

PIPELINE SYMBOL LEGEND

- THE CONTRACTOR SHALL READ AND FULLY FAMILIARISE THEMSELVES WITH THE HYDRAULIC PLANS, HYDRAULIC SPECIFICATION DOCUMENTS, AUSTRALIAN STANDARDS, AND AUTHORITY REQUIREMENTS APPLICABLE TO THE WORKS. CLAIMS DUE TO IGNORANCE OF THE CONTENTS OF HYDRAULIC SERVICES DOCUMENTS AND / OR REQUIREMENTS OF AUSTRALIAN STANDARDS / AUTHORITY REQUIREMENTS WILL NOT BE ENTERED INTO.
- THE CONTRACTOR IS REQUIRED TO VISIT AND INSPECT EXISTING SITE STRUCTURES, SERVICES AND CONDITIONS OF THE SITE PRIOR TO SUBMITTING THEIR TENDER AND FAMILIARISE THEMSELVES WITH THE VISIBLE NATURE AND CONDITIONS OF THE SITE RELATIVE TO THE WORKS TO BE CARRIED OUT. CLAIMS DUE TO IGNORANCE OF EXISTING SITE CONDITIONS WILL NOT BE ENTERED INTO.
- THE HYDRAULIC SERVICES DRAWINGS AND SPECIFICATION SET OUT THE PROJECT REQUIREMENTS TO BE MET OVER AND ABOVE THE MINIMUM STANDARDS AS SET OUT BY THE RELEVANT AUSTRALIAN STANDARD APPLICABLE TO THAT SERVICE. THE CONTRACTOR SHALL MAKE DUE ALLOWANCE IN THEIR TENDER AND WARRANTIES THAT THEY HAVE MADE DUE ALLOWANCE FOR ALL REQUIREMENTS NECESSARY FOR THE EXECUTION OF THE WORKS IN ACCORDANCE WITH THE STANDARDS AS SET OUT BY THE RELEVANT AUSTRALIAN STANDARD APPLICABLE TO THAT SERVICE, THE RELEVANT LOCAL AUTHORITY REQUIREMENTS AND FOR THOSE REQUIREMENTS AS SET OUT IN THE HYDRAULIC SERVICES DRAWINGS AND THE ACCOMPANYING SPECIFICATION.
- HYDRAULIC SERVICES DRAWINGS ARE TO BE READ IN CONJUNCTION WITH HYDRAULIC SERVICES SPECIFICATION AND DRAWINGS OF ALL OTHER DISCIPLINES FOR THIS PROJECT. IGNORANCE OF THE CONTENTS OF ANY DOCUMENT RELATIVE TO THE PROJECT SHALL NOT PROVIDE A BASIS FOR ANY VARIATION TO THE CONTRACT.
- ALLOW TO OBTAIN ALL APPROVALS AND PAY ALL FEES AND CHARGES TO ALL AUTHORITIES IN RELATION TO THE PROPOSED SERVICE INSTALLATIONS INDICATED ON THE DRAWINGS.
- ALLOW TO DISCONNECT & SEAL ALL REDUNDANT HYDRAULIC SERVICES RELATED TO THE INSTALLATION OF THE PROPOSED WORKS TO THE REQUIREMENTS OF THE RELEVANT AUTHORITY.
- ALL WORK BE CARRIED OUT IN ACCORDANCE WITH WATER & SEWER AUTHORITY REGULATIONS, SUPERINTENDENTS APPROVAL & HYDRAULIC SPECIFICATION.
- LOCATION OF FIXTURES SHALL BE IN ACCORDANCE WITH LATEST ARCHITECTURAL DRAWINGS.
- WIRING OF HW/HS AND GPO/S FOR BOILING / CHILLED WATER UNIT BY ELECTRICAL CONTRACTOR.
- LIAISE WITH BUILDING SUPERINTENDENT TO ARRANGE SHUTDOWN AND ASSOCIATED WORKS.
- ALL PIPE FIXTURES & FITTINGS ARE TO BE FIRST QUALITY AND OF ONE MANUFACTURER, WRITTEN WARRANTIES ON WORKMANSHIP AND MATERIALS OF AT LEAST 1 YEAR REQUIRED FOR EACH UNIT. ALL UNITS SHALL BE SUBJECT TO INSPECTION BY THE SUPERINTENDENT. ALL TO BE VANDAL PROOF.
- ALL FIXTURES ARE TO BE SUPPLIED AND INSTALLED BY THE HYDRAULICS SERVICES CONTRACTOR UNLESS SPECIFIED OTHERWISE.
- ON COMPLETION OF THE INSTALLATION ALLOW TO TEST THE FIXTURES FOR NORMAL OPERATION AND ADJUST AS NECESSARY.
- ALL FIXINGS SHALL BE PLUMB AND LEVEL AND NEATLY FINISHED IN A TRADESMAN LIKE MANNER AND WITHOUT DAMAGE.
- PROVIDE ALL MATERIALS AND LABOUR NECESSARY TO PROVIDE A COMPLETE, WORKING AND SERVICEABLE INSTALLATION BASED ON THE DRAWINGS, SPECIFICATION COORDINATION WITH THE STRUCTURE AND OTHER SERVICES PLUS ANY RELEVANT AUSTRALIAN STANDARDS.
- ALL MATERIALS USED IN THE WORK SHALL BE NEW AND OF THE BEST QUALITY AND TYPE AVAILABLE TO CONFORM WITH THE RELEVANT AUSTRALIAN STANDARDS AND BEAR THE REQUIRED STANDARDS MARK.
- FOR ALL PLUMBING AND DRAINAGE WORKS, AN APPLICATION SHALL BE LODGED AS REQUIRED BY THE SYDNEY WATER REGULATION 2000 SECTION 7 UNDER THE SYDNEY WATER ACT 1994. UPON COMPLETION, THE PLUMBER CARRYING OUT THE WORK SHALL SUBMIT TO THE PROJECT MANAGER THE SIGNED ORIGINAL OWNER'S COPY OF THE CERTIFICATE OF COMPLIANCE.
- ANY DAMAGE TO SERVICES DURING CONSTRUCTION SHALL REPAIRED IMMEDIATELY AT THE CONTRACTORS OWN EXPENSE.
- REFER TO SPECIFICATION FOR ADDITIONAL SPECIFICATION NOTES, WORK INSTRUCTIONS, MATERIAL SPECIFICATIONS & STANDARDS.
- PIPE WORK SHALL BE CAPPED OFF AS WORK PROCEEDS TO PREVENT INGRESS OF DIRT, CONCRETE ETC. USE PROPRIETARY CAPS / PLUGS.
- ALLOW TO MAKE APPLICATION & PAY ALL FEES TO SYDNEY WATER TO OBTAIN A PERMIT TO UNDERTAKE PLUMBING & DRAINAGE WORKS AND FOR ALL SYDNEY WATER INSPECTIONS.
- PIPING SHOWN FOR CLARITY ONLY, ACTUAL POSITION TO BE DETERMINED AND COORDINATED ON SITE.
- ALL LEVELS AND DIMENSIONS SHOWN TO BE CHECKED ON SITE PRIOR TO COMMENCING ANY WORKS. REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT.
- HYDRAULIC DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND ENGINEERING DRAWINGS.
- COORDINATE SERVICES WITH ALL OTHER TRADES AND WORKS ON SITE. THOROUGHLY INVESTIGATE THE EXTENT OF EXISTING SERVICES PRIOR TO COMMENCING WORKS ON SITE.
- DURING THE INSTALLATION, RECORD ALL CHANGES TO THE DESIGN DRAWINGS AND DIMENSION OF HIDDEN SERVICES FROM PERMANENT, VISIBLE LANDMARKS. AT THE COMPLETION OF THE WORKS PROVIDE THREE (3) SETS OF AS INSTALLED DRAWINGS AND ELECTRONIC FILES IN AUTOCAD DWG FORMAT ON CD.
- PROVIDE THREE (3) SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL SYSTEMS. THE MANUALS SHALL INCLUDE A BRIEF DESCRIPTION OF EACH SERVICE AND DETAILS OF ALL EQUIPMENT WARRANTIES AND MAINTENANCE PROCEDURES ASSOCIATED WITH THAT SERVICE. THE AS INSTALLED DRAWINGS AND ELECTRONIC FILES ARE TO BE INCLUDED IN THE MANUALS.
- ALL PIPEWORK AND ASSOCIATED VALVES AND EQUIPMENT WHICH ARE TO BE INSTALLED IN EXISTING BUILDINGS AND PENETRATING THROUGH EXISTING STRUCTURE ARE TO BE APPROVED BY THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF WORKS.
- FIT ALL SLEEVES AND PIPE COLLARS WHERE NECESSARY FOR PIPES PASSING THROUGH FIRE RATED STRUCTURE. PIPEWORK SHALL BE HIDDEN FROM VIEW BY INSTALLATION IN WALLS, CEILINGS OR BURIED IN GROUND, WHERE PIPEWORK CANNOT BE HIDDEN FROM VIEW, OBTAIN APPROVAL FROM THE SUPERINTENDENT PRIOR TO INSTALLATION.

EXPOSED PIPEWORK SHALL BE PAINTED AND LABELLED WITH PIPE MARKERS IN ACCORDANCE WITH THE TRENCH INDICATING THE SERVICE AND DIRECTION OF FLOW IN ACCORDANCE WITH AS 2648.

31. TEST ALL SYSTEMS AS REQUIRED BY THE LOCAL AUTHORITIES AND RELEVANT AUSTRALIAN STANDARDS.

32. ALLOW TO CO-ORDINATE FINAL LOCATIONS OF ALL PIPEWORK & EQUIPMENT WITH STRUCTURE & OTHER SERVICES PRIOR TO MANUFACTURE & INSTALLATION.

33. ALLOW TO ACOUSTICALLY INSULATE ALL SANITARY & STORM WATER DRAINAGE INSTALLED IN ABOVE SOUND SENSITIVE AREAS ie. BEDROOMS, LIVING AREAS IN ACCORDANCE WITH THE BCA OR THE ACOUSTIC REPORT IF AVAILABLE.

34. UNLESS OTHERWISE SPECIFIED, CORE HOLES ARE TO BE SLAB SEAL OR SIMILAR.

35. WHERE PASSING THROUGH ROOF THE PIPES SHALL BE FLASHED IN AN APPROVED MANNER LEAVING THE ROOF WATER TIGHT. UNLESS OTHERWISE SPECIFIED ON NON-TRAFFICABLE ROOFS THE VENT SHALL TERMINATE A MINIMUM OF 300mm ABOVE ROOF AND ON TRAFFICABLE ROOFS THE VENTS SHALL TERMINATE 3000mm ABOVE ROOF.

36. REFER TO ARCHITECTS PLANS FOR EXACT LOCATION & SET OUT OF PLUMBING FIXTURES & FITTINGS.

37. ALL WORK SHALL BE CARRIED OUT BY AND UNDER THE SUPERVISION OF A LICENSED PLUMBER IN STRICT CONFORMITY WITH THE ARCHITECTURAL PLANS, HYDRAULIC DRAWINGS AND SPECIFICATIONS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING CODE OF AUSTRALIA, LOCAL AUTHORITIES, AS 3500 AND OTHER RELEVANT AUSTRALIAN STANDARDS.

38. WORK IS TO BE CARRIED OUT TO THE SATISFACTION OF THE PROJECT MANAGER.

39. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA, THE SUPERINTENDENT DOES NOT GUARANTEE THEIR ACCURACY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCING WORK.

40. UPON SIGNING THE CONTRACT, THE CONTRACTOR IS DEEMED TO HAVE VISITED SITE AND FAMILIARISED THEMSELVES WITH THE SITE, THE LOCATIONS & SIZES OF ALL EXISTING SERVICES AND THE EXTENT OF WORKS REQUIRED TO PROVIDE A COMPLETE, WORKING AND SERVICEABLE INSTALLATION BASED ON THE DRAWINGS, AND SITE CONSTRAINTS. VARIATIONS DUE TO OBVIOUS SITE CONSTRAINTS WILL NOT BE APPROVED.

41. HYDRAULIC SERVICES CONTRACTOR SHALL PROVIDE A CERTIFICATE OF COMPLIANCE UPON COMPLETION OF WORKS FOR ALL SERVICES INSTALLED.

42. THE CONTRACTOR SHALL ALLOW FOR AND PAY ALL FEES AND OBTAIN ALL AUTHORITY CLEARANCES INCLUDING SYDNEY WATER, COUNCIL AND GAS COMPANY.

43. ALL PIPE PENETRATIONS AT WALLS SHALL BE FITTED WITH A PUDDLE FLANGE AND ALL WALL PENETRATIONS SHALL BE MADE GOOD AND WATER TIGHT.

44. PRESSURE PIPE 'BLUE BRUTE' CLASS 20 TO AS 2977 WITH RUBBER RING JOINTS AND DUCTILE IRON FITTINGS EXCEPT WHERE PIPEWORK RUNS UNDERSIDE OF THE BUILDING.

45. CAP OFF ALL REDUNDANT SERVICES AT THE AUTHORITY MAIN, ARRANGE INSPECTION WITH THE AUTHORITY PRIOR TO BACK FILLING AND MAKING GOOD THE SURFACE, PAY ALL ASSOCIATED FEES AND CHARGES.

46. PROVIDE APPROVED FIRE STOP COLLARS TO THE REQUIREMENTS OF THE BCA AND RELEVANT AUSTRALIAN STANDARDS.

47. DRAINS TO BE SUPPORTED ON OR FROM SOLID GROUND. LOCATION & DEPTH / INVERT LEVEL OF BRANCH SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORK.

48. REUSED DRAINS UNDER BUILDINGS SHALL BE RETESTED WHERE DIRECTED BY SUPERINTENDENT.

49. INSPECTION OPENINGS SHALL BE PROVIDED AT:

49.1. THE PROPERTY BOUNDARY

49.2. ON EACH WC OR BRANCH

49.3. AT MAX. 30m INTERVALS SPREAD EQUIDISTANT WHERE POSSIBLE

49.4. IMMEDIATELY UPSTREAM & DOWNSTREAM OF ALL JUMP-UPS

49.5. AS REQUIRED BY THE AUTHORITY FOR INSPECTION & MAINTENANCE

50. ALL SERVICES THAT CROSS PAVEMENTS, FOOTING ETC SHALL BE BACKFILLED WITH GRANULAR MATERIAL TO SUBGRADE LEVEL & COMPACTED TO 95% M.M.D.D.

51. PROVIDE 80mm COMPRESSIBLE MATERIAL OVER PIPEWORK WHERE CLEARANCE TO UNDERSIDE OF FOOTING IS LESS THAN 150mm UNLESS NOTED OTHERWISE.

52. ON COMPLETION OF PIPE INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION INCLUDING: KERBS, FOOTPATH, CONCRETE AREAS, GRAVEL AREAS & ROAD PAVEMENTS.

53. CARE SHALL BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATION SHALL BE MADE OVER AUTHORITY SERVICES, TELSTRA OR ELECTRICAL SERVICES. EXCAVATE BY HAND IN THESE AREAS.

54. THE PLUMBING CONTRACTOR SHALL OBTAIN ALL AUTHORITY APPROVALS & PAY ALL FEES.

55. INVERT LEVELS SHOWN ARE INDICATIVE ONLY. CONFIRM ALL LEVELS ON SITE BEFORE COMMENCING INSTALLATION WORK.

56. ACCESS PANEL ARE TO BE INSTALLED WHERE REQUIRED TO ACCESS CONTROL VALVES IN WATER LINES AS REQUIRED & INSPECTION OPENINGS ON STORMWATER & SEWER RISERS. ACCESS PANELS SHALL MATCH PROPOSED FINISH. REFER TO ARCHITECTURAL DRAWING FOR FINISHES.

Note

Allow to obtain approval and pay all fees and charges to all authorities in relation to the proposed service installations as indicated on the drawings.

Allow to provide "as-built" drawings on Autocad dwg compatible file format together with 2-off paper copies before final payment.

Existing services are located within the site for which documentation is not available.

Allow to obtain approval and pay all fees and charges to all authorities in relation to the proposed service installations as indicated on the drawings.

Allow to provide "as-built" drawings on Autocad dwg compatible file form together with 2-off paper copies before final payment.

Existing services are located within the site for which documentation is not available.

Services shown on this plan have been plotted from plans and by field. These services and others that may exist may not be situated within registered easements or within standard footpath allocations.

It is the contractors responsibility to identify the locations of all services via electronic pipe locating prior to ANY construction works and to avoid disturbance of these services.

Allow to disconnect & cap off obsolete services at authority mains.

	LOOSE JUMPER CONTROL VALVE
	CHECK VALVE OR NON RETURN VALVE
	VALVE AND CAST IRON SURFACE BOX
	BALANCING VALVE
	BALL VALVE
	BALANCING VALVE
	FLOAT VALVE
	SOLENOID VALVE
	STRAINER
	EXPANSION JOINT
	FIRE HOSE REEL
	EXISTING STREET HYDRANT
	EXTERNAL FIRE HYDRANT
	YARD GULLY / OVERFLOW GULLY
	CLEAROUT
	BOUNDARY TRAP
	INDUCT PIPE MICA FLAP
	REFLUX VALVE
	FLOW DIRECTION
	CAPPED PIPE
	FLOOR WASTE
	BASKET ARRESTOR
	INSPECTION / COVERED PIT
	GRATED PIT
	KERB INLET PIT
	GRATED DRAIN
	MANHOLE
	HYDRANT BOOSTER VALVE
	CONTROL PANEL
	CONTINUATION OF SERVICE
	OVERFLOW RELIEF GULLY
	TUNDISH
	CHECK VALVE/REFLUX VALVE OR NON RETURN VALVE.
	TRAP PRIMING VALVE

	AIR ADMITTANCE VALVE
	FLOOR WASTE
	ENWARE CSQ343 SHOWER
	RECESSED IN WALL TRAP
	RAINWATER OUTLET
	WINDOW DRENCHER HEAD 93 °C TEMPERATURE RAMP
	CIRCULATING PUMP
	BACKFLOW PREVENTION
	PRESSURE REDUCING VALVE
	PRESSURE LIMITING VALVE
	THERMOSTATIC MIXING VALVE
	WATER METER
	HOT WATER METER
	GAS METER
	SERVICE RISER / DROP
	HOSE TAP

EXISTING STORMWATER DRAINAGE

EXISTING SEWER DRAINAGE/SANITARY PLUMBING

EXISTING COLD WATER SERVICE

EXISTING HOT WATER SUPPLY

EXISTING GAS SERVICE

EXISTING FIRE HYDRANT SERVICE

EXISTING FIRE HOSE/REEL SERVICE

STORMWATER DRAINAGE

SUBSOIL DRAINAGE

COLD WATER SERVICE

RAINWATER / RECYCLED WATER REUSE SERVICE WATER SERVICE

HOT WATER SUPPLY

HOT WATER RETURN

WARM WATER SERVICE

GAS SERVICE

FIRE HYDRANT SERVICE

FIRE HOSE/REEL SERVICE

VENT PIPING

TUNDISH DRAINAGE SERVICE

SILT FENCE

NOTES: SAWCUT AND REINSTATE EXISTING PAVED AREAS

1. SERVICES SHOWN ON HYDRAULIC PLANS HAVE BEEN PLOTTED FROM PLANS AND BY FIELD INSPECTION. THESE SERVICES AND OTHERS MAY NOT BE SITUATED WITHIN REGISTERED EASEMENTS OR WITHIN STANDARD FOOTPATH ALLOCATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO IDENTIFY THE LOCATIONS OF ALL SERVICES PRIOR TO CONSTRUCTION WORKS AND TO AVOID DISTURBANCE OF THESE SERVICES. THE CONTRACTOR IS ADVISED TO CONTACT THE 'DIAL BEFORE YOU DIG' SERVICE TO ASCERTAIN THE LOCATIONS OF ANY EXISTING AUTHORITY SERVICES.
2. THE HYDRAULIC SUBCONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF THEIR PROGRAMME FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
3. HYDRAULIC SUBCONTRACTOR SHALL ALLOW TO CONSTRUCT NECESSARY SERVICES TO MAINTAIN SUPPLY TO EXISTING BUILDINGS REQUIRED TO REMAIN IN OPERATION TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL ALLOW TO REMOVE ALL TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
4. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF SUPERINTENDENT FOR TIME OF INTERRUPTION.

Note
Hydraulic design plans
to be read in conjunction
with architectural plans.

[illegible]

NOTE
Refer to Drains File for OSD calculations



				STRUCTURAL ENGINEER		SUITE 6, 100 MARKET STREET WOLLONGONG NSW 2500 AUSTRALIA PO BOX 880 WOLLONGONG NSW 2520 Tel: 61 2 4228 5665 Fax: 61 2 4228 0342 EMAIL john@jmarino.com.au		ENGINEER		CLIENT:		PROJECT:		TITLE:		STATUS:	
				J.J. MARINO & ASSOCIATES		ABEL & BROWN PTY. LTD.		CATHOLIC EDUCATION DIOCESE OF WOLLONGONG		PROPOSED CAR PARK		STORMWATER CONCEPT PLAN		DA Issue - Not for Construction			
				Consulting Engineers		23 WARUNG STREET, YAGOONA, NSW 2199 M: 0403 390 810 F: 9709-5705 FAX: 9796-2272 E - mail@nevillebrown.com.au W - www.nevillebrown.com.au				at		SITE PLAN		DATE: July 25		SCALE: 1:100@A1	
										ST. PAULS CATHOLIC SCHOOL				NO IN SET: 2		DRAWN: SB	
										INNES RD. MOSS VALE				CHECKED: RB		APPROVED: NB	
														SHEET: H-02		REV: B	