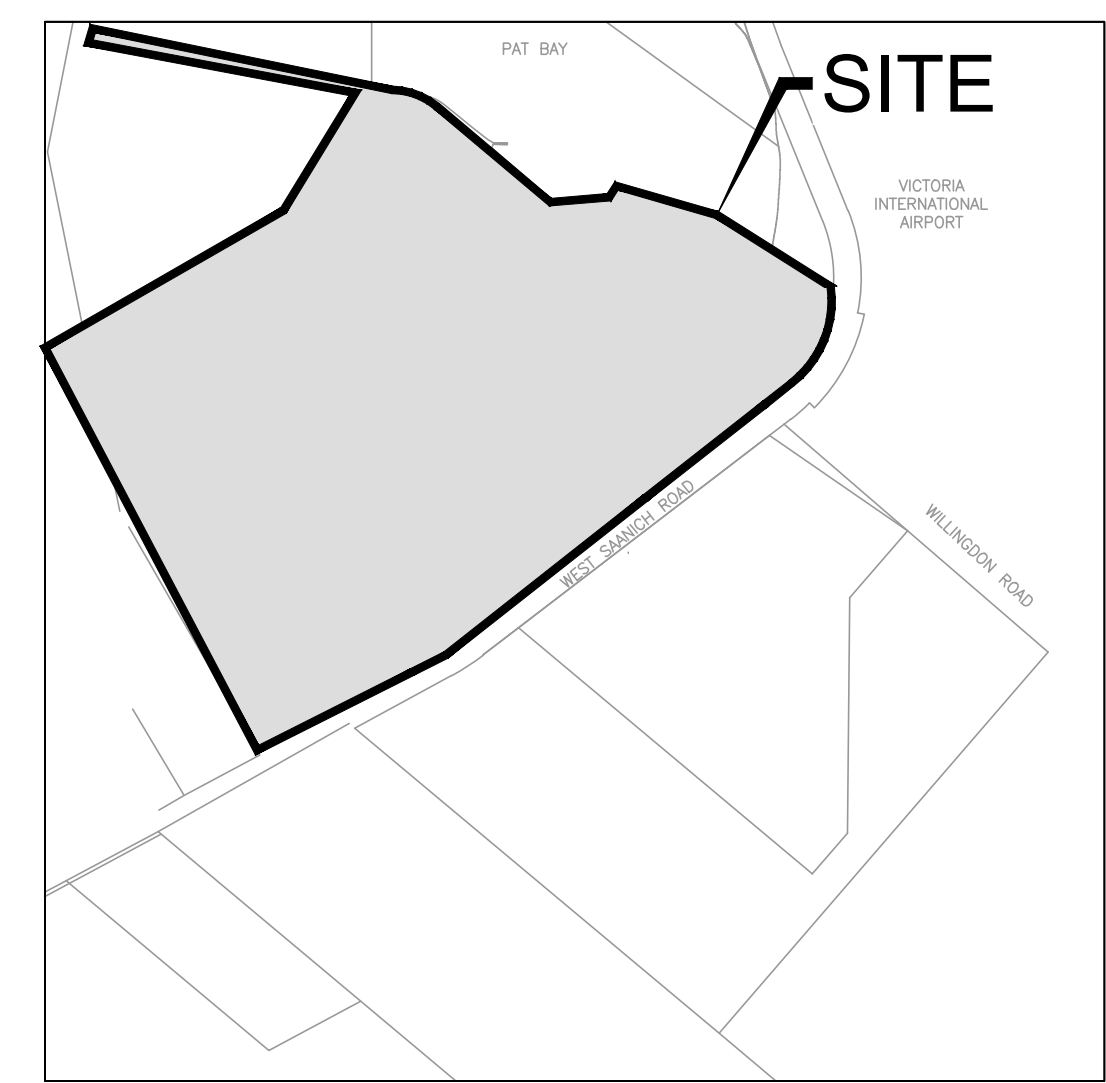


ISSUES		
No.	DATE	ISSUED FOR
1	2018.07.30	REVIEW
2	2018.10.24	REVIEW
3	2019.01.09	REVIEW
4	2019.03.29	TENDER
5	2019.11.06	TENDER

CLIENT

ISSUED FOR TENDER

EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
		EDGE OF PAVEMENT			REDUCER
		CURB AND GUTTER			FENCE
		EDGE OF GRAVEL			DITCH/SWALE
		TOP/BOTTOM OF BANK			WATERMAIN (SIZE AND MATERIAL NOTED)
		CATCH BASIN			SANITARY SEWER (SIZE AND MATERIAL NOTED)
		WATER VALVE			STORM DRAIN (SIZE AND MATERIAL NOTED)
		FIRE HYDRANT			UNDERGROUND TELEPHONE
		CAPPED END			UNDERGROUND HYDRO
		UTILITY POLE AND STREET LIGHT (LABELLED PP,TP,PP/LS ETC.)			MONUMENT
		MANHOLE			PROPERTY LINE
		CLEANOUT			CENTERLINE AND STATIONING
		SANITARY/STORM INSPECTION CHAMBER (200# RISER)			SANITARY SEWER SERVICE CONNECTION AT MAIN
		JUNCTION BOX			ELEVATIONS
		AIR VALVE			PAVEMENT REMOVAL
		WATER METER			NEW ASPHALT



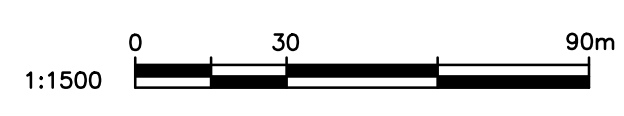
LOCATION PLAN  
NOT TO SCALE

LIST OF DRAWINGS

DWG. No.	DESCRIPTION	NOTES:
S100	LOCATION PLAN, KEY PLAN, DRAWING LIST AND GENERAL NOTES	LS LAMP STANDARD
S200	GENERAL ARRANGEMENT - SOUTHWEST ENTRANCE	BL BOLLARD LAMP
S201	GENERAL ARRANGEMENT - NORTHEAST ENTRANCE	AC ASPHALT CURB
S300	SECURITY FENCE, CANTILEVER AND PEDESTRIAN GATE DETAILS	ECC EXTRUDED CONCRETE CURB
S301	PARKING CONTROL BARRIER GATE AND CARD READER BASE DETAILS	FH FIRE HYDRANT
		CB CATCH BASIN
		SDMH STORM DRAIN MANHOLE
		SSMH SANITARY SEWER MANHOLE



KEY PLAN  
1:1500



GENERAL NOTES:

- ALL WORK AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) REQUIREMENTS.
- THE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR TO COMPLY WITH ALL APPLICABLE MINISTRY OF ENVIRONMENT AND DEPARTMENT OF FISHERIES & OCEANS CANADA REQUIREMENTS AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR TO CONFIRM LOCATION OF EXISTING UTILITIES AT ALL CROSSINGS AND CONNECTIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
- CONTRACTOR TO CONFIRM THAT ELEVATION, LOCATION AND GRADIENT OF ASPHALT MATCH EXISTING PRIOR TO PLACEMENT OF ASPHALT OR CONCRETE.
- CONTRACTOR TO BE REGISTERED WITH WORKSAFE BC.
- CONTRACTOR TO ABIDE BY SITE REGULATIONS AS NOTED IN CONTRACT DOCUMENTS AND ON CONSULTANT DRAWINGS.
- ALL TREES NOT BEING REMOVED IN THE CONSTRUCTION AREA SHALL BE PROTECTED. MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS ALONG WEST SAANICH ROAD AND WITHIN THE PARKING LOT DURING CONSTRUCTION.
- ADJUST ALL MANHOLES, WATER VALVES, HYDRO VAULTS, ETC. TO MATCH NEW CONSTRUCTION.
- ALL LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ARE APPROXIMATE ONLY AND SHOULD BE CONFIRMED BY USE OF A UTILITY LOCATOR AND MANUAL DIGGING AS REQUIRED. ALL OR ANY STRUCTURES NOT NECESSARILY SHOWN.
- ALL ELEVATIONS ARE TO GEODETIC DATUM AND ARE REFERENCED TO MONUMENTS 78H7238 AND 78H7239 LOCATED OUTSIDE THE PROJECT BOUNDARY AS NOTED ON THE SITE PLAN OF INSTITUTE OF OCEAN SCIENCES.
- DATA SOURCES:  
-ASBUILTS PROVIDED BY THE INSTITUTE OF OCEAN SCIENCES.

ROAD NOTES:

- ALL CURBS TO BE CONCRETE UNLESS OTHERWISE NOTED.
- CONSTRUCT ALL ROADS IN ACCORDANCE WITH THE LATEST VERSION OF THE MMCD SPECIFICATIONS AND DRAWINGS AS PER MMCD DRAWING G5.
- TRENCH RESTORATION AS PER MMCD STD. DWG. No. G4.
- PAVEMENT SURFACE CLEANING AND REMOVAL OF PAVEMENT MARKINGS AS PER MMCD SECTION 32 01 11.
- CONTRACTOR TO ENSURE EXISTING MONUMENTS OR IRON PINS IN DANGER OF DISTURBANCE ARE TO BE REFERENCED AND, IF DISTURBED, BE REPLACED BY A BCLS AT THE CONTRACTORS EXPENSE.
- ALL SIGNS TO BE MOUNTED AT A HEIGHT OF 2.00m TO 3.00m.
- SOIL TO BE REUSED FOR FENCE POST INSTALLATION. TOPSOIL AND FINISH GRADING AND SEEDING AS PER MMCD SECTION 32 93 01.

BC HYDRO/TELUS/SHAW CABLE/FORTIS BC NOTES:

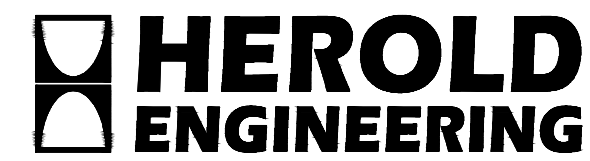
- SECURITY FENCING ELECTRICAL DESIGN BY OTHERS.
- EXISTING BC HYDRO, TELUS, SHAW CABLE AND FORTIS BC INFRASTRUCTURE INFORMATION SHOWN ON DRAWINGS IS SCHEMATIC AND FOR INFORMATION ONLY. REFER TO UTILITY COMPANY DESIGN DRAWINGS FOR CONSTRUCTION DETAILS. CONSTRUCT UNDERGROUND UTILITIES AS SPECIFIED AND IN ACCORDANCE WITH BC HYDRO, TELUS, SHAW CABLE SPECIFICATIONS AND DRAWINGS.
- CONTACT BC 1 CALL AT 1-800-474-6886 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- CONTACT BC HYDRO, TELUS, SHAW CABLE AND FORTIS BC 48 HOURS PRIOR TO THE START OF ANY EXCAVATION.

FENCE NOTES:

- SEE SHEETS S300 AND S301.

SECURITY FENCING UPGRADES  
INSTITUTE OF OCEAN SCIENCES

NORTH SAANICH, BC  
INSTITUTE OF OCEAN SCIENCES



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LOCATION PLAN,  
KEY PLAN, DRAWING  
LIST, AND GENERAL  
NOTES

DESIGNED MW	ENGINEER'S SEAL
DESIGN REVIEW DSW	
DRAFTED SAC	
DRAFTING REVIEW -	06 November 2019
PROJECT No.	CLIENT DRAWING No.
SCALE H: AS SHOWN V:	PERMIT No.
HEL DRAWING No. <b>S100</b>	REVISION 1 OF 5 <b>5</b>

File: \\Projects\1184-107 us- Security Upgrades\04s Drawings\Active\1184-107 Civil Drawings.dwg Plot Time: Nov. 6, 19 4:37 PM User: Lori Muck



WEST SAANICH ROAD

SOUTHWEST ENTRANCE/EXIT

PARKING LOT A

PARKING LOT F

**NOTES:**

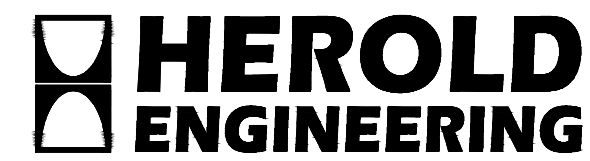
1. FOR GENERAL NOTES SEE DWG. No. S100.
2. FOR DESIGN AND LOCATION DETAILS OF ELECTRICAL COMPONENTS, PLEASE SEE PBX ELECTRICAL DESIGN DRAWINGS PROJECT NUMBER 17470.

ISSUES		
No.	DATE	ISSUED FOR
1	2018.07.30	REVIEW
2	2018.10.24	REVIEW
3	2019.01.09	REVIEW
4	2019.03.29	TENDER
5	2019.11.06	TENDER

ISSUED FOR TENDER

SECURITY FENCING UPGRADES  
INSTITUTE OF OCEAN SCIENCES

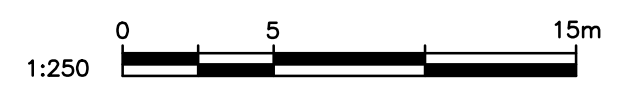
NORTH SAANICH, BC  
INSTITUTE OF OCEAN SCIENCES



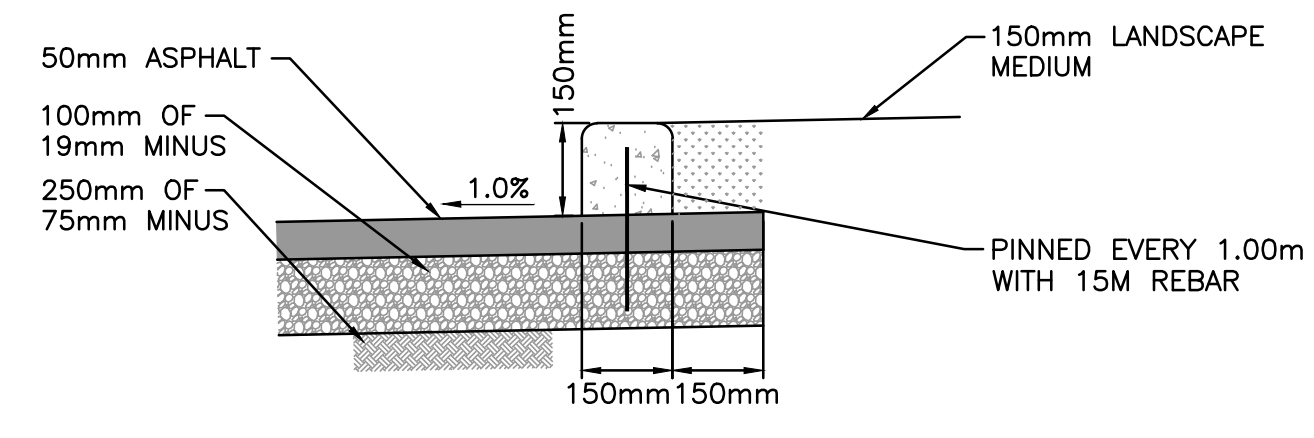
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GENERAL ARRANGEMENT  
SOUTHWEST ENTRANCE

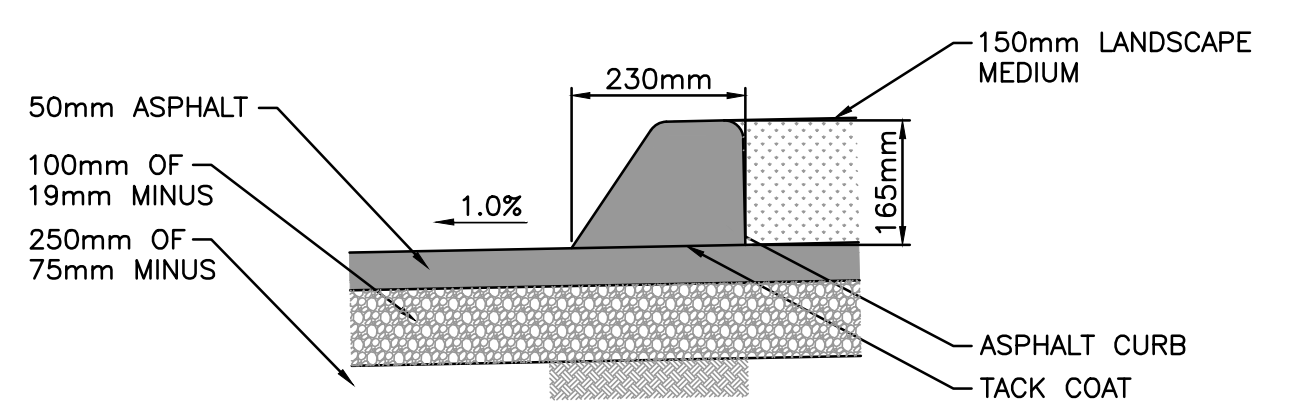
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DESIGN REVIEW DSW	
DRAFTED SAC	
DRAFTING REVIEW -	
PROJECT No.	CLIENT DRAWING No.
SCALE H: AS SHOWN V:	PERMIT No.
HEL DRAWING No. <b>S200</b>	REVISION 2 of 5 <b>5</b>



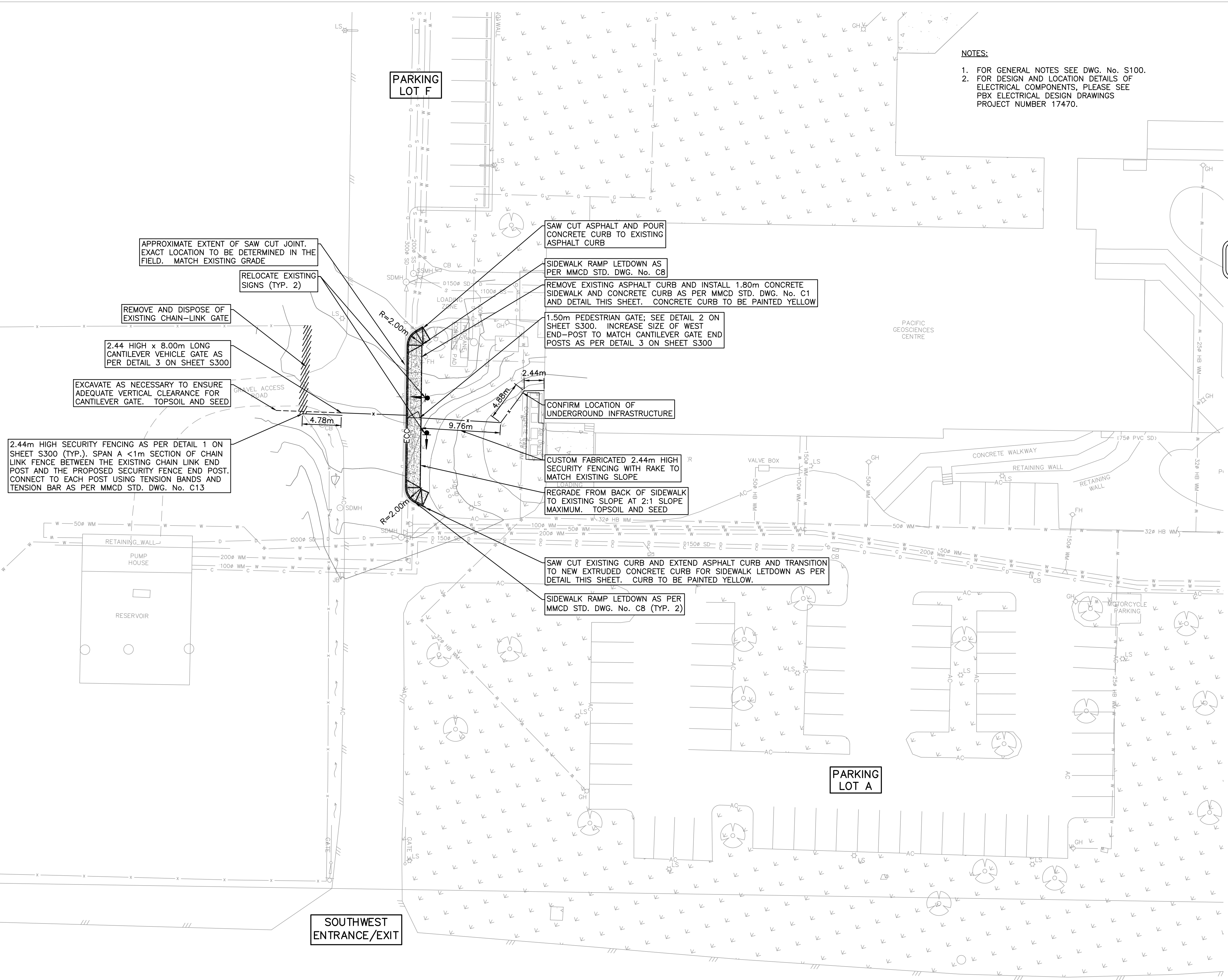
DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION



EXTRUDED CONCRETE CURB DETAIL  
NOT TO SCALE

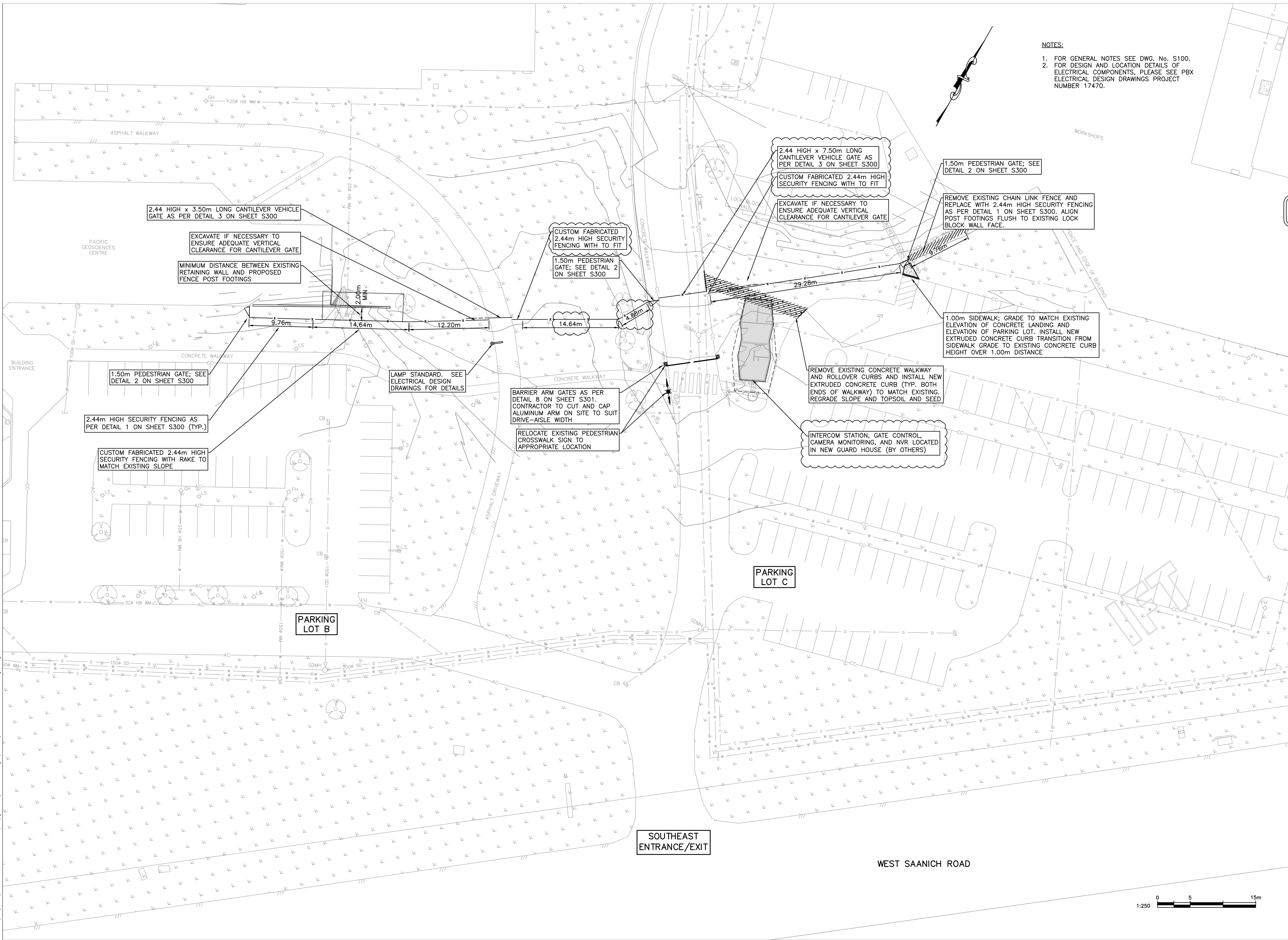


EXTRUDED ASPHALT CURB DETAIL  
NOT TO SCALE



- APPROXIMATE EXTENT OF SAW CUT JOINT. EXACT LOCATION TO BE DETERMINED IN THE FIELD. MATCH EXISTING GRADE
- RELOCATE EXISTING SIGNS (TYP. 2)
- REMOVE AND DISPOSE OF EXISTING CHAIN-LINK GATE
- 2.44 HIGH x 8.00m LONG CANTILEVER VEHICLE GATE AS PER DETAIL 3 ON SHEET S300
- EXCAVATE AS NECESSARY TO ENSURE ADEQUATE VERTICAL CLEARANCE FOR CANTILEVER GATE. TOPSOIL AND SEED
- 2.44m HIGH SECURITY FENCING AS PER DETAIL 1 ON SHEET S300 (TYP.). SPAN A <1m SECTION OF CHAIN LINK FENCE BETWEEN THE EXISTING CHAIN LINK END POST AND THE PROPOSED SECURITY FENCE END POST. CONNECT TO EACH POST USING TENSION BANDS AND TENSION BAR AS PER MMCD STD. DWG. No. C13
- SAW CUT ASPHALT AND POUR CONCRETE CURB TO EXISTING ASPHALT CURB
- SIDEWALK RAMP LETDOWN AS PER MMCD STD. DWG. No. C8
- REMOVE EXISTING ASPHALT CURB AND INSTALL 1.80m CONCRETE SIDEWALK AND CONCRETE CURB AS PER MMCD STD. DWG. No. C1 AND DETAIL THIS SHEET. CONCRETE CURB TO BE PAINTED YELLOW
- 1.50m PEDESTRIAN GATE; SEE DETAIL 2 ON SHEET S300. INCREASE SIZE OF WEST END-POST TO MATCH CANTILEVER GATE END POSTS AS PER DETAIL 3 ON SHEET S300
- CONFIRM LOCATION OF UNDERGROUND INFRASTRUCTURE
- CUSTOM FABRICATED 2.44m HIGH SECURITY FENCING WITH RAKE TO MATCH EXISTING SLOPE
- REGRADE FROM BACK OF SIDEWALK TO EXISTING SLOPE AT 2:1 SLOPE MAXIMUM. TOPSOIL AND SEED
- SAW CUT EXISTING CURB AND EXTEND ASPHALT CURB AND TRANSITION TO NEW EXTRUDED CONCRETE CURB FOR SIDEWALK LETDOWN AS PER DETAIL THIS SHEET. CURB TO BE PAINTED YELLOW.
- SIDEWALK RAMP LETDOWN AS PER MMCD STD. DWG. No. C8 (TYP. 2)

File: \\Projects\1184-107 us- Security Upgrades\04s Drawings\1184-107 Civil Drawings.dwg Plot Time: Nov. 6, 19 4:37 PM User: Lori Muck



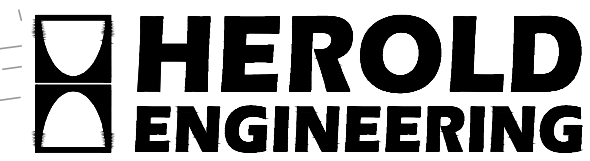
- NOTES:**
- FOR GENERAL NOTES SEE DWG. No. S100.
  - FOR DESIGN AND LOCATION DETAILS OF ELECTRICAL COMPONENTS, PLEASE SEE PBX ELECTRICAL DESIGN DRAWINGS PROJECT NUMBER 17470.

ISSUES		
No.	DATE	ISSUED FOR
1	2018.07.30	REVIEW
2	2018.10.24	REVIEW
3	2019.01.09	REVIEW
4	2019.03.29	TENDER
5	2019.11.06	TENDER

ISSUED FOR TENDER

SECURITY FENCING UPGRADES  
INSTITUTE OF OCEAN SCIENCES

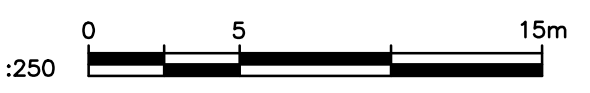
NORTH SAANICH, BC  
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GENERAL ARRANGEMENT  
SOUTHEAST ENTRANCE

DESIGNED MW	ENGINEER'S SEAL
DESIGN REVIEW DSW	
DRAFTED SAC	
DRAFTING REVIEW	
PROJECT No.	CLIENT DRAWING No.
SCALE H: AS SHOWN V:	PERMIT No.
HEL DRAWING No. <b>S201</b>	REVISION 3 of 5 <b>5</b>



DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION

ISSUES		
No.	DATE	ISSUED FOR
1	2018.07.30	REVIEW
2	2018.10.24	REVIEW
3	2019.01.09	REVIEW
4	2019.03.29	TENDER
5	2019.11.06	TENDER

CLIENT

ISSUED FOR TENDER

**GENERAL NOTES:**

- ALL DESIGN HAS BEEN IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA.
- ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA, ALL REFERENCED CODES AND ALL FEDERAL AND MUNICIPAL REGULATIONS AND BY-LAWS.
- ALL REFERENCED CODES AND STANDARDS SHALL BE AS REFERENCED IN THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE.
- DESIGN CRITERIA: WEST VANCOUVER BC WIND LOADS:

q10	0.39kPa (8.15 psf)
q50	0.50kPa (10.44 psf)
Iw	ULS 1.0/SLS 0.75

- THESE DRAWINGS INCLUDING DIMENSIONS SHALL BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER FOR CLARIFICATION PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL BE FAMILIAR WITH ALL PROJECT DRAWINGS INCLUDING THOSE OTHER DISCIPLINES AND SHALL MAKE ALLOWANCES FOR ALL ITEMS SHOWN ON OTHER DRAWINGS THAT AFFECT THIS CONTRACTOR'S WORK.
- UNDER NO CIRCUMSTANCES SHALL DRAWINGS BE SCALED.
- CONTRACTOR AND ALL SUB-TRADES SHALL VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING FABRICATION.

**CAST-IN-PLACE CONCRETE**

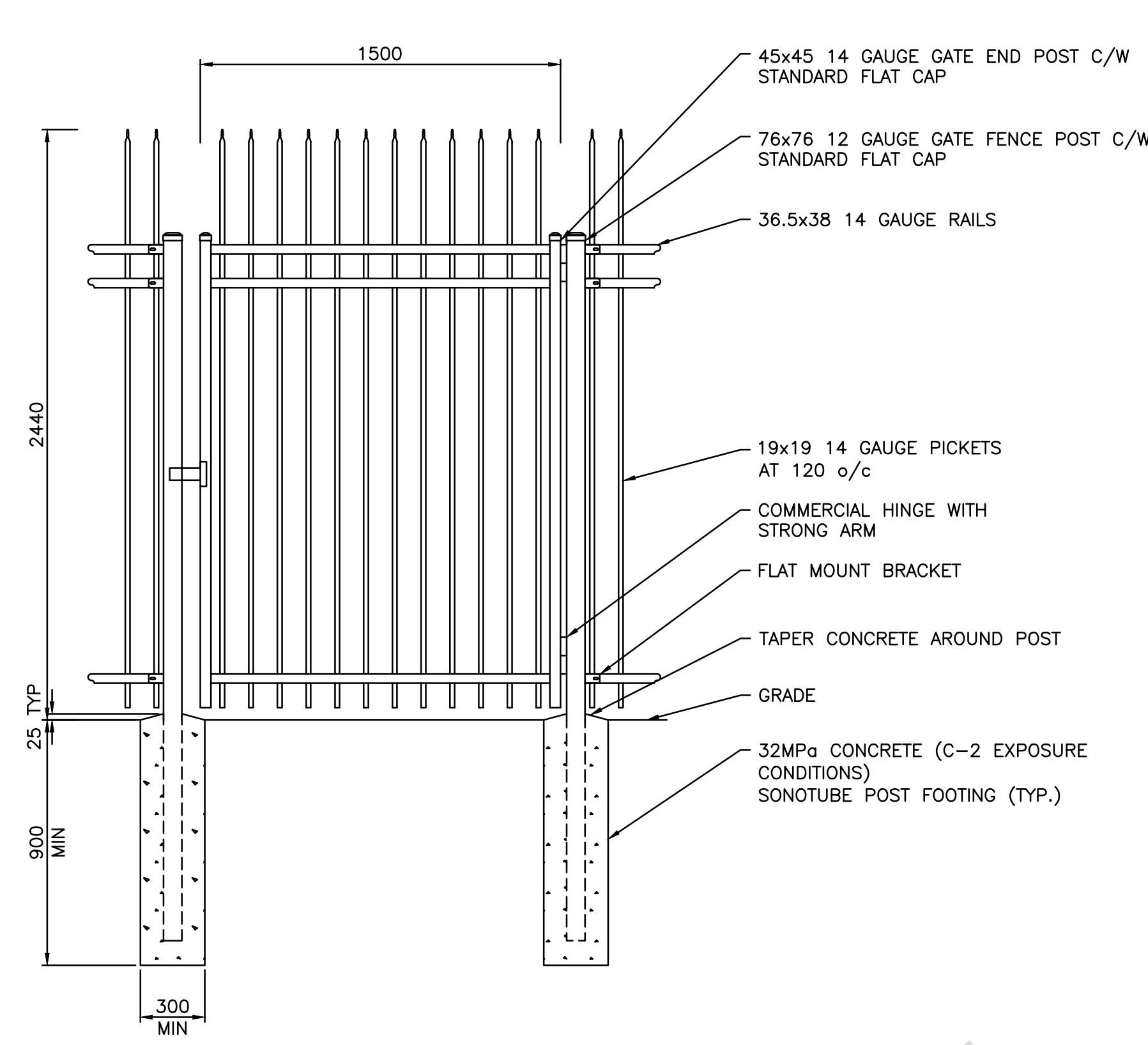
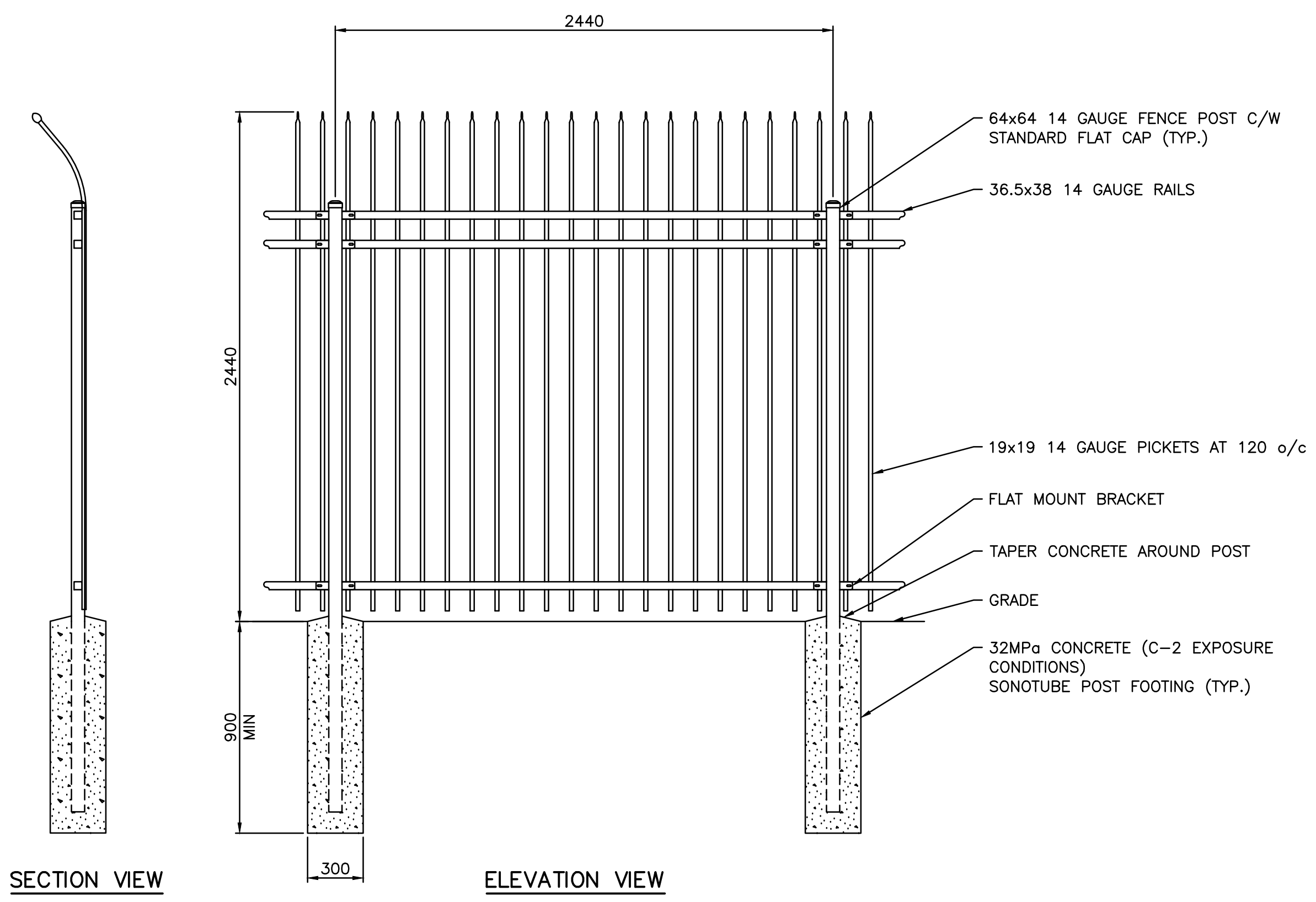
- ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF CSA A23.1 AND A23.2.
- CONCRETE MIXES, AGGREGATES AND CEMENTITIOUS MATERIALS, INCLUDING PORTLAND CEMENT AND PORTLAND LIMESTONE CEMENT, SHALL CONFORM TO CAN/CSA A23.1 AND A23.2 AND CAN/CSA-A3000 AND SHALL HAVE THE FOLLOWING PROPERTIES BASED UPON PERFORMANCE CRITERIA PROPORTIONING.

CLASS	28 DAY STRENGTH	EXPOSURE	CEMENT TYPE
FOOTINGS	30MPa (4500 psi)	C-2	GU

- CONCRETE TESTING SHALL BE CARRIED OUT BY THE CONTRACTOR AND PAID FOR BY THE OWNER AND SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND A23.2. THE MINIMUM NUMBER OF TESTS PERFORMED SHALL BE AS PER CSA A23.2. ADDITIONAL TESTING SHALL BE PERFORMED AT THE DIRECTION OF THE STRUCTURAL ENGINEER. CONTRACTOR SHALL PROVIDE TESTING AGENCY WITH ADEQUATE NOTICE TO PROVIDE TESTING AS REQUIRED.
- ALL CONCRETE CURING SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1. SPECIAL PRECAUTIONS SHALL BE TAKEN PER CSA A23.1 FOR PLACING AND CURING CONCRETE AT OR ABOVE 27°C AND AT OR BELOW 5°C.

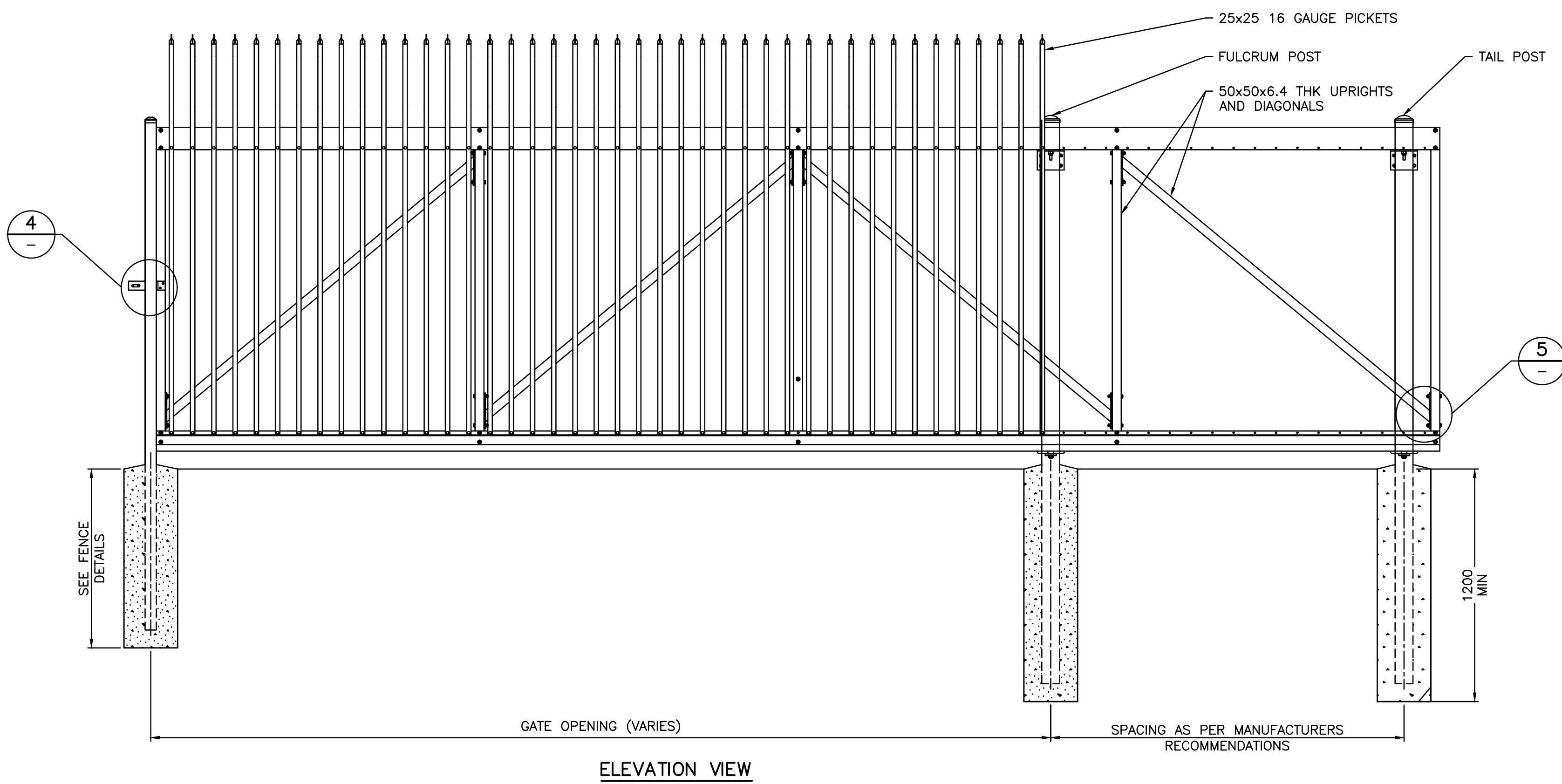
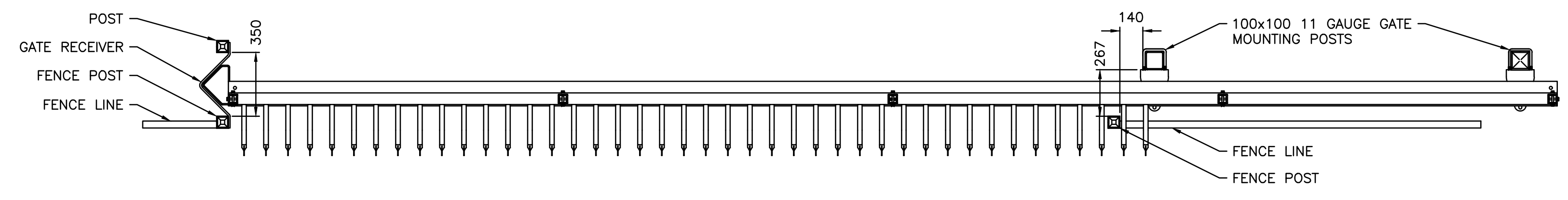
**FENCE/GATE NOTES:**

- FOR DESIGN AND LOCATION DETAILS OF ELECTRICAL COMPONENTS, PLEASE SEE PBX ELECTRICAL DESIGN DRAWINGS PROJECT NUMBER 17470.
- ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE.
- ALL FENCING (INCLUDING PEDESTRIAN GATES) MUST MEET THE SPECIFICATIONS LISTED FOR THE AMERISTAR MONTAGE COMMERCIAL "INVINCIBLE" FENCE LINE, OR AN APPROVED EQUIVALENT. FOR A DETAILED LIST OF FENCING COMPONENTS AND SPECIFICATIONS, REFER TO THE AMERISTAR MONTAGE COMMERCIAL CATALOG.
- ALL CANTILEVER GATES MUST MEET THE SPECIFICATIONS LISTED FOR THE AMERISTAR TRANSPORT II COMMERCIAL "INVINCIBLE" LINE, OR AN APPROVED EQUIVALENT. FOR A DETAILED LIST OF CANTILEVER GATE COMPONENTS AND SPECIFICATIONS, REFER TO THE AMERISTAR TRANSPORT II COMMERCIAL CATALOG.

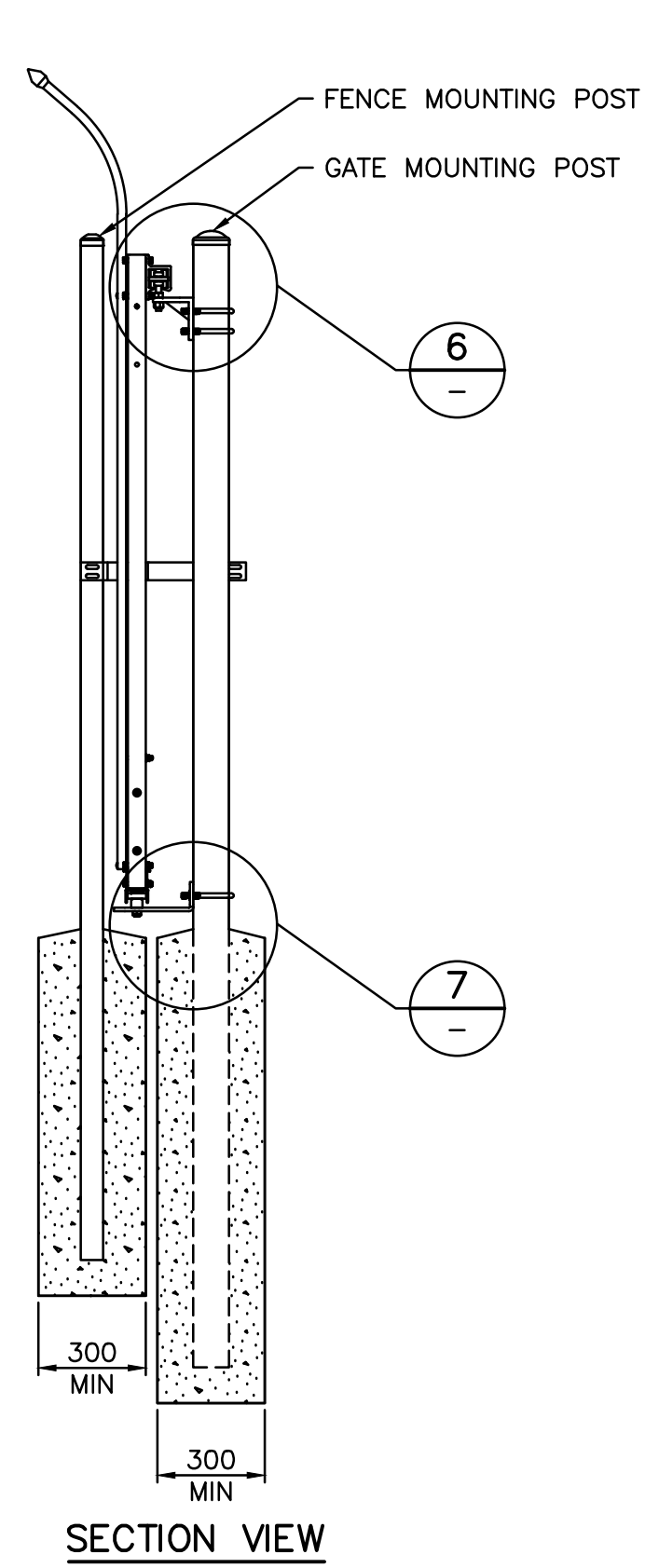


1 2.44m HIGH SECURITY FENCE DETAIL  
S200 1:20

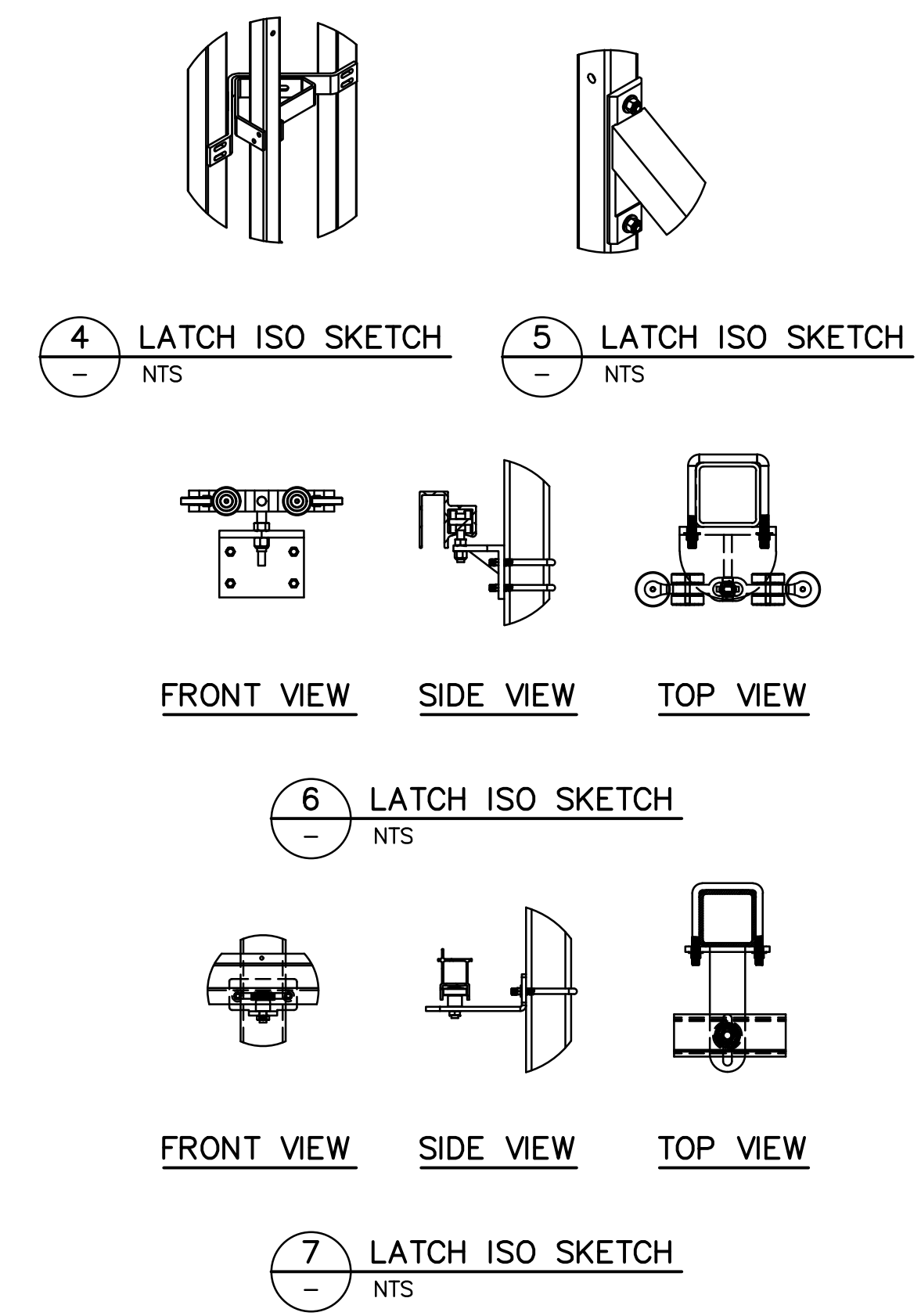
2 2.44m HIGH PEDESTRIAN GATE DETAIL  
S200 1:20



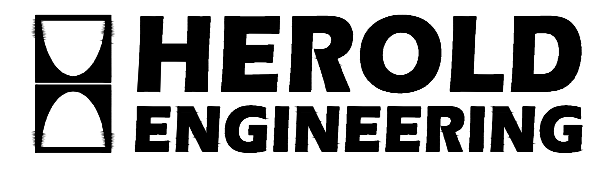
3 2.44m HIGH SECURITY FENCE CANTILEVER GATE DETAIL  
S200 1:20



SECTION VIEW



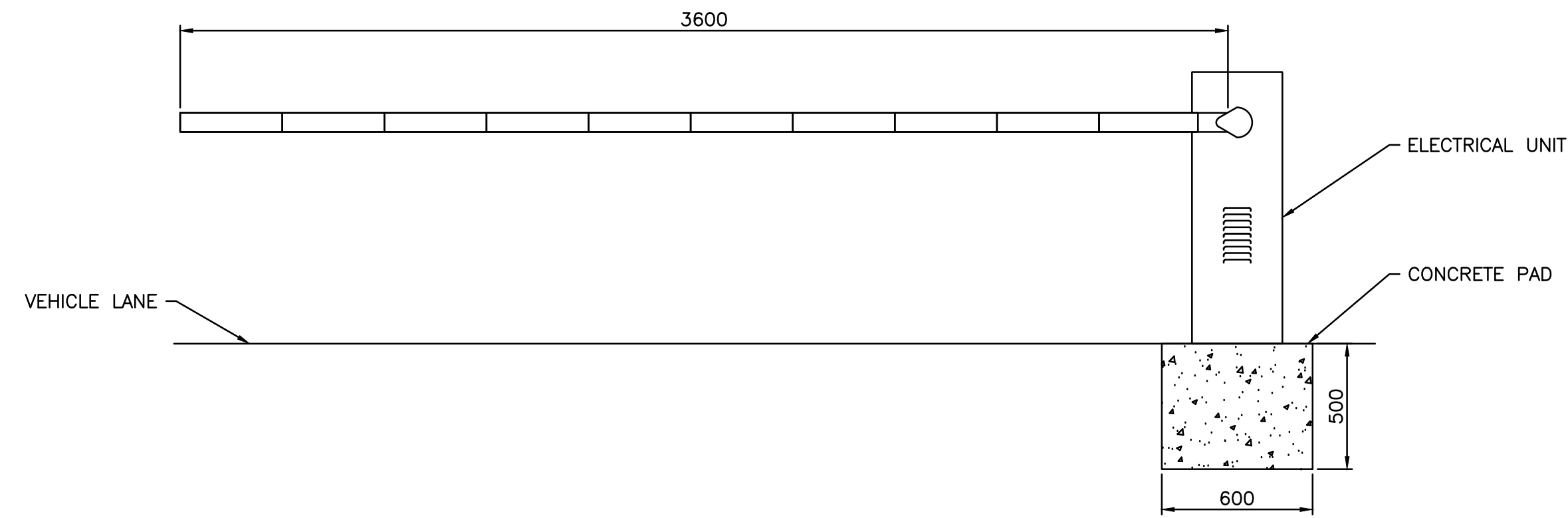
SECURITY FENCING UPGRADES  
 INSTITUTE OF OCEAN SCIENCES  
 NORTH SAANICH, BC  
 INSTITUTE OF OCEAN SCIENCES



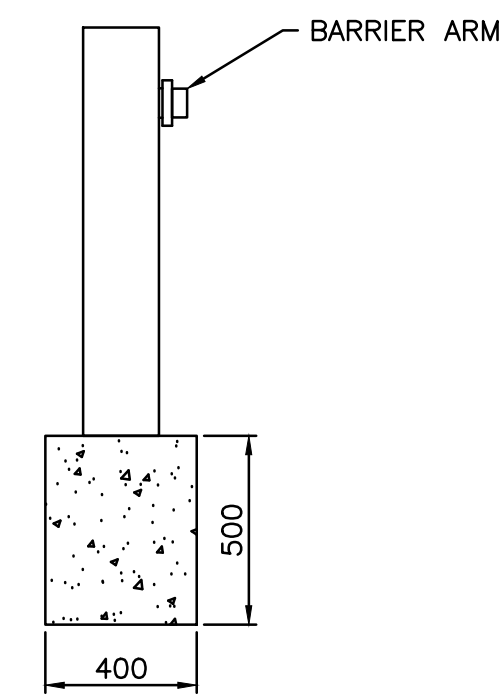
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**SECURITY FENCE, CANTILEVER AND PEDESTRIAN GATE DETAILS**

DESIGNED MW	ENGINEER'S SEAL
DESIGN REVIEW DSW	
DRAFTED SAC	
DRAFTING REVIEW -	
PROJECT No.	CLIENT DRAWING No.
SCALE H: AS SHOWN V:	PERMIT No.
HEL DRAWING No. <b>S300</b>	REVISION 4 of 5 5



ELEVATION VIEW



SECTION VIEW

**BARRIER GATE NOTES:**

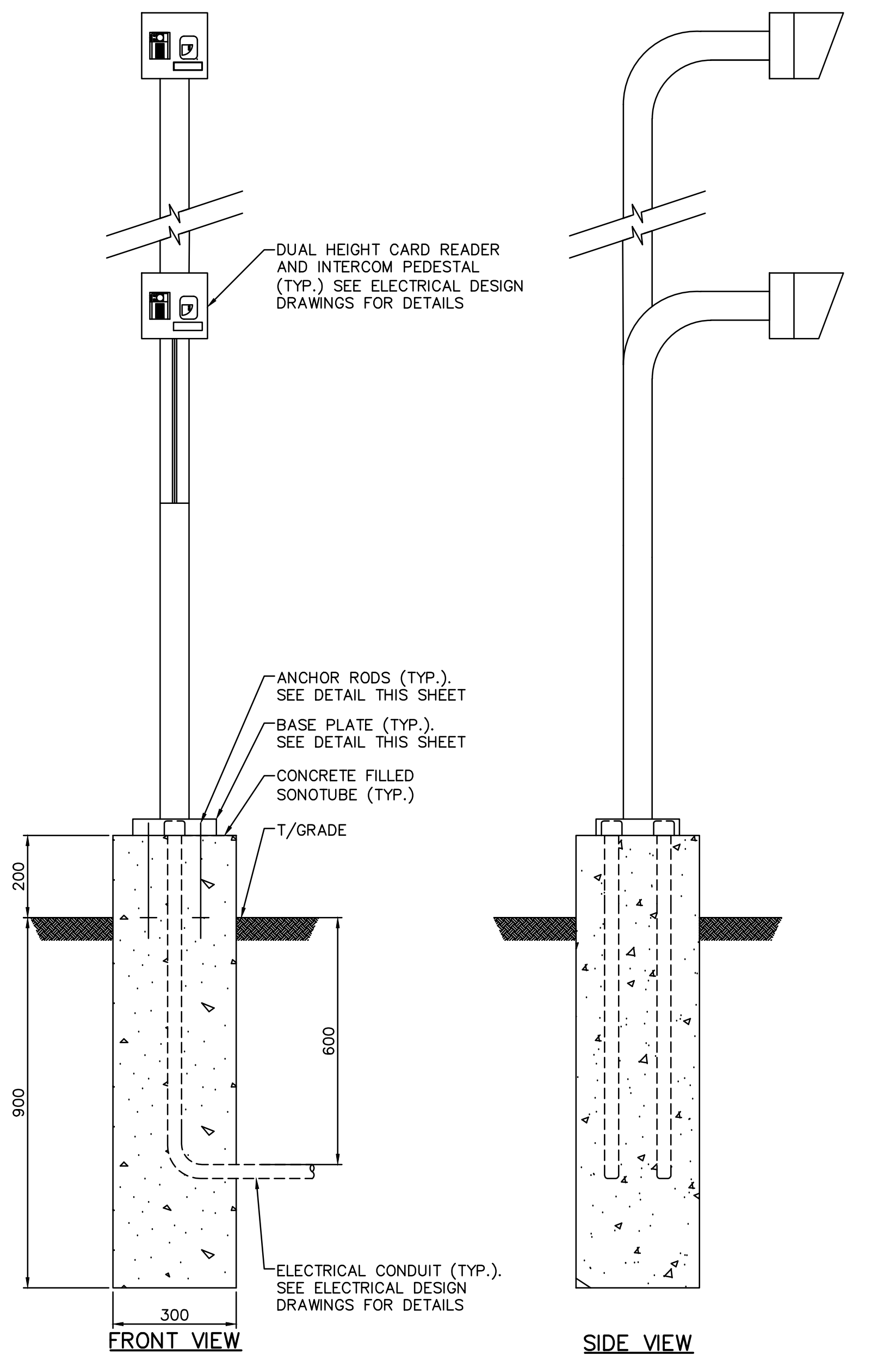
1. FOR DESIGN AND LOCATION DETAILS OF ELECTRICAL COMPONENTS, PLEASE SEE PBX ELECTRICAL DESIGN DRAWINGS PROJECT NUMBER 17470.
2. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE.
3. ALL BARRIER GATES MUST MEET THE SPECIFICATIONS LISTED FOR THE FAAC "620 STANDARD AUTOMATIC BARRIER", OR AN APPROVED EQUIVALENT. FOR A DETAILED LIST OF SPECIFICATIONS, REFER TO THE FAAC 620 STANDARD AUTOMATIC BARRIER MANUAL AND DATASHEET.

ISSUES		
No.	DATE	ISSUED FOR
1	2018.07.30	REVIEW
2	2018.10.24	REVIEW
3	2019.01.09	REVIEW
4	2019.03.29	TENDER
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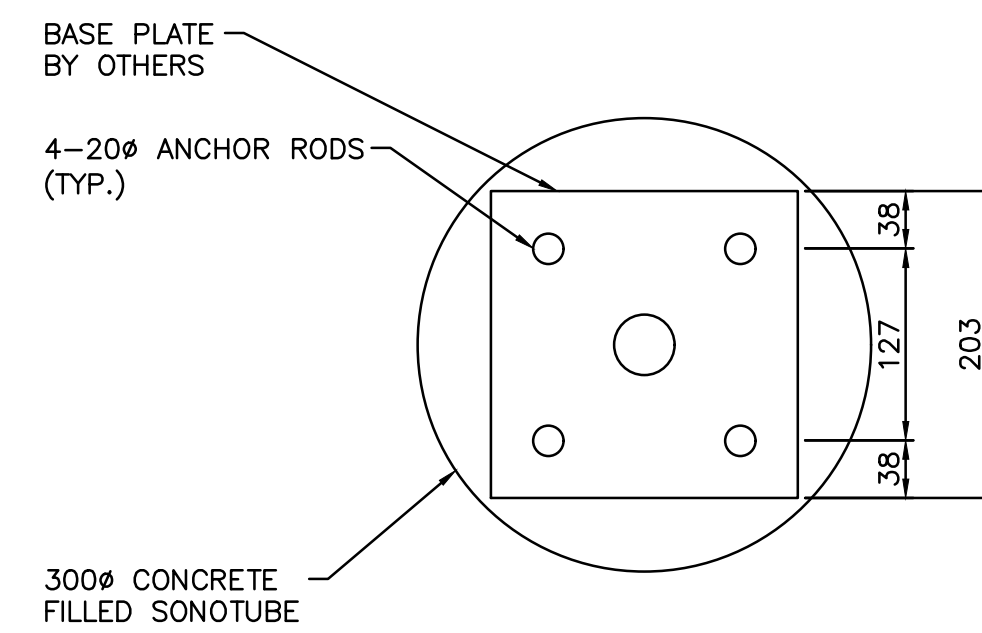
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ISSUED FOR TENDER

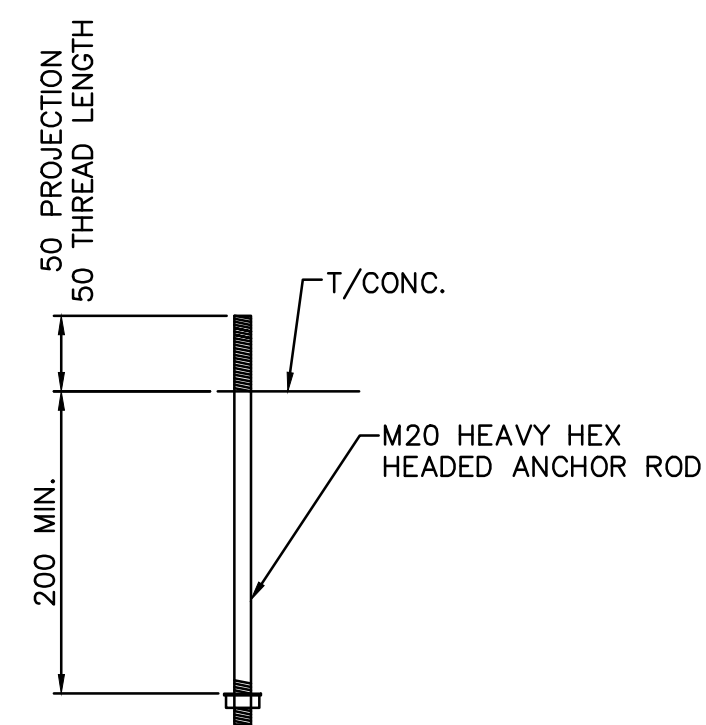
**8** PARKING CONTROL BARRIER GATE  
S201 1:20



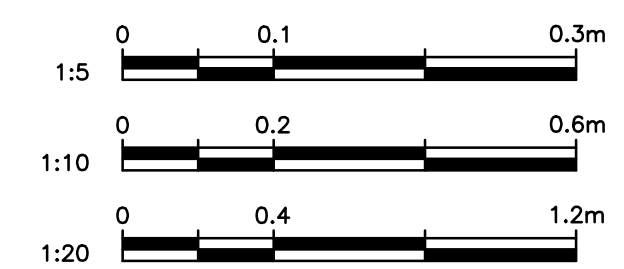
**9** CARD READER BASE DETAIL  
1:10



BASE PLATE DETAIL  
1:5



ANCHOR ROD DETAIL  
1:5



SECURITY FENCING UPGRADES  
INSTITUTE OF OCEAN SCIENCES

NORTH SAANICH, BC

INSTITUTE OF OCEAN SCIENCES



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**PARKING CONTROL BARRIER GATE AND CARD READER BASE DETAILS**

DESIGNED MW	ENGINEER'S SEAL
DESIGN REVIEW DSW	
DRAFTED SAC	
DRAFTING REVIEW -	
PROJECT No.	CLIENT DRAWING No.
SCALE H: AS SHOWN V:	PERMIT No.
HEL DRAWING No. <b>S301</b>	REVISION 5 OF 5 5