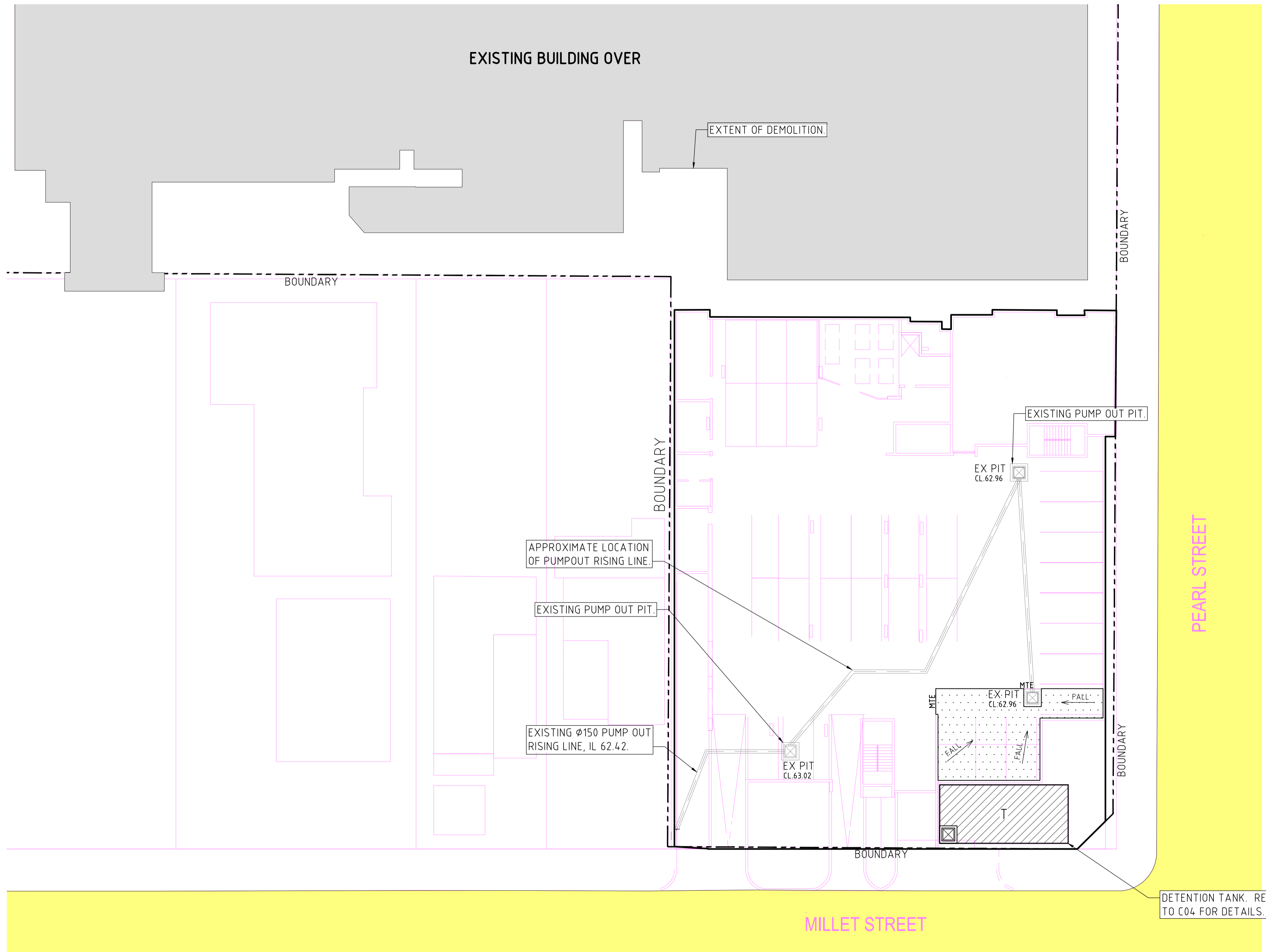





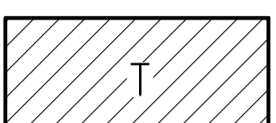
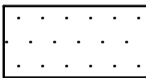


NOTE:
CONTRACTOR TO REINSTATE ALL EXISTING PATHWAYS
& RAMPS DISTURBED DURING CONSTRUCTION OF NEW
STORMWATER INFRASTRUCTURE.



LEGEND

-  DENOTES PROPOSED STORMWATER PIT AND COVER LEVEL.
-  DENOTES EXISTING STORMWATER PIT AND COVER LEVEL.
-  DENOTES EXISTING STORMWATER DRAINAGE PIPE.
-  DENOTES MATCH TO EXISTING LEVELS.
-  DENOTES PROPOSED DIRECTION OF FALL OF NEW PAVEMENT.
-  DENOTES DETENTION TANK PROVIDING MINIMUM 72.5m³ OF DETENTION. REFER TO CALCULATIONS BELOW.
-  DENOTES EXTENT OF PROPOSED PAVEMENT.

STORMWATER CONCEPT SUMMARY

THE PROPOSED DEVELOPMENT OF HURSTVILLE PRIVATE HOSPITAL INCLUDES THE REDEVELOPMENT OF AN EXISTING CONCRETE CARPARKING AREA AND HOSPITAL WING. THE REDEVELOPMENT WILL NOT INCREASE THE VOLUME OF RUNOFF FROM THE SITE, HOWEVER DETENTION HAS BEEN PROVIDED FOLLOWING CONSULTATION WITH MICK WARD, HURSTVILLE CITY COUNCIL DRAINAGE ENGINEER.

THE PHILOSOPHY OF STORMWATER MANAGEMENT ON SITE CAN BE SUMMARISED AS FOLLOWS:

- RUNOFF FROM THE MAJORITY OF NEW ROOF AREA WILL BE COLLECTED AND DIVERTED VIA DOWNPIPES TO AN UNDERGROUND DETENTION TANK, LOCATED ON THE LOWER BASEMENT LEVEL OF THE SITE. THE CAPACITY OF THE TANK HAS BEEN SIZED FOR THE TOTAL NEW ROOF AREA IN ACCORDANCE WITH HURSTVILLE CITY COUNCIL DRAFT GUIDELINES (REFER BELOW FOR CALCULATIONS). THE DETAINED WATER WILL RE-ENTER THE PIPE DRAINAGE SYSTEM VIA THE EXISTING SITE DISCHARGE PIT LOCATED IN THE SOUTH WESTERN CORNER OF THE SITE. NOTE THAT EVEN THOUGH A SMALL PORTION OF THE ROOF WILL BYPASS THE DETENTION TANK, THE TANK WILL EFFECTIVELY OVER-DETAIN THE RUNOFF FROM THE REMAINING ROOF AREA.
- RUNOFF FROM THE NEW LOWER BASEMENT AREA WILL BE CONVEYED TO THE EXISTING PUMP OUT PIT INFRASTRUCTURE.

STORMWATER DETENTION CALCULATION

REDEVELOPMENT AREA = 1610m² (100% IMPERVIOUS)

IN ACCORDANCE WITH HCC GUIDELINES	
2 YEAR ARI DETENTION STORAGE VOLUME	= 330 m ³ /ha = 53.2 m ³
TOTAL DETENTION STORAGE VOLUME	= 450 m ³ /ha = 72.5 m ³
2 YEAR ARI PERMISSIBLE SITE DISCHARGE	= 50 L/s/ha = 8.05 L/s
100 YEAR ARI PERMISSIBLE SITE DISCHARGE	= 150 L/s/ha = 19.32 L/s

STAGING OF THE TANK OUTLET ORIFICES HAS BEEN ADOPTED TO ACHIEVE THE PERMISSIBLE SITE DISCHARGE REQUIREMENTS;

- A 60mm DIAMETER LOW FLOW ORIFICE HAS BEEN ADOPTED TO DETAIN THE MINOR STORM EVENTS. A MAXIMUM HEAD OF 1m WILL PRODUCE A SITE DISCHARGE OF 7.52 L/S.
- A 90mm DIAMETER HIGH FLOW ORIFICE HAS BEEN ADOPTED TO DETAIN THE MAJOR STORM EVENTS. THE OUTFLOW FROM THE TANK WILL BE A COMBINATION OF THE LOW FLOW ORIFICE AND THE HIGH FLOW ORIFICE. A MAXIMUM HEAD OF 1.35m WILL PRODUCE A DISCHARGE OF 8.78 L/S THROUGH THE LOW FLOW ORIFICE. A MAXIMUM HEAD OF 0.35m WILL PRODUCE A DISCHARGE OF 9.50 L/S THROUGH THE HIGH FLOW ORIFICE.

DRAWN: J.BEVITT, DESIGNED: A.KNIGHT, JOB MANAGER: B.CLARK, VERIFIER: B.CLARK

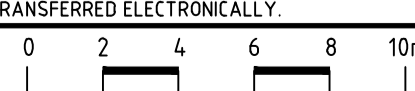
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A	ISSUED FOR DA	JB	BC	AK	09.08.12

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PLANS 1:200



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PROJECT
HURSTVILLE PRIVATE HOSPITAL

DRAWING TITLE
LOWER BASEMENT CONCEPT STORMWATER MANAGEMENT PLAN

JOB NUMBER
NL120128

DRAWING NUMBER C02	REVISION A
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DRAWING SHEET SIZE = A1

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