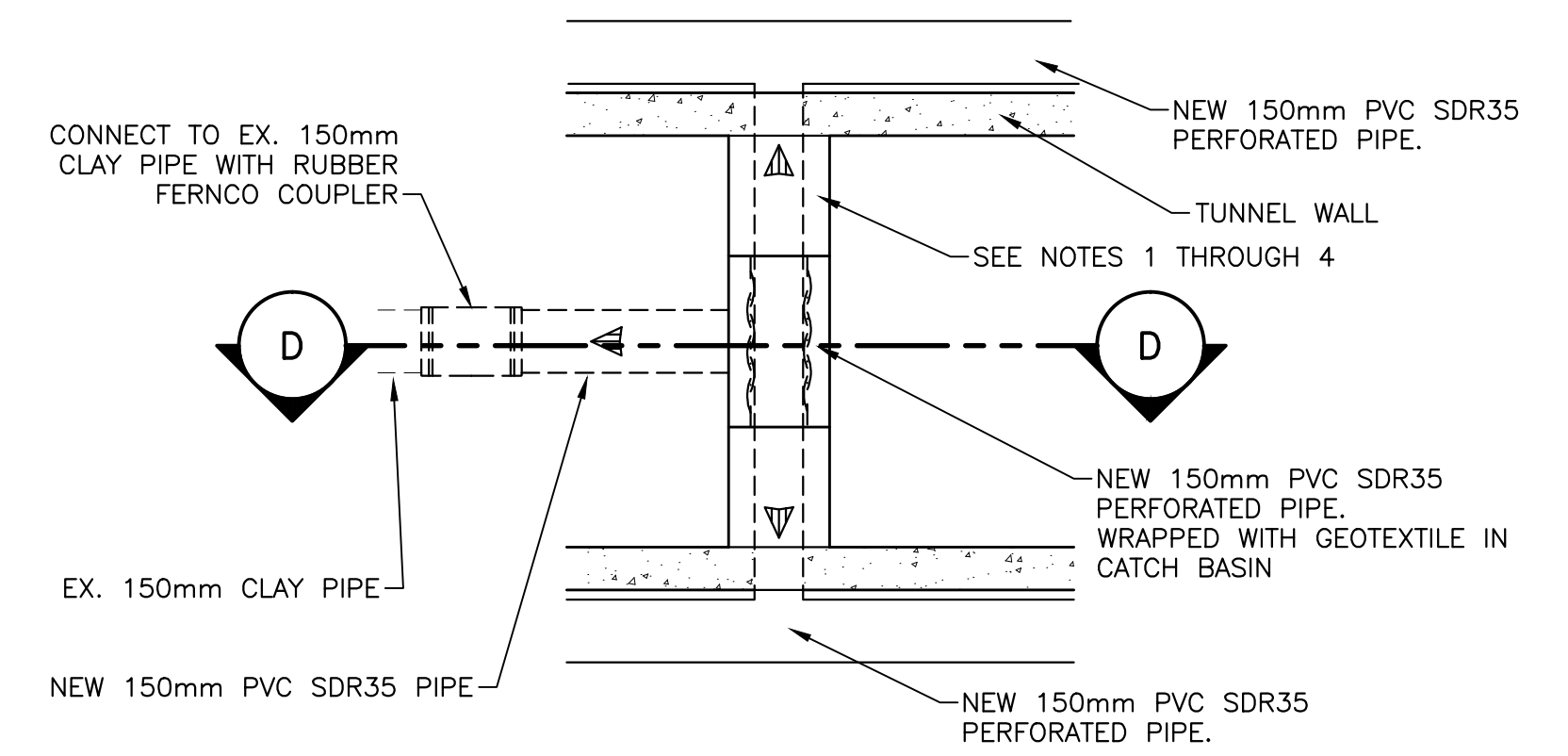
- NOTES:**
- CONTRACTOR TO PROVIDE TRENCH DRAIN SHOP DRAWINGS FOR REVIEW BY DEPARTMENTAL REPRESENTATIVE.
 - SHOP DRAWINGS TO PROVIDE GENERAL ARRANGEMENT DETAILS OF TRENCH DRAIN AND PIPE CONNECTIONS.
 - PROVIDE TRENCH DRAIN FULL WIDTH OF TUNNEL. 150mm WIDE CHANNEL C/W LOCKABLE COVERS (ACO MODEL # 9818 OR APPROVED EQUAL)
 - PROVIDE TRENCH DRAIN CATCH BASIN WITH 150mm WIDE CHANNEL AT SURFACE. CONTRACTOR TO CONNECT PERFORATED PIPE TO SIDES OF CATCH BASIN AND EXISTING CLAY PIPE TO FRONT IF APPLICABLE. PERFORATED PIPE TO BE WRAPPED WITH GEO-TEXTILE IN CATCH BASIN.



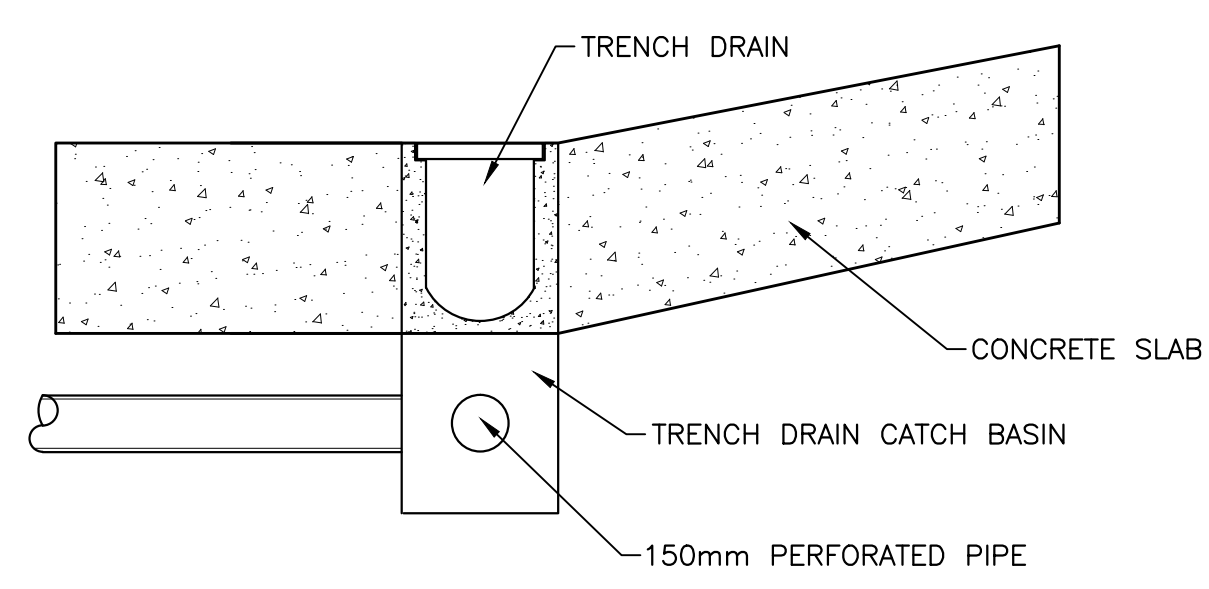
SECTION A-A
NEW CATCH BASIN DETAIL
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm
A
C102



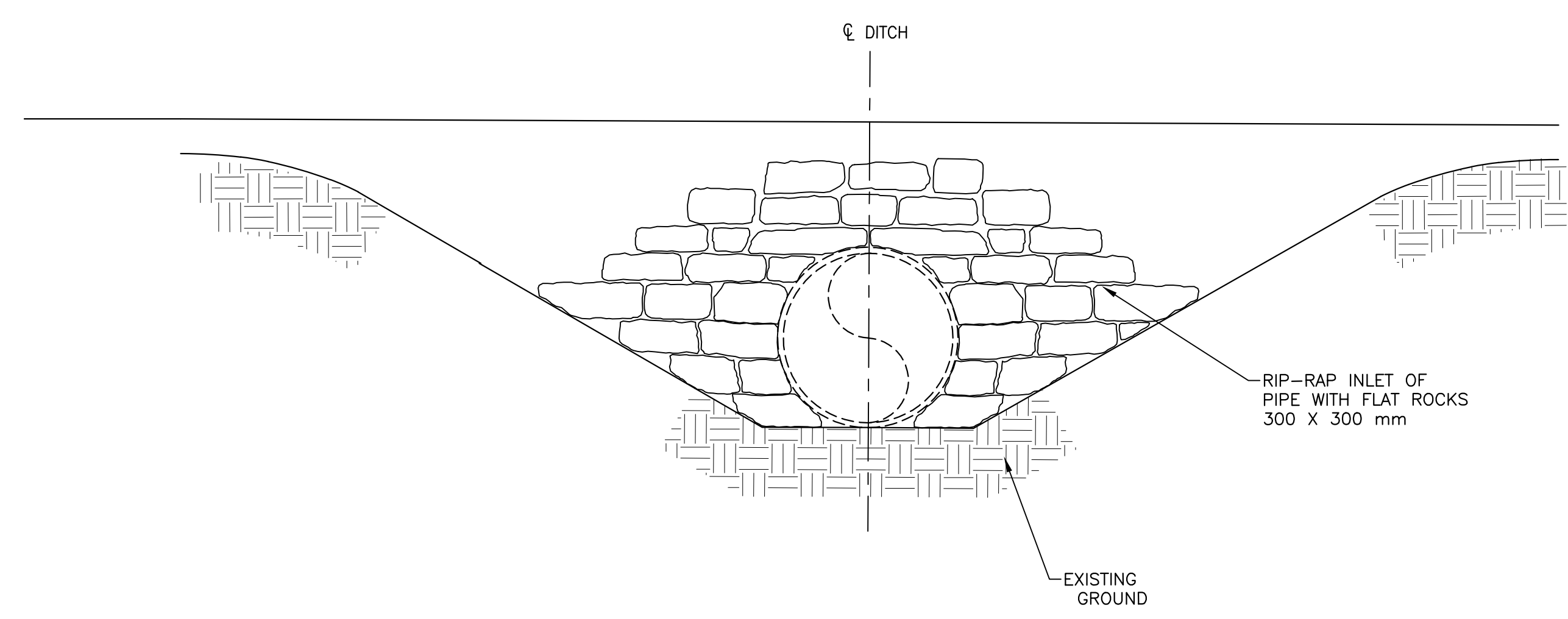
CB2/CB3 DETAIL
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm
B
C102



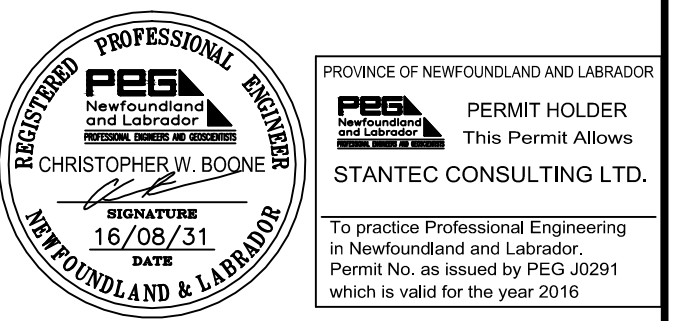
PLAN VIEW - TRENCH DRAIN
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm
C
C102



SECTION - TRENCH DRAIN
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm
D
C102



RIP RAP TYPICAL
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm
E
C102

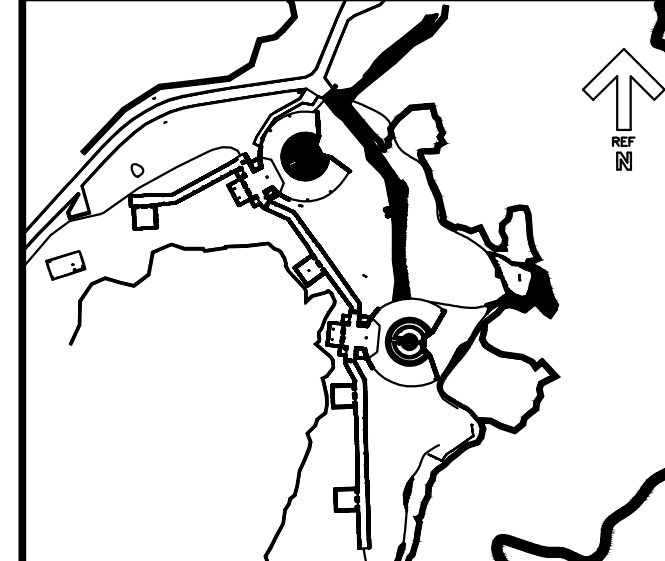


0	ISSUED FOR TENDER	08/31/2016
revisions		date

**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

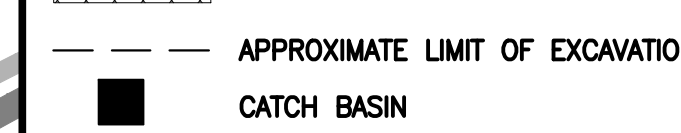
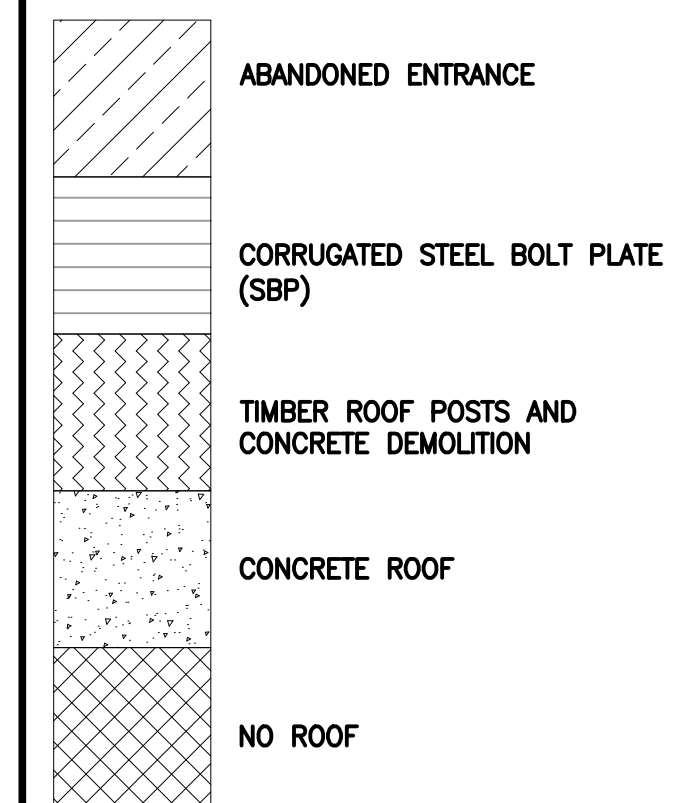
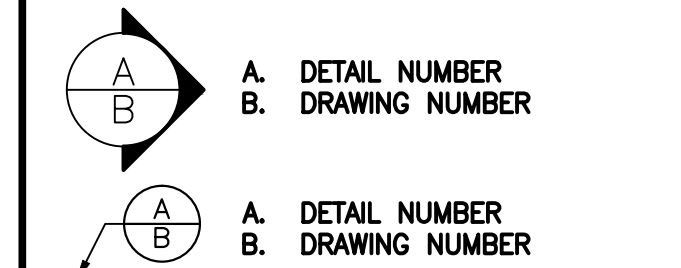
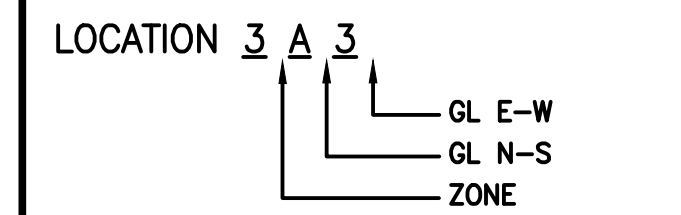
drawing design
DETAILS

designed	CB	congr
date	2016.05.25	
drawn	CS	dessiné
date	2016.05.25	
approved		approuvé
date		
Tender		Soumission
PWSC Project Manager	Administrateur de projets TPSGC	
project number		no. du projet
	446	
drawing no.		no. du dessin
	C104	



KEYPLAN: N.T.S.

LEGEND:



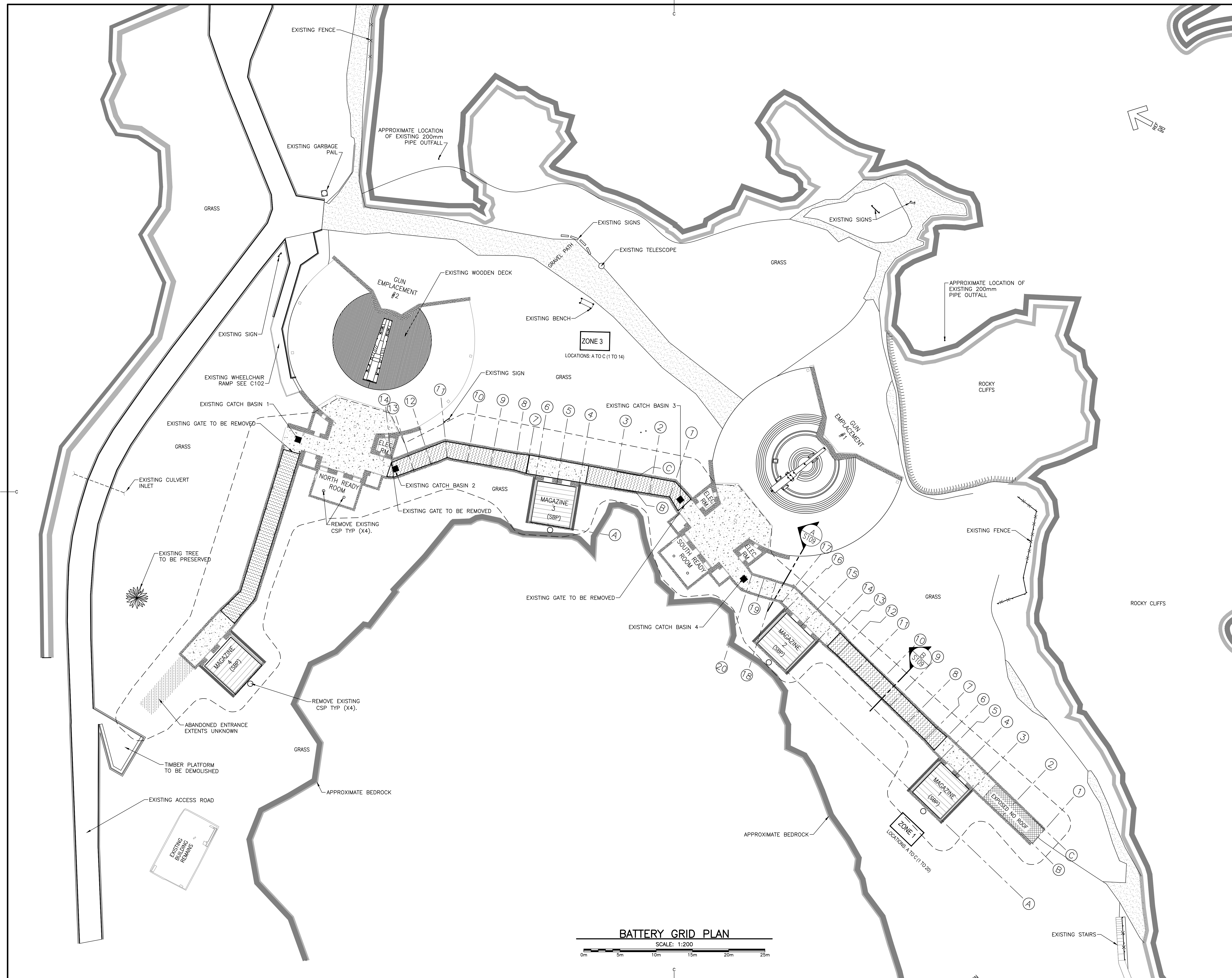
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revisions		date
project		project

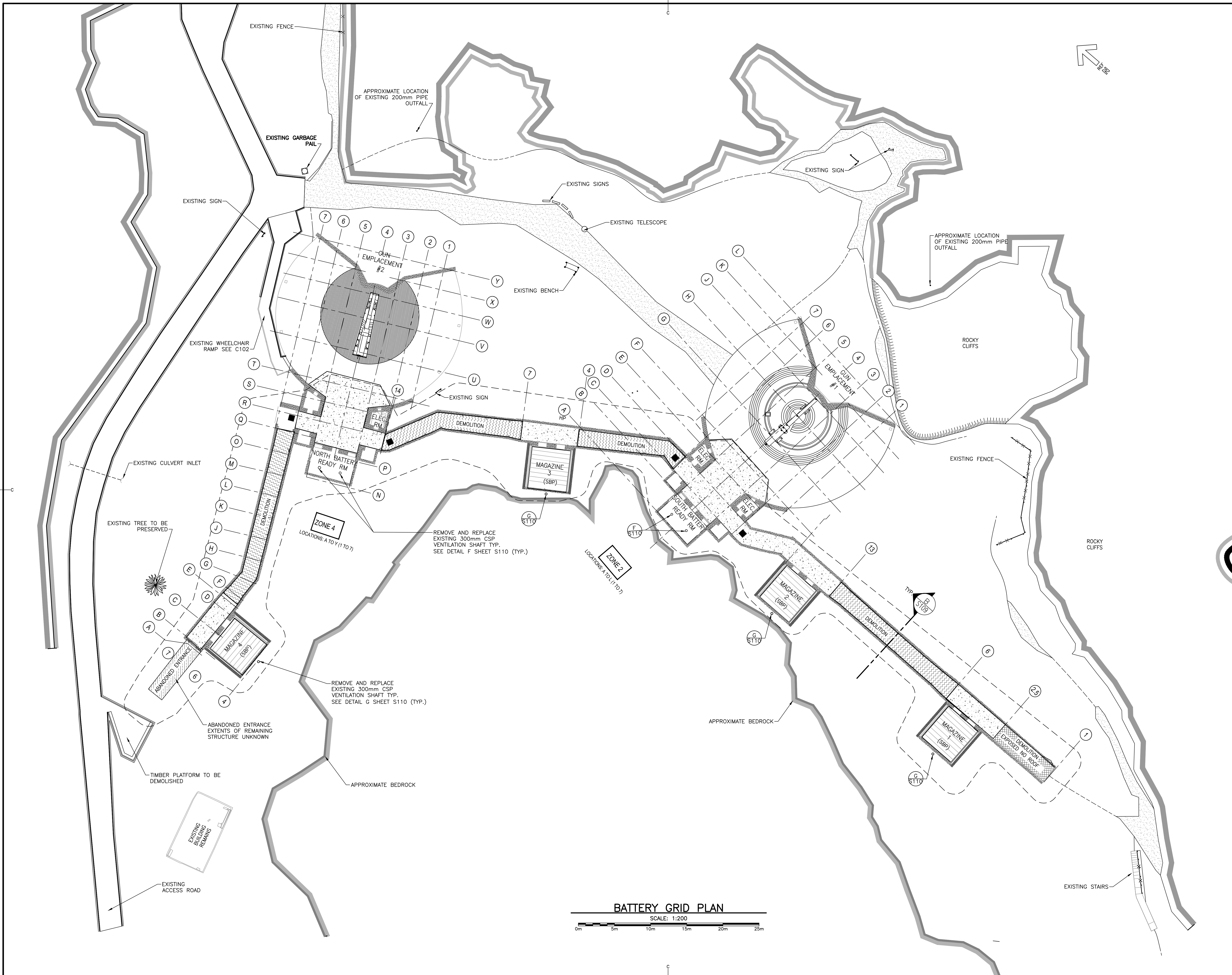
**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

**BATTERY GRID PLAN
ZONES 1 & 3
EXISTING CONDITIONS
AND DEMO**

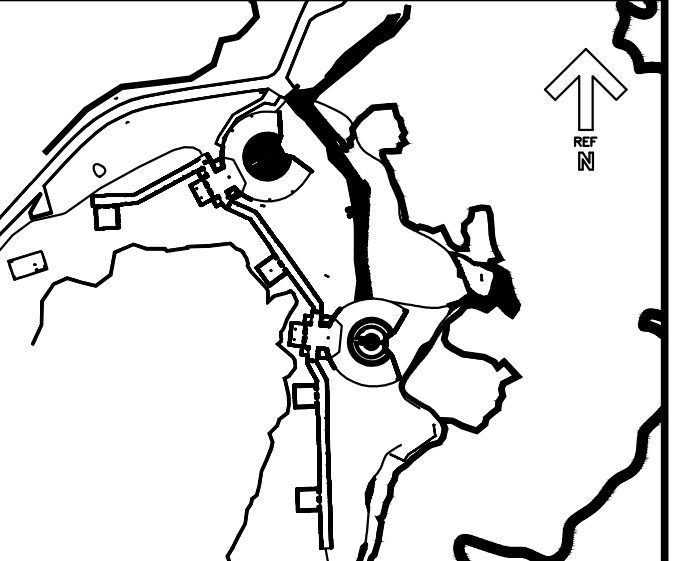
designed JJ	congr
date 2016.05.03	
drawn AB	dessiné
date 2016.07.27	
approved WJP	approuvé
date 2016.08.12	
Tender	Soumission
PWSC Project Manager	Administrateur de projets TPSC
project number	no. du projet
446	
drawing no.	no. du dessin
S101	



BATTERY GRID PLAN
SCALE: 1:200
0m 5m 10m 15m 20m 25m



BATTERY GRID PLAN
SCALE: 1:200



KEYPLAN: N.T.S.

LEGEND:

- LOCATION 3 A 3
- GL E-W
 - GL N-S
 - ZONE
- A. DETAIL NUMBER
 - B. DRAWING NUMBER
- A. DETAIL NUMBER
 - B. DRAWING NUMBER
- ABANDONED ENTRANCE
 - CORRUGATED STEEL BOLT PLATE (SBP)
 - TIMBER ROOF POSTS AND CONCRETE DEMOLITION
 - CONCRETE ROOF
 - 3 SIDED CONCRETE TUNNEL DEMOLITION
 - APPROXIMATE LIMIT OF EXCAVATION
 - CATCH BASIN

REGISTERED PROFESSIONAL ENGINEER
PEEA and Licensee
16/08/31
NEWFOUNDLAND & LABRADOR

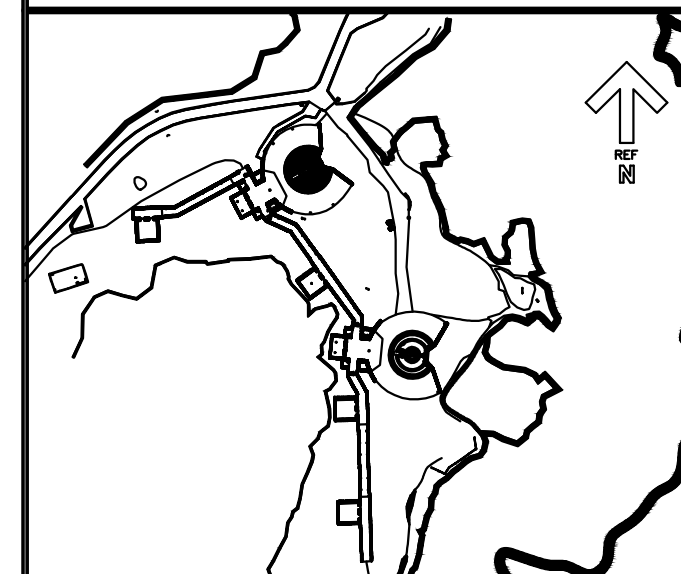
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0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

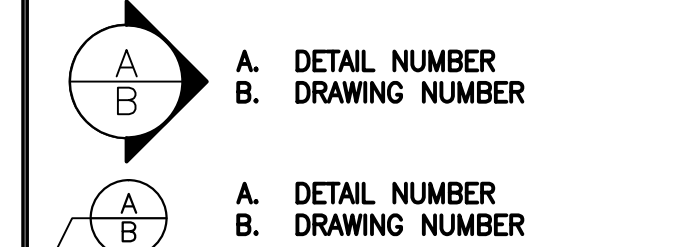
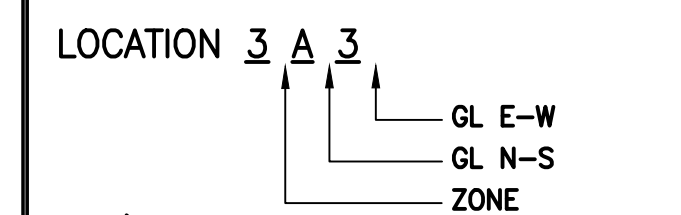
**BATTERY GRID PLAN
ZONES 2 & 4
EXISTING CONDITIONS
AND DEMO**

designed JJ	conçu
date 2016.07.24	
drawn AB	dessiné
date 2016.07.27	
approved WJP	approuvé
date 2016.07.27	
Tender	Soumission
PWSC Project Manager	Administrateur de projets TPSGC
project number	no. du projet
446	
drawing no.	no. du dessin
S102	

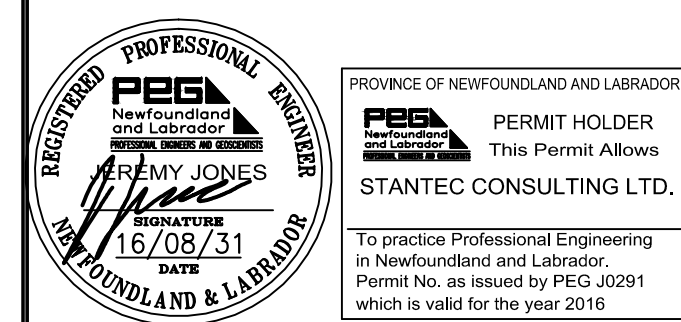


KEYPLAN: N.T.S.

LEGEND:



- CORRUGATED STEEL BOLT PLATE (SBP)
- TIMBER ROOF AND POSTS
- NEW PRECAST CONCRETE TUNNEL
- EXISTING PRECAST CONCRETE TUNNEL
- AREA OF EXCAVATION
- CATCH BASIN
- 0+000 STATION (METERS)



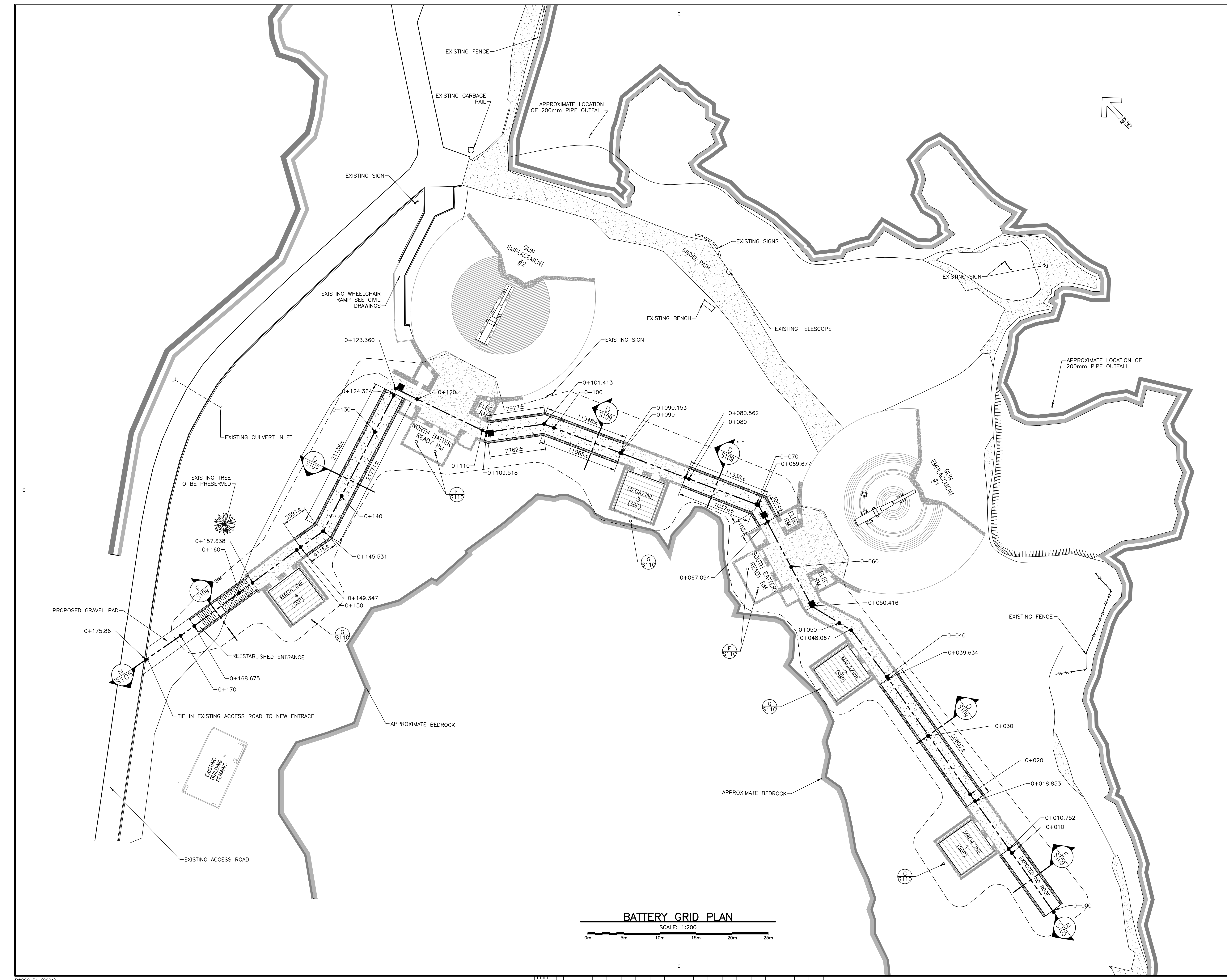
0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

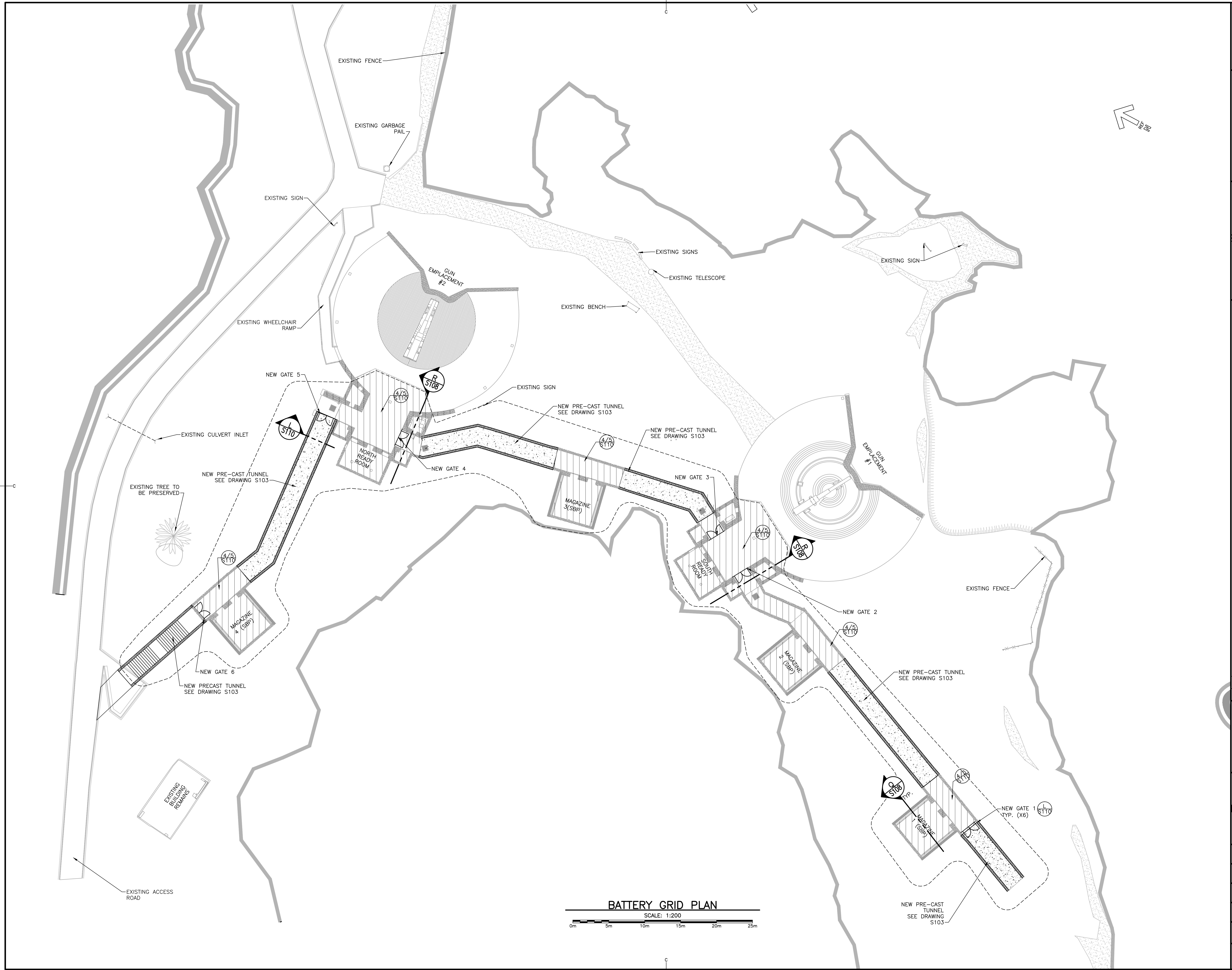
drawing design

TUNNEL REPLACEMENT

designed JJ	conçu
date 2016.05.03	
drawn AB	dessiné
date 2016.07.26	
approved WJP	approuvé
date 2016.07.27	
Tender	Soumission
PWSC Project Manager	Administrateur de projets TPSC
project number	no. du projet
446	
drawing no.	no. du dessin
S103	



BATTERY GRID PLAN
SCALE: 1:200



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141 Kelsey Drive
St. John's NL
Tel. 709.576.1458
www.stantec.com

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The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.

CONSULTANTS PROJECT NO. - 133347244

KEYPLAN: N.T.S.

LEGEND:

LOCATION 3 A 3

GL E-W
GL N-S
ZONE

A. DETAIL NUMBER
B. DRAWING NUMBER

A. DETAIL NUMBER
B. DRAWING NUMBER

ABANDONED ENTRANCE

TIMBER ROOF POSTS AND CONCRETE DEMOLITION

NEW PRECAST CONCRETE TUNNEL

REPAIR AREA OF SECTIONS TO REMAIN

AREA OF EXCAVATION

CATCH BASIN

0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

**CAPE SPEAR NHCS
WORLD WAR II BATTERY
REHABILITATION**

drawing dessin

**REHABILITATION OF
EXISTING INFRASTRUCTURE
TO REMAIN AND
GATE PLACEMENT**

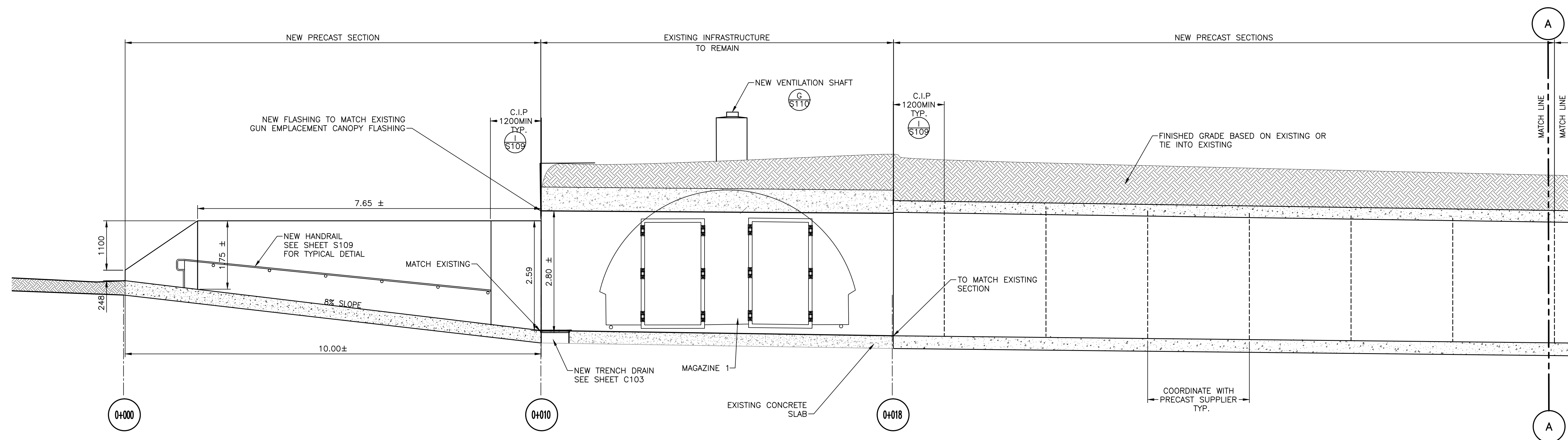
designed JJ	conçu
date 2016.07.26	
drawn AB	dessiné
date 2016.07.27	
approved WJP	approuvé
date 2016.07.27	
Tender	Submission
PWSSC Project Manager	Administrateur de projets TPSSC
project number	no. du projet
446	
drawing no.	no. du dessin
S104	

E-DRM/GDD-E

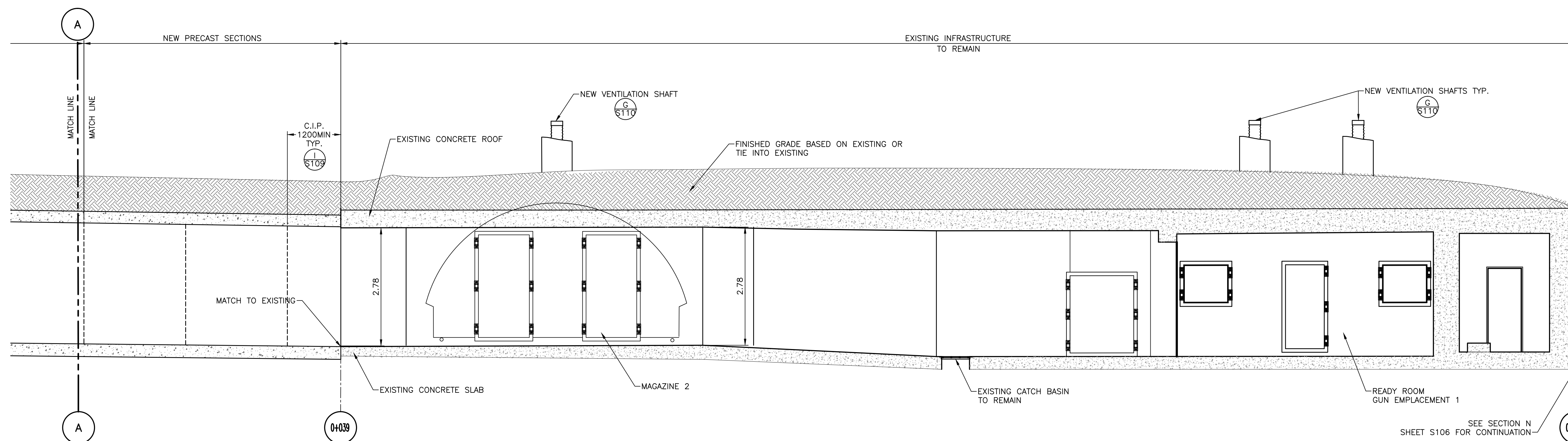
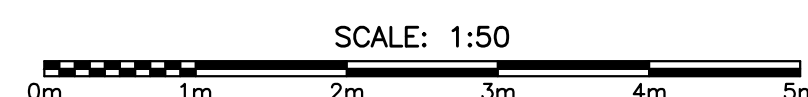


KEYPLAN: N.T.S.

LEGEND:



DEVELOPED ELEVATION: STA 0+000 TO 0+018 **N S103**



DEVELOPED ELEVATION: STA 0+039 TO 0+067 **N S103**



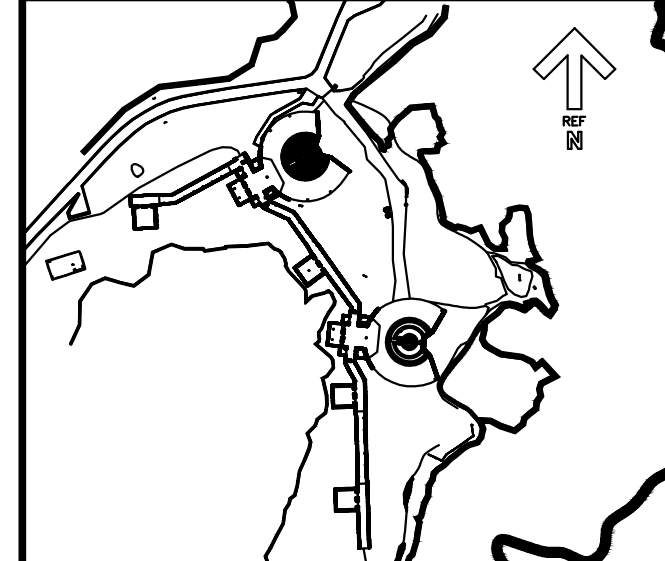
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0	ISSUED FOR TENDER	08/31/2016
revisions		date

CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION

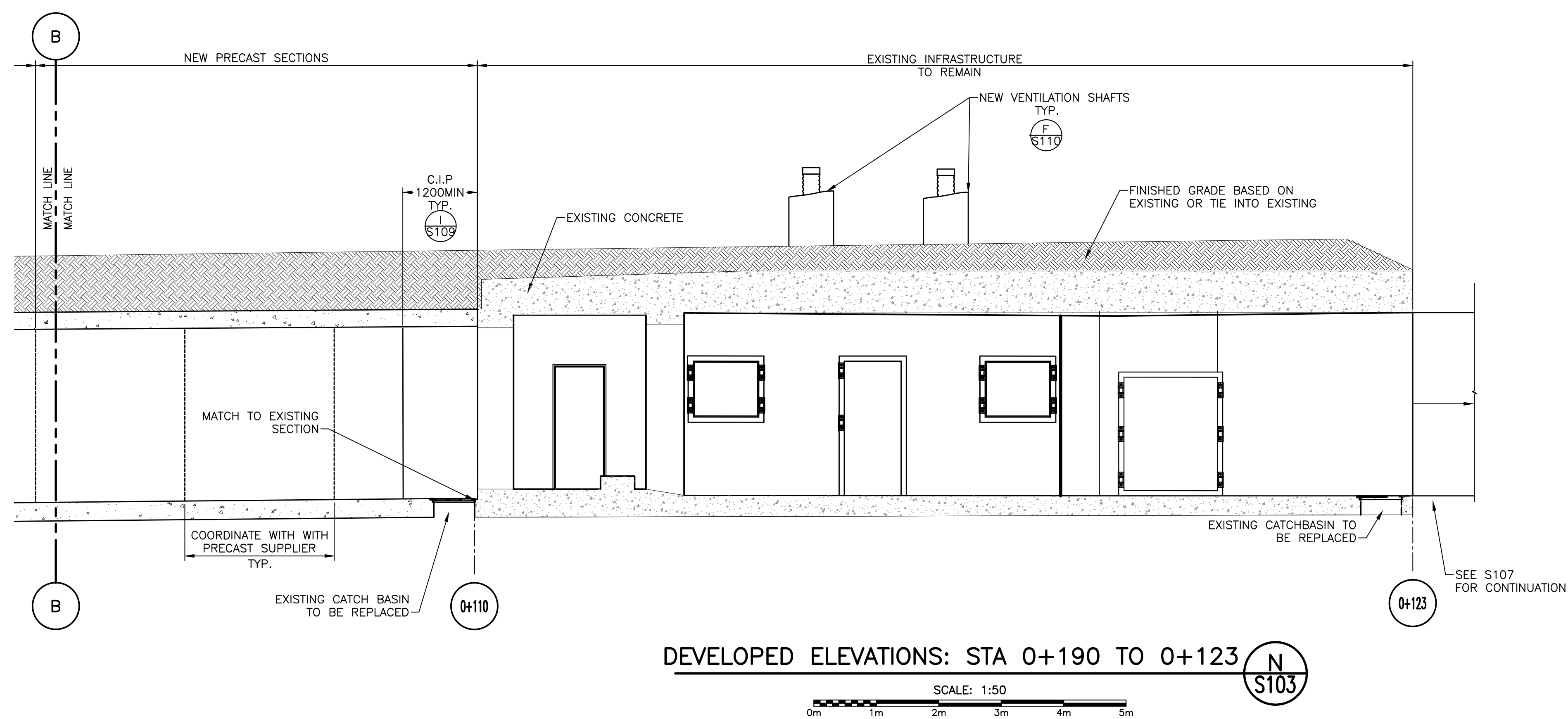
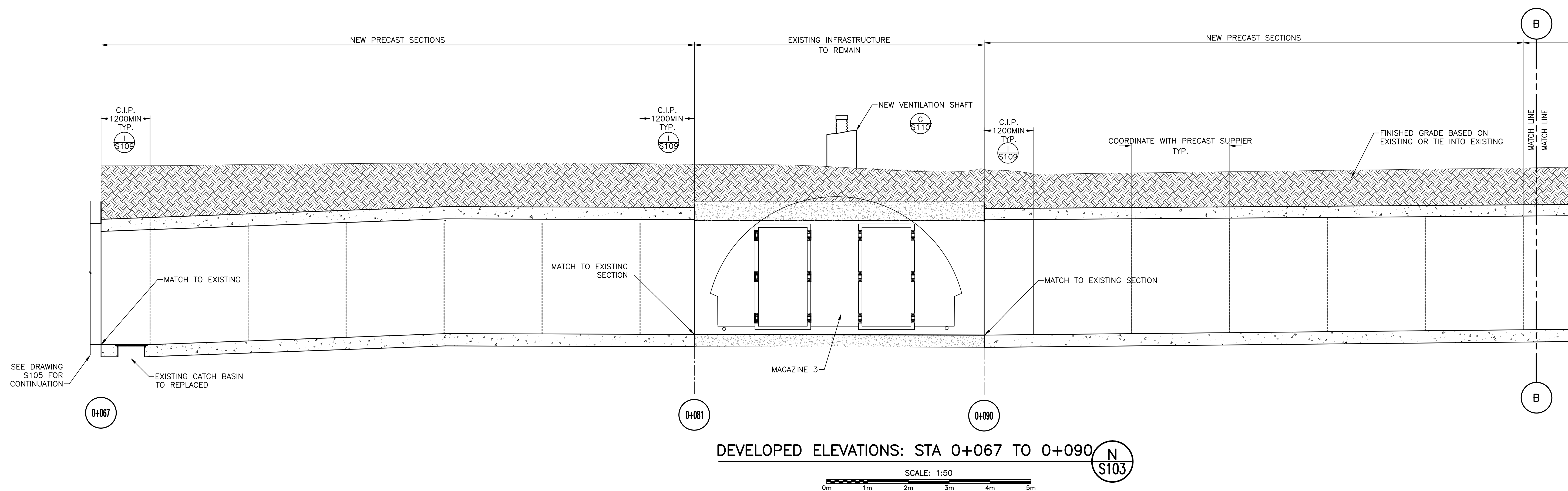
TUNNEL DEVELOPED
ELEVATIONS
SHEET 1 OF 3

designed JJ	conçu
date 2016.05.03	
drawn AB	dessiné
date 2016.07/26	
approved WJP	approuvé
date 2016.07.27	
Tender	Soumission
PWSC Project Manager	Administrateur de projets TPSCG
project number	no. du projet
446	
drawing no.	no. du dessin
S105	



KEYPLAN: N.T.S.

LEGEND:



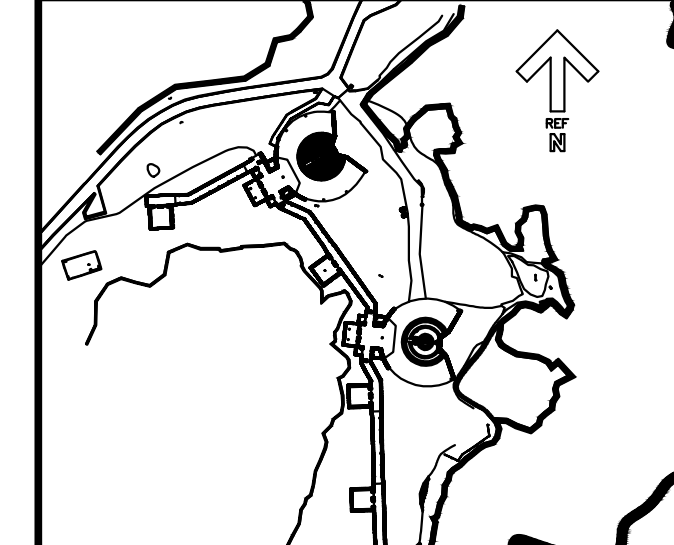
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0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

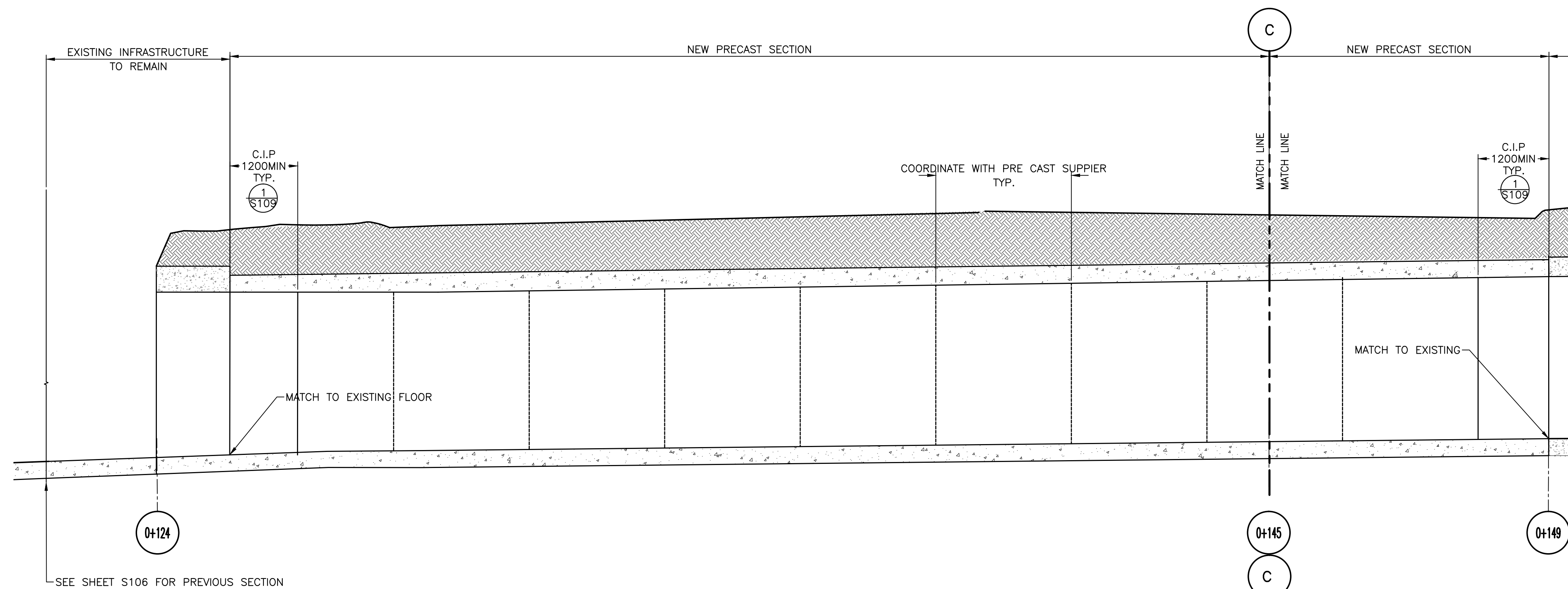
**TUNNEL DEVELOPED
ELEVATIONS
SHEET 2 OF 3**

designed JJ	conçu
date 2016.07.26	
drawn AB	dessiné
date 2016.07.26	
approved WJP	approuvé
date 2016.07.27	
Tender	Soumission
PWGSC Project Manager	Administrateur de projets TPSCG
project number	no. du projet
446	
drawing no.	no. du dessin
S106	



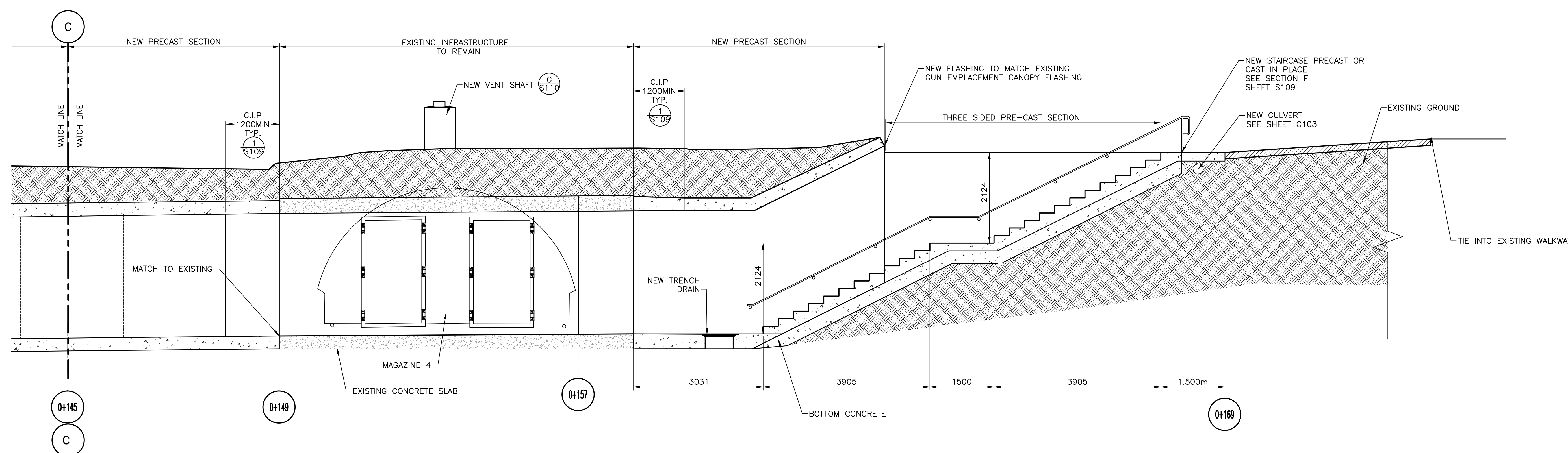
KEYPLAN: N.T.S.

LEGEND:



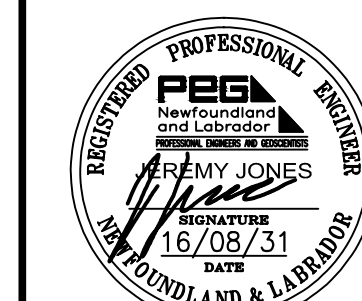
DEVELOPED ELEVATIONS: STA 0+124 TO 0+145

SCALE: 1:50



DEVELOPED ELEVATIONS STA 0+145 TO 0+169

SCALE: 1:50



PROVINCE OF NEWFOUNDLAND AND LABRADOR
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0	ISSUED FOR TENDER	08/31 2016
revisions		date

project

**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

**TUNNEL DEVELOPED
ELEVATIONS
SHEET 3 OF 3**

designed JJ conçu

date 2016.07.26

drawn AB dessiné

date 2016.07.26

approved WJP approuvé

date 2016.07.28

Tender Soumission

PWSC Project Manager Administrateur de projet TPSGC

project number no. du projet

446

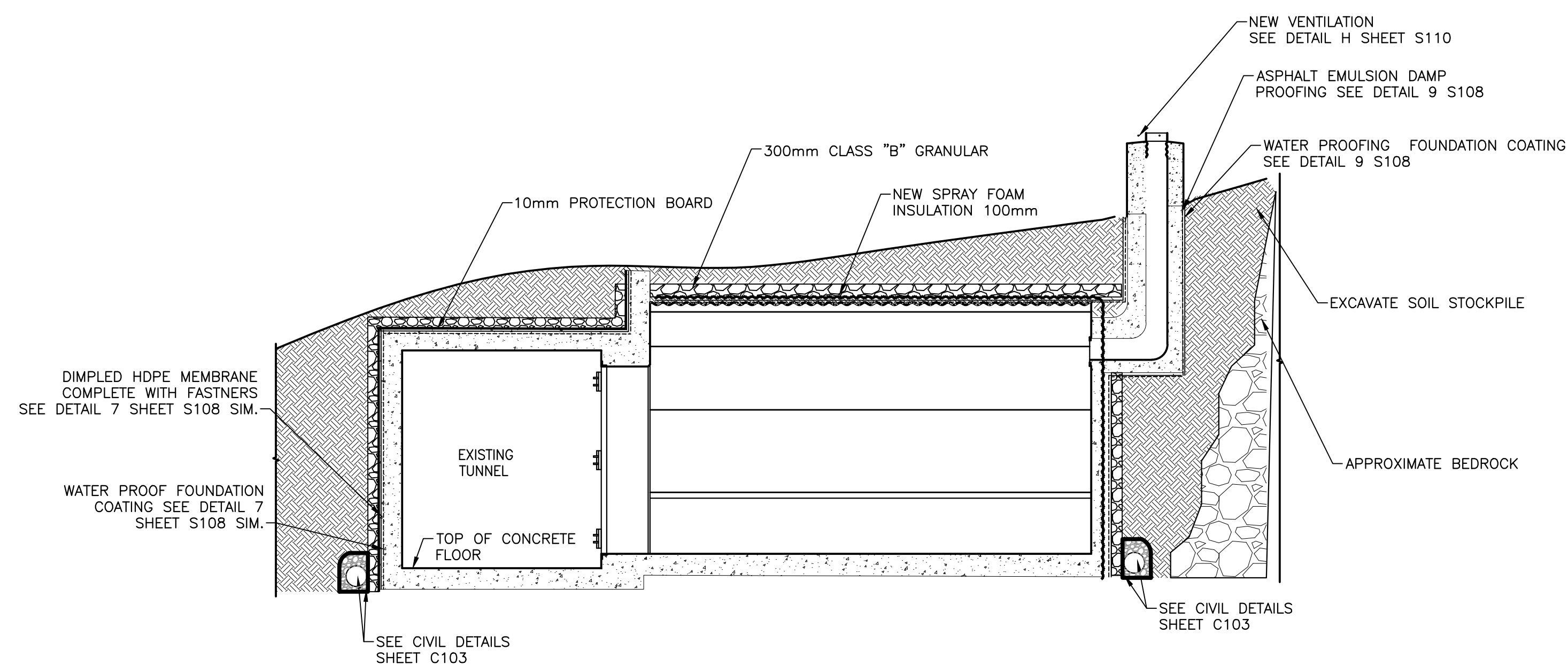
drawing no. no. du dessin

S107

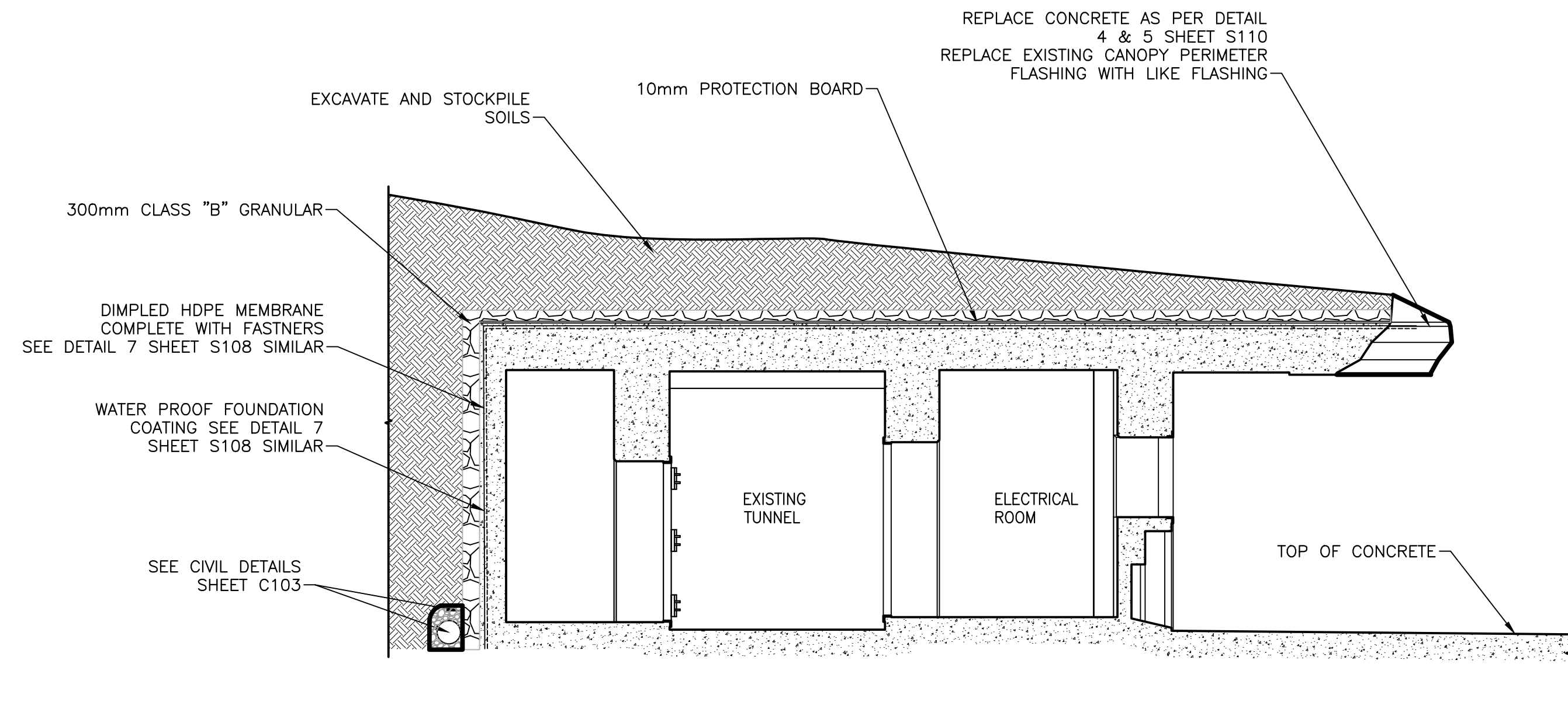


KEYPLAN: N.T.S.

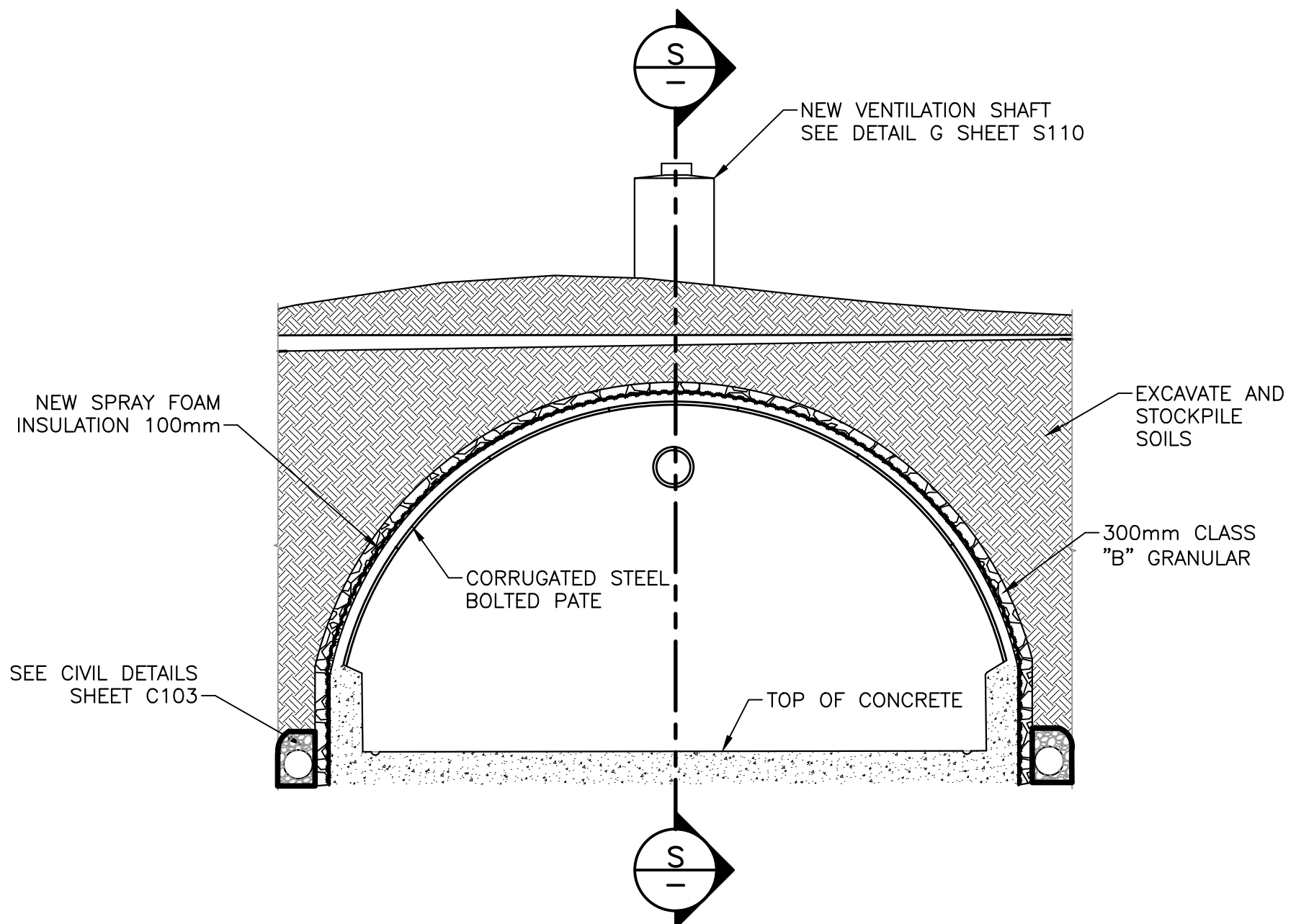
LEGEND:



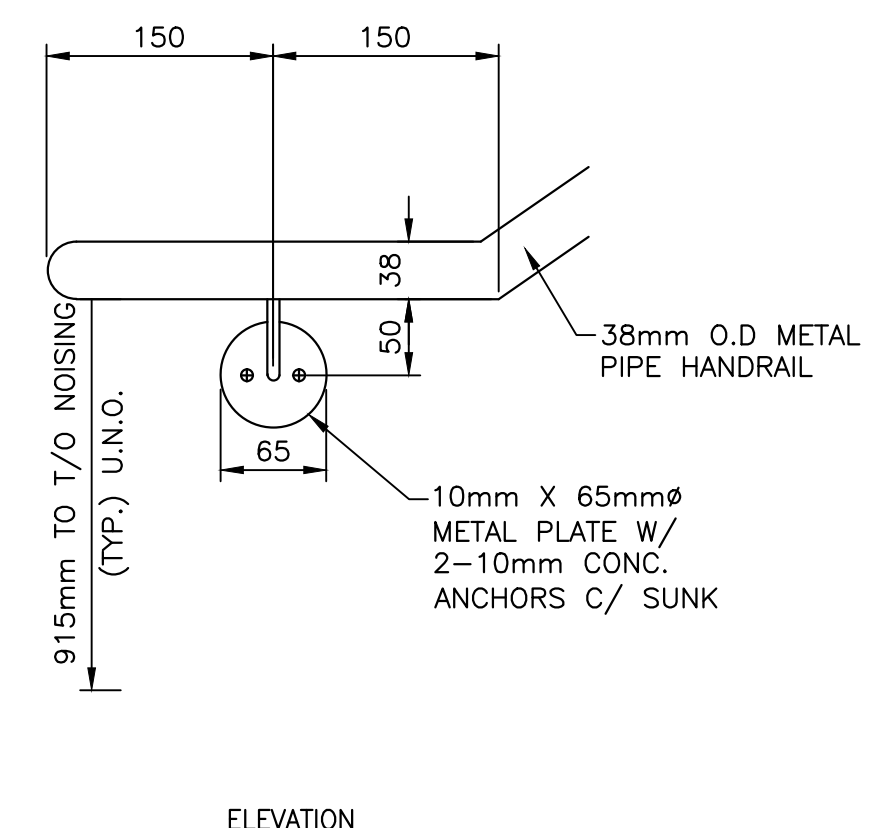
SECTION: TYPICAL MAGAZINE (S)
SCALE: 1:50



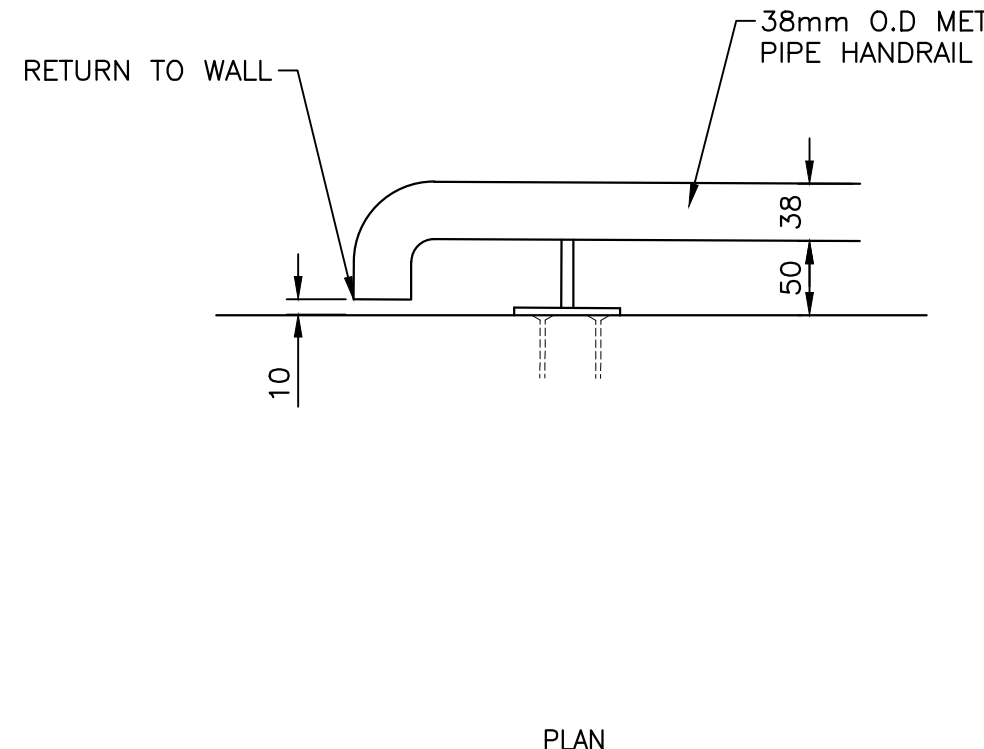
SECTION: GUN EMPLACEMENT (R S104)
SCALE: 1:50



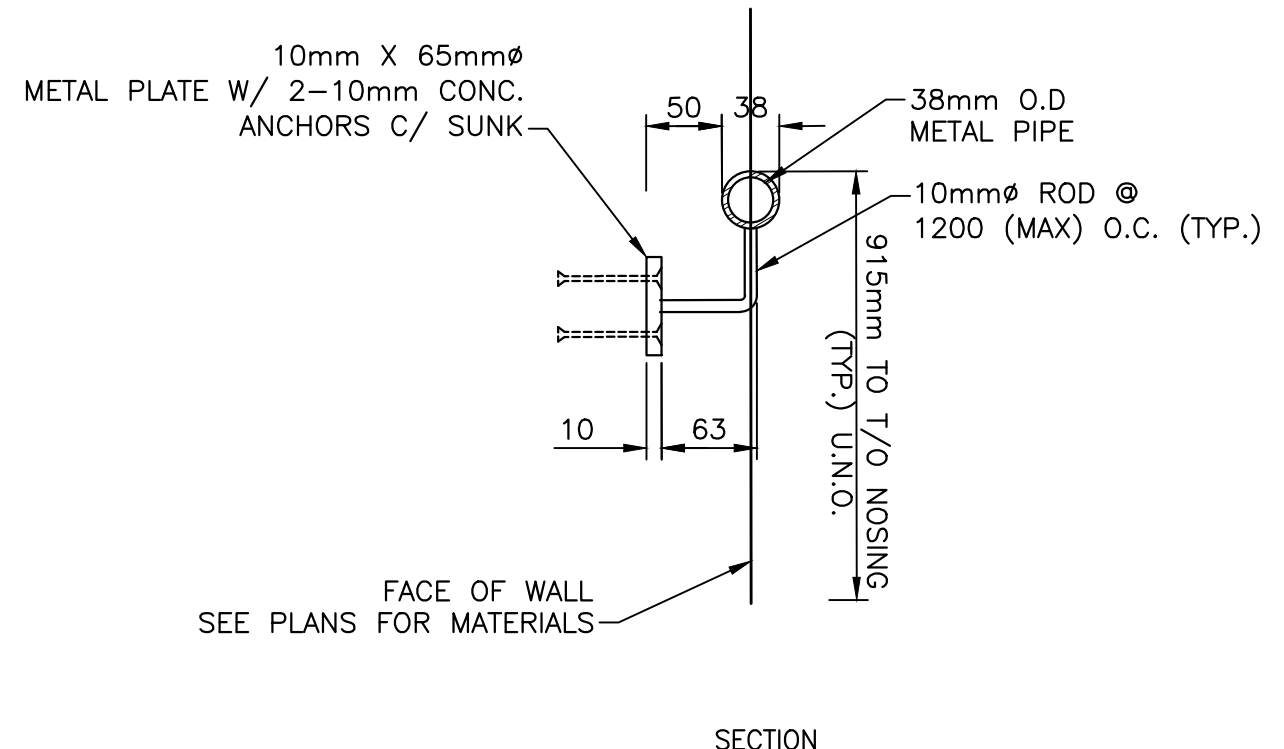
SECTION: TYPICAL MAGAZINE PROFILE (Q)
SCALE: 1:50



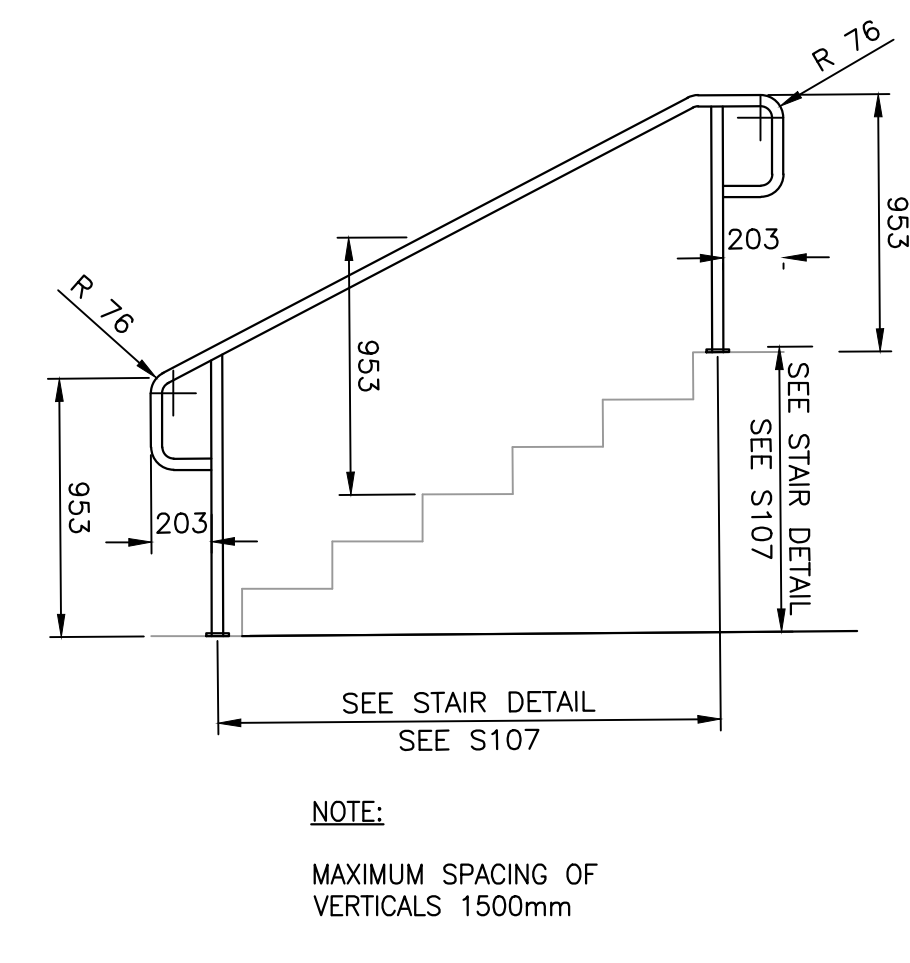
ELEVATION



PLAN



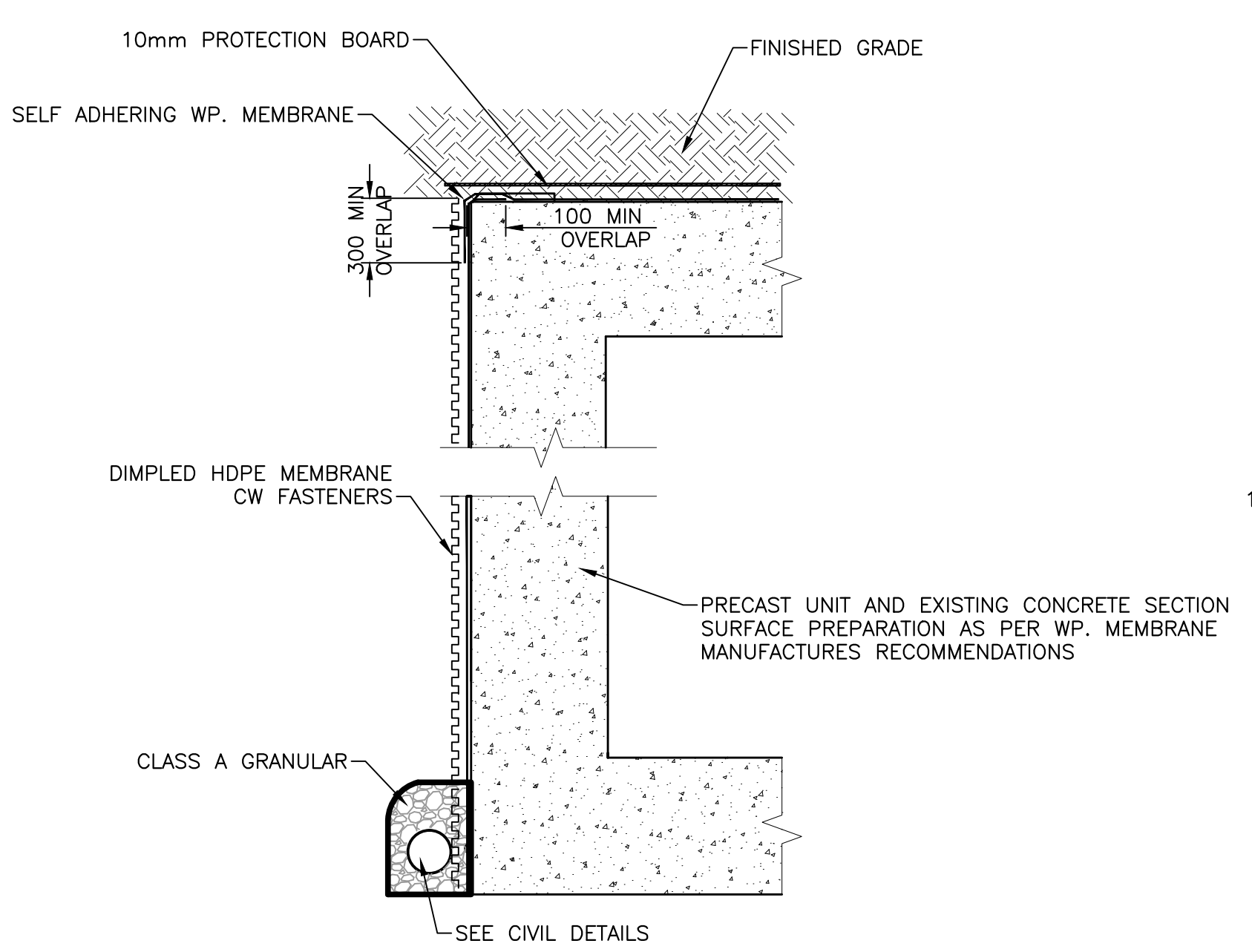
SECTION



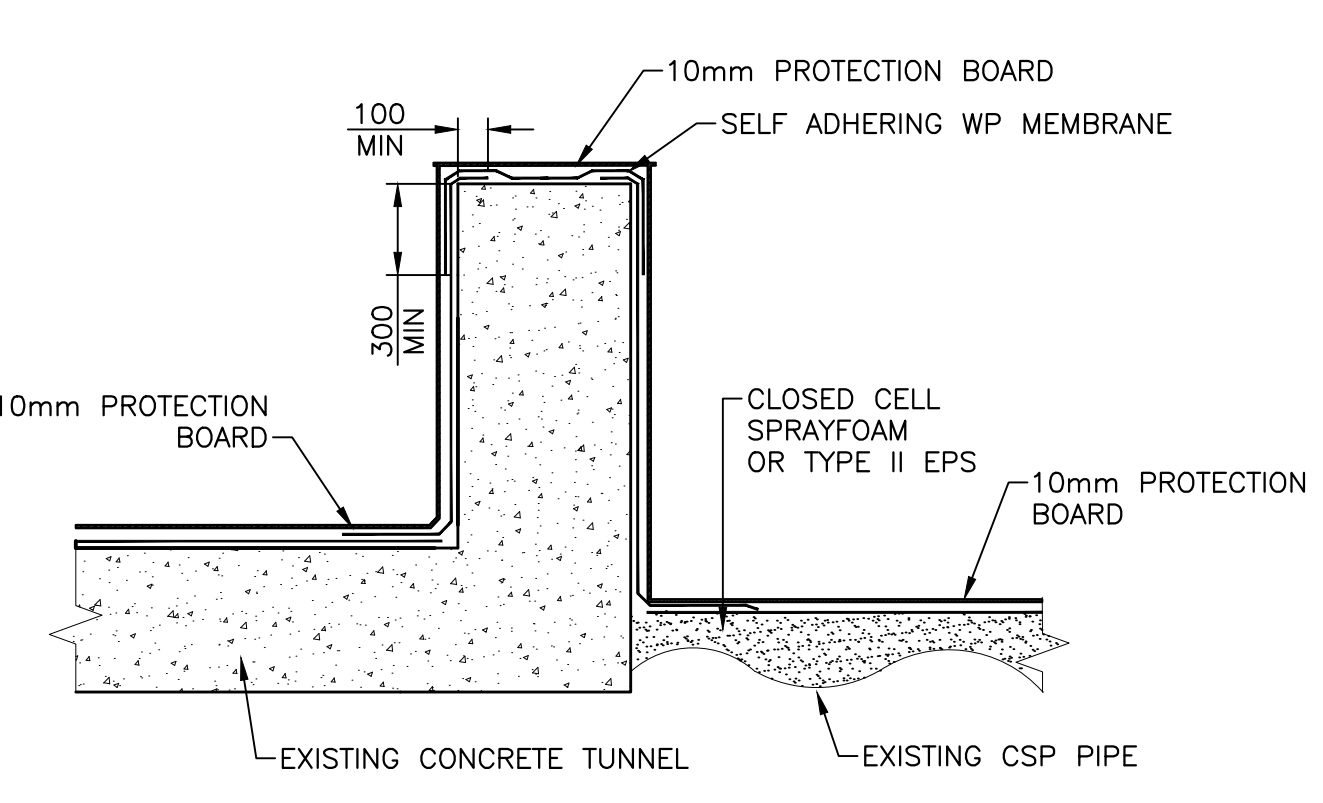
NOTE:
MAXIMUM SPACING OF VERTICALS 1500mm

TYPICAL STAIR POST & RAIL DETAIL
SCALE: 1:1

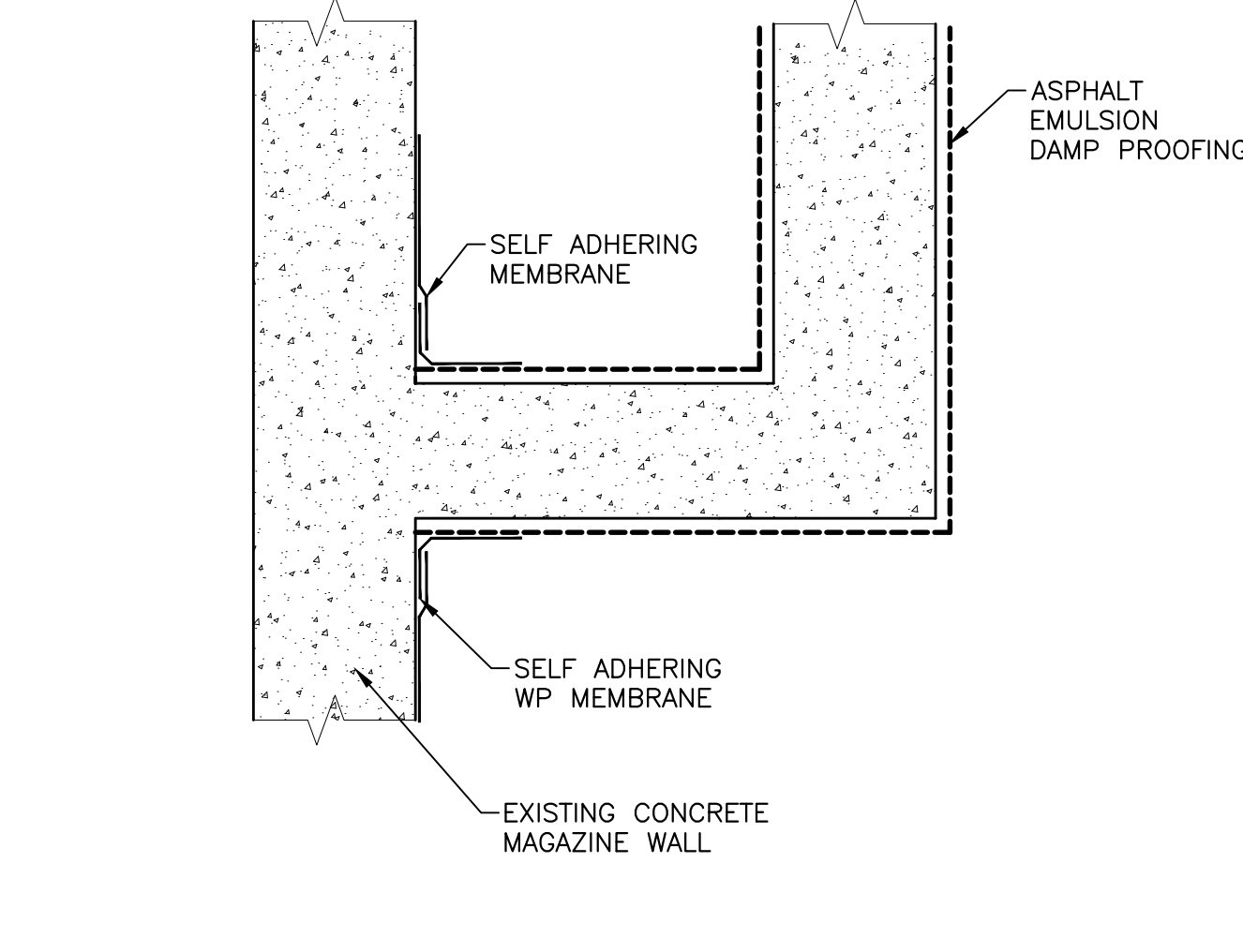
SECTION - STAIR WELL ENTRANCE
SCALE: 1:5



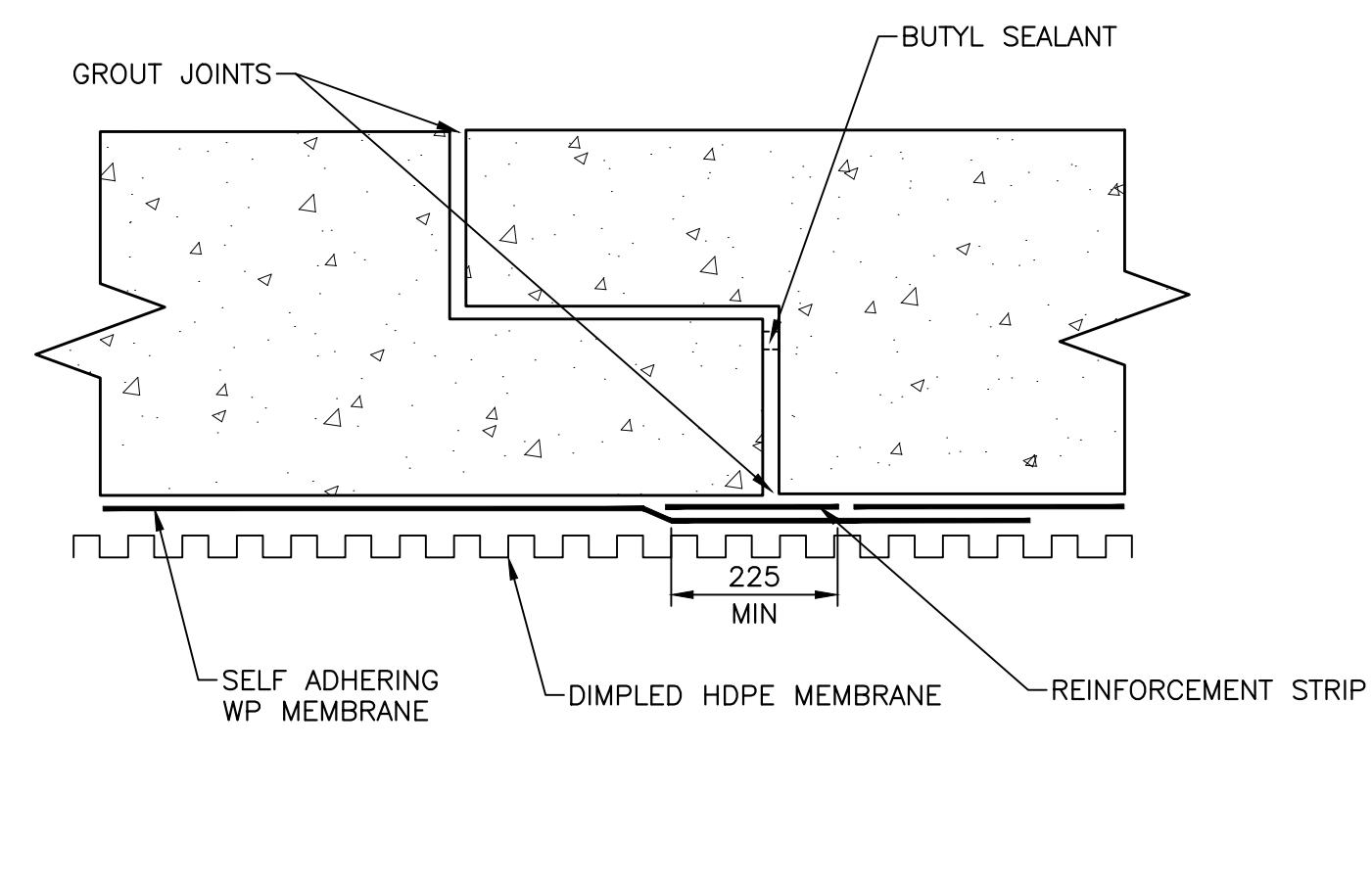
WATER PROOFING DETAIL (7)
NTS



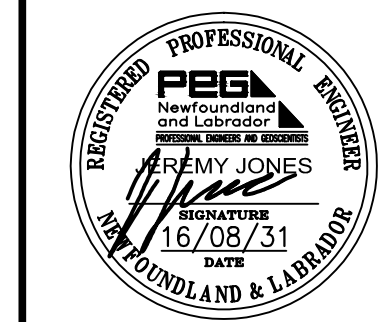
WATER PROOFING DETAIL MAGAZINES (8)
NTS



WATER PROOFING DETAIL MAGAZINES (9)
NTS



WATER PROOFING DETAIL EXPANSION (10)
SCALE: 1:10



PROVINCE OF NEWFOUNDLAND AND LABRADOR
PERMIT HOLDER
STANTEC CONSULTING LTD.
To practice Professional Engineering in Newfoundland and Labrador, Permit No. as issued by PEQB 2091 which is valid for the year 2016.

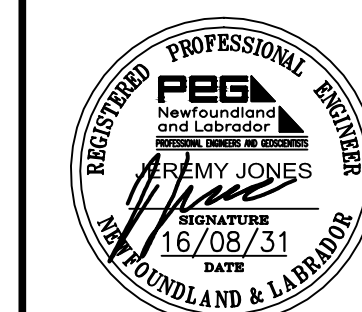
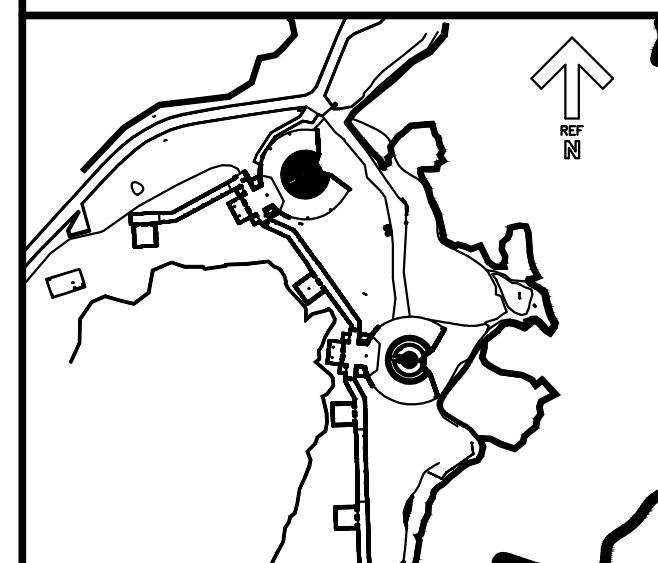
0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

CAPE SPEAR NHSC WORLD WAR II BATTERY REHABILITATION

drawing design

MAGAZINE AND GUN EMPLACEMENT CROSS SECTIONS AND ELEVATION DETAILS

designed JJ	congru
date 2016.07.27	
drawn AB	dessiné
date 2016.07/26	
approved WJP	approuvé
date 2016.07.27	
Tender	Soumission
PWSC Project Manager	Administrateur de projets TPSGC
project number	no. du projet
446	
drawing no.	no. du dessin
S108	



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0	ISSUED FOR TENDER	08/31/2016
revisions		date

**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

**CONCRETE TUNNEL
CROSS SECTION
AND DETAILS**

designed LL	congr
date	2016.07.24
drawn AB	dessiné
date	2016.07.24
approved WJP	approuvé
date	2016.07.27
Tender	Soumission

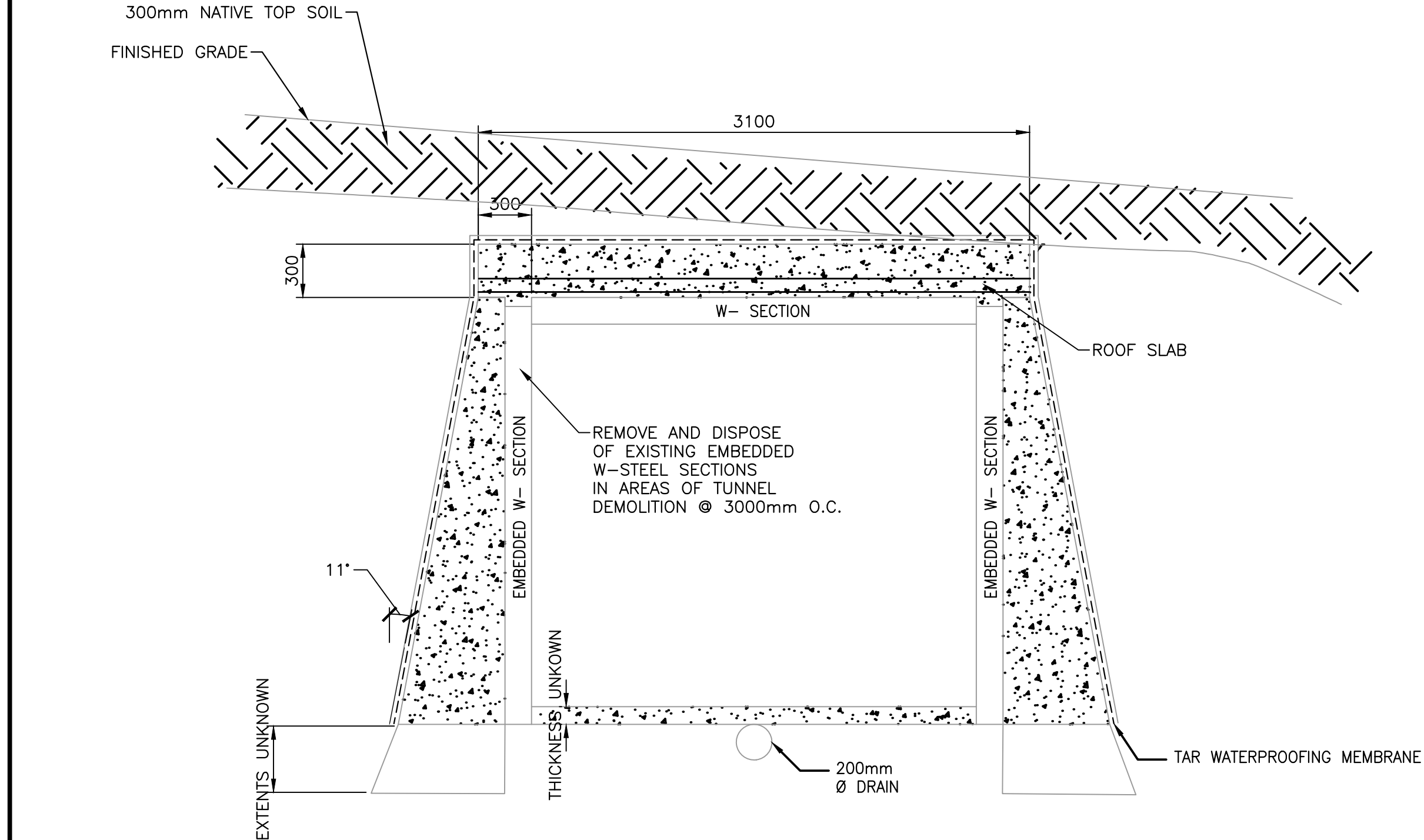
PWSC Project Manager Administrateur de projets TPSGC

project number no. du projet

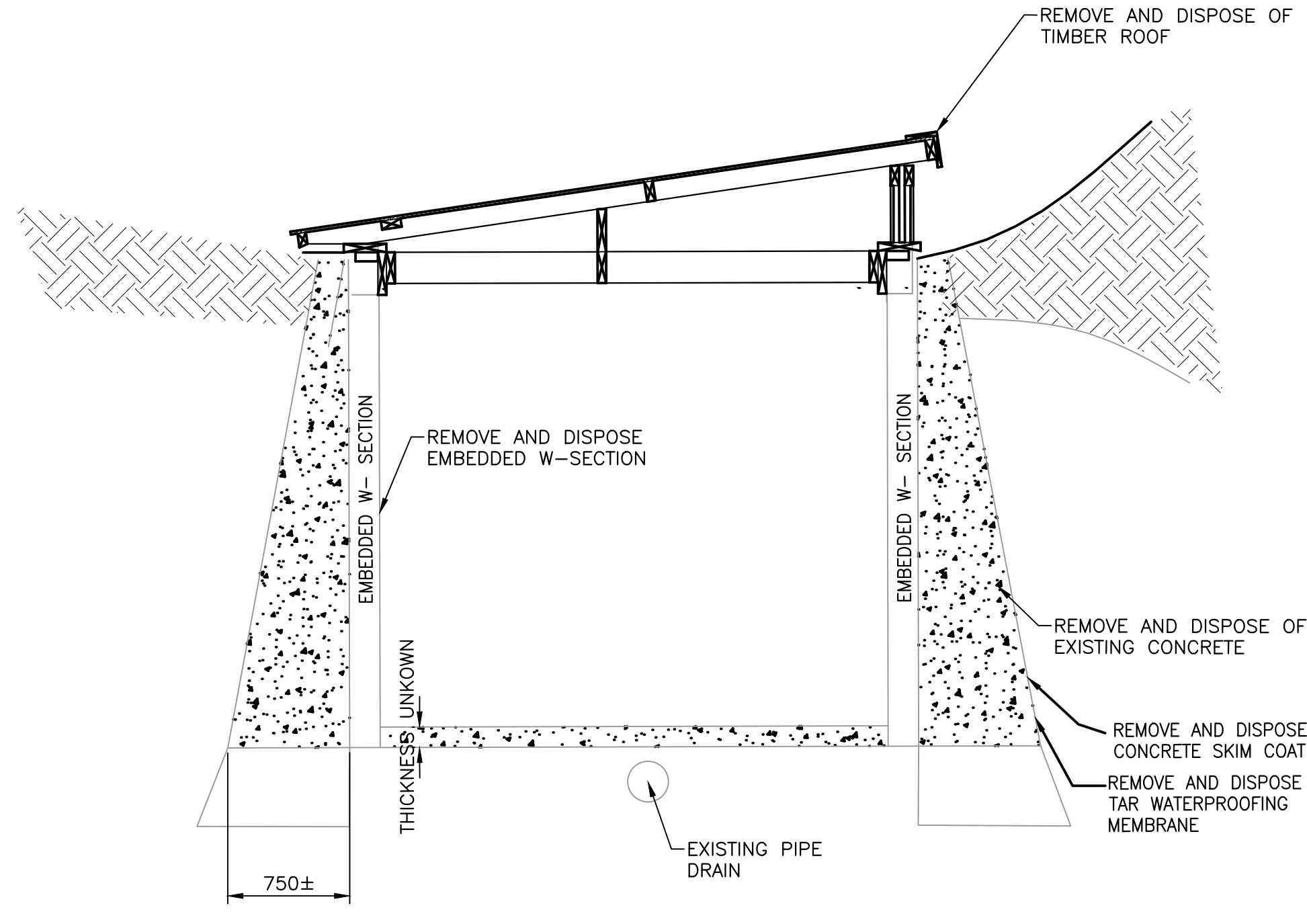
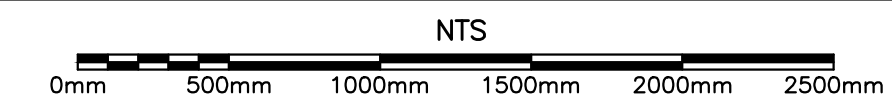
446

drawing no. no. du dessin

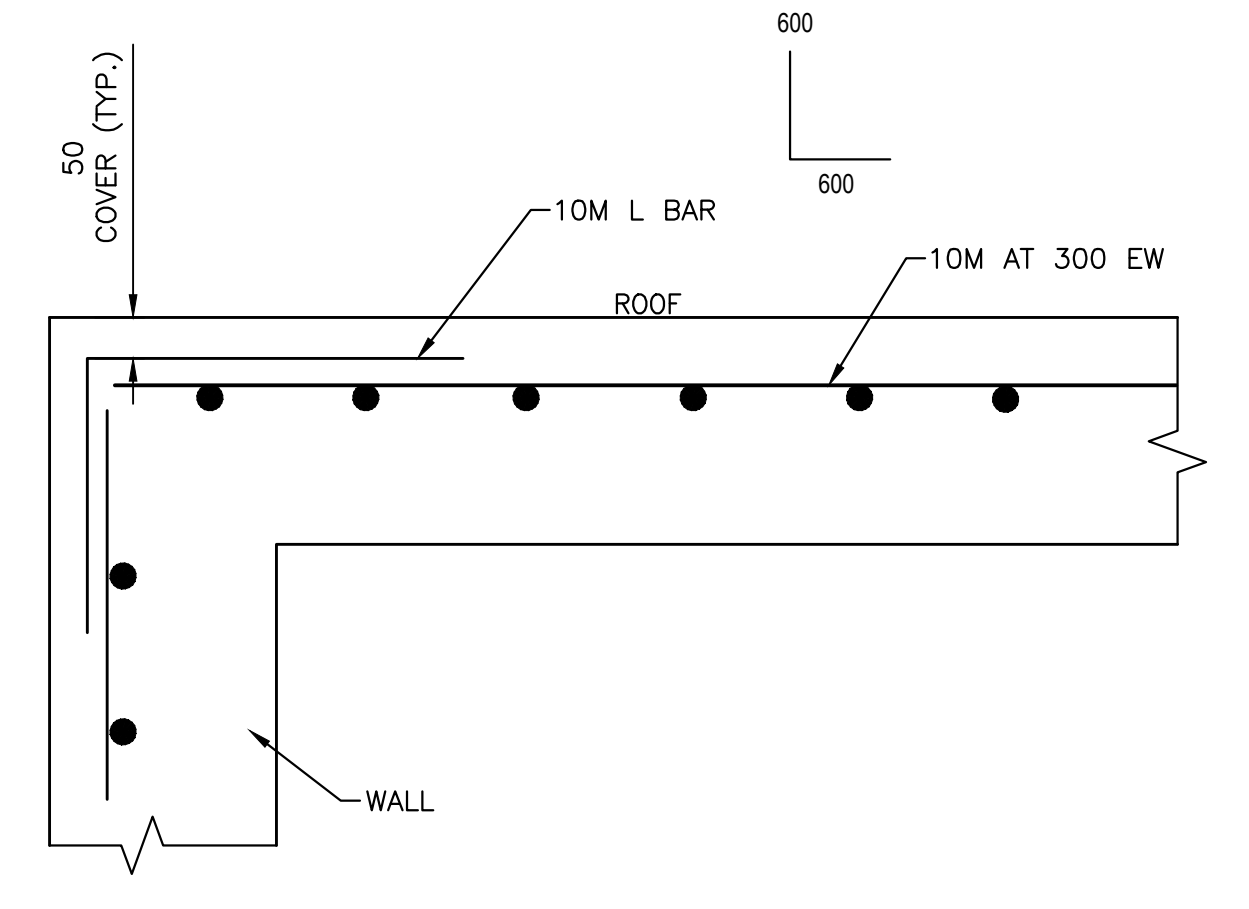
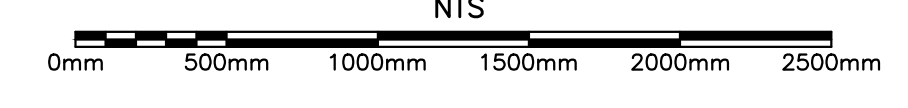
S109



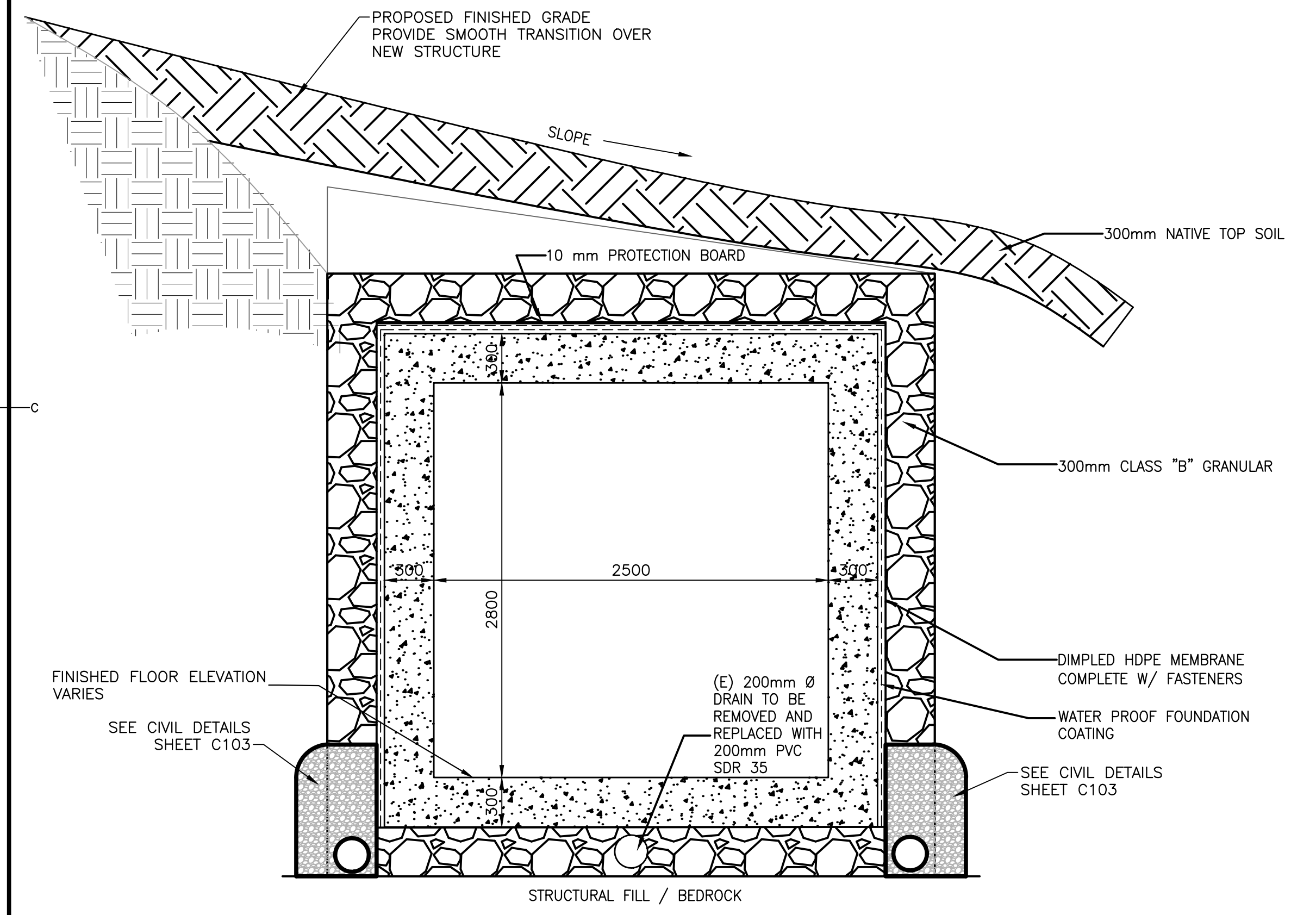
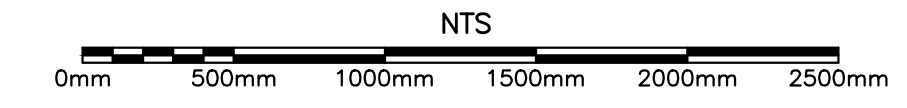
TYPICAL EXISTING BURIED TUNNEL SECTION (A)
S101



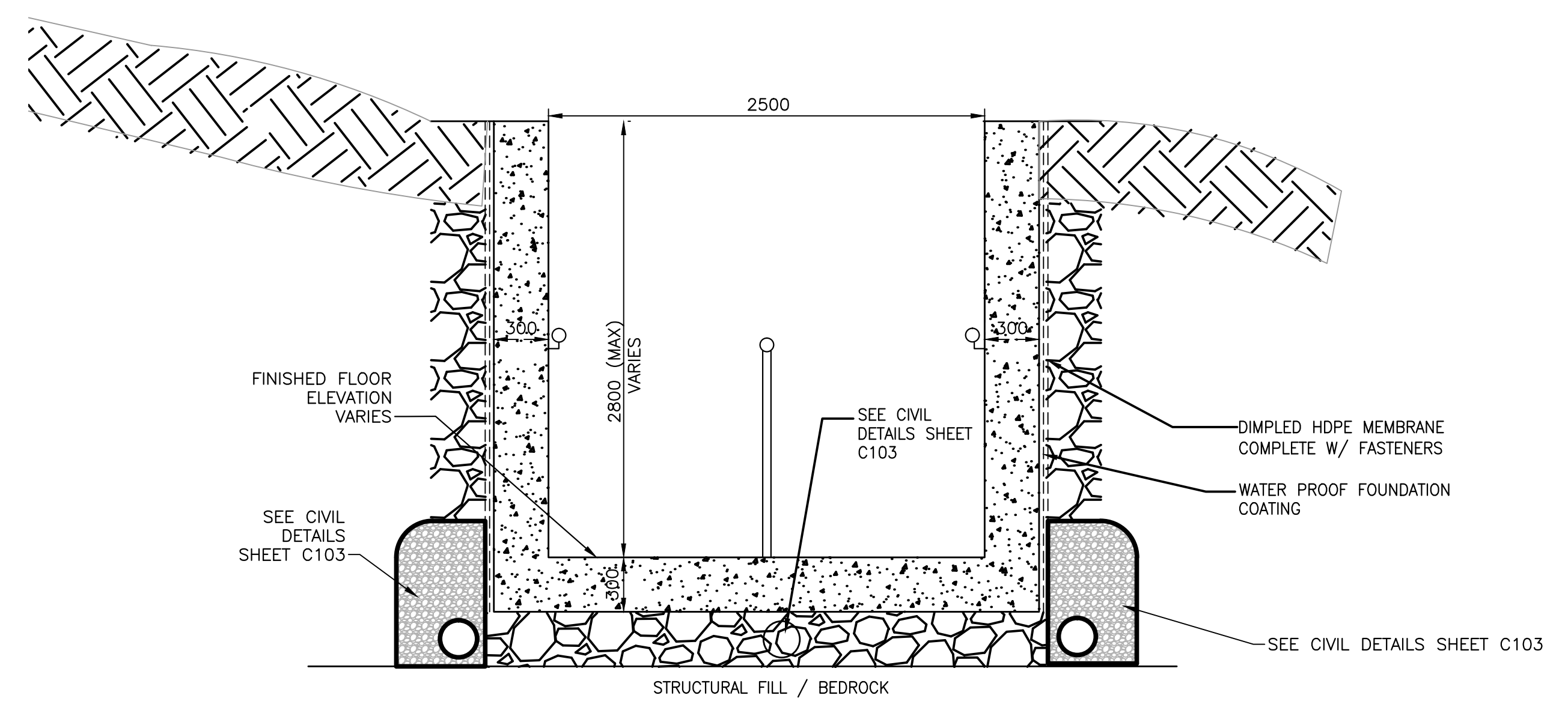
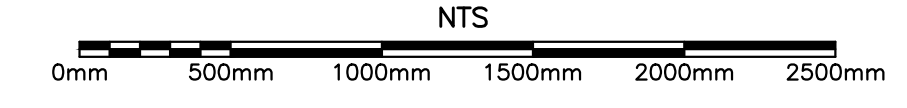
TYPICAL EXISTING TIMBER ROOF TUNNEL SECTION FOR DEMOLITION (B)
S101



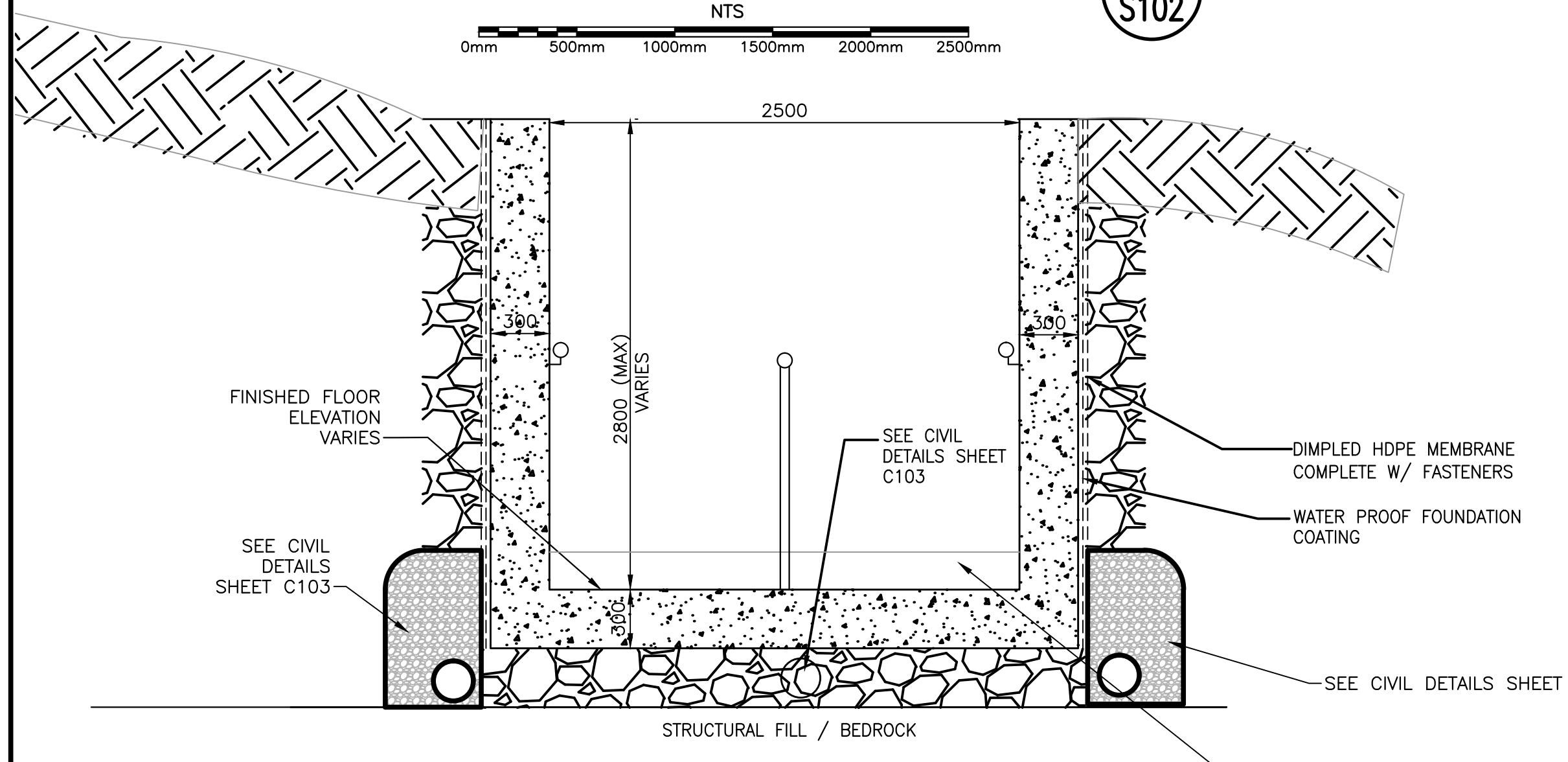
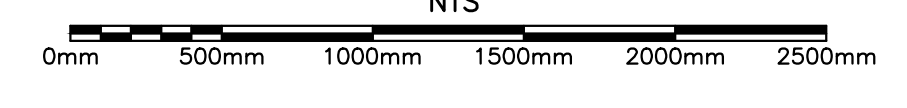
SECTION: INFILL AT CORNERS (C)
2



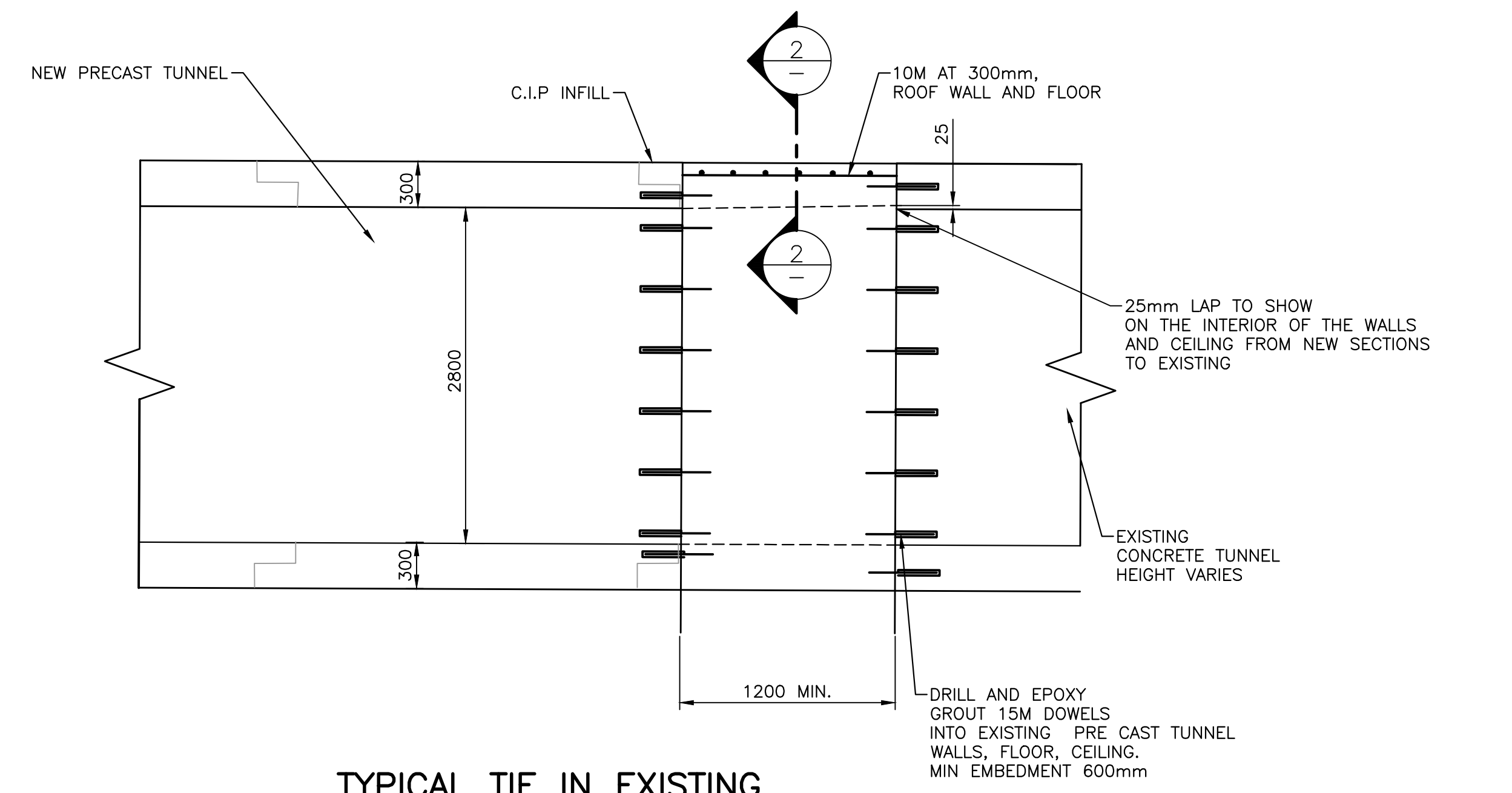
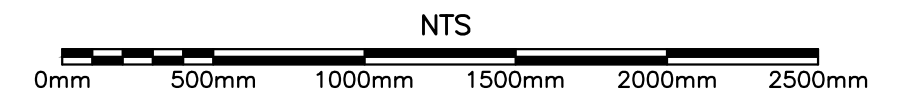
TYPICAL PRECAST CONCRETE UNIT (D)
S102



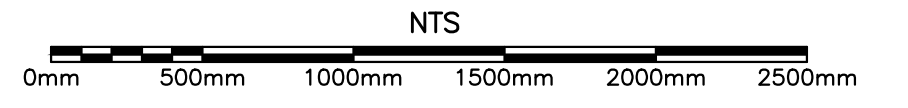
TYPICAL PRECAST CONCRETE UNIT ENTRANCE (E)
S102

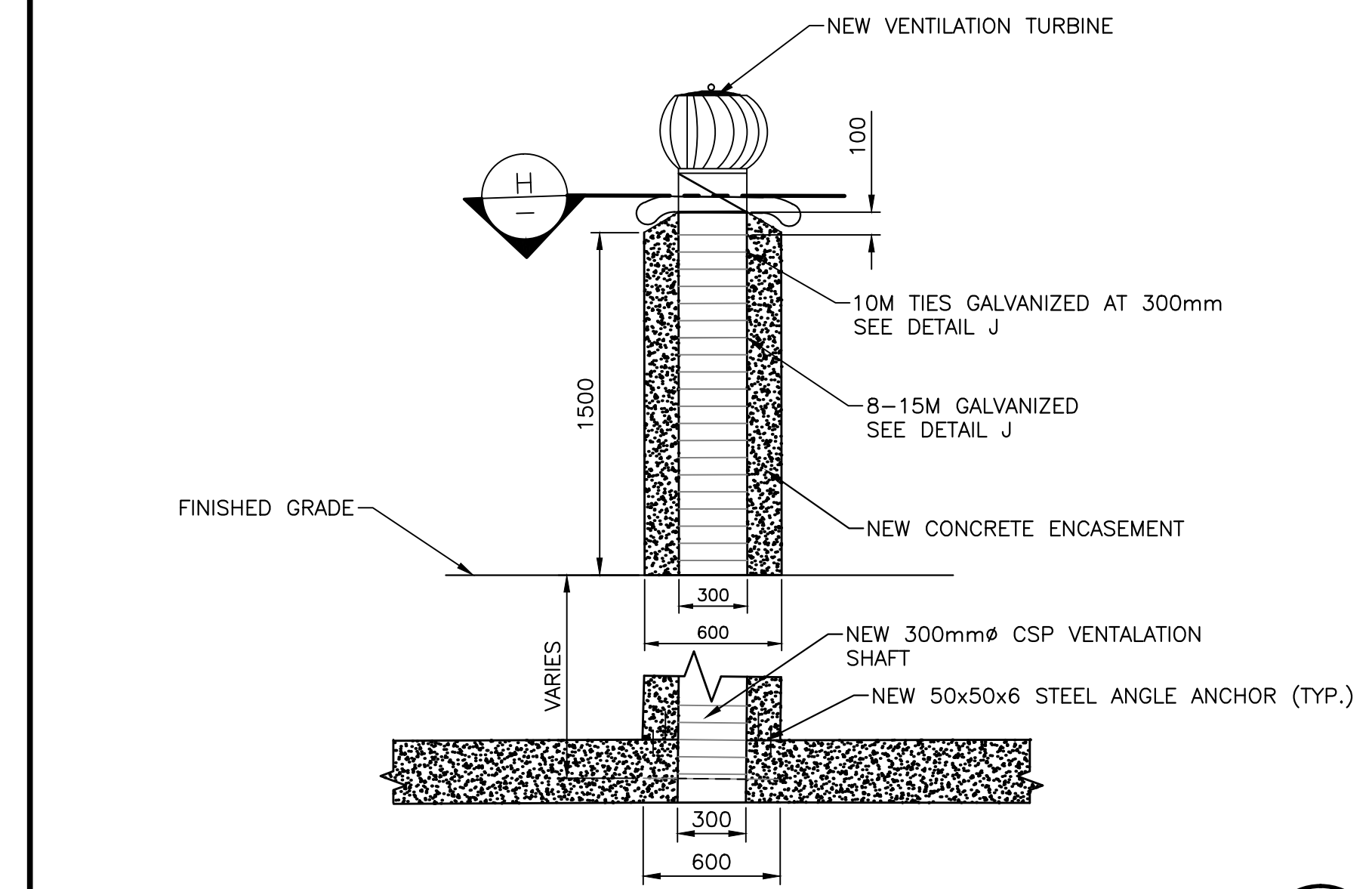


SECTION: STAIR WELL ENTRANCE (F)
S103

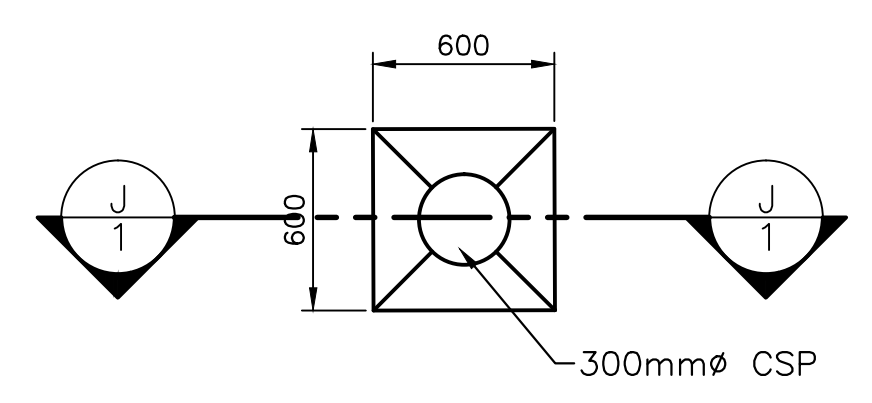


TYPICAL TIE IN EXISTING STRUCTURE TO NEW STRUCTURE (G)
1
S104

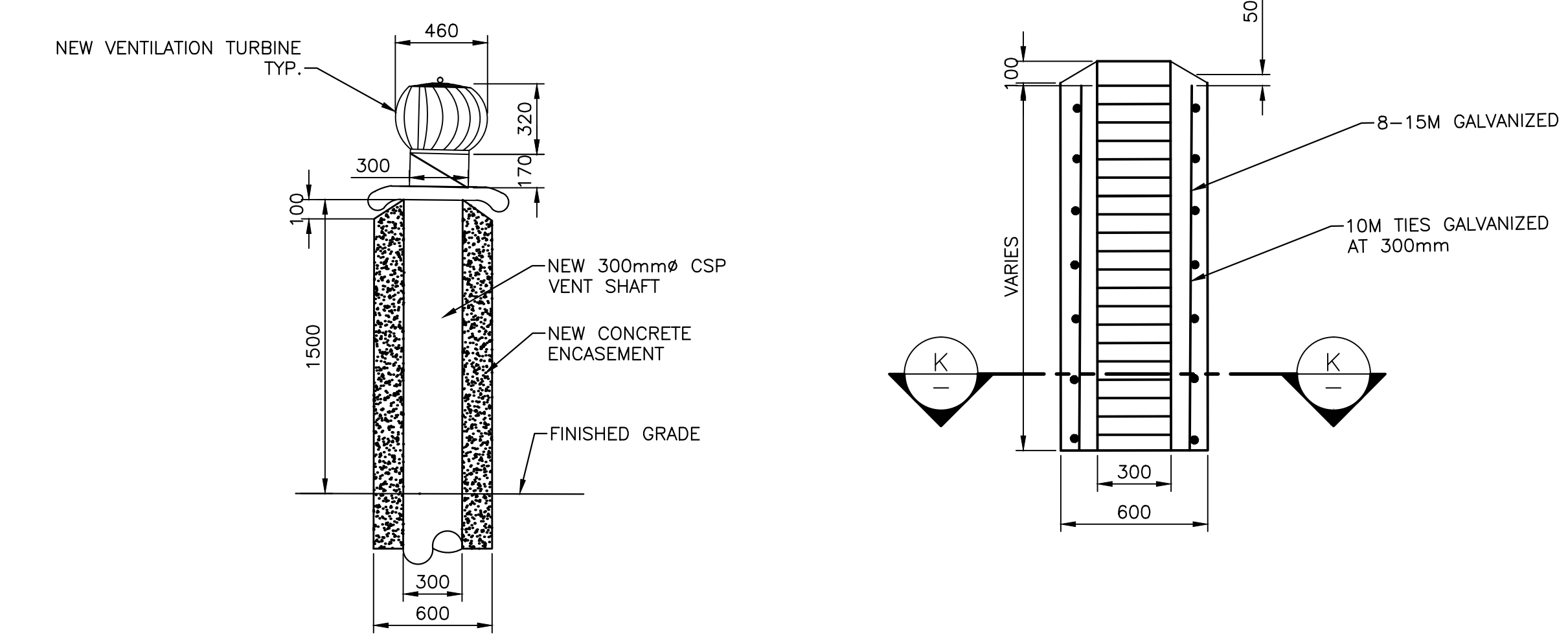




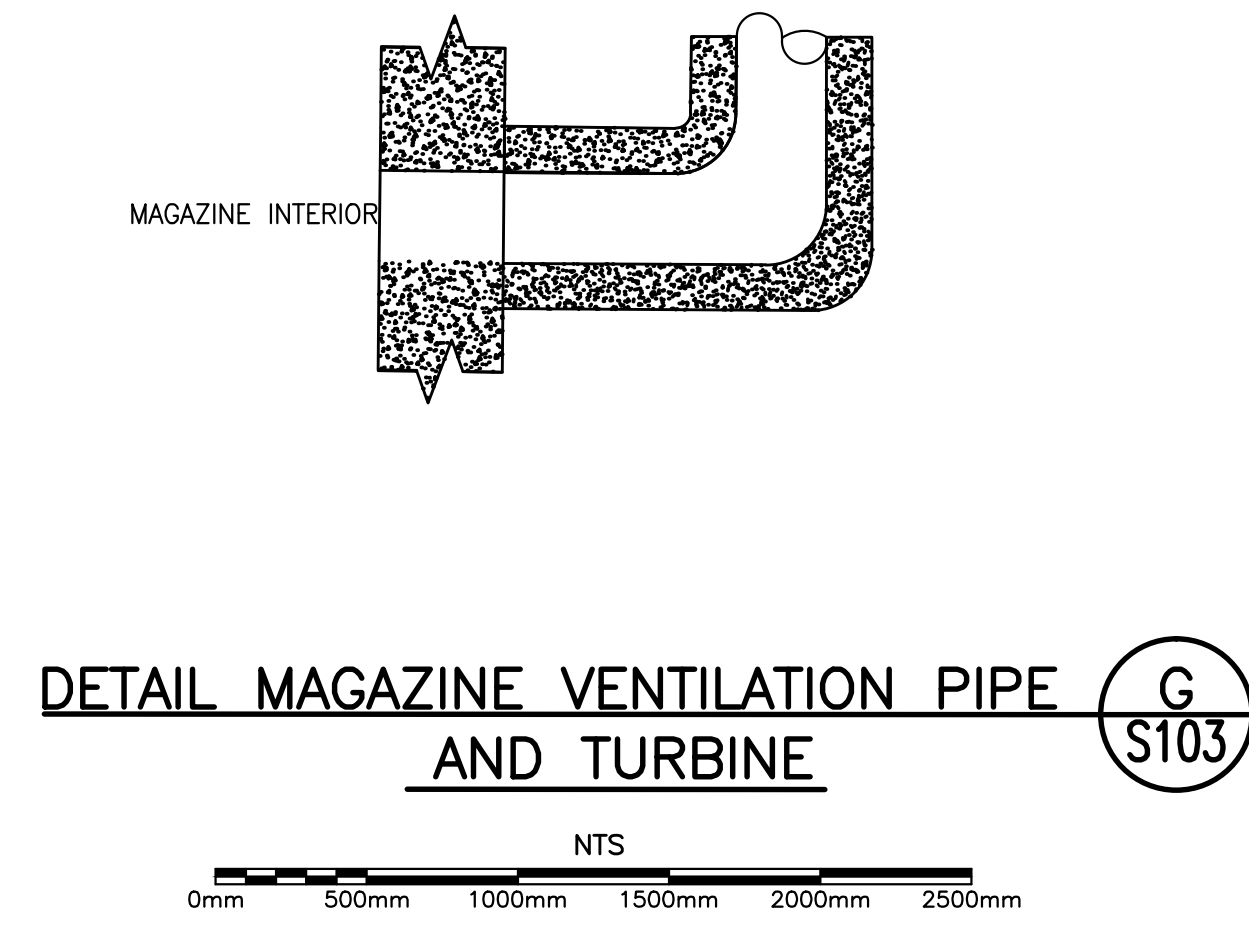
DETAIL-READY ROOM VENTILATION SHAFT REPLACEMENT (F S103)
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm



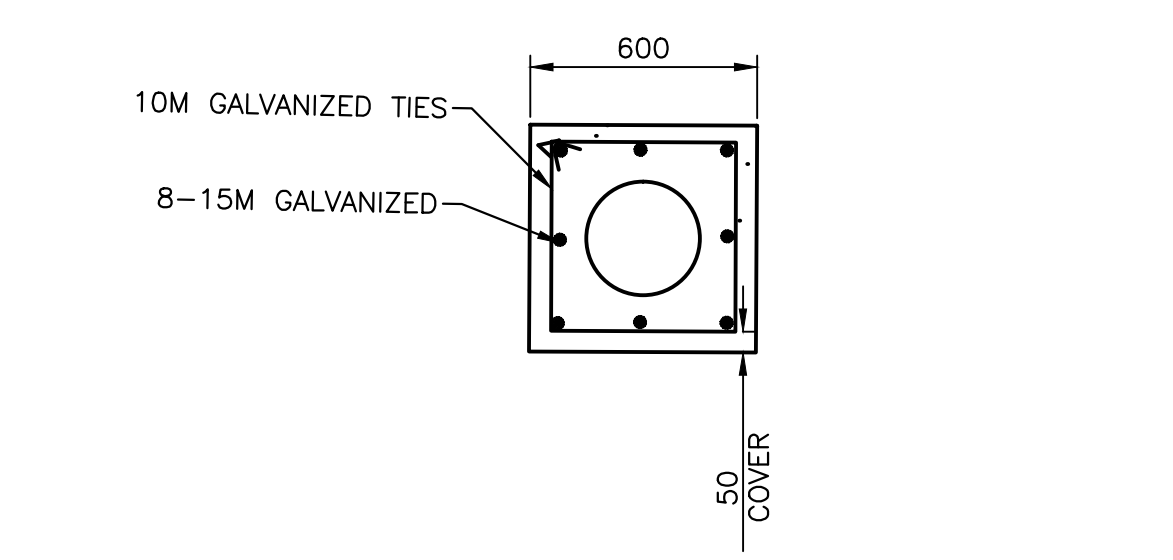
PLAN-TYPICAL VENTILATION SHAFT REPLACEMENT (H)
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm



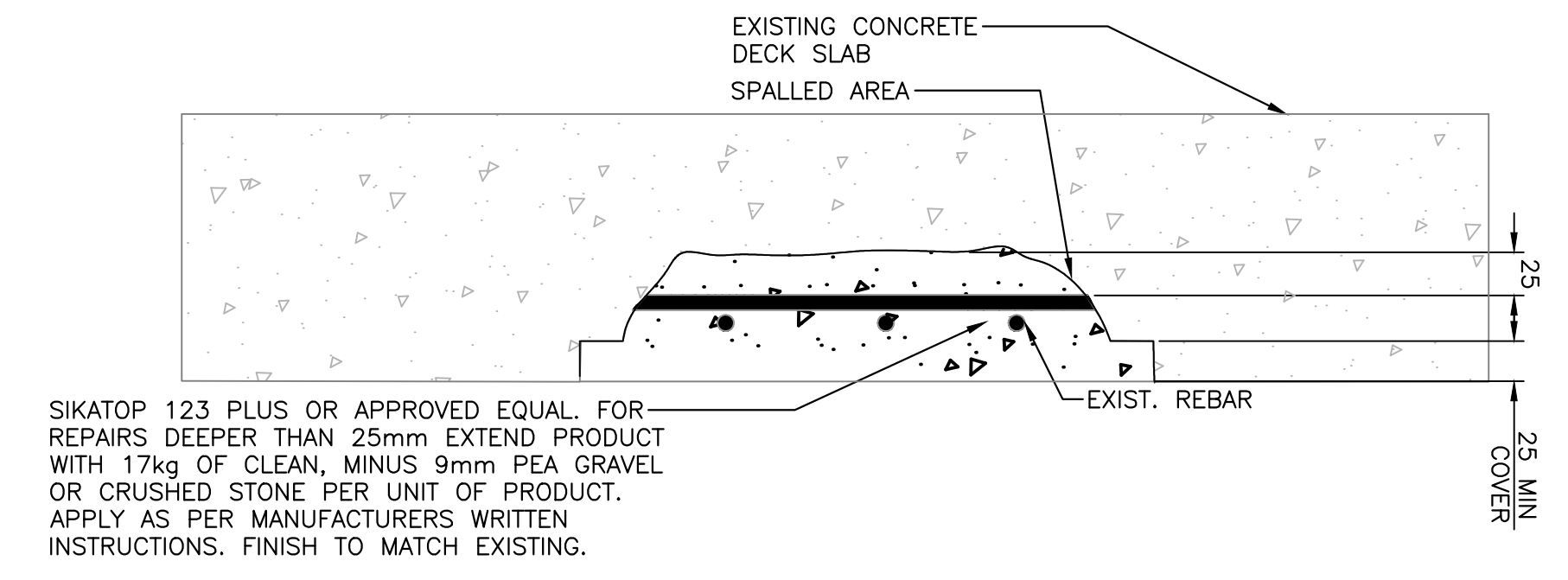
DETAIL-TYPICAL REBAR (J S103)
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm



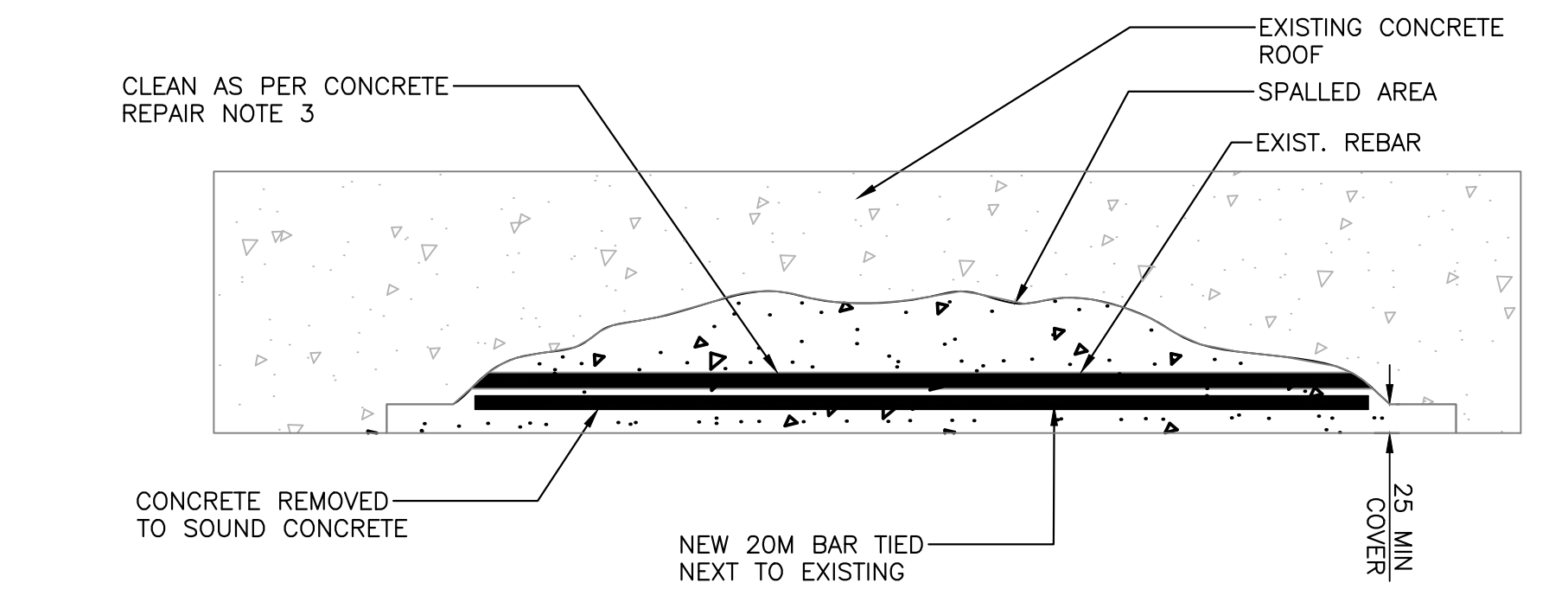
DETAIL MAGAZINE VENTILATION PIPE AND TURBINE (G S103)
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm



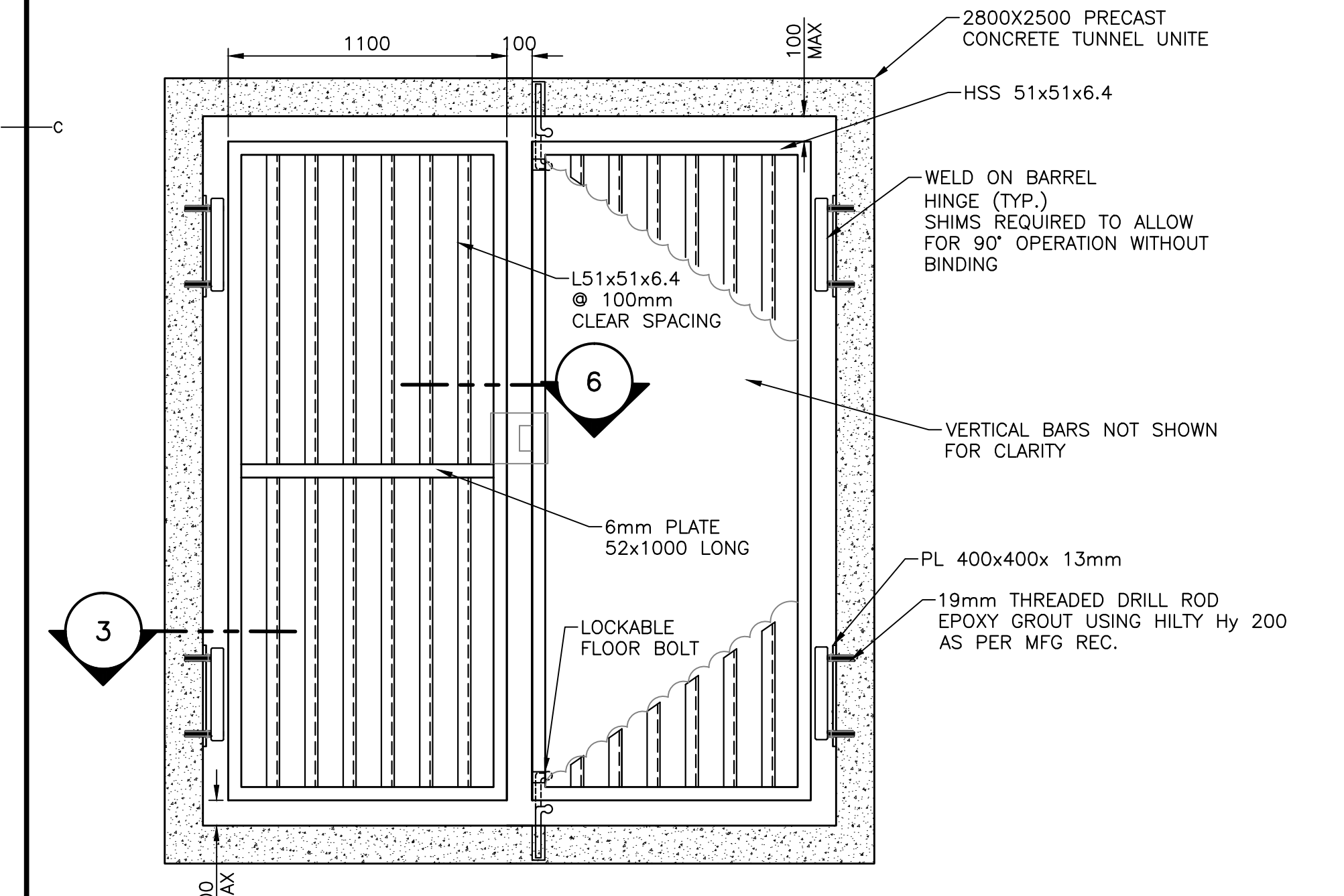
AERIAL-TYPICAL REBAR (K)
NTS
0mm 500mm 1000mm 1500mm 2000mm 2500mm



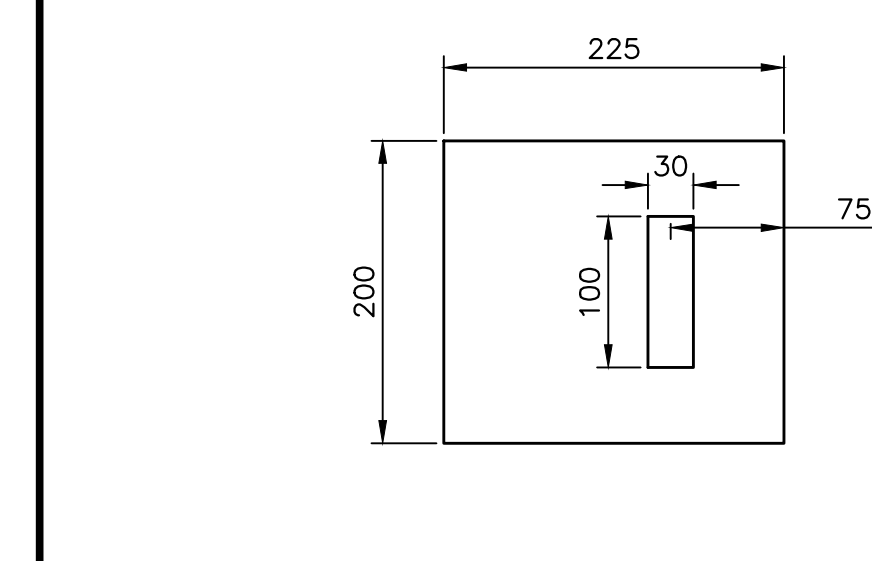
TYPICAL REPAIR PATCH (4 S104)
SCALE : 1:10
0mm 100 200 300 400 500 600 700 800 900 1000mm



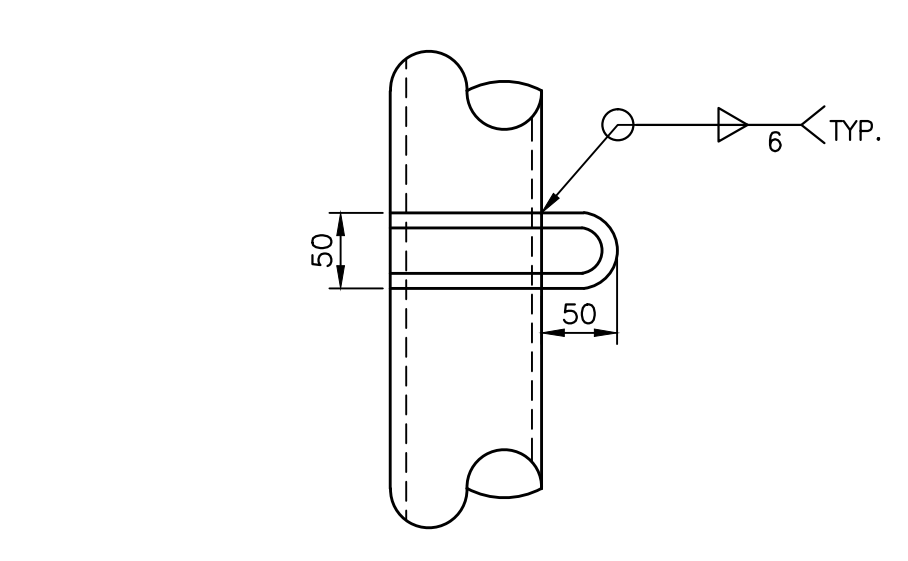
ADDITIONAL STEEL (5 S104)
SCALE : 1:10
0mm 100 200 300 400 500 600 700 800 900 1000mm



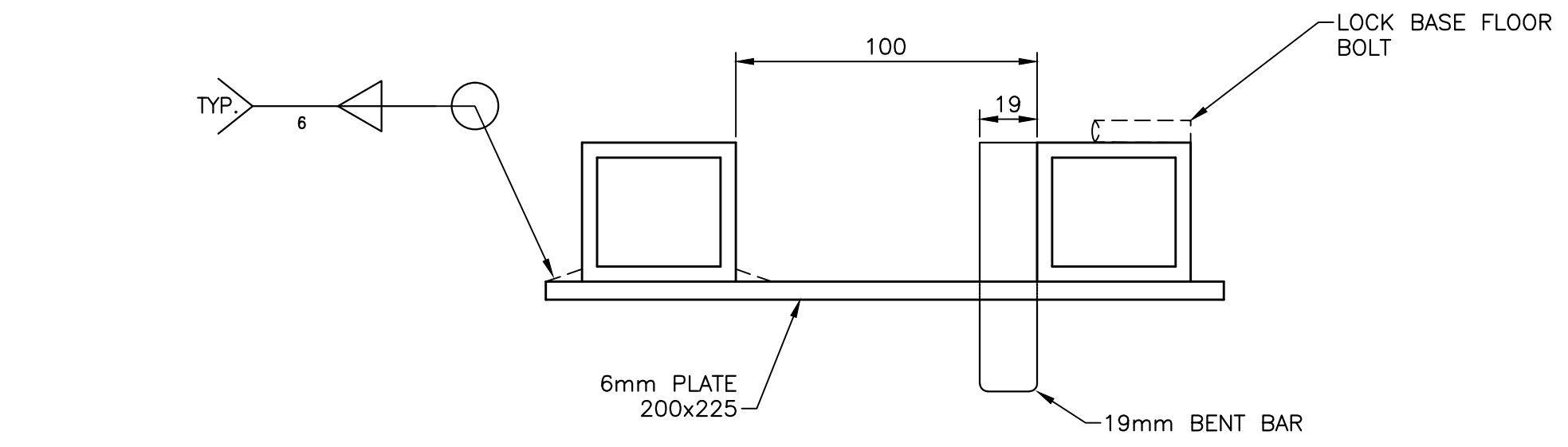
ELEVATION-MANUALLY OPERATED GATE (L S104)
SCALE : 1:20
0mm 500mm 1000mm 1500mm 2000mm 2500mm



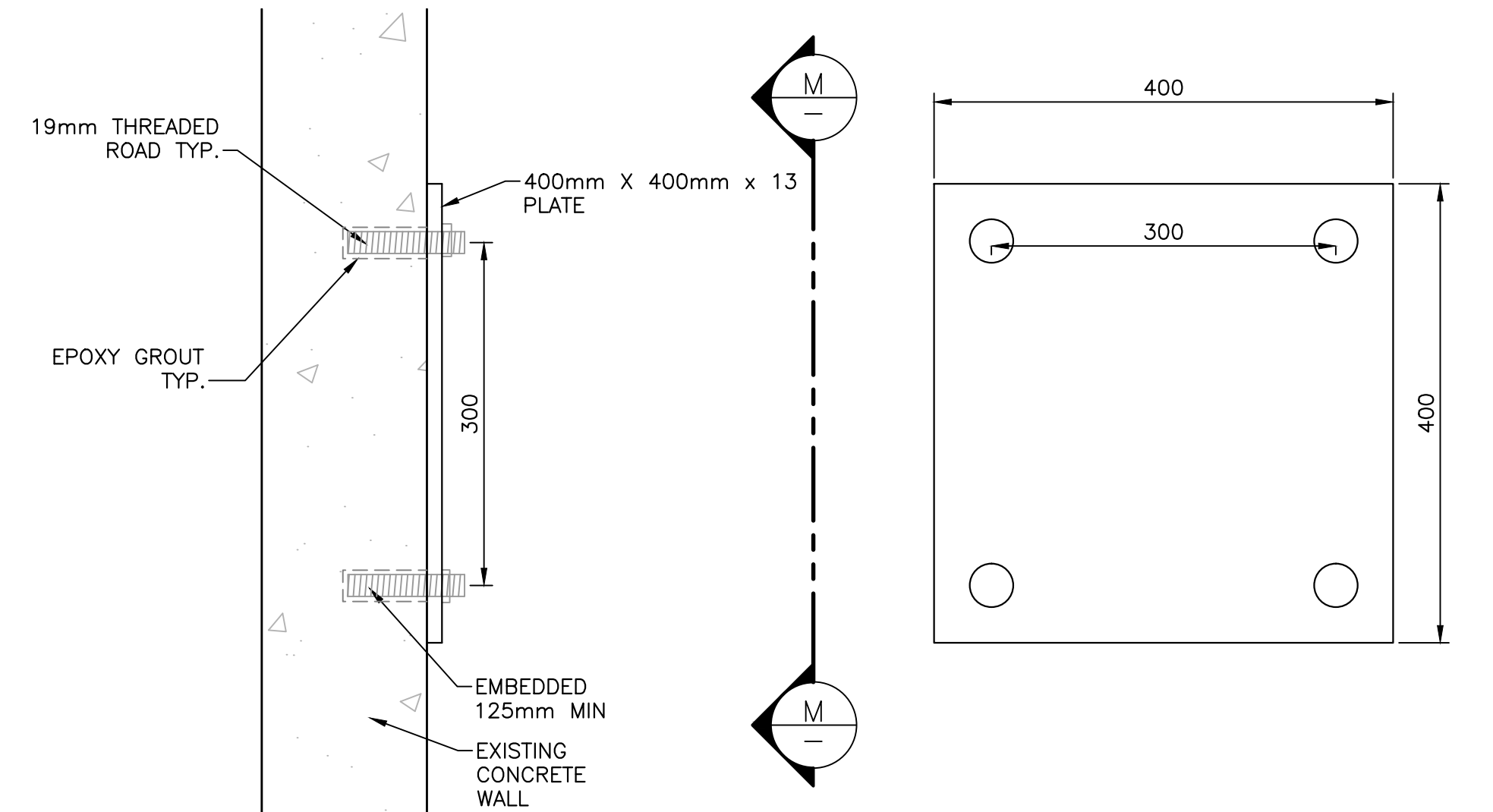
DETAIL-LATCH PLATE
SCALE: 1:5
0mm 100mm 200mm 300mm 400mm 500mm



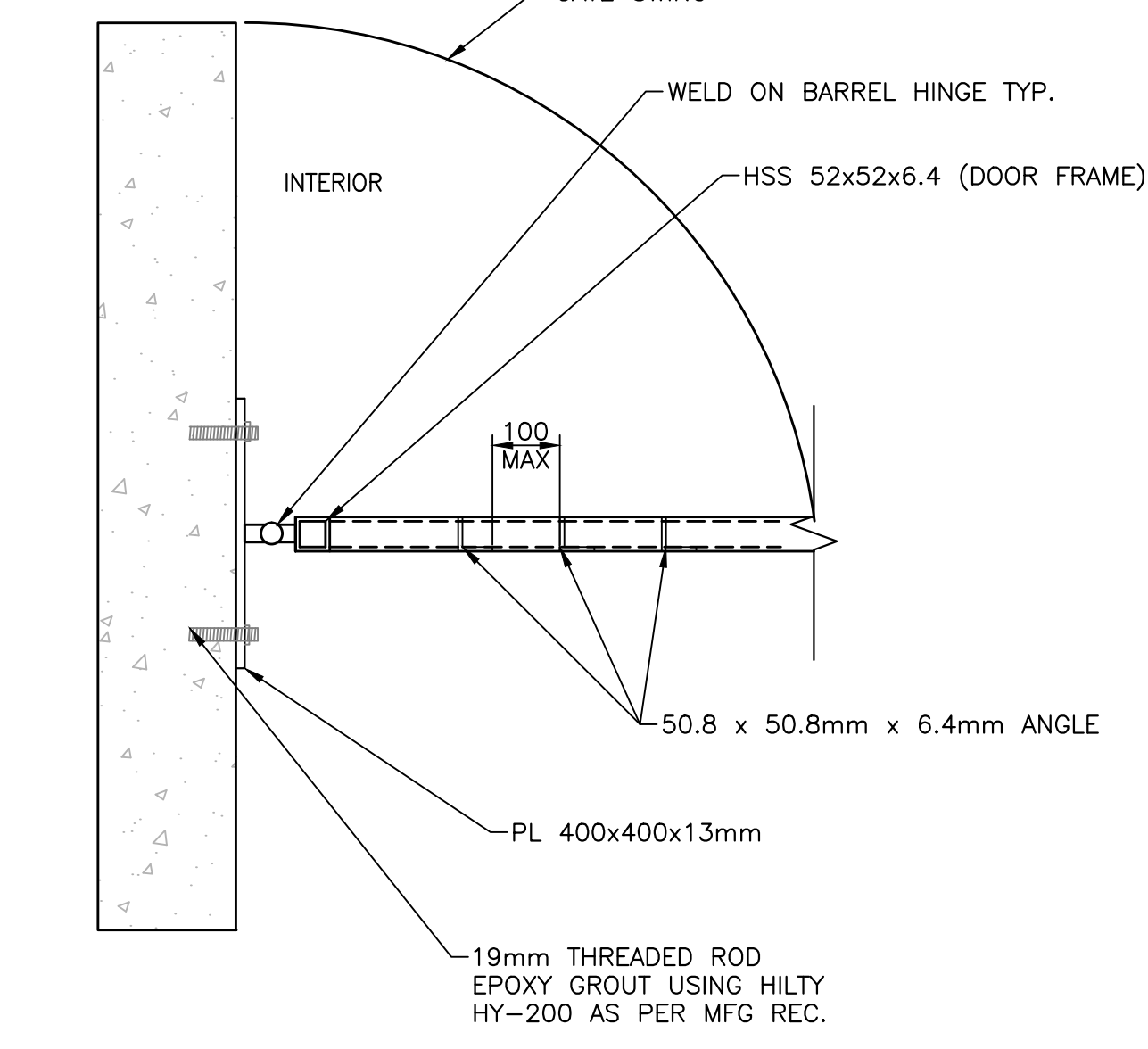
DETAIL-DOOR LATCH
SCALE: 1:5
0mm 100mm 200mm 300mm 400mm 500mm



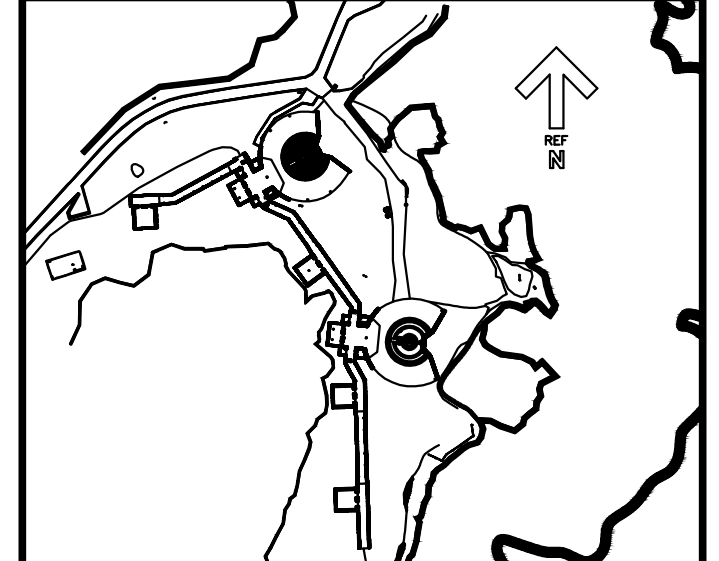
SECTION-DOOR LATCH (6)
SCALE : 1:2
0mm 50mm 100mm 150mm 200mm 250mm



GATE CONNECTION PLATE (M S104)
SCALE : 1:5
0mm 10 20 30 40 50 60 70 80 90 100mm



SECTION-MANUALLY OPERATED DATE (3)
SCALE : 1:10
0mm 100 200 300 400 500 600 700 800 900 1000mm



KEYPLAN: N.T.S.

LEGEND:



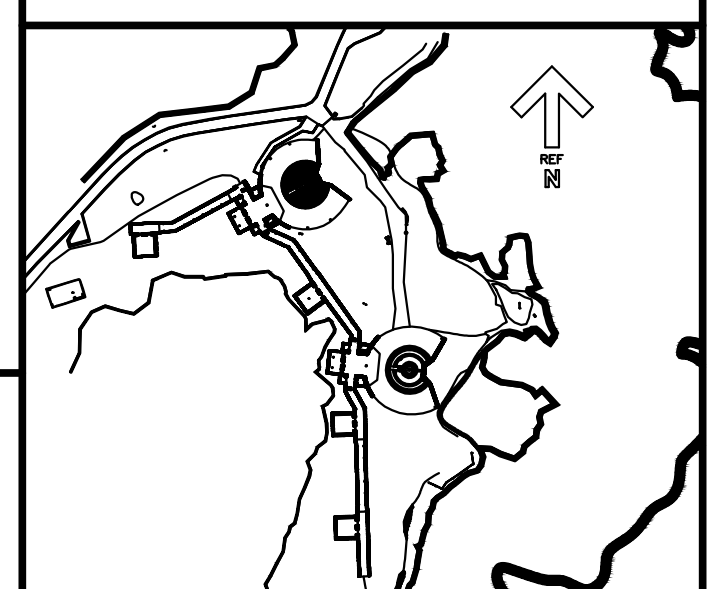
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0	ISSUED FOR TENDER	08/31/2016
revisions		date
project		project

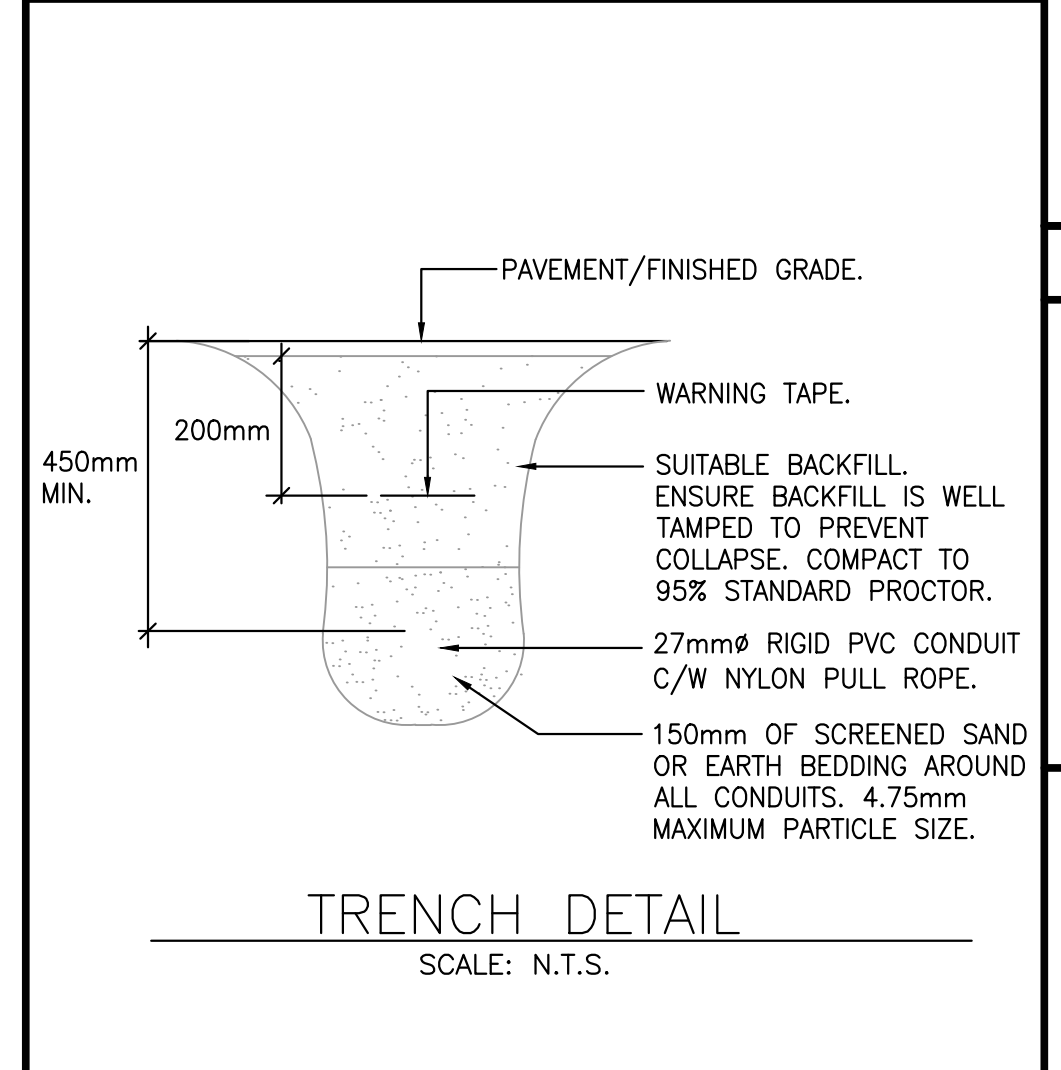
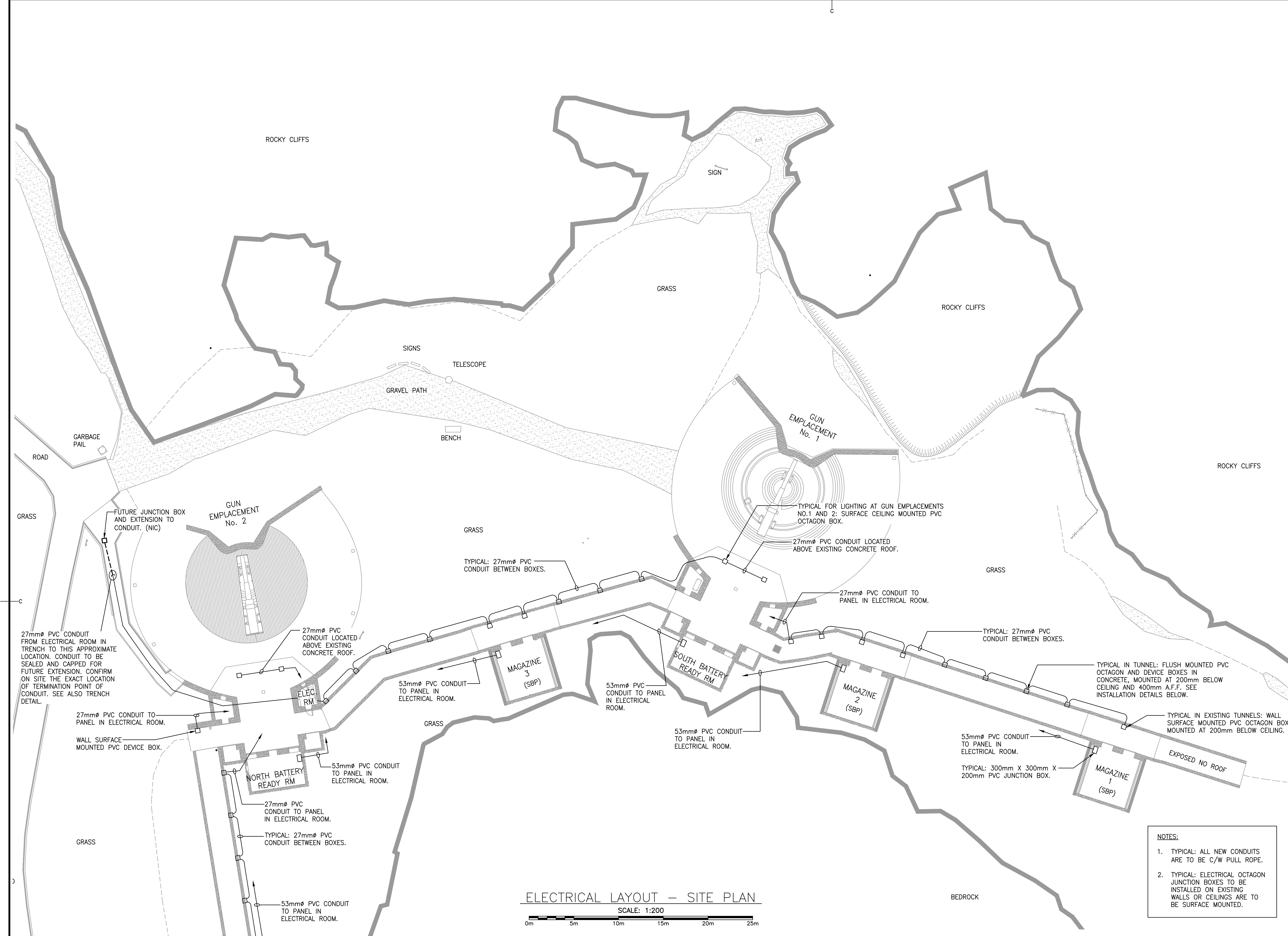
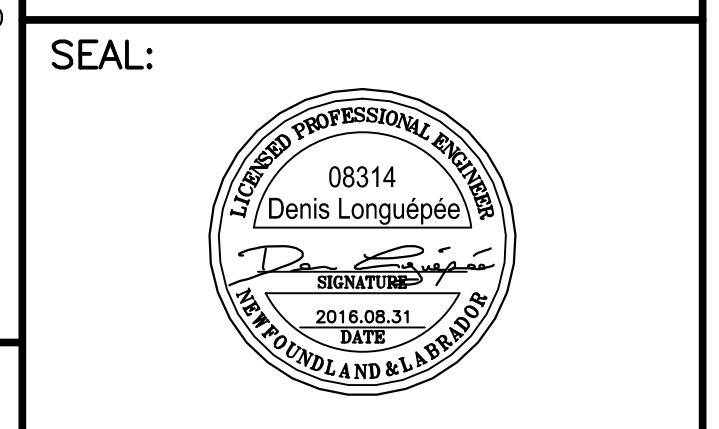
**CAPE SPEAR NHSC
WORLD WAR II BATTERY
REHABILITATION**

**CONCRETE REPAIR
AND STEEL DETAILS**

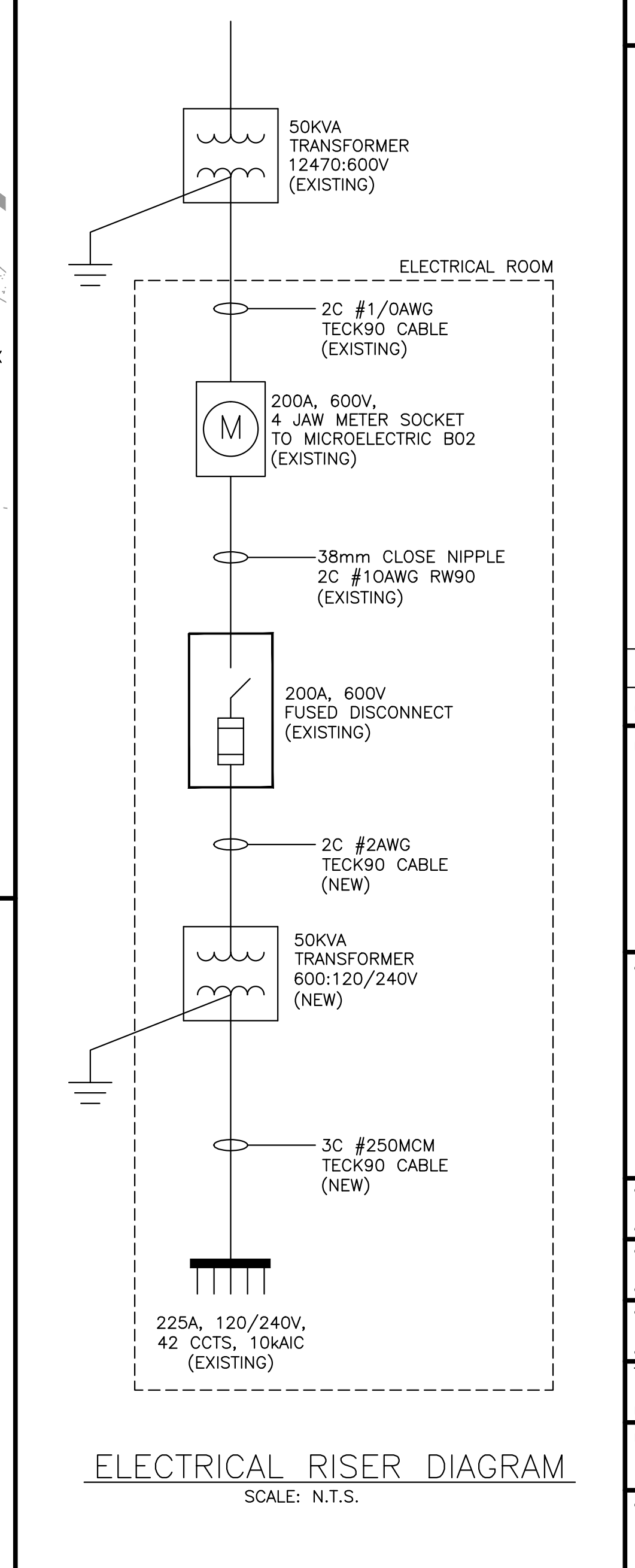
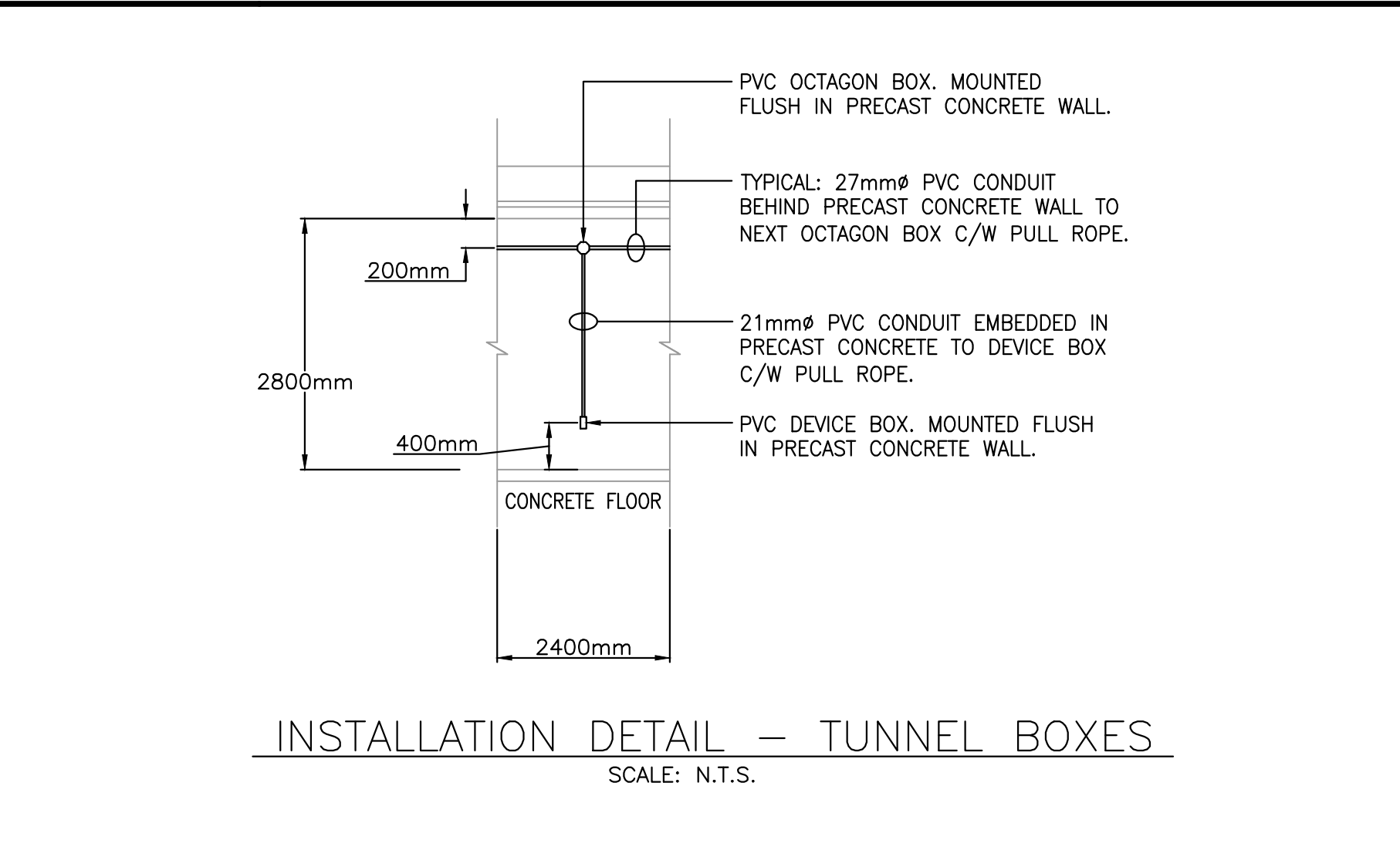
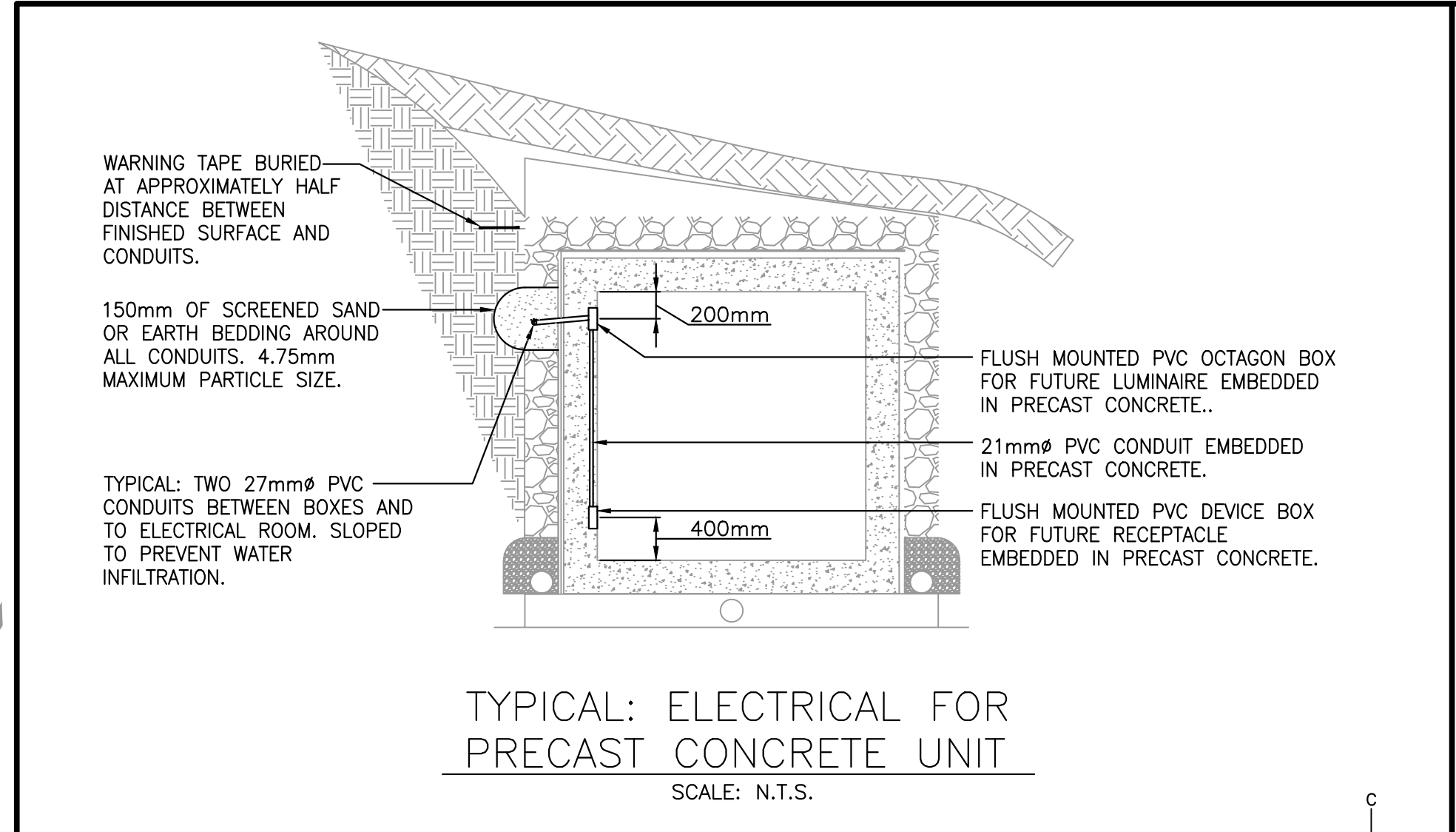
designed JJ	congr
date 2016.07.19	
drawn AB	dessiné
date 2016.07.20	
approved WJP	approuvé
date 2016.07.27	
Tender	Soumission
PWSC Project Manager	Administrateur de projets TPSC
project number	no. du projet
446	
drawing no.	no. du dessin
S110	



KEYPLAN: N.T.S.
PERMIT:
 PROVINCE OF NEWFOUNDLAND AND LABRADOR
 ENGINEERING PERMIT J0291
STANTEC CONSULTING LTD.
 04642
 Signature or Member Number (Member-in-Responsible Charge)



- NOTES:**
1. TYPICAL: ALL NEW CONDUITS ARE TO BE C/W PULL ROPE.
 2. TYPICAL: ELECTRICAL OCTAGON JUNCTION BOXES TO BE INSTALLED ON EXISTING WALLS OR CEILINGS ARE TO BE SURFACE MOUNTED.



0	ISSUED FOR TENDER	08/31/2016
revisions	date	project

CAPE SPEAR NHSC WORLD WAR II BATTERY BUNKER REHABILITATION

ELECTRICAL SITE PLAN AND RISER DIAGRAM

designed DP	conqu
date	2016.08.31
drawn MG	dessin
date	2016.08.31
approved DP	approuvé
date	2016.08.31
Tender	Soumission
PWSC Project Manager	Administrateur de projets TPSGC
project number	no. du projet
446	
drawing no.	no. du dessin
E101	