# PROPOSED WAREHOUSE AT 5 WARREN AVENUE, BANKSTOWN NSW

# CONCEPT STORMWATER DESIGN

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## **SPECIFICATIONS**

THESE PLANS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL DESIGN PLANS AND STRUCTURAL DESIGN



SITE LOCALITY

PREPARED BY

ARCHITECT

**CLIENT** 











THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.

ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE IN MILLIMETERS (U.N.O.). DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OF THESE DRAWINGS. USE FIGURED DIMENSIONS ONLY.

BENCHMARKS HAVE BEEN ESTABLISHED WHERE INDICATED ON THE DRAWINGS. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (A.H.D.). THE CONTRACTOR SHALL UNDERTAKE ALL NECESSARY SURVEY WORK TO ENSURE THAT THE WORKS ARE CONSTRUCTED TO DESIGN LINE AND LEVEL.

SETTING OUT DIMENSIONS AND LEVELS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR.

ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT SAA CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING **AUTHORITIES.** 

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING SIGNS, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH WORK HEALTH AND SAFETY REQUIREMENTS AND OTHER RELEVANT **AUTHORITY SAFETY REQUIREMENTS.** 

NO TREES SHALL BE REMOVED, CUTBACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.

WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.

ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND THESE SPECIFICATIONS.

DESIGN LEVELS GIVEN ARE TO FINISHED SURFACE LEVEL AND INCLUSIVE OF TOPSOIL. (TOPSOIL DEPTH VARIES)

THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A N.A.T.A. REGISTERED SURVEYOR.

CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ON THE DRAWING HAVE BEEN PLOTTED FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES. THIS INFORMATION HAS BEEN PREPARED SOLELY FOR THE AUTHORITIES OWN USE AND MAY NOT NECESSARILY BE UPDATED OR ACCURATE.

THE POSITION OF SERVICES AS RECORDED BY THE AUTHORITY AT THE TIME OF INSTALLATION MAY NOT REFLECT CHANGES IN THE PHYSICAL ENVIRONMENT SUBSEQUENT TO INSTALLATION.

CAPITAL ENGINEERING CONSULTANTS DOES NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THE DRAWING SHOWS MORE THAN THE PRESENCE OR ABSENCE OF SERVICES. AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FROM THE UTILITY SERVICES **AUTHORITIES A CURRENT COPY OF UNDERGROUND SERVICES SEARCH FOR THE** LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF ANY WORK AND NOTIFY ANY CONFLICT WITH THE DRAWINGS IMMEDIATELY. CLEARANCE SHAL BE OBTAINED FROM THE RELEVANT REGULATORY AUTHORITY. CONTRACTOR TO KEEP COPY OF UNDERGROUND SERVICES SEARCH ON SITE AT ALL TIMES. ANY DAMAGES TO SERVICES OR SERVICES ADJUSTMENTS SHALL BE CARRIED OUT BY THE CONTRACTOR OR RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE.

VISIT THE SITE BEFORE SUBMITTING THE FINAL TENDER PRICE TO ASSESS 'ON SITE' CONDITIONS. FAILURE TO DO SO WILL FORFEIT ANY CLAIM FOR NOT BEING AWARE OF CONDITIONS AFFECTING THE TENDER.

THE CONTRACTOR SHALL PREPARE ACCURATE WORK-AS-EXECUTED DRAWINGS FOLLOWING THE COMPLETION OF ALL WORKS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE IN PLACE & MAINTAIN TRAFFIC FACILITIES AT ALL TIMES DURING CONSTRUCTION.

# **SURVEY**

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY XXXXXXX , BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. CAPITAL ENGINEERING CONSULTANTS DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.

SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT CAPITAL ENGINEERING CONSULTANTS.

ADOPT SSM XXXXX RL:XXXXX AS PER SUREY COMPANY REF NO.XXXXX

### **RESTORATION**

RESTORE ALL TRAFFIC AREAS TO PRE-EXISTING CONDITIONS.

FOR ALL SURFACES OTHER THAN IN TRAFFIC AREAS RESTORE DISTURBED SURFACES TO PRE-EXISTING CONDITIONS AND COMPACT AS SPECIFIED.

## **MISCELLANEOUS**

ROJECT ADDRESS: 5 WARREN AVENUE, BANKSTOWN

GEOTEXTILE FABRIC MATERIAL TO BE BIDIM A24 OR APPROVED EQUIVALENT AND SHALL COMPLY WITH AS3705-2012: GEOTEXTILES - IDENTIFICATION, MARKING AND **GENERAL DATA'.** 

### **STORMWATER**

COORDINATE THE INSTALLATION OF NEW SERVICES WITH ALL NEW & EXISTING SERVICES & STRUCTURAL PROVISIONS AS DETERMINED ON SITE.

ALL PIPEWORK TO BE SUPPORTED IN ACCORDANCE WITH AS3500.3-2003.

ALL PIPEWORK IS TO BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS AS SET DOWN IN AS3500.3-2003. ALL IN-GROUND PIPEWORK TO BE INSPECTED BY THE SUPERINTENDENT UNDER TEST CONDITIONS PRIOR TO BACKFILLING. BACKFILLING AND BEDDING TO A\$3500.3-2003.

PIPES SHALL BE TRUE TO GRADES SHOWN AND ALIGNED SO THAT THE CENTRE OF THE INLET PIPE INTERSECTS WITH THE CENTRE OF THE OUTLET PIPE AT THE DOWNSTREAM FACE OF THE PIT.

BED ALL PIPES FIRMLY AND EVENLY WITH IMPORTED FILL ONLY. THICKNESS OF BEDDING LAYER SHALL BE 75mm IN SOIL AND 200mm IN ROCK.

LAY AND JOINT ALL PIPES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS3725-2007: DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES'.

ALLOW TO TEST ALL PIPES AND PITS TO LOCAL AUTHORITY'S REQUIREMENTS.

**EXCAVATE TRENCHES AND STOCKPILE ALL MATERIAL FOR INSPECTION WITH REGARD** TO REUSE FOR TRENCH BACKFILL. REMAINING MATERIAL TO BE REMOVED FROM SITE.

BACKFILL PIPES WITH IMPORTED FILL. PROVIDE 200mm SIDE SUPPORT AND 150mm OVERLAY ABOVE PIPE CROWN. TRENCH FILL ABOVE THE EMBEDMENT ZONE TO THE UNDERSIDE OF THE ROAD PAVEMENT OR THE FOOTWAY SHALL BE AS FOLLOW:-

### UNDER ROADWAY

TRENCH FILL MATERIAL SHALL CONSIST OF IMPORTED FILL AS SPECIFIED HEREIN OF EITHER HIGH GRADE COMPACTION SAND OR APPROVED CRUSHED ROAD GRAVEL CONFORMING TO RMS QA SPECIFICATION 3051 OR SIMILAR.

### OTHER THAN ROADWAY

TRENCH MATERIAL EXCAVATED SHALL CONSIST OF SELECT FILL AS SPECIFIED HEREIN AND SHALL NOT CONTAIN MORE THAN 20% OF STONES OF SIZE BETWEEN 25mm AND 75mm AND NONE LARGER THAN 75mm. PRIOR TO USE OF THE EXCAVATED MATERIAL IT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER.

COMPACT BEDDING. EMBEDMENT AND TRENCH FILL MATERIALS AS FOLLOW:-

FOR GRANULAR FILL MATERIAL (NON-COHESIVE SOIL) e.g. COARSE AGGREGATE FILL THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%.

FOR GRANULAR MATERIAL (NON COHESIVE SOILS). THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%. FOR NON-GRANULAR FILL MATERIAL (COHESIVE SOILS), THE DRY DENSITY RATIO (RD) SHALL BE NOT LESS THAN 95%.

UTILITY INFORMATION SHOWN ON THE PLANS IS NOT INTENDED TO DEPICT MORE THAN THE PRESENCE OF ANY SERVICES. ACTUAL LOCATIONS SHOULD BE VERIFIED BY HAND **EXCAVATION PRIOR TO CONSTRUCTION.** 

THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF ALL EXISTING SERVICES IN AREAS AFFECTED BY THE WORKS.

THE CONTRACTOR SHALL ENSURE THAT SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED AT ALL TIMES. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING WHERE REQUIRED. ONCE THE WORKS ARE COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD ALL DISTURBED AREAS.

### DRAINAGE PIPES

EXISTING PIPES WHICH FORM NO PART OF THE DRAINAGE SYSTEM SHALL BE REMOVED OR SEALED AS INDICATED ON THE PLANS. PIPES UP TO 300mm DIAMETER SHALL BE SEWER GRADE UPVC WITH SOLVENT WELDED JOINTS (U.N.O.). ALL PIPE JUNCTIONS AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS.

WHERE DOWNPIPES PASS UNDER FLOOR SLABS, SEWER GRADE UPVC WITH RUBBER RING JOINTS ARE TO BE USED.

MINIMUM GRADE TO DRAINAGE PIPES TO BE 1% (U.N.O.), MIN. SIZE 100mm DIAMETER

PIPES LARGER THAN OR EQUAL TO 300mm DIAMETER TO BE REINFORCED CONCRETE RUBBER RING JOINTED TYPE (CLASS 2) MANUFACTURED TO AS4058 (U.N.O.).

PIPE INSTALLATION UNDER TRAFFICABLE AREAS SHALL BE IN ACCORDANCE WITH CONCRETE PIPE ASSOCIATION OF AUSTRALIA PUBLICATION "CONCRETE PIPE **SELECTION & INSTALLATION" TYPE HS3 SUPPORT.** 

EQUIVALENT STRENGTH FRC PIPES MAY BE USED SUBJECT TO AUTHORITY APPROVAL

MINIMUM PIPE COVER TO BE 600mm UNDER TRAFFICABLE AREAS AND 300mm **ELSEWHERE (U.N.O.).** 

CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS.

STORMWATER DRAINAGE CONNECTIONS TO COUNCIL'S SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL.

PITS DEEPER THAN 1200mm TO BE FITTED WITH STEP IRONS AT 300 CENTRES TO A\$1657-2013:'FIXED PLATFORMS, WALKWAYS, STAIRWAYS AND LADDERS - DESIGN, CONSTRUCTION AND INSTALLATION'.

ALL EXPOSED EDGES TO BE ROUNDED WITH 20mm RADIUS, OR CHAMFERED 20mm x

PIT REINFORCEMENT - MESH SL82 LAP TO BE 400mm MIN. CLEAR COVER 40 MIN. CAST AGAINST BLINDING OR FORMWORK. CORNER RETURNS MAY BE FABRIC OR **EQUIVALENT BARS.** 

in part or in whole without authorization

### **STORMWATER**

BENCHING TO BE HALF OUTGOING PIPE DEPTH. CONCRETE FOR BENCHING TO BE 20MPa MASS CONCRETE.

### APPROVED PRECAST PITS MAY BE USED.

100mm DIAMETER HOLE FOR SUBSOIL DRAINAGE OUTLET TO BE LOCATED 100mm ABOVE INVERT OF ALL INLET PIPES. SUBSOIL DRAINAGE TO EXTEND FOR A DISTANCE OF 3m UPSTREAM OF PIT (AT EACH INLET TRENCH) WITH THE UPSTREAM END SEALED.

ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.

PIT GRATE, FRAMES AND SOLID COVERS SHALL BE CLASS B IN NON TRAFFIC AREAS AND CLASS D IN TRAFFICABLE AREAS IN ACCORDANCE WITH AS3996.

ALL GRATES SHALL BE PROVIDED WITH A LOCKING CLIP.

### **MAXIMUM FRONT ENTRY PIPE:-**STRAIGHT ENTRY - Ø750 SKEW ENTRY 45° - Ø525

PIT GRATING TO BE GALVANISED STEEL TYPE 'WELDLOK' OR APPROVED EQUIVALENT.

SUBSOIL PIPES SHALL BE LAID AT A MIN GRADE OF 0.5% (U.N.O.).

ADDITIONAL SUBSOIL DRAINAGE SHALL BE LAID TO SUIT SITE CONDITIONS AND GROUNDWATER PRESENCE AS DIRECTED.

SUBSOIL PIPES SHALL BE LAID BEHIND KERBS IN CUT AREAS OF THE SITE.

SUBSOIL DRAINAGE SHALL CONSIST OF A SLOTTED 100mm DIAMETER PLASTIC PIPE WRAPPED IN GEOTEXTILE AND PLACED A MINIMUM OF 650mm BELOW THE FINISHED SURFACE LEVEL AND COVERED WITH 500mm OF 20mm GRAVEL. PROVIDE A MINIMUM OF 150mm GRAVEL AROUND SUBSOIL PIPE. TRENCH TO BE LINED WITH GEOTEXTILE FABRIC TYPE BIDIM A24

GRATES TO PITS IN FOOTPATH AREAS SHALL BE HEEL SAFE COMPLYING WITH THE DISABLED ACCESS CODE

### **EROSION CONTROL**

BEFORE EARTHWORKS CAN COMMENCE THE EROSION & SEDIMENT CONTROL MEASURES MUST BE IN PLACE.

DURING THE CONSTRUCTION PERIOD, THESE CONTROL MEASURES WILL NEED TO BE INSPECTED & MAINTAINED REGULARLY, ESPECIALLY AFTER STORM EVENTS, BY THE CONTRACTOR.

ALL WORK IS TO BE CARRIED OUT TO PREVENT EROSION, CONTAMINATION & SEDIMENTATION OF THE STORAGE SITE, SURROUNDING AREAS & DRAINAGE SYSTEMS.

MINIMIZE DISTURBED AREA COVERED WITH NATURAL VEGETATION. ONLY THOSE AREAS DIRECTLY REQUIRED FOR CONSTRUCTION ARE TO BE DISTURBED.

INSTALL EROSION/SEDIMENT CONTROL MEASURES PRIOR TO COMMENCEMENT OF CONSTRUCTION OR EXCAVATION OPERATIONS.

PROVIDE SILT FENCE/STRAW BAIL BARRIERS TO THE LOW SIDE OF ALL EXPOSED EARTH **EXCAVATIONS. TIE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE.** SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW

ISOLATE EXISTING STORMWATER PITS WITH STRAW BALES OR SILT TRAPS TO FILTER ALL

DO NOT STOCKPILE EXCAVATED MATERIAL ON THE ROAD WAY.

### DIVERT CLEAN WATER FROM UNDISTURBED AREAS AROUND THE WORKING AREAS.

CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING AND LEAVING THE SITE DO SO IN A FORWARD

TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY LOCAL COUNCIL

ADOPT TEMPORARY MEASURES AS MAY BE NECCESSARY FOR EROSION & SEDIMENT CONTROL, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: DRAINS: TEMPORARY DRAINS AND CATCH DRAINS.

- SPREADER BANKS OR OTHER STRUCTURES: TO DISPERSE CONCENTRATED RUNOFF. - SILT TRAPS: CONSTRUCTION AND MAINTENANCE OF SILT TRAPS TO PREVENT DISCHARGE OF SCOURED MATERIAL TO DOWNSTREAM AREAS.

AFTER RAIN, INSPECT, CLEAN, AND REPAIR IF REQUIRED, TEMPORARY EROSION & SEDIMENT CONTROL MEASURES.

REMOVE TEMPORARY EROSION &SEDIMENT CONTROL MEASURES WHEN THEY ARE NO LONGER REQUIRED.

COMPLY WITH THE REQUIREMENTS OF LANDCOM'S MANAGING URBAN STORMWATER - SOIL AND CONSTRUCTION 'THE BLUE BOOK' LATEST EDITION

THE EROSION & SEDIMENT CONTROL PLAN PROVIDED IS ONLY INDICATIVE. THE CONTRACTOR SHOULD PREPARE A DETAILED ESCP SUITABLE FOR THE SPECIFIC SITE **CONDITIONS** 

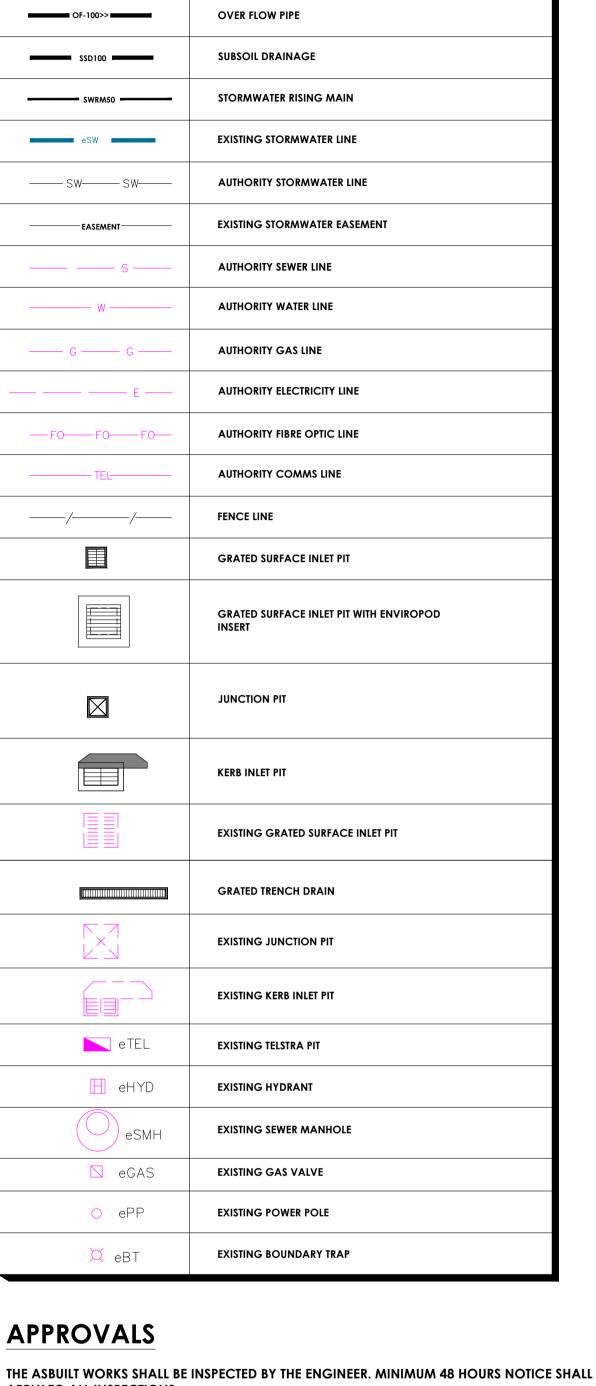
### KERB AND GUTTER

ALL KERB AND GUTTER SHALL COMPLY WITH AS2876-2000: CONCRETE KERBS AND CHANNELS-MANUALLY OR MACHINE PLACED'.

CONCRETE CHARACTERISTICS SHALL BE IN ACCORDANCE WITH THE CONCRETE NOTES

THE CONTRACTOR SHALL LIAISE WITH RELEVANT AUTHORITIES TO DETERMINE THEIR REQUIREMENTS FOR THE KERBS AND GUTTERS.

ALL KERB & GUTTER IS TO BE MACHINE LAID UNLESS OTHERWISE APPROVED BY THE **SUPERINTENDENT** 



STORMWATER LINE DISCHARGE

STORMWATER LINE SURFACE RUNOFF

STORMWATER LINE ROOF RUNOFF

LEGEND

SW100 >>

APPLY TO ALL INSPECTIONS.

THE DESIGN PLANS HEREIN ARE SUBJECT TO LOCAL COUNCIL APPROVAL PRIOR TO CONSTRUCTION. OBTAIN EXPRESS (WRITTEN) ADVICE TO PROCEED FROM PROJECT SUPERINDENDENT PRIOR TO COMMENCEMENT.

SUBMIT WORK-AS-EXECUTED DRAWINGS IN DWG FORMAT AND HARD COPY FORMAT UNDERTAKEN BY A REGISTERED SURVEYOR. VERIFY ALL CONSTRUCTION WORKS SHOWN HEREON.

CERTIFY THAT THE ASBUILT SYSTEM HAS BEEN BUILT IN ACCORDANCE WITH THE APPROVED PLANS ISSUED FOR CONSTRUCTION.

ALLOW FOR SUBGRADE AND PAVEMENT THICKNESS TO BE VERIFIED BY THE GEOTECHNICAL ENGINEER AFTER INSPECTION OF PRELIMINARY BOXING.

ALLOW FOR ANY SUBGRADE REPLACEMENT WORK TO BE DETERMINED AS REQUIRED BY GEOTECHNICAL ENGINEER AT THE TIME OF PAVEMENT CONSTRUCTION.



| ADDK     | EVIATIONS.               |                              |                             |  |
|----------|--------------------------|------------------------------|-----------------------------|--|
| Ø or DIA | DIAMETER                 | TWL                          | TOP WATER LEVEL             |  |
| CBR      | CALIFORNIA BEARING RATIO | TP                           | TANGENT POINT               |  |
| CH       | CHAINAGE                 | UPVC UNPLASTICISED POLYVINYL |                             |  |
| CL       | CENTER LINE              |                              | CHLORIDE                    |  |
| co       | CLEAR OUT                | UNO                          | UNLESS NOTED OTHERWISE      |  |
| DD       | DISH DRAIN               | WPJ                          | <b>WEAKENED PLANE JOINT</b> |  |
| DDO      | DISH DRAIN OUTLET        | FF                           | FIRST FLUSH DEVICE          |  |
| DEJ      | DOWELLED EXPANSION JOINT | TYP                          | TYPICAL                     |  |
| DGB      | DENSE GRADED BASECOURSE  |                              |                             |  |
| DGS      | DENSE GRADED SUB-BASE    |                              |                             |  |
| DP       | DOWNPIPE                 |                              |                             |  |
| е        | EXISTING                 |                              |                             |  |
| FFL      | FINISHED FLOOR LEVEL     |                              |                             |  |
| GTD      | GRATED TRENCH DRAIN      |                              |                             |  |
| GSIP     | GRATED SURFACE INLET PIT |                              |                             |  |
| HYD      | HYDRANT                  |                              |                             |  |
|          | 1001 451110 101115       |                              |                             |  |

GTD GSIF **ISOLATING JOINT** INTEGRAL KERB **INVERT LEVEL** INTERSECTION POINT

KERB INLET PIT KO KERB ONLY K&G KERB & GUTTER KR KERB RETURN LONGITUDINAL SECTION

NGL NATURAL GROUND LEVEL OFP OVERLAND FLOW PATH OSD ON-SITE DETENTION **RADIUS** RCP REINFORCED CONCRETE PIPE RK ROLL KERB & GUTTER

REDUCED LEVEL **RETAINING WALL RWT RAINWATER TANK** SJ SAWN CONTROL JOINT

SMH **SEWER MAN HOLE** SW STORMWATER **STORMWATER PIT SWP** 

SWRM STORMWATER RISING MAIN SWS STORMWATER SUMP STOP VALVE SV TOK **TOP OF KERB** TOW

**TOP OF WALL** 

SCALE BAR 1:100 SAMIR C HAKIM B.E., M.E. (civil/construction), ADV. 3-Dec-24 DIPLOMA (civil design), M.I.E. Aust, Peng MIE Aust # 3491570 This drawing is the property of the CSEG PTY LTD and shall not be copied or modified

SAMIR C HAKIM SAMARHAKAM





ARCHITEC1



COUNCIL



**RIDGE DESIGNS** 

GENREAL NOTES

SCALE: 1:100 (A3 1:200) PROJECT No: CSW2024.121 APPLICATION DEVELOPMENT APPLICATION (DA) **UPERSEDES** 02

SW-101

