ELECTRICAL SYMBOLS

CIRCUIT BREAKER

xxxA / yyyA — EARTH LEAKAGE CIRCUIT BREAKER

xxxA / yyyA — xxxA = REQUIRE CIRCUIT RATING; yyyA = MAXIMUM REQUIRED SETTABLE CIRCUIT RATING

ON LOAD ISOLATOR

EM — EMERGENCY LIGHTING TEST FACILITY

KWh — KILOWATT HOUR METER

TRANSFER SWITCH - CB TYPE WITH MECHANICAL INTERLOCK

SINGLE PHASE CONDUCTOR

THREE PHASE CONDUCTOR

SPARE SPACE (SINGLE PHASE)

SPARE SPACE (THREE PHASE)

SPARE SPACE (NON)

SURGE DIVERTER

T — CABLE TAKE OFF BOX

CURRENT TRANSFORMER

LINK

TRANSFORMER - GENERIC

G — GENERATOR AC

TS / PE — PHOTO ELECTRIC CELL WITH TIMER SHUTOFF

SWITCHBOARD

SWITCHBOARD BY OTHERS

ELECTRICAL EQUIPMENT GENERAL

INVERTER

POLE MOUNTED LUMINAIRE

EP — ELECTRICAL PIT (SQUARE)

CORE HOLE/S FOR SUBMAIN RETICULATION

INV — INVERTER (GENERAL ARRANGEMENT)

COMMUNICATIONS SYMBOLS

CP — COMMUNICATIONS PIT (SQUARE)

SP — SECURITY PIT (SQUARE)

CC — COMMUNICATIONS RACK.

TO — TELECOMMUNICATIONS OUTLETS FOR BUILDING SERVICES

OPTICAL FIBRE

CAT6A STRUCTURED CABLE

EXISTNG EQUIPMENT/ SERVICE TO BE RETAINED IN CURRENT LOCATION.

SLAB PENETRATION FOR STRUCTURED CABLING RETICULATION

CONDUIT EMBEDDED IN BUILDING FABRIC FOR STRUCTURED CABLING

PHASING

CONTAINMENT	FIXTURES / FITTINGS	
		DENOTES EXISTING ELECTRICAL SERVICES TO REMAIN
	D / D	DENOTES EXISTING ELECTRICAL SERVICES TO BE DEMOLISHED OR RELOCATED
	R / R	DENOTES EXISTING ELECTRICAL SERVICES RELOCATED POSITION

LINETYPE FOR RELOCATED OR NEW CABLETRAY/CONDUIT DETERMINED BY SYSTEM TYPE.

CONDUIT

1/E	LOW VOLTAGE ELECTRICAL CONDUIT
1/C	COMMUNICATION CONDUIT
1/S	SECURITY CONDUIT

CONDUIT, SIZE AS INDICATED
1: INDICATES NUMBER OF CONDUITS
E: INDICATES ELECTRICAL CONDUIT
C: INDICATES COMMUNICATIONS CONDUIT
S: INDICATES SECURITY CONDUIT

COLOURS ABOVE ARE INDICATIVE OF NEW SERVICE CONDUIT. WHERE CONDUIT IS EXISTING AND TO REMAIN, EXISTING AND TO BE DEMOLISHED OR EXISTING AND TO BE RELOCATED, COLOURS ARE AS PER PHASING SECTION OF LEGEND.

CABLE TRAY

300 ECT	POWER CABLE TRAY
300 CCT	COMMUNICATIONS CABLE TRAY
	POWER VERTICAL CABLE TRAY
	COMMUNICATIONS VERTICAL CABLE TRAY

EXAMPLE - 300 ECT

- 300 DENOTES WIDTH
- E DENOTES SERVICE TYPE
  E = POWER
  C = COMMUNICATIONS
  S = SECURITY
  B = BMS
- CT DENOTES CABLE CONTAINMENT TYPE
  CT = CABLE TRAY
  CL = CABLE LADDER
  CB = CABLE BASKET

GENERAL NOTES

- ALL DIMENSIONS ARE IN MILLIMETERS.
- ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SERVICES SPECIFICATIONS.
- DO NOT SCALE FOR SIZING. REFER TO ARCHITECTURAL, MANUFACTURERS DOCUMENTATION AND SPECIFICATION FOR EXACT MEASUREMENTS.
- CONTRACTOR TO CONDUCT FULL SITE SURVEY TO CONFIRM EXACT LOCATIONS OF ALL EXISTING ELECTRICAL SERVICES AND EQUIPMENT.
- ALL WORKS ARE NEW UNLESS NOTED OTHERWISE.
- EACH CAPTIVE SCREW OUT SHALL BE ON A DEDICATED CIRCUIT. EACH PAIR OF OUTLETS PROVIDED TO A RACK SHALL BE ON THE SAME PHASE.
- THE CONTRACTOR IS TO REFER TO THE SSU BRIEF FOR THE SECURITY SCOPE AND TECHNICAL REQUIREMENTS.
- ALL NEW DATA CABLING IS TO MEET THE DoE STRUCTURED CABLING SYSTEM SPECIFICATION v1.4.
- THE CONTRACTOR IS TO REFER TO THE NSW PUBLIC SCHOOLS - AUDIO-VISUAL STANDARDS FOR SCHOOL LEARNING DISPLAYS FOR AV SCOPE AND TECHNICAL REQUIREMENTS.
- THE CONTRACTOR IS TO ALLOW TO MAKE GOOD WHERE DEMOLITION OF EXISTING SERVICES OCCURS.

ABBREVIATIONS

ATS	AUTOMATIC TRANSFER SWITCH
DGPO	DOUBLE GENERAL POWER OUTLET
DTO	DOUBLE TELECOMMUNICATIONS OUTLET
GPO	GENERAL POWER OUTLET (SINGLE)
LED	LIGHT EMITTING DIODE
RU	RACK UNIT
STO	SINGLE TELECOMMUNICATIONS OUTLET
TO	TELECOMMUNICATIONS OUTLET
WP	WEATHER PROOF

NSW GOVERNMENT Education School Infrastruture

SCHOOL INFRASTRUCTURE NEW SOUTH WALES
www.schoolinfrastructure.nsw.gov.au

SERVICES CONSULTANTS
NDY A TETRA TECH COMPANY
LEVEL 13, 90 ARTHUR ST
NORTH SYDNEY NSW 2060
AUSTRALIA
T +61 2 9928 6800
F +61 2 9955 6900
www.ndy.com

ARCHITECT
fulton trotter
SUITE 904, LEVEL 9, 28-36 FOVEAUX STREET
SURRY HILLS, Sydney NSW 2010 Australia
T +61 2 8383 5151 W www.fultontrotter.com.au

PROJECT MANAGER
RP INFRASTRUCTURE
Converting visions to reality

KEY PLAN

REV	BY	DATE	DESCRIPTION
1	PS	11/10/2024	CONCEPT DESIGN
2	PS	28/10/2024	CONCEPT DESIGN
3	PS	29/10/2024	CONCEPT DESIGN
4	PS	12/11/2024	CONCEPT DESIGN
5	PS	06/12/2024	SCHEMATIC DESIGN
6	PS	17/01/2025	SCHEMATIC DESIGN
7	PS	28/02/2025	SCHEMATIC DESIGN

PROJECT NAME
SINSW - VINCENTIA HIGH SCHOOL UPGRADE
142 THE WOOL RD, VINCENTIA NSW 2540

DRAWING TITLE
ELECTRICAL SERVICES
LEGEND & GENERAL NOTES

PROJECT NO.
758-0120.0041159.0001

STATUS
SCHEMATIC DESIGN

DRW	CHK	APP	DATE	SCALE
PS	PD	PL	28/02/2025	1 : 100 @A1

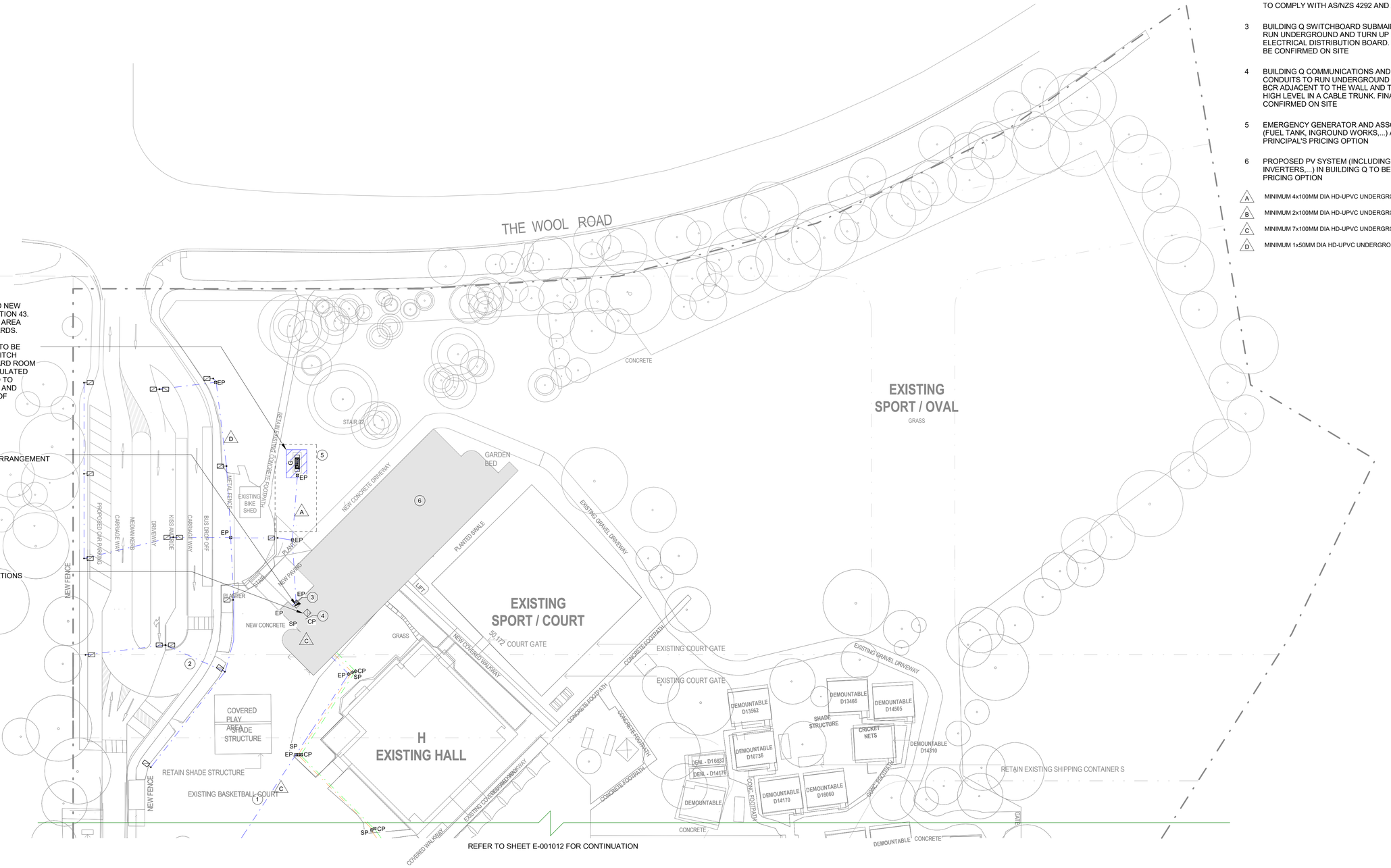
DRAWING NO.
VHS-NDY-XX-XX-DR-E-000001

REV
7

GENERATOR
(PROPOSED NEW)
TO SUPPLY EMERGENCY POWER TO PROPOSED NEW BUILDING AS REQUIRED UNDER NCC SPECIFICATION 43. GENERATOR TO BE ENCLOSED WITHIN FENCED AREA WITH TWO LOCKING GATES THAT OPEN OUTWARDS. GATES ARE TO BE NO LESS THAN 2000 WIDE TO FACILITATE INSTALLATION AND MAINTENANCE. TO BE CONNECTED TO AN AUTOMATIC TRANSFER SWITCH LOCATED IN GROUND LEVEL DISTRIBUTION BOARD ROOM OF PROPOSED NEW BUILDING VIA CABLE RETICULATED USING INGROUND CONDUIT. GENERATOR SIZED TO PROVIDE 150kW EMERGENCY STANDBY POWER AND INCLUDE DAY TANK SIZED TO ALLOW 7 HOURS OF OPERATION AT REQUIRED LOAD.

DISTRIBUTION BOARD (DB)
(PROPOSED NEW)
SEE BLOCK P POWER AND COMMUNICATIONS ARRANGEMENT FOR DETAILS.

BUILDING COMMUNICATIONS ROOM (BCR)
(PROPOSED NEW)
SEE BLOCK P LEVEL 1 POWER AND COMMUNICATIONS ARRANGEMENT FOR DETAILS.



REFER TO SHEET E-001012 FOR CONTINUATION

No.	DESCRIPTION
1	RETICULATION OF NEW SUB-MAINS USING IN-GROUND CONDUIT WITH CABLE PITS EVERY 50M OR WHEN A CHANGE IN DIRECTION OCCURS. SUB-MAIN TO CONNECT NEW MSB AND GROUND FLOOR DISTRIBUTION BOARD OF NEW PROPOSED BUILDING.
2	INDICATIVE IN-GROUND CONDUIT PATHWAYS TO SUPPORT EXTERNAL PATHWAY LIGHTING. LOCATION AND QUANTITIES OF EXTERNAL POLE TOP LUMINAIRES IS INDICATIVE AND SHALL BE DEVELOPED FURTHER IN DETAILED DESIGN PHASE. LUMINAIRE ARRANGEMENT IS TO COMPLY WITH AS/NZS 4292 AND AS/NZS 1158.
3	BUILDING Q SWITCHBOARD SUBMAINS CONDUITS TO RUN UNDERGROUND AND TURN UP UNDER THE ELECTRICAL DISTRIBUTION BOARD. FINAL LOCATION TO BE CONFIRMED ON SITE
4	BUILDING Q COMMUNICATIONS AND SECURITY CONDUITS TO RUN UNDERGROUND AND TURN UP IN THE BCR ADJACENT TO THE WALL AND TRANSFER UP TO HIGH LEVEL IN A CABLE TRUNK. FINAL LOCATION TO BE CONFIRMED ON SITE
5	EMERGENCY GENERATOR AND ASSOCIATED WORKS (FUEL TANK, INGROUND WORKS,...) ARE TO BE UNDER PRINCIPAL'S PRICING OPTION
6	PROPOSED PV SYSTEM (INCLUDING PV MODULES, INVERTERS,...) IN BUILDING Q TO BE UNDER PRINCIPAL'S PRICING OPTION
A	MINIMUM 4x100MM DIA HD-UPVC UNDERGROUND CONDUIT
B	MINIMUM 2x100MM DIA HD-UPVC UNDERGROUND CONDUIT
C	MINIMUM 7x100MM DIA HD-UPVC UNDERGROUND CONDUIT
D	MINIMUM 1x50MM DIA HD-UPVC UNDERGROUND CONDUIT

Education
School Infrastruture
NSW GOVERNMENT

SCHOOL INFRASTRUCTURE NEW SOUTH WALES
www.schoolinfrastructure.nsw.gov.au

0 5 10 20 30 40m
1 : 500 @ A1

SERVICES CONSULTANTS
NDY
A TETRA TECH COMPANY
LEVEL 13, 90 ARTHUR ST
NORTH SYDNEY NSW 2060
AUSTRALIA
T +61 2 9928 6800
F +61 2 9955 6900
www.ndy.com

ARCHITECT
fulton trotter
SUITE 904, LEVEL 9, 28-36 FOVEAUX STREET
SURRY HILLS, Sydney NSW 2010 Australia
T +61 2 8383 5151 W www.fultontrotter.com.au

PROJECT MANAGER
RP INFRASTRUCTURE
Converting visions to reality

KEY PLAN

NORTH

REV	BY	DATE	DESCRIPTION
1	PS	11/10/2024	CONCEPT DESIGN
2	PS	28/10/2024	CONCEPT DESIGN
3	PS	29/10/2024	CONCEPT DESIGN
4	PS	12/11/2024	CONCEPT DESIGN
5	PS	06/12/2024	SCHEMATIC DESIGN
6	PS	17/01/2025	SCHEMATIC DESIGN
7	PS	28/02/2025	SCHEMATIC DESIGN
8	PS	01/04/2025	SCHEMATIC DESIGN

PROJECT NAME
SINSW - VINCENTIA HIGH SCHOOL UPGRADE
142 THE WOOL RD, VINCENTIA NSW 2540
SITE

DRAWING TITLE
ELECTRICAL SERVICES
SITE PLAN SHEET 1 OF 2

PROJECT NO.
758-0120.0041159.0001

STATUS
SCHEMATIC DESIGN

DRW	CHK	APP	DATE	SCALE
PS	PD	PL	01/04/2025	1 : 500 @A1

DRAWING NO.
VHS-NDY-00-00-DR-E-001011

REV
8

MAIN SWITCHBOARD (MSB)
(EXISTING - TO BE MODIFIED)
EXISTING MAIN SWITCHBOARD TO REMAIN AND BE BACK FED FROM NEW MAIN SWITCHBOARD.

SUBSTATION 1MVA
(PROPOSED NEW)
A NEW SUBSTATION IS PROPOSED TO BE BUILT IN THE LOCATION INDICATED. A CONNECTION OFFER FROM ENDEAVOUR ENERGY HAS BEEN RECEIVED FOR A LOAD CAPACITY OF 1276 A/PHASE EXISTING ARTWORK NEAR LOCATION OF PROPOSED NEW SUBSTATION IS TO BE PROTECTED AND RETAINED. ADJACENT VEGETATION IS TO BE PRUNED TO ALLOW SUFFICIENT CLEARANCE AROUND SUBSTATION.

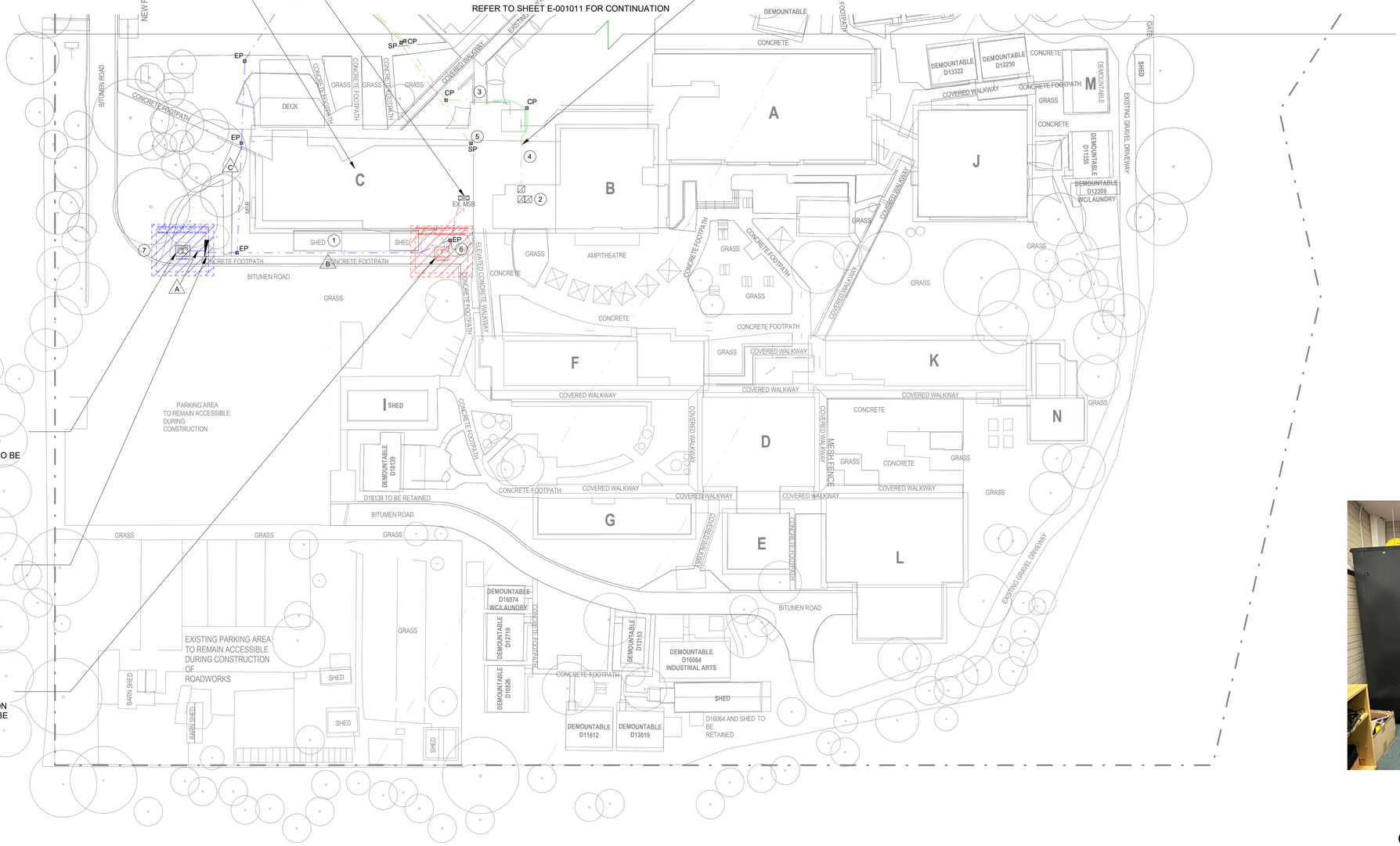
MAIN SWITCHBOARD (MSB)
(PROPOSED NEW)
A NEW EXTERNAL MSB IS TO BE INSTALLED IN THE INDICATED LOCATION WITH FRONT FACING AWAY FROM PEDESTRIAN PATHWAY. NEW CONSUMER MAINS TO CONNECT TO PROPOSED NEW SUBSTATION. CONCRETE SLAB TO BE INSTALED TO PROVIDE FLAT SURFACE FOR MSB AND 1400 mm IN FRONT OF MSB.

SUBSTATION 315 kVA
(EXISTING - TO BE DEMOLISHED)
INDICATIVE LOCATION. SUBSTATION IS TO BE DISCONNECTED AND REMOVED FOLLOWING THE INSTALLATION OF THE PROPOSED NEW SUBSTATION. EXISTING CABLES BETWEEN PROPOSED NEW SUBSTATION AND EXISTING SUBSTATION TO BE DEMOLISHED ARE TO BE REMOVED AND AND CONDUIT ABANDONED IN GROUND.

EXISTING INTEGRITI SECURITY HEADEND LOCATED IN C BLOCK, ROOM CR0023.

STRUCTURED CABLING CONNECTING EXISTING MCR TO PROPOSED NEW BUILDING BCR TO BE RETICULATED USING SURFACE MOUNTED CONDUIT AT HIGH LEVEL THROUGH BCR AND EXTERNAL MOVEMENT AREA. CONDUIT TO DESCEND ON OUTSIDE OF LIFT SHAFT AND ENTER COMMUNICATIONS PIT LOCATED ADJACENT THE BUILDING

REFER TO SHEET E-001011 FOR CONTINUATION



No.	DESCRIPTION
1	NEW SUBMAINS TO BE RETICULATED BETWEEN NEW MSB AND EXISTING MSB. IN-GROUND CONDUIT WITH CABLE PITS EVERY 50M OR WHEN CHANGE IN DIRECTION OCCURS.
2	INDICATIVE LOCATION OF EXISTING MAIN COMMUNICATIONS ROOM. INCLUDES EXISTING CCTV NETWORK VIDEO RECORDER.
3	PROPOSED RETICULATION PATH OF COMMUNICATIONS AND SECURITY CABLE FROM EXISTING MCR AND SECURITY HEADEND TO BCR IN PROPOSED NEW BLOCK. COMMUNICATIONS CABLE PIT ADJACENT TO BLOCK B TO BE P8 TYPE. COMMUNICATIONS CABLE PIT ADJACENT TO PROPOSED NEW BLOCK TO BE P5 TYPE. COMMUNICATIONS CONDUIT IS TO CONSIST OF MINIMUM 2x 100mm DIAMETER. OTHER COMMUNICATIONS PITS ALONG CONDUIT RETICULATION PATH TO BE P6 TYPE. ALL COMMUNICATION CABLE PITS USED ARE TO HAVE CONCRETE LIDS. NEW SECURITY CONDUIT IS TO CONSIST OF MINIMUM 2x 50mm CONDUIT. SECURITY CABLE PITS TO BE SIZED BASED ON SITE CONDITIONS AND MANUFACTURER REQUIREMENTS.
4	STRUCTURED CABLING CONNECTING EXISTING MCR TO PROPOSED NEW BUILDING BCR TO BE RETICULATED USING SURFACE MOUNTED CONDUIT AT HIGH LEVEL THROUGH BCR AND EXTERNAL MOVEMENT AREA. CONDUIT TO DESCEND ON OUTSIDE OF LIFT SHAFT AND ENTER COMMUNICATIONS PIT LOCATED ADJACENT THE BUILDING
5	SECURITY CONDUITS TO PENETRATE IN THE WALL CAVITY AND TRANSFER FROM LOW LEVEL TO CEILING SPACE AND CONTINUE TO HEAD END
6	LOCATE EXISTING MSB UNDERGROUND CONDUITS AND INSTALL A NEW PIT TO ALLOW THE CONNECTION OF NEW CONDUITS AND EXISTING CONDUITS. RE-USE THE EXISTING CONDUITS TO RUN THE EXISTING MDB NEW SUBMAINS
7	SUBSTATION SCOPE IS SUBJECT TO A SEPARATE PLANNING APPLICATION

MCR COMMUNICATIONS CABINETS

GENERAL NOTES

- EXISITNG BARIX PA SYSTEM HEADEND LOCATED IN BLOCK C. ASSUME SYSTEM IS TO BE EXTENDED TO INCLUDE PROPOSED NEW BUILDINGS. DoE INFORMATION TECHNOLOGY TEAM TO CONFIRM.
- EXISTING CONCEPT SECURITY HEADEND LOCATED IN BLOCK C. ASSUME SECURITY SYSTEM IS REQUIRED TO BE UPGRADED TO INTEGRITI HEADEND SYSTEM. SCHOOL SECURITY UNIT TO CONFIRM.
- LOCATION OF UNDERGROUND CONDUITS AND PITS IS INDICATIVE AND NEEDS TO BE VERIFIED ON SITE

NSW GOVERNMENT Education School Infrastructure
SCHOOL INFRASTRUCTURE NEW SOUTH WALES
www.schoolinfrastructure.nsw.gov.au

0 5 10 20 30 40m
1 : 500 @ A1

SERVICES CONSULTANTS
NDY A TETRA TECH COMPANY
LEVEL 13, 90 ARTHUR ST
NORTH SYDNEY NSW 2060
AUSTRALIA
T +61 2 9928 6800
F +61 2 9955 6900
www.ndy.com

ARCHITECT
fulton trotter
SUITE 904, LEVEL 9, 28-36 FOVEAUX STREET
SURRY HILLS, Sydney NSW 2010 Australia
T +61 2 8383 5151 W www.fultontrotter.com.au

PROJECT MANAGER
RP INFRASTRUCTURE
Converting visions to reality

KEY PLAN

NORTH

REV	BY	DATE	DESCRIPTION
1	PS	11/10/2024	CONCEPT DESIGN
2	PS	28/10/2024	CONCEPT DESIGN
3	PS	29/10/2024	CONCEPT DESIGN
4	PS	12/11/2024	CONCEPT DESIGN
5	PS	06/12/2024	SCHEMATIC DESIGN
6	PS	17/01/2025	SCHEMATIC DESIGN
7	PS	13/02/2025	SCHEMATIC DESIGN
8	PS	28/02/2025	SCHEMATIC DESIGN
9	PS	01/04/2025	SCHEMATIC DESIGN

PROJECT NAME
SINSW - VINCENTIA HIGH SCHOOL UPGRADE
142 THE WOOL RD, VINCENTIA NSW 2540
SITE

DRAWING TITLE
ELECTRICAL SERVICES
SITE PLAN SHEET 2 OF 2

PROJECT NO.
758-0120.0041159.0001

STATUS
SCHEMATIC DESIGN

DRW	CHK	APP	DATE	SCALE
PS	PD	PL	01/04/2025	1 : 500 @A1

DRAWING NO.
VHS-NDY-00-00-DR-E-001012

REV **9**

GENERAL HYDRAULIC NOTES

1. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS, SERVICES AND STRUCTURES ON SITE PRIOR TO COMMENCEMENT OF WORK.
2. CONTRACTOR SHALL ARRANGE FOR ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
3. ON COMPLETION OF PROPOSED WORKS ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KREBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS UNLESS NOTED OTHERWISE.
4. MAKE SMOOTH TRANSITION TO EXISTING SERVICES AND MAKE GOOD WHERE REQUIRED.
5. WHERE NEW WORKS ABUT EXISTING THE SUB CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER OR IN CLOSE PROXIMITY TO THESE SERVICES. HAND EXCAVATE IN THESE AREAS.
7. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL AND COMMUNICATION/SECURITY DRAWINGS AND SPECIFICATIONS.
8. CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER NON CORROSIVE CONNECTION BETWEEN DISSIMILAR PIPEWORK.
9. ALL ELEVATED SERVICES PIPEWORK SHALL BE CLEARLY LABELED IN ACCORDANCE WITH REQUIREMENTS OF AS3500 AND AS1345.
10. ALL ELEVATED SERVICES SHALL BE CHARGED AND TESTED PRIOR TO CONCEALMENT.
11. ALL SERVICE CONDUITS SHOWN ARE INDICATIVE ONLY AND FINAL PIPE AND CONDUIT DETAILS AND LOCATIONS ARE TO BE OBTAINED BY THE SUB CONTRACTOR COORDINATING WITH AND GAINING CONFIRMATION FROM THE RELEVANT SERVICES.
12. ELECTRICAL CONDUITS FOR HYDRAULIC SERVICES PLANT AND EQUIPMENT SHALL BE ORANGE HEAVY DUTY RIGID TYPE IN ACCORDANCE WITH CATEGORY 'A' OF AS3000 AND AS DESCRIBED IN THE ELECTRICAL SPECIFICATION AND DOCUMENTATION.
13. ON COMPLETION, ALL PIPEWORK SHALL BE SUBJECT TO A PRESSURE TEST REQUIRED BY THE HYDRAULIC SERVICES CONSULTANT. ANY DEFECTS FOUND IN THE SYSTEM SHALL BE REMEDIED AND THE TEST RE-APPLIED.
14. TRENCHES THROUGH EXISTING ROAD AND CONCRETE AREAS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MINIMUM OF 50mm IN BITUMINOUS PAVING. REINSTATE WITH ADDITIONAL REINFORCEMENT AND DOWELING AS REQUIRED BY STRUCTURAL ENGINEERS.
15. CONTRACTOR SHALL PROVIDE ALL TIMBERING, SHORING AND SHUTTERING AS NECESSARY TO CONSTRUCT PIPEWORK INCLUDING THE REMOVAL OF SAME UPON COMPLETION OF PIPEWORK.
16. CONTRACTOR SHALL OBTAIN ALL AUTHORITY APPROVALS AND PAY ALL FEES.
17. ALL WORK TO BE IN ACCORDANCE WITH THE RELEVANT WATER AUTHORITY, FIRE AND RESCUE NSW, AS3500, AS2444, AS2419 AND RELATED STANDARDS AS APPROPRIATE.
18. CONTRACTOR TO PROVIDE 'AS BUILT' DOCUMENTATION UPON PRACTICAL COMPLETION OF THE PROJECT AND SHALL BE IN CAD FORMAT (AUTOCAD) AND REVIT 3D MODELING.
19. ORIGIN OF LEVELS: AUSTRALIAN HEIGHT DATUM.
20. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
21. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND OR AN APPROVED GRANULAR MATERIAL AND COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 E1.1.
22. ALL SERVICES THAT CROSS FOOTINGS ETC. SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO SUBGRADE LEVEL AND COMPACTED TO 95% M.M.D.D.
23. FOR INTERNAL LAYOUTS OF THE BUILDING FOR THE CORE AMENITIES - REFER TO THE PATTERN BOOK SUITE OF DOCUMENTATION (SOURCED VIA SINSW).

FIRE HYDRANT NOTES

1. EXTERNAL HYDRANTS SHALL BE POSITIONED NOT LESS THAN 10m FROM THE BUILDING IT IS PROTECTING, UNLESS PROTECTED BY A CONSTRUCTION HAVING A FIRE RESISTANCE LEVEL OF NOT LESS THAN 90/90/90 EXTENDING AT LEAST 2m EITHER SIDE OF THE HYDRANT OUTLET AND 3m FROM THE GROUND LEVEL ADJACENT TO THE HYDRANT, OR THE HEIGHT OF THE BUILDING, WHICHEVER IS THE LESSER.
2. ALL HYDRANTS SHALL BE INSTALLED SO THAT THE VALVE OUTLET IS AT RIGHT ANGLES TO THE FACE OF THE WALL BEHIND (IF ANY) AND THE VALVE OUTLET IS HORIZONTAL OR SLOPING NOT MORE THAN 35 DEGREES BELOW THE HORIZONTAL.
3. ALL HYDRANTS SHALL BE INSTALLED TO PROVIDE A MINIMUM OF 100mm CLEARANCE AROUND THE HANDWHEEL IN ALL DIRECTIONS.
4. ALL HYDRANT PIPEWORK SHALL BE SUPPORTED IN ACCORDANCE WITH AS2419.
5. ALL HYDRANT PIPEWORK SHALL BE IDENTIFIED IN ACCORDANCE WITH AS1345.

SANITARY DRAINAGE AND STORMWATER NOTES

1. CONTRACTOR TO PROVIDE ANY ADDITIONAL EXCAVATION (INCLUDING IN ROCK), BACKFILL OF PIPES, FITTINGS AND ALL JUMP-UPS TO LOCAL AUTHORITY REQUIREMENTS INCLUDING THOSE TO BRANCH DRAINS.
2. ALL MANHOLES GREATER THAN 1.2m DEEP SHALL BE CONSTRUCTED WITH STEP IRONS TO LOCAL WATER AUTHORITY REQUIREMENTS.
3. DRAINS TO BE SUPPORTED ON OR FROM SOLID GROUND. LOCATION AND DEPTH/INVERT LEVEL OF BRANCH SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORK.
4. DRAINS UNDER BUILDINGS SHALL BE RETESTED WHERE DIRECTED BY MANAGING CONTRACTOR.
5. PROVIDE 80mm COMPRESSIBLE EXPANDED FOAM MATERIAL OVER PIPEWORK WHERE CLEARANCE TO UNDERSIDE OF FOOTING IS LESS THAN 150mm, UNLESS NOTED OTHERWISE.
6. SANITARY DRAINAGE LINES SHALL BE CONSTRUCTED OUTSIDE ZONE OF INFLUENCE OF STRUCTURAL BEAMS AND PIPES.
7. ALL BUILDING SANITARY DRAINAGE PIPEWORK SHALL BE UPVC-DWV UNLESS NOTED OTHERWISE.
8. ALL PIPE JUNCTIONS, BENDS AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS. MITRE FITTINGS WILL NOT BE ACCEPTED IN ANY CIRCUMSTANCE.
9. ALL CONNECTIONS TO DRAINAGE PITS AND MANHOLES SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH AND MADE WATERTIGHT.
10. PIPE BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH AS3500 AND ALSO IN ACCORDANCE WITH THE HYDRAULIC SERVICES SPECIFICATION.
11. WHERE STORMWATER LINES PASS UNDER FLOOR SLABS SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.

SANITARY PLUMBING NOTES

1. ALL BRANCH LINES SHALL BE GRADED AND/OR LOWERED TO AVOID PENETRATING STEEL BEAMS. THE SUB CONTRACTOR SHALL PROVIDE ANY ADDITIONAL PIPE LENGTHS AND WORK, INCLUDING CONSTRUCTION OF ADDITIONAL INSPECTION OPENINGS, AS REQUIRED BY THE LOCAL AUTHORITY.
2. COORDINATE WITH STRUCTURAL DRAWINGS. NO STEEL REINFORCING BARS TO BE CUT WITHOUT PRIOR WRITTEN APPROVAL FROM STRUCTURAL ENGINEER.
3. ALL ROOF PENETRATIONS TO DETAIL AND PAINTED (COLOUR TO BE ADVISED). ALL VENTS SHALL BE OFFSET IN ROOF SPACE MINIMUM 600mm FROM EAVES AND AS SHOWN ON ARCHITECTURAL DRAWINGS AND COMPLY WITH THE BUSH FIRE CODE REQUIREMENTS.
4. EXPOSED PIPEWORK WITHIN WET AREAS SHALL BE CHROME PLATED COPPER PIPE.
5. ALL SANITARY PLUMBING PIPEWORK SHALL BE UPVC-DWV UNLESS NOTIFIED OTHERWISE.
6. ALL PIPE PENETRATIONS AT WALLS SHALL BE FITTED WITH A PUDDLE FLANGE AND MADE GOOD AND WATERTIGHT.
7. ALL SUSPENDED SLAB PENETRATIONS SHALL BE FORMED BY PATENT "SLABSEAL" OR OTHER APPROVED FIRE ISOLATING CAST-IN PENETRATION AND APPROVED (IN WRITING) BY THE MANAGING CONTRACTOR. THIS SHALL NOT RELIEVE THE SUB CONTRACTOR OF THE RESPONSIBILITY FOR THEIR LOCATION AND SIZE.
8. ALL CORE HOLE LOCATIONS SHALL BE APPROVED BY THE MANAGING CONTRACTOR PRIOR TO COMMENCEMENT OF CORING.

WATER SERVICES NOTES

1. DOMESTIC WATER PIPEWORK SHALL BE TYPE 'B' COPPER TUBE. FOR ALL MAIN RUNS INCLUDING SUPPLY TO FIRE HOSE REELS SEE ALSO HYDRAULIC SERVICES SPECIFICATION.
2. SUPPLY COLD WATER RETICULATION TO ALL NEW FIXTURES AND FITTINGS. ALL PIPEWORK TO BE CONCEALED IN WALL CAVITIES AND CEILING SPACES. NO PIPEWORK WILL BE SURFACE MOUNTED OR MADE VISIBLE. PIPEWORK TO FIXTURES WHERE VISIBLE IN CUPBOARD SPACES SHALL BE CHROMIUM PLATED.
3. ALL HOT WATER PIPEWORK TO BE FULLY INSULATED TO AS3500. ALL COLD WATER PIPING WITHIN WALL CHASES TO BE INSULATED WITH KEMLAG OR EQUAL.
4. ALL HOT WATER PIPEWORK SHALL BE INSULATED: Ø20mm AND SMALLER – KEMLAG, Ø25mm - THERMOTECH 4-ZERO OR APPROVED EQUAL.
5. ALL COLD WATER PIPEWORK SHALL BE Ø20 MINIMUM, EXCEPT THE LAST 3000mm OF RUN OUT TO ANY SINGLE FIXTURE MAY BE Ø15, UNLESS NOTED OR SHOWN OTHERWISE.
6. ALL INTERNAL HOSE TAPS SHALL BE 15mm, UNLESS NOTED OTHERWISE. ALL EXTERNAL OR PLANT ROOM HOSE TAPS SHALL BE 20mm, UNLESS NOTED OTHERWISE.
7. ALL BRANCHES FROM MAIN LINES SHALL BE FITTED WITH ISOLATING VALVES AS REQUIRED TO ISOLATE GROUPS OR SINGLE FIXTURES.
8. BACKFLOW PREVENTION: ALL HOSE COCKS SHALL BE FITTED WITH APPROVED BACKFLOW PREVENTING VACUUM BREAKERS AND INDIVIDUAL STOP TAPS UNLESS NOTED OTHERWISE.

PIPEWORK LEGEND

FIRE

FH — FIRE HYDRANT

WATER

AWM — AUTHORITY WATER MAIN
CW — COLD WATER
HW — HOT WATER
WW — WARM WATER

DRAINAGE

ASM — AUTHORITY SEWER MAIN
S — SEWER

FIRE (EXISTING)

eFH — EXISTING FIRE HYDRANT

WATER (EXISTING)

eAWM — EXISTING AUTHORITY WATER MAIN
eCW — EXISTING COLD WATER

DRAINAGE (EXISTING)

eASM — EXISTING AUTHORITY SEWER MAIN
eS — EXISTING SEWER

SYMBOLS

GENERAL

CAPPED PIPE
CONTINUATION OF PIPE
FLANGED JOINT
CONNECT TO EXISTING
DRAWING CONTINUATION ARROW
RISER
DROPPER

DRAINAGE

CLEAROUT
TUNDISH
FLOOR WASTE

WATER

ISOLATION VALVE IN PATH BOX
DUAL CHECK VALVE
TESTABLE DOUBLE CHECK VALVE
WATER METER

FIRE HYDRANTS

EXTERNAL DUAL PILLAR FIRE HYDRANT

ABBREVIATIONS

AMU	ASSET MANAGEMENT UNIT
B	BASIN
CO	CLEAROUT
CS	CLEANERS SINK
CW	COLD WATER
DCV	DOUBLE CHECK VALVE
DUCV	DUAL CHECK VALVE
e	EXISTING
FH	FIRE HYDRANT
FW	FLOOR WASTE
H/L	HIGH LEVEL
HW	HOT WATER
HWU	HOT WATER UNIT
I/G	IN GROUND
IO	INSPECTION OPENING
MECH	MECHANICAL
PE	POLYETHYLENE
PG	PRESSURE GAUGE
S	SEWER
SIL	SEWER INVERT LEVEL
SINSW	SCHOOL INFRASTRUCTURE NSW
SW	STORMWATER
TD	TUNDISH
TD/MECH	TUNDISH/MECHANICAL
TR	TROUGH
WC	WATER CLOSET
WM	WATER METER
WS	WASTE STACK
V	VENT

Issue.	Description	Date	Drawn	Approved
D	ISSUE FOR TENDER	27.02.25	MS	RE
C	100% SCHEME DESIGN (PHASE 3)	13.02.25	GB	RE
B	80% SCHEME DESIGN (PHASE 3)	13.12.24	GPM	RE
A	50% SCHEME DESIGN (PHASE 3)	27.11.24	GPM	RE

North

Scale

PRINT IN COLOUR

Client

Architect
FULTON TROTTER ARCHITECTS
SUITE 904, LEVEL 9, 28-36 FOVEAUX STREET
SURRY HILLS NSW 2010
T: 02 8383 5151 E: sydney@fultontrotter.com.au

ACOR CONSULTANTS

ACOR Consultants Pty Ltd
Suite 2, Level 1, 33 Herbert Street
St Leonards NSW 2065
T: +61 2 9438 5098

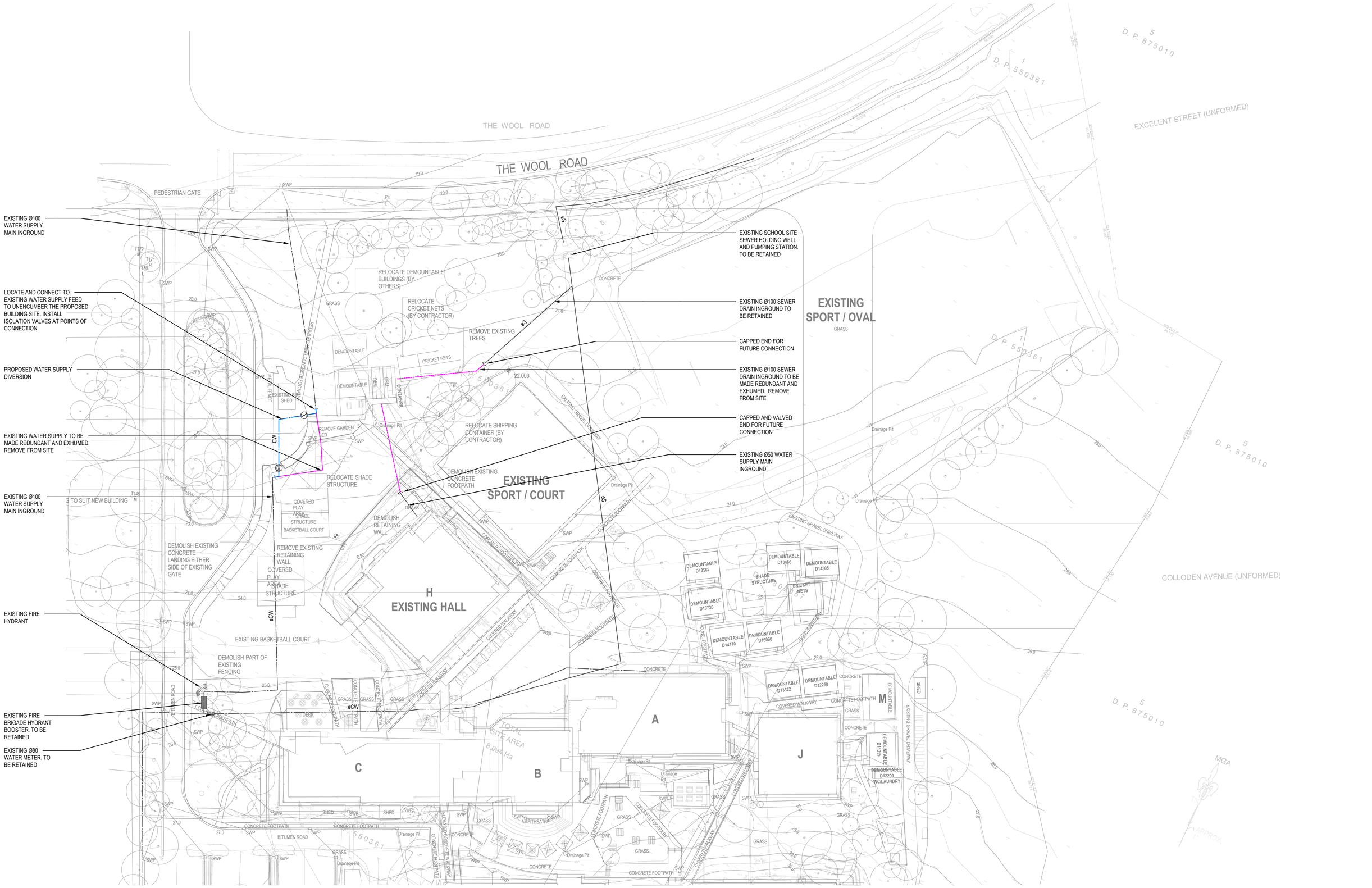
Project
SCHOOL INFRASTRUCTURE NSW
VINCENTIA HIGH SCHOOL
142 THE WOOL ROAD, VINCENTIA NSW

TENDER ISSUE

Drawing Title
HYDRAULIC SERVICES
LEGEND & GENERAL NOTES

Drawn	Designed	Q.A. Check	Q.A. Date	Scale @ A1
GB	RE	RE	26.02.25	N.T.S

Project No.	Drawing No.	Issue
NA232021	VHS-ACOR-00-00-DR-H-0001	D



D	ISSUE FOR TENDER	27.02.25	MS	RE
C	100% SCHEME DESIGN (PHASE 3)	13.02.25	GB	RE
B	80% SCHEME DESIGN (PHASE 3)	13.12.24	GPM	RE
A	50% SCHEME DESIGN (PHASE 3)	27.11.24	GPM	RE
Issue.	Description	Date	Drawn	Approved

North

Scale

5 0 5 10 15 20 25m

SCALE BAR 1:500

PRINT IN COLOUR

Client

Architect
FULTON TROTTER ARCHITECTS

SUITE 904, LEVEL 9, 28-36 FOVEAUX STREET
SURRY HILLS NSW 2010
T: 02 8383 5151 E: sydney@fultontrotter.com.au

ACOR Consultants Pty Ltd
Suite 2, Level 1, 33 Herbert Street
St Leonards NSW 2065
T: +61 2 9438 5098

Project
SCHOOL INFRASTRUCTURE NSW
VINCENTIA HIGH SCHOOL
142 THE WOOL ROAD, VINCENTIA NSW

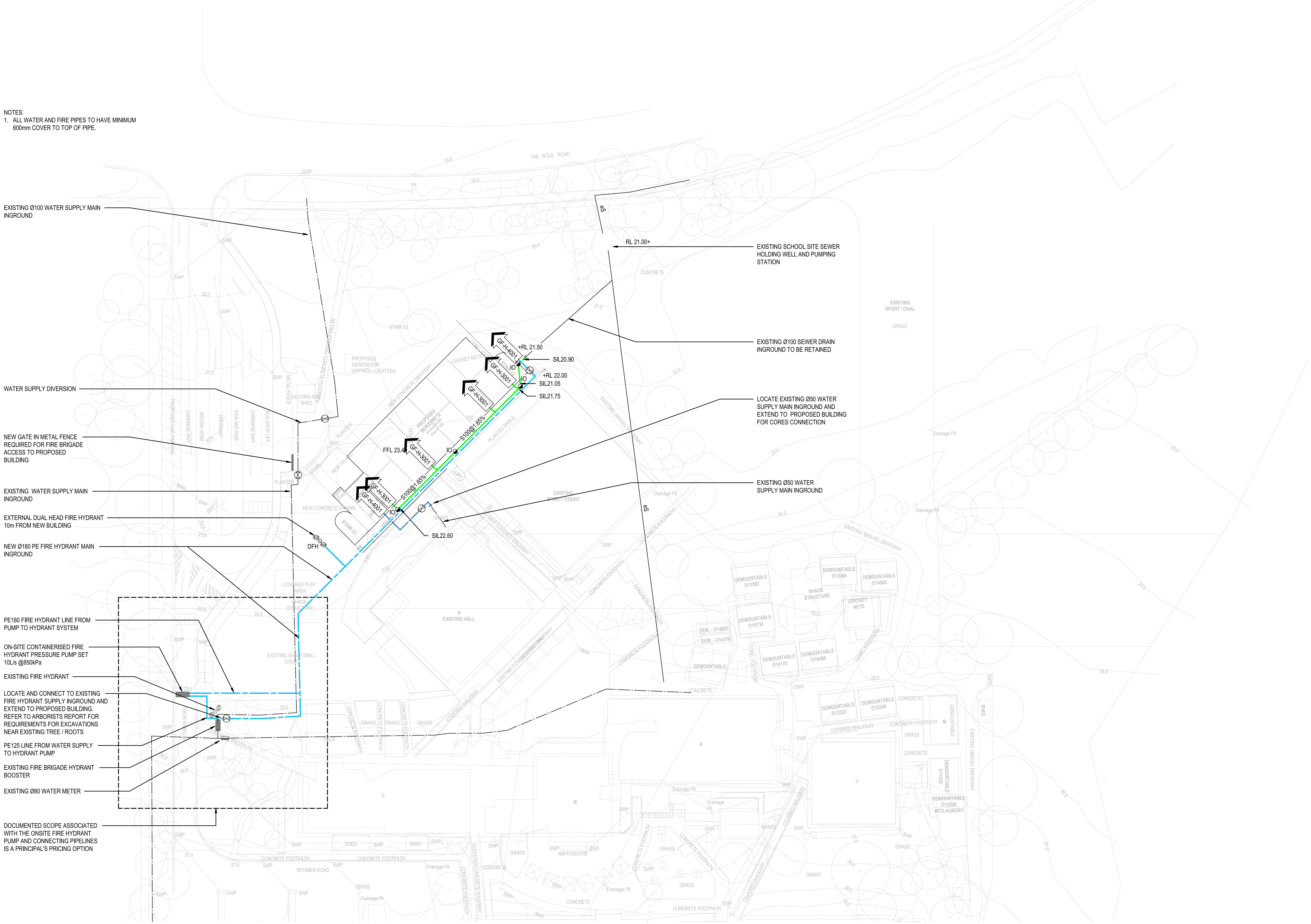
TENDER ISSUE

Drawing Title
HYDRAULIC SERVICES
EXISTING SITE PLAN & DEMOLITION

Drawn	Designed	Q.A. Check	Q.A. Date	Scale @ A1
GB	RE	RE	26.02.25	1 : 500

Project No.	Drawing No.	Issue
NA232021	VHS-ACOR-00-00-DR-H-1100	D

NOTES:
1. ALL WATER AND FIRE PIPES TO HAVE MINIMUM 600mm COVER TO TOP OF PIPE.



EXISTING Ø100 WATER SUPPLY MAIN INGROUND
WATER SUPPLY DIVERSION
NEW GATE IN METAL FENCE REQUIRED FOR FIRE BRIGADE ACCESS TO PROPOSED BUILDING
EXISTING WATER SUPPLY MAIN INGROUND
EXTERNAL DUAL HEAD FIRE HYDRANT 10m FROM NEW BUILDING
NEW Ø180 PE FIRE HYDRANT MAIN INGROUND
PE180 FIRE HYDRANT LINE FROM PUMP TO HYDRANT SYSTEM
ON-SITE CONTAINERISED FIRE HYDRANT PRESSURE PUMP SET 10L/s @650kPa
EXISTING FIRE HYDRANT
LOCATE AND CONNECT TO EXISTING FIRE HYDRANT SUPPLY INGROUND AND EXTEND TO PROPOSED BUILDING. REFER TO ARBORISTS REPORT FOR REQUIREMENTS FOR EXCAVATIONS NEAR EXISTING TREE / ROOTS
PE125 LINE FROM WATER SUPPLY TO HYDRANT PUMP
EXISTING FIRE BRIGADE HYDRANT BOOSTER
EXISTING Ø80 WATER METER
DOCUMENTED SCOPE ASSOCIATED WITH THE ONSITE FIRE HYDRANT PUMP AND CONNECTING PIPELINES IS A PRINCIPAL'S PRICING OPTION
EXISTING SCHOOL SITE SEWER HOLDING WELL AND PUMPING STATION
EXISTING Ø100 SEWER DRAIN INGROUND TO BE RETAINED
LOCATE EXISTING Ø50 WATER SUPPLY MAIN INGROUND AND EXTEND TO PROPOSED BUILDING FOR CORES CONNECTION
EXISTING Ø50 WATER SUPPLY MAIN INGROUND
RL 21.00+
+RL 21.50
SIL20.90
+RL 22.00
SIL21.05
SIL21.75
SIL22.60
FFL 23.40
S100@1.65%
GF-H-4001
GF-H-3001
IO
DFH
THE WOOL ROAD
EXISTING SPORT / OVAL
EXISTING HALL

D	ISSUE FOR TENDER	27.02.25	MS	RE
C	100% SCHEME DESIGN (PHASE 3)	13.02.25	GB	RE
B	80% SCHEME DESIGN (PHASE 3)	13.12.24	GPM	RE
A	50% SCHEME DESIGN (PHASE 3)	27.11.24	GPM	RE
Issue.	Description	Date	Drawn	Approved

North

Scale
5 0 5 10 15 20 25m
SCALE BAR 1:500

PRINT IN COLOUR

Client

Architect
FULTON TROTTER ARCHITECTS
SUITE 904, LEVEL 9, 28-36 FOVEAUX STREET
SURRY HILLS NSW 2010
T: 02 8383 5151 E: sydney@fultontrotter.com.au

ACOR Consultants Pty Ltd
Suite 2, Level 1, 33 Herbert Street
St Leonards NSW 2065
T: +61 2 9438 5098

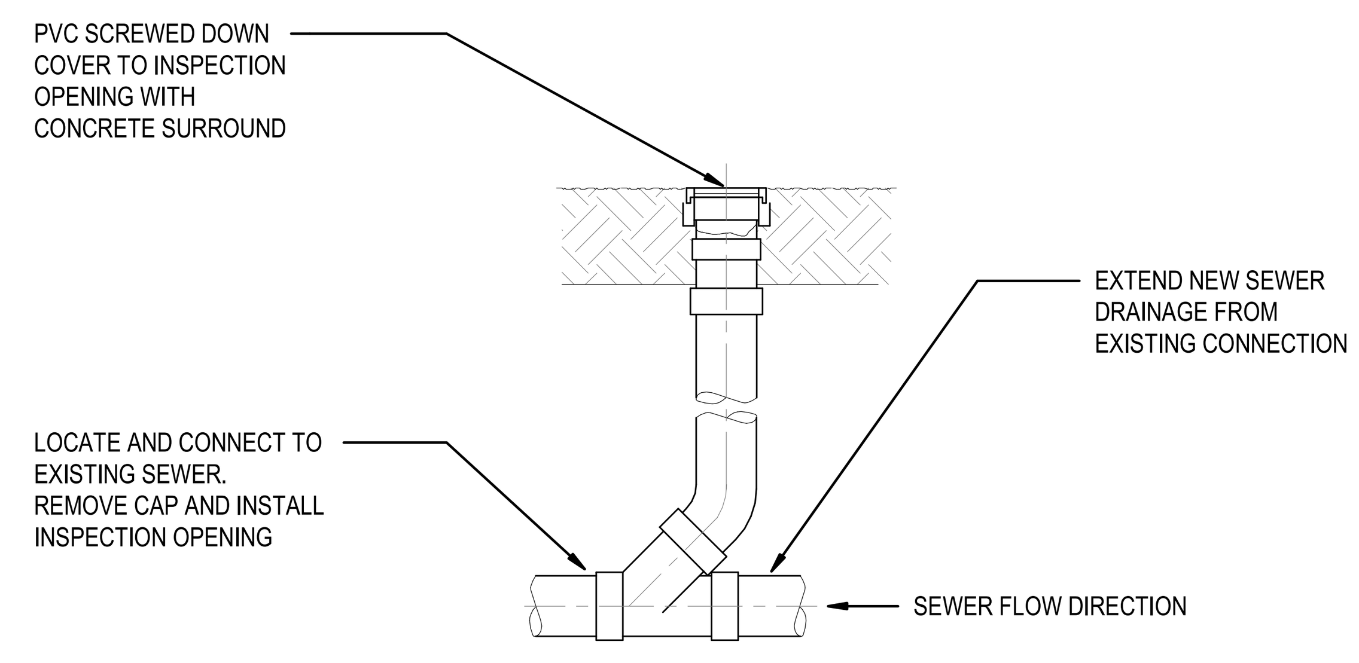
Project
SCHOOL INFRASTRUCTURE NSW
VINCENTIA HIGH SCHOOL
142 THE WOOL ROAD, VINCENTIA NSW

TENDER ISSUE

Drawing Title
HYDRAULIC SERVICES
PROPOSED SITE PLAN

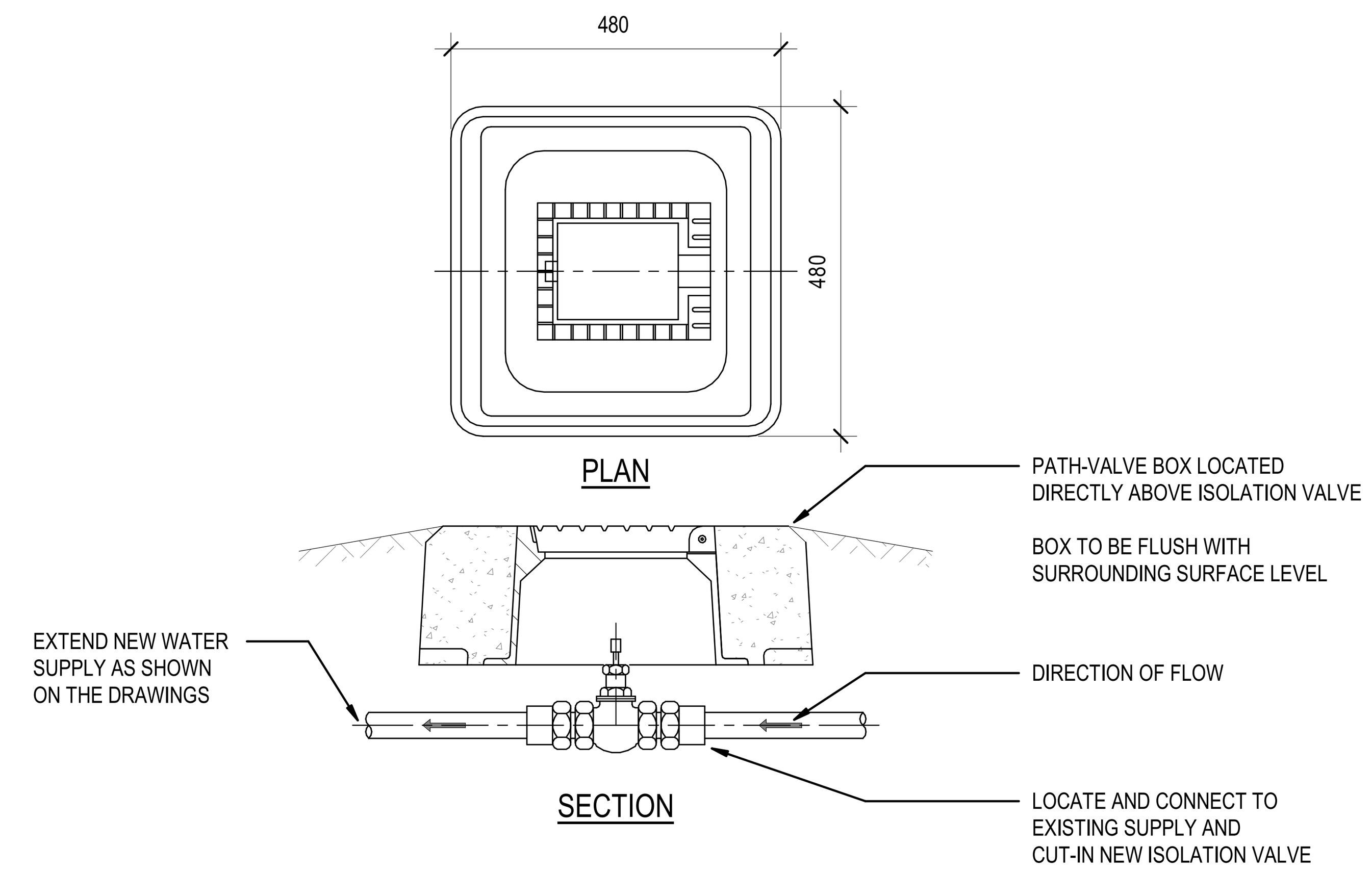
Drawn	Designed	Q.A. Check	Q.A. Date	Scale @ A1
GB	RE	RE	26.02.25	1 : 500

Project No.	Drawing No.	Issue
NA232021	VHS-ACOR-00-00-DR-H-1200	D



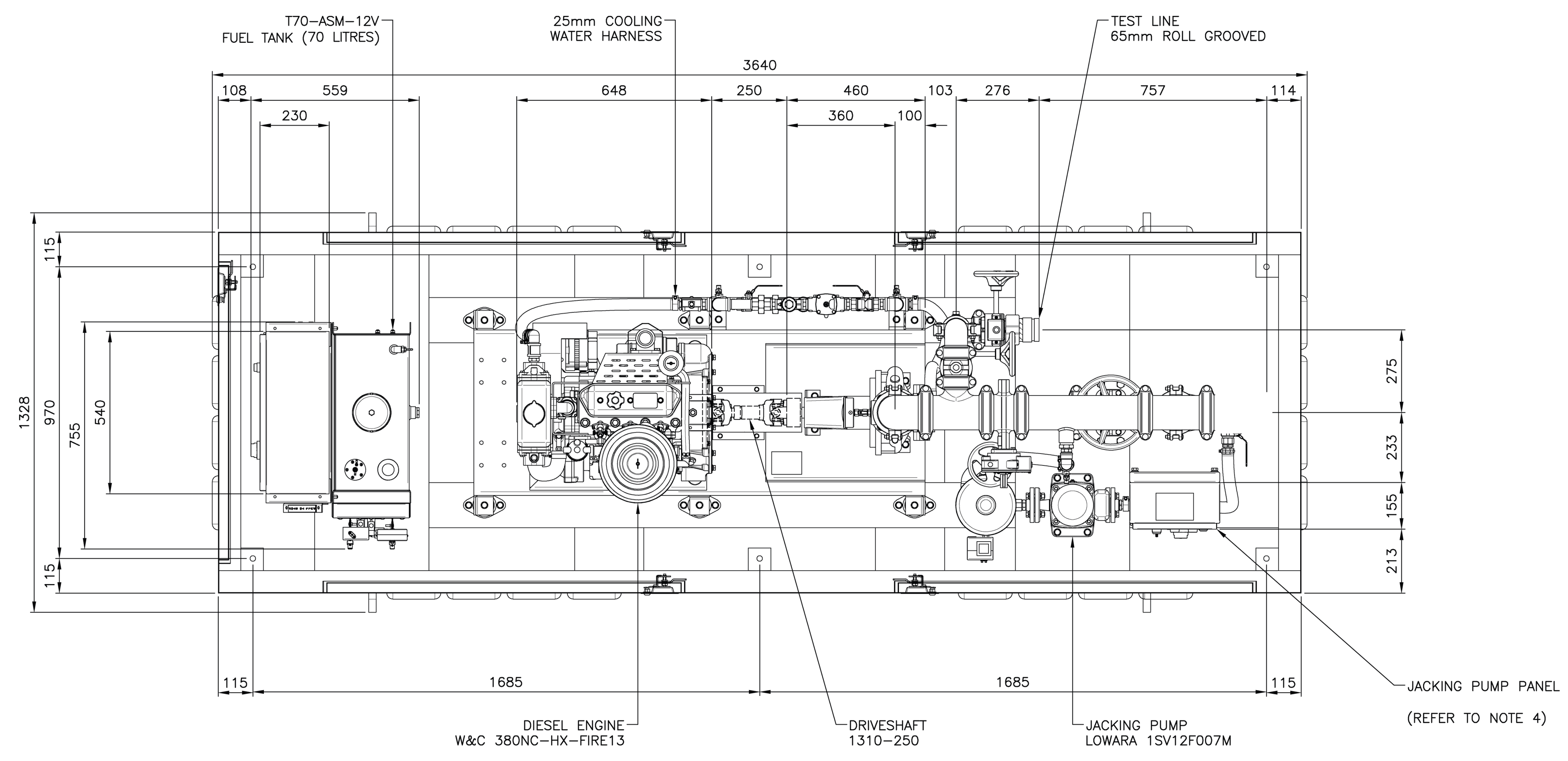
SEWER – CONNECTION TO EXISTING/INSPECTION OPENING

N.T.S.

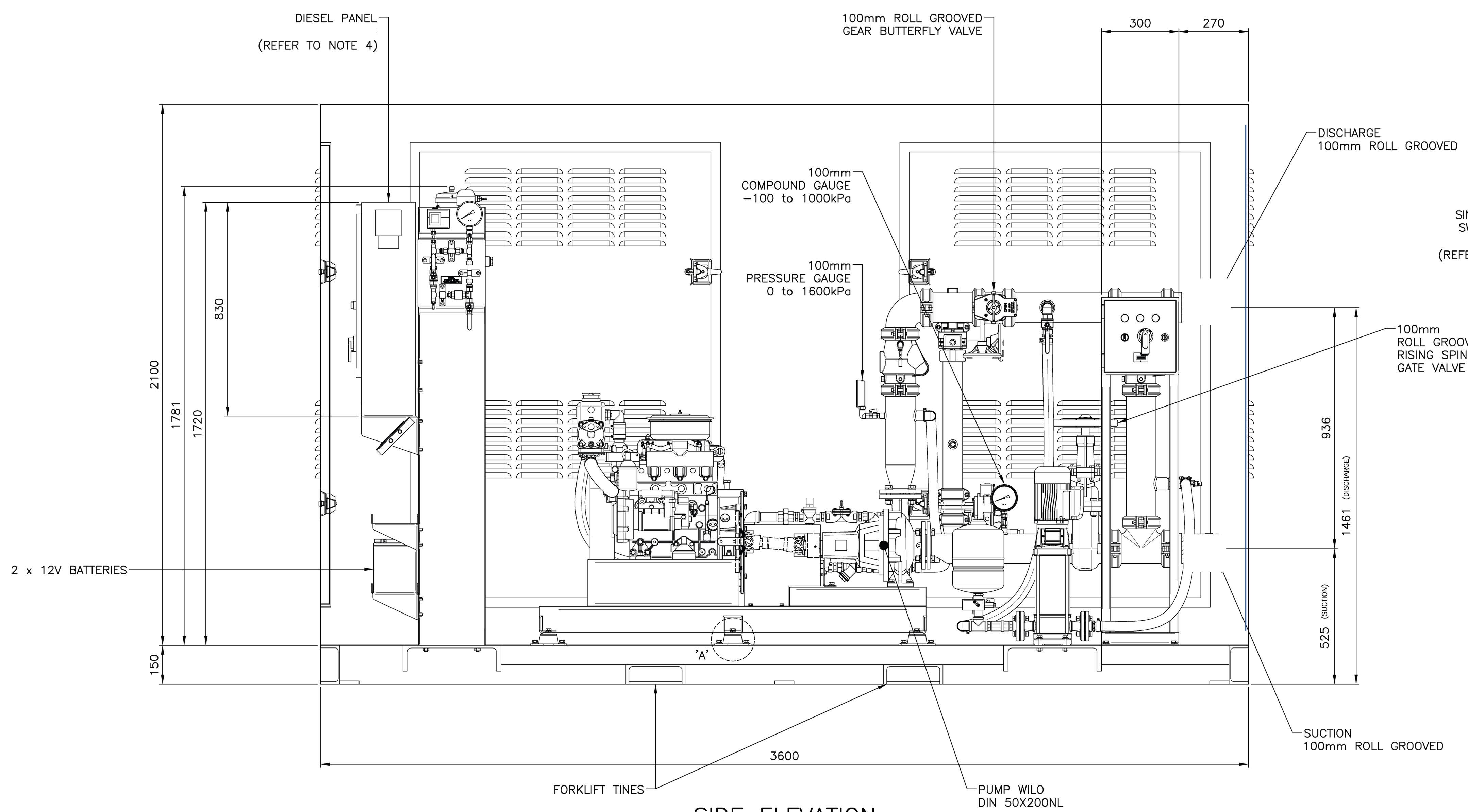


WATER SUPPLY – CONNECTION TO EXISTING (LESS THAN 80mm)

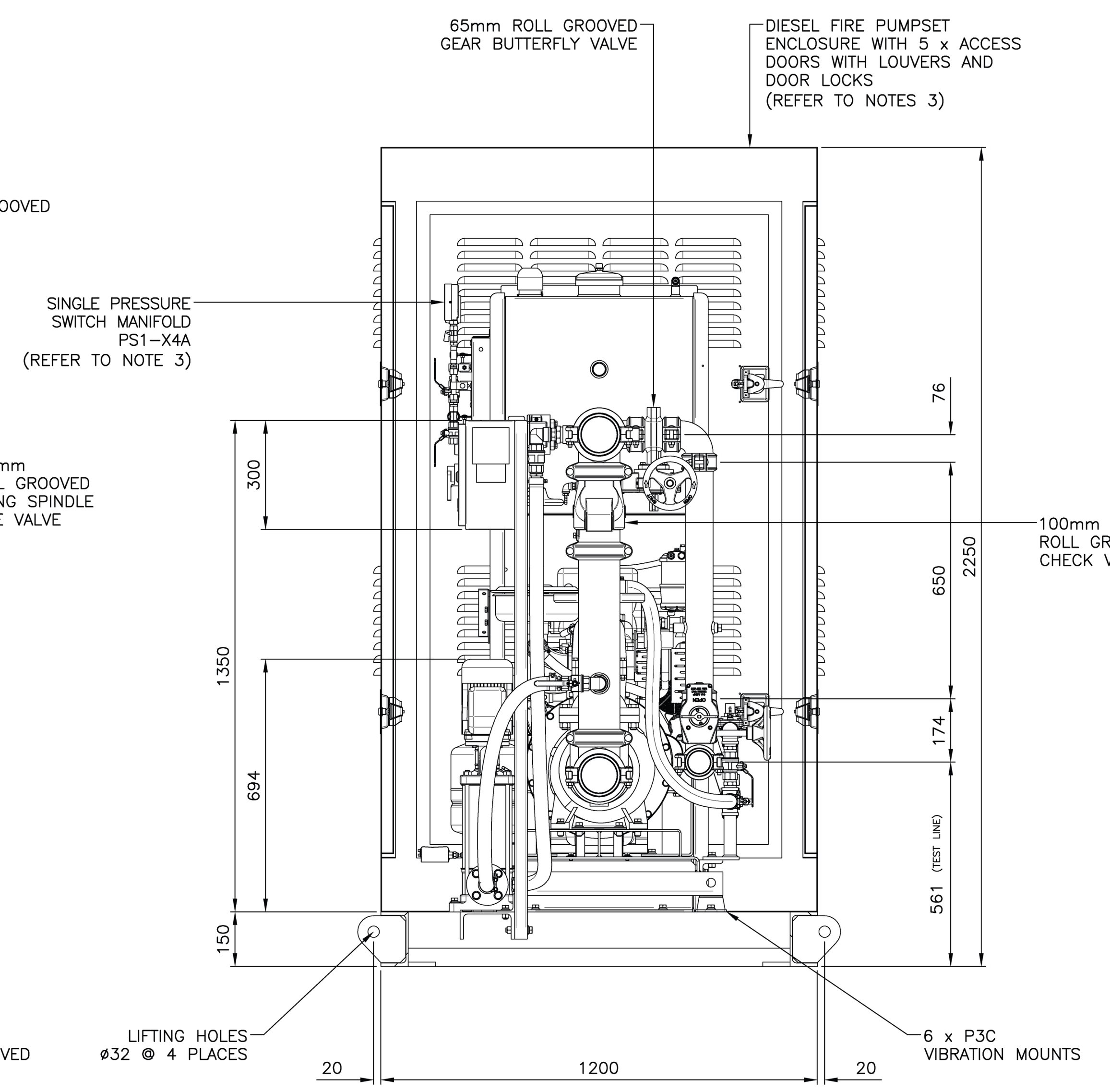
NOT TO SCALE



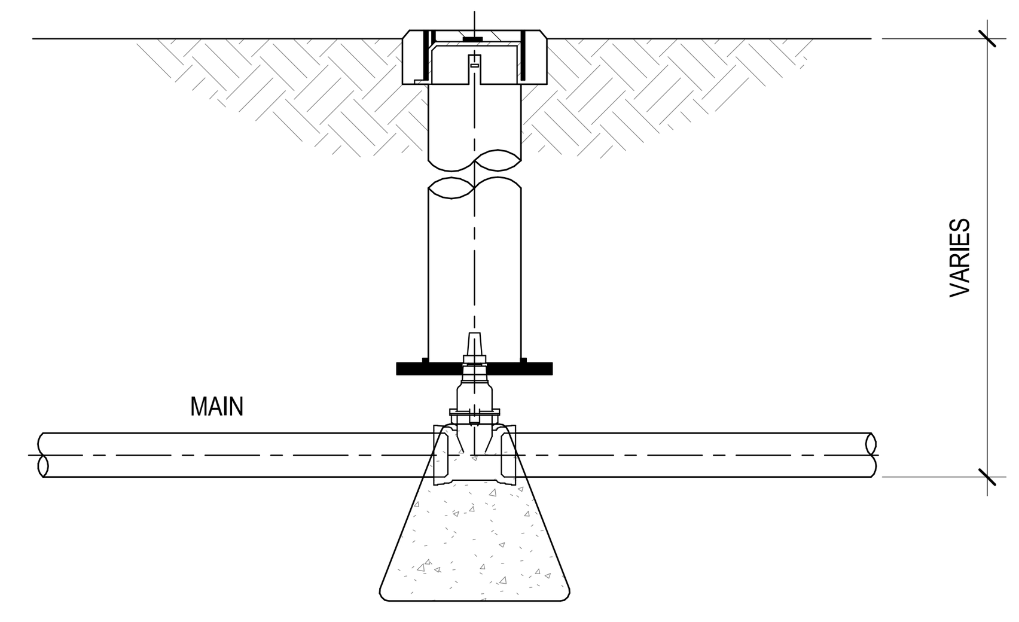
PLAN VIEW



SIDE ELEVATION



FRONT ELEVATION

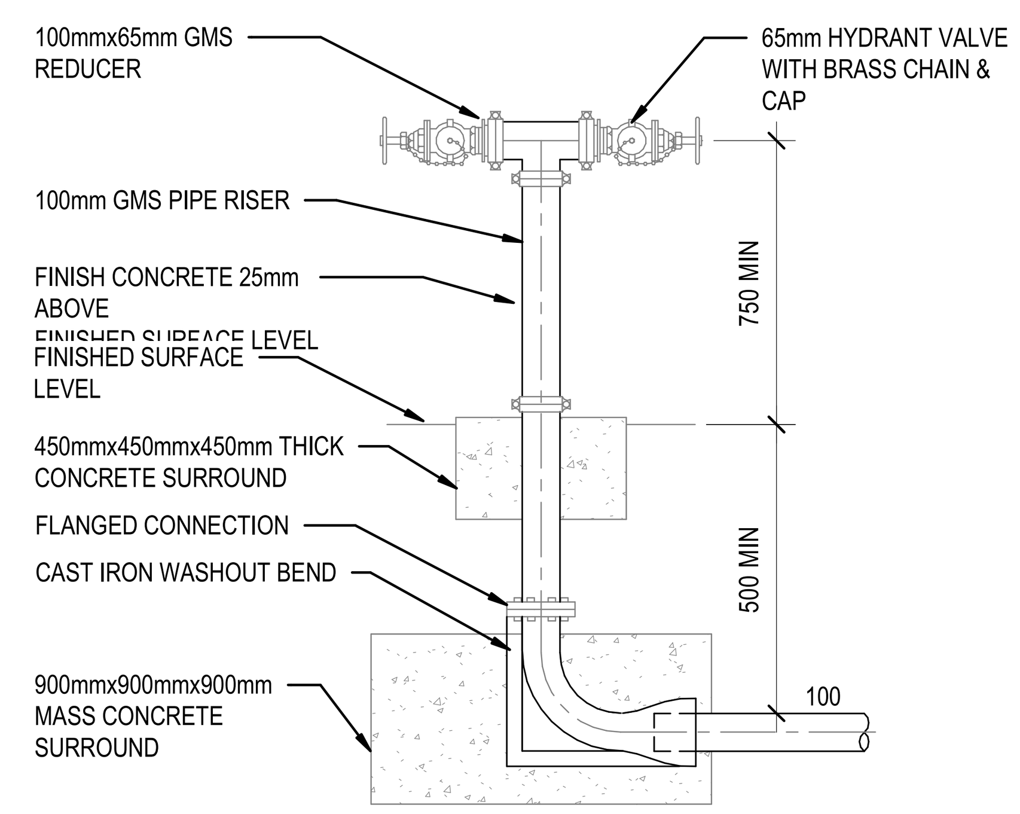


FIRE HYDRANT SUPPLY – CONNECTION TO EXISTING

N.T.S.

NOTES:

ALL FIRE HYDRANTS INSTALLED WITH STORZ FITTING.



EXTERNAL DOUBLE HEADED FIRE HYDRANT

NOT TO SCALE

Issue.	Description	Date	Drawn	Approved
C	ISSUE FOR TENDER	27.02.25	MS	RE
B	100% SCHEME DESIGN (PHASE 3)	13.02.25	GB	RE
A	80% SCHEME DESIGN (PHASE 3)	13.12.24	GPM	RE

North

Scale

PRINT IN COLOUR

Client

Architect
FULTON TROTTER ARCHITECTS
SUITE 904, LEVEL 9, 28-36 FOVEAUX STREET
SURRY HILLS NSW 2010
T: 02 8383 5151 E: sydney@fultontrotter.com.au

ACOR CONSULTANTS

ACOR Consultants Pty Ltd
Suite 2, Level 1, 33 Herbert Street
St Leonards NSW 2065
T: +61 2 9438 5098

Project
SCHOOL INFRASTRUCTURE NSW
VINCENTIA HIGH SCHOOL
142 THE WOOL ROAD, VINCENTIA NSW

TENDER ISSUE

Drawing Title
HYDRAULIC SERVICES DETAILS

Drawn	Designed	Q.A. Check	Q.A. Date	Scale @ A1
GB	RE	RE	26.02.25	As indicated

Project No.	Drawing No.	Issue
NA232021	VHS-ACOR-00-00-DR-H-9000	C

2/27/2025 10:42:41 AM