



ELECTRICAL DESIGN GROUP

ELECTRICAL BUILDING SERVICES CONSULTANTS

P.O. Box 15, SHERWOOD Q. 4075

Phone: (07) 3278 4375

Website: www.edg.net.au Email: brisbane@edg.net.au

C3219a - OUR LADY'S COLLEGE, ANNERLEY - POWER SUPPLY UPGRADE

C3219a-0001(F).xls

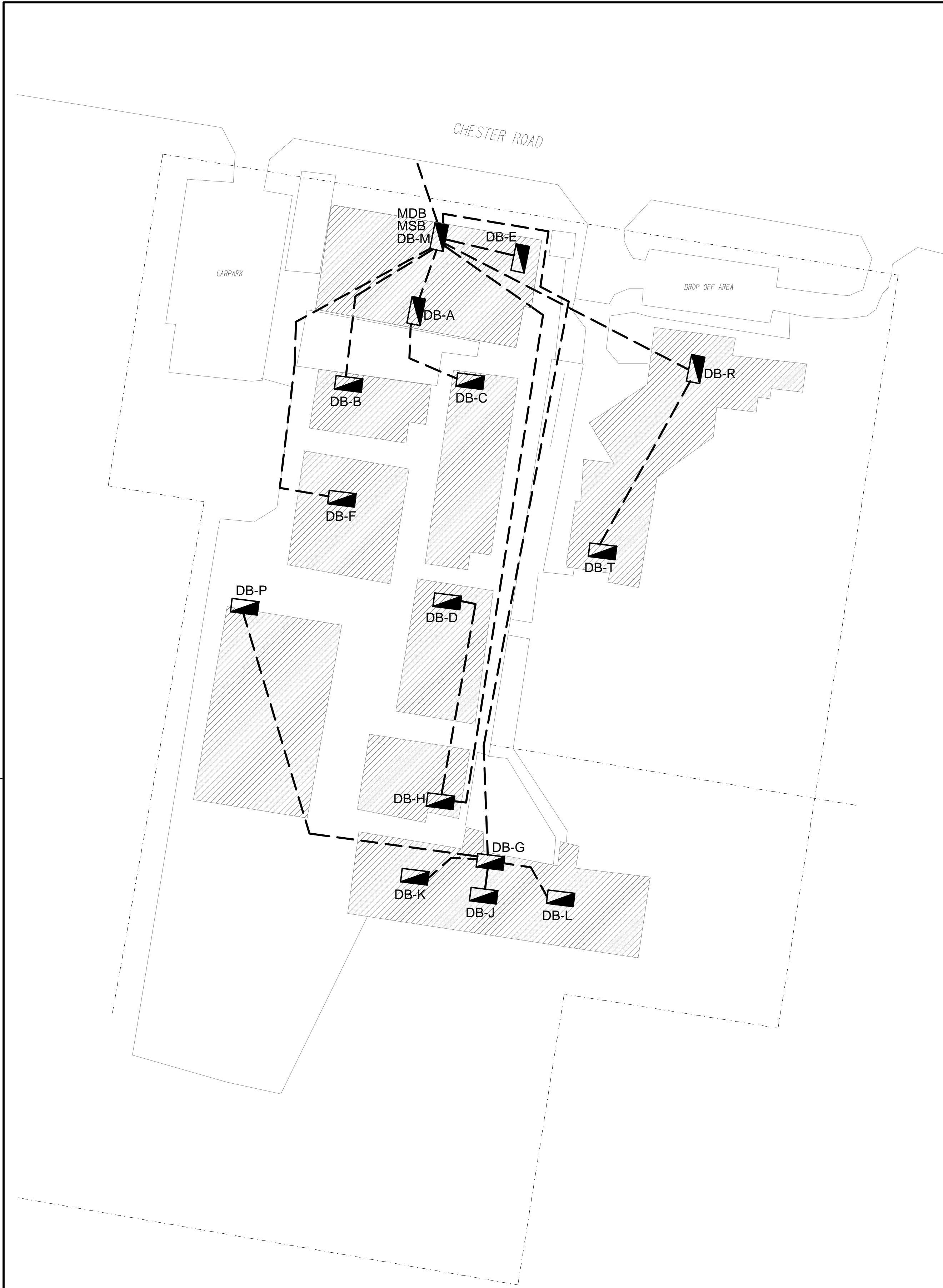
ELECTRICAL SERVICES CONTRACT DOCUMENT SCHEDULE

REVISION F - 06 FEBRUARY 2025

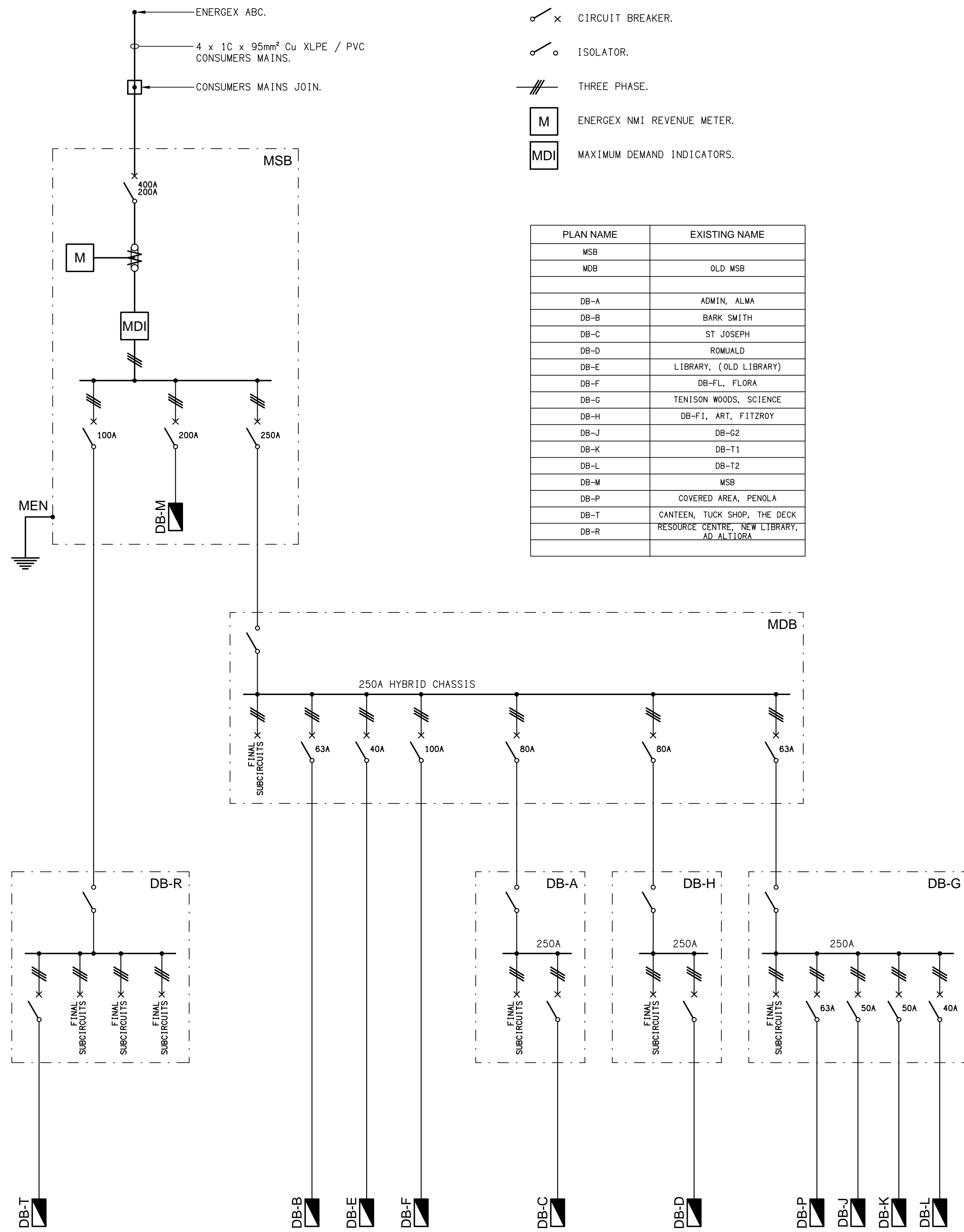
ISSUING INFORMATION				DATE OF ISSUE							
	DAY	24	27	28	29	12	06				
	MONTH	01	06	06	11	12	02				
	YEAR	24	24	24	24	24	25				
REASON FOR ISSUE				P	A	A	A	A	T		
A = APPROVAL C = CONSTRUCTION N = COORDINATION				P = PRELIMINARY T = TENDER							

DISTRIBUTION				NUMBER OF COPIES							
WWW.EDG.NET.AU								1E			
OUR LADY'S COLLEGE				1E	1E	1E	1E	1E	1E		
ENERGEX					1E	1E	1E	1E			
P = PRINT T = TRACING D = DISC				E = EMAIL F = FAX							

DOCUMENTS		REVISION									
C3219a-E01.dwg	EXISTING POWER SITE PLAN & SCHEMATIC	A						B			
C3219a-E02.dwg	PROPOSED STAGE 1 POWER SCHEMATICS	A	B					C			
C3219a-E03.dwg	PROPOSED STAGE 1 POWER SITE PLAN	A						C			
C3219a-E04.dwg	ENERGEX PADMOUNT SUBSTATION SITE PLAN	A	B	1	3	4	5				
C3219a-E05.dwg	ENERGEX PADMOUNT SUBSTATION DETAILS		A	1	3	4	5				
C3219a-E06.dwg	ENERGEX PADMOUNT SUBSTATION NOTES		A	1	3	4	5				
C3219a-E07.dwg	NOTES							A			
C3219a-0001.xls	CONTRACT DOCUMENT SCHEDULE	A	B	C	D	E	F				



SITE PLAN
EXISTING POWER DISTRIBUTION
SCALE 1: 500

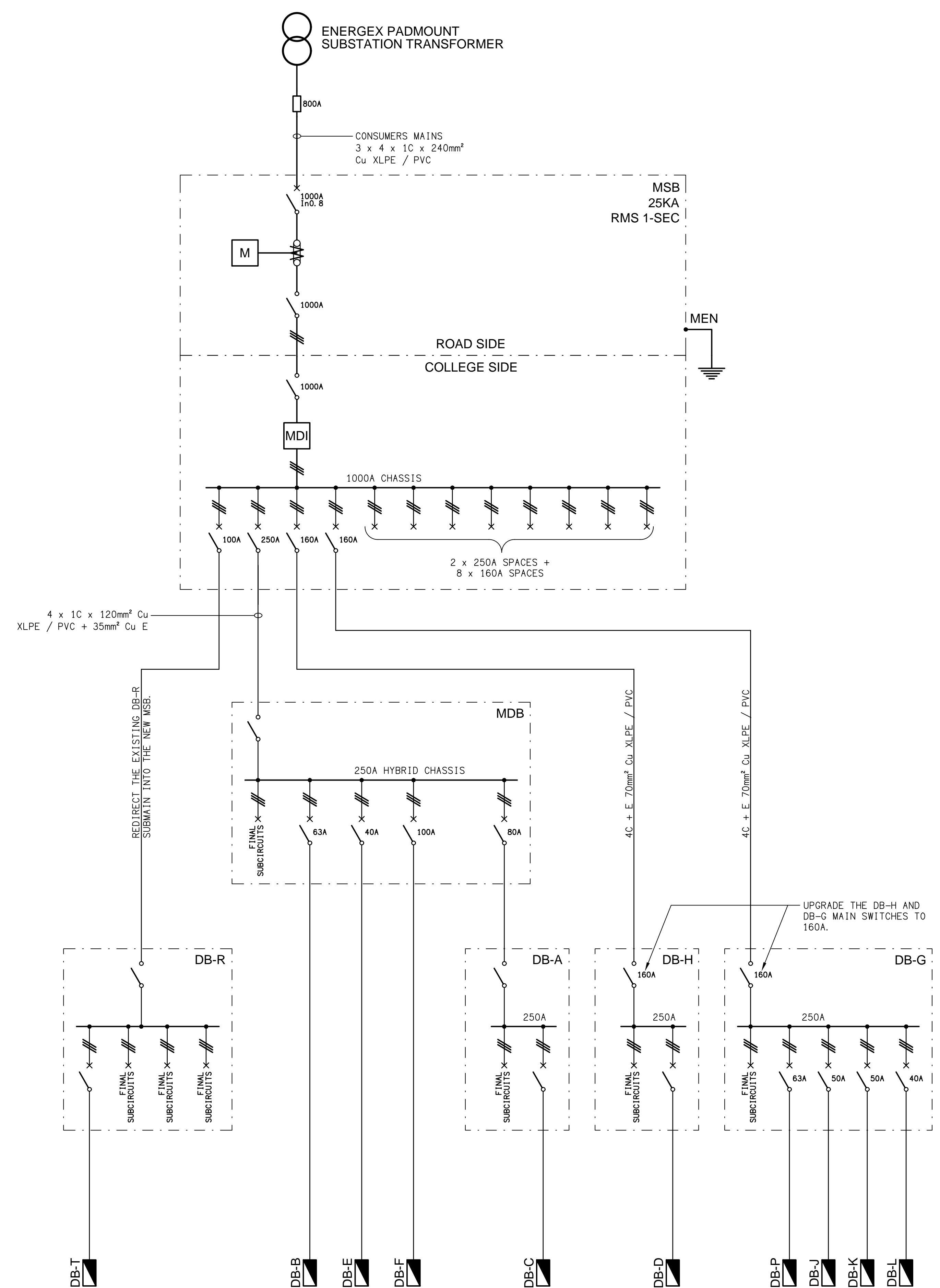
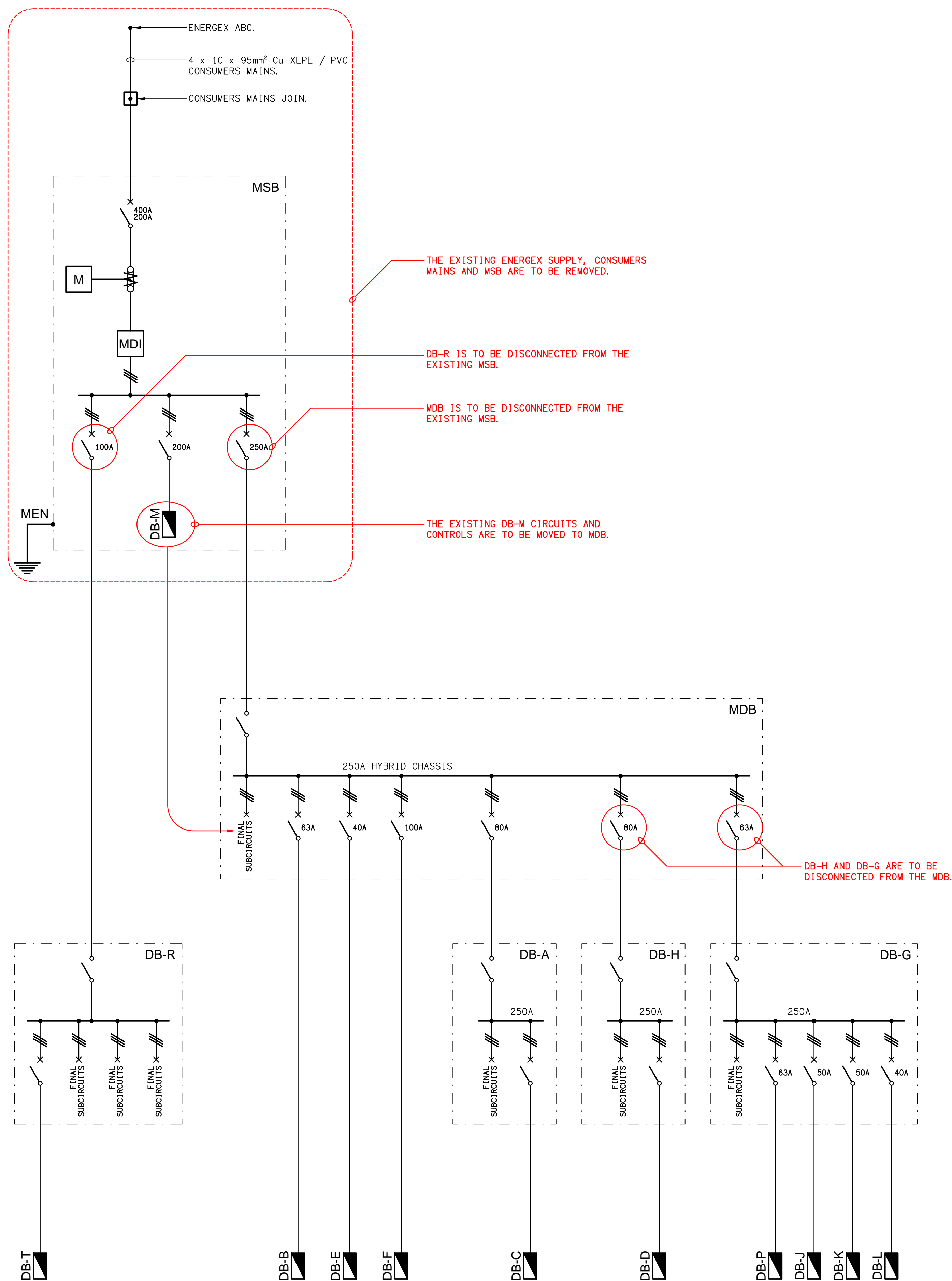


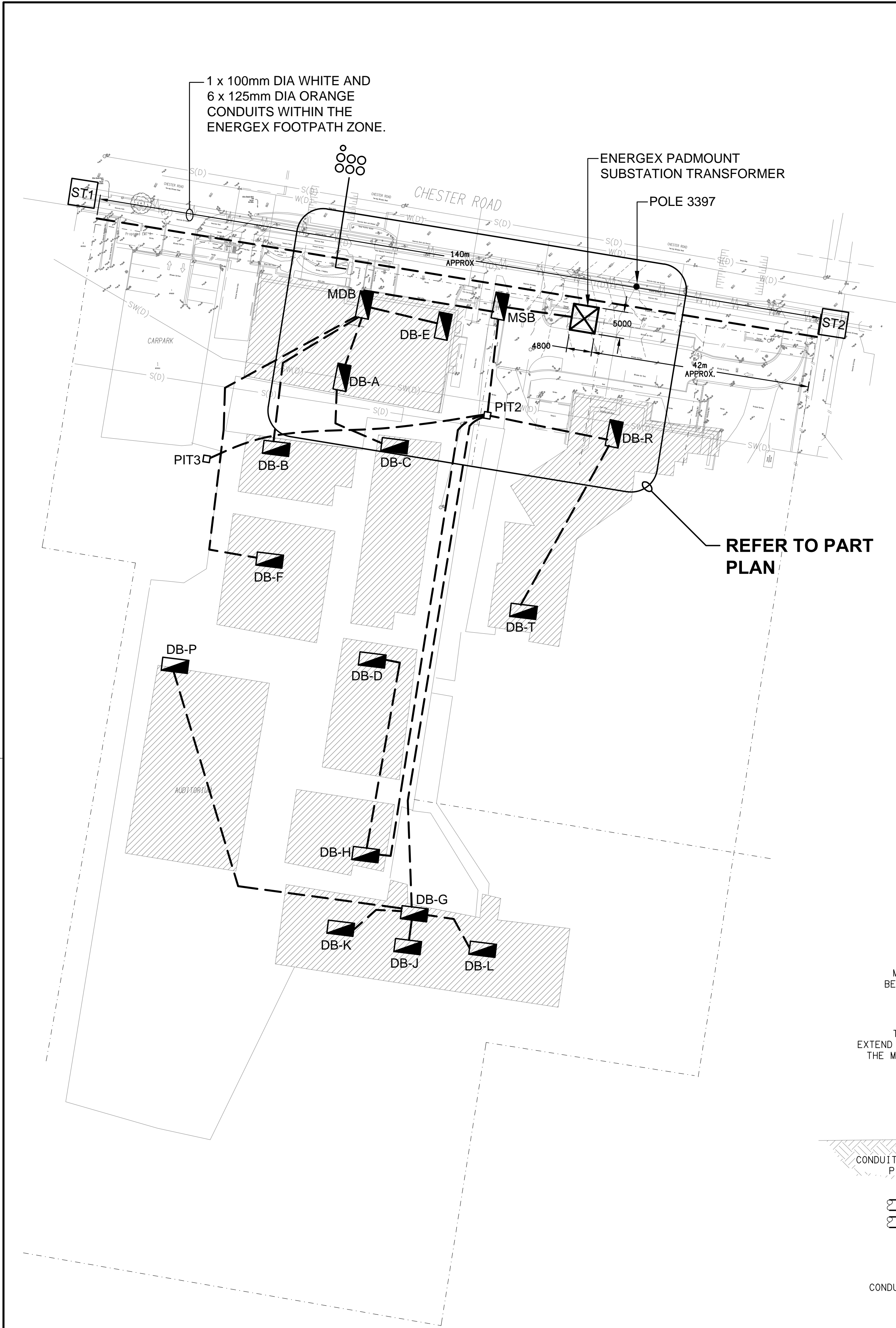
LEGEND:

- CIRCUIT BREAKER.
- ISOLATOR.
- THREE PHASE.
- ENERGEX NMI REVENUE METER.
- MAXIMUM DEMAND INDICATORS.

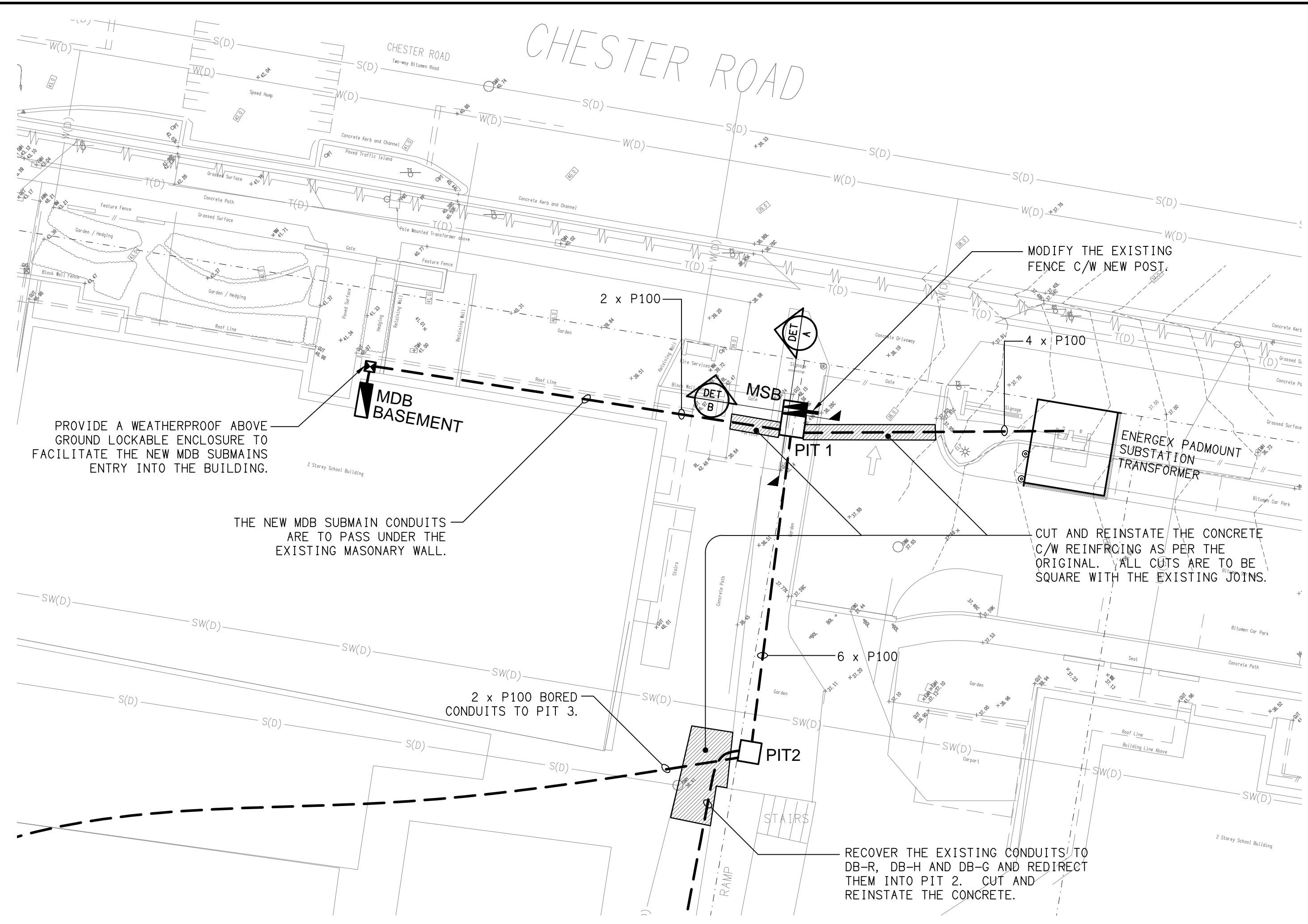
PLAN NAME	EXISTING NAME
MSB	
MDB	OLD MSB
DB-A	ADMIN, ALMA
DB-B	BARK SMITH
DB-C	ST JOSEPH
DB-D	ROMUALD
DB-E	LIBRARY, (OLD LIBRARY)
DB-F	DB-FL, FLORA
DB-G	TENISON WOODS, SCIENCE
DB-H	DB-FI, ART, FITZROY
DB-J	DB-G2
DB-K	DB-T1
DB-L	DB-T2
DB-M	MSB
DB-P	COVERED AREA, PENOLA
DB-T	CANTEEN, TUCK SHOP, THE DECK
DB-R	RESOURCE CENTRE, NEW LIBRARY, AD ALTIORA

SCHEMATIC
EXISTING POWER DISTRIBUTION
NOT TO SCALE

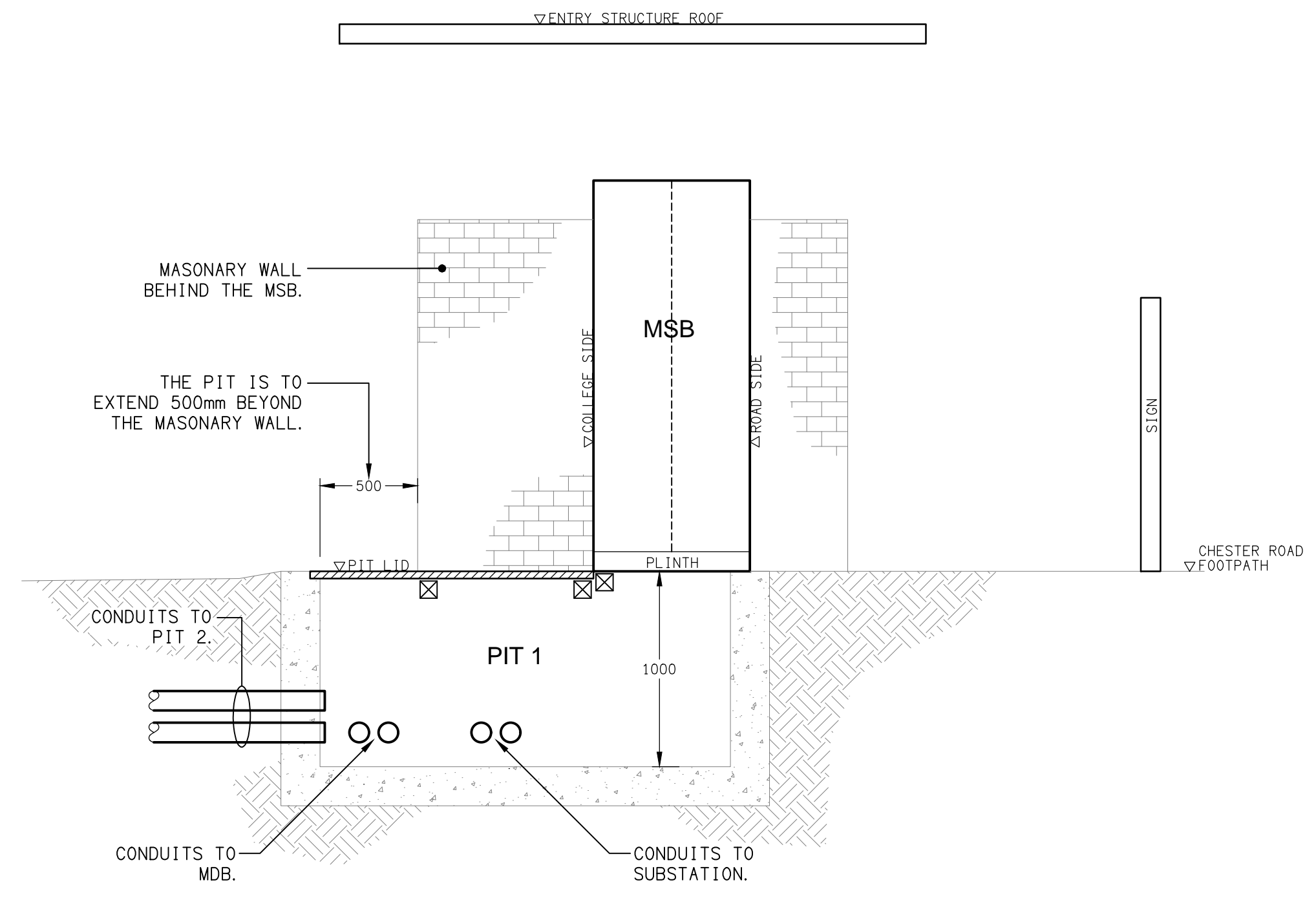




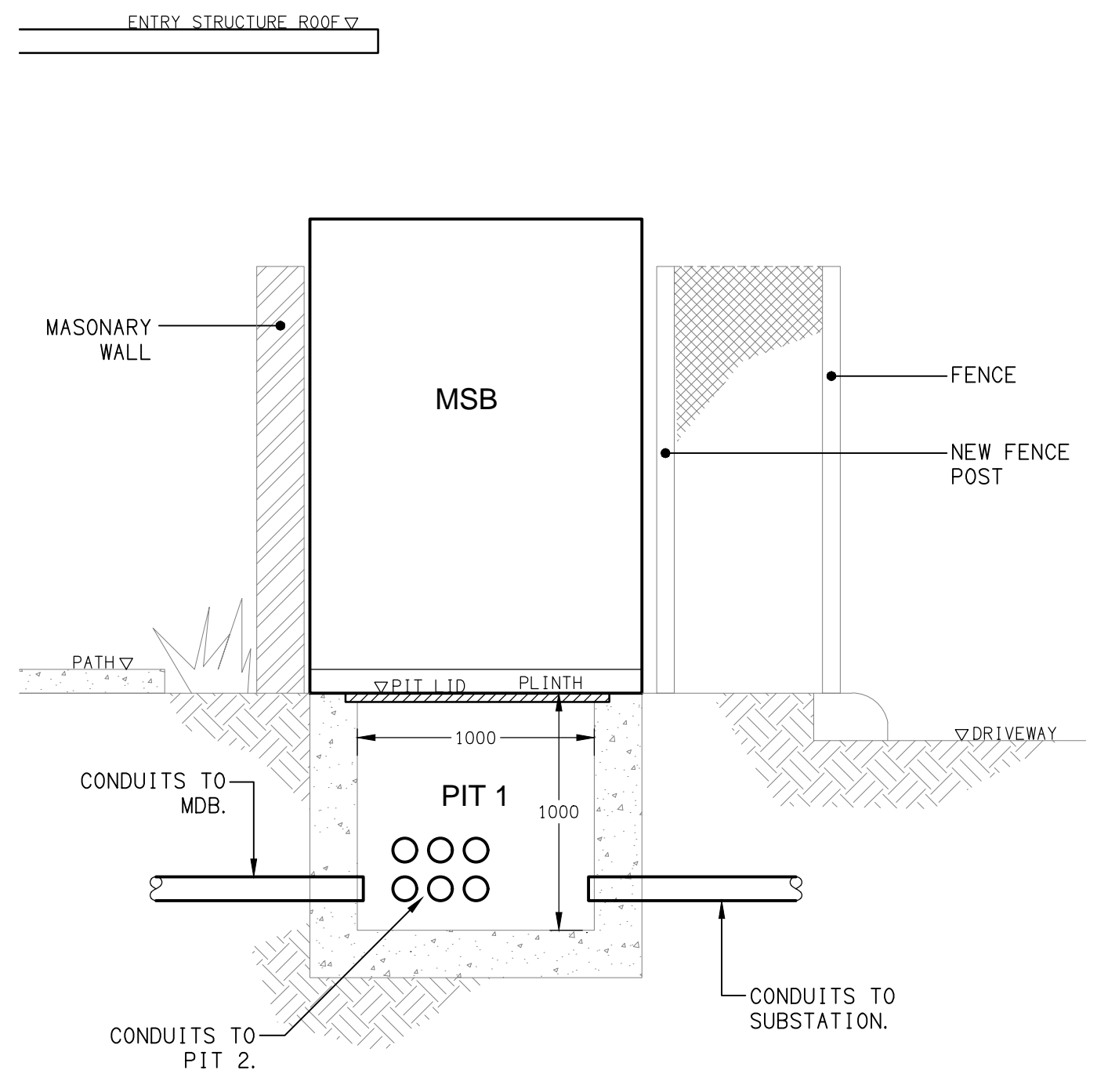
SITE PLAN
PROPOSED STAGE 1 DISTRIBUTION
SCALE 1: 500



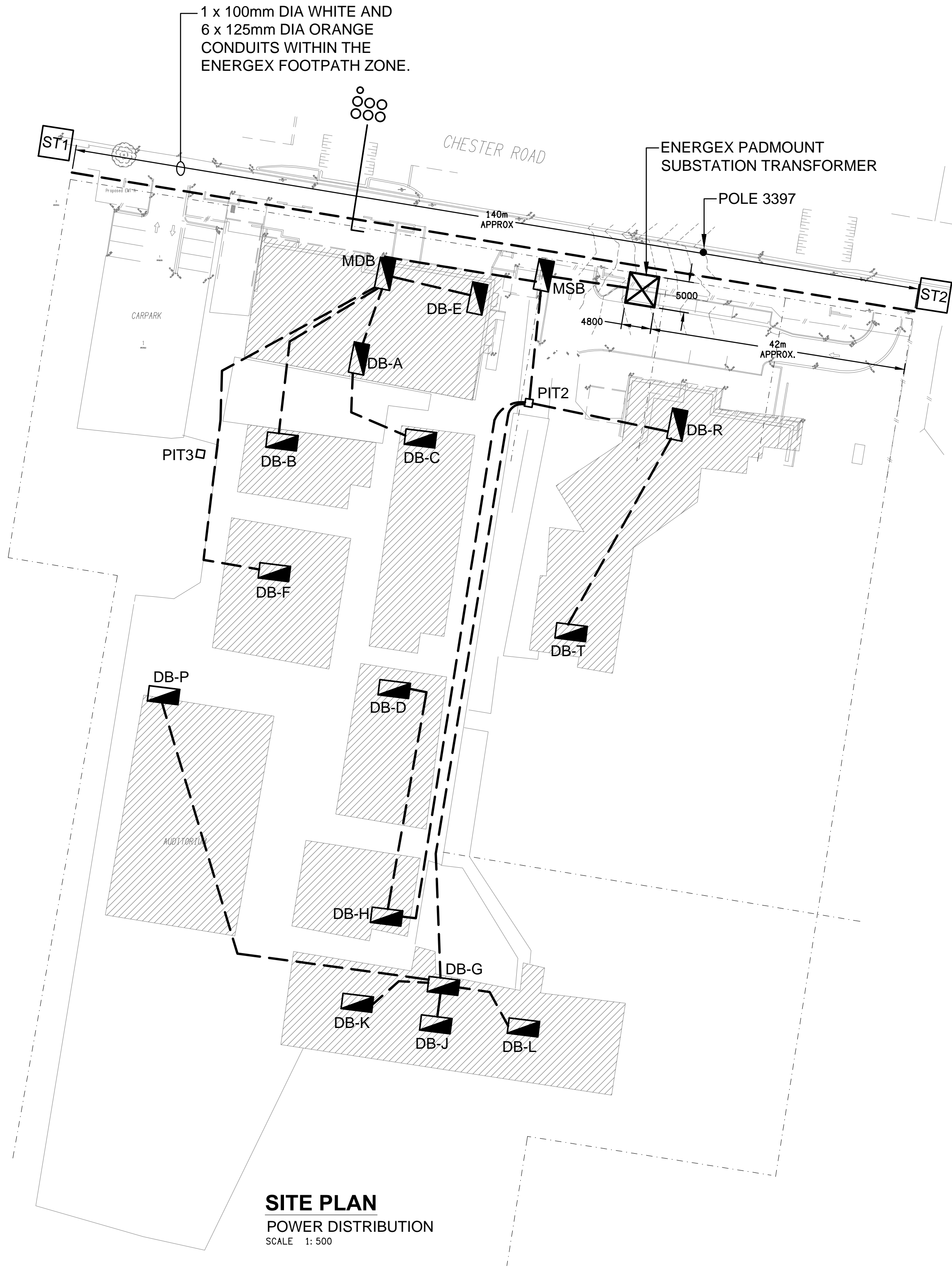
PART PLAN
CONDUIT AND LANDSCAPE WORKS
SCALE 1: 200



DETAIL A
MSB & PIT 1 SECTION
NOT TO SCALE



DETAIL B
MSB & PIT 1 SECTION
NOT TO SCALE



NOTES:

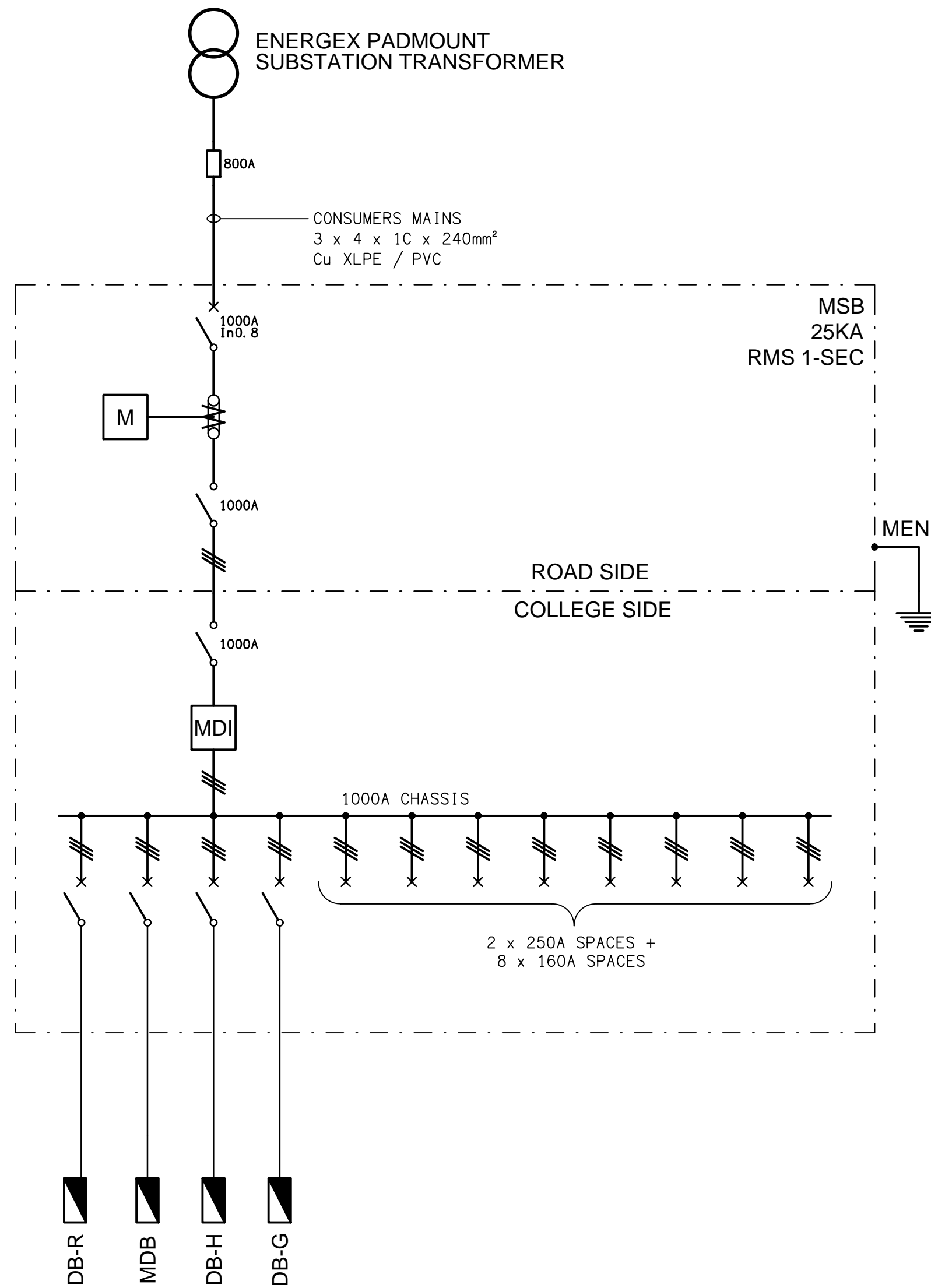
- NO OTHER SERVICES ARE TO PASS THROUGH OR UNDER THE 4800 x 5000 PADMOUNT SUBSTATION SITE.
- THE ELECTRICAL SUBCONTRACTOR IS TO PROVIDE THE ENERGEX CONDUITS WITHIN THE FOOTPATH FROM ST1 TO ST2.
- THE PADMOUNT SUBSTATION SITE IS TO BE INSPECTED BY AND HANDED TO ENERGEX AT LEAST 6-WEEKS PRIOR TO THE DATE SUPPLY IS REQUIRED.
- THE ELECTRICAL SUBCONTRACTOR IS TO BACKFILL AND COMPACT THE PADMOUNT SUBSTATION SITE AFTER ENERGEX WORKS ARE COMPLETE.
- FOLLOWING BACKFILLING AND COMPACTION THE ELECTRICIAN IS TO PROVIDE THE SUBSTATION CONCRETE SURROUND AS PER THE ENERGEX SPECIFICATION.
- PROVIDE AN EASEMENT IN FAVOUR OF ENERGEX OVER THE SUBSTATION SITE 4800 WIDE x 5000 DEEP FROM THE BOUNDARY.

NOTE:

FOR ALL ENERGEX RELATED CONSTRUCTION QUERIES THE ELECTRICAL DESIGN GROUP ON (07) 3278 4375 IS THE FIRST POINT OF CALL.

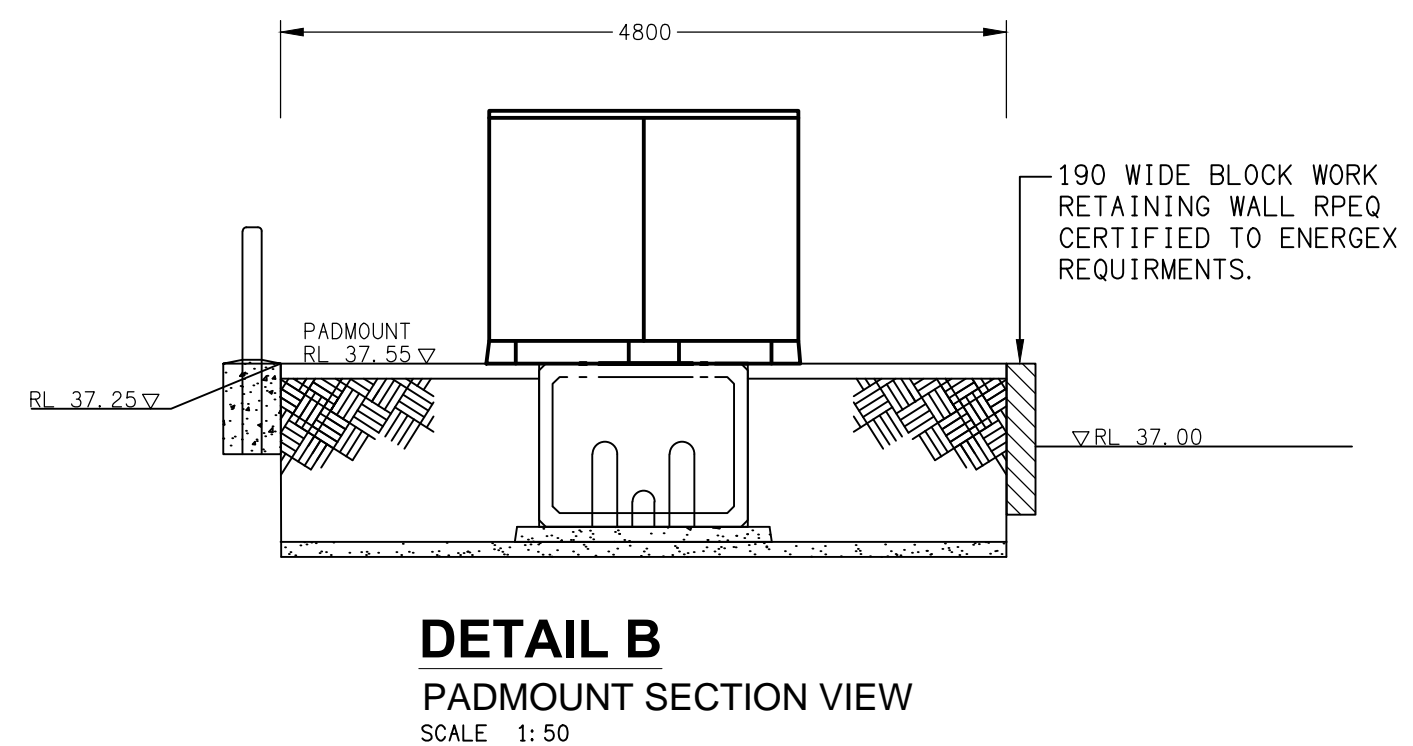
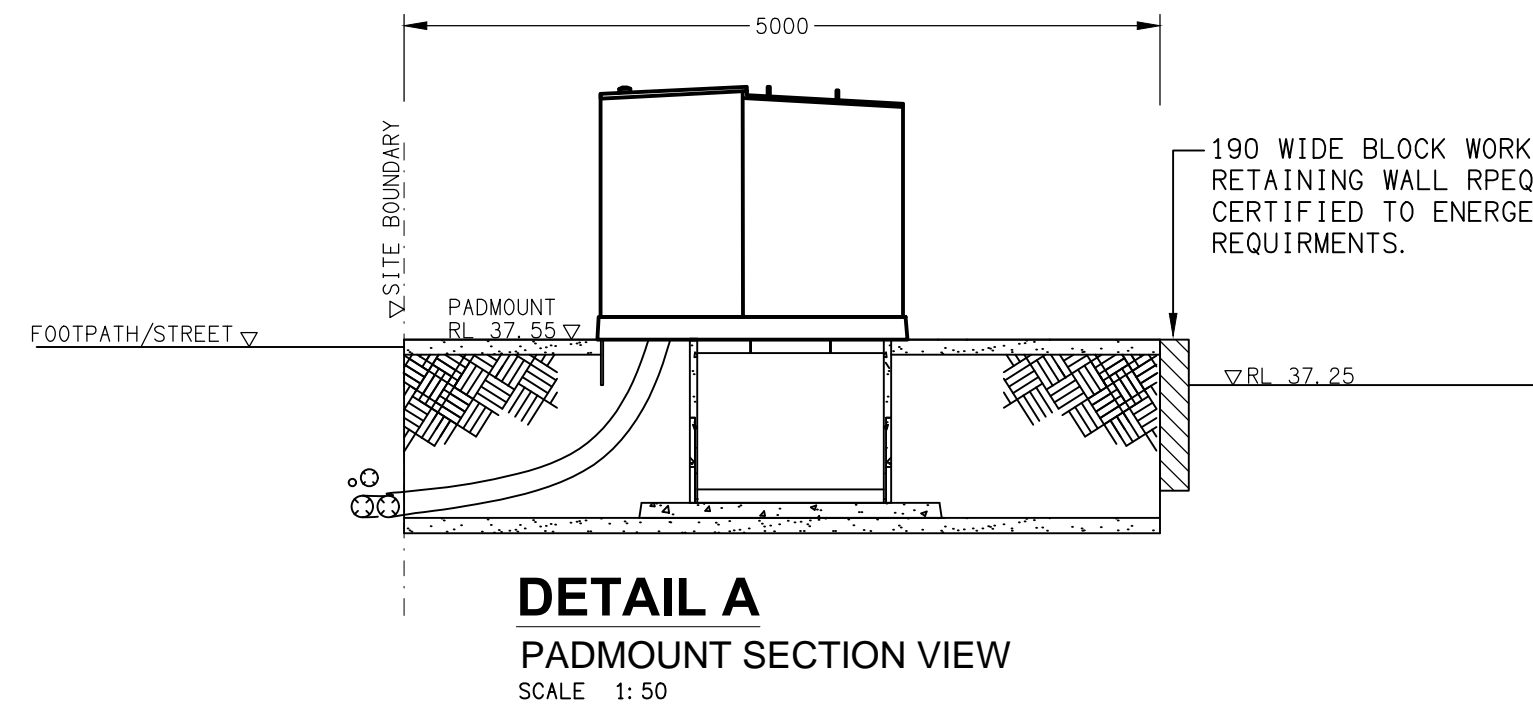
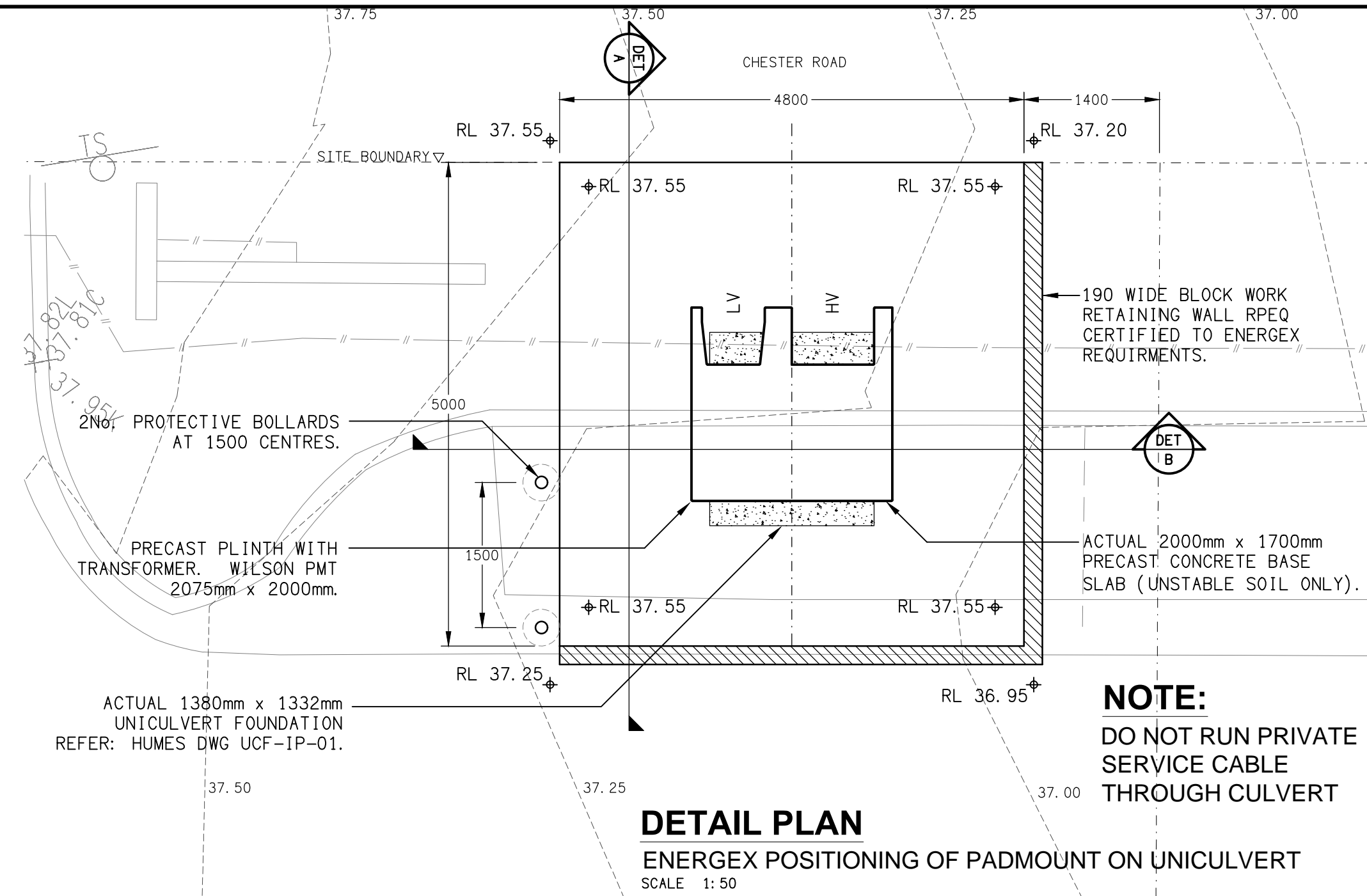
NOTE:

THERE IS NO DEFINED FLOOD LEVEL ASSOCIATED WITH THE SITE.



SCHEMATIC

MAIN SWITCHBOARD (MSB) CONFIGURATION
NOT TO SCALE



ENERGEX ACCEPTANCE

NAME

OFFICE

SIGNED

DATE / /

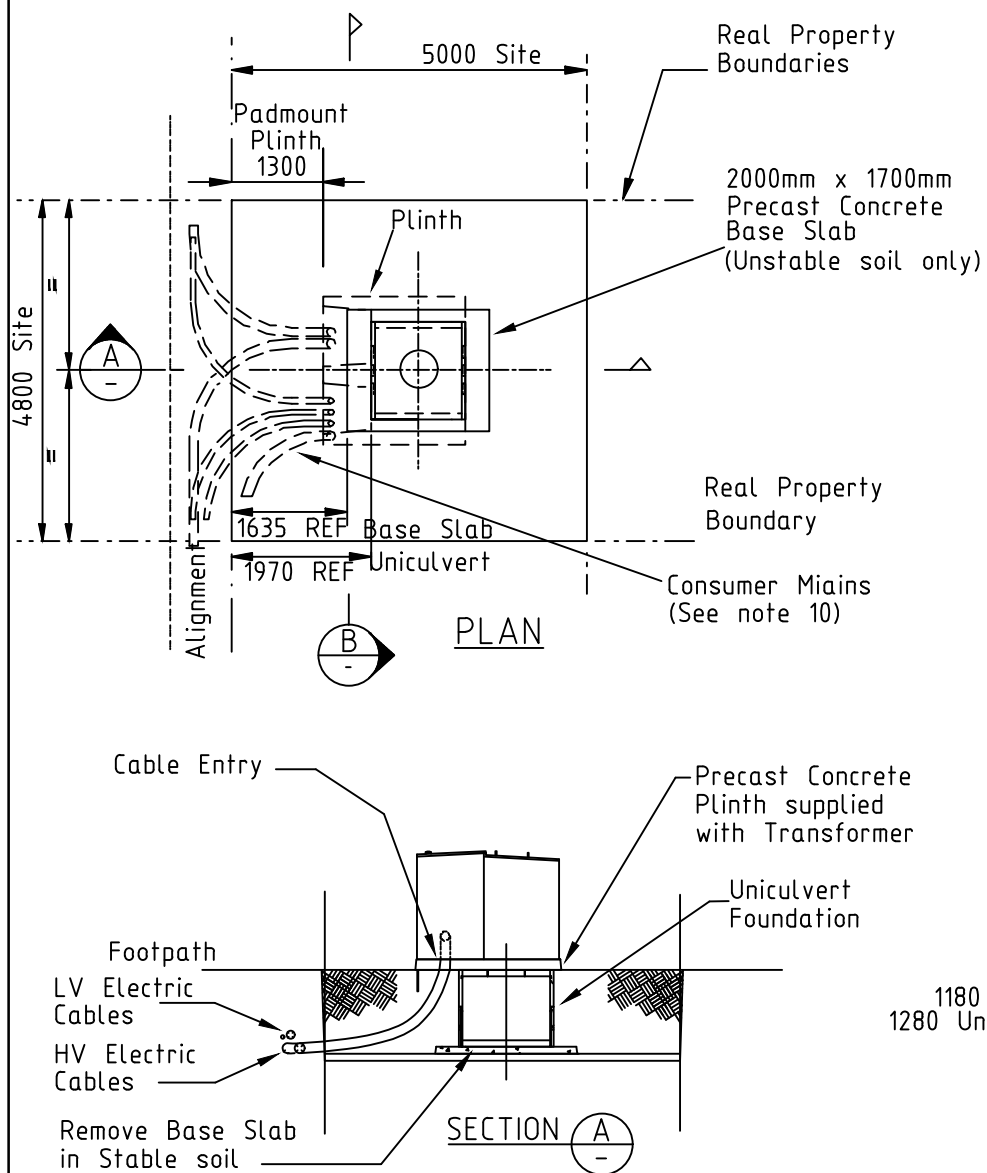
ENERGEX takes no responsibility for the accuracy of the information provided on this drawing

<div>ELECTRICAL DESIGN GROUP BRISBANE PTY LTD ACN 092 710 793</div> <div>TRADING AS: ELECTRICAL DESIGN GROUP</div>	<div>THE COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF THE ELECTRICAL DESIGN GROUP.</div> <div>USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.</div> <div>ALL DIMENSIONS TO BE VERIFIED ONSITE.</div>	<div>WR8122819</div> <div>CULVERT INSPECTION REQUIRED BEFORE TRANSFORMER IS DELIVERED - 5 BUSINESS DAYS PRIOR NOTICE NEEDED. CONTACT: SUE TRUBSHAW PH: 0437236255 EMAIL: sue.trubshaw@energyq.com.au TRANSFORMER WILL NOT BE ENERGISED UNTIL ALL REQUIREMENTS ARE MET.</div>	<div><div><div><div></div></div><div>ELECTRICAL DESIGN GROUP</div></div><div>ELECTRICAL BUILDING SERVICES CONSULTANTS</div><div>BRISBANE GOLD COAST</div><div>P.O.Box 15, Sherwood Q.4075 Phone: (07) 3278 4375 Email: brisbane@edg.net.au Web: www.edg.net.au</div></div>	<div>PROJECT: OUR LADY'S COLLEGE, ANNERLEY POWER SUPPLY UPGRADE</div> <div>15 CHESTER ROAD, ANNERLEY</div>	<div>DRAWING: ELECTRICAL SERVICES ENERGEX PADMOUNT SUBSTATION SITE PLAN</div> <div>SCALE: 1:500 & 1:50 AT A1</div> <div>PROJECT NO: C3219a</div> <div>DRAWING NO: E04</div> <div>REVISION: 5</div>
--	--	--	--	--	--

Figure 10.1 illustrates the Plan and Section of a Roadway. The Plan view shows a rectangular layout with dimensions: 5000' (COMMON EARTH) for the central section, 8900' (SEPARATE EARTH) for the total width, and 4800' (COMMON EARTH) / 12600' (SEPARATE EARTH) for the side sections. A dashed line indicates the 'Outline of plinth shown dashed'. The Section view shows a cross-section with a 150' MAX fill on the left and a 150' MAX cut on the right, with a central roadway width of 5000'. The R.P. Street Alignment is indicated on the left. A note refers to 'Note 6' for fill and cut details.

REQUIRED TASKS		DATE COMPLETED	CHECKED BY
CUSTOMER RESPONSIBILITIES	YES	NO	
24 HOUR ACCESS PROVIDED.			
PADMOUNTED SUBSTATION SITE IS LEVEL.			
PADMOUNTED SUBSTATION SITE SIZE - 5.0M x 4.8M			
RETAINING WALLS (INCL. RPEQ APPROVAL IF REQUIRED).			
PADMOUNTED SUBSTATION SITE IS CLEAR OF ALL SERVICES.			
CORRECT FOUNDATION INSTALLED.			
CONDUITS ARE INSTALLED (INCLUDING BUNGS & DRAW WIRES)			
CONDUITS TRENCHES BACKFILLED & COMPACTED.			
FENCES INSTALLED.			
HAVE 2000mm DEDICATED CLEAR ZONE IN FRONT OF PLINTH.			
CUSTOMER RESPONSIBILITIES			
PRIOR TO COMMISSIONING			
SITE BACKFILLED & COMPACTED (INCLUDING UNDER PLINTH)			
BOUNDARY SURROUND & SITE SURFACE CONCRETED.			
AREA SUITABLY DRAINED (NO PONDING)			
SITE CLEANED-UP NEATLY.			

1. ENERGE's padmount clearance zone shall be leveled and surrounding area graded to ensure no water ponding.
2. No services other than the ENERGE's electric cables shall pass through this substation site.
3. Clear access to the transformer shall be maintained for ENERGE's personnel and heavy equipment.
4. After installation is complete the site surface is to be finished with a concrete slab, refer C3-2.5.
5. Mature landscaping (including trees, sprinklers etc.) shall not encroach onto the substation site.
6. Cut and fill levels greater than 150mm will require a Civil RPEO certified design to ensure levels, compaction standards, drainage have been considered. Sites requiring retaining walls shall be designed in accordance with C3-2.6.



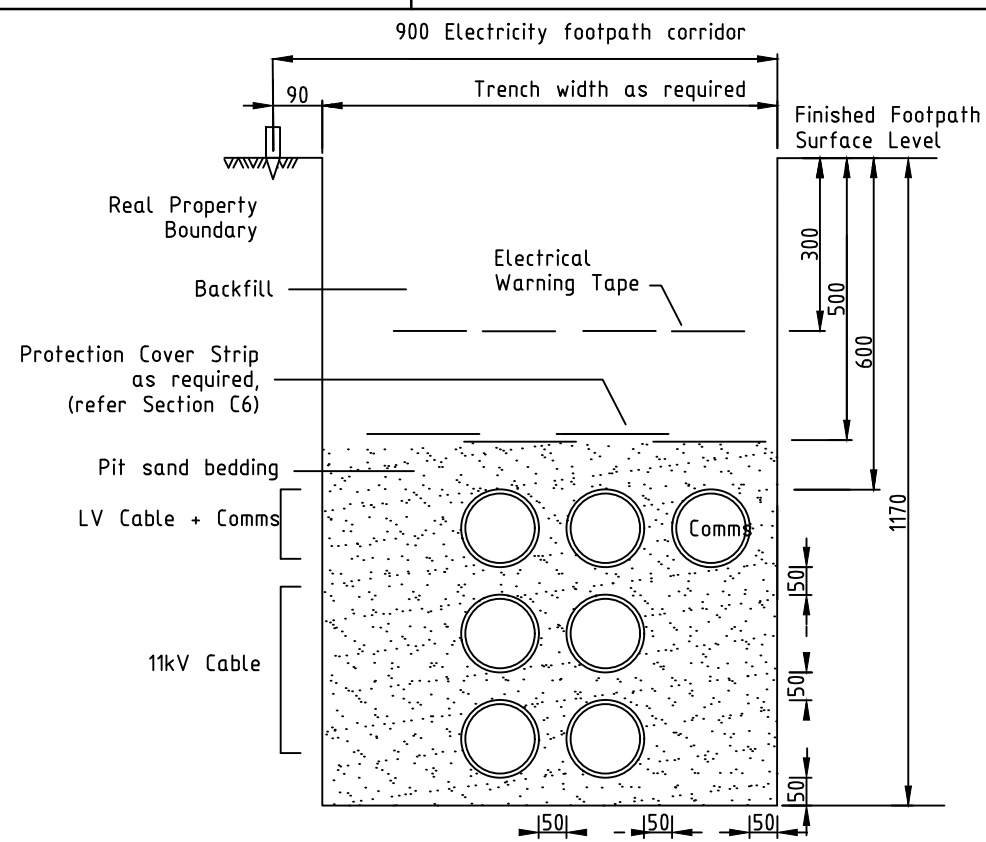
- Foundation design details are as follows:
 - Unstable soils are soft clay to sandy gravel with a soil undrained shear strength 50 - 150 kPa. These soil types REQUIRE a base slab as shown.
 - Stable soils are very stiff clay to shale/gravel with soil undrained shear strength of 150kPa or higher. These soil types DO NOT REQUIRE a base slab.
- Lift uncured and base slab separately with 4 x 131 Red Swiftlift lifting eyes.
- Position top face of Unculvert at finished ground level. (refer Civil Construction drawings)
- Installed Unculvert shall be level.
- If deep excavation is required under transformer cabinet and in front of foundation plinth front edge shall be propped while excavation remains open.
- Foundation Components:
 - 1 x Unculvert (Stock Code 19959)
 - 2 x End Walls (Stock Code 19959)
 - 1 x Base Slab (Stock Code 19960)
 Unculvert and end walls come assembled with a Layer of preformed sealant to the perimeter of the uncilvert and and between the mating surfaces.
- Only remove minimum knockout area required to pass conduits.
(Max. conduit 50mm nom. dia.) or cables through uncilvert void by tapping out concrete.
- Seal between conduits/cables and concrete end wall at knockout interface by grouting with high strength sand cement grout after conduit installation to prevent entry of void and backfill ingress to the void void.
- Excavate to property boundaries to facilitate installation of earth grid.
- Consumers mains (where present) shall not cross HV mains or run back under transformer

ENERGEX specifications for construction of the transformer site and installation of conduits on private property are available at the following web address.

https://swp.energex.com.au/service_providers/technical_docs/asp/technical_documents.asp

Commercial and Industrial Substations Manual 00293 v11
Section 14 - Drawing 11040-A4-14-33 Sht 2

The site contractor is to refer all substation construction queries to their electrical consultant.



1. CABLE CONDUIT SHALL BE OF THE FOLLOWING TYPE:
LIGHT DUTY ELECTRICAL CONDUIT TO AS/NZS 2053.
CONDUIT BENDS SHALL HAVE A MINIMUM RADIUS OF 1830mm.
2. CONDUITS SHALL BE 125mm ORANGE FOR ELECTRICAL AND 100MM WHITE (LOCATED TOP KERBSIDE) AS SPECIFIED BY ENERGENX AND SHALL BE SUPPLIED AND INSTALLED BY THE DEVELOPER OR ENERGENX.
CONDUITS SHALL BE SECURELY SEALED TO PREVENT INGRESS OF DIRT UNTIL CABLE INSTALLATION AND THEN RESEALED.
3. EACH CONDUIT TO BE FITTED WITH A 6mm BRAID POE POLYETHYLENE DRAW ROPE TO PULL IN HAULAGE ROPE. (MINIMUM BREAKING STRENGTH OF 10kN).
4. ENERGENX MAY NEED TO INSTALL AN EARTH WIRE AND EARTH RODS IN CONDUIT TRENCHES FROM THE SUBSTATION SITE.
5. ELECTRICITY SUPPLY CONDUITS AND CABLES SHALL HAVE POLYMERIC CABLE PROTECTION COVER STRIPS PLACED 100mm ABOVE THE TOP CONDUIT FACE OF THE ELECTRICITY SUPPLY CONDUITS AND CABLES. CABLE PROTECTION COVER STRIP SHALL BE LAPPED WHEN PLACED TOGETHER; 100mm MINIMUM ALONG THE LONGITUDINAL AXIS, 40mm MINIMUM ALONG THE TRAVERSE AXIS. CABLE SHALL EXTEND 40mm MINIMUM PAST THE EXTERNAL EDGES OF THE CONDUIT/CABLE BANK.
6. POLYMERIC CABLE PROTECTION COVER SHALL BE A MINIMUM OF 5mm THICK AS DESCRIBED IN THE AUSTRALIAN STANDARD: AS/4072 FPR POLYMERIC CABLE PROTECTION COVERS.
7. REDUCED CONDUIT SEPARATION MAY BE ACCEPTED TO AVOID SPECIFIC OBSTACLES
8. MIN. DEPTHS SHOWN ARE THOSE DEPTHS REQUIRED BY CODE OF PRACTICE, WORKS (MINOR ROADS) AND DMR (ARTERIAL ROADS).

- (1) Energex Communication conduit to be 100mm white located top kerbside.
- (2) Power cable conduits to be 125mm orange, light duty.
- (3) Separation for conduits - 50mm minimum, up to 160mm desirable.
- (4) Increased cover required for road crossings.
- (5) Select Backfill and Pit sand bedding complying with ENERGEX UDCM Section C2
- (6) For de-rating factors for cables in duct bank, refer to the Plant Rating Manual

The drawing consists of two parts: a Plan view and a Section view.

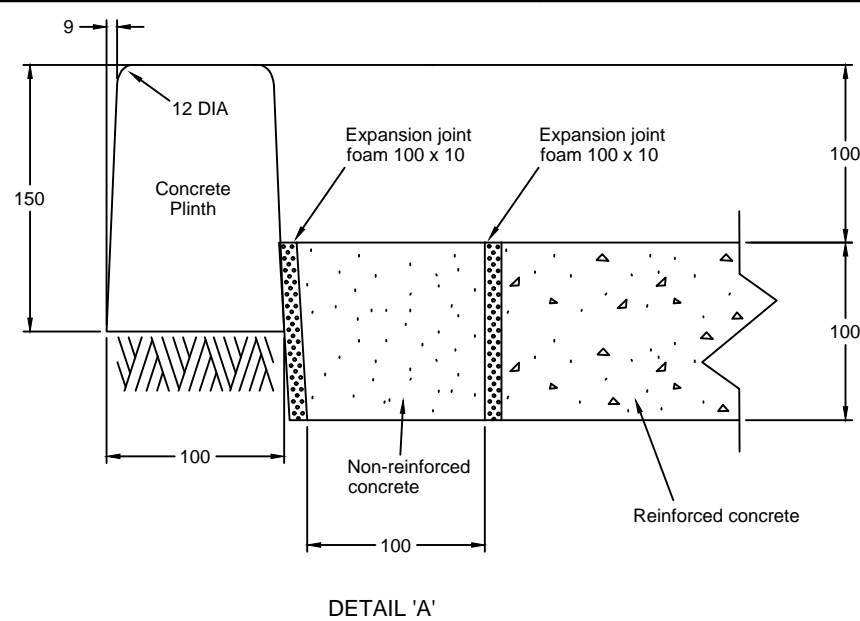
PLAN View:

- Overall dimensions: 5000 (width) x 4800 (depth).
- Alignment: R.P. Street Alignment on the left.
- Plinth: 1300 wide.
- Concrete Edge Beam: Indicated on the right side.
- Reinforced concrete surround slab cast around plinth.
- 100mm x 100mm Expansion joint foam (Abflex or equivalent) and 100mm non-reinforced concrete surround.
- Real Property Boundary (Level Site) on the right.
- Un-reinforced 100/125mm thick concrete slab.
- Labels: FOOTPATH, Fall, PADMOUNT SUBSTATION, and Section markers A-A and B-B.

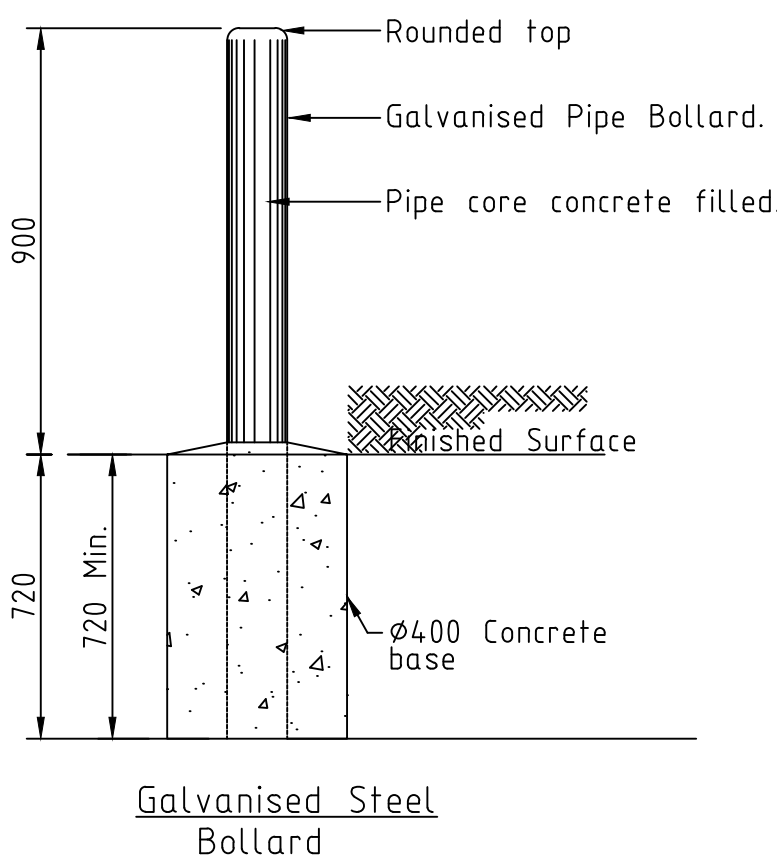
SECTION View (A-A):

- Shows the vertical profile of the substation.
- Labels: Bottom of plinth 50mm below top of concrete surround, Finished Ground Level, Backfill & compact excavated area Refer Note 1, and 150mm wide cover strip under concrete edge beam and over earth grid.

1. Backfill excavated area with crusher dust, deco or bedding material and compact in place. Ensuring that only bedding material is used around cables.
2. Reinforced concrete surround slab:
 - a. 100 / 125mm thick slab;
 - b. M62 mesh reinforcement in centre of slab;
 - c. 25 MPa grade concrete;
 - d. Finish by wood float or by nylon broom.
3. The top face of the concrete surround slab shall be 25mm above the final surface level (when turf is laid)
4. The concrete slab is to slope away from plinth falling at a slope of 1 in 25.
5. Cable apertures through the precast concrete plinth shall be backfilled to 50mm from the top of the plinth, using bedding material.
6. The surface of the surround slab may be finished with a stencil pattern surface to match the surrounding pavements of the development.
(Use textcrete or equivalent product. Construct to supplier's specifications.



1. Backfill excavated area with crusher dust/dec or bedding material and compact in place.
Ensuring that only bedding material is used around cables.
2. Reinforced concrete surround slab:
 - a. 100 / 125mm thick slab;
 - b. F62 mesh reinforcement¹ in centre of slab;
 - c. 25 MPa grade concrete;
 - d. Finish by wood float² or by nylon broom.
3. The top face of the concrete surround slab shall be 25mm above the final surface level (when turf is laid)
4. The concrete slab is to slope away from plinth falling at a slope of 1 in 25.
5. Cable apertures through the precast concrete plinth shall be backfilled to 50mm from the top of the plinth, using bedding material.
6. The surface of the surround slab may be finished with a stencil pattern surface to match the surrounding pavements of the development.
(Use texture or equivalent product. Construct to supplier's specifications.




Bollards shall be installed where padmounts are installed in car parks or other areas where padmounts are likely to be impacted by vehicles. The following outlines the minimum requirement for the design / installation of bollards: -

- Shall be manufactured of 5.6mm thick gal steel (medium)
- Circular tube min 140mm OD filled with concrete and capped.
- Buried 720mm in 400 x 400 x 720(D) concrete pad
- Installed 900mm above ground at 1.5m centers.

1. All materials and construction shall be in accordance with Australian Standards.
2. All concrete shall be minimum grade F'c=25MPa.
3. Galvanised pipe bollards may be painted to match the trim of surrounding dwellings.
4. A bollard will not be required provided a barrier such as a block wall, armco barrier or other permanent structure protects the PMT from vehicle traffic and likely impacts.

ENERGEX ACCEPTANCE

 **energen**

NAME

OFFICE

SIGNED

DATE / /

ENERGEX takes no responsibility for the accuracy of the information provided on this drawing



NOTES

1. EXTENT OF WORKS

THE POWER SUPPLY UPGRADE ELECTRICAL WORKS INCLUDES ESTABLISHING AN ENERGEX PADMOUNT SUBSTATION, A NEW MAIN SWITCHBOARD, NEW SUBMAINS ASSOCIATED UNDERGROUND CABLE ACCESS WAYS AND ASSOCIATED WORKS.

ENERGEX HAVE PROVIDED A CONTRACT WR8122819 – CX24CHE1160333A FOR THE NEW SUBSTATION WHICH HAS BEEN ACCEPTED BY THE COLLEGE.

- THE WORKS IS TO INCLUDE THOUGH ARE NOT LIMITED TO THE FOLLOWING:
- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE ELECTRICAL SERVICES.
 - INSPECTIONS.
 - TESTING AND COMMISSIONING.
 - MAINTENANCE.
 - CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
 - POWER DISTRIBUTION.
 - SHOP DRAWINGS.
 - AS CONSTRUCTED DOCUMENTS.
 - ENERGEX CIVIL WORKS AS DETAILED ON THE ENERGEX APPROVED PADMOUNT SUBSTATION DOCUMENTS.
 - ENERGEX FOOTPATH CONDUITS BY AN ENERGEX APPROVED CIVIL CONTRACTOR.
 - ARRANGING WITH ENERGEX TO INSTALL PADMOUNT SUBSTATION.
 - NEW MAIN SWITCHBOARD / METER PANEL.
 - UNDERGROUND CONSUMERS MAINS.
 - UNDERGROUND SUBMAINS.
 - PENETRATIONS AS REQUIRED. ALL NEW PENETRATIONS INTO A BUILDING AND EXISTING PENETRATIONS INTO BUILDINGS THAT BECOME EXPOSED OR INTERFERED WITH DURING THE WORKS ARE TO BE MADE WATERPROOF.
 - UNDERGROUND PITS AND CONDUITS.
 - CABLE ACCESS AND SUPPORT SYSTEMS AS NECESSARY.
 - CIVIL, STRUCTURAL AND BUILDING WORKS ASSOCIATED WITH THE ELECTRICAL SERVICES INSTALLATION.
 - BORED CONDUITS AND VACUUM EXCAVATION AS REQUIRED.
 - ARRANGE THE COLLEGES ELECTRICITY RETAILER AND ENERGEX TO HAVE THE 800 AMP FUSES INSTALLED AND THE NEW PADMOUNT SUBSTATION CONNECTED TO SUPPLY THE COLLEGE.
 - REMOVAL OF THE EXISTING OVERHEAD ENERGEX SUPPLY, CONSUMERS MAINS, MSB, RETAIL METERING, MEN LINK, EARTH STAKE AND ASSOCIATED CABLING.
 - REMOVAL OF THE EXISTING ELECTRICAL SERVICES THAT BECOME REDUNDANT.
 - NEGOTIATION AND COORDINATION WITH ENERGEX AND THE CLUBS ELECTRICITY RETAILER FOR THE UPGRADED SUPPLY AND METERING.
 - TEMPORARY WORKS.
 - SWITCHBOARDS
 - CIRCUITS AND OUTLETS.
 - ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE ELECTRICAL SERVICES INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

AS PART OF THE TENDER PROVIDE A PROGRAM FOR EACH OPTION INCLUDING ANY INTERRUPTIONS TO THE POWER SUPPLY AND THE DURATION OF ANY SUCH INTERRUPTION.

PRIOR TO COMMENCING WORK CONSULT SITE MANAGEMENT FOR ANY HAZARDOUS MATERIAL AND OR ASBESTOS REGISTERS AS WELL AS UNDERTAKE A THOROUGH INSPECTION OF THE SITE TO IDENTIFY ANY POTENTIAL HAZARDOUS MATERIALS, ASBESTOS AND HEALTH OR SAFETY RISKS. ADVISE THE CONTRACTOR OF ANY POTENTIAL HAZARDOUS MATERIALS, ASBESTOS AND HEALTH OR SAFETY RISKS IF IDENTIFIED AND DO NOT COMMENCE WORK UNTIL AN APPROPRIATE MANAGEMENT PLAN HAS BEEN DEVELOPED AND AGREED TO BY ALL PARTIES.

IDENTIFY ALL EXISTING UNDERGROUND SERVICES WITHIN THE SCOPE OF THE WORKS PRIOR TO UNDERTAKING ANY EXCAVATION. SUPPLY ALL LABOUR, MATERIALS, EQUIPMENT, AND ALL OTHER ITEMS, WHETHER MENTIONED IN DETAIL OR NOT, REQUIRED FOR THE SATISFACTORY COMPLETION OF THE ELECTRICAL SERVICES INSTALLATION, LEAVING IN FULL WORKING ORDER TO THE SATISFACTION OF THE PROJECT MANAGER.

ACCEPT FULL RESPONSIBILITY FOR LIASING, ARRANGING AND CO-ORDINATION OF ALL WORKS THAT HAVE AN EFFECT ON OR WILL BE AFFECTED BY THE ELECTRICAL SERVICES.

2. WORKMANSHIP

ENSURE THAT THE ELECTRICAL WORK IS PERFORMED BY THE HOLDER OF A CURRENT ELECTRICAL SUB CONTRACTOR LICENSE AND THE SERVICES COVERED BY THE ACMA IS PERFORMED BY THE HOLDER OF THE APPROPRIATE CURRENT ACMA LICENSE. ENSURE THE INSTALLATION AND ALL COMPONENTS, FIXTURES, FITTINGS, OUTLETS AND CABLES ARE SUPPLIED AND INSTALLED TO A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS. ENSURE ALL MATERIALS AND COMPONENTS OF A SIMILAR TYPE ARE OF THE SAME MANUFACTURER AND INSTALLED IN A UNIFORM MANNER.

IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE INSTALLATION IS FIT FOR PURPOSE AND IS PROVIDED AS A COMPLETE WORKING INSTALLATION. IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL COMPONENTS, FITTINGS, FIXTURES, SYSTEMS, PROGRAMMING ETC IRRESPECTIVE OF THE LEVEL DETAILED IN THE DOCUMENTS SUCH THAT THE INSTALLATION IS PROVIDED AS A COMPLETE WORKING INSTALLATION.

CONCEAL ALL WIRING AND CONDUITS. EXPOSED CABLING OR CONDUITS ARE GENERALLY NOT ACCEPTABLE. IT IS NOTED THAT CHASING AND REINSTATEMENT WILL BE REQUIRED. ENSURE ALL COMPONENTS, EQUIPMENT AND MATERIALS SUPPLIED ARE NEW, UNUSED, DESIGNED AND SELECTED TO ENSURE SATISFACTORY OPERATION UNDER VARYING ATMOSPHERIC, CLIMATIC, HUMID TROPICAL CONDITIONS WITHOUT DISTORTION AND DETERIORATION IN ANY PART AFFECTING EFFICIENCY AND RELIABILITY OF THE SYSTEMS. DESIGN AND SELECT ALL EQUIPMENT TO PROVIDE THE NECESSARY SAFETY TO HUMAN LIFE AND PROPERTY DURING OPERATION AND MAINTENANCE WITH PARTICULAR ATTENTION GIVEN TO ELECTRICAL SAFETY AND SEGREGATION PRECAUTIONS.

CHECK THE FINISHED PAINTWORK AROUND THE AREA OF EACH INSTALLATION AND TOUCH UP ALL DAMAGED PARTS AND FINISHES AFTER THE INSTALLATION OF THE ELECTRICAL SERVICES.

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE CONTRACT PROGRAM. ENSURE ALL FINAL LOCATIONS OF OUTLETS AND FITTINGS ARE CO-ORDINATED ONSITE WITH THE ARCHITECT AND ALL OTHER SERVICES, TO THE APPROVAL OF THE PROJECT MANAGER. ALLOW TO CO-ORDINATE THE FINAL LOCATION OF ALL EQUIPMENT, FITTINGS, & OUTLETS, SUCH THAT THEY ARE INSTALLED IN ACCORDANCE WITH THE AS3000 RESTRICTED ZONES, AND ARE NOT COVERED INAPPROPRIATELY.

ENSURE THAT ALL METAL SURFACES ARE SUITABLY PROTECTED AGAINST CORROSION, AND THAT ALL PLASTIC MATERIALS ARE UV STABILISED.

PROVIDE ALL MATERIALS AS NEW, AND OF THE HIGHEST CLASS AVAILABLE FOR THEIR RESPECTIVE TYPES. ENSURE ALL ASPECTS OF THE WORK ARE OF A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS.

NOTES

3. STANDARDS

IRRESPECTIVE OF INFORMATION CONTAINED IN THE ELECTRICAL SERVICES DOCUMENTS OR IN INSTRUCTIONS, IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL ELECTRICAL SERVICES WORKS ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE ELECTRICAL SERVICES DOCUMENTS AND INSTRUCTIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO THE PLACING OF ORDERS, FABRICATION OR INSTALLATION OF THE ITEMS/METHODS IN DISCREPANCY.

- NCC BUILDING CODE OF AUSTRALIA.
- ELECTRICITY ACT.
- ELECTRICAL SAFETY ACT.
- ENERGEX REQUIREMENTS.
- THE QUEENSLAND ELECTRICITY CONNECTION MANUAL V4 (QECM).
- NATIONAL METERING INSTALLATION REGULATIONS (NMIR).
- AS/NZS3000.
- AS3008.
- WORKPLACE HEALTH AND SAFETY ACT.
- TELECOMMUNICATIONS ACT.
- ACMA REQUIREMENTS.

4. AUTHORITIES

ENSURE ALL OF THE ELECTRICAL SERVICES COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AUTHORITIES HAVING JURISDICTION OVER THE SITE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- ACMA.
- LOCAL COUNCIL.
- LOCAL SUPPLY AUTHORITY.
- STATE GOVERNMENT DEPARTMENT OF ENVIRONMENT AND HERITAGE.
- QLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.
- QLD FIRE DEPARTMENT.

ARRANGE WITH ENERGEX TO INSPECT AND APPROVE THE ENERGEX FOOTPATH CONDUITS AND THE SUBSTATION SITE AT LEAST SIX WEEKS PRIOR TO THE SUPPLY HAVING TO BE ENERGISED.

5. POWER DISTRIBUTION

THE POWER DISTRIBUTION WORKS ARE TO INCLUDE THOUGH NOT BE LIMITED TO THE FOLLOWING:

- ALL SWITCHGEAR TO BE OF THE SAME MANUFACTURER FROM NHP/ TERASAKI OR SCHNEIDER.
- PROVIDE A NEW MSB WITH A NEW UNDERGROUND POWER SUPPLY FUSED AT 800AMPS BY ENERGEX FROM THE NEW ENERGEX PADMOUNT SUBSTATION.
- DISCONNECT THE EXISTING DB-R SUBMAIN FROM THE EXISTING MSB AND RESUPPLY IT FROM THE NEW MSB VIA THE EXISTING AND NEW UNDERGROUND PIT AND CONDUIT SYSTEMS.
- DISCONNECT AND REMOVE THE EXISTING DB-H AND DB-G SUBMAINS FROM THE EXISTING MDB. PROVIDE DB-G AND DB-H WITH NEW SUBMAINS SUPPLIED FROM THE NEW MSB VIA THE EXISTING AND NEW UNDERGROUND PIT AND CONDUIT SYSTEMS.
- REMOVE THE EXISTING CIRCUITS FROM THE EXISTING DB-M (INTEGRAL TO THE EXISTING MSB) AND RESUPPLY THEM FROM THE EXISTING MDB. PROVIDE NEW SWITCHGEAR AND CONTROLS AS NECESSARY TO FACILITATE THE CONNECTION OF THE RELOCATED CIRCUITS TO THE MDB. THE SWITCHGEAR AND CONTROLS ARE TO MATCH THE EXISTING IN CAPACITY AND FUNCTION.
- DISCONNECT AND REMOVE THE EXISTING MDB SUBMAIN FROM THE EXISTING MSB. PROVIDE THE MDB WITH A NEW SUBMAIN SUPPLIED FROM THE NEW MSB VIA THE NEW UNDERGROUND PIT AND CONDUIT SYSTEM.
- REPLACE THE EXISTING DB-H AND DB-G MAIN SWITCHES WITH NEW 160AMP NON-AUTO LOAD BREAK MAIN SWITCHES.
- REMOVE THE EXISTING MSB AND ALL ASSOCIATED CABLING.
- REPLACE ALL OF THE EXISTING SWITCHBOARD NAME LABELS WITH NEW SCREW FIXED ENGRAVED TRAFFOLYTE LABELS WITH 10MM HIGH TEXT USING THE DESIGNATIONS CONTAINED WITHIN THE CONTRACT DOCUMENTATION.

THE SUPPLY TO THE COLLEGE MUST BE MAINTAINED AT ALL TIMES FROM 6.00AM UNTIL 10.00PM. ANY INTERRUPTION TO ANY POWER SUPPLY MUST BE LIMITED BETWEEN 10.00PM AND 6.00AM WITH THE COLLEGE NOTIFIED IN WRITING 2 WEEK PRIOR. THE ENERGEX COSTS ASSOCIATED WITH MEETING THIS TIME FRAME CAN BE PASSED ONTO THE COLLEGE FOR PAYMENT BY THE COLLEGE.

ENSURE ALL THREE PHASE CIRCUITS ARE PROVIDED WITH CORRECT PHASE ROTATION.

6. SWITCHBOARD

PROVIDE THE NEW MSB AS / WITH:

- RATED AT 1,000 AMPS.
- A FRONT SECTION FACING THE ROAD AS PER THE QECM V4 REQUIREMENTS.
- A REAR SECTION FACING THE COLLEGE CONTAINING THE DISTRIBUTION CHASSIS. - SHOP DRAWINGS FOR APPROVAL.
- PLINTH MOUNTED.
- 316 STAINLESS STEEL.
- LIGHT GREY ENCLOSURE.
- WHITE ESCUTCHEONS WITH LIFT OFF HINGES AND 1/4 TURN LATCHES TO SECURE THE ESCUTCHEON THAT REMAIN PART OF THE ESCUTCHEON.
- DOORS ON ALL CUBICLES.
- IP66.
- BOTTOM ENTRY ONLY. THE TOP OF THE SWITCHBOARD IS TO BE WELDED SEALED WITHOUT ANY PENETRATIONS.
- DESIGN THE SWITCHBOARD TO OPERATE IN 40 DEG AMBIENT.
- ENERGEX PADLOCK ON THE METER CUBICAL.
- 3 POINT LOCKABLE HANDLES ON ALL NON-METER CUBICAL DOORS WITH 92268 KEYING.
- TWO ENERGEX PADLOCK KEYS AND TWO 92268 KEYS.
- FORM 2B
- ENSURE ALL CABLE CONNECTIONS CAN BE THERMALLY SCANNED WITHOUT ISOLATING THE POWER.
- EACH CUBICAL CONTAINING SWITCHGEAR IS TO CONTAIN AN AUTOMATIC TEMPERATURE CONTROLLED ANTI CONDENSATION HEATER.
- RETAIL METERING.
- PRIVATE MAXIMUM DEMAND INDICATORS (MDI).
- 600 WIDE X 600 HIGH EMPTY COMPARTMENT WITH A REMOVABLE WHITE MOUNTING PAN FOR USE BY THE SOLAR INSTALLER.

NOTES

7. CABLE ACCESS

PROVIDE ALL CABLE ACCESS NECESSARY TO COMPLETE THE ELECTRICAL INSTALLATION INCLUDING THOUGH NOT LIMITED TO:

- UNDERGROUND PITS AND CONDUITS.
- CABLE TRAYS AND CABLE LADDERS.
- BUILDING PENETRATIONS AND ASSOCIATED WATERPROOFING.
- REMOVAL OF HARD STAND VIA SAW CUTTING SQUARE TO THE EXISTING JOINS.
- TRENCHING AND EXCAVATION INCLUDING BEDDING SAND.
- BORING.
- REMOVAL OF SPILL.
- CLEAN-UP OF ALL AREAS IMPACTED BY THE WORKS BACK TO THE ORIGINAL CONDITION.
- BACKFILLING, COMPACTION AND REINSTATEMENT ALL ALL EXCAVATIONS TO THE ORIGINAL FINISH.
- SOFTSCAPE WILL BE UNDERTAKEN BY THE COLLEGE.


PIT1. PROVIDE PIT 1 AS A REINFORCED CONCRETE CAST INSITU PIT / TRENCH BELOW MSB AS PER THE MSB SECTION DETAIL. AS PART OF THE ELECTRICAL WORKS PROVIDE THE PIT, THE LID SUPPORT SYSTEM AND THE TRENCH LIDS. PROVIDE THE PIT LIDS AND STRUCTURAL SUPPORT SYSTEM AS HOT DIPPED GALVANISED STEEL. PROVIDE THE TRENCH LIDS WITH LIFTING HOLES CHECKER PLATE R10 ANTI SLIP PATTERNING WITH EACH PART NO HEAVIER THAN 20 kg. FIX THE LIDS IN PLACE SUCH THAT A TOOL IS REQUIRED TO REMOVE THEM. PROVIDE THE PIT WITH A 90DIA GRAVITY DRAIN TO THE STORMWATER SYSTEM. PROVIDE FIBRE GLASS CABLE SUPPORTS WITHIN THE PIT TO ENSURE THAT THERE ARE NO CABLES WITHIN 50MM OF THE PIT FLOOR. THE PIT AND THE LID SUPPORT SYSTEM ARE TO BE DESIGNED AND CERTIFIED BY A RPEQ STRUCTURAL ENGINEER AND DRAWINGS OF SUCH ARE TO BE SUBMITTED FOR APPROVAL.

PIT 2. PROVIDE PIT 2 WITH INTERNAL DIMENSIONS AT LEAST 900 X 900 X 900. PIT 2 IS TO BE REINFORCED CONCRETE CAST INSITU OR PLASTIC WITH A REINFORCED CONCRETE 200 WIDE X 200 DEEP COLLAR. AS PART OF THE ELECTRICAL WORKS PROVIDE THE PIT, THE LID SUPPORT SYSTEM AND THE TRENCH LIDS. PROVIDE THE PIT LID AND LID SUPPORT SYSTEM AS HOT DIPPED GALVANISED STEEL. PROVIDE THE LID IN SECTIONS WITH LIFTING HOLES FABRICATED FROM CHECKER PLATE R10 ANTI SLIP PATTERNING WITH EACH SECTION NO HEAVIER THAN 20 kg. FIX THE LIDS IN PLACE SUCH THAT A TOOL IS REQUIRED TO REMOVE THEM. PROVIDE DRAWINGS OF THE PIT AND LID FOR APPROVAL.

PIT 3. PROVIDE PIT 3 AS A PLASTIC PIT WITH INTERNAL DIMENSIONS AT LEAST 710 X 710 X 900 WITH A REINFORCED CONCRETE 200 WIDE X 200 DEEP COLLAR. PROVIDE THE PIT LID AND LID SUPPORT SYSTEM AS HOT DIPPED GALVANISED STEEL WITH AN R10 ANTI SLIP PATTERNING.

SEAL ALL CONDUITS TO THE PIT WALLS TO PREVENT EARTH AND MOISTURE FROM ENTERING THE PITS AROUND THE OUTSIDE OF THE CONDUITS.

PROVIDE ALL CONDUITS ENTERING A PIT WITH BELL MOUTHS OR CUT THE CONDUITS OFF FLUSH WITH THE PIT WALL AND FILE THE CONDUIT EDGES SUCH THAT THEY ARE ROUNDED WITH NO SHARP EDGES OR BURRS.

<div><div><div>ELECTRICAL DESIGN GROUP BRISBANE PTY LTD ACN 092 710 793</div><div>TRADING AS: ELECTRICAL DESIGN GROUP</div></div><div><div>THE COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF THE ELECTRICAL DESIGN GROUP.</div><div>USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.</div><div>ALL DIMENSIONS TO BE VERIFIED ONSITE.</div></div></div>			<div><div><div><div></div><div>ELECTRICAL DESIGN GROUP</div></div><div><div>ELECTRICALBUILDINGSERVICESCONSULTANTS</div><div>BRISBANEGOLD COAST</div></div></div><div><div>P.O.Box 15, Sherwood Q.4075 Phone: (07) 3278 4375 Email: brisbane@edg.net.au Web: www.edg.net.au</div></div></div>	<div>PROJECT: OUR LADY'S COLLEGE, ANNERLEY POWER SUPPLY UPGRADE</div> <div>15 CHESTER ROAD, ANNERLEY</div>		<div><div><div><div>A</div><div>TENDER</div></div><div><div>REV:</div><div>DESCRIPTION:</div></div></div><div>06/02/2025</div><div>DATE:</div></div> <div><div>DRAWING: ELECTRICAL SERVICES NOTES</div><div><div>SCALE: NOT TO SCALE</div><div>AT A1</div></div><div><div>PROJECT NO: C3219a</div><div>DRAWING NO: E07</div></div><div>REVISION: A</div></div>
--	--	--	---	--	--	--